Dell 2135cn
Service Manual

09 Oct 2009

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Version record

Refer to the portion indicated by change bar in each section.

Also refer to the reasons in table below.

Version Issu	e date	Note
1st	February 01, 2008	1st issued
2nd	March 31, 2008	2nd version issued Section 1, FIP 1. Rewrote contents and additional explanation 1.1 to 1.5 Rewrote contents 1.5.5 to 1.5.7 added 2.2 Rewrote contents 2.3 clerical error corrections etc. 3.1 additional flows and clerical error correction etc. Flows1 to 32/34 to 39/45 to 107/110 to 116 corrected Flows 33/40 to 43/108/109 reference number changed Flows 44 reference number changed and reference error code changed Flow 117added FIP-1.3 to 1.5/1.17 to 1.24/1.26 to 1.37/1.40 to47/1.50/1.53/1.57/1.58/1.60/1.64 to 1.69/1.90 to 91 corrected FIP-1.38/1.39/1.62/1.63 reference number changed FIP-1.48/1.49/1.51/1.52/1.54 to 1.56 /1.59 added 4.4 additional flows etc. FIP-1P1～1.P6/1.P8～1.P11 corrected FIP-Copy Error added Section 2, Operation of Diagnostic 3.1 illustration changed 3.7 menu corrected 4.1.4 menu corrected 4.2.4 menu corrected Section 3, Removal and Replacement Procedures (RRPs) 1. det ailed procedure correction Removal 8/Removal 14/Removal 15/Removal 37/Removal 46/Removal 49/Removal 56/Removal 57/Removal 59/Replacement 2/ Replacement 4/Replacement 11/ Replacement 14/Removal 23/ Replacement 42/Replacement 45/ Replacement 46/Replacement 50/ Replacement 52/Replacement 60

		Section 5 Parts List PL10.2 illustration changed Section 6 Principles of Operation 6. additional explanation 11. paragraph number changed（13.1.1/13.1.2） Section 7, Wiring Diagrams and Signal information 11. RXINCLK(+/-) signal explanation corrected Section 8 Printer Specification Specification change etc. 2.2/3.1/4.8/5.3/6.3/6.5/7.4/8.1/10.1～10.4/11.1/ 11.2/12.1 corrected 3.3 illustration changed 11. paragraph number changed（4.9 to 4.11/12.2 to 12.4）
3rd	June 13, 2008	3rd version issued Section 1, FIP 3.1 clerical error corrections etc. Flows 7 / 8 / 10 to 17 / 20 / 21 / 25 / 36 / 37 / 48 / 49 / 51 / 55 / 56 / 62 / 64 / 70 / 72 / 73 / 77 / 83 to 87 / 93 / 98 / 99 / 106 / 110 / 112 corrected Section 2, Operation of Diagnostic 4.2.4 illustration changed Section 3, Removal and Replacement Procedures (RRPs) 1. Addition of an ADF ASSY simple substance. etc. Removal Flows/Replacement Flows/Removal 2/Removal 11/Removal 35/Removal 47/Removal 59/Removal 60/Removal 61/Replacement 1/Replacement 2/Replacement 32/Replacement 47/Removal 49/Replacement 58/Replacement 61/ Section 5 Parts List “Customer Replaceable Parts Illustration” illustration changed PL10.1 illustration & Parts List changed/ PL10.3 illustration & Parts List changed/ PL10.5 illustration changed/ PL10.6 illustration & Parts List changed/ PL10.9 illustration & Parts List changed/ PL10.10 illustration & Parts List changed
4th	December 22, 2008	4th version issued Section 1, FIP 3.1 NOTE addition etc. Flows 39 / 62 / 64 / 68 / 72 / 73 NOTE was added. Flows 93 / 94 / 96 Name change. FIP-1. P1 / P2 / P4 Name change.

4.1th	April 08, 2009	4.1th version issued Section 1, FIP Flows18-1and Flows118 are added. (Change by error code (016-340).)
4.1.1th	April 15, 2009	4.1.1th version issued Section 1, FIP Flows119 are added.
4.2th	August 25, 2009	4.2th version issued Section 1, FIP Flows18/FIP1.18: The download procedure of FW by the downlo ad mode was added. (Only 016-317) Flows18-1: The download procedure of FW by the download mode was added. (016-340) Flows20/FIP1.20: The download procedure of FW by the download mode was added. (016-370)
4.3th	October 09, 2009	4.3th version issued Section 1, FIP Flows23/FIP1.23: Memory Full 016-700 The content of flow was reviewed.

Cautions

Operation contents of this document may be subject to modification without notice.

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1. About this manual

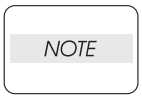
This manual is a standard service manual of Dell Inc. containing information required for maintenance of this laser printer (standard specifications).

2. Marks giving caution

Maintenance operations requiring special cautions or additional information regarding descriptions in this manual are presented as "Warning," "Caution," or "Note," depending on their nature.

If instructions are not observed, death or serious injury may result.

If instructions are not observed, injuries to workers or physical damage to assets (including this laser printer) may result.



Essentials for procedures, steps, rules, and others.

Reference ***Incidental information to descriptions.***

3. Related documents

- Instruction manuals (standard manuals)
Describe the operation and handling of this laser printer.

- Performance specifications
Describe in detail various specifications of this laser printer.
(In the event of a discrepancy between this manual and the performance specifications, the performance specifications take precedence.)

- Spare parts list
Information on maintenance parts (spare parts) for this laser printer.

4. Safety

To prevent possible accidents during maintenance operation, you should observe strictly the "Warning" and "Caution" information in this manual.
Avoid dangerous operations and operations out of the scope of this manual.
Various processes not covered by this manual may be required in actual operations, and should be performed carefully, always giving attention to safety.

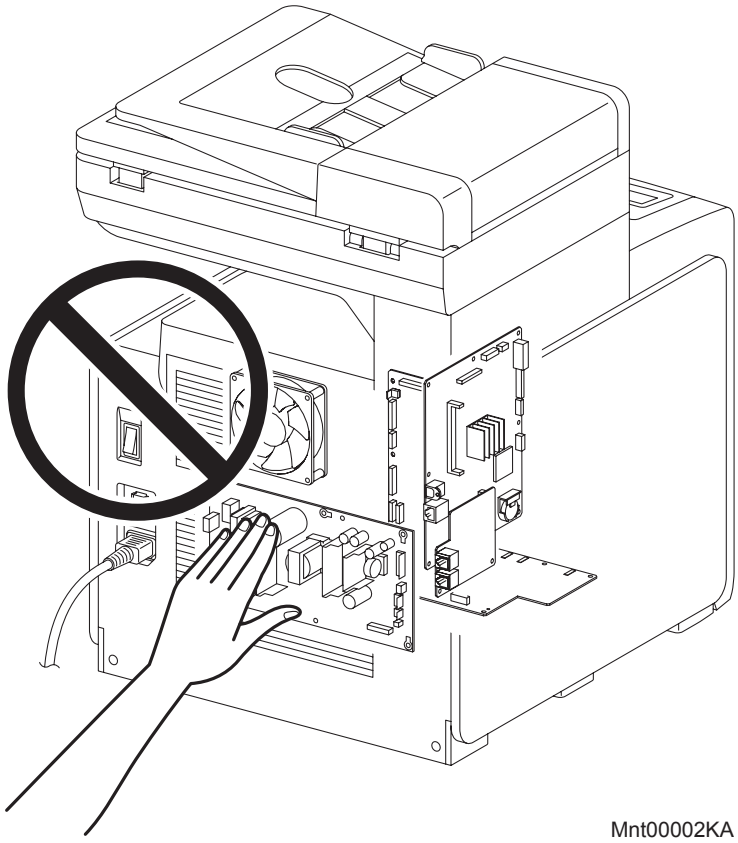
4.1 Power source

Keep the power plug disconnected during the maintenance operation to prevent electric shock, burns and other damages.
If the power supply should be kept connected to measure voltage or for other similar reasons, take sufficient care to prevent electric shock, by following the procedures in this manual.

While the printer is on, never touch live parts if not required.

Power is supplied to the power switch / inlet even while the printer is off. Never touch its live components.

Do not touch live parts unless otherwise specified.



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4.2 Driving units

When servicing gears or other driving units, be sure to turn off the power switch and unplug the power cord. Drive them manually when required.

Do not do the print work removing the cover of the printer to confirm the operation of driving part.

4.3 High-temperature units

When servicing high-temperature units (securing unit, etc.), be sure to turn them off to prevent burns, injuries and other troubles. Remove the power plug and start service processes after they have cooled down sufficiently.

Because high-temperature units are still hot after they complete an operation, wait at least 40 minutes before starting maintenance service.

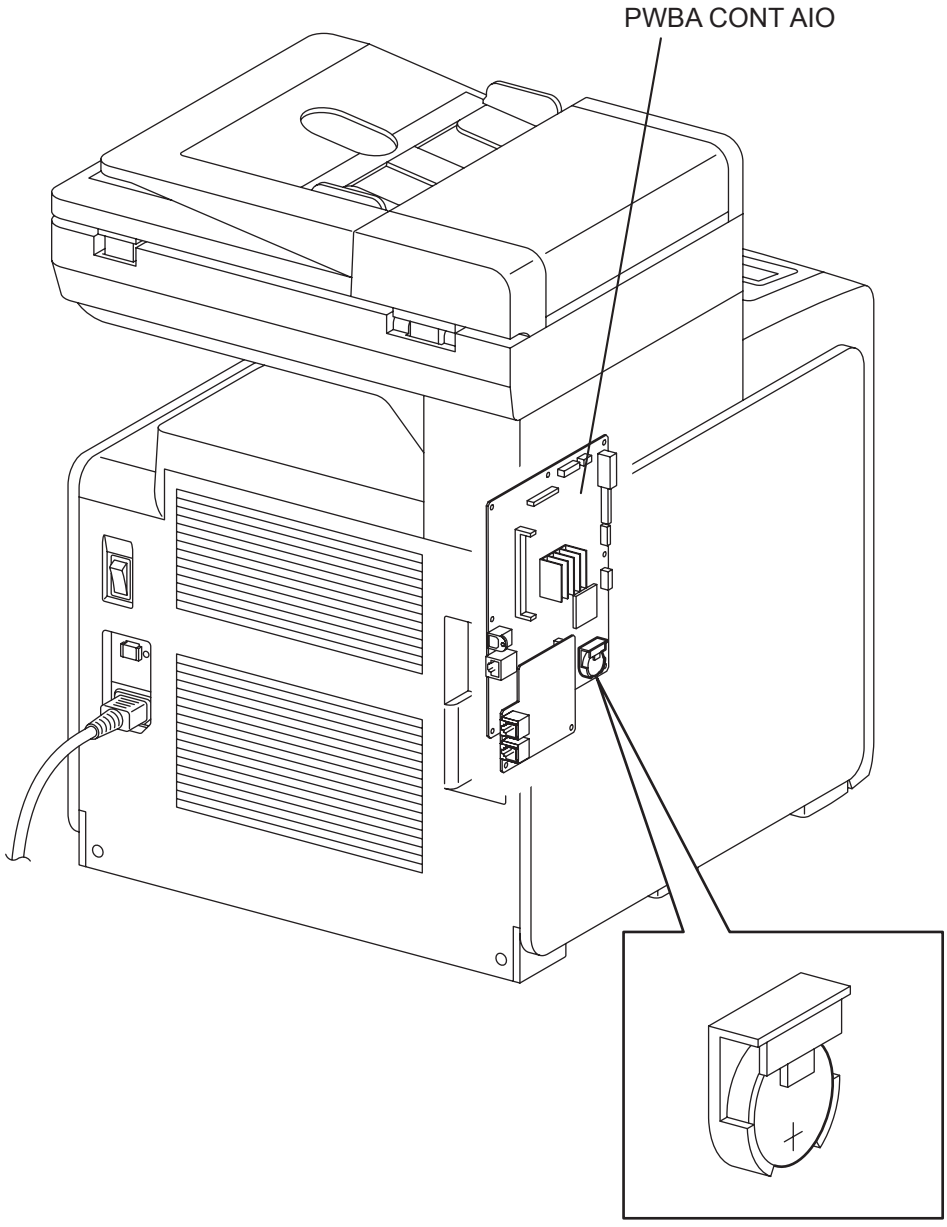
4.4 Battery

Lithium Battery is used in the following component.

- PWBA HYUI

There is a danger of a new battery exploding if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer.

Dispose the battery according to the manufacturer's instruction.



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4.5 Laser beams

WARNING

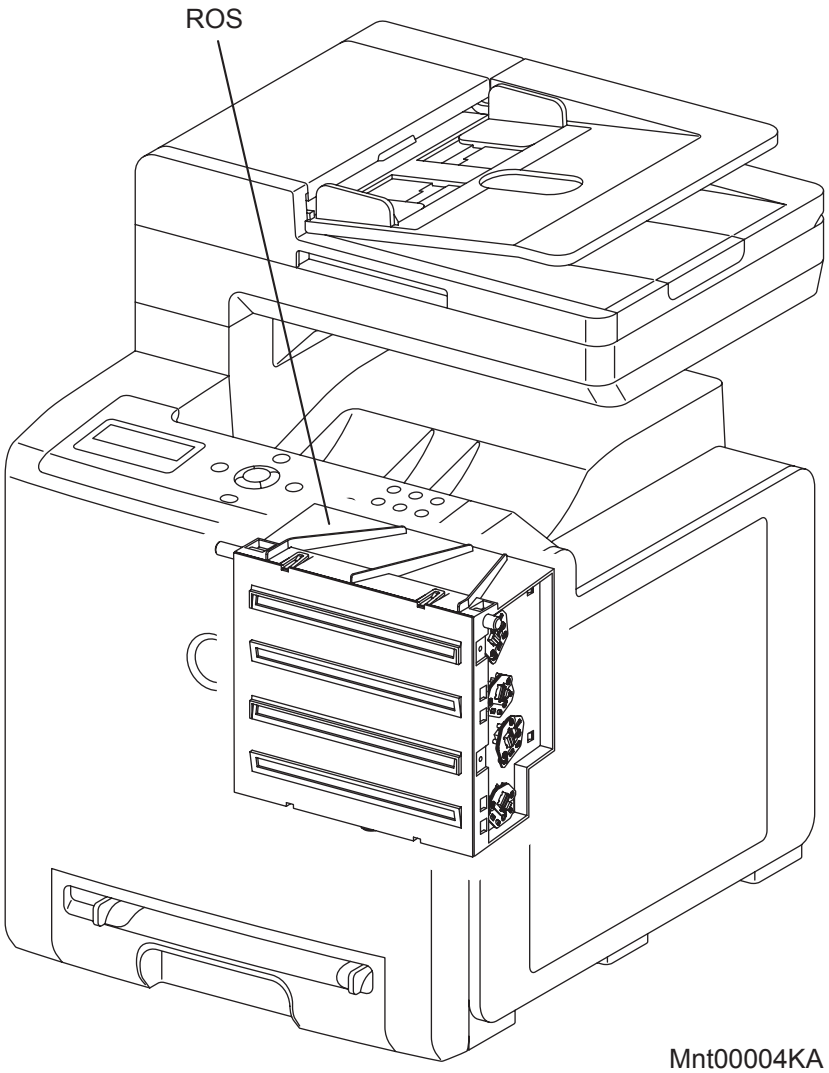
- ***If your eyes are exposed to laser beams, you may lose your eyesight.***
- ***Never open the cover if the warning label for laser beams is attached there.***
- ***Before disassembling and reassembling this laser printer, be sure to turn it OFF.***
- ***When servicing this laser printer while it is running, be sure to follow the procedures specified in this manual.***
- ***You should be well aware that the laser beams are capable of injuring you and other people near the printer.***

NOTE

Laser beams have features as follows:

- **Frequencies are smaller in width than other beams (sun and electric bulbs) and phases are uniform so that high monochromatic and convergence performance can be obtained and thin beams of light can reach places at a long distance.**
- **Being highly converged, the laser beams exert a heating action that may be harmful to human body.**

Reference: The laser beams of this laser printer are invisible rays.



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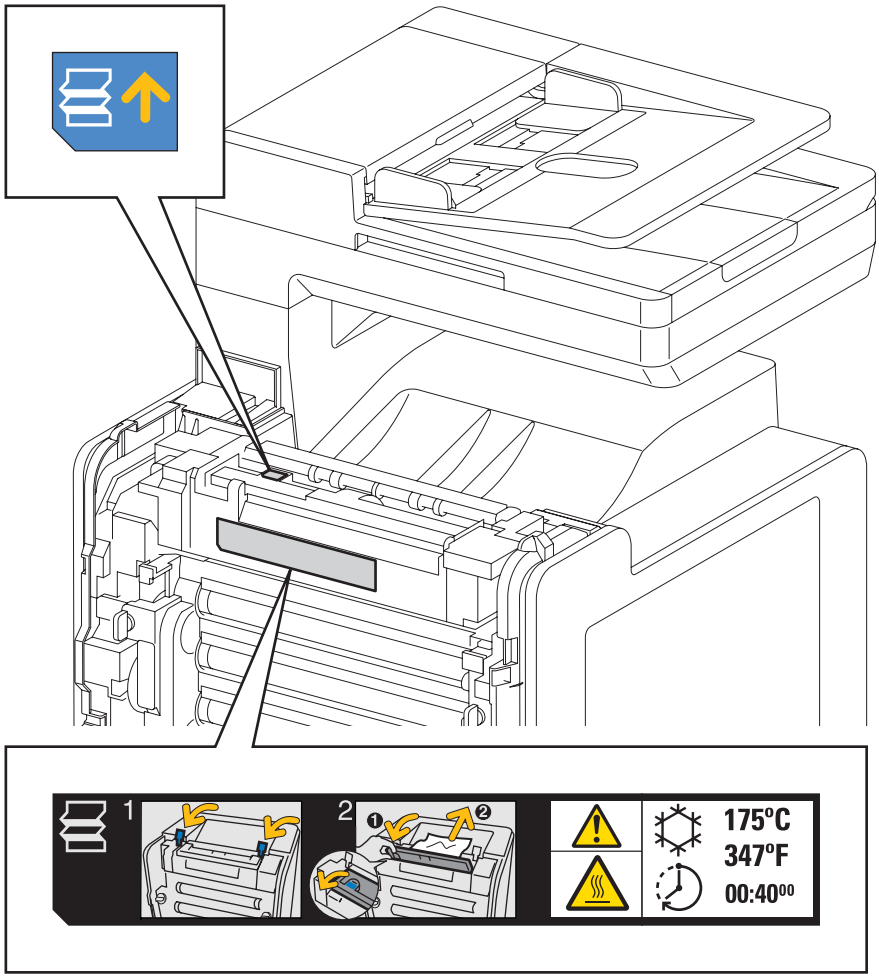
4.6 Warning/caution labels

Warning labels and caution labels are attached to this laser printer to prevent accidents Check those labels for peeling or stains when servicing the printer.

4.6.1 Caution label for high-temperature units



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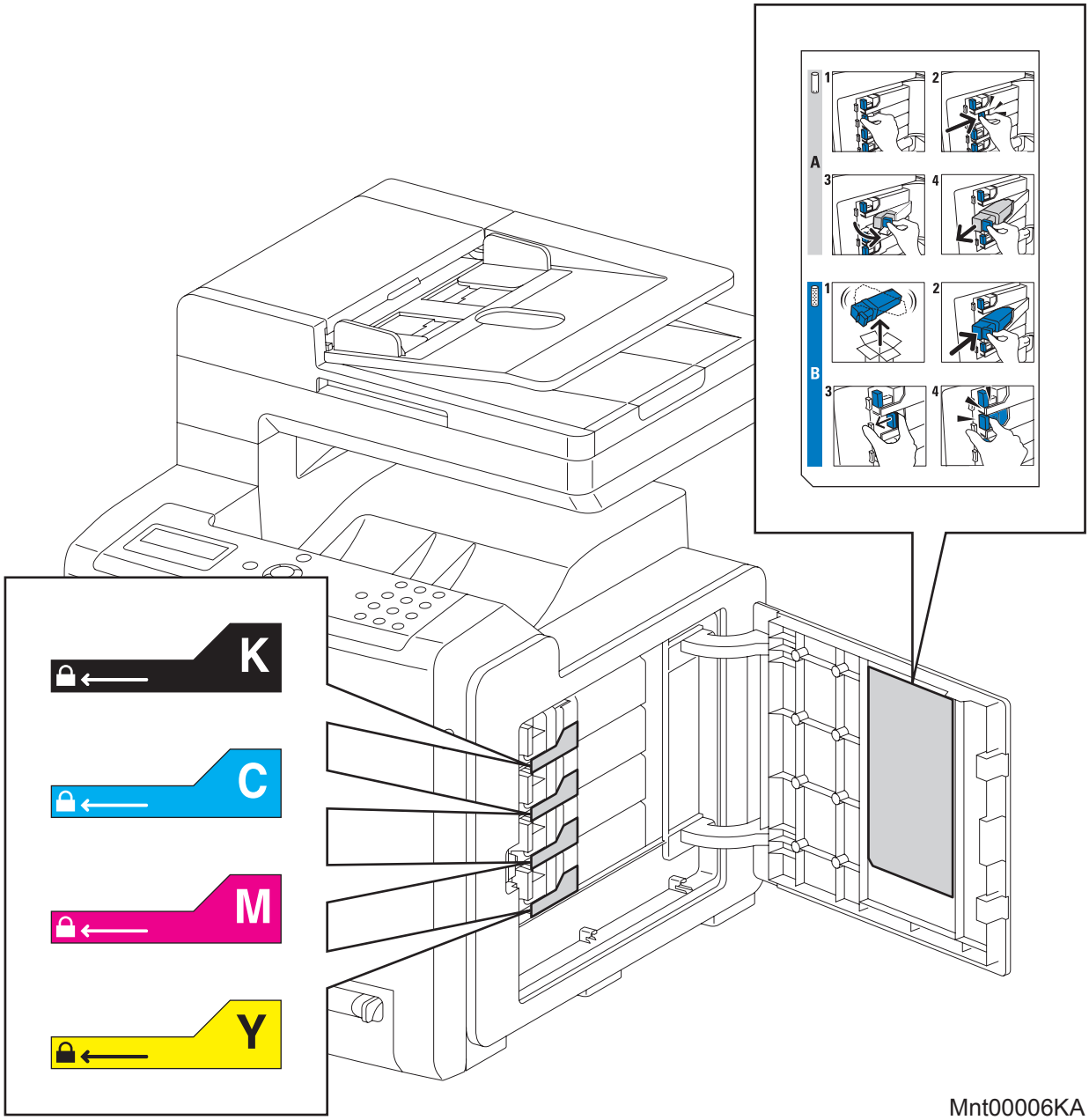
4.6.2 Caution label for toner cartridges



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K
Dell™1320c Starter Black Cartridge WM055
Black Toner Cartridge / Cartouche de toner noir / Cartuccia del toner color Nero
Tonerkassette schwarz / Cartuchos de toner negro
Order Supplies at :
www.dell.com/supplies
Dell is a trademark of Dell Inc.
For warranty questions, see the limited warranty statements included with your printer documentation.
* 0 0 0 0 0 1 1 0 *
C
Dell™1320c Starter Cyan Cartridge PN029
Cyan Toner Cartridge / Cartouche de toner cyan / Cartuccia del toner color Ciano
Tonerkassette cyan / Cartuchos de toner cian
Order Supplies at :
www.dell.com/supplies
Dell is a trademark of Dell Inc.
For warranty questions, see the limited warranty statements included with your printer documentation.
* 0 0 0 0 0 1 1 1 *
M
Dell™1320c Starter Magenta Cartridge KN619
Magenta Toner Cartridge / Cartouche de toner magenta / Cartuccia del toner color Magenta / Tonerkassette magenta / Cartuchos de toner magenta
Order Supplies at :
www.dell.com/supplies
Dell is a trademark of Dell Inc.
For warranty questions, see the limited warranty statements included with your printer documentation.
* 0 0 0 0 0 1 1 2 *
Y
Dell™1320c Starter Yellow Cartridge PN030
Yellow Toner Cartridge / Cartouche de toner jaune / Cartuccia del toner color Giallo
Tonerkassette gelb / Cartuchos de toner amarillo
Order Supplies at :
www.dell.com/supplies
Dell is a trademark of Dell Inc.
For warranty questions, see the limited warranty statements included with your printer documentation.
* 0 0 0 0 0 1 1 3 *

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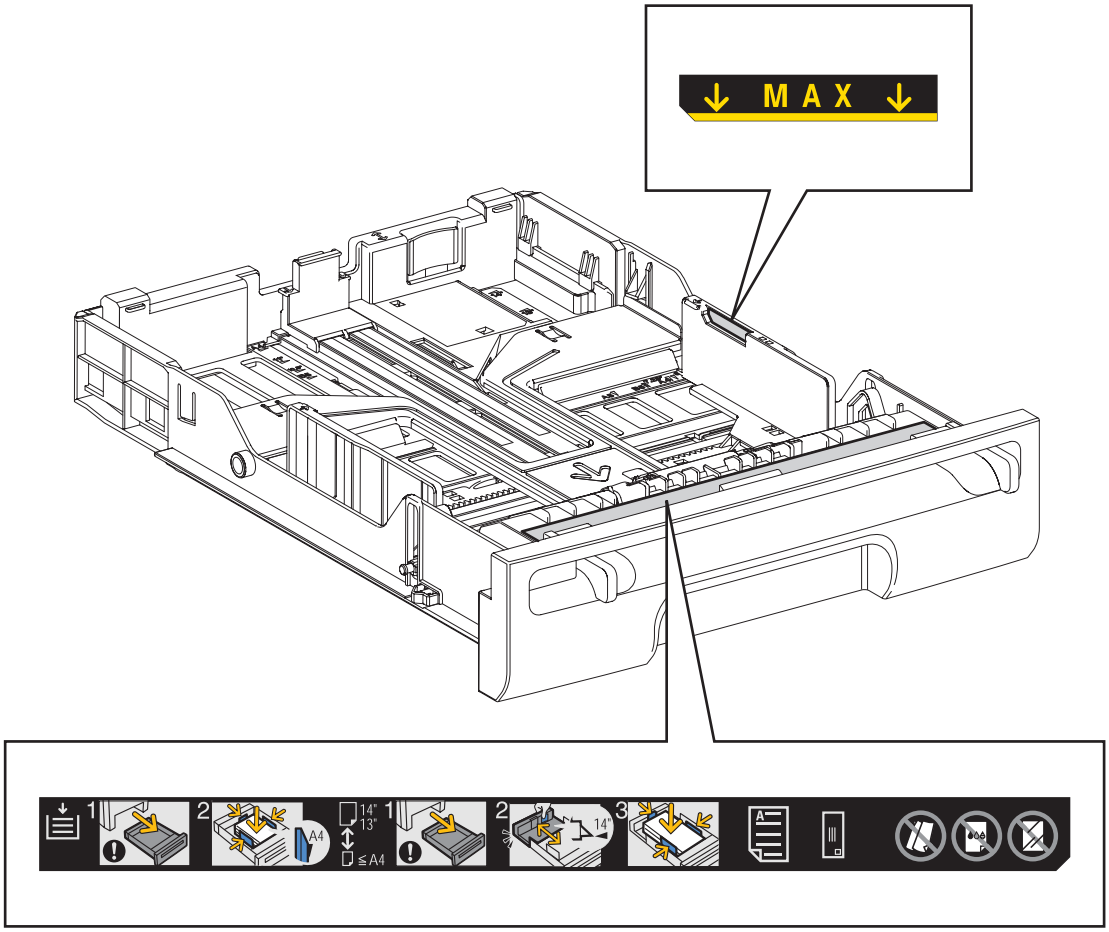
4.6.3 Caution label for SSI and tray



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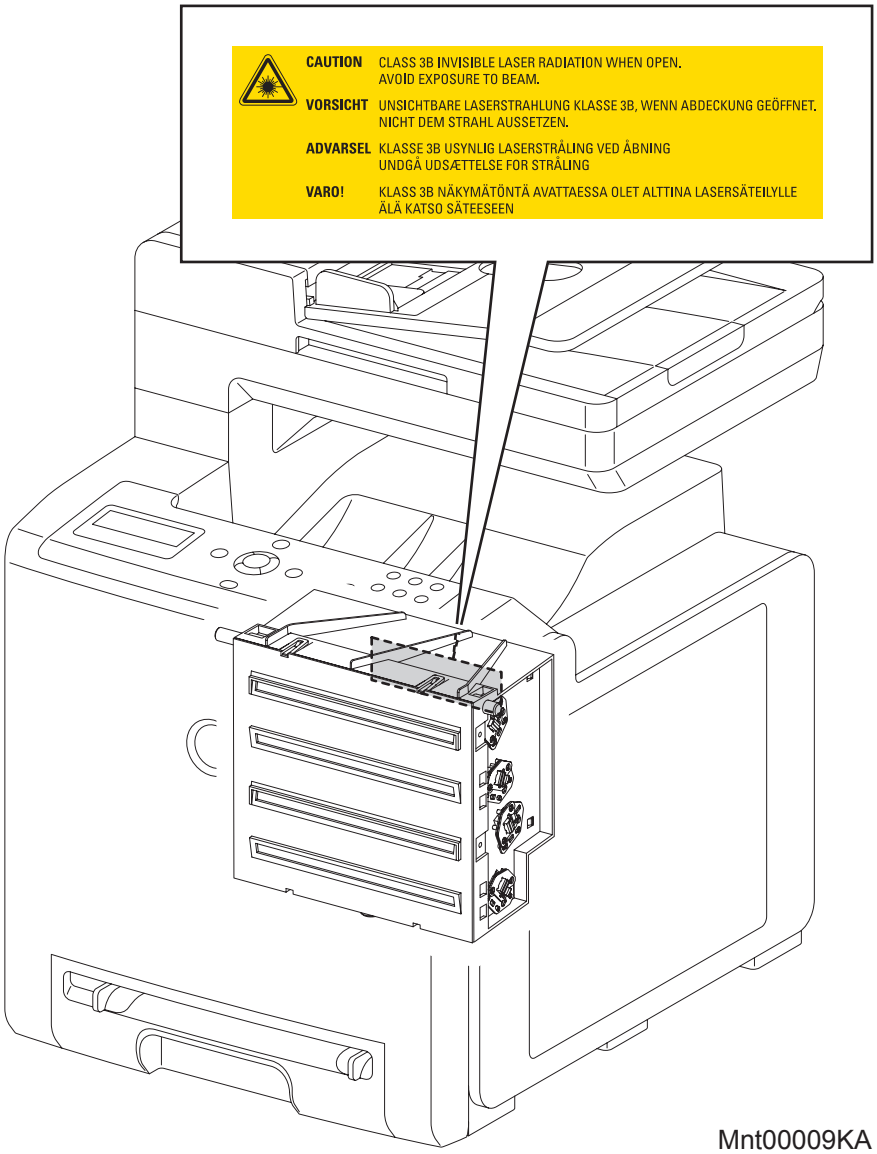
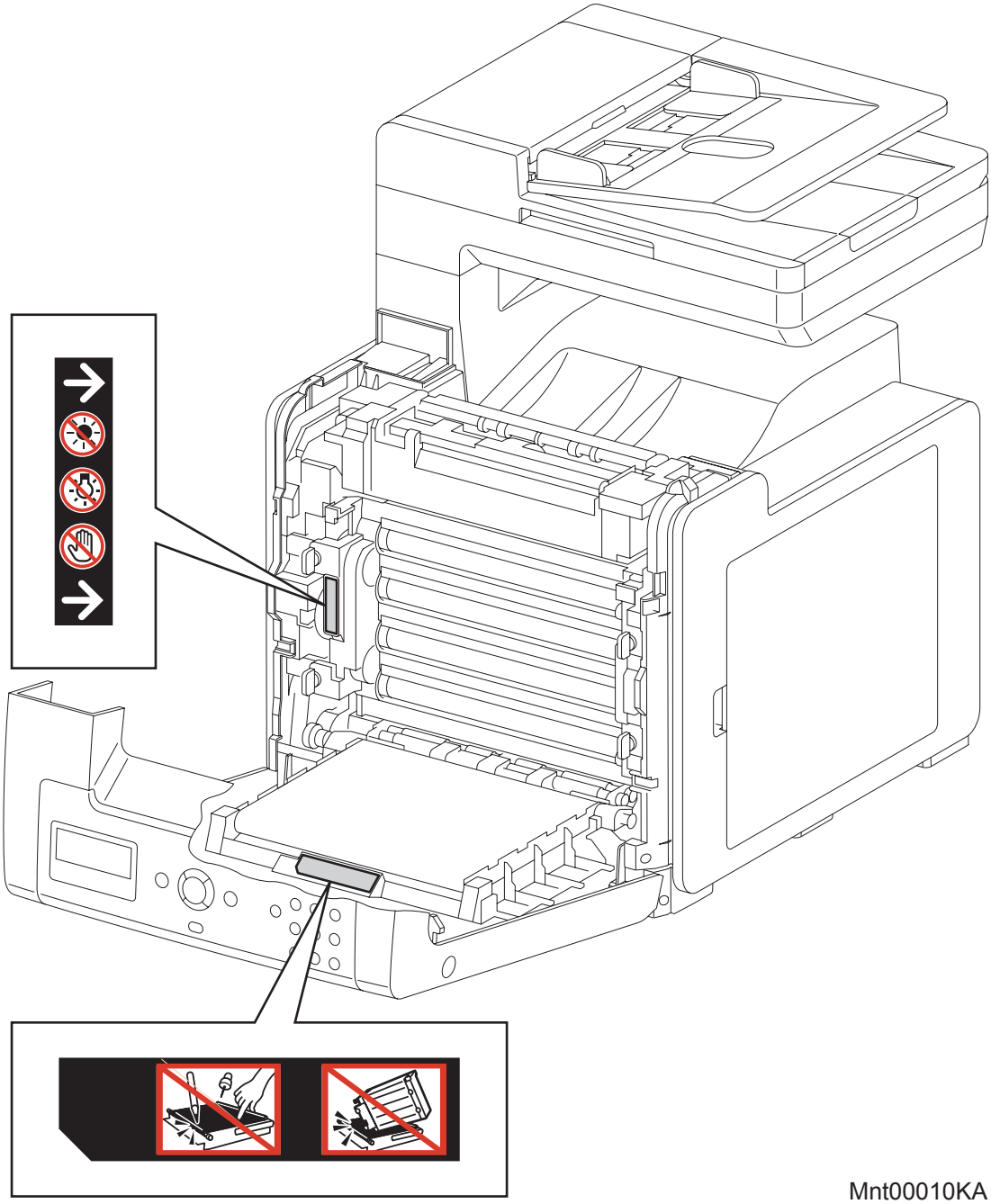
4.6.4 Caution label for ROS



4.6.5 Caution label for transfer belt and PHD unit



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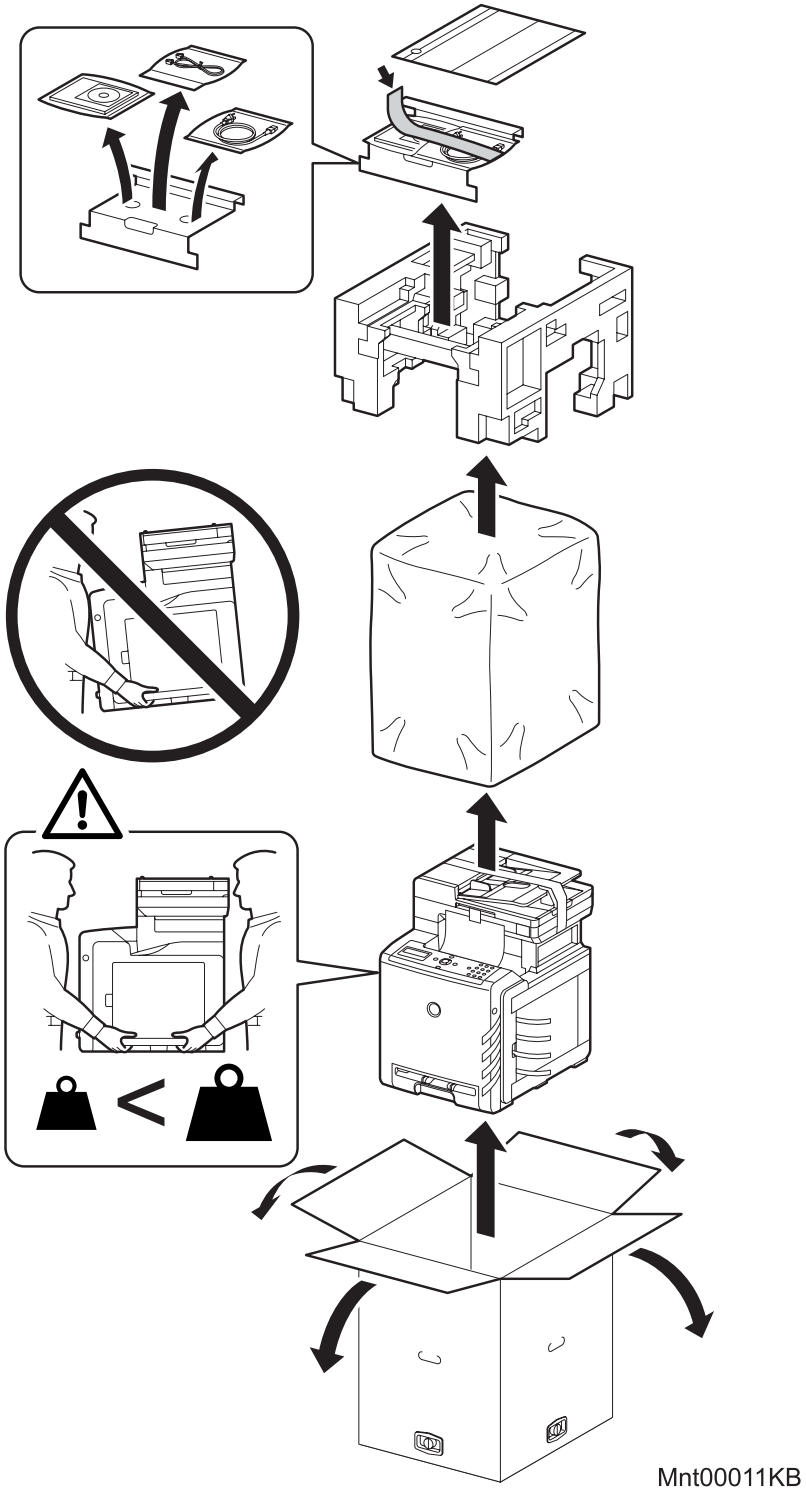
Unpacking the Printer

CAUTION

Take extreme care to avoid personal injuries.

Check the printer for evidence of any damages.
Peel all tapes off the printer.



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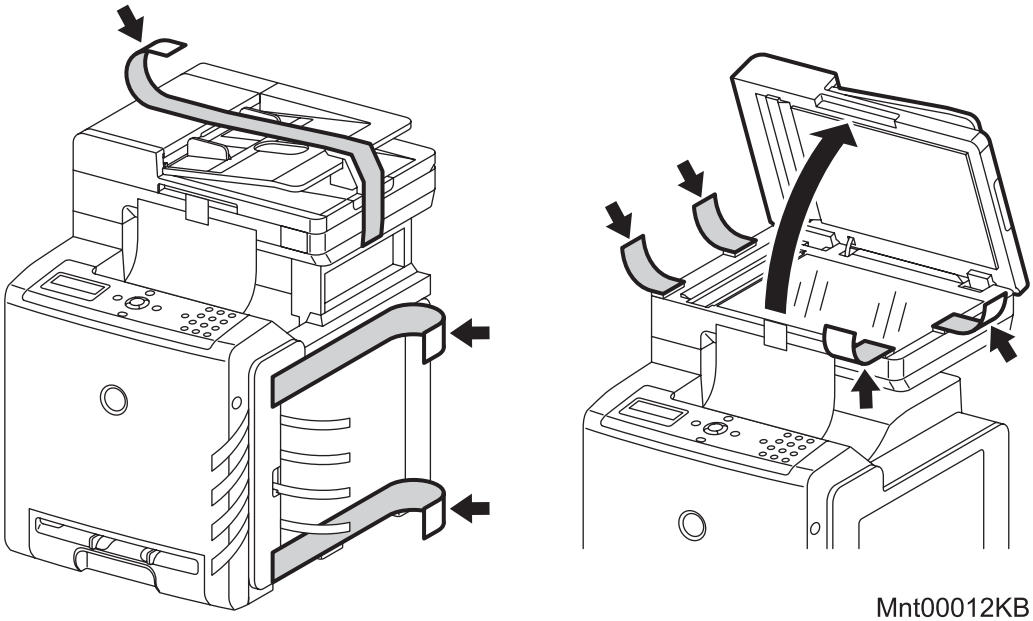

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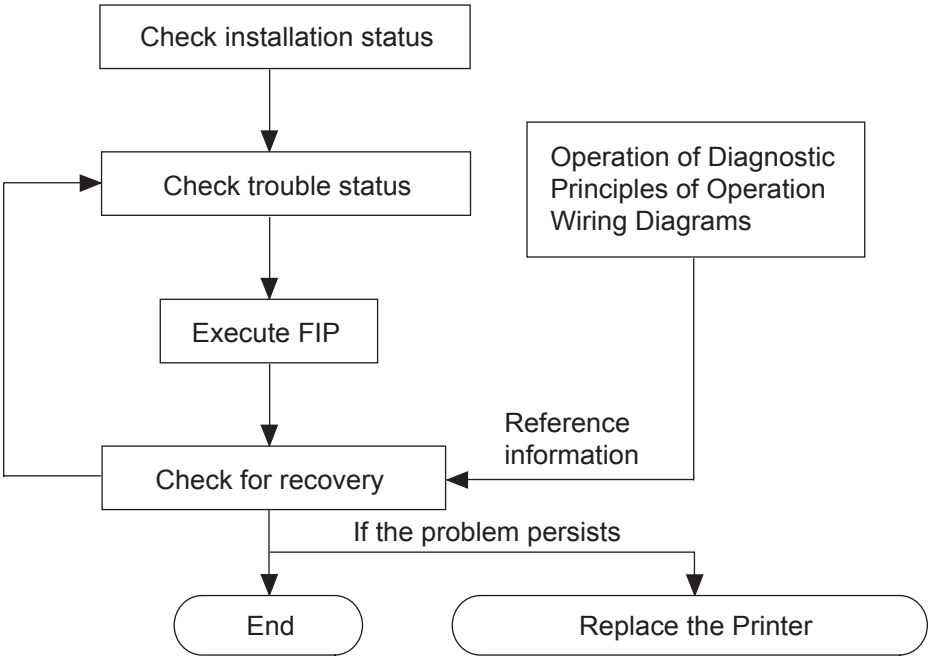
NOTE **The troubleshooting procedures described herein assume the use of the Diag Tool. However, the procedures can be performed without the Diag Tool as long as they are carefully followed.**

1. Troubleshooting Overview

To increase the efficiency of troubleshooting, ensure that preliminary checks should be made to confirm the trouble status before proceeding to the Fault Isolation Procedure (FIP), Operation of Diagnostic (Chapter 2), Wiring Diagrams (Chapter 7), and Principles of Operation (Chapter 6).

1.1 Flow of Troubleshooting

Flow of the troubleshooting is as follows:



1.2 Check Installation Status

Be sure to check the following items before starting the troubleshooting procedures.

1) The power supply voltage is within the specifications.
2) The power cord is free from breakage, short-circuit, open wire, or internal miswiring.
3) The Multi Function Printer is properly grounded.
4) The Multi Function Printer is not installed at a place subjected to high/low temperature, humidity, and sudden temperature changes.
5) The Multi Function Printer is not installed at or near water facilities, humidifier, heating appliance, fire, dust, or in airflow from air conditioner.
6) The Multi Function Printer is not installed in a place subjected to volatile or inflammable gas.

7) The Multi Function Printer is not installed under direct sunlight.
8) The Multi Function Printer is installed in a well-ventilated place.
9) The Multi Function Printer is installed on a firm and stable surface.
10) The paper meets the specifications (standard paper is recommended).
11) The Multi Function Printer is handled properly.
12) The high frequency service items are replaced at the recommended print count intervals.

1.3 Cautions on Service Operations

1) Be sure to remove the power cord unless otherwise required.

While the Multi Function Printer is powered ON, never touch the conductive parts unless otherwise required.
Never touch the conductive parts of the power switch and inlet of the LVPS, because they are live even while the printer is powered off.

2) When checking some parts with covers removed and with the interlock, safety, and power switches ON, disconnect the connectors (P/J411 and P/J412) on the ROS ASSY unless otherwise required.

When checking some parts with covers removed and with the interlock, safety, and switches ON, laser beams may be irradiated from the ROS ASSY. For your safety, be sure to disconnect the connectors (P/J411 and P/J 412) unless otherwise required.

3) When checking some parts with the Front Cover removed and the Multi Function Printer powered ON, be sure to disconnect the connector (P/J16) on the PWBA MCU unless otherwise required.

When checking some parts with the Front Cover removed and the printer powered ON, be sure to remove the connector (P/J16) on the MCU. Otherwise, a high voltage may be output from the HVPS.

When connecting the connector (P/J16) on the MCU according to the instructions in the FIP, never touch the HVPS and high voltage parts.

4) When outputting a high voltage using the Diag Tool, etc., keep all the covers on unless otherwise required.

When outputting a high voltage using the Diag Tool, etc., ensure that:

- The high voltage carrying parts must never be touched.

- The instructions in this manual must be followed.

5) When operating the drive unit using the Diag Tool, etc., keep all the covers on unless otherwise required.

When operating the drive unit using the Diag Tool, etc., ensure that:

- The drive unit must never be touched.

- The instructions in this manual must be followed.

6) When touching hot parts, be careful not to get burnt.
7) While working, be sure to wear a wrist band or the like to dissipate static charges from your body.

1.4 Cautions for FIP Use

1) When troubleshooting according to the FIP, normal PWBA MCU, PWBA HVPS, PWBA LVPS, FUSER ASSY, TRANSFER ASSY and so no may be necessary for isolation of failed parts. Prepare them in advance.
2) In the initial check according to the FIP, check only items which can be simply checked.
3) In the initial check according to the FIP, check the constitutive parts of the major check parts and related parts, as well as major check parts.
4) When working with the printer, be sure to remove the power cord unless otherwise required.
5) Connector condition is denoted as follows:

   [P/J12] -> Connector (P/J12) is connected.

   [P12] -> Plug side with the connector (P/J12) disconnected (except when attached directly to the board).

   [J12] -> Jack side with the connector (P/J12) disconnected (except when attached directly to the board).
6) [P/J1-2PIN <=> P/J3-4PIN] in the FIP means measurement with the positive side of the measuring instrument connected to [2PIN] of [P/J1] and the negative side to [4PIN] of [P/J3].
7) [P/J1<=> P/J2] in the FIP means measurement for all terminals corresponding between [P/J1] and [P/J2] based on "Wiring Diagrams".
8) In [P/J1-2PIN <=> P/J3-4PIN] in the FIP where voltage is measured, [P/J3-4PIN] on the rear negative side is always at the AG (analog ground), SG (signal ground), or RTN (return).

   Therefore, after checking of proper conductivity between AGs, SGs, or RTNs respectively, the rear negative side can be connected to the PIN of AG, SG or RTN instead of [P/J3-4PIN].

   However, care should be taken not to confuse [AG], [SG], and [RTN] because they are not on the same level.
9) When measuring the voltage at small connectors, use the dedicated tool. Handle the tool with care because its business end is pointed.
10) When measuring the voltage, set the TRANSFER ASSY, TONER CARTRIDGEs and Paper Cassette, close the COVERs and power ON unless otherwise required.
11) Numerical values in the FIP are only for guide line. Approximate values are acceptable.
12) In each step of the FIP, parts removal and other procedures implicitly required for the step are omitted.
13) In the FIP, "Replacement" means the replacement of the parts that are considered to be the cause of the trouble. Replacement of those parts means the replacement of the assembly part (HIGH ASSY) that contain them.
14) Some of the instructions in the FIP are branched off depending on the specifications. Follow the applicable instruction.
15) For some optional components, you may have to refer to the manual of the relevant component for troubleshooting. Have the relevant manual at hand as needed.

1.5 Items to Be Confirmed Before Going to FIP Troubleshooting

1.5.1 Basic Multi Function Printer Problems

Some Multi Function Printer problems can be easy to resolve. If a problem occurs, check each the following:

1) If a message is displayed on the personal computer connected with the Multi Function Printer, see "2.3 Status Code List".

2) The Multi Function Printer power cable is plugged into the printer and a properly grounded electrical outlet.

3) The Multi Function Printer power is ON.

4) If you have checked all of the above and still have a problem, turn off the Multi Function Printer, wait for 10 seconds, and then turn on the printer. This often solves the problem.

1.5.2 Display Problems

1) If the operation panel is blank, check and try the action below.

   a) Make sure the Multi Function Printer power is turned on.

   b) Turn off the Multi Function Printer, wait for 10 seconds, and turn on the Multi Function Printer.

2) If the menu settings changed from the personal computer have no effect, check and try the actions below.
   Settings in the software program, the printer driver, or the printer utilities are overriding the settings made on the personal computer.

   a) Change the settings of the Printer Driver, the Printer Utility or the Software Program using the PC, the Operator Panel or the Engineering Workstation.

1.5.3 Printing Problems

1) If a job did not print correct or incorrect characters were printed, check and try the actions below.

   a) Make sure “Ready to Print” appears on the operator panel before sending a job to print.

   b) Make sure the print media is loaded in the Multi Function Printer, then make sure the message of "Ready to Print" is displayed on the LCD.

   c) Verify that you are using the correct printer driver.

   d) Make sure you are using the correct Ethernet or USB cables and it securely connected at the back of the printer.

   e) Verify that the correct print media size is selected.

   f) If using a print spooler, verify that the spooler has not stalled.

   g) Check the printer interface from the "Configuration Page". Determine the host interface you are using. Print a Panel Setting page to verify that the current interfaces settings are correct.

   h) Output fonts will not print correctly using the PCL driver in its default mode.

2) If secure print is not available or not printing, refer to the requirements below.

   a) Make sure the Optional Memory (256 MB) is installed to the Multi Function Printer. (For Secure Printing, the Optional Memory is required.)

   b) If secure printing is not available although the optional 256 MB memory has been installed, increase the size of the RAM disk with the operator panel, PC, Engineering Workstation, or Web tools.

3) If print media misfeeds or multiple feeds occur, check and try the actions below.

a) Make sure the print media you are using meets the specifications for your printer. Refer to Print Media Guidelines of this section.

b) Flex print media before loading it.

c) Make sure the print media is loaded correctly.

d) Make sure the width and length guides on the print media sources are adjusted correctly.

e) If the print media are overfilled in sources, reduce the amount of media.

f) Load the recommended print side correctly for the type of print media you are using.

g) Turn the print media over or around and try printing again to see if feeding improves.

h) Check the print media type loaded in the source, and refill only one type of print media, if print media types are mixed.

i) Refill a new ream of print media, if some reams are mixed.

j) Remove the top and bottom sheets of a ream before loading the print media.

k) Do not reload print media until the print media source is empty.

4) If envelope misfeeds or multiple feeds occur, check and try the action below.

a) Load an envelope from the SSF.

b) Make sure the "Envelope" is selected in the "Paper Type" on the Operator Panel.

5) If page breaks in unexpected places, check and try the action below.

a) Make sure the print data is correct on your PC.

b) Make sure the Multi Function Printer and the PC are normal.

6) If a job prints from the wrong source or on the wrong print media, check and try the action below.

a) Check the "Paper Size" and "Paper Type" in the Tray Settings menu in the printer driver.

b) Make sure the "Paper Size" and the "Paper Type" in the "Tray 1" of the "Tray Settings" are correct using the Operator Panel.

7) If print media does not stack neatly in the output tray, check and try the action below.

a) Turn the print media stack over in the tray.

1.5.4 Print Media Guidelines

Print media is paper, labels, envelopes, coated paper among others. Your printer provides high-quality printing on a variety of print media. Selecting the appropriate print media for your printer helps avoid printing troubles. This section describes how to select print media, how to care for print media, and how to load the print media in the standard 250-sheet tray module.

Paper

For the best print quality in color, use 75 g/m2 (20 lb.) xerographic, grain long paper. For the best print quality in black and white, use 90 g/m2 (24 lb.) xerographic, grain long paper. Before buying large quantities of any print media, it recommends trying a sample first.
When loading paper, identify the recommended print side on the paper package, and load the paper accordingly. See "Loading Print Media in Tray" and "Single Sheet Feeder (SSF) for detailed loading instructions.

Paper Characteristics

The following paper characteristics affect print quality and reliability. It recommends that you follow these guidelines when evaluating new paper stock.

Weight
The tray automatically feeds paper weights from 60 to 216 g/m2 (16 to 58 lb. bond) grain long. The single sheet inserter automatically feeds paper weights from 60 to 216 g/m2 (16 to 58 lb. bond) grain long.
Paper lighter than 60 g/m2 (16 lb.) might not be stiff enough to feed properly, and could cause paper jams. For best performance, use 75 g/m2 (20 lb. bond) grain long paper.

Curl
Curl is the tendency of print media to curve at its edges. Excessive curl can cause paper feeding problems. Curl usually occurs after the paper passes through the printer, where it is exposed to high temperatures. Storing paper unwrapped in humid conditions, even in the paper tray, can contribute to paper curling prior to printing and cause feeding problems.

Smoothness
The degree of paper smoothness directly affects print quality. If the paper is too rough, the toner does not fuse to the paper properly, resulting in poor print quality. If the paper is too smooth, it can cause paper feeding problems.

Moisture Content
The amount of moisture in the paper affects both print quality and the ability of the printer to feed the paper properly. Leave the paper in its original packaging until you are ready to use it. This limits the exposure of the paper to moisture changes that can degrade its performance.

Grain Direction
Grain refers to the alignment of the paper fibers in a sheet of paper. Grain is either grain long, running the length of the paper, or grain short, running the width of the paper. For 60 to 135 g/m2 (16 to 36 lb. bond) paper, grain long fibers are recommended. For papers heavier than 135 g/m2 (36 lb. bond), grain short is preferred.

Fiber Content
Most high-quality xerographic paper is made from 100% chemically pulped wood. Paper containing fibers such as cotton possess characteristics that can result in degraded paper handling.

Recommended Paper

To ensure the best print quality and feed reliability, use 75 g/m2 (20 lb.) xerographic paper. Business papers designed for general business use also provide acceptable print quality.

Always print several samples before buying large quantities of any type of print media. When choosing any print media, you should consider the weight, fiber content, and color.

Only use paper able to withstand these temperatures without discoloring, bleeding, or releasing hazardous emissions. Check with the manufacturer or vendor to determine whether the paper you have chosen is acceptable for laser printers.

Unacceptable Paper

The following paper types are not recommended for use with the printer:

1) Chemically treated papers used to make copies without carbon paper, also known as carbonless papers, carbonless copy paper (CCP), or no carbon required (NCR) paper
2) Preprinted papers with chemicals that may contaminate the printer
3) Preprinted papers that can be affected by the temperature in the printer fuser
4) Preprinted papers that require a registration (the precise print location on the page) greater than ±0.09 in., such as optical character recognition (OCR) forms

   In some cases, you can adjust registration with your software program to successfully print on these forms.
5) Coated papers (erasable bond), synthetic papers, thermal papers
6) Rough-edged, rough or heavily textured surface papers or curled papers
7) Recycled papers containing more than 25% post-consumer waste that do not meet DIN 19 309
8) Multiple-part forms or documents
9) Label paper with Cut

Unacceptable Paper

The following paper types are not recommended for use with the printer:

1) Chemically treated papers used to make copies without carbon paper, also known as carbonless papers, carbonless copy paper (CCP), or no carbon required (NCR) paper
2) Preprinted papers with chemicals that may contaminate the printer
3) Preprinted papers that can be affected by the temperature in the printer fuser
4) Preprinted papers that require a registration (the precise print location on the page) greater than 0.09 in., such as optical character recognition (OCR) forms. In some cases, you can adjust registration with your software program to successfully print on these forms.
5) Coated papers (erasable bond), synthetic papers, thermal papers
6) Rough-edged, rough or heavily textured surface papers or curled papers
7) Multiple-part forms or documents
8) Label paper with Cut

Selecting Paper

Proper paper selection helps prevent jams and ensures trouble-free printing.
To help avoid jams or poor print quality:

1) Always use a new, undamaged paper.
2) Before loading the paper, identify the recommended print side of the paper. This information is usually indicated on the paper package.
3) Do not use paper that you have cut or trimmed yourself.
4) Do not mix print media sizes, weights, or types in the same source. This may result in a paper jam.
5) Do not remove trays while a job is printing.
6) Make sure the Paper Type and Paper Size settings are correct.
7) Make sure the paper is properly loaded in the tray.
8) Flex paper back and forth, and then fan them. Straighten the edges of the stack on a level surface.
9) When curl is excessive, with plain paper, turn it over and reset it.

Identifying Print Media Sources and Specifications

The following tables provide information on standard and optional print media sources.

Print Media Sizes and Support Y: Yes N: No

	250-sheet Tray
A4	Y
A5	Y
B5	Y
Letter	Y
Executive	Y
Folio (8.5" x13")	Y
Legal (8.5" x14")	Y
Com-10	Y
Monarch	Y
DL	Y
C5	Y
User-specified print media	Y

Print Media Supported Y: Yes N: No

	250-sheet Tray
Plain Paper Light (60-90gsm)	Y
Plain Paper Normal (80gsm)	Y
Plain Paper Thick (90-105gsm)	Y
Labels	Y
Covers Normal (106-163gsm)	Y
Covers Thick (164-216gsm)	Y
Envelope	Y
Postcard	Y
Coated Normal (106-163gsm)	Y
Coated Thin (95-105gsm)	N
Coated Thick (164-216gsm)	Y

1.5.5 Copy Problem

If document loaded in the ADF cannot be copied, check and try the action below.

1) Ensure that the ADF cover is firmly closed.
2) Ensure that the release lever is properly positioned.

1.5.6 Fax Problems

If printer is not working, there is no display and the buttons are not working. Check and try the action below.

1) Unplug the power cord and plug it in again.
2) Ensure that there is power to the electrical receptacle.

If no dial tone sounds, check and try the action below.

1) Check that the phone line is connected properly.
2) Check that the phone socket in the wall is working by plugging in another phone.

If numbers stored in the memory do not dial correctly, check and try the action below.

1) Ensure that the numbers are stored in the memory correctly. (Print a Phone Book list.)

If document does not feed into the printer, check and try the action below.

1) Ensure that the document is not wrinkled and you are putting it in correctly. Check that the document is of the right size, not too thick or thin.
2 Ensure that the ADF cover is firmly closed.

If faxes are not received automatically, check and try the action below.

1) The FAX mode should be selected.
2) Ensure that there is paper in the paper tray.
3) Check to see if the display shows Memory Full.

If printer does not send faxes, check and try the action below.

1) Ensure that the document is loaded in the ADF or on the document feeder glass.
2) Sending should show up on the display.
3) Check the other fax machine you are sending to, to see if it can receive your fax.

If incoming fax has blank spaces or is received in poorquality, check and try the action below.

1) A noisy phone line can cause line errors.
2) Check your printer by making a copy.
3) The toner cartridge may be empty. Replace the toner cartridge.
4) The fax machine sending you the fax may be faulty.

If some of the words on an incoming fax are stretched, check and try the action below.

1) The fax machine sending you the fax had a temporary document jam.

If there are lines on the documents you send, check and try the action below.

1) Check your scan glass for marks and clean it.

The printer dials a number, but the connection with another fax machine fails. Check and try the action below.

1) The other fax machine may be turned off, out of paper, or cannot answer incoming calls. Speak with the other machine operator and ask her/him to sort out the problem.

If documents are not stored in the memory, check and try the action below.

1) There may not be enough memory to store the document. If the display shows a Memory Full message, delete any documents you no longer need from the memory and then restore the document, or wait for the job in progress (e.g., a fax transmission or reception) to complete.

If blank areas appear at the bottom of each page or on other pages, with a small strip of text at the top. Check and try the action below.

1) You may have chosen the wrong paper settings in the user option setting. See "Print Media Guidelines" on page 135.

If printer will not send or receive faxes, check and try the action below.

1) Ensure that the country code is set correctly under SETUP → Admin Menu → Fax Settings → Country.

If error often occurs during a fax transmission or reception, check and try the action below.

1) Reduce the modem speed under SETUP → Admin Menu → Fax Settings → Modem Speed.

1.5.7 Scanning Problems

If scanner does not work, check and try the action below.

1) Ensure that you place the document to be scanned face down from the document feeder glass, or face up in the ADF.
2) There may not be enough available memory to hold the document you want to scan. Try the Prescan function to see if that works. Try lowering the scan resolution rate.
3) Check that the USB cable is connected properly.
4) Ensure that the USB cable is not defective. Switch the cable with a known good cable. If necessary, replace the cable.
5) Check that the scanner is configured correctly. Check the application you want to use to make certain that the scanner job is being sent to the correct port.

If printer scans very slowly, check and try the action below.

1) Graphics are scanned more slowly than text when using the Scan to E-mail or Scan to Network feature.
2) Communication speed becomes slow in scan mode because of the large amount of memory required to analyze and reproduce the scanned image.
3) Scanning images at a high resolution takes more time than scanning at a low resolution.

If document misfeeds or multiple feeds occur in the Automatic Document Feeder (ADF), check and try the action below.

1) Check whether the ADF roller assembly is installed properly.
2) Ensure the document's paper type meets the specifications for the printer.
3) Check whether the document is properly loaded in the ADF.
4) Ensure that the document guides are adjusted properly.
5) Ensure that the number of document sheets do not exceed the maximum capacity of the ADF.
6) Ensure that the document is not curled.

7 Fan the document well before loading it in the ADF.

If vertical stripes appear on the output when scanned using the ADF, check and try the action below.

1) Clean the ADF glass.

If smear appears at the same location on the output when scanned using the document glass, check and try the action below.

1) Clean the document glass.

If images are skewed, check and try the action below.

1) Ensure that the document is loaded straight in the ADF or on the document glass.

If diagonal lines appear jagged when scanned using the ADF, check and try the action below.

1) If the document uses thick media, try scanning it from the document glass.

If message appears on your computer screen:

- "Device can't be set to the H/W mode you want."
- "Port is being used by another program."
- "Port is Disabled."
- "Scanner is busy receiving or printing data. When the current job is completed, try again."
- "Invalid handle."
- "Scanning has failed."

Check and try the action below.

1) There may be a copying or printing job in progress. When the current job is complete, try the job again.
2) The selected port is currently being used. Restart your computer and try again.
3) The printer's cable may be improperly connected or the power may be off.
4) The scanner driver is not installed or an operating environment is not set up properly.
5) Ensure that the port is properly connected and the power is turned on. Then restart your computer.
6) Check if the USB cable is properly connected.

If printer does not properly transfer scan data to a specified destination via the Scan to E-mail or Scan to Network feature, check and try the action below.

1) Check if the following settings have been set correctly on the Dell Printer Configuration Web Tool.

   -Scan to Network

2) Check the following settings under Address Book → Server Address:

   - Server Address
   - Server Path
   - Share Name
   - Login Name
   - Login Password
   - Scan to E-mail

3) Check the following setting under Address Book → E-Mail Address:

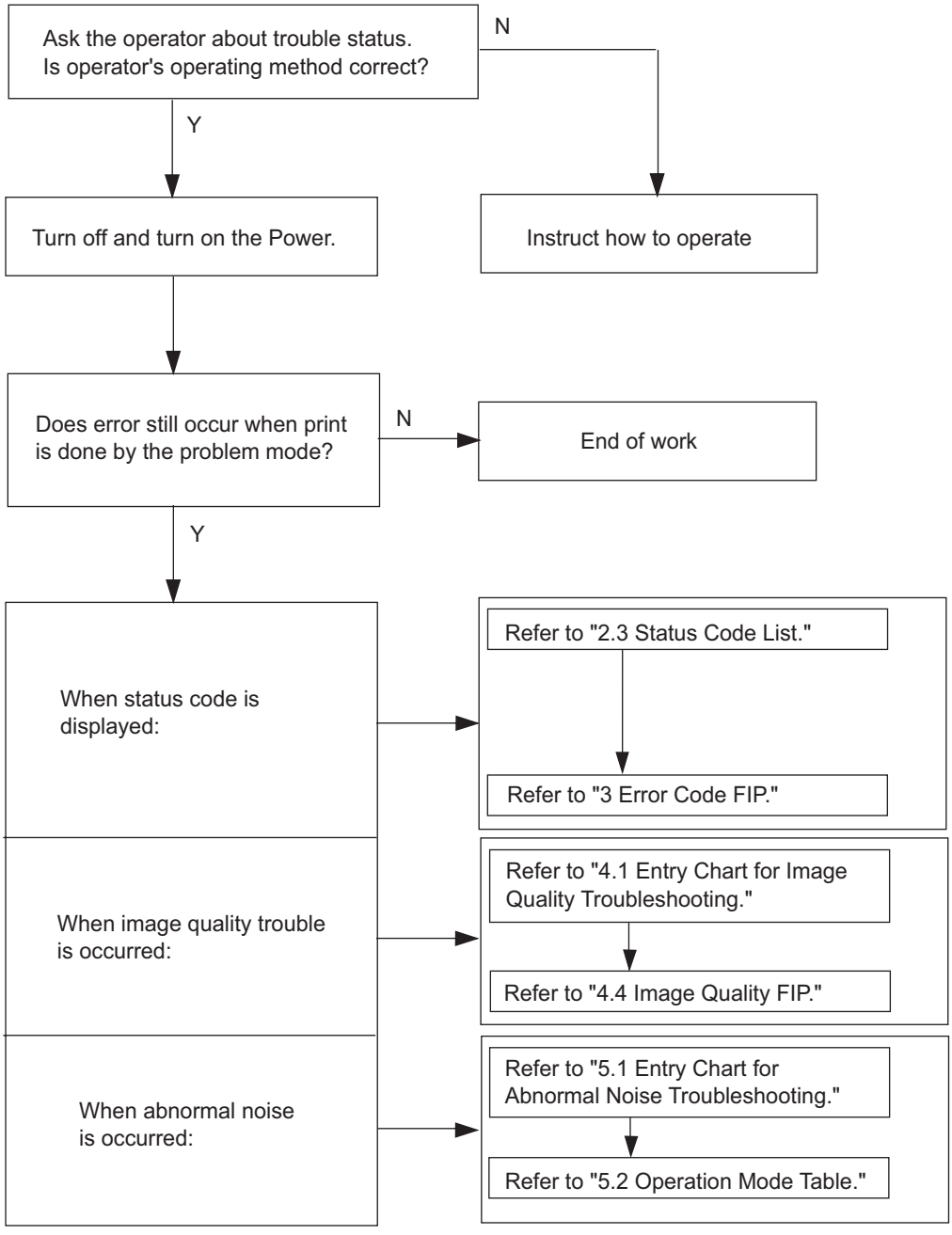
   - Address

2. FIP

2.1 FIP

The FIP is the first step for trouble diagnosis. The FIP isolates the presence of various troubles including error codes, and guides the troubleshooting procedure.

2.2 Flow of FIP



2.3 Status Code List

NOTE

The error messages for the errors which automatically reset themselves or those which occur during the operation of Copy/Push Scan will not appear on the "Status Window".

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
001-360 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 001-360	<IOT Fan Motor Failure> Fan Motor failure is detected.	Flows 1 FIP-1. 1
MCU Firmware Error Error 003-340 Code: XX Restart Printer	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 003-340-000000xx	<IOT Firmware Error> MCU firmware error occurred. Code: XX 01: Task Over 02: Time Over 03: NV Write Retry 04: NV Write Queue Over 05: LEISUS Send Over 06: CRUM Data 07: Pursuit Comp 08: Pursuit SUM 09: Fuser NV 0A: Dispense 0B: FSR SBY Mode 0C: Media ERR2 0D: Hanpa 0E: FSR SBY Mode 0F: FSR Print Mode 10: Renzoku Heater 11: PPM Group ERR 12: CMODE ERR 13: Send CMD ERR 14-25h:Not Used	Flows 2 FIP-1. 2
NVM Error Error 003-356 Code:xxxxxxxx Restart Printer	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 003-356	<IOT NVRAM Error> The error is detected at MCU NVRAM check. Code: 1000-17FF PWBA MCU NVM 3000-30FF PHD CRUM 3100-31FF Y Toner CRUM 3200-32FF M Toner CRUM 3300-33FF C Toner CRUM 3400-34FF K Toner CRUM 3800-38FF PWBA EEPROM	Flows 3 FIP-1. 3

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Paper Jam 005-110 Open ADF Cover and Clear Jam	Paper Jam has occurred at the ADF. Remove the remaining documents from the ADF. Please click the Show Me How Button for details. 005-110	<PICKUP Jam> The Pick Up Jam occurred.	Flows 4 FIP-1. 4
Paper Jam 005-121 Open ADF Cover and Clear Jam	Paper Jam has occurred at the ADF. Remove the remaining documents from the ADF. Please click the Show Me How Button for details. 005-121	<ADF Jam> The ADF Jam occurred.	Flows 4 FIP-1. 4
Job was Finished 005-124 Open ADF Cover and Remove Document	Job was Finished. The documents is remaining at the ADF. Remove the remaining documents from the ADF. Please click the Show Me How Button for details. 005-124	<ADF Jam> The ADF Jam occurred when the job is cancelled.	Flows 4 FIP-1. 4
Cover Open 005-301 Close ADF Cover	The ADF Cover is open. Close the ADF Cover. 005-301	<ADF Cover Open> The ADF Cover is opened.	Flows 5 FIP-1. 5
Laser Error Error 006-370 Error Code: XX Restart Printer	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 006-370-000000xx	<IOT ROS Failure> The ROS failure is detected. 01: SOS Rotating up defect 02: SOS Interval defect 03: LD defect	Flows 6 FIP-1. 6
007-340 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 007-340	<IOT Motor Failure> Main Motor failure is detected.	Flows 7 FIP-1. 7

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
007-341 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 007-341	<IOT Motor Failure> Sub Motor failure is detected.	Flows 8 FIP-1. 8
007-371 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 007-371	<IOT K Mode Solenoid Error> K Mode Solenoid (Color Mode Switching Solenoid) error is detected.	Flows 9 FIP-1. 9
CTD Sensor Error Error 009-340 Code: XX Restart Printer	Multifunction printer error. Contact customer support if this failure is repeated. 009-340-000000xx	<IOT CTD (ADC) Sensor Error> CTD (ADC) sensor error is detected. 01 or 10: Y Toner Patch Error 02 or 20: M Toner Patch Error 03 or 30: Y and M Toner Patch Error 04 or 40: C Toner Patch Error 05 or 50: Y and C Toner Patch Error 06 or 60: M and C Toner Patch Error 07 or 70: Y, M and C Toner Patch Error 08 or 80: K Toner Patch Error 09 or 90: Y and K toner Patch Error 0A or A0: M and K Toner Patch Error 0B or B0: Y, M and K Toner Patch Error 0C or C0: C and K Toner Patch Error 0D or D0: Y, C and K Toner Patch Error 0E or E0: M, C and K Toner Patch Error 0F or F0: Y, M, C and K Toner Patch Error	Flows 10 Y Flows 11 M Flows 12 C Flows 13 K FIP-1. 10 Y FIP-1. 11 M FIP-1. 12 C FIP-1. 13 K
010-317 Reseat Fuser Restart Printer Contact Support	The Fuser is either missing or not fully inserted into the multifunction printer. CAUTION: Turn off the multifunction printer and wait for 30 minutes. Open the Front Cover and make sure that the Fuser have been fully installed. Please click the Show Me How Button for details. 010-317	<IOT Fuser Detached> Fuser detached is detected.	Flows 14 FIP-1. 14
Replace Fuser Now 010-351 Printer Contact Support If Message Returns	Multifunction printer error. Contact customer support. Please click the Show Me How Button to show details. 010-351	<IOT Fuser (CRU) Life Over> Fuser has reached the replacement time.	Flows 15 FIP-1. 15

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Env. Sensor Error Error 010-354 Code: XX Restart Printer	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 010-354-000000xx	<IOT Environment Sensor Error> Environment sensor error is detected. 01: Humid Sensor Error 02: Temp. Sensor Error 03: Humid and Temp Sensors Error	Flows 16 FIP-1. 16
Fuser Error Error 010-377 Error Code: xx Restart Printer	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 010-377-000000xx	<IOT Fuser Failure> The Fuser failure is detected. 01: NC circuit fail 02: NC Detect disconnection 03: NC Detect fail 04: NC Comp disconnection 05: NC Comp fail 06: NC Temp Over 07: STS Temp Over 08: NC Comp Table Fail 09: NC Overheat 0A: STS disconnection 0B: STS Overheat 0C: STS Low-temp 0D: NC Low-temp 0E: Cool Time-over 0F: Fuser Ready Time-over ERR1 10: NC Warm-up Time-over ERR2 11: Fuser Ready Time-over ERR2 12: Relay Off STS H 13: Relay Off NC H 14: Relay Other 15: Fuser Machine Code ERR 16: Fuser Ready Timeover ERR3 NC: No Contact Sensor STS: Soft Touch Sensor	Flows 17 FIP-1. 17
Copy Scan Fax 010-421 Printer Replace Fuser Now Contact Support	Replace Fuser Now. Contact customer support. Please click the Show Me How Button to show details. 010-421	<IOT Fuser Life Pre Warning> Fuser is going to reach the replacement time.	Flows 15 FIP-1. 15
016-300 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-300	<ESS Data Cache Error> CPU data cache error is detected.	Flows 18 FIP-1. 18
016-301 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-301	<ESS Instruction Cache Error> CPU instruction cache error is detected.	Flows 18 FIP-1. 18

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
016-302 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-302	<ESS Illegal Exception> CPU illegal exception is detected.	Flows 18 FIP-1. 18
016-310 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-310	<ESS Font-ROM Error> The Font-ROM error is detected.	Flows 18 FIP-1. 18
016-313 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-313	<ASIC Fail> The error is detected by ASIC error.	Flows 18 FIP-1. 18
016-315 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-315	<ESS On Board RAM W/R Check Fail> The error is detected by on board RAM W/R check during initialization.	Flows 18 FIP-1. 18
016-316 Printer Reseat Memory Restart Printer Contact Support	Multifunction printer error. Turn off the multifunction printer. Remove the additional memory module from the slot, and then reattach it firmly. Turn on the multifunction printer. Contact customer support if this failure is repeated. 016-316	<ESS DIMM Slot RAM W/R Fail> The error is detected by DIMM slot RAM W/R check.	Flows 19 FIP-1. 19
016-317 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-317	<ESS ROM Check (Main) Fail> Checksum error in main program ROM is detected.	Flows 18 FIP-1. 18

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
016-318 Printer Reseat Memory Restart Printer Contact Support	Multifunction printer error. Remove the unsupported additional memory module. Contact customer support if this failure is repeated. 016-318	<ESS DIMM Slot RAM Power On Initializing Fail > The error is detected by DIMM slot RAM power on initial check.	Flows 19 FIP-1. 19
016-323 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-323	<ESS NVRAM1 W/R Check Fail> The failure is detected by NVRAM 1 W/R check during initialization.	Flows 18 FIP-1. 18
016-324 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-324	<ESS NVRAM2 W/R Check Fail> The failure is detected by NVRAM 2 W/R check during initialization.	Flows 18 FIP-1. 18
016-327 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-327	<ESS NVRAM SIZE And ID Check Fail> The error is detected by consistency check between NVRAM size required by the system and its actual size, and by consistency check of ID recorded when turning ON the power.	Flows 18 FIP-1. 18
016-340 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-340	<CONT AIO Network Communication Fail> Communication error between Network Module and System Control Module is detected.	Flows 18-1 FIP-1. 18
016-344 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-344	<CONT AIO Network MAC Address Checksum Error> Checksum error in Network MAC address is detected. MAC: Media Access Control	Flows 18 FIP-1. 18
016-345 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-345	<CONT AIO Network Ethernet BIST parity/ RAM R/W Error> The error is detected by Network Ethernet parity RAM R/W check.	Flows 18 FIP-1. 18

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
016-346 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-346	<CONT AIO Network Internal Loopback Error> The error is detected by on board Network Internal Loopback check.	Flows 18 FIP-1. 18
016-347 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-347	<CONT AIO Network Fatal Error> The fatal error is detected by on board Network check.	Flows 18 FIP-1. 18
016-370 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 016-370	<IOT-ESS Communication Fail> Communication failure between IOT and ESS is detected.	Flows 20 FIP-1. 20
Invalid ID 016-383 Printer Contact Support If Message Returns	Firmware download ID error has occurred. Press Set Button. Contact customer support if this failure is repeated. 016-383	<Download ID Error> The download file of other models (different ID) is detected.	Flows 21 FIP-1. 21
Range Chk Error 016-384 Printer Contact Support If Message Returns	Firmware download range error has occurred. Press Set Button. Contact customer support if this failure is repeated. 016-384	<Download Range Error> Due to the wrong data downloaded, writing was attempted to the non-modifiable area.	Flows 21 FIP-1. 21
Header Error 016-385 Printer Contact Support If Message Returns	Firmware download header checksum error has occurred. Press Set Button. Contact customer support if this failure is repeated. 016-385	<Download Header Error> The download file is broken, or communication error is detected.	Flows 21 FIP-1. 21

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Check Sum Error 016-386 Printer Contact Support If Message Returns	Firmware download checksum error has occurred. Press Set Button. Contact customer support if this failure is repeated. 016-386	<Download Checksum Error> The download file is broken, or communication error is detected.	Flows 21 FIP-1. 21
Format Error 016-387 Printer Contact Support If Message Returns	Firmware download format error has occurred. Press Set Button. Contact customer support if this failure is repeated. 016-387	<Download Format Error> The download file is broken, or communication error is detected.	Flows 21 FIP-1. 21
Open Flash Err. 016-388 Printer Contact Support If Message Returns	Firmware download format error has occurred. Press Set Button. Contact customer support if this failure is repeated. 016-388	<Download Error> An error occurred opening the Flash.	Flows 21 FIP-1. 21
Protection Error 016-391 Printer Contact Support If Message Returns	Firmware download protect error has occurred. Press Set Button. Contact customer support if this failure is repeated. 016-391	<Download Error> <Download Format Error> The download file is broken, or communication error is detected.	Flows 21 FIP-1. 21
Erase Flash Err. 016-392 Printer Contact Support If Message Returns	Firmware download delete error has occurred. Contact customer support if this failure is repeated. 016-392	<Download Error> An error was detected at Flash memory erasing.	Flows 18 FIP-1. 18
Write Flash Err. 016-393 Printer Contact Support If Message Returns	Firmware download write error has occurred. Contact customer support if this failure is repeated. 016-393	<Download Error> An error was detected at Flash memory writing.	Flows 18 FIP-1. 18
Verify Error 016-394 Printer Contact Support If Message Returns	Firmware download verify error has occurred. Contact customer support if this failure is repeated. 016-394	<Download Error> An error was detected at Flash memory verifying.	Flows 18 FIP-1. 18

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
SMTP Error 016-503 Scan Press ✓	No Message.	<SMTP Error> Failed to Resolve SMTP Server Name Transmission.	Flows 22 FIP-1. 22
POP Error 016-504 Scan Press ✓	No Message.	<POP3 Error> Failed to Resolve POP3 Server Name Transmission.	Flows 22 FIP-1. 22
POP login Error 016-505 Scan Press ✓	No Message.	<POP3 Error> Failed to Login to POP3 Server at Mail Transmission.	Flows 22 FIP-1. 22
SMTP Login Error 016-506 Scan Press ✓	No Message.	<SMTP Error> Required User Parameter Not Set.	Flows 22 FIP-1. 22
SMTP Login Error 016-507 Scan Press ✓	No Message.	<SMTP Error> Failed to Login to SMTP Server at Mail Transmission.	Flows 22 FIP-1. 22
(For standard printer) Memory Full 016-700 Printer Add Memory Press ✓ (For printer with optional memory) Memory Full 016-700 Printer Job too Large Press ✓	The multifunction printer memory is full and cannot continue processing the current print job. Press Continue Button to clear the message, cancel the current print job. 016-700	<Memory Overflow> The amount of data in the print job exceeded the memory capacity of the printer.	Flows 23 FIP-1. 23
PCL Request 016-720 Printer Data Violation Press ✓	Error relating to PDL emulation problems occurs. Press Continue Button to clear the message, cancel the current print job. 016-720	<PDL Error> PDL error occurs.	Flows 24 FIP-1. 24
Invalid User 016-757 Printer Account Denied Press ✓	Authentication error has occurred. The account is not registered. Please inquire of the system administrator. 016-757	<Auditron-Invalid User> Account error occurs.	Flows 25 FIP-1. 25
Disabled Func 016-758 Printer Denied Col print Press ✓	Function unavailable. It is a function that cannot be used. Please inquire of the system administrator. 016-758	<Auditron-Disabled Function> Disabled function is selected.	Flows 26 FIP-1. 26

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Reached Limits 016-759 Printer Over your limits Press ✓	Printable page limit reached. Printable page limit reached, cannot print. Please inquire of the system administrator. 016-759	<Auditron-Reached Limit> Detects the reached limit.	Flows 27 FIP-1. 27
SMTP Error 016-764 Scan Press ✓	No Message	<SMTP Error> Error Connecting to SMTP Server.	Flows 22 FIP-1. 22
SMTP Server Full 016-765 Scan Press ✓	No Message.	<SMTP Error> SMTP Server Disk Space Full.	Check the server side.
SMTP Error 016-766 Scan Press ✓	No Message.	<SMTP Error> SMTP Server File System Error.	Check the server side.
Address Error 016-767 Scan Press ✓	No Message.	<Email Address Error> Invalid Reception Email Address.	Flows 22 FIP-1. 22
From Address Error 016-768 Scan Press ✓	No Message.	<Email Address Error> Invalid Sender Email Address.	Flows 22 FIP-1. 22
Network Error 016-786 Scan Press ✓	No Message.	<Network Error> Time Out Error at Data Transmission / Reception.	Flows 22 FIP-1. 22 or Check the server side.
Network Not Ready 016-790 Scan Press ✓	No Message.	<Network Error> F2N Module Starting Up or IP Address Not Determined.	Flows 22 FIP-1. 22
Network Not Ready 016-794 Scan Press ✓	No Message.	<Network Error> The Scan to SMB can not be executed, because the SMB over TCP has not waked up.	Flows 22 FIP-1. 22
Invalid Job 016-799 Printer Data Violation Press ✓	The configuration of the multifunction printer on the printer driver does not conform to the printer. Press Cancel button to cancel the print job. Make sure that the configuration of the printer on the printer driver conforms to the printer. 016-799	<Job Environment Violation> There are some prohibition in the setting contents of a print job.	Flows 28 FIP-1. 28

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
(For standard printer) Memory Full 016-980 Printer Add Memory Press ✓ (For printer with optional memory) Memory Full 016-980 Printer Job too Large Press ✓	No Message.	<IOT Disk Full> The RAM Disk is full.	Flows 29 FIP-1. 29
(For standard printer) Collate Full 016-981 Printer Add Memory Press ✓ (For printer with optional memory) Collate Full 016-981 Printer Job too Large Press ✓	No Message.	<Collate Full> Collate Full error occurred.	Flows 30 FIP-1. 30
Mail Size Limits 016-985 Scan Press ✓	No Message.	<Mail Size Error> Mail Size Error.	Check the server side.
File size limits 016-986 Scan Press ✓	No Message.	<File Size Error> Exceeded Format-specific Size Limit after Conversion.	Flows 31 FIP-1. 31
Memory Full 017-970 System Job Failure Press ✓	No Message.	<Out of Memory> Out of Memory for AIOC	Flows 32 FIP-1. 32
H/W Error 017-971 System Job Failure Press ✓	No Message.	<Flash ROM Error> Write error at Image Data Flash ROM.	Flows 31 FIP-1. 31
H/W Error 017-972 System Job Failure Press ✓	No Message.	<Flash ROM Error> Erase error at Image Data Flash ROM.	Flows 31 FIP-1. 31
H/W Error 017-973 System Job Failure Press ✓	No Message.	< Flash ROM Error> Suspend error at Image Data Flash ROM.	Flows 31 FIP-1. 31
H/W Error 017-974 System Job Failure Press ✓	No Message.	< Flash ROM Error> Resume error at Image Data Flash ROM.	Flows 31 FIP-1. 31
File Error 017-975 System Job Failure Press ✓	No Message.	<File Error> File Handle Count exceeds Limit.	Flows 31 FIP-1. 31
File Error 017-976 System Job Failure Press ✓	No Message.	<File Error> File Count exceeds Manageable Limit.	Flows 31 FIP-1. 31

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
File Error 017-977 System Job Failure Press ✓	No Message.	<File Error> Document Count exceeds Manageable Limit.	Flows 31 FIP-1. 31
File Error 017-978 System Job Failure Press ✓	No Message.	<File Error> Document Page Count exceeds Limit.	Flows 31 FIP-1. 31
File Error 017-979 System Job Failure Press ✓	No Message.	<File Error> File Double open.	Flows 31 FIP-1. 31
Report error 017-980 System Job Failure Press ✓	No Message.	<Report File Open/Close Error> Failed to Open/Close Report File.	Flows 31 FIP-1. 31
File Error 017-986 System Job Failure Press ✓	No Message.	<File Error> Empty File created.	Flows 31 FIP-1. 31
File Error 017-987 System Job Failure Press ✓	No Message.	<File Error> File read error due to Buffer overflow.	Flows 31 FIP-1. 31
PCScan Time Out 017-988 Scan Job Failure Press ✓	No Message.	<PC Scan Time Out> Timeout at Scan-To-Application start.	Flows 33 FIP-1. 33
File Error 017-989 System Job Failure Press ✓	No Message.	<File Size Over> The Writing File Size exceeds the buffer size.	Flows 31 FIP-1. 31
Download Mode Send FW Data Error 024-360 Send FW Data	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 024-360	<Download Error> Download failure of MCU firmware.	Flows 34 FIP-1. 34
024-362 Printer Restart Printer PAGEC Time Error Contact Support	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 024-362	<IOT PAGEC Timeout Error> The PAGEC timeout error is detected.	Flows 35 FIP-1. 35

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Load Tray 1 024-910 Printer	Actual paper size in tray and specified paper size are different. Load the specified paper in Tray 1. Paper Size: XXX Paper Type: YYY 024-910	<IOT Paper Size Mismatch in Tray 1> The paper size mismatch in Tray 1 is detected.	Flows 36 FIP-1. 36
Load SSF 024-914 Printer	Actual paper size in tray and specified paper size are different. Load the specified paper in SSF. Paper Size: XXX Paper Type: YYY 024-914	<IOT Paper Size Mismatch in SSF> The paper size mismatch in SSF is detected.	Flows 37 FIP-1. 37
Load Tray 1 024-965 Printer	No paper detected. Load the specified paper in Tray 1. Paper Size: XXX Paper Type: YYY 024-965	<No suitable paper in Tray 1> The paper empty is detected.	Flows 38 FIP-1. 38
Load SSF 024-969 Printer	No paper detected. Load the specified paper in SSF. Paper Size: XXX Paper Type: YYY 024-969	<No suitable paper in SSF> The paper empty is detected.	Flows 39 FIP-1. 39
SMB Login Error 031-521 Scan Press ✓	No Message.	<SMB Error> The number of the Workstation which is allowed to login to SMB scan is restricted.	Flows 40 FIP-1. 40
SMB Login Error 031-522 Scan Press ✓	No Message.	<SMB Error> SMB user authentication has failed, or login to SMB scanner has failed.	Flows 40 FIP-1. 40
SMB Error 031-523 Scan Share Name Error Press ✓	No Message.	<SMB Error> The shared name on SMB scan server has a problem.	Flows 41 FIP-1. 41
SMB Login Error 031-524 Scan Press ✓	No Message.	<SMB Error> The restriction on the number of SMB scan user has been exceeded.	Flows 42 FIP-1. 42
SMB Error 031-525 Scan File Access Error Press ✓	No Message.	<SMB Error> The SMB scan client has no access permission (Win9x series).	Flows 43 FIP-1. 43

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
DNS Error 031-526 Scan Name Resolve Error Press ✓	No Message.	<SMB Error> Resolving host names has failed on SMB scan.	Flows 41 FIP-1. 41
DNS Error 031-527 Scan Server Address Error Press ✓	No Message.	<SMB Error> No DNS server has been set on SMB scan.	Check the network settings.
SMB Error 031-528 Scan Server Not Found Press ✓	No Message.	<SMB Error> The connection with a server has a problem on SMB scan.	Flows 41 FIP-1. 41
SMB Login Error 031-529 Scan Press ✓	No Message.	<SMB Error> The login name or the password for SMB scan has a problem.	Flows 44 FIP-1. 44
SMB Path Error 031-530 Scan Press 100	No Message.	<SMB Error> The storage of scanned images has a problem on SMB scan server.	Flows 44 FIP-1. 44
SMB List Error 031-531 Scan Press ✓	No Message	<SMB Error> The file/folder name of SMB scan server could not be successfully acquired.	Flows 44 FIP-1. 44
SMB Error 031-532 Scan File Name Error Press ✓	No Message.	<SMB Error> The suffix of the file/folder name of SMB scan has exceeded the limit value.	Flows 44 FIP-1. 44
SMB Error 031-533 Scan File Make Error Press ✓	No Message.	<SMB Error> SMB scan file could not be successfully created.	Flows 44 FIP-1. 44
SMB Error 031-534 Scan Folder Make Error Press ✓	No Message.	<SMB Error> SMB scan folder could not be successfully created.	Flows 44 FIP-1. 44
SMB Error 031-535 Scan File Delete Error Press ✓	No Message.	<SMB Error> SMB scan file could not be successfully deleted.	Flows 44 FIP-1. 44
SMB Error 031-536 Scan Folder Delete Error Press ✓	No Message.	<SMB Error> SMB scan folder could not be successfully deleted.	Flows 44 FIP-1. 44
SMB Error 031-537 Scan Disk Full Error Press ✓	No Message.	<SMB Error> No free space is available on the location on SMB scan data server.	Check the server side.
SMB Error 031-539 Scan Server Name Error Press ✓	No Message.	<SMB Error> The name of SMB server (NetBIOS) is wrongly specified.	Ask to the system administrator.
SMB Login Error 031-540 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-007): The scan domain name is wrongly specified.	Ask to the system administrator.

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
SMB Login Error 031-541 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-008): The scan user name is wrongly specified.	Flows 44 FIP-1. 44
SMB initializing.. 031-542 Scan Press ✓	No Message.	<SMB Error> SMB (TCP/IP) has not been started.	Ask to the system administrator.
SMB Login Error 031-543 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-045): The time when no login to the scan is allowed.	Ask to the system administrator.
SMB Login Error 031-544 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-046): The password expiry date has passed.	Change the password.
SMB Login Error 031-545 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-047): The password must be changed.	Change the password.
SMB Login Error 031-546 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-048): The user is invalid.	Flows 44 FIP-1. 44
SMB Login Error 031-547 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-049): The user is locked out.	Flows 44 FIP-1. 44
SMB Login Error 031-548 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-050): The user expiry date has passed.	Ask to the system administrator.
SMB Login Error 031-549 Scan Press ✓	No Message.	<SMB Error> SMB protocol error (4-051): There is a restriction on users. Empty password is not allowed.	Ask to the system administrator.
SMB Error 031-550 Scan File Append Error Press ✓	No Message.	<SMB Error> The append command failed on SMB scan.	Ask to the system administrator.
SMB Error 031-551 Scan Rename Error Press ✓	No Message.	<SMB Error> The rename command failed on SMB scan.	Ask to the system administrator.
SMB Error 031-552 Scan File Duplication Press ✓	No Message.	<SMB Error> SMB scan was canceled since the ìCancelî was selected for resolving the file name overlap.	Turning off and on the printer power. If the error occurred again, replace the printer.
DNS Error 031-574 Scan Name Resolve Error Press ✓	No Message.	<DNS Library Call Error> Resolving host names has failed on FTP scan.	Ask to the system administrator and check the network setting.

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
DNS Error 031-575 Scan Server Address Error Press ✓	No Message.	<DNS Library Call Error> No DNS server has been set on FTP scan.	Check the network settings.
FTP Error 031-576 Scan Server Not Found Press ✓	No Message.	<DNS Library Call Error> The connection with a server has a problem on FTP scan.	Flows 44 FIP-1. 44
FTP Login Error 031-578 Scan Press ✓	No Message.	<USER./PASS command failed> The login name or the password for FTP scan has a problem.	Flows 44 FIP-1. 44
FTP Path Error 031-579 Scan Press ✓	No Message.	<Migration to RepositoryPath failed> The storage of scanned images has a problem on FTP scan server	Flows 44 FIP-1. 44
FTP Error 031-580 Scan NLST Command Error Press ✓	No Message.	<NLST command failed> The file/folder name of FTP scan server could not be successfully acquired.	Flows 44 FIP-1. 44
FTP Error 031-581 Scan File Name Error Press ✓	No Message.	<FTP Error> The suffix of the file/folder name of FTP scan has exceeded the limit value.	Flows 44 FIP-1. 44
FTP Error 031-582 Scan STOR Command Error Press ✓	No Message.	<STOR command failed> FTP scan file could not be successfully created.	Flows 44 FIP-1. 44
FTP Error 031-584 Scan MKD Command Error Press ✓	No Message	<MKD command failed> FTP scan folder could not be successfully created.	Flows 44 FIP-1. 44
FTP Error 031-585 Scan DEL Command Error Press ✓	No Message.	<DEL command failed> FTP scan file could not be successfully deleted.	Flows 44 FIP-1. 44
FTP Error 031-587 Scan RMD Command Error Press ✓	No Message.	<RMD command failed> FTP scan folder could not be successfully deleted.	Flows 44 FIP-1. 44
FTP Error 031-588 Scan Write Error Press ✓	No Message.	<Write failed> Data writing to FTP scan server has failed.	Flows 44 FIP-1. 44
FTP Error 031-590 Scan File Duplication Press ✓	No Message.	<FTP Error> FTP scan was canceled since the “Cancel” was selected for resolving the file name overlap.	Turning off and on the printer power. If the error occurred again, replace the printer.

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
FTP Error 031-594 Scan TYPE Command Error Press ✓	No Message	<TYPE command failed> The TYPE command has failed on FTP scan.	Ask to the system administrator.
FTP Error 031-595 Scan PORT Command Error Press ✓	No Message.	<PORT command failed> The PORT command has failed on FTP scan.	Ask to the system administrator.
FTP Error 031-598 Scan APPE Command Error Press ✓	No Message.	<APPE command failed> The append command has failed on FTP scan.	Ask to the system administrator.
FTP Error 031-599 Scan Rename Error Press ✓	No Message.	<RNFR command or RNTO command failed> The rename command has failed on FTP scan.	Ask to the system administrator.
Communication 033-500 Fax Job Failure Press ✓	No Message.	< FAX RX JPEG Data Limit Over> The Incoming Fax JPEG Decoded Data exceeds System Data Limit.	Flows 45 FIP-1. 45
Codec Error 033-501 Fax Job Failure Press ✓	No Message.	<CODEC Error> The Codec Process Aborted by Read error during Manual Dialing.	Flows 46 FIP-1. 46
File Error 033-502 Fax Job Failure Press ✓	No Message.	<File Open Error> The File Open error occurred.	Flows 31 FIP-1. 31
Memory Full 033-503 Fax Job Failure Press ✓	No Message.	<Memory Full> Memory Full at Reception.	Flows 32 FIP-1. 32
Codec Error 033-510 Fax Job Failure Press ✓	No Message.	<CODEC Error> The Decoded Line Count per Stripe error at JBIG Data Decoding.	Flows 47 FIP-1. 47
Communication 033-511 Fax Job Failure Press ✓	No Message.	<Communication Error> The MH/HR/MMR Received as 0 Line.	Flows 48 FIP-1. 48
Communication 033-512 Fax Job Failure Press ✓	No Message.	< Modem Parameter Exchange Error> The Modem Parameter Exchange error occurred.	Flows 49 FIP-1. 49
Communication 033-513 Fax Job Failure Press ✓	No Message.	<Communication Error> Communication Interrupted due to Memory Full.	Flows 32 FIP-1. 32
Codec Error 033-514 Fax Job Failure Press ✓	No Message.	<JPEG DNL/SOF0 Error> Line Number Unavailable at JPEG Reception.	Flows 45 FIP-1. 45

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
Codec Error 033-515 Fax Job Failure Press ✓	No Message.	<JPEG Nf Error> Color/BW Multi-value Info Unavailable at JPEG Reception.	Flows 45 FIP-1. 45
Codec Error 033-516 Fax Job Failure Press ✓	No Message.	<JPEG EOI Error> Failed to Detect EOI at JPEG Reception.	Flows 45 FIP-1. 45
Password Error 033-517 Fax Job Failure Press ✓	No Message.	<D-Fax Password Error> The password for D-Fax does not match the password for Fax/Scanner Lock.	Flows 50 FIP-1. 50
Country is not Set 033-518 Fax Job Failure Press ✓	No Message.	<Fax Country is not set correctly.> The Country setting value is not set correctly.	Set the [Country] of the [Fax Setting] on the [Admin Menu] correctly.
Function is Disabled 033-519 Fax Job Failure Press ✓	No Message.	<FAX Function is not set correctly> The FAX Function setting is not set correctly.	Set the [Fax] of the [Function Enable] on the [secure Settings] of the [Admin Menu] correctly.
Codec Error 033-520 Fax Job Failure Press ✓	No Message	<JBF Error Call Back> The incoming data error occurred at the Call Back.	Flows 47 FIP-1. 47
Codec Error 033-521 Fax Job Failure Press ✓	No Message.	<JBF Error Marker Abort> The Abort Marker is detected	Flows 47 FIP-1. 47
Codec Error 033-522 Fax Job Failure Press ✓	No Message.	<JBF Error Marker Unknown> The unsupported Maker is detected.	Flows 47 FIP-1. 47
Codec Error 033-523 Fax Job Failure Press ✓	No Message.	<JBF Error Marker not Found> The Regular Marker is not found.	Flows 47 FIP-1. 47
Codec Error 033-524 Fax Job Failure Press ✓	No Message.	<JBF Error Marker Bad ATMOVE> The unsupported Adaptive Template is executed.	Flows 47 FIP-1. 47
Codec Error 033-525 Fax Job Failure Press ✓	No Message.	<JBF Error Marker Bad Newline> The unsupported Image Level is executed.	Flows 47 FIP-1. 47

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Codec Error 033-526 Fax Job Failure Press ✓	No Message.	<JBF Error BHI> The BIH information is abnormal.	Flows 47 FIP-1. 47
Communication 033-751 Fax Job Failure Press ✓	No Message.	<Over Run> The incoming data overrun at the MODEM.	Flows 51 FIP-1. 51
Busy 033-752 Fax Job Failure Press ✓	No Message.	< During Call Busy Tone> The busy tone was received while calling the external telephone at the TEL/FAX mode.	Flows 52 FIP-1. 52
Communication 033-753 Fax Job Failure Press ✓	No Message.	< CJ Not Detection> The CJ can not be detected.	Flows 49 FIP-1. 49
Communication 033-754 Fax Job Failure Press ✓	No Message.	< V8 Error> The V8 error occurred.	Flows 49 FIP-1. 49
Communication 033-755 Fax Job Failure Press ✓	No Message.	< Phase 2 Error> The Phase 2 (Line Probing) error occurred.	Flows 49 FIP-1. 49
Communication 033-756 Fax Job Failure Press ✓	No Message.	<Phase 3 Error> The Phase 3 (Primary Channel Equalizer Training) error occurred.	Flows 49 FIP-1. 49
Communication 033-757 Fax Job Failure Press ✓	No Message.	< Primary Channel Synchronization Error> The Primary Channel Synchronization Error occurred.	Flows 49 FIP-1. 49
Communication 033-758 Fax Job Failure Press ✓	No Message.	<Control Channel Synchronization Error> The Control Channel Synchronization Error occurred.	Flows 49 FIP-1. 49
Communication 033-759 Fax Job Failure Press ✓	No Message.	< Control Channel Retrain Error> The Control Channel Retrain Error occurred.	Flows 49 FIP-1. 49
Communication 033-760 Fax Job Failure Press ✓	No Message.	< Control Channel OFF Time Out> The Control Channel OFF Time Out occurred.	Flows 49 FIP-1. 49
Communication 033-761 Fax Job Failure Press ✓	No Message.	< Primary Channel OFF Time Out> The Primary Channel OFF Time Out occurred.	Flows 49 FIP-1. 49
Communication 033-762 Fax Job Failure Press ✓	No Message.	< DM Prevention Function Receive Refuse> The incoming data was rejected by the DM prevention function.	Flows 53 FIP-1. 53

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Communication 033-763 Fax Job Failure Press ✓	No Message.	< Manual Transmission Read Manuscript Not Do> Read Timeout at Manual Dialing.	Flows 46 FIP-1. 46
Communication 033-764 Fax Job Failure Press ✓	No Message.	< Draw Data Create Not Do> Graphics process Timeout at Fax Sending.	Flows 51 FIP-1. 51
Codec Error 033-765 Fax Job Failure Press ✓	No Message.	< File Pointer Error> Read/Write File pointer Error at Encoding/Decoding.	Flows 45 FIP-1. 45
Codec Error 033-766 Fax Job Failure Press ✓	No Message.	< Target File Opening> The Target File Empty at decoding.	Flows 45 FIP-1. 45
Codec Error 033-767 Fax Job Failure Press ✓	No Message.	< MMR MN86064 Decode Error> The Decode error of MN86064 at MMR Decoding.	Flows 45 FIP-1. 45
Codec Error 033-768 Fax Job Failure Press ✓	No Message.	< AT-Move Counter Over> The AT-Move Count per Stripe 5 or more.	Flows 47 FIP-1. 47
Codec Error 033-769 Fax Job Failure Press ✓	No Message.	< JBIG NEWLEN Marker Error> The NEWLEN marker was not detected.	Flows 47 FIP-1. 47
Codec Error 033-770 Fax Job Failure Press ✓	No Message.	< YD Error> The YD error at JBIG encoding.	Flows 47 FIP-1. 47
Codec Error 033-771 Fax Job Failure Press ✓	No Message.	< Abort Marker Error> The Abort Maker error at JBIG decoding.	Flows 47 FIP-1. 47
Codec Error 033-772 Fax Job Failure Press ✓	No Message.	< Undefined Maker Error> The Undefined Marker was detected.	Flows 47 FIP-1. 47
Codec Error 033-773 Fax Job Failure Press ✓	No Message.	< BIH Error> The BIH was abnormal at JBIG decoding.	Flows 47 FIP-1. 47
Buffer 033-774 Fax Job Failure Press ✓	No Message.	< FAX TX Encode Output Buffer Over> The JBIG Encode Output Buffer overflow at Fax sending.	Flows 45 FIP-1. 45
Buffer 033-775 Fax Job Failure Press ✓	No Message.	< FAX RX Encode Output Buffer Over> The JBIG Encode Output Buffer overflow at Fax Receiving.	Flows 54 FIP-1. 54

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
Buffer 033-776 Scan Job Failure Press ✓	No Message.	< SCAN Encode Output Buffer Over> The JBIG Encode Output Buffer overflow at accumulation of Outgoing Fax or D-Fax.	Flows 45 FIP-1. 45
Buffer 033-777 Fax Job Failure Press ✓	No Message.	< FAX RX Decode Input Buffer Over> The Incoming Buffer overflow at Copy from ECM to JBIG.	Flows 54 FIP-1. 54
Communication 033-782 Fax Job Failure Press ✓	No Message.	< NSS/DCS Function disagreement> The incoming NSS/DCS Function Not supported.	Flows 48 FIP-1. 48
Buffer 033-784 Fax Job Failure Press ✓	No Message.	<Buffer Error> The Incoming Fax Buffer overflow at JBIG Decode Output.	Flows 54 FIP-1. 54
Buffer 033-785 Scan Job Failure Press ✓	No Message.	<Buffer Error > The MHR decode Output Buffer overflow at Push-Scan.	Flows 45 FIP-1. 45
Codec Error 033-786 Fax Job Failure Press ✓	No Message.	<DECODE Error> The Decode-BIH Line Count Inconsistency at JBIG Data Decoding.	Flows 47 FIP-1. 47
Memory Full 033-787 Fax Job Failure Press ✓	No Message.	<HAKKO Table Full> The Calling Table is full.	Flows 31 FIP-1. 31
Memory Full 033-788 Fax Job Failure Press ✓	No Message.	<Memory Full> Exceeds the memory capacity.	Flows 32 FIP-1. 32
Cancel 033-789 Fax Job Canceled Press ✓	No Message.	<Cancel> The Cancellation occurred.	Flows 31 FIP-1. 31
Cancel 033-790 Fax Job Canceled Press ✓	No Message.	<Cancel> The Cancellation occurred.	Flows 31 FIP-1. 31
Cancel 033-791 Fax Job Canceled Press ✓	No Message.	<Cancel> The Cancellation occurred.	Flows 31 FIP-1. 31
Accumulation Limit 033-795 Fax Press ✓	No Message.	<Fax Send Count Limit> The Outgoing Fax exceeds store limit.	Flows 32 FIP-1. 32
Communication 033-799 Fax Job Failure Press ✓	No Message.	<Line Count Limit Over> The line Count per Page Exceeds Limit at MH/HR/MMR Reception.	Flows 48 FIP-1. 48
Communication 034-508 Fax Job Failure Press ✓	No Message.	<Command Refuse Signal Send> The Communication Aborted Sending Command Rejection Cord.	Flows 48 FIP-1. 48

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Communication 034-515 Fax Job Failure Press v	No Message.	<DIS DCS Illegal Command Receive> Unsupported Command received.	Flows 55 FIP-1. 55
Invalid Data 034-799 Fax Job Failure Press ✓	No Message.	<No Dial Data> The Autodial started but No Data Ready.	Flows 52 FIP-1. 52
No Answer 035-701 Fax Job Failure Press v	No Message.	<Send T1 Time Out> The T1 Time Out error occurred at the data is transmitting.	Flows 56 FIP-1. 56
Communication 035-702 Fax Job Failure Press ✓	No Message.	<Receive DCN> Receiving the DCN.	Flows 48 FIP-1. 48
Communication 035-704 Fax Job Failure Press ✓	No Message.	<Not Send ability> Source Lacking Send Capacity.	Flows 48 FIP-1. 48
Communication 035-705 Fax Job Failure Press ✓	No Message.	<DCS/NSS Resend Over> Exceeds the predetermined value of the resending.	Flows 48 FIP-1. 48
Communication 035-706 Fax Job Failure Press ✓	No Message.	<Fall Back Error> The Fall Back error occurred.	Flows 49 FIP-1. 49
Communication 035-708 Fax Job Failure Press ✓	No Message.	<Post Message Resend Over> Exceeds the predetermined value of the resending.	Flows 48 FIP-1. 48
Communication 035-709 Fax Job Failure Press ✓	No Message.	<G3 Send RTN/PIN Receive> Received RTN/PIN at G3 Transmission.	Flows 48 FIP-1. 48
Communication 035-710 Fax Job Failure Press ✓	No Message.	<Receive PIN> Receive PIN. (Except EOR)	Flows 48 FIP-1. 48
Communication 035-716 Fax Job Failure Press ✓	No Message.	<T2 Time Out> The T2 Time Out occurred.	Flows 48 FIP-1. 48
Communication 035-717 Fax Job Failure Press ✓	No Message.	<G3 Receive RTN Send> Received RTN at G3 Transmission.	Flows 48 FIP-1. 48
No Answer 035-718 Fax Job Failure Press ✓	No Message.	<Receive T1 Time Out> The T1 Time Out error occurred at receiving the data.	Flows 55 FIP-1. 55

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
Communication 035-720 Fax Job Failure Press ✓	No Message.	<Not Receive Ability> Source Lacking Receive Capacity.	Flows 56 FIP-1. 56
Communication 035-728 Fax Job Failure Press ✓	No Message.	<G3 EOL Not Receive> Unable to receive EOL for 13 sec at G3 Reception.	Flows 48 FIP-1. 48
Communication 035-729 Fax Job Failure Press ✓	No Message.	<Career Cut> Career Interrupted.	Flows 48 FIP-1. 48
Communication 035-730 Fax Job Failure Press ✓	No Message.	<RS Request CS NOT ON> The Modem CS not turning on to RS Request at High-Speed Training.	Flows 51 FIP-1. 51
Communication 035-737 Fax Job Failure Press ✓	No Message.	<CTC/EOR Resend Over> Exceeds the predetermined value of the resending.	Flows 48 FIP-1. 48
Communication 035-739 Fax Job Failure Press ✓	No Message.	<T5 Time Out> The T5 Time Out error occurred.	Flows 48 FIP-1. 48
Communication 035-740 Fax Job Failure Press ✓	No Message.	<ECM Send EOR-Q Send> Sent EOR-Q at ECM transmission.	Flows 48 FIP-1. 48
Communication 035-742 Fax Job Failure Press ✓	No Message.	<ECM Receive EOR-Q Receive> Receive EOR-Q at ECM	Flows 48 FIP-1. 48
No Dial Tone 035-746 Fax Job Failure Press ✓	No Message.	<Before Dial first Dial Tone> Failed to Detect Dial Tone before Dialing.	Flows 52 FIP-1. 52
File Error 035-779 Fax Job Failure Press ✓	No Message.	<Fax FWD document Change Error> Document Change error at forwarding Fax.	Flows 31 FIP-1. 31
Busy 035-781 Fax Job Failure Press ✓	No Message.	<Busy Tone Error> Detected Busy Tone after Dialing.	Flows 56 FIP-1. 56
Communication 035-792 Fax Job Failure Press ✓	No Message.	< JM Not Detection> The JM can not be detected.	Flows 49 FIP-1. 49
Communication 035-793 Fax Job Failure Press ✓	No Message.	< Digital Line Detection> The telephone line is the digital line.	Change to the analog line.

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
062-311 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-311	<IIT Initializing Error> The IIT initializing error occurred.	Flows 57 FIP-1. 57
062-320 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-320	<Scanner Error> The image acquisition error occurred.	Flows 58 FIP-1. 58
062-321 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-321	<IIT Initializing Error> The IIT initializing error occurred.	Flows 57 FIP-1. 57
062-322 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-322	<Parameter Error> Abnormality of the parameter.	Flows 59 FIP-1. 59
062-323 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-323	<Panel Setting Parameter NG> Abnormality of the parameter.	Flows 60 FIP-1. 60
(For printer with optional memory) Memory Full 062-324 Scan Job too Large Press ✓ (For standard printer) Memory Full 062-324 Scan Add Memory Press ✓	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-324	<IIT Memory Over Flow> The amount of scanning data exceeded the memory capacity of the printer.	Flows 58 FIP-1. 58

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
062-360 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-360	<HP Sensor Error> The Scanner Home Position error occurred.	Flows 57 FIP-1. 57
062-371 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-371	<IIT Lamp Error> The IIT Lamp error occurred.	Flows 57 FIP-1. 57
062-393 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 062-393	<CCD ASIC Error> The CCD ASIC communication error occurred.	Flows 59 FIP-1. 59
Confirm 062-790 Deleted by Limit Press ✓	No Message.	<Copy Limit> Unable to continue due to copy limitation.	Flows 61 FIP-1. 61
Paper Jam 071-100 Printer Open Tray1 Remove Paper Open & close Front Cover	Paper Jam has occurred at the Tray 1. Remove the Tray 1 and remove the jammed paper. Open and close the Front Cover. Please click the Show Me How Button for details. 071-100	<IOT Tray 1 Misfeed JAM> Regi Sensor is not turned ON within the specified time after feeding a paper from Tray 1.	Flows 62 FIP-1. 62
Insert Output 071-920 Insert Output to Tray	No Message.	<IOT Side 2 No paper> One-side blank paper was not loaded in Tray at 2-side manual printing.	Flows 63 FIP-1. 63
071-921 Printer Press ✓ to continue printing	No Message.	<IOT Side 2 No paper> One-side blank paper was not loaded in Tray at 2-side manual printing.	Flows 63 FIP-1. 63
Paper Jam 075-100 Printer Check SSF Remove Paper Open & Close Front Cover	Paper Jam has occurred at the SSF. Pull the jammed paper out of the SSF. Open and close the Front Cover. Please click the Show Me How Button for details. 075-100	<IOT SSF Misfeed JAM> Regi Sensor is not turned ON within the specified time after feeding a paper from SSF.	Flows 64 FIP-1. 64

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Paper Jam 075-101 Printer Check SSF Open FrontCover and Remove Paper	Paper Jam has occurred at the SSF. Open the Front Cover and remove the jammed paper. Open and close the Front Cover. Please click the Show Me How Button for details. 075-101	<IOT SSF Insert JAM> SSF No Paper Sensor detect when a paper is inserted from SSF.	Flows 65 FIP-1. 65
Paper Jam 075-102 Printer Check SSF Open & Close Front Cover	Paper Jam has occurred at the SSF. Pull the jammed paper out of the SSF. Open and close the Front Cover. Please click the Show Me How Button for details. 075-102	<IOT SSF Paper Pullout JAM> Though it tried to feed a paper from SSF, the paper was not loaded or it was pulled out forcibly from SSF.	Flows 66 FIP-1. 66
Insert Output 075-920 Insert Output to SSF	No Message.	<IOT Side 2 No paper> One-side blank paper was not loaded in SSF at 2-side manual printing.	Flows 67 FIP-1. 67
075-921 Printer Press ✓ to continue printing	No Message.	<IOT Side 2 No paper> One-side blank paper was not loaded in SSF at 2-side manual printing.	Flows 67 FIP-1. 67
075-923 Printer Reseat paper of SSF	The SSF is not holding the paper correctly. Pull the paper out of the SSF. Reload the paper of the SSF. 075-923	<IOT SSF No Paper> Waiting for reseat paper of SSF.	Flows 39 FIP-1. 39
Paper Jam 077-100 Printer Jam at Front Cover Open Front Cover and Remove Paper	No Message.	<IOT Regi Jam> The paper reached Regi Sensor earlier than the specified time.	Flows 68 FIP-1. 68
Paper Jam 077-101 Printer Jam at Front Cover Open Front Cover and Remove Paper	No Message.	<IOT Regi Jam> The paper does not pass through the Regi Sensor within the specified time.	Flows 68 FIP-1. 68
Paper Jam 077-102 Printer Jam at Exit Open Front Cover and Remove Paper	No Message.	<IOT Regi Jam> The paper does not reach the Regi Sensor within the specified time.	Flows 62 FIP-1. 62

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Paper Jam 077-103 Printer Jam at Exit Open Front Cover and Remove Paper	No Message.	<IOT Exit Jam> The paper reached Exit Sensor earlier than the specified time.	Flows 69 FIP-1. 69
Paper Jam 077-104 Printer Jam at Exit Open Front Cover and Remove Paper	No Message.	<IOT Exit Jam> The paper does not pass through the Exit Sensor within the specified time.	Flows 69 FIP-1. 69
Paper Jam 077-105 Printer Jam at Exit Open Front Cover and Remove Paper	No Message.	<IOT Exit Jam> The paper passed through the Exit Sensor earlier than the specified time.	Flows 69 FIP-1. 69
Close Front Cover 077-300 Printer Front Cover is Open	The Front Cover is open. Close the Front Cover. 077-300	<IOT Cover Front Open> Front cover is open.	Flows 70 FIP-1. 70
Close Side Door 077-301 Printer Side Door is Open	The Side Cover is open. Close the Side Cover. 077-301	<IOT Side Cover Open> Side cover is open.	Flows 71 FIP-1. 71
Paper Jam 077-900 Printer Open Front Cover Remove Paper	Paper Jam has occurred at the Output Tray. CAUTION: The Fuser is hot. Push the Side Button to open the Front Cover and remove the jammed paper. If the jammed paper is in the Fuser, lift the levers at both ends of the Fuser and remove the jammed paper. Please click the Show Me How Button for details. 077-900	<IOT Remain Exit JAM> The paper remains at Exit Sensor.	Flows 72 FIP-1. 72

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
Paper Jam 077-901 Printer Open Front Cover Remove Paper	Paper Jam has occurred at the Belt Unit. Push the Side Button to open the Front Cover and remove the jammed paper. Close the Front Cover. If the jammed paper is not easily removed, work after pulling out the tray. Please click the Show Me How Button for details. 077-901	<IOT Remain Regi JAM> The paper remains at Regi Sensor.	Flows 73 FIP-1. 73
Copy Scan Fax 091-402 Printer Replace PHD Now Contact Support	Replace PHD Now. Contact customer support. Please click the Show Me How Button for details. 091-402	<IOT PHD Life Pre Warning> The PHD Unit is going to reach the replacement time.	Flows 74 FIP-1. 74
Check PHD Unit 091-912 Remove Tape From PHD	Multifunction printer error. Remove the ribbons from the PHD unit. Contact customer support if this failure is repeated. 091-912	<PHD Tape Staying> Detect the tape staying on the PHD Unit. (Toner patch error occurred at new PHD Unit installing.)	Flows 75 FIP-1. 75
Replace PHD Now 091-935 Printer Contact Support If Message Returns	Replace PHD Now. Contact customer support. Please click the Show Me How Button for details. 091-935	<IOT PHD Life Over> PHD Unit reached the replacement time.	Flows 74 FIP-1. 74
Insert PHD Unit 091-972 Printer Insert PHD Unit	The PHD Unit is either missing or not fully inserted into the multifunction printer. Open the Front Cover and make sure that the PHD Unit have been fully installed. Please click the Show Me How Button for details. 091-972	<IOT PHD Detached> PHD Unit detached is detected.	Flows 76 FIP-1. 76
Check CTD Unit 092-310	Multifunction printer error. Clean the CTD sensor. 092-310	<IOT CTD (ADC) Sensor Contamination> Dustiness of the CTD (ADC) Sensor is detected.	Flows 77 FIP-1. 77
Check CTD Unit 092-910 Clean CTD Sensor	No Message.	<IOT CTD (ADC) Sensor Contamination> Dustiness of the CTD (ADC) Sensor is detected.	Flows 77 FIP-1. 77

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
CRUM ID 093-360 Reseat Yellow Cartridge	An unsupported Yellow Cartridge is installed. Open the Side Cover. Remove the unsupported Yellow Cartridge and install a supported one. Please click the Show Me How Button for details. 093-360	<IOT Y CRUM ID Error> CRUM ID error of Yellow Cartridge is detected.	Flows 78 FIP-1. 78
CRUM ID 093-361 Reseat Magenta Cartridge	An unsupported Magenta Cartridge is installed. Open the Side Cover. Remove the unsupported Magenta Cartridge and install a supported one. Please click the Show Me How Button for details. 093-361	<IOT M CRUM ID Error> CRUM ID error of Magenta Cartridge is detected.	Flows 79 FIP-1. 79
CRUM ID 093-362 Reseat Cyan Cartridge	An unsupported Cyan Cartridge is installed. Open the Side Cover. Remove the unsupported Cyan Cartridge and install a supported one. Please click the Show Me How Button for details. 093-362	<IOT C CRUM ID Error> CRUM ID error of Cyan Cartridge is detected.	Flows 80 FIP-1. 80
CRUM ID 093-363 Reseat Black Cartridge	An unsupported Black Cartridge is installed. Open the Side Cover. Remove the unsupported Black Cartridge and install a supported one. Please click the Show Me How Button for details. 093-363	<IOT K CRUM ID Error> CRUM ID error of Black Cartridge is detected.	Flows 81 FIP-1. 81
Copy Scan Fax 093-423 Printer Yellow Cartridge is Close to Life	No Message.	<IOT CRU Life Pre Warning> Yellow Cartridge is going to reach the replacement time.	Flows 82 FIP-1. 82
Copy Scan Fax 093-424 Printer Magenta Cartridge is Close to Life	No Message.	<IOT CRU Life Pre Warning> Magenta Cartridge is going to reach the replacement time.	Flows 82 FIP-1. 82

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Copy Scan Fax 093-425 Printer Cyan Cartridge is Close to Life	No Message.	<IOT CRU Life Pre Warning> Cyan Cartridge is going to reach the replacement time.	Flows 82 FIP-1. 82
Copy Scan Fax 093-426 Printer Black Cartridge is Close to Life	No Message.	<IOT CRU Life Pre Warning> Black Cartridge is going to reach the replacement time.	Flows 82 FIP-1. 82
Low Density 093-919 Printer Yellow Cartridge	Multifunction printer error. Check the PHD unit and the Toner Cartridge. Contact customer support if this failure is repeated. 093-919	<IOT Y Toner Low Density> Detects low density of yellow.	Flows 83 FIP-1. 83
Low Density 093-920 Printer Magenta Cartridge	Multifunction printer error. Check the PHD unit and the Toner Cartridge. Contact customer support if this failure is repeated. 093-920	<IOT M Toner Low Density> Detects low density of magenta.	Flows 84 FIP-1. 84
Low Density 093-921 Printer Cyan Cartridge	Multifunction printer error. Check the PHD unit and the Toner Cartridge. Contact customer support if this failure is repeated. 093-921	<IOT C Toner Low Density> Detects low density of cyan.	Flows 85 FIP-1. 85
Low Density 093-922 Printer Black Cartridge	Multifunction printer error. Check the PHD unit and the Toner Cartridge. Contact customer support if this failure is repeated. 093-922	<IOT K Toner Low Density> Detects low density of black.	Flows 86 FIP-1. 86
Replace Cart. 093-930 Printer Replace Yellow Cartridge	The Yellow Cartridge need to be replaced now. Open the Side Cover. Then remove the used Yellow Cartridge and install a new one. Please click the Show Me How Button for details. 093-930	<IOT Y CRU Life Over> Yellow Cartridge reached the replacement time.	Flows 82 FIP-1. 82

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Replace Cart. 093-931 Printer Replace Magenta Cartridge	The Magenta Cartridge need to be replaced now. Open the Side Cover. Then remove the used Magenta Cartridge and install a new one. Please click the Show Me How Button for details. 093-931	<IOT M CRU Life Over> Magenta Cartridge reached the replacement time.	Flows 82 FIP-1. 82
Replace Cart. 093-932 Printer Replace Cyan Cartridge	The Cyan Cartridge need to be replaced now. Open the Side Cover. Then remove the used Cyan Cartridge and install a new one. Please click the Show Me How Button for details. 093-932	<IOT C CRU Life Over> Cyan Cartridge reached the replacement time.	Flows 82 FIP-1. 82
Replace Cart. 093-933 Printer Replace Black Cartridge	The Black Cartridge need to be replaced now. Open the Side Cover. Then remove the used Black Cartridge and install a new one. Please click the Show Me How Button for details. 093-933	<IOT K CRU Life Over> Black Cartridge reached the replacement time.	Flows 82 FIP-1. 82
Replace Cart. 093-934 Printer Replace Cyan Cartridge	The Cyan Cartridge need to be replaced now. Open the Side Cover. Then remove the used Cyan Cartridge and install a new one. Please click the Show Me How Button for details. 093-934	<IOT Waste Toner Full> Waste Toner Counter value has reached replacement time.	Flows 82 FIP-1. 82
Replace Cart. 093-935 Printer Replace Magenta Cartridge	The Magenta Cartridge need to be replaced now. Open the Side Cover. Then remove the used Magenta Cartridge and install a new one. Please click the Show Me How Button for details. 093-935	<IOT Waste Toner Full> Waste Toner Counter value has reached replacement time.	Flows 82 FIP-1. 82

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Replace Cart. 093-936 Printer Replace Yellow Cartridge	The Yellow Cartridge need to be replaced now. Open the Side Cover. Then remove the used Yellow Cartridge and install a new one. Please click the Show Me How Button for details. 093-936	<IOT Waste Toner Full> Waste Toner Counter value has reached replacement time.	Flows 82 FIP-1. 82
Replace Cart. 093-937 Printer Replace Black Cartridge	The Black Cartridge need to be replaced now. Open the Side Cover. Then remove the used Black Cartridge and install a new one. Please click the Show Me How Button for details. 093-937	<IOT Waste Toner Full> Waste Toner Counter value has reached replacement time.	Flows 82 FIP-1. 82
093-965 Reseat PHD Unit Restart Printer Contact Support	An unsupported PHD Unit is installed. Open the Front Cover. Remove the unsupported PHD Unit and install a supported one. Please click the Show Me How Button for details. 093-965	<IOT CRUM ID Error> CRUM ID error of PHD Unit is detected.	Flows 87 FIP-1. 87
Insert Print Cart. 093-970 Printer Insert Yellow Cartridge	The Yellow Cartridge is either missing or not fully inserted into the multifunction printer. Open the Side Cover and make sure that the Yellow Cartridge have been fully installed. Please click the Show Me How Button for details. 093-970	<IOT Y CRU Detached> Yellow Cartridge detached is detected.	Flows 88 FIP-1. 88

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Insert Print Cart. 093-971 Printer Insert Magenta Cartridge	The Magenta Cartridge is either missing or not fully inserted into the multifunction printer. Open the Side Cover and make sure that the Magenta Cartridge have been fully installed. Please click the Show Me How Button for details. 093-971	<IOT M CRU Detached> Magenta Cartridge detached is detected.	Flows 88 FIP-1. 88
Insert Print Cart. 093-972 Printer Insert Cyan Cartridge	The Cyan Cartridge is either missing or not fully inserted into the multifunction printer. Open the Side Cover and make sure that the Cyan Cartridge have been fully installed. Please click the Show Me How Button for details. 093-972	<IOT C CRU Detached> Cyan Cartridge detached is detected.	Flows 88 FIP-1. 88
Insert Print Cart. 093-973 Printer Insert Black Cartridge	The Black Cartridge is either missing or not fully inserted into the multifunction printer. Open the Side Cover and make sure that the Black Cartridge have been fully installed. Please click the Show Me How Button for details. 093-973	<IOT K CRU Detached> Black Cartridge detached is detected.	Flows 88 FIP-1. 88
Copy Scan Fax 094-422 Printer Contact Support If Message Returns	Multifunction printer error. Contact customer support if this failure is repeated. 094-422	<IOT Transfer Assy Life Pre Warning> The Transfer Assy is going to reach the replacement time.	Flows 89 FIP-1. 89
094-911 Printer Restart Printer Contact Support If Message Returns	Multifunction printer error. Contact customer support if this failure is repeated. 094-911	<IOT Transfer Assy Life Over> Transfer Assy reached the replacement time.	Flows 89 FIP-1. 89

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
116-396 Scan Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 116-396	<Software Bag> -Fatal Maillib Related Error. -Other File2Net Lib Error.	Flows 31 FIP-1. 31
116-397 Printer Restart Printer	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 116-397	<Communication Error> Communication Error between system modules.	Flows 31 FIP-1. 31
116-398 Printer Restart Printer	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 116-398	<Communication Error> Communication Error between system modules.	Flows 31 FIP-1. 31
116-987 Scan Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 116-987	<Software Bag> A fatal error related to the format library.	Flows 31 FIP-1. 31
117-310 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-310	<Main Program Sum Error> The main program sum error occurred.	Flows 45 FIP-1. 45
117-311 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-311	<Parameter Sum Error> The parameter sum error occurred.	Flows 45 FIP-1. 45
117-312 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-312	<Download Program Sum Error> The download program sum error occurred.	Flows 45 FIP-1. 45

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
117-313 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-313	<Data Send Error> Failed in the ESS data transfer.	Flows 90 FIP-1. 90
117-314 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-314	< Report Program Error> The Report Creating Program error occurred.	Flows 31 FIP-1. 31
117-315 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-315	<EEPROM Driver Error> The EEPROM Driver program error occurred.	Flows 31 FIP-1. 31
117-322 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-322	<SYSMGR Task Error> The SYSMGR task error occurred.	Flows 31 FIP-1. 31
117-323 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-323	<ESSMGR Task Error> The ESSMGR task error occurred.	Flows 90 FIP-1. 90
117-324 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-324	<ESSSUB1 Task Error> The ESSSUB1 task error occurred.	Flows 90 FIP-1. 90
117-328 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-328	<MSCAN Task Error> The MSCAN task error occurred.	Flows 31 FIP-1. 31

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
117-335 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-335	<D-Fax Task Error> The D-Fax task error occurred.	Flows 31 FIP-1. 31
117-336 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-336	<PULL Task Error> The PULL task error occurred.	Flows 31 FIP-1. 31
117-337 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-337	<IITTX Task Error> The IITTX task error occurred.	Flows 31 FIP-1. 31
117-340 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-340	<HOOK Task Error> The HOOK task error occurred.	Flows 31 FIP-1. 31
117-344 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-344	<FLASHFILE Task Error> The FLASHFILE Task error occurred.	Flows 90 FIP-1. 90
117-348 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-348	<IITRX Task Error> The IITRX Task error occurred.	Flows 31 FIP-1. 31
117-349 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-349	<SCANMGR Task Error> The SCANMGR Task error occurred.	Flows 31 FIP-1. 31

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
117-350 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-350	<Task Error> The task initializing (start up) error occurred.	Flows 31 FIP-1. 31
117-352 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-352	<AIOC-IIT Communication Error> The Communication error between the CONT AIOC and the IIT.	Flows 57 FIP-1. 57
117-354 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-354	<ESSMGR Task Error> Failed in AIF SET.	Flows 90 FIP-1. 90
117-355 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-355	<ESSMGR Task Error> The Service Function-ID out of range.	Flows 90 FIP-1. 90
117-362 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-362	<EEPROM Sum Check Error> The EEPROM Check Sum Error occurred.	Flows 31 FIP-1. 31
117-363 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-363	<NVM Sum Check Error> The NVM Check Sum Error occurred.	Flows 31 FIP-1. 31
117-365 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 117-365	<RTC clock setting mismatch> RTC clock setting does not match the data of Memory (SRAM).	Flows 18 FIP-1. 18

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
123-314 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 123-314	<Panel Power On Error> The power on sequence of the FAX controller does not start within one minute after activating the panel.	Flows 91 FIP-1. 91
131-397 Scan Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 131-397	<Software Bag> A fatal error occurred in File2Net.	Flows 18 FIP-1. 18
131-398 Scan Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 131-398	<SMB Error> A fatal error occurred in SMBclient.	Turn off and on the printer and the PC power. If the error occurred, go to Flows 18 FIP-1. 18
131-399 Scan Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 131-399	<FTP Error> A fatal error occurred in FTPclient.	Turn off and on the printer and the PC power. If the error occurred, go to Flows 18 FIP-1. 18
133-231 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-231	<TFAXCOM Data Receive I/F Error> The data processing interface error on T FAXCOM.	Flows 31 FIP-1. 31
133-234 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-234	<JBIG Parameter Error> The JBIG parameter setting error occurred.	Flows 31 FIP-1. 31

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
133-235 System Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-235	<MHR Parameter Error> The MHR parameter setting error occurred.	Flows 31 FIP-1. 31
133-236 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-236	< MHR Encode Error> The cording error at the MHR.	Flows 45 FIP-1. 45
133-237 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-237	< MHR Input Buffer Error> The Data error at MHR Input Buffer.	Flows 45 FIP-1. 45
133-238 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-238	< MHR Output Buffer Error> The Data error at MHR Output Buffer.	Flows 45 FIP-1. 45
133-239 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-239	<FAX ECM Buffer Address Error> The Fax ECM Buffer Read/Write Address error occurred.	Flows 45 FIP-1. 45
133-240 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-240	< Resolution Change Error> The Fax Resolution Conversion error at Sending/Receiving.	Flows 45 FIP-1. 45
133-241 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-241	< Memory Pool Get Error> The Memory Pool acquisition error occurred. (OS Error)	Flows 45 FIP-1. 45

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
133-242 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-242	< Memory Pool Release Error> The Memory Pool release error occurred. (OS error)	Flows 45 FIP-1. 45
133-243 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-243	< Message Send Error> The Message communication error occurred. (OS error)	Flows 45 FIP-1. 45
133-244 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-244	< Message Receive Error> The message reception error occurred. (OS error)	Flows 45 FIP-1. 45
133-246 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-246	< Memory Pool Get Error> The Memory Pool acquisition error occurred. (OS error)	Flows 45 FIP-1. 45
133-247 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-247	< Message Send Error> The communication error occurred. (OS error)	Flows 45 FIP-1. 45
133-248 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-248	< Memory Pool Release Error> The Memory Pool release error occurred. (OS error)	Flows 45 FIP-1. 45
133-249 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-249	< Message Receive Error> The message receive error occurred. (OS error)	Flows 45 FIP-1. 45

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
133-251 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-251	< File Open Error> The File Open error occurred.	Flows 45 FIP-1. 45
133-252 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-252	< File Close Error> The File Close error occurred.	Flows 45 FIP-1. 45
133-253 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-253	<File Erase Error> The File Erasing error occurred.	Flows 51 FIP-1. 51
133-254 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-254	<Memory Full> Out of Memory for Printing.	Flows 32 FIP-1. 32
133-259 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-259	<OS Call Error> The OS Call error occurred.	Flows 45 FIP-1. 45
133-260 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-260	<File Open Error> The File Open error occurred.	Flows 45 FIP-1. 45
133-261 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-261	<File Close Error> The File Close error occurred.	Flows 45 FIP-1. 45

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
133-269 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-269	<File Close Error> The File Close error occurred.	Flows 45 FIP-1. 45
133-271 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-271	<Memory Pool Get Error> The Memory Pool acquisition error occurred. (OS error)	Flows 45 FIP-1. 45
133-272 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-272	<Message Send Error> The Message Send error occurred. (OS error)	Flows 45 FIP-1. 45
133-273 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-273	<Memory Pool Release Error> The Memory Pool release error occurred.	Flows 45 FIP-1. 45
133-274 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-274	<Message Receive Error> The Message Receive error occurred.	Flows 45 FIP-1. 45
133-275 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-275	<OS Call Error> The OS Call error occurred.	Flows 45 FIP-1. 45
133-276 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-276	<File Open Error> The File Open error occurred.	Flows 45 FIP-1. 45

Error Message		Error Contents	FIP to be referred
Panel Message	Status Window		
133-277 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-277	<File Close Error> The File Close error occurred.	Flows 45 FIP-1. 45
133-278 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-278	<File Erase Error> The File Erase error occurred.	Flows 45 FIP-1. 45
133-279 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-279	< FAX CODEC I/F Error> The FAX CODEC I/F error occurred.	Flows 45 FIP-1. 45
133-280 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-280	<Error Fax Time> The Fax Timer error occurred.	Flows 45 FIP-1. 45
133-281 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-281	<Power Off Report Create Fail> Failed to Create Power Off report.	Flows 45 FIP-1. 45
133-282 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-282	<Memory Pool Get Error> The Memory Pool acquisition error occurred. (OS Error)	Flows 45 FIP-1. 45
133-283 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-283	<Message Send Error> The Message send error occurred.	Flows 45 FIP-1. 45

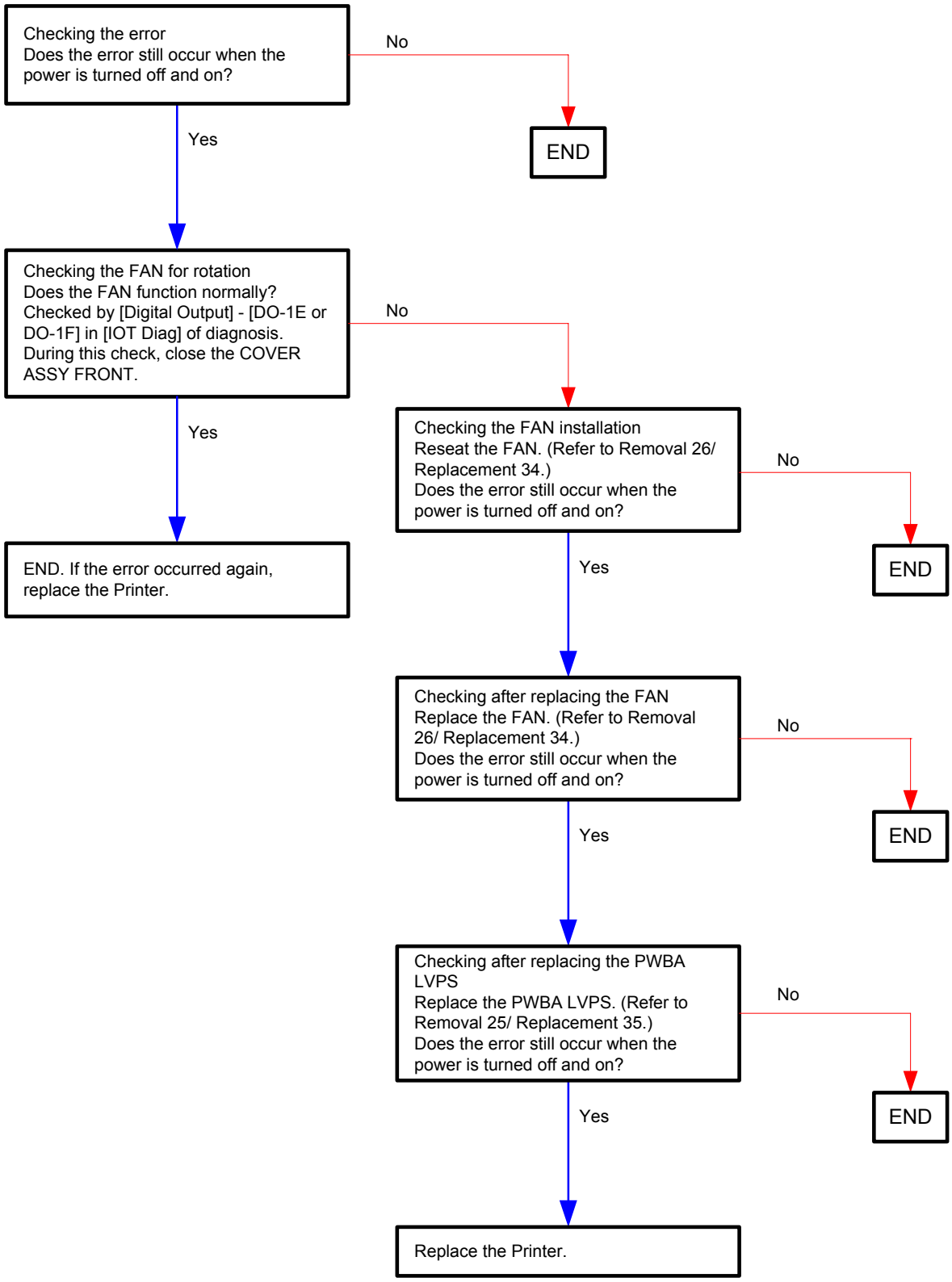
Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
133-286 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-286	< OS Call Error> The OS call error occurred.	Flows 45 FIP-1. 45
133-287 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-287	<File Open Error> The File Open error occurred.	Flows 45 FIP-1. 45
133-288 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-288	<File Close Error> The File Close error occurred.	Flows 45 FIP-1. 45
133-289 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-289	<File Erase Error> The File Erase error occurred.	Flows 45 FIP-1. 45
133-290 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 133-290	<Print Decode Error> A decoding error occurred three times consecutively during the decoding of JBIG data.	Flows 45 FIP-1. 45
134-211 Fax Restart Printer Contact Support If Message Returns	Multifunction printer error. Turn off the multifunction printer, and turn it on again. Contact customer support if this failure is repeated. 134-211	<Fax Card Modem Error> MODEM error occurred.	Flows 55 FIP-1. 55
Copy Scan Fax 193-700 Printer Non-Dell Toner Installed	No Message.	<Customer Toner Mode> Printer is in the Customer Toner Mode.	Flows 92 FIP-1. 92

Error Message		Error Contents	FIP to be referred
Panel Message	**Status Window**		
Illegal Settings This is unavailable when Tray(NoPaper) is selected	No Message.	<Copy Select Tray No Paper> Unable to Start due to No Paper.	Flows 38 FIP-1. 38
Invalid Settings This is unavailable when Tray(Size) is selected	No Message.	<Copy Dup Size Limit> Copy failed because the size of the paper is not for duplex copy.	Change the paper size.
Invalid Settings This is unavailable when Tray(Media) is selected	No Message.	<Copy Dup Medium NG> Copy failed because the type of the paper is no for duplex copy.	Change the paper type.
Invalid Settings This is unavailable when Tray(NoPaper) is selected	No Message.	<Copy Select Tray NoPaper> Copy failed because there is no paper in the paper tray.	Refill the paper in the paper tray.
Invalid Settings This is unavailable when Tray(Remove) is selected	No Message.	<Copy Select Tray REMOVE> Copy failed because the paper tray is not set properly.	Set the paper tray to its proper position.
Invalid Settings This is unavailable when Tray(Broken) is selected	No Message.	< Copy Select Tray Broken> Copy failed because of the paper tray failure.	Change the damaged paper tray.
Invalid Settings This is unavailable when Tray(NoTray) is selected	No Message.	<Copy Select Tray Exist> Copy failed because there is no paper tray.	Set the paper tray to its proper position.

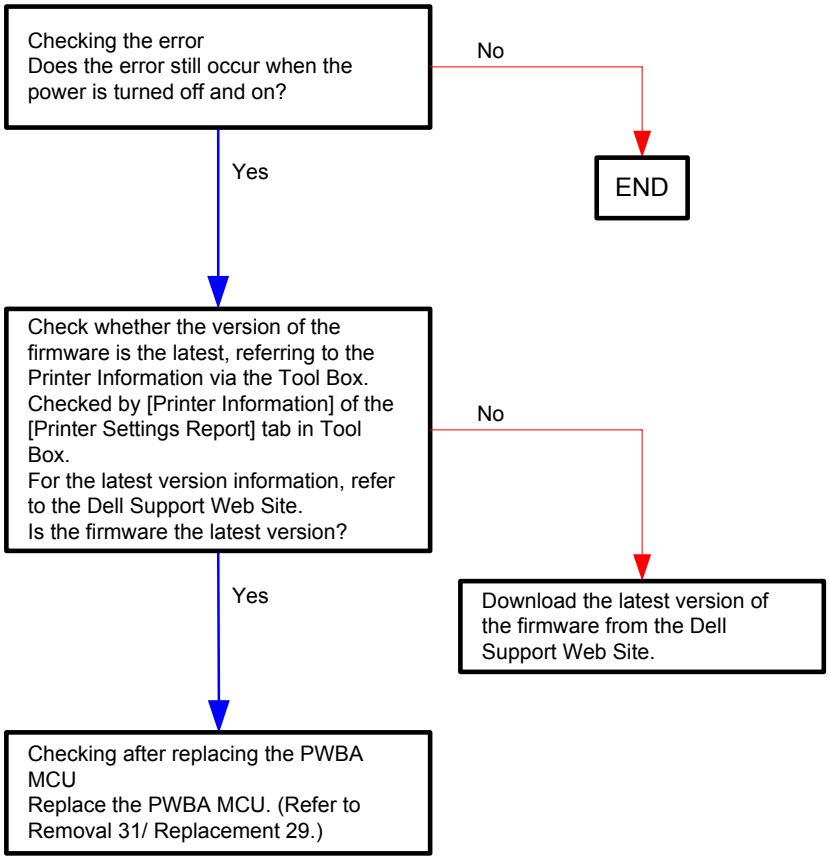
3. ERROR CODE FIP

3.1 Troubleshooting for the call center

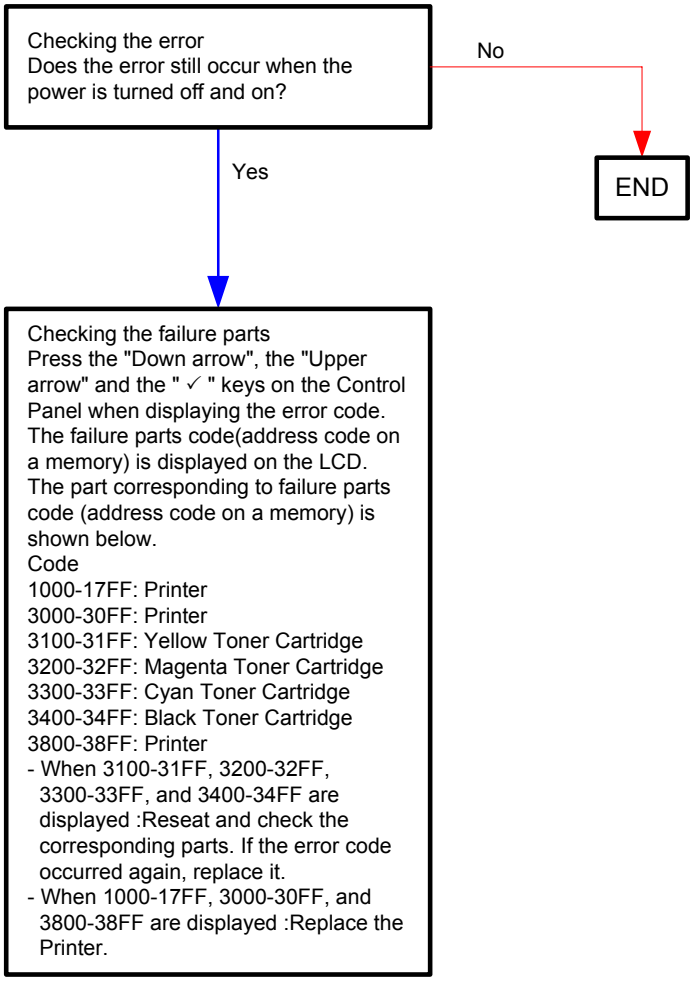
Flows 1 001-360 Restart Printer



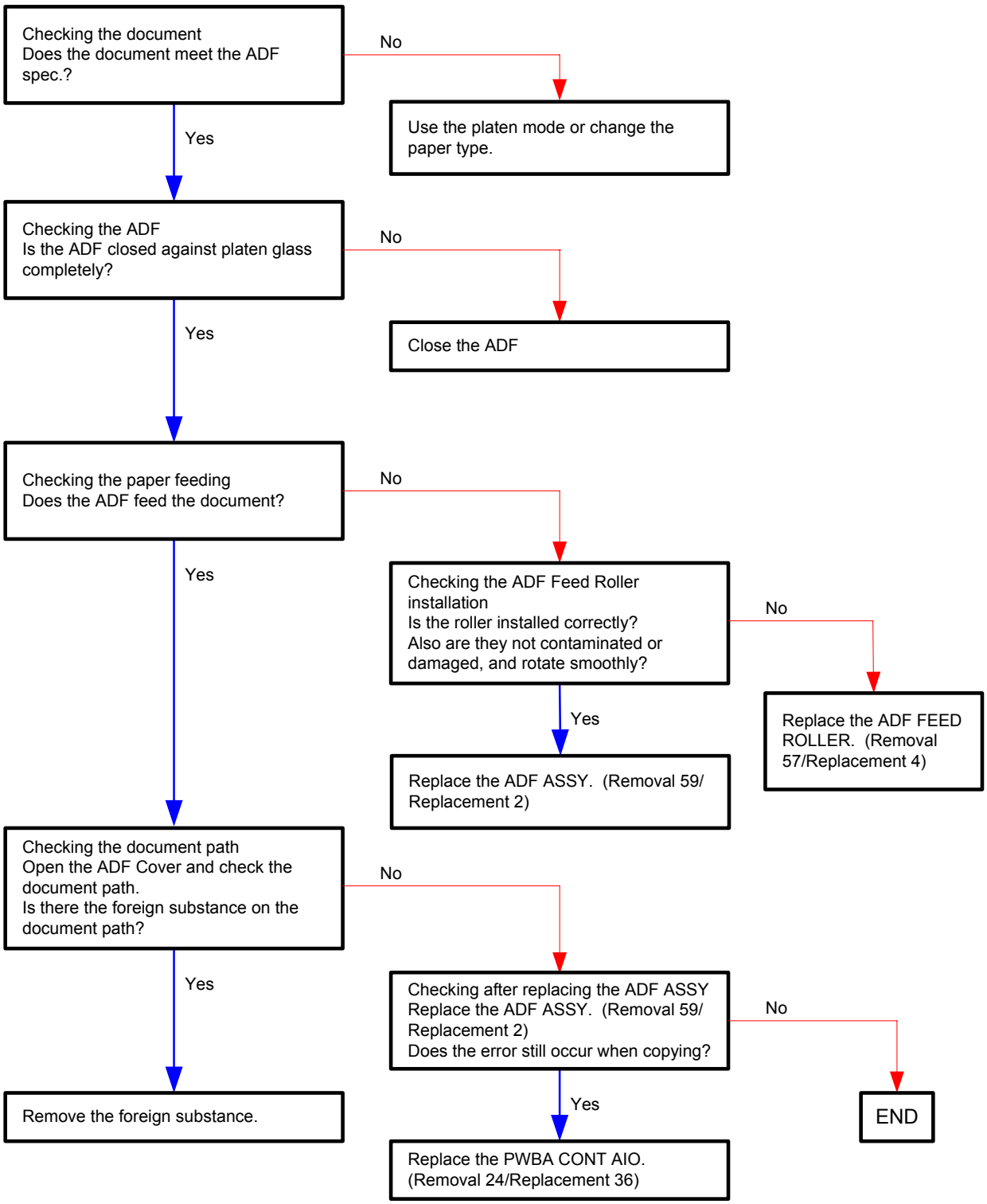
Flows 2 MCU Firmware Error 003-340



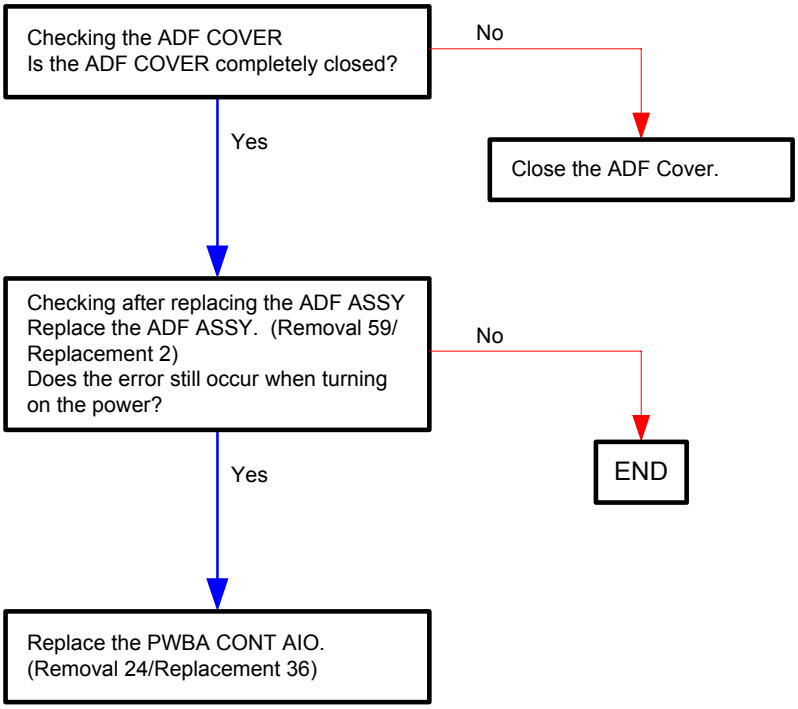
Flows 3 NVM Error 003-356



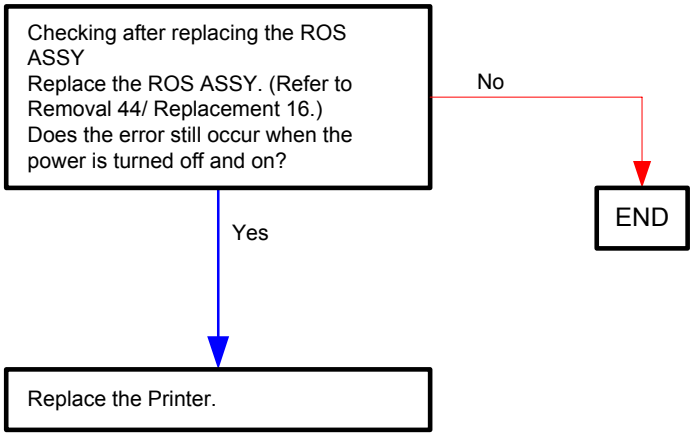
Flows 4 Paper Jam 005-110/005-121 / Job was Finished 005-124



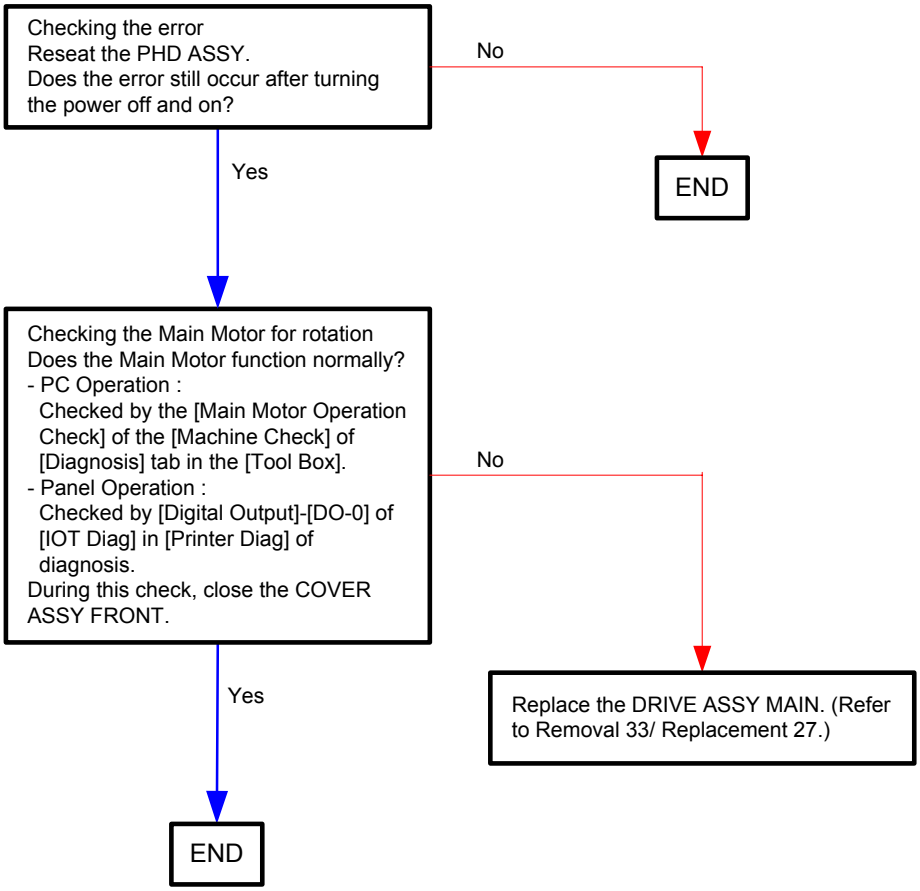
Flows 5 Cover Open 005-301



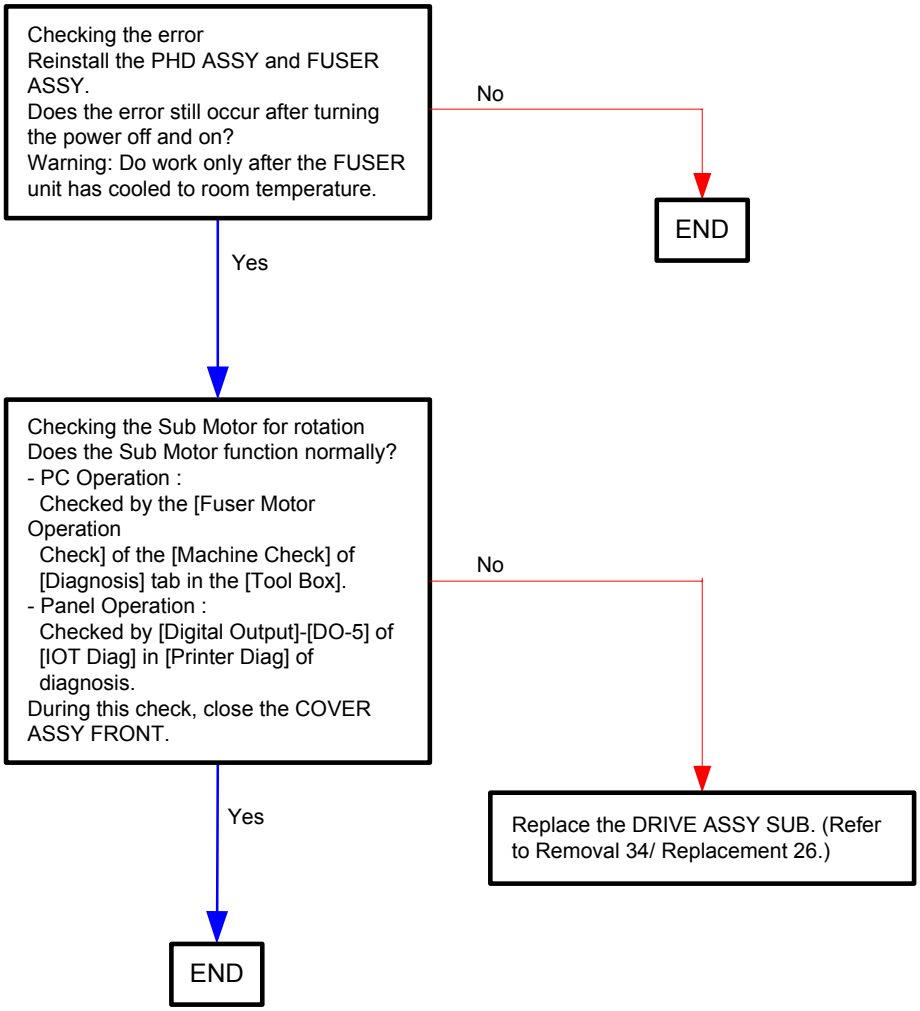
Flows 6 Laser Error 006-370



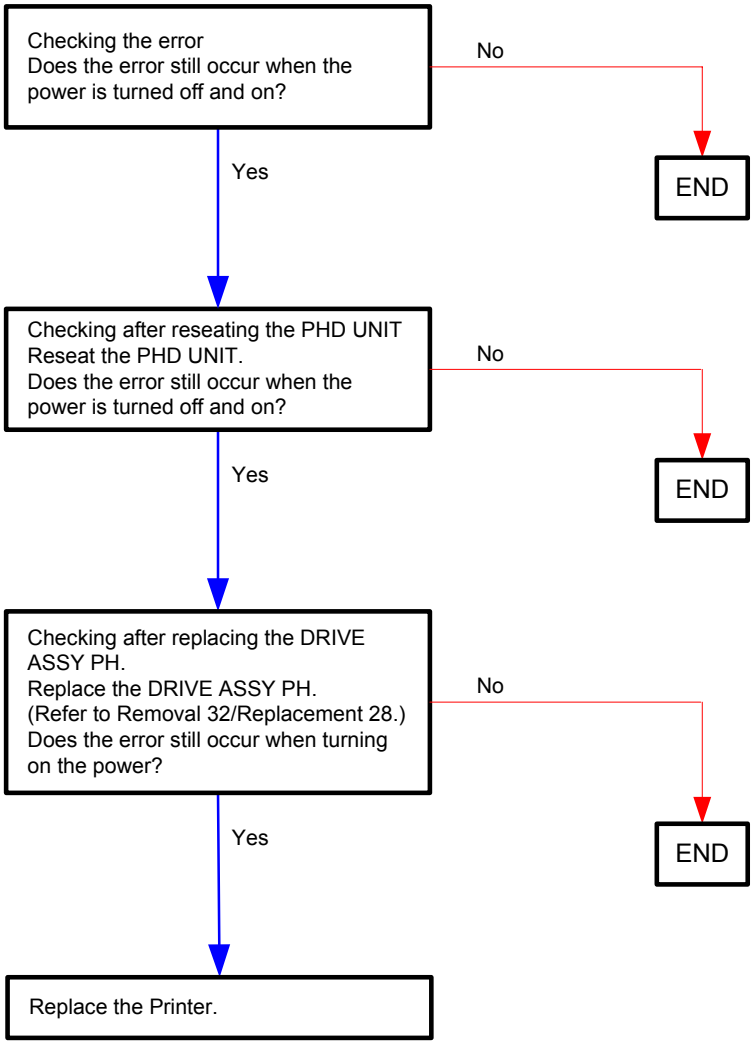
Flows 7 007-340 Restart Printer



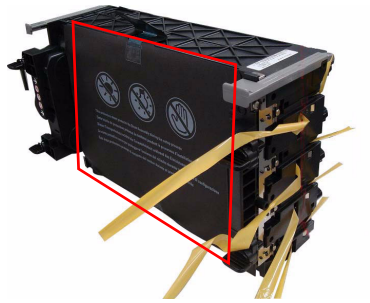
Flows 8 007-341 Restart Printer



Flows 9 007-371 Restart Printer



Flows 10 CTD Sensor Error 009-340 (Y)



Work before troubleshooting.
Check the protection sheet on the PHD UNIT.
If there is the protection sheet, remove it.

Checking the error
Turn the power off and open the front cover.
Check the CTD (ADC) Sensor and if it is dirty, wipe it with a clean dry cloth or a cotton swab.
Close the front cover when work is complete.
Does the error still occur after turning the power on?

No → END

Yes → Checking the belt of the TRANSFER ASSY
Open the COVER ASSY FRONT.
Is there any damage on the belt surface of the TRANSFER ASSY?

No → Checking after reseating the TONER CARTRIDGE (Y)
Reseat the TONER CARTRIDGE (Y), and check that the lock key is in the lock position.
Does the error still occur when the power is turned off and on?

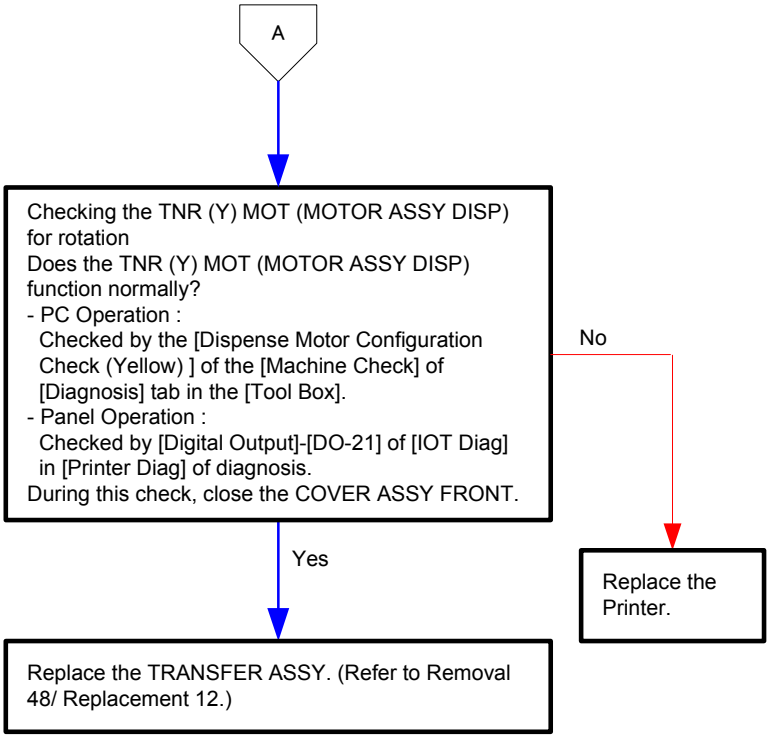
No → END

Yes → Checking after replacing the PHD UNIT.
Replace the PHD UNIT. (Refer to Removal 3/ Replacement 57.)
Does the error still occur when the power is turned off and on?

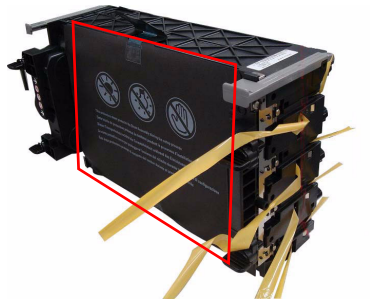
No → END

Yes → A

Yes → Call the DELL and replace the TRANSFER ASSY.


A
Checking the TNR (Y) MOT (MOTOR ASSY DISP) for rotation
Does the TNR (Y) MOT (MOTOR ASSY DISP) function normally?
- PC Operation :
Checked by the [Dispense Motor Configuration Check (Yellow)] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-21] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Yes
Replace the Printer.
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

Flows 11 CTD Sensor Error 009-340 (M)



Work before troubleshooting.
Check the protection sheet on the PHD UNIT.
If there is the protection sheet, remove it.

Checking the error
Turn the power off and open the front cover.
Check the CTD (ADC) Sensor and if it is dirty, wipe it with a clean dry cloth or a cotton swab.
Close the front cover when work is complete.
Does the error still occur after turning the power on?

No → END

Yes

Checking the belt of the TRANSFER ASSY
Open the COVER ASSY FRONT.
Is there any damage on the belt surface of the TRANSFER ASSY?

No

Checking after reseating the TONER CARTRIDGE (M)
Reseat the TONER CARTRIDGE (M), and check that the lock key is in the lock position.
Does the error still occur when the power is turned off and on?

No → END

Yes

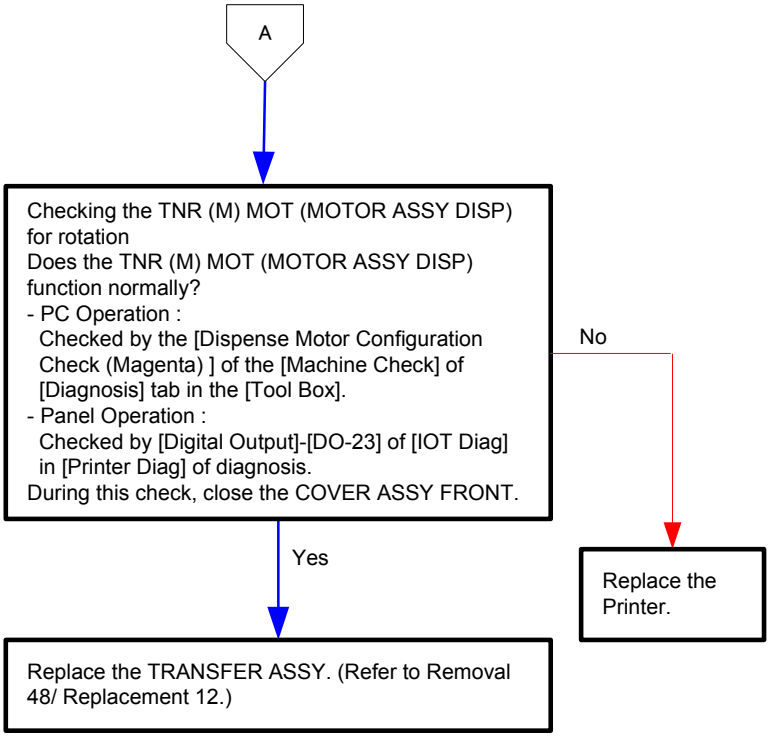
Checking after replacing the PHD UNIT.
Replace the PHD UNIT. (Refer to Removal 3/ Replacement 57.)
Does the error still occur when the power is turned off and on?

No → END

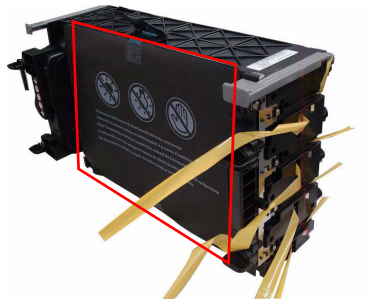
Yes → A

Yes

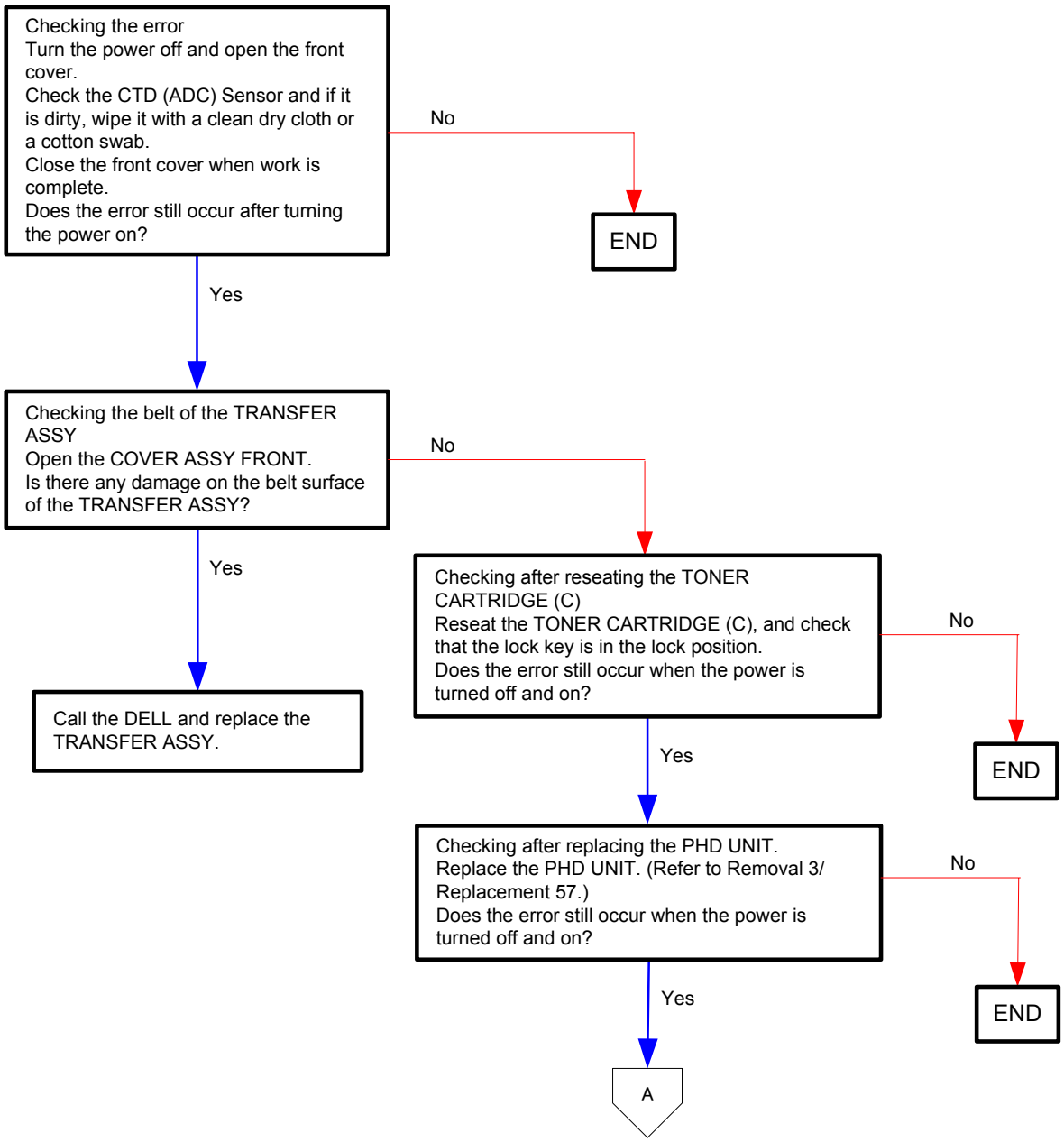
Call the DELL and replace the TRANSFER ASSY.

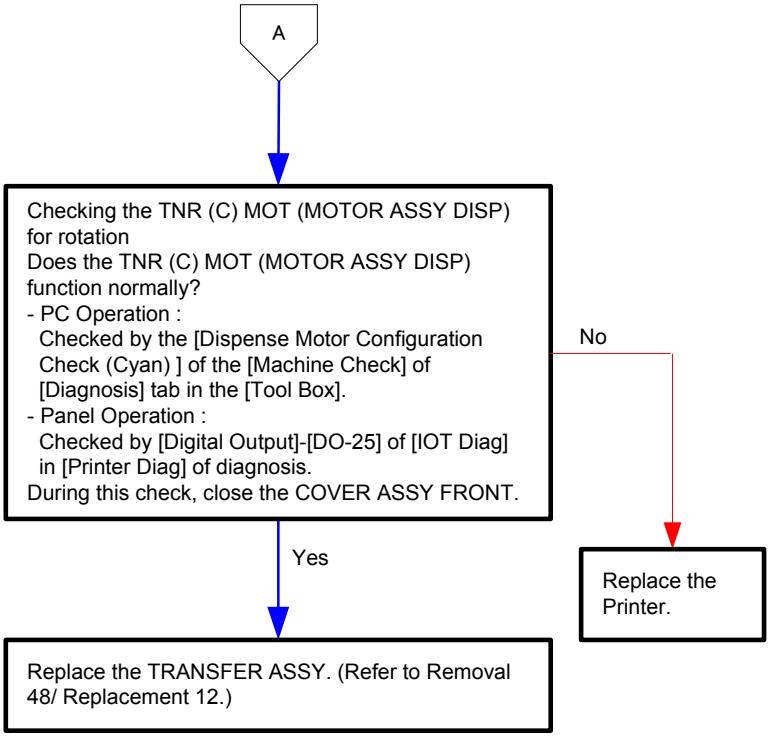

A
Checking the TNR (M) MOT (MOTOR ASSY DISP) for rotation
Does the TNR (M) MOT (MOTOR ASSY DISP) function normally?
- PC Operation :
Checked by the [Dispense Motor Configuration Check (Magenta)] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-23] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Yes
Replace the Printer.
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

Flows 12 CTD Sensor Error 009-340 (C)

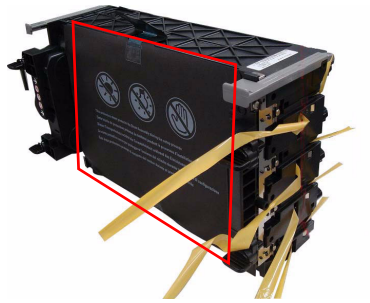


Work before troubleshooting.
Check the protection sheet on the PHD UNIT.
If there is the protection sheet, remove it.




A
Checking the TNR (C) MOT (MOTOR ASSY DISP) for rotation
Does the TNR (C) MOT (MOTOR ASSY DISP) function normally?
- PC Operation :
Checked by the [Dispense Motor Configuration Check (Cyan)] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-25] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Yes
Replace the Printer.
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

Flows 13 CTD Sensor Error 009-340 (K)



Work before troubleshooting.
Check the protection sheet on the PHD UNIT.
If there is the protection sheet, remove it.

Checking the error
Turn the power off and open the front cover.
Check the CTD (ADC) Sensor and if it is dirty, wipe it with a clean dry cloth or a cotton swab.
Close the front cover when work is complete.
Does the error still occur after turning the power on?

No → END

Yes

Checking the belt of the TRANSFER ASSY
Open the COVER ASSY FRONT.
Is there any damage on the belt surface of the TRANSFER ASSY?

No

Checking after reseating the TONER CARTRIDGE (K)
Reseat the TONER CARTRIDGE (K), and check that the lock key is in the lock position.
Does the error still occur when the power is turned off and on?

No → END

Yes

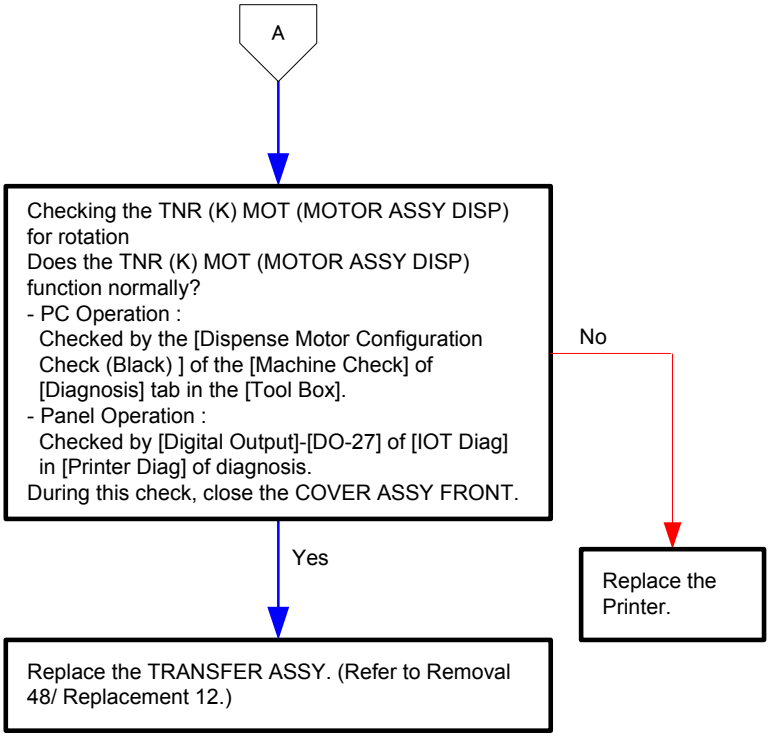
Checking after replacing the PHD UNIT.
Replace the PHD UNIT. (Refer to Removal 3/ Replacement 57.)
Does the error still occur when the power is turned off and on?

No → END

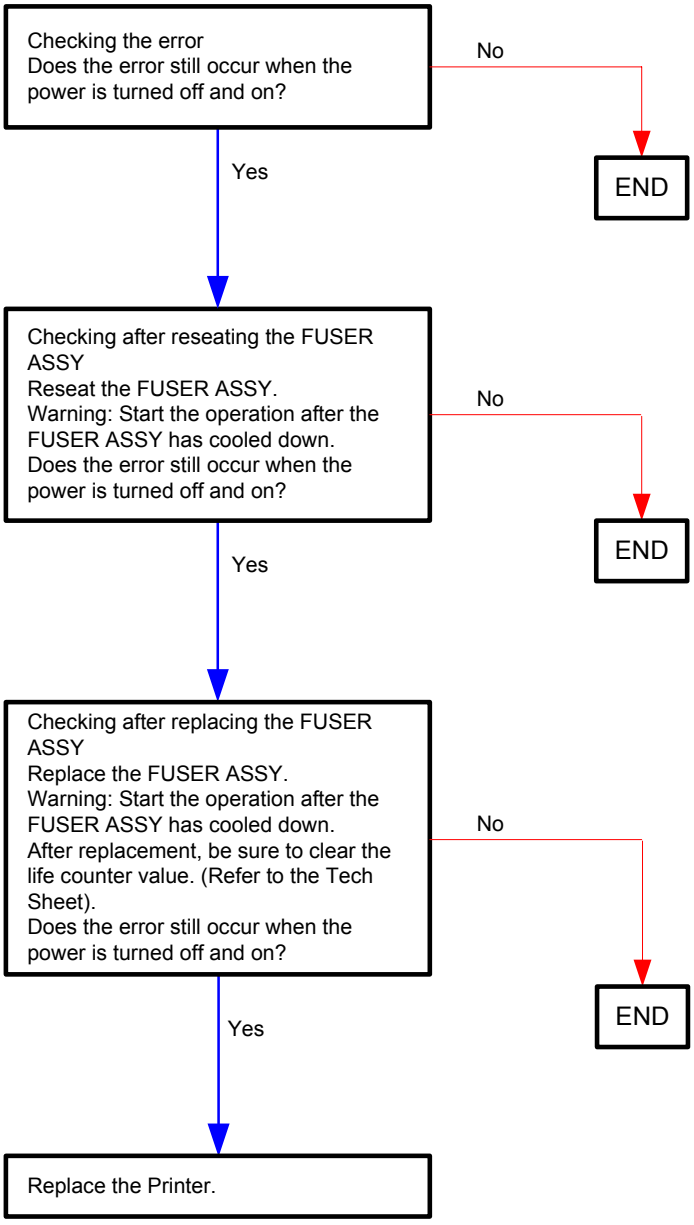
Yes → A

Yes

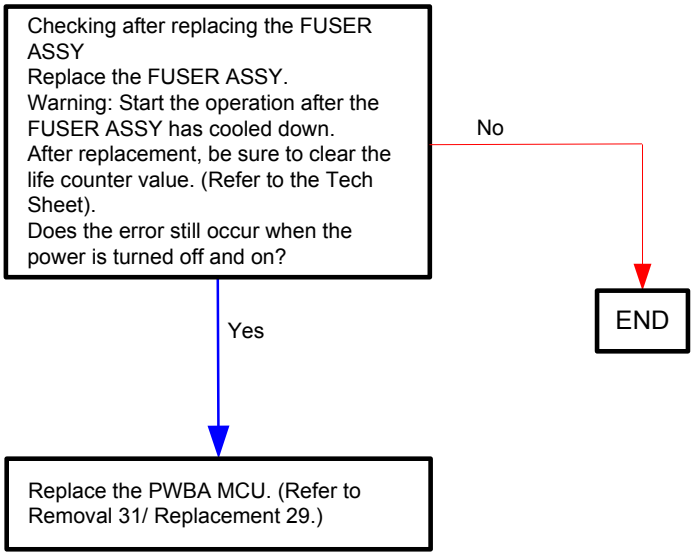
Call the DELL and replace the TRANSFER ASSY.


A
Checking the TNR (K) MOT (MOTOR ASSY DISP) for rotation
Does the TNR (K) MOT (MOTOR ASSY DISP) function normally?
- PC Operation :
Checked by the [Dispense Motor Configuration Check (Black)] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-27] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Yes
Replace the Printer.
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

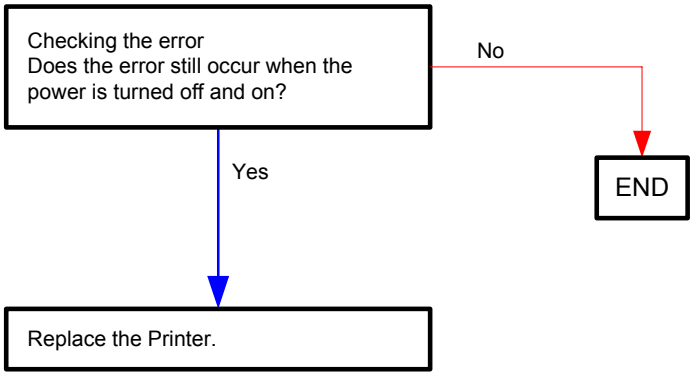
Flows 14 010-317 Reseat Fuser



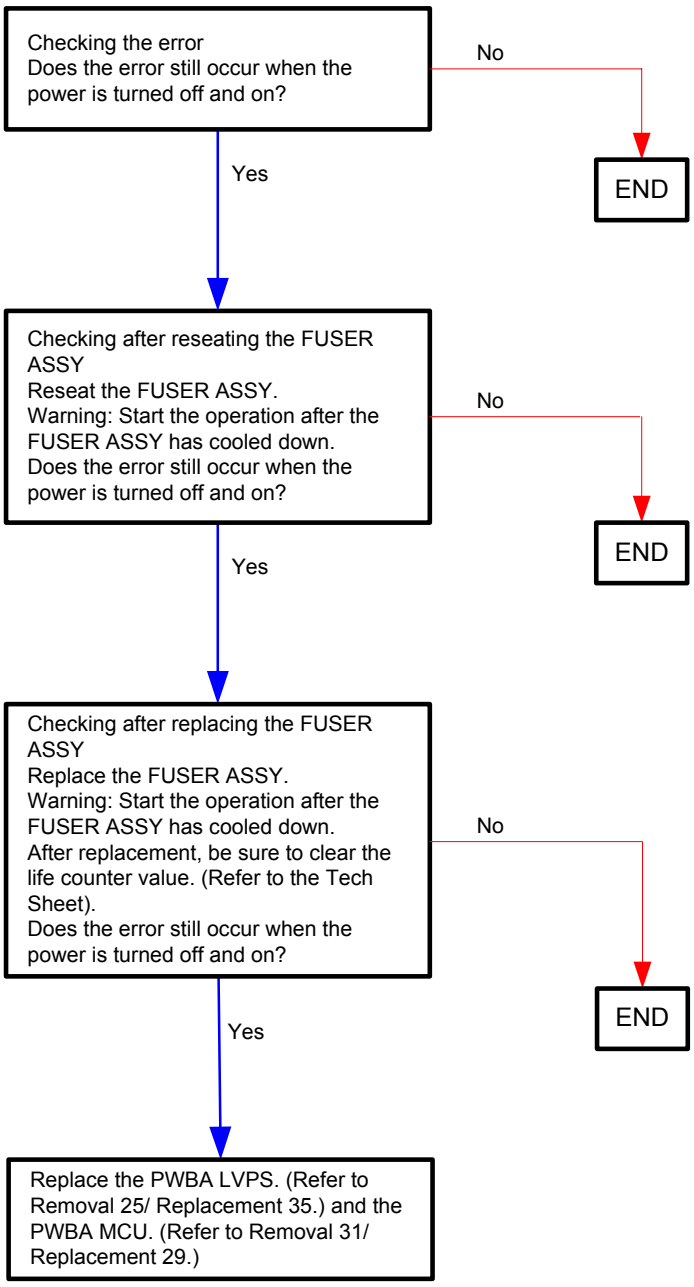
Flows 15 Replace Fuser Now 010-351/010-421



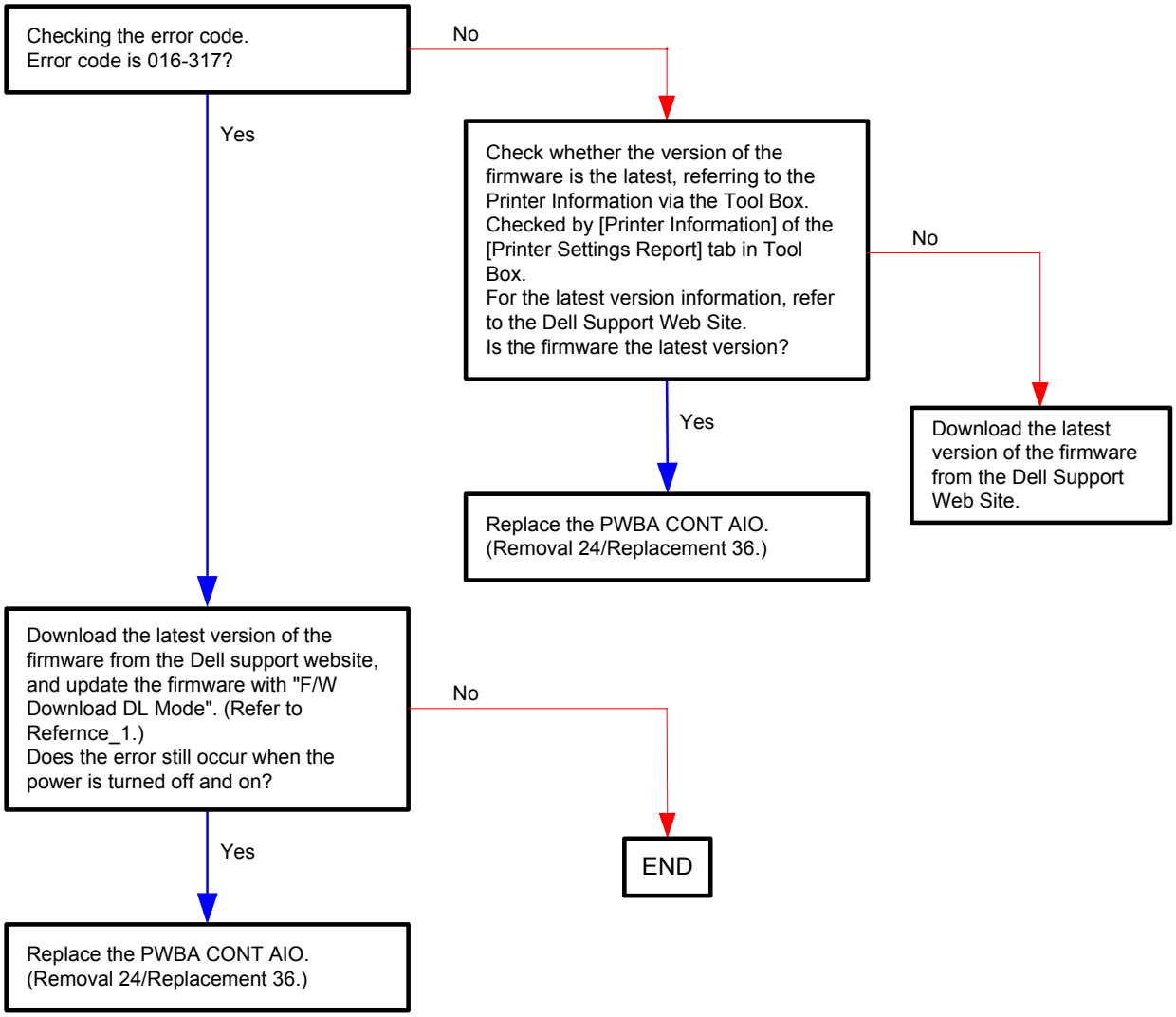
Flows 16 Env. Sensor Error 010-354



Flows 17 Fuser Error 010-377



Flows 18 016-300/016-301/016-302/016-310/016-313/016-315/016-317/016-323/016-324/016-327/016-344/016-345/016-346/016-347/117-365/131-397/131-398/131-399 Restart Printer / Erase Flash Err. 016-392 / Write Flash Err. 016-393 / Verify Error 016-394



Reference_1:

1. Make sure that the printer is connected to the computer via USB port (remove the network cable). Then, try downloading as follows:

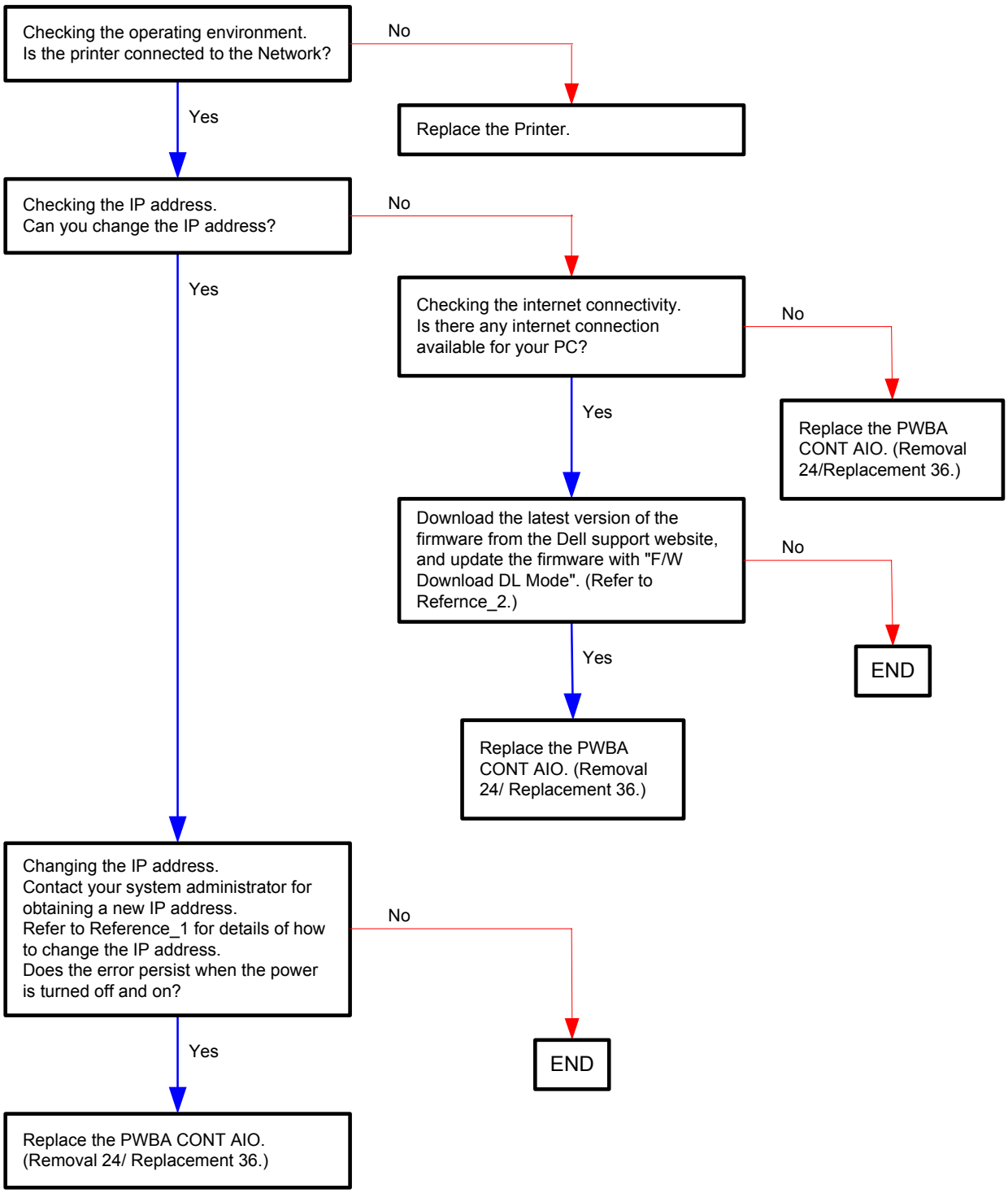
   1) Power on the printer while pressing the <X Cancel> and <✓> buttons.

   2) The printer goes into the Download Mode with a message "Download Mode Ready". Then, activate firmware update tool and follow the instruction displayed.

NOTE

While the firmware download is being executed, the printer displays a message "Writing...USB F/W" and the computer displays a progress bar and may be restarted during the downloading process. Never power off the printer or the computer until the downloading process completes, and never interrupt the downloading process.

Flows 18-1 016-340 Restart Printer



Reference_1:Changing the IP address

1) Remove the network cable, and power off the printer and then on
2) Change the IP address on the Control Panel.
3) Plug the network cable back into the printer, and then turn the power on.
4) On the Control Panel, open [Admin] > [Network] > [TCP/IP], and confirm that the IP address has been changed.

Reference_2:

1. Make sure that the printer is connected to the computer via USB port (remove the network cable). Then, try downloading as follows:

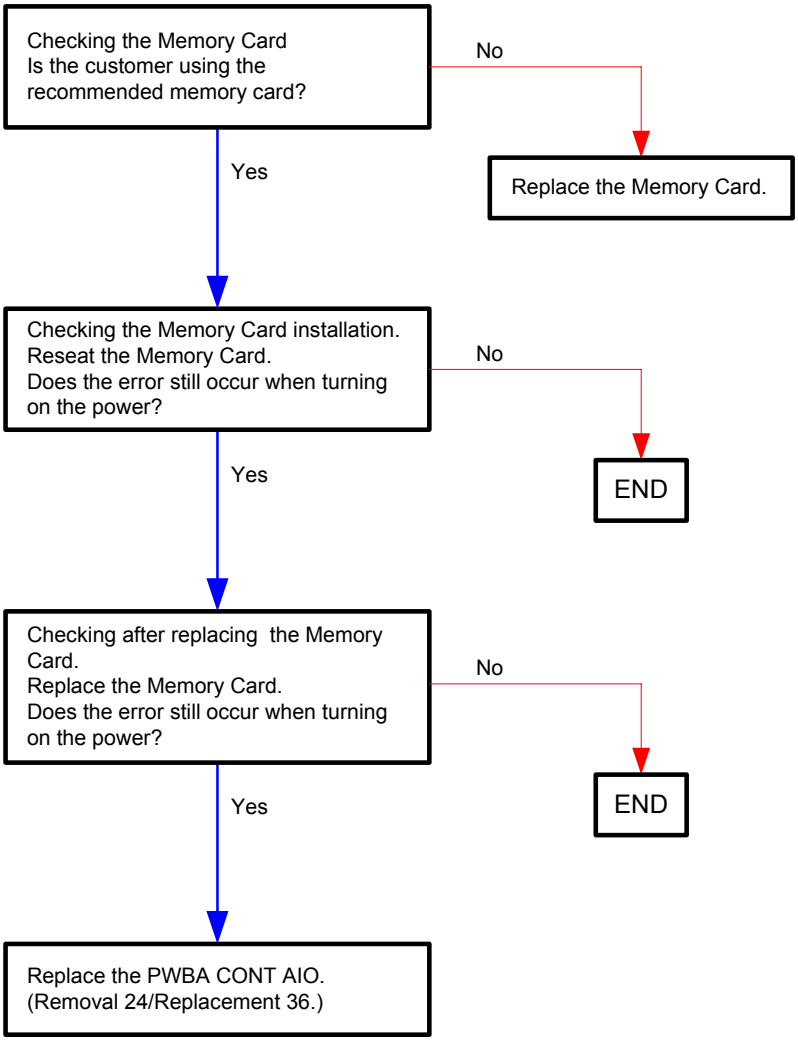
    1) Power on the printer while pressing the <X Cancel> and <✓> buttons.

    2) The printer goes into the Download Mode with a message "Download Mode Ready". Then, activate firmware update tool and follow the instruction displayed.

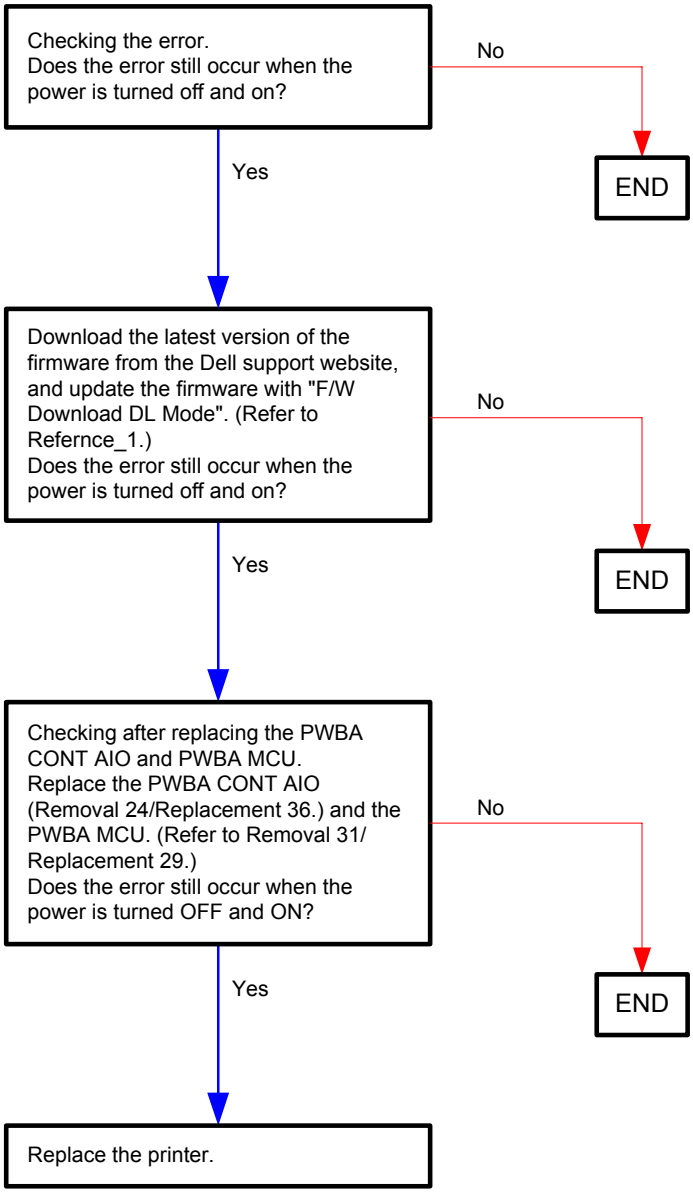
NOTE

While the firmware download is being executed, the printer displays a message "Writing...USB F/W" and the computer displays a progress bar and may be restarted during the downloading process. Never power off the printer or the computer until the downloading process completes, and never interrupt the downloading process.

Flows 19 016-316/016-318 Reseat Memory



Flows 20 016-370 Restart Printer



Reference_1:

1. Make sure that the printer is connected to the computer via USB port (remove the network cable). Then, try downloading as follows:

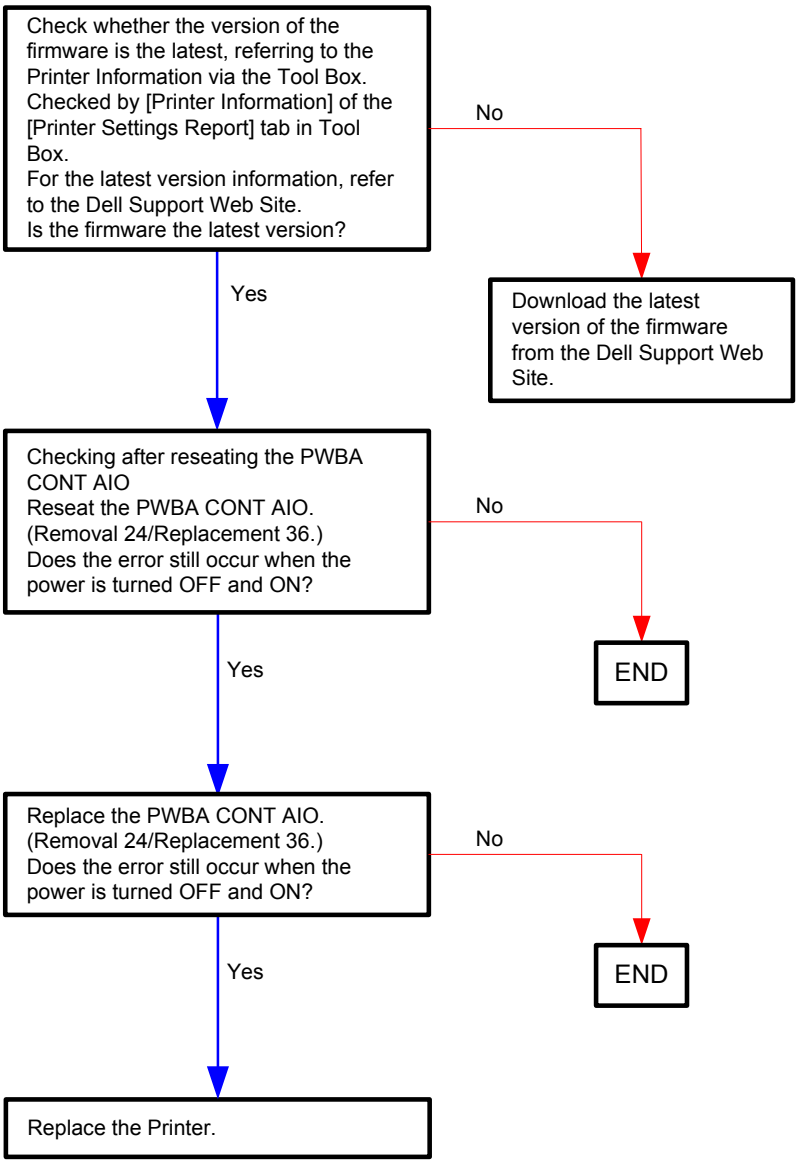
    1) Power on the printer while pressing the <X Cancel> and <✓> buttons.

    2) The printer goes into the Download Mode with a message "Download Mode Ready". Then, activate firmware update tool and follow the instruction displayed.

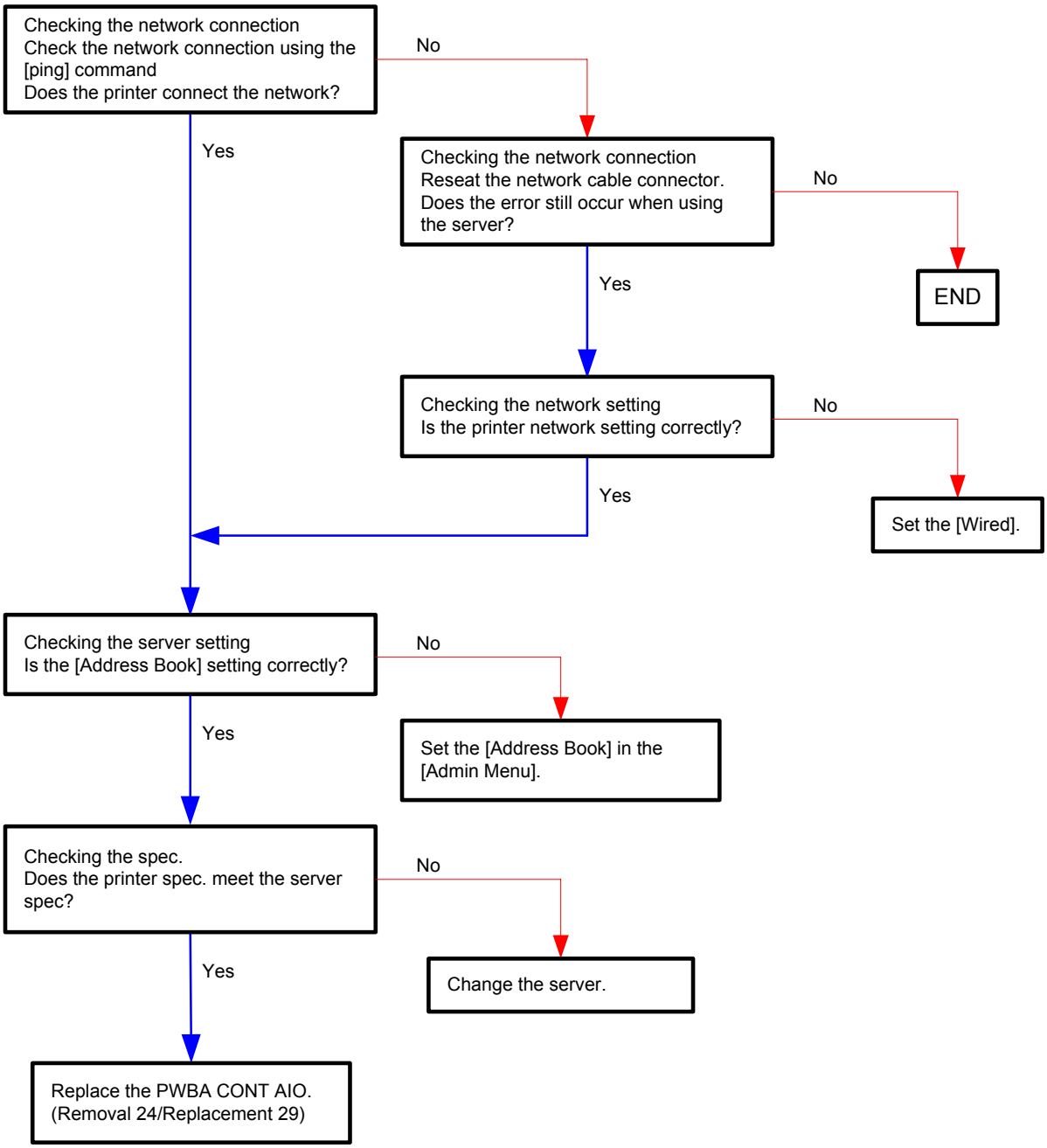
NOTE

While the firmware download is being executed, the printer displays a message "Writing...USB F/W" and the computer displays a progress bar and may be restarted during the downloading process. Never power off the printer or the computer until the downloading process completes, and never interrupt the downloading process.

Flows 21 Invalid ID 016-383 / Range Chk Error 016-384 / Header Error 016-385 / Check Sum Error 016-386 / Format Error 016-387 / Open Flash Err. 016-388 / Protection Error 016-391



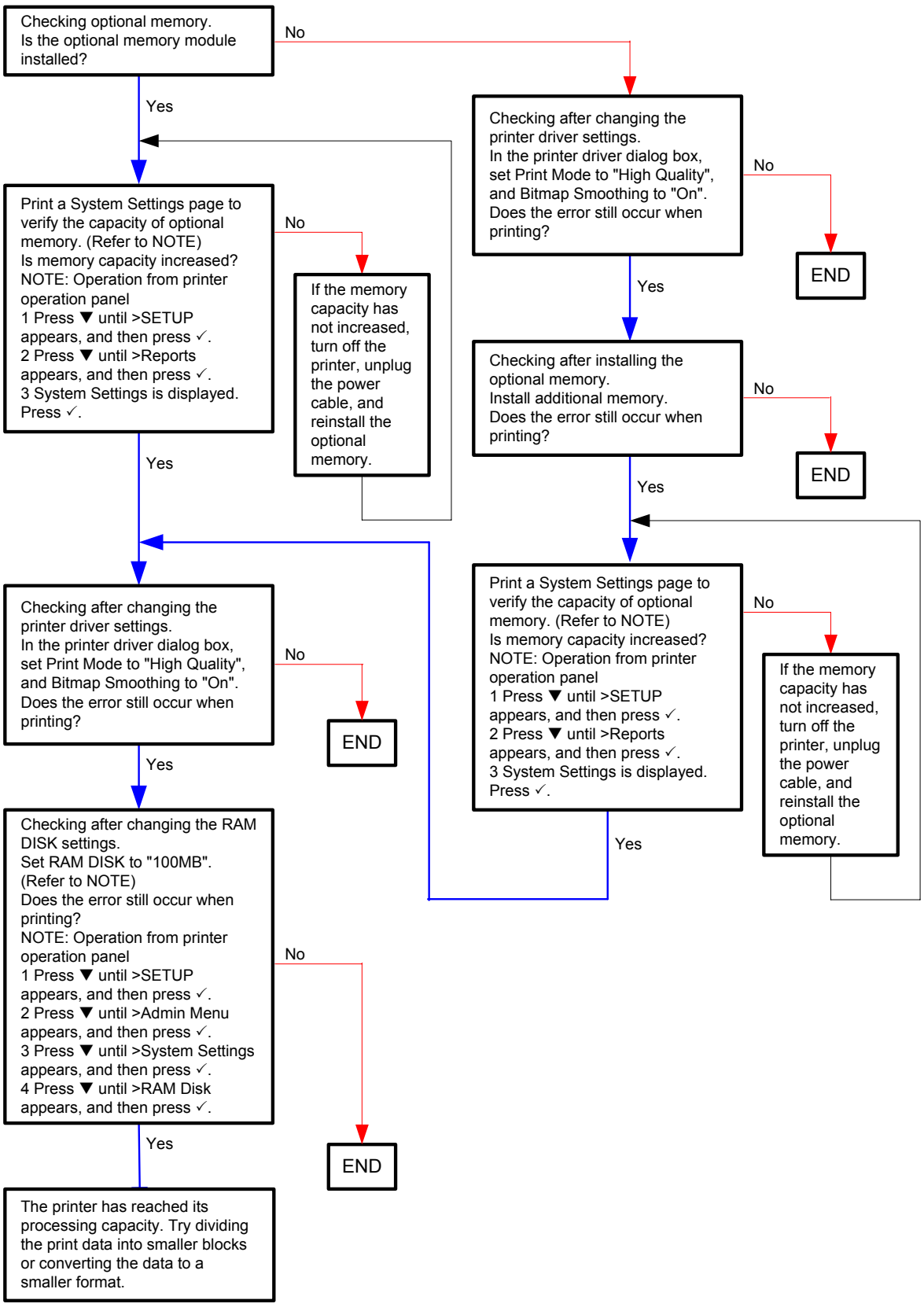
Flows 22 SMTP Error 016-503/016-764 / POP Error 016-504 / POP login Error 016-505 / SMTP Login Error 016-506/016-507 / Address Error 016-767 / From Address Error 016-768 / Network Error 016-786 / Network Not Ready 016-790/016-794



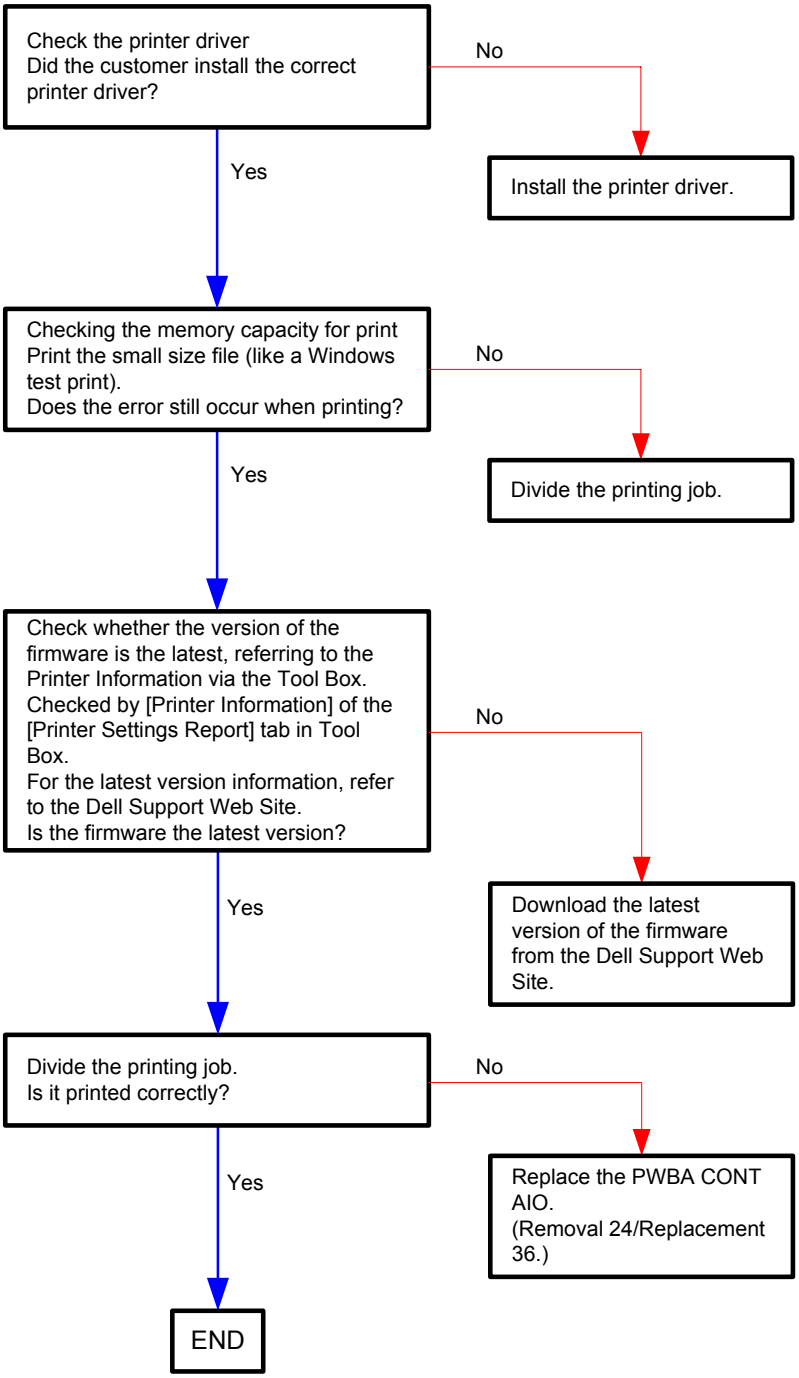
Flows 23 Memory Full 016-700

NOTE

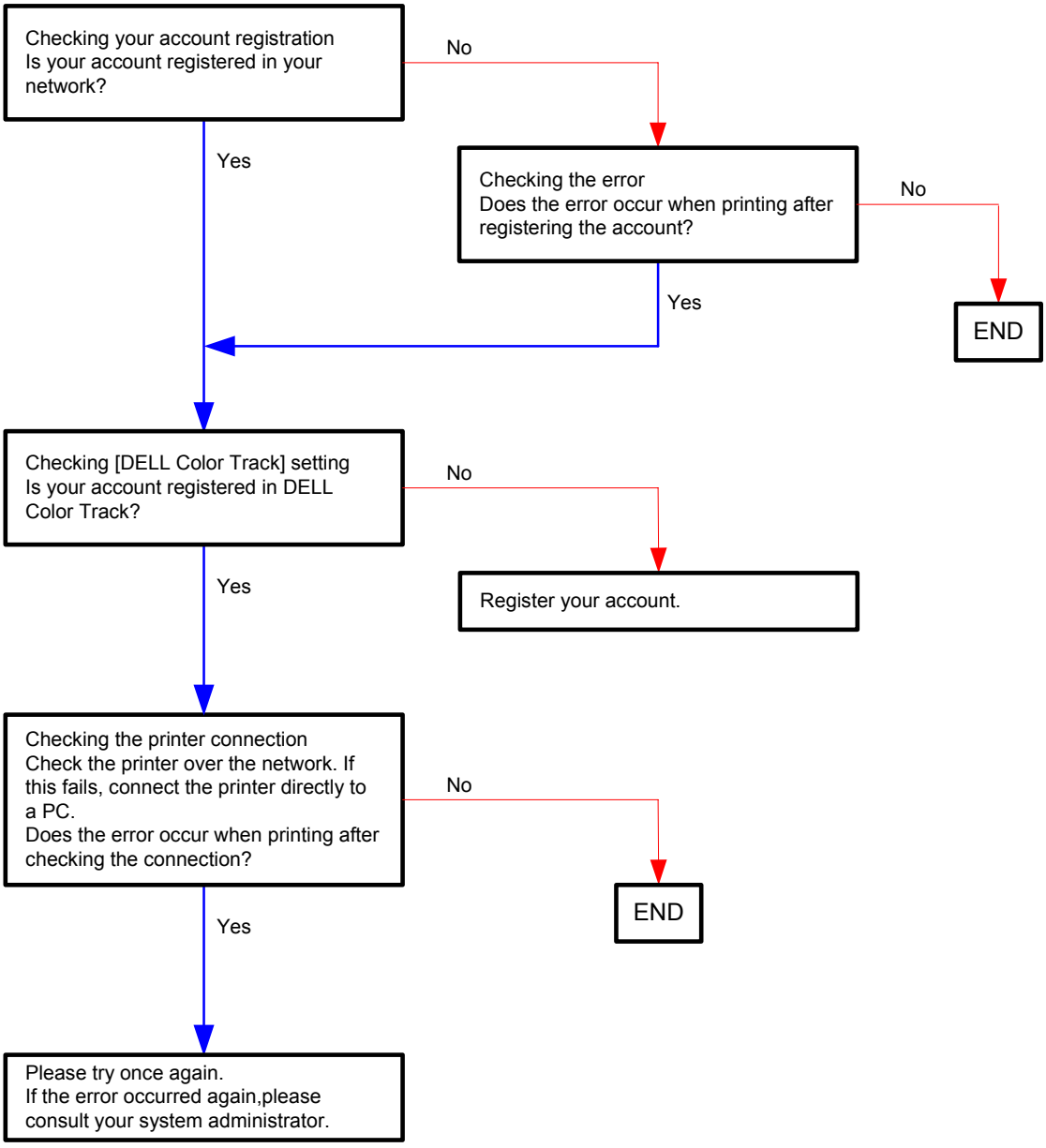
Errors may be avoided by the following measures:
- When the RAM disk is set to "Available", cancel it or reduce the disk capacity.
- Add the optional memory.



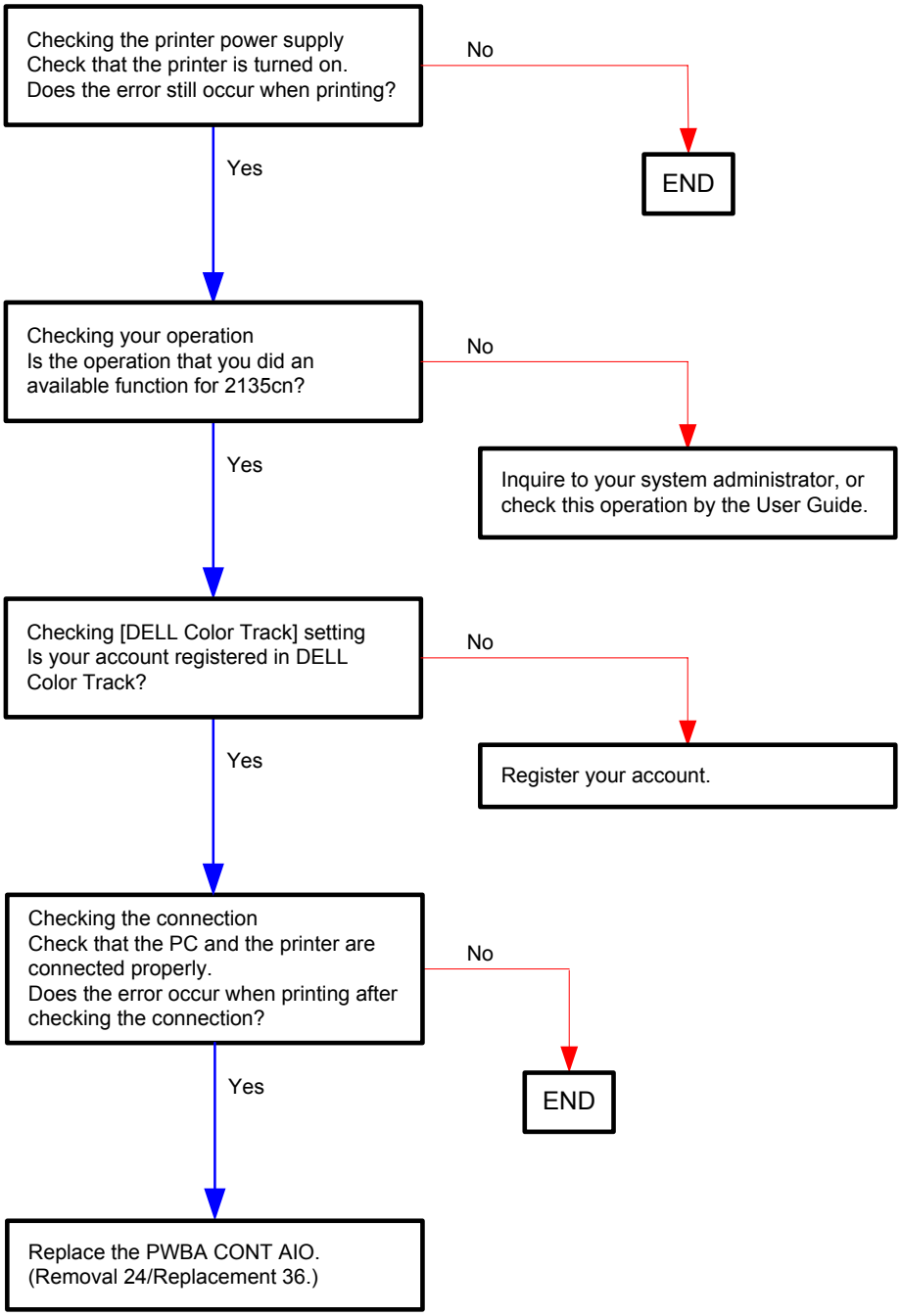
Flows 24 PCL Request 016-720



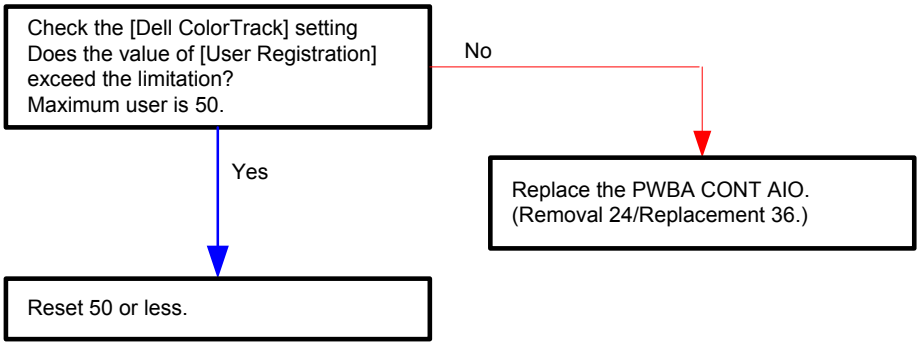
Flows 25 Invalid User 016-757



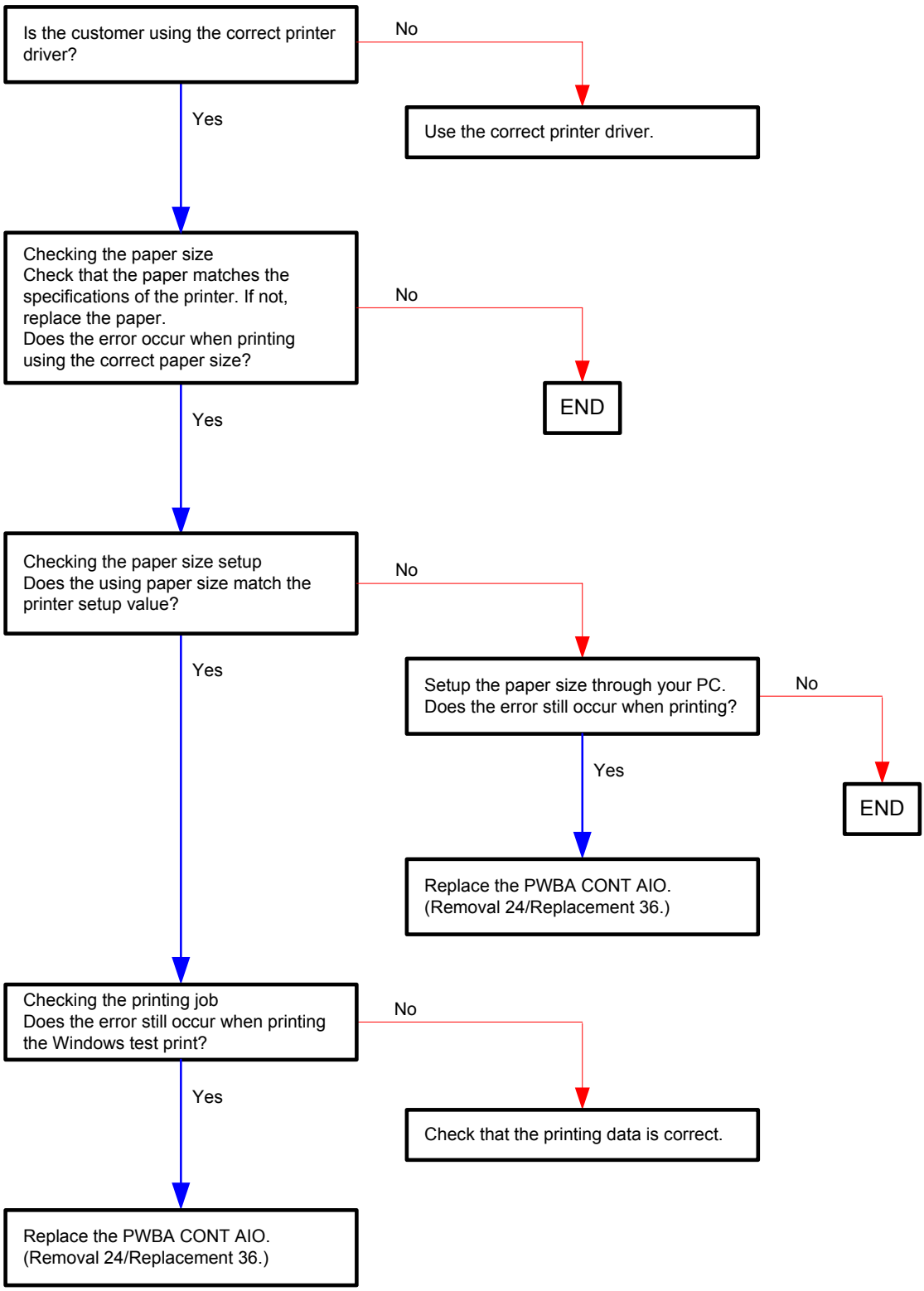
Flows 26 Disabled Func 016-758



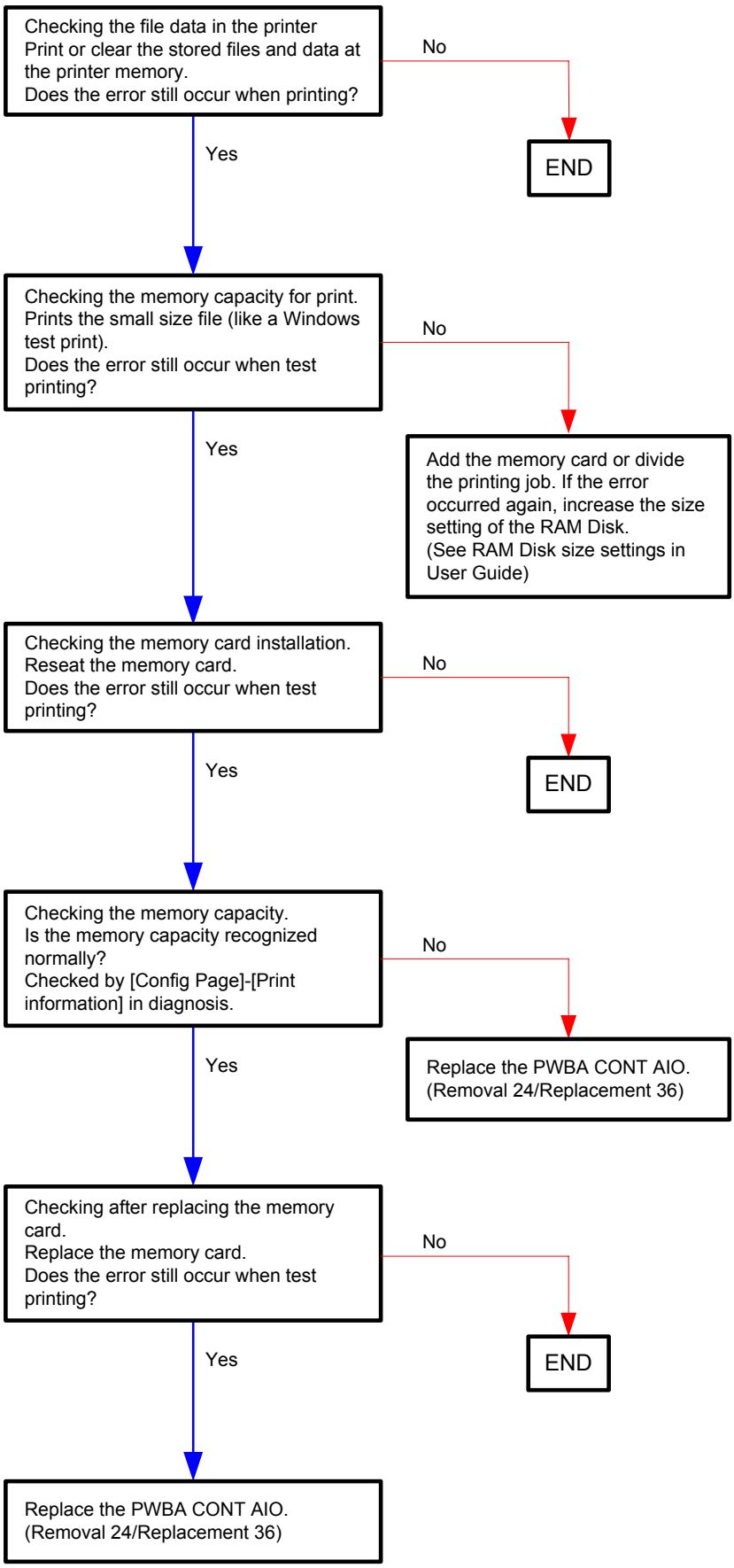
Flows 27 Reached Limits 016-759



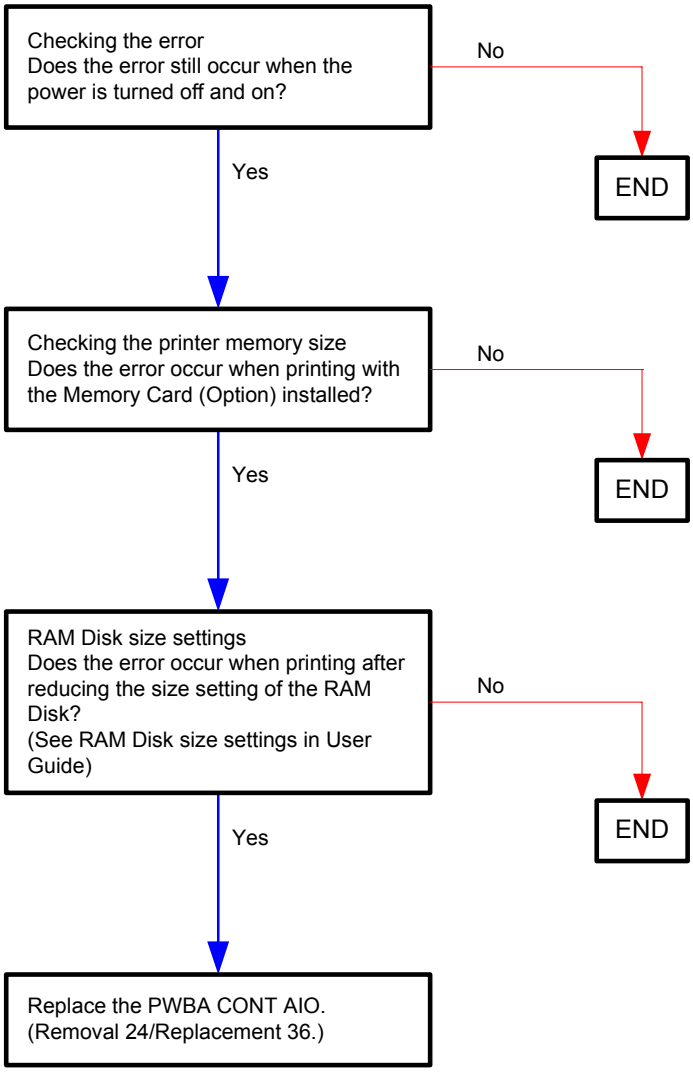
Flows 28 Invalid Job 016-799



Flows 29 Memory Full 016-980



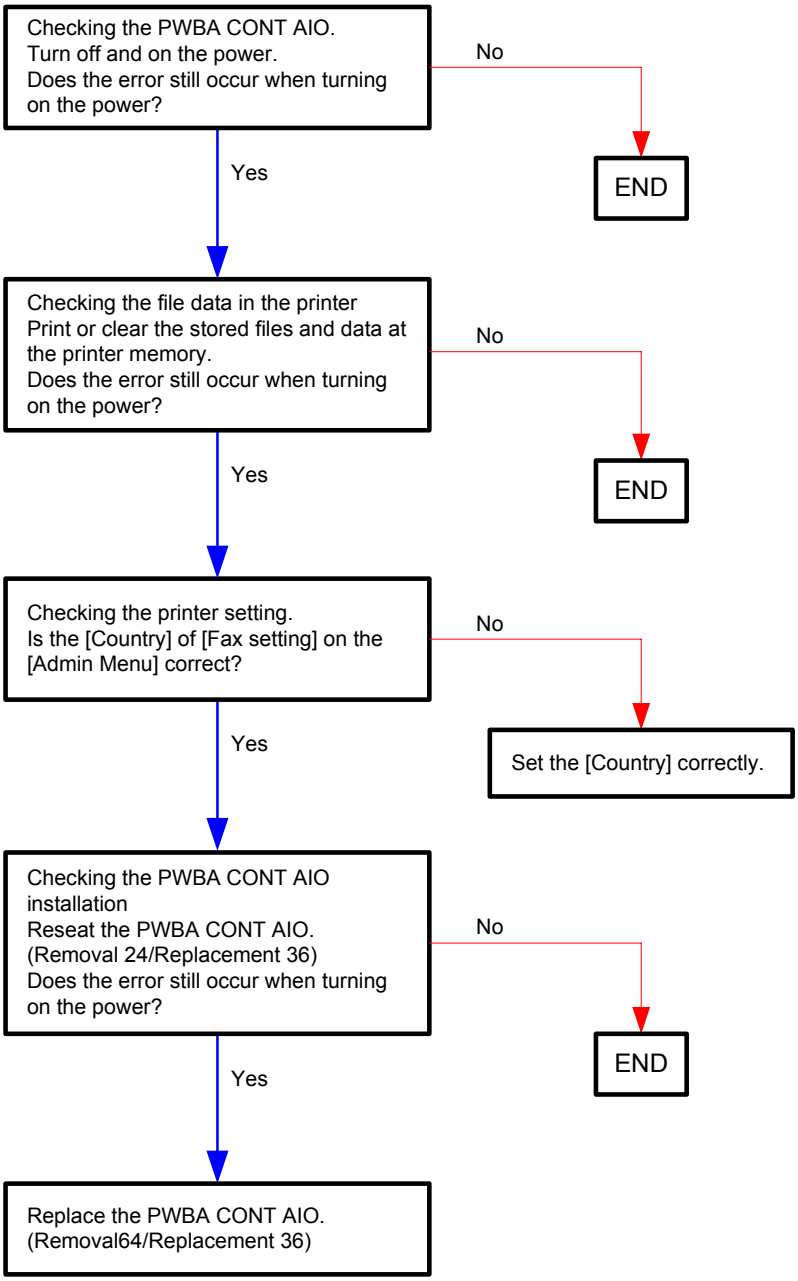
Flows 30 Collate Full 016-981



Flows 31 File size limits 016-986 / H/W Error 017-971/017-972/017-973/017-974 / File Error 017-975/017-976/017-977/017-978/017-979/017-986/017-987/017-989/033-502/035-779 / Report error 017-980 / Memory Full 033-787 / Cancel 033-789/033-790/033-791 / 116-396/116-397/116-398/116-987/117-314/117-315/117-322/117-328/117-335/117-336/117-337/117-340/117-348/117-349/117-350/117-362/117-363/133-231/133-234/133-235 Restart Printer

NOTE

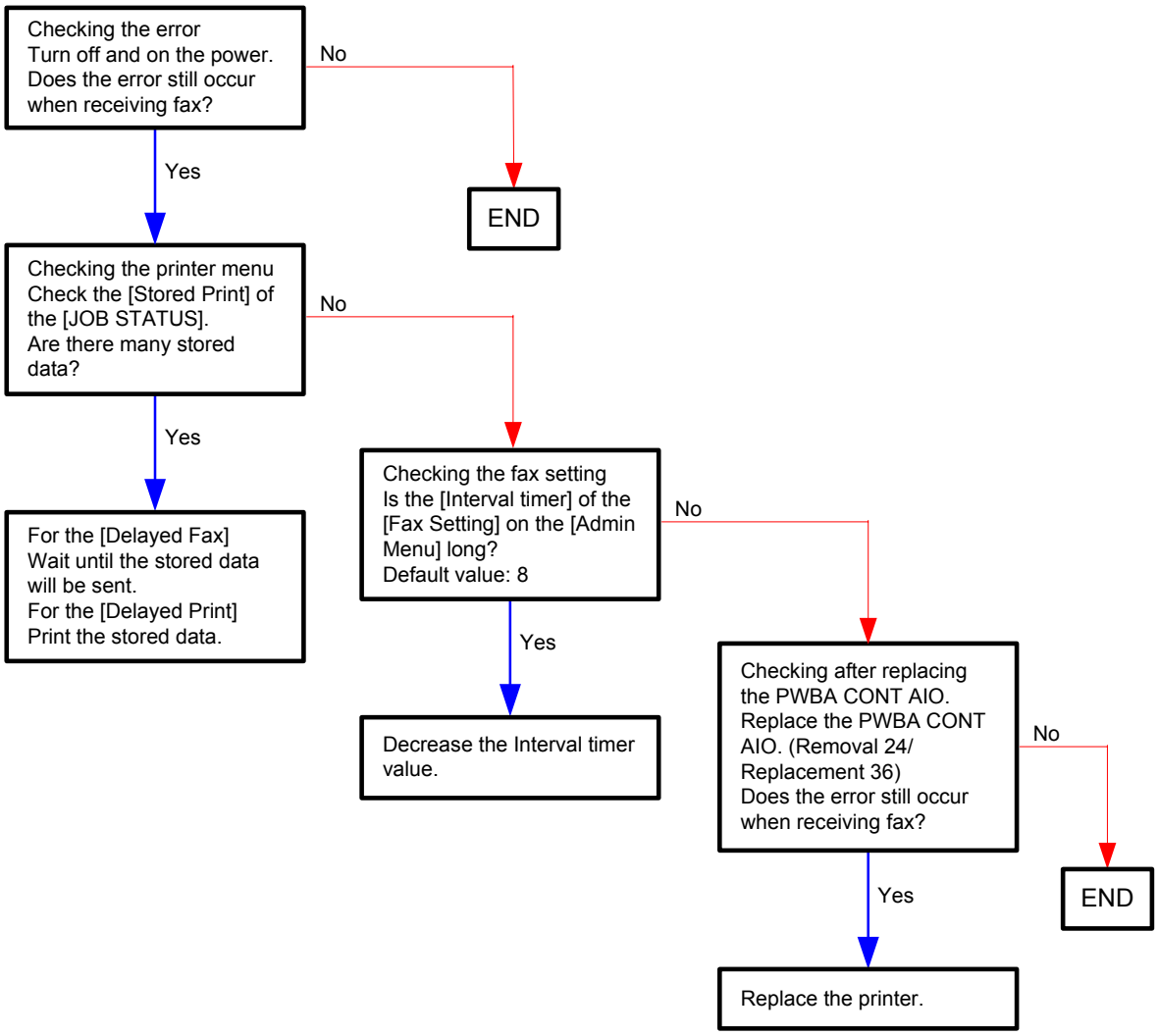
When the 016-986 error occurs, divide the document into blocks and retry scanning block by block.



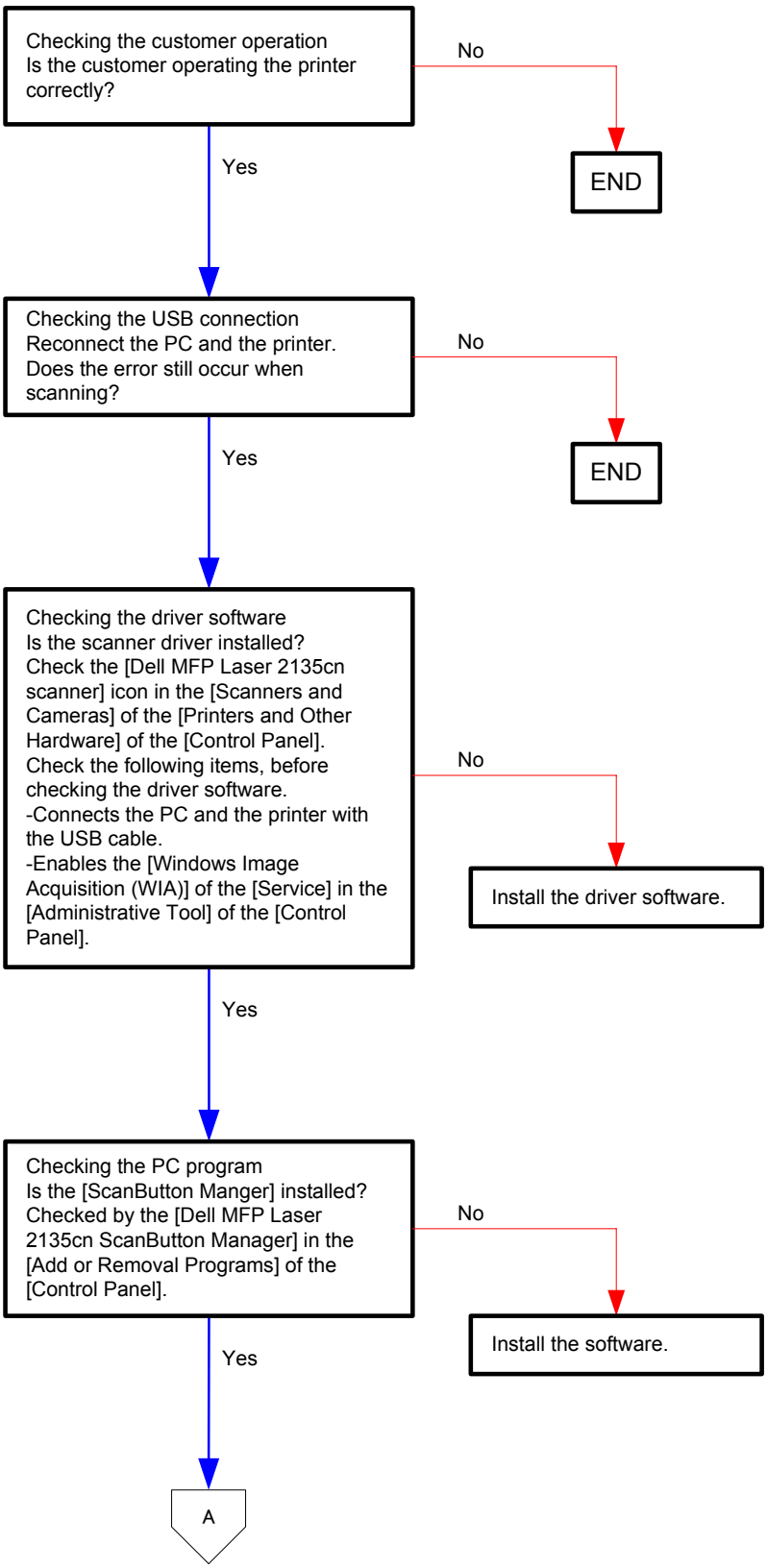
Flows 32 Memory Full 017-970/033-503/033-788 / Communication 033-513 / Accumulation Limit 033-795

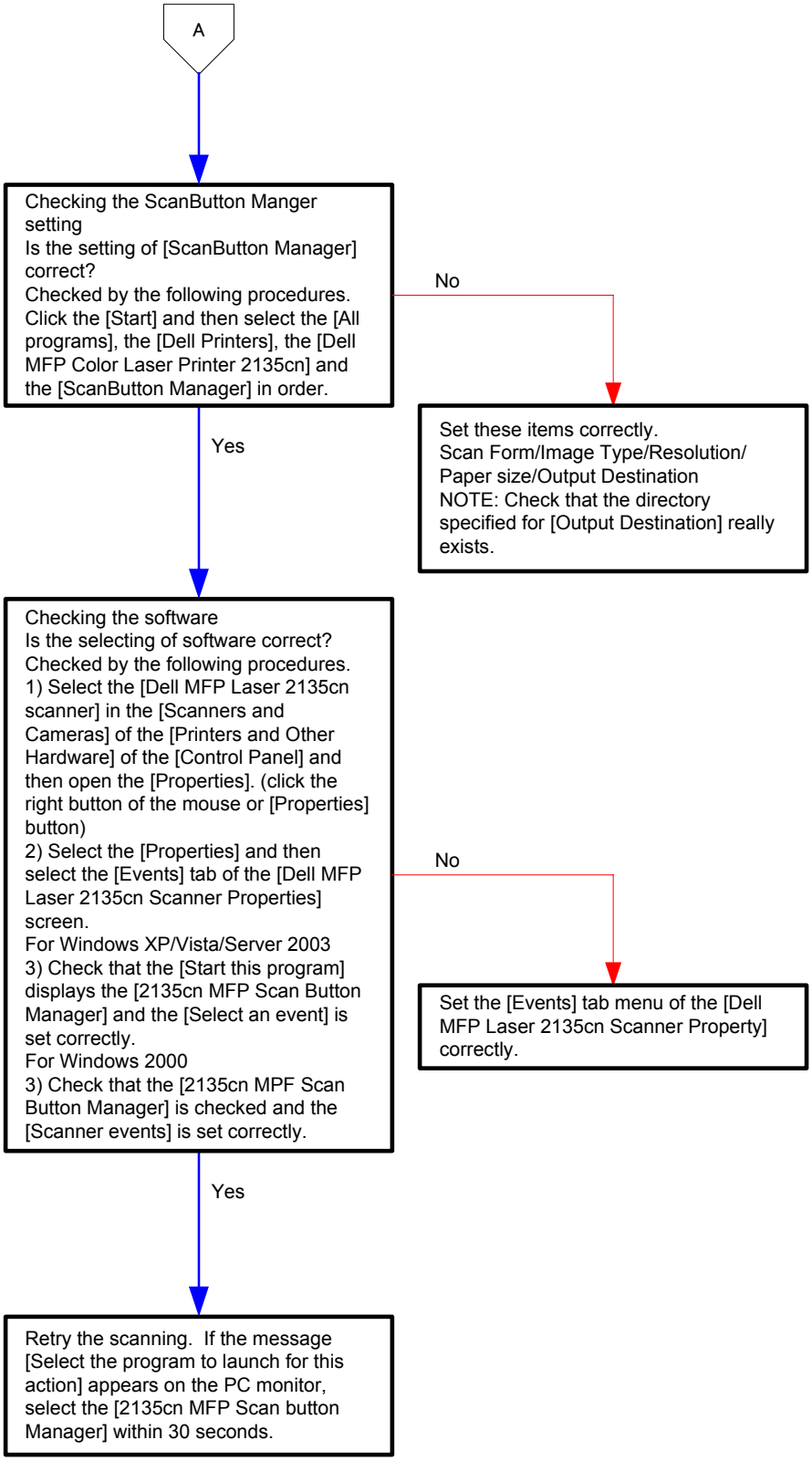
NOTE

The [033-795] error occurs when the sheet count of a single fax transmission exceeds 75. To send more than 75 sheets at a time, divide the documents in blocks.

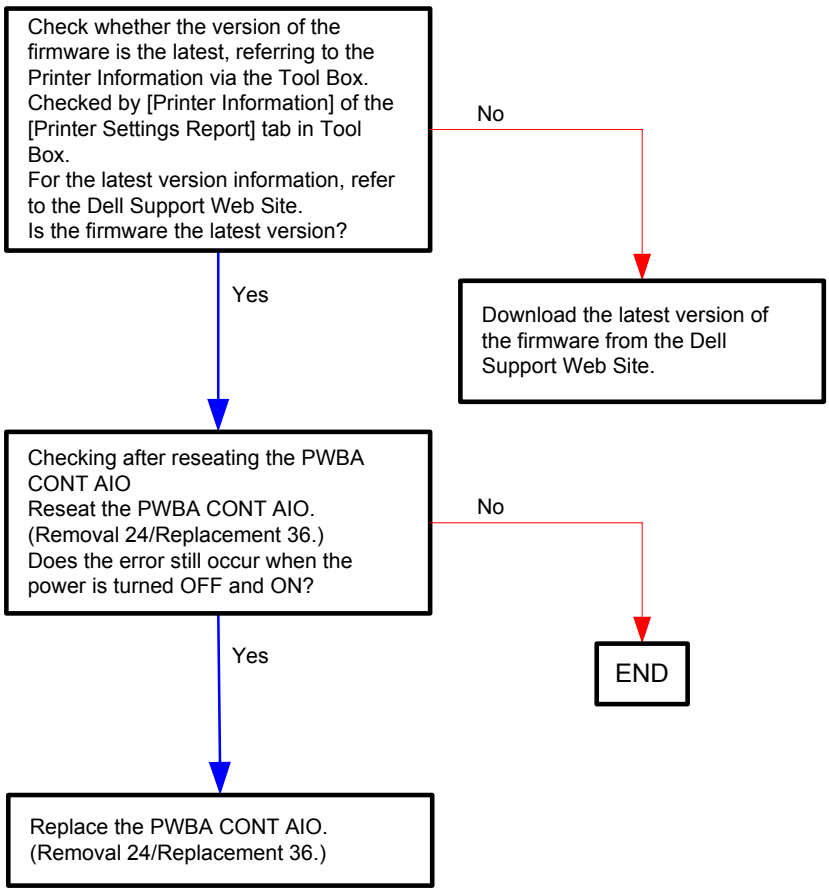


Flows 33 PCScan Time Out 017-988

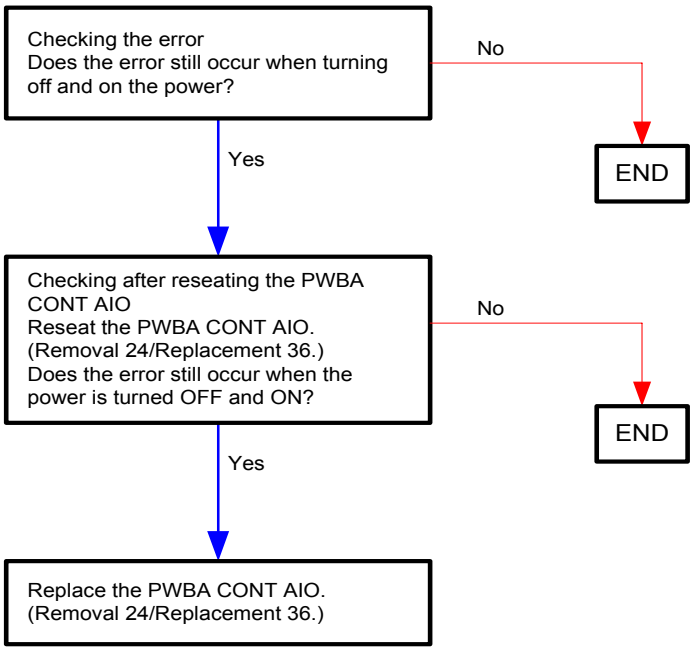



A
Checking the ScanButton Manger setting
Is the setting of [ScanButton Manager] correct?
Checked by the following procedures.
Click the [Start] and then select the [All programs], the [Dell Printers], the [Dell MFP Color Laser Printer 2135cn] and the [ScanButton Manager] in order.
No
Set these items correctly.
Scan Form/Image Type/Resolution/ Paper size/Output Destination
NOTE: Check that the directory specified for [Output Destination] really exists.
Yes
Checking the software
Is the selecting of software correct?
Checked by the following procedures.
1) Select the [Dell MFP Laser 2135cn scanner] in the [Scanners and Cameras] of the [Printers and Other Hardware] of the [Control Panel] and then open the [Properties]. (click the right button of the mouse or [Properties] button)
2) Select the [Properties] and then select the [Events] tab of the [Dell MFP Laser 2135cn Scanner Properties] screen.
For Windows XP/Vista/Server 2003
3) Check that the [Start this program] displays the [2135cn MFP Scan Button Manager] and the [Select an event] is set correctly.
For Windows 2000
3) Check that the [2135cn MPF Scan Button Manager] is checked and the [Scanner events] is set correctly.
No
Set the [Events] tab menu of the [Dell MFP Laser 2135cn Scanner Property] correctly.
Yes
Retry the scanning. If the message [Select the program to launch for this action] appears on the PC monitor, select the [2135cn MFP Scan button Manager] within 30 seconds.

Flows 34 Download Mode Send FW Data 024-360



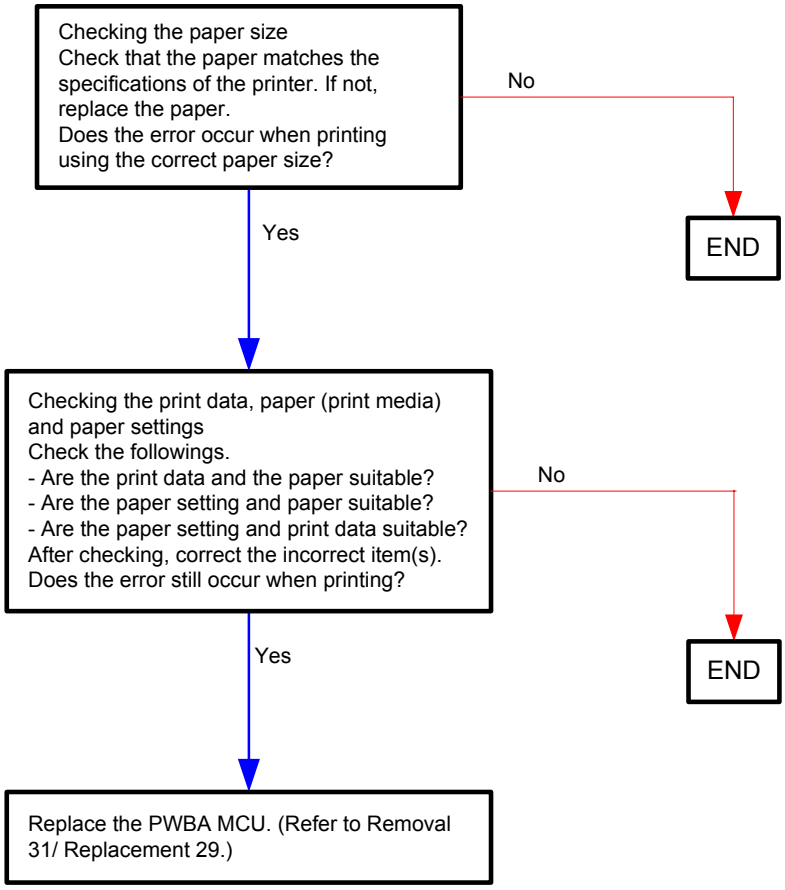
Flows 35 024-362 Restart Printer



Flows 36 Load Tray 1 024-910

NOTE

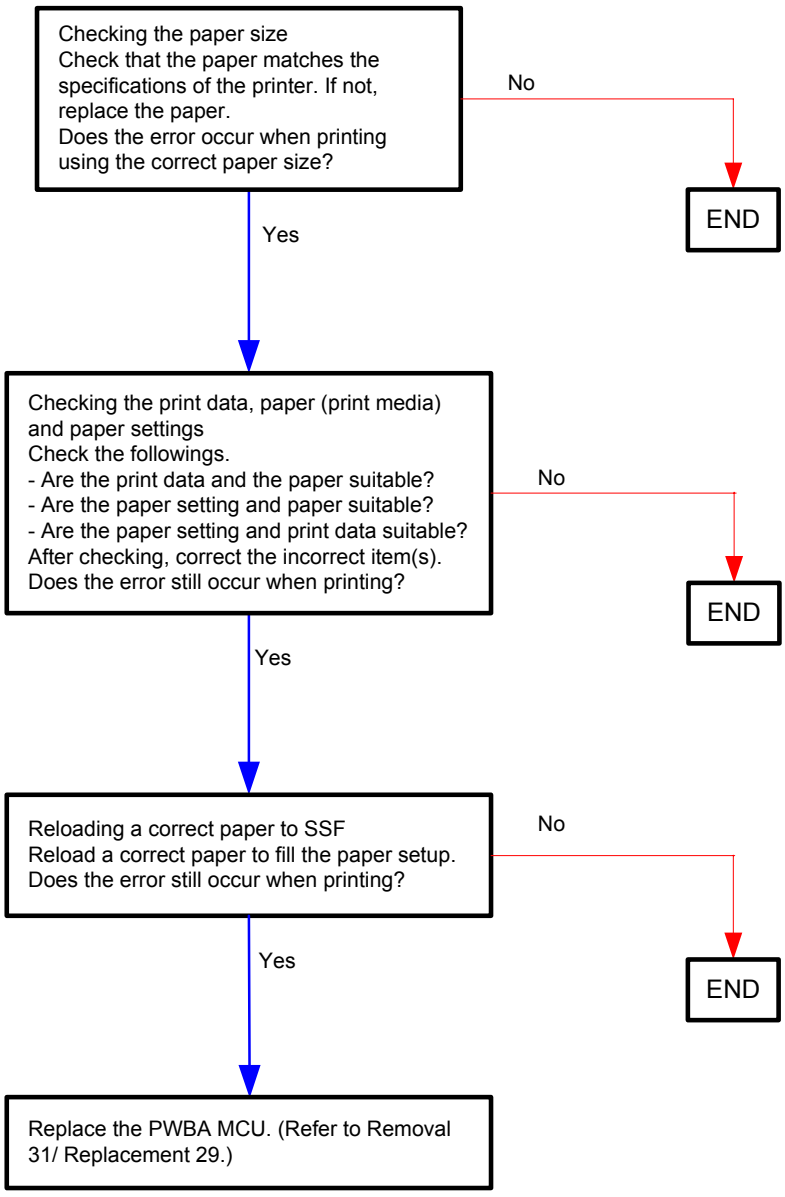
This error is displayed when the paper set in Tray 1 is different in size from the paper size defined on the PC.
In Tray 1, set the paper defined on the PC.



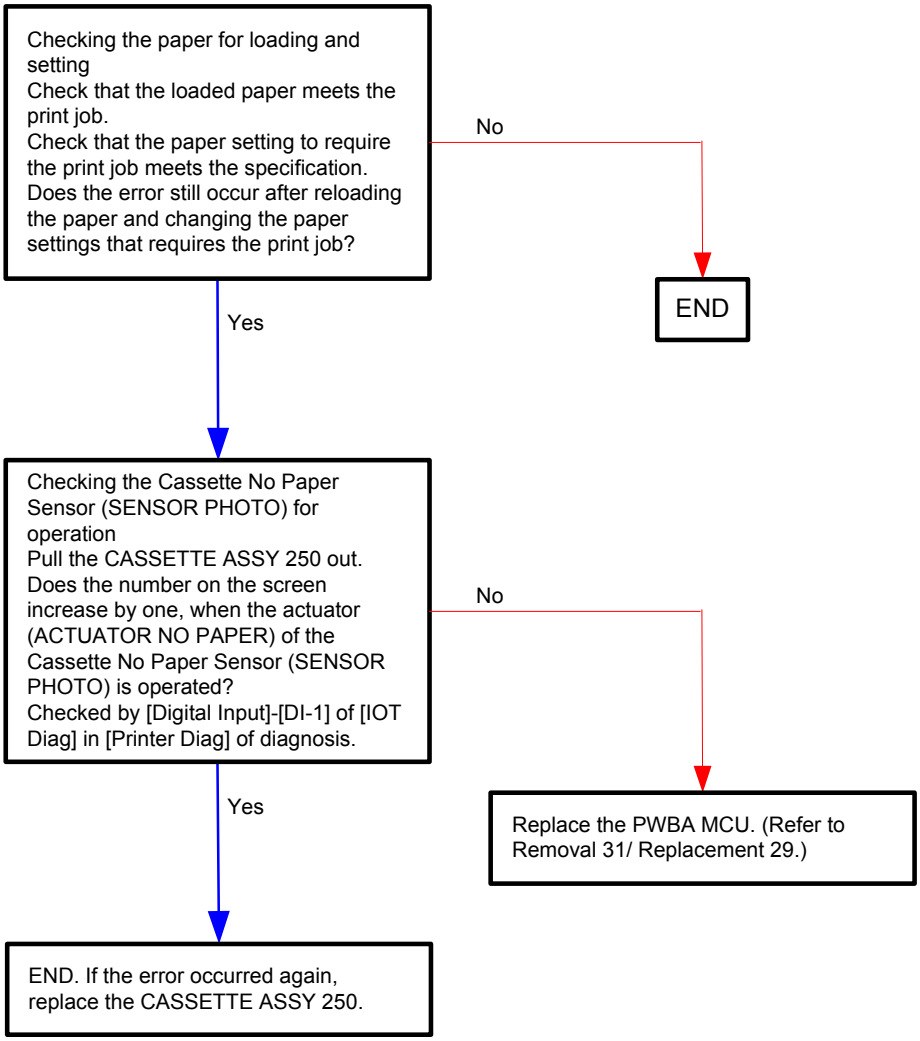
Flows 37 Load SSF 024-914

NOTE

This error is displayed when the paper set in SSF is different in size from the paper size defined on the PC.
In SSF, set the paper defined on the PC.



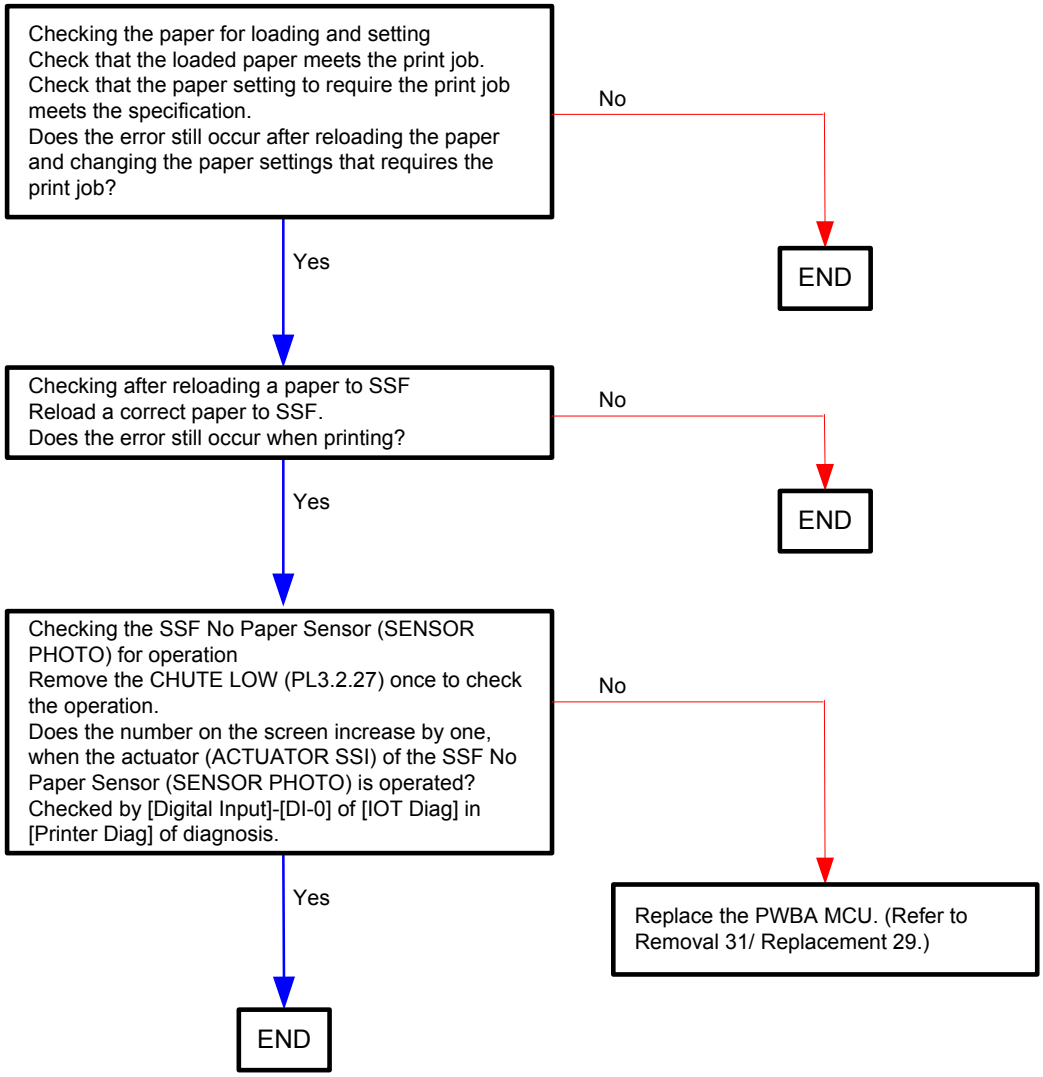
Flows 38 Load Tray 1 024-965 / Illegal Settings



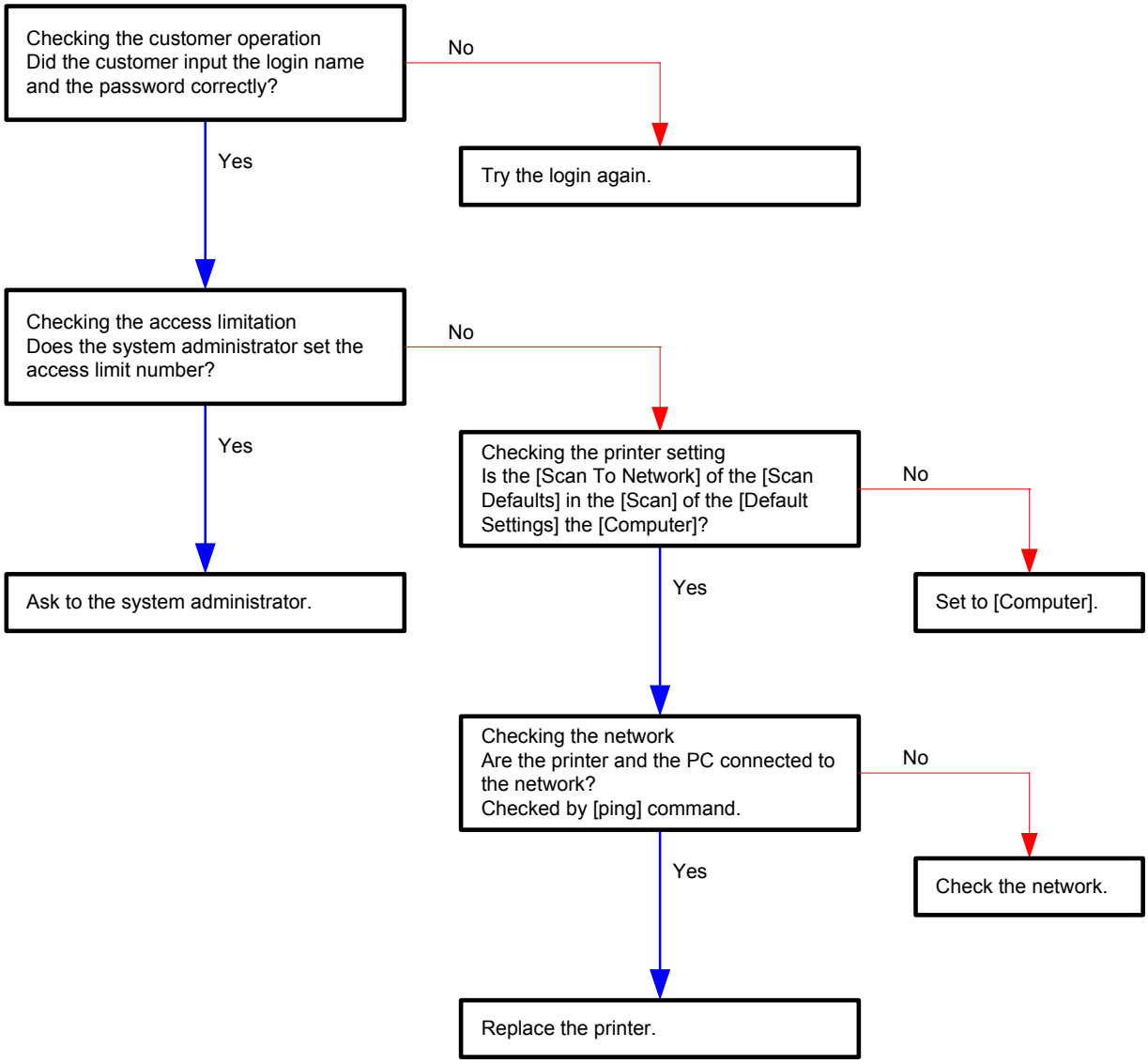
Flows 39 Load SSF 024-969 / 075-923 Reseat paper

NOTE

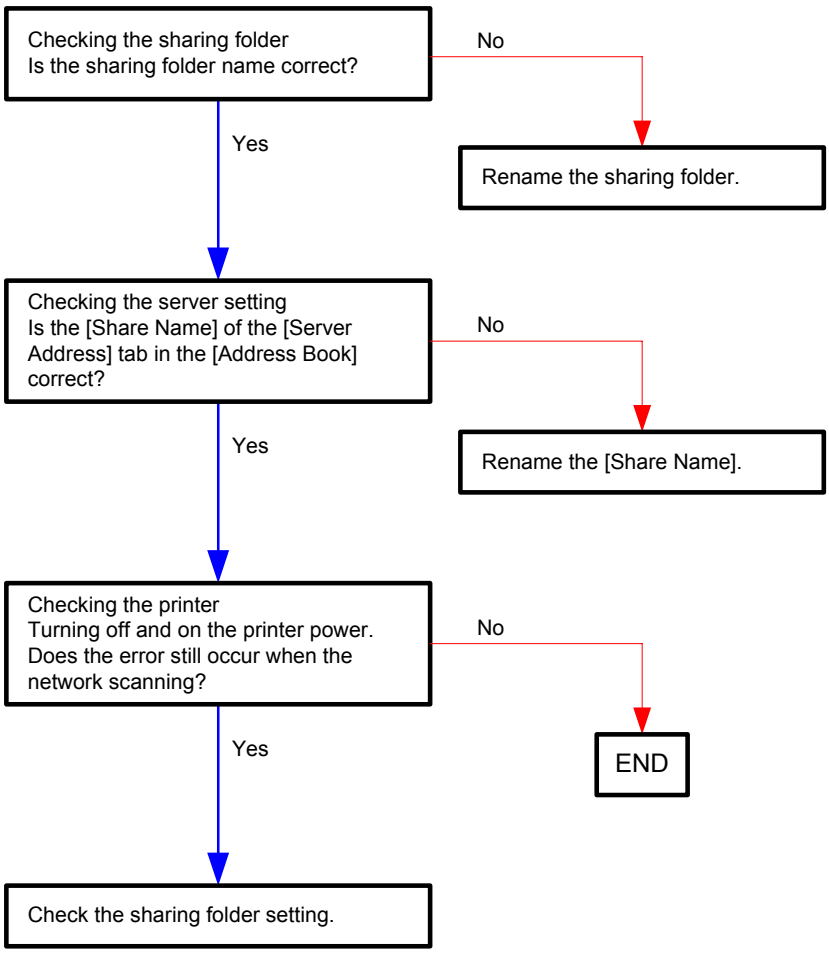
When loading a sheet to the SSF, ensure that the lead edge of the sheet touches the back of the SSF (as far as 8 to 10cm from the lead edge). Otherwise, this error may occur.



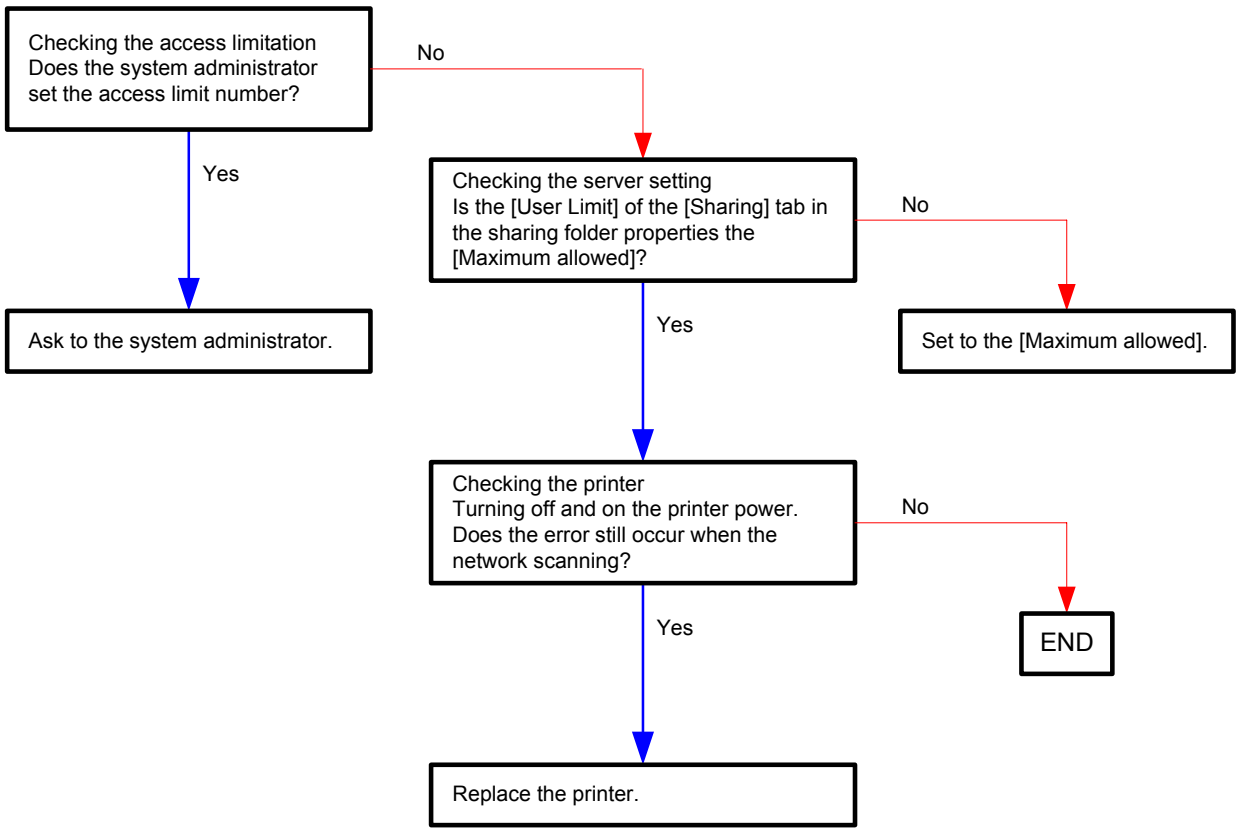
Flows 40 SMB Login Error 031-521/031-522



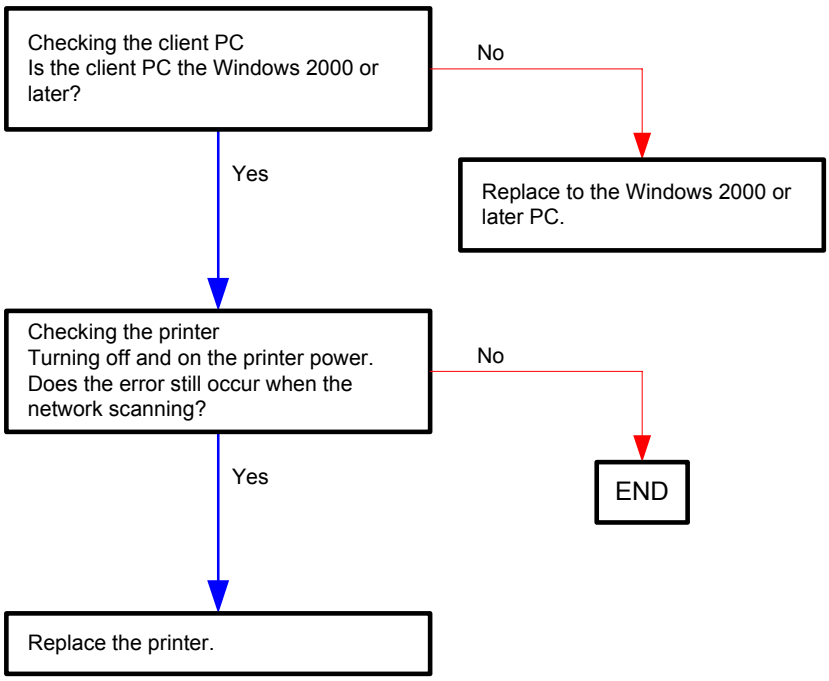
Flows 41 SMB Error 031-523/031-528 / DNS Error 031-526



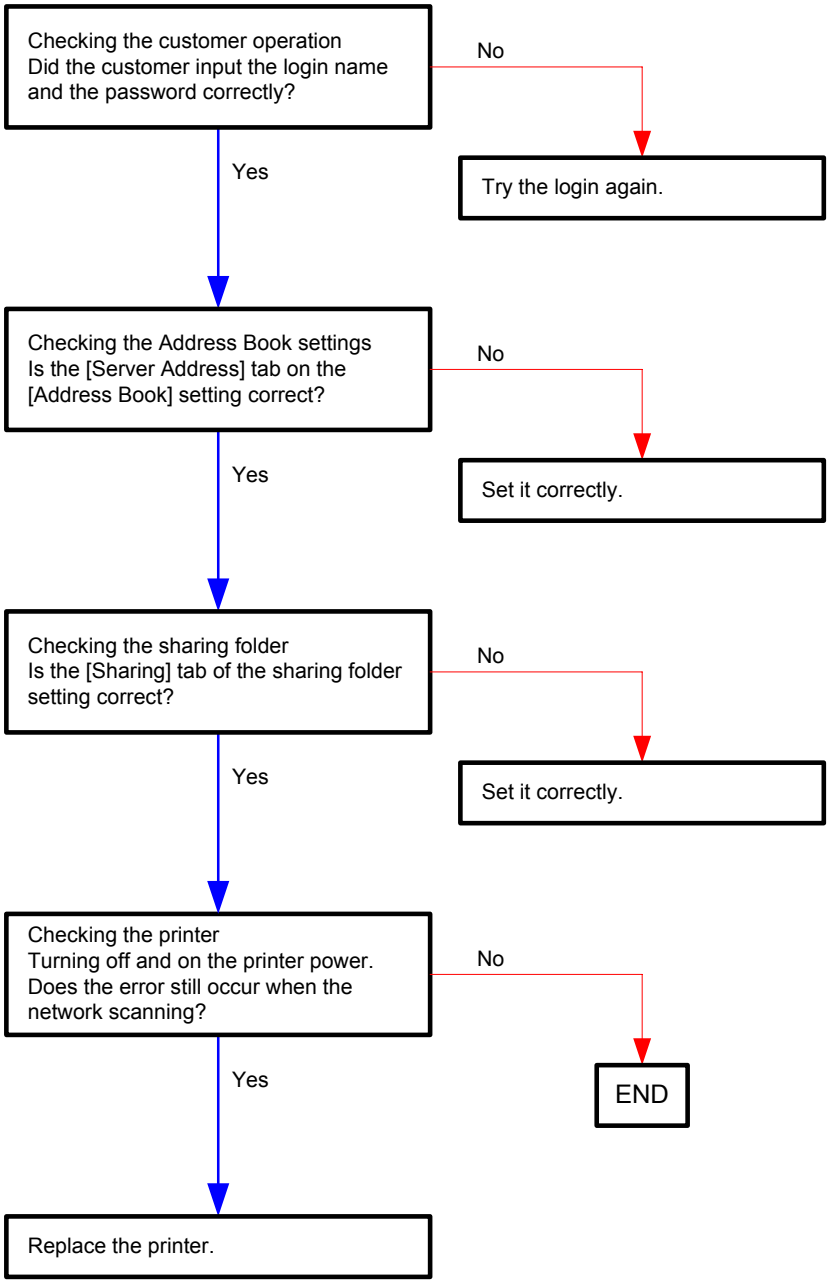
Flows 42 SMB Login Error 031-524



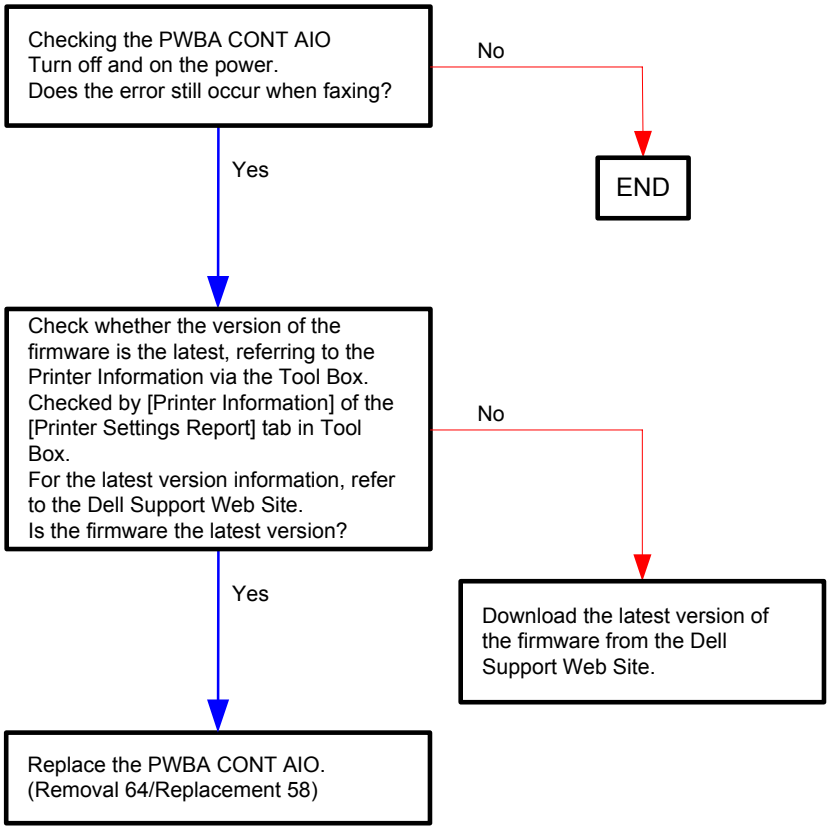
Flows 43 SMB Error 031-525



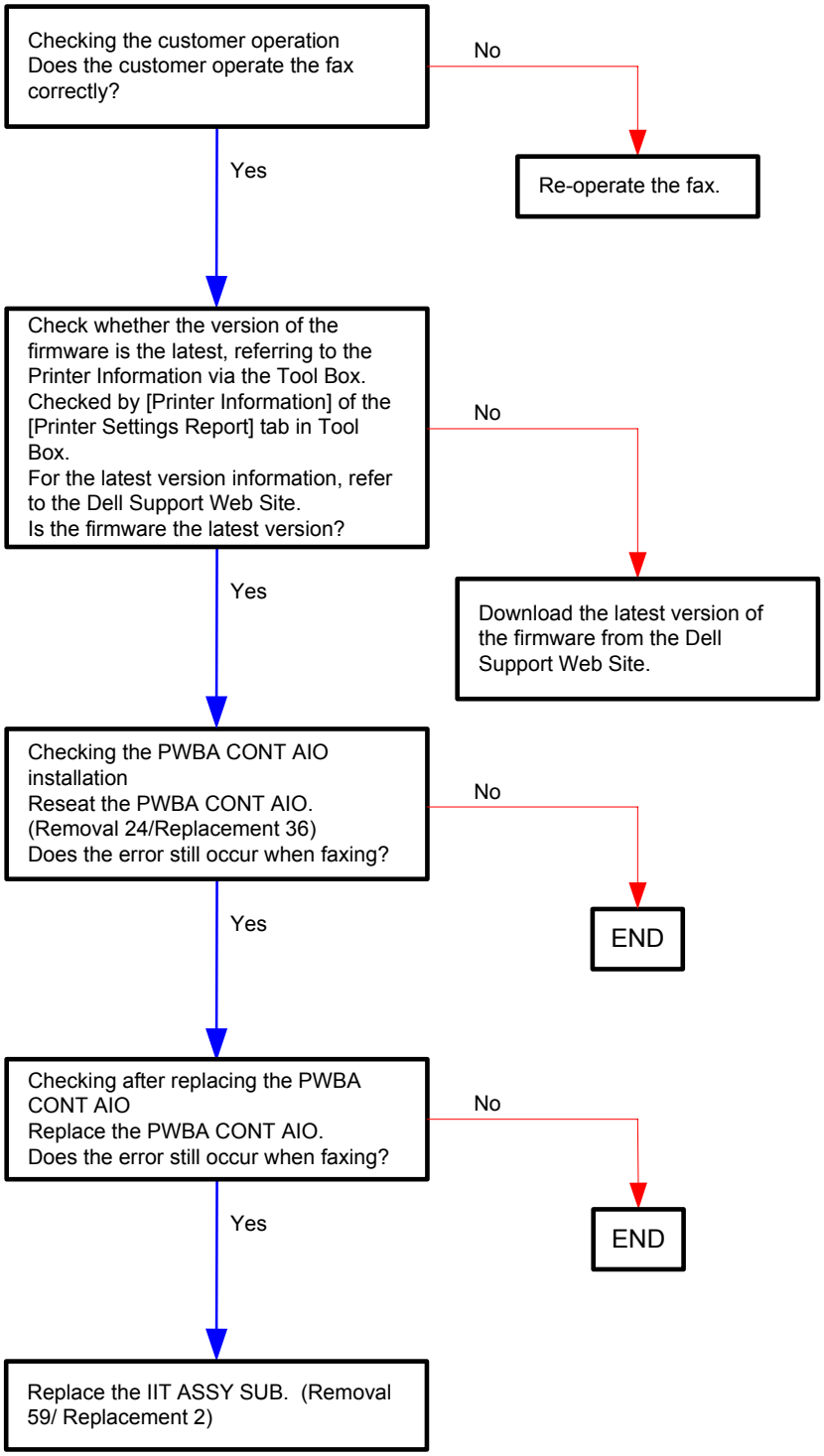
Flows 44 SMB Login Error 031-529/031-541/031-546/031-547 / SMB Path Error 031-530 / SMB List Error 031-531 / SMB Error 031-532/031-533/031-534/031-535/031-536 / FTP Error 031-576/031-580/031-581/031-582/031-584/031-585/031-587/031-588 / FTP Login Error 031-578 / FTP Path Error 031-579



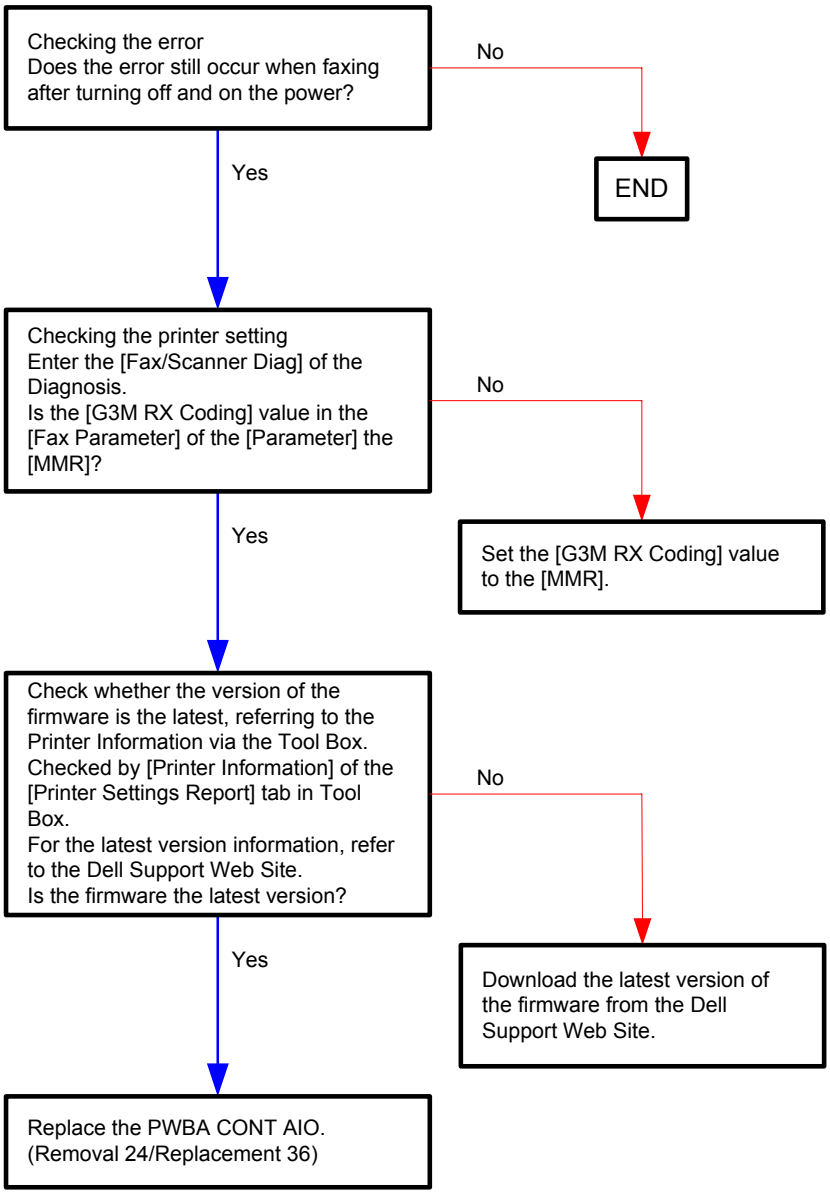
Flows 45 Communication 033-500 / Codec Error 033-514/033-515/033-516/033-765/033-766/033-767 / Buffer 033-774/033-776/033-785 / 117-310/117-311/117-312/133-236/133-237/133-238/133-239/133-240/133-241/133-242/133-243/133-244/133-246/133-247/133-248/133-249/133-251/133-252/133-253/133-259/133-260/133-261/133-269/133-271/133-272/133-273/133-274/133-275/133-276/133-277/133-278/133-279/133-280/133-281/133-282/133-283/133-286/133-287/133-288/133-289/133-290 Restart Printer



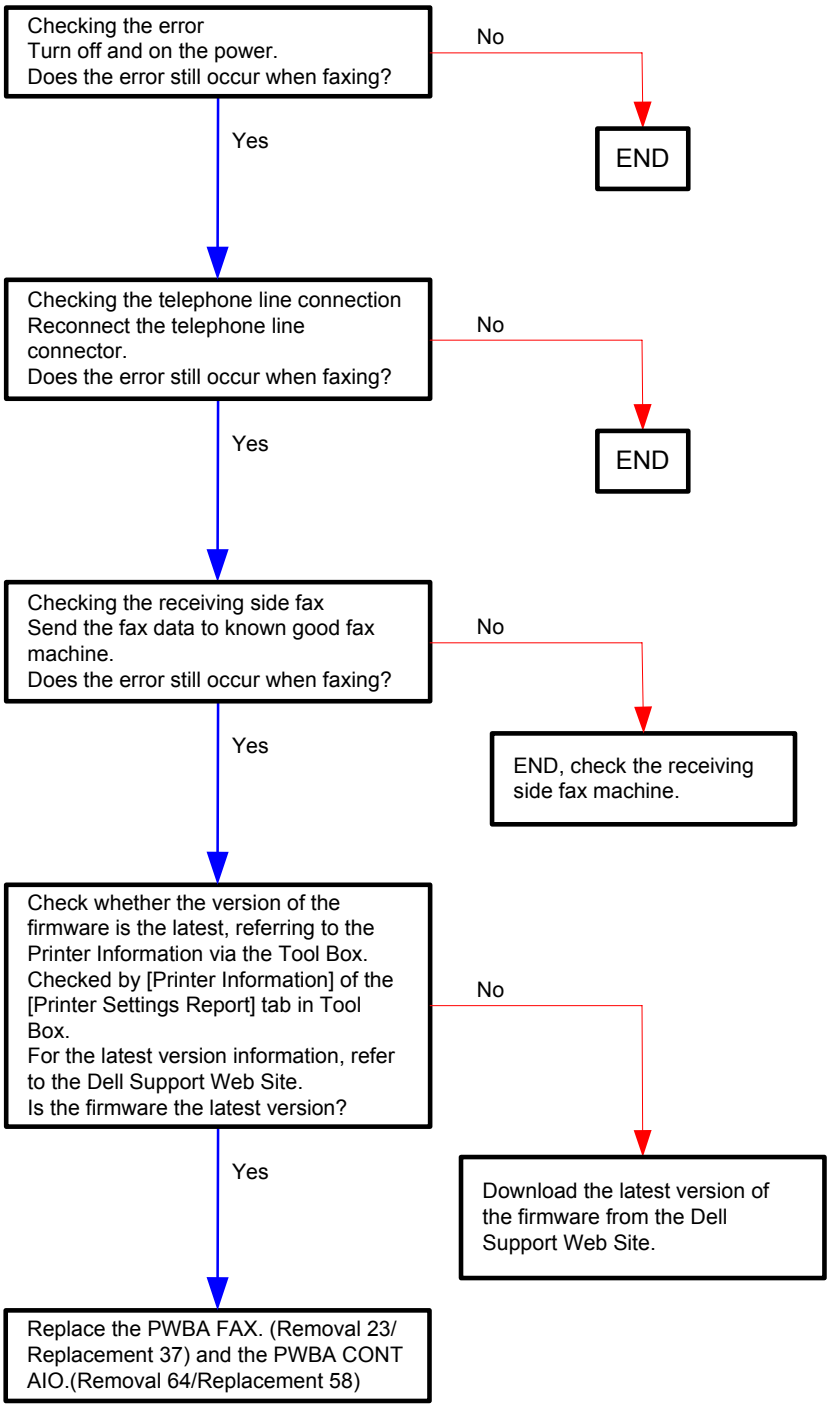
Flows 46 Codec Error 033-501 / Communication 033-763



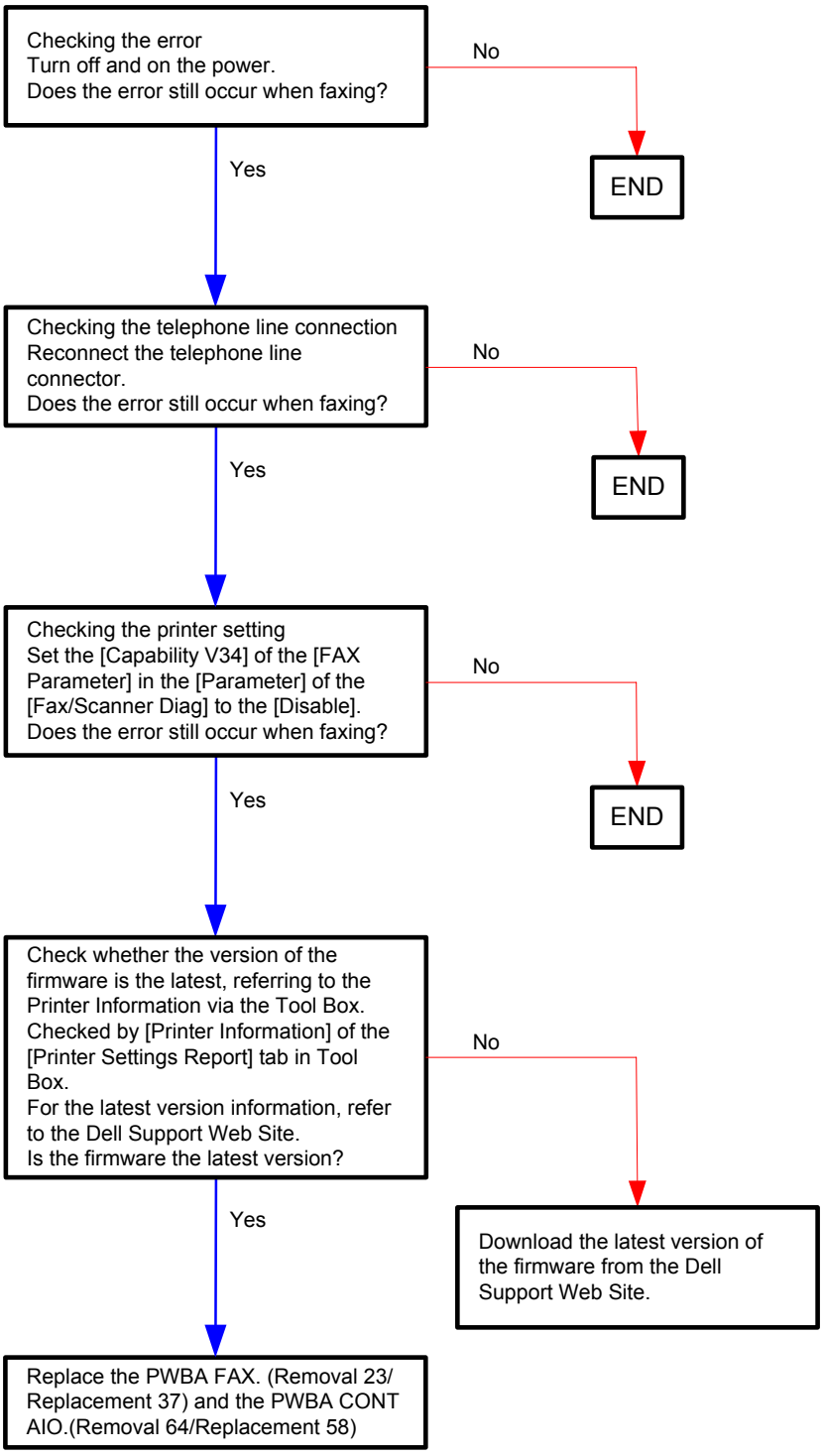
Flows 47 Codec Error 033-510/033-520/033-521/033-522/033-523/033-524/033-525/033-526/033-768/033-769/033-770/033-771/033-772/033-773/033-786



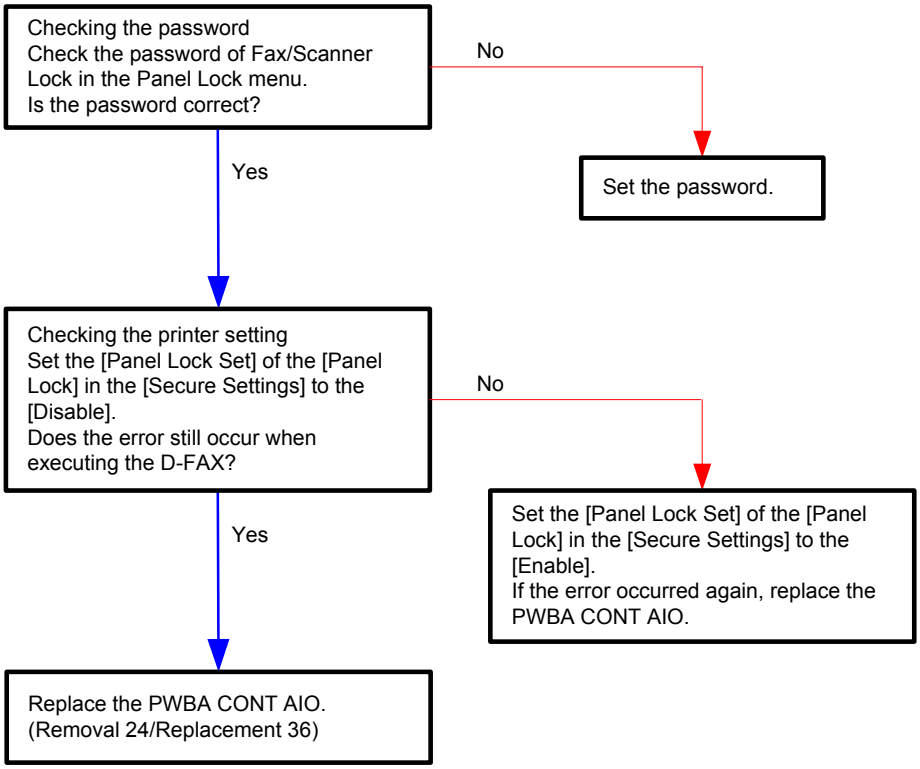
Flows 48 Communication 033-511/033-782/033-799/034-508/035-702/035-704/035-705/035-708/035-709/035-710/035-716/035-717/035-728/035-729/035-737/035-739/035-740/035-742



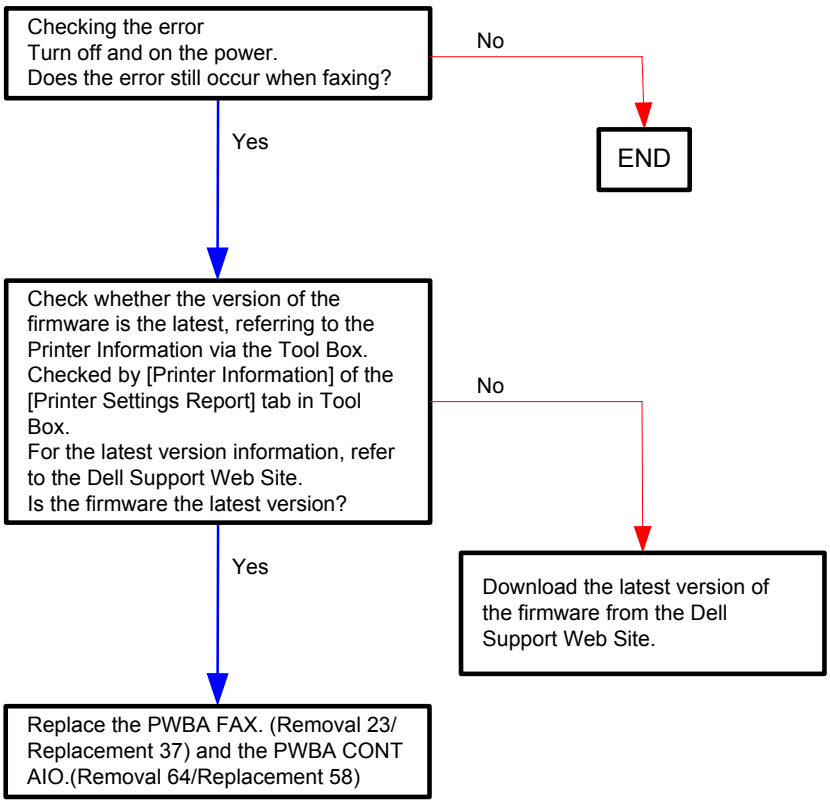
Flows 49 Communication 033-512/033-753/033-754/033-755/033-756/033-757/033-758/033-759/033-760/033-761/035-706/035-792



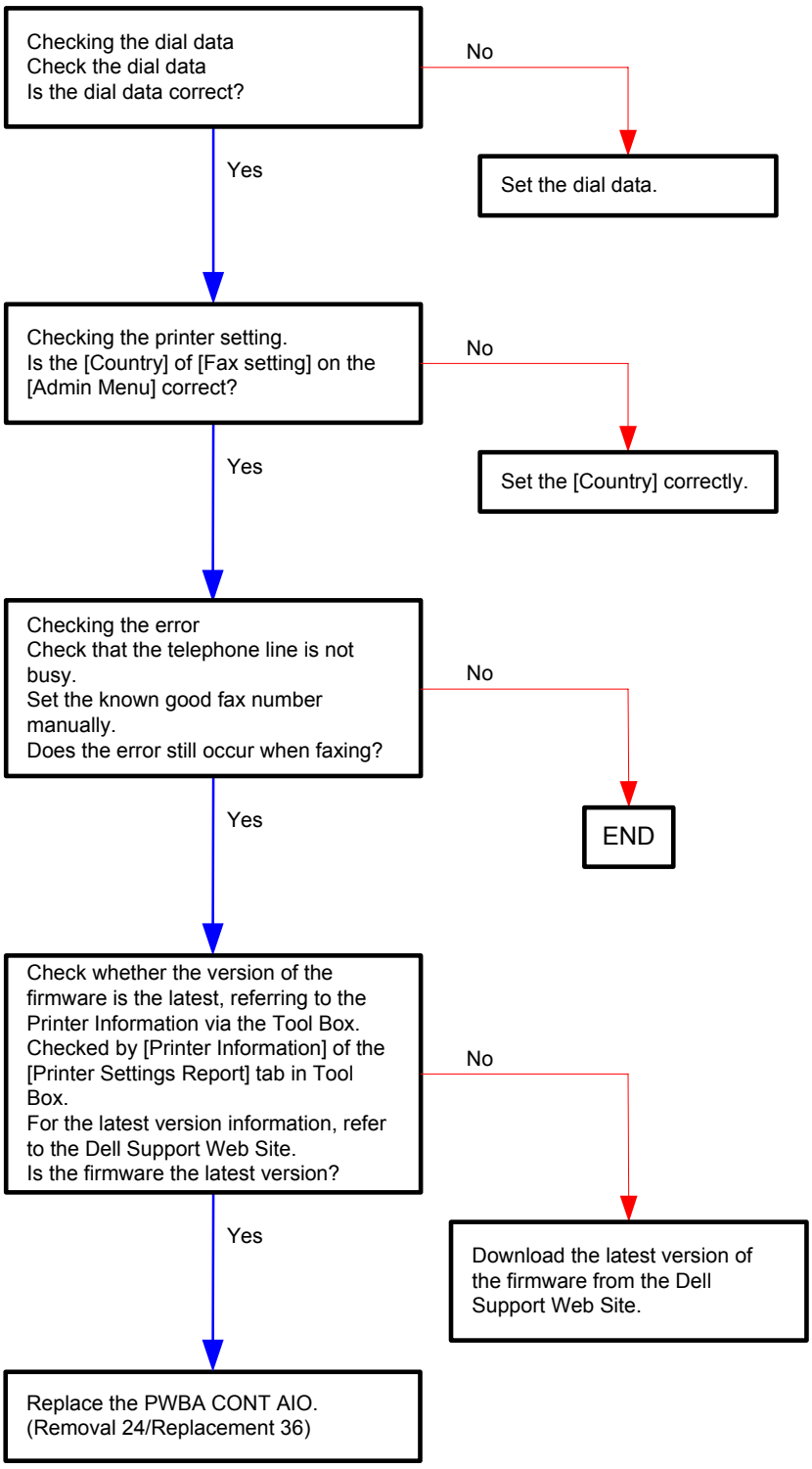
Flows 50 Password Error 033-517



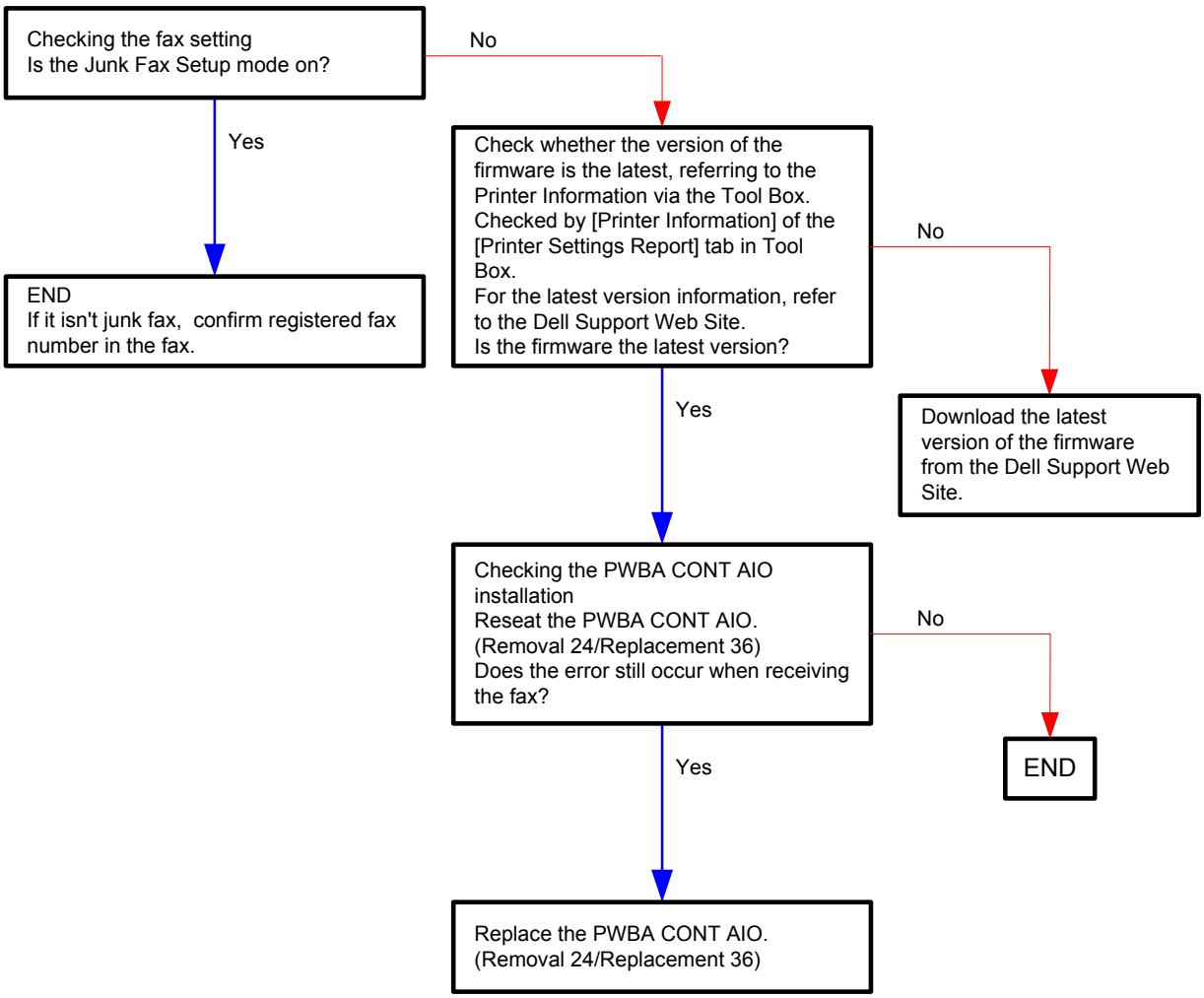
Flows 51 Communication 033-751/033-764/035-730 / 133-254 Restart Printer



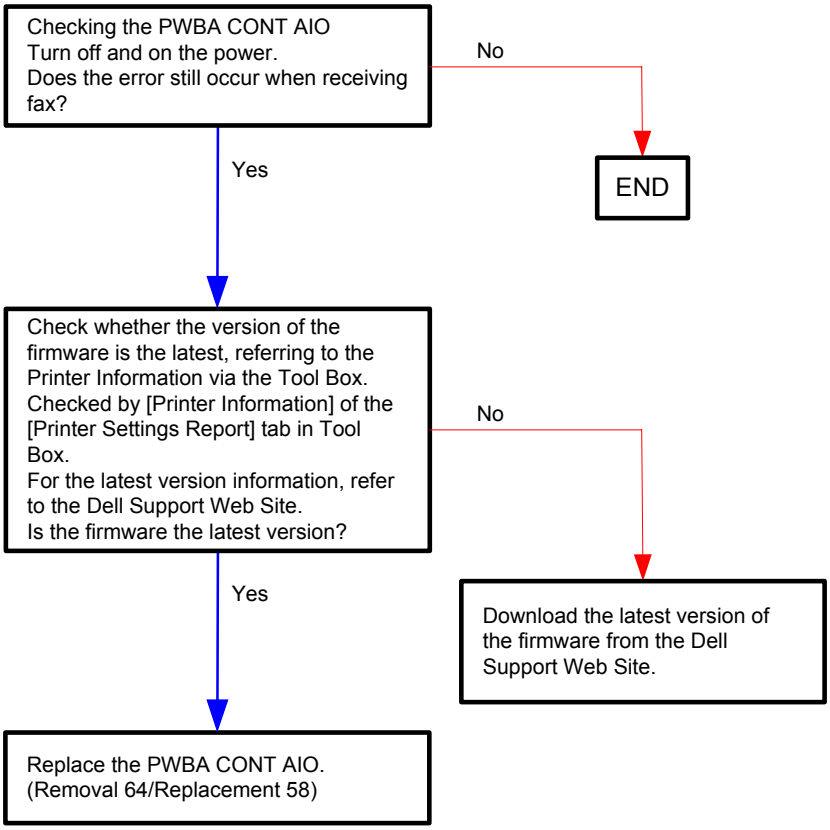
Flows 52 Busy 033-752 / Invalid Data 034-799 / No Dial Tone 035-746



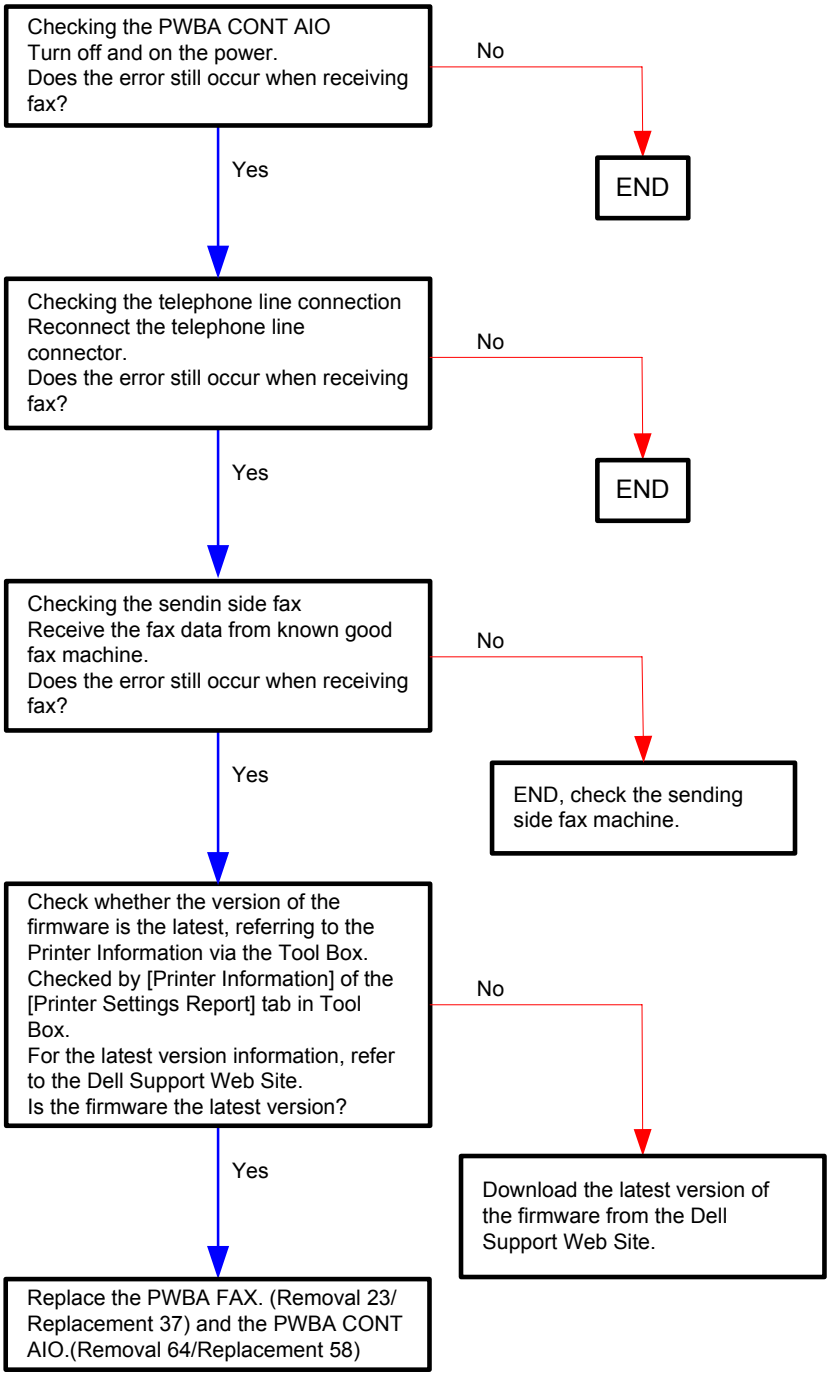
Flows 53 Communication 033-762



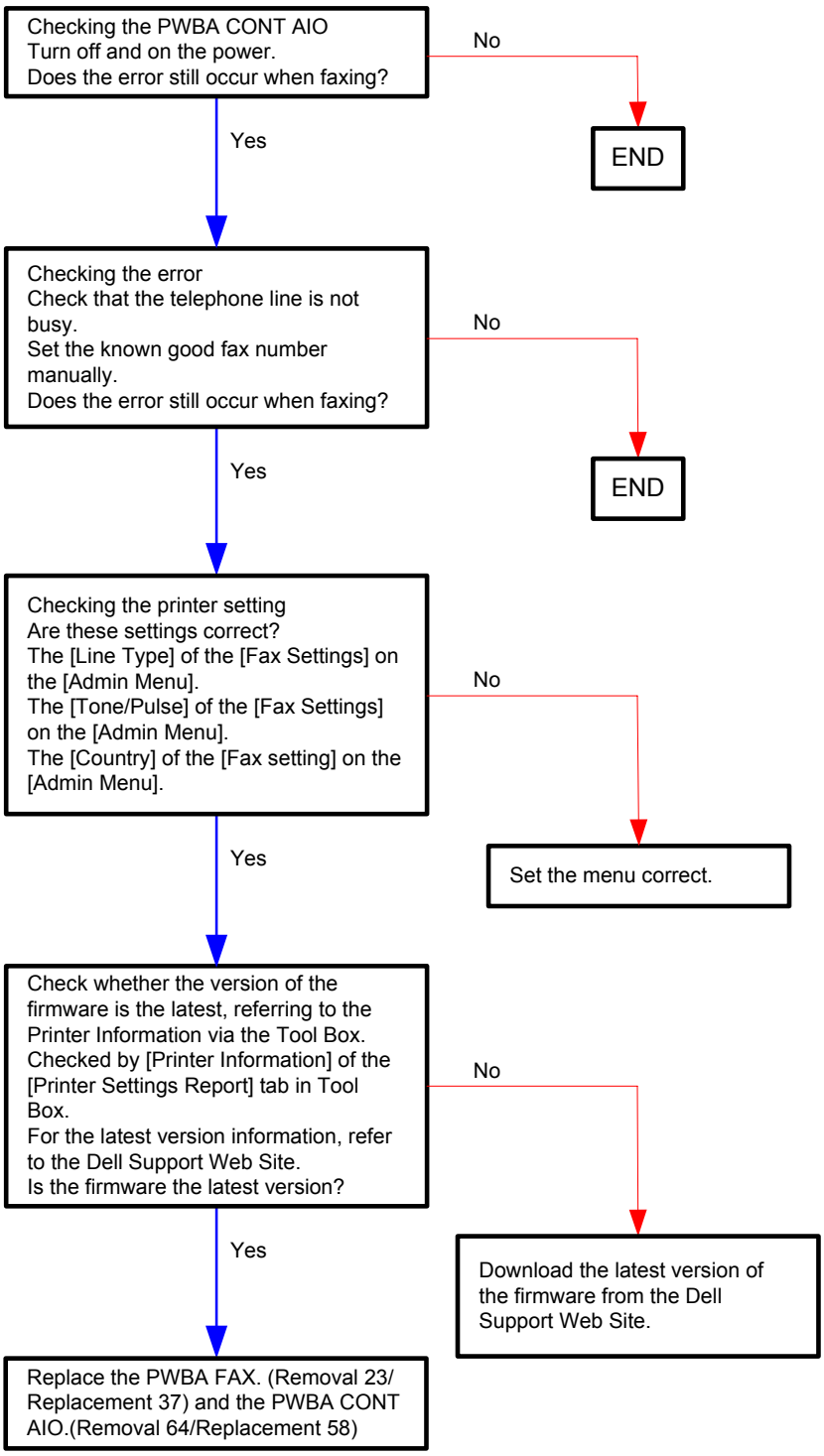
Flows 54 Buffer 033-775/033-777/033-784



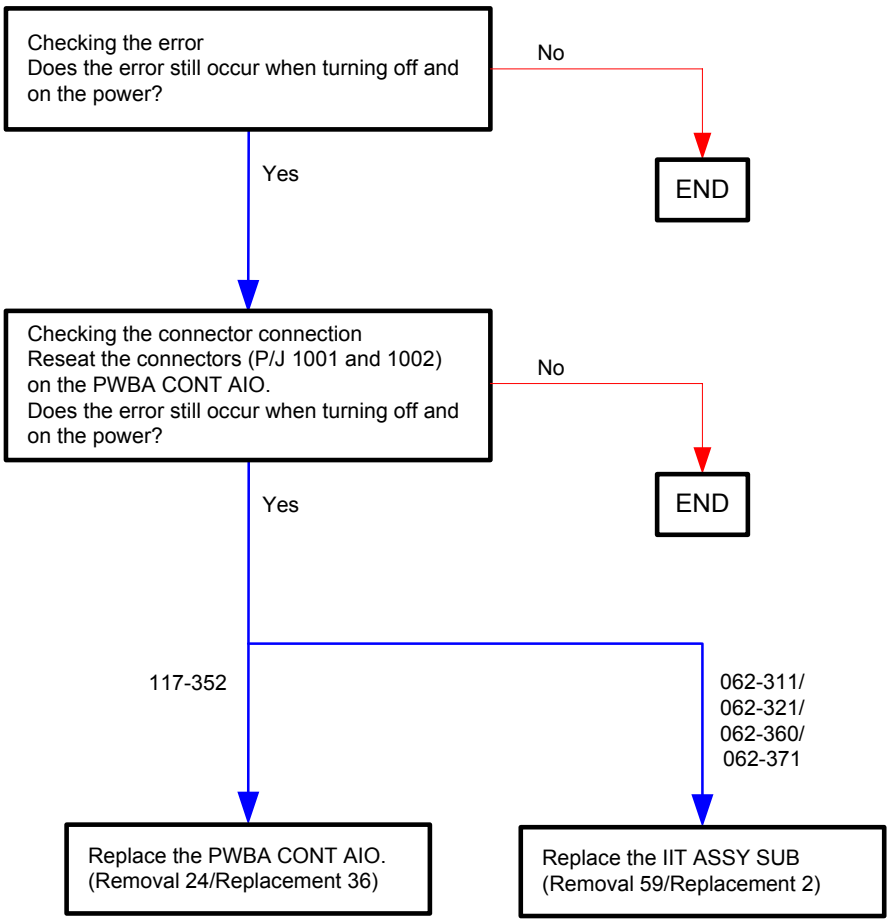
Flows 55 Communication 034-515 / No Answer 035-718 / 134-211 Restart Printer



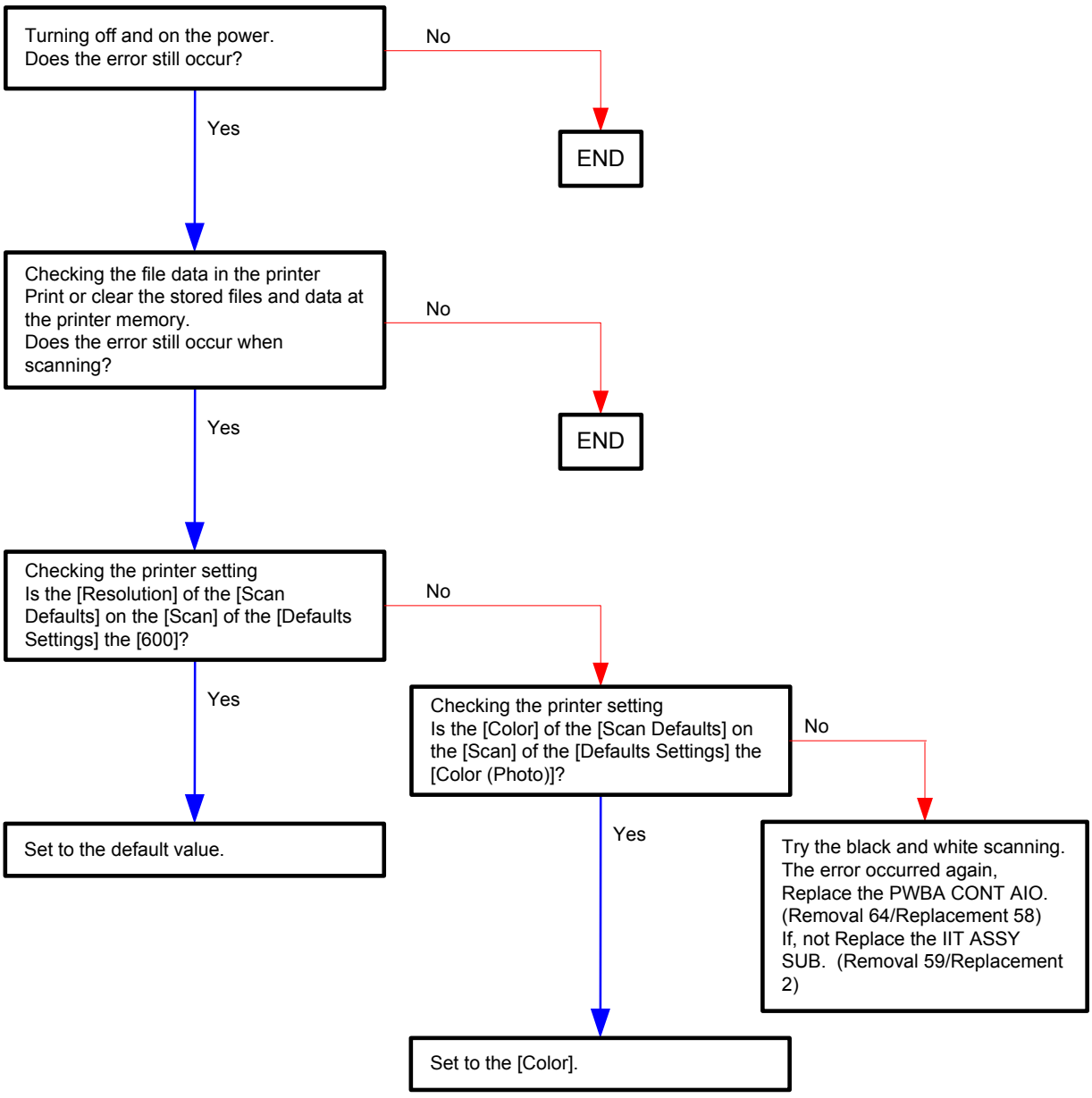
Flows 56 No Answer 035-701 / Communication 035-720 / Busy 035-781



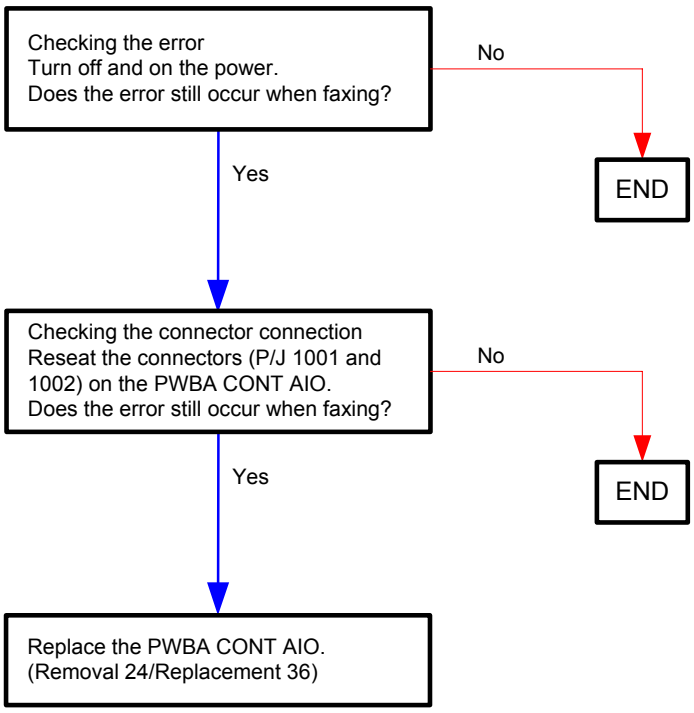
Flows 57 062-311/062-321/062-360/062-371/117-352 Restart Printer



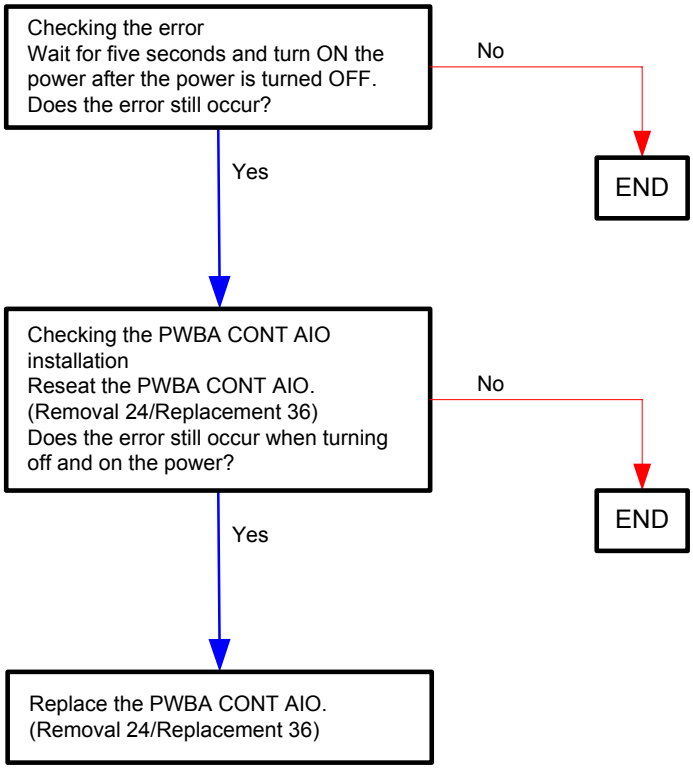
Flows 58 062-320 Restart Printer / Memory Full 062-324



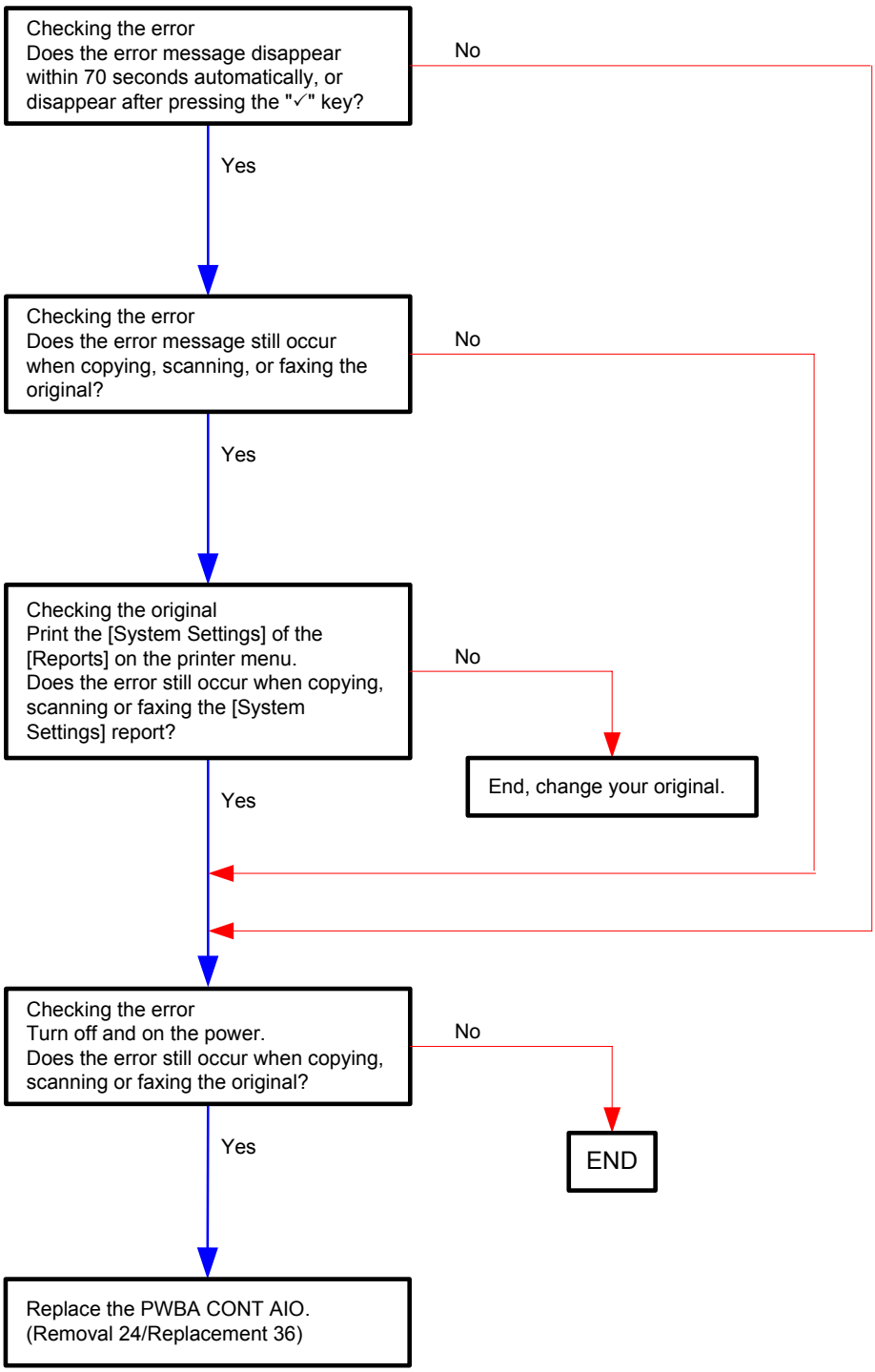
Flows 59 062-322/062-393 Restart Printer



Flows 60 062-323 Restart Printer



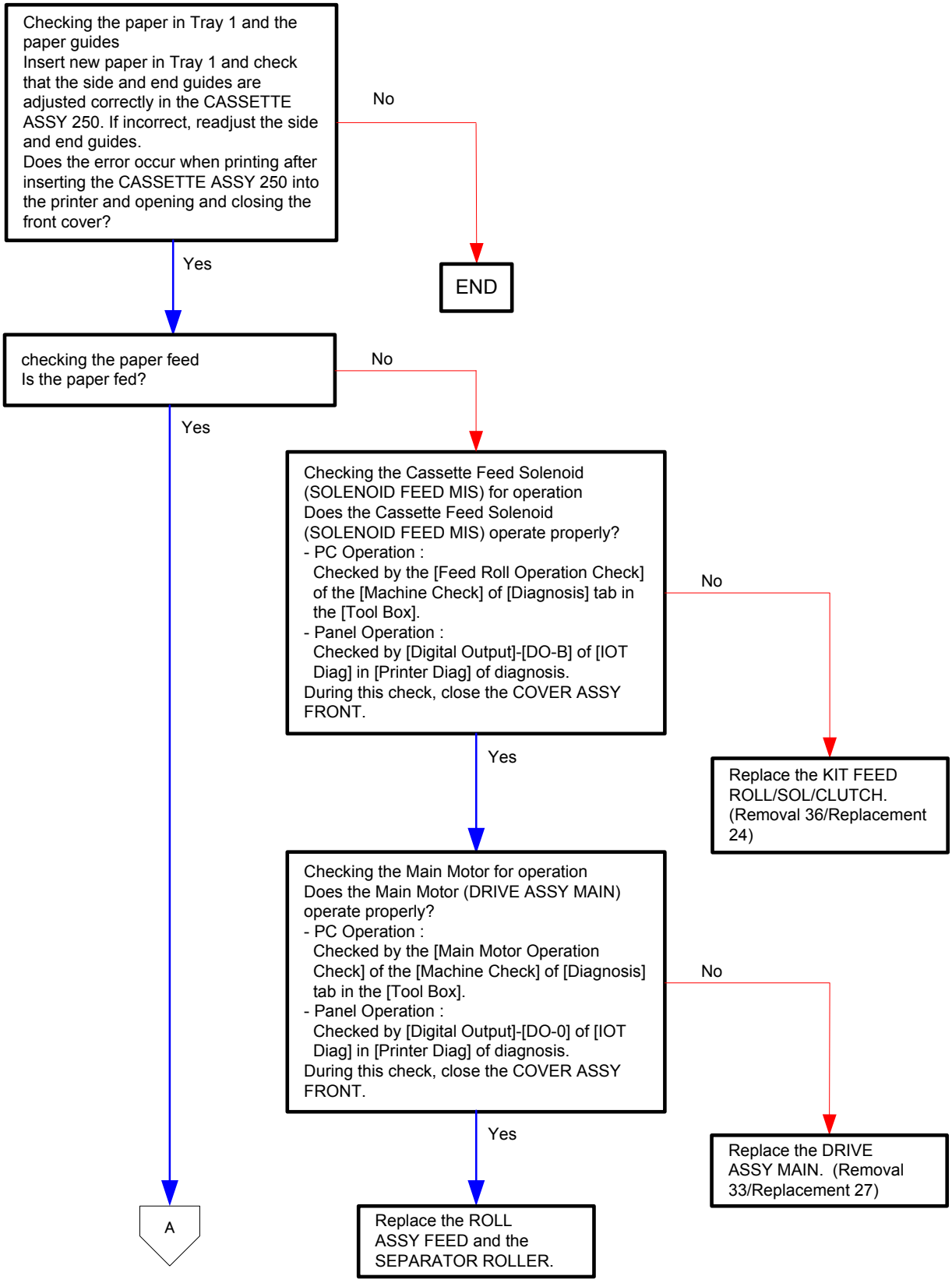
Flows 61 Confirm 062-790

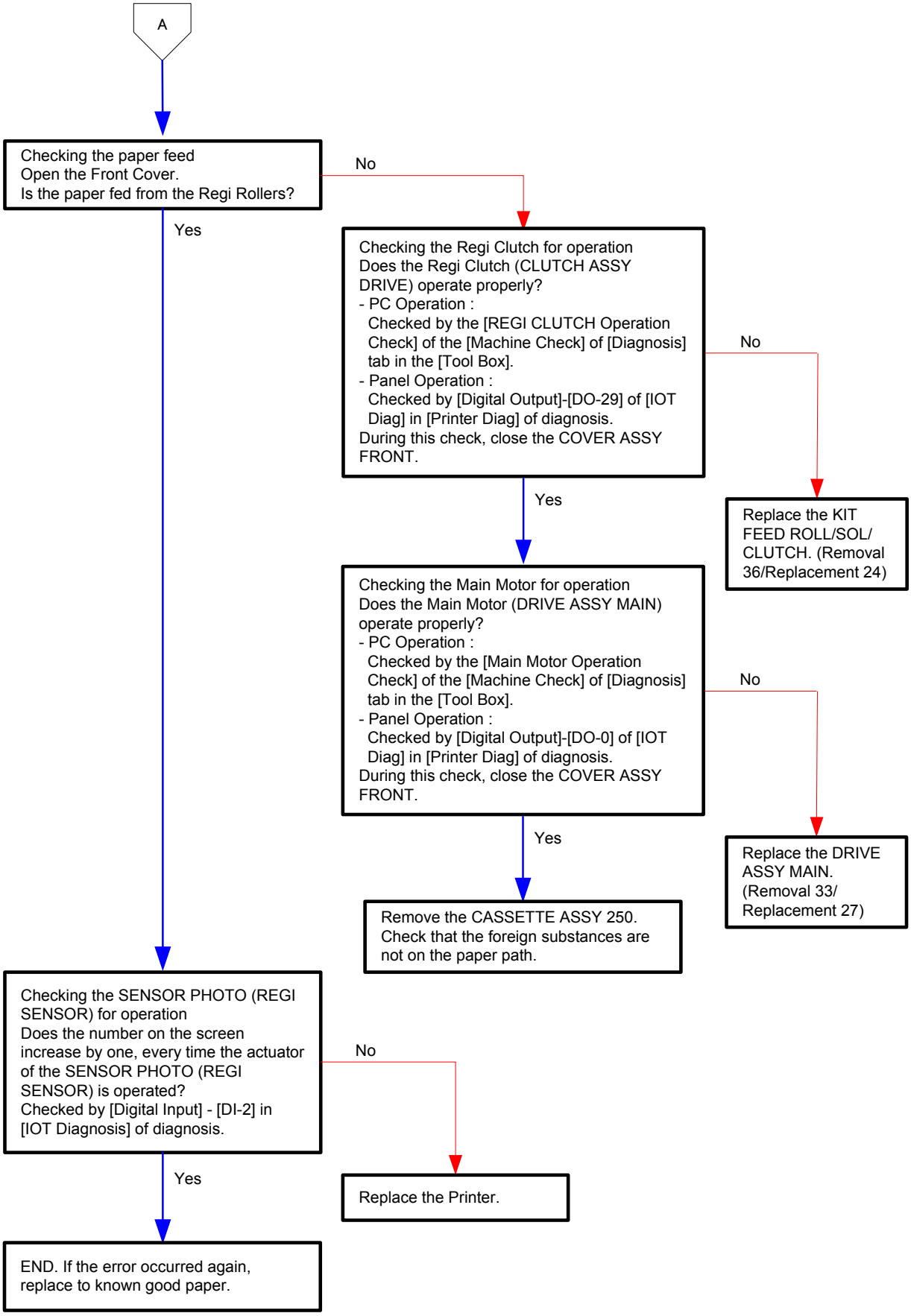


Flows 62 Paper Jam 071-100/077-102

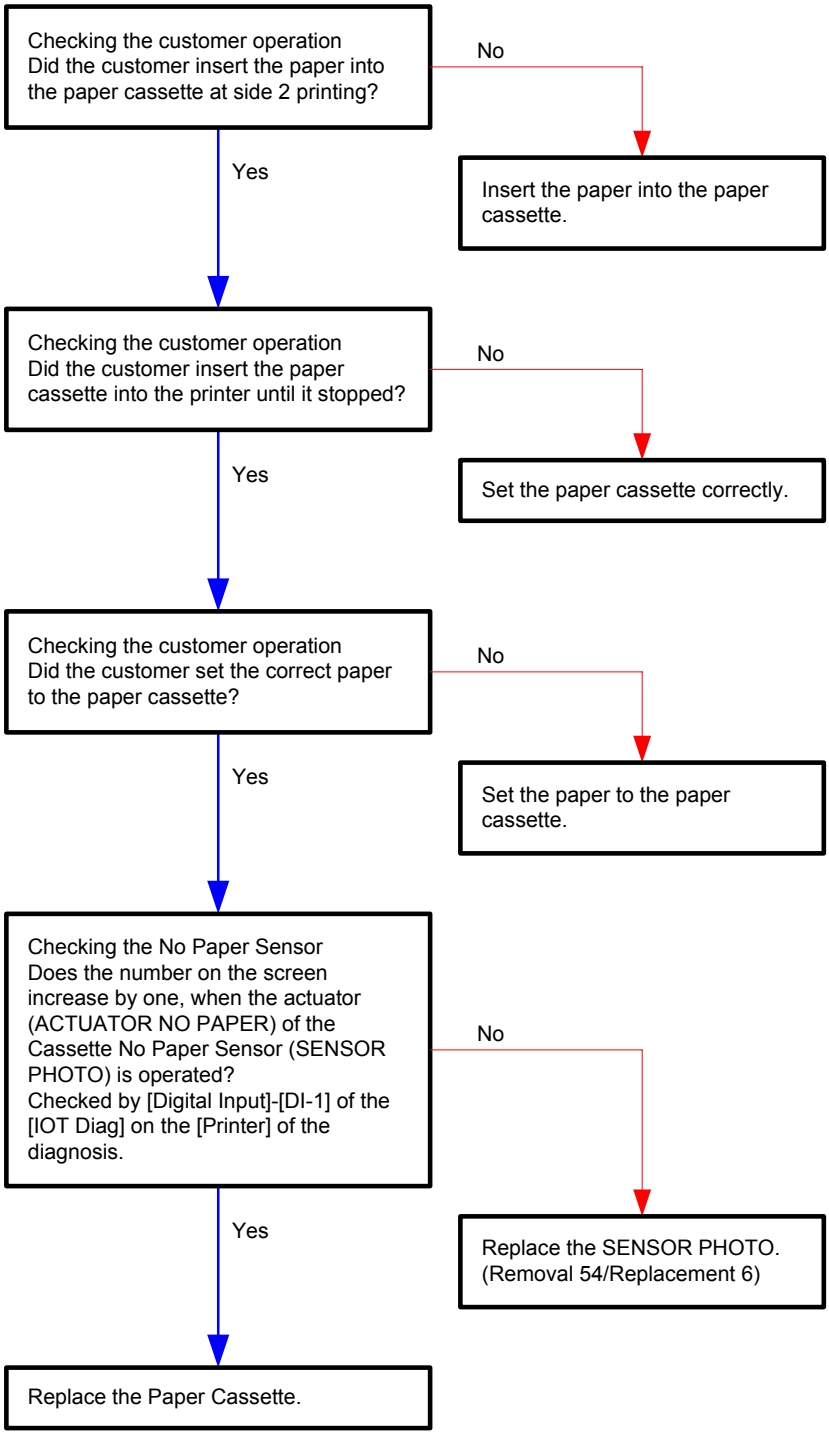
NOTE

Do not load a sheet to the SSF while printing with the Paper Cassette as the media source.
Otherwise, a Jam error occurs.




A
Checking the paper feed
Open the Front Cover.
Is the paper fed from the Regi Rollers?
No
Yes
Checking the Regi Clutch for operation
Does the Regi Clutch (CLUTCH ASSY DRIVE) operate properly?
- PC Operation :
Checked by the [REGI CLUTCH Operation Check] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-29] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Yes
Replace the KIT FEED ROLL/SOL/ CLUTCH. (Removal 36/Replacement 24)
Checking the Main Motor for operation
Does the Main Motor (DRIVE ASSY MAIN) operate properly?
- PC Operation :
Checked by the [Main Motor Operation Check] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-0] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Yes
Replace the DRIVE ASSY MAIN. (Removal 33/ Replacement 27)
Remove the CASSETTE ASSY 250.
Check that the foreign substances are not on the paper path.
Checking the SENSOR PHOTO (REGI SENSOR) for operation
Does the number on the screen increase by one, every time the actuator of the SENSOR PHOTO (REGI SENSOR) is operated?
Checked by [Digital Input] - [DI-2] in [IOT Diagnosis] of diagnosis.
No
Yes
Replace the Printer.
END. If the error occurred again, replace to known good paper.

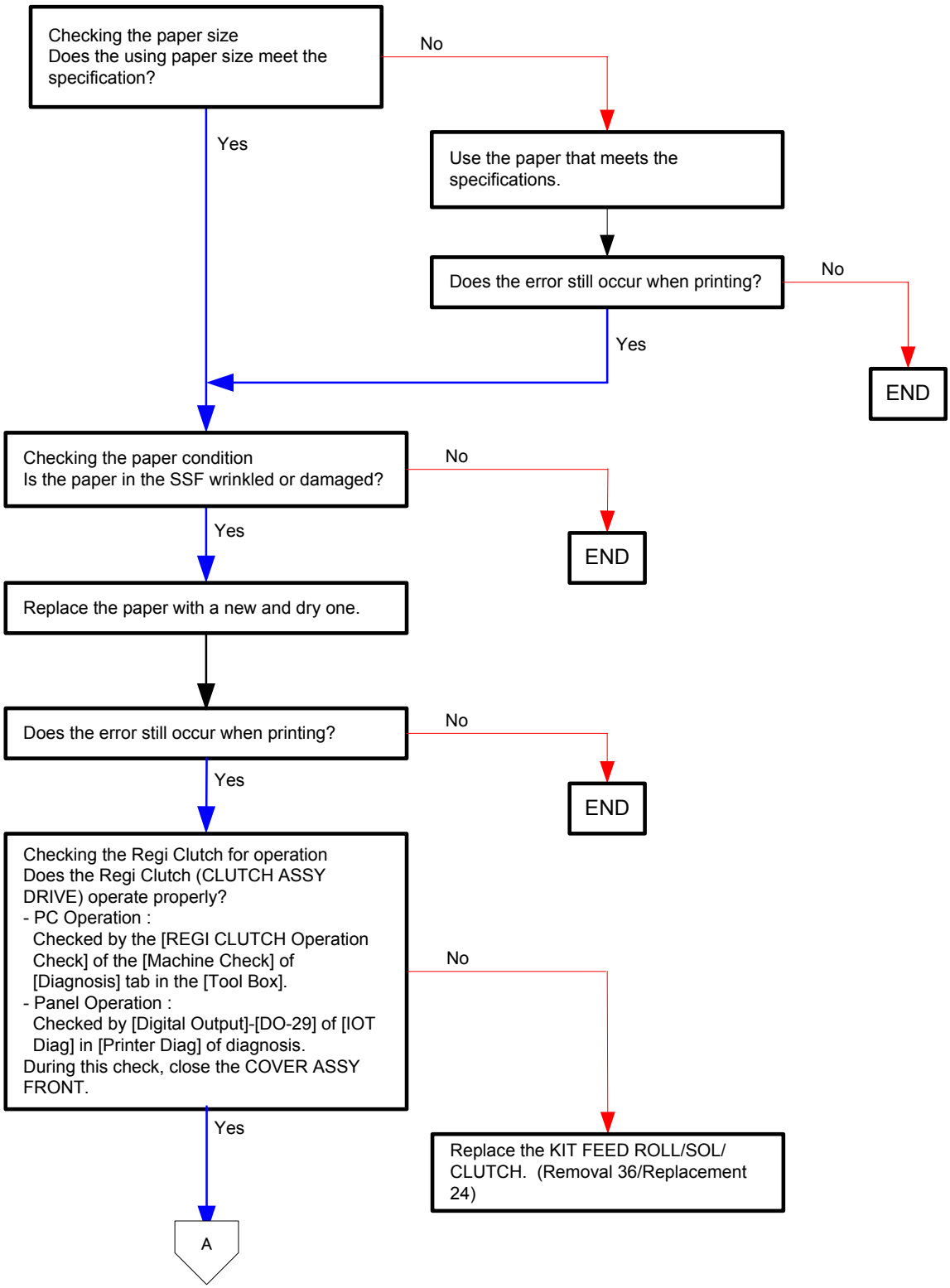
Flows 63 Insert Output 071-920 / 071-921

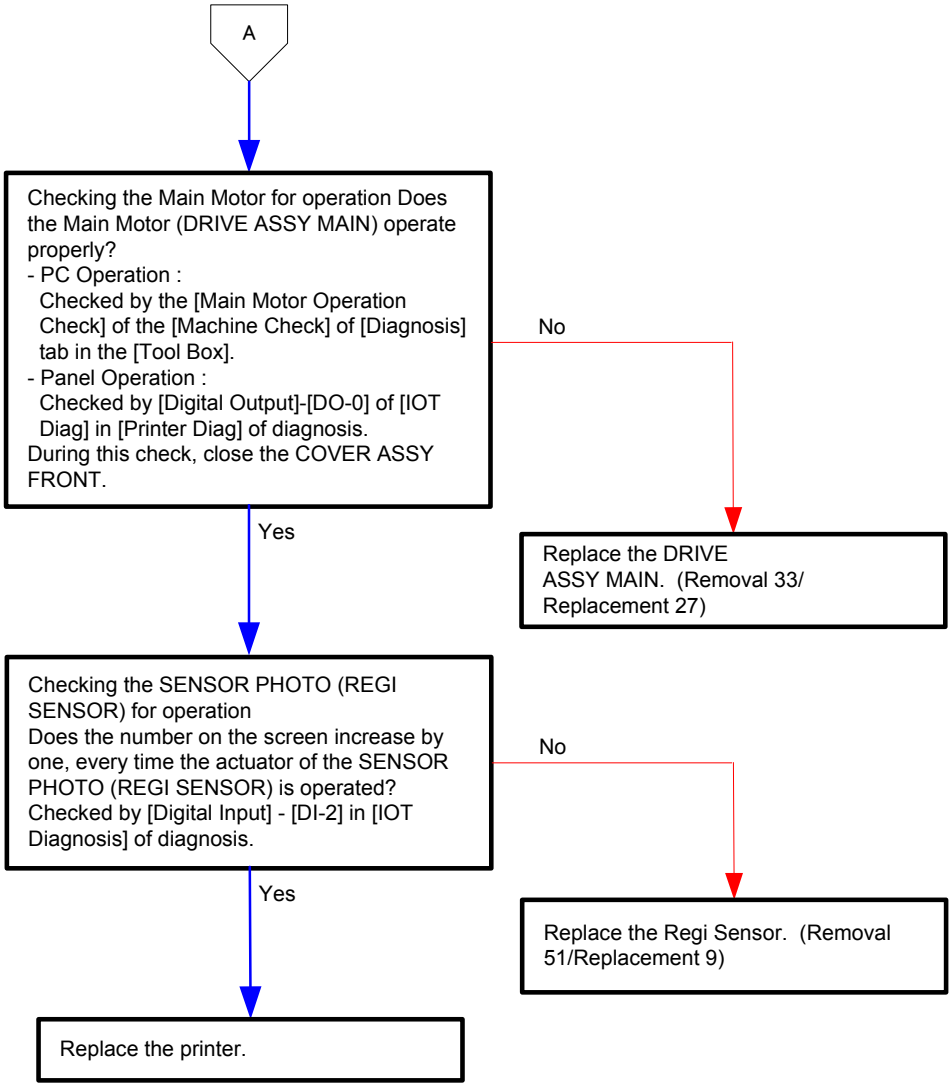


Flows 64 Paper Jam 075-100

NOTE

Do not load a sheet to the SSF while printing with the Paper Cassette as the media source.
Otherwise, a Jam error occurs.

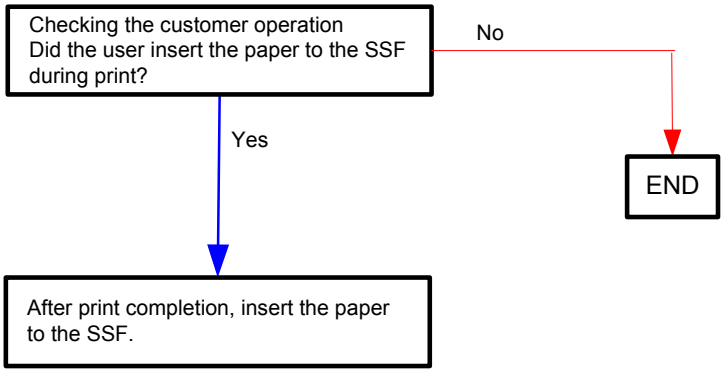



A
Checking the Main Motor for operation Does the Main Motor (DRIVE ASSY MAIN) operate properly?
- PC Operation :
Checked by the [Main Motor Operation Check] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-0] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Yes
Replace the DRIVE ASSY MAIN. (Removal 33/ Replacement 27)
Checking the SENSOR PHOTO (REGI SENSOR) for operation
Does the number on the screen increase by one, every time the actuator of the SENSOR PHOTO (REGI SENSOR) is operated?
Checked by [Digital Input] - [DI-2] in [IOT Diagnosis] of diagnosis.
No
Yes
Replace the Regi Sensor. (Removal 51/Replacement 9)
Replace the printer.

Flows 65 Paper Jam 075-101

NOTE

This error occurs when a document is accidentally fed into the SSF during printing. To restart printing, open the front cover and remove the document.



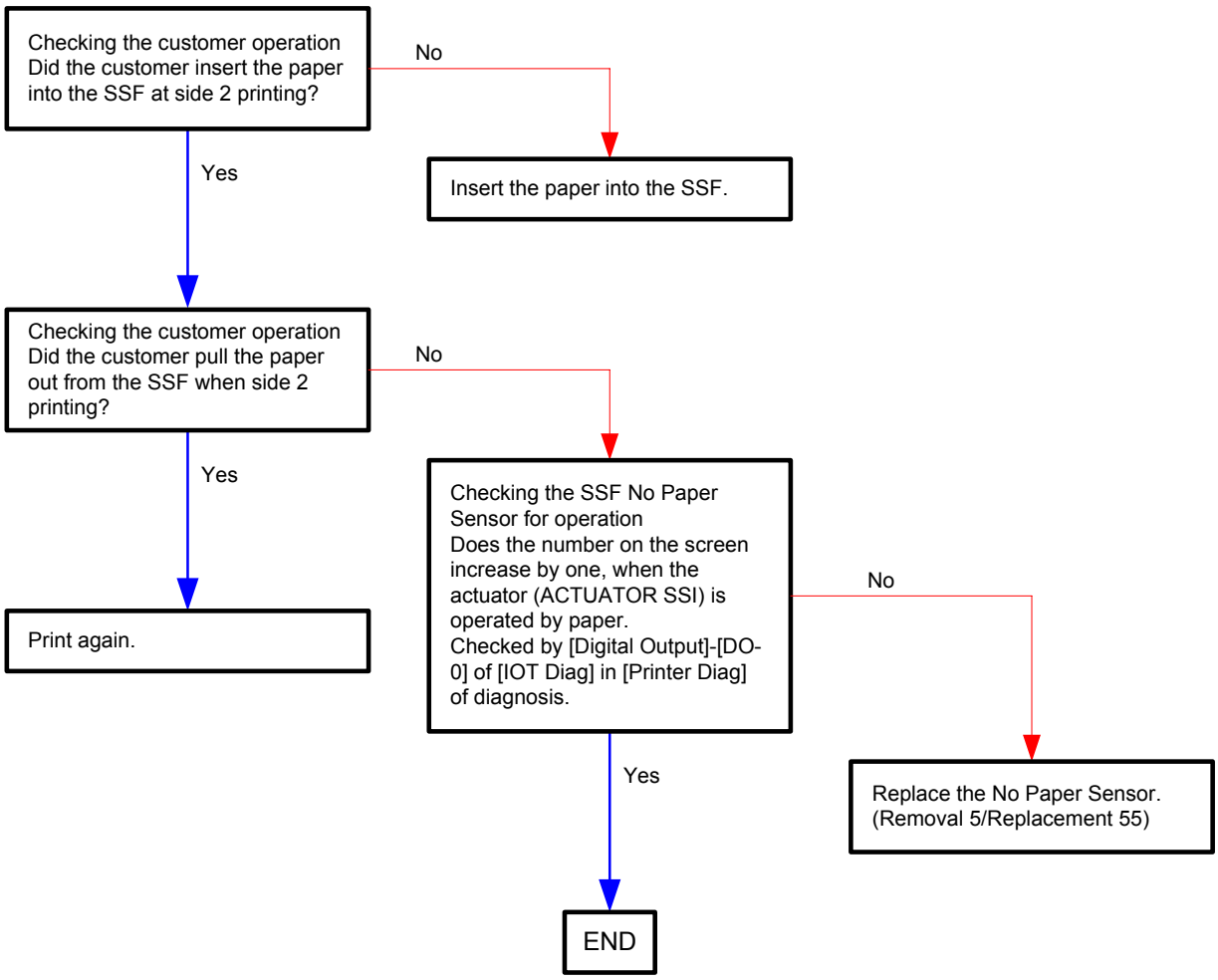
Flows 66 Paper Jam 075-102

NOTE

When starting SSF printing, an error will occur by pulling out a document on the SSF by force.

Checking the printing
Reload a paper to SSF after opening and closing the Front Cover.

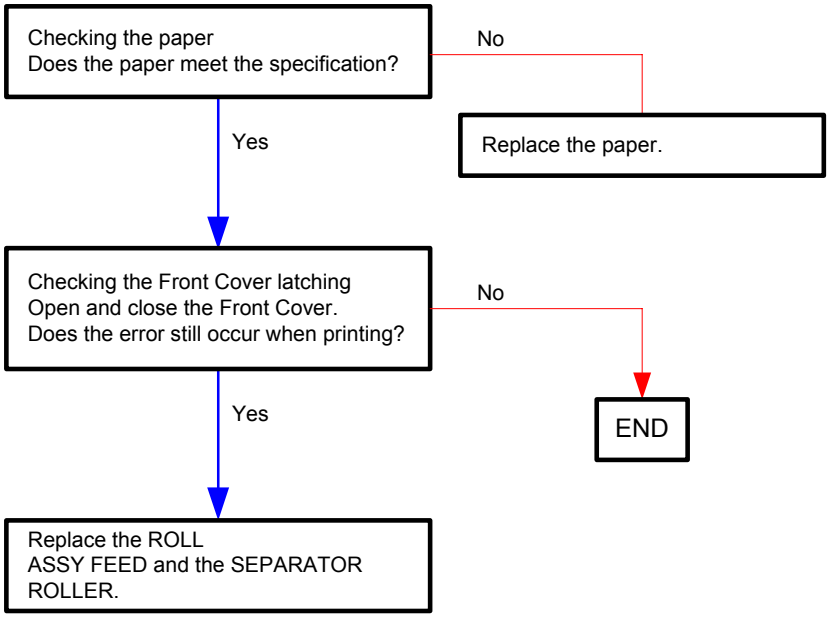
Flows 67 Insert Output 075-920 / 075-921



Flows 68 Paper Jam 077-100/077-101

NOTE

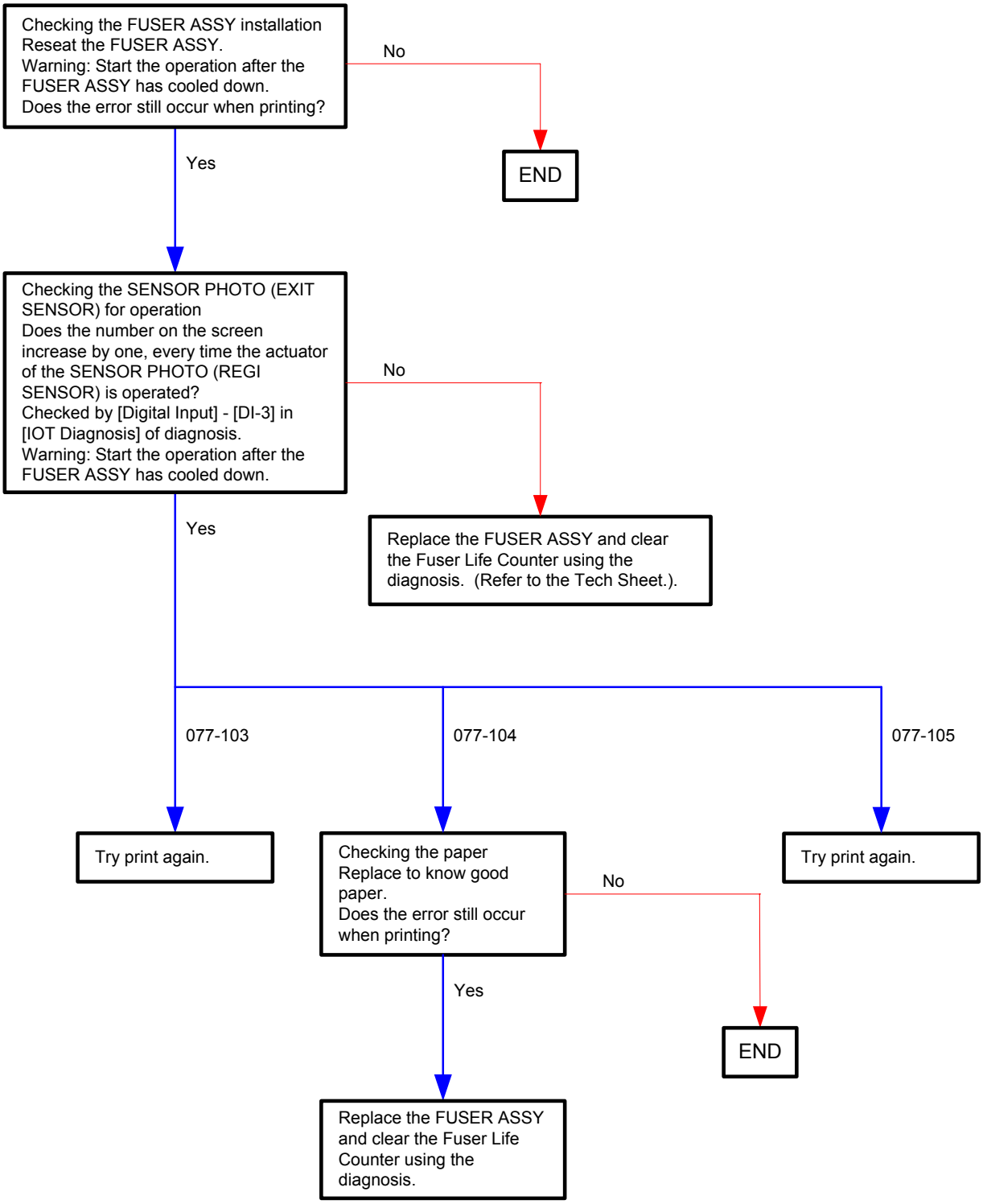
Do not load a sheet to the SSF while printing with the Paper Cassette as the media source.
Otherwise, a Jam error occurs.



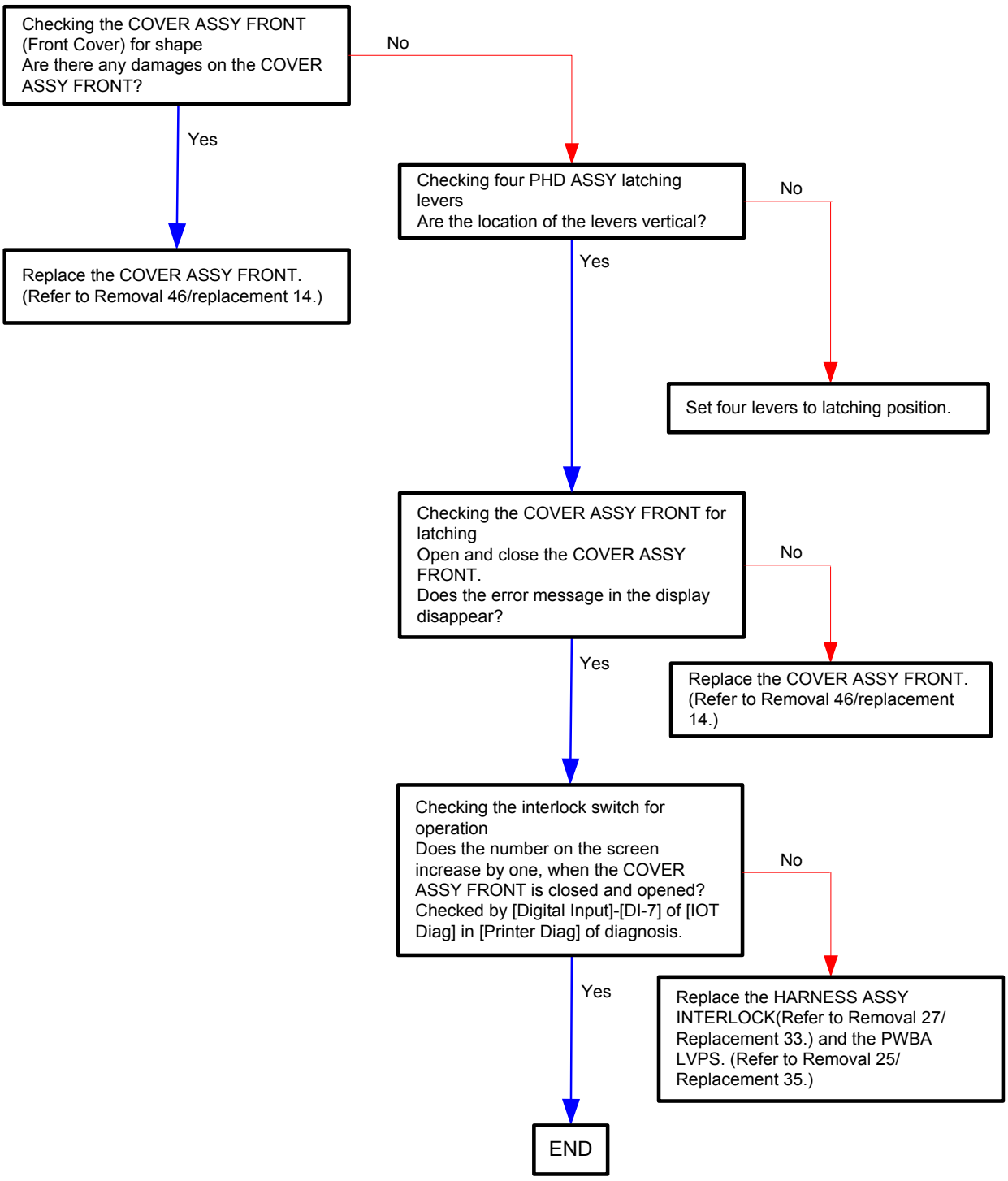
Flows 69 Paper Jam 077-103/077-104/077-105

NOTE

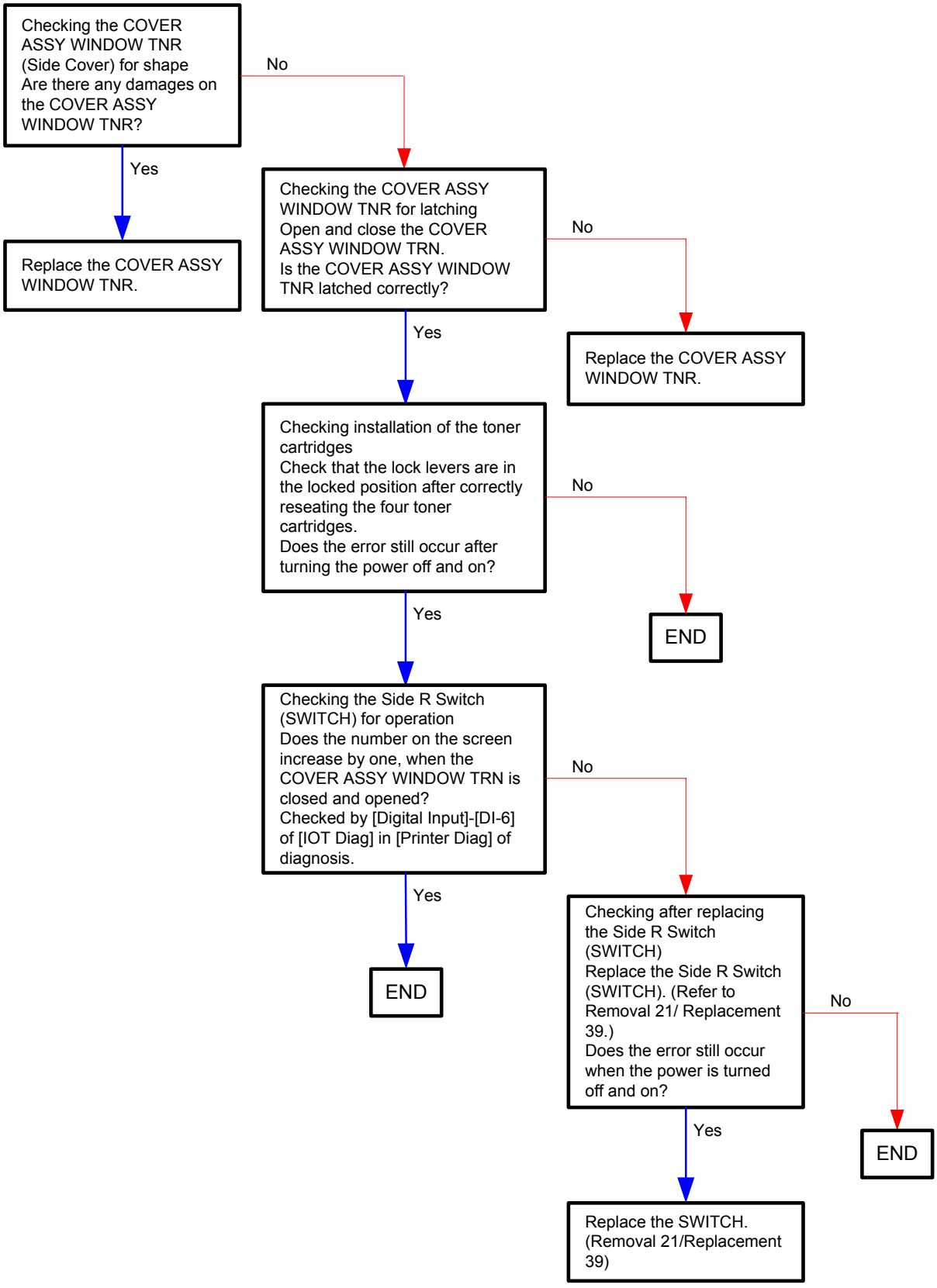
When starting SSF printing, an error will occur by pulling out a document on the SSF by force.



Flows 70 Close Front Cover 077-300



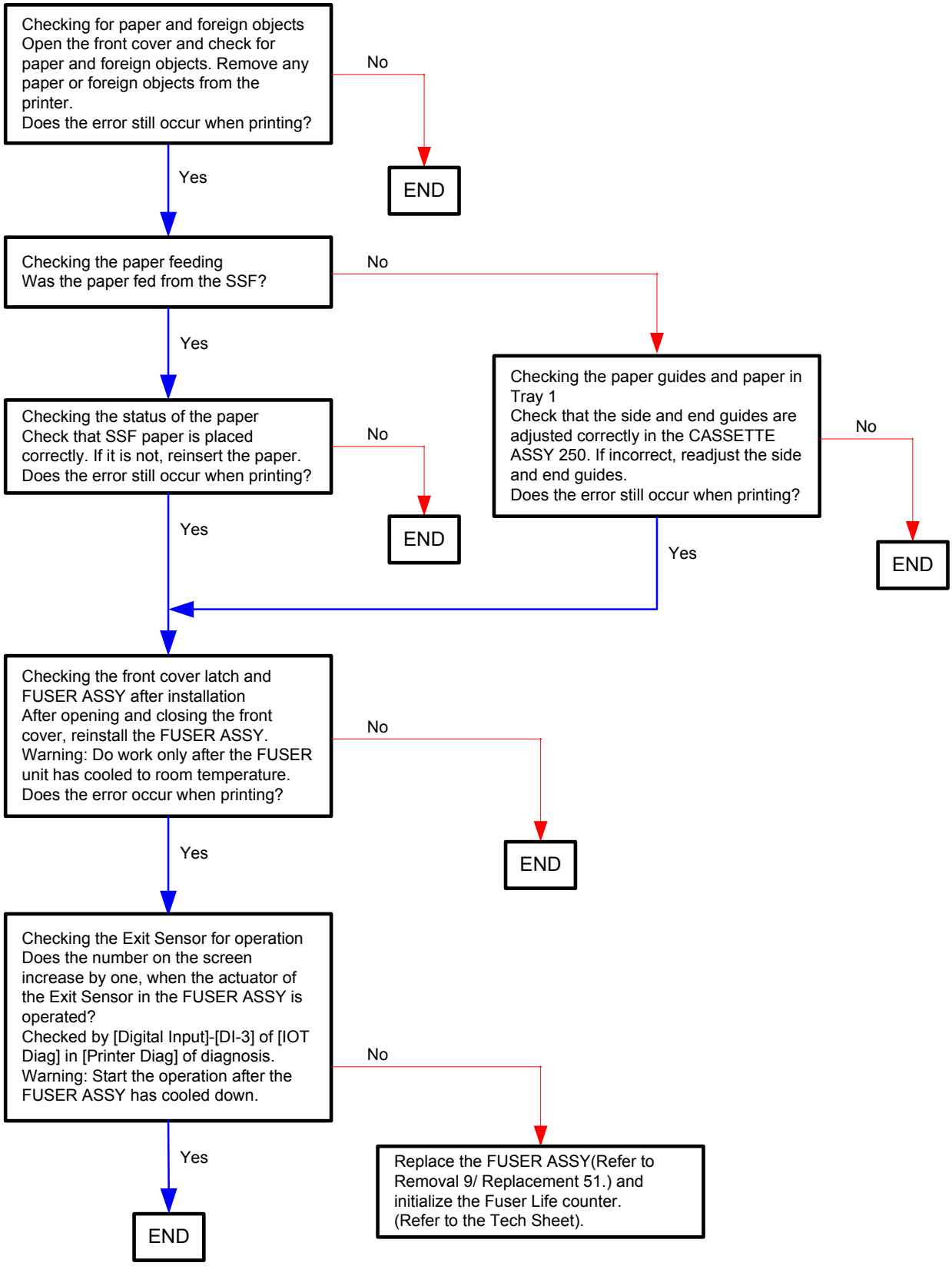
Flows 71 Close Side Door 077-301



Flows 72 Paper Jam 077-900

NOTE

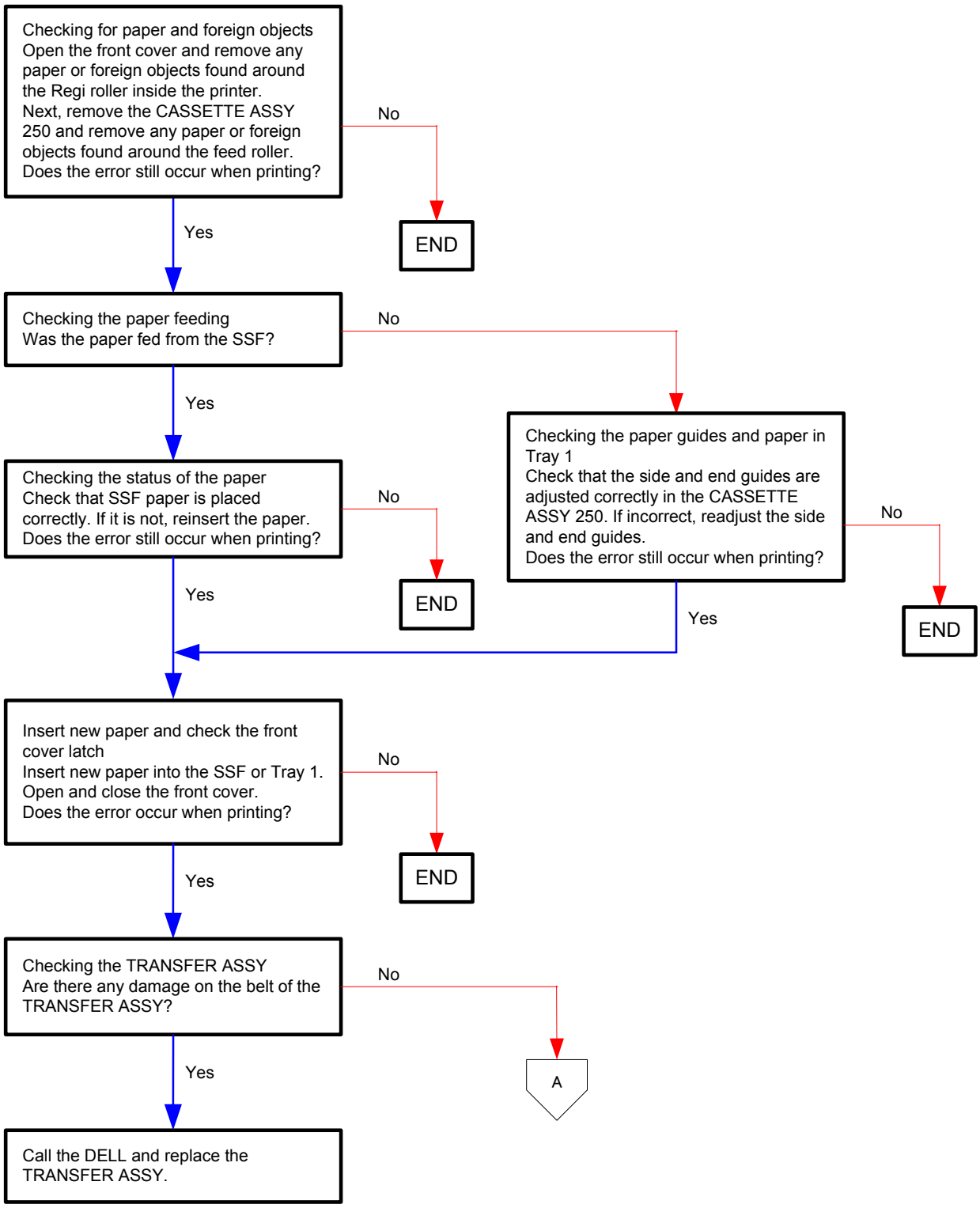
Do not load a sheet to the SSF while printing with the Paper Cassette as the media source.
Otherwise, a Jam error occurs.

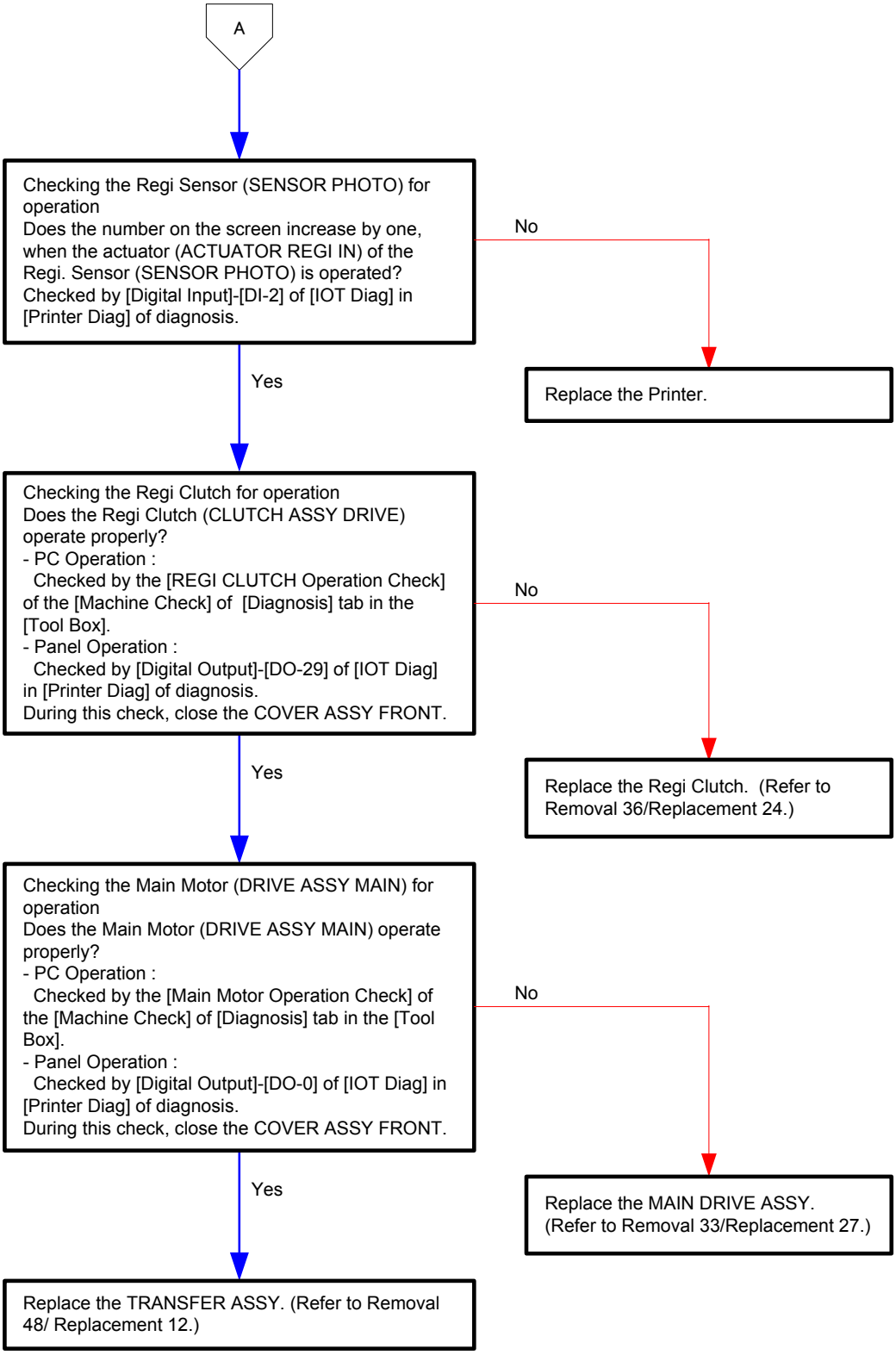


Flows 73 Paper Jam 077-901

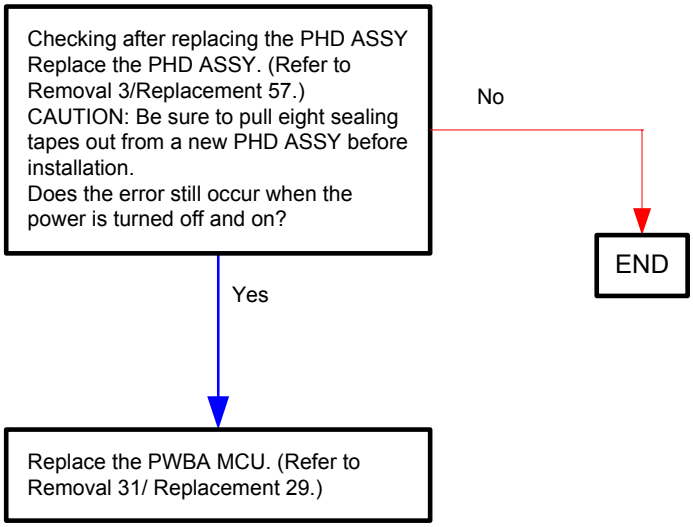
NOTE

Do not load a sheet to the SSF while printing with the Paper Cassette as the media source.
Otherwise, a Jam error occurs.

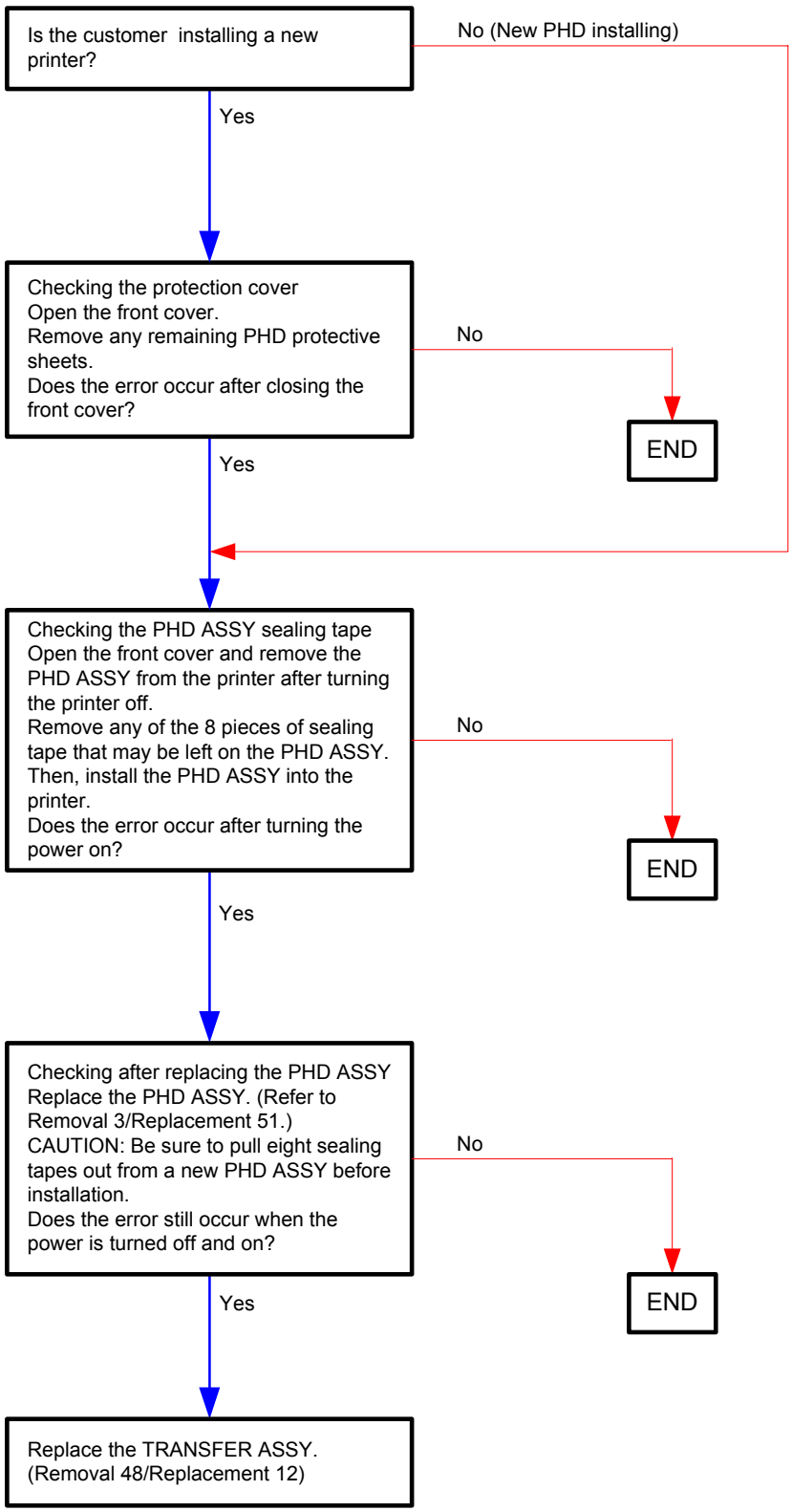



A
Checking the Regi Sensor (SENSOR PHOTO) for operation
Does the number on the screen increase by one, when the actuator (ACTUATOR REGI IN) of the Regi. Sensor (SENSOR PHOTO) is operated?
Checked by [Digital Input]-[DI-2] of [IOT Diag] in [Printer Diag] of diagnosis.
No
Replace the Printer.
Yes
Checking the Regi Clutch for operation
Does the Regi Clutch (CLUTCH ASSY DRIVE) operate properly?
- PC Operation :
Checked by the [REGI CLUTCH Operation Check] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-29] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Replace the Regi Clutch. (Refer to Removal 36/Replacement 24.)
Yes
Checking the Main Motor (DRIVE ASSY MAIN) for operation
Does the Main Motor (DRIVE ASSY MAIN) operate properly?
- PC Operation :
Checked by the [Main Motor Operation Check] of the [Machine Check] of [Diagnosis] tab in the [Tool Box].
- Panel Operation :
Checked by [Digital Output]-[DO-0] of [IOT Diag] in [Printer Diag] of diagnosis.
During this check, close the COVER ASSY FRONT.
No
Replace the MAIN DRIVE ASSY. (Refer to Removal 33/Replacement 27.)
Yes
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

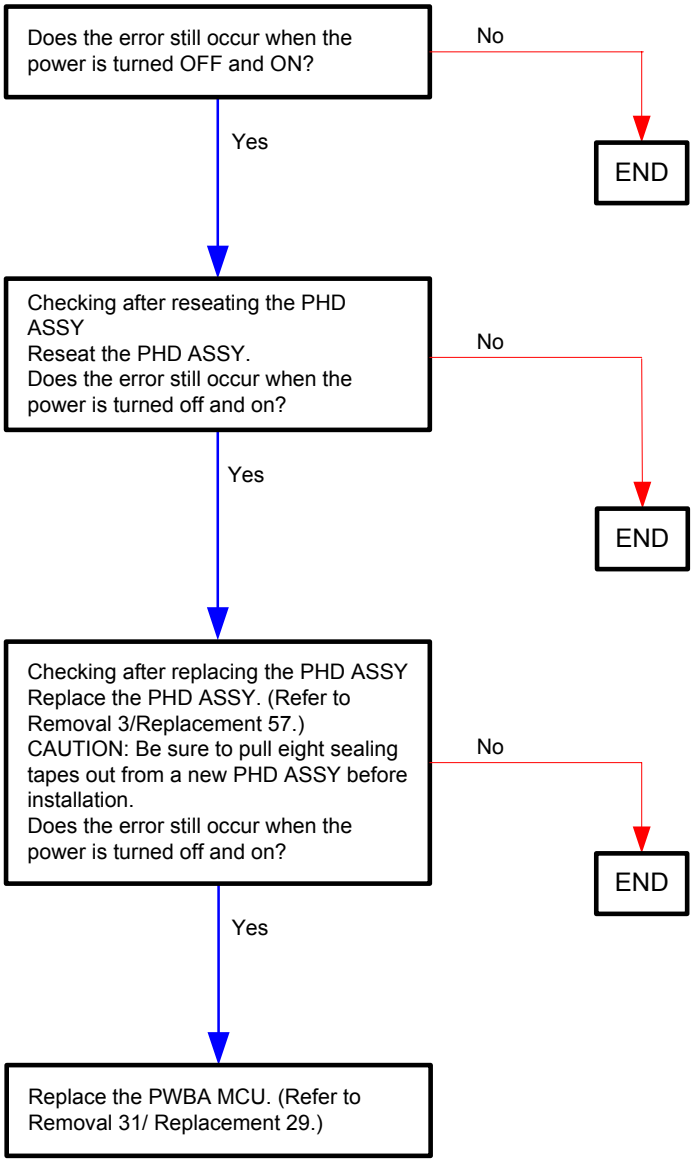
Flows 74 Replace PHD Now 091-402/091-935



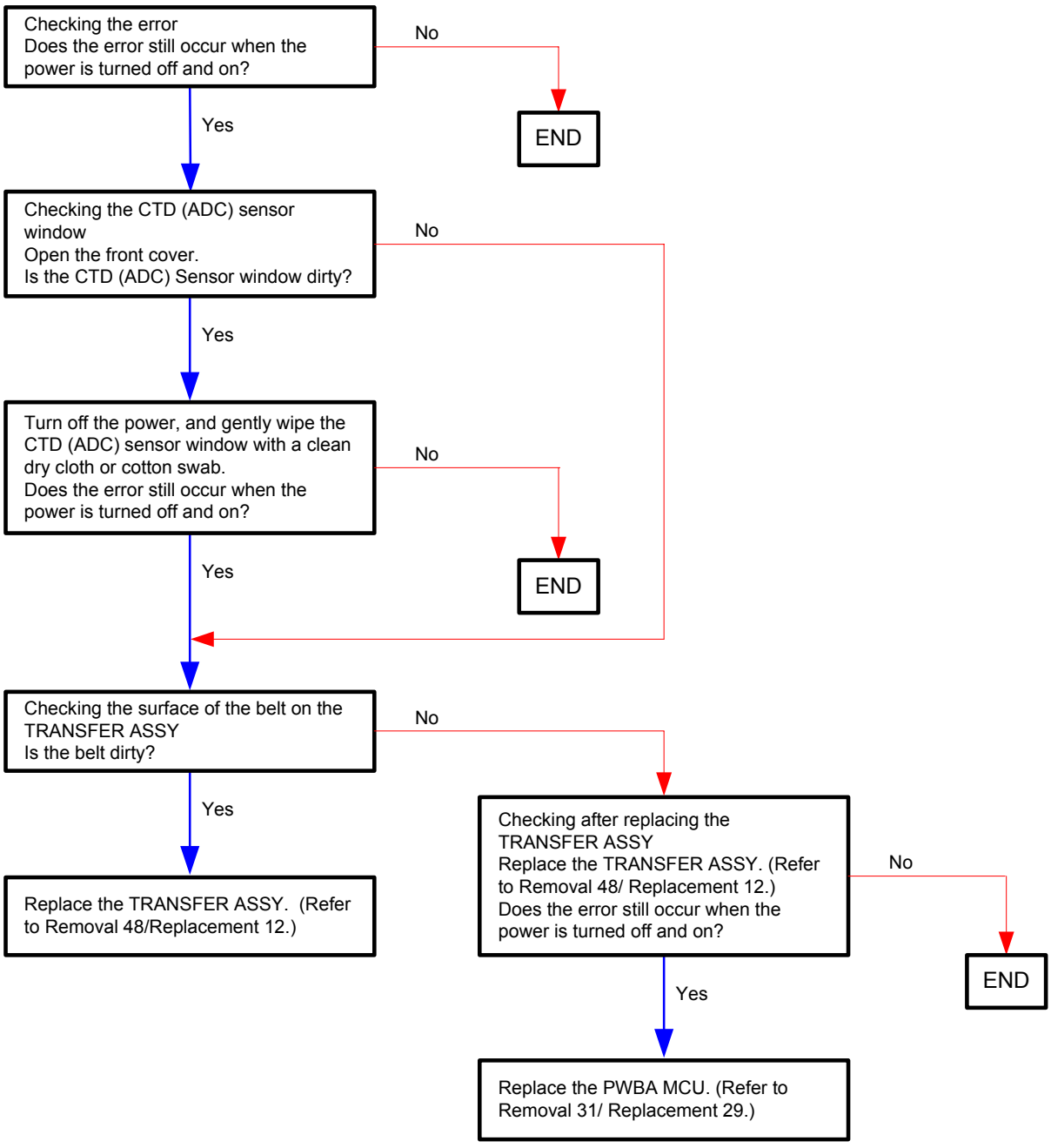
Flows 75 Check PHD Unit 091-912



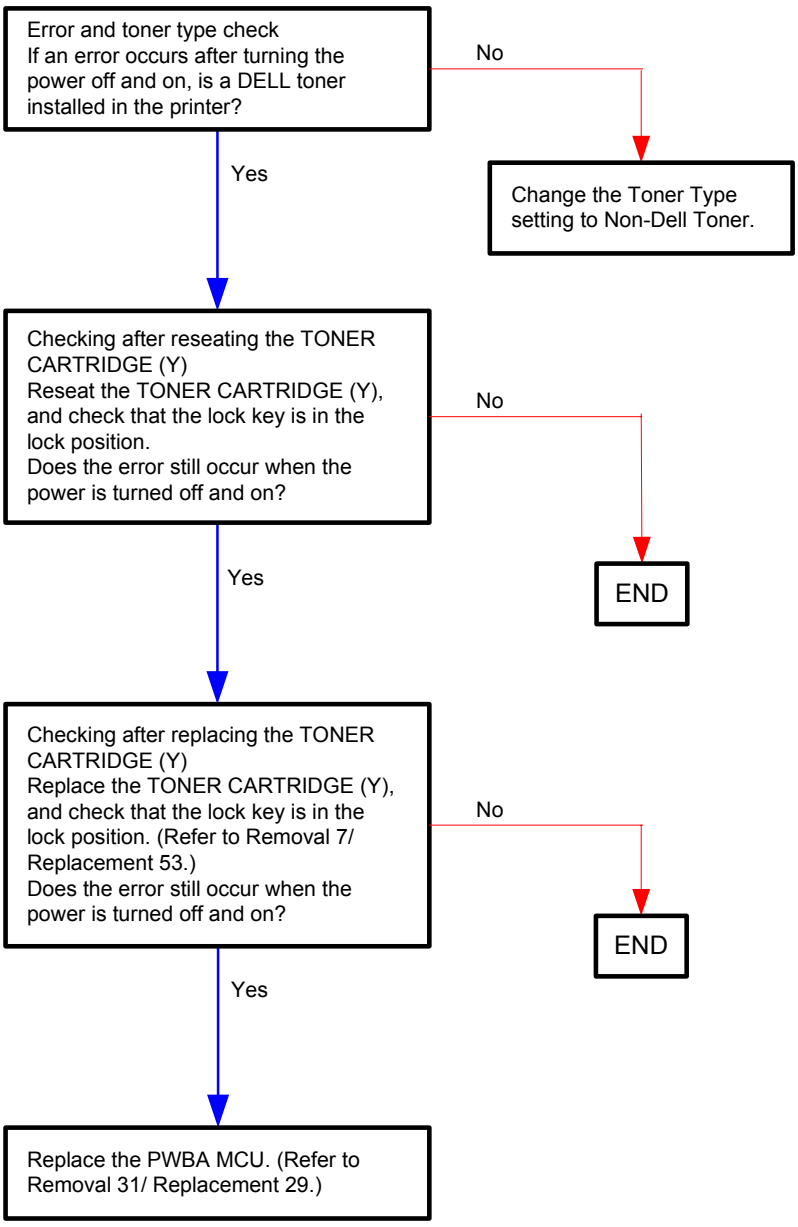
Flows 76 Insert PHD Unit 091-972



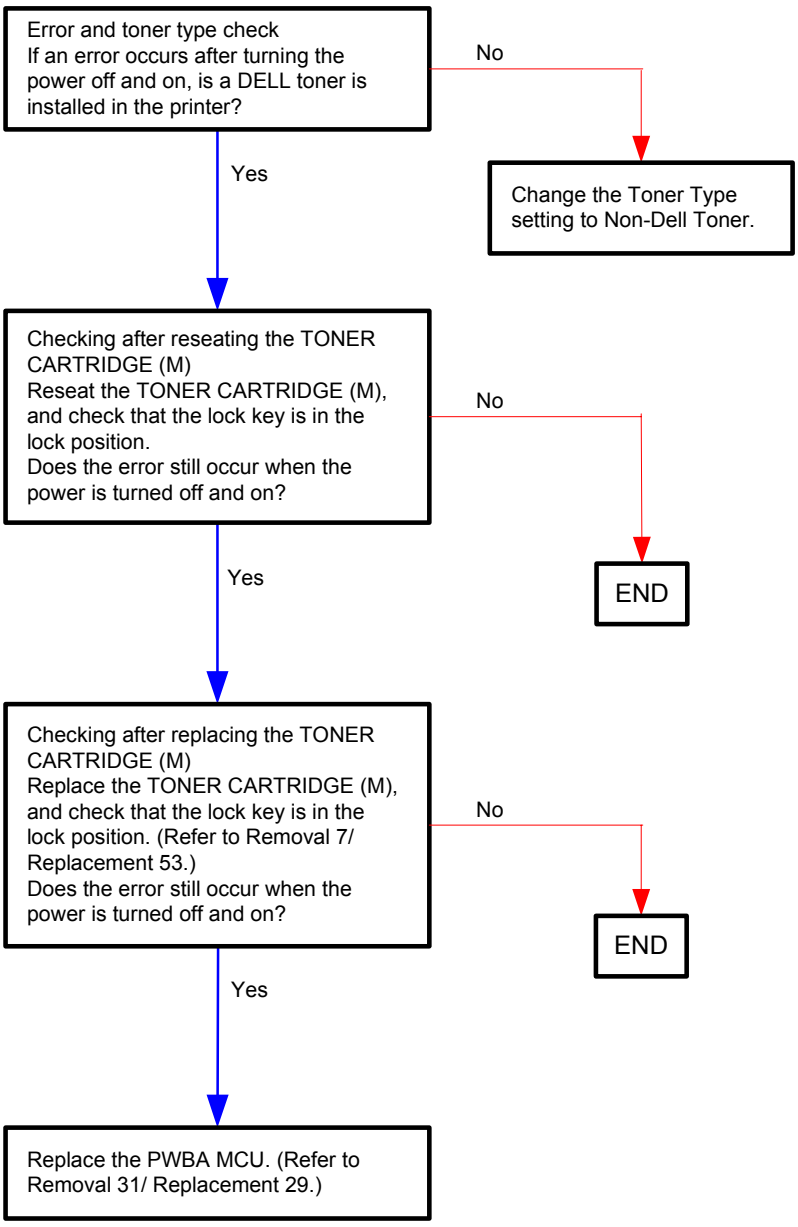
Flows 77 Check CTD Unit 092-310/092-910



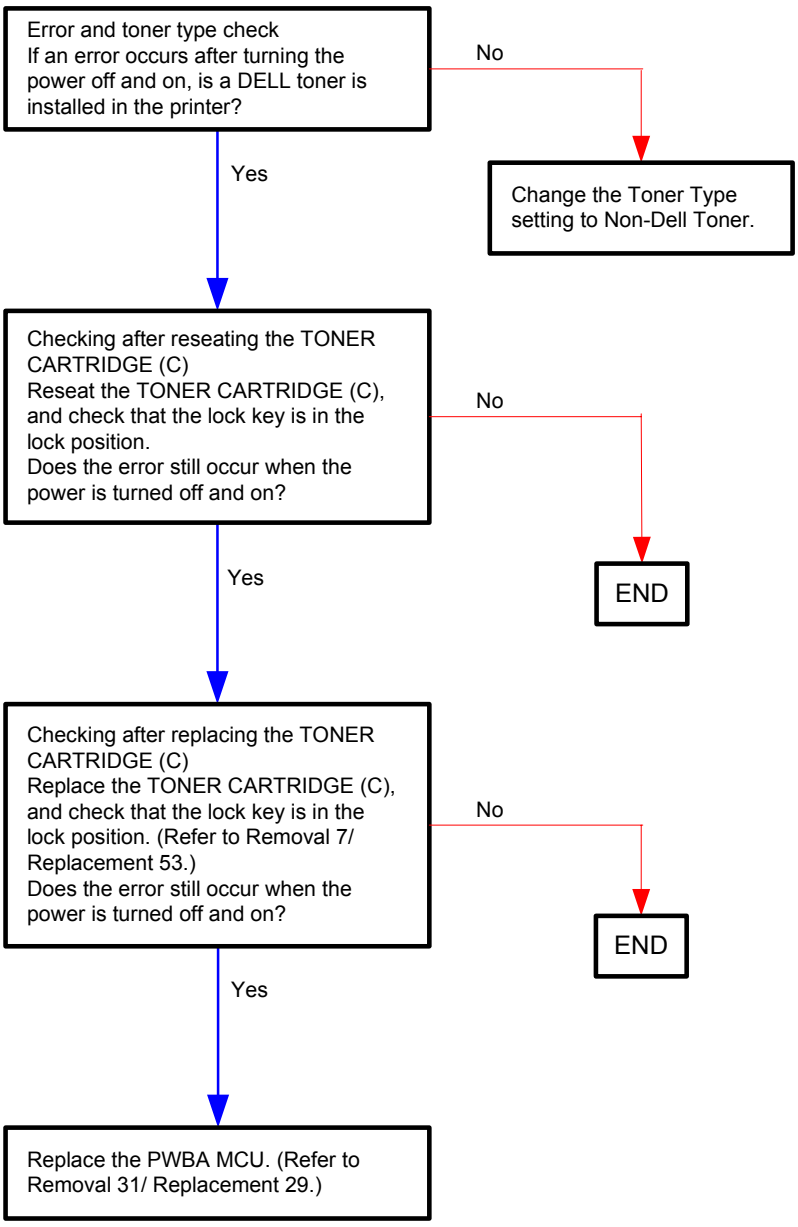
Flows 78 CRUM ID 093-360



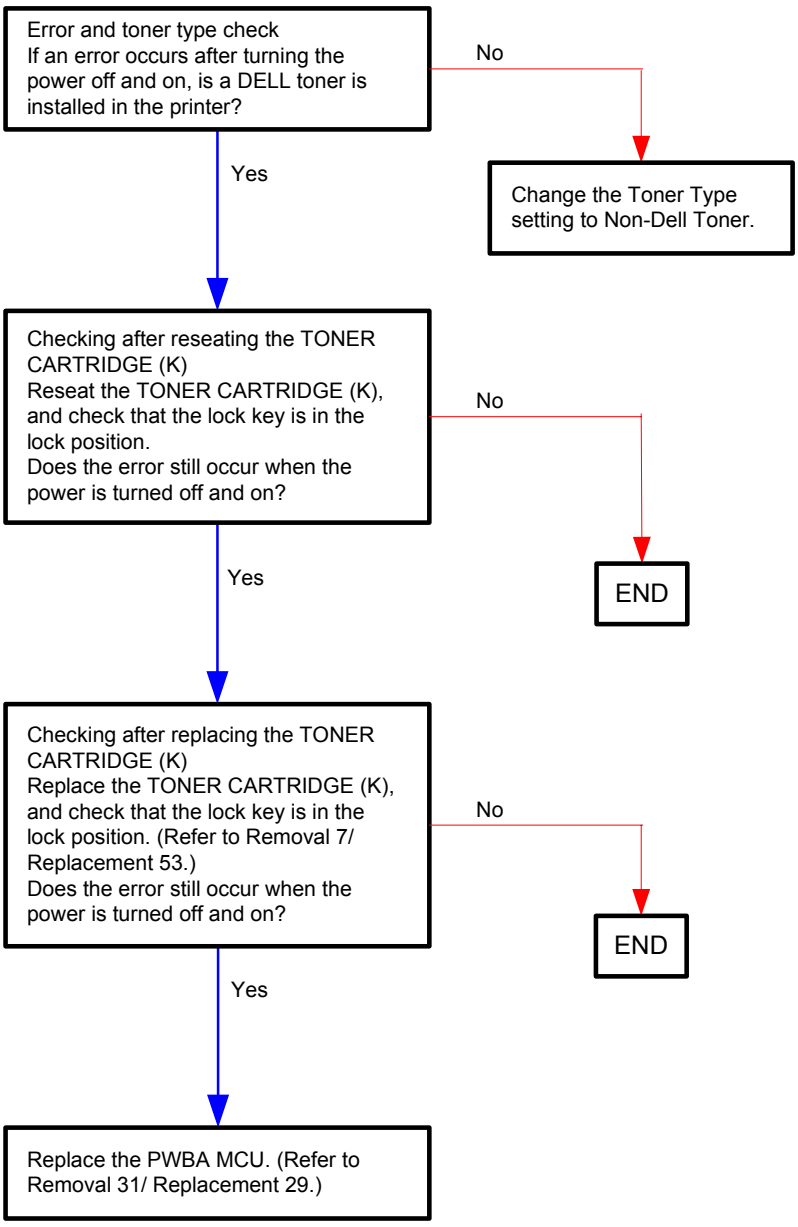
Flows 79 CRUM ID 093-361



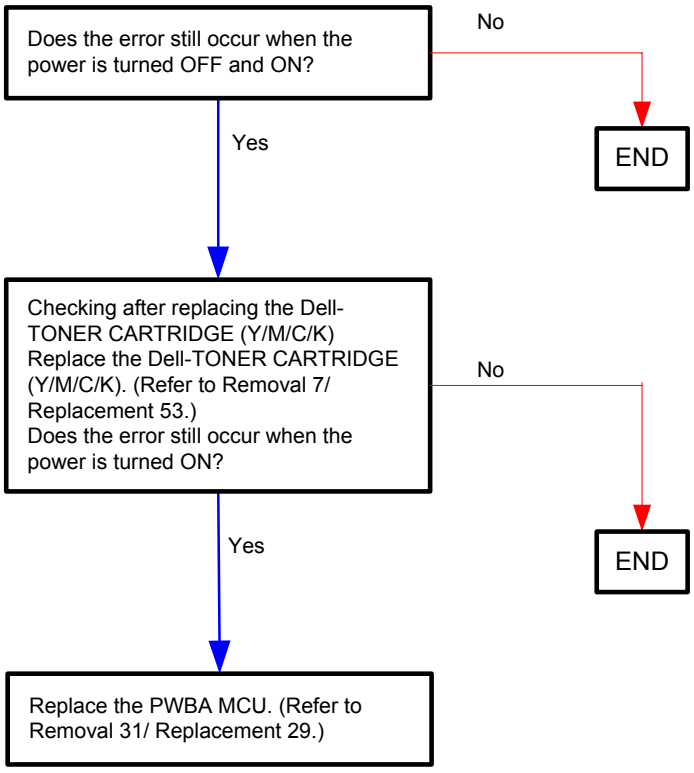
Flows 80 CRUM ID 093-362



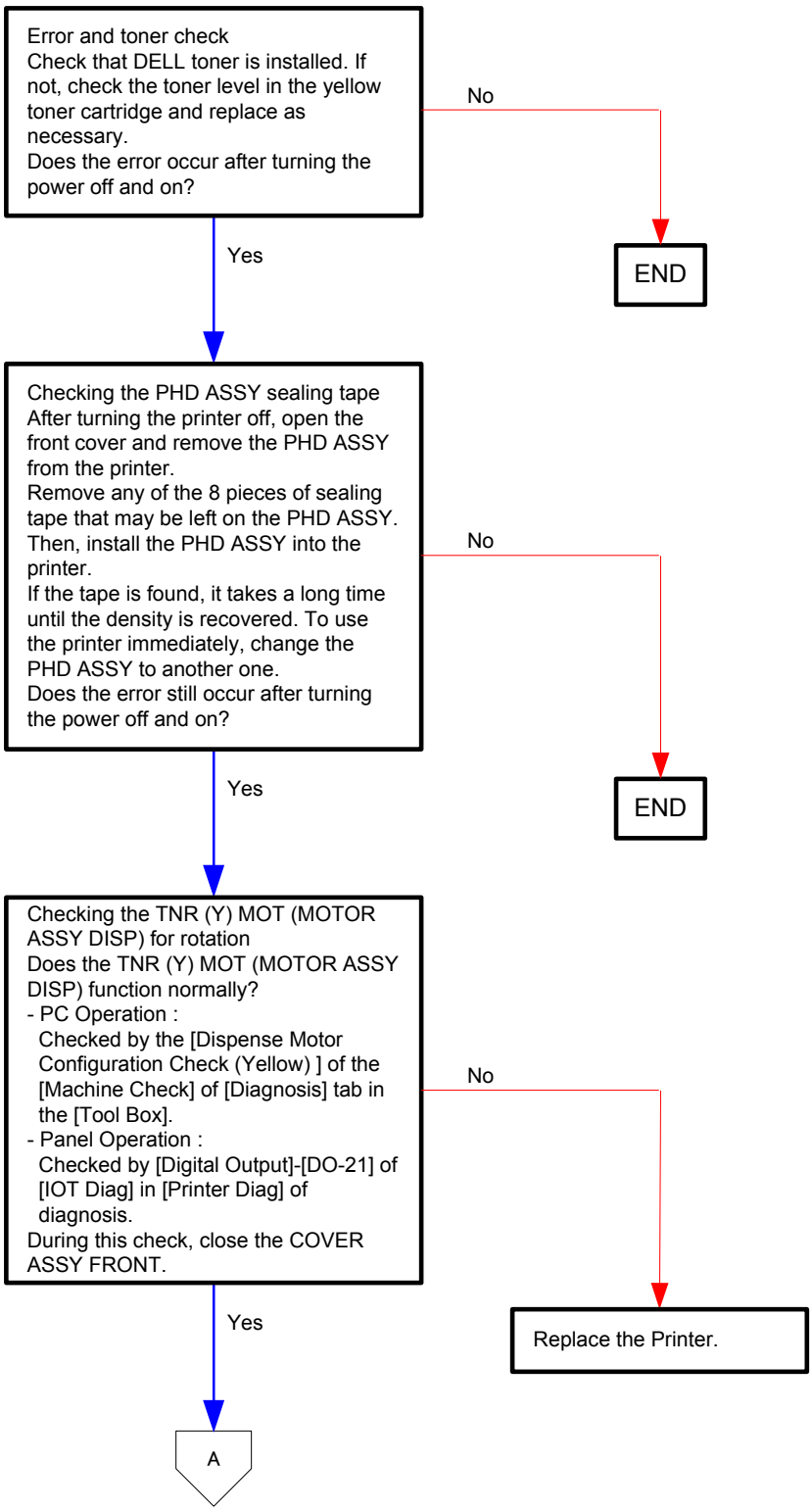
Flows 81 CRUM ID 093-363

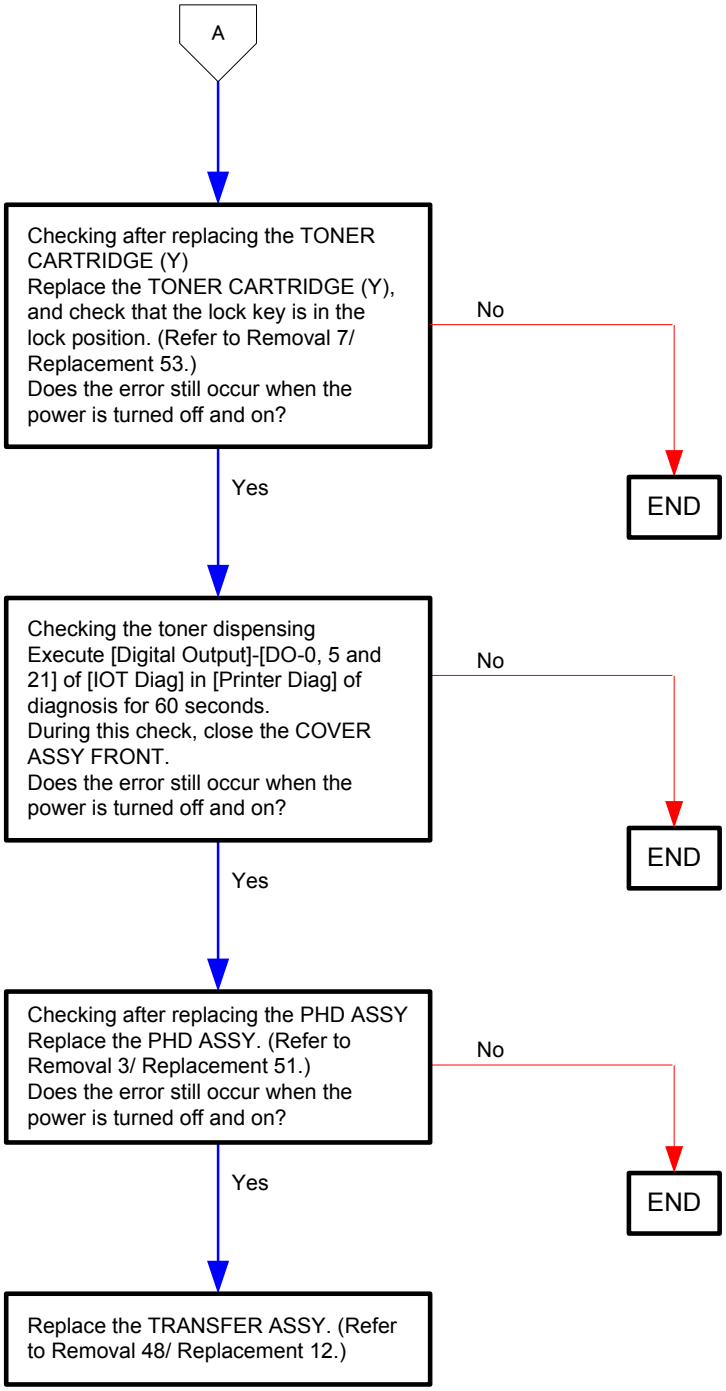


Flows 82 093-423 Yellow Cartridge / 093-424 Magenta Cartridge / 093-425 Cyan Cartridge / 093-426 Black Cartridge / Replace Cart. 093-930/093-931/093-932/093-933/093-934/093-935/093-936/093-937

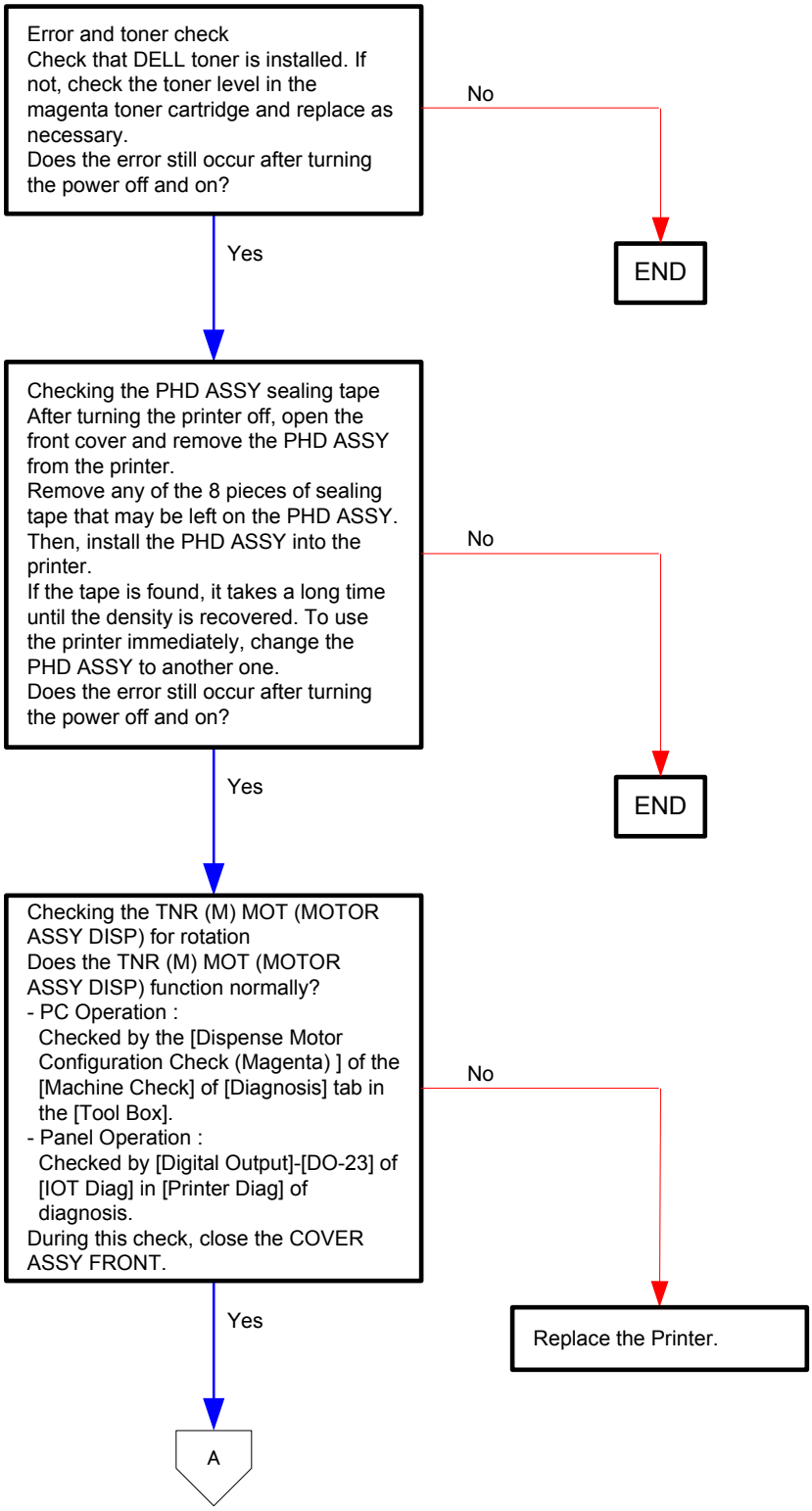


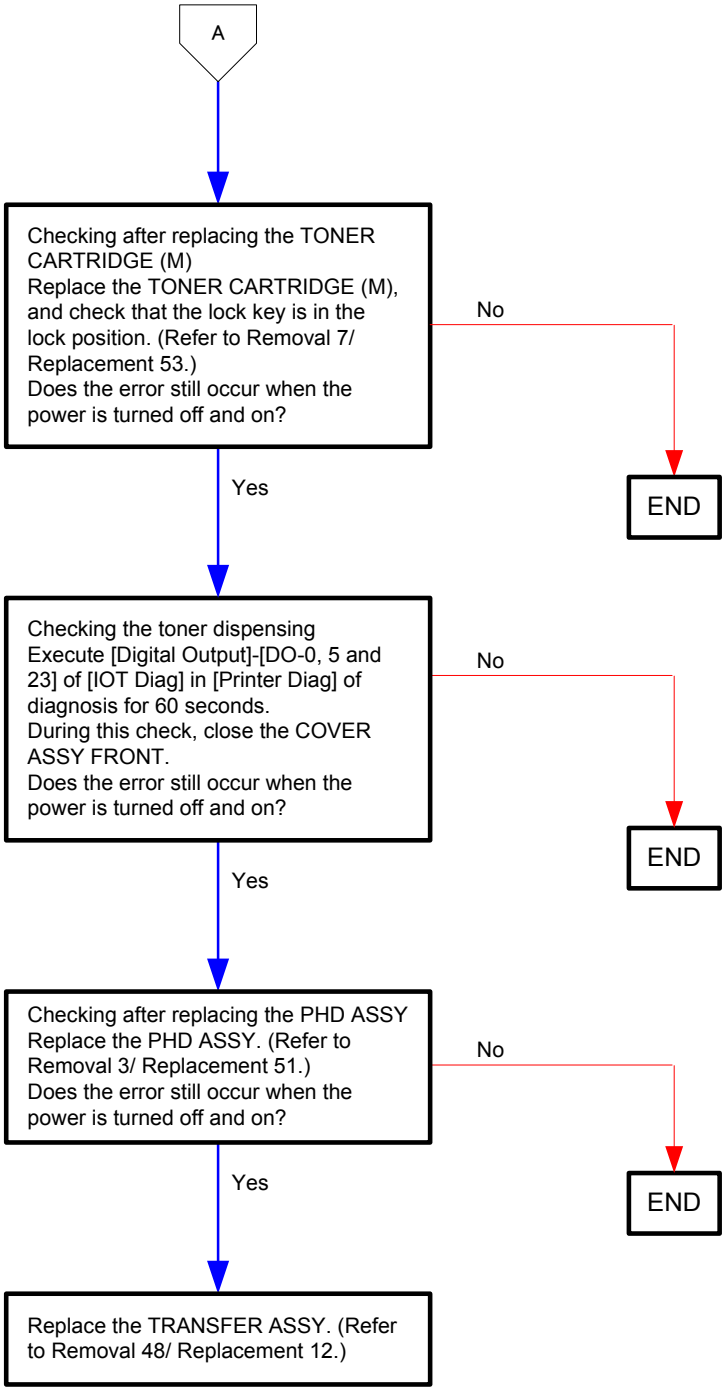
Flows 83 Low Density 093-919



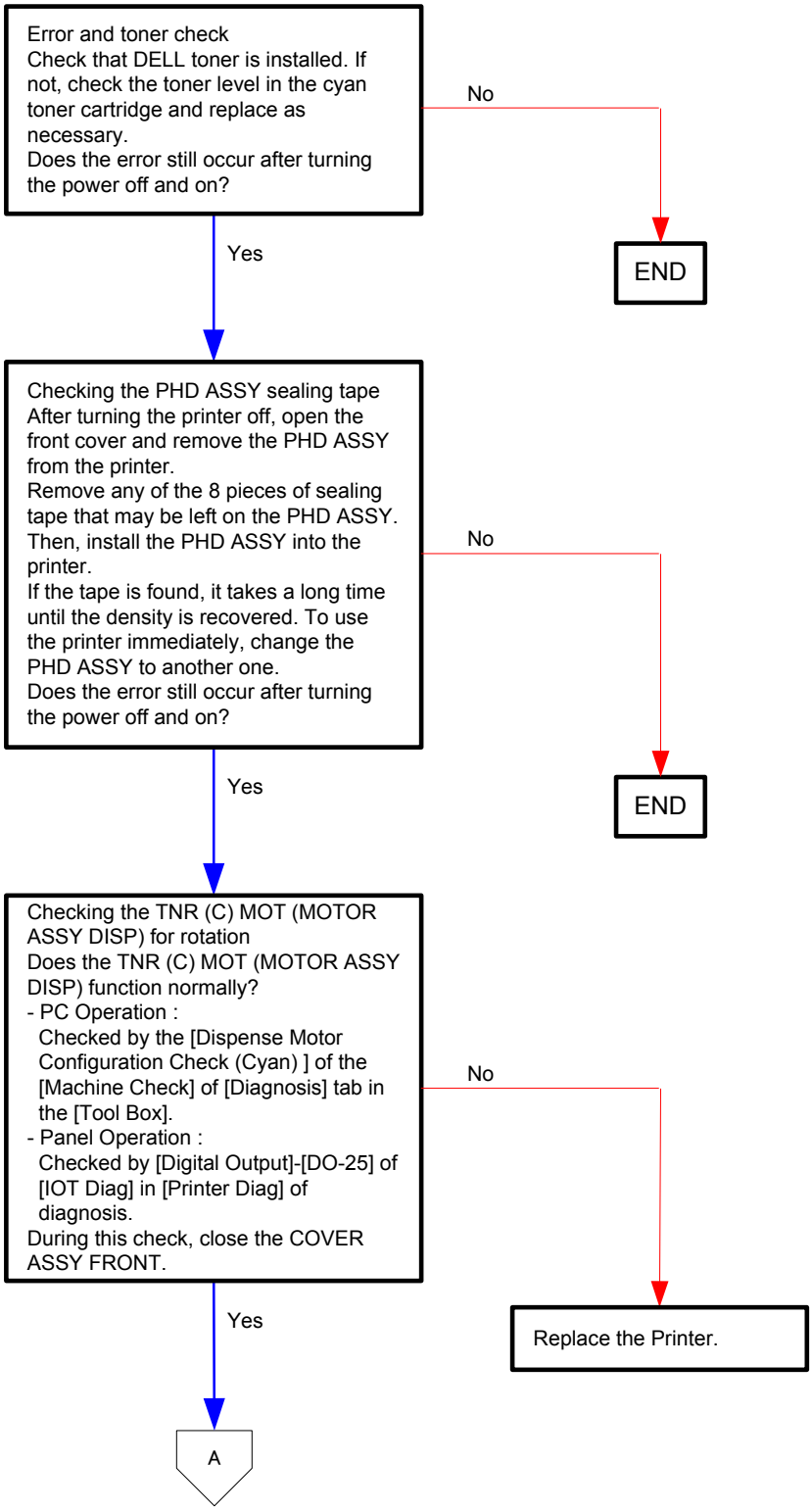

A
Checking after replacing the TONER CARTRIDGE (Y)
Replace the TONER CARTRIDGE (Y), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.)
Does the error still occur when the power is turned off and on?
No
END
Yes
Checking the toner dispensing
Execute [Digital Output]-[DO-0, 5 and 21] of [IOT Diag] in [Printer Diag] of diagnosis for 60 seconds.
During this check, close the COVER ASSY FRONT.
Does the error still occur when the power is turned off and on?
No
END
Yes
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Does the error still occur when the power is turned off and on?
No
END
Yes
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

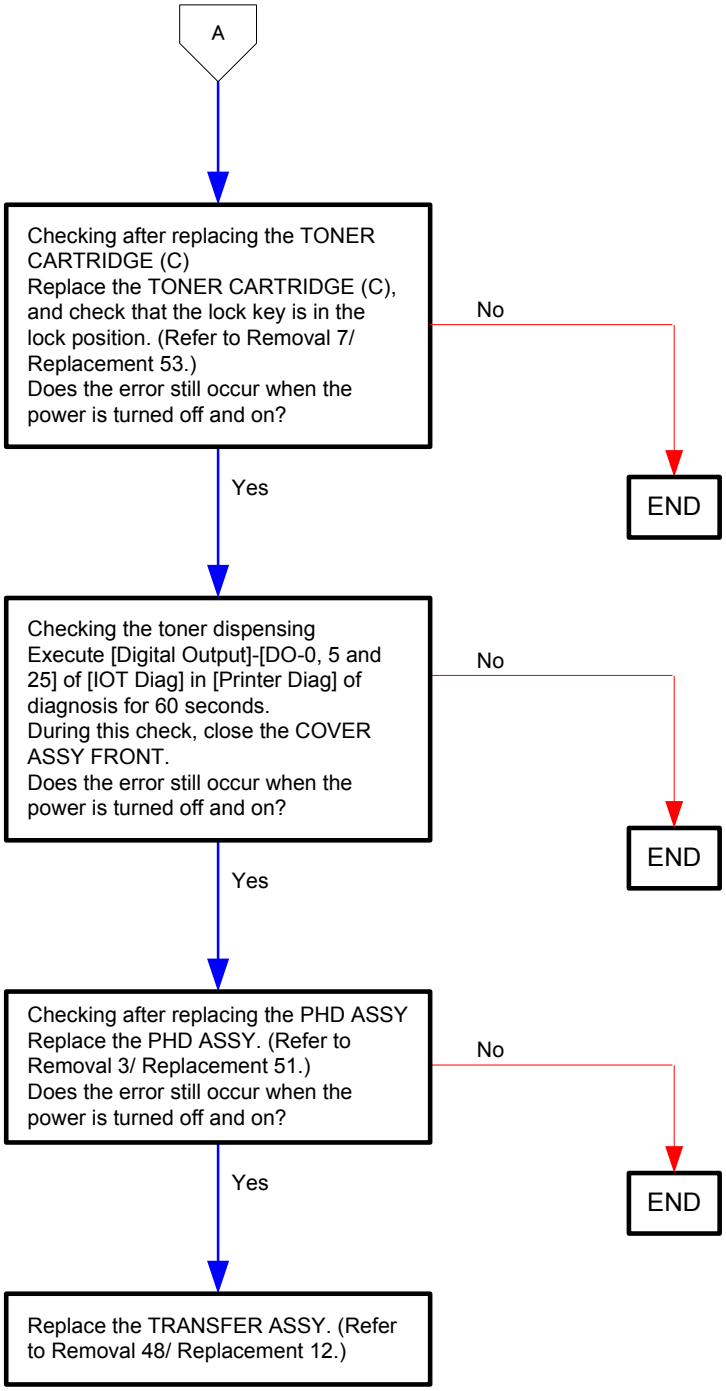
Flows 84 Low Density 093-920



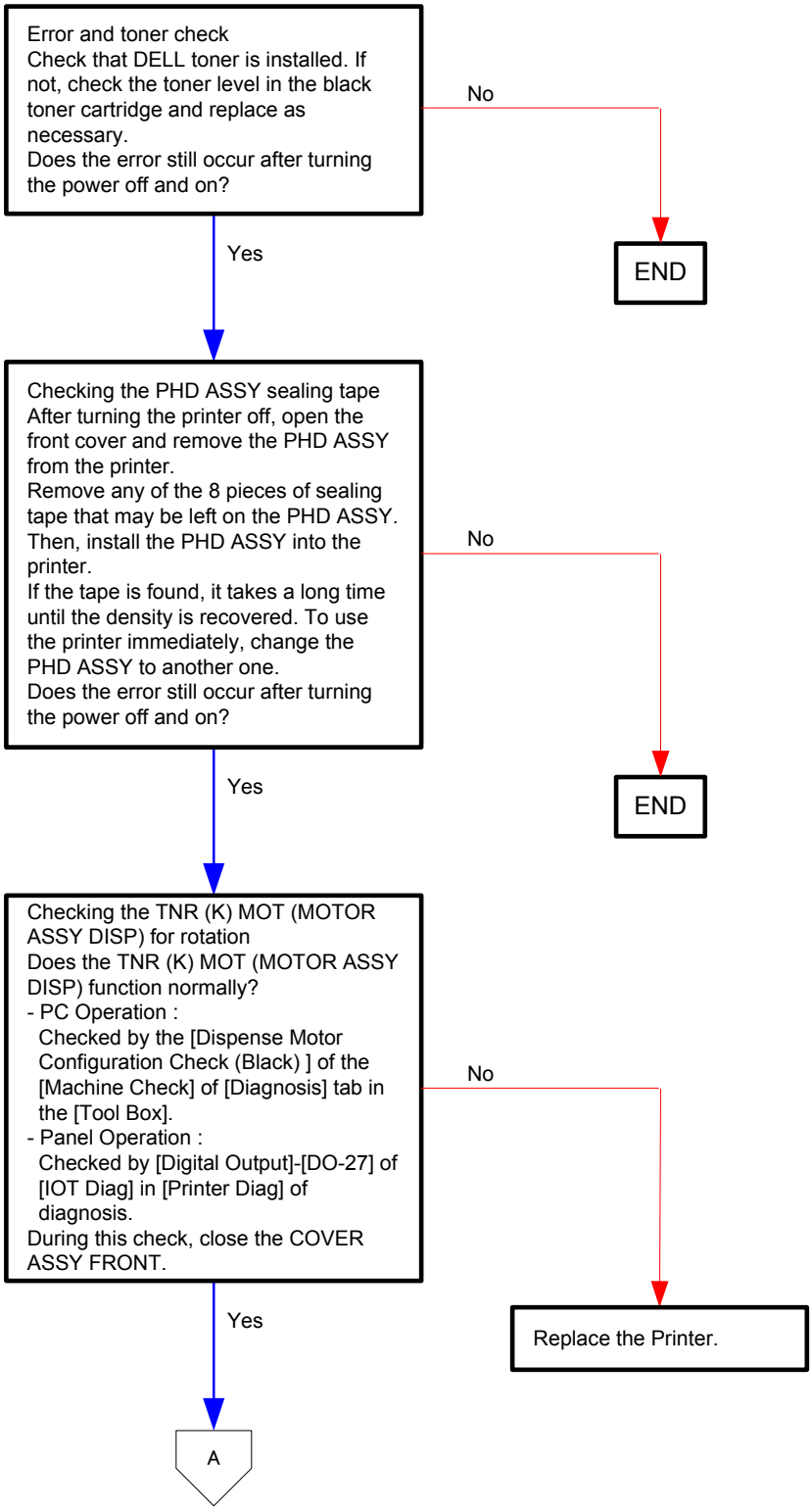

A
Checking after replacing the TONER CARTRIDGE (M)
Replace the TONER CARTRIDGE (M), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.)
Does the error still occur when the power is turned off and on?
No
Yes
END
Checking the toner dispensing
Execute [Digital Output]-[DO-0, 5 and 23] of [IOT Diag] in [Printer Diag] of diagnosis for 60 seconds.
During this check, close the COVER ASSY FRONT.
Does the error still occur when the power is turned off and on?
No
Yes
END
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Does the error still occur when the power is turned off and on?
No
Yes
END
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

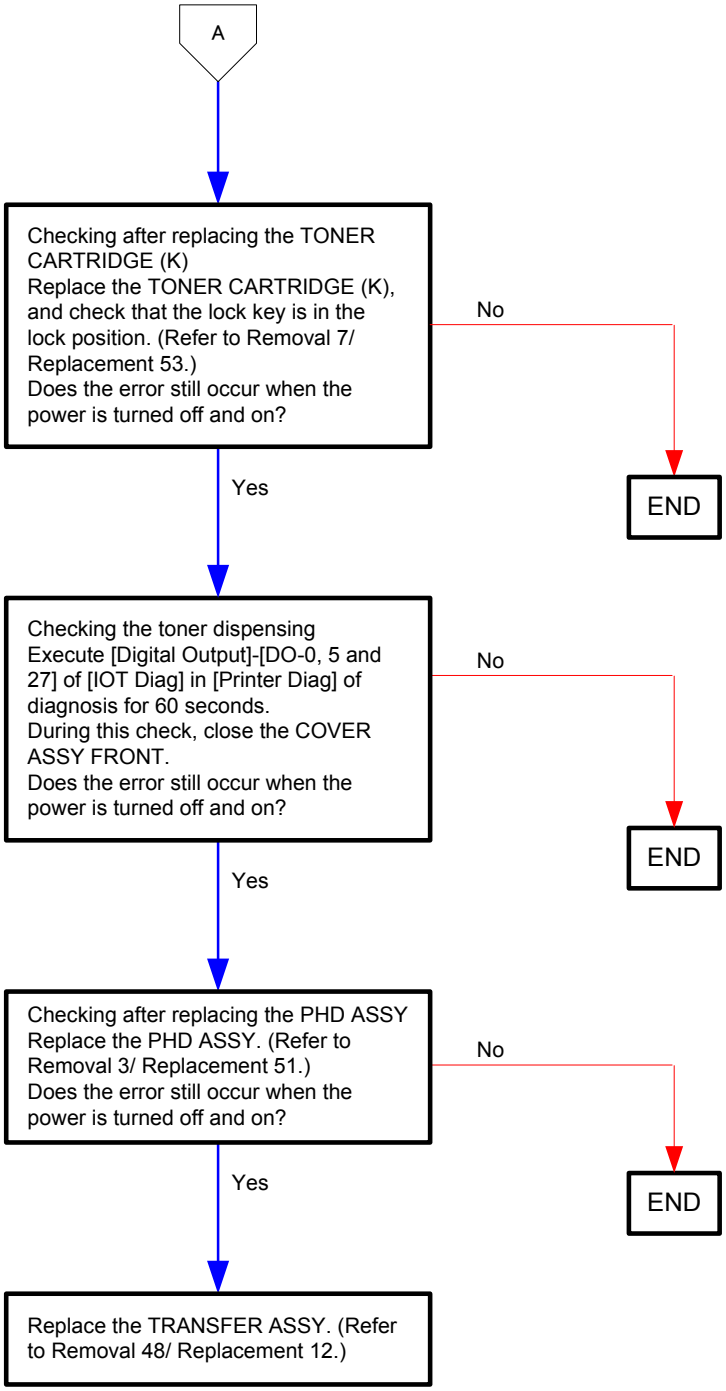
Flows 85 Low Density 093-921



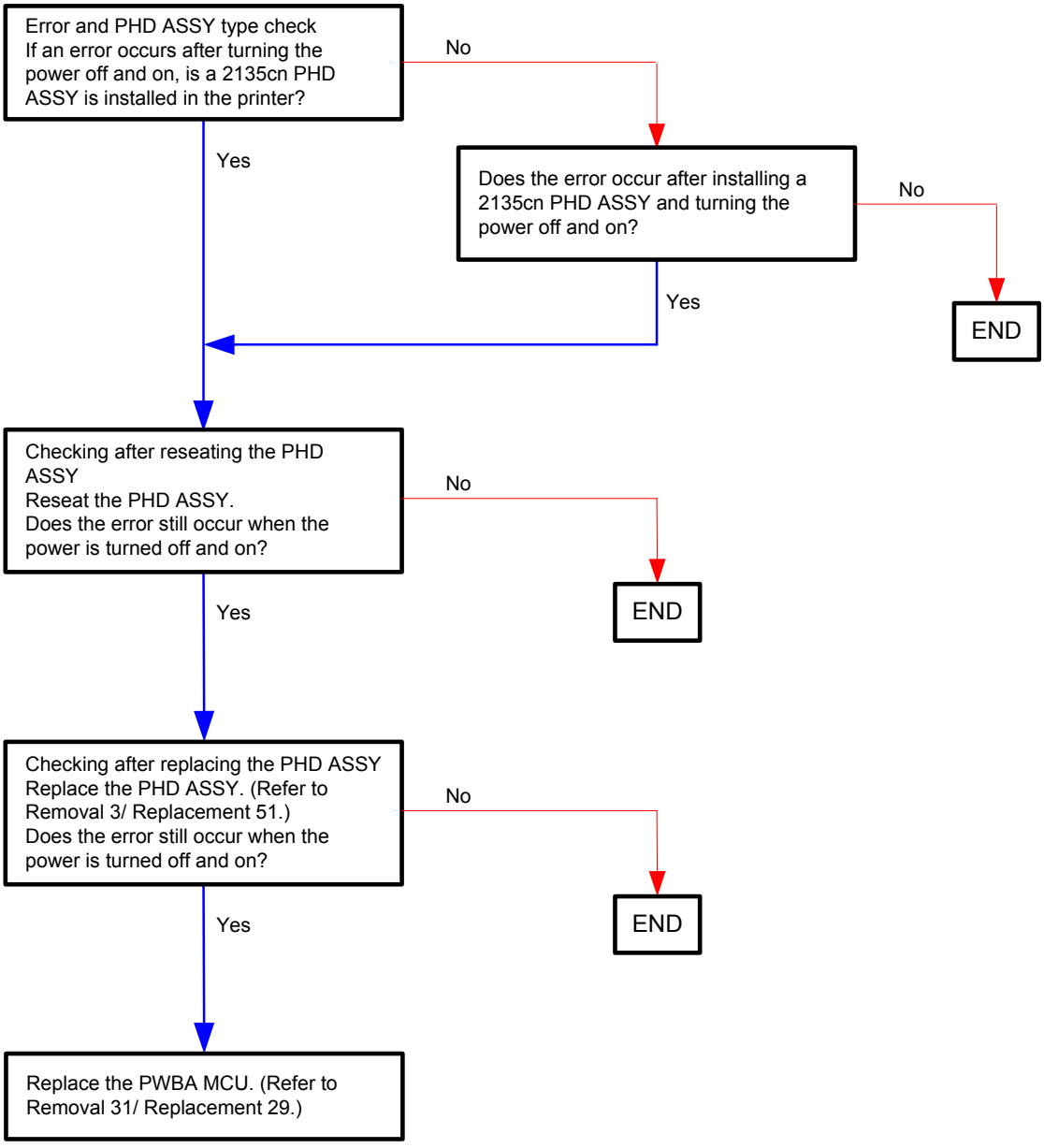

A
Checking after replacing the TONER CARTRIDGE (C)
Replace the TONER CARTRIDGE (C), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.)
Does the error still occur when the power is turned off and on?
No
END
Yes
Checking the toner dispensing
Execute [Digital Output]-[DO-0, 5 and 25] of [IOT Diag] in [Printer Diag] of diagnosis for 60 seconds.
During this check, close the COVER ASSY FRONT.
Does the error still occur when the power is turned off and on?
No
END
Yes
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Does the error still occur when the power is turned off and on?
No
END
Yes
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

Flows 86 Low Density 093-922

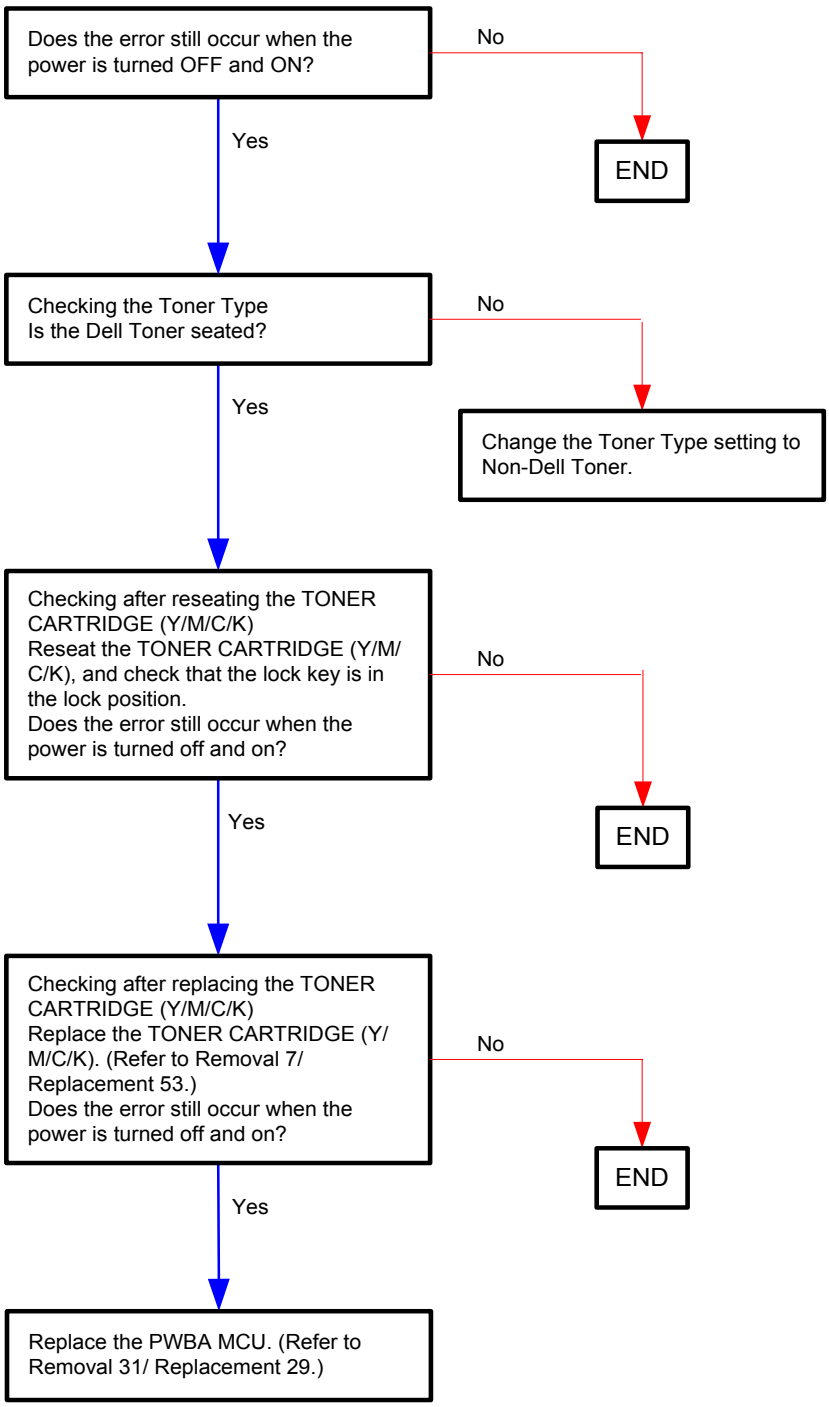



A
Checking after replacing the TONER CARTRIDGE (K)
Replace the TONER CARTRIDGE (K), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.)
Does the error still occur when the power is turned off and on?
No
END
Yes
Checking the toner dispensing
Execute [Digital Output]-[DO-0, 5 and 27] of [IOT Diag] in [Printer Diag] of diagnosis for 60 seconds.
During this check, close the COVER ASSY FRONT.
Does the error still occur when the power is turned off and on?
No
END
Yes
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Does the error still occur when the power is turned off and on?
No
END
Yes
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

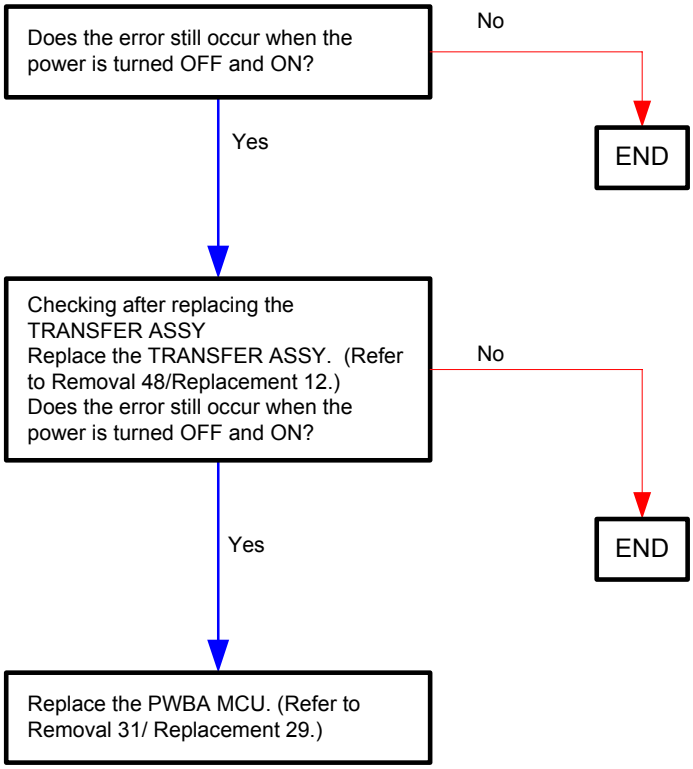
Flows 87 093-965 Reseat PHD Unit



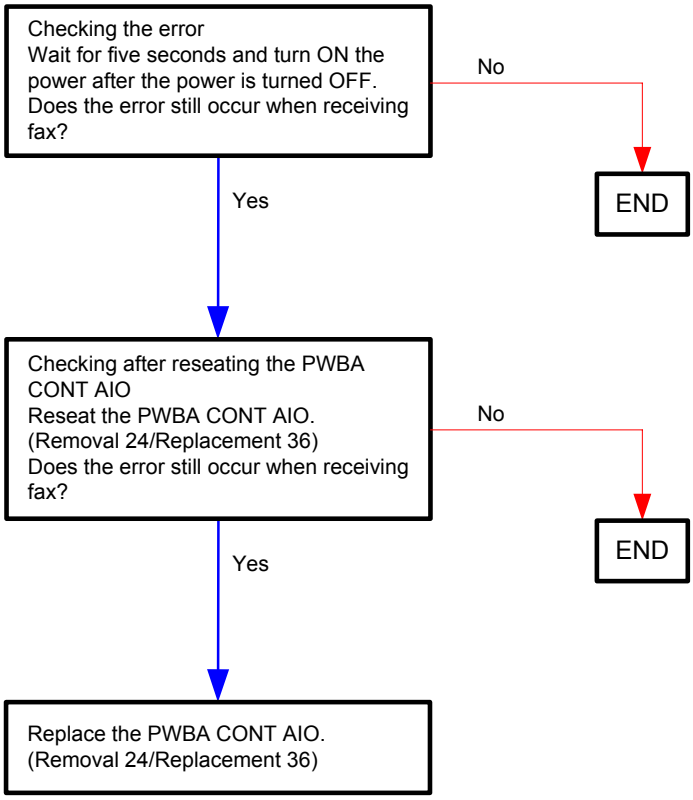
Flows 88 Insert Print Cart. 093-970/093-971/093-972/093-973



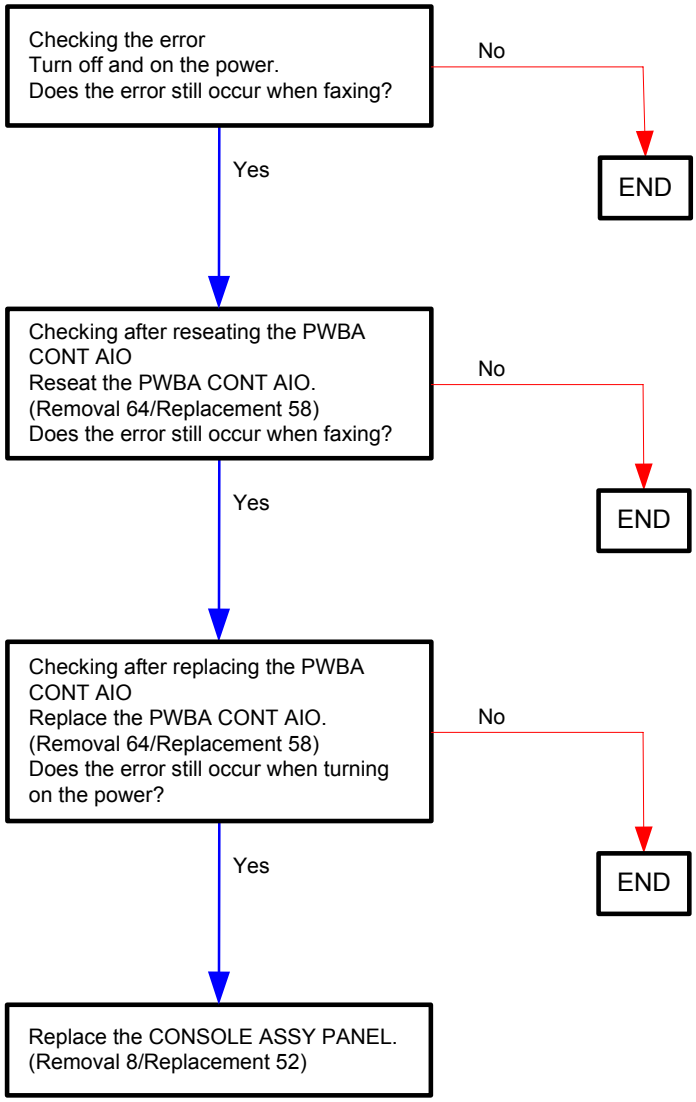
Flows 89 094-422 Contact Support / 094-911 Restart Printer



Flows 90 117-313/117-323/117-324/117-344/117-354/117-355 Restart Printer



Flows 91 123-314 Restart Printer

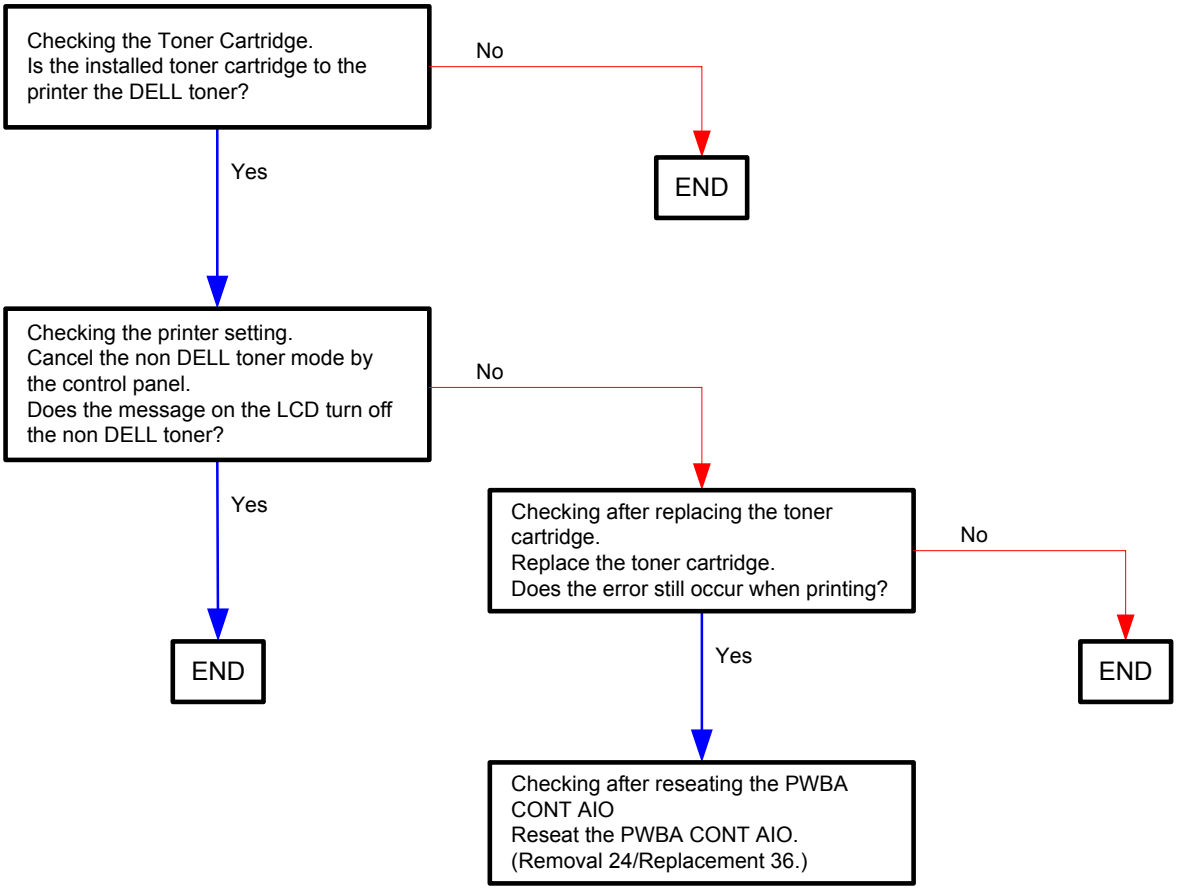


Flows 92 193-700 Non-Dell Toner

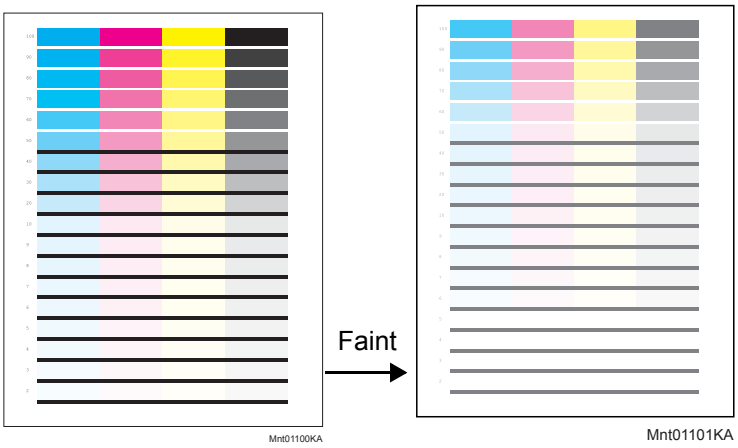
NOTE

This message appears when [Non-Dell Toner] setting of [Maintenance] on [Admin Menu] is turned to [ON] for using non-Dell toner cartridge.
Printing is available while this message is displayed.

When you use Dell toner cartridge, you can turn off the message by turning the [Non-DELL Toner] setting to [OFF].

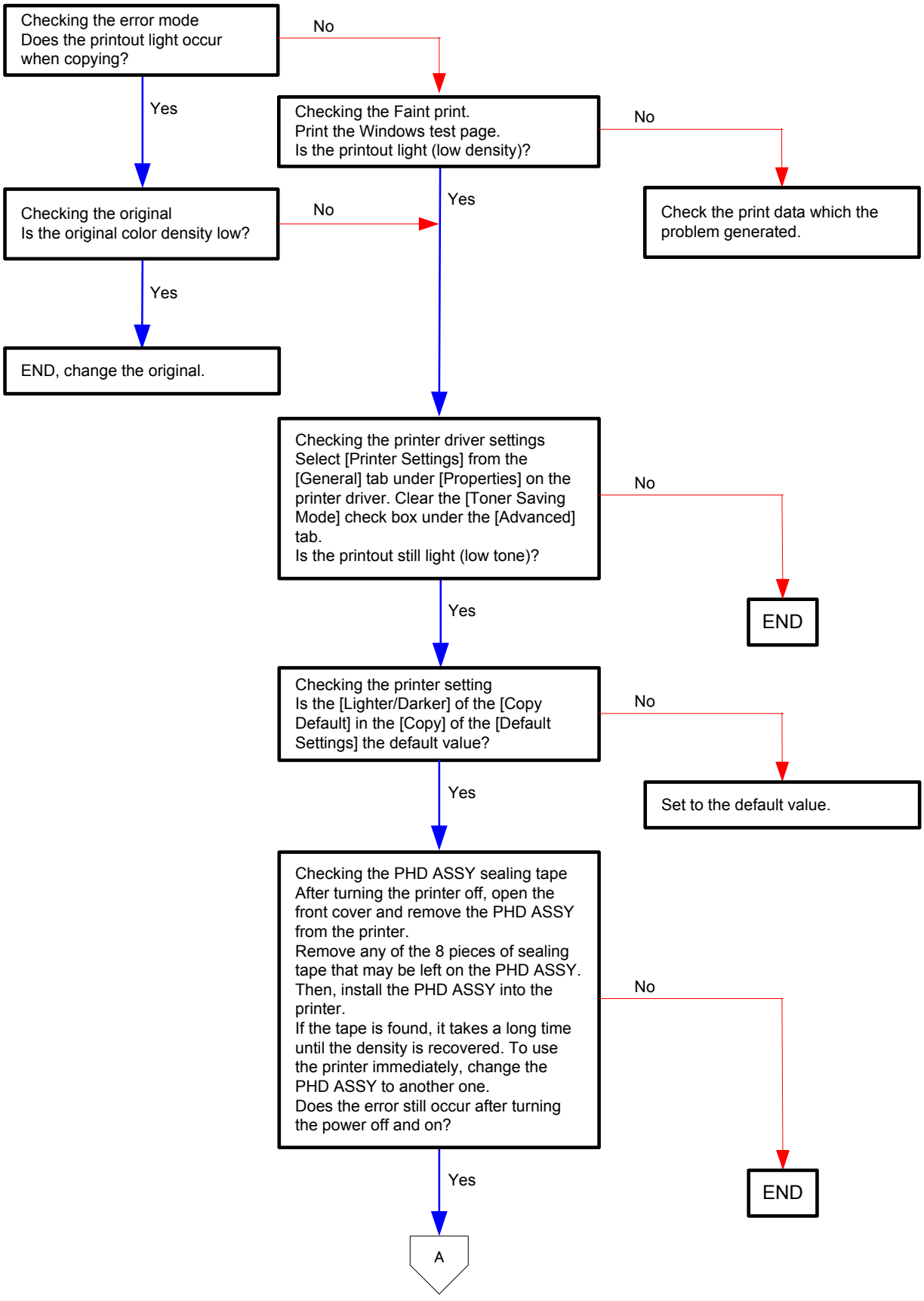


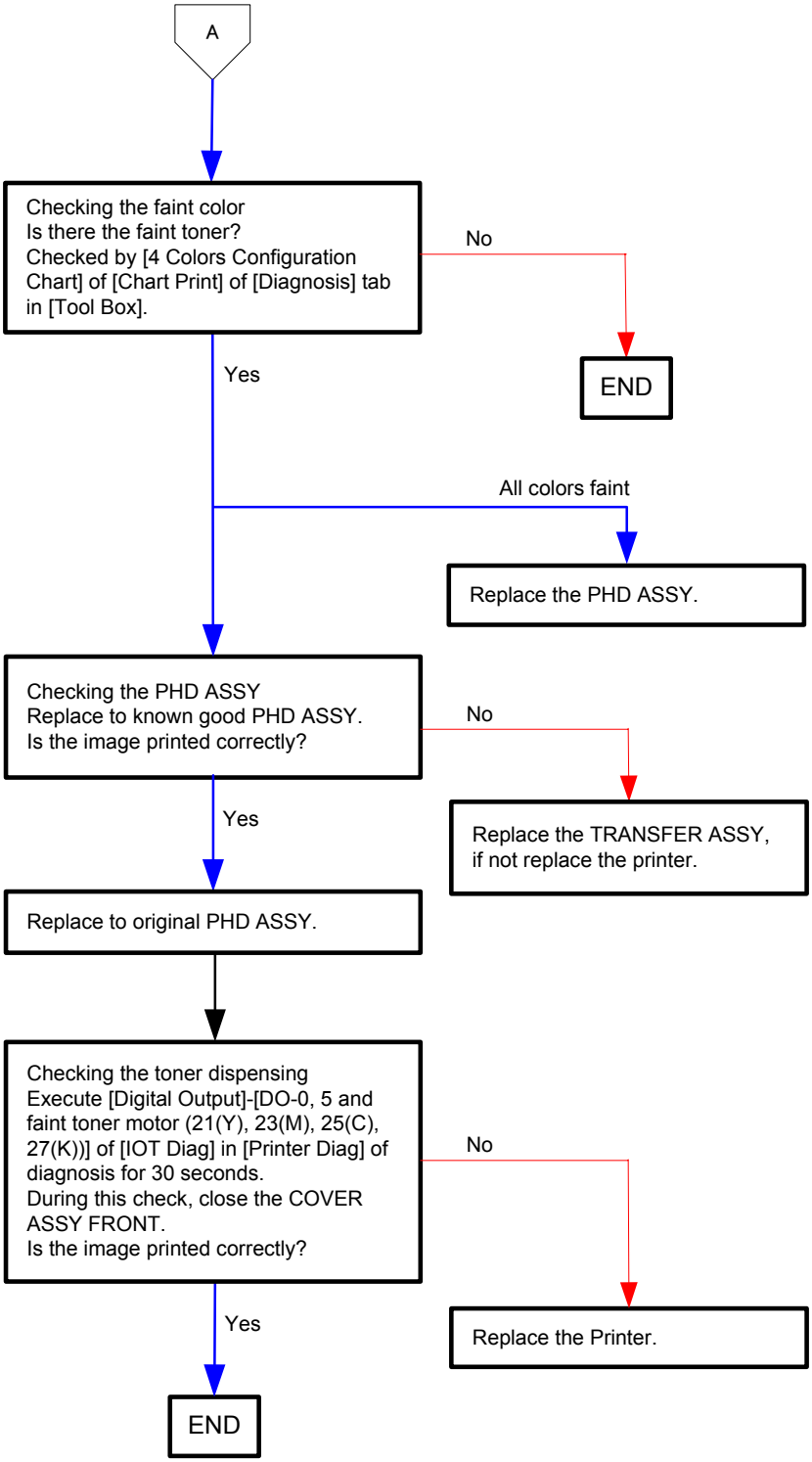
Flows 93 Faint print (Low contrast)



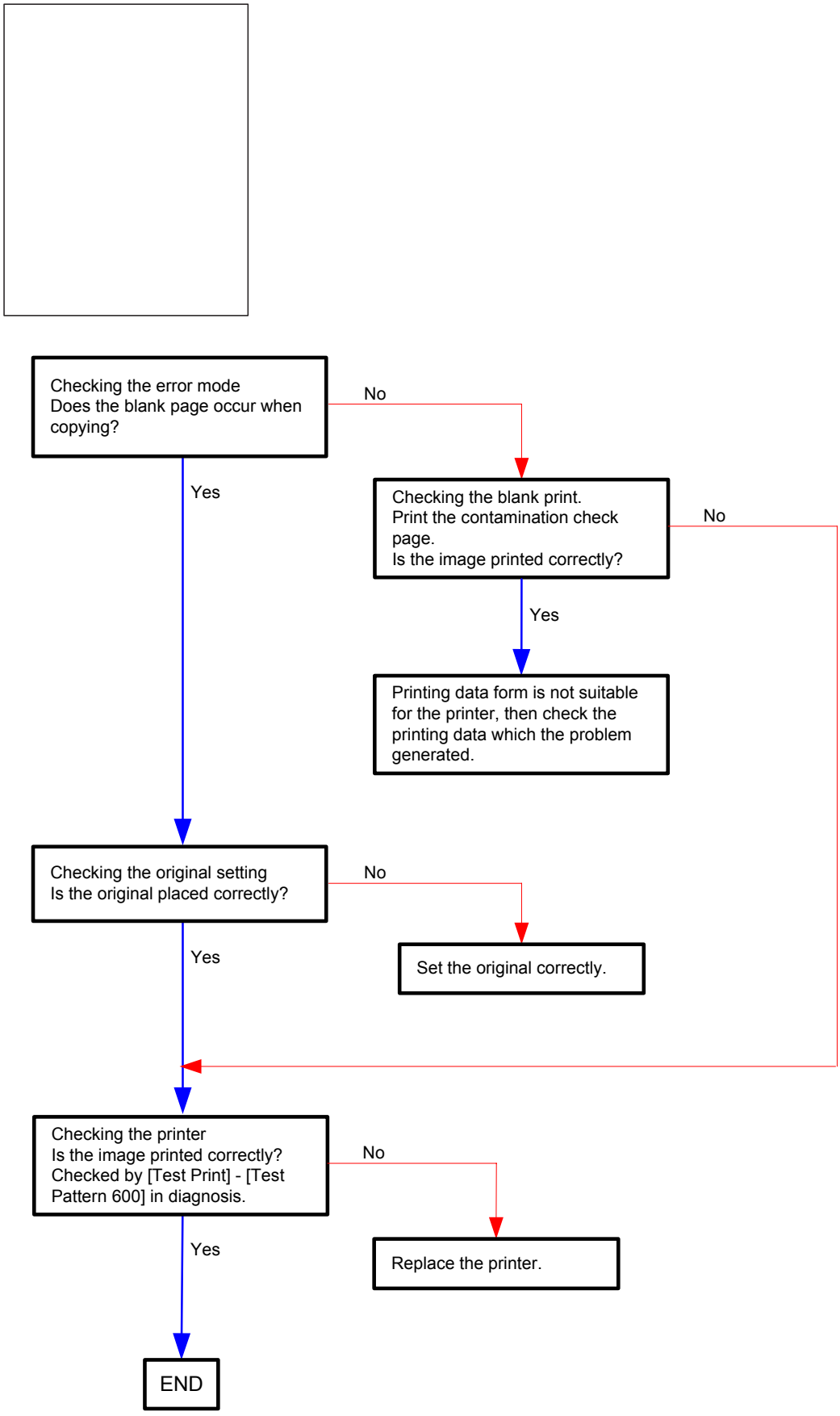
NOTE

If the copy finish is too light, restoring the default [Color balance Y, M, C and K] of [Copy Defaults] in [Copy] of [Defaults Settings] settings may solve it.

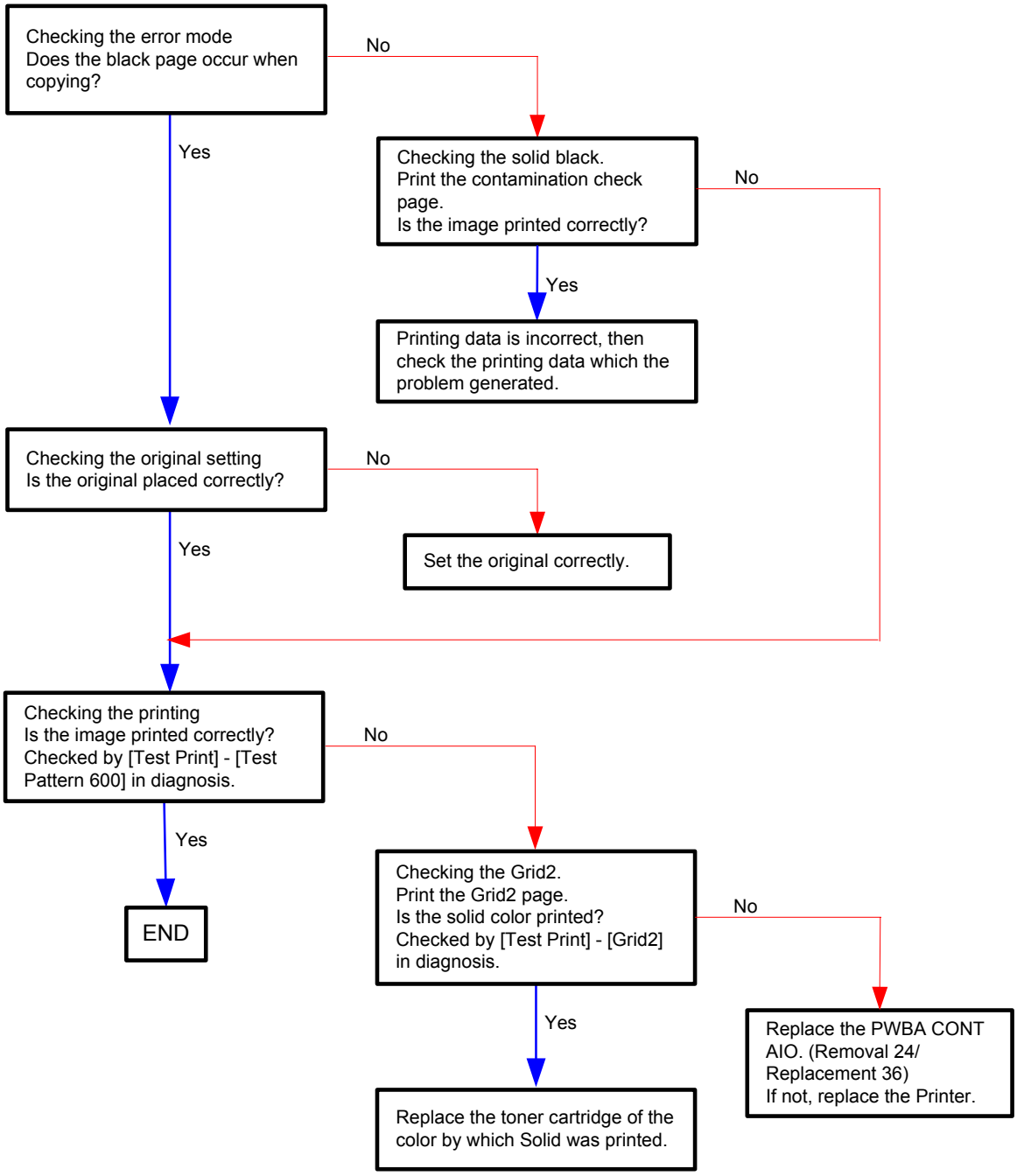



A
Checking the faint color
Is there the faint toner?
Checked by [4 Colors Configuration Chart] of [Chart Print] of [Diagnosis] tab in [Tool Box].
No
END
Yes
All colors faint
Replace the PHD ASSY.
Checking the PHD ASSY
Replace to known good PHD ASSY.
Is the image printed correctly?
No
Replace the TRANSFER ASSY, if not replace the printer.
Yes
Replace to original PHD ASSY.
Checking the toner dispensing
Execute [Digital Output]-[DO-0, 5 and faint toner motor (21(Y), 23(M), 25(C), 27(K))] of [IOT Diag] in [Printer Diag] of diagnosis for 30 seconds.
During this check, close the COVER ASSY FRONT.
Is the image printed correctly?
No
Replace the Printer.
Yes
END

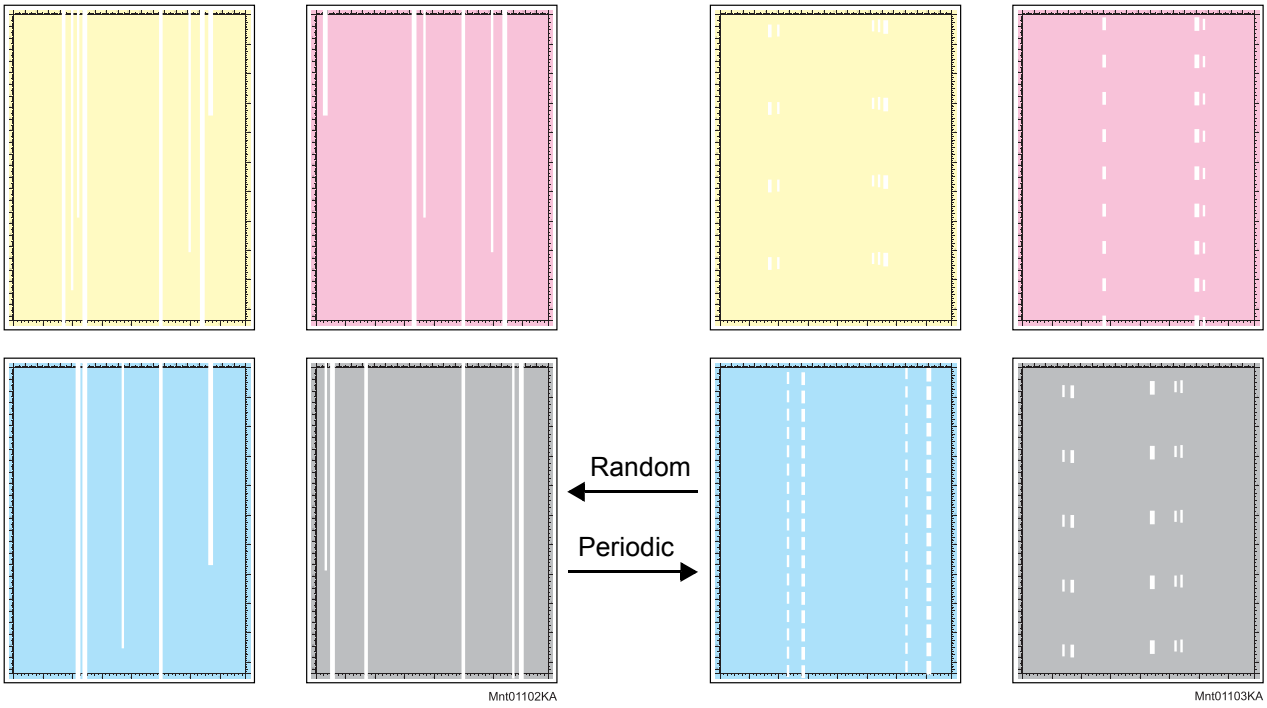
Flows 94 Blank print (No print)

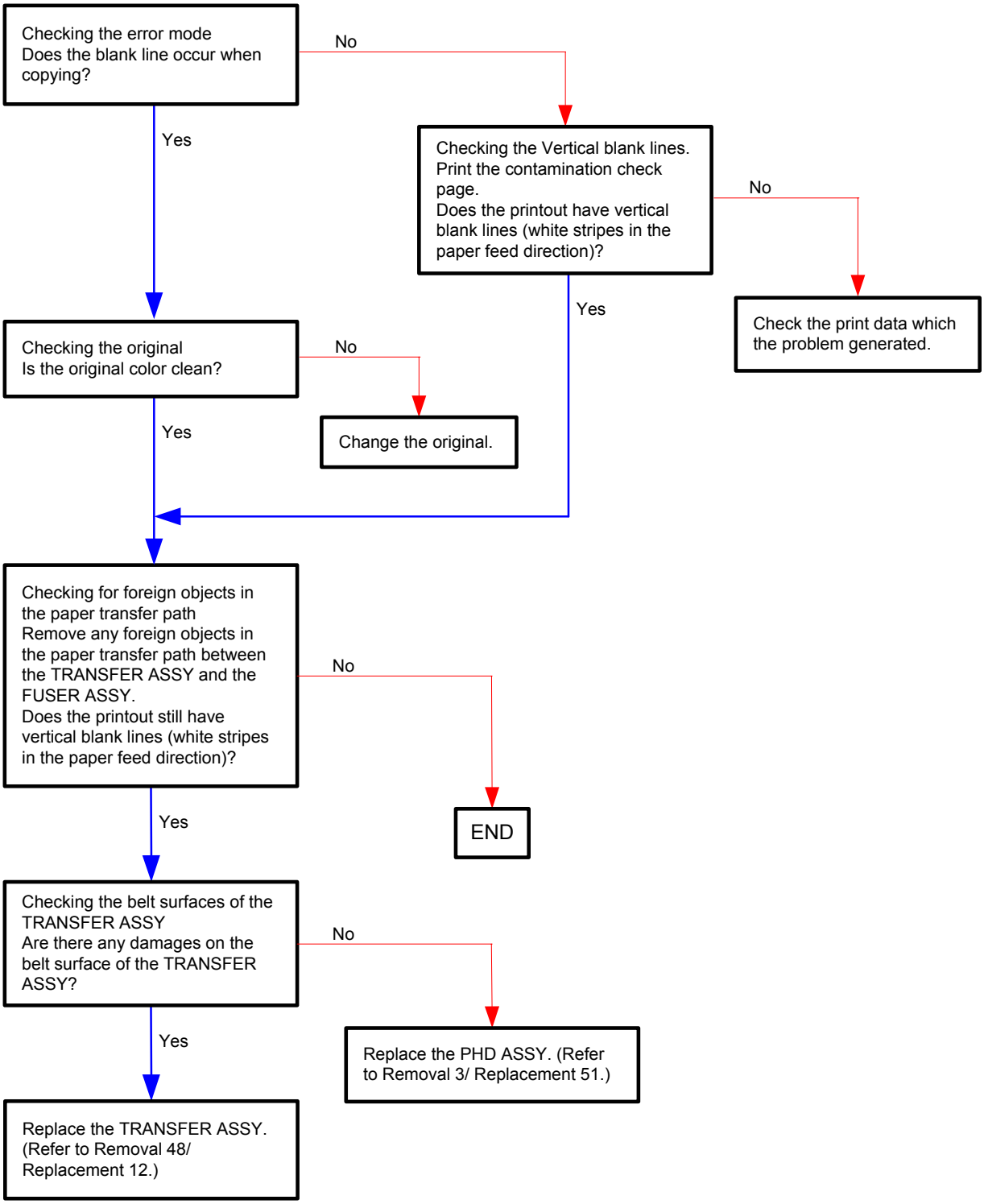


Flows 95 Solid black

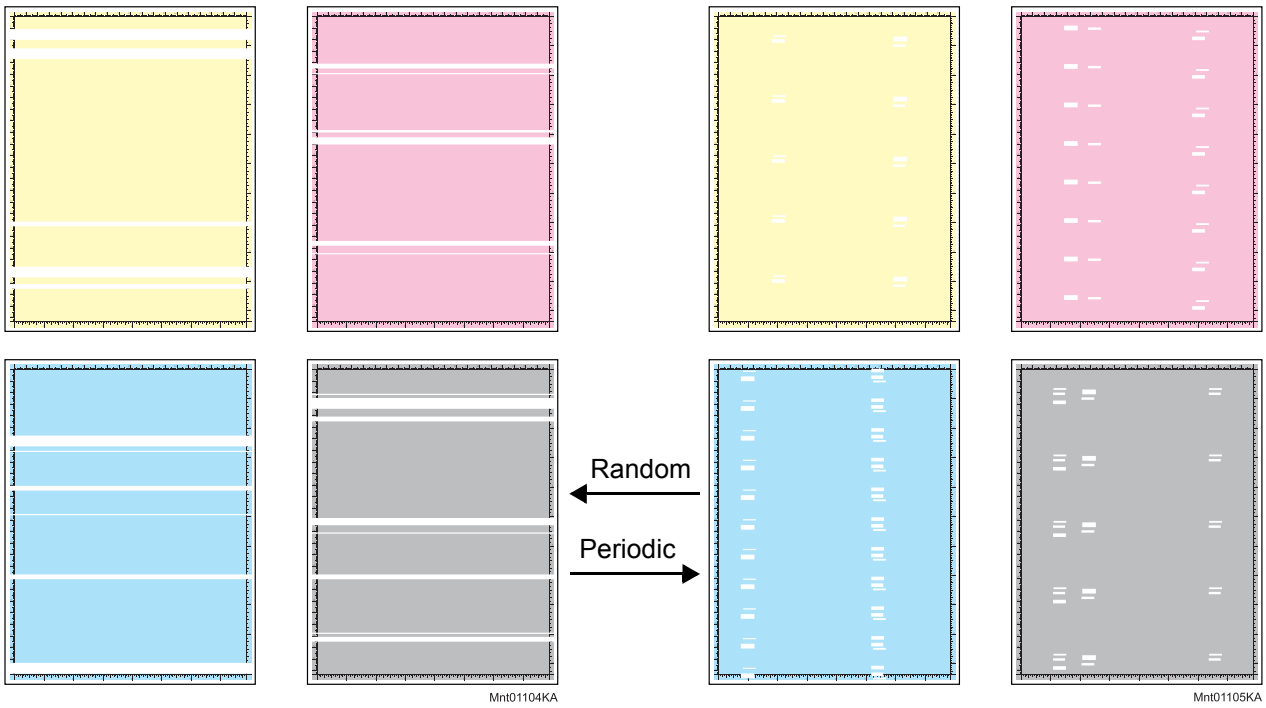

Checking the error mode
Does the black page occur when copying?
No
Yes
Checking the solid black.
Print the contamination check page.
Is the image printed correctly?
No
Yes
Printing data is incorrect, then check the printing data which the problem generated.
Checking the original setting
Is the original placed correctly?
No
Yes
Set the original correctly.
Checking the printing
Is the image printed correctly?
Checked by [Test Print] - [Test Pattern 600] in diagnosis.
No
Yes
END
Checking the Grid2.
Print the Grid2 page.
Is the solid color printed?
Checked by [Test Print] - [Grid2] in diagnosis.
No
Yes
Replace the PWBA CONT AIO. (Removal 24/ Replacement 36)
If not, replace the Printer.
Replace the toner cartridge of the color by which Solid was printed.

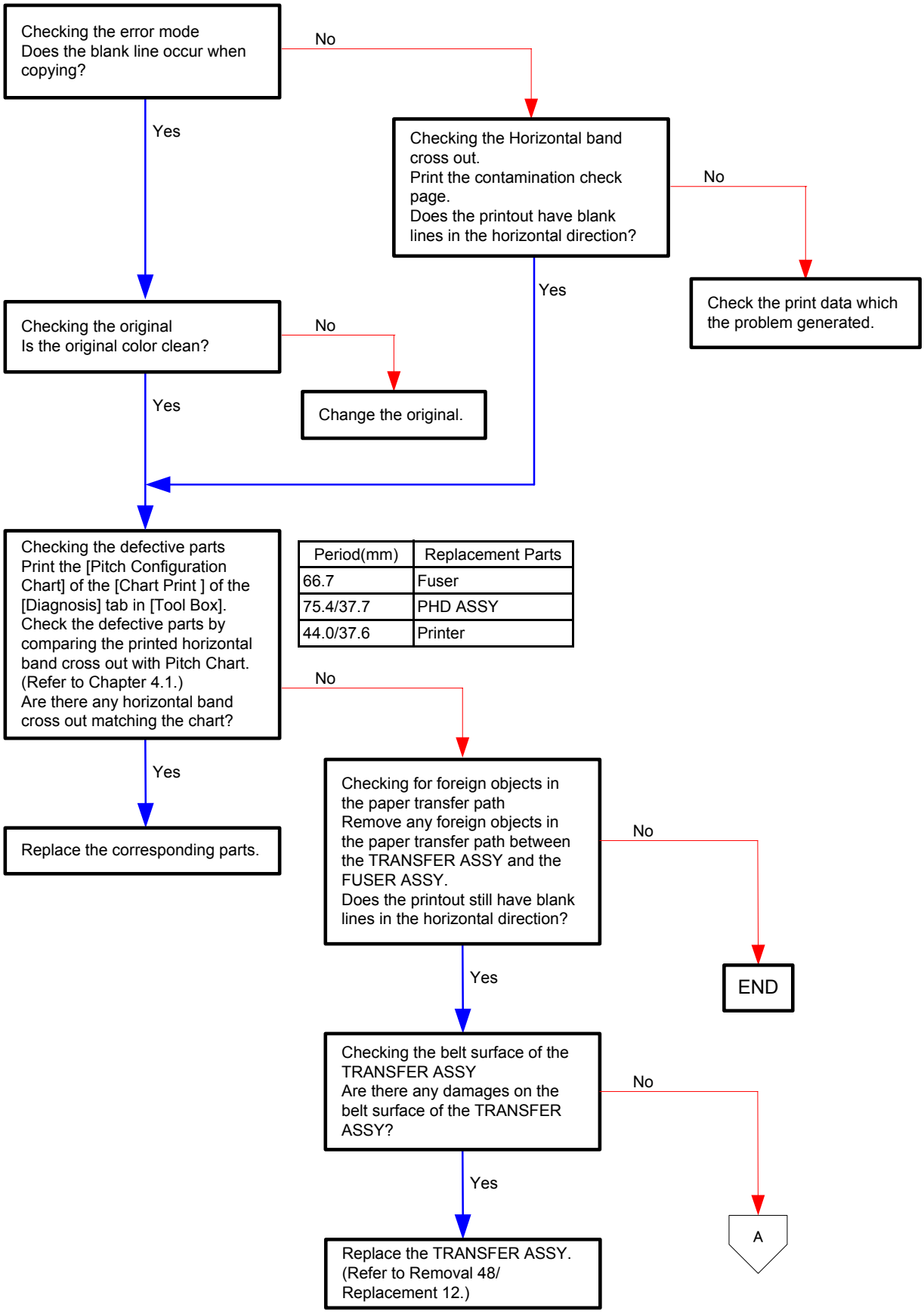
Flows 96 Vertical blank line (White stripes in paper transport direction)



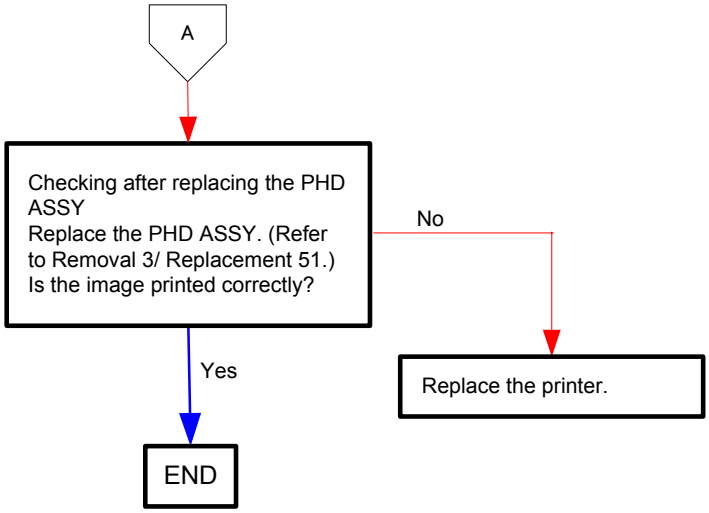

Checking the error mode
Does the blank line occur when copying?
No
Yes
Checking the Vertical blank lines.
Print the contamination check page.
Does the printout have vertical blank lines (white stripes in the paper feed direction)?
No
Yes
Check the print data which the problem generated.
Checking the original
Is the original color clean?
No
Yes
Change the original.
Checking for foreign objects in the paper transfer path
Remove any foreign objects in the paper transfer path between the TRANSFER ASSY and the FUSER ASSY.
Does the printout still have vertical blank lines (white stripes in the paper feed direction)?
No
Yes
END
Checking the belt surfaces of the TRANSFER ASSY
Are there any damages on the belt surface of the TRANSFER ASSY?
No
Yes
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)

Flows 97 Horizontal band cross out (White stripe in horizontal direction)

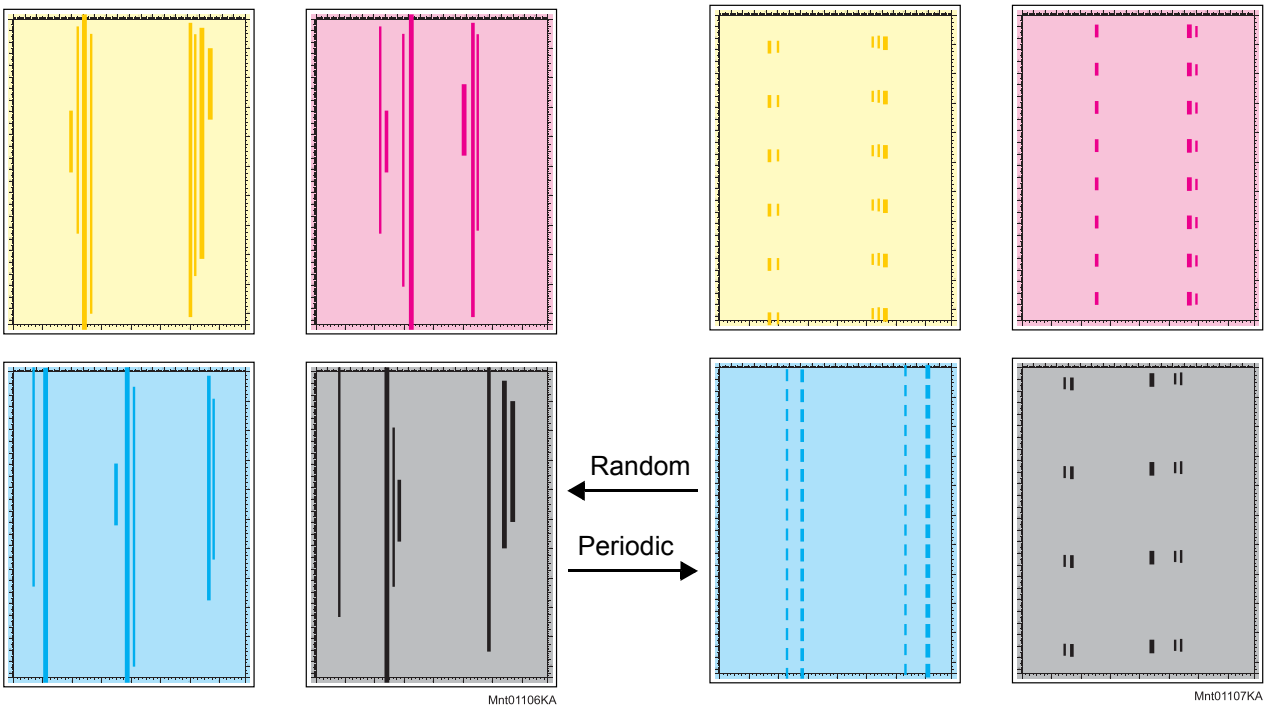


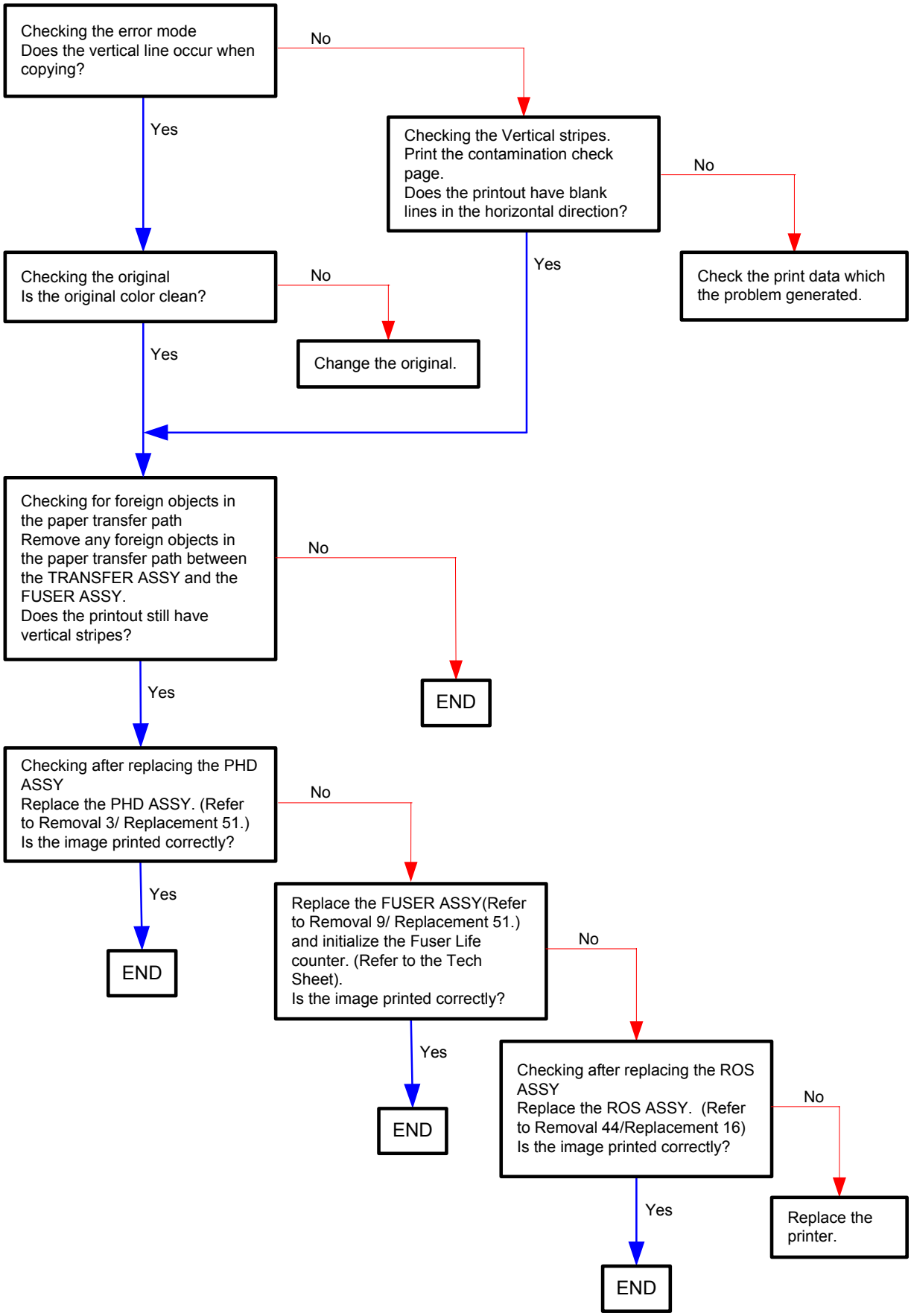


Period(mm)	Replacement Parts
66.7	Fuser
75.4/37.7	PHD ASSY
44.0/37.6	Printer

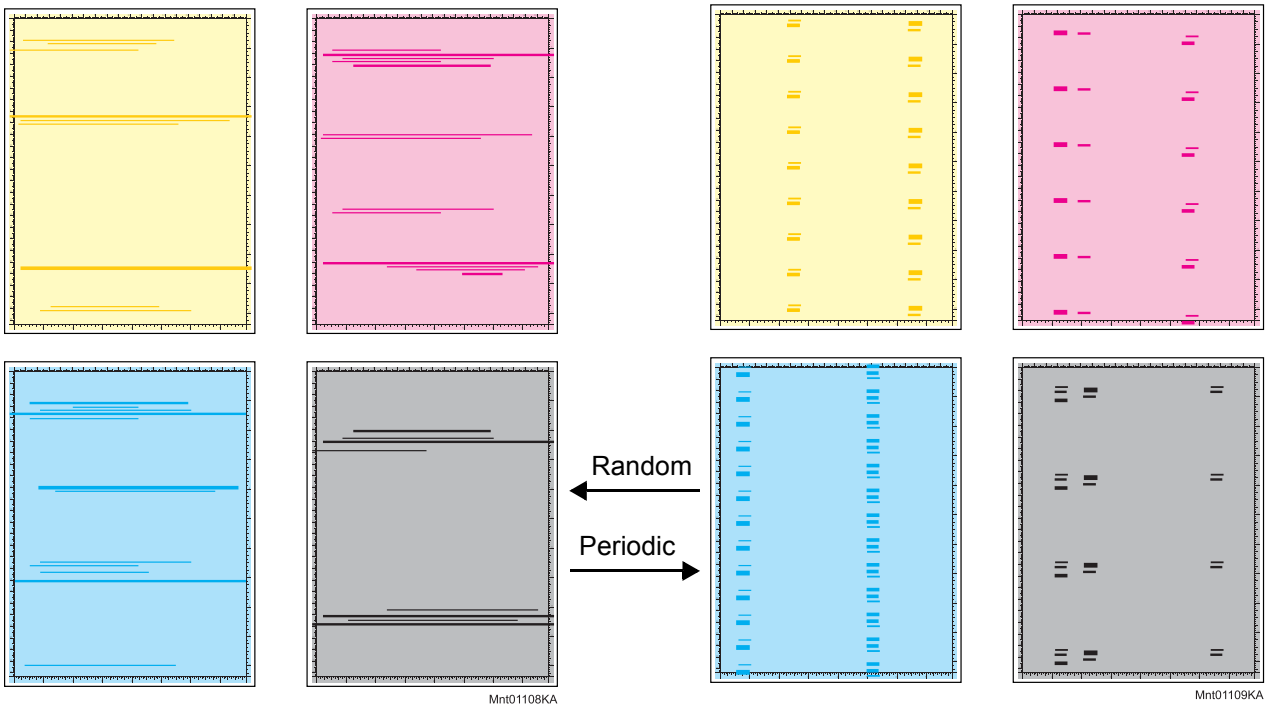

A
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Is the image printed correctly?
No
Yes
Replace the printer.
END

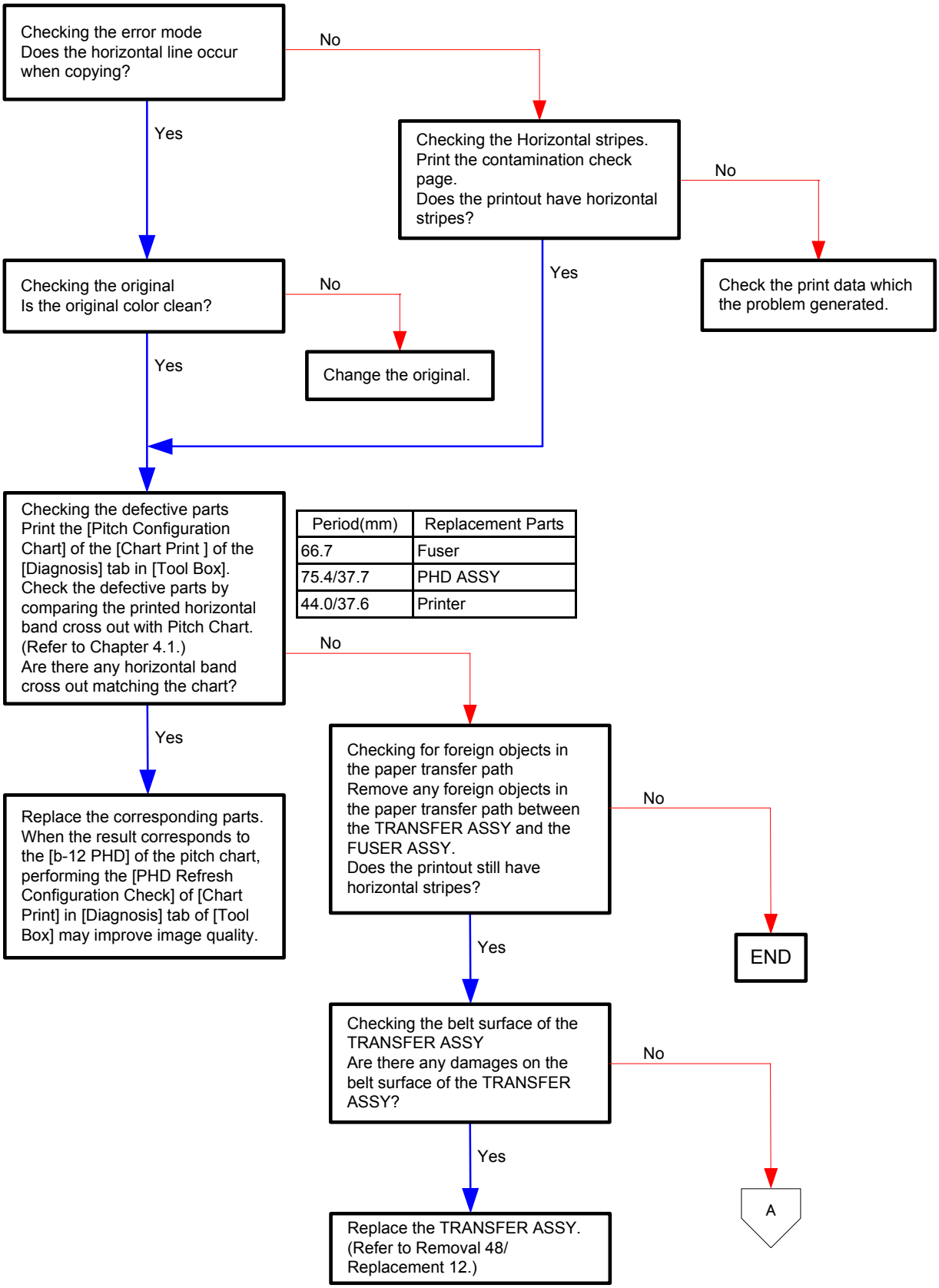
Flows 98 Vertical stripes



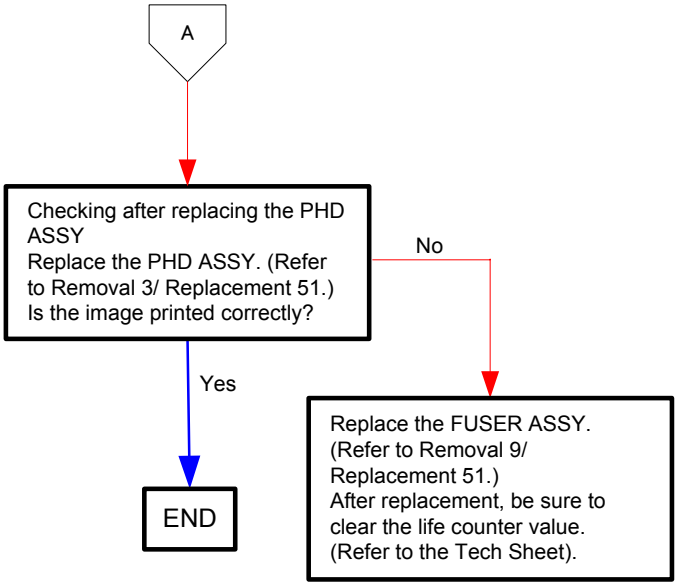

Checking the error mode
Does the vertical line occur when copying?
No
Yes
Checking the Vertical stripes.
Print the contamination check page.
Does the printout have blank lines in the horizontal direction?
No
Yes
Check the print data which the problem generated.
Checking the original
Is the original color clean?
No
Change the original.
Yes
Checking for foreign objects in the paper transfer path
Remove any foreign objects in the paper transfer path between the TRANSFER ASSY and the FUSER ASSY.
Does the printout still have vertical stripes?
No
END
Yes
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Is the image printed correctly?
No
Yes
END
Replace the FUSER ASSY(Refer to Removal 9/ Replacement 51.) and initialize the Fuser Life counter. (Refer to the Tech Sheet).
Is the image printed correctly?
No
Yes
END
Checking after replacing the ROS ASSY
Replace the ROS ASSY. (Refer to Removal 44/Replacement 16)
Is the image printed correctly?
No
Yes
Replace the printer.
END

Flows 99 Horizontal stripes

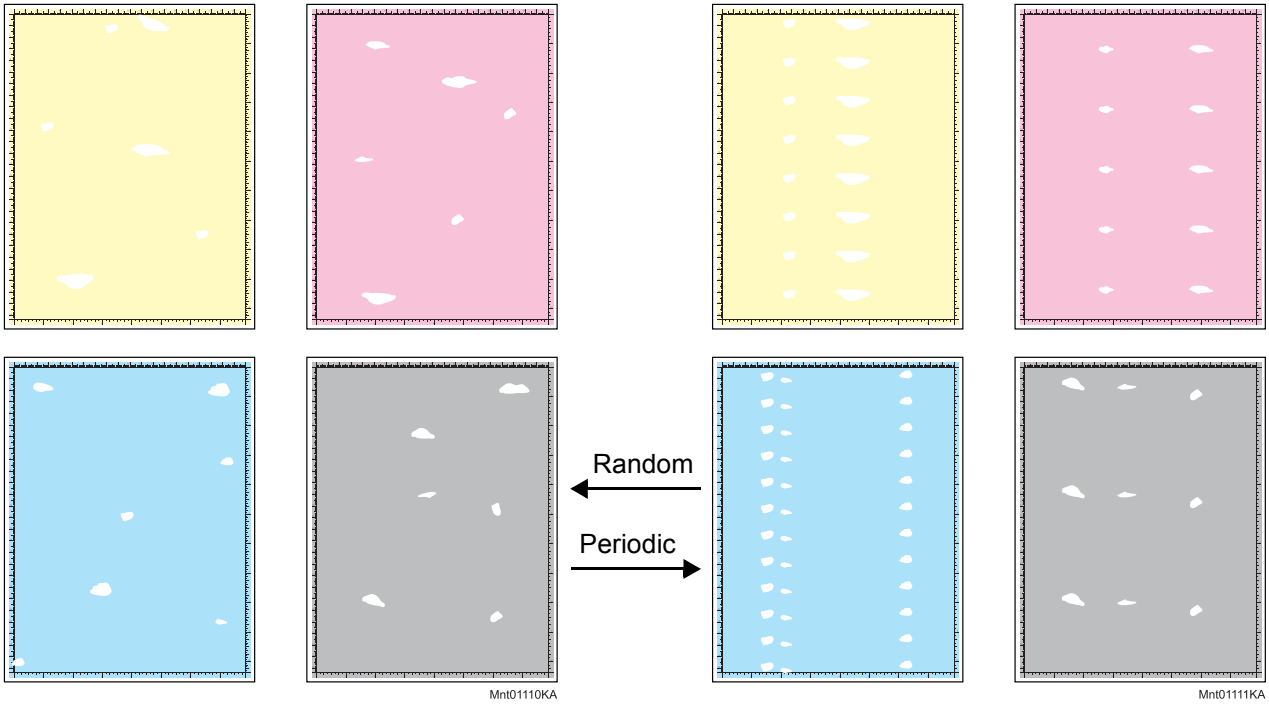


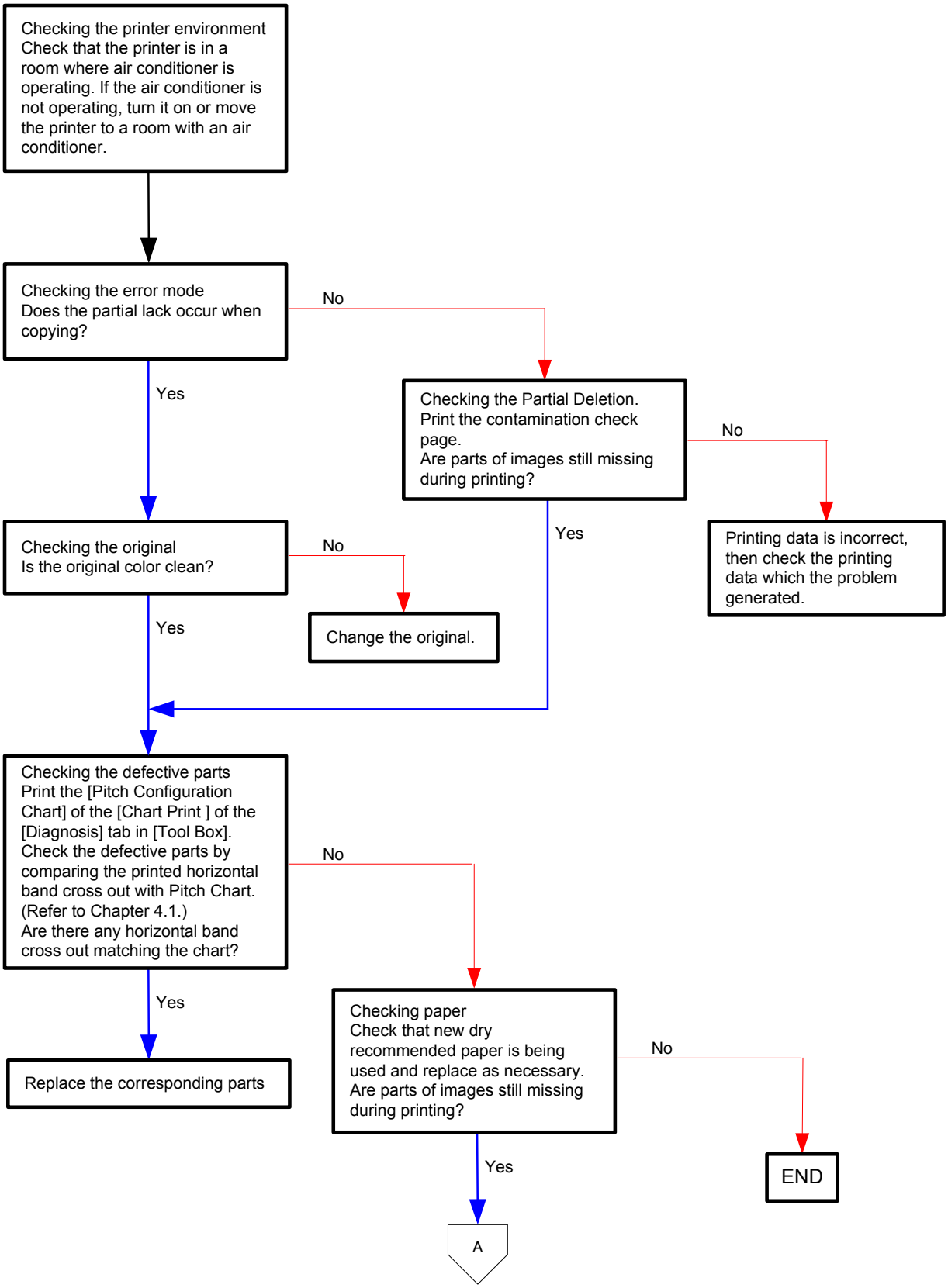


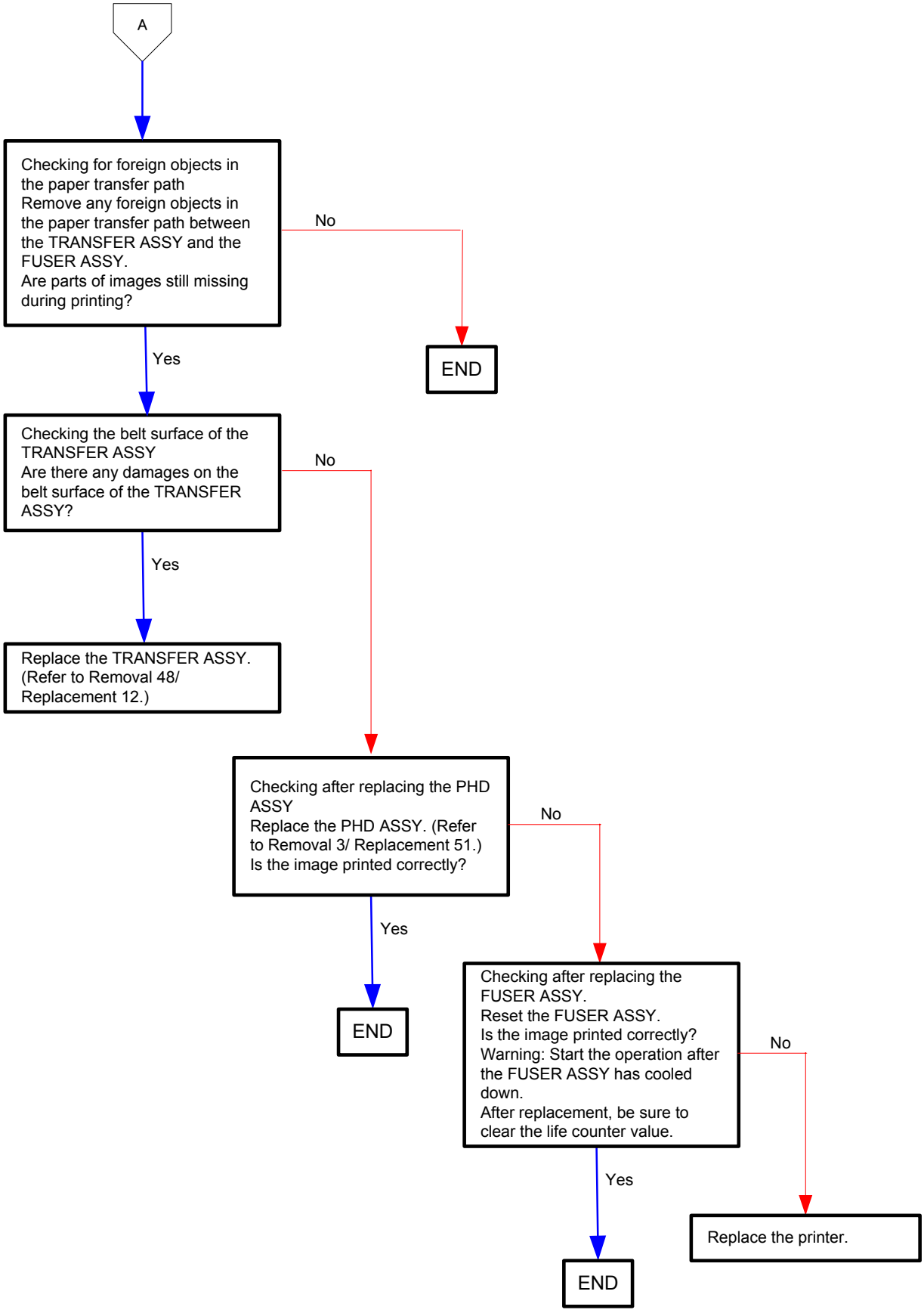
Period(mm)	Replacement Parts
66.7	Fuser
75.4/37.7	PHD ASSY
44.0/37.6	Printer


A
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Is the image printed correctly?
No
Yes
Replace the FUSER ASSY. (Refer to Removal 9/ Replacement 51.)
After replacement, be sure to clear the life counter value. (Refer to the Tech Sheet).
END

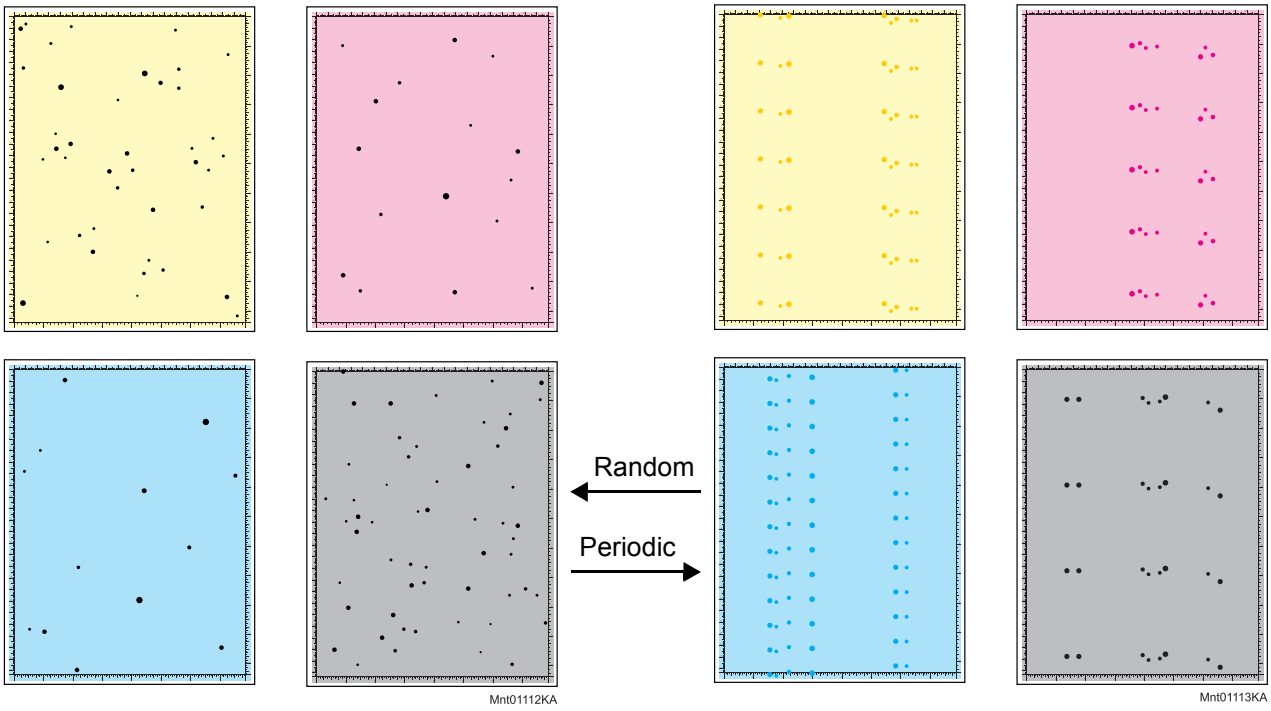
Flows 100 Partial Deletion

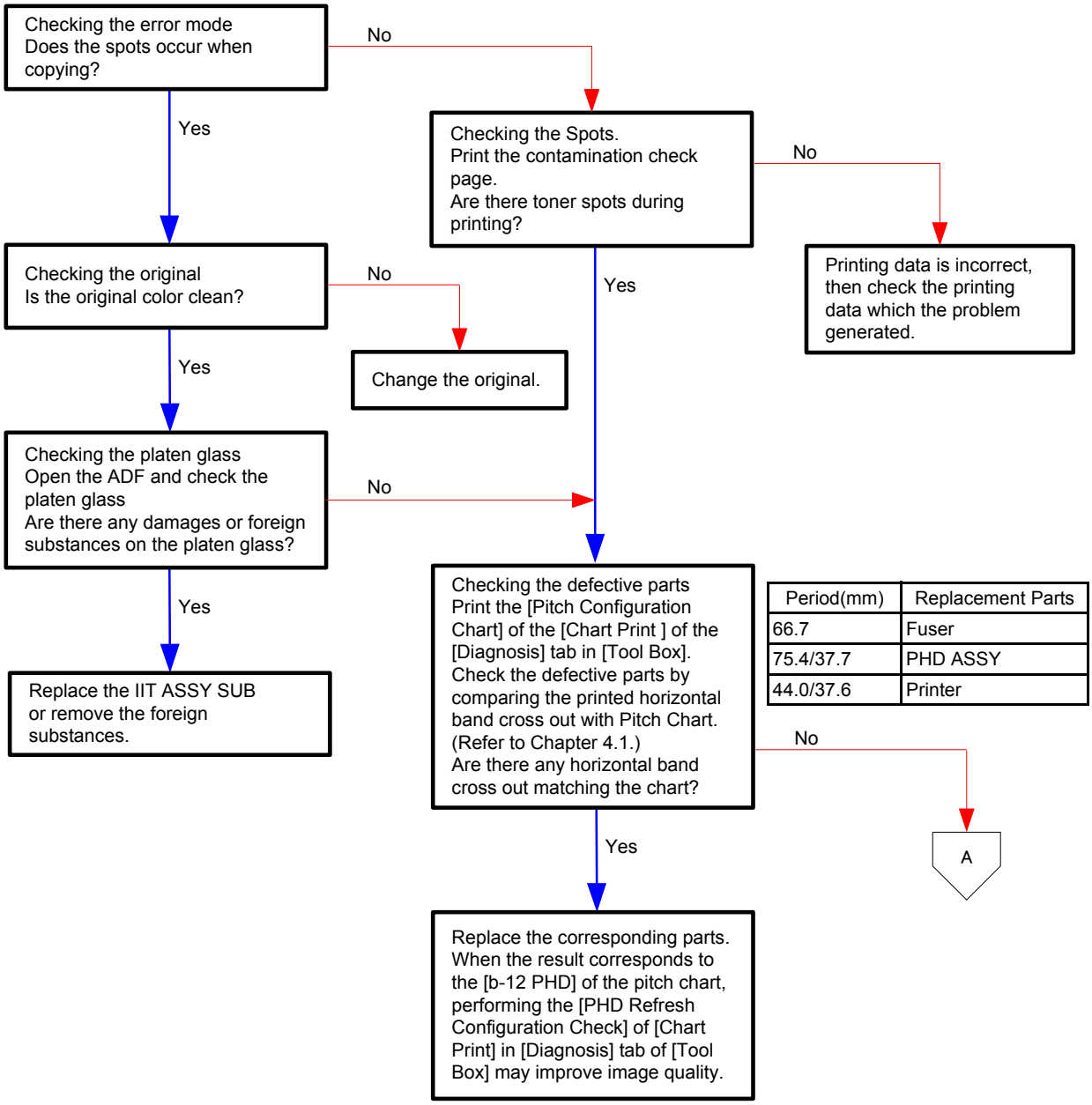



Checking the printer environment
Check that the printer is in a room where air conditioner is operating. If the air conditioner is not operating, turn it on or move the printer to a room with an air conditioner.
Checking the error mode
Does the partial lack occur when copying?
No
Yes
Checking the Partial Deletion.
Print the contamination check page.
Are parts of images still missing during printing?
No
Yes
Printing data is incorrect, then check the printing data which the problem generated.
Checking the original
Is the original color clean?
No
Change the original.
Yes
Checking the defective parts
Print the [Pitch Configuration Chart] of the [Chart Print] of the [Diagnosis] tab in [Tool Box].
Check the defective parts by comparing the printed horizontal band cross out with Pitch Chart. (Refer to Chapter 4.1.)
Are there any horizontal band cross out matching the chart?
No
Yes
Replace the corresponding parts
Checking paper
Check that new dry recommended paper is being used and replace as necessary.
Are parts of images still missing during printing?
No
Yes
END
A

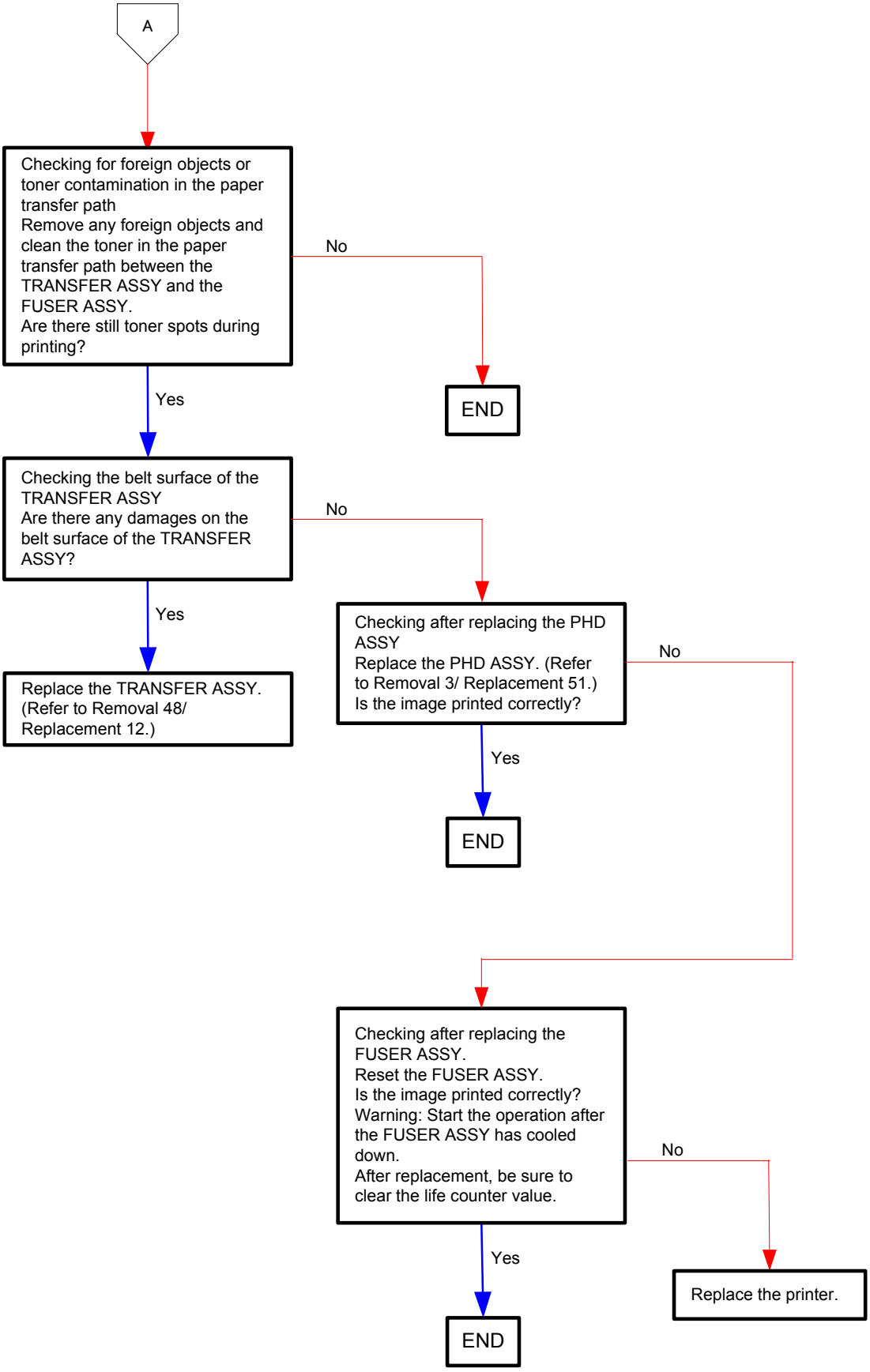

A
Checking for foreign objects in the paper transfer path
Remove any foreign objects in the paper transfer path between the TRANSFER ASSY and the FUSER ASSY.
Are parts of images still missing during printing?
No
END
Yes
Checking the belt surface of the TRANSFER ASSY
Are there any damages on the belt surface of the TRANSFER ASSY?
No
Yes
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Is the image printed correctly?
No
Yes
END
Checking after replacing the FUSER ASSY.
Reset the FUSER ASSY.
Is the image printed correctly?
Warning: Start the operation after the FUSER ASSY has cooled down.
After replacement, be sure to clear the life counter value.
No
Yes
Replace the printer.
END

Flows 101 Spots

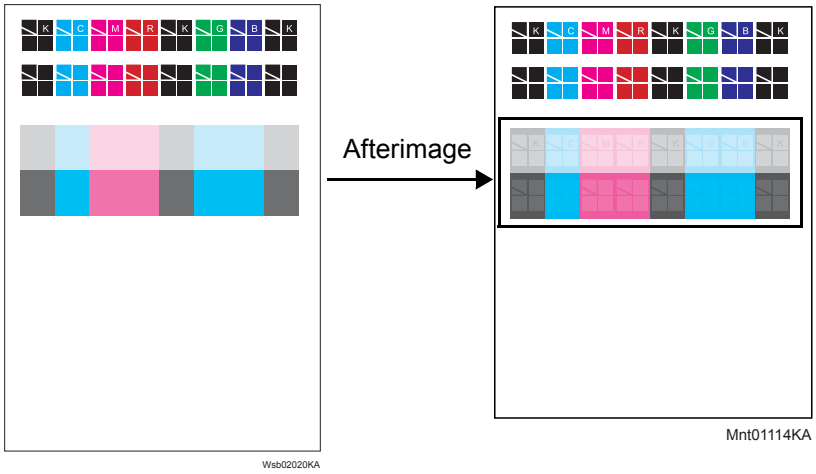


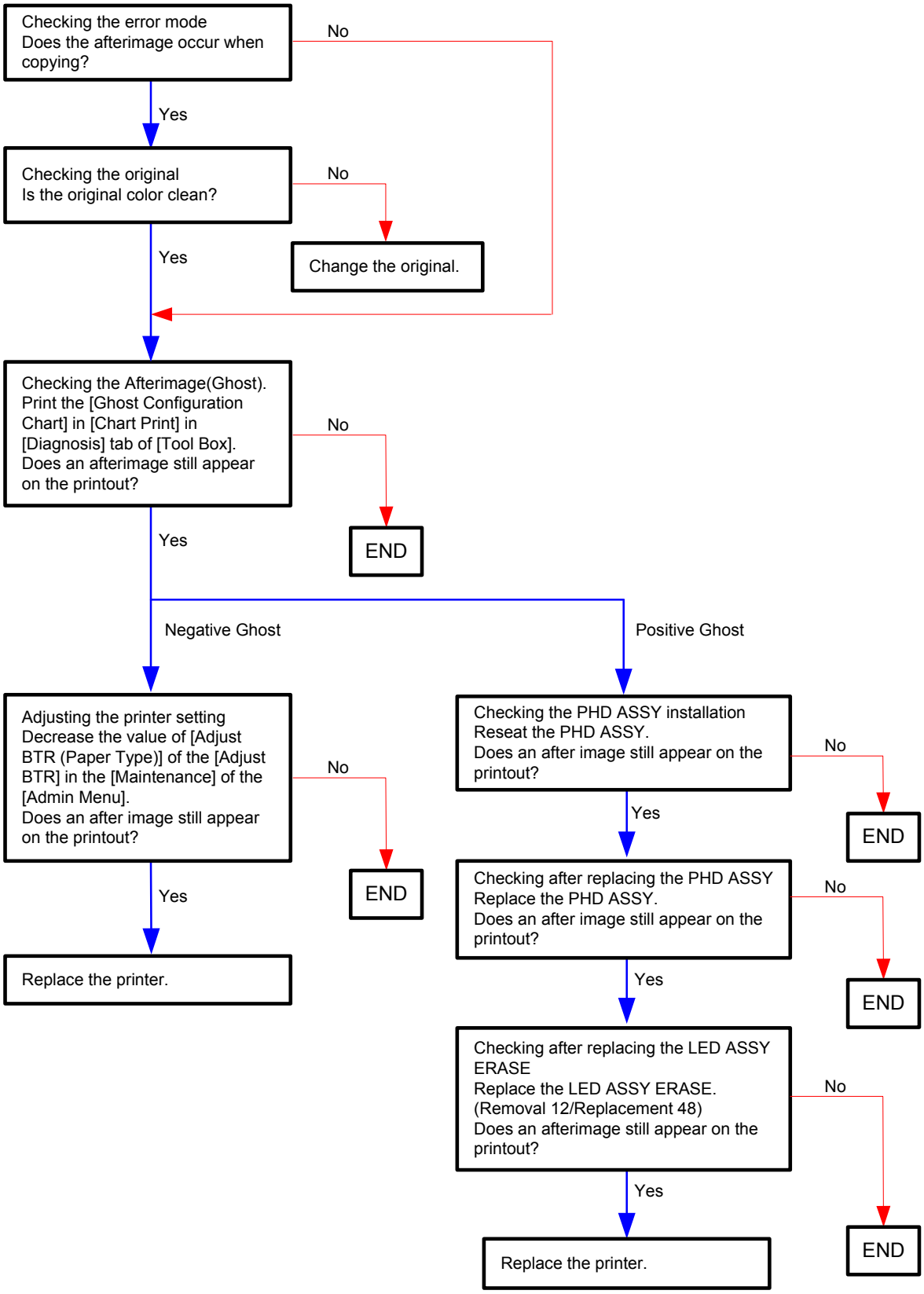


Period(mm)	Replacement Parts
66.7	Fuser
75.4/37.7	PHD ASSY
44.0/37.6	Printer

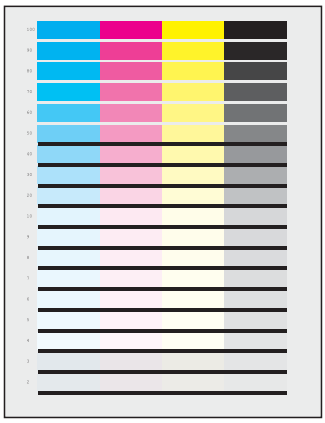

A
Checking for foreign objects or toner contamination in the paper transfer path
Remove any foreign objects and clean the toner in the paper transfer path between the TRANSFER ASSY and the FUSER ASSY.
Are there still toner spots during printing?
No
END
Yes
Checking the belt surface of the TRANSFER ASSY
Are there any damages on the belt surface of the TRANSFER ASSY?
No
Yes
Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Is the image printed correctly?
No
Yes
END
Checking after replacing the FUSER ASSY.
Reset the FUSER ASSY.
Is the image printed correctly?
Warning: Start the operation after the FUSER ASSY has cooled down.
After replacement, be sure to clear the life counter value.
No
Yes
Replace the printer.
END

Flows 102 Afterimage (Ghost)

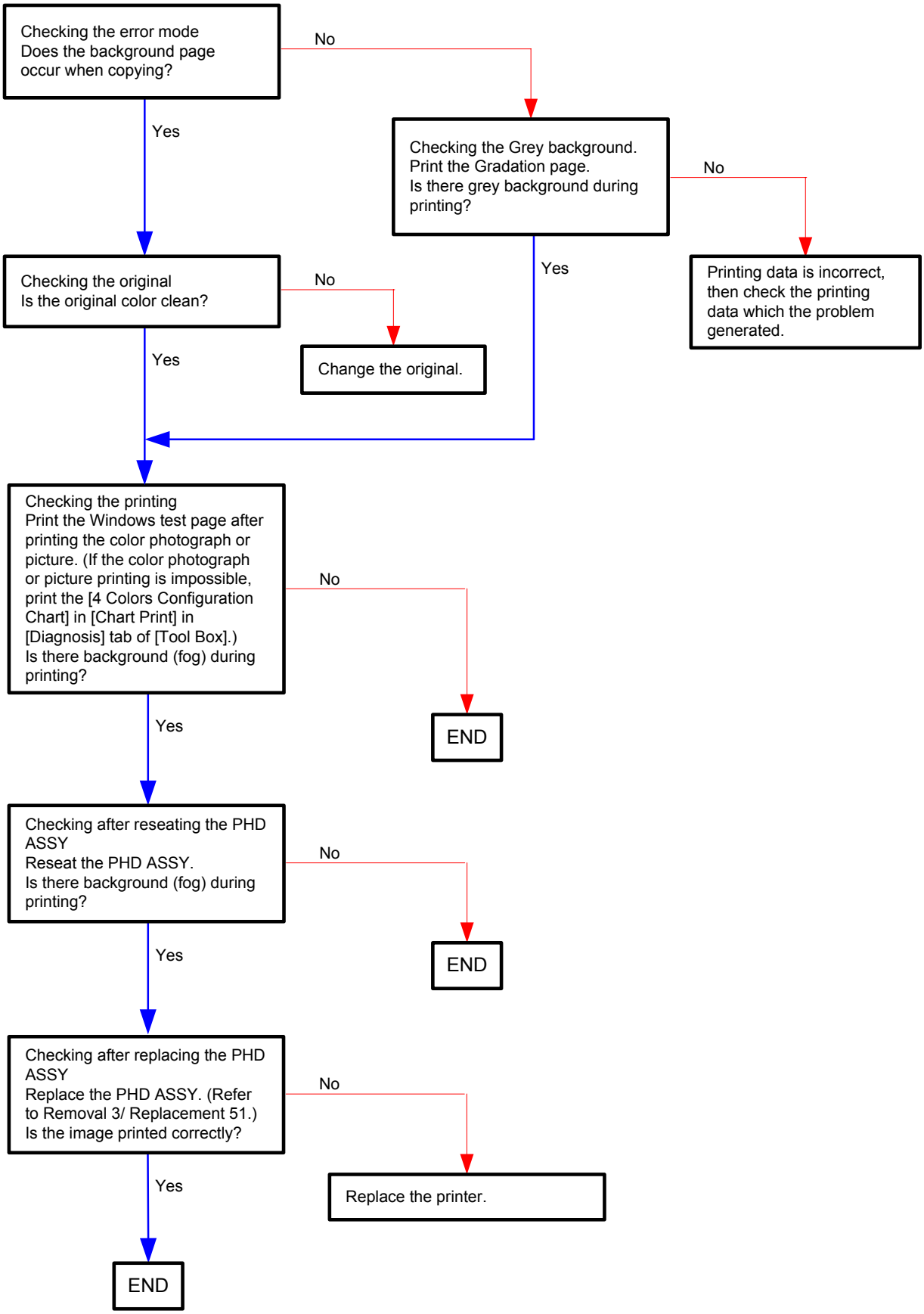



Checking the error mode
Does the afterimage occur when copying?
No
Yes
Checking the original
Is the original color clean?
No
Change the original.
Yes
Checking the Afterimage(Ghost).
Print the [Ghost Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box].
Does an afterimage still appear on the printout?
No
END
Yes
Negative Ghost
Positive Ghost
Adjusting the printer setting
Decrease the value of [Adjust BTR (Paper Type)] of the [Adjust BTR] in the [Maintenance] of the [Admin Menu].
Does an after image still appear on the printout?
No
END
Yes
Replace the printer.
Checking the PHD ASSY installation
Reseat the PHD ASSY.
Does an after image still appear on the printout?
No
END
Yes
Checking after replacing the PHD ASSY
Replace the PHD ASSY.
Does an after image still appear on the printout?
No
END
Yes
Checking after replacing the LED ASSY ERASE
Replace the LED ASSY ERASE.
(Removal 12/Replacement 48)
Does an afterimage still appear on the printout?
No
END
Yes
Replace the printer.

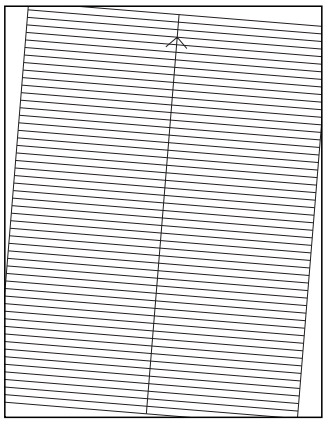
Flows 103 Grey Background



Mnt01115KA


Checking the error mode
Does the background page occur when copying?
No
Yes
Checking the Grey background.
Print the Gradation page.
Is there grey background during printing?
No
Yes
Printing data is incorrect, then check the printing data which the problem generated.
Checking the original
Is the original color clean?
No
Change the original.
Yes
Checking the printing
Print the Windows test page after printing the color photograph or picture. (If the color photograph or picture printing is impossible, print the [4 Colors Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box].)
Is there background (fog) during printing?
No
END
Yes
Checking after reseating the PHD ASSY
Reseat the PHD ASSY.
Is there background (fog) during printing?
No
END
Yes
Checking after replacing the PHD ASSY
Replace the PHD ASSY. (Refer to Removal 3/ Replacement 51.)
Is the image printed correctly?
No
Replace the printer.
Yes
END

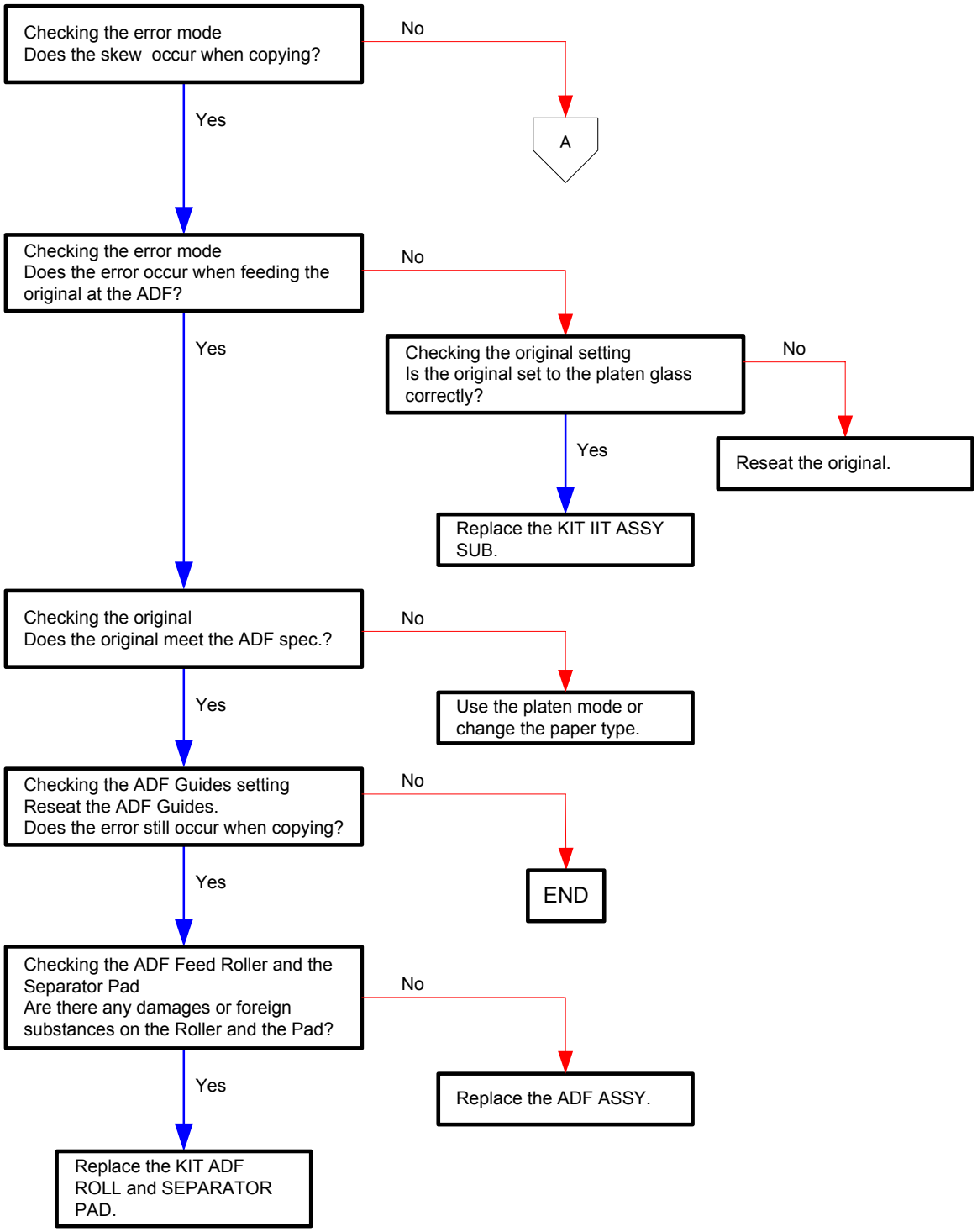
Flows 104 Skew

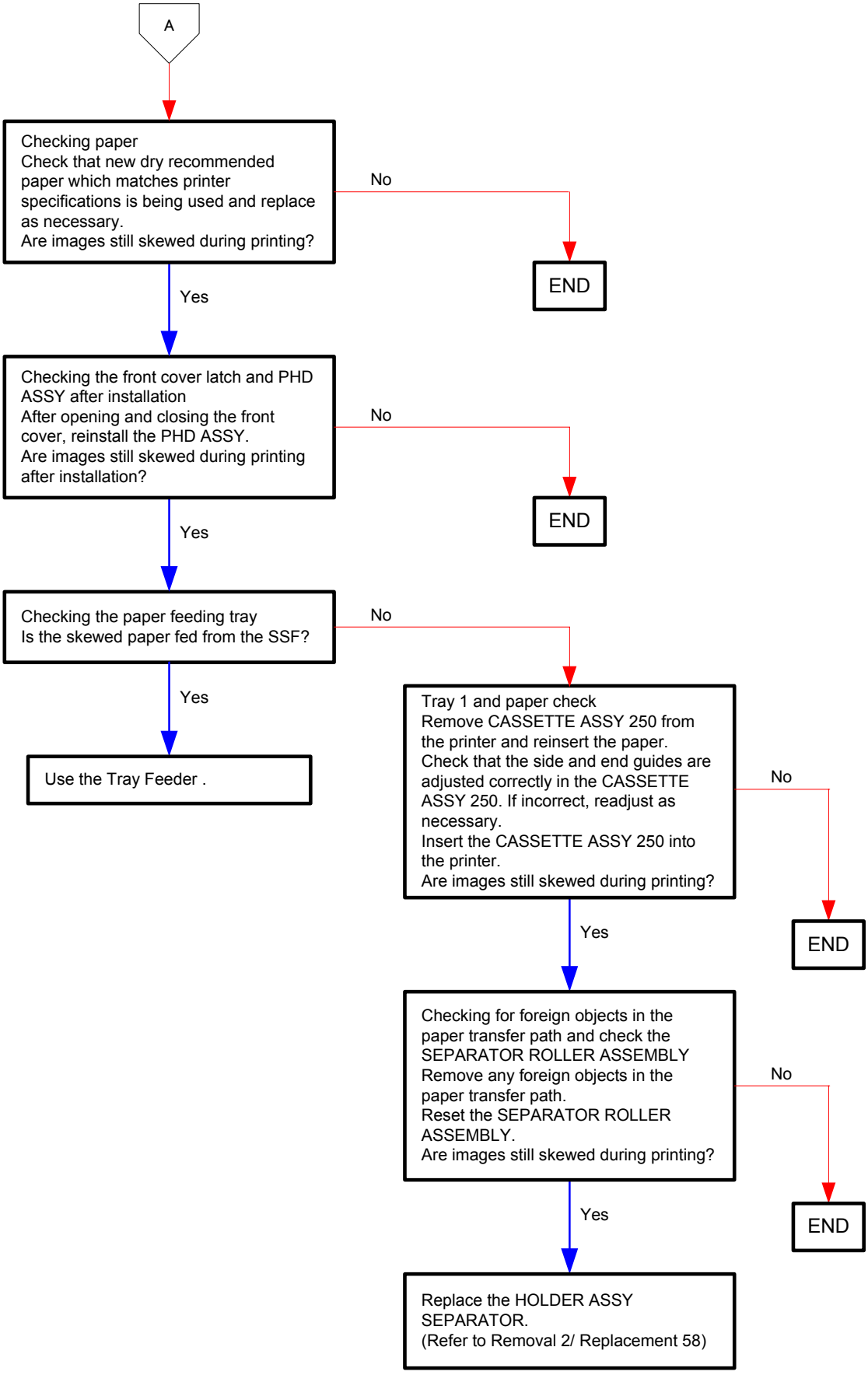


Mnt01116KA

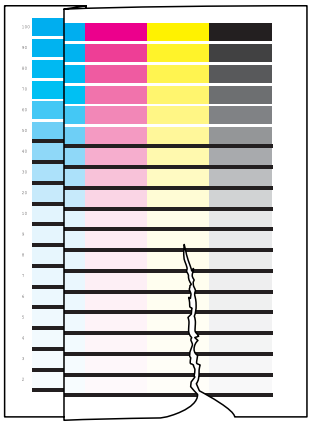
NOTE

Tray is recommended for paper feeding because sheets fed via SSF is prone to skew depending on how the sheet is placed on SSF.



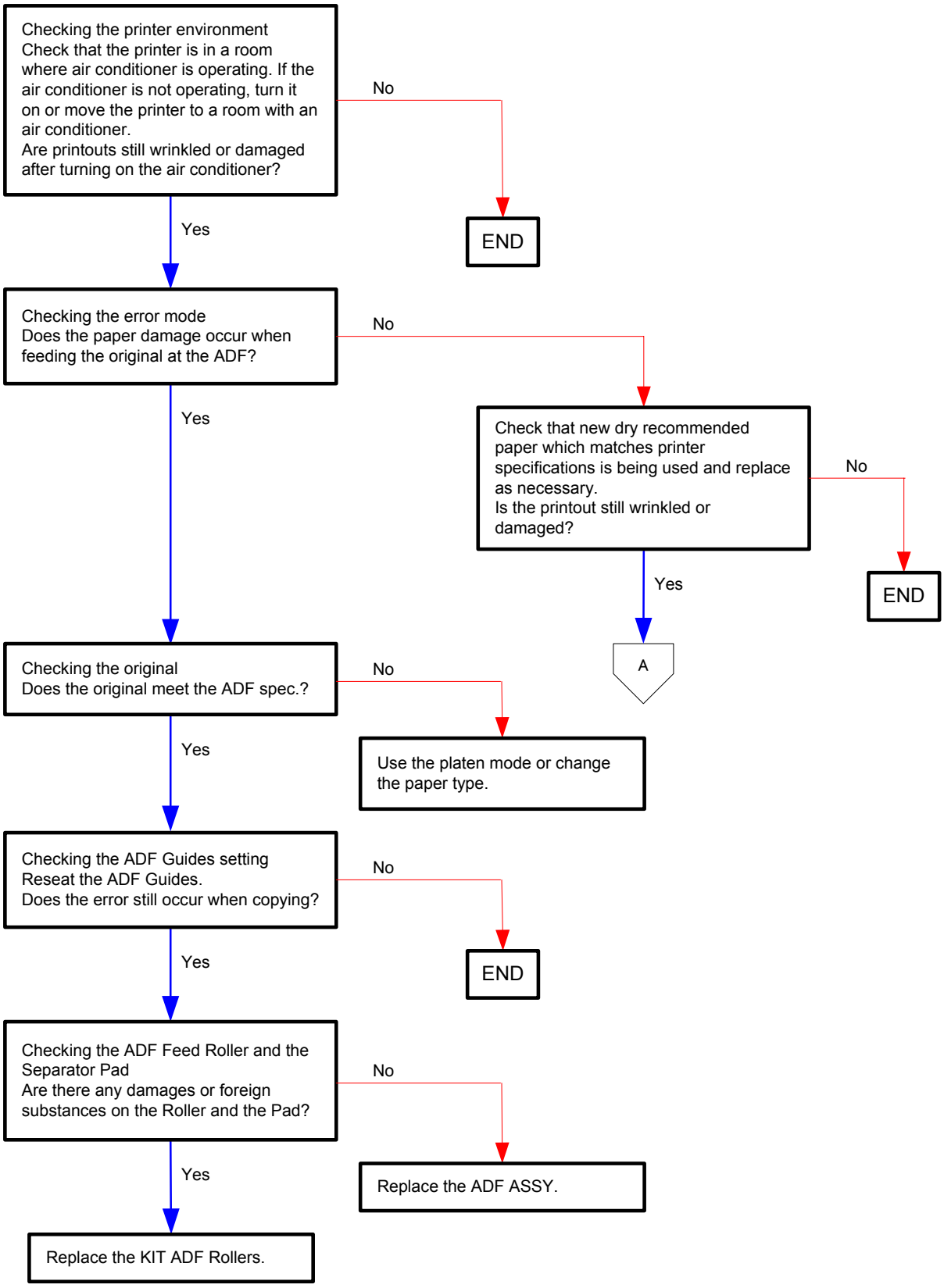

A
Checking paper
Check that new dry recommended paper which matches printer specifications is being used and replace as necessary.
Are images still skewed during printing?
No
END
Yes
Checking the front cover latch and PHD ASSY after installation
After opening and closing the front cover, reinstall the PHD ASSY.
Are images still skewed during printing after installation?
No
END
Yes
Checking the paper feeding tray
Is the skewed paper fed from the SSF?
No
Yes
Use the Tray Feeder .
Tray 1 and paper check
Remove CASSETTE ASSY 250 from the printer and reinsert the paper.
Check that the side and end guides are adjusted correctly in the CASSETTE ASSY 250. If incorrect, readjust as necessary.
Insert the CASSETTE ASSY 250 into the printer.
Are images still skewed during printing?
No
END
Yes
Checking for foreign objects in the paper transfer path and check the SEPARATOR ROLLER ASSEMBLY
Remove any foreign objects in the paper transfer path.
Reset the SEPARATOR ROLLER ASSEMBLY.
Are images still skewed during printing?
No
END
Yes
Replace the HOLDER ASSY SEPARATOR.
(Refer to Removal 2/ Replacement 58)

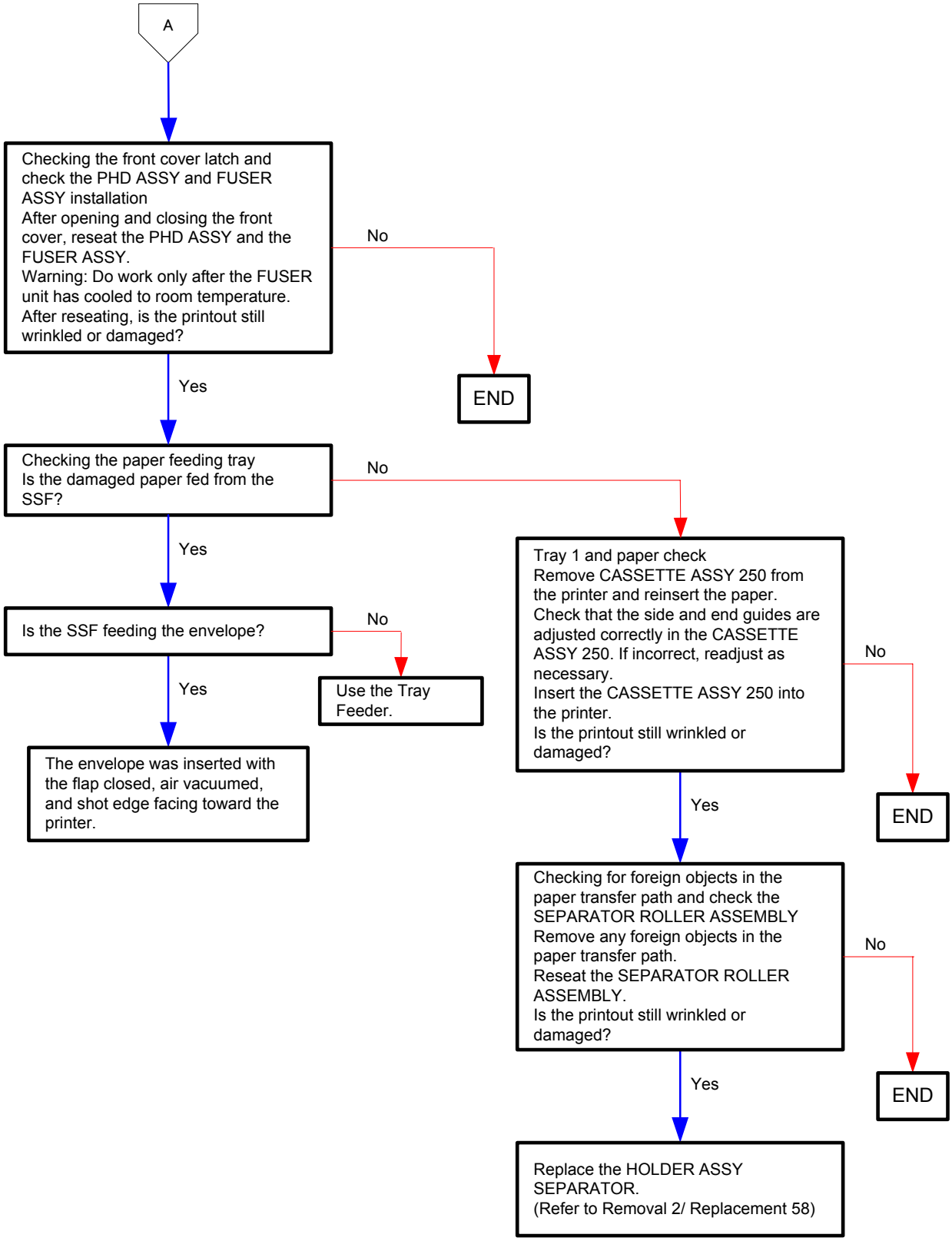
Flows 105 Paper damage



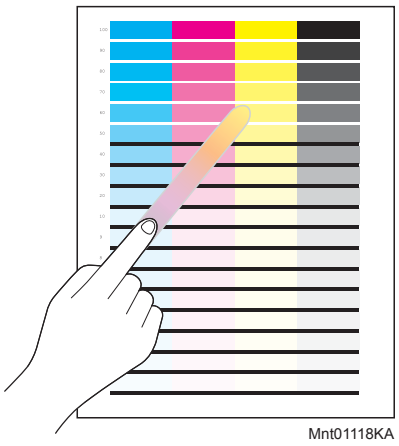
NOTE

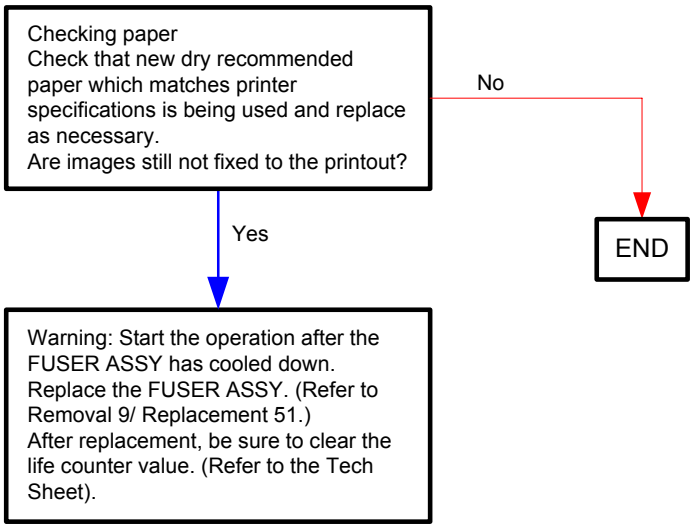
Tray is recommended for paper feeding because sheets fed via SSF is prone to skew depending on how the sheet is placed on SSF.




A
Checking the front cover latch and check the PHD ASSY and FUSER ASSY installation
After opening and closing the front cover, reseat the PHD ASSY and the FUSER ASSY.
Warning: Do work only after the FUSER unit has cooled to room temperature.
After reseating, is the printout still wrinkled or damaged?
No
END
Yes
Checking the paper feeding tray
Is the damaged paper fed from the SSF?
No
Yes
Is the SSF feeding the envelope?
No
Use the Tray Feeder.
Yes
The envelope was inserted with the flap closed, air vacuumed, and shot edge facing toward the printer.
Tray 1 and paper check
Remove CASSETTE ASSY 250 from the printer and reinsert the paper.
Check that the side and end guides are adjusted correctly in the CASSETTE ASSY 250. If incorrect, readjust as necessary.
Insert the CASSETTE ASSY 250 into the printer.
Is the printout still wrinkled or damaged?
No
END
Yes
Checking for foreign objects in the paper transfer path and check the SEPARATOR ROLLER ASSEMBLY
Remove any foreign objects in the paper transfer path.
Reseat the SEPARATOR ROLLER ASSEMBLY.
Is the printout still wrinkled or damaged?
No
END
Yes
Replace the HOLDER ASSY SEPARATOR.
(Refer to Removal 2/ Replacement 58)

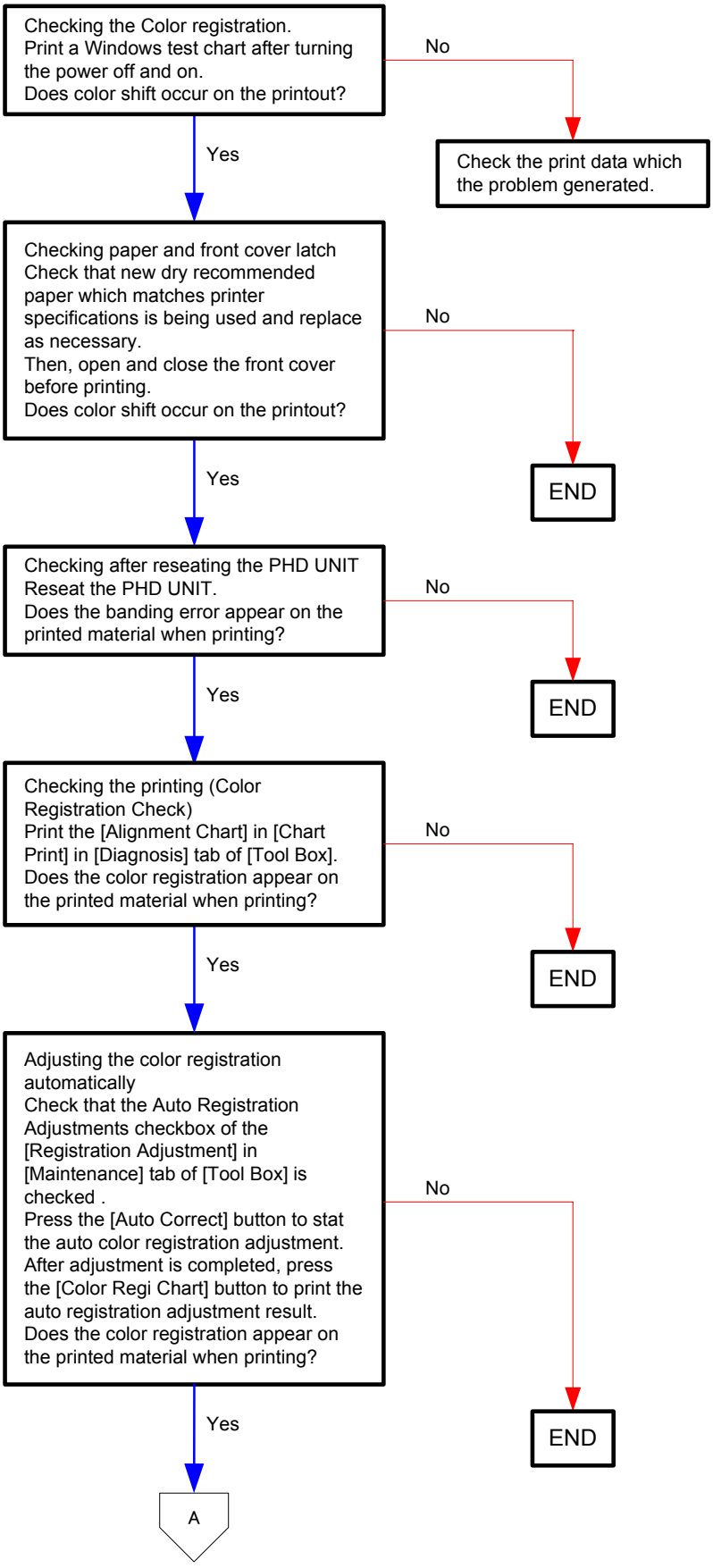
Flows 106 Unfusing

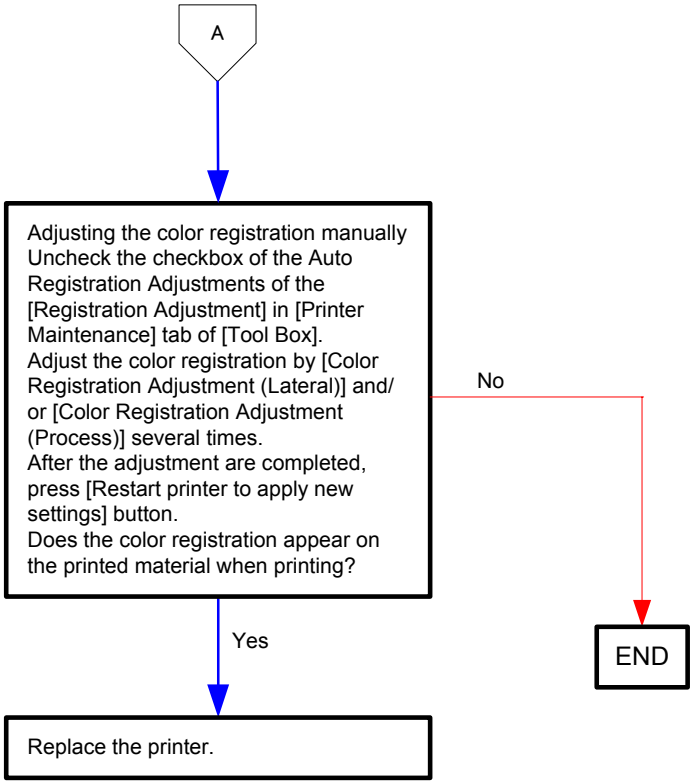




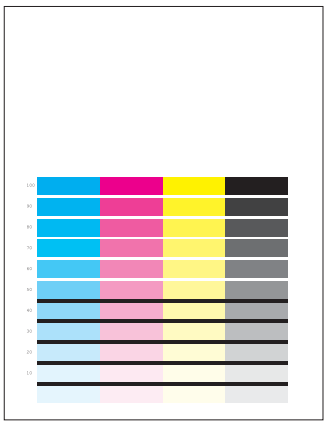
Flows 107 Color registration (Color shift)

- Troubleshooting of a control system

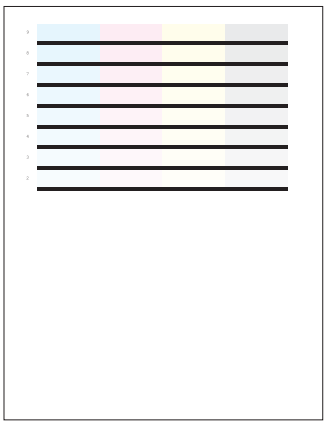

Checking the Color registration.
Print a Windows test chart after turning the power off and on.
Does color shift occur on the printout?
No
Check the print data which the problem generated.
Yes
Checking paper and front cover latch
Check that new dry recommended paper which matches printer specifications is being used and replace as necessary.
Then, open and close the front cover before printing.
Does color shift occur on the printout?
No
END
Yes
Checking after reseating the PHD UNIT
Reseat the PHD UNIT.
Does the banding error appear on the printed material when printing?
No
END
Yes
Checking the printing (Color Registration Check)
Print the [Alignment Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box].
Does the color registration appear on the printed material when printing?
No
END
Yes
Adjusting the color registration automatically
Check that the Auto Registration Adjustments checkbox of the [Registration Adjustment] in [Maintenance] tab of [Tool Box] is checked .
Press the [Auto Correct] button to stat the auto color registration adjustment.
After adjustment is completed, press the [Color Regi Chart] button to print the auto registration adjustment result.
Does the color registration appear on the printed material when printing?
No
END
Yes
A


A
Adjusting the color registration manually
Uncheck the checkbox of the Auto Registration Adjustments of the [Registration Adjustment] in [Printer Maintenance] tab of [Tool Box].
Adjust the color registration by [Color Registration Adjustment (Lateral)] and/or [Color Registration Adjustment (Process)] several times.
After the adjustment are completed, press [Restart printer to apply new settings] button.
Does the color registration appear on the printed material when printing?
No
END
Yes
Replace the printer.

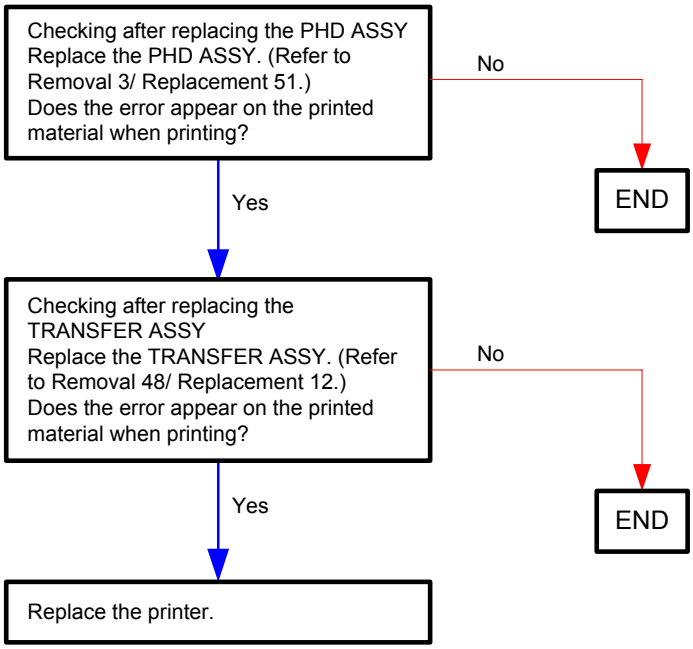
- Troubleshooting of a paper feeding system



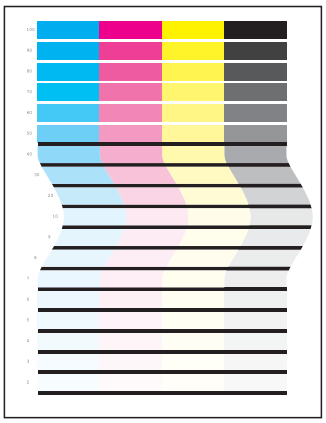
paper feeding is late.



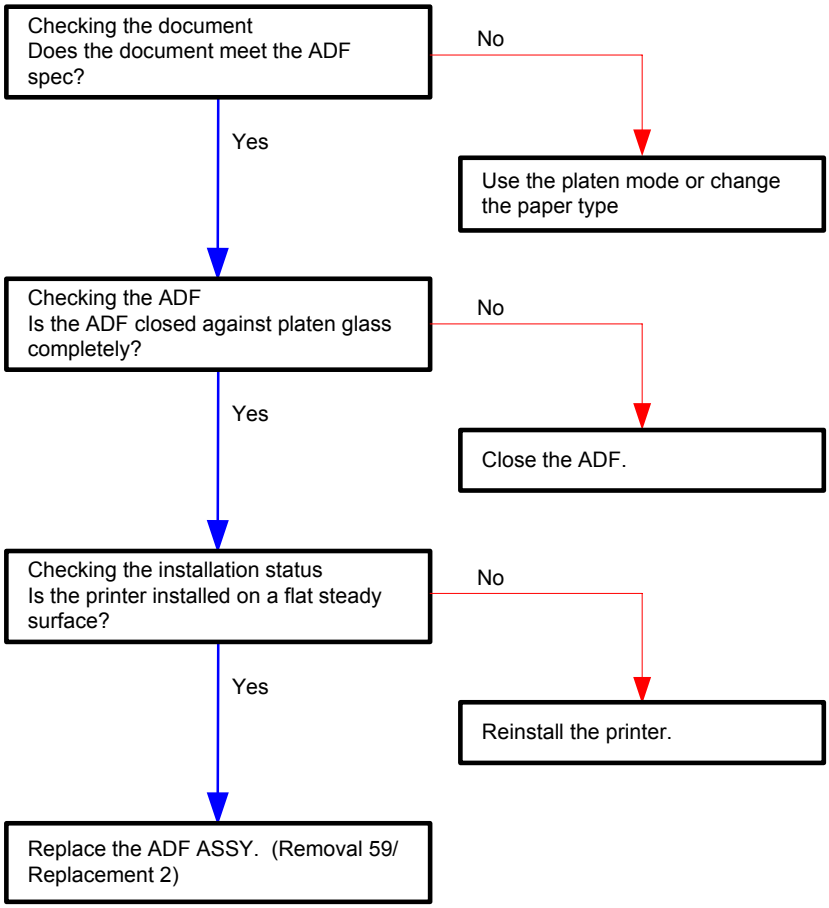
paper feeding is early.



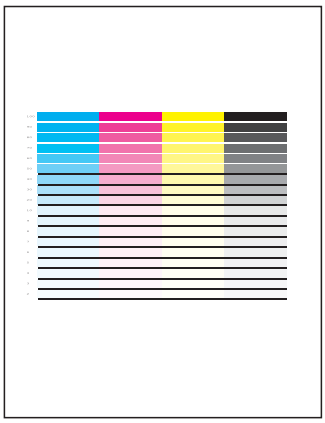
Flows 108 Hunting



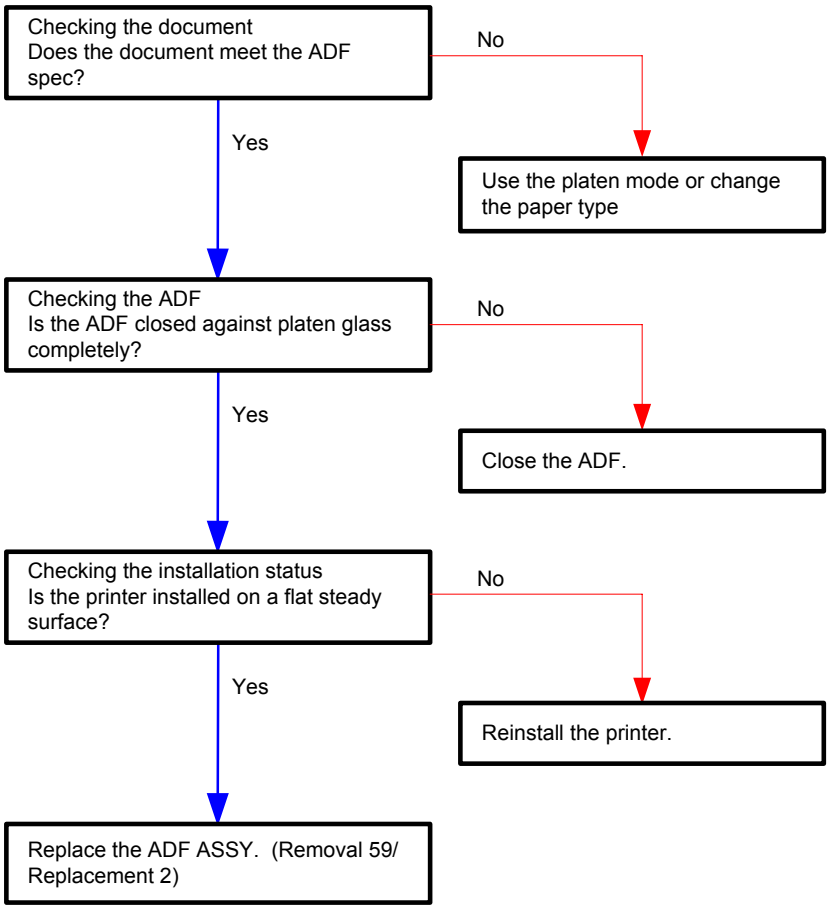
Mnt01120KA



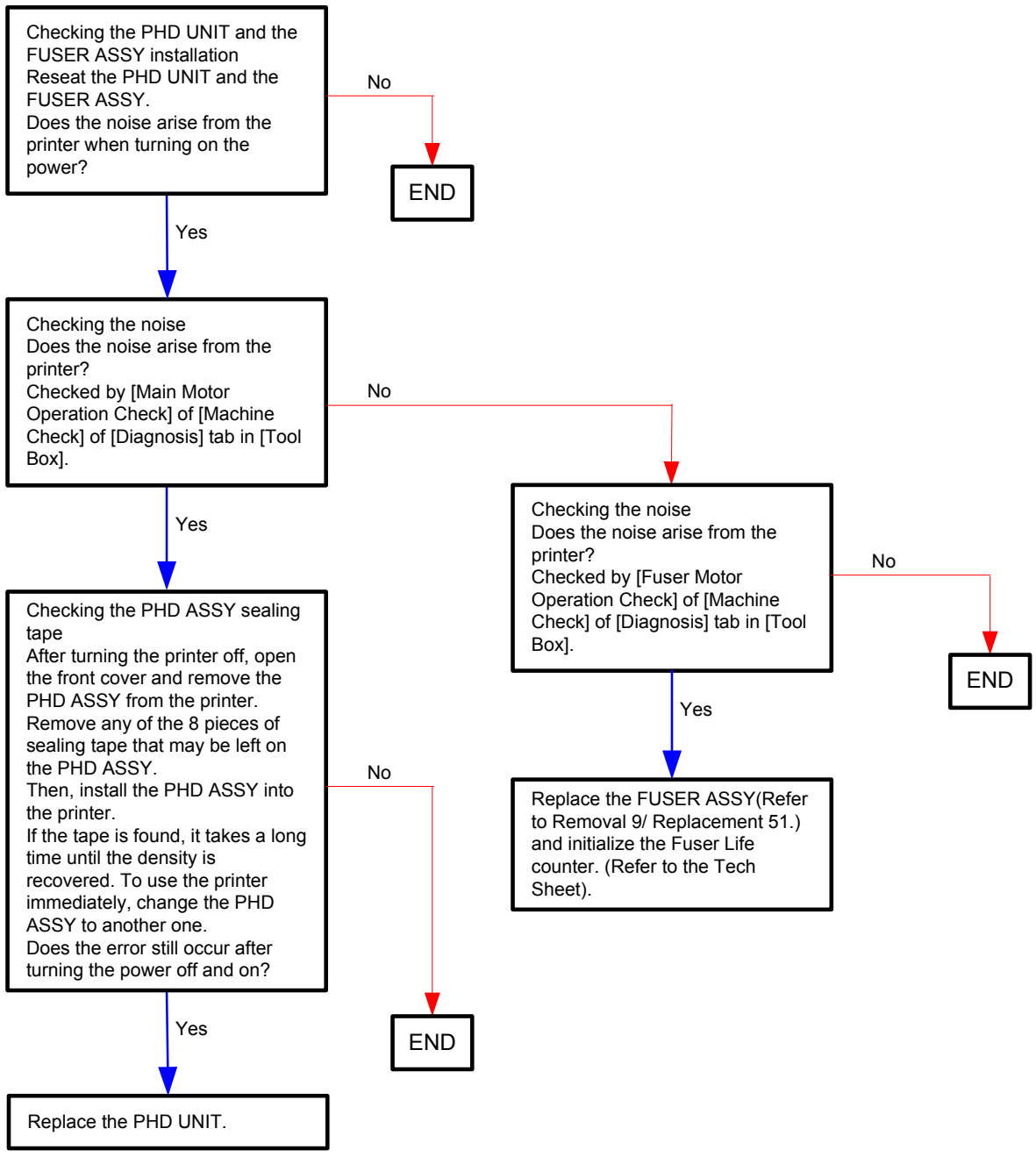
Flows 109 Magnification Incorrect



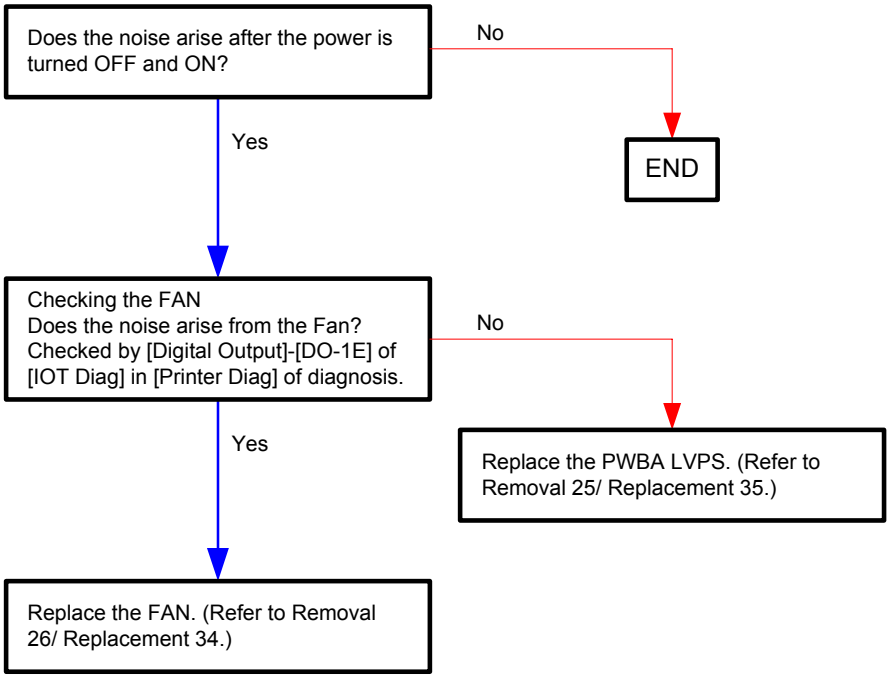
Mnt01121KA



Flows 110 Noise :When power is turned on.



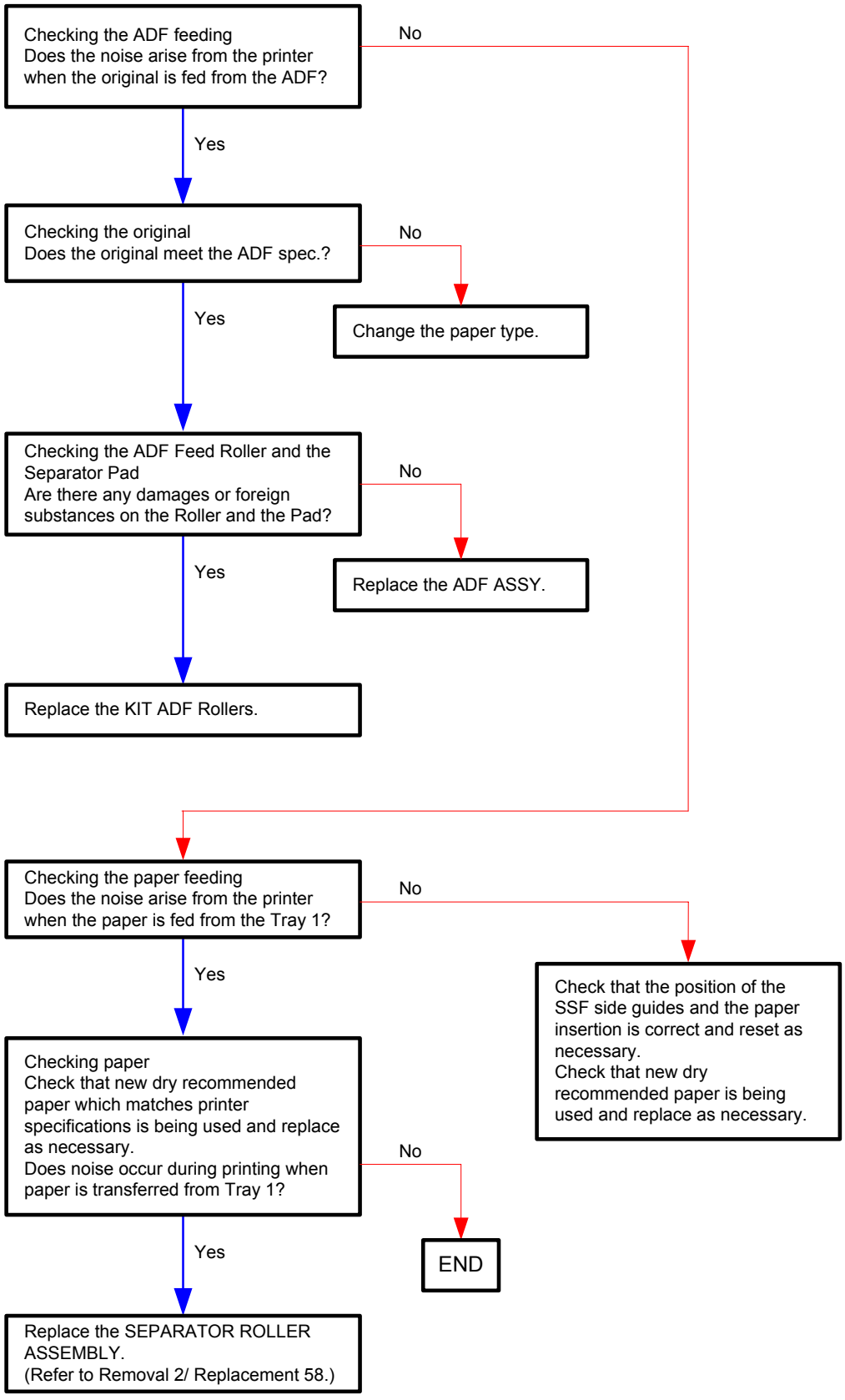
Flows 111 Noise During standby



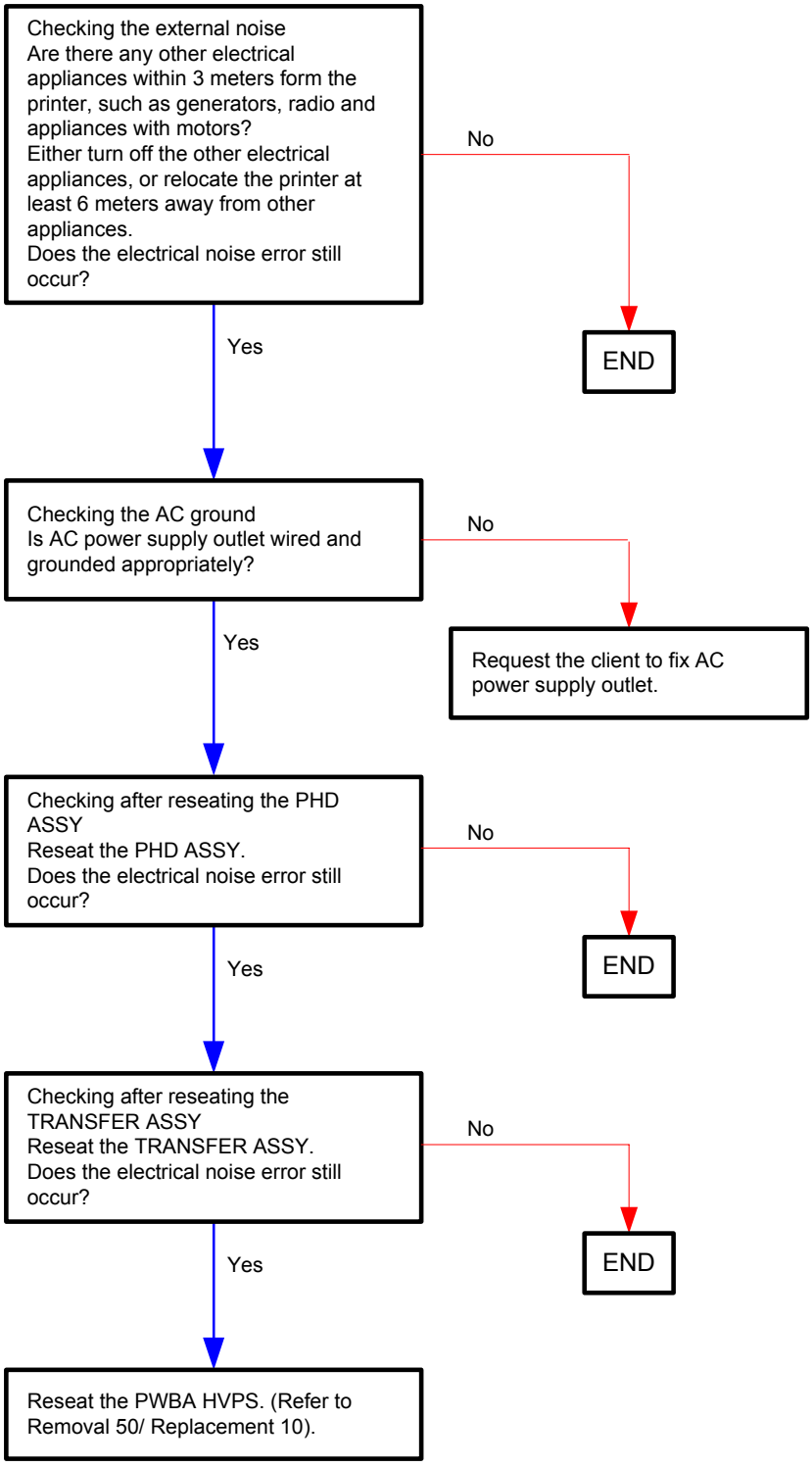
Flows 112 Noise During printing

NOTE

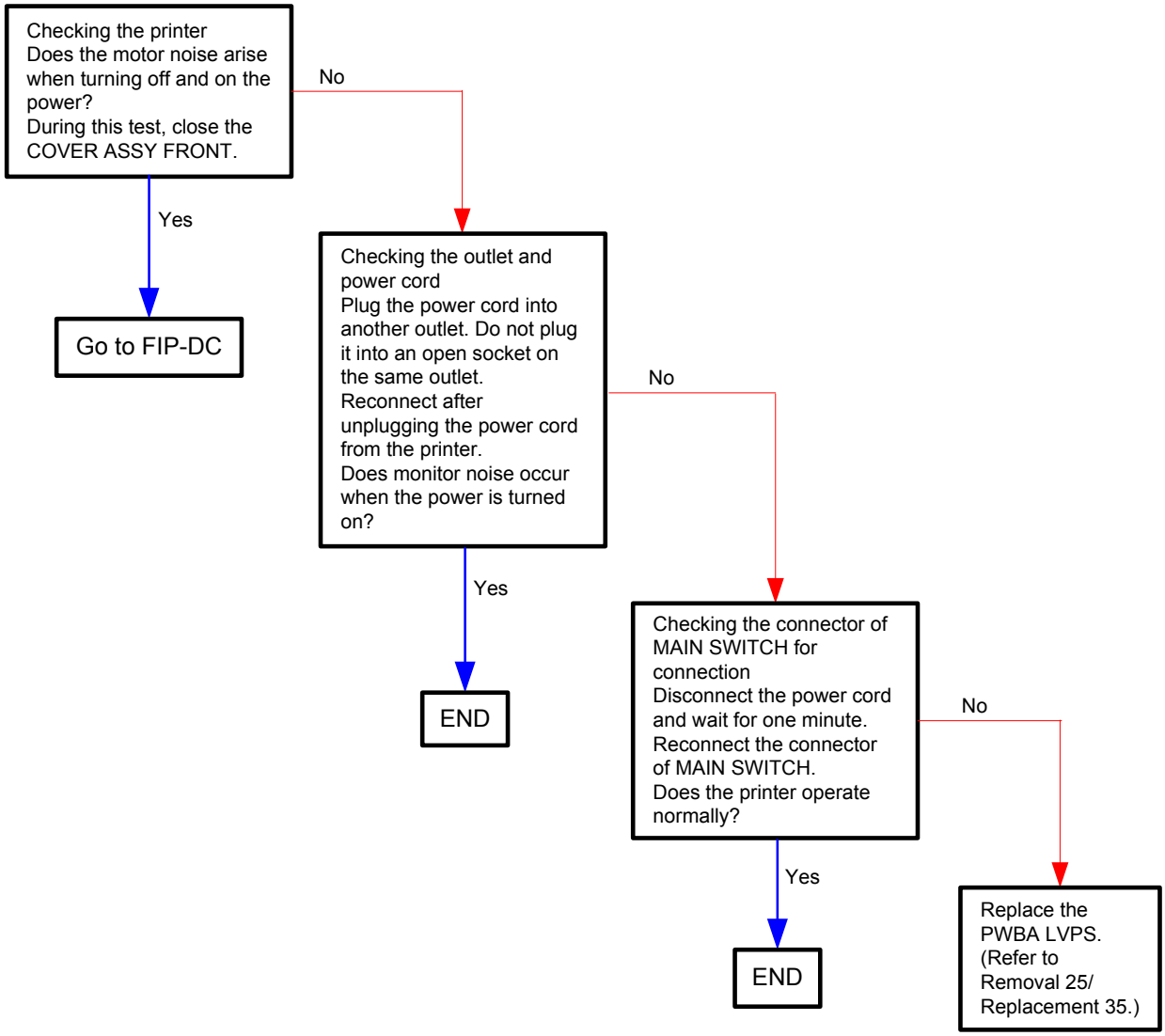
Work before troubleshooting.
Check the sealing tape on the PHD ASSY. if there is the sealing tape, remove it.



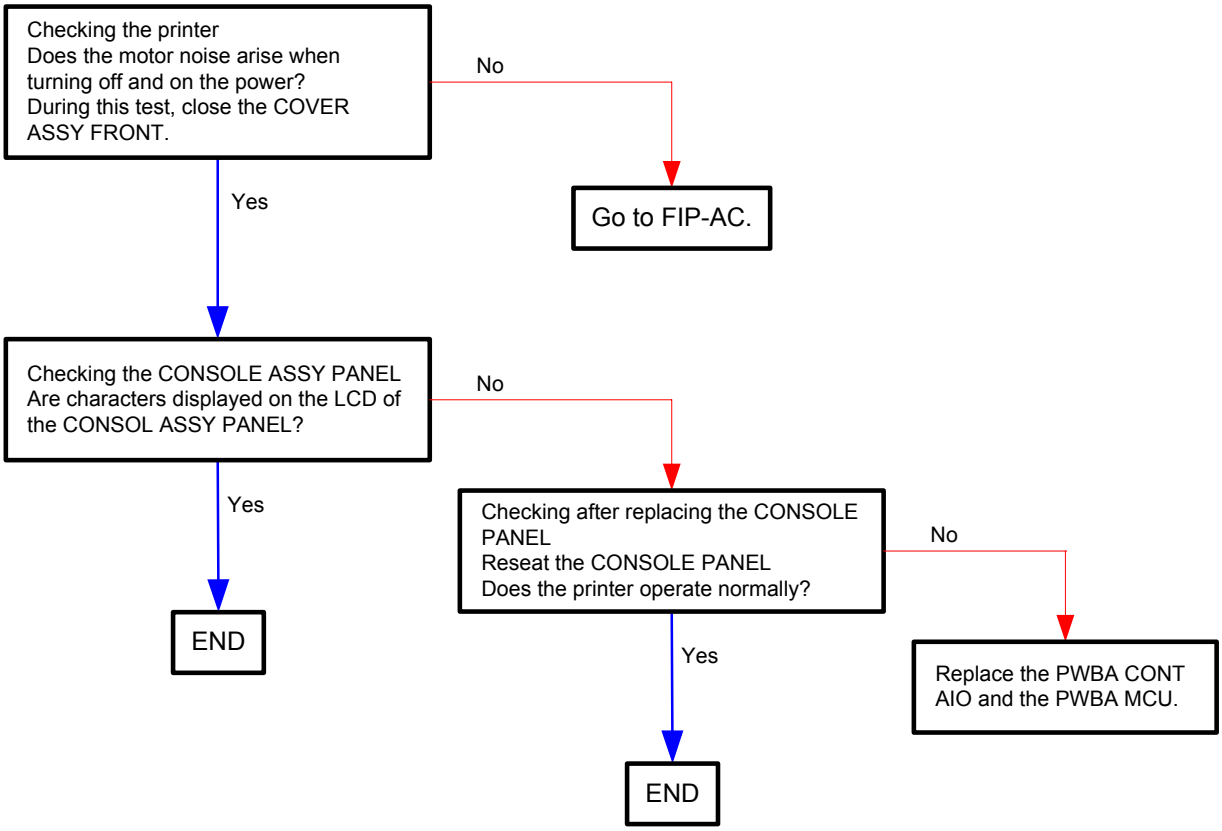
Flows 113 Electrical Noise



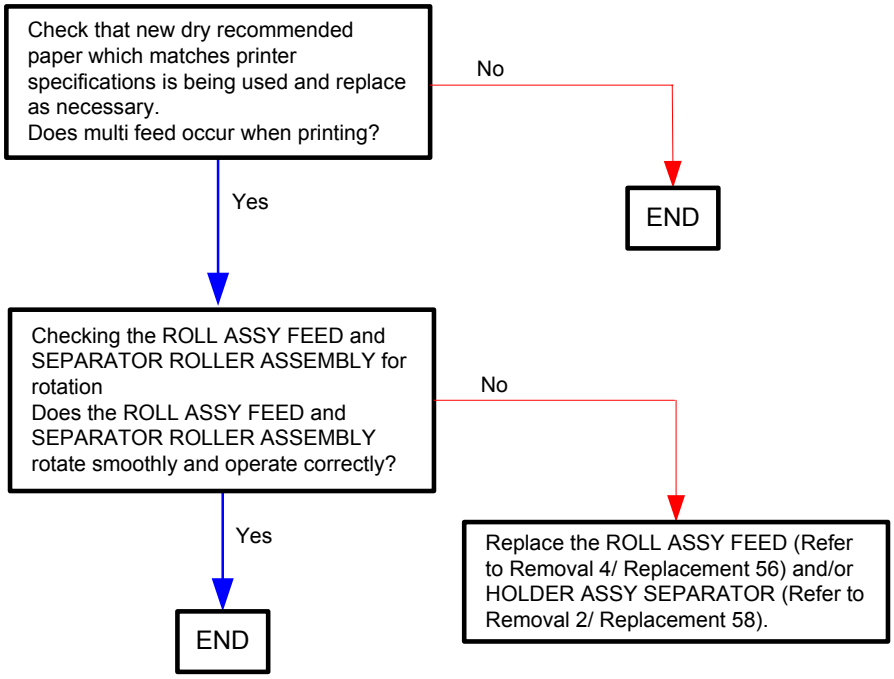
Flows 114 AC


Checking the printer
Does the motor noise arise when turning off and on the power?
During this test, close the COVER ASSY FRONT.
No
Yes
Go to FIP-DC
Checking the outlet and power cord
Plug the power cord into another outlet. Do not plug it into an open socket on the same outlet.
Reconnect after unplugging the power cord from the printer.
Does monitor noise occur when the power is turned on?
No
Yes
END
Checking the connector of MAIN SWITCH for connection
Disconnect the power cord and wait for one minute.
Reconnect the connector of MAIN SWITCH.
Does the printer operate normally?
No
Yes
END
Replace the PWBA LVPS. (Refer to Removal 25/ Replacement 35.)

Flows 115 DC

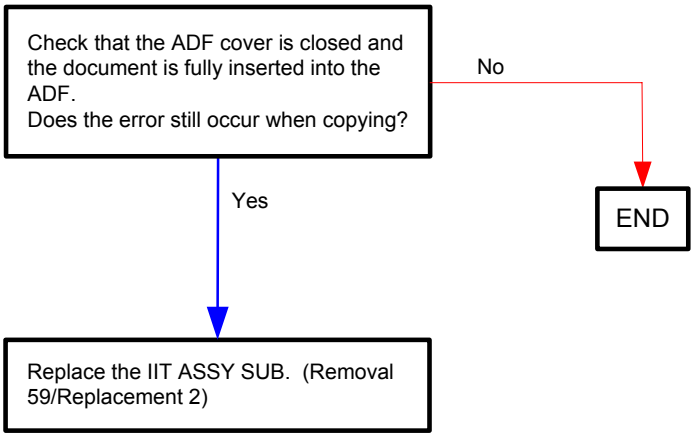

Checking the printer
Does the motor noise arise when turning off and on the power?
During this test, close the COVER ASSY FRONT.
No
Go to FIP-AC.
Yes
Checking the CONSOLE ASSY PANEL
Are characters displayed on the LCD of the CONSOL ASSY PANEL?
No
Yes
END
Checking after replacing the CONSOLE PANEL
Reseat the CONSOLE PANEL
Does the printer operate normally?
No
Replace the PWBA CONT AIO and the PWBA MCU.
Yes
END

Flows 116 Multiple Feed

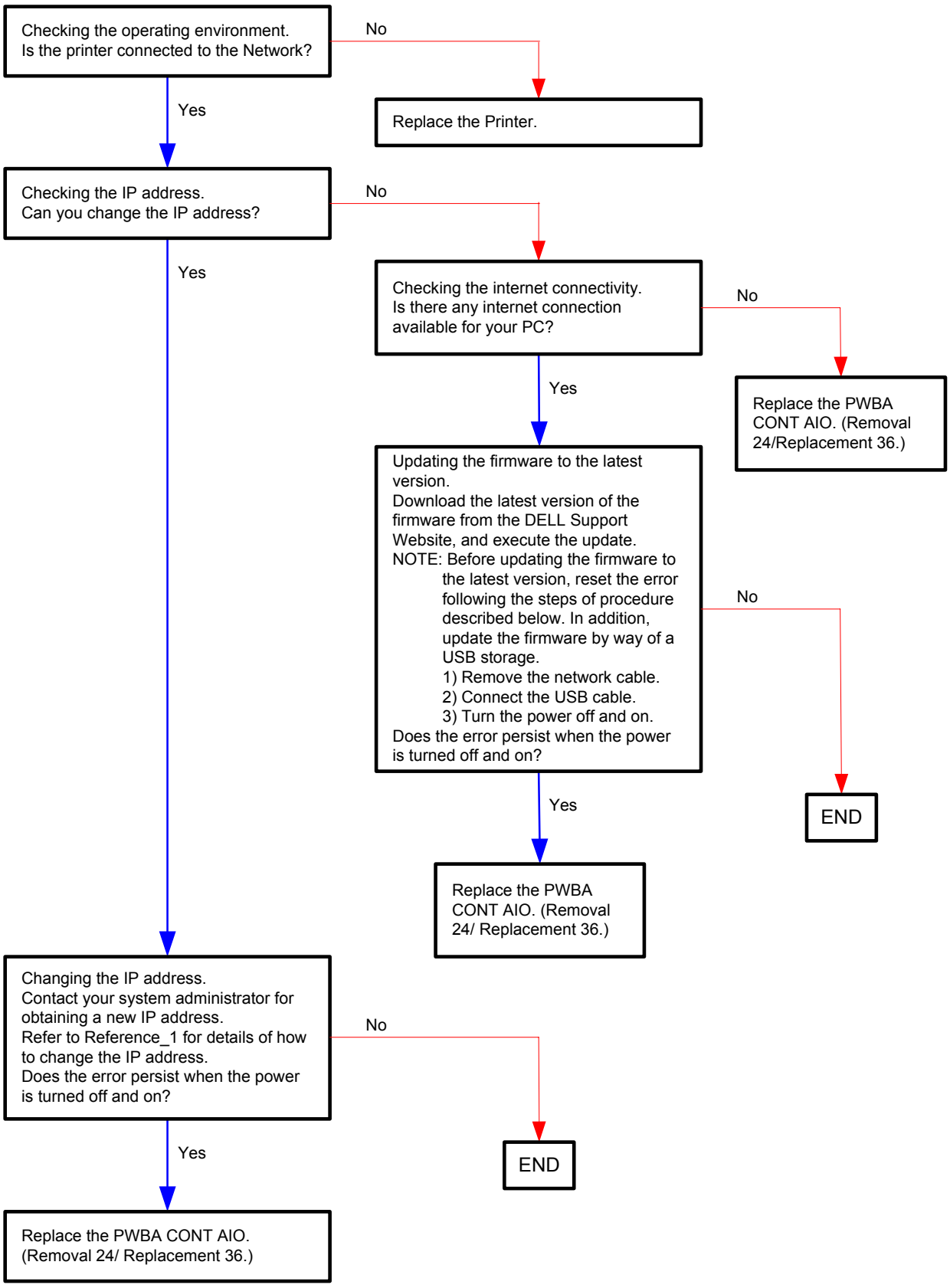


Flows 117 Copy Error

Problem: Though the document is set on the ADF, it is copied via the Platen.



Flows 118 Control Panel Freezes

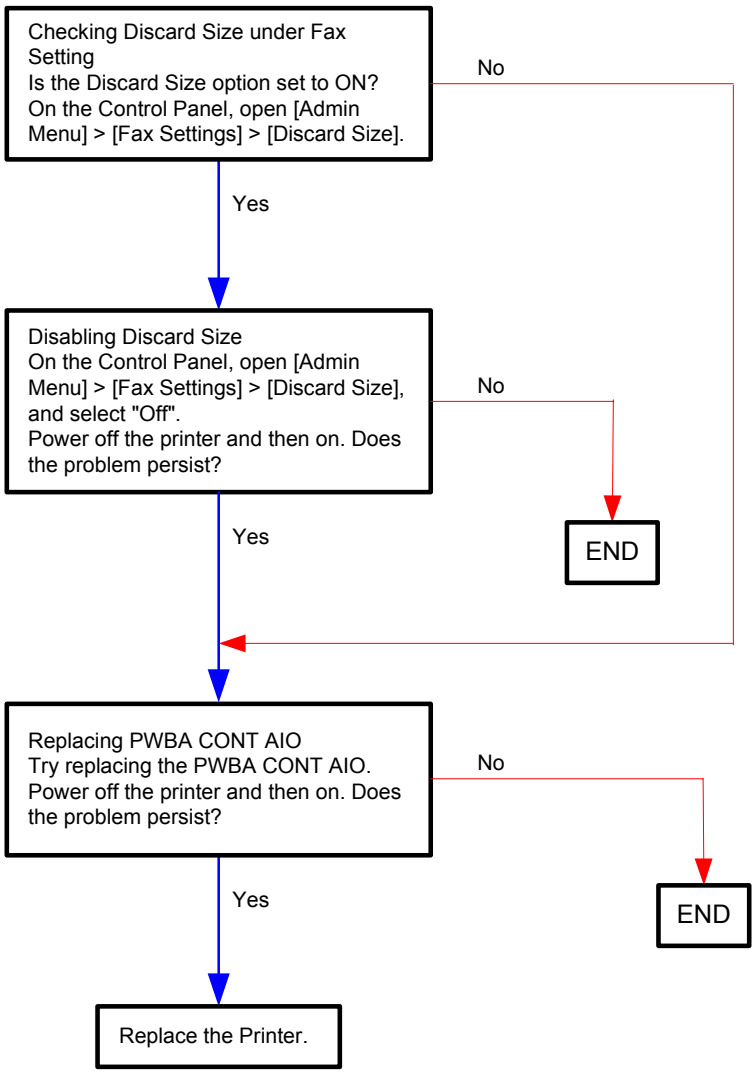


Reference_1:Changing the IP address

1) Remove the network cable, and power off the printer and then on
2) Change the IP address on the Control Panel.
3) Plug the network cable back into the printer, and then turn the power on.
4) On the Control Panel, open [Admin] > [Network] > [TCP/IP], and confirm that the IP address has been changed.

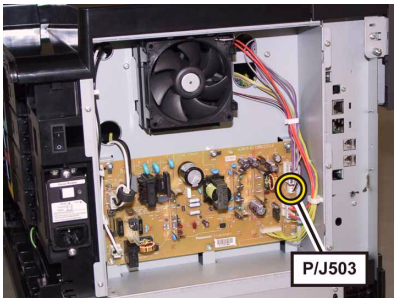
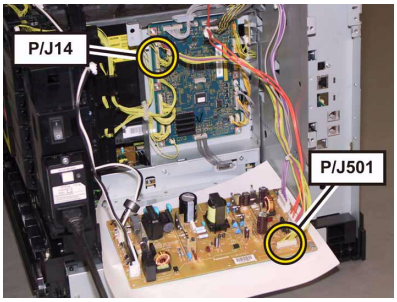
Flows 119 Freezes with "Printing..." during Fax Reception

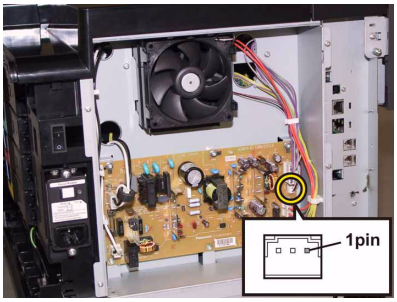
Problem: The message "Printing..." appears on the Control Panel and the printer freezes during fax reception. Also occurs when the printer is powered off and then on.



3.2 Troubleshooting for the repair center

FIP-1. 1 001-360 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: FAN (PL10.6.17) PWBA LVPS (PL10.6.16) PWBA MCU (PL10.7.7) HARN ASSY LVPS (PL10.8.3)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the FAN for rotation Does the FAN function normally? Checked by [Digital Output]-[DO-1E or DO-1F] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, close the COVER ASSY FRONT.	Replace the PWBA MCU. (Refer to Removal 31 / Replacement 29.)	Go to step 3.
3	Check the connection between the FAN and PWBA LVPS. Is P/J503 on PWBA LVPS connected correctly? 	Go to step 5.	Reconnect the connector P/J503 correctly, then go to step 4.
4	Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.
5	Check the connections between the PWBA LVPS and PWBA MCU. Are P/J501 and P/J14 connected correctly? 	Go to step 7.	Reconnect the connector(s) P/J501 and P/J14 correctly, then go to step 6.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the HARN ASSY LVPS for continuity Disconnect J501 from the PWBA LVPS. Disconnect J14 from the PWBA MCU. Is each cable of J501 <=> J14 continuous?	Go to step 8.	Replace the HARN ASSY LVPS.

Step	Check	Remedy	
		Yes	No
8	Checking the power to the FAN Disconnect J503 from the PWBA LVPS. Is the voltage across P503-1pin <=> ground on the PWBA LVPS, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed? 	Replace the FAN. (Refer to Removal 26/ Replacement 34.)	Go to step 9.
9	Checking after replacing the PWBA LVPS Replace the PWBA LVPS. (Refer to Removal 25/ Replacement 35.) Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

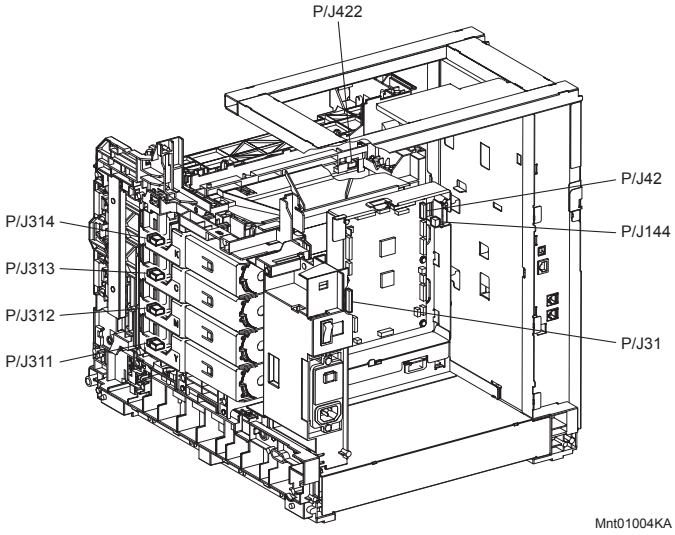
FIP-1. 2 MCU Firmware Error 003-340

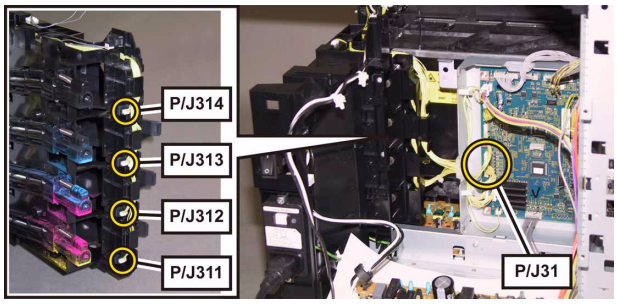
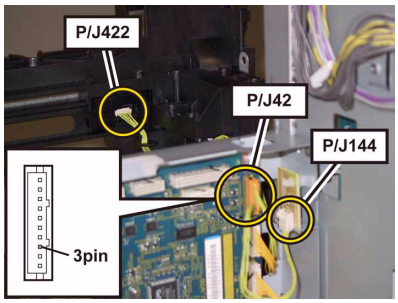
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA MCU (PL10.7.7)		
1	Does the error still occur after several ON/OFF procedures of the power?	Go to step 2.	End of work. *1
2	Checking the firmware version Is the firmware the latest version?	Go to step 3.	Upgrade the firmware, then go to step 3.
3	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work. *1
4	Checking after replacing the PWBA MCU Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.) Does the error still occur when the power is turned OFF and ON?	Go to Electrical Noise.	End of work.

*1: Though some kind of foreign noise would be possible cause, go to FIP Electrical Noise in Other FIP and check, to make sure.

FIP-1. 3 NVM Error 003-356

NOTE If the error occurred after replacing the PWBA MCU, transfer the internal data of the old PWBA MCU to a new one.

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD ASSY (PL4.1.21) TONER CARTRIDGE (K) (PL5.1.21) TONER CARTRIDGE (C) (PL5.1.22) TONER CARTRIDGE (M) (PL5.1.23) TONER CARTRIDGE (Y) (PL5.1.24) HARN ASSY TONER CRUM (PL5.1.26) PWBA MCU (PL10.7.7) PWBA EEPROM (XPRO) (PL10.7.6) HARN ASSY PHD XPRO (PL10.8.11)		
1	Does the error still occur after several ON/OFF procedures of the power?	Go to step 2.	End of work. *1
2	Checking after reseating the PHD UNIT and TONER CARTRIDGEs Reseat the PHD UNIT and four TONER CARTRIDGEs. Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work. *1
3	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work. *1
4	Checking the connectors for connection Are the following connectors connected correctly? - P/J311 on the Toner CRUM (Y) - P/J312 on the Toner CRUM (M) - P/J313 on the Toner CRUM (C) - P/J314 on the Toner CRUM (K) - P/J31 on the PWBA MCU - P/J42 on the PWBA MCU - P/J144 on the PWBA EEPROM (XPRO) - P/J422 on the PHD UNIT 	Go to step 6.	Reconnect the connector(s) P/J 311 to P/J314, P/ J31, P/J42, P/ J144 and/or P/ J422 correctly, then go to step 5.
5	Does the error still occur when the power is turned OFF and ON?	Go to step 6.	End of work.

Step	Check	Remedy	
		Yes	No
6	Checking the HARN ASSY TONER CRUM for continuity Disconnect J311 from the Toner CRUM (Y). Disconnect J312 from the Toner CRUM (M). Disconnect J313 from the Toner CRUM (C). Disconnect J314 from the Toner CRUM (K). Disconnect J31 from the PWBA MCU. Is each cable of J311 to J314 <=> J31 continuous? 	Go to step 7.	Replace the HARN ASSY TONER CRUM.
7	Checking the HARN ASSY PHD XPRO for continuity Disconnect J42 from the PWBA MCU. Disconnect J144 from the PWBA EEPROM (XPRO). Disconnect P422 from the PHD UNIT. Is each cable of J42 <=> J144 and P422 continuous? 	Go to step 8.	Replace the HARN ASSY PHD XPRO.
8	Checking the power to the PWBA EEPROM (XPRO) Disconnect J42 from the PWBA MCU. Is the voltage across P42-3pin <=> ground on the PWBA MCU, about +3.3 VDC?	Replace the PWBA EEPROM (XPRO).	Go to step 9.
9	Checking after replacing the PWBA MCU Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.) Does the error still occur when the power is turned OFF and ON?	Go to Electrical Noise.	End of work.

*1: Though some kind of foreign noise would be possible cause, go to FIP Electrical Noise in Other FIP and check, to make sure.

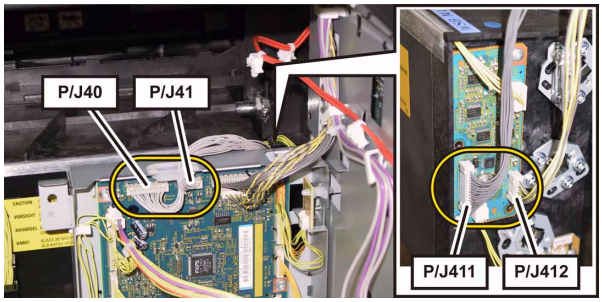
FIP-1. 4 Paper Jam 005-110/005-121 / Job was Finished 005-124

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) ADF ASSY (PL10.10.1) KIT ROLL FEED (PL10.10.97)		
1	Checking the document Does the document meet the ADF SPEC?	Go to step 2.	Use the platen mode or change the paper type.
2	Checking the connector connection Reseat the connector (P/J1003) on the PWBA CONT AIO. Does the error still occur when copying?	Go to step 3.	End of work.
3	Checking the ADF Is the ADF closed against platen glass completely?	Go to step 4.	Close the ADF completely.
4	Checking the paper feeding Does the ADF feed the document?	Go to step 5.	Go to step 7.
5	Checking the document path Open the ADF Cover and check the document path. Is there the foreign substance on the document path?	Remove the foreign substance.	Go to step 6.
6	Checking after replacing the ADF ASSY Replace the ADF ASSY. (Removal 59/Replacement 2) Does the error still occur when copying?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.
7	Checking the ADF Feed Roller installation Is the roller installed correctly? Also are they not contaminated or damaged, and rotate smoothly?	Replace the ADF ASSY. (Removal 59/Replacement 2)	Replace the ADF Feed Roller.

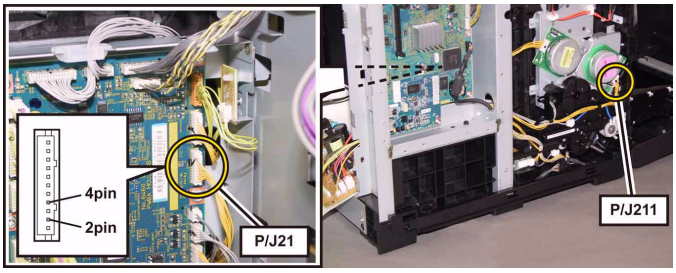
FIP-1. 5 Cover Open 005-301

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) ADF ASSY (PL10.10.1)		
1	Checking the ADF COVER Is the ADF COVER completely closed?	Go to step 2.	Close the ADF COVER.
2	Checking the ADF COVER Are there any damages on the ADF COVER?	Replace the ADF COVER.	Go to step 3.
3	Checking the connector connection Reseat the connector (P/J1003) on the PWBA CONT AIO. Does the error still occur when copying?	Go to step 4.	End of work.
4	Checking after replacing the ADF ASSY Replace the ADF ASSY. (Removal 59/Replacement 2) Does the error still occur when copying?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

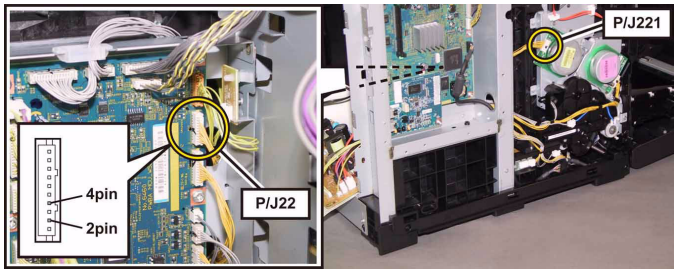
FIP-1. 6 Laser Error 006-370

Step	Check	Remedy	
		Yes	No
	Possible causative parts: ROS ASSY (PL4.1.1) HARN ASSY ROS RE (PL4.1.22) HARN ASSY ROS VIDEO (PL4.1.23) PWBA MCU (PL10.7.7)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking after reseating the ROS ASSY Reseat the ROS ASSY. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J41, P/J411 and P/J412 connected correctly? 	Go to step 6.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 correctly, then go to step 5.
5	Does the error still occur when the power is turned OFF and ON?	Go to step 6.	End of work.
6	Checking the HARN ASSY ROS RE for continuity Disconnect P/J40 from the PWBA MCU. Disconnect P/J411 from the ROS ASSY. Is each cable of J40 <=> J411 continuous?	Go to step 7.	Replace the HARN ASSY ROS RE.
7	Checking the HARN ASSY ROS VIDEO for continuity Disconnect J41 from the PWBA MCU. Disconnect J412 from the ROS ASSY. Is each cable of J41 <=> J412 continuous?	Go to step 8.	Replace the HARN ASSY ROS VIDEO.
8	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 44/ Replacement 16.) Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

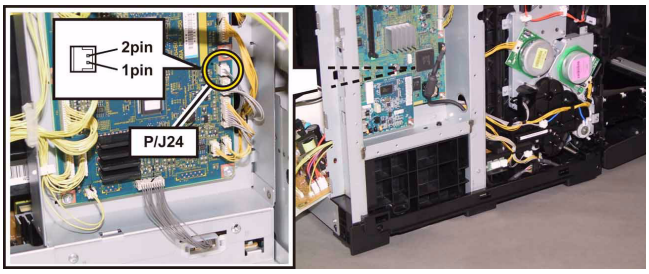
FIP-1. 7 007-340 Restart Printer

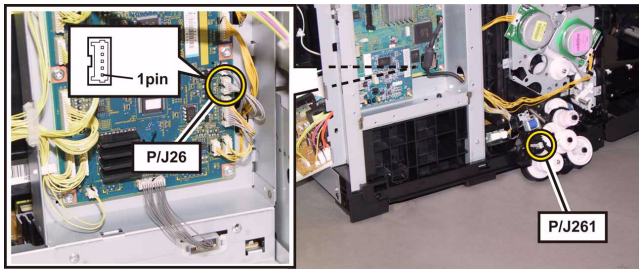
Step	Check	Remedy	
		Yes	No
	Possible causative parts: DRIVE ASSY MAIN (PL7.1.2) PWBA MCU (PL10.7.7) HARN ASSY MAIN MOT (PL10.8.7)		
1	Does the error occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking the Main Motor for rotation Does the Main Motor function normally? Checked by [Digital Output]-[DO-00] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, close the COVER ASSY FRONT.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 4.
4	Checking the connectors of the MAIN MOTOR for connection Check the connections between the PWBA MCU and DRIVE ASSY MAIN. Are P/J21 and P/J211 connected correctly? 	Go to step 6.	Reconnect the connector(s) P/J21 and/or P/J211 correctly, then go to step 5.
5	Does the error still occur when the power is turned OFF and ON?	Go to step 6.	End of work.
6	Checking the HARN ASSY MAIN MOT for continuity Disconnect J21 from the PWBA MCU. Disconnect J211 from the DRIVE ASSY MAIN. Is each cable of J21 <=> J211 continuous?	Go to step 7.	Replace the HARN ASSY MAIN MOT.
7	Checking after reseating the DRIVE ASSY MAIN Reseat the DRIVE ASSY MAIN. Does the error still occur when the power is turned OFF and ON?	Go to step 8.	End of work.
8	Checking the power to the DRIVE ASSY MAIN Disconnect J21 from the PWBA MCU. Are the voltages across J21-2pin/J21-4pin <=> ground on the PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed?	Replace the DRIVE ASSY MAIN. (Refer to Removal 33/ Replacement 27.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1. 8 007-341 Restart Printer

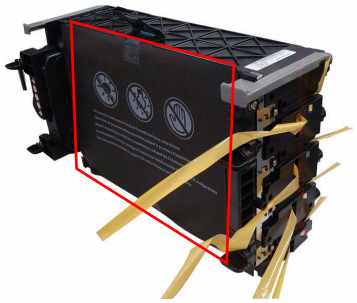
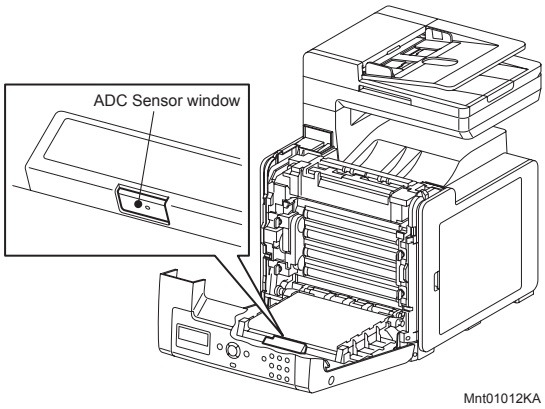
Step	Check	Remedy	
		Yes	No
	Possible causative parts: DRIVE ASSY SUB (PL7.1.1) PWBA MCU (PL10.7.7) HARN ASSY SUB MOT (PL10.8.8)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking after reseating the FUSER ASSY and PHD UNIT Reseat the FUSER ASSY and PHD UNIT. **Warning: Start the operation after the FUSER ASSY has cooled down.** Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking the Sub Motor for rotation Does the Sub Motor function normally? Checked by [Digital Output]-[DO-05] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, close the COVER ASSY FRONT.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 4.
4	Checking the connectors of the SUB MOTOR for connection Check the connections between the PWBA MCU and DRIVE ASSY SUB. Are P/J22 and P/J221 connected correctly? 	Go to step 6.	Reconnect the connector(s) P/J22 and/or P/J221 correctly, then go to step 5.
5	Does the error still occur when the power is turned OFF and ON?	Go to step 6.	End of work.
6	Checking the HARN ASSY SUB MOT for continuity Disconnect J22 from the PWBA MCU. Disconnect J221 from the DRIVE ASSY SUB. Is each cable of J22 <=> J221 continuous?	Go to step 7.	Replace the HARN ASSY SUB MOT.
7	Checking after reseating the DRIVE ASSY SUB Reseat the DRIVE ASSY SUB. Does the error still occur when the power is turned OFF and ON?	Go to step 8.	End of work.
8	Checking the power to the DRIVE ASSY SUB Disconnect J22 from the PWBA MCU. Are the voltages across J22-2pin/J22-4pin <=> ground on the PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed?	Replace the DRIVE ASSY SUB. (Refer to Removal 34/ Replacement 26.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

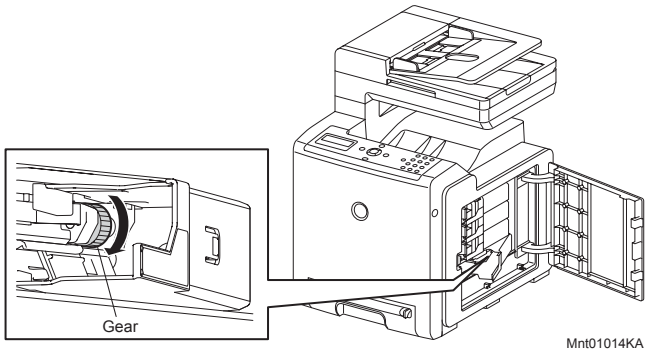
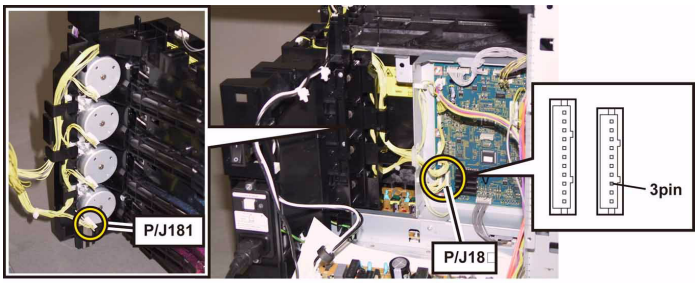
FIP-1. 9 007-371 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: DRIVE ASSY PH (PL7.1.4) PWBA MCU (PL10.7.7) HARN ASSY KSNR REGCL (PL10.8.9)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking the K Mode Solenoid (Color Mode Switching Solenoid) for operation Does the K Mode Solenoid function normally? Checked by [Digital Output]-[DO-0A] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, close the COVER ASSY FRONT. Does the K Mode Solenoid click sound arise from the DRIVE ASSY PH, when the K Mode Solenoid check is performed?	Go to step 4.	Go to step 5.
4	Checking after reseating the DRIVE ASSY PH Reseat the DRIVE ASSY PH. Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.
5	Checking the connector of the K Mode Solenoid in the DRIVE ASSY PH for connection Check the connection between the PWBA MCU and K Mode Solenoid. Is P/J24 connected correctly? 	Go to step 7.	Reconnect the connector P/J24 correctly, then go to step 6.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the power to the K Mode Solenoid Disconnect J24 from the PWBA MCU. Is the voltage across P24-1pin <=> ground on the PWBA MCU, about +24 VDC when the Interlock Switch (HARN ASSY INTERLOCK) is pushed?	Go to step 8.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
8	Checking the K Mode Solenoid for resistance Disconnect P/J24 from the PWBA MCU. Is the resistance across J24-1 and J24-2 about 80 to 110-ohm?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the DRIVE ASSY PH. (Refer to Removal 32/ Replacement 28.)

Step	Check	Remedy	
		Yes	No
9	Checking the connectors of the K Mode Sensor in the DRIVE ASSY PH for connection Check the connections between the PWBA MCU and K Mode Sensor. Are P/J26 and P/J261 connected correctly? 	Go to step 11.	Reconnect the connector(s) P/J26 and/or P/J261correctly, then go to step 10.
10	Does the error still occur when the power is turned OFF and ON?	Go to step 11.	End of work.
11	Checking the HARN ASSY KSNR REGCL for continuity Disconnect J26 from the PWBA MCU. Disconnect J261 from the K Mode Sensor. Is each cable of J26 <=> J261 continuous?	Go to step 12.	Replace the HARN ASSY KSNR REGCL.
12	Checking the power to the K Mode Sensor Disconnect J26 from the PWBA MCU. Is the voltage across P26-1pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 13.	Replace the PWBA MCU. (Refer to Removal 35/ Replacement 16.)
13	Checking the K Mode Sensor for operation Remove the DRIVE ASSY PH from the printer once, but P/J261 and P/J24 should be connected. Checked by [Digital Input]-[DI-04] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, close the COVER ASSY FRONT. Does the voltage change, when a piece of paper is inserted into the gap of the K Mode Sensor?	Replace the PWBA MCU. (Refer to Removal 35/ Replacement 16.)	Replace the DRIVE ASSY PH. (Refer to Removal 23/ Replacement 28.)

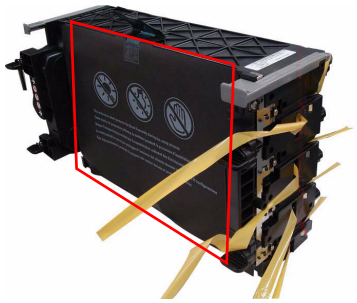
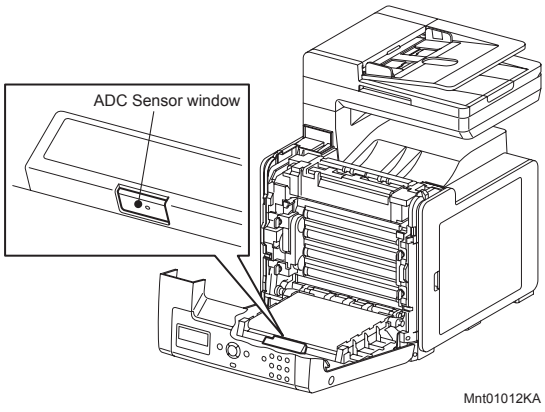
FIP-1. 10 CTD Sensor Error 009-340 (Y)

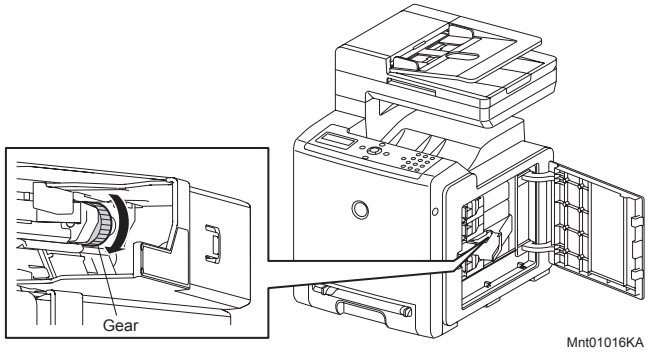
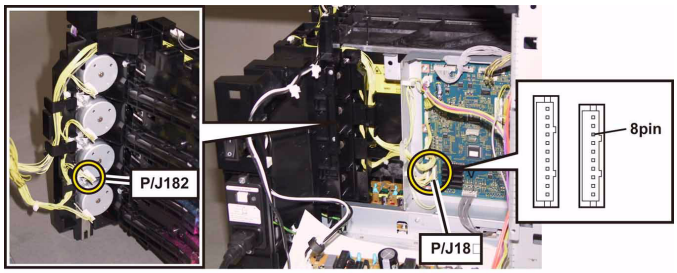
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) DISPENSER ASSY (PL5.1.1) FRAME ASSY MOT (PL5.1.2) MOTOR ASSY DISP (PL5.1.3) TONER CARTRIDGE (Y) (PL5.1.24) HARN ASSY TNR MOT (PL5.1.25) TRANSFER ASSY (PL6.1.7) PWBA MCU (PL10.7.7)		
1	Checking the protection sheet staying Is there the protection sheet on the PHD UNIT? 	Remove the protection sheet.	Go to step 2.
2	Checking the ADC Sensor Window Open the COVER ASSY FRONT. Is the ADC Sensor window dirty? 	Go to step 3.	Go to step 4.
3	Turn off the power, and gently wipe the ADC Sensor window with a clean dry cloth or cotton swab. After wiping the window, close the COVER ASSY FRONT. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after reseating the TONER CARTRIDGE (Y) Reseat the TONER CARTRIDGE (Y), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.

Step	Check	Remedy	
		Yes	No
5	Checking the TNR (Y) MOT (MOTOR ASSY DISP) for rotation Does the TNR (Y) MOT (MOTOR ASSY DISP) function normally? Checked by [Digital Output]-[DO-21] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 6.	Go to step 7.
6	Checking the gears of the DISPENSER ASSY for shape and operation Are the shape and operation of the gears of the DISPENSER ASSY normal? 	Go to step 11.	Replace the defective gear(s) or DISPENSER ASSY. (Refer to Removal 42/ Replacement 18.)
7	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (Y) MOT (MOTOR ASSY DISP). Are P/J18 and P/J181 connected correctly? 	Go to step 9.	Reconnect the connector(s) P/J18 and/or P/J181 surly, then go to step 8.
8	Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.
9	Checking the HARN ASSY TNR MOT for continuity Disconnect J18 from the PWBA MCU. Disconnect J181 from the TNR (Y) MOT. Is each cable of J18 <=> J181 continuous?	Go to step 10.	Replace the HARN ASSY TNR MOT.
10	Checking the power to TNR (Y) MOT (MOTOR ASSY DISP) Disconnect J18 from the PWBA MCU. Is the voltage across P18-3pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
11	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 12.	End of work.

Step	Check	Remedy	
		Yes	No
12	Checking after replacing the TONER CARTRIDGE (Y) Replace the TONER CARTRIDGE (Y), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 13.	End of work.
13	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Go to step 14.	End of work.
14	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when the power is turned OFF and ON?	Replace the ADC Sensor or TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

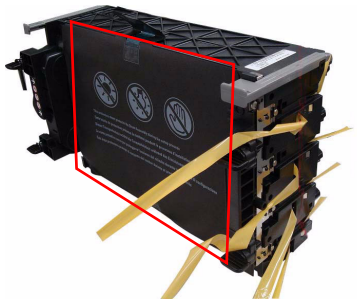
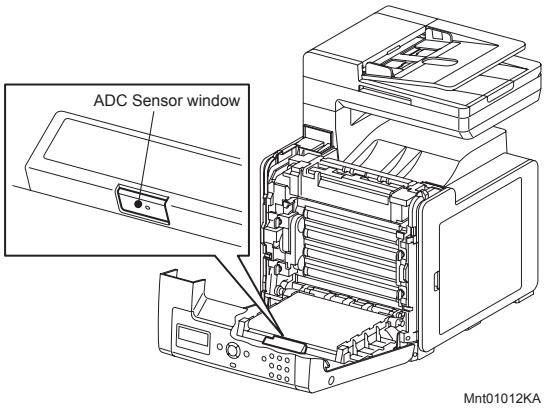
FIP-1. 11 CTD Sensor Error 009-340 (M)

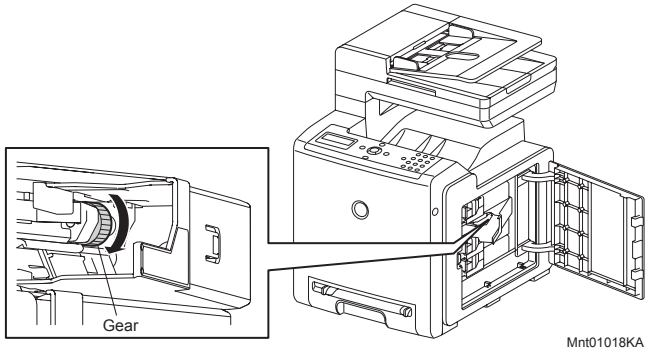
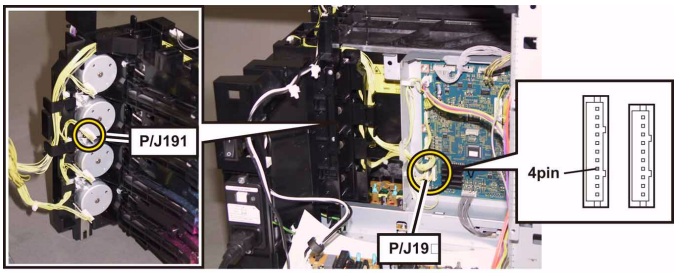
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) DISPENSER ASSY (PL5.1.1) FRAME ASSY MOT (PL5.1.2) MOTOR ASSY DISP (PL5.1.3) TONER CARTRIDGE (M) (PL5.1.23) HARN ASSY TNR MOT (PL5.1.25) TRANSFER ASSY (PL6.1.7) PWBA MCU (PL10.7.7)		
1	Checking the protection sheet staying Is there the protection sheet on the PHD UNIT? 	Remove the protection sheet.	Go to step 2.
2	Checking the ADC Sensor Window Open the COVER ASSY FRONT. Is the ADC Sensor window dirty? 	Go to step 3.	Go to step 4.
3	Turn off the power, and gently wipe the ADC Sensor window with a clean dry cloth or cotton swab. After wiping the window, close the COVER ASSY FRONT. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after reseating the TONER CARTRIDGE (M) Reseat the TONER CARTRIDGE (M), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.

Step	Check	Remedy	
		Yes	No
5	Checking the TNR (M) MOT (MOTOR ASSY DISP) for rotation Does the TNR (M) MOT (MOTOR ASSY DISP) function normally? Checked by [Digital Output]-[DO-23] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 6.	Go to step 7.
6	Checking the gears of the DISPENSER ASSY for shape and operation Are the shape and operation of the gears of the DISPENSER ASSY normal? 	Go to step 11.	Replace the defective gear(s) or DISPENSER ASSY. (Refer to Removal 42/ Replacement 18.)
7	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (M) MOT (MOTOR ASSY DISP). Are P/J18 and P/J182 connected correctly? 	Go to step 9.	Reconnect the connector(s) P/J18 and/or P/J182 surly, then go to step 8.
8	Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.
9	Checking the HARN ASSY TNR MOT for continuity Disconnect J18 from the PWBA MCU. Disconnect J182 from the TNR (M) MOT. Is each cable of J18 <=> J182 continuous?	Go to step 10.	Replace the HARN ASSY TNR MOT.
10	Checking the power to TNR (M) MOT (MOTOR ASSY DISP) Disconnect J18 from the PWBA MCU. Is the voltage across P18-8pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
11	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 12.	End of work.

Step	Check	Remedy	
		Yes	No
12	Checking after replacing the TONER CARTRIDGE (M) Replace the TONER CARTRIDGE (M), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 13.	End of work.
13	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Go to step 14.	End of work.
14	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when the power is turned OFF and ON?	Replace the ADC Sensor or TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

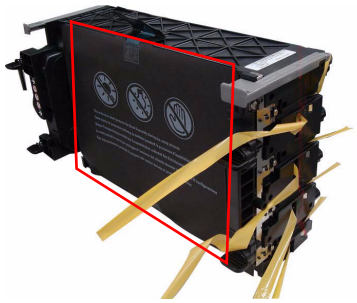
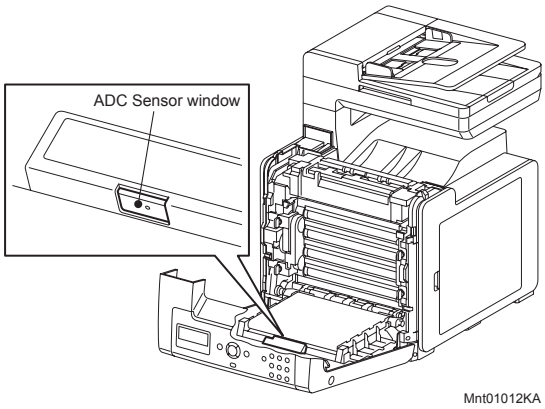
FIP-1. 12 CTD Sensor Error 009-340 (C)

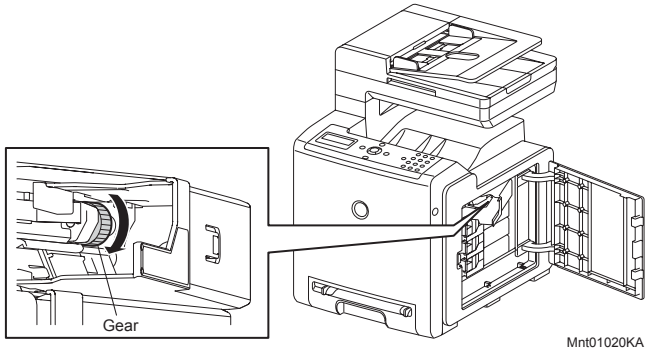
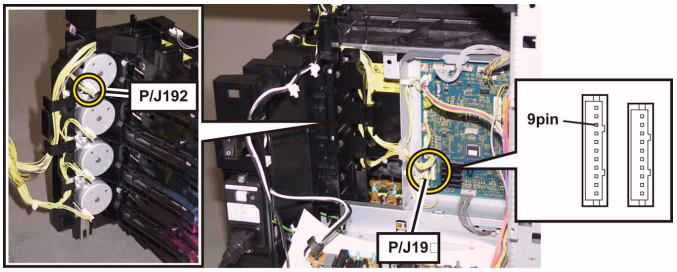
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) DISPENSER ASSY (PL5.1.1) FRAME ASSY MOT (PL5.1.2) MOTOR ASSY DISP (PL5.1.3) TONER CARTRIDGE (C) (PL5.1.22) HARN ASSY TNR MOT (PL5.1.25) TRANSFER ASSY (PL6.1.7) PWBA MCU (PL10.7.7)		
1	Checking the protection sheet staying Is there the protection sheet on the PHD UNIT? 	Remove the protection sheet.	Go to step 2.
2	Checking the ADC Sensor Window Open the COVER ASSY FRONT. Is the ADC Sensor window dirty? 	Go to step 3.	Go to step 4.
3	Turn off the power, and gently wipe the ADC Sensor window with a clean dry cloth or cotton swab. After wiping the window, close the COVER ASSY FRONT. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after reseating the TONER CARTRIDGE (C) Reseat the TONER CARTRIDGE (C), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.

Step	Check	Remedy	
		Yes	No
5	Checking the TNR (C) MOT (MOTOR ASSY DISP) for rotation Does the TNR (C) MOT (MOTOR ASSY DISP) function normally? Checked by [Digital Output]-[DO-25] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 6.	Go to step 7.
6	Checking the gears of the DISPENSER ASSY for shape and operation Are the shape and operation of the gears of the DISPENSER ASSY normal? 	Go to step 11.	Replace the defective gear(s) or DISPENSER ASSY. (Refer to Removal 42/ Replacement 18.)
7	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (C) MOT (MOTOR ASSY DISP). Are P/J19 and P/J191 connected correctly? 	Go to step 9.	Reconnect the connector(s) P/J19 and/or P/J191 surly, then go to step 8.
8	Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.
9	Checking the HARN ASSY TNR MOT for continuity Disconnect J19 from the PWBA MCU. Disconnect J191 from the TNR (C) MOT. Is each cable of J19 <=> J191 continuous?	Go to step 10.	Replace the HARN ASSY TNR MOT.
10	Checking the power to TNR (C) MOT (MOTOR ASSY DISP) Disconnect J19 from the PWBA MCU. Is the voltage across P19-4pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
11	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 12.	End of work.

Step	Check	Remedy	
		Yes	No
12	Checking after replacing the TONER CARTRIDGE (C) Replace the TONER CARTRIDGE (C), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 13.	End of work.
13	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Go to step 14.	End of work.
14	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when the power is turned OFF and ON?	Replace the ADC Sensor or TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

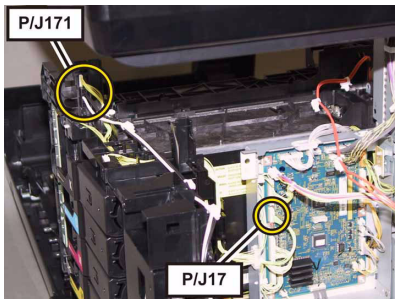
FIP-1. 13 CTD Sensor Error 009-340 (K)

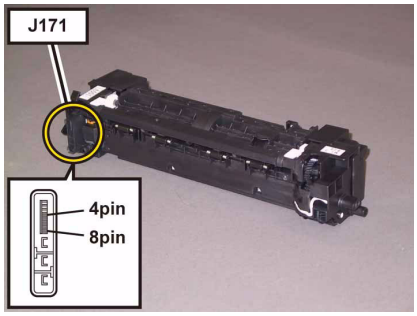
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) DISPENSER ASSY (PL5.1.1) FRAME ASSY MOT (PL5.1.2) MOTOR ASSY DISP (PL5.1.3) TONER CARTRIDGE (K) (PL5.1.21) HARN ASSY TNR MOT (PL5.1.25) TRANSFER ASSY (PL6.1.7) PWBA MCU (PL10.7.7)		
1	Checking the protection sheet staying Is there the protection sheet on the PHD UNIT? 	Remove the protection sheet.	Go to step 2.
2	Checking the ADC Sensor Window Open the COVER ASSY FRONT. Is the ADC Sensor window dirty? 	Go to step 3.	Go to step 4.
3	Turn off the power, and gently wipe the ADC Sensor window with a clean dry cloth or cotton swab. After wiping the window, close the COVER ASSY FRONT. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after reseating the TONER CARTRIDGE (K) Reseat the TONER CARTRIDGE (K), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.

Step	Check	Remedy	
		Yes	No
5	Checking the TNR (K) MOT (MOTOR ASSY DISP) for rotation Does the TNR (K) MOT (MOTOR ASSY DISP) function normally? Checked by [Digital Output]-[DO-27] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 6.	Go to step 7.
6	Checking the gears of the DISPENSER ASSY for shape and operation Are the shape and operation of the gears of the DISPENSER ASSY normal? 	Go to step 11.	Replace the defective gear(s) or DISPENSER ASSY. (Refer to Removal 42/ Replacement 18.)
7	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (K) MOT (MOTOR ASSY DISP). Are P/J19 and P/J192 connected correctly? 	Go to step 9.	Reconnect the connector(s) P/J19 and/or P/J192 surly, then go to step 8.
8	Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.
9	Checking the HARN ASSY TNR MOT for continuity Disconnect J19 from the PWBA MCU. Disconnect J192 from the TNR (K) MOT. Is each cable of J19 <=> J192 continuous?	Go to step 10.	Replace the HARN ASSY TNR MOT.
10	Checking the power to TNR (K) MOT (MOTOR ASSY DISP) Disconnect J19 from the PWBA MCU. Is the voltage across P19-9pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
11	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 12.	End of work.

Step	Check	Remedy	
		Yes	No
12	Checking after replacing the TONER CARTRIDGE (K) Replace the TONER CARTRIDGE (K), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 13.	End of work.
13	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Go to step 14.	End of work.
14	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when the power is turned OFF and ON?	Replace the ADC Sensor or TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

FIP-1. 14 010-317 Reseat Fuser

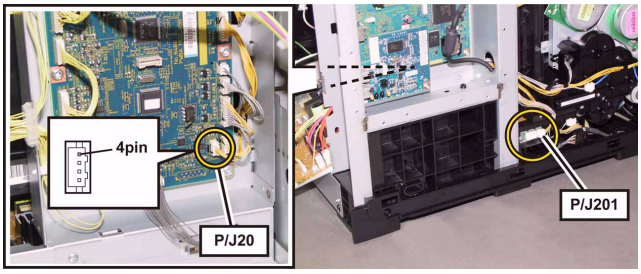
Step	Check	Remedy	
		Yes	No
	Possible causative parts: FUSER ASSY (PL6.1.1) PWBA MCU (PL10.7.7) HARN ASSY FUSER (PL10.8.6)		
1	Checking after reseating the FUSER ASSY Reseat the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the connectors for connection Remove the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Check the connections between the PWBA MCU and FUSER ASSY. Are P/J17 and P/J171 connected correctly?  	Go to step 4.	Reconnect the connector(s) P/J17 and/or P/J171 correctly, then go to step 3.
3	Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking the HARN ASSY FUSER for continuity Remove the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Disconnect J17 from the PWBA MCU. Is each cable of J17 <=> P171 continuous? **NOTE: P171 is attached to the frame.**	Go to step 5.	Replace the HARN ASSY FUSER.

Step	Check	Remedy	
		Yes	No
5	Checking the resistances of Temp. Sensor in the FUSER ASSY Remove the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Check the resistances across the following pins of the removed FUSER ASSY. J171-5pin <=> J171-4pin J171-6pin <=> J171-8pin J171-6pin <=> J171-7pin Can the resistances be measured? (The resistances are 7 k-ohm at 180 degrees C). 	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the FUSER ASSY. (Refer to Removal 9/ Replacement 51.) After replacement, be sure to clear the life counter value.

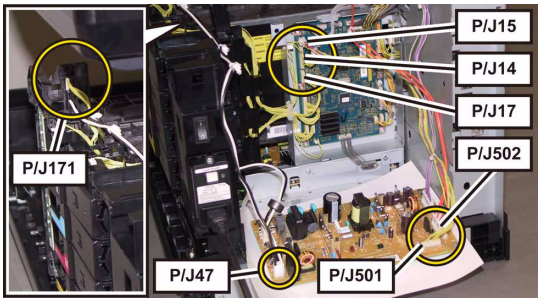
FIP-1. 15 Replace Fuser Now 010-351/010-421

Step	Check	Remedy	
		Yes	No
	Possible causative parts: FUSER ASSY (PL6.1.1) PWBA MCU (PL10.7.7)		
1	Checking the life counter value of the FUSER ASSY Does the life counter value show the near of the end?	Replace the FUSER ASSY. (Refer to Removal 9/ Replacement 51.) After replacement, be sure to clear the life counter value.	Go to step 2.
2	Checking after reseating the FUSER ASSY Reseat the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking after replacing the FUSER ASSY Replace the FUSER ASSY. (Refer to Removal 9/ Replacement 51.) **Warning: Start the operation after the FUSER ASSY has cooled down.** Does the error still occur when the power is turned OFF and ON? **NOTE: After replacement, be sure to clear the life counter value.**	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

FIP-1. 16 Env. Sensor Error 010-354

Step	Check	Remedy	
		Yes	No
	Possible causative parts: SENSOR HUM (PL10.4.20) HARN ASSY HUM (PL10.4.21) PWBA MCU (PL10.7.7)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking after reseating the SENSOR HUM Reseat the SENSOR HUM. Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking the HARN ASSY HUM for continuity Disconnect J20 from the PWBA MCU. Disconnect J201 from the SENSOR HUM. Is each cable of J20 <=> J201 continuous? 	Go to step 4.	Replace the HARN ASSY HUM.
4	Checking the power to SENSOR HUM Disconnect the connector of J20 from the PWBA MCU. Is the voltage across P20-4pin <=> ground on the PWBA MCU, about +5 VDC?	Replace the SENSOR HUM. (Refer to COVER ASSAY SIDE L Removal 14/ Replacement 46)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1. 17 Fuser Error 010-377

Step	Check	Remedy	
		Yes	No
	Possible causative parts: FUSER ASSY (PL6.1.1) PWBA MCU (PL10.7.7) HARN ASSY LVPS (PL10.8.3) HARN ASSY FUSER (PL10.8.6)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking after reseating the FUSER ASSY Reseat the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking the connectors for connection Remove the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Check the connections between the PWBA MCU (P/J17) and FUSER ASSY (P/J171). Check the connections between the FUSER ASSY (P/J171) and PWBA LVPS (P/J47). Check the connections between the PWBA LVPS (P/J501 and P/J502) and PWBA MCU (P/J14 and P/J15). Are these connectors connected correctly?  	Go to step 5.	"Reconnect the connector(s) P/J17, P/J47, P/J171, P/J501, P/J502, P/J14 and/or P/J15 correctly, then go to step 4."
4	Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.
5	Checking the HARN ASSY FUSER for continuity Disconnect J17 from the PWBA MCU. Disconnect J47 from the PWBA LVPS. Is each cable of J17 and J47 <=> P171 continuous? **NOTE: P171 is attached to the frame.**	Go to step 6.	Replace the HARN ASSY FUSER.
6	Checking the HARN ASSY LVPS for continuity Disconnect J14 from the PWBA MCU. Disconnect J501 from the PWBA LVPS. Is each cable of J14 <=> J501 continuous?	Go to step 7.	Replace the HARN ASSY LVPS.

Step	Check	Remedy	
		Yes	No
7	Checking after replacing the FUSER ASSY Replace the FUSER ASSY. (Refer to Removal 9/ Replacement 51.) **Warning: Start the operation after the FUSER ASSY has cooled down.** Does the error still occur when the power is turned OFF and ON? **NOTE: After replacement, be sure to clear the life counter value.**	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

FIP-1. 18 016-300/016-301/016-302/016-310/016-313/016-315/016-317/016-323/016-324/016-327/016-340/016-344/016-345/016-346/016-347/117-365/131-397/131-398/131-399 Restart Printer / Erase Flash Err. 016-392 / Write Flash Err. 016-393 / Verify Error 016-394

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error code. Error code is 016-317 or 016-340?	Go to step 2.	Go to step 3.
2	Download the latest version of the firmware from the Dell support website, and update the firmware with "F/W Download DL Mode". (Refer to Refernce_1.) Does the error still occur when the power is turned off and on?	Replace the PWBA CONT AIO. (Removal 24/ Replacement 36.)	End of work.
3	Check whether the version of the firmware is the latest, referring to the Printer Information via the Tool Box. Checked by [Printer Information] of the [Printer Settings Report] tab in Tool Box. For the latest version information, refer to the Dell Support Web Site. Is the firmware the latest version?	Replace the PWBA CONT AIO. (Removal 24/ Replacement 36.)	Download the latest version of the firmware from the Dell Support Web Site.

Reference_1:

1. Make sure that the printer is connected to the computer via USB port (remove the network cable). Then, try downloading as follows:

    1) Power on the printer while pressing the <X Cancel> and <✓> buttons.

    2) The printer goes into the Download Mode with a message "Download Mode Ready". Then, activate firmware update tool and follow the instruction displayed.

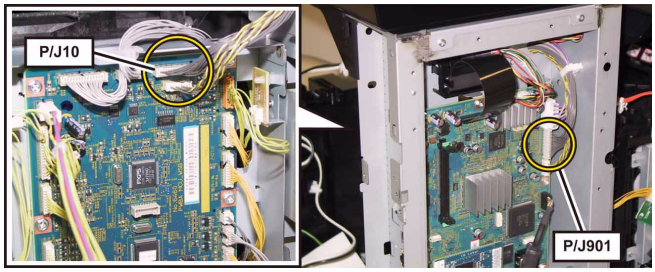
NOTE

While the firmware download is being executed, the printer displays a message "Writing...USB F/W" and the computer displays a progress bar and may be restarted during the downloading process. Never power off the printer or the computer until the downloading process completes, and never interrupt the downloading process.

FIP-1. 19 016-316/016-318 Reseat Memory

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) Memory Card (Option)		
1	Is the customer using the recommended memory card?	Go to step 2.	Replace to the recommended memory card.
2	Checking the Memory Card installation. Reseat the Memory Card. Does the error still occur when turning on the power?	Go to step 3.	End of work.
3	Checking after replacing the Memory Card. Replace the Memory Card. Does the error still occur when turning on the power?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 20 016-370 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) PWBA MCU (PL10.7.7) HARN ASSY ESS (PL10.8.1)		
1	Checking the error. Does the error still occur when the power is turned off and on?	Go to step 2.	End of work.
2	Download the latest version of the firmware from the Dell support website, and update the firmware with "F/W Download DL Mode". (Refer to Refernce_1.) Does the error still occur when the power is turned off and on?	Go to step 3.	End of work.
3	Checking after reseating the PWBA CONT AIO and PWBA MCU Reseat the PWBA CONT AIO and PWBA MCU. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking the connectors for connection Check the connections between the PWBA MCU and PWBA CONT AIO. Are P/J10 and P/J901 connected correctly? 	Go to step 6.	Reconnect the connector(s) P/J10 and/or P/J901 correctly, then go to step 5.
5	Does the error still occur when the power is turned OFF and ON?	Go to step 6.	End of work.
6	Checking the HARN ASSY ESS for continuity Disconnect J10 from the PWBA MCU. Disconnect J901 from the PWBA CONT AIO. Is each cable of J10 <=> J901 continuous?	Go to step 7.	Replace the HARN ASSY ESS.
7	Checking after replacing the PWBA MCU Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.) Does the error still occur when the power is turned OFF and ON?	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 29.)	End of work.

Reference_1:

1. Make sure that the printer is connected to the computer via USB port (remove the network cable). Then, try downloading as follows:

   1) Power on the printer while pressing the <X Cancel> and <✓> buttons.

   2) The printer goes into the Download Mode with a message "Download Mode Ready". Then, activate firmware update tool and follow the instruction displayed.

NOTE

While the firmware download is being executed, the printer displays a message "Writing...USB F/W" and the computer displays a progress bar and may be restarted during the downloading process. Never power off the printer or the computer until the downloading process completes, and never interrupt the downloading process.

FIP-1. 21 Invalid ID 016-383 / Range Chk Error 016-384 / Header Error 016-385 / Check Sum Error 016-386 / Format Error 016-387 / Open Flash Err. 016-388 / Protection Error 016-391

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the download file Was the file for 2135c downloaded?	Go to step 2.	Re-download the correct file.
2	Checking the connection between PC and printer Are your PC and the printer correctly connected by USB or LAN? Disconnect and reconnect the USB or network cable. Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking re-downloading the correct file for 2135c Re-download the correct file from Dell web site. Does the error still occur when the power is turned OFF and ON?	Replace the PWBA CONT AIO. (Removal 24/ Replacement 36.)	End of work.

FIP-1. 22 SMTP Error 016-503/016-764 / POP Error 016-504 / POP login Error 016-505 / SMTP Login Error 016-506/016-507 / Address Error 016-767 / From Address Error 016-768 / Network Error 016-786 / Network Not Ready 016-790/016-794

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the network connection Check the network connection using the [ping] command. Does the printer connect the network?	Go to step 6.	Go to step 2.
2	Checking the network connection Reseat the network cable connector. Does the error still occur when using the server?	Go to step 3.	End of work.
3	Checking the network setting Is the printer network setting correctly?	Go to step 4.	Set the [Wired] in the [Admin Menu].
4	Checking the server setting Is the [Address Book] setting correctly?	Go to step 5.	Set the [Address Book] in the [Admin Menu].
5	Checking the spec. Does the printer spec. meet the server spec?	Go to step 6.	Change the server.
6	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when using the server?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 23 Memory Full 016-700

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking optional memory. Is the optional memory module installed?	Go to step 5.	Go to step 2.
2	Checking after changing the printer driver settings. In the printer driver dialog box, set Print Mode to "High Quality", and Bitmap Smoothing to "On". Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking after installing the optional memory. Install additional memory. Does the error still occur when printing?	Go to step 4.	End of work.
4	Print a System Settings page to verify the capacity of optional memory. (Refer to NOTE) Is memory capacity increased? NOTE: Operation from printer operation panel 1 Press ▼ until >SETUP appears, and then press ✓. 2 Press ▼ until >Reports appears, and then press ✓. 3 System Settings is displayed. Press ✓.	Go to step 6.	If the memory capacity has not increased, turn off the printer, unplug the power cable, and reinstall the optional memory.
5	Print a System Settings page to verify the capacity of optional memory. (Refer to NOTE) Is memory capacity increased? NOTE: Operation from printer operation panel 1 Press ▼ until >SETUP appears, and then press ✓. 2 Press ▼ until >Reports appears, and then press ✓. 3 System Settings is displayed. Press ✓.	Go to step 6.	If the memory capacity has not increased, turn off the printer, unplug the power cable, and reinstall the optional memory.
6	Checking after changing the printer driver settings. In the printer driver dialog box, set Print Mode to "High Quality", and Bitmap Smoothing to "On". Does the error still occur when printing?	Go to step 7.	End of work.
7	Checking after changing the RAM DISK settings. Set RAM DISK to "100MB". (Refer to NOTE) Does the error still occur when printing? NOTE: Operation from printer operation panel 1 Press ▼ until >SETUP appears, and then press ✓. 2 Press ▼ until >Admin Menu appears, and then press ✓. 3 Press ▼ until >System Settings appears, and then press ✓. 4 Press ▼ until >RAM Disk appears, and then press ✓.	The printer has reached its processing capacity. Try dividing the print data into smaller blocks or converting the data to a smaller format.	End of work.

FIP-1. 24 PCL Request 016-720

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the printing job Print the small size file (like a Windows test print). Does the error still occur when printing?	Go to step 2.	End of work.
2	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Does the error still occur when printing?	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)	End of work.

FIP-1. 25 Invalid User 016-757

Step	Check	Remedy	
		Yes	No
	Possible causative parts:		
1	Checking your account registration Is your account registered in your network?	Go to step 3.	Please request the registration to your system administrator, then go to step 2.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking connection Is your PC surely connected with the printer via network?	Please consult your system administrator.	Connect your PC with printer surely, then go to step 4.
4	Does the error still occur when printing?	Please consult your system administrator.	End of work.

FIP-1. 26 Disabled Func 016-758

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the power of the printer Is the power of the printer turned ON?	Go to step 3.	Turn ON the power of the printer, and go to step 2.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking your operation Is the operation that you did an available function for 2135c?	Go to step 4.	Please inquire to your system administrator, or check this operation by the User Guide.
4	Checking connection Is your PC surely connected with the printer?	Go to step 6.	Connect your PC with printer surely, then go to step 5.
5	Does the error still occur when printing?	Go to step 6.	End of work.
6	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Does the error still occur when printing?	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)	End of work.

FIP-1. 27 Reached Limits 016-759

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Check the [Dell ColorTrack] setting Does the value of [User Registration] exceed the limitation? Maximum user is 50.	Reset to 50 or less and go to step 2.	Go to step 3.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36) Does the error still occur when printing?	Replace the PWBA CONT AIO.	End of work.

FIP-1. 28 Invalid Job 016-799

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the paper size Does the paper size in use meet the specifications?	Go to step 3.	Use the paper that meets the specifications, then go to step 2.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking the paper size setup Does the using paper size match the printer setup value?	Go to step 5.	Go to step 4.
4	Setup the paper size through your PC. Does the error still occur when printing?	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)	End of work.
5	Checking the printing job Does the error still occur when printing the Windows test print?	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)	Check that the printing data is correct.

FIP-1. 29 Memory Full 016-980

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the file data in the printer Print or clear the stored files and data at the printer memory. Does the error still occur when printing?	Go to step 2.	End of work.
2	Checking the memory capacity for print Print the small size file (like a Windows test page). Does the error still occur when printing?	Go to step 3.	Add the MEMORY CARD or divide the printing job.
3	Checking after reseating the MEMORY CARD Reseat the MEMORY CARD. Does the error still occur when printing?	Go to step 4.	End of work.
4	Checking the memory capacity. Is the memory capacity recognized normally? Checked by [Config Page] of [Print information] in diagnosis.	Go to step 5.	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)
5	Checking after replacing the MEMORY CARD Replace the MEMORY CARD. Does the error still occur when printing?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 30 Collate Full 016-981

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Does the error still occur when the power is turned off and on?	Go to step 2.	End of work.
2	Checking the printer memory size Does the error occur when printing with the Memory Card (Option) installed?	Go to step 3.	End of work.
3	RAM Disk size settings Does the error occur when printing after reducing the size setting of the RAM Disk? (See RAM Disk size settings in chapter 2)	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 31 File size limits 016-986 / H/W Error 017-971/017-972/017-973/017-974 / File Error 017-975/017-976/017-977/017-978/017-979/017-986/017-987/017-989/033-502/035-779 / Report error 017-980 / Memory Full 033-787 / Cancel 033-789/033-790/033-791 / 116-396/116-397/116-398/116-987/117-314/117-315/117-322/117-328/117-335/117-336/117-337/117-340/117-348/117-349/117-350/117-362/117-363/133-231/133-234/133-235 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the PWBA CONT AIO Turn off and on the power. Does the error still occur when turning on the power?	Go to step 2.	End of work.
2	Checking the file data in the printer Print out the stored files at the printer memory. Does the error still occur when turning on the power?	Go to step 3.	End of work.
3	Checking the printer setting Is the [Country] of [Fax setting] on the [Admin Menu] correct?	Go to step 4.	Set the [Country] correctly.
4	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when turning on the power?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 32 Memory Full 017-970/033-503/033-788 / Communication 033-513 / Accumulation Limit 033-795

NOTE

The [033-795] error occurs when the sheet count of a single fax transmission exceeds 75. To send more than 75 sheets at a time, divide the documents in blocks.

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) MEMORY CARD (PL10.6.8)		
1	Checking the error Does the error still occur when turning off and on the power?	Go to step 2.	END.
2	Checking the error Clear the stored data. Does the error still occur after clearing the data? Checked by [BackUp Data]-[Document Clear] in [Fax/Scanner diag].	Go to step 3.	END.
3	Checking the memory card installation Reseat the memory card on the PWBA AIO CONT. Does the error still occur when turning off and on the power?	Go to step 4.	END.
4	Checking after replacing the memory card Replace the memory card. Does the error still occur when turning off and on the power?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	END.

FIP-1. 33 PCScan Time Out 017-988

The 017-988 error occurs by the following causes.

-No destination folder exists in the PC.

-Black and white scanning was performed with JPEG specified as the image format.

-There was no request from the PC within 30 seconds after [Scan to Application] was set via the printer menu.

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the USB connection Reconnect the PC and the printer. Does the error still occur when scanning?	Go to step 2.	End of work.
2	Is the scanner driver installed? Check the [Dell MFP Laser 2135cn scanner] icon in the [Scanners and Cameras] of the [Printers and Other Hardware] of the [Control Panel]. Check the following items, before checking the driver software. -Connects the PC and the printer with the USB cable. -Enables the [Windows Image Acquisition (WIA)] of the [Service] in the [Administrative Tool] of the [Control Panel].	Go to step 3.	Install the driver software.
3	Checking the PC program Is the [ScanButton Manger] installed? Checked by the [Dell MFP Laser 2135cn ScanButton Manager] in the [Add or Removal Programs] of the [Control Panel].	Go to step 4.	Install the software.
4	Checking the ScanButton Manger setting Is the setting of [ScanButton Manager] correct? Checked by the following procedures. Click the [Start] and then select the [All programs], the [Dell Printers], the [Dell MFP Color Laser Printer 2135cn] and the [ScanButton Manager] in order.	Go to step 5.	Set these items correctly. Scan Form/Image Type/Resolution/ Paper size/Output Destination NOTE: Check that the directory specified for [Output Destination] really exists.

Step	Check	Remedy	
		Yes	No
5	Is the selecting of software correct? Checked by the following procedures. 1) Select the [Dell MFP Laser 2135cn scanner] in the [Scanners and Cameras] of the [Printers and Other Hardware] of the [Control Panel] and then open the [Properties]. (click the right button of the mouse or [Properties] button) 2) Select the [Properties] and then select the [Events] tab of the [Dell MFP Laser 2135cn Scanner Properties] screen. For Windows XP/Vista/Server 2003 3) Check that the [Start this program] displays the [2135cn MFP Scan Button Manager] and the [Select an event] is set correctly. For Windows 2000 3) Check that the [2135cn MPF Scan Button Manager] is checked and the [Scanner events] is set correctly.	Retry the scanning. If the message [Select the program to launch for this action] appears on the PC monitor, select the [2135cn MFP Scan button Manager] within 30 seconds. If the error occurred again, replace the PWBA CONT AIO. (Removal 24/ Replacement 36)	Set the [Events] tab menu of the [Dell MFP Laser 2135cn Scanner Property] correctly.

FIP-1. 34 Download Mode Send FW Data 024-360

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) PWBA MCU (PL10.7.7)		
1	Checking the error Does the error still occur when turning off the power?	Go to step 2.	End of work.
2	Checking the MCU firmware Is the download firmware the 2135cn?	Go to step 3.	Re-download the correct firmware.
3	Checking after replacing the PWBA MCU Replace the PWBA MCU. (Removal 31/Replacement 29) Does the error still occur?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 35 024-362 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Does the error still occur when turning off and on the power?	Go to step 2.	End of work., if the error occurs again, go to step 2.
2	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when turning off and on the power?	Replace the PWBA CONT AIO.	End of work.

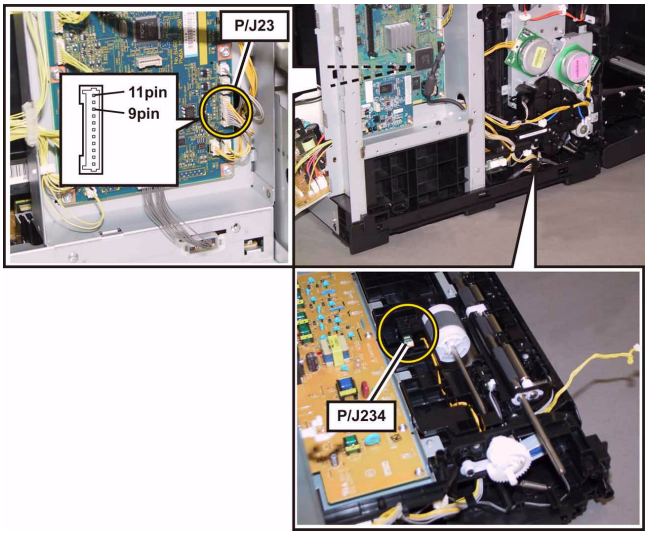
FIP-1. 36 Load Tray 1 024-910

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) PWBA MCU (PL10.7.7)		
1	Checking the paper size Does the using paper size meet the specification?	Go to step 3.	Use the paper that meets the specifications, then go to step 2.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking the print data, paper (print media) and paper settings Check the followings. - Are the print data and the paper suitable? - Are the paper setting and paper suitable? - Are the paper setting and print data suitable? - Are the original and the paper suitable? After checking, correct the incorrect item(s). Does the error still occur when printing?	Go to step 4.	End of work.
4	Checking after reloading a paper and the CASSETTE ASSY 250 Reload a correct paper into the CASSETTE ASSY 250. Reseat the CASSETTE ASSY 250 correctly. Does the error still occur when printing?	Go to step 5.	End of work.
5	Checking after replacing the PWBA MCU Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.) Does the error still occur when printing?	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)	End of work.

FIP-1. 37 Load SSF 024-914

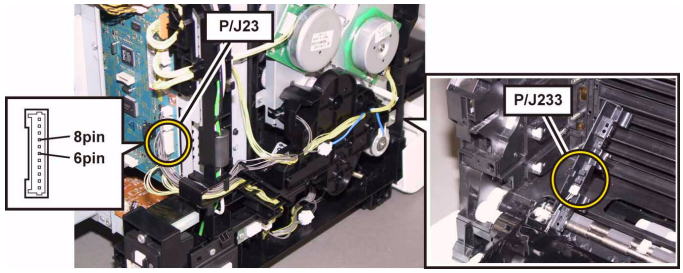
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) PWBA MCU (PL10.7.7)		
1	Checking the paper size Does the using paper size meet the specification?	Go to step 3.	Use the paper that meets the specifications, then go to step 2.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking the print data, paper (print media) and paper settings Check the followings. - Are the print data and the paper suitable? - Are the paper setting and paper suitable? - Are the paper setting and print data suitable? - Are the original and the paper suitable? After checking, correct the incorrect item(s). Does the error still occur when printing?	Go to step 4.	End of work.
4	Reloading a correct paper to SSF Reload a correct paper to fill the paper setup. Does the error still occur when printing?	Replace the PWBA MCU (refer to Removal 31/ Replacement 29), if not, replace the PWBA CONT AIO (refer to Removal 24/Replacement 36).	End of work.

FIP-1. 38 Load Tray 1 024-965 / Illegal Settings

Step	Check	Remedy	
		Yes	No
	Possible causative parts: SENSOR PHOTO (PL3.2.13) ACTUATOR NO PAPER (PL3.2.19) HARN ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7)		
1	Checking the paper for loading and setting Check that the loaded paper meets the print job. Check that the paper setting to require the print job meets the specification. Does the error still occur after reloading the paper and changing the paper settings that requires the print job?	Go to step 2.	End of work.
2	Checking the ACTUATOR NO PAPER for shape and operation Pull the CASSETTE ASSY 250 out. Are the shape and operation of the ACTUATOR NO PAPER normal?	Go to step 3.	Reseat the ACTUATOR NO PAPER. If broken or deformed, replace the ACTUATOR NO PAPER.
3	Checking the Cassette No Paper Sensor (SENSOR PHOTO) for operation Pull the CASSETTE ASSY 250 out. Does the number on the screen increase by one, when the actuator (ACTUATOR NO PAPER) of the Cassette No Paper Sensor (SENSOR PHOTO) is operated? Checked by [Digital Input]-[DI-01] of [IOT Diag] in [Printer Diag] of diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 4.
4	Checking the connectors of the SENSOR PHOTO (Cassette No Paper Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J234 connected correctly? 	Go to step 5.	Reconnect the connector(s) P/J23 and/or P/J234 correctly.
5	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J234 from the SENSOR PHOTO. Is each cable of J23 <=> J234 continuous?	Go to step 6.	Replace the HARN ASSY L SIDE.

Step	Check	Remedy	
		Yes	No
6	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-9pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 7.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
7	Checking the SENSOR PHOTO for operation Check the voltage across J23-11pin <=> ground on the PWBA MCU. Does the voltage change, when the ACTUATOR NO PAPER is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.

FIP-1. 39 Load SSF 024-969 / 075-923 Reseat paper

Step	Check	Remedy	
		Yes	No
	Possible causative parts: SENSOR PHOTO (PL3.2.13) ACTUATOR SSI (PL3.2.14) HARN ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7)		
1	Checking the paper for loading and setting Check that the loaded paper meets the print job. Check that the paper setting to require the print job meets the specification. Does the error still occur after reloading the paper and changing the paper settings that requires the print job?	Go to step 2.	End of work.
2	Checking after setting the guide sides of the SSF Reset the guide sides. Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking after reloading a paper to SSF Reload a correct paper to fill the paper setup. Does the error still occur when printing?	Go to step 4.	End of work.
4	Checking the ACTUATOR SSI for shape and operation Remove the CHUTE LOW (PL3.2.27) once to check the shape and operation. Are the shape and operation of the ACTUATOR SSI normal?	Go to step 5.	Reseat the ACTUATOR SSI. If broken or deformed, replace the ACTUATOR SSI.
5	Checking the SSF No Paper Sensor (SENSOR PHOTO) for operation Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the number on the screen increase by one, when the actuator (ACTUATOR SSI) of the SSF No Paper Sensor (SENSOR PHOTO) is operated? Checked by [Digital Input]-[DI-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 6.
6	Checking the connectors of the SENSOR PHOTO (SSF No Paper Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J233 connected correctly? 	Go to step 8.	Reconnect the connector(s) P/J23 and/or P/J233 correctly, then go to step 7.
7	Does the error still occur when printing?	Go to step 8.	End of work.
8	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J233 from the SENSOR PHOTO. Is each cable of J23 <=> J233 continuous?	Go to step 9.	Replace the HARN ASSY L SIDE.

Step	Check	Remedy	
		Yes	No
9	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-6pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 10.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
10	Checking the SENSOR PHOTO for operation Check the voltage across J23-8pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the ACTUATOR SSI is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.

FIP-1. 40 SMB Login Error 031-521/031-522

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the customer operation Did the customer input the login name and the password correctly?	Go to step 2.	Try the login again.
2	Checking the access limitation Does the system administrator set the access limit number?	Ask to the system administrator.	Go to step 3.
3	Checking the printer setting Is the [Scan To Network] of the [Scan Defaults] in the [Scan] of the [Default Settings] the [Computer]?	Go to step 4.	Set to [Computer].
4	Checking the network Are the printer and the PC connected to the network? Checked by [ping] command.	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	Check the network.

FIP-1. 41 SMB Error 031-523/031-528 / DNS Error 031-526

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the sharing folder Is the sharing folder name correct?	Go to step 2.	Rename the sharing folder.
2	Checking the server setting Is the [Share Name] of the [Server Address] tab in the [Address Book] correct?	Go to step 3.	Rename the [Share Name].
3	Checking the printer Turning off and on the printer power. Does the error still occur when the network scanning?	Check the sharing folder setting. If OK, Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 42 SMB Login Error 031-524

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the access limitation Does the system administrator set the access limit number?	Ask to the system administrator.	Go to step 2.
2	Checking the server setting Is the [User Limit] of the [Sharing] tab in the sharing folder properties the [Maximum allowed]?	Go to step 3.	Set to the [Maximum allowed].
3	Checking the printer Turning off and on the printer power. Does the error still occur when the network scanning?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 43 SMB Error 031-525

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the client PC Is the client PC the Windows 2000 or later?	Go to step 2.	Replace to the Windows 2000 or later PC.
2	Checking the printer Turning off and on the printer power. Does the error still occur when the network scanning?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 44 SMB Login Error 031-529/031-541/031-546/031-547 / SMB Path Error 031-530 / SMB List Error 031-531 / SMB Error 031-532/031-533/031-534/031-535/031-536 / FTP Error 031-576/031-580/031-581/031-582/031-584/031-585/031-587/031-588 / FTP Login Error 031-578 / FTP Path Error 031-579

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the customer operation Did the customer input the login name and the password correctly?	Go to step 2.	Try the login again.
2	Checking the Address Book settings Is the [Server Address] tab on the [Address Book] setting correct?	Go to step 3.	Set it again.
3	Checking the sharing folder Is the [Sharing] tab of the sharing folder setting correct?	Go to step 4.	Set it again.
4	Checking the printer Turning off and on the printer power. Does the error still occur when the network scanning?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 45 Communication 033-500 / Codec Error 033-514/033-515/033-516/033-765/033-766/033-767 / Buffer 033-774/033-776/033-785 / 117-310/117-311/117-312/133-236/133-237/133-238/133-239/133-240/133-241/133-242/133-243/133-244/133-246/133-247/133-248/133-249/133-251/133-252/133-253/133-259/133-260/133-261/133-269/133-271/133-272/133-273/133-274/133-275/133-276/133-277/133-278/133-279/133-280/133-281/133-282/133-283/133-286/133-287/133-288/133-289/133-290 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the PWBA CONT AIO Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Replace the PWBA CONT AIO. (Removal 64/Replacement 58)	End of work.

FIP-1. 46 Codec Error 033-501 / Communication 033-763

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) IIT ASSY SUB (PL10.9.2)		
1	Checking the error Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Go to step 3.	End of work.
3	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Go to step 4.	End of work.
4	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when faxing?	Go to step 5.	End of work.
5	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when faxing?	Replace the IIT ASSY SUB. Removal 59/ Replacement 2)	End of work.

FIP-1. 47 Codec Error 033-510/033-520/033-521/033-522/033-523/033-524/033-525/033-526/033-768/033-769/033-770/033-771/033-772/033-773/033-786

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking the firmware version Is the firmware the current version? Checked by [System Setting] of the [Reports] on the [Setup].	Go to step 3.	Download the firmware from the DELL web site.
3	Checking the printer setting Enter the [Fax/Scanner Diag] of the Diagnosis. Is the [G3M RX Coding] value in the [Fax Parameter] of the [Parameter] the [MMR]?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	Set the [G3M RX Coding] value to the [MMR].

FIP-1. 48 Communication 033-511/033-782/033-799/034-508/035-702/035-704/035-705/035-708/035-709/035-710/035-716/035-717/035-728/035-729/035-737/035-739/035-740/035-742

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) PWBA FAX (PL10.6.9)		
1	Checking the error Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking the telephone line connection Reconnect the telephone line connector. Does the error still occur when faxing?	Go to step 3.	End of work.
3	Checking the receiving side fax Send the fax data to known good fax machine. Does the error still occur when faxing?	Go to step 4.	END, check the receiving side fax machine.
4	Checking after replacing the PWBA FAX Replace the PWBA FAX. (Removal 23/Replacement 37) Does the error still occur when faxing?	Go to step 5.	End of work.
5	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Replace the PWBA CONT AIO. (Removal 64/Replacement 58)	End of work.

FIP-1. 49 Communication 033-512/033-753/033-754/033-755/033-756/033-757/033-758/033-759/033-760/033-761/035-706/035-792

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking the telephone line connection Reconnect the telephone line connector. Does the error still occur when faxing?	Go to step 3.	End of work.
3	Checking the printer setting Set the [Capability V34] of the [FAX Parameter] in the [Parameter] of the [Fax/Scanner Diag] to the [Disable]. Does the error still occur when faxing?	Go to step 4.	End of work.
4	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Replace the PWBA CONT AIO. (Removal 64/Replacement 58)	End of work.

FIP-1. 50 Password Error 033-517

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking the password Is the password correct?	Go to step 3.	Set the correct password.
3	Checking the printer setting Set the [Panel Lock Set] of the [Panel Lock] in the [Secure Settings] to the [Disable]. Does the error still occur when executing the D-FAX?	Replace the PWBA CONT AIO (Removal 24/ Replacement 36)	Set the [Panel Lock Set] of the [Panel Lock] in the [Secure Settings] to the [Enable]. If the error occurred again, replace the PWBA CONT AIO.

FIP-1. 51 Communication 033-751/033-764/035-730 / 133-254 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) PWBA FAX (PL10.6.9)		
1	Checking the error Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Go to step 3.	End of work.
3	Checking after replacing the PWBA FAX Replace the PWBA FAX. (Removal 23/Replacement 37) Does the error still occur when faxing?	Replace the PWBA CONT AIO. (Removal 64/Replacement 58)	End of work.

FIP-1. 52 Busy 033-752 / Invalid Data 034-799 / No Dial Tone 035-746

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Does the error still occur when turning off and on the power?	Go to step 2.	End of work.
2	Checking the error Check that the telephone line is not busy. Set the known good fax number manually. Does the error still occur when faxing?	Go to step 3.	End of work.
3	Checking the printer setting Is the [Country] of [Fax setting] on the [Admin Menu] correct?	Go to step 4.	Set the [Country] correctly.
4	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Go to step 5.	End of work.
5	Checking the error Check that the telephone line is not busy. Call the known good fax number automatically. Does the error still occur when faxing?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 53 Communication 033-762

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Turn off and on the power. Does the error still occur when receiving the fax?	Go to step 2.	End of work.
2	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Go to step 3.	End of work.
3	Checking the fax setting Is the [Junk Fax Setup] of the [Fax settings] the [On]?	Go to step 4.	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)
4	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when receiving the fax?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 54 Buffer 033-775/033-777/033-784

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the PWBA CONT AIO Turn off and on the power. Does the error still occur when receiving fax?	Go to step 2.	End of work.
2	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Replace the PWBA CONT AIO. (Removal 64/Replacement 58)	End of work.

FIP-1. 55 Communication 034-515 / No Answer 035-718 / 134-211 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) PWBA FAX (PL10.6.9)		
1	Checking the PWBA CONT AIO Turn off and on the power. Does the error still occur when receiving fax?	Go to step 2.	End of work.
2	Checking the telephone line connection Reconnect the telephone line connector. Does the error still occur when receiving fax?	Go to step 3.	End of work.
3	Checking the sendin side fax Receive the fax data from known good fax machine. Does the error still occur when receiving fax?	Go to step 4.	END, check the sending side fax machine.
4	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Go to step 5.	End of work.
5	Checking after replacing the PWBA FAX Replace the PWBA FAX. (Removal 23/Replacement 37) Does the error still occur when receiving fax?	Replace the PWBA CONT AIO. (Removal 64/Replacement 58)	End of work.

FIP-1. 56 No Answer 035-701 / Communication 035-720 / Busy 035-781

Step	Check	Remedy	
		Yes	No
	Possible causative parts: CONSOLE ASSY PANEL (PL10.2.2) PWBA CONT AIO (PL10.6.6)		
1	Checking the PWBA CONT AIO Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking the error Check that the telephone line is not busy. Set the known good fax number manually. Does the error still occur when faxing?	Go to step 3.	End of work.
3	Checking the printer setting Are these settings correct? The [Line Type] of the [Fax Settings] on the [Admin Menu]. The [Tone/Pulse] of the [Fax Settings] on the [Admin Menu]. The [Country] of the [Fax setting] on the [Admin Menu].	Go to step 4.	Set the menu correct.
4	Checking the firmware Click the [Updater] of the [Quick Launch Utility] on your PC. Does the error still occur after uploading the firmware?	Go to step 5.	End of work.
5	Checking after replacing the PWBA FAX Replace the PWBA FAX. (Removal 23/Replacement 37) Does the error still occur when receiving fax?	Replace the PWBA CONT AIO. (Removal 64/Replacement 58)	End of work.

FIP-1. 57 062-311/062-321/062-360/062-371/117-352 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) IIT ASSY SUB (PL10.9.2)		
1	Checking the error Does the error still occur when turning off and on the power?	Go to step 2.	End of work.
2	Checking the connector connection Reseat the connectors (P/J 1001 and 1002) on the PWBA CONT AIO. Does the error still occur when turning off and on the power?	Go to step 3.	End of work.
3	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when turning off and on the power?	Replace the IIT ASSY SUB (Removal 59/ Replacement 2)	End of work.

FIP-1. 58 062-320 Restart Printer / Memory Full 062-324

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6) IIT ASSY SUB (PL10.9.2)		
1	Checking the error Does the error still occur when scanning?	Go to step 2.	End of work.
2	Checking the connector connection Reseat the connectors (P/J 1001 and 1002) on the PWBA CONT AIO. Does the error still occur when scanning?	Go to step 3.	End of work.
3	Checking the file data in the printer Print or clear the stored files and data at the printer memory. Does the error still occur when scanning?	Go to step 4.	End of work.
4	Checking the printer setting Is the [Color] of the [Scan Defaults] on the [Scan] of the [Defaults Settings] the [Color (Photo)]?	Set to the [Color].	Go to step 5.
5	Checking the printer setting Is the [Resolution] of the [Scan Defaults] on the [Scan] of the [Defaults Settings] the [600]?	Set to the default value.	Go to step 6.
6	Checking after replacing the IIT ASSY SUB. (Removal 59/ Replacement 2) Does the error still occur when scanning?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 59 062-322/062-393 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Does the error still occur when turning off and on the power?	Go to step 2.	End of work.
2	Checking the connector connection Reseat the connectors (P/J 1001 and 1002) on the PWBA CONT AIO. Does the error still occur when faxing?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 60 062-323 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Wait for five seconds and turn ON the power after the power is turned OFF. Does the error still occur?	Go to step 2.	End of work.
2	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when turning off and on the power?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

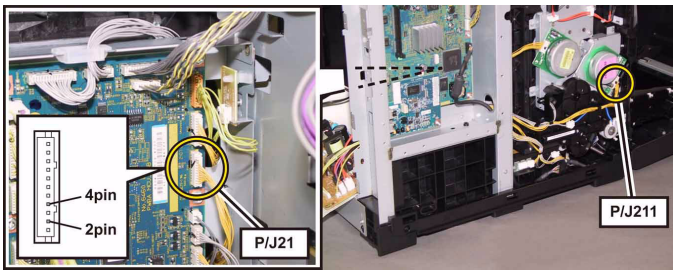
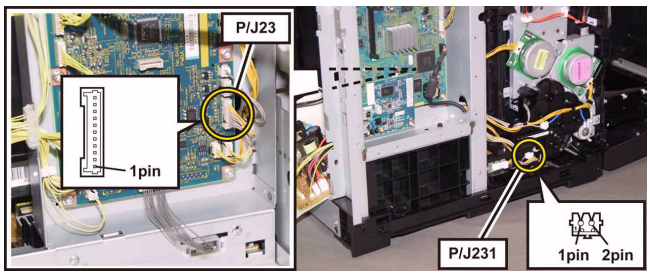
FIP-1. 61 Confirm 062-790

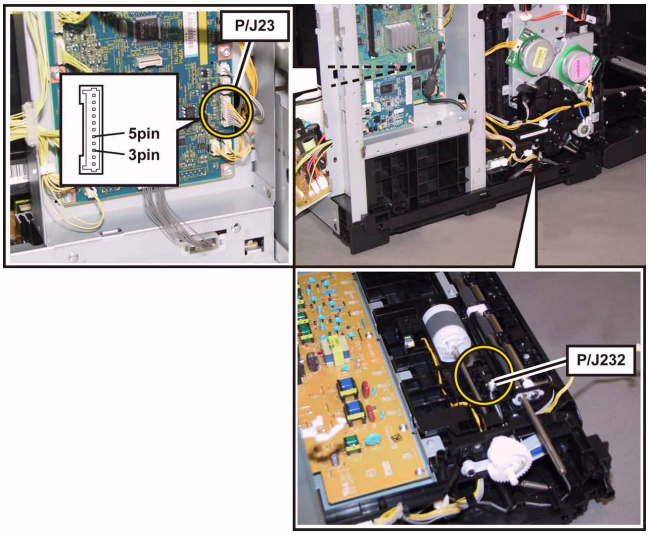
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO(PL10.6.6)		
1	Checking the error Does the error message disappear within 70 seconds automatically, or disappear after pressing the "✓" key?	Go to step 2.	Go to step 4.
2	Checking the error Does the error message still occur when copying, scanning, or faxing the original?	Go to step 3.	Go to step 4.
3	Checking the original Print the Windows test page. Does the error message still occur when copying, scanning or faxing the Windows test page?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.
4	Checking the error Turn off and on the power. Does the error message still occur when copying, scanning, or faxing the original?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

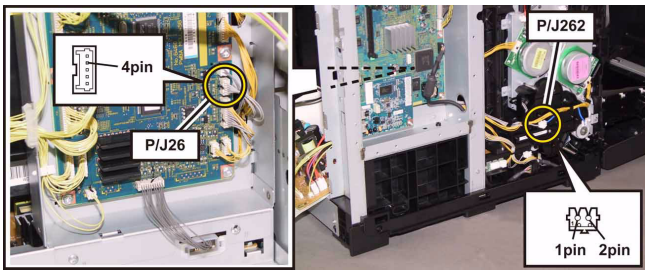
FIP-1. 62 Paper Jam 071-100/077-102

Step	Check	Remedy	
		Yes	No
	Possible causative parts: CASSETTE ASSY 250 (PL2.1.1) SEPARATOR ROLLER ASSEMBLY (PL2.1.5) CLUTCH ASSY DRV (PL3.1.1) SOLENOID FEED (PL3.1.11) ROLL ASSY FEED (PL3.2.4) ACTUATOR REGI ROLL (PL3.2.8) ACTUATOR REGI IN (PL3.2.11) SENSOR PHOTO (PL3.2.13) DRIVE ASSY MAIN (PL7.1.2) DRIVE ASSY PH (PL7.1.4) HARN ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7) HARN ASSY MAIN MOT (PL10.8.7) HARN ASSY KSNR REGCL (PL10.8.9)		
1	Checking the paper condition Is the paper in the Tray 1 wrinkled or damaged?	Replace the paper with a new and dry one, then go to step 2.	Go to step 3.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking after reloading a new paper Reload a new paper in the Tray 1. Does the error still occur when printing?	Go to step 4.	End of work.
4	Checking the COVER ASSY FRONT for latching Open and close the COVER ASSY FRONT, and then latch correctly. Does the error still occur when printing?	Go to step 5.	End of work.
5	Checking the Main Motor (DRIVE ASSY MAIN) for operation Does the Main Motor (DRIVE ASSY MAIN) operate properly? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 6.	Go to step 18.
6	Checking the DRIVE ASSY PH for operation Does the ROLL ASSY FEED, ROLL ASSY REGI and ROLL REGI METAL rotate properly? Checked by [Digital Output]-[DO-0B] of the [IOT Diag] on the [Printer] of the diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 7.	Reseat or replace the DRIVE ASSY PH. (Refer to Removal 32/ Replacement 28.)
7	Checking the paper feeding position Is the paper not fed from the Tray 1?	Go to step 8.	Go to step 12.
8	Checking after resetting the Guide Sides and End Guide on the Tray 1 Reset the Guide Sides and End Guide, and reseat the Tray 1 to the printer correctly. Does the error still occur when printing?	Go to step 9.	End of work.

Step	Check	Remedy	
		Yes	No
9	Checking the SEPARATOR ROLLER ASSEMBLY on the Tray 1 for shape and rotation Pull the Tray 1 out from the printer. Is the SEPARATOR ROLLER ASSEMBLY not contaminated and/or damaged, and rotated smoothly?	Go to step 10.	Replace the SEPARATOR ROLLER ASSEMBLY. (Refer to Removal 2/ Replacement 58.)
10	Checking the ROLL ASSY FEED for shape and rotation Pull the Tray 1 out from the printer. Is the ROLL ASSY FEED not contaminated and/or damaged, and rotated smoothly?	Go to step 11.	Replace the ROLL ASSY FEED. (Refer to Removal 4/ Replacement 56.)
11	Checking the Cassette Feed Solenoid (SOLENOID FEED) for operation Does the Cassette Feed Solenoid (SOLENOID FEED) operate properly? Checked by [Digital Output]-[DO-2F] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Replace the CASSETTE ASSY 250. (Refer to Removal 1/ Replacement 59.)	Go to step 21.
12	Checking the paper lead edge staying position Does the paper lead edge stay before the ROLL ASSY REGI and ROLL REGI METAL?	Go to step 13.	The paper lead edge stay after the ROLL ASSY REGI and ROLL REGI METAL, then go to step 16.
13	Checking the paper transfer path between the ROLL ASSY FEED and ROLL ASSY REGI. Are there any obstacles on the paper transfer path?	Remove the obstacles or stains from the paper transfer path.	Go to step 14.
14	Checking the ACTUATOR REGI IN for shape and operation Remove the CHUTE LOW (PL3.2.27) once to check the shape and operation. Are the shape and operation of the ACTUATOR REGI IN normal?	Go to step 15.	Reseat the ACTUATOR REGI IN. If broken or deformed, replace it.
15	Checking the Regi. Sensor (SENSOR PHOTO) for operation Does the number on the screen increase by one, when the actuator (ACTUATOR REGI IN) is operated? Remove the CHUTE LOW (PL3.2.27) once to check the operation. Checked by [Digital Input]-[DI-02] of [IOT Diag] in [Printer Diag] of diagnosis.	Go to step 16.	Go to step 25.
16	Checking the Regi. Clutch (CLUTCH ASSY DRV) for operation, and ROLL ASSY REGI and ROLL REGI METAL for rotation Checked by [Digital Output]-[DO-00 and 29] of [IOT Diag] in [Printer Diag] of diagnosis. Does the Regi. Clutch (CLUTCH ASSY DRV) operate properly, and the ROLL ASSY REGI and ROLL REGI METAL rotate? During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 17.	Go to step 29.

Step	Check	Remedy	
		Yes	No
17	Checking the ACTUATOR REGI ROLL for shape and operation Remove the CHUTE LOW (PL3.2.27) once to check the shape and operation. Are the shape and operation of the ACTUATOR REGI ROLL normal?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Reseat the ACTUATOR REGI ROLL. If broken or deformed, replace it with a new one.
18	Checking the connectors for connection Check the connections between the PWBA MCU and DRIVE ASSY MAIN (Main Motor). Are P/J21 and P/J211 connected correctly? 	Go to step 19.	Reconnect the connector(s) P/J21 and/or P/J211 correctly.
19	Checking the HARN ASSY MAIN MOT for continuity Disconnect J21 from the PWBA MCU. Disconnect J211 from the DRIVE ASSY MAIN. Is each cable of J21 <=> J211 continuous?	Go to step 20.	Replace the HARN ASSY MAIN MOT.
20	Checking the power to the DRIVE ASSY MAIN Disconnect J21 from the PWBA MCU. Are the voltages across J21-2pin/J21-4pin <=> ground on the PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed?	Replace the DRIVE ASSY MAIN. (Refer to Removal 33/ Replacement 27.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
21	Checking the connectors of the SOLENOID FEED (Cassette Feed Solenoid) for connection Check the connections between the PWBA MCU and SOLENOID FEED. Are P/J23 and P/J231 connected correctly? 	Go to step 22.	Reconnect the connector(s) P/J23 and/or P/J231 correctly.
22	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect P231 from the SOLENOID FEED. Is each cable of J23 <=> P231 continuous?	Go to step 23.	Replace the HARN ASSY L SIDE.
23	Checking the power to the SOLENOID FEED Disconnect J23 from the PWBA MCU. Is the voltage across P23-1pin <=> ground on the PWBA MCU, about +24 VDC when the Interlock Switch (HARN ASSY INTERLOCK) is pushed?	Go to step 24.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

Step	Check	Remedy	
		Yes	No
24	Checking the SOLENOID FEED for resistance Disconnect P/J231 of the SOLENOID FEED. Is the resistance across J231-1 and J231-2 about 96 ohm?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SOLENOID FEED. (Refer to Removal 36/ Replacement 24.)
25	Checking the connectors of the SENSOR PHOTO (Regi Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J232 connected correctly? 	Go to step 26.	Reconnect the connector(s) P/J23 and/or P/J232 correctly.
26	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J232 from the SENSOR PHOTO. Is each cable of J23 <=> J232 continuous?	Go to step 27.	Replace the HARN ASSY L SIDE.
27	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-3pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 28.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
28	Checking the SENSOR PHOTO for operation Check the voltage across J23-5pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the actuator (ACTUATOR REGI IN) is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.

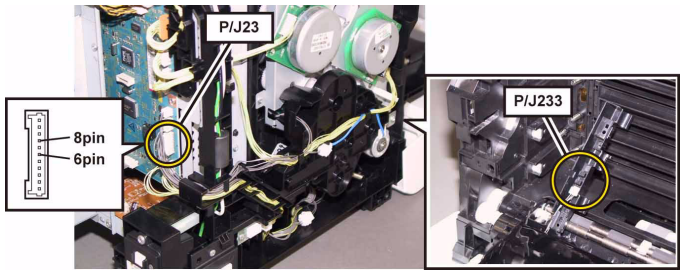
Step	Check	Remedy	
		Yes	No
29	Checking the connectors of the CLUTCH ASSY DRV (Regi Clutch) for connection Check the connections between the PWBA MCU and CLUTCH ASSY DRV. Are P/J26 and P/J262 connected correctly? 	Go to step 30.	Reconnect the connector(s) P/J26 and/or P/J262 correctly.
30	Checking the HARN ASSY KSNR REGCL for continuity Disconnect J26 from the PWBA MCU. Disconnect P262 from the CLUTCH ASSY DRV. Is each cable of J26 <=> P262 continuous?	Go to step 31.	Replace the HARN ASSY KSNR REGCL.
31	Checking the power to the CLUTCH ASSY DRV Disconnect J26 from the PWBA MCU. Is the voltage across P26-4pin <=> ground on the PWBA MCU, about +24 VDC when the Interlock Switch (HARN ASSY INTERLOCK) is pushed?	Go to step 32.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
32	Checking the CLUTCH ASSY DRV for resistance Disconnect P/J262 of the CLUTCH ASSY DRV. Is the resistance across J262-1 and J262-2 approximately 280-ohm?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the CLUTCH ASSY DRV. (Refer to Removal 36/ Replacement 24.)

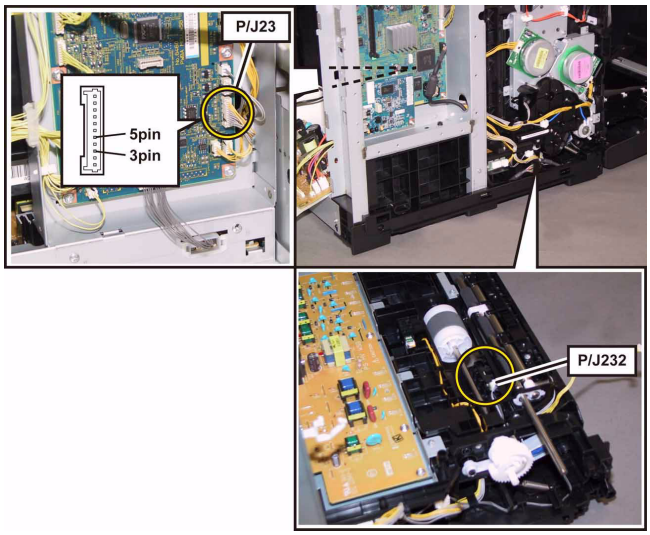
FIP-1. 63 Insert Output 071-920 / 071-921

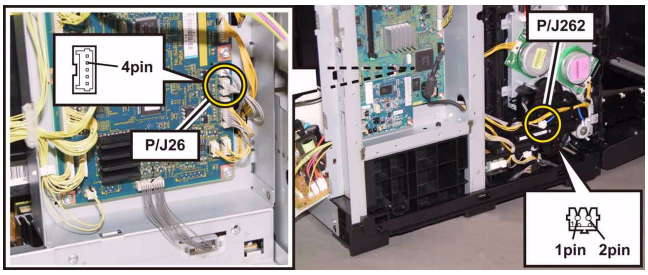
Step	Check	Remedy	
		Yes	No
	Possible causative parts: No Paper Sensor (PL3.2.13) HARN ASSY L SIDE (PL10.4.18) PWBA MCU(PL10.7.7)		
1	Checking the operation Did you insert the paper into the paper cassette at side 2 printing?	Go to step 2.	Insert the paper into the paper cassette.
2	Checking the customer operation Did you insert the paper cassette into the printer until it stopped?	Go to step 3.	Set the paper cassette correctly.
3	Checking the customer operation Did you set the correct paper to the paper cassette?	Go to step 4.	Set the paper to the paper cassette.
4	Checking the No Paper Sensor Does the number on the screen increase by one, when the actuator (ACTUATOR NO PAPER) of the Cassette No Paper Sensor (SENSOR PHOTO) is operated? Checked by [Digital Input]-[DI-01] of the [IOT Diag] on the [Printer] of the diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 5.
5	Checking the connectors of the SENSOR PHOTO (Cassette No Paper Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J234 connected correctly?	Go to step 6.	Reconnect the connector(s) P/J23 and/or P/J234 correctly.
6	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J234 from the SENSOR PHOTO. Is each cable of J23 <=> J234 continuous?	Go to step 7.	Replace the HARN ASSY L SIDE.
7	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-9pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 8.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
8	Checking the SENSOR PHOTO for operation Check the voltage across J23-11pin <=> ground on the PWBA MCU. Does the voltage change, when the ACTUATOR NO PAPER is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the No paper Sensor.

FIP-1. 64 Paper Jam 075-100

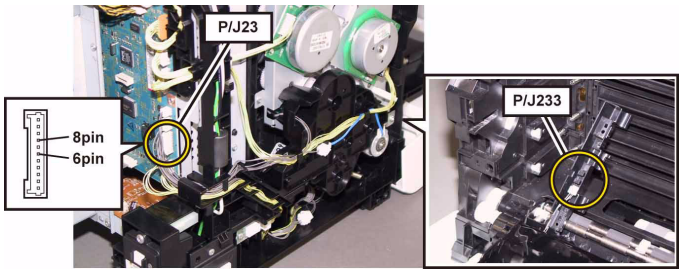
Step	Check	Remedy	
		Yes	No
	Possible causative parts: CLUTCH ASSY DRV (PL3.1.1) ACTUATOR REGI ROLL (PL3.2.8) SENSOR PHOTO (PL3.2.13) ACTUATOR SSI (PL3.2.14) DRIVE ASSY MAIN (PL7.1.2) DRIVE ASSY PH (PL7.1.4) HARN ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7) HARN ASSY MAIN MOT (PL10.8.7) HARN ASSY KSNR REGCL (PL10.8.9)		
1	Checking the paper size Does the using paper size meet the specification?	Go to step 3.	Use the paper that meets the specifications, then go to step 2.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking the paper condition Is the paper in the SSF wrinkled or damaged?	Replace the paper with a new and dry one, then go to step 4.	Go to step 5.
4	Does the error still occur when printing?	Go to step 6.	End of work.
5	Checking after reloading a new paper Reload a new paper in the SSF. Does the error still occur when printing?	Go to step 6.	End of work.
6	Checking the COVER ASSY FRONT for latching Open and close the COVER ASSY FRONT, and then latch correctly. Does the error still occur when printing?	Go to step 7.	End of work.
7	Checking the DRIVE ASSY MAIN for operation Does the ROLL ASSY FEED rotate properly? Checked by [Digital Output]-[DO-0] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 8.	Reseat or replace the DRIVE ASSY MAIN. (Refer to Removal 33/ Replacement 27.)
8	Checking the paper lead edge staying position Does the paper lead edge stay before the ROLL ASSY REGI and ROLL REGI METAL?	Go to step 9.	The paper lead edge stay after the ROLL ASSY REGI and ROLL REGI METAL, then go to step 14.
9	Checking after resetting the guide sides of the SSF Reset the side guides. Does the error still occur when printing?	Go to step 10.	End of work.
10	Checking the paper transfer path between the SSF paper loading window and Regi.Sensor Are there any obstacles on the paper transfer path?	Remove the obstacles or stain from the paper transfer path, then go to step 11.	Go to step 12.
11	Does the error still occur when printing?	Go to step 12.	End of work.

Step	Check	Remedy	
		Yes	No
12	Checking the ACTUATOR SSI for shape and operation Remove the CHUTE LOW (PL3.2.27) once to check the operation. Are the shape and operation of the ACTUATOR SSI normal?	Go to step 13.	Reseat the ACTUATOR SSI. If broken or damaged, replace the ACTUATOR SSI.
13	Checking the SSF No Paper Sensor (SENSOR PHOTO) for operation Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the number on the screen increase by one, when the actuator (ACTUATOR SSI) of the SSF No Paper Sensor (SENSOR PHOTO) is operated? Checked by [Digital Input]-[DI-0] of [IOT Diag] in [Printer Diag] of diagnosis.	Go to step 14.	Go to step 17.
14	Checking the Regi. Clutch (CLUTCH ASSY DRV) for operation, and ROLL ASSY REGI and ROLL REGI METAL for rotation Checked by [Digital Output]-[DO-0 and 29] of [IOT Diag] in [Printer Diag] of diagnosis. Does the Regi. Clutch (CLUTCH ASSY DRV) operate properly, and the ROLL ASSY REGI and ROLL REGI METAL rotate? During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 15.	Go to step 26.
15	Checking the ACTUATOR REGI ROLL for shape and operation Remove the CHUTE LOW (PL3.2.27) once to check the shape and operation. Are the shape and operation of the ACTUATOR REGI ROLL normal?	Go to step 16.	Reseat the ACTUATOR REGI ROLL. If broken or deformed, replace it with a new one.
16	Checking the Regi. Sensor (SENSOR PHOTO) for operation Does the number on the screen increase by one, when the ACTUATOR REGI ROLL is operated? Remove the CHUTE LOW (PL3.2.27) once to check the operation. Checked by [Digital Input]-[DI-2] of [IOT Diag] in [Printer Diag] of diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 22.
17	Checking the connectors of the SENSOR PHOTO (SSF No Paper Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO (SSF No Paper Sensor). Are P/J23 and P/J233 connected correctly? 	Go to step 19.	Reconnect the connector(s) P/J23 and/or P/J233 correctly, then go to step 18.
18	Does the error still occur when printing?	Go to step 19.	End of work.

Step	Check	Remedy	
		Yes	No
19	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J233 from the SENSOR PHOTO. Is each cable of J23 <=> J233 continuous?	Go to step 20.	Replace the HARN ASSY L SIDE.
20	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-6pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 21.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
21	Checking the SENSOR PHOTO for operation Check the voltage across J23-8pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the ACTUATOR SSI is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.
22	Checking the connectors of the SENSOR PHOTO (Regi Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J232 connected correctly? 	Go to step 23.	Reconnect the connector(s) P/J23 and/or P/J232 correctly.
23	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J232 from the SENSOR PHOTO. Is each cable of J23 <=> J232 continuous?	Go to step 24.	Replace the HARN ASSY L SIDE.
24	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-3pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 25.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
25	Checking the SENSOR PHOTO for operation Check the voltage across J23-5pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the ACTUATOR REGI ROLL is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.

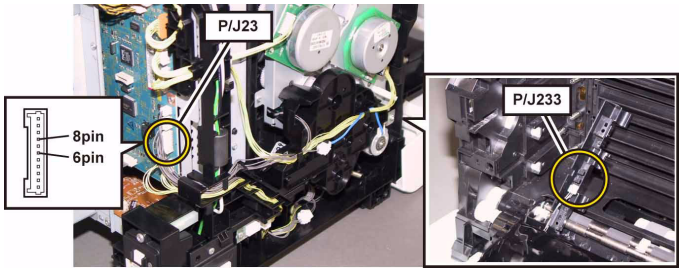
Step	Check	Remedy	
		Yes	No
26	Checking the connectors of the CLUTCH ASSY DRV (Regi Clutch) for connection Check the connections between the PWBA MCU and CLUTCH ASSY DRV. Are P/J26 and P/J262 connected correctly? 	Go to step 27.	Reconnect the connector(s) P/J26 and/or P/J262 correctly.
27	Checking the HARN ASSY KSNR REGCL for continuity Disconnect J26 from the PWBA MCU. Disconnect P262 from the CLUTCH ASSY DRV. Is each cable of J26 <=> P262 continuous?	Go to step 28.	Replace the HARN ASSY KSNR REGCL.
28	Checking the power to the CLUTCH ASSY DRV Disconnect J26 from the PWBA MCU. Is the voltage across P26-4pin <=> ground on the PWBA MCU, about +24 VDC when the Interlock Switch (HARN ASSY INTERLOCK) is pushed?	Go to step 29.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
29	Checking the CLUTCH ASSY DRV for resistance Disconnect P/J262 of the CLUTCH ASSY DRV. Is the resistance across J262-1 and J262-2 approximately 280-ohm?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the CLUTCH ASSY DRV. (Refer to Removal 36/ Replacement 24.)

FIP-1. 65 Paper Jam 075-101

Step	Check	Remedy	
		Yes	No
	Possible causative parts: SENSOR PHOTO (PL3.2.13) HARNESS ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7)		
1	Checking the customer operation Did the customer insert the paper to the SSF during print?	After print completion, insert the paper to the SSF.	Go to step 2.
2	Checking the SSF No Paper Sensor for operation Does the number on the screen increase by one, when the actuator (ACTUATOR SSI) is operated by paper. Checked by [Digital Output]-[DO-0] of [IOT Diag] in [Printer Diag] of diagnosis.	Go to step 3.	Go to step 4.
3	Checking the error Does the error still occur when printing?	Replace the PWBA MCU. (Refer to Removal 31/Replacement 29)	End of work.
4	Checking the connectors of the SENSOR PHOTO Paper Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J233 connected correctly? 	Go to step 6.	Reconnect the connector(s) P/J23 and/or P/J233 correctly, then go to step 5.
5	Does the error still occur when printing?	Go to step 6.	End of work.
6	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J233 from the SENSOR PHOTO. Is each cable of J23 <=> J233 continuous?	Go to step 7.	Replace the HARN ASSY L SIDE.
7	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-6pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 8.	Replace the PWBA MCU. (Refer to Removal 31/Replacement 29)
8	Checking the SENSOR PHOTO for operation Check the voltage across J23-8pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the ACTUATOR SSI is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.

FIP-1. 66 Paper Jam 075-102

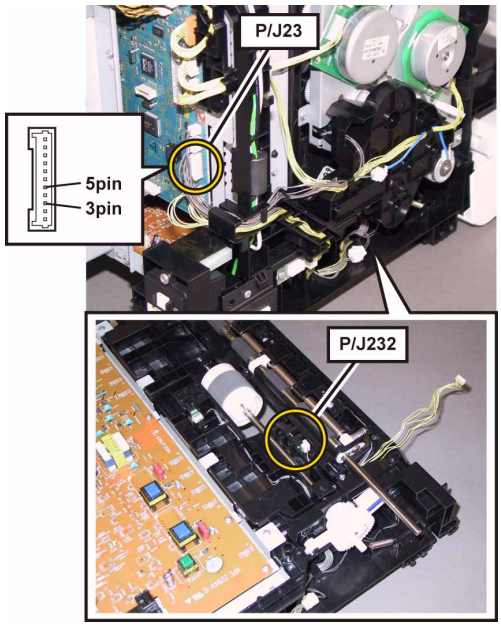
Step	Check	Remedy	
		Yes	No
	Possible causative parts: ROLL ASSY REGI (PL3.2.9) ROLL REGI METAL (PL3.2.10) SENSOR PHOTO (PL3.2.13) ACTUATOR SSI (PL3.2.14) SPRING REGI R M (PL3.2.24) SPRING REGI L M (PL3.2.29) HARN ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7)		
1	Was a paper pulled out from SSF forcibly?	Go to step 2.	Go to step 3.
2	Checking the printing Reload a paper to SSF. Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking after opening and closing the COVER ASSY FRONT Open and close the COVER ASSY FRONT, and then latch correctly. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking the ROLL ASSY REGI and ROLL REGI METAL for shape and operation Remove the PHD UNIT once to check the followings. Are ROLL ASSY REGI and ROLL REGI METAL seated correctly? Are they not contaminated and/or damaged, and rotated smoothly? Check these items by turning with your finger.	Go to step 5.	Clean or replace the defective ROLL(s).
5	Checking the ROLL ASSY REGI and ROLL REGI METAL for contacting Is the ROLL REGI METAL surely contacted with the ROLL ASSY REGI by the spring force on both sides of the ROLL REGI METAL? Check this item with your finger.	Go to step 6.	Replace the SPRING REGI R M and/or SPRING REGI L M.
6	Checking the ACTUATOR SSI for shape and operation Remove the CHUTE LOW (PL3.2.27) once to check the operation. Are the shape and operation of the ACTUATOR SSI normal?	Go to step 7.	Reseat the ACTUATOR SSI. If broken or damaged, replace the ACTUATOR SSI.
7	Checking the SSF No Paper Sensor (SENSOR PHOTO) for operation Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the number on the screen increase by one, when the actuator (ACTUATOR SSI) of the SSF No Paper Sensor (SENSOR PHOTO) is operated? Checked by [Digital Input]-[DI-0] of [IOT Diag] in [Printer Diag] of diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 8.

Step	Check	Remedy	
		Yes	No
8	Checking the connectors of the SENSOR PHOTO (SSF No Paper Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J233 connected correctly? 	Go to step 10.	Reconnect the connector(s) P/J23 and/or P/J233 correctly, then go to step 9.
9	Does the error still occur when printing?	Go to step 10.	End of work.
10	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J233 from the SENSOR PHOTO. Is each cable of J23 <=> J233 continuous?	Go to step 11.	Replace the HARN ASSY L SIDE.
11	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-6pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 12.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
12	Checking the SENSOR PHOTO for operation Check the voltage across J23-8pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the actuator of the SENSOR PHOTO is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.

FIP-1. 67 Insert Output 075-920 / 075-921

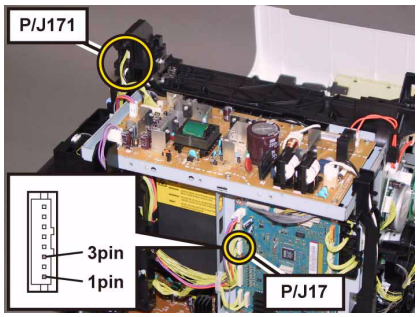
Step	Check	Remedy	
		Yes	No
	Possible causative parts: No Paper Sensor (PL3.2.13) HARN ASSY L SIDE (PL10.4.18) PWBA MCU(PL10.7.7)		
1	Checking the operation Did you insert the paper into the SSF at side 2 printing?	Go to step 2.	Insert the paper into the SSF.
2	Checking the operation Did you pull the paper out from the SSF when side 2 printing?	Print again.	Go to step 3.
3	Checking the operation Did you insert the correct paper into the SSF?	Go to step 4.	Insert the paper into the SSF.
4	Checking the SSF No Paper Sensor (SENSOR PHOTO) for operation Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the number on the screen increase by one, when the actuator (ACTUATOR SSI) of the SSF No Paper Sensor (SENSOR PHOTO) is operated? Checked by [Digital Input]-[DI-0] of the [IOT Diag] on the [Printer] of the diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 5.
5	Checking the connectors of the SENSOR PHOTO (SSF No Paper Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J233 connected correctly?	Go to step 6.	Reconnect the connector(s) P/J23 and/or P/J233 correctly.
6	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J233 from the SENSOR PHOTO. Is each cable of J23 <=> J233 continuous?	Go to step 7.	Replace the HARN ASSY L SIDE.
7	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-6pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 8.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
8	Checking the SENSOR PHOTO for operation Check the voltage across J23-8pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the ACTUATOR SSI is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the No paper Sensor.

FIP-1. 68 Paper Jam 077-100/077-101

Step	Check	Remedy	
		Yes	No
	Possible causative parts: ACTUATOR REGI IN (PL3.2.11) SENSOR PHOTO (PL3.2.13) HARN ASSY L SIDE (PL10.4.18) PWBA MCU(PL10.7.7)		
1	Checking the error Replace to known good paper. Does the error still occur when printing?	Go to step 2.	End of work.
2	Checking the Regi Rolls installation Open the Front Cover and check the Regi Rolls installation. Is the ROLL REGI METAL pressed against the ROLL ASSY REGI by the spring pressure?	Go to step 3.	Replace the printer.
3	Checking the Regi Clutch Does the clutch noise occur? Checked by [REGI CLUTCH Operation Check] of the [Diagnosis] tab in the [Tool Box].	Go to step 4.	Replace the printer.
4	Checking the Regi Sensor for operation Does the number on the screen increase by one, when the actuator (ACTUATOR REGI IN) is operated? Checked by [Digital Input]-[DI-2] of the [IOT Diag] on the [Printer] of the diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 5.
5	Checking the ACTUATOR REGI IN for shape and operation Remove the CHUTE LOW (PL3.2.27) once to check the shape and operation. Are the shape and operation of the ACTUATOR REGI IN normal?	Go to step 6.	Reseat the ACTUATOR REGI IN. If broken or deformed, replace it.
6	Checking the connectors of the SENSOR PHOTO (Regi Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J232 connected correctly? 	Go to step 7.	Reconnect the connector(s) P/J23 and/or P/J232 correctly.

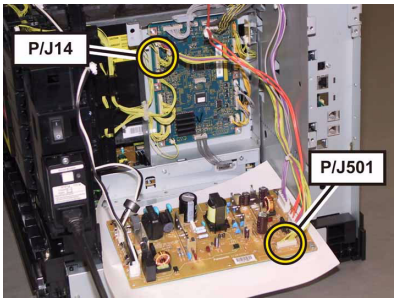
Step	Check	Remedy	
		Yes	No
7	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J232 from the SENSOR PHOTO. Is each cable of J23 <=> J232 continuous?	Go to step 8.	Replace the HARN ASSY L SIDE.
8	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-3pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 9.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
9	Checking the SENSOR PHOTO for operation Check the voltage across J23-5pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the actuator (ACTUATOR REGI IN) is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.

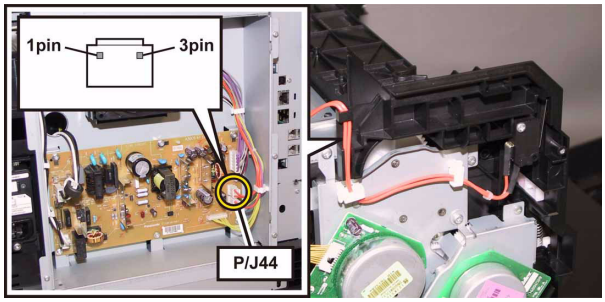
FIP-1. 69 Paper Jam 077-103/077-104/077-105

Step	Check	Remedy	
		Yes	No
	Possible causative parts: FUSER ASSY (PL6.1.1) PWBA MCU (PL10.7.7) HARN ASSY FUSER (PL10.8.6)		
1	Checking the error Replace to known good paper. Does the error still occur when printing?	Go to step 2.	End of work.
2	Checking the Exit Sensor for operation Does the number on the screen increase by one, when the actuator of the Exit Sensor in the FUSER ASSY is operated? Checked by [Digital Input]-[DI-3] of the [IOT Diag] on the [Printer] of the diagnosis. Warning: Start the operation after the FUSER ASSY has cooled down.	Go to step 7.	Go to step 3.
3	Checking the connectors of the Exit Sensor in the FUSER ASSY for connection Check the connections between the PWBA MCU and FUSER ASSY. Are P/J17 and P/J171 connected correctly? 	Go to step 4.	Reconnect the connector(s) P/J17 and/or P/J171 correctly.
4	Checking the HARN ASSY FUSER for continuity Remove the FUSER ASSY. Disconnect J17 from the PWBA MCU. Is each cable of J17 <=> P171 continuous? NOTE: P171 is attached to the frame.	Go to step 5.	Replace the HARN ASSY FUSER.
5	Checking the power to the Exit Sensor in the FUSER ASSY Disconnect the connector of J17 on the PWBA MCU. Is the voltage across J17-1pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 6.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
6	Checking the Exit Sensor for operation Check the voltage across J17-3pin <=> ground on the PWBA MCU. Does the voltage change, when the actuator of the Exit Sensor is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the FUSER ASSY.
7	Checking the Regi Rolls installation Open the Front Cover and check the Regi Rolls installation. Is the ROLL REGI METAL pressed against the ROLL ASSY REGI by the spring pressure?	Go to step 8.	Replace the printer.

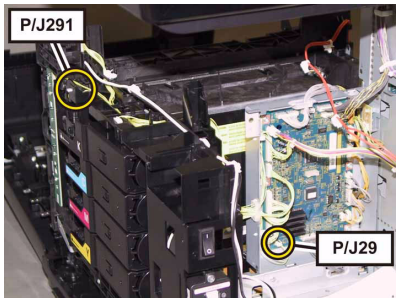
Step	Check	Remedy	
		Yes	No
8	Checking the Regi Clutch Does the clutch noise occur? Checked by [REGI CLUTCH Operation Check] of the [Diagnosis] tab in the [Tool Box].	Replace the printer.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1. 70 Close Front Cover 077-300

Step	Check	Remedy	
		Yes	No
	Possible causative parts: COVER ASSY FRONT (PL1.1.8) HARN ASSY INTERLOCK (PL10.6.4) PWBA LVPS (PL10.6.16) PWBA MCU (PL10.7.7) HARN ASSY LVPS (PL10.8.3)		
1	Checking the COVER ASSY FRONT (Front Cover) for shape Are there any damages on the COVER ASSY FRONT?	Replace the COVER ASSY FRONT. (Refer to Removal 46/ Replacement 14.)	Go to step 2.
2	Checking the COVER ASSY FRONT for latching Open and close the COVER ASSY FRONT. Is the COVER ASSY FRONT latched correctly?	Go to step 3.	Reseat or replace the COVER ASSY FRONT. (Refer to Removal 46/ Replacement 14.)
3	Checking the interlock switch for operation Does the number on the screen increase by one, when the COVER ASSY FRONT is closed and opened? Checked by [Digital Input]-[DI-07] of [IOT Diag] in [Printer Diag] of diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 4.
4	Checking the connectors for connection Check the connections between PWBA MCU and PWBA LVPS. Are P/J14 and P/J501 connected correctly? 	Go to step 6.	Reconnect the connector(s) P/J14 and/or P/J501 correctly, then go to step 5.
5	Does the error still occur when the power is turned OFF and ON?	Go to step 6.	End of work.
6	Checking the HARN ASSY LVPS for continuity Disconnect J14 from the PWBA MCU. Disconnect J501 from the PWBA LVPS. Is each cable of J14 <=> J501 continuous?	Go to step 7.	Replace the HARN ASSY LVPS.

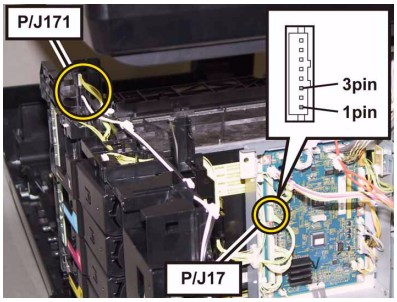
Step	Check	Remedy	
		Yes	No
7	Checking the power to the Interlock Switch Disconnect the connector of J44 on the PWBA LVPS. Is the voltage across P44-1 <=> ground on the PWBA LVPS, about +24 VDC? 	Go to step 8.	Replace the PWBA LVPS. (Refer to Removal 25/ Replacement 35.)
8	Checking the Interlock Switch for operation Check the voltage across P44-3pin <=> ground on the PWBA LVPS. Does the voltage change, when the Interlock Switch is turned ON/OFF?	Replace the PWBA LVPS. (Refer to Removal 25/ Replacement 35.)	Replace the HARN ASSY INTERLOCK. (Refer to Removal 27/ Replacement 33.)

FIP-1. 71 Close Side Door 077-301

Step	Check	Remedy	
		Yes	No
	Possible causative parts: COVER ASSY WINDOW TNR (PL1.1.7) SWITCH (PL5.1.9) HARN ASSY SIDE SW (PL5.1.27) PWBA MCU (PL10.7.7)		
1	Checking the COVER ASSY WINDOW TNR (Side Cover) for shape Are there any damages on the COVER ASSY WINDOW TNR?	Replace the COVER ASSY WINDOW TNR. (Refer to Removal 11/ Replacement 49.)	Go to step 2.
2	Checking the COVER ASSY WINDOW TNR for latching Open and close the COVER ASSY WINDOW TRN. Is the COVER ASSY WINDOW TNR latched correctly?	Go to step 3.	Reseat or replace the COVER ASSY WINDOW TNR. (Refer to Removal 11/ Replacement 49.)
3	Checking the Side R Switch (SWITCH) for operation Does the number on the screen increase by one, when the COVER ASSY WINDOW TRN is closed and opened? Checked by [Digital Input]-[DI-06] of [IOT Diag] in [Printer Diag] of diagnosis.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 4.
4	Checking the HARN ASSY SIDE SW for continuity Disconnect J29 from the PWBA MCU. Disconnect J291 from the SIDE R SWITCH. Is each cable of J29 <=> J291 continuous? 	Go to step 5.	Replace the HARN ASSY SIDE SW.
5	Checking after replacing the Side R Switch (SWITCH) Replace the Side R Switch (SWITCH). (Refer to Removal 21/ Replacement 39.) Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

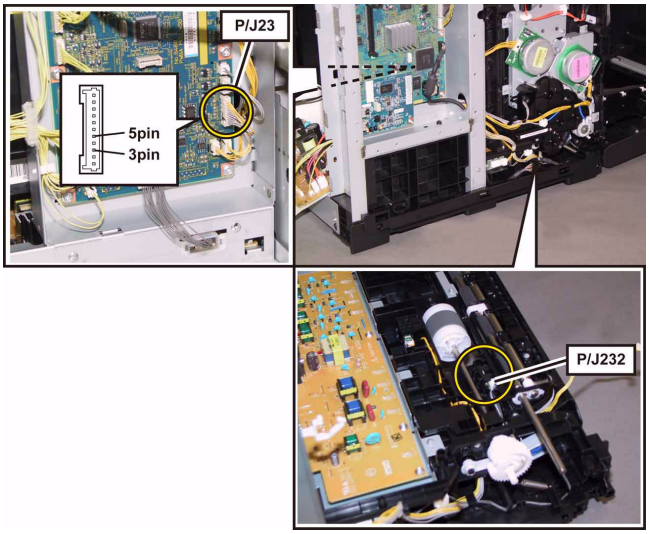
FIP-1. 72 Paper Jam 077-900

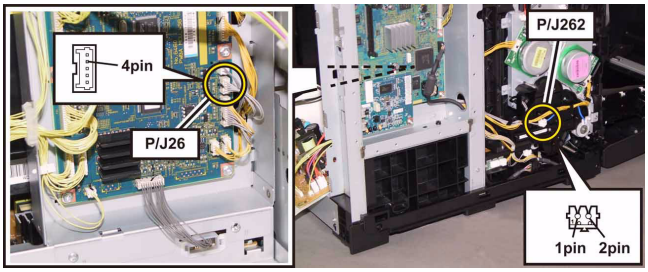
Step	Check	Remedy	
		Yes	No
	Possible causative parts: FUSER ASSY (PL6.1.1) PWBA MCU (PL10.7.7) HARN ASSY FUSER (PL10.8.6)		
1	Checking the paper feeding Was a paper fed from SSF?	Go to step 2.	Go to step 4.
2	Checking the paper setting Was the paper correctly set to SSF without slant?	Go to step 4.	Set the paper to SSF correctly, and go to step 3.
3	Does the error still occur when printing?	Go to step 4.	End of work.
4	Checking the paper condition Is the paper wrinkled or damaged?	Replace the paper with a new and dry one, then go to step 5.	Go to step 6.
5	Does the error still occur when printing?	Go to step 7.	End of work.
6	Checking after reloading a new paper Reload a new paper. Does the error still occur when printing?	Go to step 7.	End of work.
7	Checking the COVER ASSY FRONT for latching Open and close the COVER ASSY FRONT, and then latch correctly. Does the error still occur when printing?	Go to step 8.	End of work.
8	Checking the FUSER ASSY Are there any remaining paper and/or foreign substance in the FUSER ASSY? **Warning: Start the operation after the FUSER ASSY has cooled down.**	Remove the paper and/or substance, then go to step 9.	Go to step 9.
9	Checking after reseating the FUSER ASSY Reseat the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Does the error still occur when printing?	Go to step 10.	End of work.
10	Checking the Exit Sensor for operation Does the number on the screen increase by one, when the actuator of the Exit Sensor in the FUSER ASSY is operated? Checked by [Digital Input]-[DI-03] of [IOT Diag] in [Printer Diag] of diagnosis. **Warning: Start the operation after the FUSER ASSY has cooled down.**	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Go to step 11.

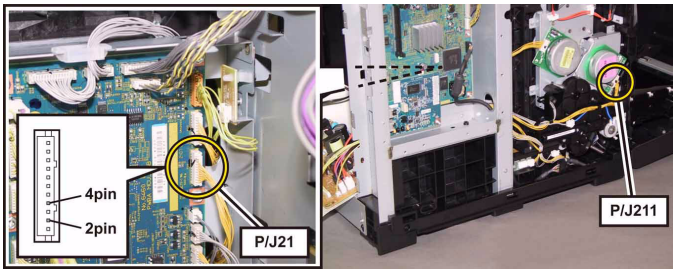
Step	Check	Remedy	
		Yes	No
11	Checking the connectors of the Exit Sensor in the FUSER ASSY for connection Check the connections between the PWBA MCU and FUSER ASSY. Are P/J17 and P/J171 connected correctly? 	Go to step 12.	Reconnect the connector(s) P/J17 and/or P/J171 correctly.
12	Checking the HARN ASSY FUSER for continuity Remove the FUSER ASSY. Disconnect J17 from the PWBA MCU. Is each cable of J17 <=> P171 continuous? **NOTE: P171 is attached to the frame.**	Go to step 13.	Replace the HARN ASSY FUSER.
13	Checking the power to the Exit Sensor in the FUSER ASSY Disconnect the connector of J17 on the PWBA MCU. Is the voltage across J17-1pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 14.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
14	Checking the Exit Sensor for operation Check the voltage across J17-3pin <=> ground on the PWBA MCU. Does the voltage change, when the actuator of the Exit Sensor is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the FUSER ASSY. (Refer to Removal 9/ Replacement 51.)

FIP-1. 73 Paper Jam 077-901

Step	Check	Remedy	
		Yes	No
	Possible causative parts: CLUTCH ASSY DRV (PL3.1.1) ACTUATOR REGI ROLL (PL3.2.8) ROLL ASSY REGI (PL3.2.9) ROLL REGI METAL (PL3.2.10) ACTUATOR REGI IN (PL3.2.11) SENSOR PHOTO (PL3.2.13) TRANSFER ASSY (PL6.1.7) DRIVE ASSY MAIN (PL7.1.2) HARN ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7) HARN ASSY MAIN MOT (PL10.8.7) HARN ASSY KSNR REGCL (PL10.8.9)		
1	Checking the paper size Does the using paper size meet the specification?	Go to step 3.	Use the paper that meets the specifications, then go to step 2.
2	Does the error still occur when printing?	Go to step 3.	End of work.
3	Checking the paper condition Is the paper wrinkled or damaged?	Replace the paper with a new and dry one, then go to step 4.	Go to step 5.
4	Does the error still occur when printing?	Go to step 6.	End of work.
5	Checking after reloading a new paper Reload a new paper. Does the error still occur when printing?	Go to step 6.	End of work.
6	Checking the COVER ASSY FRONT for latching Open and close the COVER ASSY FRONT, and then latch correctly. Does the error still occur when printing?	Go to step 7.	End of work.
7	Checking around the Regi Sensor Are there any remaining paper and/or foreign substance around the Regi Sensor?	Remove the paper and/or substance, then go to step 8.	Go to step 9.
8	Does the error still occur when printing?	Go to step 9.	End of work.
9	Checking the TRANSFER ASSY Are there any remaining paper and/or damage on the belt of the TRANSFER ASSY?	Remove the remaining paper. If the belt is damaged, replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	Go to step 10.
10	Checking the ROLL ASSY REGI and ROLL REGI METAL for shape and operation Remove the PHD UNIT once to check the followings. Are ROLL ASSY REGI and ROLL REGI METAL seated correctly? Also, are they not contaminated and/or damaged, and rotated smoothly? Check these items by turning with your finger.	Go to step 11.	Clean or replace the defective ROLL(s).

Step	Check	Remedy	
		Yes	No
11	Checking the ACTUATOR REGI IN and ACTUATOR REGI ROLL for shape and operation Remove the CHUTE LOW (PL3.2.27) once to check the following. Are the shape and operation of the ACTUATOR REGI IN and ACTUATOR REGI ROLL normal?	Go to step 12.	Reseat the ACTUATOR REGI IN and/or ACTUATOR REGI ROLL. If broken or deformed, replace it or they.
12	Checking the Regi. Sensor (SENSOR PHOTO) for operation Does the number on the screen increase by one, when the actuator (ACTUATOR REGI IN) of the Regi. Sensor (SENSOR PHOTO) is operated? Remove the CHUTE LOW (PL3.2.27) once to check the operation. Checked by [Digital Input]-[DI-02] of [IOT Diag] in [Printer Diag] of diagnosis.	Go to step 13.	Go to step 16.
13	Checking the Main Motor (DRIVE ASSY MAIN) for operation Does the Main Motor (DRIVE ASSY MAIN) operate properly? Checked by [Digital Output]-[DO-00] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 14.	Go to step 24.
14	Checking the Regi. Clutch (CLUTCH ASSY DRV) for operation, and ROLL ASSY REGI and ROLL REGI METAL for rotation Checked by [Digital Output]-[DO-00 and 29] of [IOT Diag] in [Printer Diag] of diagnosis. Does the Regi. Clutch (CLUTCH ASSY DRV) operate properly, and the ROLL ASSY REGI and ROLL REGI METAL rotate? During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 15.	Go to step 20.
15	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when printing? 	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

Step	Check	Remedy	
		Yes	No
16	Checking the connectors of the SENSOR PHOTO (Regi Sensor) for connection Check the connections between the PWBA MCU and SENSOR PHOTO. Are P/J23 and P/J232 connected correctly?	Go to step 17.	Reconnect the connector(s) P/J23 and/or P/J232 correctly.
17	Checking the HARN ASSY L SIDE for continuity Disconnect J23 from the PWBA MCU. Disconnect J232 from the SENSOR PHOTO. Is each cable of J23 <=> J232 continuous?	Go to step 18.	Replace the HARN ASSY L SIDE.
18	Checking the power to the SENSOR PHOTO Disconnect J23 from the PWBA MCU. Is the voltage across P23-3pin <=> ground on the PWBA MCU, about +3.3 VDC?	Go to step 19.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
19	Checking the SENSOR PHOTO for operation Check the voltage across 23-5pin <=> ground on the PWBA MCU. Remove the CHUTE LOW (PL3.2.27) once to check the operation. Does the voltage change, when the actuator of the SENSOR PHOTO is operated?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the SENSOR PHOTO.
20	Checking the connectors of the CLUTCH ASSY DRV (Regi Clutch) for connection Check the connections between the PWBA MCU and CLUTCH ASSY DRV (Regi Clutch). Are P/J26 and P/J262 connected correctly? 	Go to step 21.	Reconnect the connector(s) P/J26 and/or P/J262 correctly.
21	Checking the HARN ASSY KSNR REGCL for continuity Disconnect J26 from the PWBA MCU. Disconnect P262 from the CLUTCH ASSY DRV. Is each cable of J26 <=> P262 continuous?	Go to step 22.	Replace the HARN ASSY KSNR REGCL.
22	Checking the power to the CLUTCH ASSY DRV Disconnect J26 from the PWBA MCU. Is the voltage across P26-4pin <=> ground on the PWBA MCU, about +24 VDC when the Interlock Switch (HARN ASSY INTERLOCK) is pushed?	Go to step 23.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
23	Checking the CLUTCH ASSY DRV for resistance Disconnect P/J262 of the CLUTCH ASSY DRV. Is the resistance across J262-1 and J262-2 approximately 280-ohm?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	Replace the CLUTCH ASSY DRV. (Refer to Removal 36/ Replacement 24.)

Step	Check	Remedy	
		Yes	No
24	Checking the connectors for connection Check the connections between the PWBA MCU and DRIVE ASSY MAIN (Main Motor). Are P/J21 and P/J211 connected correctly? 	Go to step 25.	Reconnect the connector(s) P/J21 and/or P/J211 correctly.
25	Checking the HARN ASSY MAIN MOT for continuity Disconnect J21 from the PWBA MCU. Disconnect J211 from the DRIVE ASSY MAIN. Is each cable of J21 <=> J211 continuous?	Go to step 26.	Replace the HARN ASSY MAIN MOT.
26	Checking the power to the DRIVE ASSY MAIN Disconnect J21 from the PWBA MCU. Are the voltages across J21-2pin/J21-4pin <=> ground on the PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed?	Replace the DRIVE ASSY MAIN. (Refer to Removal 33/ Replacement 27.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

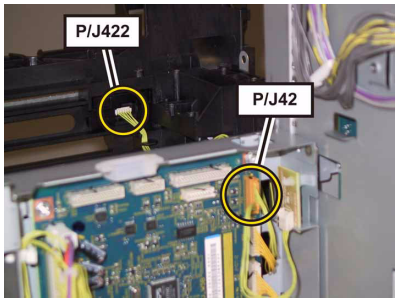
FIP-1. 74 Replace PHD Now 091-402/091-935

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) PWBA MCU (PL10.7.7)		
1	Checking the life counter value of the PHD UNIT Does the life count value show the near of the end?	Replace the PHD UNIT. (Refer to Removal 3/ Replacement 57.)	Go to step 2.
2	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 48.) **CAUTION: Be sure to pull eight sealing tapes out from a new PHD UNIT before installation.** Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

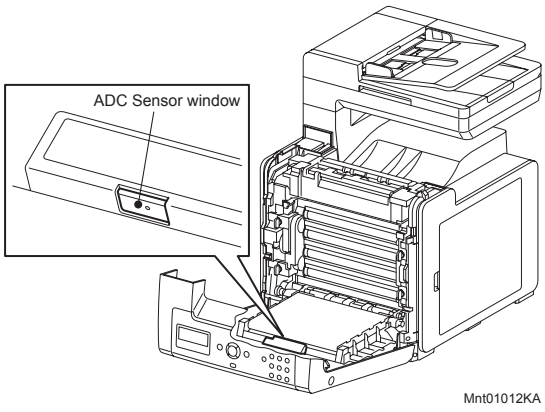
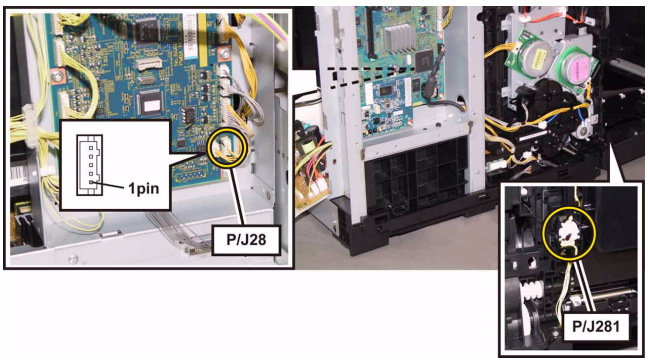
FIP-1. 75 Check PHD Unit 091-912

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) PWBA MCU (PL10.7.7)		
1	Checking the sealing tapes of the PHD UNIT staying Turn off the power, and open the COVER ASSY FRONT. Remove the PHD UNIT. Has the sealing tapes (total eight sealing tapes) been pulled out? After checking, reseat the PHD UNIT correctly.	Go to step 3.	Pull the sealing tapes out, then go to step 2.
2	Does the error still occur when the power is turned OFF and ON?	Go to step 3.	End of work.
3	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) **CAUTION: Be sure to pull eight sealing tapes out from a new PHD UNIT before installation.** Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

FIP-1. 76 Insert PHD Unit 091-972

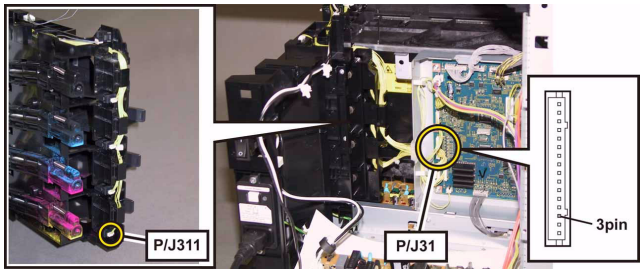
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) PWBA MCU (PL10.7.7) HARN ASSY PHD XPRO (PL10.8.11)		
1	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the connectors for connection Check the connectors between the PWBA MCU and PHD UNIT. Are P/J42 and P/J422 connected correctly? 	Go to step 4.	Reconnect the connector(s) P/J42 and/or P/J422 surly, then go to step 3.
3	Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking the HARN ASSY PHD XPRO for continuity Disconnect P422 from the PHD UNIT. Disconnect J42 from the PWBA MCU. Is each cable of P422 <=> J42 continuous?	Go to step 5.	Replace the HARN ASSY PHD XPRO.
5	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) **CAUTION: Be sure to pull eight sealing tapes out from a new PHD UNIT before installation.** Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

FIP-1. 77 Check CTD Unit 092-310/092-910

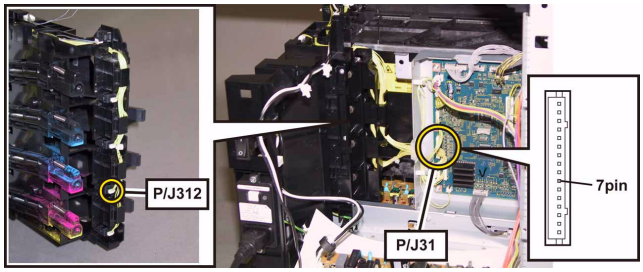
Step	Check	Remedy	
		Yes	No
	Possible causative parts: TRANSFER ASSY (PL6.1.7) HARN ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7)		
1	Turn OFF the power, and gently wipe the ADC Sensor window with a clean dry cloth or cotton swab. After wiping the window, close the COVER ASSY FRONT. Does the error still occur when the power is turned OFF and ON? 	Go to step 2.	End of work.
2	Checking the connectors for connection Check the connectors between the PWBA MCU and ADC Sensor. Are P/J28 and P/J281connected correctly? 	Go to step 4.	Reconnect the connector(s) P/J28 and/or P/J281 correctly, then go to step 3.
3	Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking the HARN ASSY L SIDE for continuity Disconnect J28 from the PWBA MCU. Disconnect J281 from the TRANSFER ASSY. Is each cable of J28 <=> J281 continuous?	Go to step 5.	Replace the HARN ASSY L SIDE.
5	Checking the surface of the belt on the TRANSFER ASSY Is the belt dirty?	Clean the belt with a clean dry cloth, then go to step 6.	Go to step 7.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.

Step	Check	Remedy	
		Yes	No
7	Checking after replacing the TRANSFER ASSY Replace the TRANSFER ASSY or ADC Sensor. (Refer to Removal 48/Replacement 12.) Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

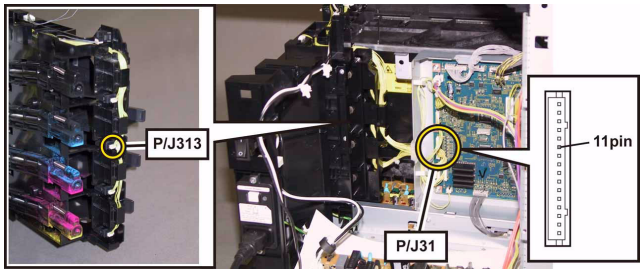
FIP-1. 78 CRUM ID 093-360

Step	Check	Remedy	
		Yes	No
	Possible causative parts: CONNECTOR CRUM (PL5.1.14) TONER CARTRIDGE (Y) (PL5.1.24) HARN ASSY TONER CRUM (PL5.1.26) PWBA MCU (PL10.7.7)		
1	Close the COVER ASSY WINDOW TNR correctly. Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the Toner Type Is the Dell Toner seated?	Go to step 3.	Change the Toner Type setting to Non-Dell Toner.
3	Checking after reseating the TONER CARTRIDGE (Y) Reseat the TONER CARTRIDGE (Y), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after replacing the TONER CARTRIDGE (Y) Replace the TONER CARTRIDGE (Y), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.
5	Checking the connector for connection Check the connectors between the PWBA MCU and CONNECTOR CRUM. Are P/J31 and P/J311 connected correctly? 	Go to step 7.	Reconnect the connector(s) P/J31 and/or P/J311 surly, then go to step 6.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the HARN ASSY TONER CRUM for continuity Disconnect J31 from the PWBA MCU. Disconnect J311 from the CONNECTOR CRUM. Is each cable of J31 <=> J311 continuous?	Go to step 8.	Replace the HARN ASSY TONER CRUM.
8	Checking the power to CONNECTOR CRUM Disconnect J31 from the PWBA MCU. Is the voltage across P31-3pin <=> ground on the PWBA MCU, about +3.3 VDC?	Replace the CONNECTOR CRUM. (Refer to DISPENSER ASSY Removal 42/Replacement 18)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

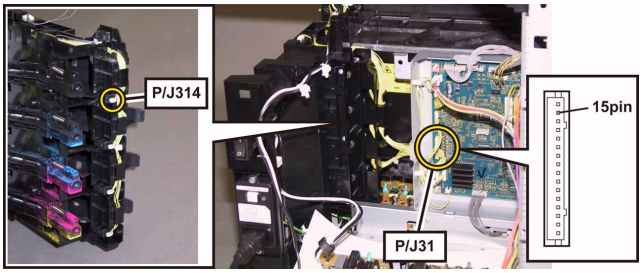
FIP-1. 79 CRUM ID 093-361

Step	Check	Remedy	
		Yes	No
	Possible causative parts: CONNECTOR CRUM (PL5.1.14) TONER CARTRIDGE (M) (PL5.1.23) HARN ASSY TONER CRUM (PL5.1.26) PWBA MCU (PL10.7.7)		
1	Close the COVER ASSY WINDOW TNR correctly. Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the Toner Type Is the Dell Toner seated?	Go to step 3.	Change the Toner Type setting to Non-Dell Toner.
3	Checking after reseating the TONER CARTRIDGE (M) Reseat the TONER CARTRIDGE (M), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after replacing the TONER CARTRIDGE (M) Replace the TONER CARTRIDGE (M), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.
5	Checking the connector for connection Check the connectors between the PWBA MCU and CONNECTOR CRUM. Are P/J31 and P/J312 connected correctly? 	Go to step 7.	Reconnect the connector(s) P/J31 and/or P/J312 surly, then go to step 6.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the HARN ASSY TONER CRUM for continuity Disconnect J31 from the PWBA MCU. Disconnect J312 from the CONNECTOR CRUM. Is each cable of J31 <=> J312 continuous?	Go to step 8.	Replace the HARN ASSY TONER CRUM.
8	Checking the power to CONNECTOR CRUM Disconnect J31 from the PWBA MCU. Is the voltage across P31-7pin <=> ground on the PWBA MCU, about +3.3 VDC?	Replace the CONNECTOR CRUM. (Refer to DISPENSER ASSY Removal 42/Replacement 18)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1. 80 CRUM ID 093-362

Step	Check	Remedy	
		Yes	No
	Possible causative parts: CONNECTOR CRUM (PL5.1.14) TONER CARTRIDGE (C) (PL5.1.22) HARN ASSY TONER CRUM (PL5.1.26) PWBA MCU (PL10.7.7)		
1	Close the COVER ASSY WINDOW TNR correctly. Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the Toner Type Is the Dell Toner seated?	Go to step 3.	Change the Toner Type setting to Non-Dell Toner.
3	Checking after reseating the TONER CARTRIDGE (C) Reseat the TONER CARTRIDGE (C), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after replacing the TONER CARTRIDGE (C) Replace the TONER CARTRIDGE (C), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.
5	Checking the connector for connection Check the connectors between the PWBA MCU and CONNECTOR CRUM. Are P/J31 and P/J313 connected correctly? 	Go to step 7.	Reconnect the connector(s) P/J31 and/or P/J313 surly, then go to step 6.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the HARN ASSY TONER CRUM for continuity Disconnect J31 from the PWBA MCU. Disconnect J313 from the CONNECTOR CRUM. Is each cable of J31 <=> J313 continuous?	Go to step 8.	Replace the HARN ASSY TONER CRUM.
8	Checking the power to CONNECTOR CRUM Disconnect J31 from the PWBA MCU. Is the voltage across P31-11pin <=> ground on the PWBA MCU, about +3.3 VDC?	Replace the CONNECTOR CRUM. (Refer to DISPENSER ASSY Removal 42/Replacement 18)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1. 81 CRUM ID 093-363

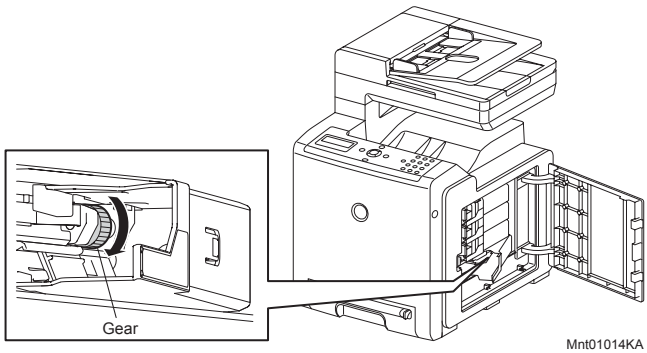
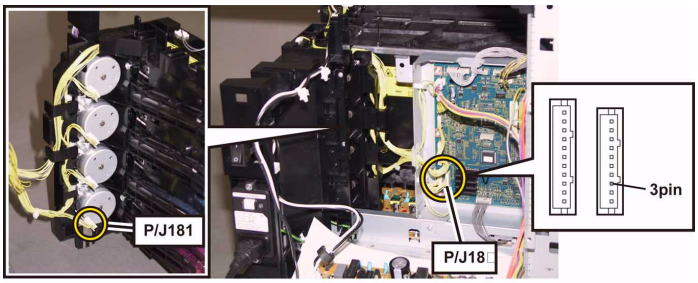
Step	Check	Remedy	
		Yes	No
	Possible causative parts: CONNECTOR CRUM (PL5.1.14) TONER CARTRIDGE (K) (PL5.1.21) HARN ASSY TONER CRUM (PL5.1.26) PWBA MCU (PL10.7.7)		
1	Close the COVER ASSY WINDOW TNR correctly. Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the Toner Type Is the Dell Toner seated?	Go to step 3.	Change the Toner Type setting to Non-Dell Toner.
3	Checking after reseating the TONER CARTRIDGE (K) Reseat the TONER CARTRIDGE (K), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after replacing the TONER CARTRIDGE (K) Replace the TONER CARTRIDGE (K), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.
5	Checking the connector for connection Check the connectors between the PWBA MCU and CONNECTOR CRUM. Are P/J31 and P/J314 connected correctly? 	Go to step 7.	Reconnect the connector(s) P/J31 and/or P/J314 surly, then go to step 6.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the HARN ASSY TONER CRUM for continuity Disconnect J31 from the PWBA MCU. Disconnect J314 from the CONNECTOR CRUM. Is each cable of J31 <=> J314 continuous?	Go to step 8.	Replace the HARN ASSY TONER CRUM.
8	Checking the power to CONNECTOR CRUM Disconnect J31 from the PWBA MCU. Is the voltage across P31-15pin <=> ground on the PWBA MCU, about +3.3 VDC?	Replace the CONNECTOR CRUM. (Refer to DISPENSER ASSY Removal 42/Replacement 18)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1. 82 093-423 Yellow Cartridge / 093-424 Magenta Cartridge / 093-425 Cyan Cartridge / 093-426 Black Cartridge / Replace Cart. 093-930/093-931/093-932/093-933/093-934/093-935/093-936/093-937

Step	Check	Remedy	
		Yes	No
	Possible causative parts: TONER CARTRIDGE (K) (PL5.1.21) TONER CARTRIDGE (C) (PL5.1.22) TONER CARTRIDGE (M) (PL5.1.23) TONER CARTRIDGE (Y) (PL5.1.24) PWBA MCU (PL10.7.7)		
1	Checking after replacing the Dell-TONER CARTRIDGE (Y/M/C/K) Replace the Dell-TONER CARTRIDGE (Y/M/C/K). (Refer to Removal 7/Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

FIP-1. 83 Low Density 093-919

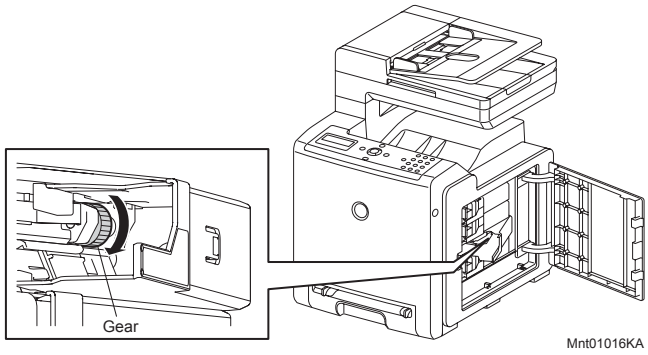
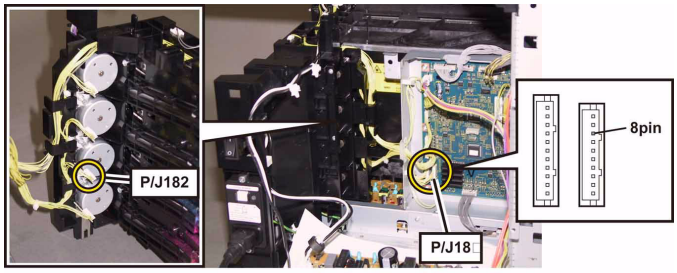
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) DISPENSER ASSY (PL5.1.1) FRAME ASSY MOT (PL5.1.2) MOTOR ASSY DISP (PL5.1.3) GEAR IDLER (PL5.1.6) GEAR IDLER AUG (PL5.1.7) GEAR IDLER AGI (PL5.1.8) TONER CARTRIDGE (Y) (PL5.1.24) HARN ASSY TNR MOT (PL5.1.25) TRANSFER ASSY (PL6.1.7) PWBA MCU (PL10.7.7)		
1	Checking the Toner Type Is the Dell Toner seated?	Go to step 2.	Go to step 5.
2	Checking the sealing tapes on the PHD UNIT staying Are there sealing tapes on the PHD UNIT? 	Pull the tape out.	Go to step 3.
3	Checking the life count value of the TONER CARTRIDGE (Y) Check the life count value of the TONER CARTRIDGE (Y) In [Parameter]-[Life Y Toner of [IOT Diag] in [Printer Diag] of diagnosis. Does the remainder value shows the near of the end? (Refer to Chapter 2 for details of the life counter value.)	Replace the TONER CARTRIDGE (Y), then go to step 4. (Refer to Removal 7/ Replacement 53.)	Go to step 7.
4	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
5	Checking the toner remainder in the Non-Dell Toner Cartridge (Y) Is the toner that remains in the Non-Dell Toner Cartridge (Y) a little?	Replace the Non-Dell Toner Cartridge (Y), then go to step 6.	Go to step 7.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the sealing tapes for yellow toner of the PHD UNIT staying Turn off the power, and open the COVER ASSY FRONT. Remove the PHD UNIT. Has the sealing tapes for yellow toner been pulled out? After checking, reseat the PHD UNIT.	Go to step 9.	Pull the sealing tapes out, then go to step 8.
8	Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.

Step	Check	Remedy	
		Yes	No
9	Checking after reseating the TONER CARTRIDGE (Y) Remove the TONER CARTRIDGE (Y), and shake it from side to side. Reseat the TONER CARTRIDGE (Y), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 10.	End of work.
10	Checking the TNR (Y) MOT (MOTOR ASSY DISP) for rotation Does the TNR (Y) MOT (MOTOR ASSY DISP) function normally? Checked by [Digital Output]-[DO-21] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 11.	Go to step 12.
11	Checking the gears of the DISPENSER ASSY for shape and operation Are the shape and operation of the gears of the DISPENSER ASSY normal? 	Go to step 16.	Replace the defective gear(s) or DISPENSER ASSY. (Refer to Removal 42/ Replacement 18.)
12	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (Y) MOT (MOTOR ASSY DISP). Are P/J18 and P/J181 connected correctly? 	Go to step 14.	Reconnect the connector(s) P/J18 and/or P/J181 surly, then go to step 13.
13	Does the error still occur when the power is turned OFF and ON?	Go to step 14.	End of work.
14	Checking the HARN ASSY TNR MOT for continuity Disconnect J18 from the PWBA MCU. Disconnect J181 from the TNR (Y) MOT. Is each cable of J18 <=> J181 continuous?	Go to step 15.	Replace the HARN ASSY TNR MOT.

Step	Check	Remedy	
		Yes	No
15	Checking the power to TNR (Y) MOT (MOTOR ASSY DISP) Disconnect J18 from the PWBA MCU. Is the voltage across P18-3pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
16	Checking after replacing the TONER CARTRIDGE (Y) Replace the TONER CARTRIDGE (Y), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 17.	End of work.
17	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Go to step 18.	End of work.
18	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when the power is turned OFF and ON?	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

FIP-1. 84 Low Density 093-920

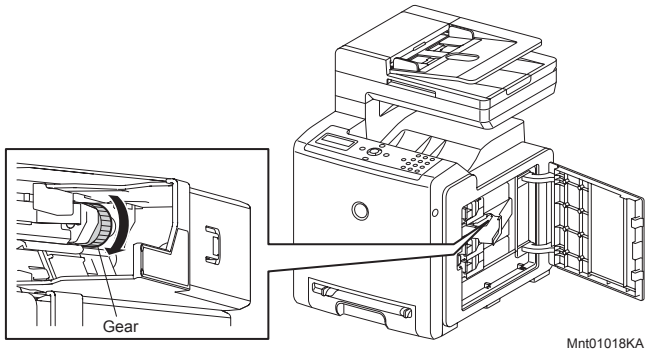
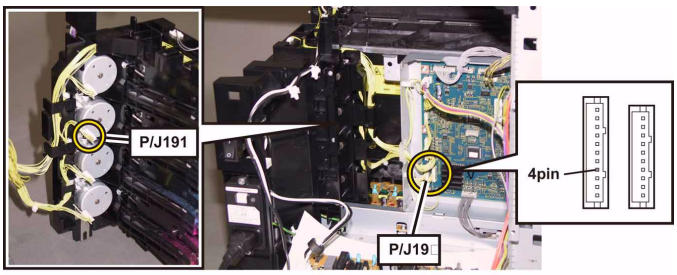
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) DISPENSER ASSY (PL5.1.1) FRAME ASSY MOT (PL5.1.2) MOTOR ASSY DISP (PL5.1.3) GEAR IDLER (PL5.1.6) GEAR IDLER AUG (PL5.1.7) GEAR IDLER AGI (PL5.1.8) TONER CARTRIDGE (M) (PL5.1.23) HARN ASSY TNR MOT (PL5.1.25) TRANSFER ASSY (PL6.1.7) PWBA MCU (PL10.7.7)		
1	Checking the Toner Type Is the Dell Toner seated?	Go to step 2.	Go to step 5.
2	Checking the sealing tapes on the PHD UNIT staying Are there sealing tapes on the PHD UNIT? 	Pull the tape out.	Go to step 3.
3	Checking the life count value of the TONER CARTRIDGE (M) Check the life count value of the TONER CARTRIDGE (M) In [Parameter]-[Life M Toner of [IOT Diag] in [Printer Diag] of diagnosis. Does the remainder value shows the near of the end? (Refer to Chapter 2 for details of the life counter value.)	Replace the TONER CARTRIDGE (M), then go to step 4. (Refer to Removal 7/ Replacement 53.)	Go to step 7.
4	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
5	Checking the toner remainder in the Non-Dell Toner Cartridge (M) Is the toner that remains in the Non-Dell Toner Cartridge (M) a little?	Replace the Non-Dell Toner Cartridge (M), then go to step 6.	Go to step 7.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the sealing tapes for magenta toner of the PHD UNIT staying Turn off the power, and open the COVER ASSY FRONT. Remove the PHD UNIT. Has the sealing tapes for magenta toner been pulled out? After checking, reseat the PHD UNIT.	Go to step 9.	Pull the sealing tapes out, then go to step 8.
8	Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.

Step	Check	Remedy	
		Yes	No
9	Checking after reseating the TONER CARTRIDGE (M) Remove the TONER CARTRIDGE (M), and shake it from side to side. Reseat the TONER CARTRIDGE (M), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 10.	End of work.
10	Checking the TNR (M) MOT (MOTOR ASSY DISP) for rotation Does the TNR (M) MOT (MOTOR ASSY DISP) function normally? Checked by [Digital Output]-[DO-23] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 11.	Go to step 12.
11	Checking the gears of the DISPENSER ASSY for shape and operation Are the shape and operation of the gears of the DISPENSER ASSY normal? 	Go to step 16.	Replace the defective gear(s) or DISPENSER ASSY. (Refer to Removal 42/ Replacement 18.)
12	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (M) MOT (MOTOR ASSY DISP). Are P/J18 and P/J182 connected correctly? 	Go to step 14.	Reconnect the connector(s) P/ J18 and/or P/J182 surly, then go to step 13.
13	Does the error still occur when the power is turned OFF and ON?	Go to step 14.	End of work.
14	Checking the HARN ASSY TNR MOT for continuity Disconnect J18 from the PWBA MCU. Disconnect J182 from the TNR (M) MOT. Is each cable of J18 <=> J182 continuous?	Go to step 15.	Replace the HARN ASSY TNR MOT.

Step	Check	Remedy	
		Yes	No
15	Checking the power to TNR (M) MOT (MOTOR ASSY DISP) Disconnect J18 from the PWBA MCU. Is the voltage across P18-8pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
16	Checking after replacing the TONER CARTRIDGE (M) Replace the TONER CARTRIDGE (M), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 17.	End of work.
17	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Go to step 18.	End of work.
18	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when the power is turned OFF and ON?	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

FIP-1. 85 Low Density 093-921

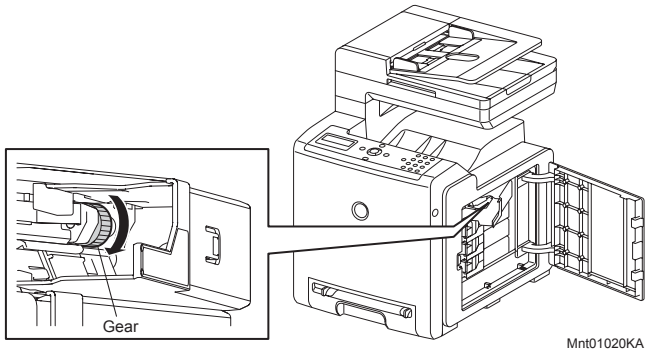
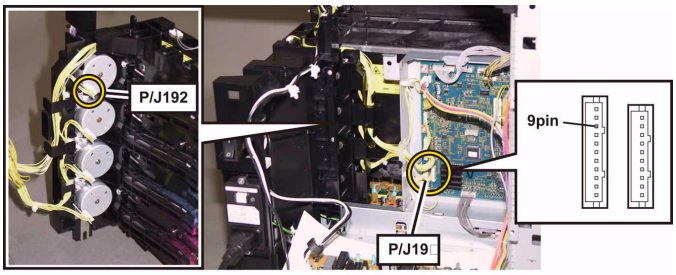
Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) DISPENSER ASSY (PL5.1.1) FRAME ASSY MOT (PL5.1.2) MOTOR ASSY DISP (PL5.1.3) GEAR IDLER (PL5.1.6) GEAR IDLER AUG (PL5.1.7) GEAR IDLER AGI (PL5.1.8) TONER CARTRIDGE (C) (PL5.1.22) HARN ASSY TNR MOT (PL5.1.25) TRANSFER ASSY (PL6.1.7) PWBA MCU (PL10.7.7)		
1	Checking the Toner Type Is the Dell Toner seated?	Go to step 2.	Go to step 5.
2	Checking the sealing tapes on the PHD UNIT staying Are there sealing tapes on the PHD UNIT? 	Pull the tape out.	Go to step 3.
3	Checking the life count value of the TONER CARTRIDGE (C) Check the life count value of the TONER CARTRIDGE (C) In [Parameter]-[Life C Toner of [IOT Diag] in [Printer Diag] of diagnosis. Does the remainder value shows the near of the end? (Refer to Chapter 2 for details of the life counter value.)	Replace the TONER CARTRIDGE (C), then go to step 4. (Refer to Removal 7/ Replacement 53.)	Go to step 7.
4	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
5	Checking the toner remainder in the Non-Dell Toner Cartridge (C) Is the toner that remains in the Non-Dell Toner Cartridge (C) a little?	Replace the Non-Dell Toner Cartridge (C), then go to step 6.	Go to step 7.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the sealing tapes for cyan toner of the PHD UNIT staying Turn off the power, and open the COVER ASSY FRONT. Remove the PHD UNIT. Has the sealing tapes for cyan toner been pulled out? After checking, reseat the PHD UNIT.	Go to step 9.	Pull the sealing tapes out, then go to step 8.
8	Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.

Step	Check	Remedy	
		Yes	No
9	Checking after reseating the TONER CARTRIDGE (C) Remove the TONER CARTRIDGE (C), and shake it from side to side. Reseat the TONER CARTRIDGE (C), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 10.	End of work.
10	Checking the TNR (C) MOT (MOTOR ASSY DISP) for rotation Does the TNR (C) MOT (MOTOR ASSY DISP) function normally? Checked by [Digital Output]-[DO-25] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 11.	Go to step 12.
11	Checking the gears of the DISPENSER ASSY for shape and operation Are the shape and operation of the gears of the DISPENSER ASSY normal? 	Go to step 16.	Replace the defective gear(s) or DISPENSER ASSY. (Refer to Removal 42/ Replacement 18.)
12	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (C) MOT (MOTOR ASSY DISP). Are P/J19 and P/J191 connected correctly? 	Go to step 14.	Reconnect the connector(s) P/ J19 and/or P/J191 surly, then go to step 13.
13	Does the error still occur when the power is turned OFF and ON?	Go to step 14.	End of work.
14	Checking the HARN ASSY TNR MOT for continuity Disconnect J19 from the PWBA MCU. Disconnect J191 from the TNR (C) MOT. Is each cable of J19 <=> J191 continuous?	Go to step 15.	Replace the HARN ASSY TNR MOT.

Step	Check	Remedy	
		Yes	No
15	Checking the power to TNR (C) MOT (MOTOR ASSY DISP) Disconnect J19 from the PWBA MCU. Is the voltage across P19-4pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
16	Checking after replacing the TONER CARTRIDGE (C) Replace the TONER CARTRIDGE (C), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 17.	End of work.
17	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Go to step 18.	End of work.
18	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when the power is turned OFF and ON?	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

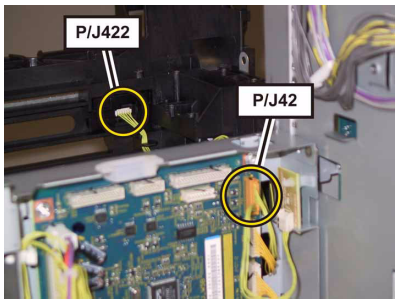
FIP-1. 86 Low Density 093-922

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) DISPENSER ASSY (PL5.1.1) FRAME ASSY MOT (PL5.1.2) MOTOR ASSY DISP (PL5.1.3) GEAR IDLER (PL5.1.6) GEAR IDLER AUG (PL5.1.7) GEAR IDLER AGI (PL5.1.8) TONER CARTRIDGE (K) (PL5.1.21) HARN ASSY TNR MOT (PL5.1.25) TRANSFER ASSY (PL6.1.7) PWBA MCU (PL10.7.7)		
1	Checking the Toner Type Is the Dell Toner seated?	Go to step 2.	Go to step 5.
2	Checking the sealing tapes on the PHD UNIT staying Are there sealing tapes on the PHD UNIT? 	Pull the tape out.	Go to step 3.
3	Checking the life count value of the TONER CARTRIDGE (K) Check the life count value of the TONER CARTRIDGE (K) In [Parameter]-[Life K Toner of [IOT Diag] in [Printer Diag] of diagnosis. Does the remainder value shows the near of the end? (Refer to Chapter 2 for details of the life counter value.)	Replace the TONER CARTRIDGE (K), then go to step 4. (Refer to Removal 7/ Replacement 53.)	Go to step 7.
4	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
5	Checking the toner remainder in the Non-Dell Toner Cartridge (K) Is the toner that remains in the Non-Dell Toner Cartridge (K) a little?	Replace the Non-Dell Toner Cartridge (K), then go to step 6.	Go to step 7.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the sealing tapes for black toner of the PHD UNIT staying Turn off the power, and open the COVER ASSY FRONT. Remove the PHD UNIT. Has the sealing tapes for black toner been pulled out? After checking, reseat the PHD UNIT.	Go to step 9.	Pull the sealing tapes out, then go to step 8.
8	Does the error still occur when the power is turned OFF and ON?	Go to step 9.	End of work.

Step	Check	Remedy	
		Yes	No
9	Checking after reseating the TONER CARTRIDGE (K) Remove the TONER CARTRIDGE (K), and shake it from side to side. Reseat the TONER CARTRIDGE (K), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 10.	End of work.
10	Checking the TNR (K) MOT (MOTOR ASSY DISP) for rotation Does the TNR (K) MOT (MOTOR ASSY DISP) function normally? Checked by [Digital Output]-[DO-27] of [IOT Diag] in [Printer Diag] of diagnosis. During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	Go to step 11.	Go to step 12.
11	Checking the gears of the DISPENSER ASSY for shape and operation Are the shape and operation of the gears of the DISPENSER ASSY normal? 	Go to step 16.	Replace the defective gear(s) or DISPENSER ASSY. (Refer to Removal 42/ Replacement 18.)
12	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (K) MOT (MOTOR ASSY DISP). Are P/J19 and P/J192 connected correctly? 	Go to step 14.	Reconnect the connector(s) P/ J19 and/or P/J192 surly, then go to step 13.
13	Does the error still occur when the power is turned OFF and ON?	Go to step 14.	End of work.
14	Checking the HARN ASSY TNR MOT for continuity Disconnect J19 from the PWBA MCU. Disconnect J192 from the TNR (K) MOT. Is each cable of J19 <=> J192 continuous?	Go to step 15.	Replace the HARN ASSY TNR MOT.

Step	Check	Remedy	
		Yes	No
15	Checking the power to TNR (K) MOT (MOTOR ASSY DISP) Disconnect J19 from the PWBA MCU. Is the voltage across P19-9pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
16	Checking after replacing the TONER CARTRIDGE (K) Replace the TONER CARTRIDGE (K), and check that the lock key is in the lock position. (Refer to Removal 7/ Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 17.	End of work.
17	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Go to step 18.	End of work.
18	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the error still occur when the power is turned OFF and ON?	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	End of work.

FIP-1. 87 093-965 Reseat PHD Unit

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) PWBA MCU (PL10.7.7) HARN ASSY PHD XPRO (PL10.8.11)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the PHD UNIT type Is the seated PHD UNIT for 2135c?	Go to step 4.	Replace the PHD UNIT for 2135c, then go to step 3.
3	Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.
5	Checking the connectors for connection Check the connectors between the PWBA MCU and PHD UNIT. Are P/J42 and P/J422 connected correctly?	Go to step 7.	Reconnect the connector(s) P/J42 and/or P/J422 surly, then go to step 6.
6	Does the error still occur when the power is turned OFF and ON?	Go to step 7.	End of work.
7	Checking the HARN ASSY PHD XPRO for continuity Disconnect P422 from the PHD UNIT. Disconnect J42 from the PWBA MCU. Is each cable of P422 <=> J42 continuous? 	Go to step 8.	Replace the HARN ASSY PHD XPRO.
8	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

FIP-1. 88 Insert Print Cart. 093-970/093-971/093-972/093-973

Step	Check	Remedy	
		Yes	No
	Possible causative parts: TONER CARTRIDGE (K) (PL5.1.21) TONER CARTRIDGE (C) (PL5.1.22) TONER CARTRIDGE (M) (PL5.1.23) TONER CARTRIDGE (Y) (PL5.1.24) PWBA MCU (PL10.7.7)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the Toner Type Is the Dell Toner seated?	Go to step 3.	Change the Toner Type setting to Non-Dell Toner.
3	Checking after reseating the TONER CARTRIDGE (Y/M/C/K) Reseat the TONER CARTRIDGE (Y/M/C/K), and check that the lock key is in the lock position. Does the error still occur when the power is turned OFF and ON?	Go to step 4.	End of work.
4	Checking after replacing the TONER CARTRIDGE (Y/M/C/K) Replace the TONER CARTRIDGE (Y/M/C/K). (Refer to Removal 7/Replacement 53.) Does the error still occur when the power is turned OFF and ON?	Go to step 5.	End of work.
5	Checking the HARN ASSY TONER CRUM for continuity Disconnect J31 from the PWBA MCU. Disconnect J311 (Y), J312 (M), J313 (C) or J324 (K) from the connector CRUM. Is each cable of J31 <=> J311, J312, J313 or J324 continuous?	Go to step 6.	Replace the HARN ASSY TONER CRUM
6	Checking after reseating the PWBA MCU Reseat the PWBA MCU. (Refer to Removal31/Replacement 29.) Does the error still occur when the power is turned OFF and ON?	Replace the PWBA MCU.(Refer to Removal 31/ Replacement 29.)	End of work.

FIP-1. 89 094-422 Contact Support / 094-911 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: TRANSFER ASSY (PL6.1.7) HARN ASSY L SIDE (PL10.4.18) PWBA MCU (PL10.7.7)		
1	Does the error still occur when the power is turned OFF and ON?	Go to step 2.	End of work.
2	Checking the life counter value of the TRANSFER ASSY Does the life counter value show the near of the end? (Refer to Chapter 2 for details of the life counter value.)	Replace the TRANSFER ASSY. (Refer to Removal 48/ replacement 12.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1. 90 117-313/117-323/117-324/117-344/117-354/117-355 Restart Printer

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the error Turn off and on the power. Does the error still occur when receiving fax?	Go to step 2.	End of work.
2	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when receiving fax?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

FIP-1. 91 123-314 Restart Printer

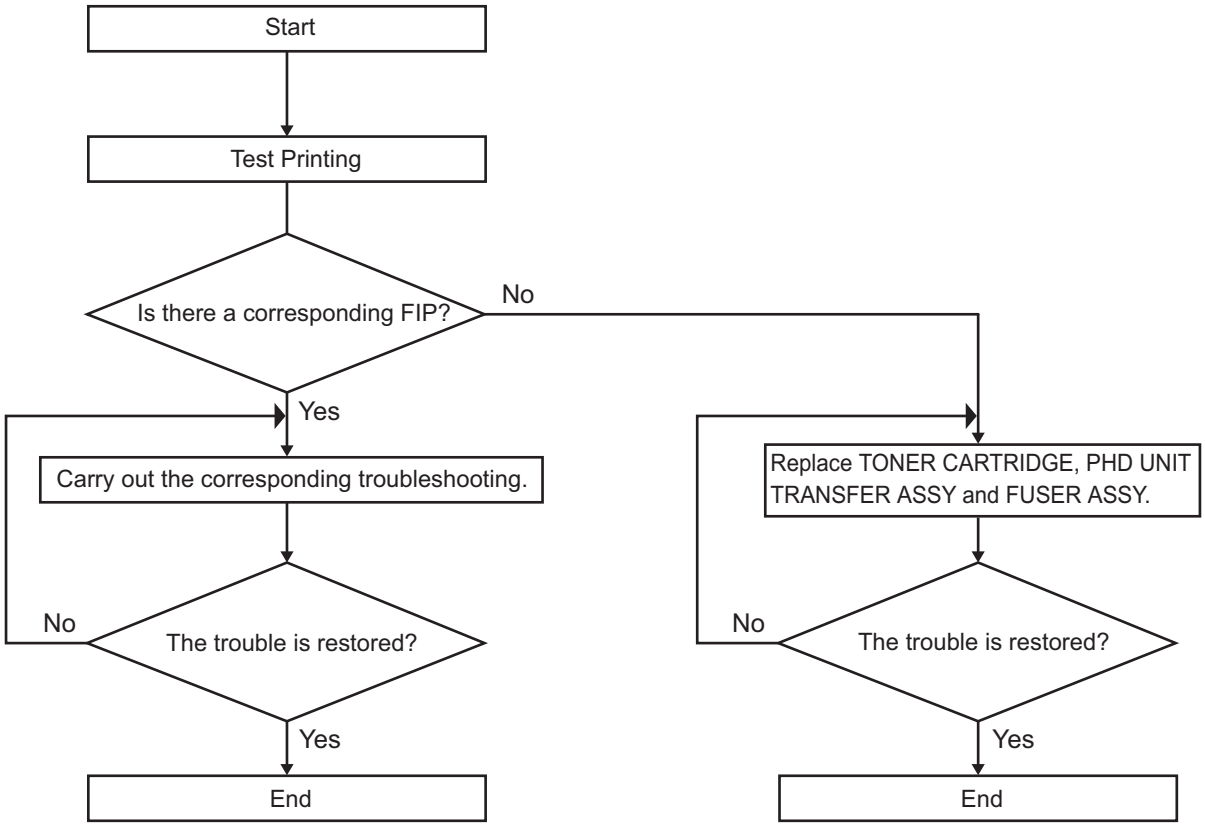
Step	Check	Remedy	
		Yes	No
	Possible causative parts: CONSOLE ASSY PANEL (PL10.2.2) PWBA CONT AIO (PL10.6.6)		
1	Checking the error Turn off and on the power. Does the error still occur when faxing?	Go to step 2.	End of work.
2	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. (Removal 64/Replacement 58) Does the error still occur when faxing?	Go to step 3.	End of work.
3	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Removal 64/Replacement 58) Does the error still occur when turning on the power?	Replace the CONSOLE ASSY PANEL. (Removal 8/Replacement 52)	End of work.

FIP-1. 92 193-700 Non-Dell Toner

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA CONT AIO (PL10.6.6)		
1	Checking the Toner Cartridge. Is the installed toner cartridge to the printer the DELL toner?	Go to step 2.	End of work.
2	Checking the printer setting Is the [Non-Dell Toner] of the [Maintenance] on the [Admin Menu] of the [SET UP] the [On]?	Set to the [Off].	Go to step 3.
3	Checking the Toner Cartridge Replace to the known good toner cartridges. Does the error still occur when turning on the power?	Replace the PWBA CONT AIO. (Removal 24/Replacement 36)	End of work.

4. Image Quality Trouble

4.1 Entry Chart for Image Quality Troubleshooting



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NOTE

It is stated as the ESS is normal. By operating test print with the Printer Engine only, if the trouble is on ESS side or the Printer Engine side can simply be diagnosed, except those phenomena that are not able to be diagnosed by test print.

- Test print result with the Printer Engine only is normal. --- >Malfunction on ESS side

- Test print result with the Printer Engine only is also abnormal. ---> Malfunction on the Printer Engine side

When it is the case of [Malfunction on ESS side], replace with normal ESS and normal Interface Cable, and check.

When the trouble still occurs after replacement, check the host side, and operate Troubleshooting efficiently, using the following image quality FIP according to each phenomenon.

When the image quality trouble of print occurs, get a print to judge, understand and treat the trouble substance precisely and appropriately, and then troubleshoot efficiently, using the image quality FIP table according to each phenomenon.

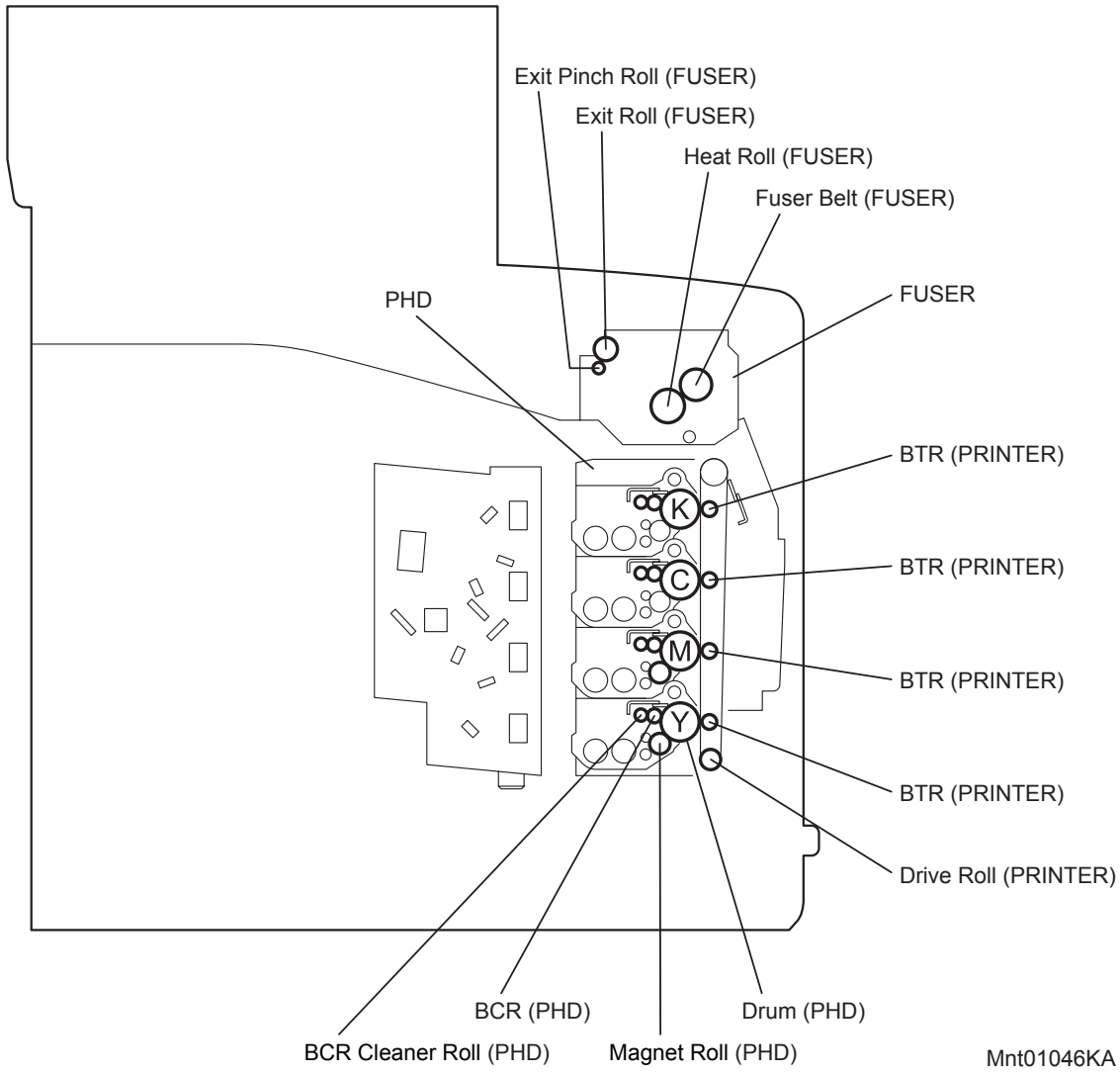
When trouble restorations with image quality FIP is not possible, check again with the image quality FIP, and then replace [ESS and possible causative parts] in order and check, and operate Troubleshooting, using [Chapter 2 Diagnostic].

Image quality FIP states regarding the typical image quality trouble, as follows.

- FIP-1.P1 Faint print (Low contrast)
- FIP-1.P2 Blank print (No print)
- FIP-1.P3 Solid black
- FIP-1.P4 Vertical blank lines (White stripes in paper transport direction)
- FIP-1.P5 Horizontal band cross out (White stripes in the horizontal direction)
- FIP-1.P6 Vertical stripes
- FIP-1.P7 Horizontal stripes
- FIP-1.P8 Partial lack
- FIP-1.P9 Spots
- FIP-1.P10 Afterimage
- FIP-1.P11 Background (Fog)
- FIP-1.P12 Skew
- FIP-1.P13 Paper damage
- FIP-1.P14 No fix
- FIP-1.P15 Color registration (Color Shift)
- FIP-1.P16 Hunting
- FIP-1.P17 Magnification incorrect

NOTE

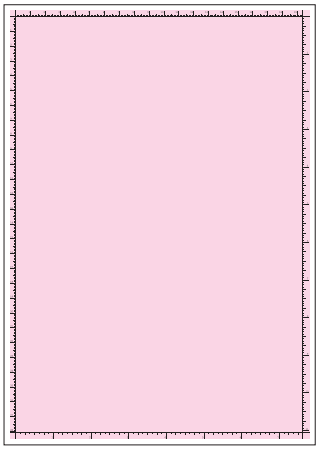
When horizontal lines and/or spot occur periodically, it is possibly caused by the trouble of a particular roll. In this case, compare the trouble intervals on the test print with the Pitch Chart. The interval does not necessarily match circumference of the roll. The trouble may be solved easily by the check.



-Pitch Chart

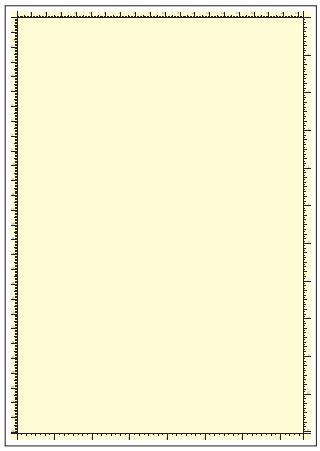
The chart is printed [Pitch Configuration Chart] in the [Diagnosis] tab of the [Tool Box].

Page 1



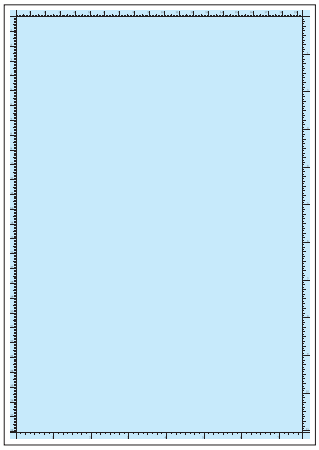
Wsb02028KA

Page 2



Wsb02027KA

Page 3



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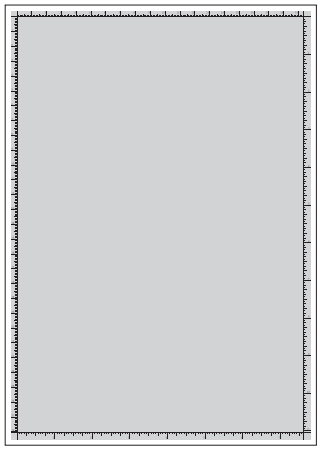
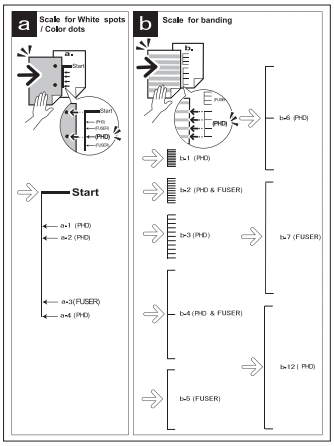
Page 4



Wsb02030KA

Page 5



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4.2 Diagnosis Test Chart

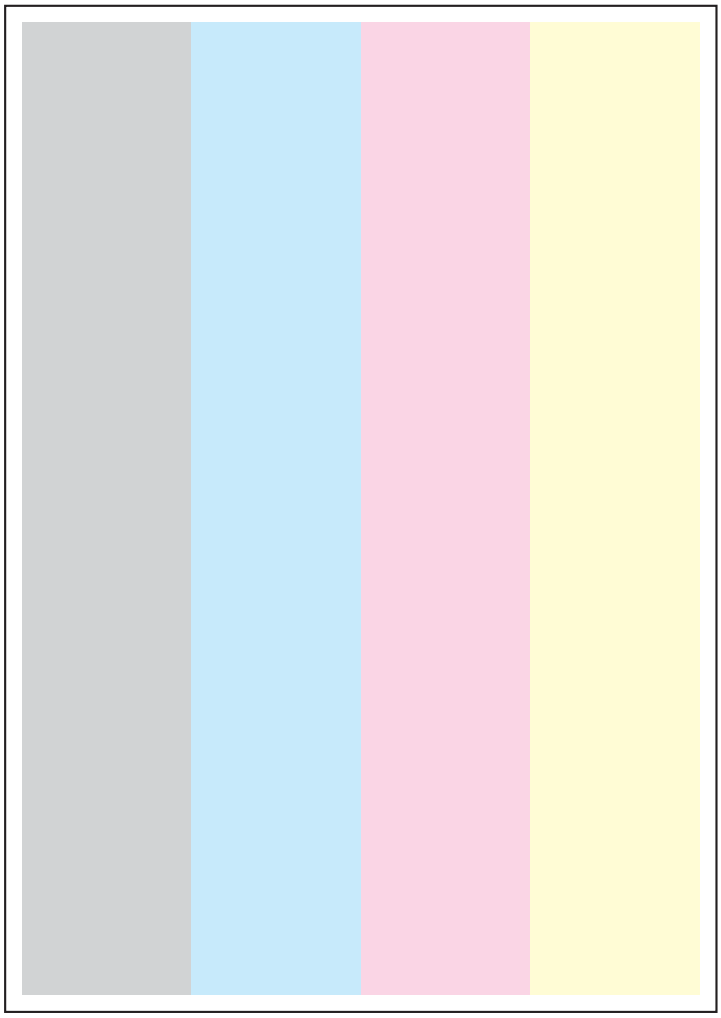
The test charts to improve a defective image quality or to specify the cause of generation when a defective image was generated are in [Diagnosis] tab in [Tool Box].

Use the following test charts properly by the state of a defective image quality.

-PHD Refresh

When the result of [Contamination Check] corresponds to b-12 (PHD) of the pitch chart, performing this test print may improve image quality.

This chart is printed the [PHD Refresh Configuration Chart] of the [Diagnosis] tab in [Tool Box].



Wsb02021KA

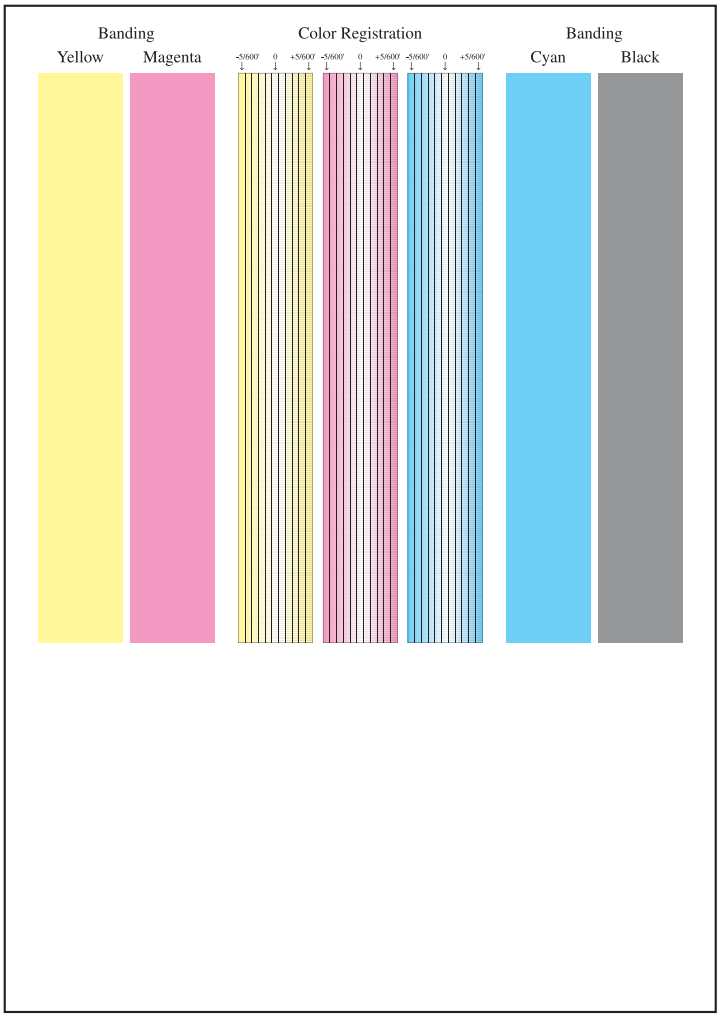
-MQ Chart

This chart allows you to check for a banding if any occurs.

This chart is printed the [MQ Chart] of the [Diagnosis] tab in [Tool Box].

When the image quality is normal, the waves of Y, M, and C are confined within the frame. When the image quality is abnormal, the wave runs out the frame. Compare the pitch of the wave with the pitch chart of second page.

No	Roll Parts	**Period (mm)**	**Replaceable parts**
1	Heat Roll	**66.7**	**Fuser**
2	Drum	**75.4**	**PHD Unit**
3	Mag Roll	**37.7**	**PHD Unit**
4	Drive Roll	**44.0**	**Printer**
5	Regi Roll	**37.6**	**Printer**



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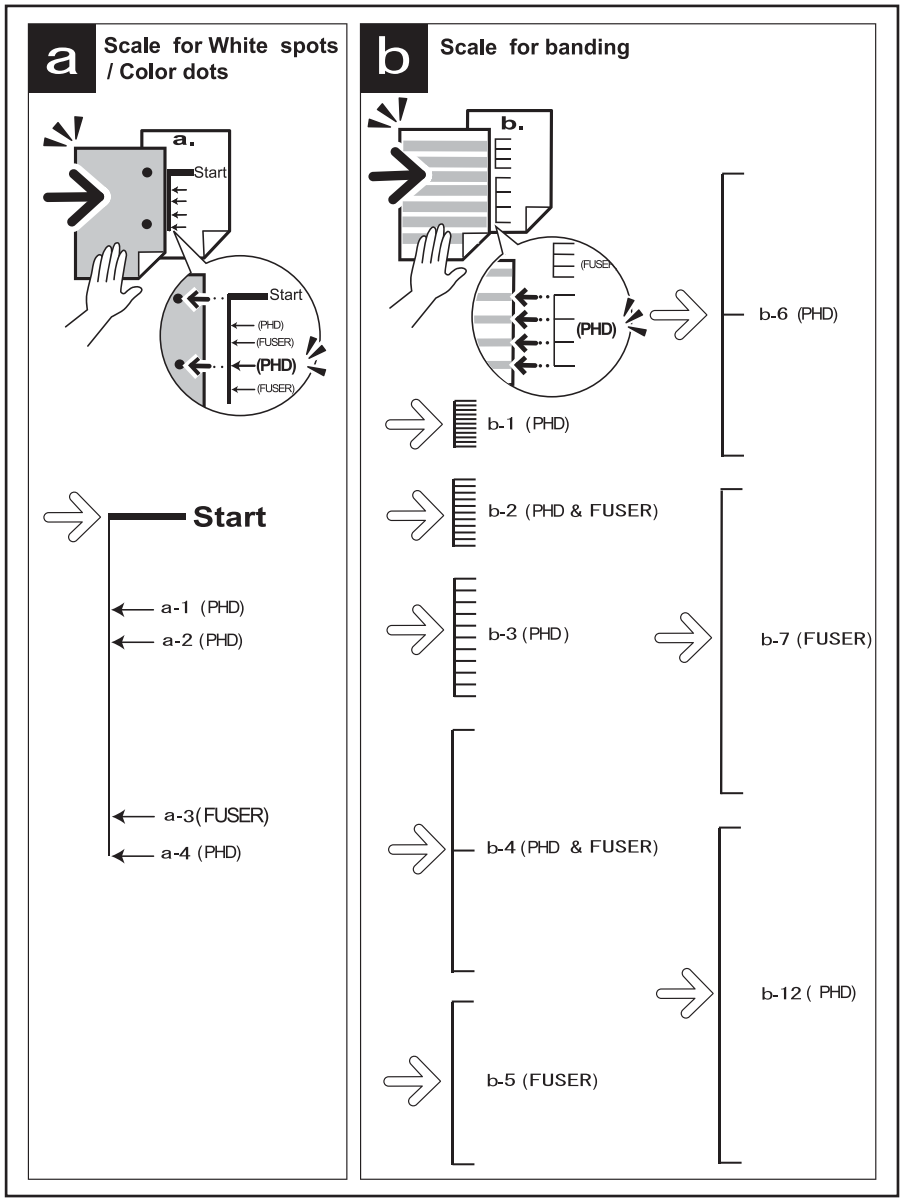
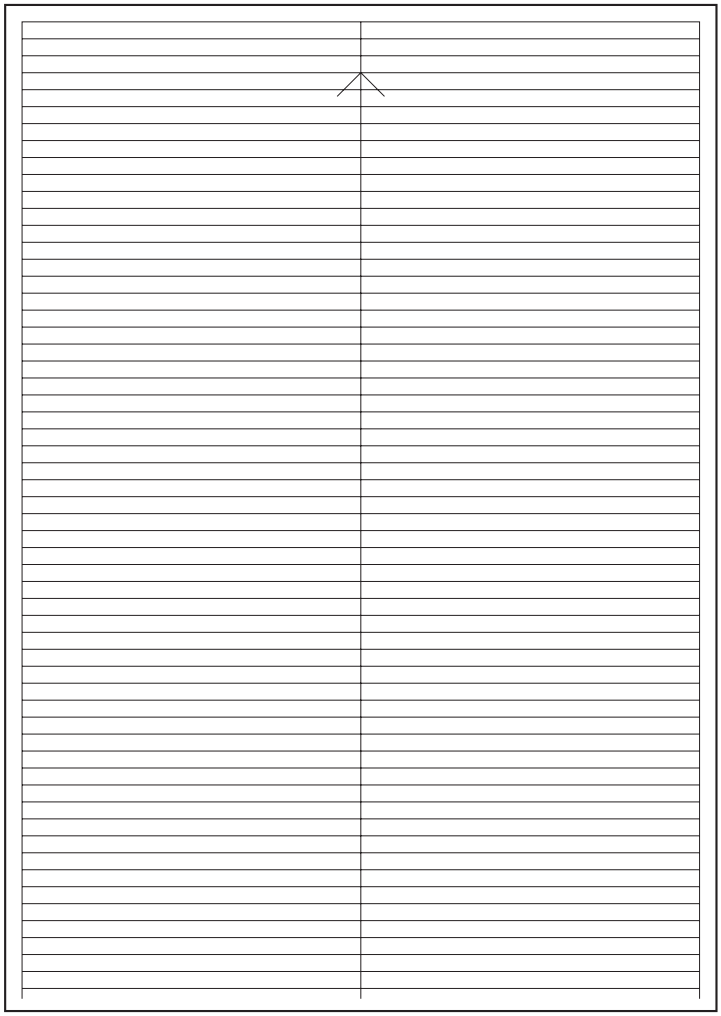

a
Scale for White spots / Color dots
a.
Start
Start
(PHD)
(FUSER)
(PHD)
(FUSER)
Start
a-1 (PHD)
a-2 (PHD)
a-3(FUSER)
a-4 (PHD)
b
Scale for banding
b.
(FUSER)
(PHD)
b-6 (PHD)
b-1 (PHD)
b-2 (PHD & FUSER)
b-3 (PHD)
b-7 (FUSER)
b-4 (PHD & FUSER)
b-12 (PHD)
b-5 (FUSER)

Wsb02025KA

-Alignment Chart

This chart allows you to check for the skewed paper if any occurs.
This chart is printed the [Alignment Chart] of the [Diagnosis] tab in [Tool Box].

When the sheet is fed normally, the vertical and horizontal lines are aligned parallel to the edges of the sheet. When there is a problem, this alignment is skewed.

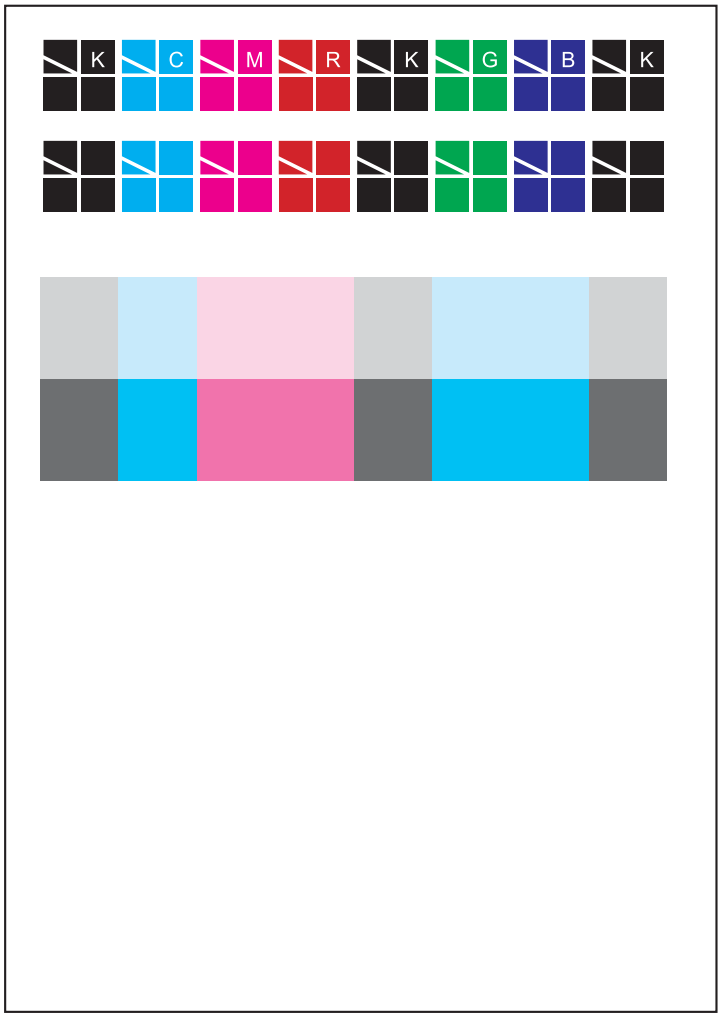


Wsb02022KA

-Ghost Chart

This chart allows you to check for a ghost if any occurs.
This chart is printed the [Ghost Configuratio Chart] of the [Diagnosis] tab in [Tool Box].

When a ghost occurs, the patches with open cross and character K/B/G/R/M/C appear on the light-colored patches K/C/M in the lower half of the chart, and the patches with open cross only appears on the dark-colored patches K/C/M below the light-colored patches.



Wsb02020KA

4.3 Items to Be Confirmed Before Image Quality Troubleshooting

Print Quality Problems

Customers may need your help determining the cause of print quality issues such as streaking, fading, or dropouts. Here are some questions that may help you determine why your customer's printer is not printing optionally. First, confirm the following items to understand customer's operating condition.

1) Does your customer's print media fall within the Printer Media Guidelines? (Refer to "Printer Media Guidelines").

2) Is there enough toner?

3) Has the printer been cleaned recently?

Checking printer condition

Toner

Low toner can cause print quality problems such as fading, streaking, white lines, or dropouts. Have your customer print a small document from a different application to replicate the problem and verify the amount of toner available for printing. When your customers print a document, the Laser Printer Status Monitor should display a dialog box that estimates the amount of toner left in the cartridge.

If the toner is low, your customers can sometimes extend the cartridge life by removing the cartridge from the printer, gently shaking it from side-to-side, and replacing it (Rocking the toner cartridge from side-to-side loosens toner that may get stuck).

Cleaning

Paper, toner, and dust particles can accumulate inside the printer and cause print quality problems, such as smearing or toner specks. Clean inside the printer to prevent these problems.

Prior checks before troubleshooting

Check the following items if any print quality problems occur before going to each troubleshooting. Those actions may solve problems easily and simply.

If the any problems below have occurred, check and take actions described in each item.

1) Color is out of alignment:

   a)Clean inside of the printer.

   b)If you install a new black cartridge and a PHD Unit cleaning has not been done, this problem will happen. Clean inside of the printer.

2) Print is too light

   a) The toner may be low. Confirm the amount of the toner and change the toner cartridges if necessary.

   b) Set the Toner Saving Mode check box to off in the [Advanced] tab on the printer driver.

   c)If you are printing on an uneven print surface, change the Paper Type settings in the Tray Settings menu.

   d)Verify that the correct print media is being used.

   e) The PHD Unit needs to be replaced. Change the PHD Unit.

3) Toner smears or print comes off page:

   a)If you are printing on an uneven print surface, change the Paper Type settings in the Tray Settings menu.

   b)Verify that the print media is within the printer specifications. (Refer to "Printer Media Guidelines").

4) Toner spots appear on the page/printing is blurred:

a)Check the toner cartridge to make sure it is installed correctly.

b)Change the toner cartridge.

5) Entire page is white:

a)Make sure the packaging material is removed from the toner cartridge.

b)Check the toner cartridge to make sure it is installed correctly.

c)The toner may be low. Change the toner cartridge.

6) Streaks appear on the page:

a)The toner may be low. Change the toner cartridge.

b)If you are using preprinted forms, make sure the toner can withstand temperatures of 0°C to 35°C.

7) Characters have jagged or uneven edges:

a) If you are using downloaded fonts, verify that the fonts are supported by the printer, the host computer, and the software program.

8) Part or all of the page prints in black:

a) Check the toner cartridge to make sure it is installed correctly.

9) The job prints, but the top and side margins are incorrect:

a) Make sure the Paper Size setting in the Tray Settings is correct.

b) Make sure the margins are set correctly in your software program.

4.4 Print Image Quality Specifications

Image Quality Guarantee Conditions

The image quality is specified and guaranteed under the following conditions.

1) Environmental Condition

Temperature: 15°C - 28°C

Humidity:20% RH - 70% RH

Note that defect may occur due to condensation after around 30 minutes if the printer is turned on in a critical environment.

2) Guaranteed Paper

The print image quality specified in this chapter should be guaranteed when the standard paper is fed from the cassette tray. The print image quality is evaluated on the maximum size of each standard paper.

Color print quality: FX C2 paper

Black and White quality: FX P paper

3) Paper condition

The paper used is flesh paper immediately after unpacked, which has been left in the operating environment for 12 hours before unpacking.

4) Printer condition

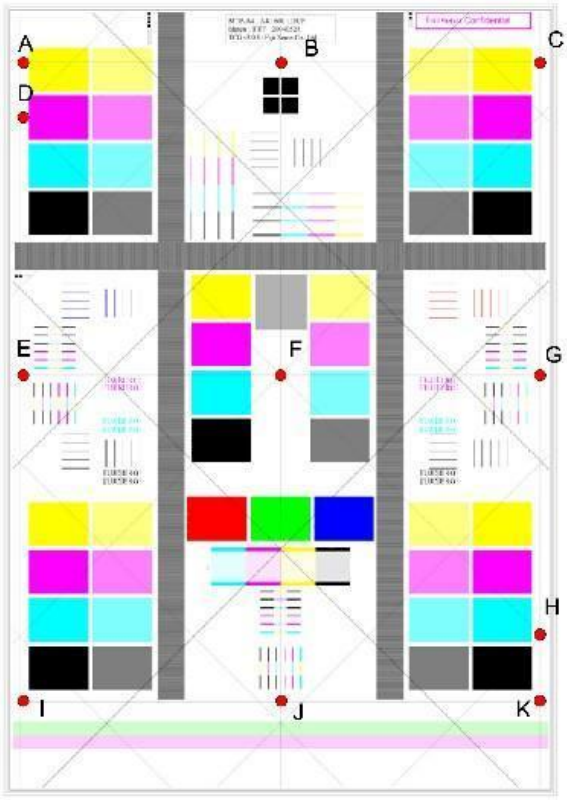
The print image quality specified in this chapter is guaranteed with the printer in normal condition.

5) Criterion for judgment

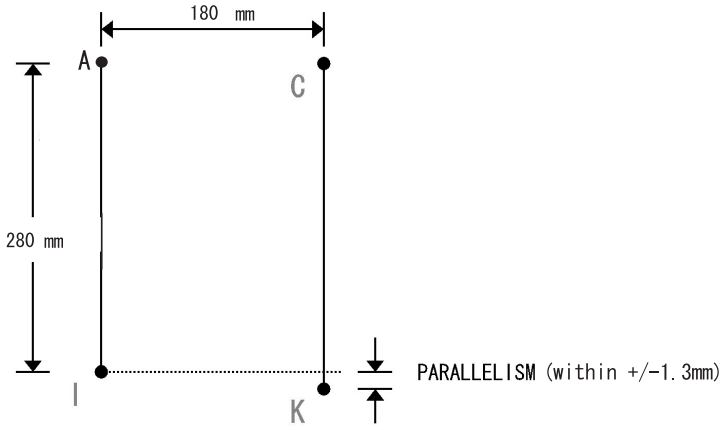
The print image quality is guaranteed with Spec. In rate = 90% (λ =90%).

6) For Color chart, Parallelism, Perpendicularity, Skew, Linearity, Magnification Error, Registration and Printed Guaranteed Area, refer to each chart below.

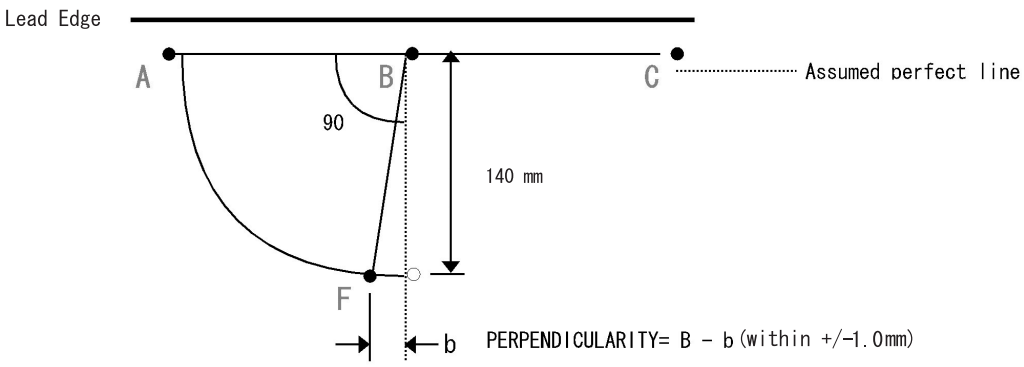
Chart



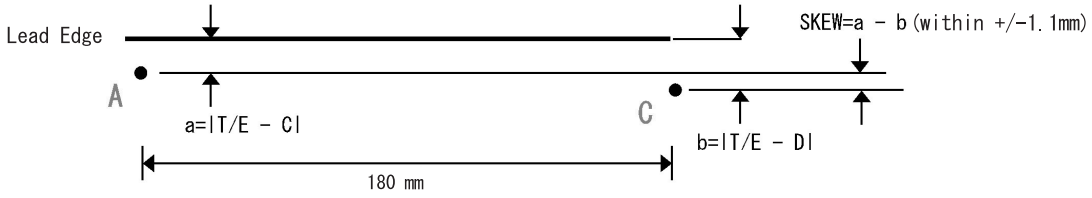
Parallelism



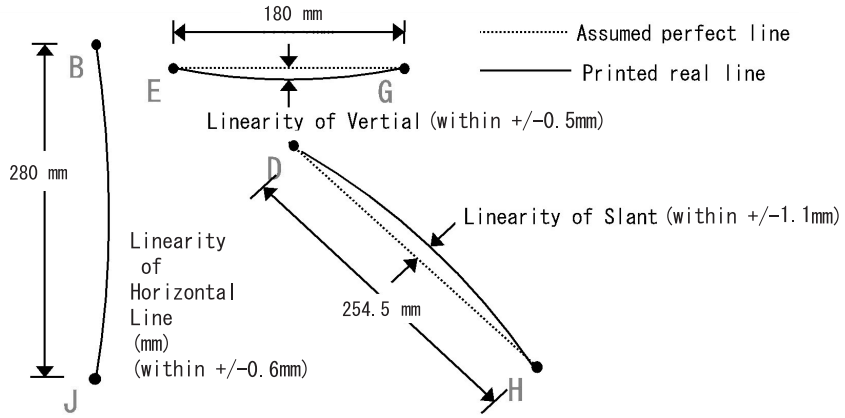
Perpendicularity



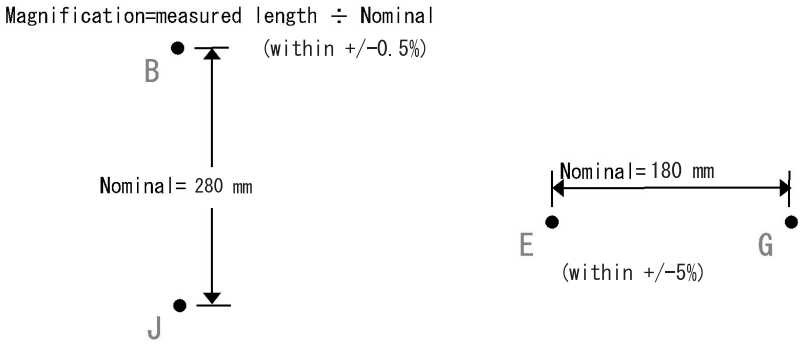
Skew



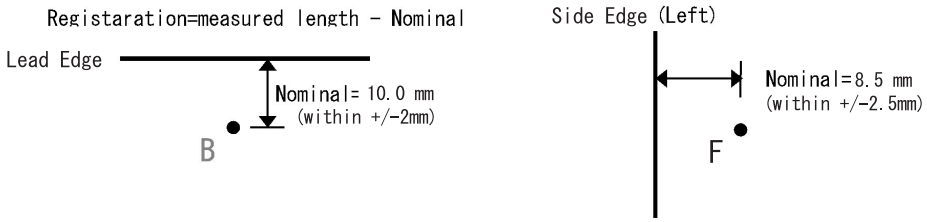
Linearity



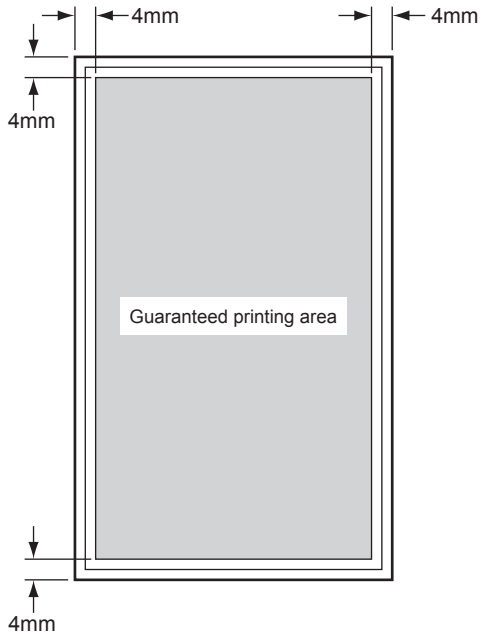
Magnification Error



Registration



Guaranteed Printing Area



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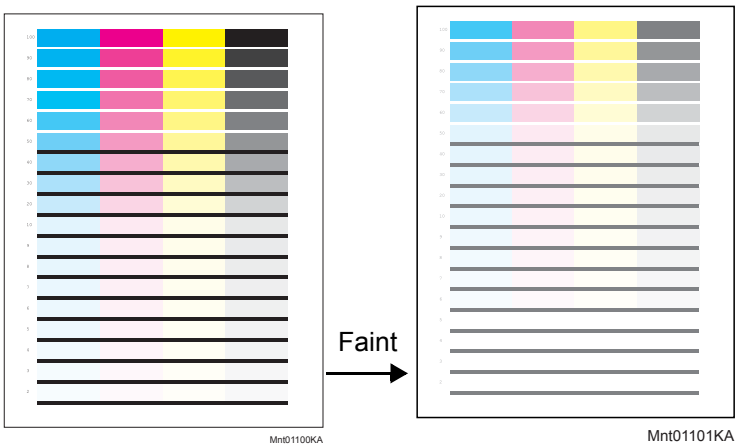
4.5 Image Quality FIP

FIP-1.P1 Faint print (Low contrast)

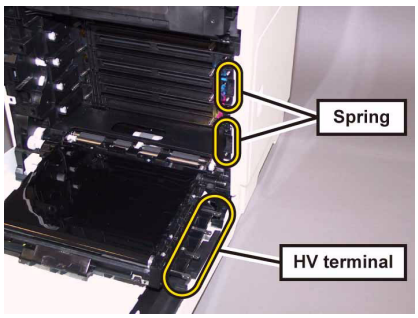


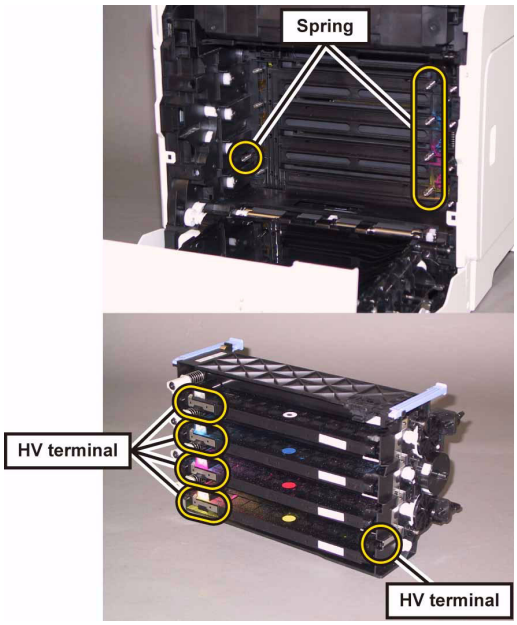
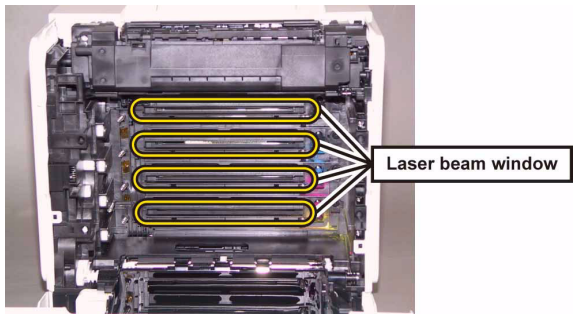
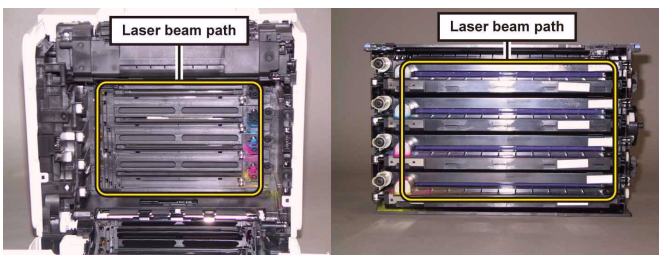
Trouble substance
The density of the image is entirely too faint.

Possible causative parts
- ROS ASSY (PL4.1.1)
- PHD UNIT (PL4.1.21)
- FRAME ASSY MOT (PL5.1.2)
- MOTOR ASSY DISP (Y/M/C/K) (PL5.1.3)
- TONER CARTRIDGE K (PL5.1.21)
- TONER CARTRIDGE C (PL5.1.22)
- TONER CARTRIDGE M (PL5.1.23)
- TONER CARTRIDGE Y (PL5.1.24)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

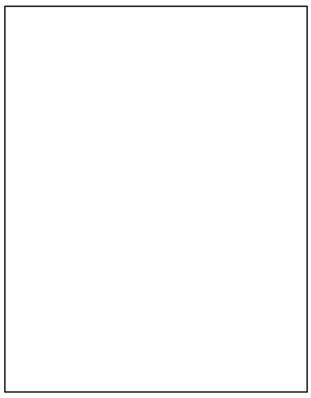
Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 4.
2	Checking the original Is the original color density low?	End of work.	Go to step 3.
3	Checking the printer setting Is the [Lighter/Darker] of the [Copy Default] in the [Copy] of the [Default Settings] the [Lighter 2 or 3]?	Set the [Normal] or [Darker 1 to 3].	Go to step 12.
4	Checking the Faint print. Print the Windows test page. Is the image printed correctly?	Check the printing data which the problem generated.	Go to step 5.
5	Checking the Toner Type Is the Dell Toner seated?	Go to step 6.	Replace the toner with the Dell toner.

Step	Check	Remedy	
		Yes	No
6	Checking the sealing tapes on the PHD UNIT staying Turn off the power, and open the COVER ASSY FRONT. Remove the PHD UNIT. Are there sealing tapes on the PHD UNIT? 	Pull the sealing tapes out.	Go to step 7.
7	Checking the paper condition Is the paper dry and recommended paper?	Go to step 9.	Replace the paper with a new dry and recommended one, then go to step 8.
8	Is the image printed correctly?	End of work.	Go to step 9.
9	Checking the menu settings Check the [Advanced] tab of the [Printing Preferences] on the [Properties] of the Printer Driver. Is the [Toner Saving Mode] selected?	Cancel the [Toner Saving Mode], then go to step 10.	Go to step 11.
10	Is the image printed correctly?	End of work.	Go to step 11.
11	Checking the faint color Is there the faint toner? Checked by [4 Colors Configuration Chart] of [Chart Print] in [Diagnosis] tab of [Tool Box].	Go to step 12.	Check the original printing data.
12	Checking after reseating the TONER CARTRIDGEs Reseat the TONER CARTRIDGEs, and check that their lock keys are in the lock positions. Is the image printed correctly?	End of work.	Go to step 13.
13	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the right side of the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed? 	Clean or replace the TRANSFER ASSY or SPRING(s), then go to step 14.	Go to step 14.

Step	Check	Remedy	
		Yes	No
14	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s), then go to step 15.	Go to step 15.
15	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 16.
16	Checking the laser beam windows of the ROS ASSY Are the laser beam windows on the ROS ASSY clean? 	Go to step 17.	Clean the window(s) with soft cloth or cotton swab gently.
17	Checking the laser beam path Are there any foreign substances between the ROS ASSY and PHD UNIT? 	Remove the foreign substances.	Go to step 18.

Step	Check	Remedy	
		Yes	No
18	Does the Toner Dispenser Motor function normally? Checked by [Digital Output]-[DO-21(Y)/23(M)/25(C)/27(K)] of [IOT Diag] in [Printer Diag] of diagnosis.	Go to step 20.	Replace the MOTOR ASSY DISP (Y, M, C or K) (refer to Removal 43/ Replacement 17), then go to step 19.
19	Is the image printed correctly?	End of work.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
20	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 21.
21	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 22.
22	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 23.
23	Checking after replacing the TRANSFER ASSY Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.) Is the image printed correctly?	End of work.	Go to step 24.
24	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57) Is the image printed correctly?	End of work.	Go to step 25.
25	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 26.
26	Checking after replacing the FRAME ASSY MOT Replace the FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.) Is the image printed correctly?	End of work.	Go to step 27.
27	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 44/ Replacement 16.) Is the image printed correctly?	End of work.	Replace the PWBA CONT AIO. (Removal 24/ Replacement 36.)

FIP-1.P2 Blank print (No print)

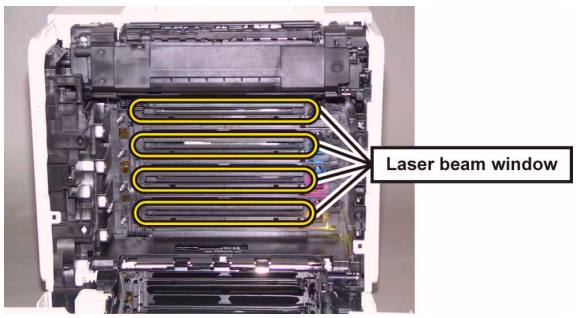
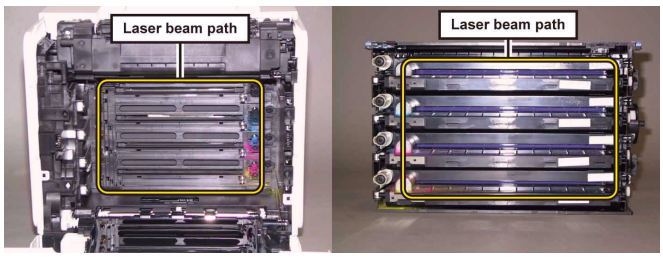


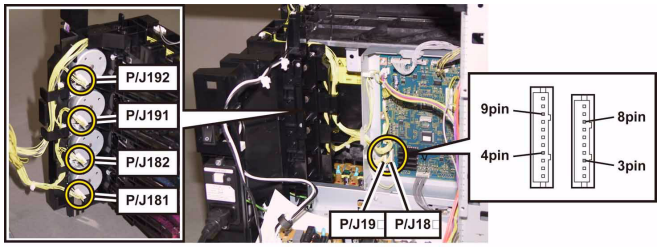
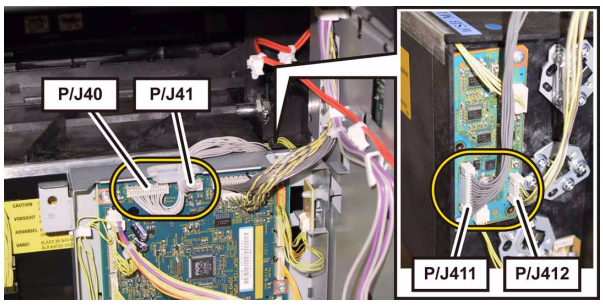
Trouble substance
The entire paper is printed pure white.

Possible causative parts
- ROS ASSY (PL4.1.1)
- PHD UNIT (PL4.1.21)
- MOTOR ASSY DISP (Y/M/C/K) (PL5.1.3)
  or FRAME ASSY MOT (PL5.1.2)
- TONER CARTRIDGE K (PL5.1.21)
- TONER CARTRIDGE C (PL5.1.22)
- TONER CARTRIDGE M (PL5.1.23)
- TONER CARTRIDGE Y (PL5.1.24)
- TRANSFER ASSY (PL6.1.7)
- DRIVE ASSY SUB (PL7.1.1)
- DRIVE ASSY MAIN (PL7.1.2)
- DRIVE ASSY PH (PL7.1.4)
- PWBA CONT AIO (PL10.6.6)
- PWBA ESS (PL10.7.7)
- IIT ASSY SUB (PL10.9.2)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 5.
2	Checking the original setting Is the original placed correctly?	Go to step 3.	Set the original correctly.
3	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when copying?	Go to step 4.	End of work.
4	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when copying?	Replace the IIT ASSY SUB. (Removal 59/ Replacement 2)	End of work.
5	Checking the blank print. Print the contamination check page. Is the image printed correctly?	Printing data form is not suitable for the printer, then check the printing data which the problem generated.	Go to step 6.

Step	Check	Remedy	
		Yes	No
6	Checking the Toner Type Is the Non-Dell Toner seated?	Replace the toner with the Dell toner, then go to step 7.	Go to step 8.
7	Is the image printed correctly?	End of work.	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)
8	Checking after reseating all TONER CARTRIDGEs (Y/M/C/K) Reseat the TONER CARTRIDGEs, and check that their lock keys are in the lock positions. Is the image printed correctly?	End of work.	Go to step 9.
9	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed?	Clean or replace the TRANSFER ASSY or SPRING(s), then go to step 10.	Go to step 11.
10	Is the image printed correctly?	End of work.	Go to step 11.
11	Checking the paper condition Is the paper dry and recommended paper?	Go to step 13.	Replace the paper with a new dry and recommended one, then go to step 12.
12	Is the image printed correctly?	End of work.	Go to step 13.
13	Checking the life counter value of the TONER CARTRIDGEs Checked by [Parameter]-[Life Y/M/C/K Toner] of [IOT Diag] in [Printer Diag] of diagnosis. Does the remainder value show the near of the end? (Refer to Chapter 2 for details of the life counter value.)	Replace the TONER CARTRIDGE(s). (Refer to Removal 7/ Replacement 53.)	Go to step 14.
14	Checking the laser beam windows of the ROS ASSY Are the laser beam windows on the ROS ASSY clean? 	Go to step 15.	Clean the window(s) with soft cloth or cotton swab gently.
15	Checking the laser beam path Are there any foreign substances between the ROS ASSY and PHD UNIT? 	Remove the foreign substances.	Go to step 16.

Step	Check	Remedy	
		Yes	No
16	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 17.
17	Checking the Toner Dispenser Motors for function Does the Toner Dispenser Motors function normally? Checked by [Digital Output]-[DO-21(Y)/23(M)/25(C)/27(K)] of [IOT Diag] in [Printer Diag] of diagnosis.	Go to step 22.	Go to step 18.
18	Checking the connector for connection Check the connectors between the PWBA MCU and TNR (Y/M/C/K) MOT (MOTOR ASSY DISP). Are P/J18, P/J19, P/J181, P/J182, P/J191 and P/J192 connected correctly? 	Go to step 20.	Reconnect the connector(s) P/J18, P/J19, P/J181, P/J182, P/J191 and/or P/J192 surly, then go to step 19.
19	Is the image printed correctly?	End of work.	Go to step 20.
20	Checking the HARN ASSY TNR MOT for continuity Disconnect J18 and J19 from the PWBA MCU. Disconnect J181, J182, J191 and J192 from the TNR (Y/M/C/K) MOT. Is each cable of J18 <=> J181 and J182 continuous? Is each cable of J19 <=> J191 and J192 continuous?	Go to step 21.	Replace the HARN ASSY TNR MOT.
21	Checking the power to TNR (Y/M/C/K) MOT (MOTOR ASSY DISP) Disconnect J18 and J19 from the PWBA MCU. Is the voltage across P18-3pin, P18-8pin, P19-4pin and P19-9pin <= > ground on PWBA MCU, about +24 VDC when the interlock switch (HARN ASSY INTERLOCK) is pushed.	Replace the MOTOR ASSY DISP or FRAME ASSY MOT. (Refer to Removal 43/ Replacement 17.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
22	Checking the ROS ASSY for connection Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly? 	Go to step 24.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 surely, then go to step 23.
23	Is the image printed correctly?	End of work.	Go to step 24.
24	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 25.
25	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 26.

Step	Check	Remedy	
		Yes	No
26	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 27.
27	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 28.
28	Checking after replacing the TRANSFER ASSY Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.) Is the image printed correctly?	End of work.	Go to step 29.
29	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 30.
30	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 44/ Replacement 16.) Is the image printed correctly?	End of work.	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)

FIP-1.P3 Solid black

Trouble substance
The entire paper is printed jet-black.

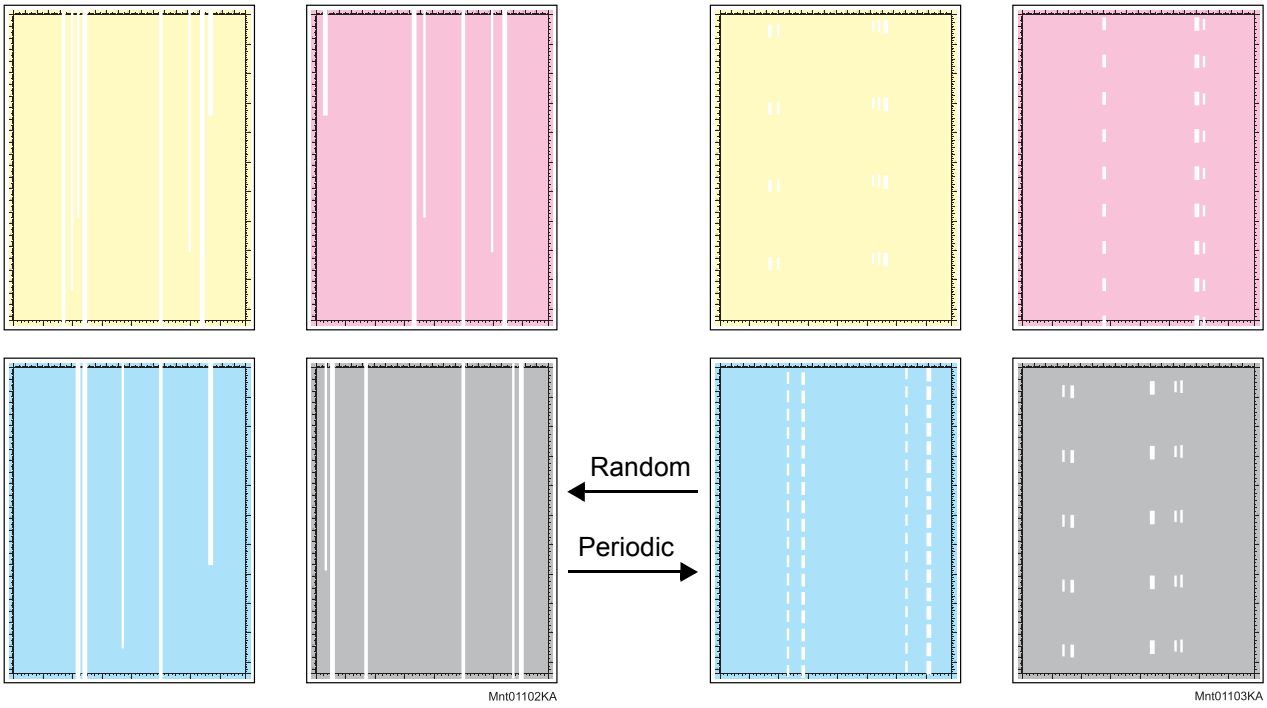
Possible causative parts
- ROS ASSY (PL4.1.1)
- PWBA HVPS (PL4.1.19)
- PHD UNIT (PL4.1.21)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- IIT ASSY SUB (PL10.9.2)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 5.
2	Checking the original setting Is the original placed correctly?	Go to step 3.	Set the original correctly.
3	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when copying?	Go to step 4.	End of work.
4	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when copying?	Replace the IIT ASSY SUB. (Removal 59/ Replacement 2)	End of work.
5	Checking the solid black. Print the contamination check page. Is the image printed correctly?	Printing data is incorrect, then check the printing data which the problem generated.	Go to step 6.
6	Checking the Toner Type Is the Dell Toner seated?	Go to step 7.	Change the Toner Type setting to Non-Dell Toner.
7	Checking the printing Is the image printed correctly? Checked by [Test Print] - [Test Pattern 600] in diagnosis.	Go to step 8.	Go to step 9.
8	Checking the test printing Is the image printed correctly? Checked by printing the [TestPat (IOT)] in [Test Print] in printer of diagnosis.	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)	Go to step 9.
9	Checking the Grid2. Print the Grid2 page. Is the solid color printed? Checked by [Test Print] - [Grid2] in diagnosis.	Replace the toner cartridge of the color by which Solid was printed.	Go to step 10.

Step	Check	Remedy	
		Yes	No
10	Checking after reseating the PWBA MCU Reseat the PWBA MCU. (Removal 25/Replacement 29.) Is the image printed correctly?	End of work.	Go to step 11.
11	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 12.
12	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 13.
13	Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 15.
15	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.) Is the image printed correctly?	End of work.	Go to step 16.
16	Checking after replacing the PWBA HVPS Replace the PWBA HVPS. (Refer to Removal 50/ Replacement 10.) Is the image printed correctly?	End of work.	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)

FIP-1.P4 Vertical blank lines (White stripes in paper transport direction)



Trouble substance

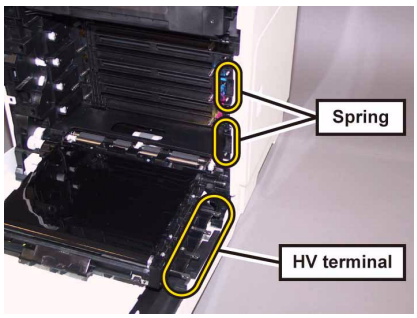
There are some extremely faint or completely non-printed parts. Those nonprinted parts cover a wide area vertically, along the paper feeding direction.

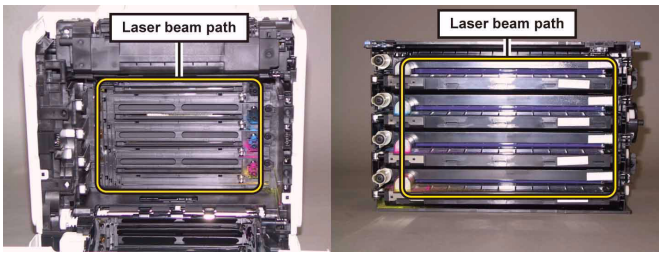
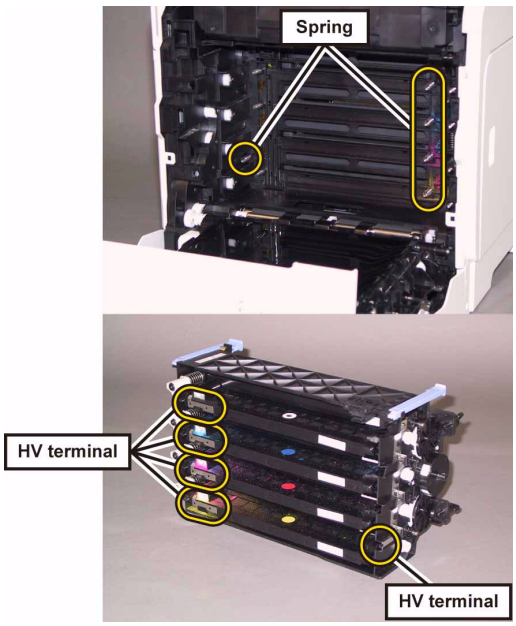
Possible causative parts

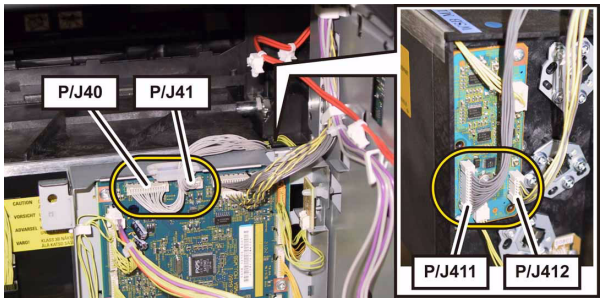
- ROS ASSY (PL4.1.1)
- PHD UNIT (PL4.1.21)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- IIT ASSY SUB (PL10.9.2)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

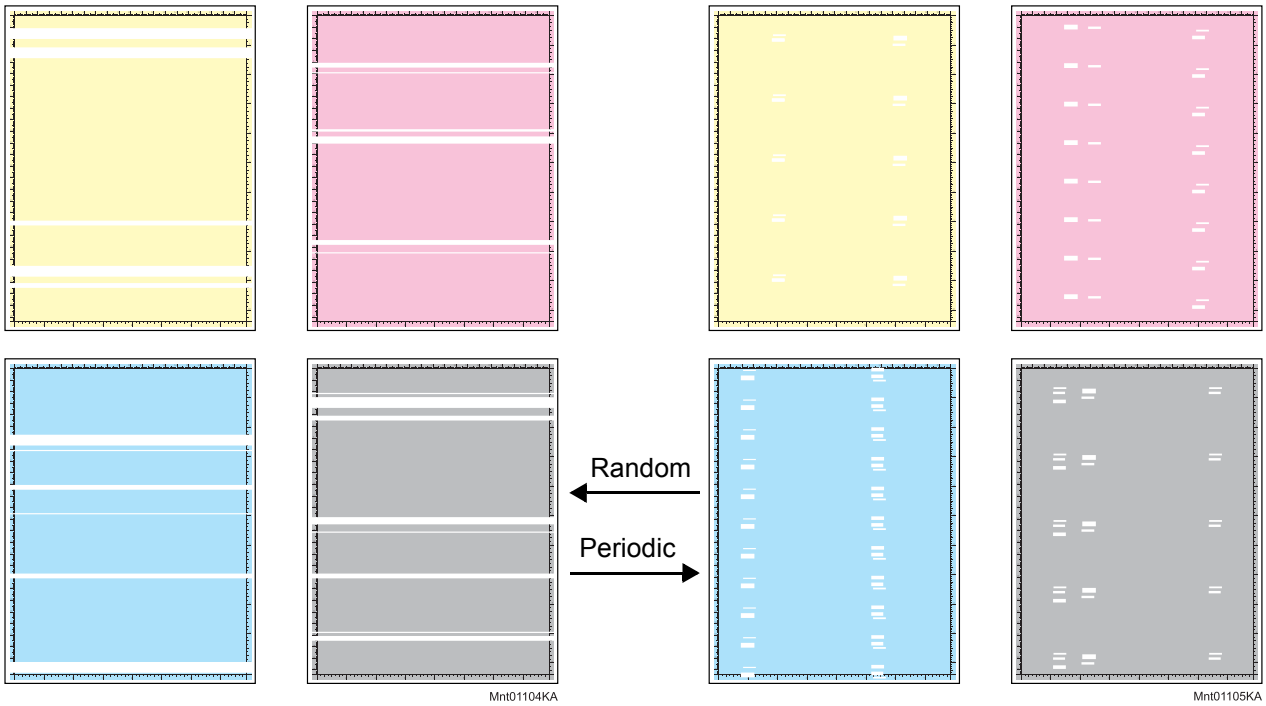
Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 5.
2	Checking the original Is the original color clean?	Go to step 3.	Change the original.
3	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when copying?	Go to step 4.	End of work.

Step	Check	Remedy	
		Yes	No
4	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when copying?	Replace the IIT ASSY SUB. (Removal 59/ Replacement 2)	End of work.
5	Checking the Vertical blank lines. Print the contamination check page. Is the image printed correctly?	Printing data is incorrect, then check the printing data which the problem generated.	Go to step 6.
6	Checking the defective parts Print the [Pitch Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. When the vertical blank lines of periodicity are observed, check the defective parts by comparing the printed vertical blank lines with the Pitch Chart. (Refer to Chapter 4.1.) Are there any vertical blank lines matching the chart?	Replace the corresponding parts.	Go to step 7.
7	Checking the paper condition Is the paper dry and recommended paper?	Go to step 9.	Replace the paper with a new dry and recommended one, then go to step 8.
8	Is the image printed correctly?	End of work.	Go to step 9.
9	Checking the foreign substances on the paper transfer path Are there any foreign substances on the paper transfer path between the TRANSFER ASSY and FUSER ASSY?	Remove the foreign substances, then go to step 10.	Go to step 11.
10	Is the image printed correctly?	End of work.	Go to step 11.
11	Checking the belt surfaces of the TRANSFER ASSY Are there any damages on the belt surface of the TRANSFER ASSY?	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	Go to step 12.
12	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed?  	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 13.

Step	Check	Remedy	
		Yes	No
13	Checking the laser beam path Are there any foreign substances between the ROS ASSY and PHD UNIT? 	Remove the foreign substances.	Go to step 14.
14	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 15.
15	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 16.
16	Checking after reseating the FUSER ASSY Reseat the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Is the image printed correctly?	End of work.	Go to step 17.
17	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 18.
18	Checking after reseating the PWBA ESS Reseat the PWBA ESS. Is the image printed correctly?	End of work.	Go to step 19.
19	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 20.

Step	Check	Remedy	
		Yes	No
20	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 21.
21	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 22.
22	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.) Is the image printed correctly?	End of work.	Go to step 23.
23	Checking the ROS ASSY for connection Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly? 	Go to step 25.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 surely, then go to step 24.
24	Is the image printed correctly?	End of work.	Go to step 25.
25	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 44/ Replacement 16.) Is the image printed correctly?	End of work.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1.P5 Horizontal band cross out (White stripes in horizontal direction)



Trouble substance

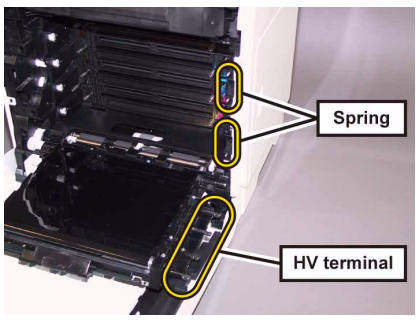
There are some extremely faint or completely non-printed parts. Those nonprinted parts cover a wide area horizontally, perpendicular to the paper feeding direction.

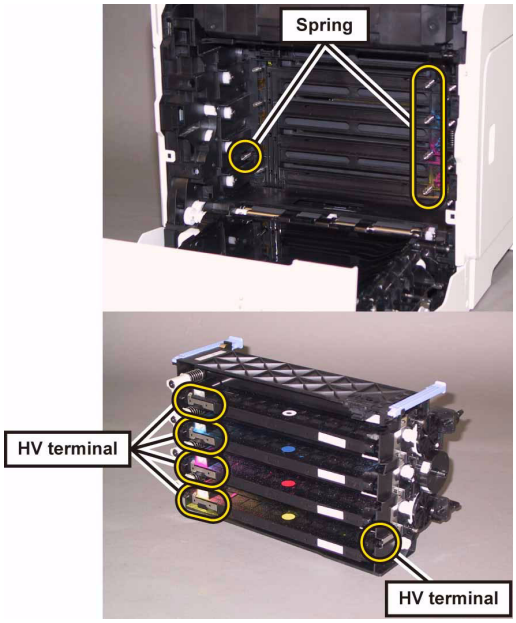
Possible causative parts

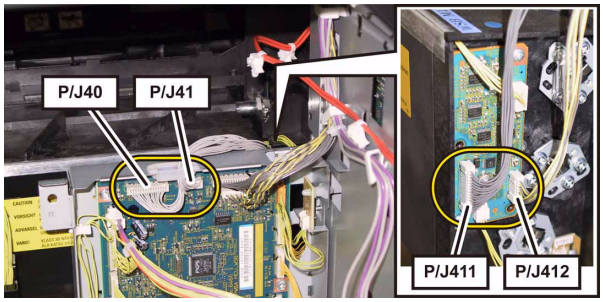
- ROS ASSY (PL4.1.1)
- PWBA HVPS (PL4.1.19)
- PHD UNIT (PL4.1.21)
- TONER CARTRIDGE K (PL5.1.21)
- TONER CARTRIDGE C (PL5.1.22)
- TONER CARTRIDGE M (PL5.1.23)
- TONER CARTRIDGE Y (PL5.1.24)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- IIT ASSY SUB (PL10.9.2)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

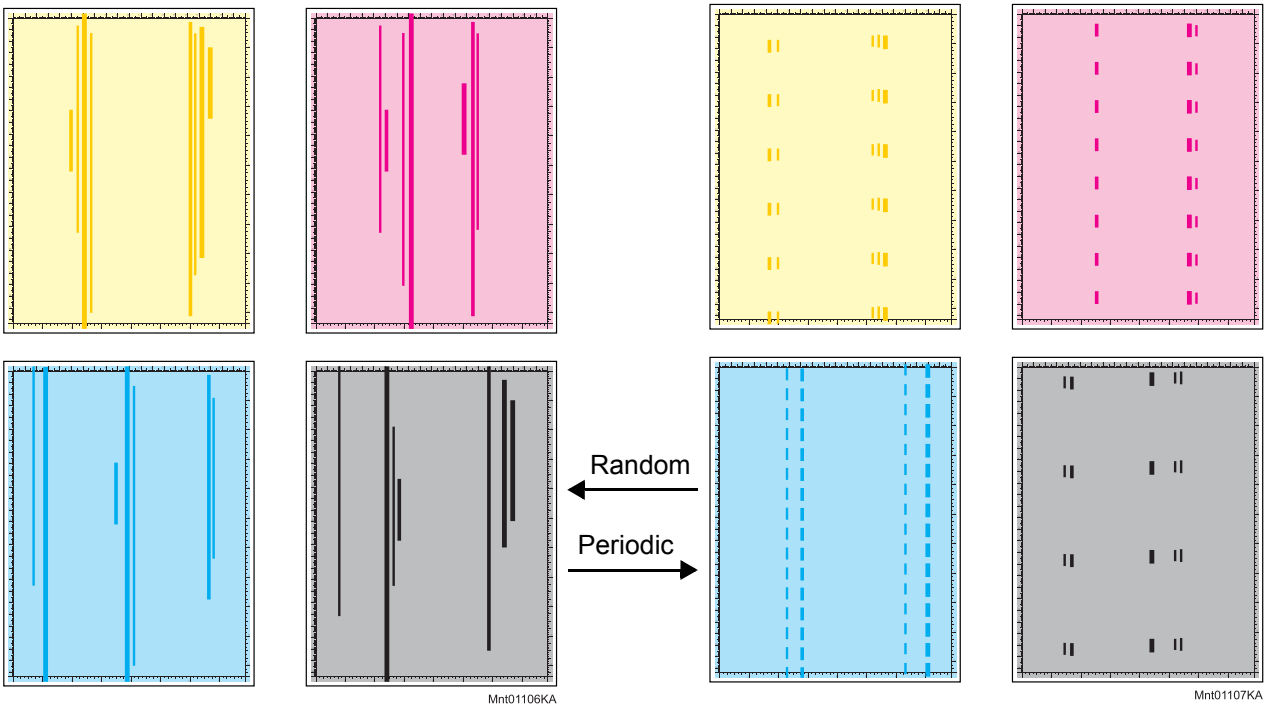
Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 5.

Step	Check	Remedy	
		Yes	No
2	Checking the original Is the original color clean?	Go to step 3.	Change the original.
3	Checking the PWBA CONT AIO installation Reseat the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when copying?	Go to step 4.	End of work.
4	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Removal 24/Replacement 36) Does the error still occur when copying?	Replace the IIT ASSY SUB. (Removal 59/ Replacement 2)	End of work.
5	Checking the Horizontal band cross out. Print the contamination check page. Is the image printed correctly?	Printing data is incorrect, then check the printing data which the problem generated.	Go to step 6.
6	Checking the defective parts Print the [Pitch Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. Check the defective parts by comparing the printed horizontal band cross out with Pitch Chart. (Refer to Chapter 4.1.) Are there any horizontal band cross out matching the chart?	Replace the corresponding parts	Go to step 7.
7	Checking the paper condition Is the paper dry and recommended paper?	Go to step 9.	Replace the paper with a new dry and recommended one, then go to step 8.
8	Is the image printed correctly?	End of work.	Go to step 9.
9	Checking the belt surface of the TRANSFER ASSY Are there any damages on the belt surface of the TRANSFER ASSY?	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	Go to step 10.
10	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed?  	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 11.
11	Checking the laser beam path Are there any foreign substances between the ROS ASSY and PHD UNIT?	Remove the foreign substances.	Go to step 12.

Step	Check	Remedy	
		Yes	No
12	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 13.
13	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after reseating the FUSER ASSY Reseat the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Is the image printed correctly?	End of work.	Go to step 15.
15	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 16.
16	Checking after reseating the PWBA ESS Reseat the PWBA ESS. Is the image printed correctly?	End of work.	Go to step 17.
17	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 18.
18	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 19.
19	Checking after replacing the TONER CARTRIDGEs Replace the TONER CARTRIDGE(s). (Refer to Removal 7/ Replacement 53.) Is the image printed correctly?	End of work.	Go to step 20.
20	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 21.

Step	Check	Remedy	
		Yes	No
21	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.) Is the image printed correctly?	End of work.	Go to step 22.
22	Checking the ROS ASSY for connection Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly? 	Go to step 24.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 surely, then go to step 23.
23	Is the image printed correctly?	End of work.	Go to step 24.
24	Checking after replacing the PWBA HVPS Replace the PWBA HVPS. (Refer to Removal 50/ Replacement 10.) Is the image printed correctly?	End of work.	Go to step 25.
25	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 44/ Replacement 16.) Is the image printed correctly?	End of work.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1.P6 Vertical stripes



Trouble substance

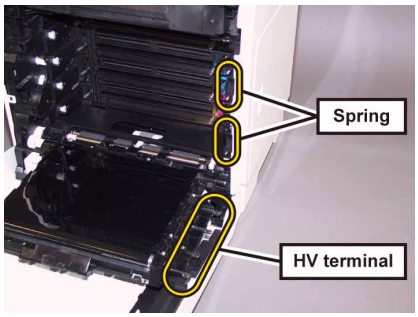
There are vertical black stripes along the paper.

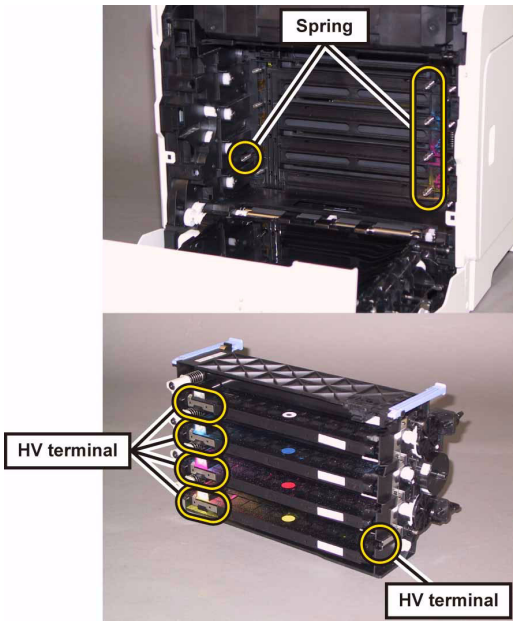
Possible causative parts

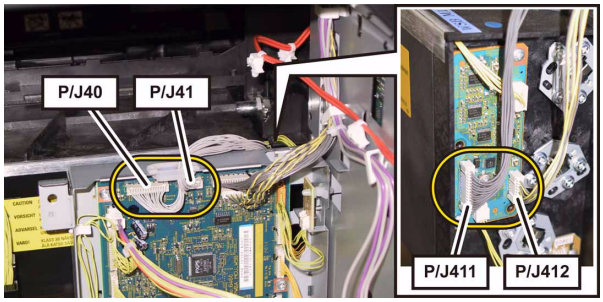
- ROS ASSY (PL4.1.1)
- PHD UNIT (PL4.1.21)
- FUSER ASSY (PL6.1.1)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- IIT ASSY SUB (PL10.9.2)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

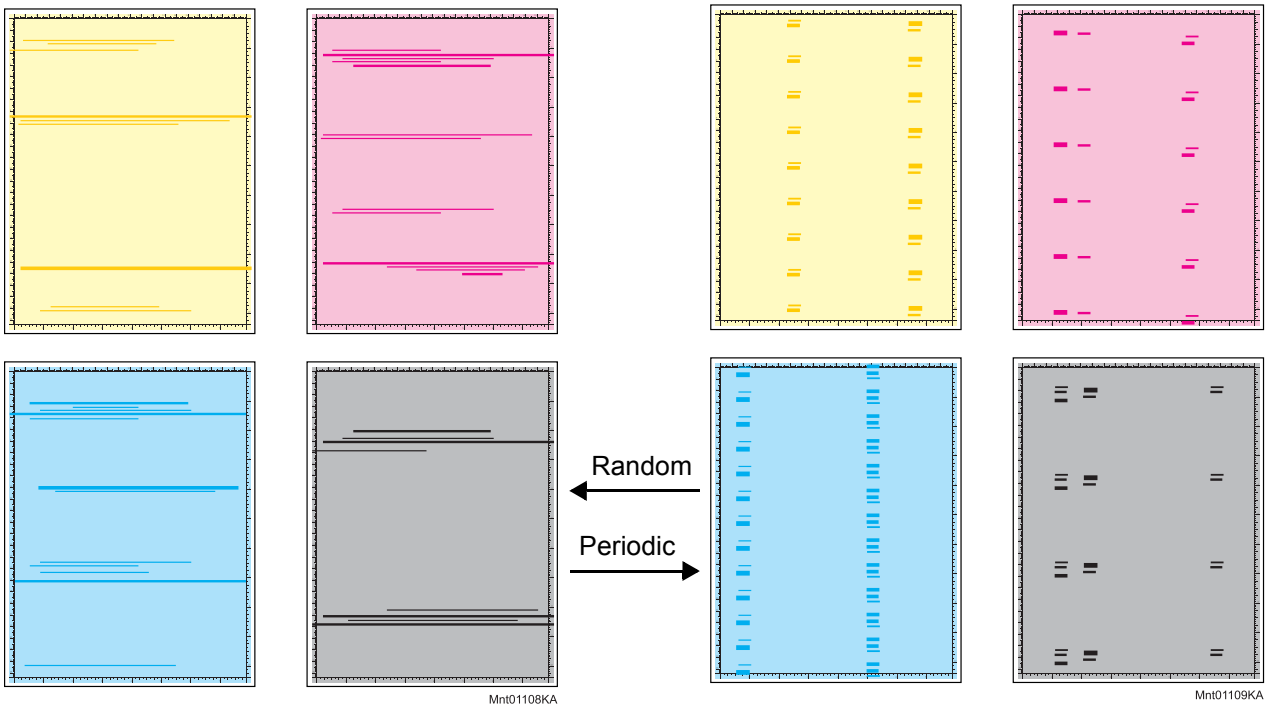
Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 4.
2	Checking the original Is the original color clean?	Go to step 3.	Change the original.

Step	Check	Remedy	
		Yes	No
3	Checking the Platen Glass Open the ADF and check the Platen Glass. Are there any damages or foreign substances on the Platen Glass?	Replace the IIT ASSY SUB or remove the foreign substances. (Removal 59/ Replacement 2)	Go to step 5.
4	Checking the Vertical stripes. Print the contamination check page. Is the image printed correctly?	Printing data is incorrect, then check the printing data which the problem generated.	Go to step 5.
5	Checking the defective parts Print the [Pitch Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. When the vertical stripes of periodicity are observed, check the defective parts by comparing the printed vertical stripes with the Pitch Chart. (Refer to Chapter 4.1.) Are there any vertical stripes matching the chart?	Replace the corresponding parts. When the result corresponds to the [b-12 PHD] of the pitch chart, performing the [PHD Refresh Configuration Check] of [Chart Print] in [Diagnosis] tab of [Tool Box] may improve image quality.	Go to step 6.
6	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed?  	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 7.

Step	Check	Remedy	
		Yes	No
7	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 8.
8	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 9.
9	Checking after reseating the FUSER ASSY **Warning: Start the operation after the FUSER ASSY has cooled down.** Reseat the FUSER ASSY. Is the image printed correctly?	End of work.	Go to step 10.
10	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 11.
11	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 12.
12	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 13.
13	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 14.

Step	Check	Remedy	
		Yes	No
14	Checking the ROS ASSY for connection Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly? 	Go to step 16.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 surely, then go to step 15.
15	Is the image printed correctly?	End of work.	Go to step 16.
16	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 17.
17	Checking after replacing the FUSER ASSY Replace the FUSER ASSY and initialize the Fuser Life Counter using the diagnosis. (Refer to Removal 9/ Replacement 51.) Is the image printed correctly?	End of work.	Go to step 18.
18	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.) Is the image printed correctly?	End of work.	Go to step 19.
19	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 44/ Replacement 16.) Is the image printed correctly?	End of work.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1.P7 Horizontal stripes



Trouble substance

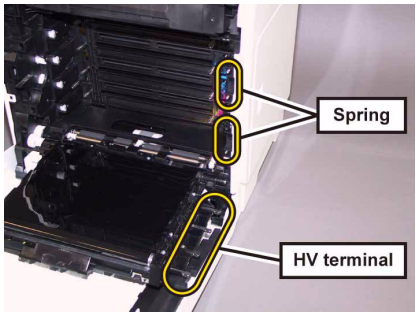
There are horizontal black stripes (perpendicular to the paper path direction) along the paper.

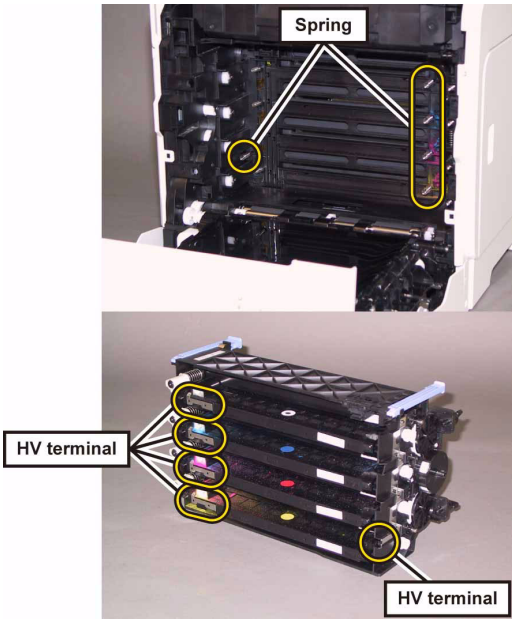
Possible causative parts

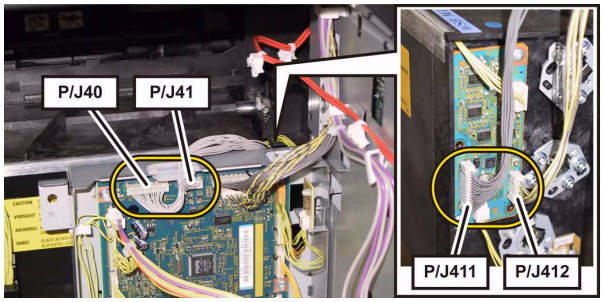
- ROS ASSY (PL4.1.1)
- PHD UNIT (PL4.1.21)
- TONER CARTRIDGE K (PL5.1.21)
- TONER CARTRIDGE C (PL5.1.22)
- TONER CARTRIDGE M (PL5.1.23)
- TONER CARTRIDGE Y (PL5.1.24)
- FUSER ASSY (PL6.1.1)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- IIT ASSY SUB (PL10.9.2)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

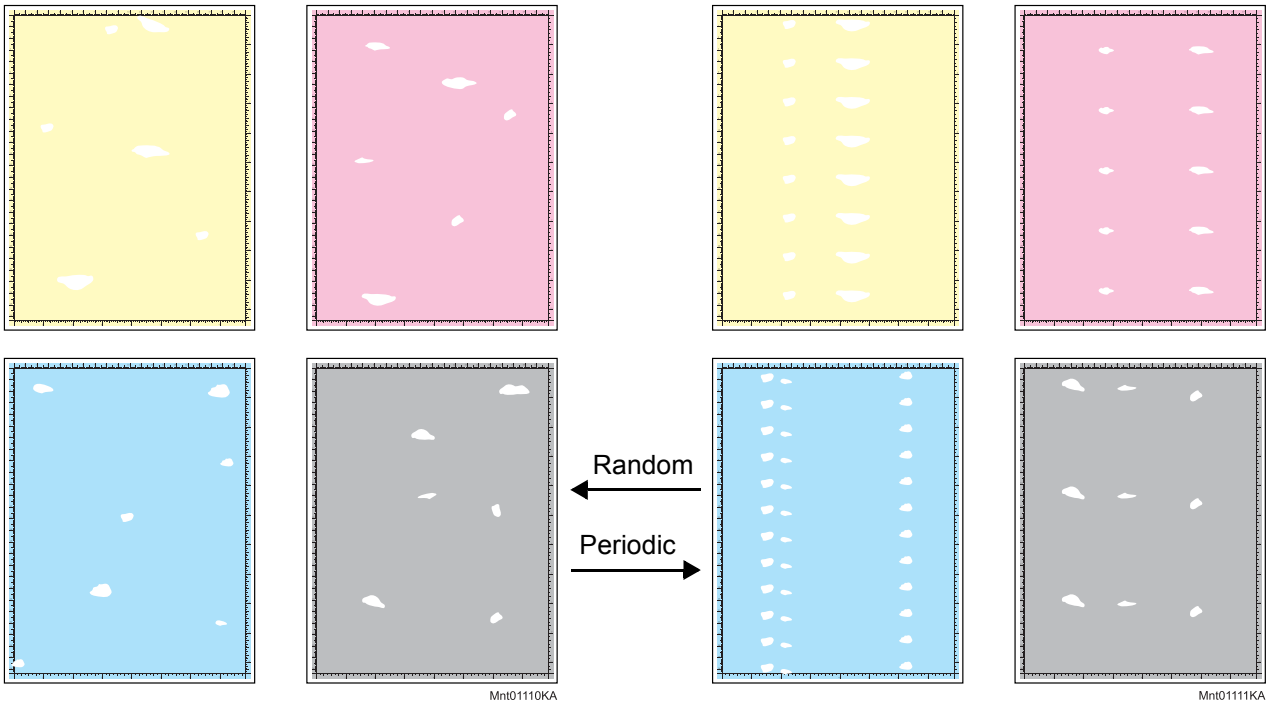
Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 4.
2	Checking the original Is the original color clean?	Go to step 3.	Change the original.

Step	Check	Remedy	
		Yes	No
3	Checking the Platen Glass Open the ADF and check the Platen Glass. Are there any damages or foreign substances on the Platen Glass?	Replace the IIT ASSY SUB or remove the foreign substances. (Removal 59/ Replacement 2)	Go to step 5.
4	Checking the Horizontal stripes. Print the contamination check page. Is the image printed correctly?	Printing data is incorrect, then check the printing data which the problem generated.	Go to step 5.
5	Checking the defective parts Print the [Pitch Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. Check the defective parts by comparing the printed horizontal stripes with Pitch Chart. (Refer to Chapter 4.1.) Are there any horizontal stripes matching the chart?	Replace the corresponding parts When the result corresponds to the [b-12 PHD] of the pitch chart, performing the [PHD Refresh Configuration Check] of [Chart Print] in [Diagnosis] tab of [Tool Box] may improve image quality.	Go to step 6.
6	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed?  	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 7.
7	Checking the paper path Are there any contaminations of the toner on the paper path?	Clean the paper path.	Go to step 8.

Step	Check	Remedy	
		Yes	No
8	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 9.
9	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 10.
10	Checking after reseating the FUSER ASSY **Warning: Start the operation after the FUSER ASSY has cooled down.** Reseat the FUSER ASSY. Is the image printed correctly?	End of work.	Go to step 11.
11	Checking the TONER CARTRIDGE (Y/M/C/K) Are the TONER CARTRIDGEs that meet the specification installed to the correct position?	Go to step 12.	Replace a new TONER CARTRIDGE (Y/M/C/K) meets the specification. (Refer to Removal 7/ Replacement 53.)
12	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 13.
13	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 15.
15	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 16.

Step	Check	Remedy	
		Yes	No
16	Checking the ROS ASSY for connection Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly? 	Go to step 18.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 surely, then go to step 17.
17	Is the image printed correctly?	End of work.	Go to step 18.
18	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 48.) Is the image printed correctly?	End of work.	Go to step 19.
19	Checking after replacing the FUSER ASSY Replace the FUSER ASSY and initialize the Fuser Life Counter using the diagnosis. (Refer to Removal 10/ Replacement 41.) Is the image printed correctly?	End of work.	Go to step 20.
20	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Refer to Removal 34/ Replacement 17.) Is the image printed correctly?	End of work.	Go to step 21.
21	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 37/ Replacement 14.) Is the image printed correctly?	End of work.	Replace the PWBA MCU. (Refer to Removal 35/ Replacement 16.)

FIP-1.P8 Partial Deletion



Trouble substance

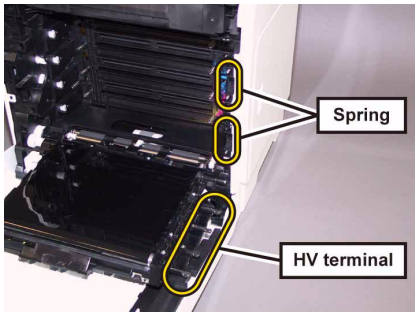
There are some extremely faint or completely missing parts in a limited area on the paper.

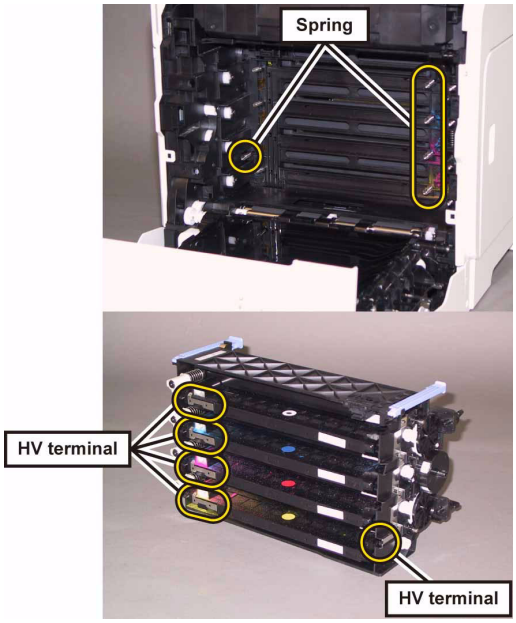
Possible causative parts

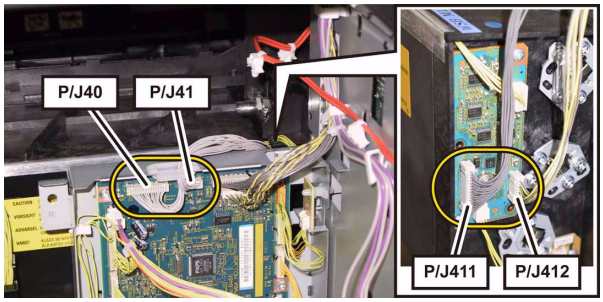
- ROS ASSY (PL4.1.1)
- PHD UNIT (PL4.1.21)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- IIT ASSY SUB (PL10.9.2)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

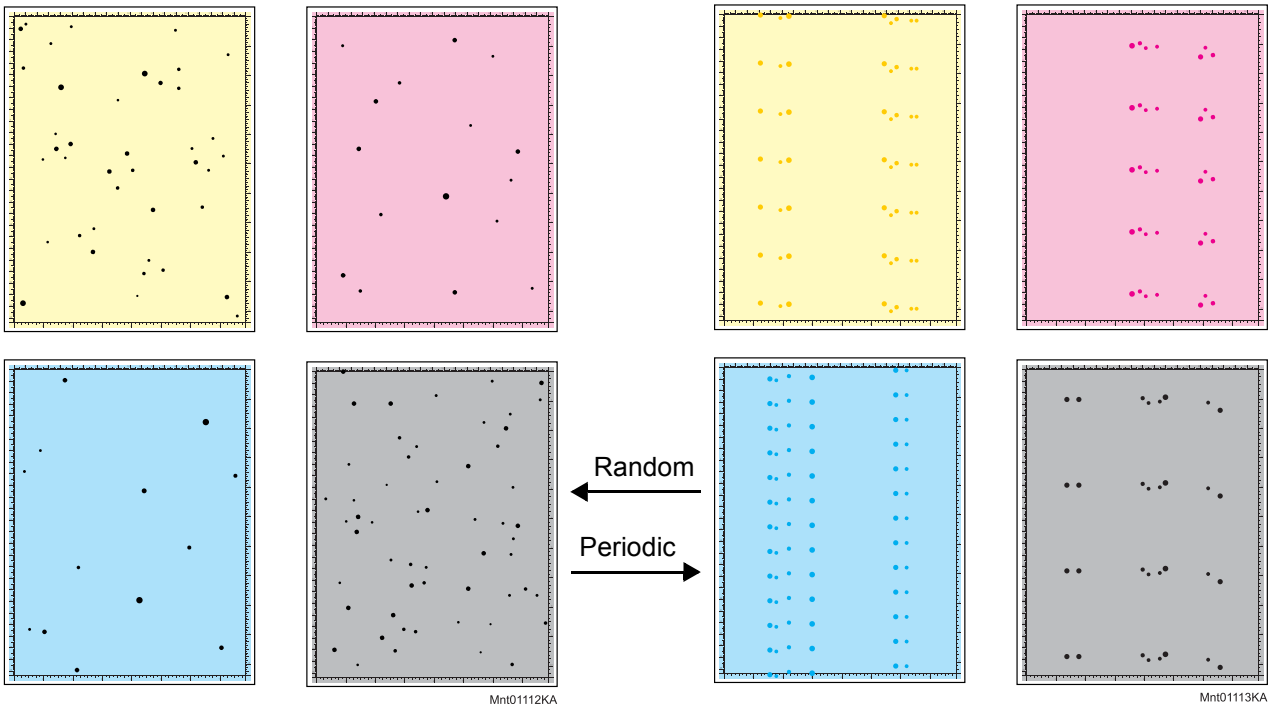
Step	Check	Remedy	
		Yes	No
1	Checking dew condensation Was the printer installed in the room where the air conditioner well works?	Go to step 3.	Turn on the power of the air conditioner and replace a new dray and recommended paper, then go to step 2.
2	Is the image printed correctly?	End of work.	Go to step 3.
3	Checking the error mode Does the error occur only during copying?	Go to step 4.	Go to step 5.

Step	Check	Remedy	
		Yes	No
4	Checking the original Is the original color clean?	Go to step 6.	Change the original.
5	Checking the Partial Deletion. Print the contamination check page. Is the image printed correctly?	Check the printing data which the problem generated.	Go to step 6.
6	Checking the defective parts Print the [Pitch Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. When the partial lacks of periodicity are observed, check the defective parts by comparing the printed partial lacks with the Pitch Chart. (Refer to Chapter 4.1.) Are there any partial lackes matching the chart?	Replace the corresponding parts.	Go to step 7.
7	Checking after replacing a new paper Replace the paper with a new dry and recommended one. Is the image printed correctly?	End of work.	Go to step 8.
8	Checking the belt surface of the TRANSFER ASSY Are there any damages on the belt surface of the TRANSFER ASSY?	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	Go to step 9.
9	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed? 	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 10.

Step	Check	Remedy	
		Yes	No
10	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 11.
11	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 12.
12	Checking after reseating TONER CARTRIDGEs (Y/M/C/K) Reseat the TONER CARTRIDGEs (Y/M/C/K), and check that their lock keys are in the lock positions. Is the image printed correctly?	End of work.	Go to step 13.
13	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 15.
15	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 16.
16	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 17.

Step	Check	Remedy	
		Yes	No
17	Checking the ROS ASSY for connection Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly? 	Go to step 19.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 surely, then go to step 18.
18	Is the image printed correctly?	End of work.	Go to step 19.
19	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 20.
20	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.) Is the image printed correctly?	End of work.	Go to step 21.
21	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 44/ Replacement 16.) Is the image printed correctly?	End of work.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1.P9 Spots



Trouble substance

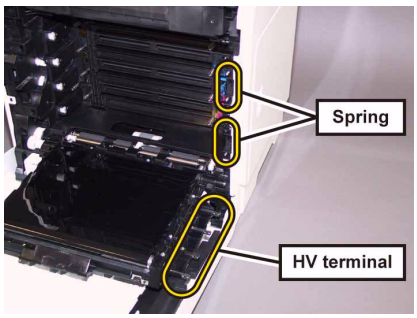
There are toner spots all over the paper disorderedly.

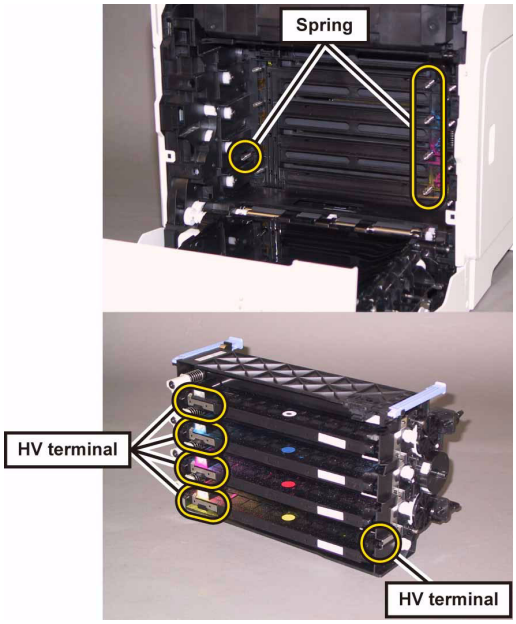
Possible causative parts

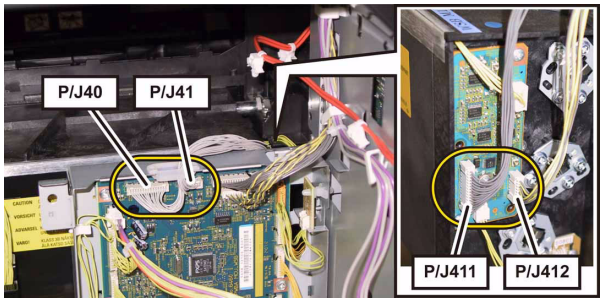
- ROS ASSY (PL4.1.1)
- PHD UNIT (PL4.1.21)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- IIT ASSY SUB (PL10.9.2)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

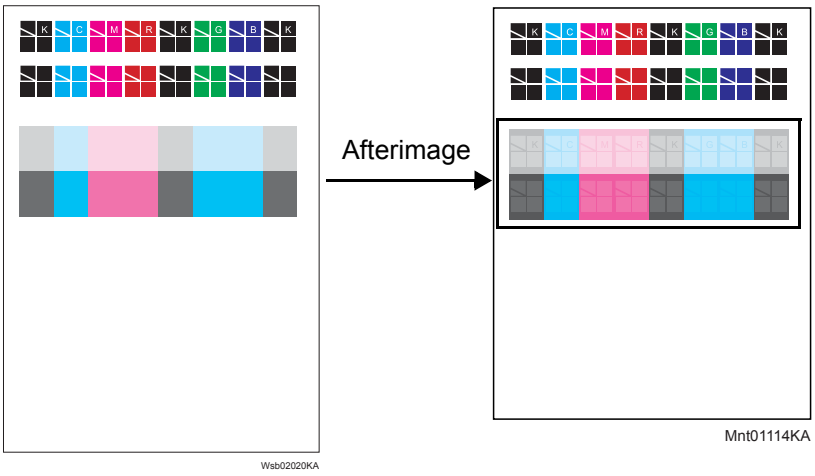
Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 4.
2	Checking the original Is the original color clean?	Go to step 3.	Change the original.

Step	Check	Remedy	
		Yes	No
3	Checking the Platen Glass Open the ADF and check the Platen Glass. Are there any damages or foreign substances on the Platen Glass?	Replace the IIT ASSY SUB or remove the foreign substances. (Removal 59/ Replacement 2)	Go to step 6.
4	Checking the contaminations on the paper transfer path Are there any contaminations on the paper transfer path?	Clean the contaminations with soft cloth or cotton swab, then go to step 5.	Go to step 6.
5	Is the image printed correctly?	End of work.	Go to step 6.
6	Checking the defective parts Print the [Pitch Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. Check the defective parts by comparing the printed spots with Pitch Chart. (Refer to Chapter 4.1.) Are there any spots matching the chart?	Replace the corresponding parts When the result corresponds to the [b-12 PHD] of the pitch chart, performing the [PHD Refresh Configuration Check] of [Chart Print] in [Diagnosis] tab of [Tool Box] may improve image quality.	Go to step 7.
7	Checking the using paper Does the using paper meet the specifications?	Go to step 9.	Use the paper that meets the specifications, then go to step 8.
8	Is the image printed correctly?	End of work.	Go to step 9.
9	Checking the belt surface of the TRANSFER ASSY Are there any damages on the belt surface of the TRANSFER ASSY?	Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.)	Go to step 10.
10	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed? 	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 11.

Step	Check	Remedy	
		Yes	No
11	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 12.
12	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 13.
13	Checking after reseating TONER CARTRIDGEs (Y/M/C/K) Reseat the TONER CARTRIDGEs (Y/M/C/K), and check that their lock keys are in the lock positions. Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after reseating the FUSER ASSY **Warning: Start the operation after the FUSER ASSY has cooled down.** Reseat the FUSER ASSY and initialize the Fuser Life Counter using the diagnosis. Is the image printed correctly?	End of work.	Go to step 15.
15	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 16.
16	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 17.
17	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 18.
18	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 19.

Step	Check	Remedy	
		Yes	No
19	Checking the ROS ASSY for connection Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly? 	Go to step 21.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 surely, then go to step 20.
20	Is the image printed correctly?	End of work.	Go to step 21.
21	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 22.
22	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.) Is the image printed correctly?	End of work.	Go to step 23.
23	Checking after replacing the ROS ASSY Replace the ROS ASSY. (Refer to Removal 44/ Replacement 16.) Is the image printed correctly?	End of work.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1.P10 Afterimage (Ghost)

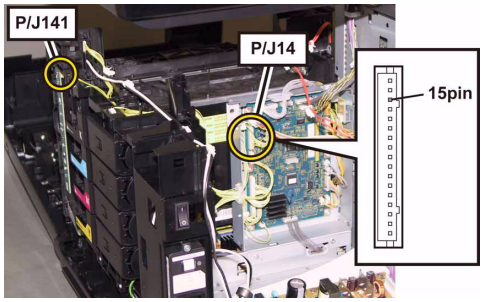
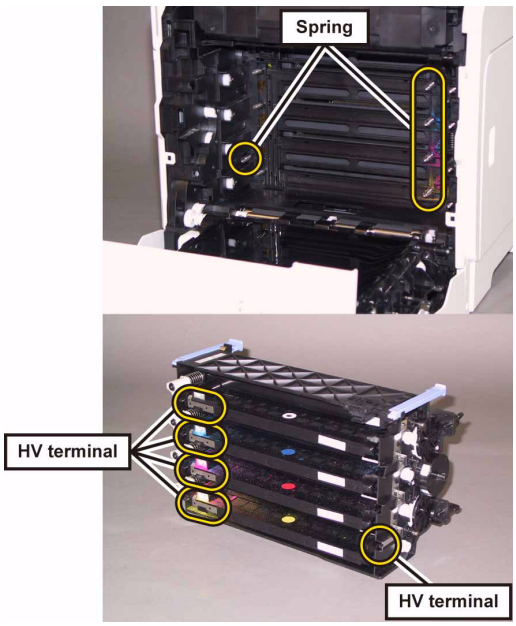


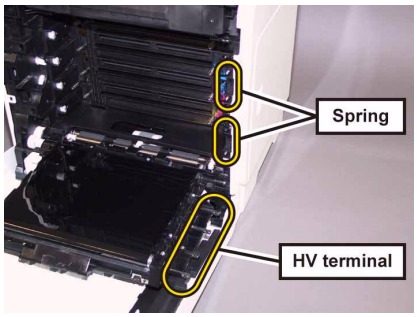
Trouble substance
The ghost appears on the paper. The ghost may be the image of the previous page, or a part of the page currently printing.

Possible causative parts
- LED ASSY ERASE (PL4.1.8)
- PHD UNIT (PL4.1.21)
- FUSER ASSY (PL6.1.1)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- HARN ASSY LVPS (PL10.8.3)

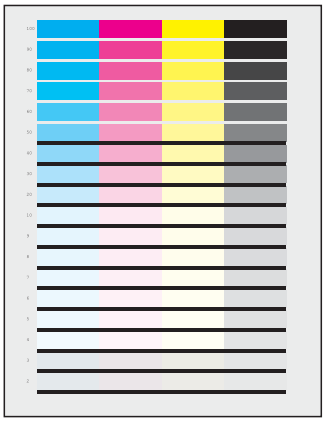
Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 3.
2	Checking the original Is the original color clean?	Go to step 5.	Change the original.
3	Checking the printing Did the client print the same image of large volume?	Go to step 4.	Go to step 5.
4	Checking the Afterimage(Ghost). Print the Windows test page. Is the image printed correctly?	Check the printing data which the problem generated.	Go to step 5.
5	Checking the Afterimage(Ghost). Print the [Ghost Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. Is the image printed correctly?	End of work.	Go to step 6.
6	Checking the erase lamps Open the COVER ASSY FRONT, and remove the PHD UNIT. Cheat the safety interlock switch. Does the four erase LEDs light correctly?	Go to step 10.	Go to step 7.

Step	Check	Remedy	
		Yes	No
7	Checking the connectors for connection Check the connections between the PWBA MCU and LED ASSY ERASE. Are P/J141 and P/J14 connected correctly? 	Go to step 8.	Reconnect the connector(s) P/J141 and/or P/J14 surely, then go to step 8.
8	Checking the HARN ASSY LVPS for continuity Disconnect J14 from the PWBA MCU. Disconnect J141 from the LED ASSY ERASE. Is each cable of J14 <=> J141 continuous?	Go to step 9.	Replace the HARN ASSY LVPS.
9	Checking the power to LED ASSY ERASE Disconnect the connector of J14 from the LED ASSY ERASE. Is the voltage across P14-15pin <=> ground on the PWBA MCU, about +3.3 VDC?	Replace the LED ASSY ERASE. (Refer to Removal 12/ Replacement 48.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
10	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 11.
11	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 12.

Step	Check	Remedy	
		Yes	No
12	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed?  	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 13.
13	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 15.
15	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 16.
16	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 17.
17	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 18.
18	Checking after replacing the FUSER ASSY **Warning: Start the operation after the FUSER ASSY has cooled down.** Replace the FUSER ASSY. (Refer to Removal 9/ Replacement 51.) Is the image printed correctly?	End of work.	Go to step 19.
19	Checking after replacing the PWBA MCU Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.) Is the image printed correctly?	End of work.	Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.)

FIP-1.P11 Grey Background



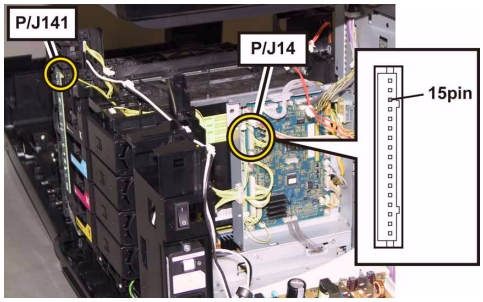
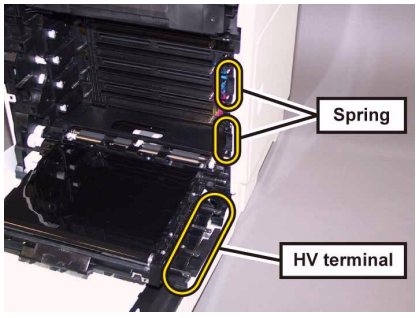
Mnt01115KA

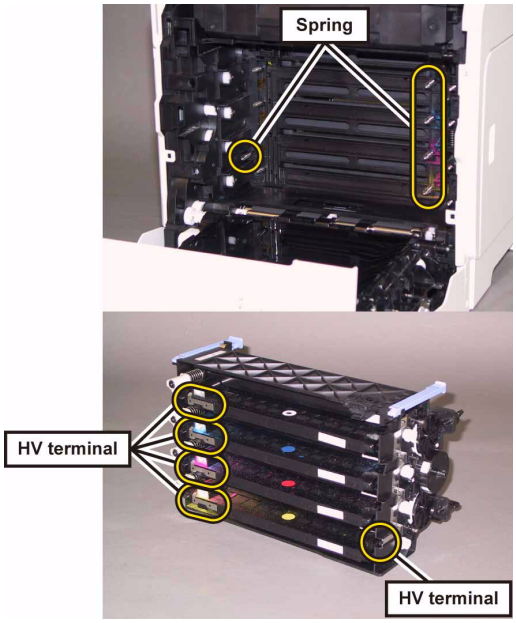
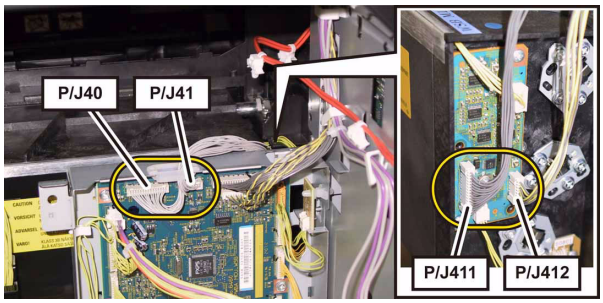
Trouble substance
There is toner stain all over or a part of the page. The stain appears as very bright gray stain.

Possible causative parts
- LED ASSY ERASE (PL4.1.8)
- PHD UNIT (PL4.1.21)
- TRANSFER ASSY (PL6.1.7)
- PWBA CONT AIO (PL10.6.6)
- PWBA MCU (PL10.7.7)
- HARN ASSY LVPS (PL10.8.3)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

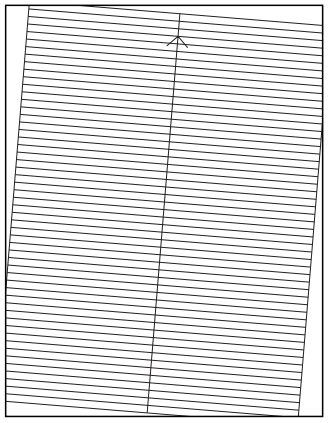
Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 3.
2	Checking the original Is the original color clean?	Go to step 5.	Change the original.
3	Checking the Grey background. Print the Gradation page. Is the image printed correctly?	Printing data is incorrect, then check the printing data which the problem generated.	Go to step 4.
4	Checking the contaminations on the paper transfer path Are there any contaminations on the paper transfer path?	Clean the contaminations with soft cloth or cotton swab, then go to step 5.	Go to step 6.
5	Is the image printed correctly?	End of work.	Go to step 6.
6	Checking the printing Print the Windows test page after printing the color photograph or picture. (If the color photograph or picture printing is impossible, print the [4 Colors Configuration Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box].) Is the image printed correctly?	End of work.	Go to step 7.
7	Checking the erase lamps Open the COVER ASSY FRONT, and remove the PHD UNIT. Cheat the safety interlock switch. Does the four erase LEDs light correctly?	Go to step 11.	Go to step 8.

Step	Check	Remedy	
		Yes	No
8	Checking the connectors for connection Check the connections between the PWBA MCU and LED ASSY ERASE. Are P/J141 and P/J14 connected correctly? 	Go to step 9.	Reconnect the connector(s) P/J141 and/or P/J14 surely, then go to step 9.
9	Checking the HARN ASSY LVPS for continuity Disconnect J14 from the PWBA MCU. Disconnect J141 from the LED ASSY ERASE. Is each cable of J14 <=> J141 continuous?	Go to step 10.	Replace the HARN ASSY LVPS.
10	Checking the power to LED ASSY ERASE Disconnect the connector of J14 from the LED ASSY ERASE. Is the voltage across P14-15pin <=> ground on the PWBA MCU, about +3.3 VDC?	Replace the LED ASSY ERASE. (Refer to Removal 12/ Replacement 48.)	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)
11	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed? 	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 12.

Step	Check	Remedy	
		Yes	No
12	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed? 	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 13.
13	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after reseating TONER CARTRIDGEs (Y/M/C/K) Reseat the TONER CARTRIDGEs (Y/M/C/K), and check that their lock keys are in the lock positions. Is the image printed correctly?	End of work.	Go to step 15.
15	Checking the ROS ASSY for connection Check the connections between the ROS ASSY and PWBA MCU. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly? 	Go to step 17.	Reconnect the connector(s) P/J40, P/J41, P/J411 and/or P/J412 surely, then go to step 16.
16	Is the image printed correctly?	End of work.	Go to step 17.
17	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Is the image printed correctly?	End of work.	Go to step 18.
18	Checking after reseating the PWBA CONT AIO Reseat the PWBA CONT AIO. Is the image printed correctly?	End of work.	Go to step 19.
19	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 20.

Step	Check	Remedy	
		Yes	No
20	Checking after reseating the PWBA HVPS Reseat the PWBA HVPS. Is the image printed correctly?	End of work.	Go to step 21.
21	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Is the image printed correctly?	End of work.	Go to step 22.
22	Checking after replacing the PWBA CONT AIO Replace the PWBA CONT AIO. (Refer to Removal 24/ Replacement 36.) Is the image printed correctly?	End of work.	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)

FIP-1.P12 Skew


Mnt01116KA

Trouble substance
The printed image is not paralleled with both sides of the paper.

Possible causative parts
- SEPARATOR ROLLER ASSEMBLY (PL2.1.5)
- ROLL ASSY FEED (PL3.2.4)
- ROLL ASSY REGI (PL3.2.9)
- ROLL REGI METAL (PL3.2.10)
- KIT IIT ASSY SUB (PL10.9.99)
- ADF ASSY (PL10.10.1)
- KIT ADF FEED ROLL and SEPARATOR PAD (PL10.10.97)

NOTE

. Tray is recommended for paper feeding because sheets fed via SSF is prone to skew depending on how the sheet is placed on SSF.

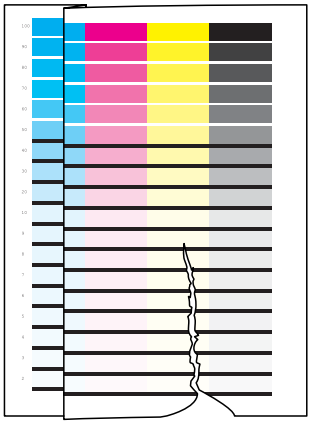
Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur only during copying?	Go to step 2.	Go to step 7.
2	Checking the error mode Does the error occur when feeding the original at the ADF?	Go to step 3.	Go to step 6.
3	Checking the original Does the original meet the ADF spec.?	Go to step 4.	Use the Platen Mode or change the original.
4	Checking the ADF Guides setting Reseat the ADF Guides. Does the error still occur when copying?	Go to step 5.	End of work.
5	Checking the ADF Feed Roller and the Separator Pad Are there any damages or foreign substances on the Roller and Pad?	Replace the KIT ADF ROLL and SEPARATOR PAD. (Removal 57/Replacement 4)	Replace the ADF ASSY. (Removal 59/Replacement 2)
6	Checking the original setting Was the original set to the platen glass correctly?	Replace the KIT IIT ASSY SUB. (Removal 59/ Replacement 2)	Reset the original.
7	Checking the using paper Does the using paper meet the specifications?	Go to step 9.	Use the paper that meets the specifications, then go to step 8.
8	Is the image printed correctly?	End of work.	Go to step 9.

Step	Check	Remedy	
		Yes	No
9	Checking the paper condition Is the paper dry and recommended paper?	Go to step 11.	Replace the paper with a new dry and recommended one, then go to step 10.
10	Is the image printed correctly?	End of work.	Go to step 11.
11	Checking the COVER ASSY FRONT for latching Open and close the COVER ASSY FRONT. Is the image printed correctly?	End of work.	Replace the defective parts, then go to step 12.
12	Is the image printed correctly?	End of work.	Go to step 13.
13	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 15.
15	Checking the paper feeding tray Is the skewed paper fed from the SSF?	Go to step 16.	Go to step 20.
16	Checking the side guides setting of SSF Reset the side guides. Is the image printed correctly?	End of work.	Go to step 17.
17	Checking the paper path Are there any foreign substances on the paper path?	Remove the foreign substances, then go to step 18.	Go to step 19.
18	Is the image printed correctly?	End of work.	Go to step 19.
19	Checking the ROLL ASSY REGI and ROLL ASSY METAL for rotation Checked by [Digital Output]-[DO-00 and 29] of the [IOT Diag] on the [Printer] of the diagnosis. Does the Roll Assy Regi and Roll Regi Metal rotate? During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	End of work.	Replace the ROLL ASSY REGI and/ or ROLL REGI METAL.
20	Checking after reseating the Paper Cassette Reseat the Paper Cassette. Is the image printed correctly?	End of work.	Go to step 21.
21	Checking after reseating the paper Reseat the paper in the Paper Cassette. Is the image printed correctly?	End of work.	Go to step 22.
22	Checking the side guides of the Paper Cassette Reset the side guides. Is the image printed correctly?	End of work.	Go to step 23.
23	Checking the paper path Are there any foreign substances on the paper path?	Remove the foreign substances, then go to step 24.	Go to step 25.
24	Is the image printed correctly?	End of work.	Go to step 25.
25	Checking after reseating the SEPARATOR ROLLER ASSEMBLY Reseat the SEPARATOR ROLLER ASSEMBLY. Is the image printed correctly?	End of work.	Go to step 26.

Step	Check	Remedy	
		Yes	No
26	Checking after replacing the SEPARATOR ROLLER ASSEMBLY Replace the SEPARATOR ROLLER ASSEMBLY. (Refer to Removal 2/Replacement 58.) Is the image printed correctly?	End of work.	Go to step 27.
27	Checking after replacing the ROLL ASSY FEED Replace the ROLLER ASSY FEED. (Refer to Removal 4/ Replacement 56.) Is the image printed correctly?	End of work.	Go to step 28.
28	Checking the ROLL ASSY REGI and ROLL REGI METAL for rotation Checked by [Digital Output]-[DO-00 and 29] of the [IOT Diag] on the [Printer] of the diagnosis. Does the ROLL ASSY REGI and ROLL REGI METAL rotate? During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	End of work.	Replace the ROLL ASSY REGI and/ or ROLL REGI METAL.

FIP-1.P13 Paper damage


Mnt01117KA

Trouble substance
The paper comes out from the printer wrinkled, folded or worn-out.

Possible causative parts
- SEPARATOR ROLLER ASSEMBLY (PL2.1.5)
- ROLL ASSY FEED (PL3.2.4)
- ROLL ASSY REGI (PL3.2.9)
- ROLL REGI METAL (PL3.2.10)
- KIT IIT ASSY SUB (PL10.9.99)
- ADF ASSY (PL10.10.1)
- KIT ADF FEED ROLL and SEPARATOR PAD (PL10.10.97)

NOTE

.Tray is recommended for paper feeding because sheets fed via SSF is prone to skew depending on how the sheet is placed on SSF.

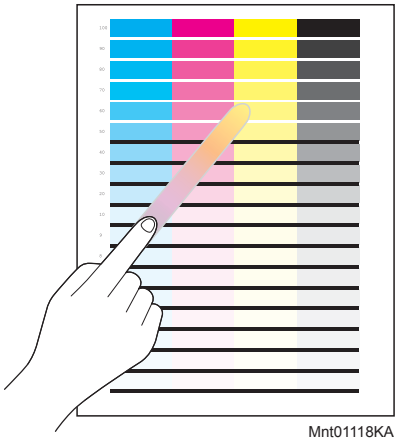
Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

Step	Check	Remedy	
		Yes	No
1	Checking the error mode Does the error occur when feeding the original at the ADF?	Go to step 2.	Go to step 5.
2	Checking the original Does the original meet the ADF spec.?	Go to step 3.	Use the Platen Mode or change the original.
3	Checking the ADF Guides setting Reseat the ADF Guides. Does the error still occur when copying?	Go to step 4.	End of work.
4	Checking the ADF Feed Roller and the Separator Pad Are there any damages or foreign substances on the Roller and Pad?	Replace the KIT ADF ROLL and SEPARATOR PAD. (Removal 57/Replacement 4)	Replace the ADF ASSY. (Removal 59/Replacement 2)
5	Checking dew condensation Was the printer installed in the room where the air conditioner well works?	Go to step 7.	Turn on the power of the air conditioner, and replace a new dray and recommended paper, then go to step 6.
6	Is the image printed correctly?	End of work.	Go to step 7.
7	Checking the using paper Does the using paper meet the specifications?	Go to step 9.	Use the paper that meets the specifications, then go to step 8.
8	Is the image printed correctly?	End of work.	Go to step 9.

Step	Check	Remedy	
		Yes	No
9	Checking the paper condition Is the paper dry and recommended paper?	Go to step 11.	Replace the paper with a new dry and recommended one, then go to step 10.
10	Is the image printed correctly?	End of work.	Go to step 11.
11	Checking the COVER ASSY FRONT for latching Open and close the COVER ASSY FRONT. Is the image printed correctly?	End of work.	Replace the defective parts, then go to step 12.
12	Is the image printed correctly?	End of work.	Go to step 13.
13	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Is the image printed correctly?	End of work.	Go to step 14.
14	Checking after reseating the FUSER ASSY **Warning: Start the operation after the FUSER ASSY has cooled down.** Reseat the FUSER ASSY. Is the image printed correctly?	End of work.	Go to step 15.
15	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Is the image printed correctly?	End of work.	Go to step 16.
16	Checking the paper feeding tray Is the damaged paper fed from the SSF?	Go to step 17.	Go to step 21.
17	Checking the side guides setting of SSF Reset the side guides. Is the image printed correctly?	End of work.	Go to step 18.
18	Checking the paper path Are there any foreign substances on the paper path?	Remove the foreign substances, then go to step 19.	Go to step 20.
19	Is the image printed correctly?	End of work.	Go to step 20.
20	Checking the ROLL ASSY REGI and ROLL REGI METAL for rotation Checked by [Digital Output]-[DO-00 and 29] of the [IOT Diag] on the [Printer] of the diagnosis. Does the ROLL ASSY REGI and ROLL REGI METAL rotate? During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	End of work.	Replace the ROLL ASSY REGI and/ or ROLL REGI METAL.
21	Checking after reseating the Paper Cassette Reseat the Paper Cassette. Is the image printed correctly?	End of work.	Go to step 22.
22	Checking the side guides of the Paper Cassette Reset the side guides. Is the image printed correctly?	End of work.	Go to step 23.
23	Checking after reseating a new paper Reseat a new paper in the Paper Cassette. Is the image printed correctly?	End of work.	Go to step 24.
24	Checking the paper path Are there any foreign substances on the paper path?	Remove the foreign substances, then go to step 25.	Go to step 26.
25	Is the image printed correctly?	End of work.	Go to step 26.

Step	Check	Remedy	
		Yes	No
26	Checking after reseating the SEPARATOR ROLLER ASSEMBLY Reseat the SEPARATOR ROLLER ASSEMBLY. Is the image printed correctly?	End of work.	Go to step 27.
27	Checking after replacing the SEPARATOR ROLLER ASSEMBLY Replace the SEPARATOR ROLLER ASSEMBLY. (Refer to Removal 2/Replacement 58.) Is the image printed correctly?	End of work.	Go to step 28.
28	Checking after replacing the ROLL ASSY FEED Replace the ROLL ASSY FEED. (Refer to Removal 4/ Replacement 56.) Is the image printed correctly?	End of work.	Go to step 29.
29	Checking the ROLL ASSY REGI and ROLL REGI METAL for rotation Checked by [Digital Output]-[DO-00 and 29] of the [IOT Diag] on the [Printer] of the diagnosis. Does the ROLL ASSY REGI and ROLL REGI METAL rotate? During this check, cheat the interlock switch (HARN ASSY INTERLOCK).	End of work.	Replace the ROLL ASSY REGI and/ or ROLL REGI METAL.

FIP-1.P14 Unfusing


Mnt01118KA

Trouble substance
The printed image is not fixed on the paper properly. The image easily comes off when rubbed.

Possible causative parts
- FUSER ASSY (PL6.1.1)

- PWBA MCU (PL10.7.7)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

Step	Check	Remedy	
		Yes	No
1	Checking the using paper Does the using paper meet the specifications?	Go to step 3.	Use the paper that meets the specifications, then go to step 2.
2	Is the image printed correctly?	End of work.	Go to step 3.
3	Checking the paper condition Is the paper dry and recommended paper?	Go to step 5.	Replace the paper with a new dry and recommended one, then go to step 4.
4	Is the image printed correctly?	End of work.	Go to step 5.
5	Checking the Toner Type Is the Dell Toner seated?	Go to step 7.	Replace the toner with Dell Toner, then go to step 6.
6	Is the image printed correctly?	End of work.	Go to step 7.
7	Checking the power cord for connection Connect the power cord with other wall outlet. (Never connect the power cord into other connector of the same wall outlet.) Is the image printed correctly?	End of work.	Go to step 8.
8	Checking after reseating the FUSER ASSY **Warning: Start the operation after the FUSER ASSY has cooled down.** Reseat the FUSER ASSY. Is the image printed correctly?	End of work.	Go to step 9.
9	Checking after replacing the FUSER ASSY **Warning: Start the operation after the FUSER ASSY has cooled down.** Replace the FUSER ASSY and initialize the Fuser Life Counter. (Refer to Removal 9/Replacement 51.) Does the error still occur when printing?	Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.)	End of work.

FIP-1.P15 Color registration (Color shift)

- Troubleshooting of a control system

Trouble substance

A yellow or black image printed is not overlapped on a cyan or magenta image correctly.

Possible causative parts

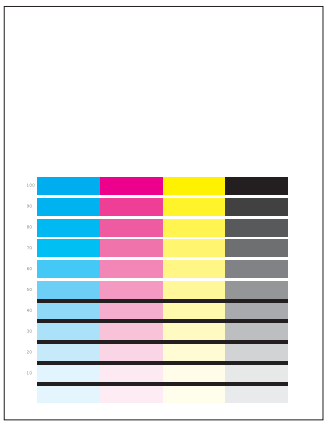
- PWBA MCU (PL10.7.7)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

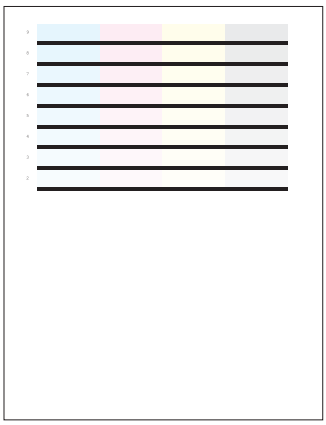
Step	Check	Remedy	
		Yes	No
1	Turn OFF/ON the power. Does the color registration (color shift) appear on the printed material when printing?	Go to step 2.	End of work.
2	Checking the Color registration. Print the Windows test page. Is the image printed correctly?	Printing data is incorrect, then check the printing data which the problem generated.	Go to step 3.
3	Checking the paper condition Is the paper dry and recommended paper?	Go to step 5.	Replace the paper with a new dry and recommended one, then go to step 4.
4	Does the color registration appear on the printed material when printing?	Go to step 5.	End of work.
5	Checking the COVER ASSY FRONT for latching Open and close the COVER ASSY FRONT. Does the color registration appear on the printed material when printing?	Go to step 6.	End of work.
6	Checking the printing (Banding Error Check) Print the [MQ Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. Does the banding error appear on the printed material?	Go to step 7.	Go to step 9.

Step	Check	Remedy	
		Yes	No
7	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the banding error appear on the printed material when printing?	Go to step 8.	Go to step 9.
8	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the banding error appear on the printed material when printing?	Go to step 9.	Go to step 9.
9	Checking the printing (Color Registration Check) Print the [Alignment Chart] in [Chart Print] in [Diagnosis] tab of [Tool Box]. Does the color registration appear on the printed material when printing?	Go to step 10.	End of work.
10	Adjusting the color registration automatically Check that the Auto Registration Adjustments checkbox of the [Registration Adjustment] in [Printer Maintenance] tab of [Tool Box] is checked. Press the [Auto Correct] button to stat the auto color registration adjustment. After adjustment is completed, press the [Color Regi Chart] Does the color registration appear on the printed material when printing?	Go to step 11.	End of work.
11	Adjusting the color registration manually Uncheck the checkbox of the Auto Registration Adjustments of the [Registration Adjustment] in [Printer Maintenance] tab of [Tool Box]. Adjust the color registration by [Color Registration Adjustment (Lateral)] and/or [Color Registration Adjustment (Process)] several times. After the adjustments are completed, press [Restart printer to apply new settings] button. Does the color registration appear on the printed material when printing?	Replace the Printer.	End of work.

- Troubleshooting of a paper feeding system



paper feeding is late.



paper feeding is early.

Trouble substance

A yellow or black image printed is not overlapped on a cyan or magenta image correctly.

Possible causative parts

- PHD UNIT (PL4.1.21)
- FUSER ASSY (PL6.1.1)
- TRANSFER ASSY (PL6.1.7)
- PWBA MCU (PL10.7.7)

Before commencing troubleshooting, check the paper transfer path. Make sure there is no foreign materials on the transfer path, such as staples, paper clips, scraps of paper and so on.

Step	Check	Remedy	
		Yes	No
1	Checking after replacing the PHD UNIT Replace the PHD UNIT. (Refer to Removal 3/Replacement 57.) Does the error appear on the printed material when printing?	Go to step 2.	End of work.
2	Checking after replacing the TRANSFER ASSY Replace the TRANSFER ASSY. (Refer to Removal 48/ Replacement 12.) Does the error appear on the printed material when printing?	Go to step 3.	End of work.
3	Checking after replacing the PWBA MCU Replace the PWBA MCU. (Refer to Removal 31/ Replacement 29.) Does the error appear on the printed material when printing?	Replace the printer.	End of work.

FIP-1.P16 Hunting

Mnt01120KA

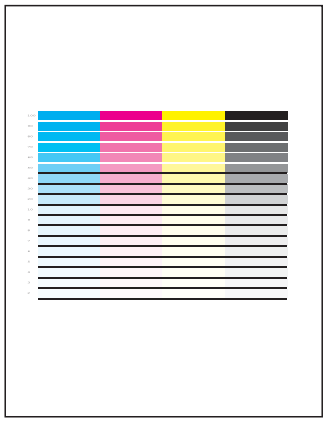
Trouble substance
Vertical undulation of the image with respect to the feeding direction, such as wavy column line.

Possible causative parts
- IIT ASSY SUB (PL10.9.2)

- ADF ASSY (PL10.10.1)

Step	Check	Remedy	
		Yes	No
1	Checking the original Does the original meet the ADF spec.?	Go to step 2.	Use the platen mode or change the original type.
2	Checking the ADF Is the ADF closed against platen glass completely?	Go to step 3.	Close the ADF correctly.
3	Checking the installation status Is the printer installed on a flat steady surface?	Go to step 4.	Reinstall the printer?
4	Checking after replacing the ADF ASSY Replace the ADF ASSY. (Removal 59/Replacement 2) Does the error still occur when copying?	Replace the IIT ASSY SUB.	End of work.

FIP-1.P17 Magnification incorrect



Mnt01121KA

Trouble substance
Incorrect magnification when copying with the ADF feeding.

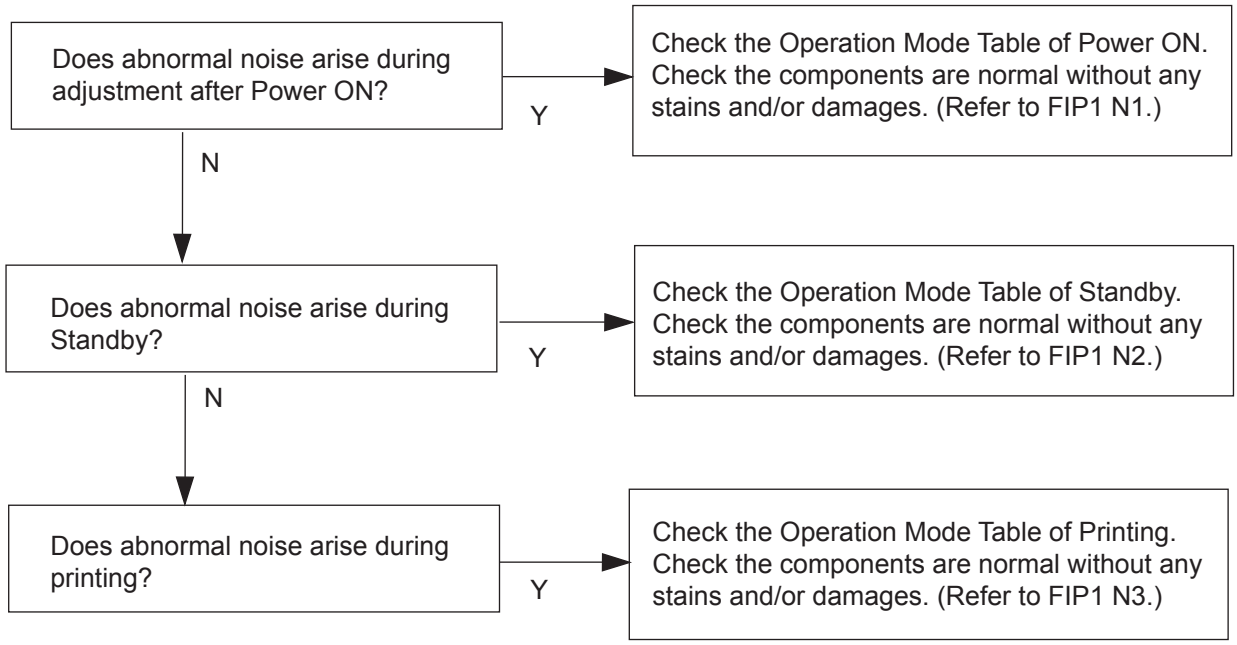
Possible causative parts
- IIT ASSY SUB (PL10.9.2)

- ADF ASSY (PL10.10.1)

Step	Check	Remedy	
		Yes	No
1	Checking the original Does the original meet the ADF spec.?	Go to step 2.	Use the platen mode or change the original type.
2	Checking the ADF Is the ADF closed against platen glass completely?	Go to step 3.	Close the ADF correctly.
3	Checking the installation status Is the printer installed on a flat steady surface?	Go to step 4.	Reinstall the printer?
4	Checking after replacing the ADF ASSY Replace the ADF ASSY. (Removal 59/Replacement 2) Does the error still occur when copying?	Replace the IIT ASSY SUB.	End of work.

5. Abnormal Noise Trouble

5.1 Entry Chart for Abnormal Noise Troubleshooting



5.2 Operation Mode Table

FIP-1.N1 When Power is Turned On

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PHD UNIT (PL4.1.21) FUSER ASSY (PL6.1.1) TRANSFER ASSY (PL6.1.7) DRIVE ASSY SUB (PL7.1.1) DRIVE ASSY MAIN (PL7.1.2)		
1	Checking the Main Motor Does the noise arise from the printer? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 2.	Go to step 5.
2	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the noise arise from the printer? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 3.	End of work.
3	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the noise arise from the printer? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 4.	End of work.
4	Checking after reseating the DRIVE ASSY MAIN Reseat the DRIVE ASSY MAIN. Does the noise arise from the printer? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Try replacing the PHD UNIT (refer to Removal 3/ Replacement 57), TRANSFER ASSY (refer to Removal 48/ Replacement 12) and DRIVE ASSY MAIN (refer to Removal 33/ Replacement 27) one after another.	End of work.
5	Checking the Sub Motor Does the noise arise from the printer? Checked by [Digital Output]-[DO-05] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 6.	Check the installation situation of printer.
6	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the noise arise from the printer? Checked by [Digital Output]-[DO-05] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 7.	End of work.
7	Checking after reseating the FUSER ASSY Reseat the FUSER ASSY. **Warning: Start the operation after the FUSER ASSY has cooled down.** Does the noise arise from the printer? Checked by [Digital Output]-[DO-05] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 8.	End of work.

Step	Check	Remedy	
		Yes	No
8	Checking after reseating the DRIVE ASSY SUB Reseat the DRIVE ASSY SUB. Does the noise arise from the printer? Checked by [Digital Output]-[DO-05] of the [IOT Diag] on the [Printer] of the diagnosis.	Try replacing the PHD UNIT (refer to Removal 3/ Replacement 57), FUSER ASSY (refer to Removal 9/ Replacement 51) and DRIVE ASSY SUB (refer to Removal 34/ Replacement 26) one after another.	End of work.

FIP-1.N2 During Standby

Step	Check	Remedy	
		Yes	No
	Possible causative parts: PWBA LVPS (PL10.6.16) FAN (PL10.6.17)		
1	Checking the FAN Does the noise arise from the Fan? Checked by [Digital Output]-[DO-1E] of the [IOT Diag] on the [Printer] of the diagnosis.	Replace the FAN. (Refer to Removal 26/ Replacement 34.)	Replace the PWBA LVPS. (Refer to Removal 25/ Replacement 35.)

FIP-1.N3 During Printing

Step	Check	Remedy	
		Yes	No
	Possible causative parts: SEPARATOR ROLLER ASSEMBLY (PL2.1.5) ROLL ASSY FEED (PL3.2.4) ROLL ASSY REGI (PL3.2.9) ROLL REGI METAL (PL3.2.10) PHD UNIT (PL4.1.21) FUSER ASSY (PL6.1.1) TRANSFER ASSY (PL6.1.7) DRIVE ASSY SUB (PL7.1.1) DRIVE ASSY MAIN (PL7.1.2) FAN (PL10.6.17)		
1	Checking the paper feeding Does the noise arise from the printer when the paper is fed from the Tray 1?	Go to step 2.	Go to step 6.
2	Checking the paper condition in the Paper Cassette Is the paper dry and recommended paper?	Go to step 4.	Replace the paper with a new dry and recommended one, then go to step 3.
3	Checking noise when the paper is fed from the Tray 1 Does the noise arise from the printer?	Go to step 4.	End of work.
4	Checking the SEPARATOR ROLLER ASSEMBLY in the Paper Cassette for rotation Remove the Paper Cassette from the printer. Does the SEPARATOR ROLLER rotate smoothly? Turning it with your finger.	Go to step 5.	Replace the SEPARATOR ROLLER ASSEMBLY. (Refer to Removal 2/ Replacement 58.)
5	Checking the ROLL ASSY FEED for rotation Remove the Paper Cassette from the printer. Checked by [Digital Output]-[DO-00 and 2F] of the [IOT Diag] on the [Printer] of the diagnosis. Does the noise arise from this Roller? **NOTE: After checking is completed, turn off DO-2F first, and then turn off [DO-00].**	Replace the ROLL ASSY FEED. (Refer to Removal 4/ Replacement 56.)	Go to step 9.
6	Checking the paper guide sides setting and paper setting of SSF Were the paper guide sides of SSF correctly set, and was the paper correctly inserted into SSF?	Go to step 7.	Reset the paper guide sides, and correctly insert the paper to SSF, then go to step 7.
7	Checking the paper condition Is the paper dry and recommended paper?	Go to step 9.	Replace the paper with a new dry and recommended one, then go to step 8.
8	Checking noise when the paper is fed from the SSF Does the noise arise from the printer?	Go to step 9	End of work.
9	Checking the Main Motor Does the noise arise from the printer? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 10.	Go to step 16.

Step	Check	Remedy	
		Yes	No
10	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the noise arise from the printer? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 11.	End of work.
11	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the noise arise from the printer? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 12.	End of work.
12	Checking the foreign substances on the surfaces of the ROLL ASSY REGI and ROLL REGI METAL Are there any foreign substances on the surfaces of these parts?	Remove the foreign substances, then go to step 13.	Go to step 14.
13	Checking noise when printing Does the noise arise from the printer?	Go to step 14.	End of work.
14	Checking the ROLL ASSY REGI and ROLL REGI METAL for rotation Checked by [Digital Output]-[DO-00 and 29] of the [IOT Diag] on the [Printer] of the diagnosis. Does the noise arise from the Roller(s)?	Replace the ROLL ASSY REGI and/ or ROLL REGI METAL.	Go to step 15.
15	Checking the DRIVE ASSY MAIN for installation Reseat the DRIVE ASSY MAIN. Does the noise arise from the printer? Checked by [Digital Output]-[DO-00] of the [IOT Diag] on the [Printer] of the diagnosis.	Try replacing the PHD UNIT (refer to Removal 3/ Replacement 57), TRANSFER ASSY (refer to Removal 48/ Replacement 12) and DRIVE ASSY MAIN (refer to Removal 33/ Replacement 27) one after another.	End of work.
16	Checking the Sub Motor Does the noise arise from the printer? Checked by [Digital Output]-[DO-05] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 17.	Check the installation situation of the printer.
17	Checking the PHD UNIT for installation Reseat the PHD UNIT. Does the noise arise from the printer? Checked by [Digital Output]-[DO-05] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 18.	End of work.
18	Checking the FUSER ASSY for installation Reseat the FUSER ASSY. Checked by [Digital Output]-[DO-05] of the [IOT Diag] on the [Printer] of the diagnosis.	Go to step 19.	End of work.

Step	Check	Remedy	
		Yes	No
19	Checking the DRIVE ASSY SUB for installation Reseat the DRIVE ASSY SUB. Does the noise arise from the printer? Checked by [Digital Output]-[DO-05] of the [IOT Diag] on the [Printer] of the diagnosis.	Try replacing the PHD UNIT (refer to Removal 3/ Replacement 57), FUSER ASSY (refer to Removal 9/ Replacement 51) and DRIVE ASSY SUB (refer to Removal 34/ Replacement 26) one after another.	End of work.

6. Other FIP

Other FIP covers the Electrical Noise FIP, Power Supply FIP and Multiple Feed FIP, except Error Code FIP, Abnormal Noise FIP and Image Quality FIP.

FIP-Electrical Noise

Step	Check	Remedy	
		Yes	No
1	Checking the external noise Are there any other electrical appliances within 3 meters form the printer, such as generators, radio and appliances with motors? Either turn off the other electrical appliances, or relocate the printer at least 6 meters away from other appliances. Does the electrical noise error still occur?	Go to step 2.	End of work.
2	Checking the AC ground Is AC power supply outlet wired and grounded appropriately?	Go to step 3.	Request the client to fix AC power supply outlet.
3	Checking the TRANSFER ASSY for connection Open the COVER ASSY FRONT. Are four HV terminals on the TRANSFER ASSY, and four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed?	Clean or replace the TRANSFER ASSY or SPRING(s).	Go to step 4.
4	Checking the PHD UNIT for connection Remove the PHD UNIT. Are five HV terminals on the PHD UNIT, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed?	Clean and/or replace the PHD UNIT or SPRING(s).	Go to step 5.
5	Checking after reseating the PHD UNIT Reseat the PHD UNIT. Does the electrical noise error still occur?	Go to step 6.	End of work.
6	Checking after reseating the TRANSFER ASSY Reseat the TRANSFER ASSY. Does the electrical noise error still occur?	Reseat the PWBA HVPS.	End of work.

FIP-AC

Step	Check	Remedy	
		Yes	No
1	Checking the printer Does the motor noise arise when turning on the power? During this test, close the COVER ASSY FRONT.	Go to FIP-DC.	Go to step 2.
2	Checking the power supply on wall outlet Connect the power cord with other wall outlet. Does the printer operate normally?	End of work.	Go to step 3.
3	Checking the power code for connection Reconnect the power cord. Does the printer operate normally?	End of work.	Go to step 4.
4	Checking the BREAKER GFI for operation Does the BREAKER GFI operate normally?	End of work.	Go to step 5.
5	Checking the connector of PWBA LVPS for connection Disconnect the power cord and wait for one minute. Reconnect the all connectors of PWBA LVPS. Does the printer operate normally?	End of work.	Go to step 6.
6	Checking the connector of MAIN SWITCH for connection Disconnect the power cord and wait for one minute. Reconnect the connector of MAIN SWITCH. Does the printer operate normally?	End of work.	Replace the PWBA LVPS. (Refer to Removal 25/ Replacement 35.)

FIP-DC

Step	Check	Remedy	
		Yes	No
1	Checking the connector of the PWBA LVPS for connection Disconnect the power cord and wait for one minute. Reconnect the all connectors of the PWBA LVPS. Does the printer operate normally?	End of work.	Go to step 2.
2	Checking the connector of the CONSOLE ASSY PANEL for connection Reconnect the connector (P/J220) of the CONSOLE ASSY PANEL. Does the CONSOLE ASSY PANEL operate normally?	End of work.	Go to step 3.
3	Checking after reseating the PWBA MCU Reseat the PWBA MCU. Does the printer operate normally?	End of work.	Replace the PWBA LVPS. (Refer to Removal 25/ Replacement 35.)

FIP-Multiple Feed

NOTE **.This multiple feed trouble occurs only when the paper is fed from the Paper Cassette.**

Step	Check	Remedy	
		Yes	No
	Possible causative parts SEPARATOR ROLLER ASSEMBLY (PL2.1.5) ROLL ASSY FEED (PL3.2.4) ROLL ASSY REGI (PL3.2.9) ROLL REGI METAL (PL3.2.10)		
1	Checking the using paper Does the using paper meet the specifications?	Go to step 3.	Use the paper that meets the specifications, then go to step 2.
2	Does the multi feed still occur when printing?	Go to step 3.	End of work.
3	Checking paper condition Is the paper dry and recommended paper?	Go to step 5.	Replace the paper with a new dry and recommended one, then go to step 4.
4	Does the multi feed still occur when printing?	Go to step 5.	End of work.
5	Checking the ROLL ASSY FEED and SEPARATOR ROLLER ASSEMBLY for rotation Does the ROLL ASSY FEED and SEPARATOR ROLLER ASSEMBLY rotate smoothly and operate correctly?	End of work.	Replace the ROLL ASSY FEED (refer to Removal 4/ Replacement 56) and/or SEPARATOR ROLLER ASSEMBLY (refer to Removal 2/ Replacement 58).

FIP-Copy Error

Problem: Though the document is set on the ADF, it is copied via the Platen.

Step	Check	Remedy	
		Yes	No
	Possible causative parts IIT ASSY SUB (PL10.9.2)		
1	Check that the ADF cover is closed and the document is fully inserted into the ADF. Does the error still occur when copying?	Replace the IIT ASSY SUB. (Removal 59/ Replacement 2)	End of work.

FIP-Control Panel Freezes

Step	Check	Remedy	
		Yes	No
	Possible causative parts PWBA CONT AIO (PL10.6.6)		
1	Checking the operating environment. Is the printer connected to the Network?	Go to step 2.	Replace the Printer.
2	Checking the IP address. Can you change the IP address?	Go to step 5.	Go to step 3.
3	Checking the internet connectivity. Is there any internet connection available for your PC?	Go to step 4.	Replace the PWBA CONT AIO. (Removal 24/ Replacement 36.)
4	Updating the firmware to the latest version. Download the latest version of the firmware from the DELL Support Website, and execute the update. **NOTE: Before updating the firmware to the latest version, reset the error following the steps of procedure described below. In addition, update the firmware by way of a USB storage.** **1) Remove the network cable.** **2) Connect the USB cable.** **3) Turn the power off and on.** Does the error persist when the power is turned off and on?	Replace the PWBA CONT AIO. (Removal 24 / Replacement 36.)	End of work.
5	Changing the IP address. Contact your system administrator for obtaining a new IP address. Refer to Reference_1 for details of how to change the IP address. Does the error persist when the power is turned off and on?	Replace the PWBA CONT AIO. (Removal 24/ Replacement 36.)	End of work.

Reference_1:Changing the IP address

1) Remove the network cable, and power off the printer and then on
2) Change the IP address on the Control Panel.
3) Plug the network cable back into the printer, and then turn the power on.
4) On the Control Panel, open [Admin] > [Network] > [TCP/IP], and confirm that the IP address has been changed.

FIP-The message "Printing..." appears on the Control Panel and the printer freezes during fax reception.

Step	Check	Remedy	
		Yes	No
	Possible causative parts PWBA CONT AIO (PL10.6.6)		
1	Checking Discard Size under Fax Setting Is the Discard Size option set to ON? On the Control Panel, open [Admin Menu] > [Fax Settings] > [Discard Size].	Go to step 2.	Go to step 3.
2	Disabling Discard Size On the Control Panel, open [Admin Menu] > [Fax Settings] > [Discard Size], and select "Off". Power off the printer and then on. Does the problem persist?	Go to step 3.	End of work.
3	Replacing PWBA CONT AIO Try replacing the PWBA CONT AIO. Power off the printer and then on. Does the problem persist?	Replace the Printer.	End of work.

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1. Overview

1.1 Position of the Diag. in the Whole System

Major functions of this diag. are as follows:

・IOT Diag

・Setting of parameters for registration in paper feeding direction and so on.

2. Configuration

The diagnosis provides three modes that have their respective uses (purposes), target operators, and functions.

Shippper Mode:

This mode intends to be used in the production line with the purpose to locate a chip that causes a problem.

Diagnosis time in the mode shall be as short as possible with consideration of production cost.

The mode shifts to the Developer mode (described later) after the ESS Diag.

This mode is protected password.

Customer Mode:

This mode intends to be used by customer who handle problems in field with the purpose to locate a replaceable unit that causes a problem.

Sorting problems on the basis of parts that can be replaced by the customer support center.

This is the base of this mode design, and that is why so many features.

The mode allows the user to execute the ESS diagnosis, test prints, parameter settings FAX, Scanner and so on through the control panel.

Developer/CE (Customer Engineer) Mode:

This mode is for debugging by developers or CEs. It intends to be partially used in the production line.

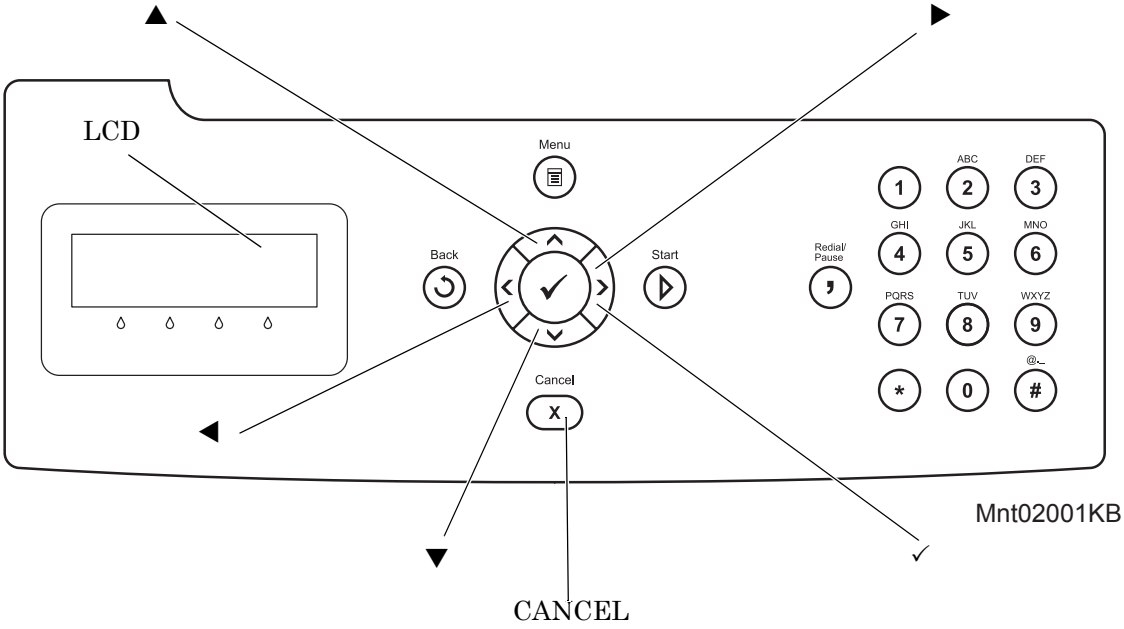
The mode allows the user to execute the ESS diagnosis, test prints, parameter settings and so on through the debug terminal.

The functions are activated by commands sent from the serial terminal.Special tool (FX internal debugging terminal) is required to operate Developer mode.

This mode is protected password.

3. How to use Diag. Customer Mode

3.1 Roles of the control panel in Diag.



[LCD]: Displaying a diagnosis item and its result
[▲], [▼]: Selecting a diagnosis item/Selecting data at parameter setting
[◀], [▶]: Key moves the cursor to the left/right
[✓]: Determining a diagnosis item/Executing a diagnosis/Determining a parameter at parameter setting
[CANCEL]: Reseting a diagnosis item (Returning to the menu one level higher)
Terminating each digital input/output

3.2 Entering diag. Customer mode

1) Turn off the power.
2) Turn on the power while holding down " ▲ " and " ▼ " keys.
3) Release the fingers from these keys when "Please wait..." is displayed.
4) The "Customer Mode", "Printer" and "FAX/Scanner" are displayed. (Entered the Diag. mode.)

3.3 Selecting Diag. mode

NOTE

Once FAX/Scanner Diag or Printer Diag is selected, the diag mode cannot be changed. To change the diag mode, exit the selected diag mode and enter the diag mode again.

There are two diag modes in the customer diag.
-FAX/Scanner Diag
The menu of the FAX, ADF and Scanner relation.
-Printer Diag
The menu of the printer relation.

3.4 Selecting Diag. item

The diagnosis setting items are configured as menus, which can be operated with the control panel keys. Arrow keys select menu items and " ✓ " key activates functions.

3.5 Change method parameters value

For parameter setting, pressing " ✓ " key after selecting an item from the menu displays the current setting value of the item. Then a numeric value selected by " ▼ " and " ▲ " keys are written into the NVM by " ✓ " key.

3.6 Executing/Exiting Diag. mode

The diagnosis can be executed by as follows.
1) A test item is displayed. " ✓ " key fixed the test item.
2) The display prompts the user to start the test. Press " ✓ " key and start the test.

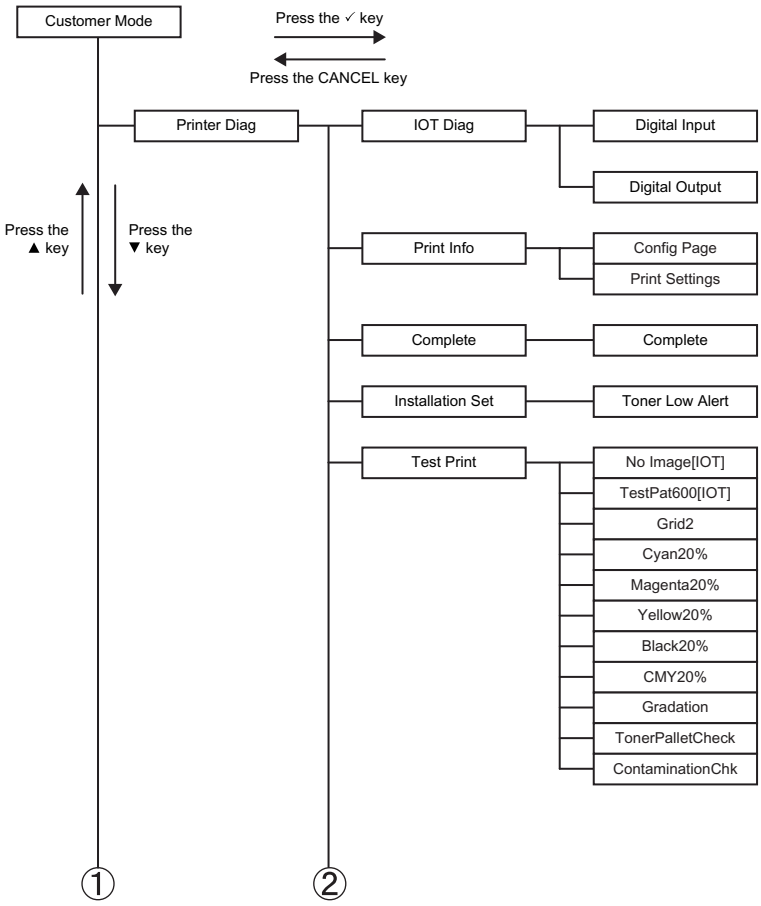
The diagnosis can be stopped by as follows.
1) During the diagnosis test, press " CANCEL " key.
2) The diagnosis is stopped, and the display indicates the one step higher menu.

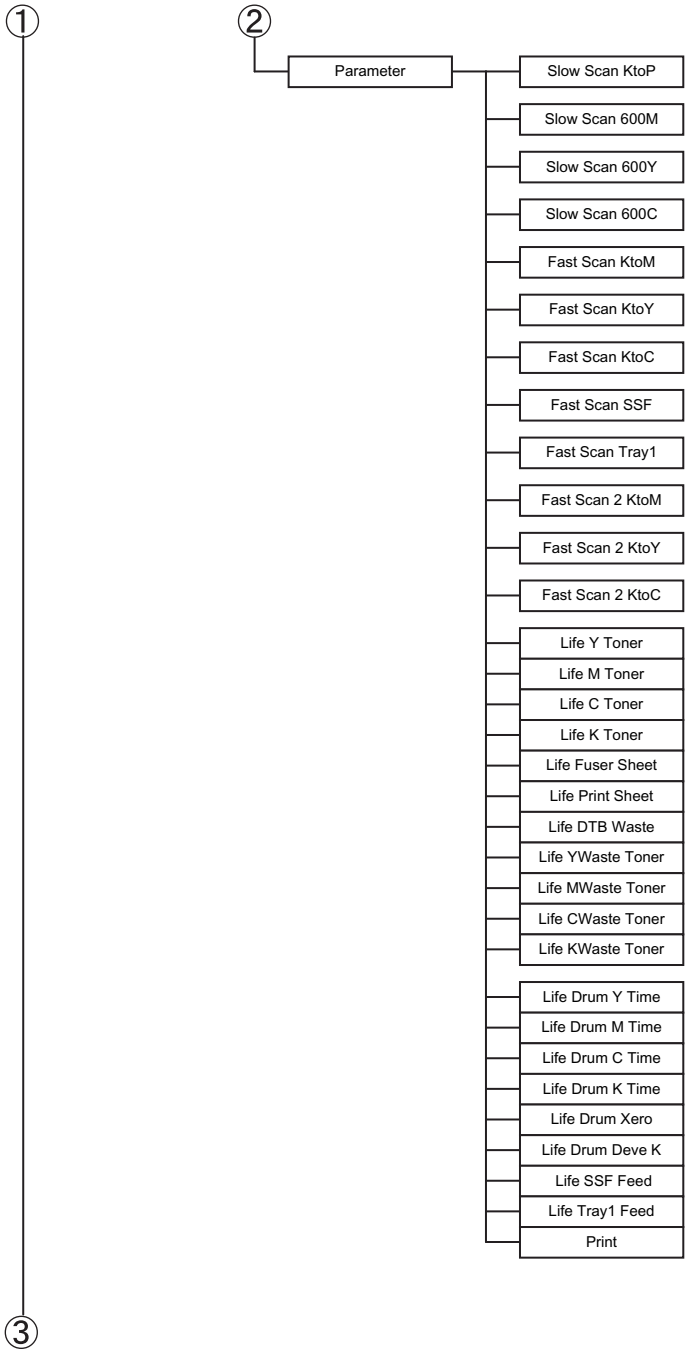
NOTE

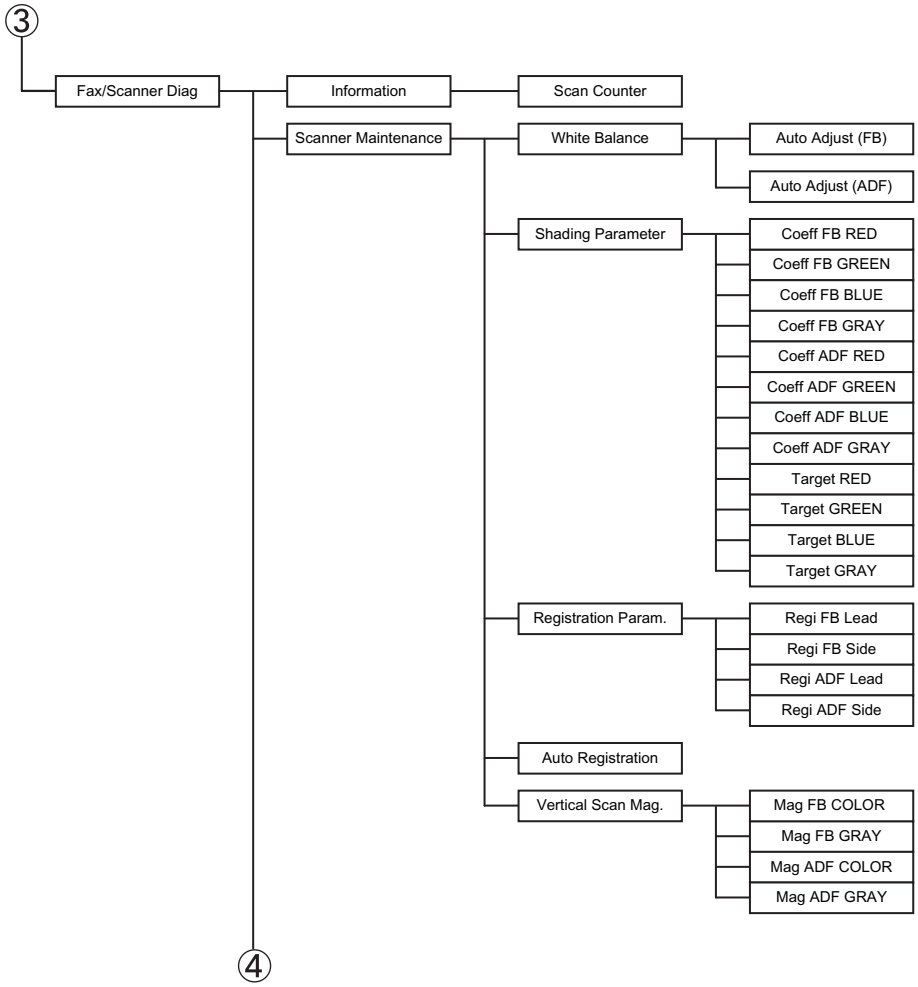
If an error occurs during the diag. sequence, the diagnosis displays the error and stops, leaving the remaining items unperformed.
Pressing " CANCEL " or " ✓ " key releases the error display, and then the menu items are displayed.

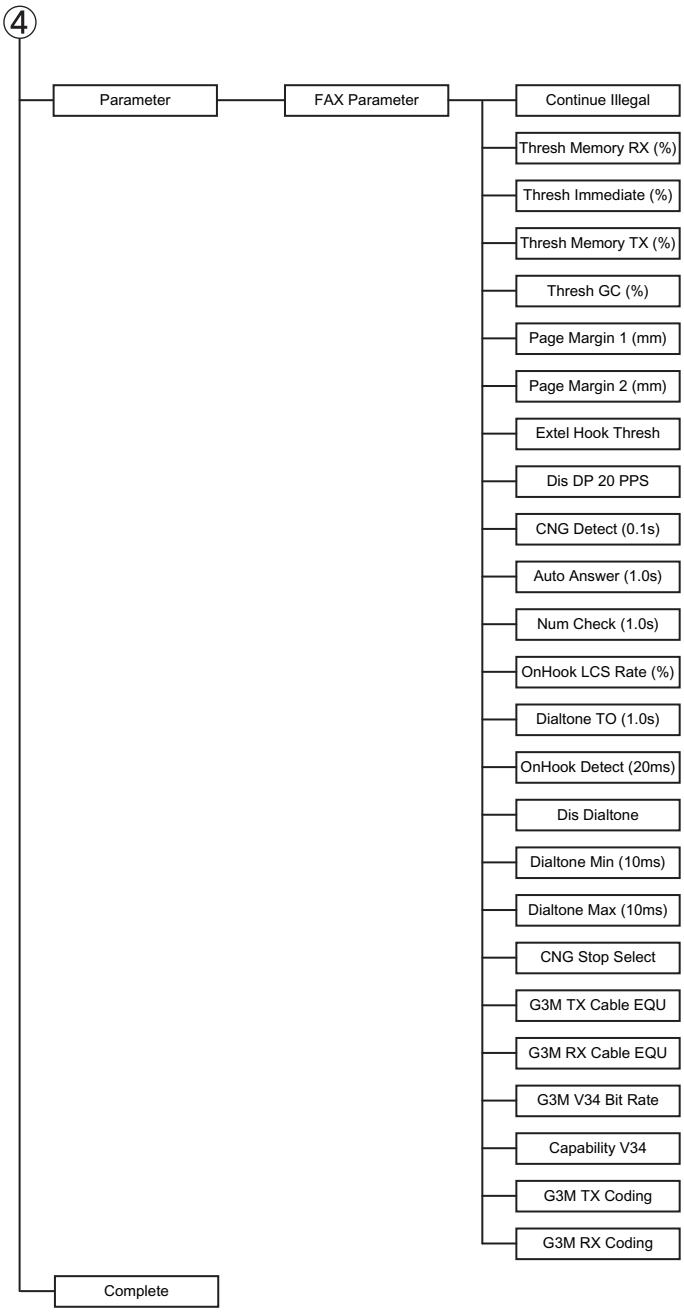
3.7 Diag. mode menu tree

Menu Tree of the Customer Mode is as follows




①
②
Parameter
Slow Scan KtoP
Slow Scan 600M
Slow Scan 600Y
Slow Scan 600C
Fast Scan KtoM
Fast Scan KtoY
Fast Scan KtoC
Fast Scan SSF
Fast Scan Tray1
Fast Scan 2 KtoM
Fast Scan 2 KtoY
Fast Scan 2 KtoC
Life Y Toner
Life M Toner
Life C Toner
Life K Toner
Life Fuser Sheet
Life Print Sheet
Life DTB Waste
Life YWaste Toner
Life MWaste Toner
Life CWaste Toner
Life KWaste Toner
Life Drum Y Time
Life Drum M Time
Life Drum C Time
Life Drum K Time
Life Drum Xero
Life Drum Deve K
Life SSF Feed
Life Tray1 Feed
Print
③


③
Fax/Scanner Diag
Information
Scan Counter
Scanner Maintenance
White Balance
Auto Adjust (FB)
Auto Adjust (ADF)
Shading Parameter
Coeff FB RED
Coeff FB GREEN
Coeff FB BLUE
Coeff FB GRAY
Coeff ADF RED
Coeff ADF GREEN
Coeff ADF BLUE
Coeff ADF GRAY
Target RED
Target GREEN
Target BLUE
Target GRAY
Registration Param.
Regi FB Lead
Regi FB Side
Regi ADF Lead
Regi ADF Side
Auto Registration
Vertical Scan Mag.
Mag FB COLOR
Mag FB GRAY
Mag ADF COLOR
Mag ADF GRAY
④


④
Parameter
FAX Parameter
Continue Illegal
Thresh Memory RX (%)
Thresh Immediate (%)
Thresh Memory TX (%)
Thresh GC (%)
Page Margin 1 (mm)
Page Margin 2 (mm)
Extel Hook Thresh
Dis DP 20 PPS
CNG Detect (0.1s)
Auto Answer (1.0s)
Num Check (1.0s)
OnHook LCS Rate (%)
Dialtone TO (1.0s)
OnHook Detect (20ms)
Dis Dialtone
Dialtone Min (10ms)
Dialtone Max (10ms)
CNG Stop Select
G3M TX Cable EQU
G3M RX Cable EQU
G3M V34 Bit Rate
Capability V34
G3M TX Coding
G3M RX Coding
Complete

4. The Kind of Diag. and Contents of a Test

4.1 FAX Scanner Diag.

4.1.1 Executing FAX Scanner Diag

1) Turn off the power.
2) Turn on the power while holding down " ▲ " and " ▼ " keys.
3) Release the fingers from the keys when " Please wait..." is displayed.
4) The "Printer" and "FAX /Scanner" are displayed. (Entered the Customer Diag. mode.)
5) Press " ▼ " to select "FAX /Scanner", and press " ✓ " key. (Entered the FAX /Scanner Diag. mode.)
6) Press " ▲ " or " ▼ " key to select the test item.
7) Press " ✓ " key twice to execute the test.

NOTE

To return to one step higher menu, press "CANCEL" key.

4.1.2 Information

- Scan Counter

The value of scan count is displayed. FB: Scanning of platen mode/ADF: Scanning of ADF mode.

4.1.3 Scanner Maintenance

- White Balance

Enables automatic calibration of the correction value for platen scanning (FB) and ADF scanning (ADF).

- Shading Parameter

Adjusts the white balance value read from the white reference plate.
Coeff: White reference plate value after shading correction.
Target: Target value of Coeff.
Do not change this setting; the image quality may be affected.

- Registration Param.

Adjusts the side and lead registrations during document scanning.
Do not change this setting; the image quality may be affected.

- Auto Registration

Sets whether or not to auto-adjust the registration.

- Vertical Scan Mag.

Adjusts the scaling in the sub-scanning direction.
Do not change this setting; the image quality may be affected.

4.1.4 Parameter

- Continue Illegal

Specifies how to handle the document data when the document data in the transmission queue overflows the memory.

Clear	Delete the document data.
Transmit	Place the portion of the document data up to the memory limit in the transmission queue.

- Thresh Memory RX (%)

Sets the amount of memory to be left free when the received document data is stored. When the remaining memory amount falls below this threshold, data reception is denied.
The value can be set in the range of 0 to 100. The smaller the value, the larger the memory capacity becomes

- Thresh Immediate (%)

Sets the remaining memory amount threshold that triggers immediate output. Immediate output refers to an automatic image data output that is performed to accommodate the overflowing data when the incoming document data exceeds the memory capacity.
The value can be set in the range of 0 to 99. The larger the value, the sooner the immediate output is initiated.

- Thresh Memory TX (%)

Sets the amount of memory to be left free when the document data is placed in the transmission queue.
The value can be set in the range of 0 to 100. The smaller the value, the larger the memory capacity for transmission queue becomes.

- Thresh GC (%)

Sets the remaining memory amount in the Flash file system for image data storage that triggers the "garbage collection"

- Page Margin 1 (mm): Valid when the Discard Size setting in Fax Setting is "OFF".

Sets the page size margin that allows a larger-than-standard size document to be handled as a standard size document. The document is reduced to the standard size, assuming it is larger than the standards size by the set value.
The value can be set in the range of 0 to 127. When the value is 10, the margin is 10 mm.

- Page Margin 2 (mm): Valid when the Discard Size setting in Fax Setting is "ON".

Sets the page size margin that allows a larger-than-standard size document to be handled as a standard size document. The document is reduced to the standard size, assuming it is larger than the standards size by the set value.
The value can be set in the range of 0 to 127. When the value is 10, the margin is 10 mm.

- Extel Hook Thresh
Sets the threshold of ON HOOK detection at the external telephone to one of Lower, Normal, and Higher.

- Dis DP 20PPS
Sets whether or not to enable 20PPS dial pulse. When 20PPS is disabled in this menu, any 20PPS setting in other menu will be overridden with 10PPS.

- CNG Detect (0.1s)
Sets the CNG detection duration for telephone-FAX switching.
The value can be set in the range of 0 to 255. When the value is 100, the detecting time is 10 sec.

- Auto Answer (1.0s)
Sets the ringing tone duration of the external telephone terminal for FAX-telephone switching.
The value can be set in the range of 0 to 255. When the value is 100, the ringing tone duration is 100 sec.

- Num Check (1.0s)
Inhibits autodialing for a specified duration when different sets of document data bound for the same destination are placed consecutively in the transmission queue. This pause allows the receiving side to make time for processing.
The value can be set in the range of 1 to 255. When the value is 10, the autodialing pause is 10 sec.

- OnHook LCS Rate (%)
Sets the threshold of OFF HOOK detection at LCS.
The value can be set in the range of 1 to 100.

- Dial tone TO (1.0s)
Sets the duration for detecting the dial tone. The value can be set in the range of 0 to 255. When the value is 10, the dial tone is detected for 10 sec.

- OnHook Detect (20ms)
Sets the detecting duration for a valid onhook signal. The value can be set in the range of 10 to 255. When the value is 10, the onhook detecting duration is 200 msec. Any onhook signal shorter than the set time is invalid.

- Dis Dial tone
Sets whether or not to enable dial tone pattern detection.

- Dial tone Min (10ms)
Sets the minimum limit of dial tone pattern detection duration.

- Dial tone Max (10ms)
Sets the maximum limit of dial tone pattern detection duration.

- CNG Stop Select
Sets the conditions for stopping CNG transmission. Below are the setting conditions:

CED&V21	When CED and V.21 preamble are detected.

CED	When CED is detected.
V21	When V.21 preamble is detected.

- G3M TX Cable EQU

Sets the cable amplitude equalizer value for transmission. Below are the setting values:

0db	Equivalent to a cable length of 0km.
4db	Equivalent to a cable length of 1.9km.
8db	Equivalent to a cable length of 3.6km.
12db	Equivalent to a cable length of 7.2km.

- G3M RX Cable EQU

Sets the cable amplitude equalizer value for reception (applicable to V17, V29, and V27ter). Below are the setting values:

0db	Equivalent to a cable length of 0km.
4db	Equivalent to a cable length of 1.9km.
8db	Equivalent to a cable length of 3.6km.
12db	Equivalent to a cable length of 7.2km.

- G3M V34 Bit Rate

Sets the signaling rate for the Super G3 (V34) mode.
The value can be set in the range of 2400bps to 33600bps in 14 steps. Below are the signaling rates:
2400/4800/7200/9600/12000/14400/16800/19200/21600/24000/26400/28800/31200/33600

- Capability V34

Sets the communication capability of the Super G3 (V34) mode.

- G3M TX Coding

Sets the data encoding method for transmission. When the encoding method set here is not supported by the receiving side, the receiving side's method is adopted. Below are the encoding methods:
MH/MR/ MMR/JBIG

- G3M RX Cording

Sets the data encoding method for reception. Below are the encoding methods:
MH/MR/ MMR/JBIG

4.1.5 Complete

Exits the diagnostics and returns to normal operation, taking the changes of the data into effect.

4.2 IOT Diag

4.2.1 Digital Input (DI) Test

This function checks whether the DI components operate normally or not.
The DI test is performed for all the DI components.
Exit operation of the DI test makes the control panel display the Customer diag. function menu.

NOTE

During the DI test, other Customer diag. functions can not be performed simultaneouly. Therefore, the printer does not accept any operation except operations for the DI components and exit operation of the DI test.

At the start of the DI test, number " 0 " is displayed on the control panel. This number is counted up when a DI component is turned on from off, therefore it allows the user to know the component is active.

When a paper jam is occurred, or an error message or code is displayed, execute this test to locate the damaged parts.
The test will execute the DI Test codes of the components that are supposed to be faulty from the error details. (Refer to each FIP on Chapter 1.)
Test result: NG (Go to each FIP or replace the parts.)
OK (Turn off/on the main power.)

4.2.2 Executing digital input (DI) test

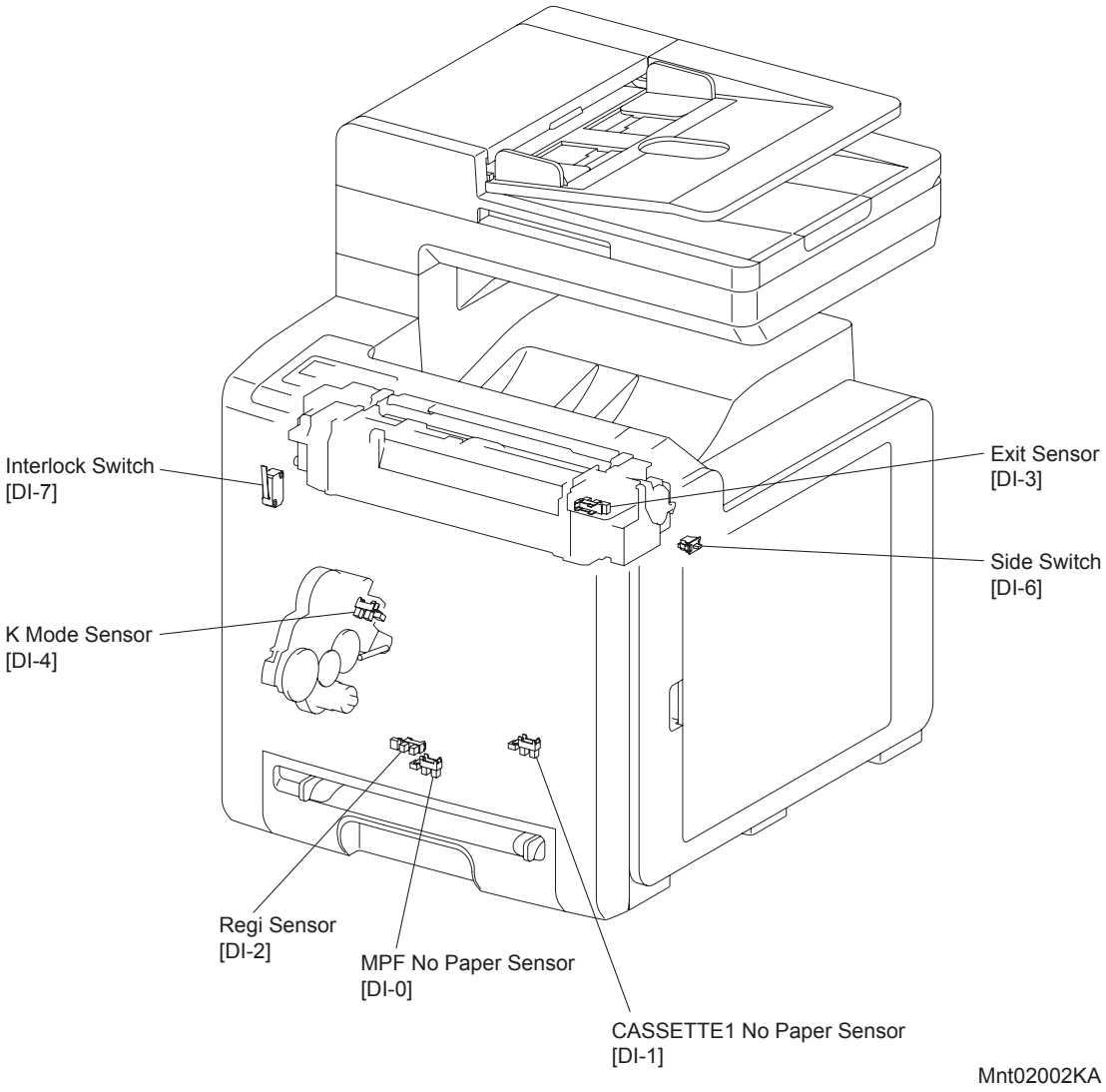
1) Turn off the power.
2) Turn on the power while holding down " ▲ " and " ▼ " keys.
3) Release the fingers from these keys when "Please wait..." is displayed.
4) The "Customer Mode", "Printer" and "FAX/Scanner" are displayed. (Entered the Diag. mode.)
5) Press " ✓ " key. (Entered the Printer Diag. mode.)
6) Press " ▼ " to select "IOT Diag", and then press " ✓ " key.
7) Press " ▼ " key to select "Digital Input", and then press " ✓ " key.
8) Press " ▲ " or " ▼ " key to select the test item.
9) Press " ✓ " key twice to execute the test.

NOTE

To exit the test press the "CANCEL" key, and to return to one step higher menu, press the "Menu" key.

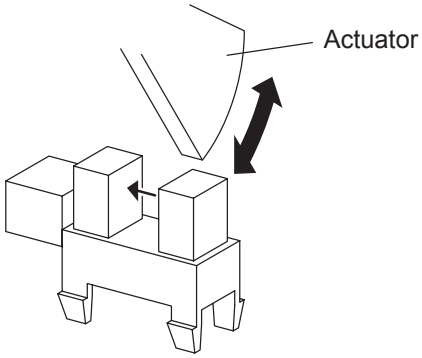
Parameters for the Digital Input Test are as follows.

Code	Components
DI-0	MPF No Paper Seneor
DI-1	CASSETTE 1 No Paper Seneor
DI-2	Regi Sensor
DI-3	Exit Seneor
DI-4	K Mode Sensor
DI-6	Side Switch
DI-7	Interlock Switch


Interlock Switch
[DI-7]
K Mode Sensor
[DI-4]
Regi Sensor
[DI-2]
MPF No Paper Sensor
[DI-0]
CASSETTE1 No Paper Sensor
[DI-1]
Exit Sensor
[DI-3]
Side Switch
[DI-6]
Mnt02002KA

- About Sensor

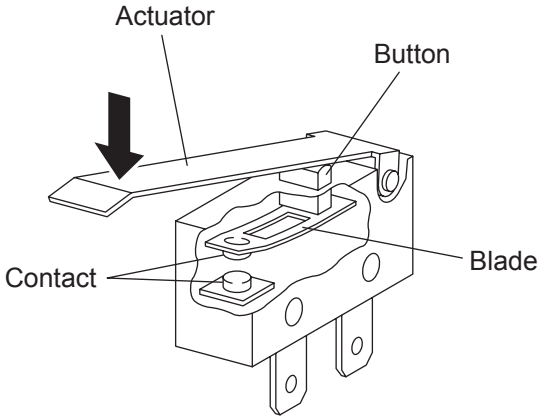
A transmissive type sensor is composed of the light-emitting side and the light-receiving side that are placed opposite to each other allowing the light to pass from the former to the latter. On the basis of whether or not the light path is blocked due to the actuator, etc., the sensor detects the paper absence/presence or the moving part position such as at the home position or elsewhere.



Leg_Sec02_016FA

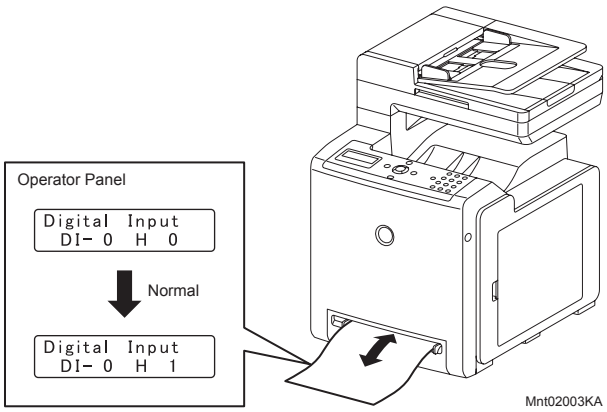
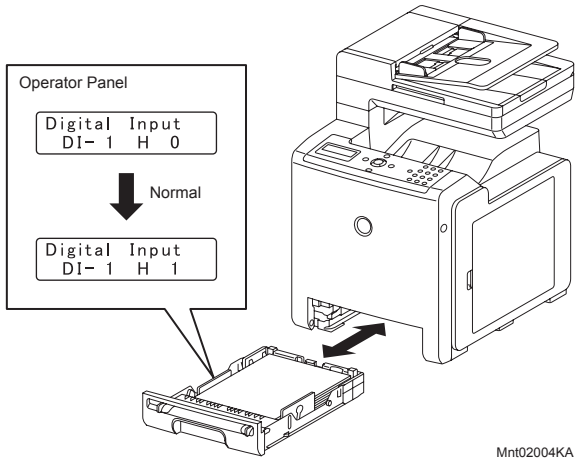
- About Switch

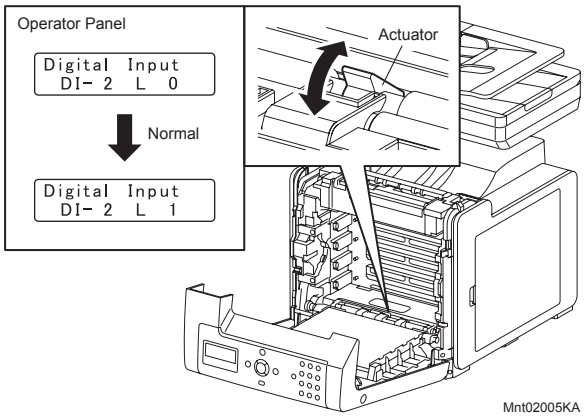
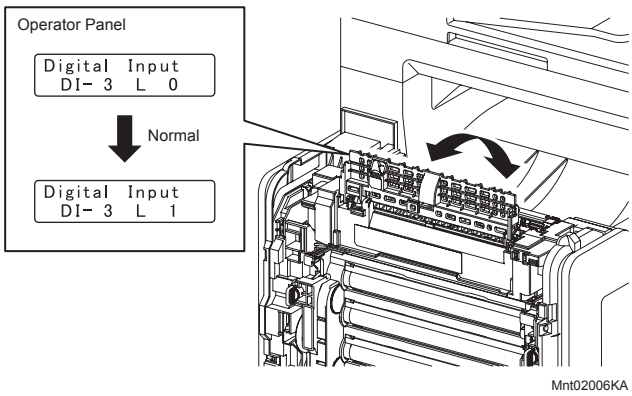
A micro-switch closes the internal contacts via the button which is pushed down under the provided leaf spring which is held down by the actuator of the cover or door that is being closed. When the door or cover has being opened, the leaf spring returns to its original position and the button is pushed up by the spring in the switch, allowing the internal contacts to open.

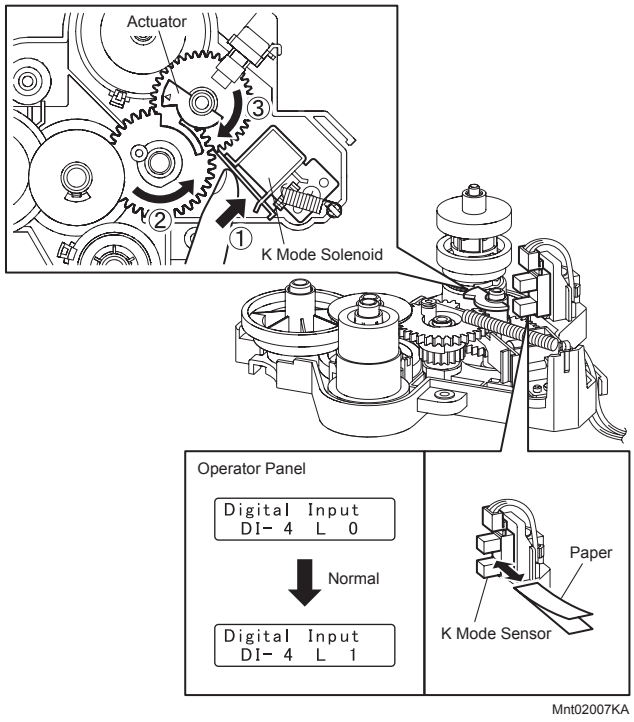
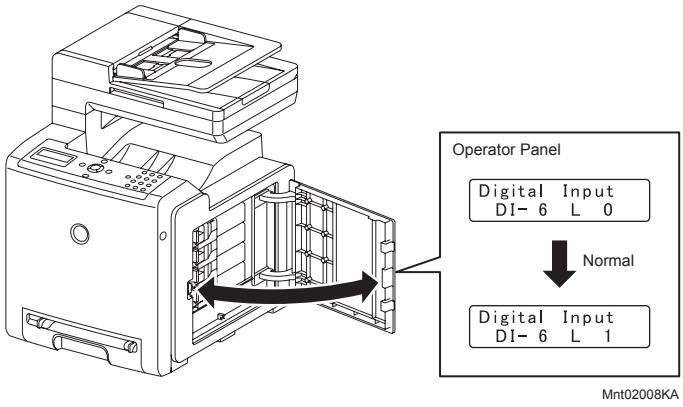


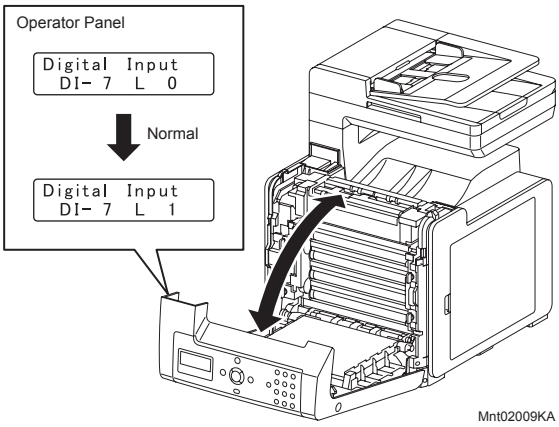
Leg_Sec02_018FA

-Checking the Sensor and Switch

Sensor name (Diag. Code)	Confirmation procedures
MPF No Paper Sensor (DI-0)	NOTE: Remove the paper of the MPF before executing the test. 1) Turn on the power and enter the Printer Diag. 2) Execute the DI-0. 3) Check the sensor.  4) Press the "Cancel" key to stop the test.
CASSETTE 1 No Paper Sensor (DI-1)	1) Turn on the power and enter the Printer Diag. 2) Execute the DI-1. 3) Remove the paper cassette. 4) Check the sensor.  5) Press the "Cancel" key to stop the test. 6) Replace the paper cassette.

Sensor name (Diag. Code)	Confirmation procedures
Regi Sensor (DI-2)	1) Turn on the power and enter the Printer Diag. 2) Execute the DI-2. 3) Open the Front Cover. 4) Remove the PHD ASSY. 5) Check the sensor by An actuator operation.  6) Press the "Cancel" key to stop the test. 7) Replace the PHD ASSY. 8) Close the Front Cover.
Exit Sensor (DI-3)	NOTE: Fuser is very hot, so pay sufficient attention at work to above burns, etc. 1) Turn on the power and enter the Printer Diag. 2) Execute the DI-3. 3) Open the Front Cover. 4) Check the sensor.  5) Press the "Cancel" key to stop the test. 6) Close the Front Cover.

Sensor name (Diag. Code)	Confirmation procedures
K Mode sensor (DI-4) (Color Mode Switching Sensor)	NOTE: These procedures are for the technical staff. When performing operation for five minutes or longer with the front cover open, remove the PHD ASSY, and cover the drum to avoid exposure to light. 1) Remove the DRIVE ASSY PH. 2) Cheat the safety Interlock System. 3) Turn on the power and enter the Printer Diag. 4) Execute the DI-4. 5) Check the sensor.  6) Press the "Cancel" key to stop the test. 7) Turn off the printer power. 8) Attach the DRIVE ASSY PH.
Side Switch (DI-6)	1) Turn on the power and enter the Printer Diag. 2) Execute the DI-6. 3) Check the Switch.  4) Press the "Cancel" key to stop the test. 5) Close the Toner Cover.

Sensor name (Diag. Code)	Confirmation procedures
Interlock Switch (DI-7)	1) Turn on the power and enter the Printer Diag. 2) Execute the DI-7. 3) Open and close the Front Cover to check the switch.  4) Press the "Cancel" key to stop the test. 5) Close the Front Cover.

4.2.3 Digital Output (DO) Test

This function checks whether the DO components operate.
When the interlock is opened while the DO test is performed, each component ends to operate.

NOTE

In this Test Mode, each DO component can be turned individually. Therefore it allows the customer to check a component' s operation from outside, and judge whether the component is normal or not.
When all the diag. functions are stopped, all the DO components can be turned off.
DO test can make each of the DO components operate simultaneously.

When a paper jam or PQ problem is occurred, or an error message or code is displayed, this test enables to look for the broken or damaged parts.
Test result: NG (Go to each FIP or replace the parts.)
OK (Turn off/on the main power.)

4.2.4 Executing digital output (DO) test

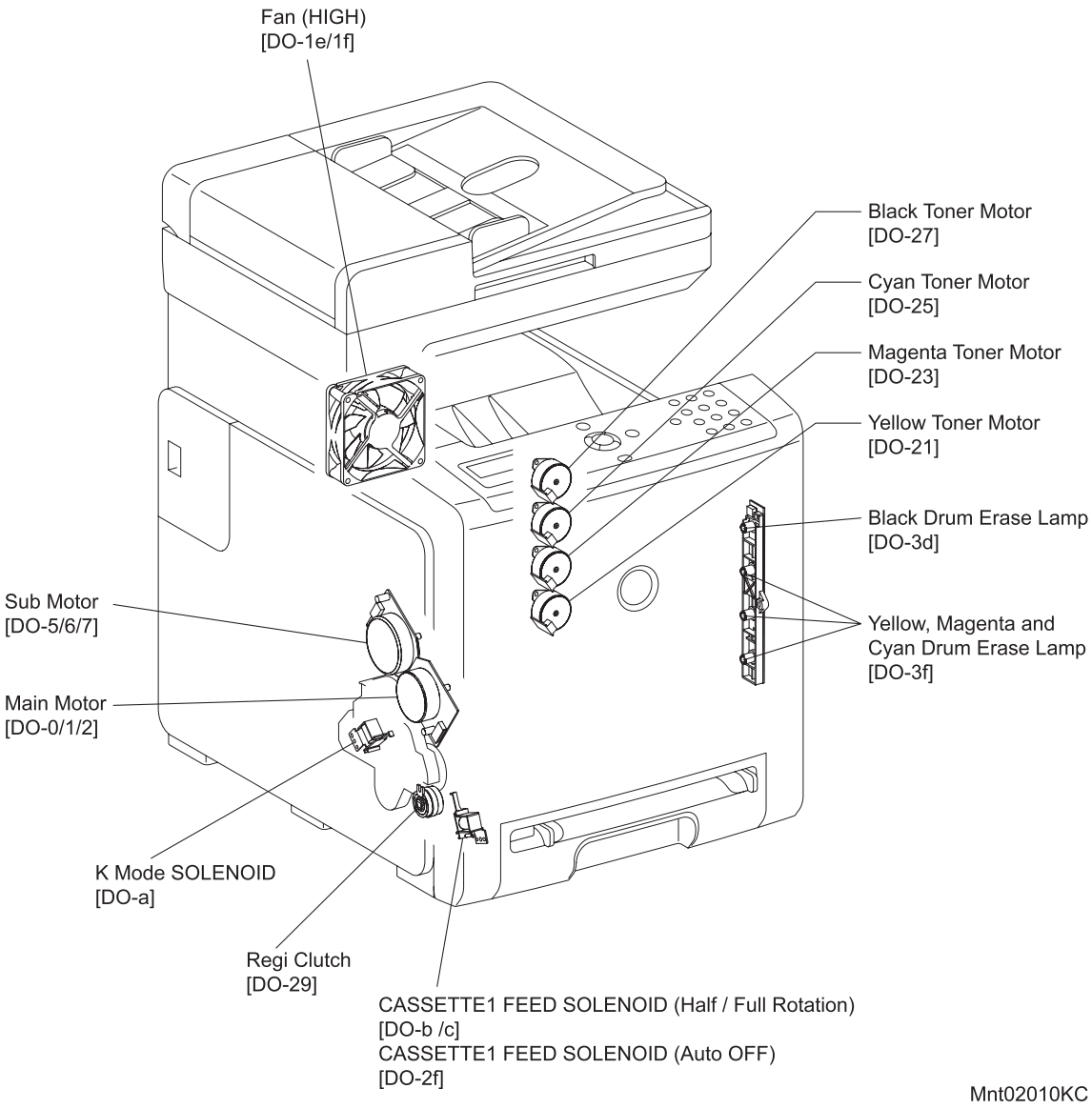
1) Turn off the power.
2) Turn on the power while holding down " ▲ " and " ▼ " keys.
3) Release the fingers from these keys when "Please wait..." is displayed.
4) The "Customer Mode", "Printer" and "FAX Scanner" are displayed. (Entered the Diag. mode.)
5) Press " ✓ " key. (Entered the Printer Diag. mode.)
6) Press " ▼ " key to select "IOT Diag", and then press " ✓ " key.
7) Press " ▼ " key to select "Digital Output", and then press " ✓ " key.
8) Press " ▲ " or " ▼ " key to select test item.
9) Press " ✓ " key to execute the test.

NOTE

To exit the test press the "CANCEL" key, and to return to one step higher menu, press the "Menu" key.

Parameters for the Digital Output Test are as follows.

Code	Components
DO-0,1,2	Main Motor
DO-5,6,7	Sub Motor
DO-a	K Mode SOLENOID
DO-b ,c	CASSETTE1 FEED SOLENOID (Half / Full Rotation)
DO-1e,1f	Fan (HIGH)
DO-21	Yellow Toner Motor
DO-23	Magenta Toner Motor
DO-25	Cyan Toner Motor
DO-27	Black Toner Motor
DO-29	Regi Clutch
DO-2f	CASSETTE1 FEED SOLENOID (Auto OFF)
DO-3d	Black Drum Erase Lamp
DO-3f	Yellow, Magenta and Cyan Drum Erase Lamp


Fan (HIGH)
[DO-1e/1f]
Black Toner Motor
[DO-27]
Cyan Toner Motor
[DO-25]
Magenta Toner Motor
[DO-23]
Yellow Toner Motor
[DO-21]
Black Drum Erase Lamp
[DO-3d]
Yellow, Magenta and
Cyan Drum Erase Lamp
[DO-3f]
Sub Motor
[DO-5/6/7]
Main Motor
[DO-0/1/2]
K Mode SOLENOID
[DO-a]
Regi Clutch
[DO-29]
CASSETTE1 FEED SOLENOID (Half / Full Rotation)
[DO-b /c]
CASSETTE1 FEED SOLENOID (Auto OFF)
[DO-2f]
Mnt02010KC

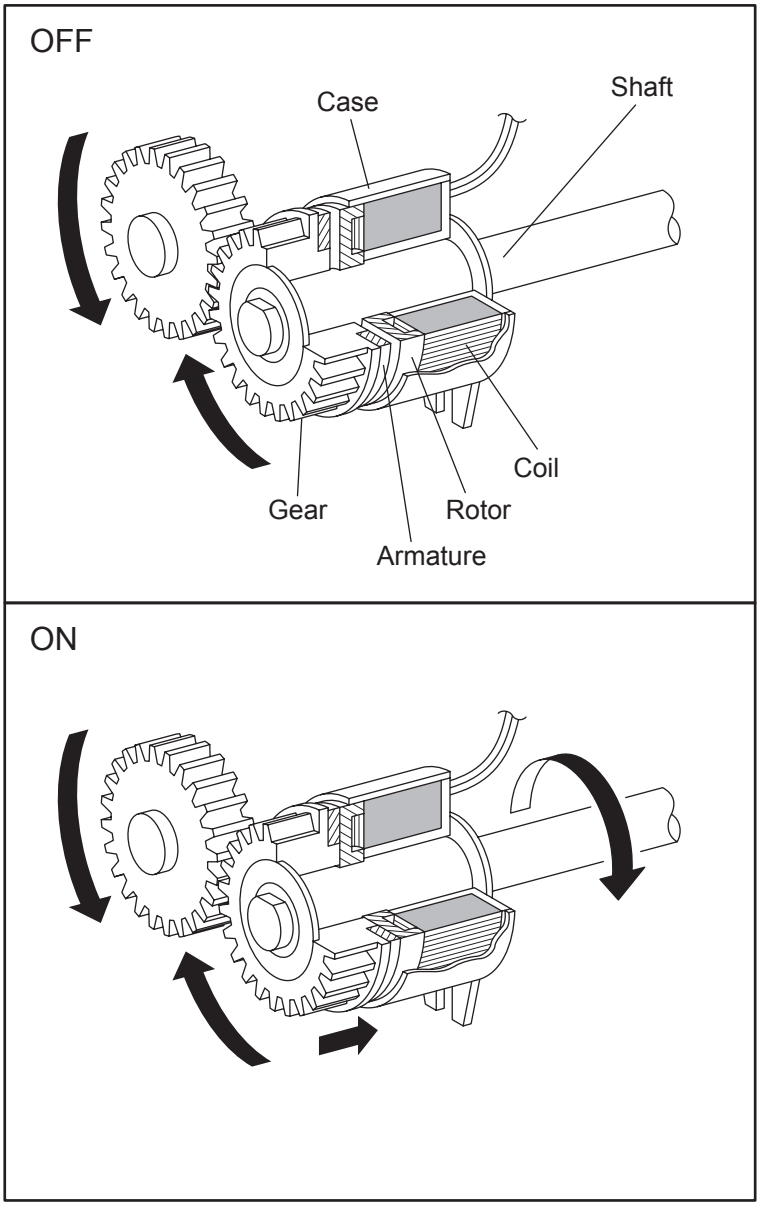
- About Clutch

The electromagnetic clutch in the printer controls the rotation of the roller by transferring or cutting the torque from the motor to the roller.

The electromagnetic clutch becomes an electromagnet by the passage of electric current through the coil inside the case and attracts the armature and gear to the rotating rotor, thereby rotating the gear.

Upon the loss of power to the coil, electromagnetic force is lost and the armature comes off the rotor, and the gear comes to rest.

The clutch makes so soft noises that you must be close the component to audibly confirm the operation of the component.



Leg_Sec02_050FA

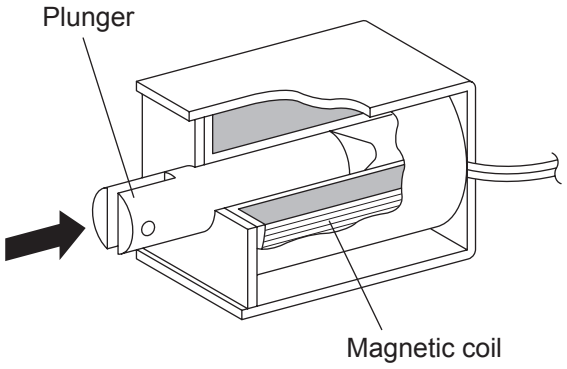
- About Solenoid

The solenoid in the printer opens/closes the shutter or controls the position of the gear for transferring the torque of the motor to the roller.

A solenoid becomes an electromagnet by the passage of electric current through the coil inside the case and attracts the plunger.

Upon the loss of power to the coil, electromagnetic force is lost and the plunger is returned to its original position by spring action, thereby allowing the shutter to operate or the gear to move to the predefined position.

Unlike a clutch, a solenoid generates a loud operation noise.

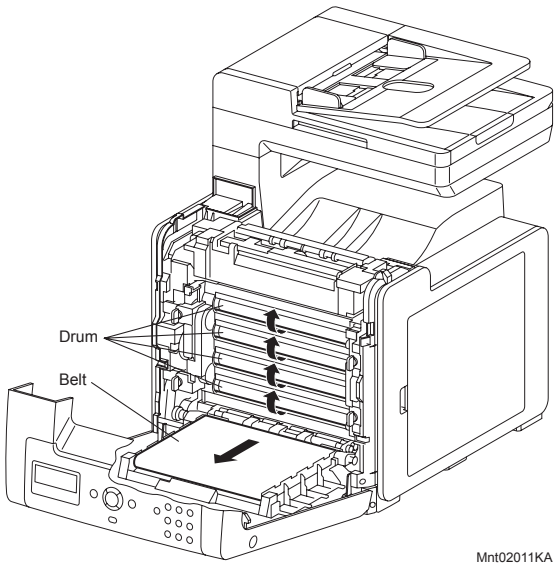


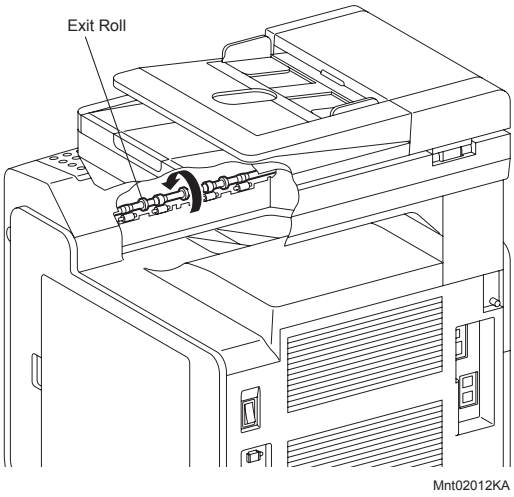
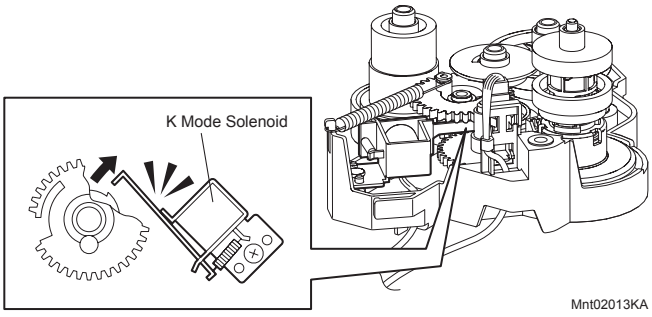
Leg_Sec02_051FA

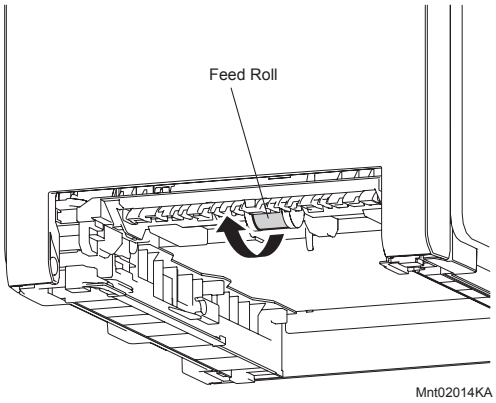
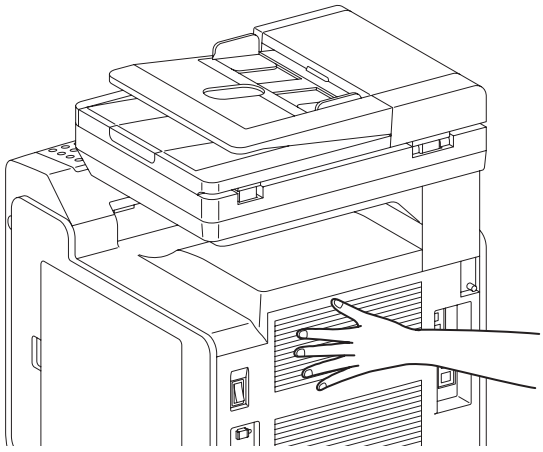
- Checking Motor, Clutch and Solenoid

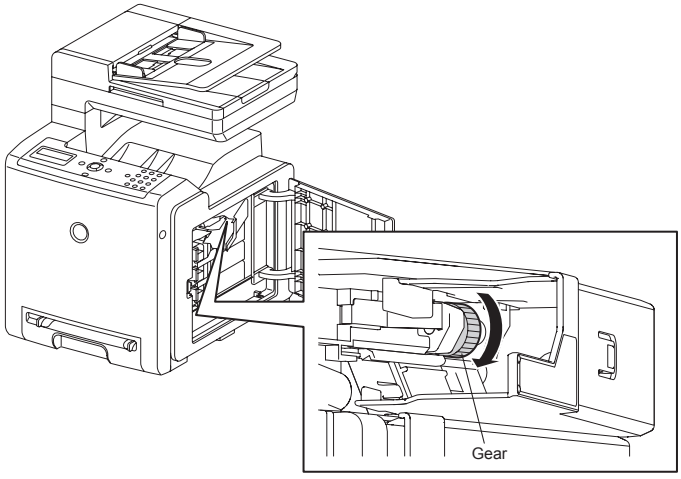
NOTE

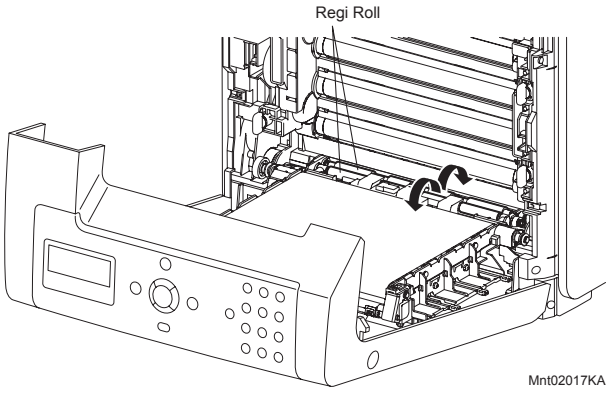
Before executing the DO test, close all covers and doors.

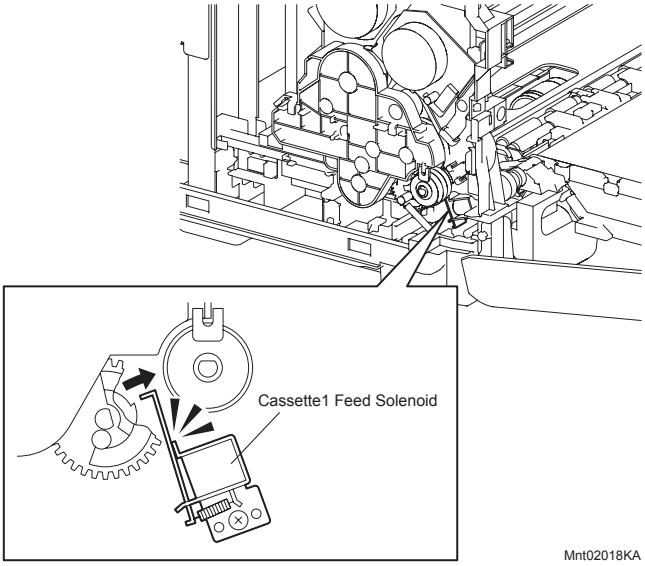
Clutch and Solenoid name (Diag. Code)	Confirmation procedure
Main Motor (DO-0/DO-1/DO-2)	NOTE: These procedures are for the technical staff. The customer check is the procedure 1, 4 and 5. When performing operation for five minutes or longer with the front cover open, remove the PHD ASSY, and cover the drum to avoid exposure to light. The rotational speed of the motor is as follows. DO-2<DO-0<DO-1 1) Turn on the power and enter the Printer Diag. 2) Open the Front Cover 3) Cheat the safety Interlock System. 4) Execute the DO-0. (The customer can confirm the motor noise only.)  5) Check the drum rotation. 6) Press the "Cancel" key to stop the test. 7) Remove the cheater and replace the black toner cartridge. 8) Close the Front Cover.

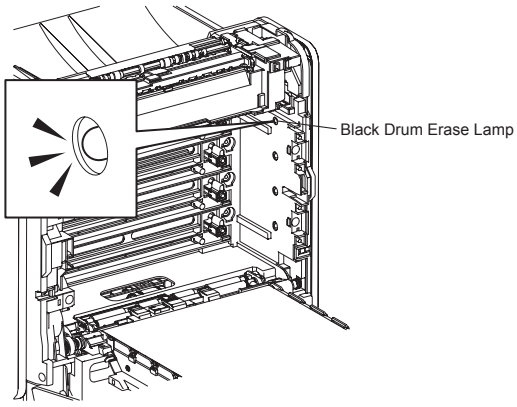
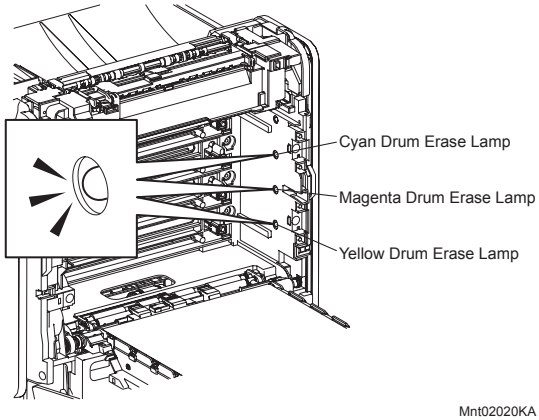
Clutch and Solenoid name (Diag. Code)	Confirmation procedure
Sub Motor (DO-5/DO-6/DO-7)	The rotational speed of the motor is as follows. DO-7<DO-5<DO-6 1) Turn on the power and enter the Printer Diag. 2) Execute the DO-5.  3) Check the Exit Roll rotation. 4) Press the "Cancel" key to stop the test.
K Mode SOLENOID (DO-a) (Color Mode Switching Sensor)	NOTE: These procedures are for the technical staff. When performing operation for five minutes or longer with the front cover open, remove the PHD ASSY, and cover the drum to avoid exposure to light. 1) Remove the DRIVE ASSY PH. 2) Cheat the safety Interlock System. 3) Turn on the power and enter the Printer Diag. 4) Execute the DO-a.  5) Check the K Mode SOLENOID movement. 6) Press the "Cancel" key to stop the test. 7) Turn off the printer power. 8) Attach the DRIVE ASSY PH. 9) Remove the cheater and turn on the printer power.

Clutch and Solenoid name (Diag. Code)	Confirmation procedure
CASSETTE1 FEED SOLENOID (Half / Full Rotation) (DO-b ,c)	The rotational speed of the solenoid is as follows. DO-c<DO-b 1) Turn on the power and enter the Printer Diag. 2) Remove the paper cassette. 3) Execute the DO-b.  Mnt02014KA 4) Check the Feed Roll rotation. 5) Press the "Cancel" key to stop the test. 6) Replace the paper cassette.
Fan (HIGH) (DO-1e ,1f)	1) Turn on the power and enter the Printer Diag. 2) Execute the DO-1e.  Mnt02015KA 3) Check the FAN rotation. 4) Press the "Cancel" key to stop the test.

Clutch and Solenoid name (Diag. Code)	Confirmation procedure
Yellow Toner Motor(DO-21) Magenta Toner Motor (DO-23) Cyan Toner Motor (DO-25) Black Toner Motor (DO-27)	NOTE: These procedures are for the technical staff. Described below is the check procedure common among the four toner motor. Note the operation for the toner in the PHD ASSY spills if the motor is rotated for a long time. 1) Turn on the power and enter the Printer Diag. 2) Open the Cover and remove the toner cartridge. 3) Open the toner cartridge holder. 4) Execute the DO-21, DO-23, DO-25 or DO-27.  Mnt02016KA 5) Check the TONER MOTER rotation. 6) Press the "Cancel" key to stop the test. 7) Replace the toner cartridge and close the toner cartridge holder. 8) Close the Cover.

Clutch and Solenoid name (Diag. Code)	Confirmation procedure
Regi Clutch (DO-29)	NOTE: When performing operation for five minutes or longer with the front cover open, remove the PHD ASSY , and cover the drum to avoid exposure to light. 1) Turn on the power and enter the Printer Diag. 2) Execute the DO-29. Upon hitting the " ✓ " key, the operating noise of the clutch will be heard. 3) Press the "Cancel" key to stop the clutch. Combination test is as follows. NOTE: The Regi Roll rotates when the DO-0 and the DO-29 are executed. These procedures are for the technical staff. When performing operation for five minutes or longer with the front cover open, remove the PHD ASSY, and cover the drum to avoid exposure to light. 1) Turn on the power and enter the Printer Diag. 2) Open the Front Cover. 3) Cheat the safety Interlock System. 4) Execute the DO-0 and the DO-29.  5) Check the Regi Roll rotation. 6) Press the "Cancel" key to stop the test. 7) Press the "▼" key to display the DO-0. 8) Press the "Cancel" key to stop the motor. 9) Remove the cheter and close the Front Cover.

Clutch and Solenoid name (Diag. Code)	Confirmation procedure
CASSETTE1 FEED SOLENOID (Auto OFF) (DO-2f)	NOTE: This test should be carried out in the case where the Feed Roll fails to rotate under the CASSETTE1 FEED SOLENOID (DO-b or DO-c) (Feed Roll Rotation) status. These procedures are for the technical staff. When performing operation for five minutes or longer with the front cover open, remove the PHD ASSY, and cover the drum to avoid exposure to light. 1) Remove the COVER ASSY SIDE L. 2) Cheat the safety Interlock System. 3) Turn on the power and enter the Printer Diag. 4) Execute the DO-2f.  5) Check the FEED SOLENOID movement. 6) Press the "Cancel" key to stop the test. 7) Turn off the printer power. 8) Attach the COVER ASSY SIDE L. 9) Remove the cheter and close the Front Cover. 10) Turn on the printer power.

Clutch and Solenoid name (Diag. Code)	Confirmation procedure
Black Drum Erase Lamp (DO-3d)	NOTE: These procedures are for the technical staff. 1) Turn on the power and enter the Printer Diag. 2) Open the Front Cover. 3) Remove the PHD ASSY and cover the drum to avoid exposure to light. 4) Cheat the safety Interlock System. 5) Execute the DO-3d.  6) Check the lamp lighting. 7) Press the "Cancel" key to stop the test. 8) Replace the PHD ASSY. 9) Remove the cheter and close the Front Cover.
Yellow, Magenta and Cyan Drum Erase Lamp (DO-3f)	NOTE: These procedures are for the technical staff. 1) Turn on the power and enter the Printer Diag. 2) Open the Front Cover. 3) Remove the PHD ASSY and cover the drum to avoid exposure to light. 4) Cheat the safety Interlock System. 5) Execute the DO-3f.  6) Check the lamps lighting. 7) Press the "Cancel" key to stop the test. 8) Replace the PHD ASSY. 9) Remove the cheter and close the Front Cover.

4.3 Print Info

Prints out the detailed printer settings and configuration information.

4.3.1 Executing Print Info

1) Turn off the power.
2) Turn on the power while holding down " ▲ " and " ▼ " keys.
3) Release the fingers from these keys when "Please wait..." is displayed.
4) The "Customer Mode", "Printer" and "FAX Scanner" are displayed. (Entered the Diag. mode.)
5) Press " ✓ " key. (Entered the Printer Diag. mode.)
6) Press " ▼ " to select "Print Info", and then press " ✓ " key.
7) Press " ▲ " and " ▼ " key to select the item.
8) Press " ✓ " key twice to execute the setting.

NOTE

To exit the print or to returning to one step higher menu, press "CANCEL" key.

4.3.2 Config Page

The version of software of IOT and the printer configuration can be confirmed by executing this test.

4.3.3 Print Settings

The service tag, printing count value and error count value can be confirmed by executing this test.

4.4 Complete

Completes the diagnosis operation and reboot the data.

4.4.1 Executing Complete

1) Turn off the power.
2) Turn on the power while holding down " ▲ " and " ▼ " keys.
3) Release the fingers from these keys when "Please wait..." is displayed.
4) The "Customer Mode", "Printer" and "FAX Scanner" are displayed. (Entered the Diag. mode.)
5) Press " ✓ " key. (Entered the Printer Diag. mode.)
6) Press " ▼ " to select "Complete", and then press " ✓ " key.
7) Press " ✓ " key twice to execute the setting.

NOTE

To exit the operation or to returning to one step higher menu, press "CANCEL" key.

4.4.2 Complete

Completes the diagnosis operation and reboot the data.

4.5 Installation Set

Specifies whether or not Alarm display of Toner residual quantity is performed.

4.5.1 Executing Installation Set

1) Turn off the power.
2) Turn on the power while holding down " ▲ " and " ▼ " keys.
3) Release the fingers from these keys when "Please wait..." is displayed.
4) The "Customer Mode", "Printer" and "FAX Scanner" are displayed. (Entered the Diag. mode.)
5) Press " ✓ " key. (Entered the Printer Diag. mode.)
6) Press " ▼ " to select "Installation Set", and then press " ✓ " key.
7) Press " ▼ " key to select the ON or OFF.
8) Press " ✓ " key to execute the setting.

NOTE

To exit the test or to returning to one step higher menu, press "CANCEL" key.

4.6 Test Print

Print an internal test pattern of the printer. If paper jam or paper empty occurs during the print, the test waits until they are resolved.

4.6.1 Executing test print

1) Turn off the power.
2) Turn on the power while holding down " ▲ " and " ▼ " keys.
3) Release the fingers from these keys when "Please wait..." is displayed.
4) The "Customer Mode", "Printer" and "FAX Scanner" are displayed. (Entered the Diag. mode.)
5) Press " ✓ " key. (Entered the Printer Diag. mode.)
6) Press " ▼ " key to select "Test Print", and then press " ✓ " key.
7) Press " ▲ " or " ▼ " key to select the test item.
8) Press " ✓ " key twice to execute the test.

NOTE

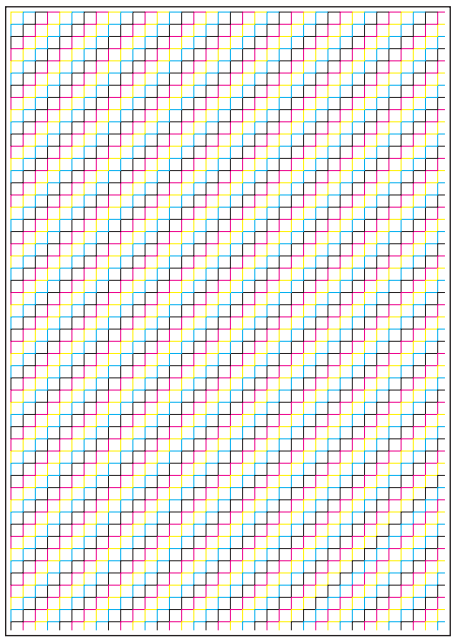
To exit the test or to returning to one step higher menu, press "CANCEL" key.

4.6.2 No Image [IOT]

Prints the blanked paper.

4.6.3 Test Pattern 600[IOT]

Prints the IOT built-in 600dpi pattern.
When the PQ problem occurred, this test enables to identify the problem as the printing process or the PWBA ESS related.
Compare the sample chart with the print.
Check result: NG (Check the printing process.) OK (Check the PWBA ESS related.)



Kmy02001KA

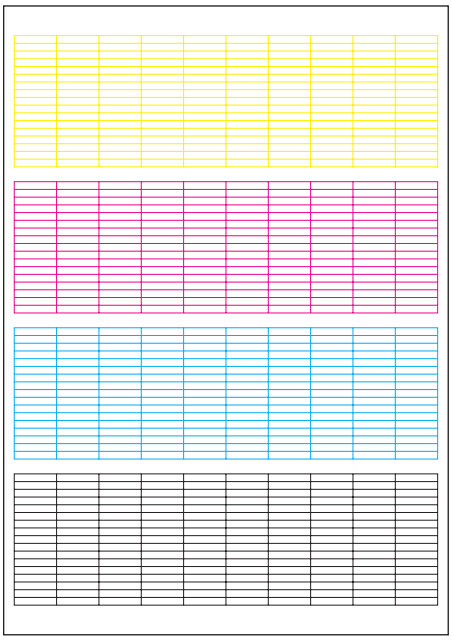
4.6.4 Grid2

Prints the ESS built-in grid pattern.

When the PQ problem occurred, this test enables to identify the problem as printer-related or otherwise.

Compare the sample chart with the print.

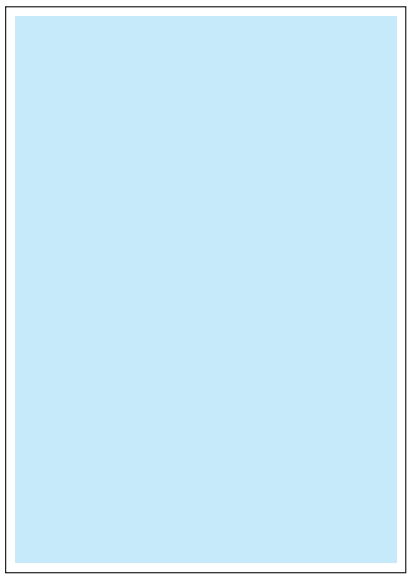
Check result: NG (Check the printing process and PWBA ESS-related.) OK (Check the network, cable, PC and so on.)



Leg_Sec02_004FA

4.6.5 Cyan 20%

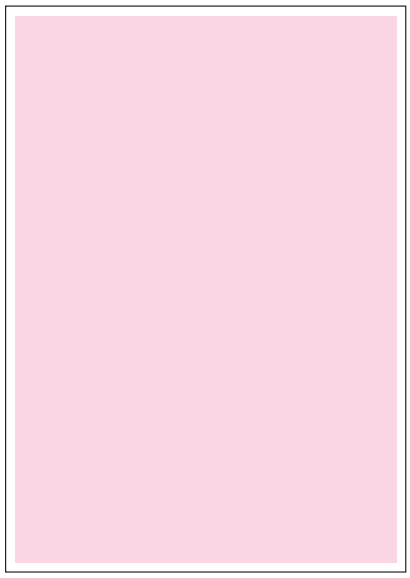
Outputs cyan 20% paint on the whole area of a A4 paper.
When the PQ problem occurred, this test enables to identify the problem as the cyan toner or another color.
Compare the sample chart with the print.
Check result: NG (Check the cyan toner-related.)　OK (Check another toner.)



Leg_Sec02_005FA

4.6.6 Magenta 20%

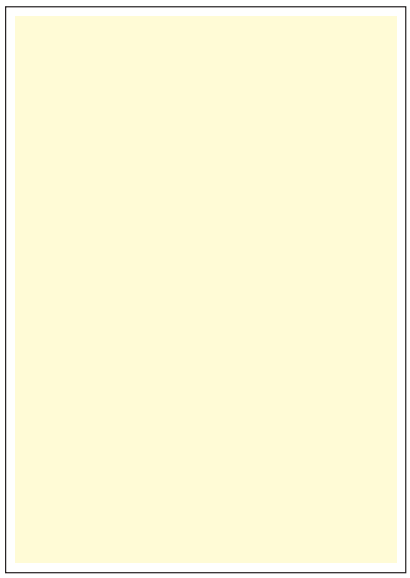
Outputs magenta 20% paint on the whole area of a A4 paper.
When the PQ problem occurred, this test enables to identify the problem as the magenta toner or another color.
Compare the sample chart with the print.
Check result: NG (Check the magenta toner-related.)　OK (Check another toner.)



Leg_Sec02_006FA

4.6.7 Yellow 20%

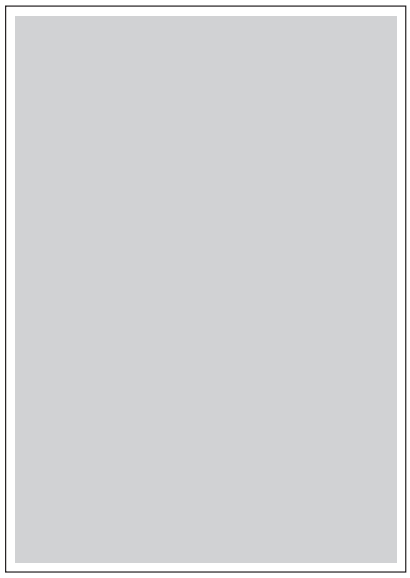
Outputs yellow 20% paint on the whole area of a A4 paper.
When the PQ problem occurred, this test enables to identify the problem as the yellow toner or another color.
Compare the sample chart with the print.
Check result: NG (Check the yellow toner-related.)　OK (Check another toner.)



Leg_Sec02_007FA

4.6.8 Black 20%

Outputs black 20% paint on the whole area of a A4 paper.
When the PQ problem occurred, this test enables to identify the problem as the black toner or another color.
Compare the sample chart with the print.
Check result: NG (Check the black toner-related.)　OK (Check another toner.)



Leg_Sec02_008FA

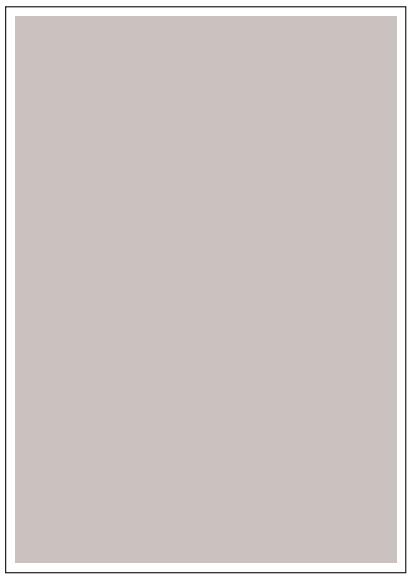
4.6.9 CMY 20%

Outputs C/M/Y 20% paint on the whole area of a A4 paper.

When the PQ problem occurred, this test enables to identify the problem as the balance of three color toners or otherwise.

Compare the sample chart with the print.

Check result: NG (Check the yellow, magenta or cyan toner-related.)　OK (Check black toner.)



Leg_Sec02_009FA

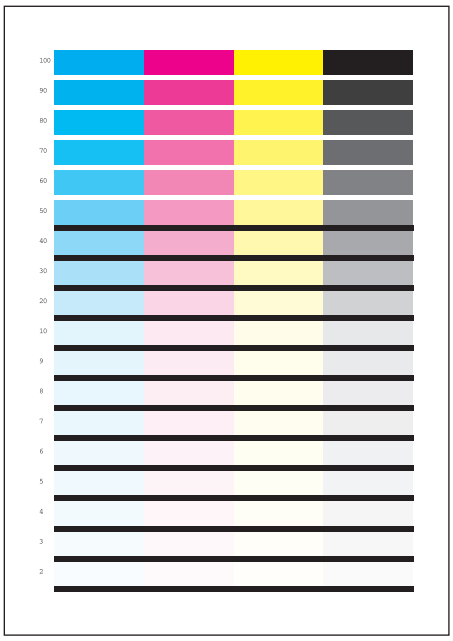
4.6.10 Gradation

Outputs the tone pattern from 2% to 100% on a A4 paper for each of 4 colors.

When the PQ problem occurred, this test enables to identify the problem as the printing process or PWBA ESS-related.

Compare the sample chart with the print.

Check result: NG (Check the printing process.)　OK (Check the PWBA ESS-related.)



Leg_Sec02_010FA

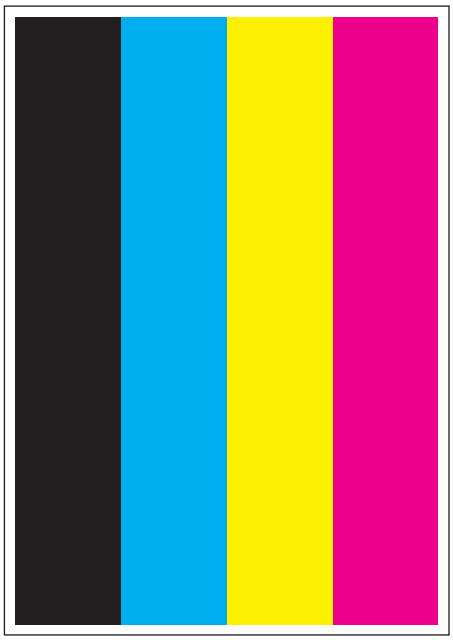
4.6.11 Toner Pallet Check

Outputs each 100% density color pattern of Y/M/C/K.

When the PQ problem occurred in the picture or photo printing, this test enables to identify the problem as the toner or another.

Compare the sample chart with the print.

Check result: NG (Check the problem toner-related.)　OK (Check the print job or print data.)



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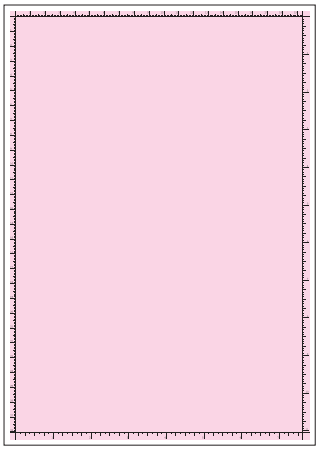
4.6.12 Contamination Check

Allows you to check the print for any regular lines or toner spots when encountering PQ problems. From the difference in the interval of regular lines or spots, you can determine the parts that have caused the trouble.

Page 1 to 4: Prints the scale patterns in vertical and horizontal directions for evaluating regularity and intervals.

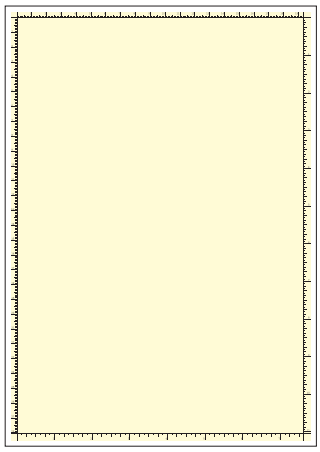
Page 5: Prints the list of intervals by component fault.

Page 1



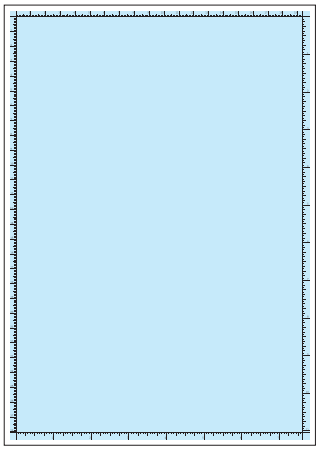
Wsb02028KA

Page 2



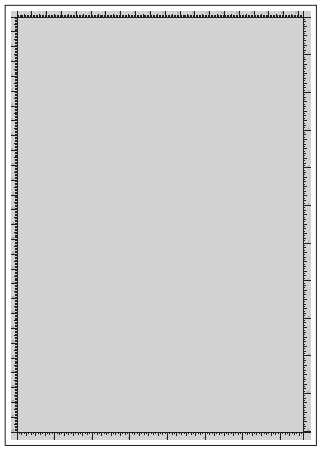
Wsb02027KA

Page 3



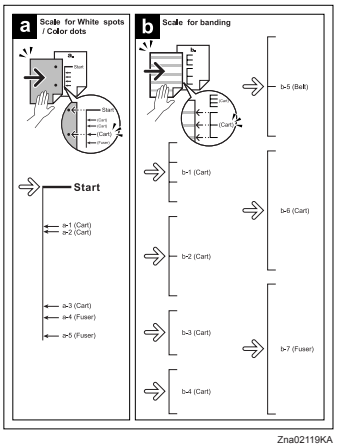
Wsb02029KA

Page 4



Wsb02030KA

Page 5



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4.6.13 Parameter Setting

This function reads/writes the following parameters stored in the printer.

Item	Range	Description
Slow Scan K to P	-128 to 127	Sets the registration in the paper feeding direction
Slow Scan 600 M,Y,C		
First Scan K to M,Y or C	-128 to 127	Sets the registration in the scanning direction.
First Scan SSF ,Tray 1	-30 to 30	
First Scan 2 K to M,Y or C	-1 to 2	
Life Counter	-	Reads the life counter and the printer.

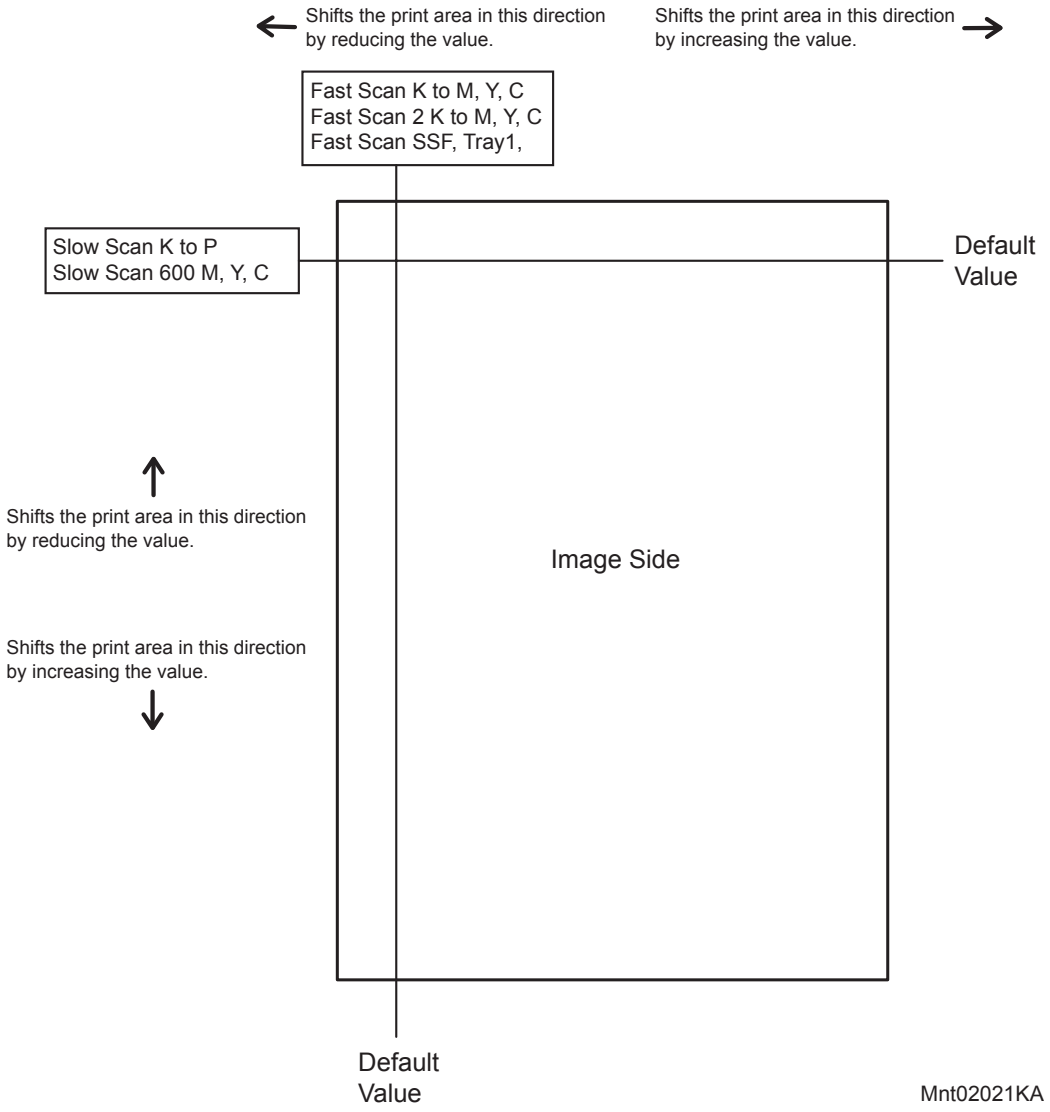
NOTE

Print the parameter list using the Print function of Parameter Menu in diagnosis before changing the value of the registration.

Parameter	Function	Default	Adjustable range
Slow Scan K to P (Shifts 0.17mm/1count)	Black registration adjustment	--	-128 to 127
Slow Scan 600 M,Y,C (Shifts 0.042mm/1count)	Color registration adjustment (600 dpi)	--	-128 to 127
Fast Scan K to M, Y or C (Shifts 0.042mm/1count)	Color registration adjustment Calculation of adjustment is shown below. (exp. Yellow) (Value of Fast Scan K to Y + Value of Fast Scan 2 K to Y)/4	--	-128 to 127
Fast Scan 2 K to M, Y or C (Shifts 0.01mm/1count)		--	-1 to 2
Fast Scan SSF, Tray1 (Shifts 0.17mm/1count)	Black registration adjustment at side 1 print	--	-30 to 30

NOTE

The default values are different in each printer.



Reference Counter Values

NOTE

These counter values are reference only. Do not use as the official value.

Counter Name	Value of life warning
Life Y Toner (Dispense time)	-
Life M Toner (Dispense time)	-
Life C Toner (Dispense time)	-
Life K Toner (Dispense time)	-
Life Fuser (Paper feeding count)	100000
Life Printer (Paper feeding count)	-
Life DTB (Transfer Belt) 2 (Waste Toner cleaning count)	200000
Life Y Waste Toner (Waste Toner cleaning count)	18000
Life M Waste Toner (Waste Toner cleaning count)	18000
Life C Waste Toner (Waste Toner cleaning count)	18000
Life K Waste Toner (Waste Toner cleaning count)	18000
Life Y Drum (Cycle count)	3000000
Life M Drum (Cycle count)	3000000
Life C Drum (Cycle count)	3000000
Life K Drum (Cycle count)	3000000
Life Drum Xero	-
Life Drum Deve K	-
Life MPF Feed	-
Life Tray 1 Feed	-
Life Duplex Feed	-
Print	-

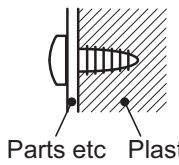
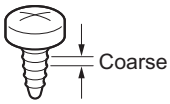
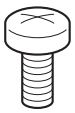
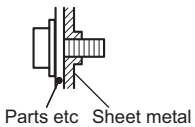
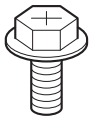
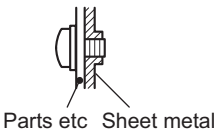
4.6.14 Printing the parameter list

This function prints the parameter values and life counter values stored in the IOT.

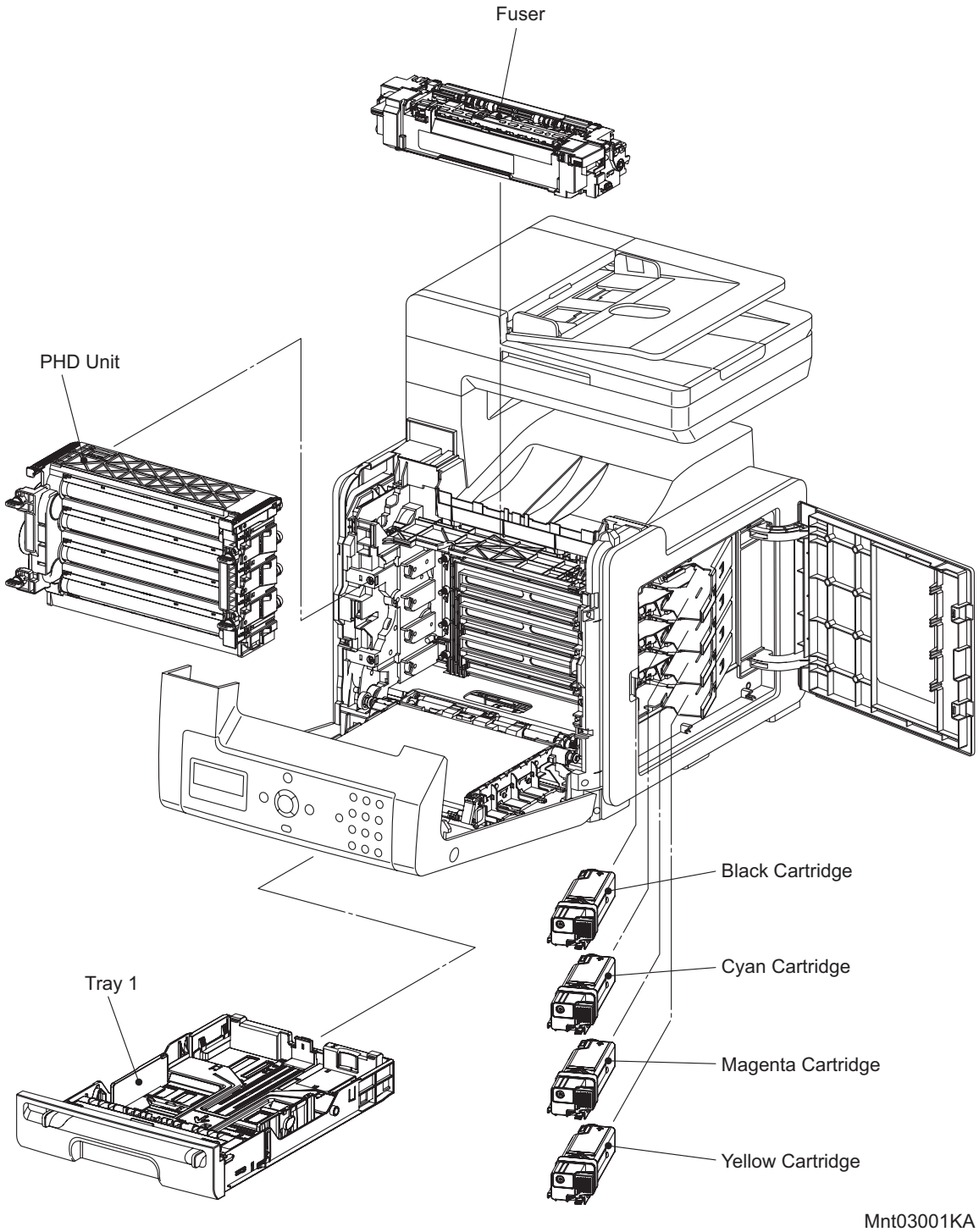
1. Removal and Replacement Procedures (RRPs)

1.1 Before starting service procedure

- Start the procedure after turning off the power and removing the power cord from the outlet.
- When performing the service operation around the FUSER ASSY, ensure that FUSER ASSY and its surrounding area have cooled down sufficiently.
- Pay sufficient attention to the parts during the procedure because they may be broken or may not perform their functions properly if unreasonable force is applied.
- Since various types of screws are used, ensure that the right screws are used in their right positions. Use special caution not to confuse the screws for plastic and the ones for sheet metal, because using the wrong type of screw may result in damage to the screw threads or other troubles.

No.	Type	Application	Shape	How to distinguish	Points to be noted	Major application locations
1	Screw for plastic Silver, tap	Plastic 		・Silver-colored ・Thread is coarser than that of the sheet metal type. ・Screw tip is thin.	Oblique screwing damages the thread because this screw cuts female threads in the base material as it goes in.	-
2	Screw for metal sheet Silver	Sheet metal		・Silver-colored ・Diameter of the thread section is uniform.		-
3	Screw for metal sheet Silver, with a flange	Sheet metal 		・Silver-colored ・It has a flange. ・Diameter of the thread section is uniform.		・PWBA
4	Screw for metal sheet Silver, with an external tooth washer	Sheet metal 		・Silver-colored ・Provided with an external tooth washer. ・Diameter of the thread section is uniform.		・Mounting positions of the ground wires.

- Wear a wristband or the like as far as possible to remove static electricity of the human body.
- Keep the front cover closed. Buzzer goes off when the machine is left powered on with the front cover open for five minutes or longer to prevent the drum deterioration due to exposure to light.
- When opening the front door in a removal/replacement operation, cover the drum to keep it from being exposed to light.
- Remove PAPER TRAY, PHD unit, TONER CARTRIDGE, and FUSER, and put them in a place where they do not affect the procedure. (Note that the service procedures can be performed with those parts in place depending on the target section of removal/replacement.)



1.2 General notes

- The string "(PL X.Y.Z)" suffixed to the part name in the procedure denotes that the part corresponds to the plate (PL) "X.Y", item "Z" of [Engineering Parts list], and its shape and fitting position can be checked in [Engineering Parts list].
- Directional descriptions used in the procedures are defined as follows:
  -Front : Direction toward you when facing the front of the printer.
  -Rear : Direction opposite to the front when facing the front of the printer.
  -Left : Left-hand direction when facing the front of the printer.
  -Right : Right-hand direction when facing the front of the printer.

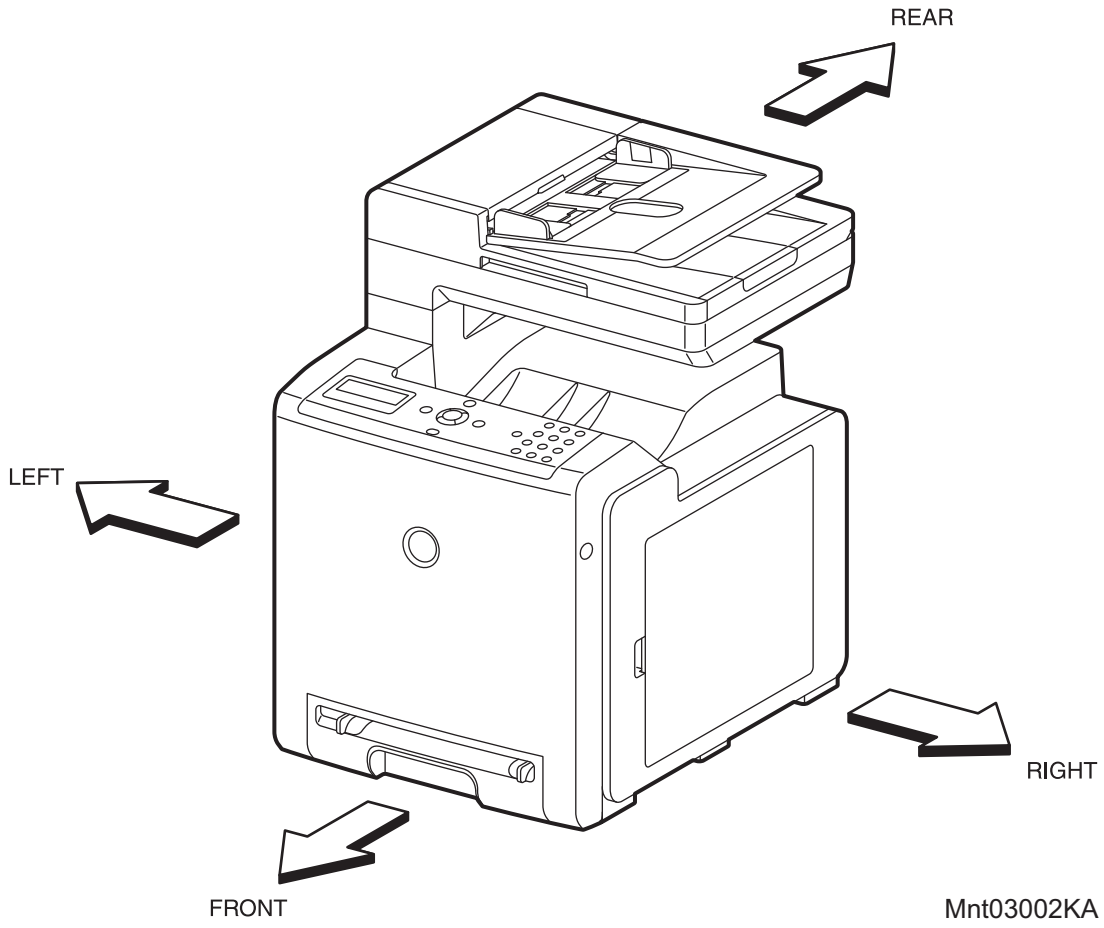
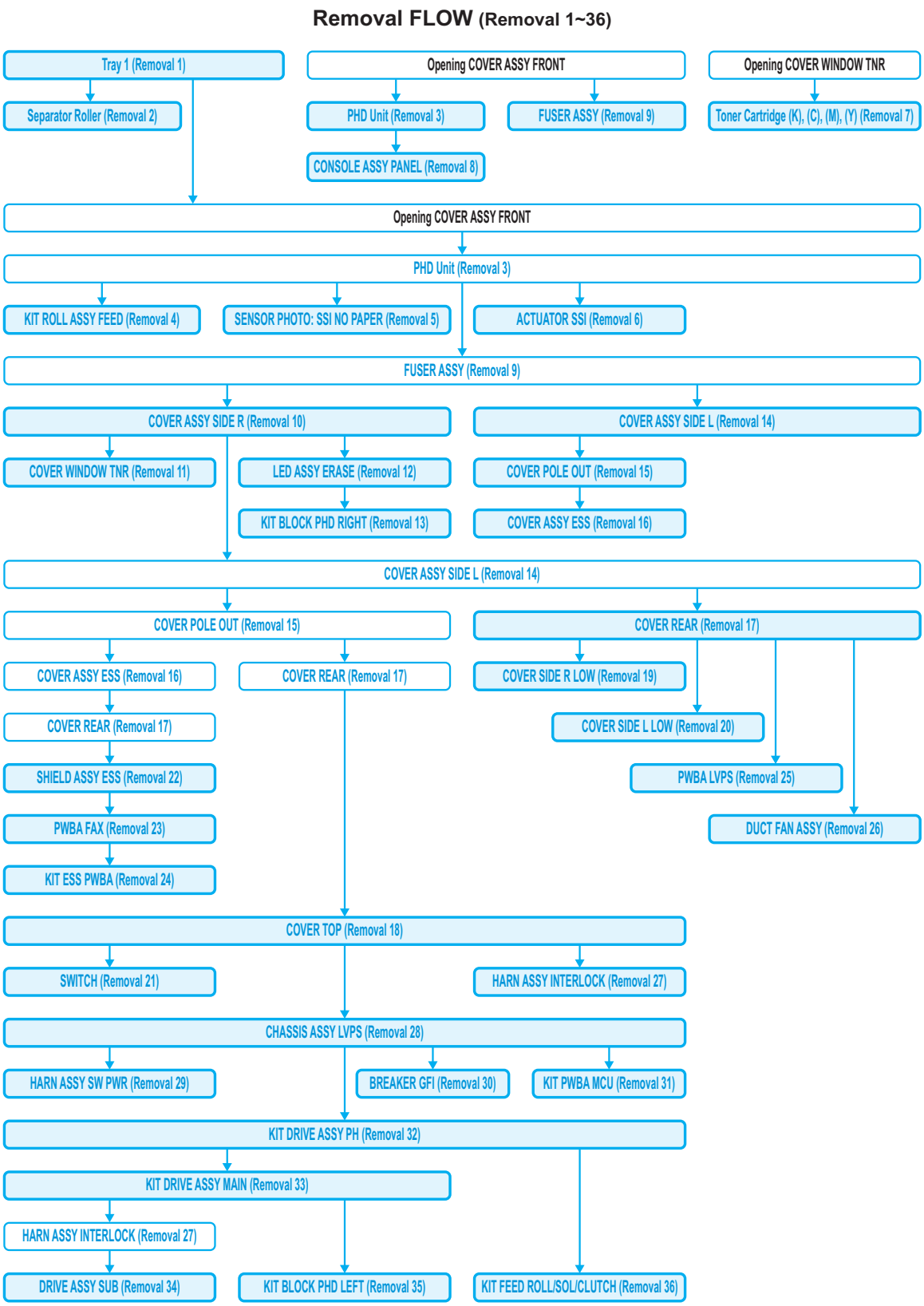


Figure: Definitions of Printer Orientation

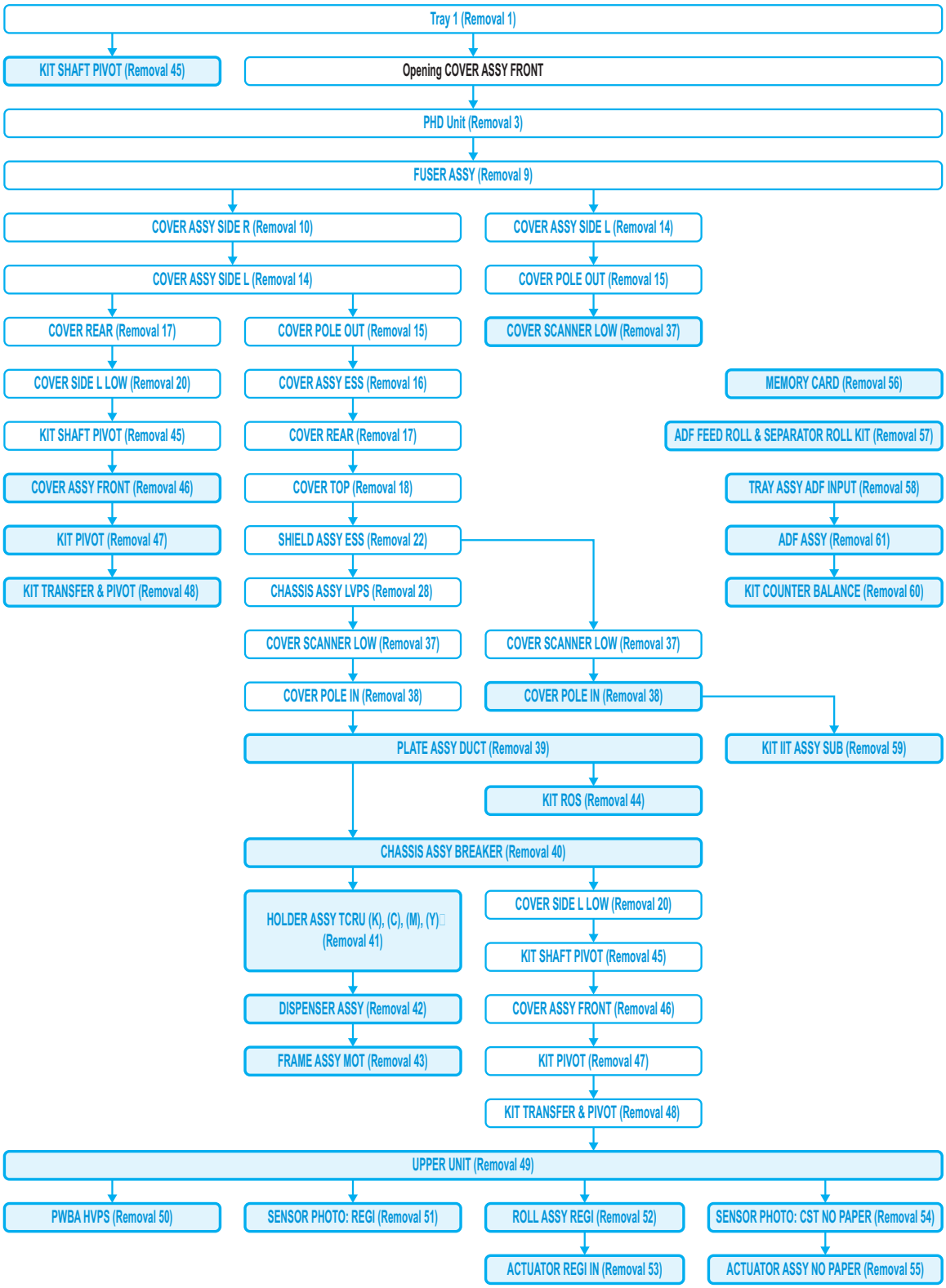
- The string "(RRP X.Y)" that appears in or at the end of the procedure denotes that the related service procedure is described in [RRP X.Y].
- Screws shown in the illustrations are to be unscrewed and removed using a Phillips head (cross-slot) screwdriver, unless otherwise specified.
- Black arrows shown in the illustrations denote moving directions. When numbers are assigned to these arrows, they refer to the order in the procedure.
- Refer to [Chapter 4 Plug/Jack (P/J) Connector Locations] for the positions of connectors (P/J).

Removal Flows

The components not connected with arrows in the flow below can be removed independently.

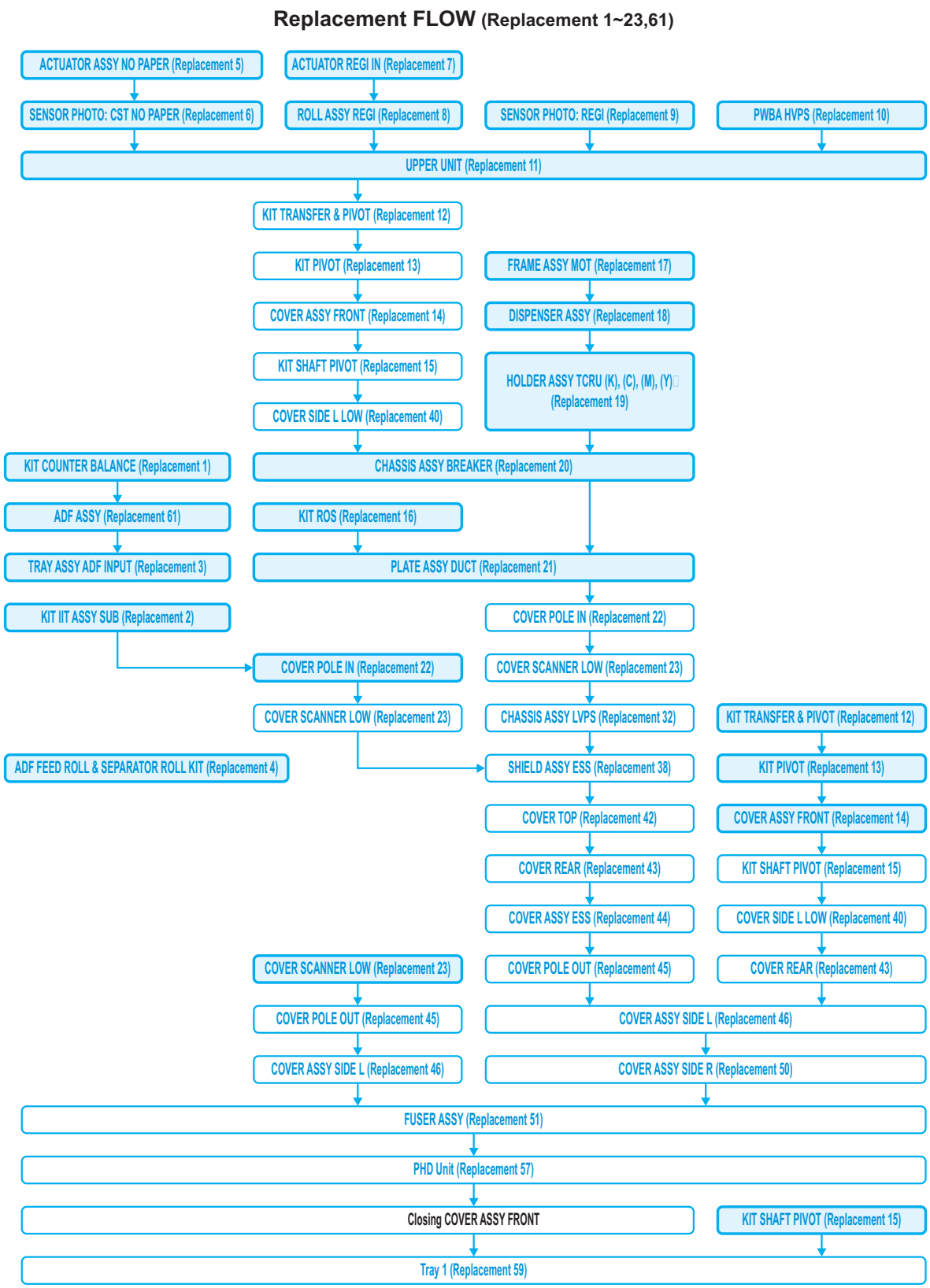


Removal FLOW (Removal 37~61)

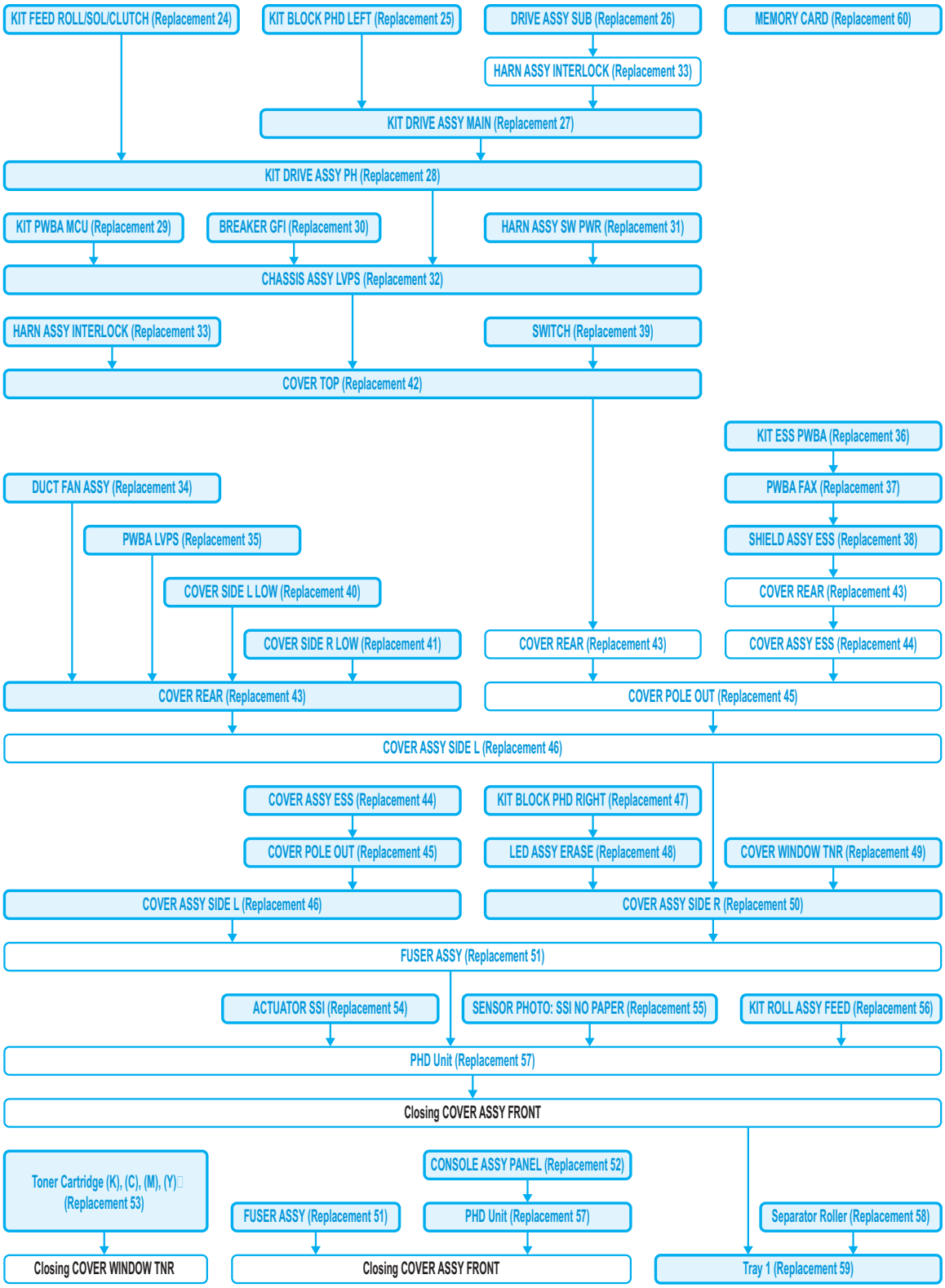


Replacement Flows

The components not connected with arrows in the flow below can be replaced independently.



Replacement FLOW (Replacement 24~60)

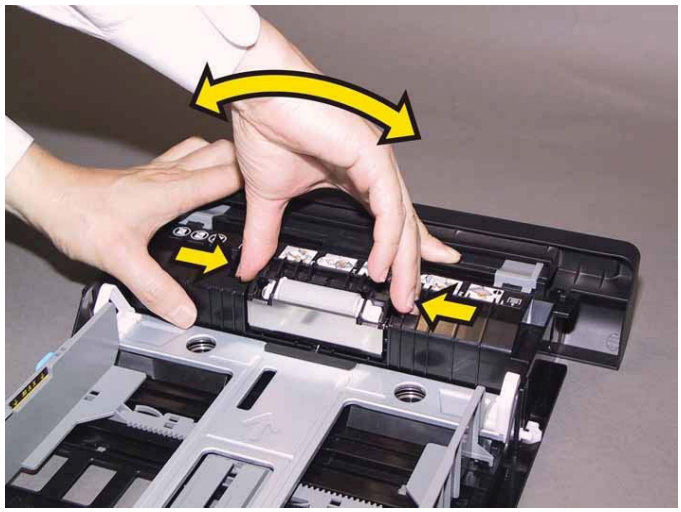
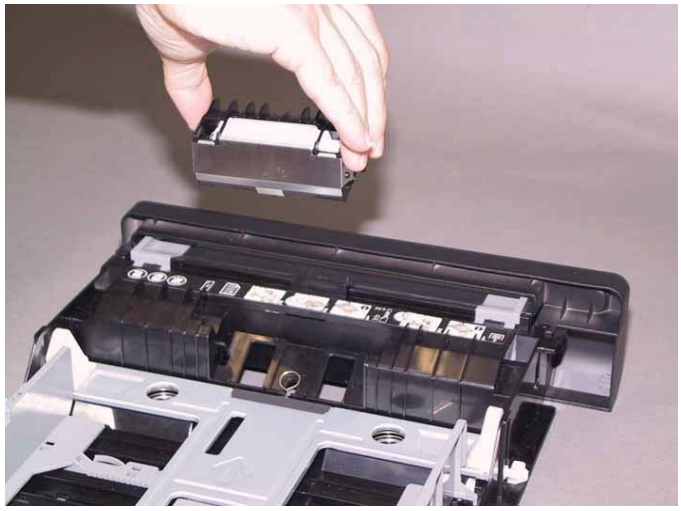


Removal 1 Tray 1 (PL10.3.1)

1) Pull out the Tray 1 (PL10.3.1) from the printer.	

Removal 2 Separator Roller (PL10.3.99)

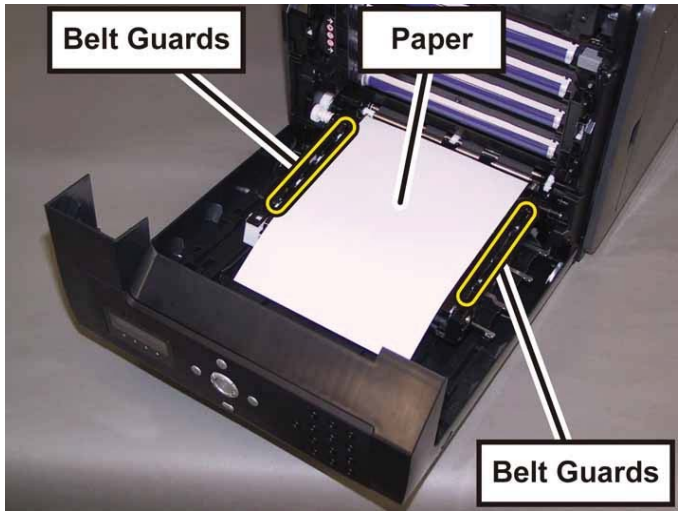
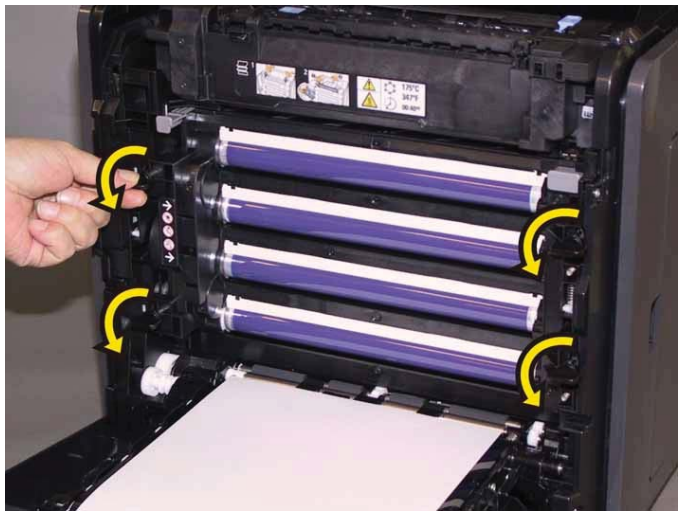
1) Remove the Tray 1. (Removal 1)

2) Hold the tray and pinch the left and right hooks of the Separator Roller (PL10.3.5). Swing the Separator Roller to release the two hooks.	
3) Pull up the Separator Roller to remove the Separator Roller from the Tray 1.	

Removal 3 PHD Unit (PL4.1.21)

Note: Cover the drum of the PHD unit to avoid exposure to light.

1) Open the COVER ASSY FRONT (PL10.2.1).

2) Put the paper on the TRANSFER ASSY (PL6.1.7) to protect the belt. **Note: When carrying out the work this procedure, take care not to cover the left and right of the belt guards with the paper.**	
3) Rotate the four stoppers of the PHD Unit (PL4.1.21) to the counter clock wise direction, to release the lock.	
4) Remove the PHD Unit toward you by pulling it by the left and right handles.	

5) Lift up the PHD Unit from the printer.	

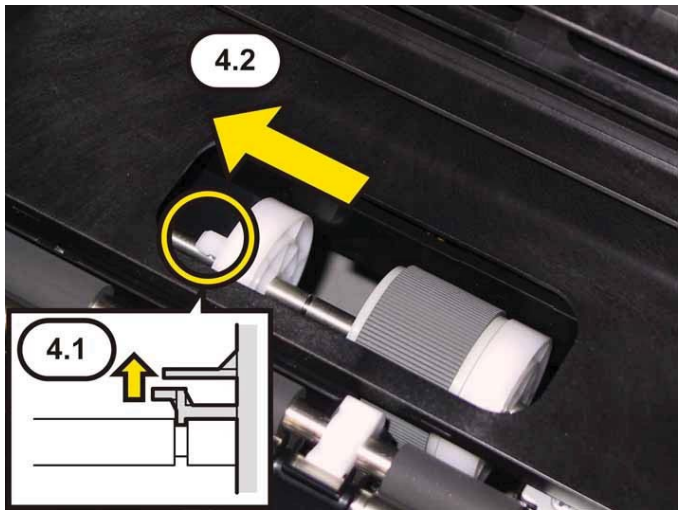
Removal 4 KIT ROLL ASSY FEED (PL3.2.99)

1) Remove the Tray 1. (Removal 1)

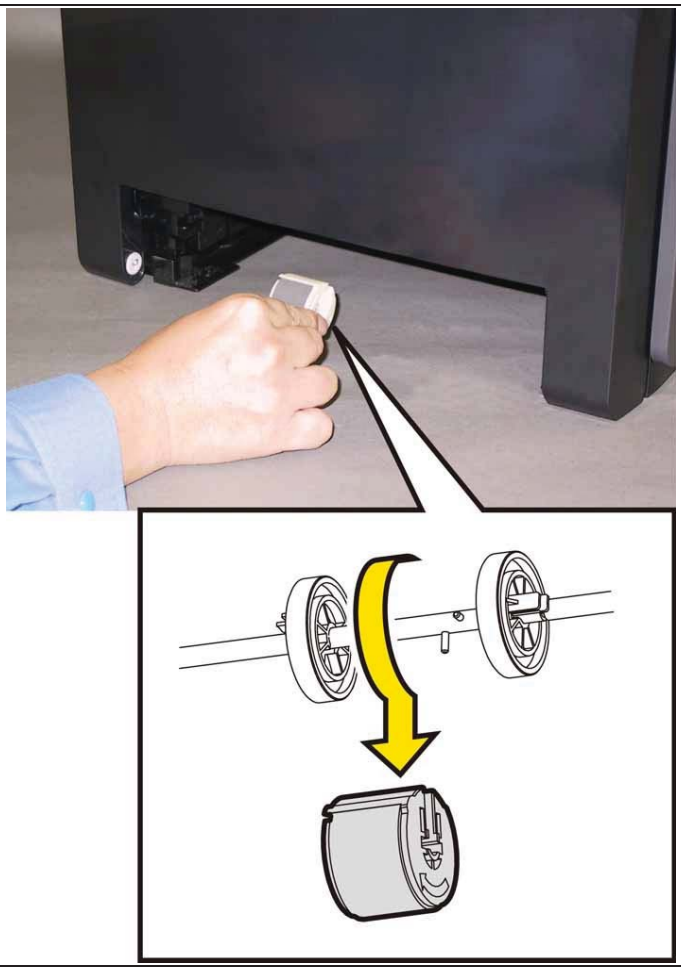
2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

4) Release the hook of the ROLL CORE MSI (PL3.2.3) on the left of the ROLL ASSY FEED (PL 3.2.4), and move the ROLL CORE MSI to left until it stops.	
5) Release the groove on the ROLL ASSY FEED from the vertical pin mounted on the SHAFT ASSY FEED (PL3.2.2) by sliding the ROLL ASSY FEED to the left.	

6) Close the COVER ASSY FRONT.

7) Remove the ROLL ASSY FEED from the SHAFT ASSY FEED by rotating the ROLL ASSY FEED 180 degrees.	

Removal 5 SENSOR PHOTO: SSI NO PAPER (PL3.2.13)

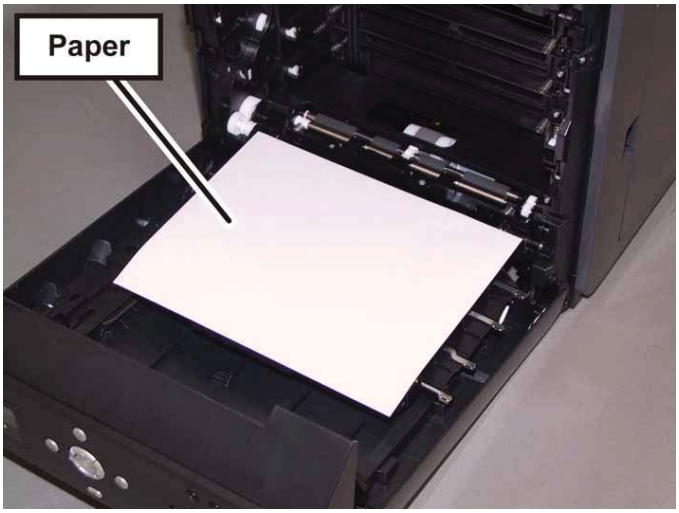
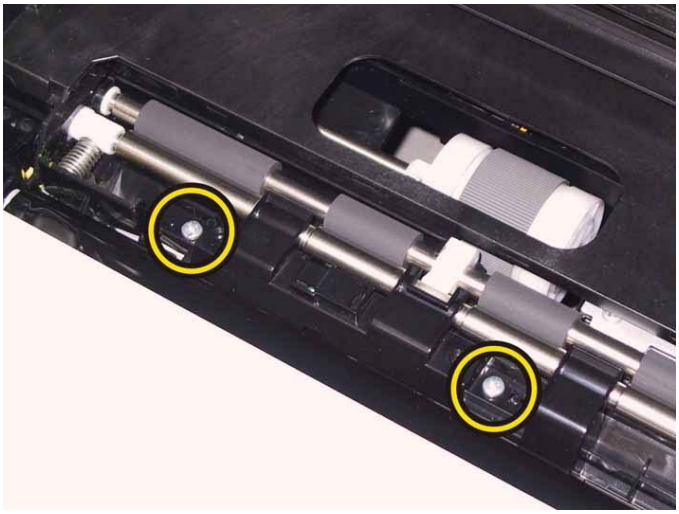
1) Remove the Tray 1. (Removal 1)

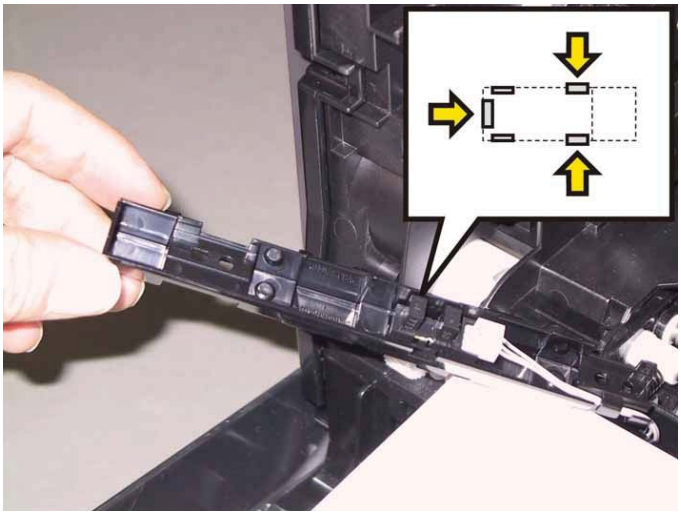
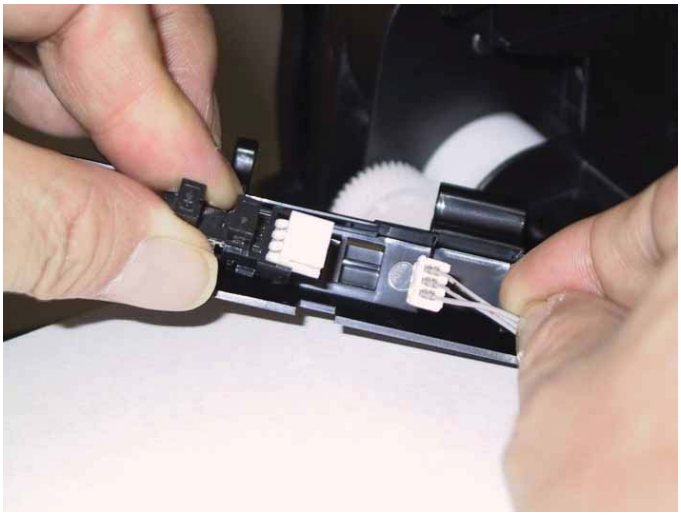
2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: When carrying out the work described next procedure, take care not to move the BRACKET SNS from the printer too far because they are connected with the harness.

4) Before working, put the paper on the transfer belt to protect from the damage.	
5) Remove the two screws (silver, tap, 8mm) that fix the BRACKET SNS (PL3.2.28) to the printer, remove the BRACKET SNS.	

6) Release the three hooks that fix the SENSOR PHOTO: SSI NO PAPER (PL3.2.13) to the BRACKET SNS, and remove the SENSOR PHOTO: SSI NO PAPER.	
7) Disengage the connector (P/J233) of the SENSOR PHOTO: SSI NO PAPER.	

Removal 6 ACTUATOR SSI (PL3.2.14)

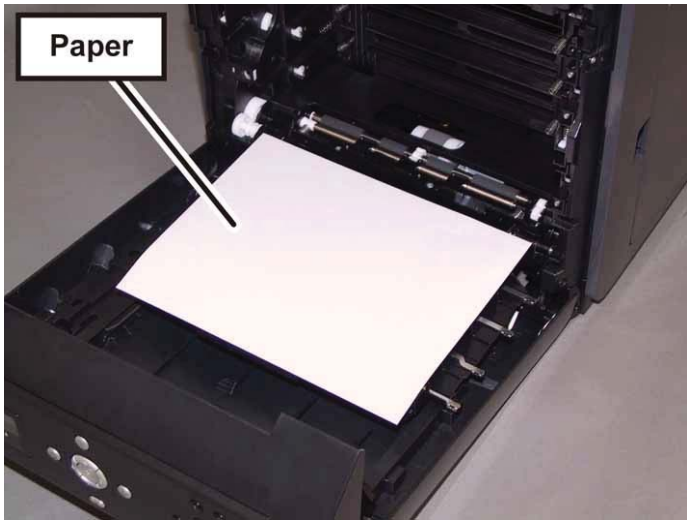
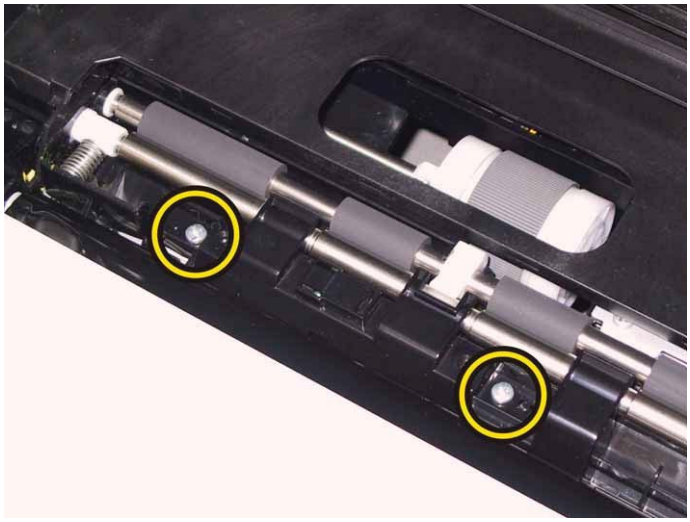
1) Remove the Tray 1. (Removal 1)

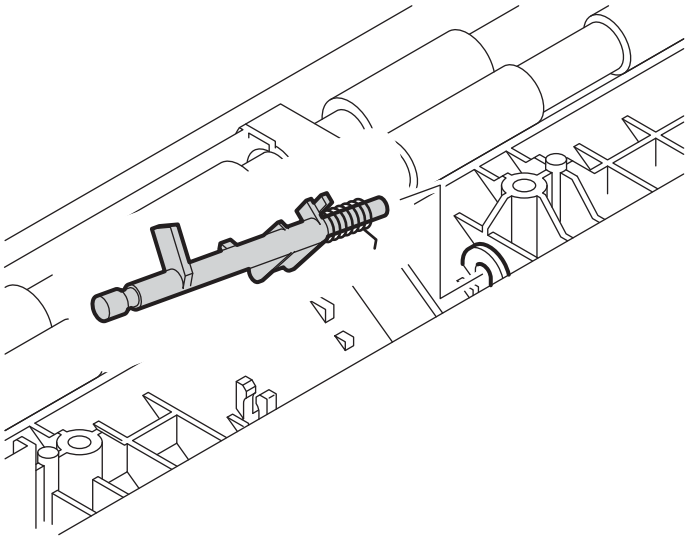
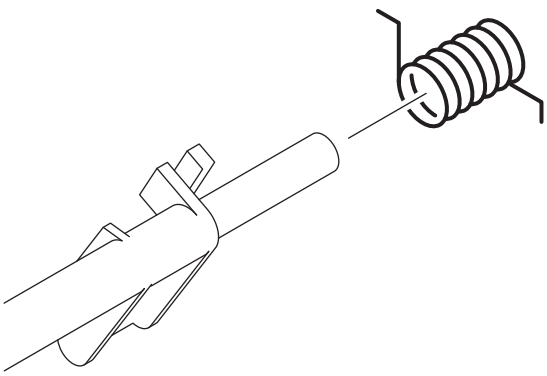
2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: When carrying out the work described next procedure, take care not to move the BRACKET SNS from the printer too far because they are connected with the harness.

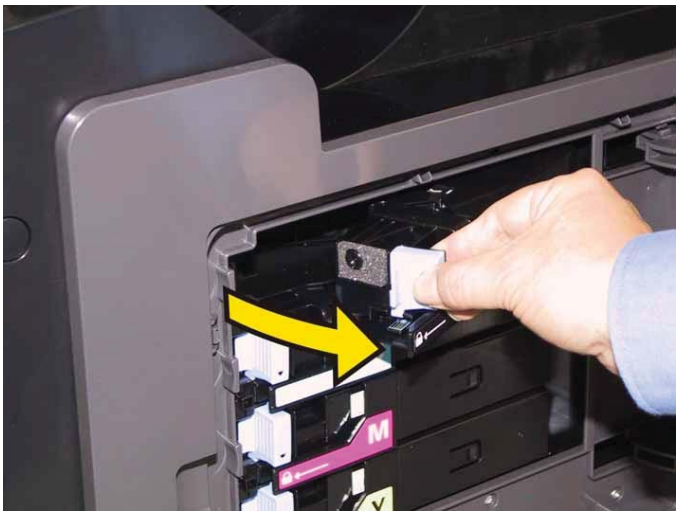
4) Before working, put the paper on the transfer belt to protect from the damage.	
5) Remove the two screws (silver, tap, 8mm) that fix the BRACKET SNS (PL3.2.28) to the printer, remove the BRACKET SNS.	

6) Release the left shaft of the ACTUATOR SSI (PL3.2.14) from the hook of the CHUTE UP (PL3.2.26).	
7) Remove the ACTUATOR SSI and the SPRING ACT SSI (PL3.2.15) by releasing the right shaft of the ACTUATOR SSI from the hole of the CHUTE UP.	
8) Remove the SPRING ACT SSI from the ACTUATOR SSI.	

Removal 7 Black, Cyan, Magenta, Yellow Cartridge (PL5.1.21~24)

Note: Described below is the removal procedure common among the four Toner Cartridges.

1) Open the COVER WINDOW TNR (PL10.1.7).

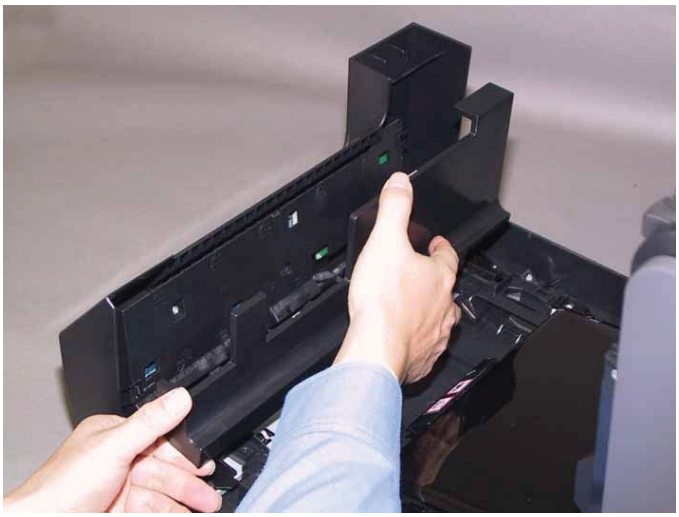
2) Move the handle of the toner cartridge to backward, to release the lock.	
3) Open the HOLDER ASSY TCRU K (PL5.1.17).	
4) Remove the toner cartridge from the HOLDER ASSY TCRU.	

Removal 8 CONSOLE ASSY PANEL (PL10.2.2)

1) Open the COVER ASSY FRONT (PL10.2.1).

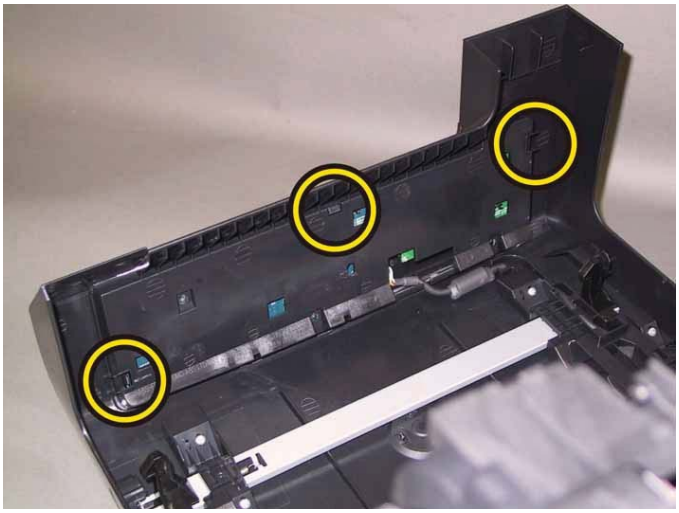
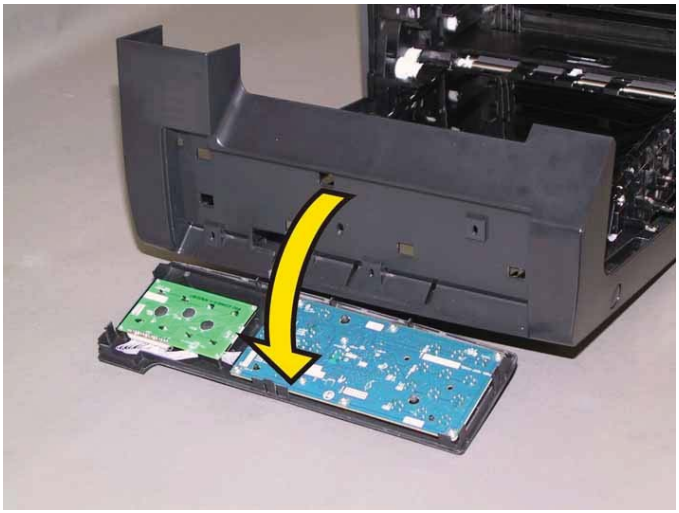
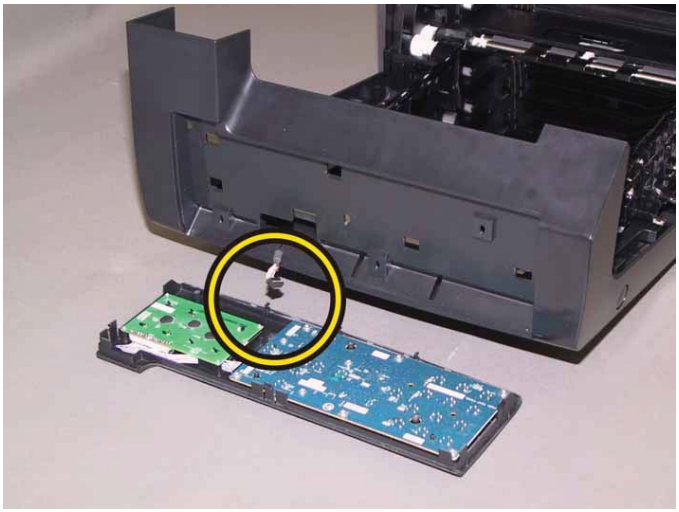
Note: Cover the drum of the PHD unit to avoid exposure to light.

2) Remove the PHD Unit. (Removal 3)

3) Release the boss of the COVER INNER FRONT (PL10.2.4) using a miniature screwdriver, shift the COVER INNER FRONT to right side. Release the five hooks of the COVER INNER FRONT.	
4) Remove the COVER INNER FRONT from the COVER ASSY FRONT.	
5) Remove the two screws (silver, tap, 8mm) that fix the CONSOLE ASSY PANEL (PL10.2.2) to the COVER ASSY FRONT.	

Note: Take care not to move the CONSOLE ASSY PANEL away from the COVER ASSY FRONT too far because the CONSOLE ASSY PANEL is secured to the HARNESS ASSY A-OP.

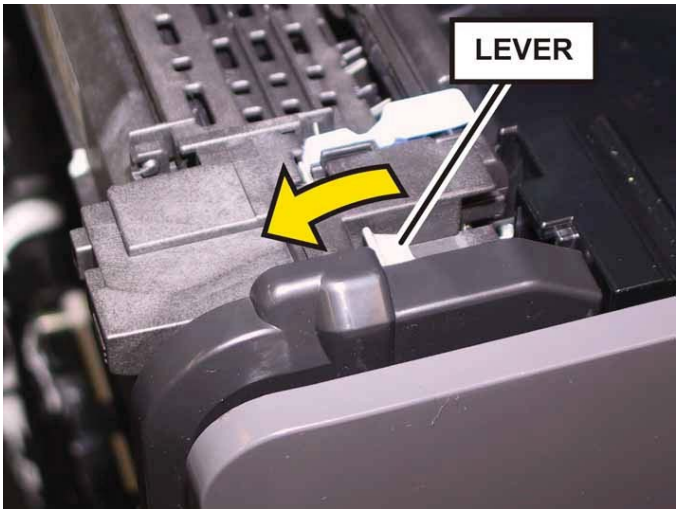
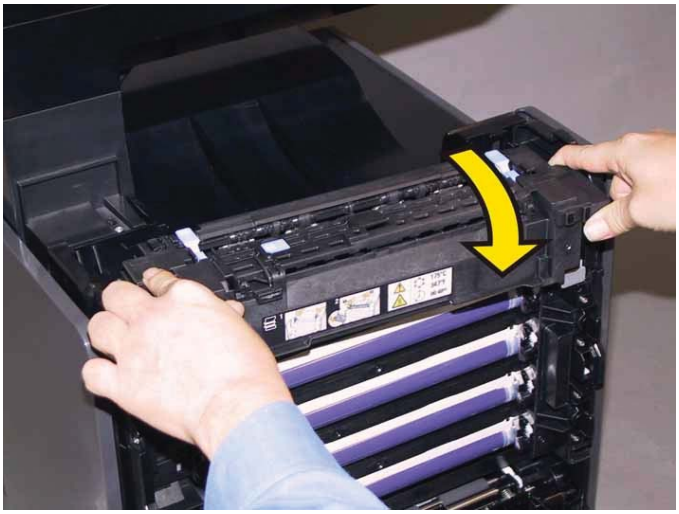
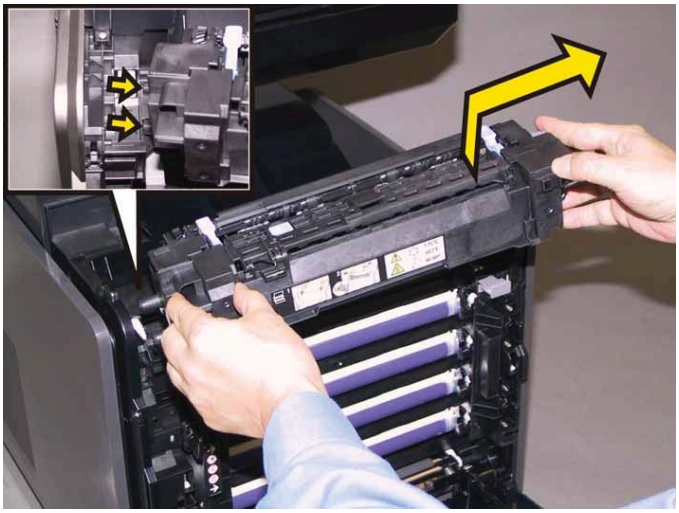
Note: When carrying out the work described next procedure, take care not to drop the CONSOLE ASSY PANEL.

6) Release the three hooks of the CONSOLE ASSY PANEL.	
7) Remove the CONSOLE ASSY PANEL from the COVER ASSY FRONT.	
8) Disengage the connector (P/J202) of the CONSOLE ASSY PANEL, and then remove the CONSOLE ASSY PANEL.	

Removal 9 FUSER ASSY (PL6.1.1)

1) Open the COVER ASSY FRONT (PL10.2.1).

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

2) Pull the LEVER of the FUSER ASSY (PL6.1.1) to release the lock.	
3) Disengage the connector of the FUSER ASSY by pulling the right side of the FUSER ASSY toward you with the LEVER released.	
4) Lift up the FUSER ASSY, move the FUSER ASSY to the right side.	

Removal 10 COVER ASSY SIDE R (PL10.1.6)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

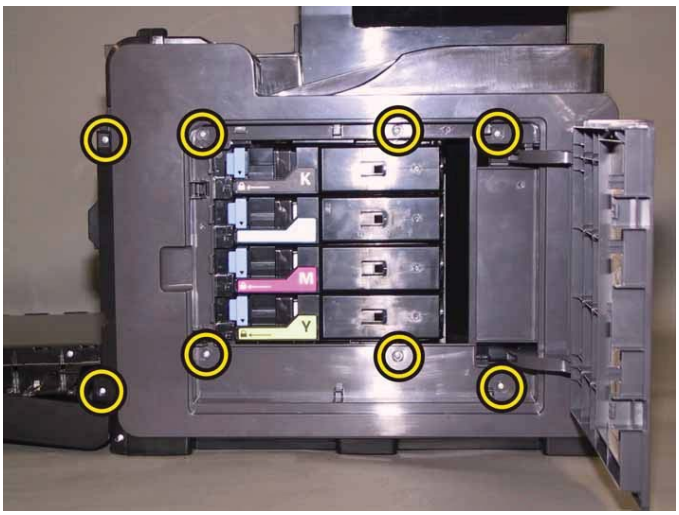
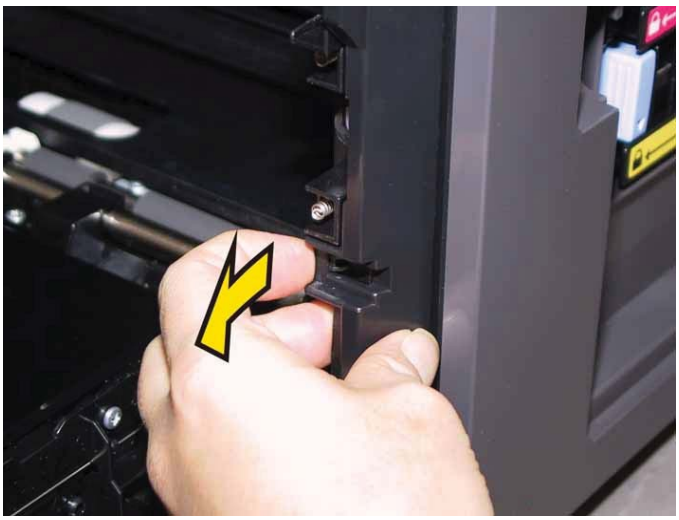
Note: Cover the drum of the PHD unit to avoid exposure to light.

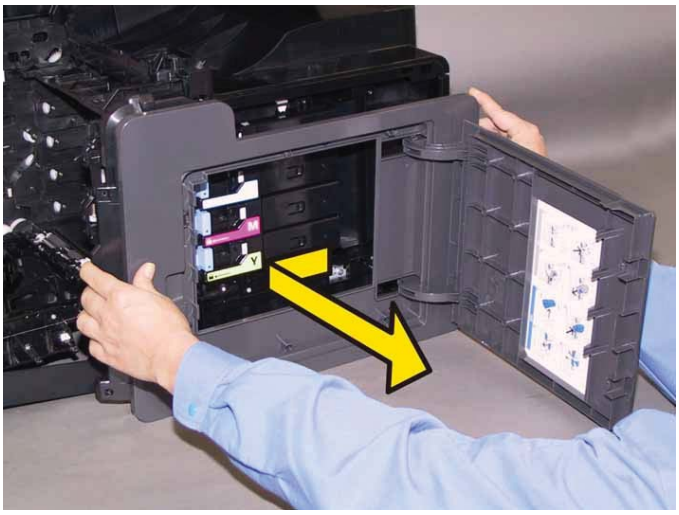
3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Open the COVER WINDOW TNR (PL10.1.7).

6) Remove the eight screws (silver, tap, 8mm) that fix the COVER ASSY SIDE R (PL10.1.6) to the printer.	
7) Release the front hook of the COVER ASSY SIDE R.	

8) Shift the COVER ASSY SIDE R to front side, release the two hooks of the COVER ASSY SIDE R. Remove the COVER ASSY SIDE R from the printer.	

Removal 11 COVER WINDOW TNR (PL10.1.7)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

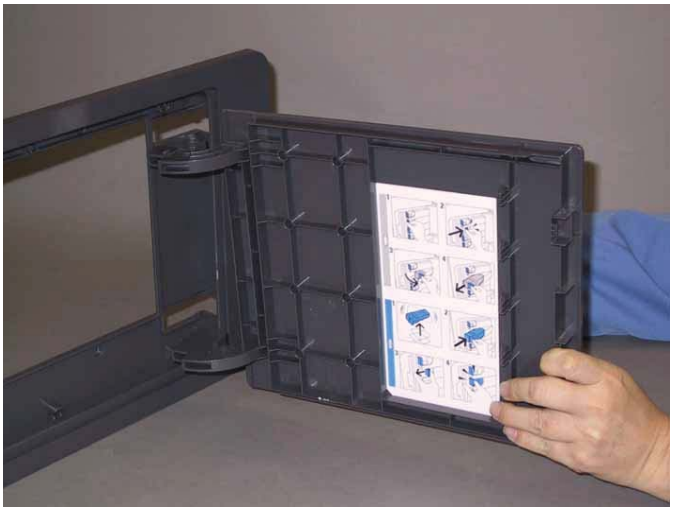
3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Release the boss on the upper hinge of the COVER WINDOW TNR (PL10.1.7) from the hole of the COVER ASSY SIDE R (PL10.1.6).	
7) Release the boss on the lower hinge of the COVER WINDOW TNR from the hole of the COVER ASSY SIDE R.	

8) Remove the COVER WINDOW TNR from the COVER ASSY SIDE R.	

Removal 12 LED ASSY ERASE (PL4.1.8)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

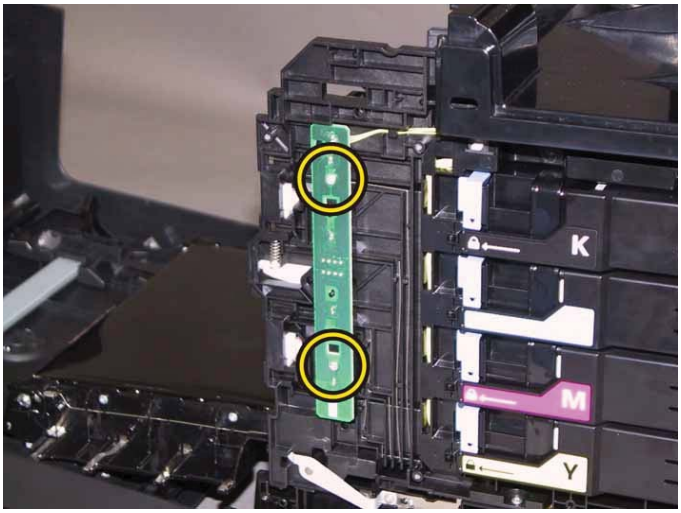
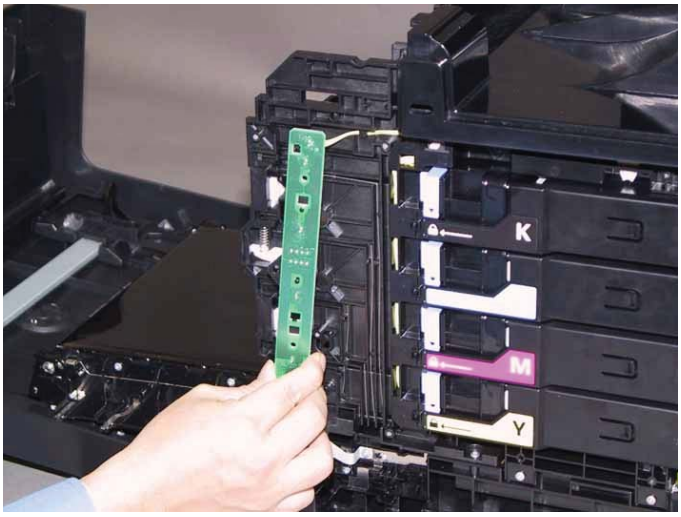
Note: Cover the drum of the PHD unit to avoid exposure to light.

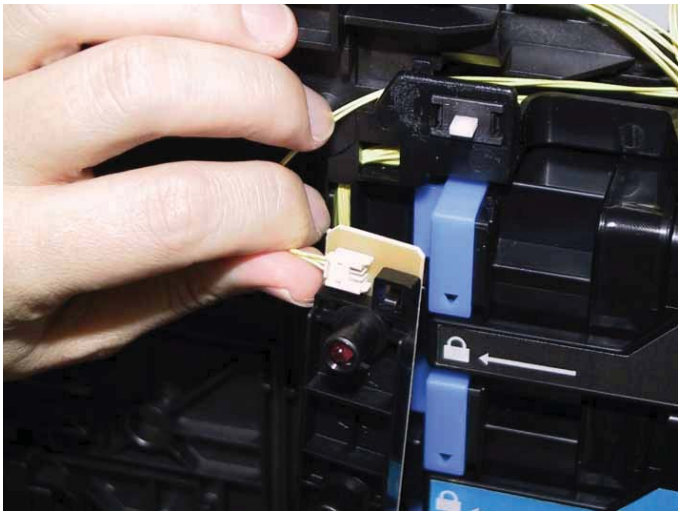
3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the two screws (silver, tap, 8mm) that fix the LED ASSY ERASE (PL4.1.8) to the printer.	
7) Remove the LED ASSY ERASE from the printer.	

8) Disengage the connector (P/J141) of the LED ASSY ERASE.	

Removal 13 KIT BLOCK PHD RIGHT (PL4.1.97)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

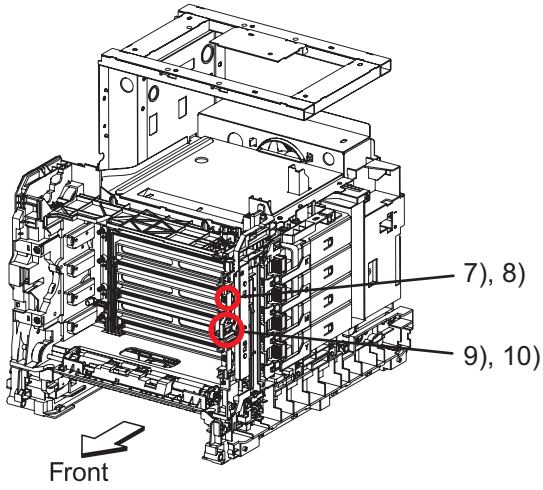
Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

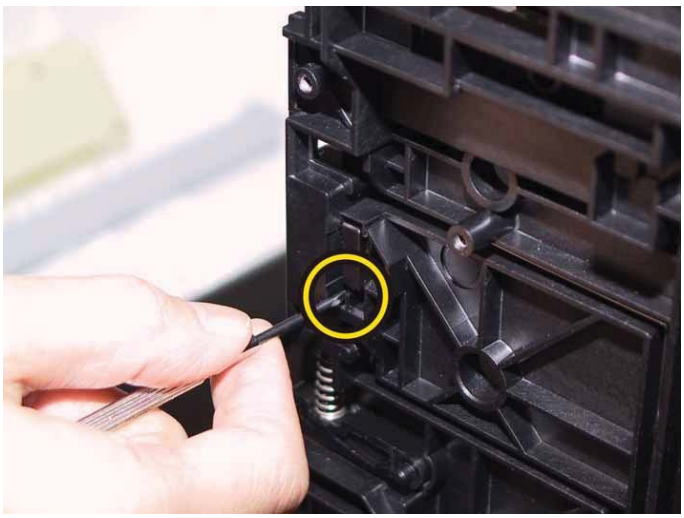
5) Remove the COVER ASSY SIDE R. (Removal 10)

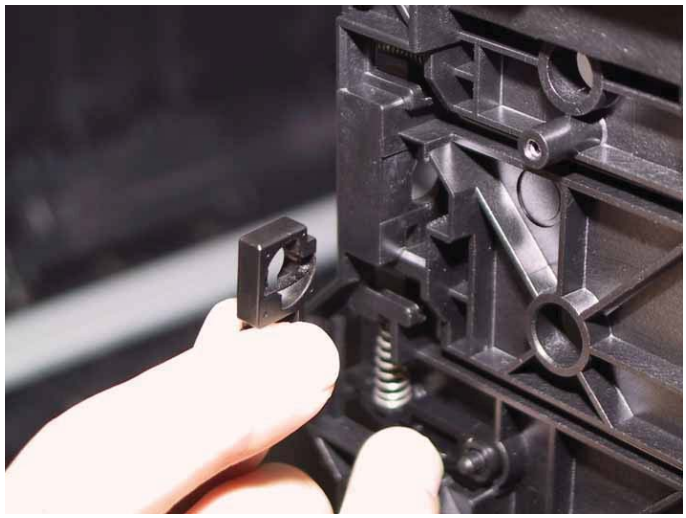
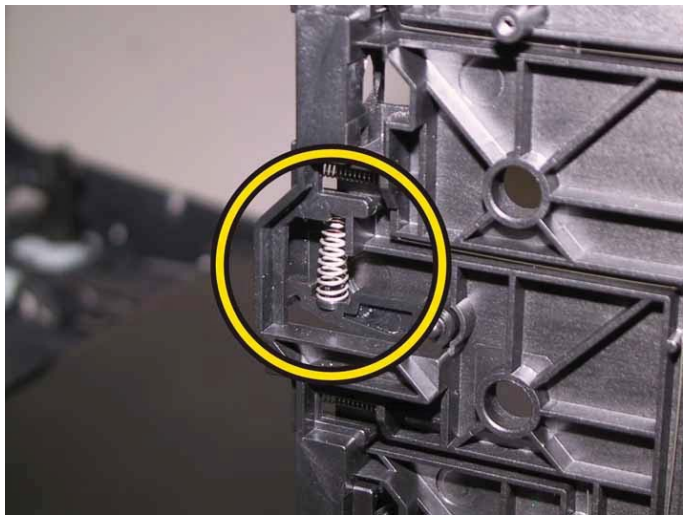
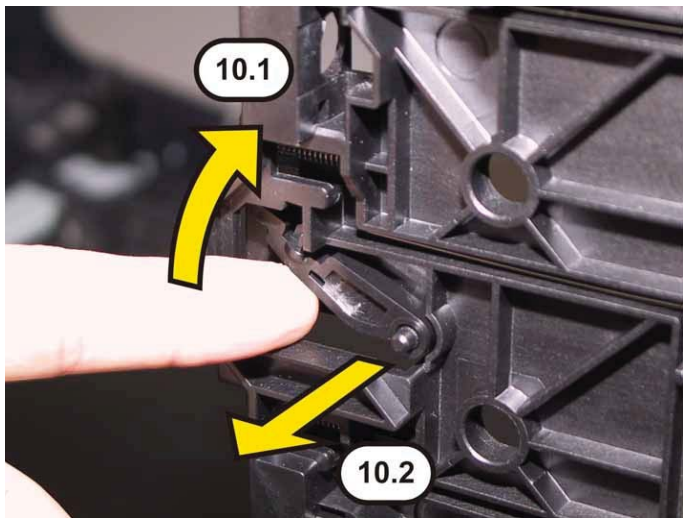
6) Remove the LED ASSY ERASE. (Removal 12)

Accesses Position (The 7), 8), 9) and 10) show the procedure number.)



Note: Described below is the removal procedure common among the upper and lower BLOCK STOPPER PHD ADs (PL4.1.7).

7) Release the hook of the BLOCK STOPPER PHD AD (PL4.1.7), using a miniature screwdriver.	

8) Remove the BLOCK STOPPER PHD AD from the printer.	
9) Remove the SPRING PHD (PL4.1.4) from the printer.	
10) Rotate the LEVER PHD (PL4.1.5) slightly, remove the LEVER PHD from the printer.	

Removal 14 COVER ASSY SIDE L (PL10.1.10)

1) Remove the Tray 1. (Removal 1)

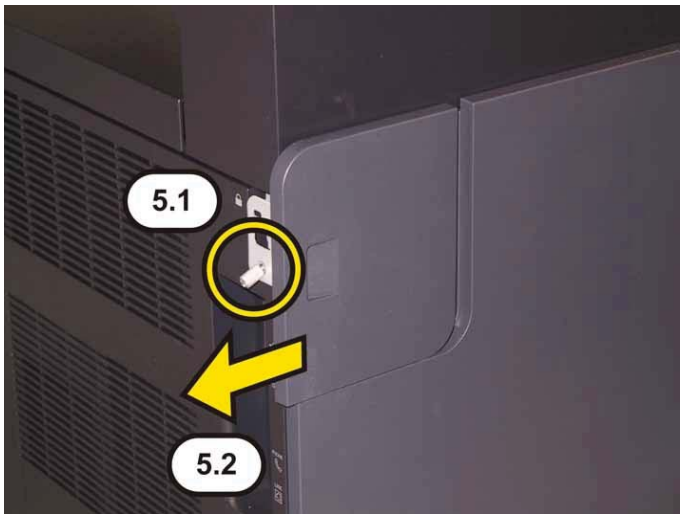
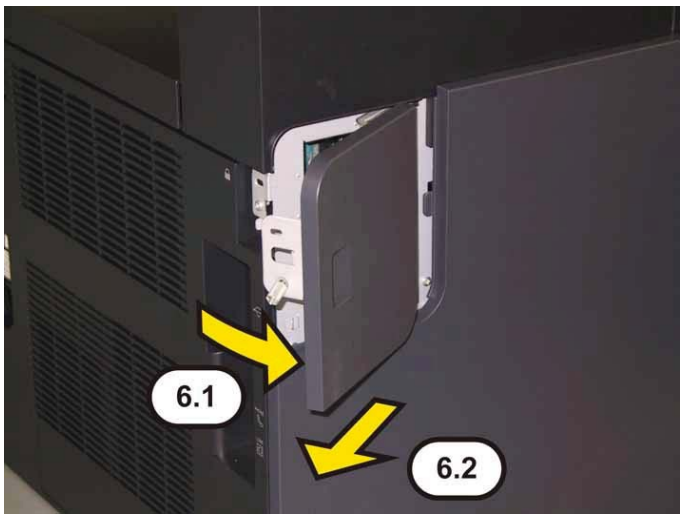
2) Open the COVER ASSY FRONT (PL10.2.1).

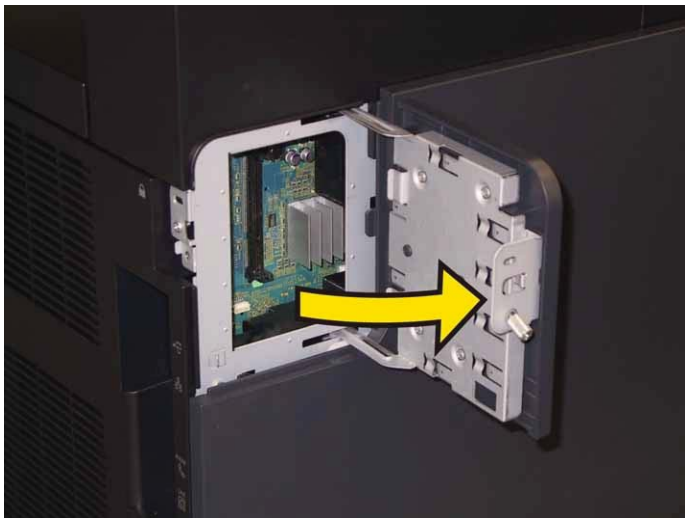
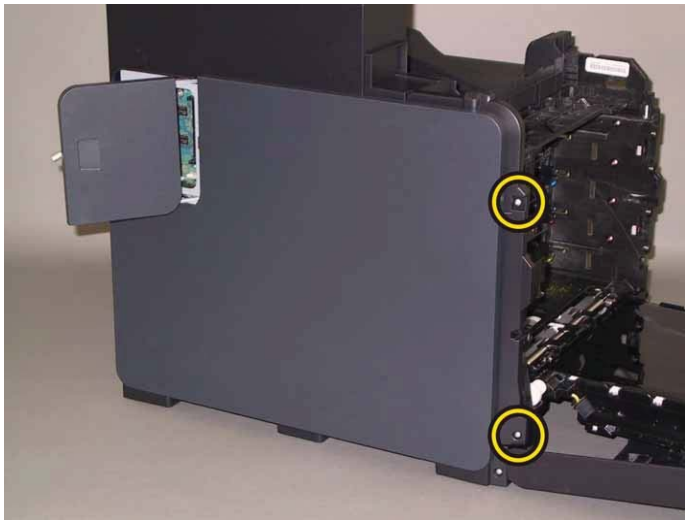
Note: Cover the drum of the PHD unit to avoid exposure to light.

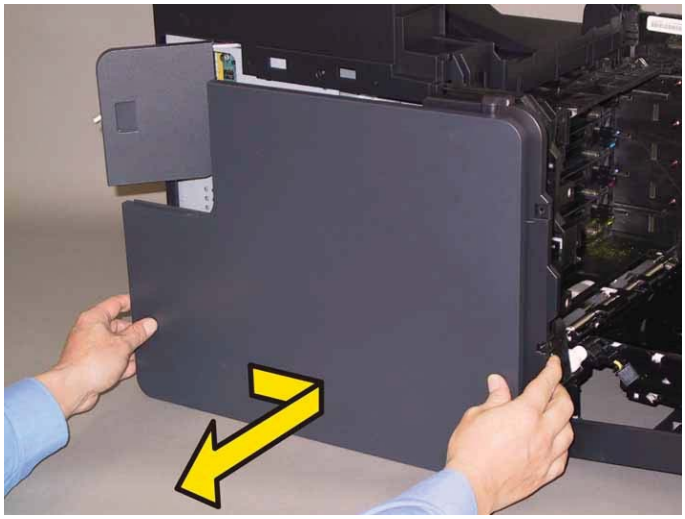
3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Loosen the SCREW KNURLING, shift the COVER ASSY ESS (PL10.1.11) to rear side.	
6) Slowly pull the COVER ASSY ESS until it stop, and then slide it rearward obliquely. **Note: Do not pull the COVER ASSY ESS fast. Otherwise, the hinge may be caught and damaged.**	

7) Open the COVER ASSY ESS completely.	
8) Remove the two screws (silver, tap, 8mm) that fix the COVER ASSY SIDE L (PL10.1.10) to the printer.	
9) Release the front hook of the COVER ASSY SIDE L.	

10) Shift the COVER ASSY SIDE L to front side, release the six hooks of the COVER ASSY SIDE L. Remove the COVER ASSY SIDE L from the printer.	

Removal 15 COVER POLE OUT (PL10.1.1)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

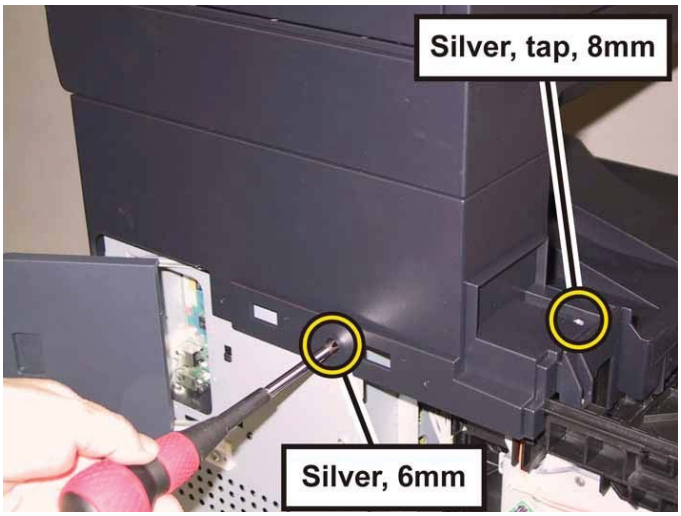
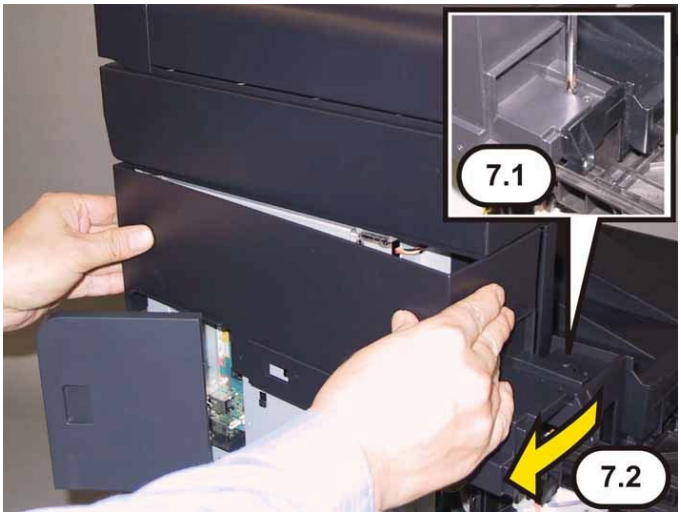
Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE L. (Removal 14)

6) Remove the one screw (silver, 6mm) and the one screw (silver, tap, 8mm) that fix the COVER POLE OUT (PL10.1.1) to the printer.	
7) Push the boss of the COVER TOP (PL10.1.4) using the screwdriver, remove the front side of the COVER POLE OUT.	

8) Release the two hooks of the COVER POLE OUT, remove the COVER POLE OUT from the printer.	

Removal 16 COVER ASSY ESS (PL10.1.11)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

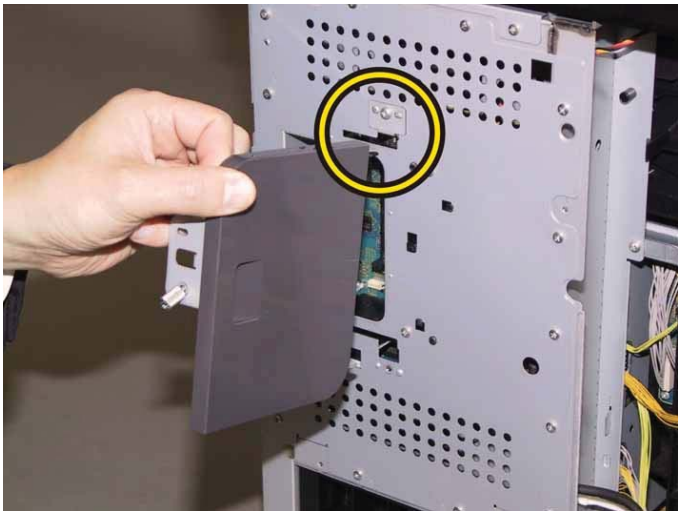
Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE L. (Removal 14)

6) Remove the COVER POLE OUT. (Removal 15)

7) Remove the one screw (silver, 6mm) that fixes the HOUSING PIVOT (PL10.1.13) to the printer.	
8) Remove the HOUSING PIVOT from the hole of the COVER ASSY ESS (PL10.1.11) and the printer.	

9) Release the upper hole of the COVER ASSY ESS from the PIVOT ASSY (PL10.1.12), remove the COVER ASSY ESS from the printer.	

Removal 17 COVER REAR (PL10.1.5)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

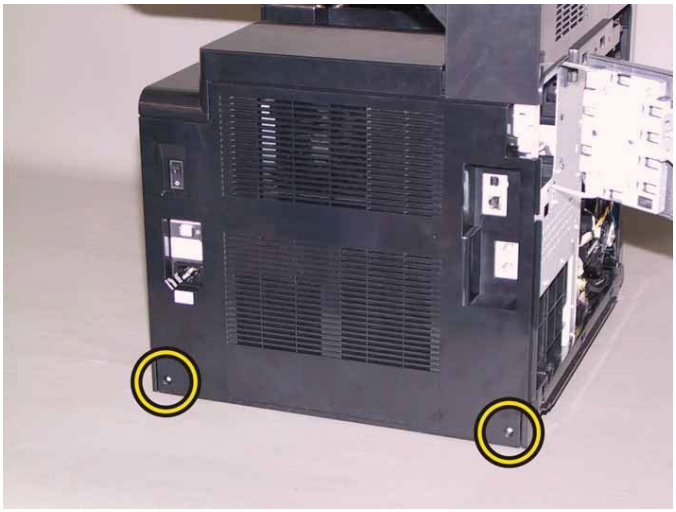
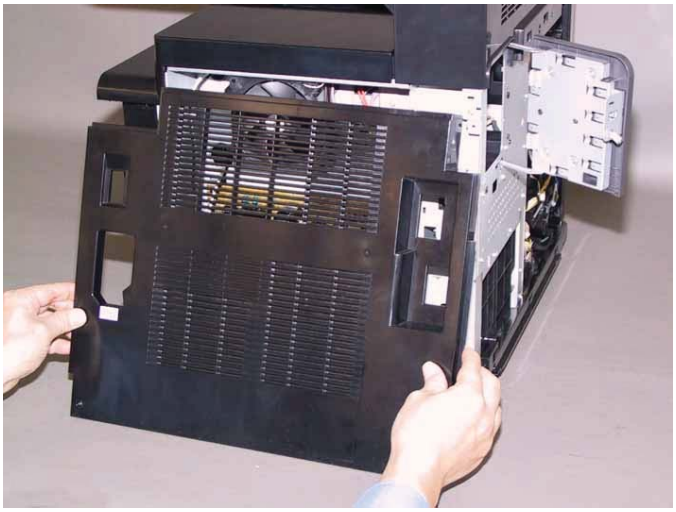
3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the two screws (silver, tap, 8mm) that fix the COVER REAR (PL10.1.5) to the printer.	
8) Remove the COVER REAR from the printer.	

Removal 18 COVER TOP (PL10.1.4)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

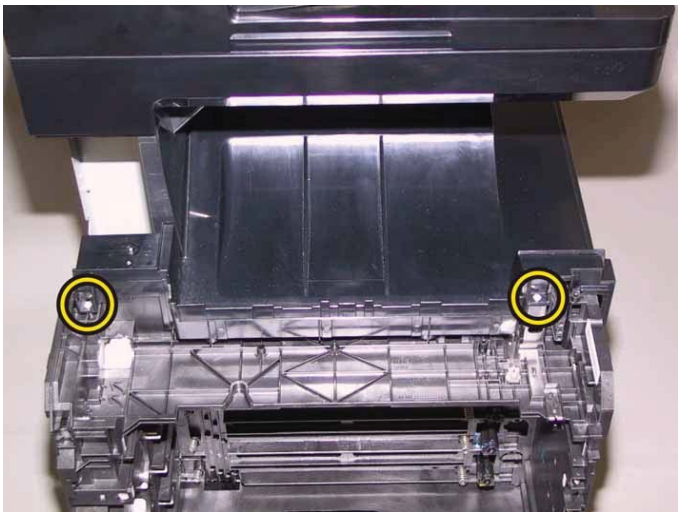
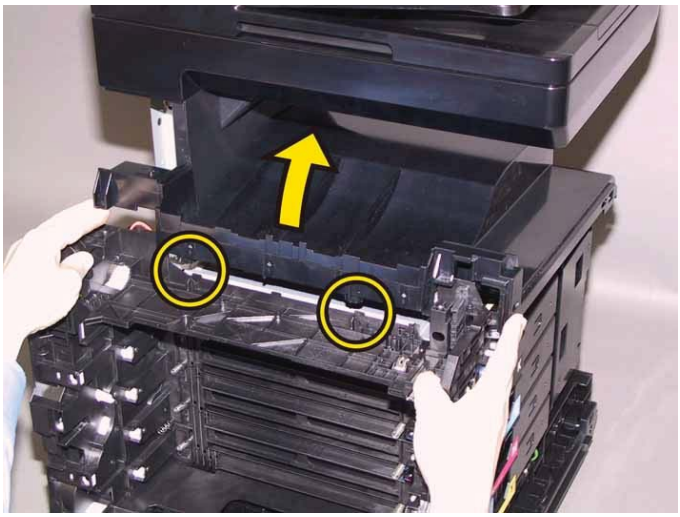
4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER REAR. (Removal 17)

9) Remove the two screws (silver, tap, 8mm) that fix the COVER TOP (PL10.1.4) to the printer.	
10) Lift up the front side of the COVER TOP to release the COVER TOP from the two pegs on the printer.	

11) Release the rear hook of the COVER TOP.	
12) Remove the boss of the COVER TOP from the hole of the COVER POLE IN (PL10.1.3), remove the COVER TOP from the printer.	

Removal 19 COVER SIDE R LOW (PL10.1.8)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

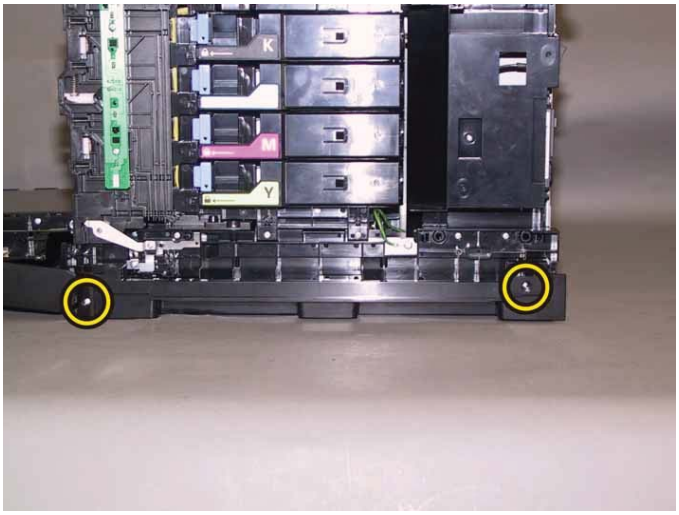
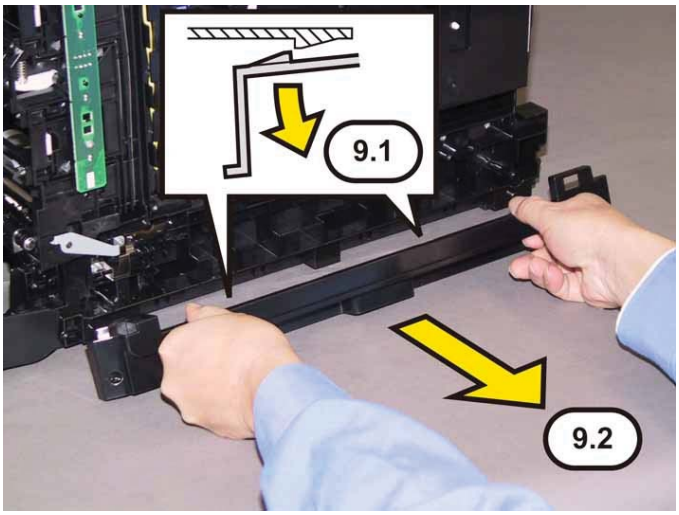
Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER REAR. (Removal 17)

8) Remove the two screws (silver, tap, 8mm) that fix the COVER SIDE R LOW (PL10.1.8) to the printer.	
9) Release the two hooks of the COVER SIDE R LOW from the printer, remove the COVER SIDE R LOW from the printer.	

Removal 20 COVER SIDE L LOW (PL10.1.9)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

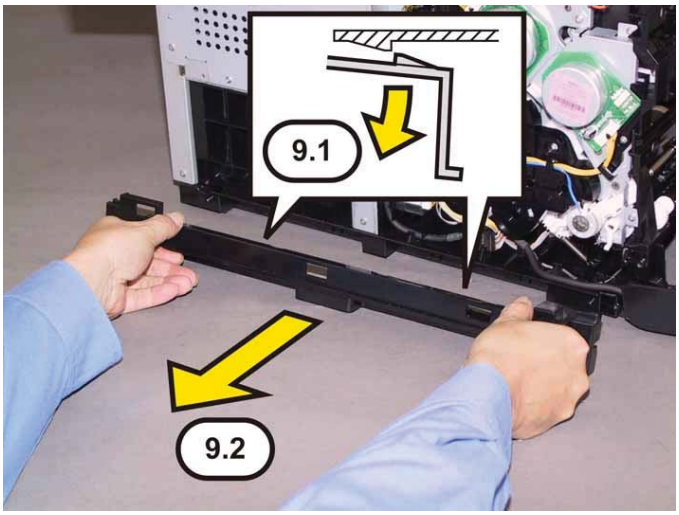
Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER REAR. (Removal 17)

8) Remove the two screws (silver, tap, 8mm) that fix the COVER SIDE L LOW (PL10.1.9) to the printer.	
9) Release the two hooks of the COVER SIDE L LOW from the printer, remove the COVER SIDE L LOW from the printer.	

Removal 21 SWITCH (PL5.1.9)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

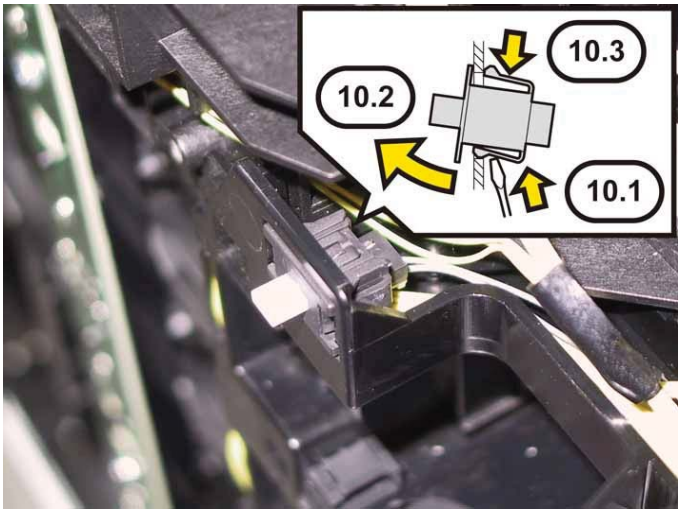
5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER REAR. (Removal 17)

9) Remove the COVER TOP. (Removal 18)

10) Release the hooks of the SWITCH (PL5.1.9) by using the miniature screwdriver, remove the SWITCH from the printer.	
11) Disengage the connector (P/J291) of the SWITCH.	

Removal 22 SHIELD ASSY ESS (PL10.6.19)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

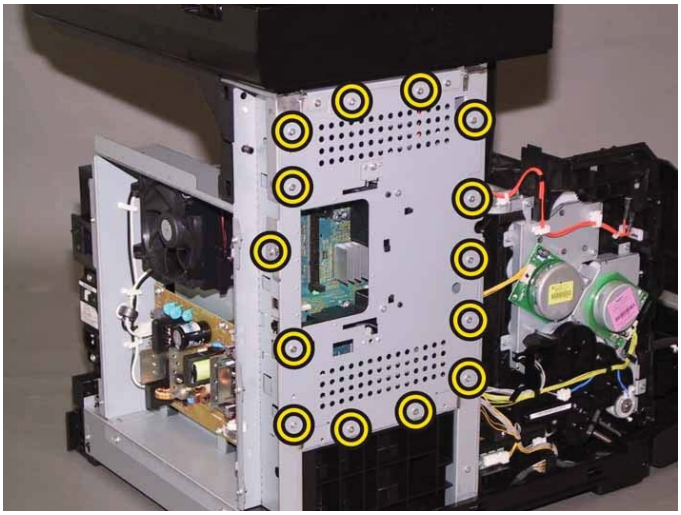
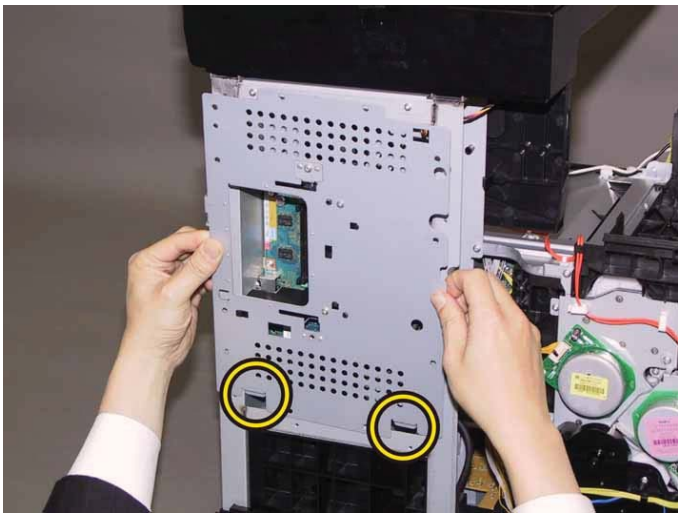
5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the fourteen screws (silver, 6mm) that fix the SHIELD ASSY ESS (PL10.6.19) to the printer.	
11) Lift the SHIELD ASSY ESS slightly up to release the two tabs of the SHIELD ASSY ESS, remove the SHIELD ASSY ESS from the printer.	

Removal 23 PWBA FAX (PL10.6.9)

Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

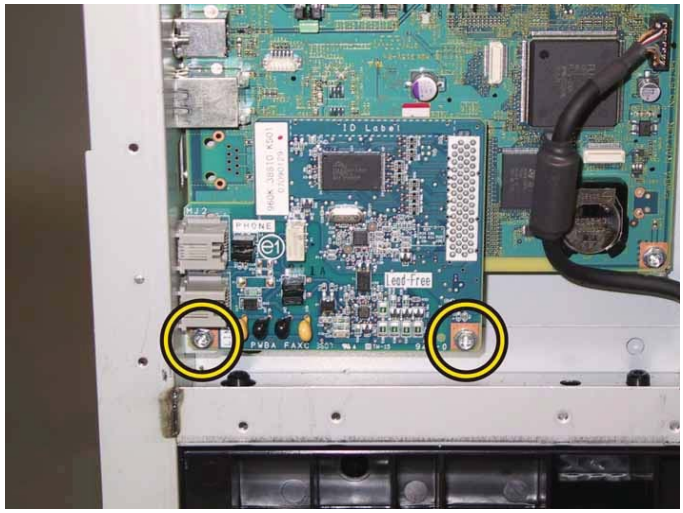
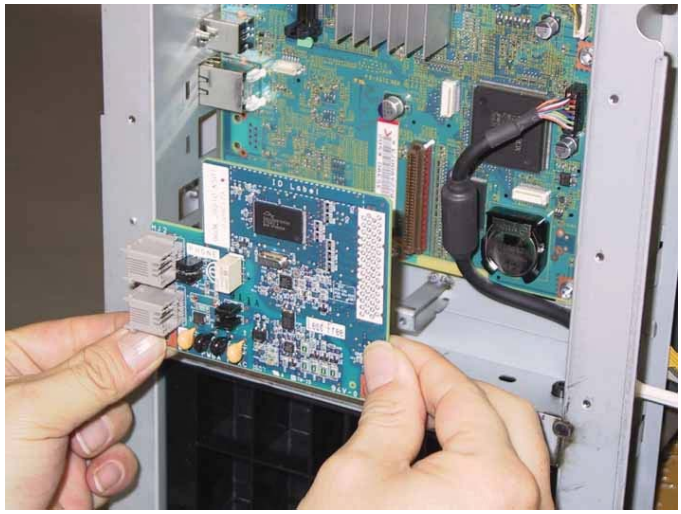
6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the SHIELD ASSY ESS. (Removal 22)

11) Remove the two screws (silver, with flange, 6mm) that fix the PWBA FAX (PL10.6.9) to the printer.	
12) Remove the PWBA FAX from the PWBA CONT AIO (PL10.6.6).	

Removal 24 KIT ESS PWBA (PL10.6.99)

Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

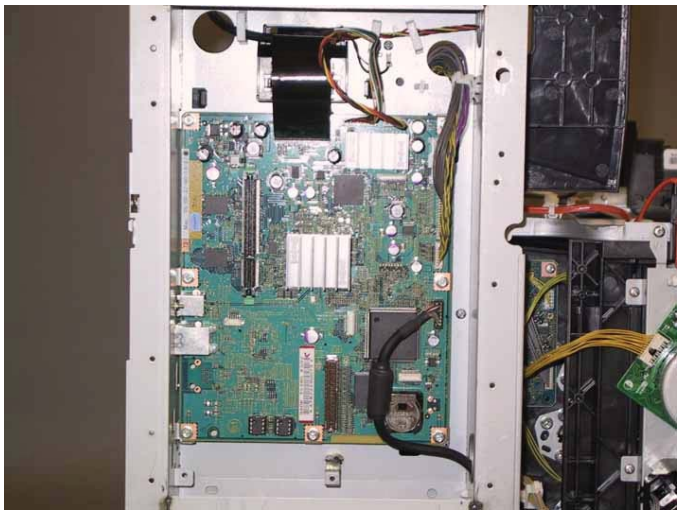
7) Remove the COVER POLE OUT. (Removal 15)

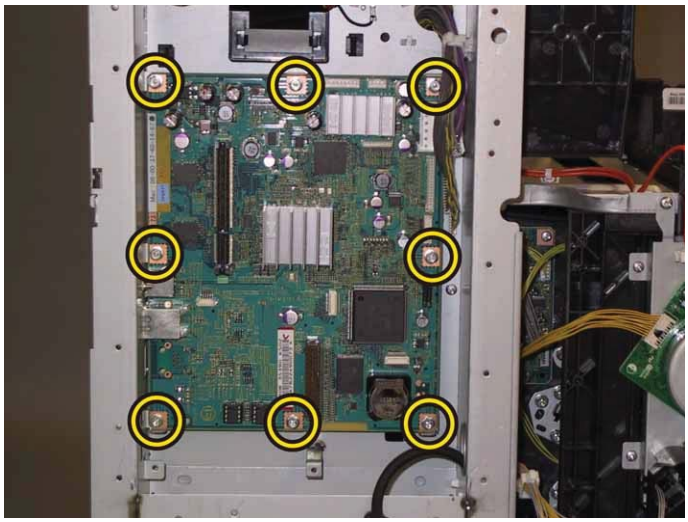
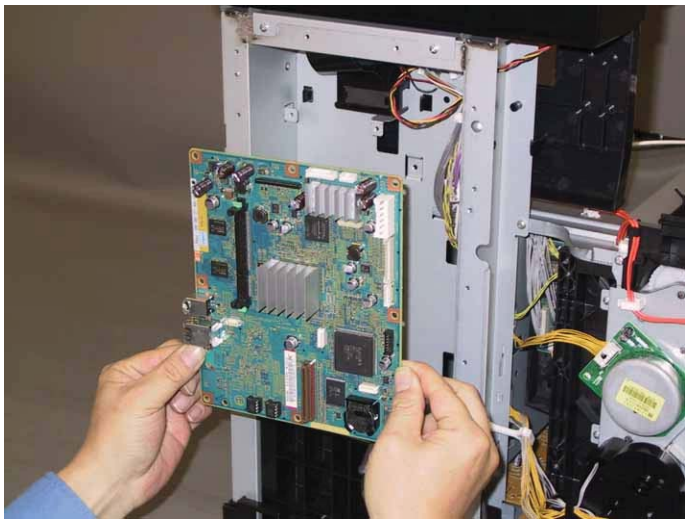
8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the SHIELD ASSY ESS. (Removal 22)

11) Remove the PWBA FAX. (Removal 23)

12) Disengage all the connectors of the PWBA CONT AIO (PL10.6.6).	

13) Remove the eight screws (silver, with flange, 6mm) that fix the PWBA CONT AIO to the printer.	
14) Remove the one screw (silver, 6mm) that fixes the USB connector of the PWBA CONT AIO to the printer.	
15) Remove the PWBA CONT AIO from the printer.	

Removal 25 PWBA LVPS (PL10.6.16)

Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

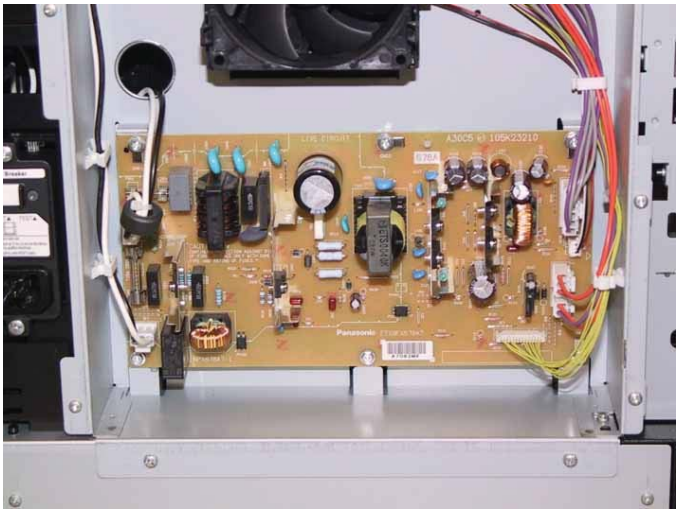
Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

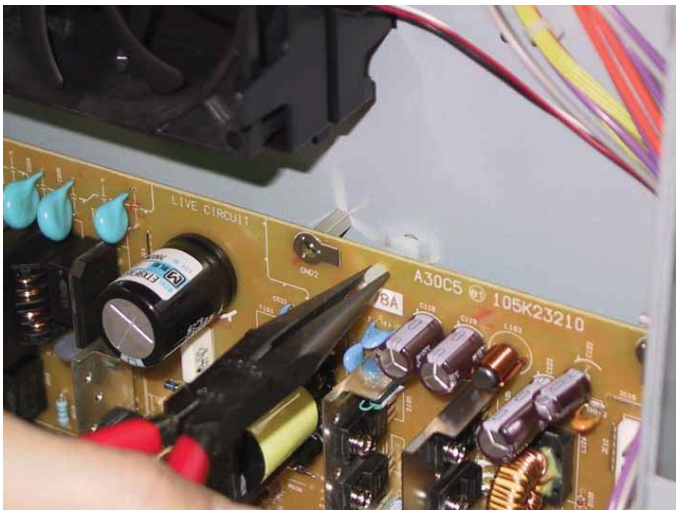
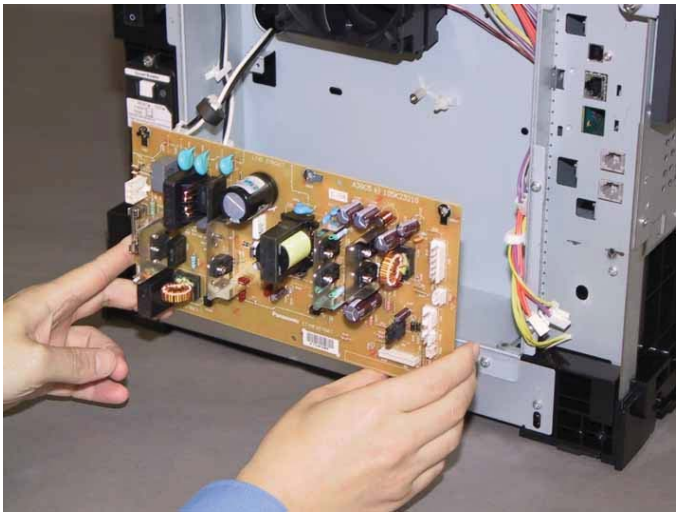
4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER REAR. (Removal 17)

8) Disengage all the connectors of the PWBA LVPS (PL10.6.16).	
9) Remove the six screws (silver, with flange, 6mm) that fix the PWBA LVPS to the printer.	

10) Release the hooks of the SUPPORT PWB (PL10.6.15).	
11) Remove the PWBA LVPS from the printer.	

Removal 26 DUCT FAN ASSY (PL10.6.17)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

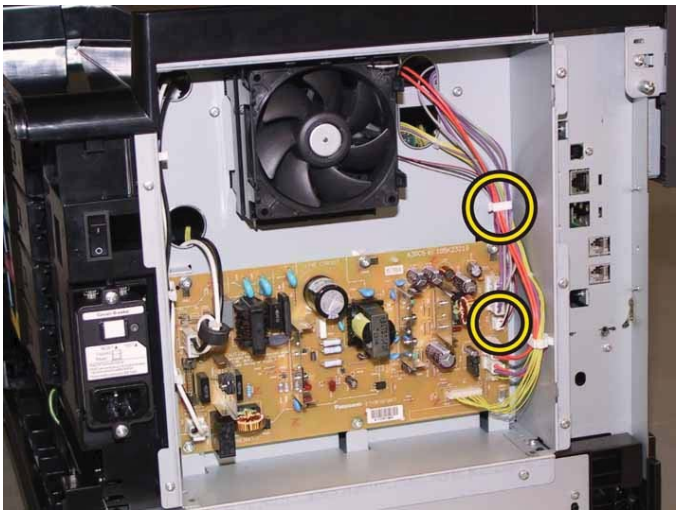
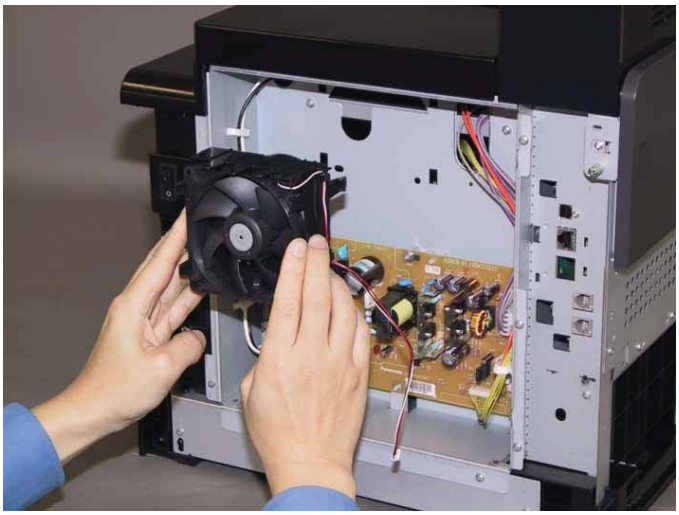
Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER REAR. (Removal 17)

8) Disengage the DUCT FAN ASSY (PL10.6.17) connector (P/J503) on the PWBA LVPS (PL10.6.16), release the harness of the DUCT FAN ASSY from the clamp.	
9) Release the four hooks of the DUCT ASSY FAN, remove the DUCT ASSY FAN from the printer.	

Removal 27 HARN ASSY INTERLOCK (PL10.6.4)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

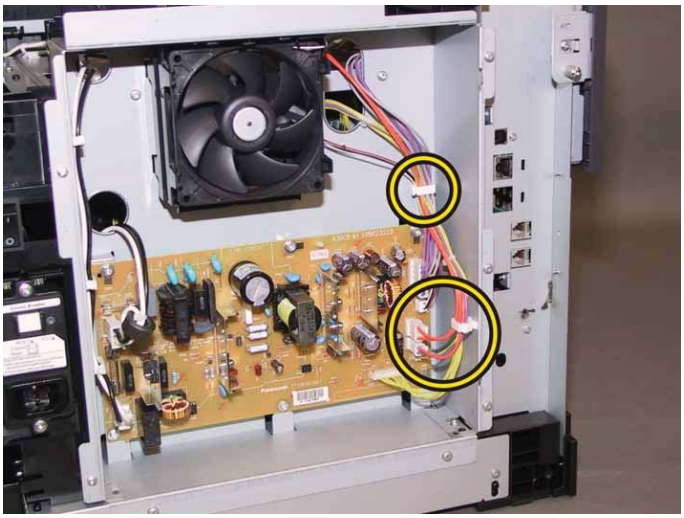
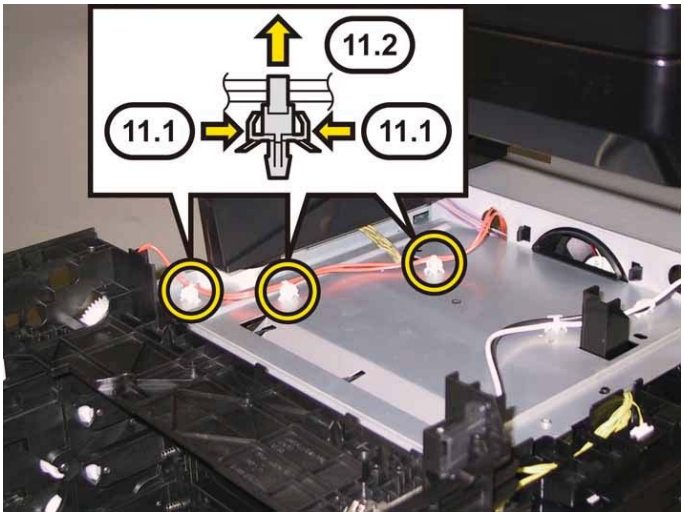
5) Remove the COVER ASSY SIDE R. (Removal 10)

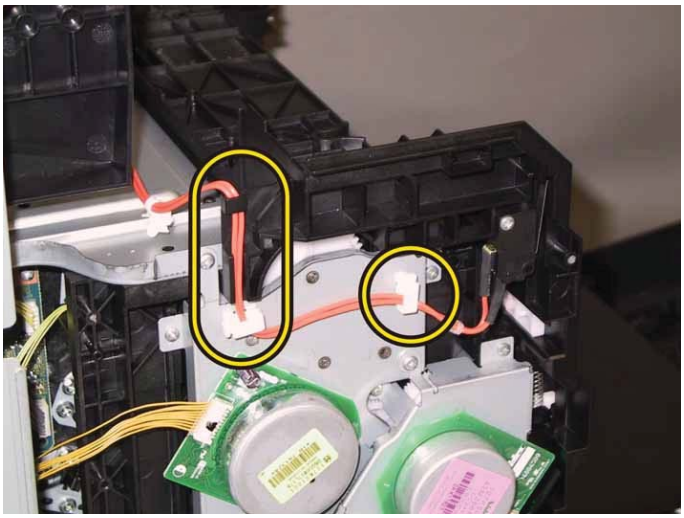
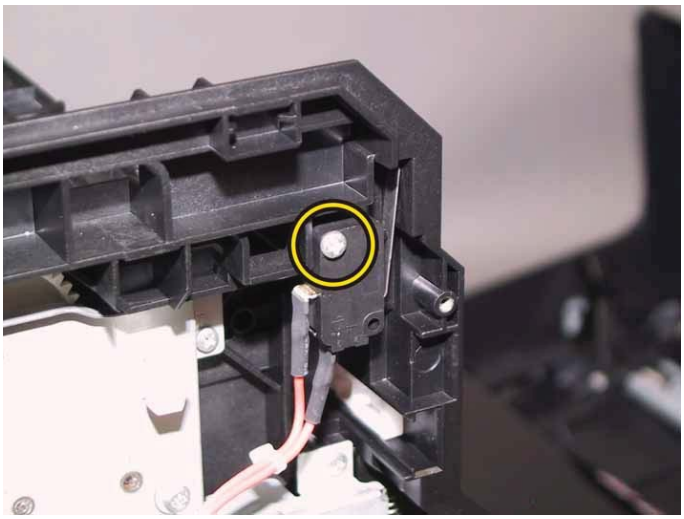
6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER REAR. (Removal 17)

9) Remove the COVER TOP. (Removal 18)

10) Disengage the HARN ASSY INTERLOCK (PL10.6.4) connector (P/J44) on the PWBA LVPS (PL10.6.16), release the harness of the HARN ASSY INTERLOCK from the clamp.	
11) Remove the three clamps on the PLATE ASSY DUCT (PL10.6.1) that fix the harness of the HARN ASSY INTERLOCK, pull the harness of the HARN ASSY INTERLOCK out from the hole of the CHASSIS LVPS (PL10.6.13).	

12) Release the clamps that fix the harness of the HARN ASSY INTERLOCK, remove the harness.	
13) Remove the one screw (sliver, tap, 16mm) that fixes the HARN ASSY INTERLOCK to the printer, remove the HARN ASSY INTERLOCK.	

Removal 28 CHASSIS ASSY LVPS (Reference only)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

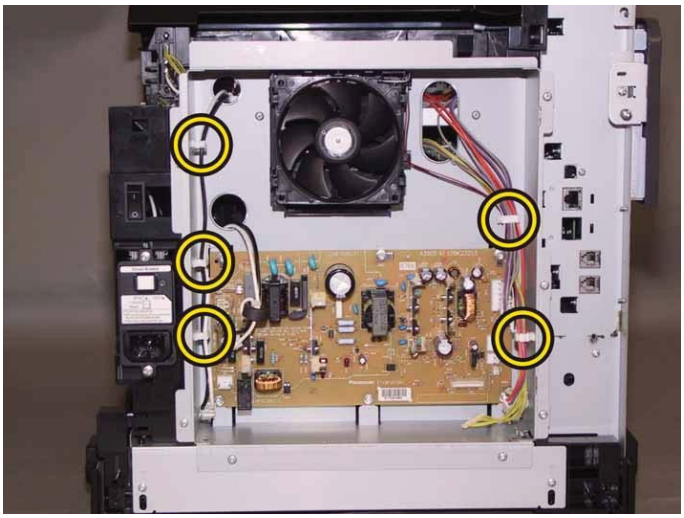
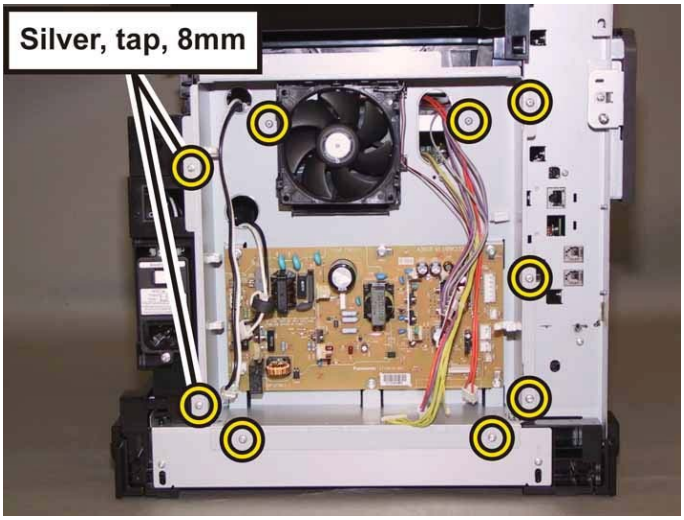
5) Remove the COVER ASSY SIDE R. (Removal 10)

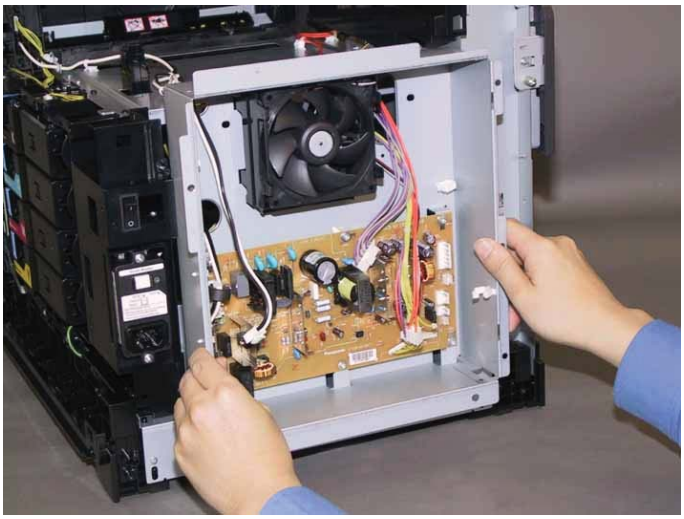
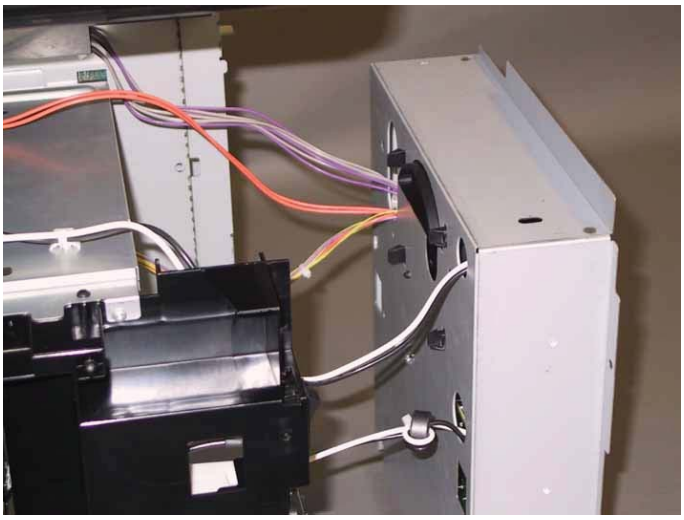
6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER REAR. (Removal 17)

9) Remove the COVER TOP. (Removal 18)

10) Disengage all the connectors of the PWBA LVPS (PL10.6.16), release the harnesses from the clamps on the CHASSIS LVPS (PL10.6.13).	
11) Remove the seven screws (silver, M4, 6mm) and the two screws (silver, tap, 8mm) that fix the CHASSIS LVPS to the printer.	

Note: When carrying out the work described next procedure, lift the CHASSIS LVPS slightly up, because the notch of the CHASSIS LVPS hits the screw.	
12) Move the CHASSIS LVPS with the PWBA LVPS (PL10.6.16) and the DUCT FAN ASSY (PL10.6.17) slightly from the printer.	
13) Pull the harnesses out from the hole of the CHASSIS LVPS, remove the CHASSIS ASSY LVPS from the printer.	

Removal 29 HARN ASSY SW PWR (PL10.7.8)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

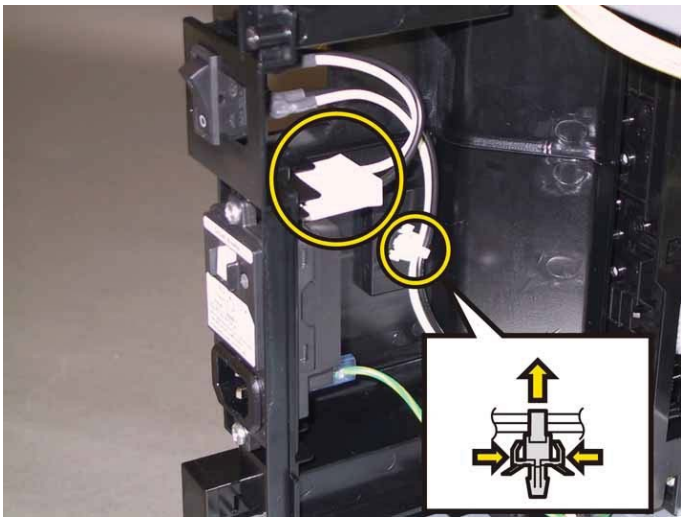
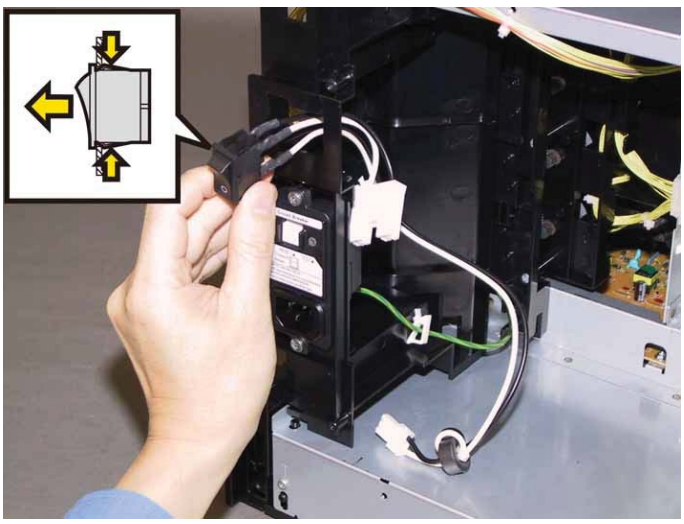
6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER REAR. (Removal 17)

9) Remove the COVER TOP. (Removal 18)

10) Remove the CHASSIS ASSY LVPS. (Removal 28)

11) Disengage the connector (P/J482) on the BREAKER GFI (PL10.7.10), release the clamp on the printer that fix the harnesses of the HARN ASSY SW PWR (PL10.7.8).	
12) Release the hooks of the POWER SWITCH to remove the POWER SWITCH, remove the HARN ASSY SW PWR from the printer.	

Removal 30 BREAKER GFI (PL10.7.10)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

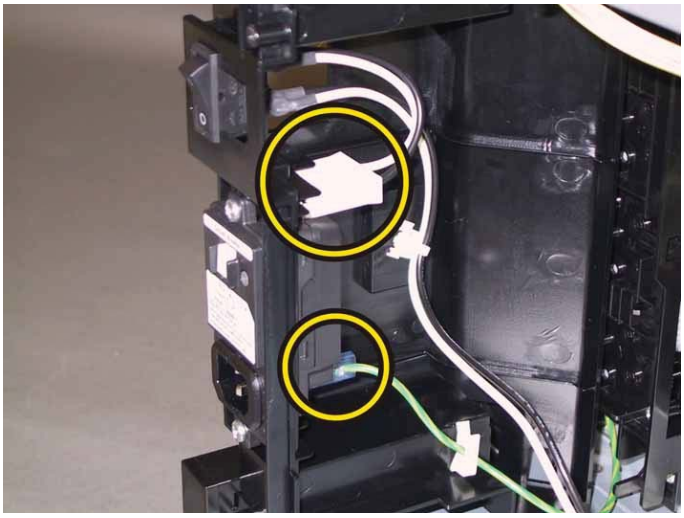
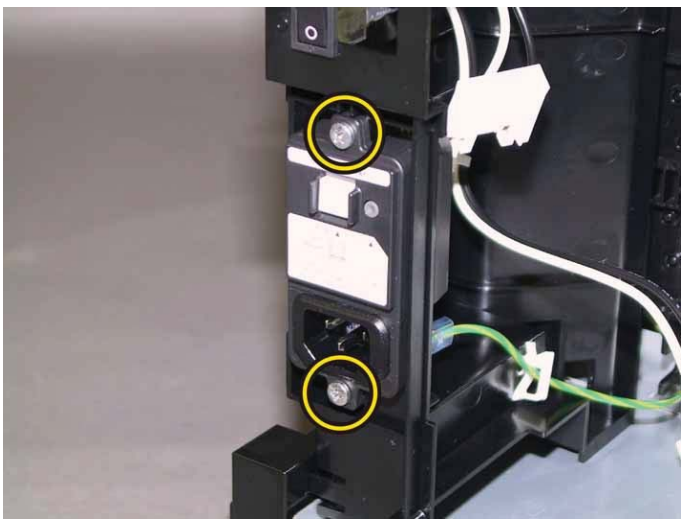
6) Remove the COVER ASSY SIDE L. (Removal 14)

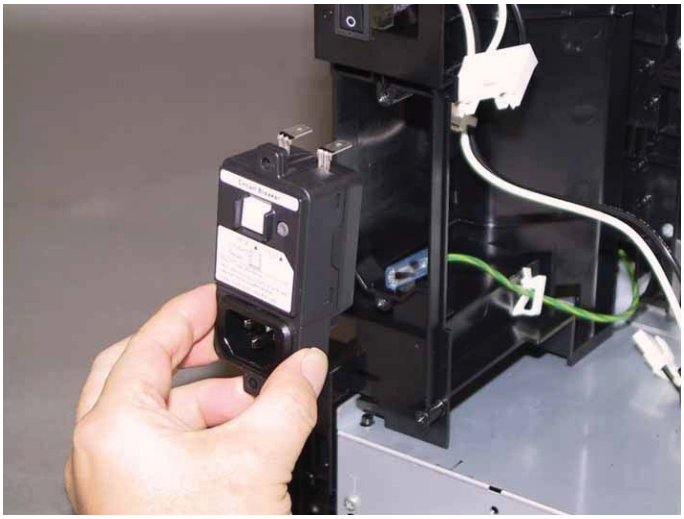
7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER REAR. (Removal 17)

9) Remove the COVER TOP. (Removal 18)

10) Remove the CHASSIS ASSY LVPS. (Removal 28)

11) Disengage the connector (P/J482) and the FASTON terminal (FS484) on the BREAKER GFI (PL10.7.10).	
12) Remove the two screws (silver, tap, 12mm) that fix the BREAKER GFI to the printer.	

13) Remove the BREAKER GFI from the printer.	

Removal 31 KIT PWBA MCU (PL10.7.99)

Note: Never fail to perform the diagnostic operation. Otherwise the data will be lost in the worst case.

Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Perform the NVM Save to evacuate the MCU data.

2) Turn on the power while pressing the "►" key, "◄" key, and [MENU] key on the control panel.

3) Enter the password, press the "▲" key twice, and press the " ✓ " key once. The diagnostic screen comes up.

4) Press the " ✓ " key once.

5) Press the "▼" key several times until "IOT Diag" is displayed. Press the " ✓ " key once.

6) Press the "▼" key several times until "NVM Settings" is displayed. Press the " ✓ " key once.

7) Press the "▼" key several times until "SaveNVM to ESS" is displayed. Press the " ✓ " key once.

8) Press the " ✓ " key once, and NVM Save is performed.

9) After NVM Save is complete, press the [CANCEL] key several times until "IOT Diag" is displayed.

10) Press the "▼" key several times until "Complete" is displayed.

11) Press the " ✓ " key two times. “COPY, SCAN and FAX” are displayed.

12) Turn off the power to exit.

13) Remove the POWER CORD from outlet.

14) Remove the Tray 1. (Removal 1)

15) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

16) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

17) Remove the FUSER ASSY. (Removal 9)

18) Remove the COVER ASSY SIDE R. (Removal 10)

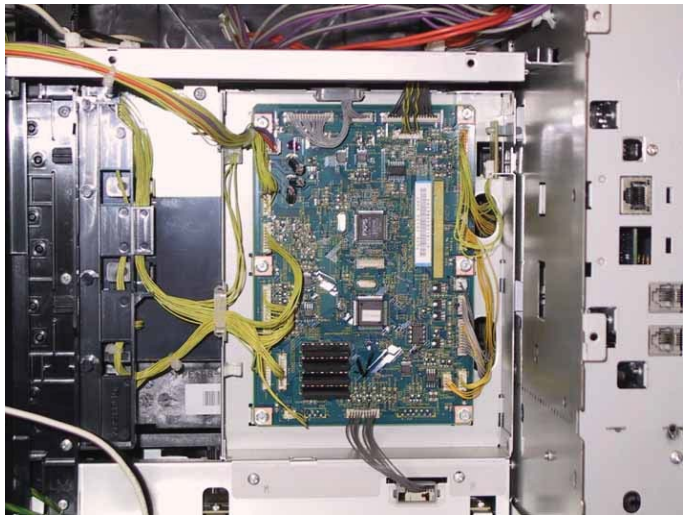
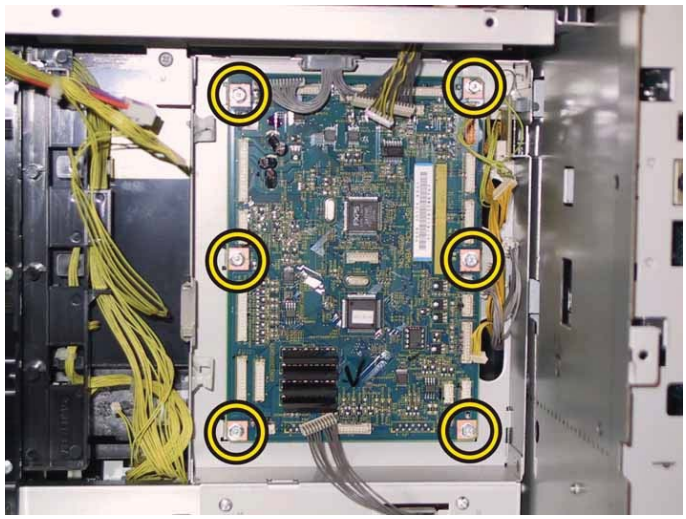
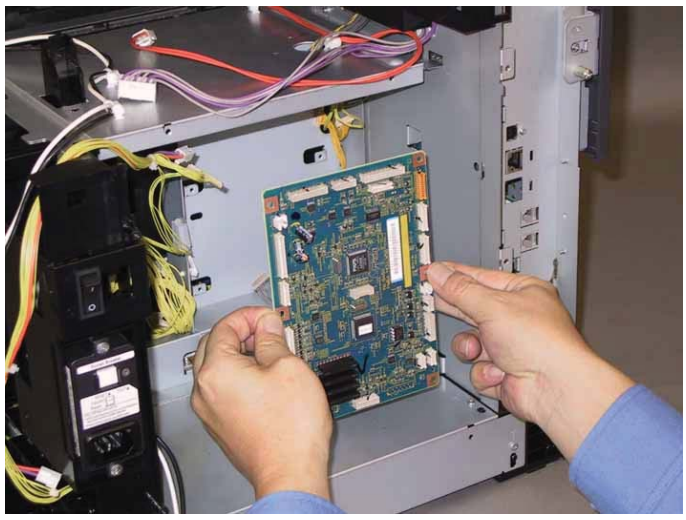
19) Remove the COVER ASSY SIDE L. (Removal 14)

20) Remove the COVER POLE OUT. (Removal 15)

21) Remove the COVER REAR. (Removal 17)

22) Remove the COVER TOP. (Removal 18)

23) Remove the CHASSIS ASSY LVPS. (Removal 28)

24) Disengage all the connectors of the PWBA MCU (PL10.7.7).	
25) Remove the six screws (silver, with flange, 6mm) that fix the PWBA MCU to the printer.	
26) Remove the PWBA MCU from the printer.	

Removal 32 KIT DRIVE ASSY PH (PL7.1.99)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

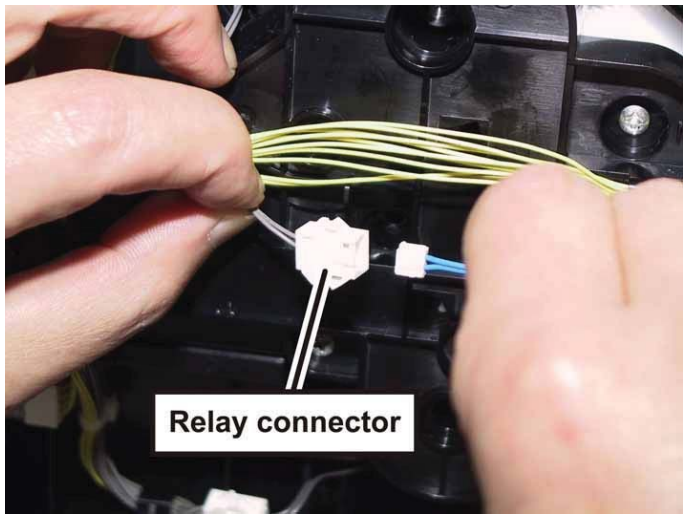
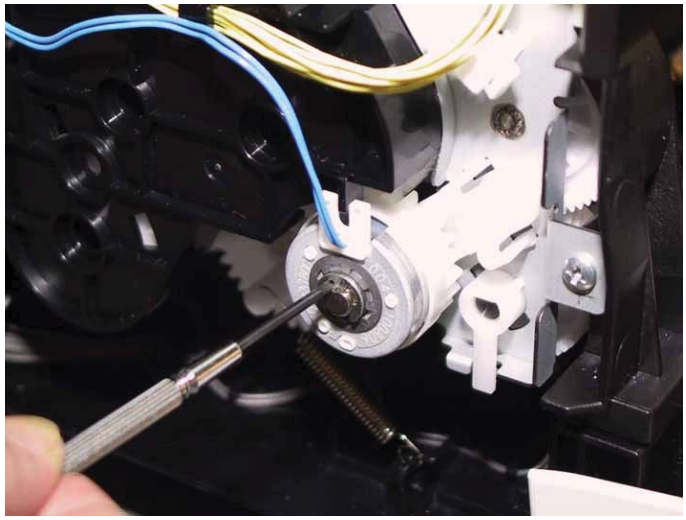
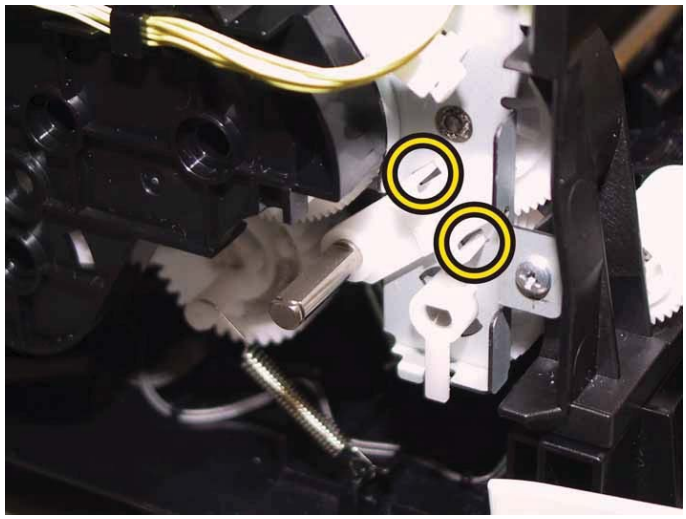
8) Remove the COVER REAR. (Removal 17)

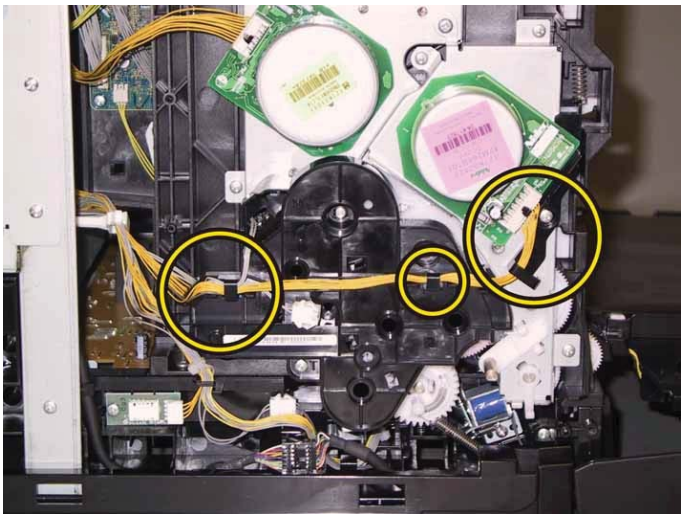
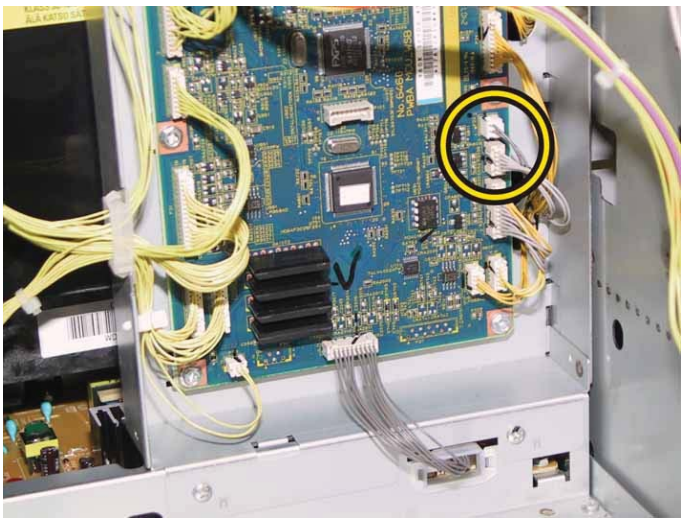
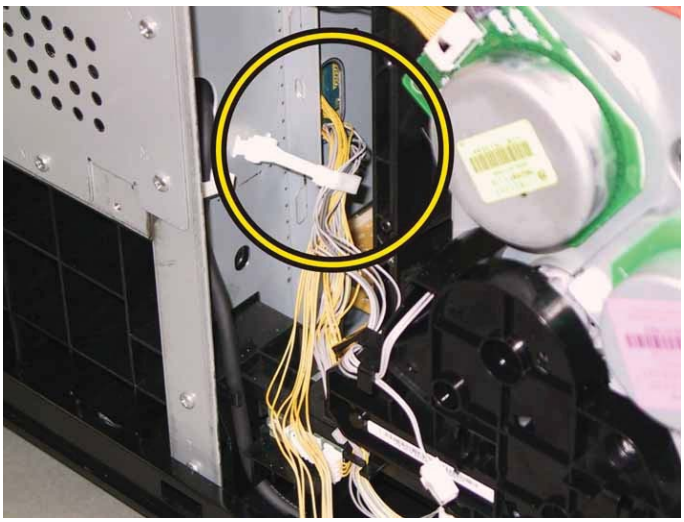
9) Remove the COVER TOP. (Removal 18)

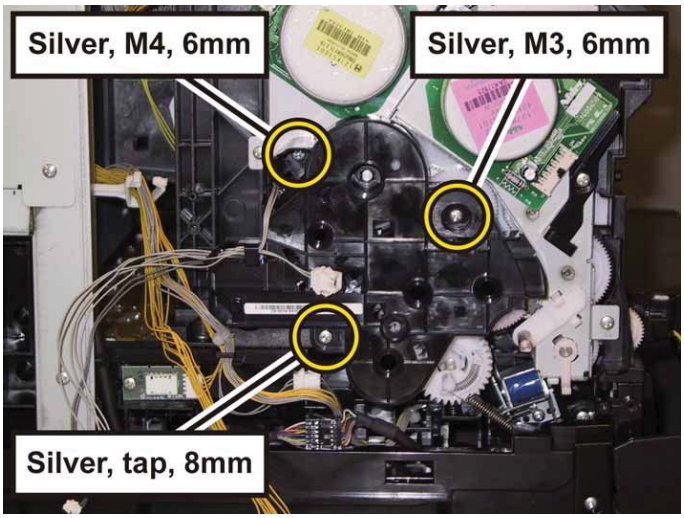
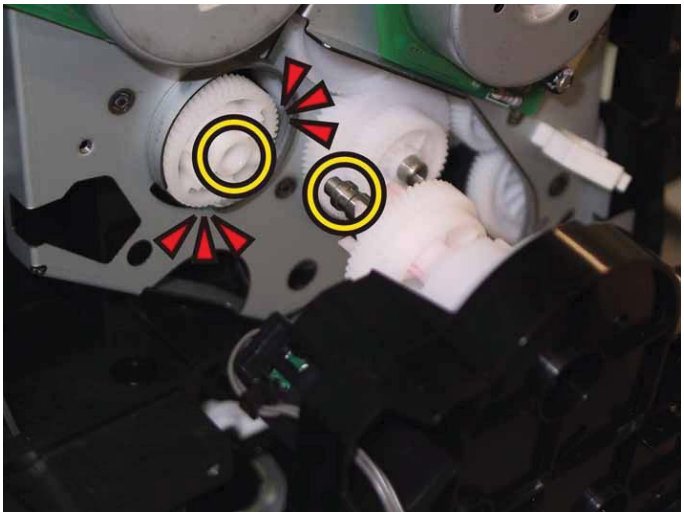
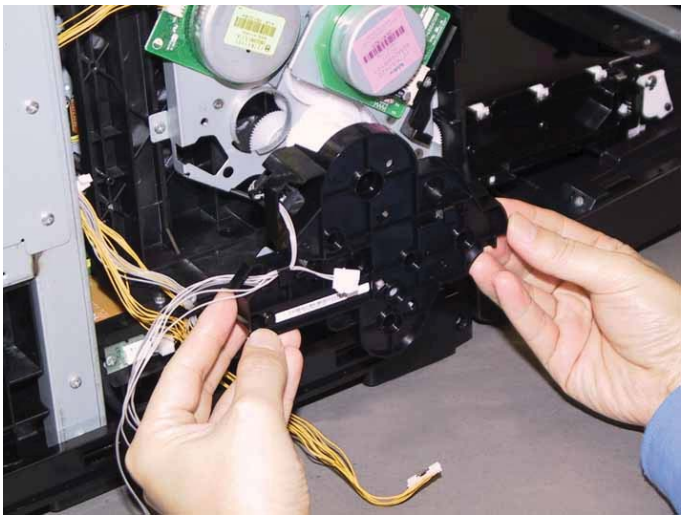
10) Remove the CHASSIS ASSY LVPS. (Removal 28)

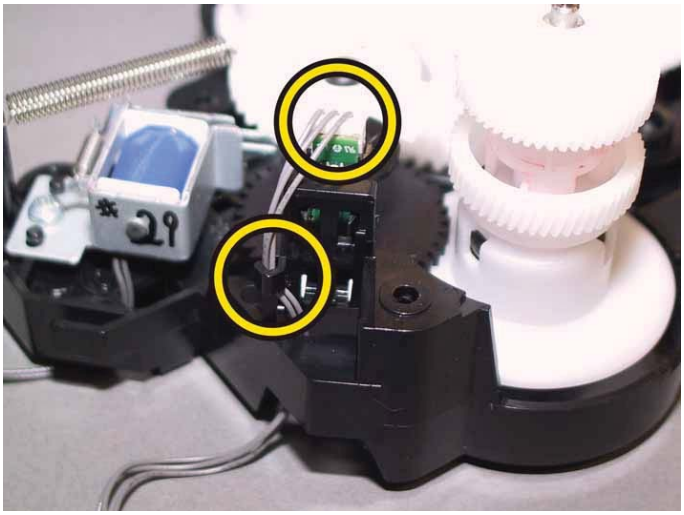
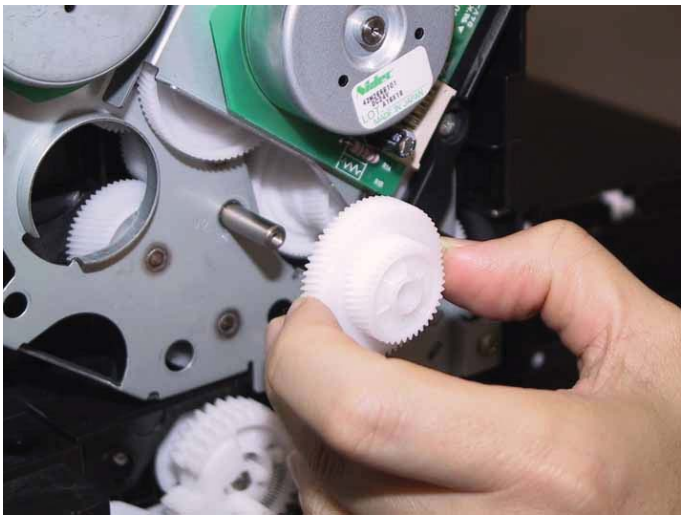
11) Release the harness of the CLUTCH ASSY DRV (PL10.4.1) from the hook of the DRIVE ASSY PH (PL7.1.4).	

Note: When carrying out the work described below, leave the relay connector on the printer harness side.

12) Disengage the connector (P/J262) of the CLUTCH ASSY DRV.	
13) Remove the E-ring that fixes the CLUTCH ASSY DRV to the shaft, using a miniature screwdriver, remove the CLUTCH ASSY DRV.	
14) Release the two hooks of the BEARING REGI (PL10.4.2), remove the BEARING REGI from the shaft.	

15) Disengage the connector (P/J211) of the DRIVE ASSY MAIN (PL7.1.2), release all the harness from the hooks of the DRIVE ASSY PH.	
16) Disengage the two connectors (P/J24, 26) on the PWBA MCU (PL10.7.7).	
17) Release the harnesses from the CLAMP LOCKING (PL10.5.10), pull it out from the hole of the CHASSIS MCU.	

18) Remove the one screw (silver, M4, 6mm), the one screw (silver, M3, 6mm) and the one screw (silver, tap, 8mm) that fix the DRIVE ASSY PH to the printer.	
Note: When carrying out the work described next procedure, take care not to drop the coupling gear to inside.	
19) Remove the DRIVE ASSY PH from the printer.	

20) Disengage the connector (P/J261) of the color mode sensor on the DRIVE ASSY PH, release the HARN ASSY KSNR REGCL (PL10.8.9) from the hook of the DRIVE ASSY PH.	
21) Remove the GEAR P2 (PL7.1.3) from the shaft of the DRIVE ASSY SUB (PL7.1.1).	

Removal 33 KIT DRIVE ASSY MAIN (PL7.1.98)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

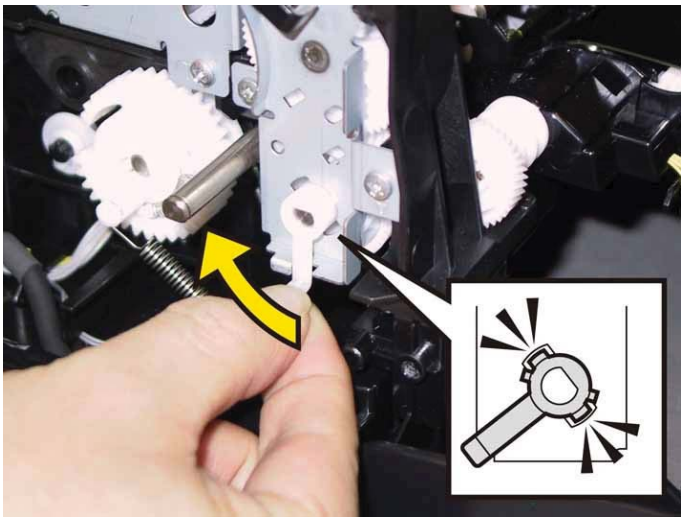
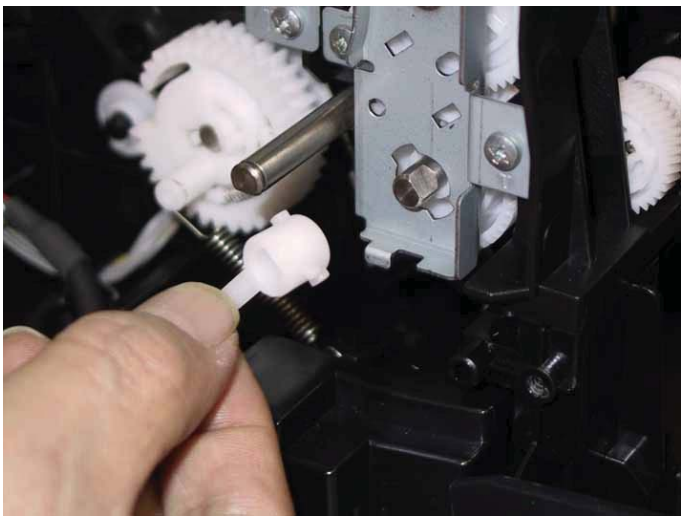
7) Remove the COVER POLE OUT. (Removal 15)

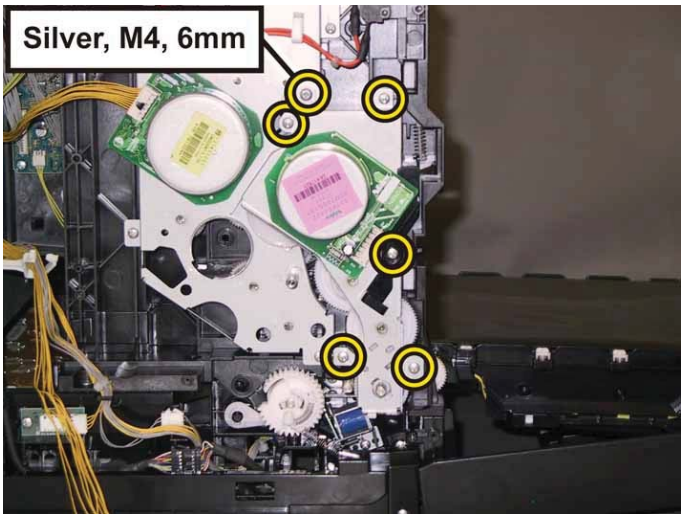
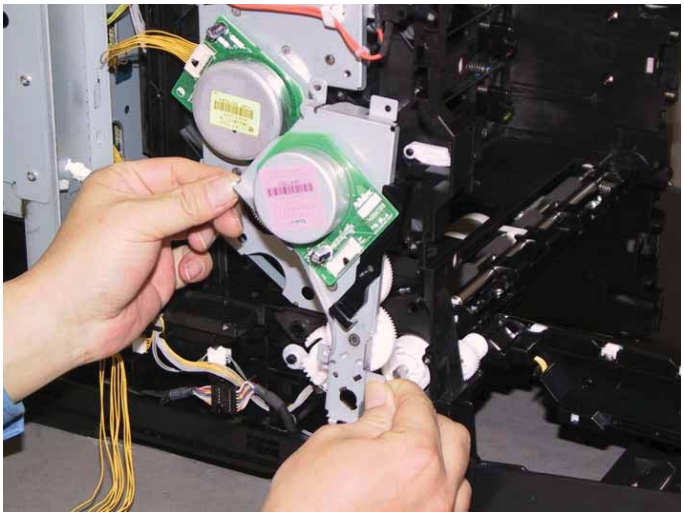
8) Remove the COVER REAR. (Removal 17)

9) Remove the COVER TOP. (Removal 18)

10) Remove the CHASSIS ASSY LVPS. (Removal 28)

11) Remove the KIT DRIVE ASSY PH. (Removal 32)

12) Rotate the STOPPER PIVOT (PL6.1.3), mate the tabs of the STOPPER PIVOT with the notches of the DRIVE ASSY MAIN (PL7.1.2).	
13) Remove the STOPPER PIVOT from the printer.	

14) Remove the one screw (silver, M4, 6mm) and the five screws (silver, tap, 8mm) that fix the DRIVE ASSY MAIN (PL7.1.2) to the printer.	
15) Remove the DRIVE ASSY MAIN from the printer.	

Removal 34 DRIVE ASSY SUB (PL7.1.1)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER REAR. (Removal 17)

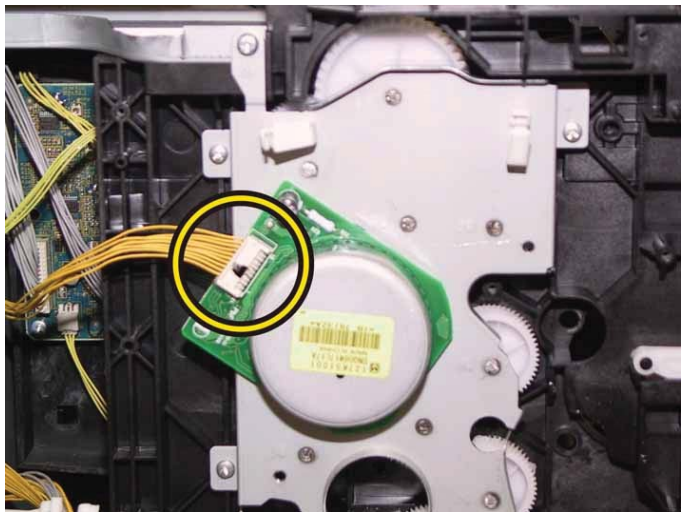
9) Remove the COVER TOP. (Removal 18)

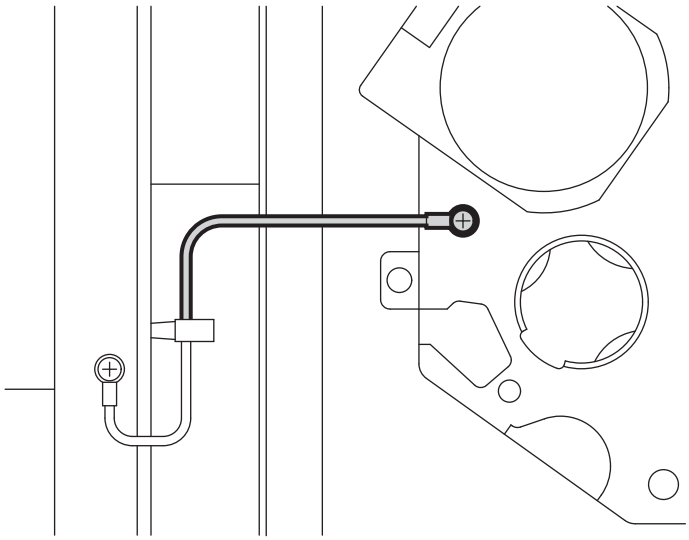
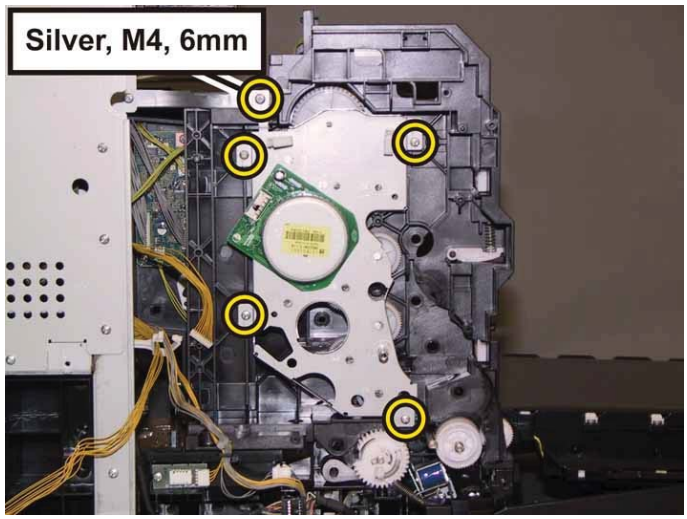
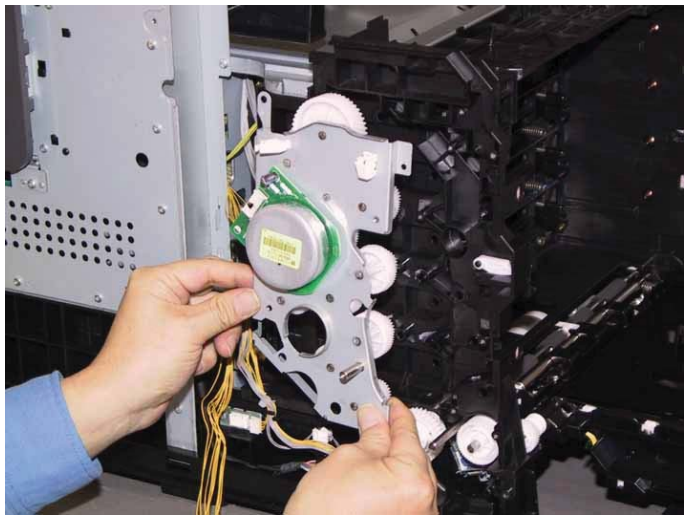
10) Remove the CHASSIS ASSY LVPS. (Removal 28)

11) Remove the KIT DRIVE ASSY PH. (Removal 32)

12) Remove the KIT DRIVE ASSY MAIN. (Removal 33)

13) Remove the HARN ASSY INTERLOCK. (Removal 27)

14) Disengage the connector (P/J221) of the DRIVE ASSY SUB (PL7.1.1).	

15) Remove the one screw (silver, 6m) that fix the HARNESS ASSY GND (PL7.1.5) to the DRIVE ASSY SUB, remove the HARNESS ASSY GND.	
16) Remove the one screw (silver, M4, 6mm) and the four screws (silver, tap, 8mm) that fix the DRIVE ASSY SUB to the printer.	
17) Remove the DRIVE ASSY SUB from the printer.	

Removal 35 KIT BLOCK PHD LEFT (PL4.1.98)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER REAR. (Removal 17)

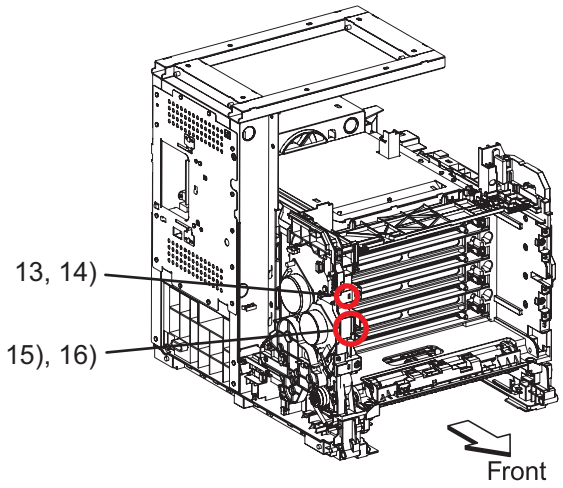
9) Remove the COVER TOP. (Removal 18)

10) Remove the CHASSIS ASSY LVPS. (Removal 28)

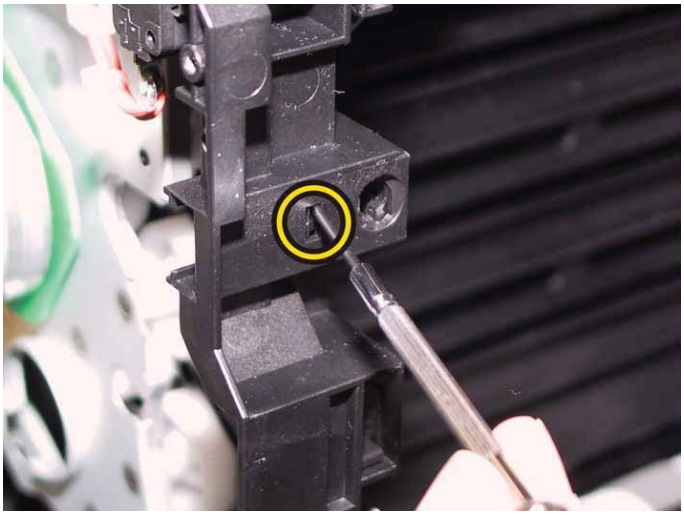
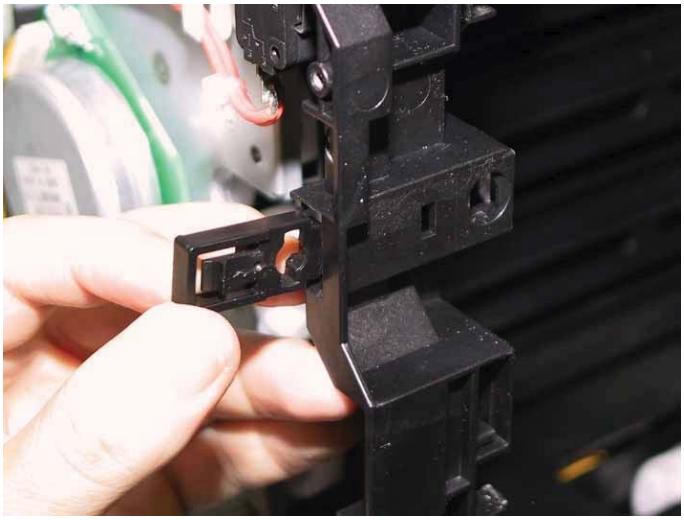
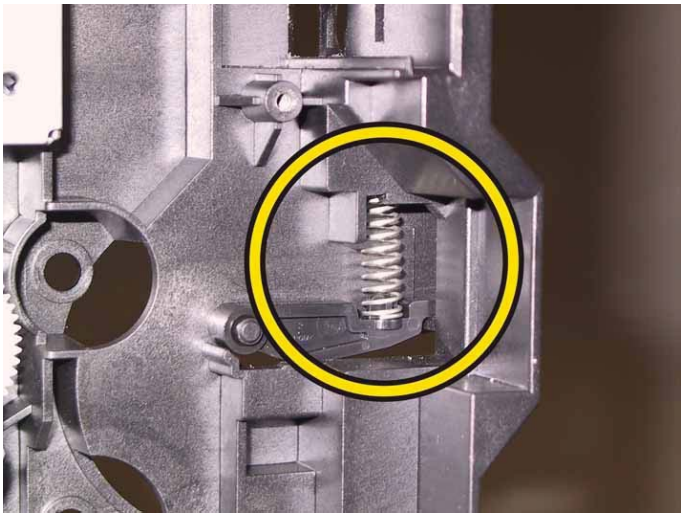
11) Remove the KIT DRIVE ASSY PH. (Removal 32)

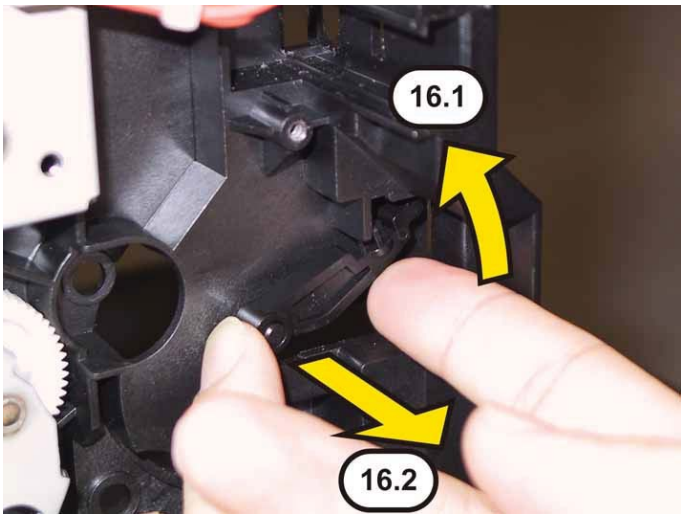
12) Remove the KIT DRIVE ASSY MAIN. (Removal 33)

Accesses Position (The 13), 14), 15) and 16) show the procedure number.)



Note: Described next procedure is the removal procedure common among the upper and lower BLOCK STOPPER PDH Ds (PL4.1.6).

13) Release the hook of the BLOCK STOPPER PHD D (PL4.1.6), using a miniature screwdriver.	
14) Remove the BLOCK STOPPER PHD D from the printer.	
15) Remove the SPRING PHD (PL4.1.4) from the printer.	

16) Rotate the LEVER PHD (PL4.1.5) slightly, remove the LEVER PHD from the printer.	

Removal 36 KIT FEED ROLL/SOL/CLUTCH (PL10.4.99)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

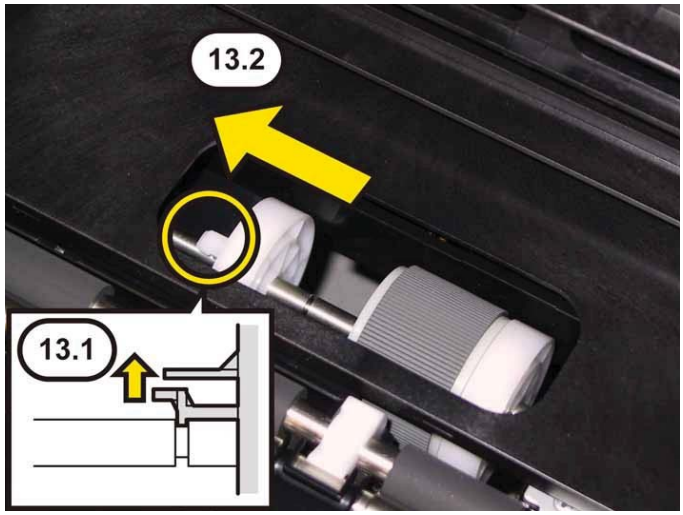
8) Remove the COVER REAR. (Removal 17)

9) Remove the COVER TOP. (Removal 18)

10) Remove the COVER SIDE L LOW. (Removal 20)

11) Remove the CHASSIS ASSY LVPS. (Removal 28)

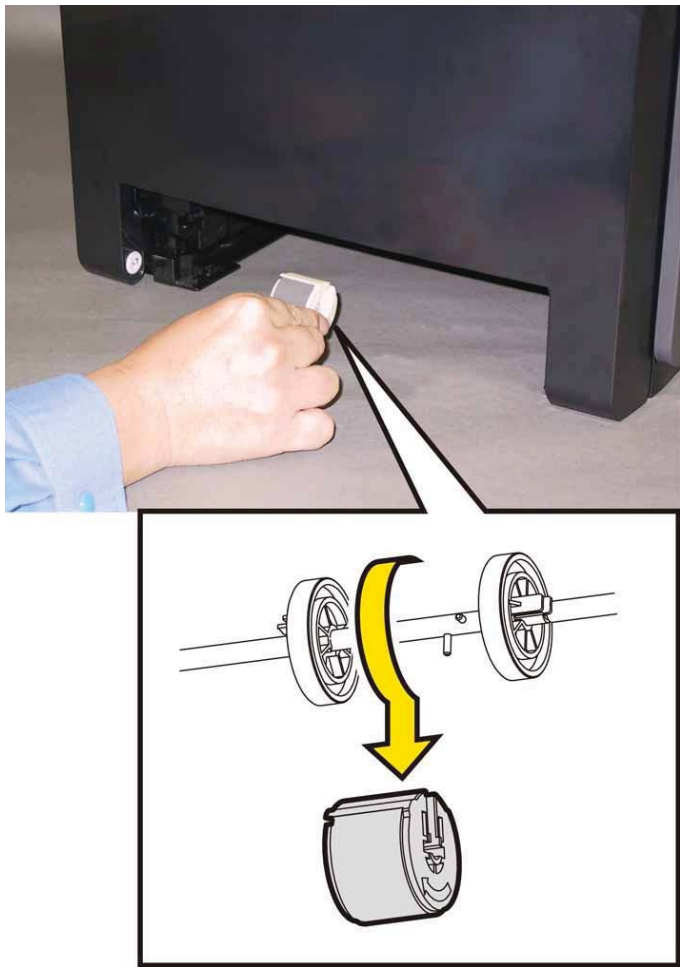
12) Remove the KIT DRIVE ASSY PH. (Removal 32)

13) Release the hook of the ROLL CORE MSI (PL3.2.3) on the left of the ROLL ASSY FEED (PL 3.2.4), and move the ROLL CORE MSI to left until it stops.	

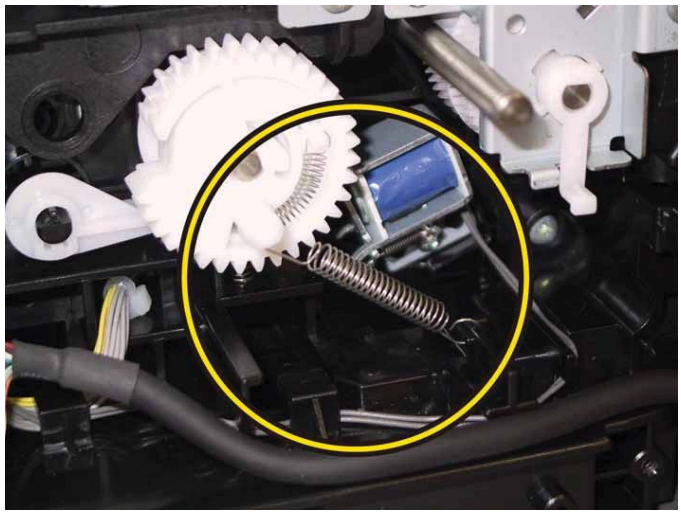
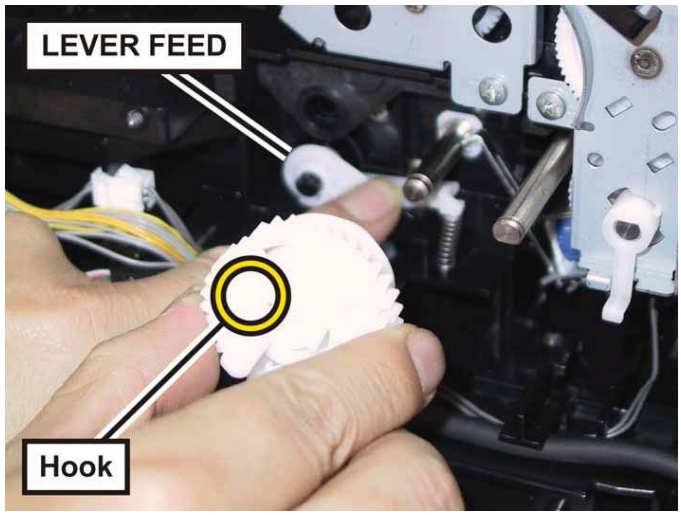
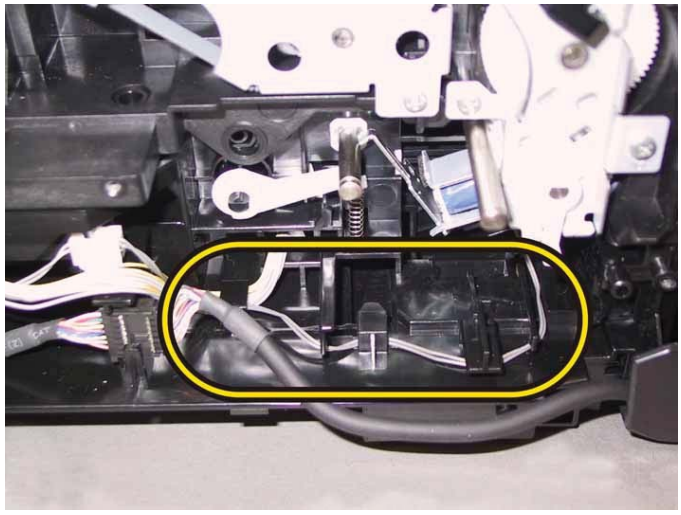
14) Release the groove on the ROLL ASSY FEED from the vertical pin mounted on the SHAFT ASSY FEED (PL3.2.2) by sliding the ROLL ASSY FEED to the left.

15) Close the COVER ASSY FRONT.

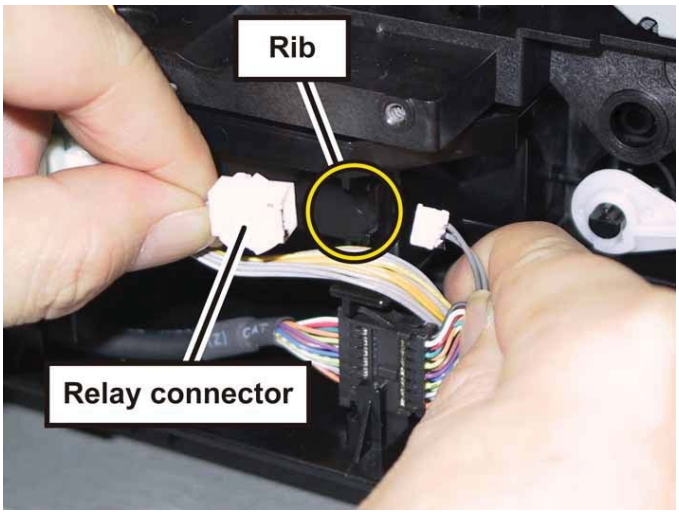
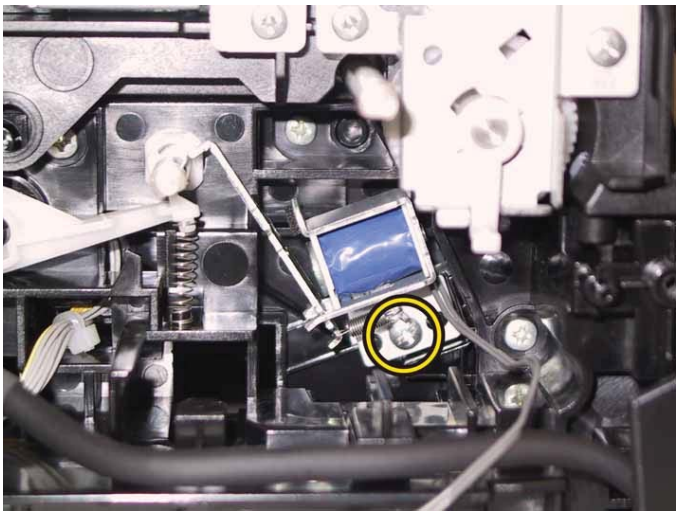
16) Remove the ROLL ASSY FEED from the SHAFT ASSY FEED by rotating the ROLL ASSY FEED 180 degrees.



17) Open the COVER ASSY FRONT.

18) Remove the SPRING FEED OUT (PL10.4.15) from the printer.	
19) Release the hook of the GEAR ASSY FEED (PL10.4.19), remove the GEAR ASSY FEED from the SHAFT ASSY FEED (PL3.2.2). **When carrying out the work this procedure, pushing down the LEVER FEED (PL10.4.13).**	
20) Release the HARNESS A-OP-OPP (PL10.2.13) from the hooks of the printer, release the harness of the SOLENOID FEED MSI (PL10.4.11) from the hooks of the printer.	

Note: When carrying out the work described next procedure, leave the relay connector on the printer harness side.

21) Release the relay connector from the rib of the printer, disengage the connecter (P/J231) of the SOLENOID FEED MSI.	
22) Remove the one screw (silver, tap, 8mm) that fixes the SOLENOID FEED MSI to the printer, remove the SOLENOID FEED MSI.	

Removal 37 COVER SCANNER LOW (PL10.1.2)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE L. (Removal 14)

6) Remove the COVER POLE OUT. (Removal 15)

7) Release the one boss of the COVER SCANNER LOW (PL10.1.2) using a miniature screwdriver to shift the SCANNER LOW to right side. Release the four hooks of the COVER SCANNER LOW.	
8) Remove the COVER SCANNER LOW from the printer.	

Removal 38 COVER POLE IN (PL10.1.3)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

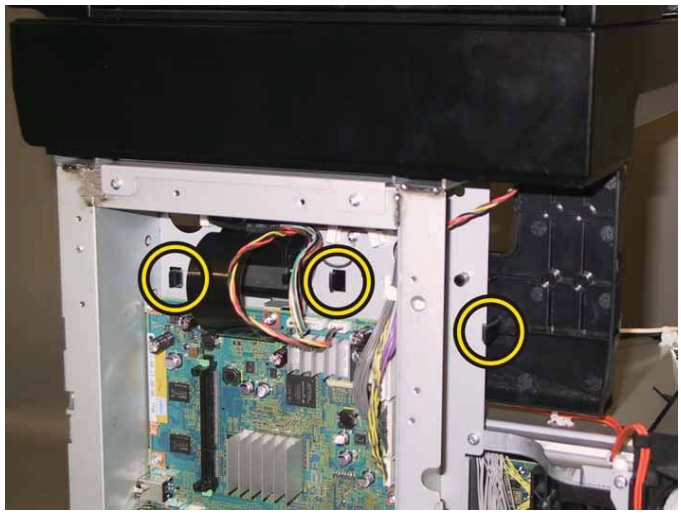
8) Remove the COVER ASSY ESS. (Removal 16)

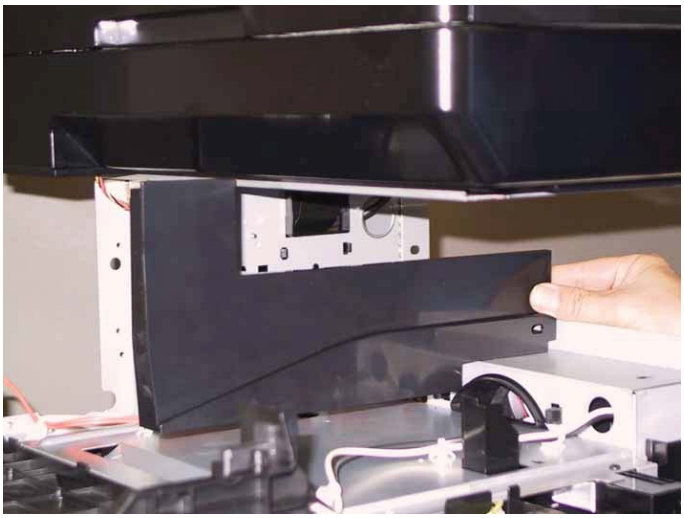
9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the COVER SCANNER LOW. (Removal 37)

13) Release the three hooks of the COVER POLE IN (PL10.1.3).	

14) Remove the COVER POLE IN from the printer.	

Removal 39 PLATE ASSY DUCT (PL10.6.1)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

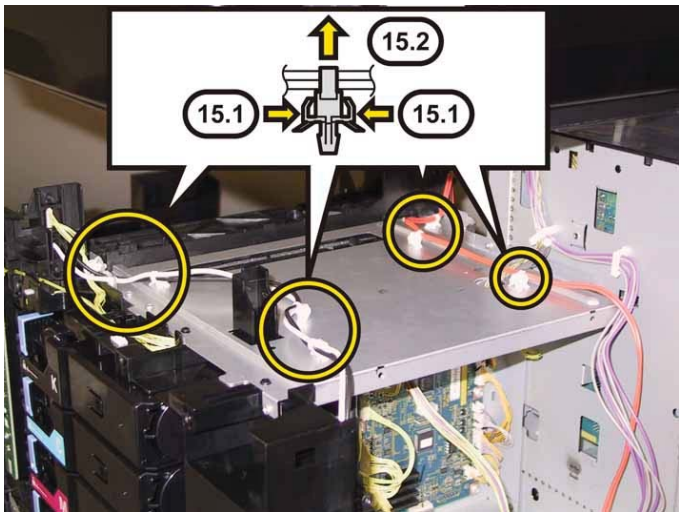
10) Remove the COVER TOP. (Removal 18)

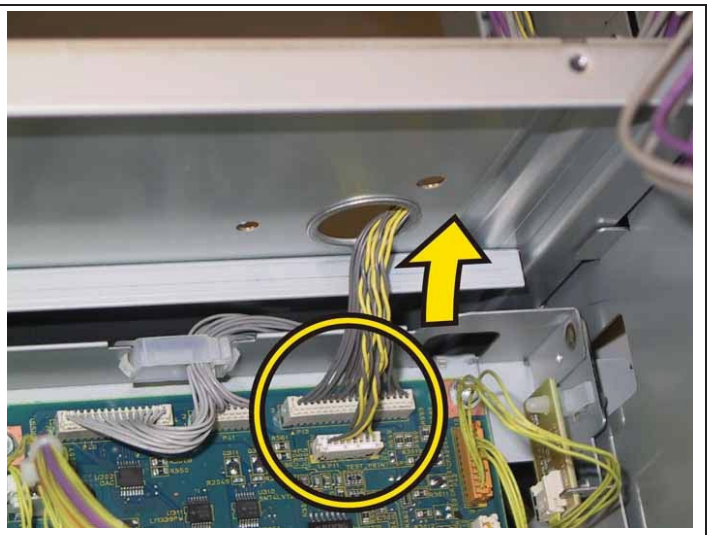
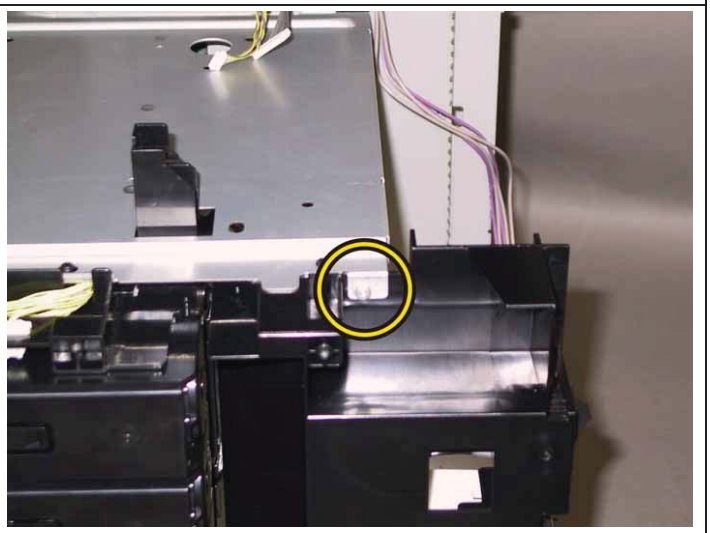
11) Remove the SHIELD ASSY ESS. (Removal 22)

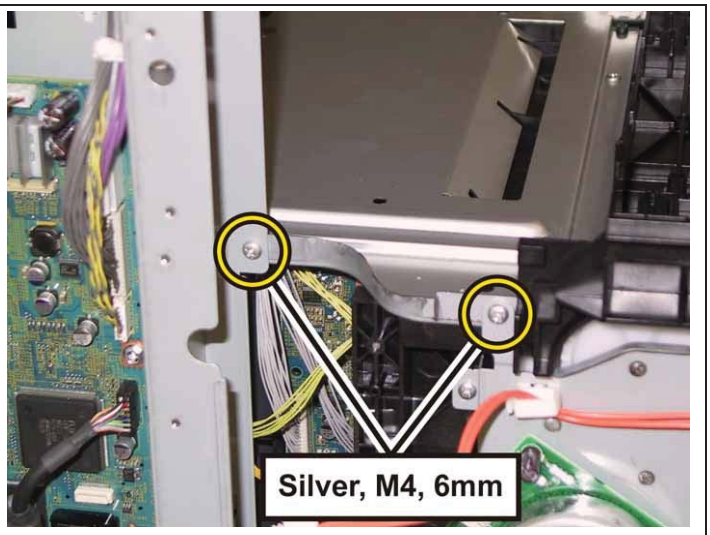
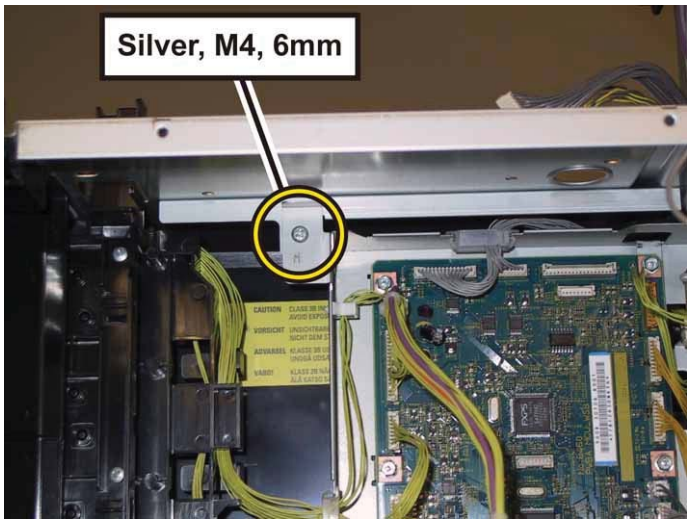
12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Release the seven clamps on the PLATE ASSY DUCT (PL10.6.1) that fix the harnesses of the HARN ASSY FUSER (PL6.1.2) and the HARN ASSY INTERLOCK (PL10.6.4) to the PLATE ASSY DUCT.	

16) Disengage the two connectors (P/J10, 11) on the PWBA MCU (PL10.7.7), pull it out from the hole of the PLATE ASSY DUCT.	
17) Remove the seven screws (silver, tap, 8mm) that fix the upper side of the PLATE ASSY DUCT to the printer.	
18) Remove the one screw (silver, tap, 8mm) that fixes the right side of the PLATE ASSY DUCT to the printer.	

19) Remove the two screws (silver, M4, 6mm) that fix the left side of the PLATE ASSY DUCT to the printer.	
20) Remove the one screw (silver, M4, 6mm) that fixes the inside of the PLATE ASSY DUCT to the printer.	
21) Remove the PLATE ASSY DUCT from the printer.	

Removal 40 CHASSIS ASSY BREAKER (Reference only)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

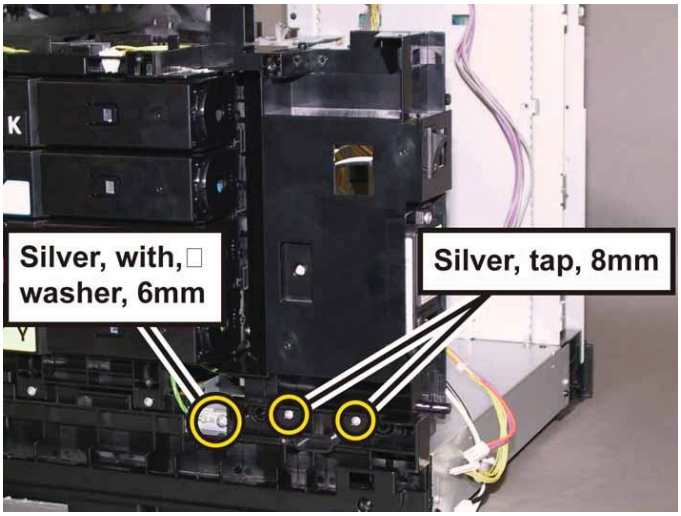
11) Remove the SHIELD ASSY ESS. (Removal 22)

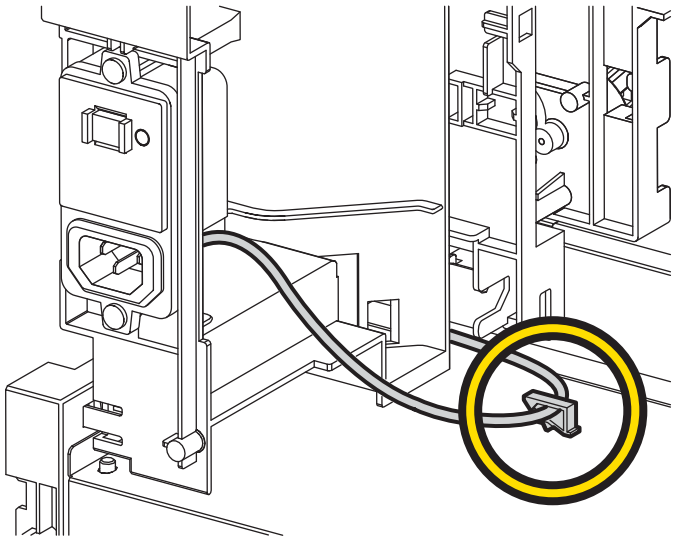
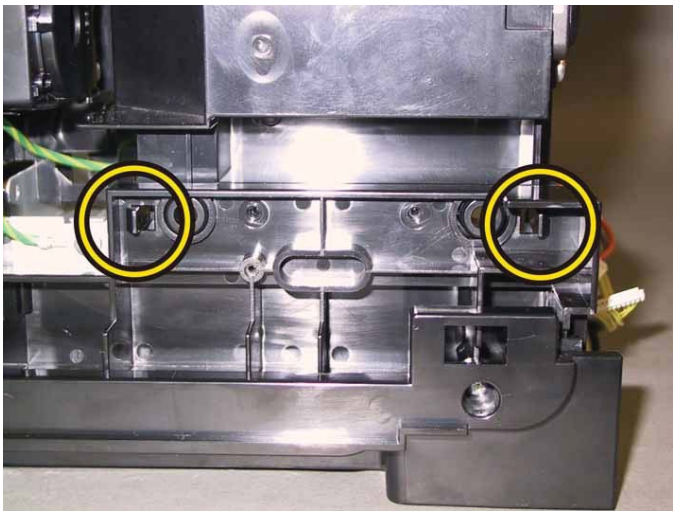
12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the two screws (silver, tap, 8mm) that fix the CHASSIS BREAKER (PL10.5.8) to the printer, remove the one screw (silver, with washer, 6mm) that fixes the grounding terminal of the HARN ASSY GFI GND (PL10.7.9) to the printer.	

17) Release the HARN ASSY GFI GND from the clamp.	
18) Release the two hooks of the CHASSIS BREAKER.	
19) Remove the CHASSIS BREAKER together with the BREAKER GFI (PL10.7.10), the HARN ASSY SW PWR (PL10.7.8) and the HARN ASSY GFI GND.	

Removal 41 HOLDER ASSY TCRU (K), (C), (M), (Y) (PL5.1.17~20)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

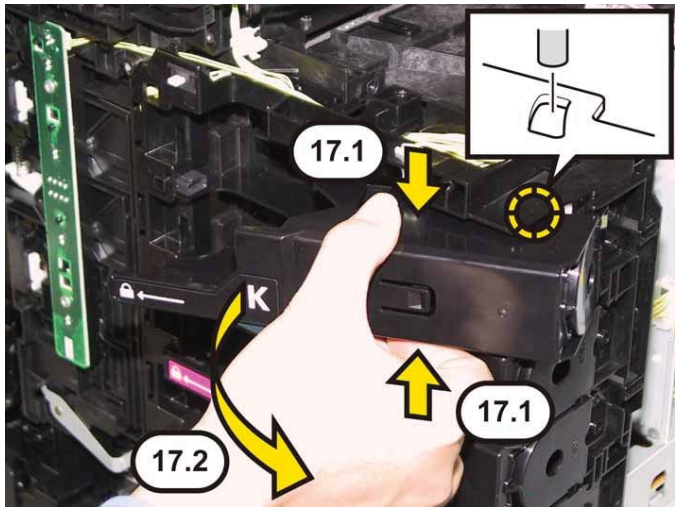
13) Remove the COVER SCANNER LOW. (Removal 37)

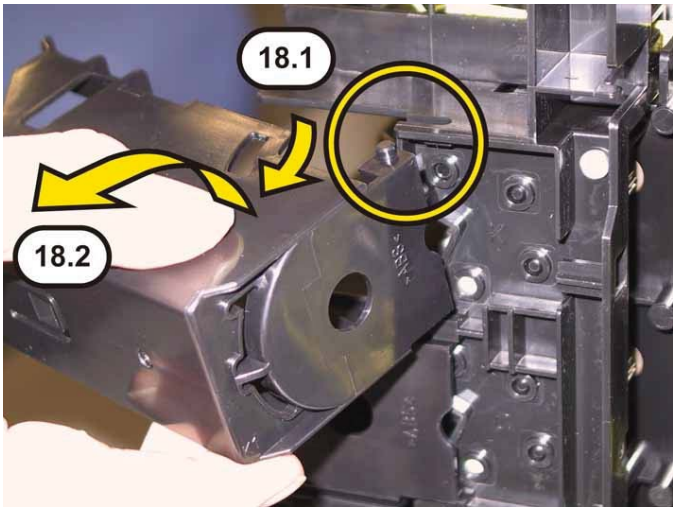
14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

Note: Described below is the removal procedure common among the four HOLDER ASSY TCRU.

17) Press the central part of the HOLDER ASSY TCRU to release the hole of the HOLDER ASSY TCRU from the boss of the FRAME DISP (PL5.1.12). Open the HOLDER ASSY TCRU by 90 degrees.	

18) Press the boss part of the HOLDER ASSY TCRU, remove the HOLDER ASSY TCRU from the printer.	

Removal 42 DISPENSER ASSY (PL5.1.1)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

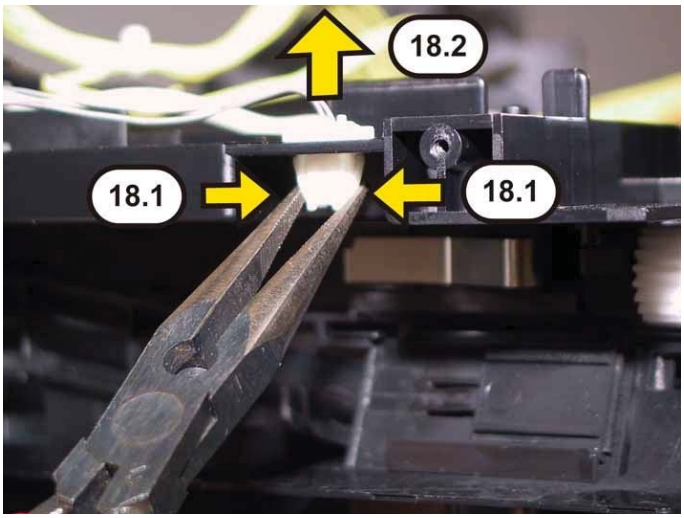
13) Remove the COVER SCANNER LOW. (Removal 37)

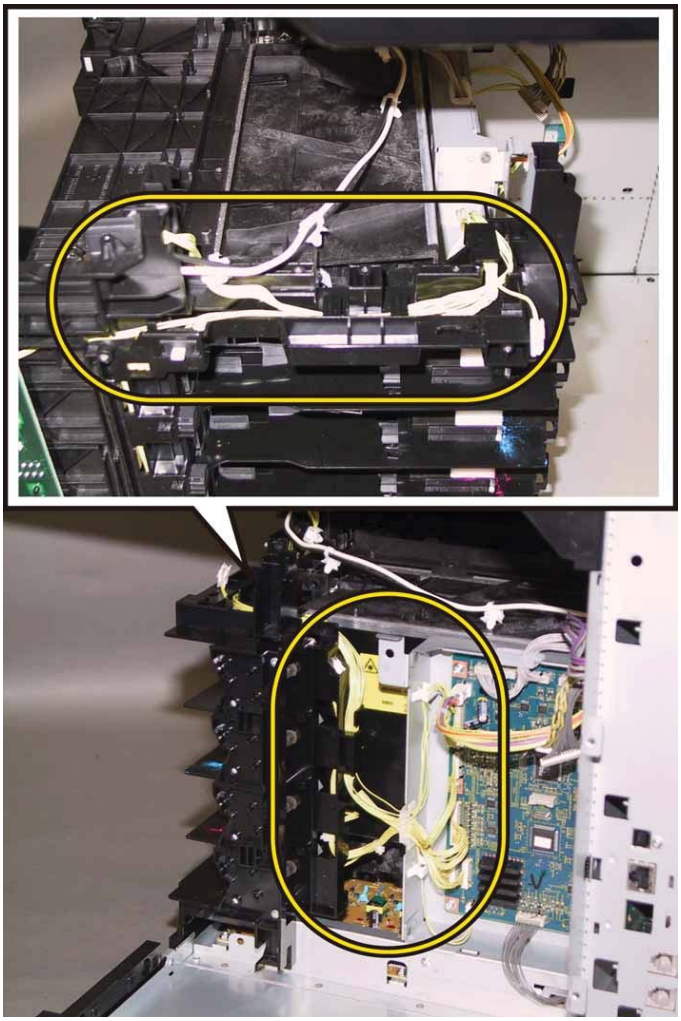
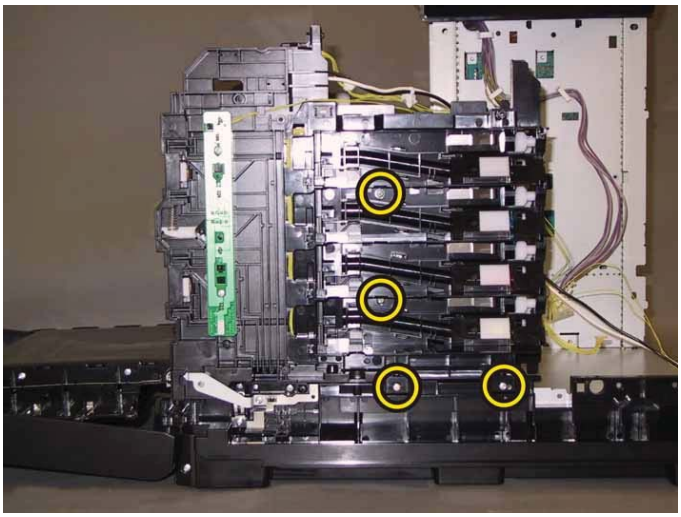
14) Remove the COVER POLE IN. (Removal 38)

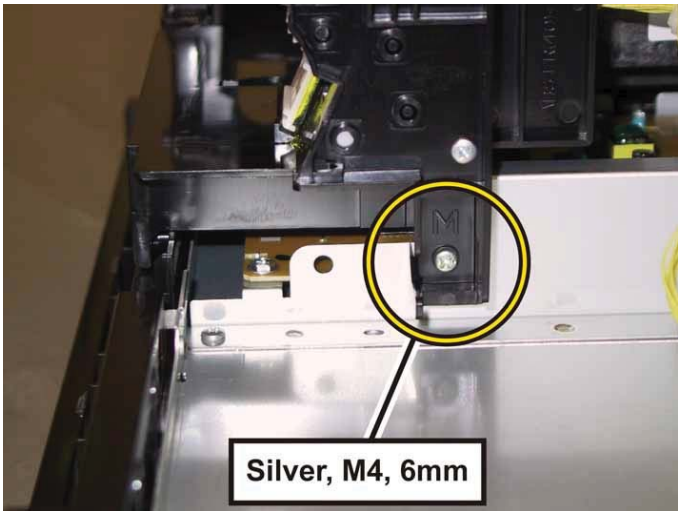
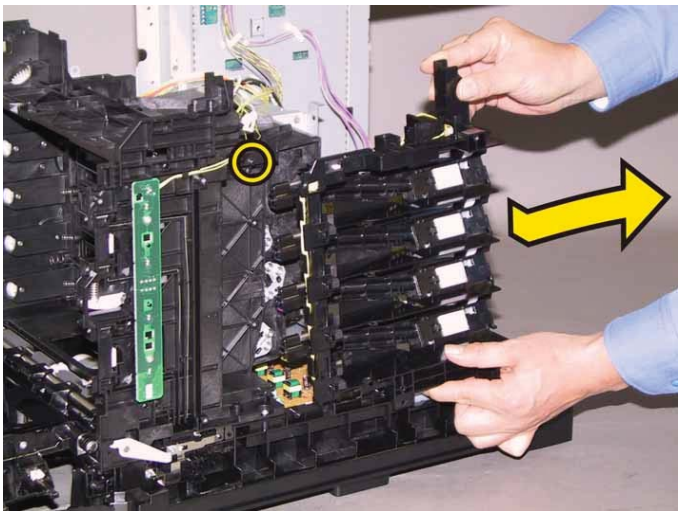
15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

17) Remove the HOLDER ASSY TCRU (K), (C), (M), (Y). (Removal 41)

18) Release the hooks of the connector (P5041) of the HARNESS ASSY LVPS MAIN (PL10.8.14), using a pliers, and then remove it from the DISPENSER ASSY (PL5.1.1).	

19) Disengage the seven connectors (P/J14, 15, 17, 18, 19, 29, 31) on the PWBA MCU (PL10.7.7), release the HARN ASSY FUSER (PL6.1.2) and HARNESS ASSY LVPS MAIN from the hooks of the DISPENSER ASSY.	
20) Remove the four screws (silver, tap, 8mm) that fix the DISPENSER ASSY to the printer.	

21) Remove the one screw (silver, M4, 6mm) that fixes the rear side of the DISPENSER ASSY to the printer.	
22) Release the hole of the DISPENSER ASSY from the boss of the printer, move the DISPENSER ASSY to backward. Remove the DISPENSER ASSY from the printer.	

Removal 43 FRAME ASSY MOT (PL5.1.2)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

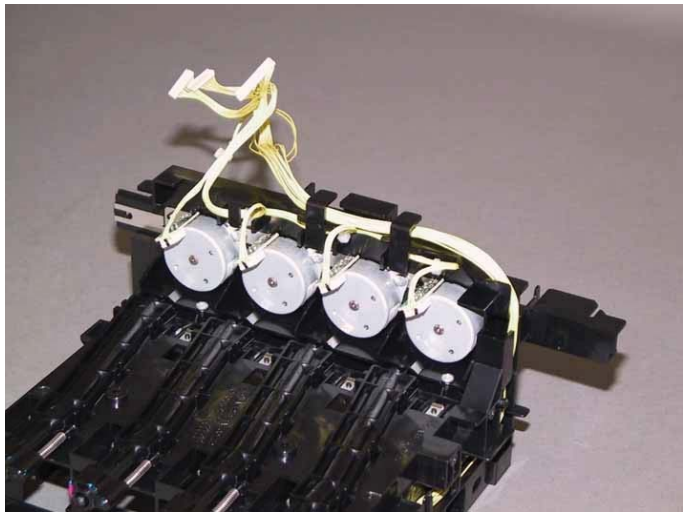
14) Remove the COVER POLE IN. (Removal 38)

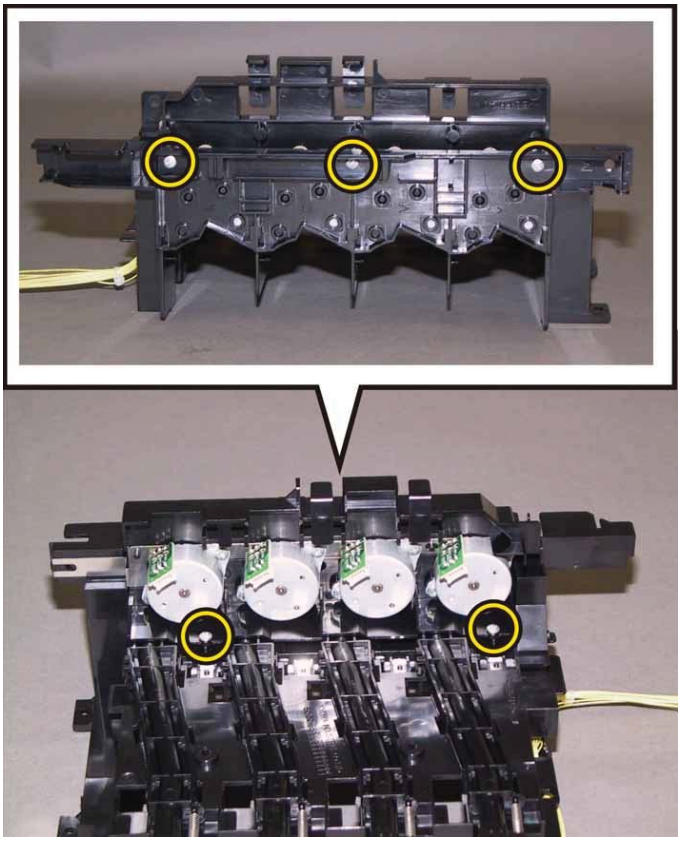
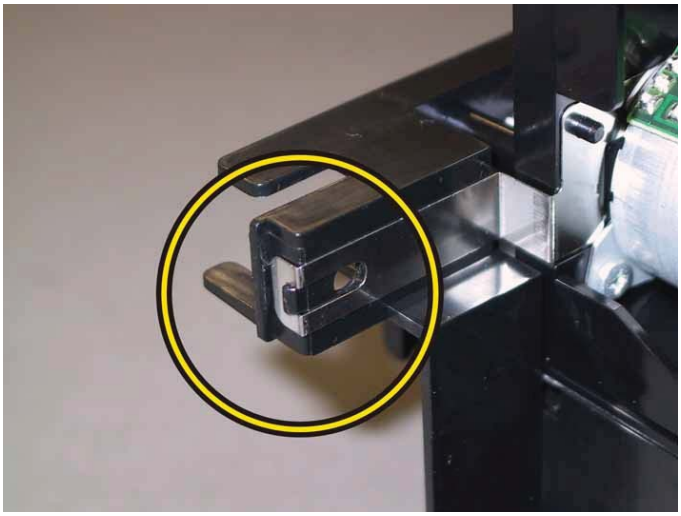
15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

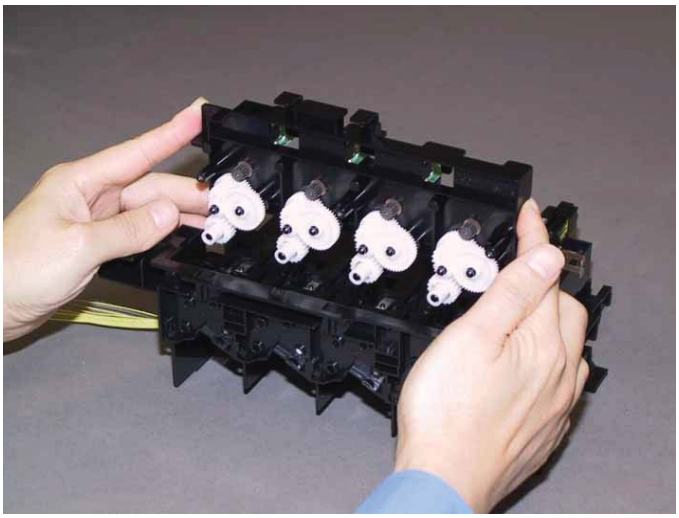
17) Remove the HOLDER ASSY TCRU (K), (C), (M), (Y). (Removal 41)

18) Remove the DISPENSER ASSY. (Removal 42)

19) Disengage all the connectors of the MOTOR ASSY DISP (PL5.1.3), release all the harness from the hooks of the FRAME ASSY MOT (PL5.1.2).	

20) Remove the five screws (silver, tap, 8mm) that fix the FRAME ASSY MOT to the DISPENSER ASSY (PL5.1.1).	
21) Release the notch of the CONDUCTOR MOTOR (PL5.1.4) from the hook of the FRAME DISP (PL5.1.12),	

Note: When carrying out the work described next procedure, take care not to drop and lose the GEARs.

22) Remove the FRAME ASSY MOT from the DISPENSER ASSY.	

Removal 44 KIT ROS (PL4.1.99)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

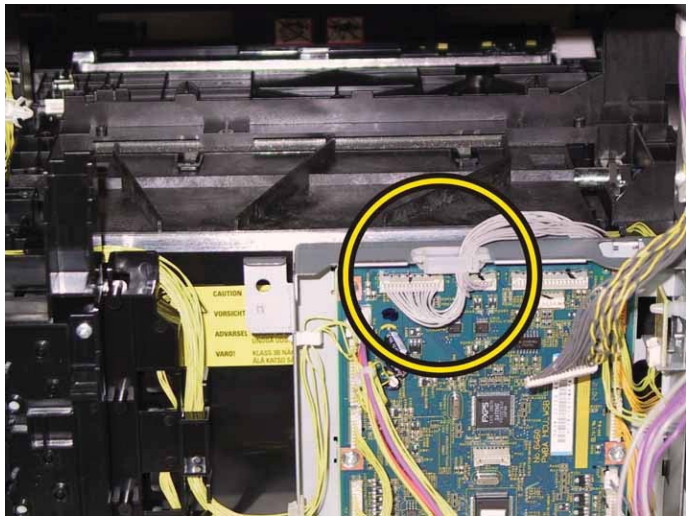
11) Remove the SHIELD ASSY ESS. (Removal 22)

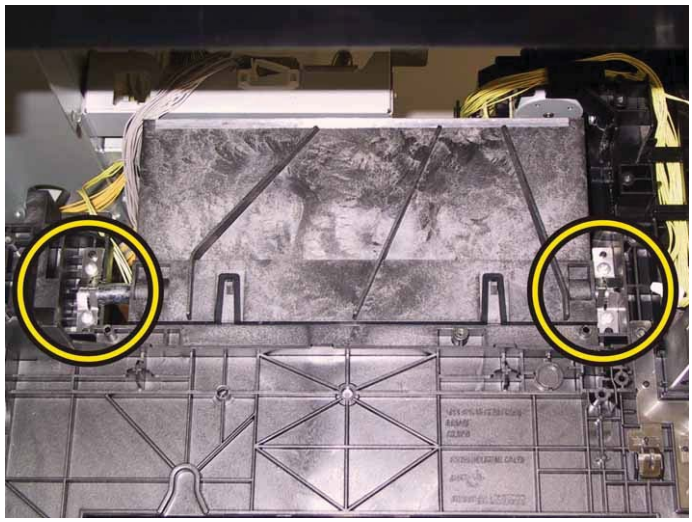
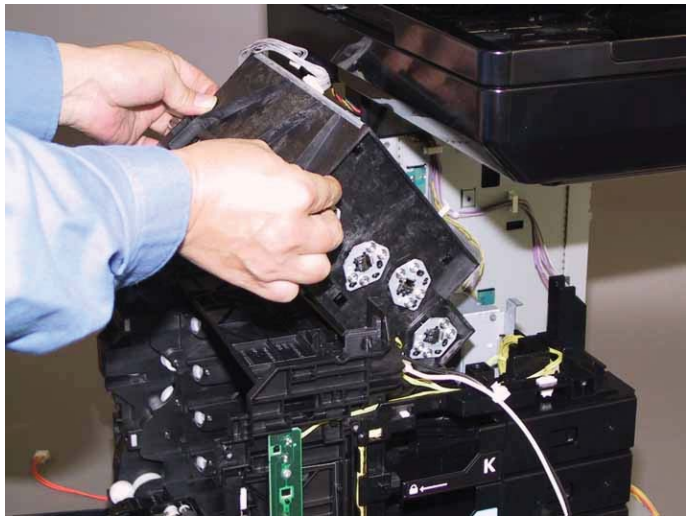
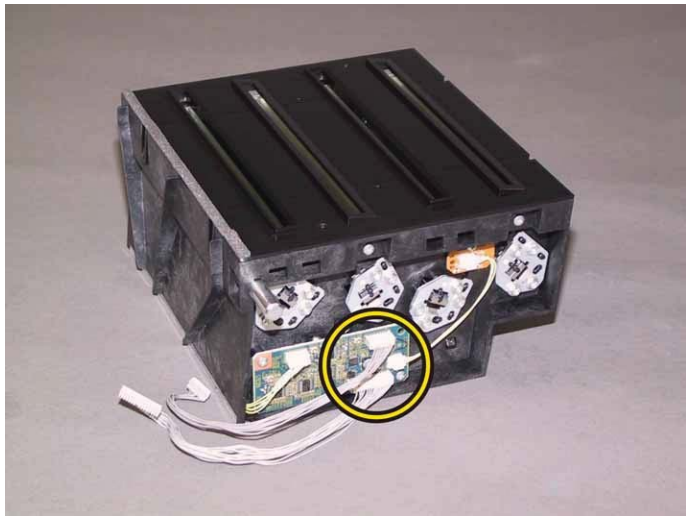
12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

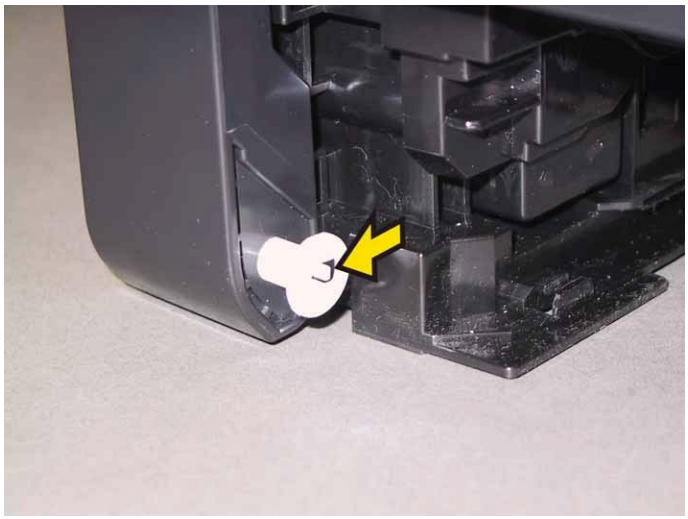
16) Disengage the two connectors (P/J40, 41) on the PWBA MCU (PL10.7.7), release the harness from the EDGING SADDLE (PL10.7.3).	

17) Remove the four screws (silver, tap 8mm) that fix the left and right sides of the SPRING ROSs (PL4.1.2) to the printer. Remove the SPRING ROSs from the printer.	
18) Lift up the ROS ASSY (PL4.1.1) slowly from the printer.	
19) Disengage the two connectors (P/J411, 412) of the ROS ASSY, remove the HARN ASSY ROS RE (PL4.1.22) and HARN ASSY ROS VIDEO (PL4.1.23).	

Removal 45 KIT SHAFT PIVOT (PL10.2.99)

Note: Described below is the removal procedure common among the left and right SHAFT PIVOTs (PL10.2.14).

1) Remove the Tray 1. (Removal 1)

2) Release the hook of the SHAFT PIVOT (PL10.2.14) to pull out the SHAFT PIVOT.	

Removal 46 COVER ASSY FRONT (PL10.2.1)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

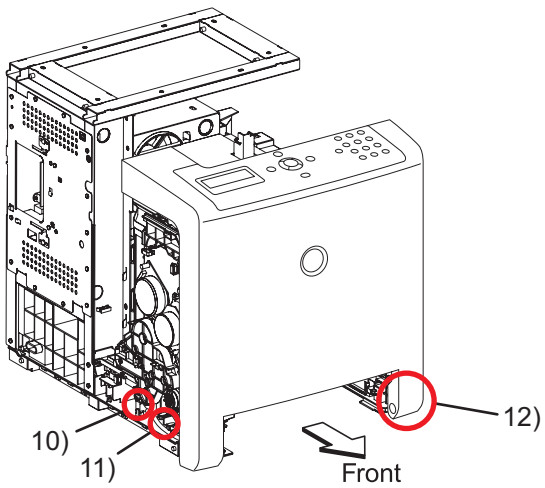
6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER REAR. (Removal 17)

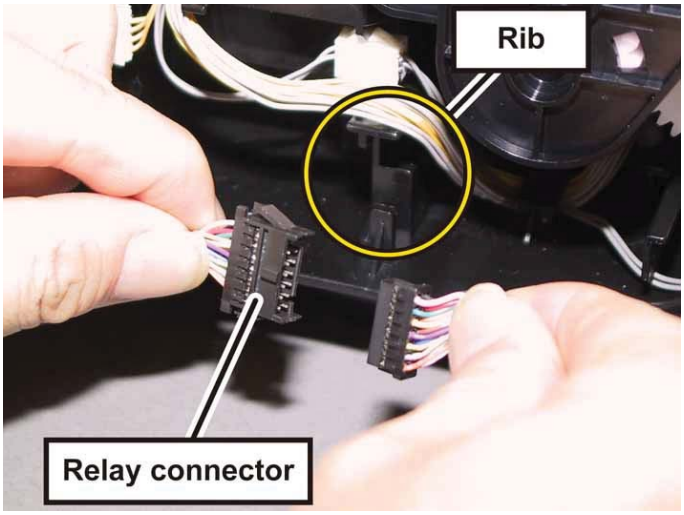
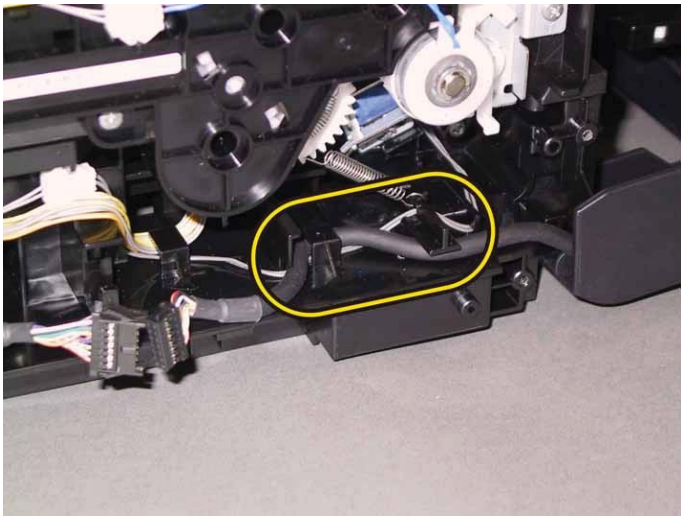
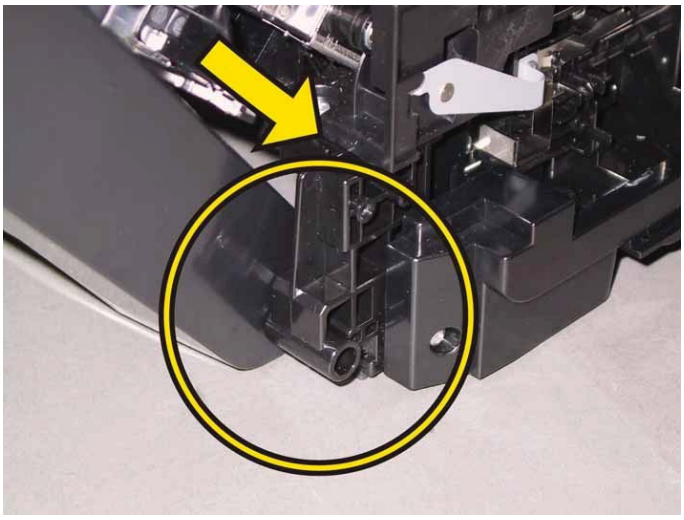
8) Remove the COVER SIDE L LOW. (Removal 20)

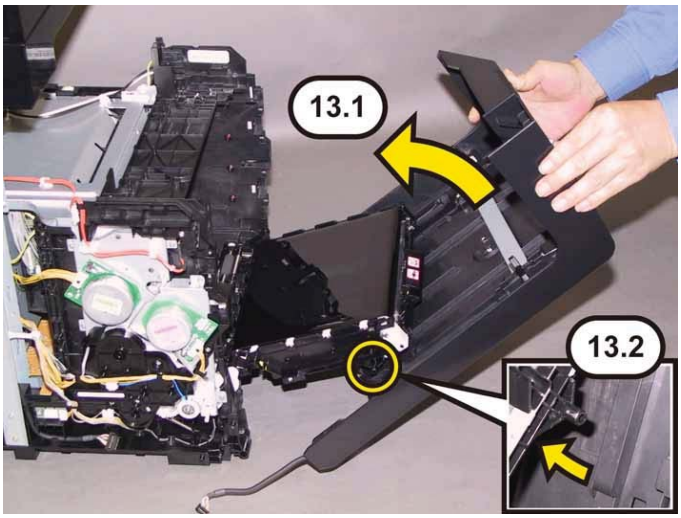
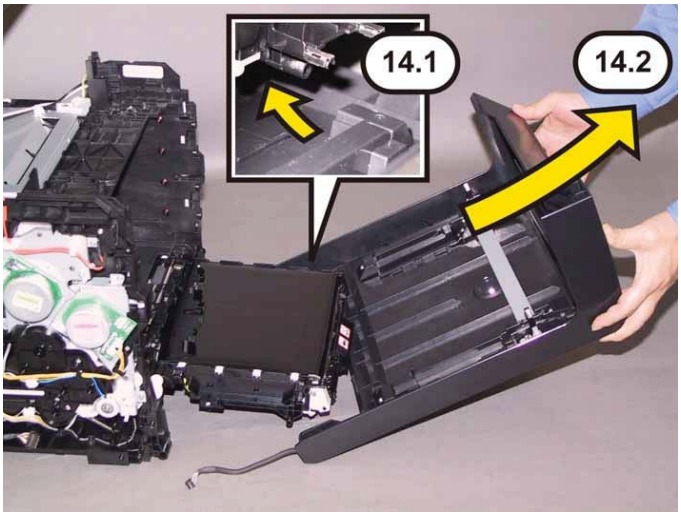
9) Remove the KIT SHAFT PIVOT. (Removal 45)

Accesses Position (The 10), 11) and 12) show the procedure number.)



Note: When carrying out the work described below, leave the relay connector on the COVER ASSY FRONT side.

10) Release the harness of the HARNESS A-OP-OPP (PL10.2.13) from the rib of the printer, disengage the connector (P/J5301) of the HARNESS A-OP-ESS (PL10.8.12).	
11) Release the HARNESS A-OP-OPP from the hooks of the printer.	
12) Insert the right side under part of the COVER ASSY FRONT (PL10.2.1) into the inside of the printer.	

13) Tilt the COVER ASSY FRONT, release the left side boss of the TRANSFER ASSY (PL6.1.7) from the COVER ASSY FRONT.	
14) Release the right side boss of the TRANSFER ASSY from the COVER ASSY FRONT, remove the COVER ASSY FRONT from the printer.	

Removal 47 KIT PIVOT (PL6.1.99)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

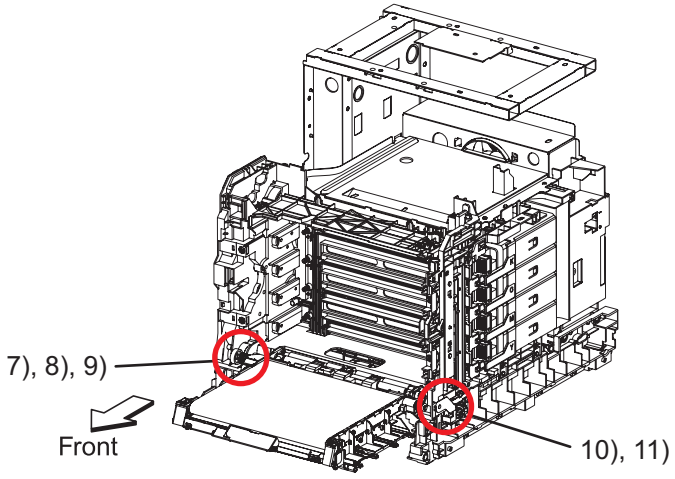
Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

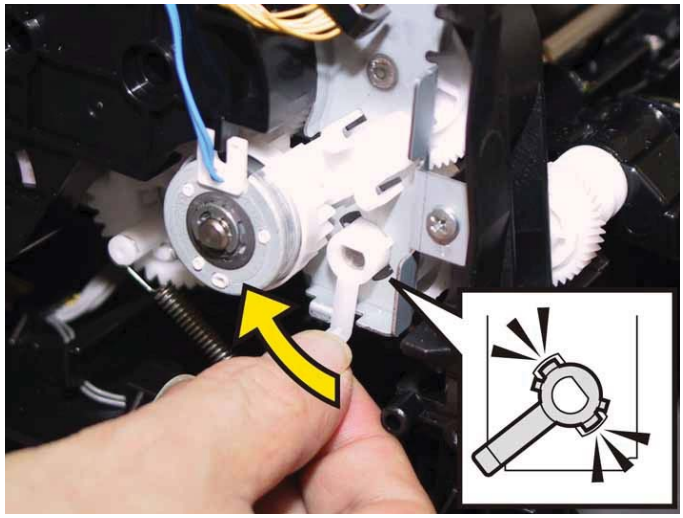
5) Remove the COVER ASSY SIDE R. (Removal 10)

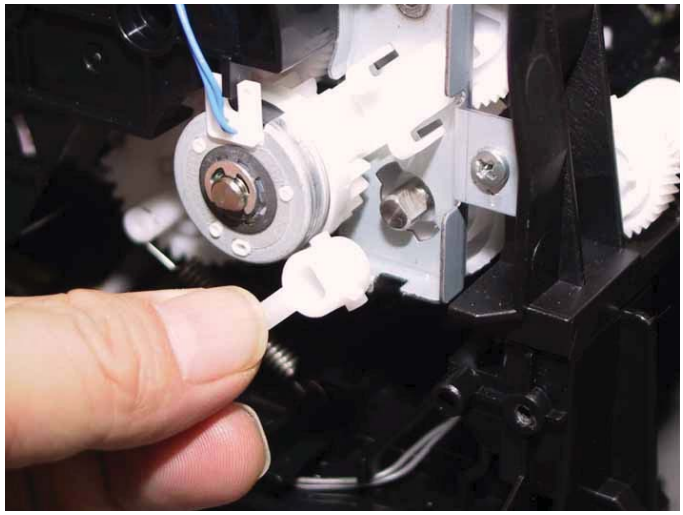
6) Remove the COVER ASSY SIDE L. (Removal 14)

Accesses Position (All the numbers show the procedure number.)

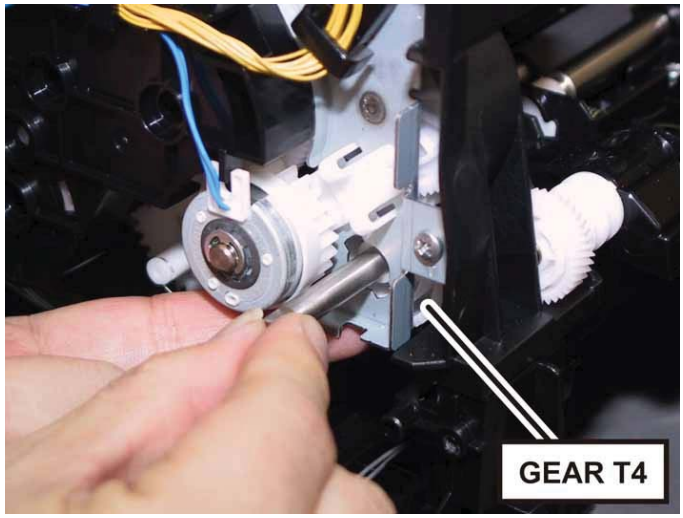
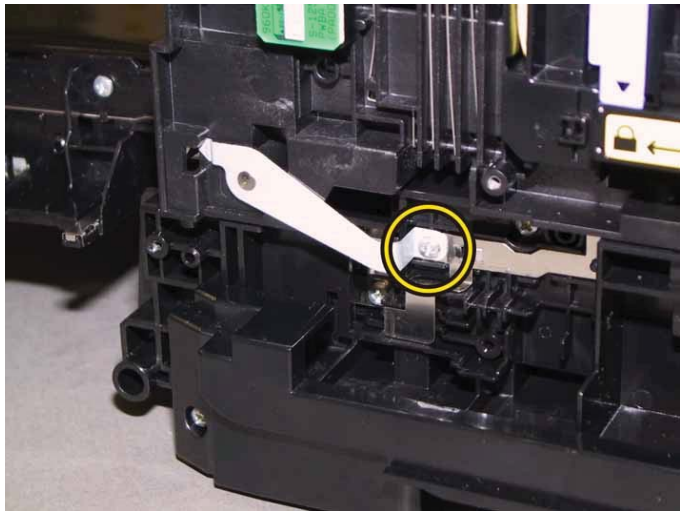


7) Rotate the STOPPER PIVOT (PL6.1.3), mate the tabs of the STOPPER PIVOT with the notches of the DRIVE ASSY MAIN (PL7.1.2).



8) Remove the STOPPER PIVOT from the printer.	

Note: When carrying out the work described next procedure, take care not to drop the GEAR T4.

9) Pull out the PIVOT TRANS L (PL6.1.4), remove the GEAR T4 (PL6.1.5) from the printer.	
10) Remove the one screw (silver, tap, 8mm) that fixes the SHAFT ASSY PIVOT (PL6.1.6) to the printer.	

Note: When carrying out the work described next procedure, keep the TRANSFER ASSY slightly lifted for ease of work.

11) Pull out the SHAFT ASSY PIVOT from the printer.	

Removal 48 KIT TRANSFER & PIVOT (PL6.1.98)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

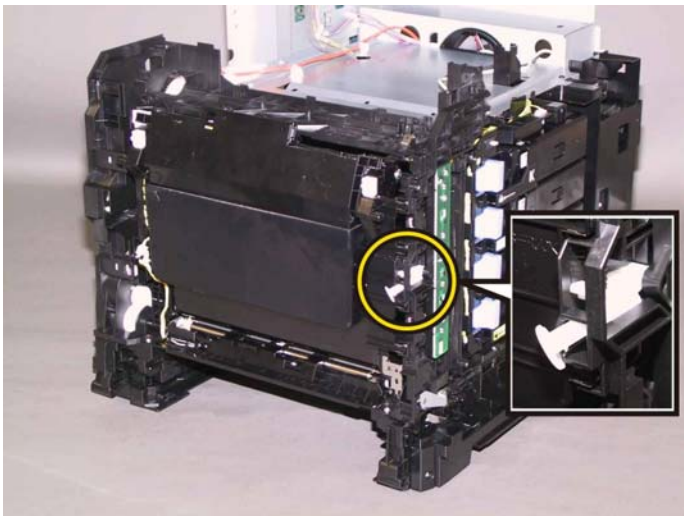
6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER REAR. (Removal 17)

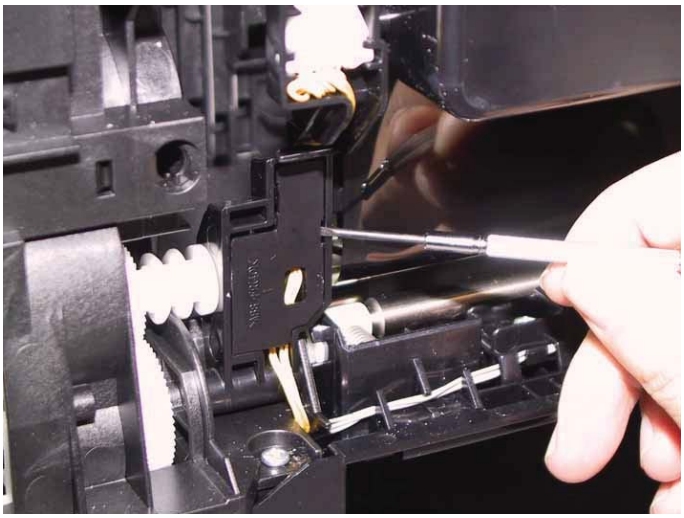
8) Remove the COVER SIDE L LOW. (Removal 20)

9) Remove the KIT SHAFT PIVOT. (Removal 45)

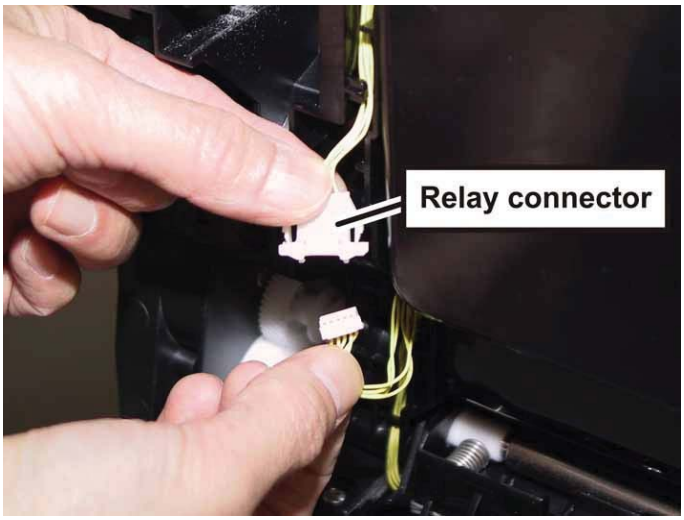
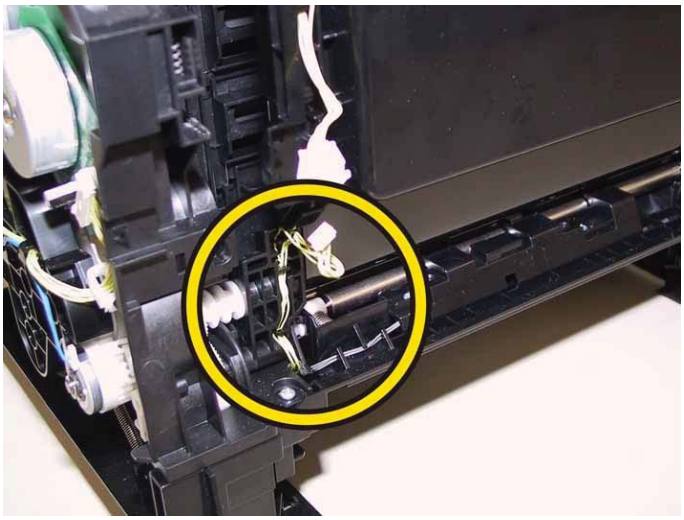
10) Remove the COVER ASSY FRONT. (Removal 46)

11) Insert the SHAFT PIVOT (PL10.2.14) to the hole of the frame, to fix the TRANSFER ASSY (PL6.1.7).	

Note: When carrying out the work described next procedure, take care not to scratch the belt surface of the TRANSFER ASSY.

12) Release the hook of the COVER HARNESS 2 (PL6.1.8), using a miniature screwdriver, and then remove the COVER HARNESS 2.	

Note: When carrying out the work described below, leave the relay connector on the TRANSFER ASSY harness side.

13) Release the harness from the pegs of the TRANSFER ASSY, disengage the connector (P/J281) of the TRANSFER ASSY.	
14) Release the harness coming from printer from hook of the TRANSFER ASSY.	

15) Tilt the TRANSFER ASSY slowly.

16) Remove the KIT PIVOT. (Removal 47)

17) Remove the TRANSFER ASSY from the printer.	

Removal 49 UPPER UNIT (Reference only)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

17) Remove the COVER SIDE L LOW. (Removal 20)

18) Remove the KIT SHAFT PIVOT. (Removal 45)

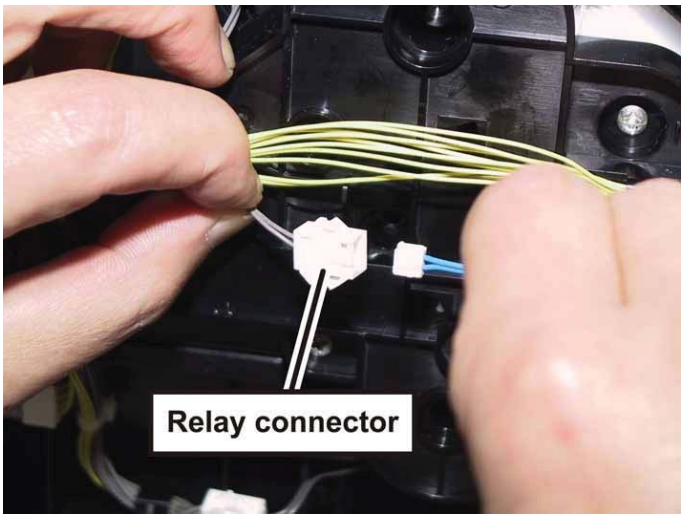
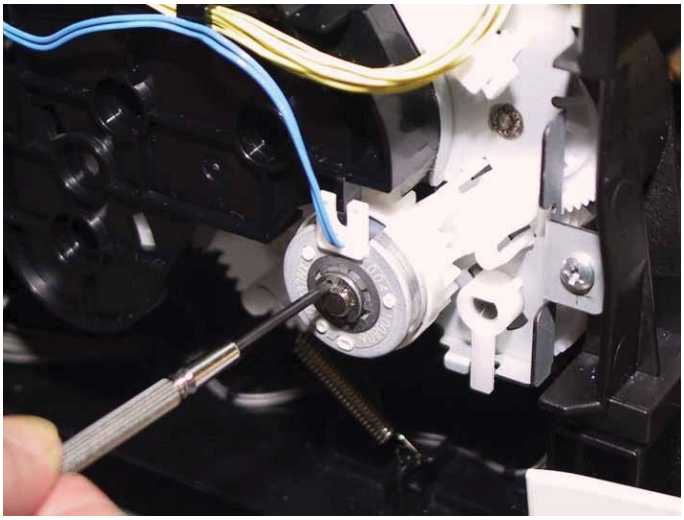
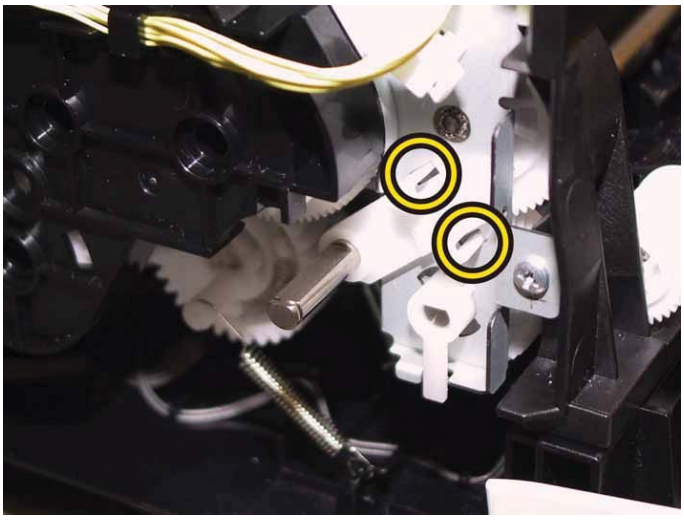
19) Remove the COVER ASSY FRONT. (Removal 46)

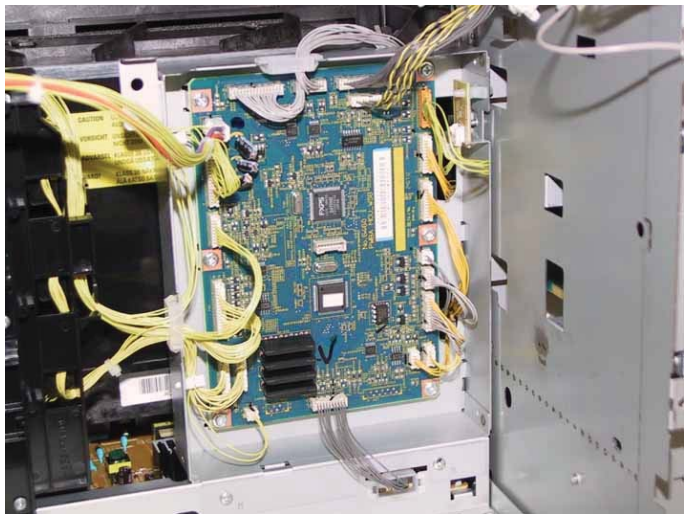
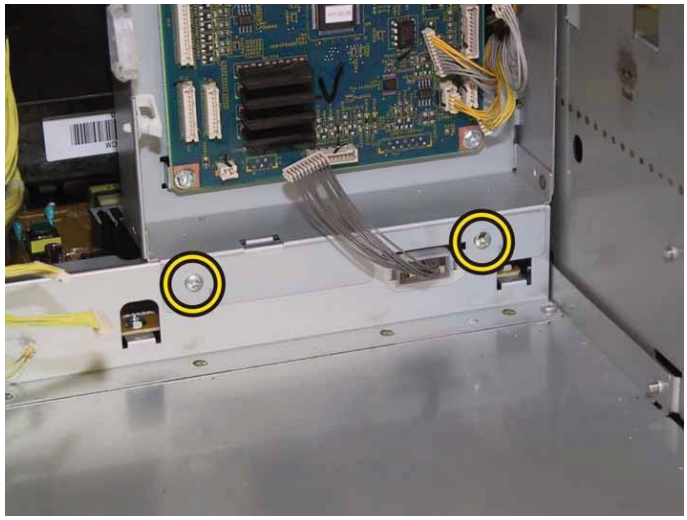
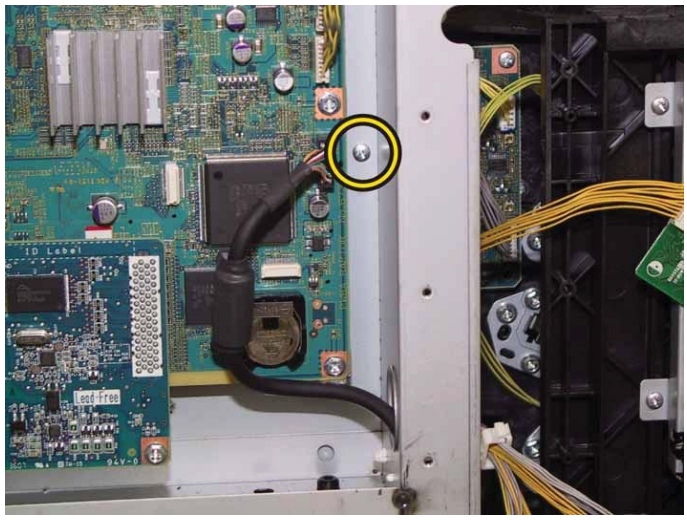
20) Remove the KIT PIVOT. (Removal 47)

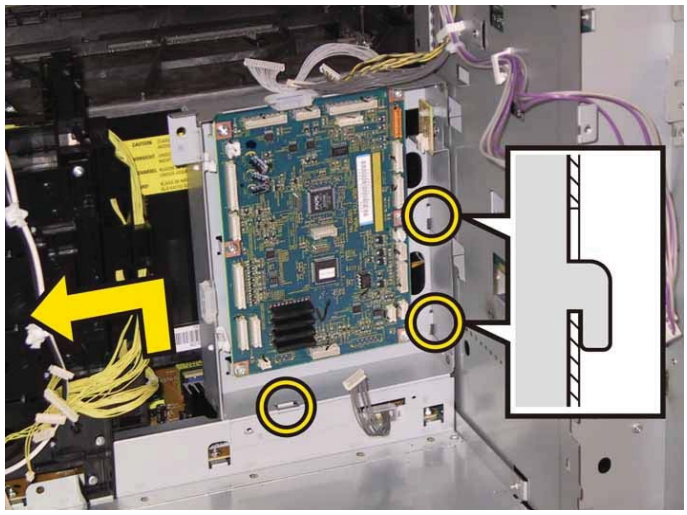
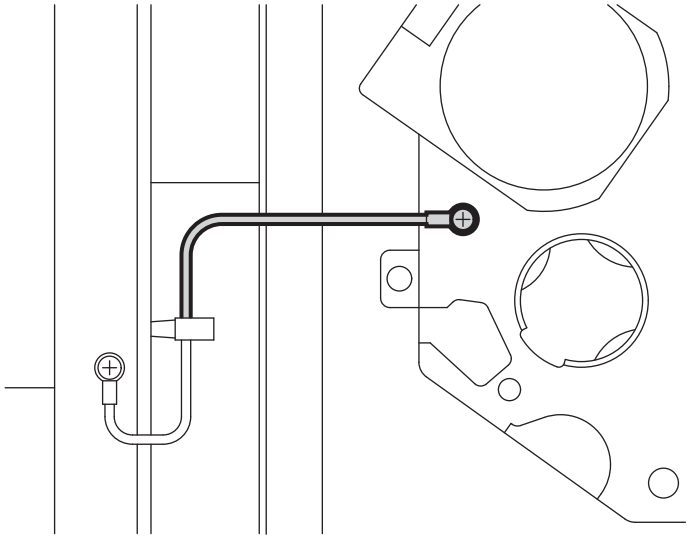
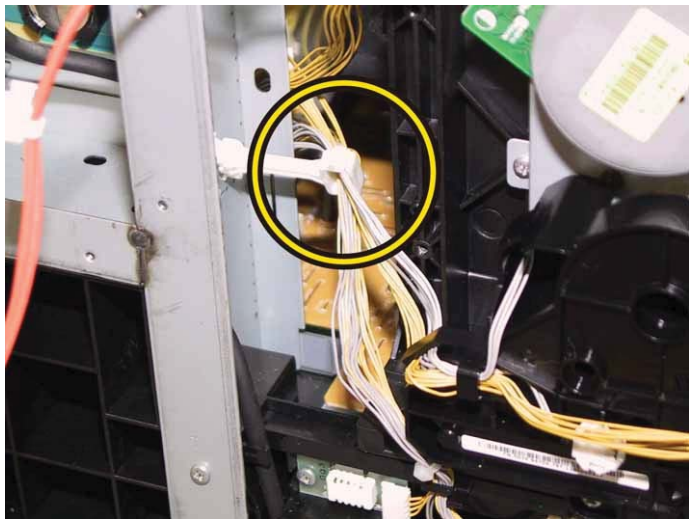
21) Remove the KIT TRANSFER & PIVOT. (Removal 48)

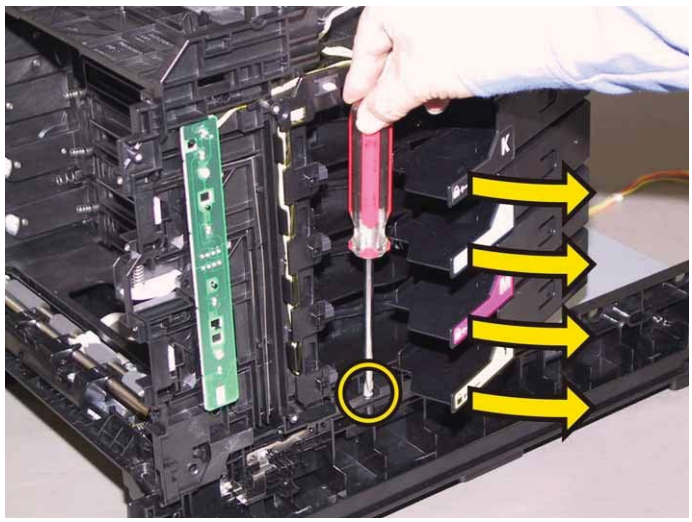
22) Release the harness of the CLUTCH ASSY DRV (PL10.4.1) from the hook of the DRIVE ASSY PH (PL7.1.4).	

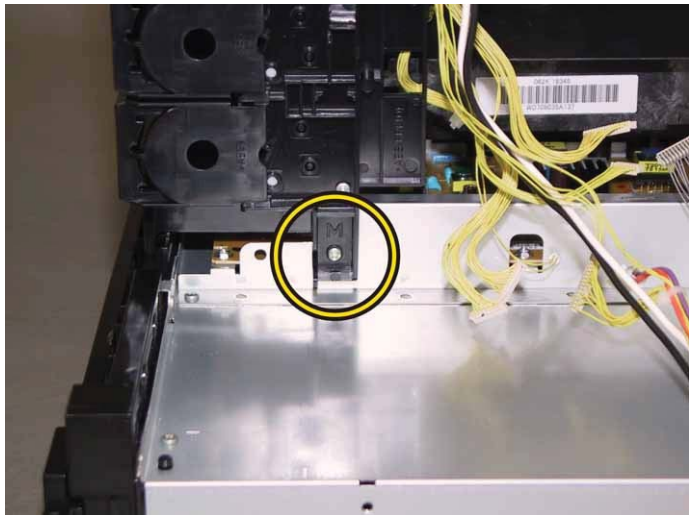
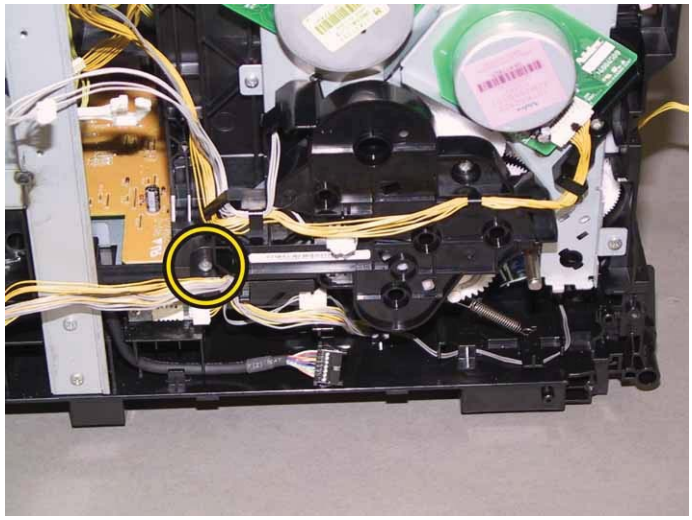
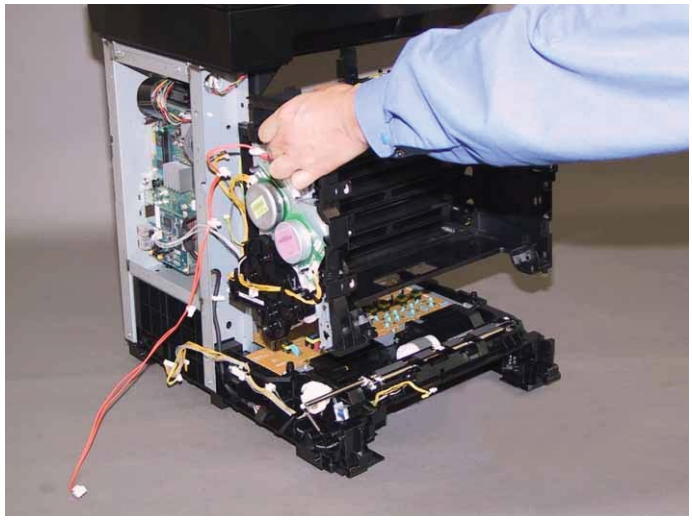
Note: When carrying out the work described below, leave the relay connector on the printer harness side.

23) Disengage the connector (P/J262) of the CLUTCH ASSY DRV.	
24) Remove the E-ring that fixes the CLUTCH ASSY DRV to the shaft, using a miniature screwdriver, remove the CLUTCH ASSY DRV.	
25) Release the two hooks of the BEARING REGI (PL10.4.2), remove the BEARING REGI from the shaft.	

26) Disengage all the connectors of the PWBA MCU (PL10.7.7) and PWBA EEPROM (PL10.7.6), pull the harnesses out from the hole of the CHASSIS MCU (PL10.7.2).	
27) Remove the two screws (silver, 6mm) that fix the under part of the CHASSIS MCU.	
28) Remove the one screw (silver, 6mm) that fixes the side part of the CHASSIS MCU.	

29) Release the three tabs of the CHASSIS MCU from the holes of the printer, remove the CHASSIS MCU together with the PWBA MCU from the printer.	
30) Remove the one screw (silver, 6m) that fix the HARNESS ASSY GND (PL7.1.5) to the DRIVE ASSY SUB, remove the HARNESS ASSY GND.	
31) Release all the harnesses from the CLAMP LOCKING (PL10.5.10).	

32) Remove the two screws (silver, tap, 8mm) that fix the front side of the printer frame.	
33) Remove the two screws (silver, tap, 8mm) that fix the under part of the DISPENSER ASSY.	
34) Open the HOLDER ASSY TCRU (K), (C), (M), and (Y), remove the one screw (silver, tap, 8mm) that fixes the right side of the printer frame.	

35) Remove the one screw (silver, M4, 6mm) that fixes the rear side of the DISPENSER ASSY.	
36) Remove the one screw (silver, tap, 8mm) that fixes the left side of the printer frame.	
37) Remove the UPPER UNIT.	

Removal 50 PWBA HVPS (PL10.7.1)

Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

17) Remove the COVER SIDE L LOW. (Removal 20)

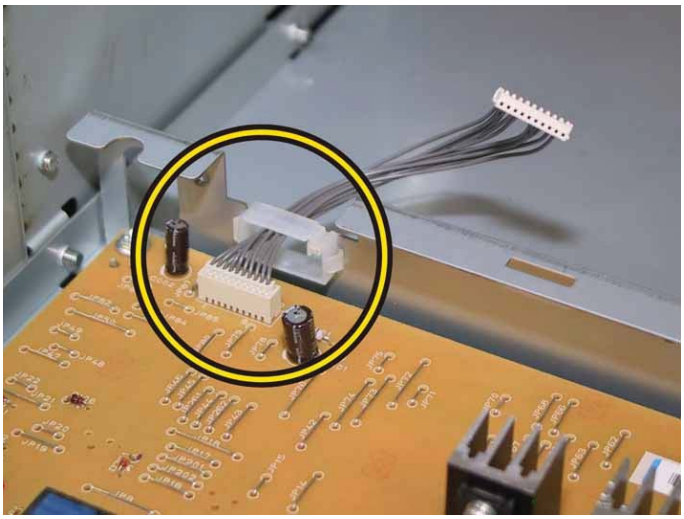
18) Remove the KIT SHAFT PIVOT. (Removal 45)

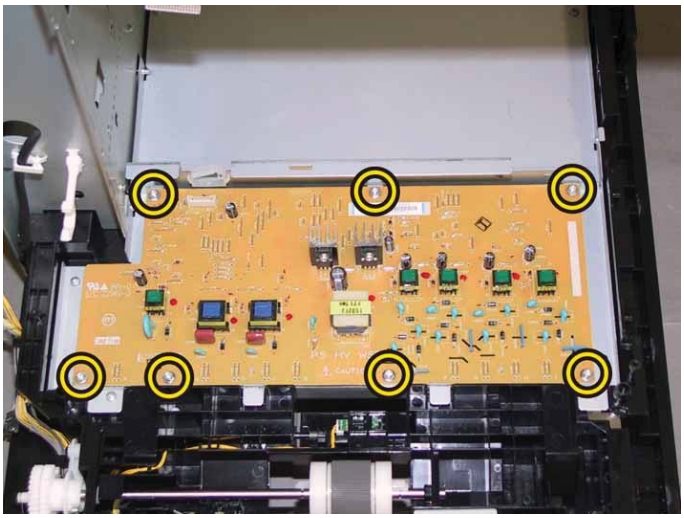
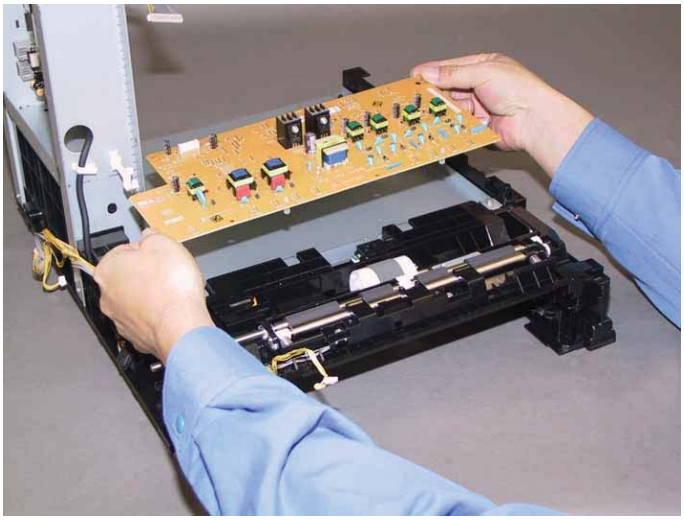
19) Remove the COVER ASSY FRONT. (Removal 46)

20) Remove the KIT PIVOT. (Removal 47)

21) Remove the KIT TRANSFER & PIVOT. (Removal 48)

22) Remove the UPPER UNIT. (Removal 49)

23) Open the EDGING SADDLE (PL10.5.6), removal the HARN ASSY HVPS (PL10.8.5) from the PWBA HVPS (PL10.7.1).	

24) Remove the seven screws (silver, with flange, 6mm) that fix the PWBA HVPS to the CHASSIS ASSY HVPS (PL10.5.7).	
25) Remove the PWBA HVPS from the CHASSIS ASSY HVPS.	

Removal 51 SENSOR PHOTO: REGI (PL3.2.13)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

17) Remove the COVER SIDE L LOW. (Removal 20)

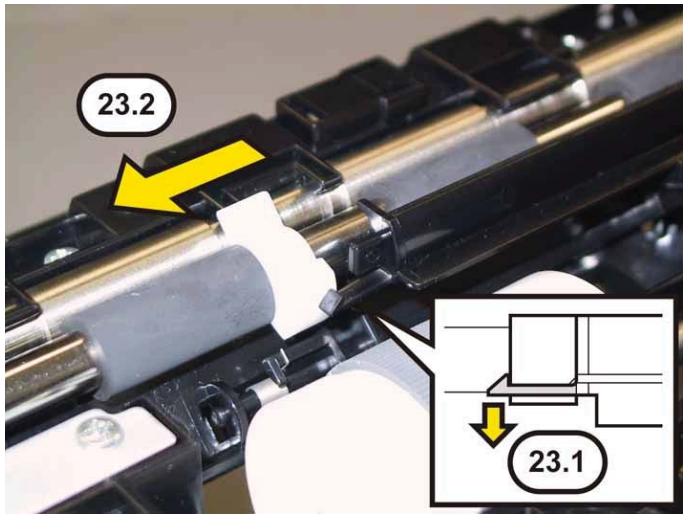
18) Remove the KIT SHAFT PIVOT. (Removal 45)

19) Remove the COVER ASSY FRONT. (Removal 46)

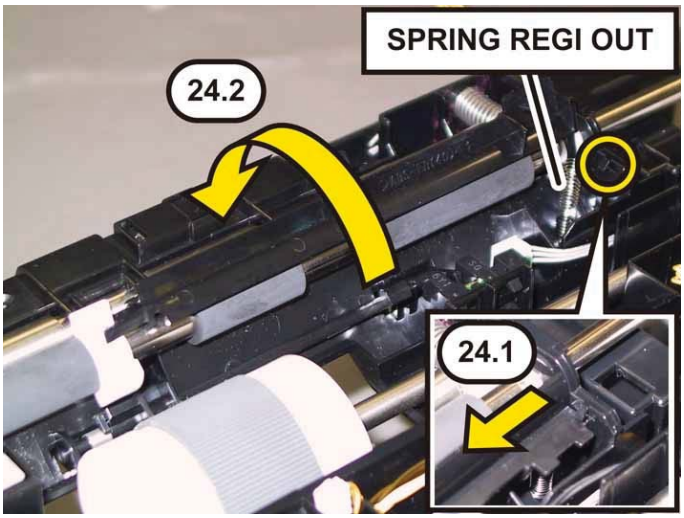
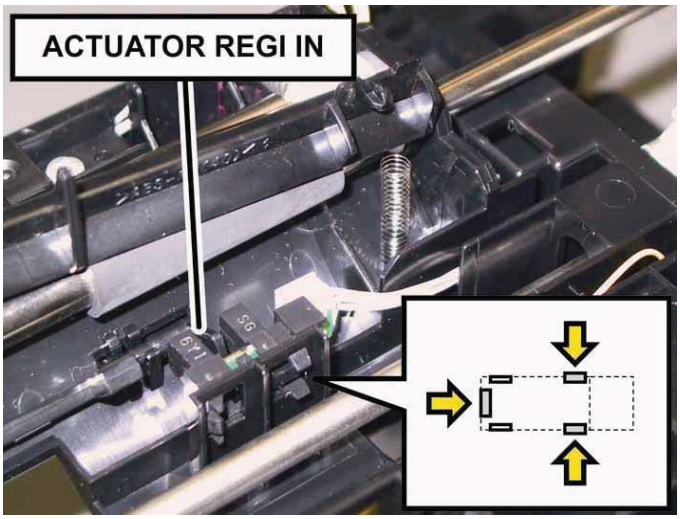
20) Remove the KIT PIVOT. (Removal 47)

21) Remove the KIT TRANSFER & PIVOT. (Removal 48)

22) Remove the UPPER UNIT. (Removal 49)

23) Release the hook of the ACTUATOR REGI OUT (PL3.2.6), shift the ACTUATOR REGI ROLL (PL3.2.8) to right side.	

Note: When carrying out the work described next procedure, take care not to drop and lose the SPRING REGI OUT (PL3.2.7).

24) Release the ACTUATOR REGI OUT from the hook on the CHUTE UP (PL3.2.26), open the ACTUATOR REGI OUT.	
25) Release the three hooks that fix the SENSOR PHOTO: REGI (PL3.2.13) to the FEEDER ASSY NV AIO (PL10.4.97), and remove the SENSOR PHOTO: REGI. **Note: When carrying out the work this procedure, it is easier to push the ACTUATOR REGI IN (PL3.2.11) to downward.**	
26) Disengage the connector (P/J232) of the SENSOR PHOTO: REGI.	

Removal 52 ROLL ASSY REGI (PL3.2.9)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

17) Remove the COVER SIDE L LOW. (Removal 20)

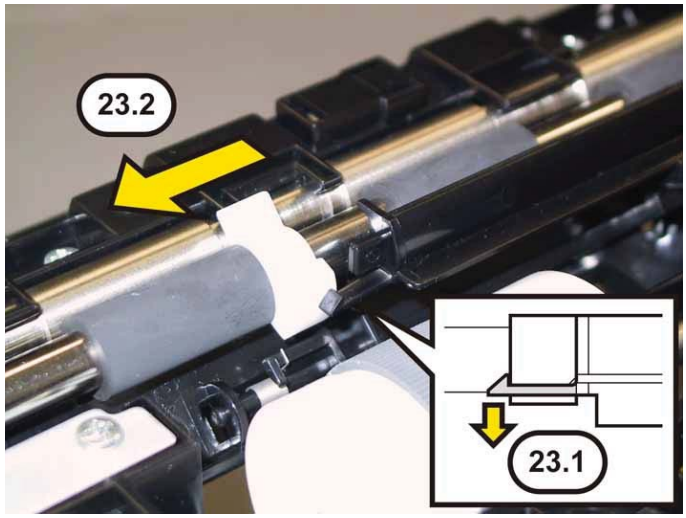
18) Remove the KIT SHAFT PIVOT. (Removal 45)

19) Remove the COVER ASSY FRONT. (Removal 46)

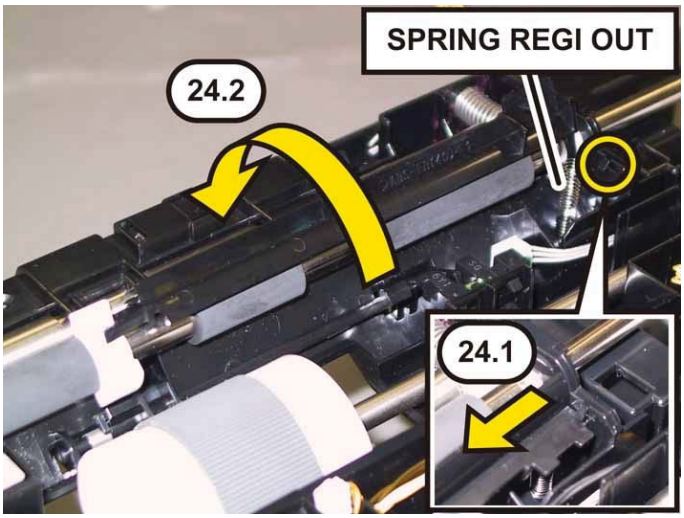
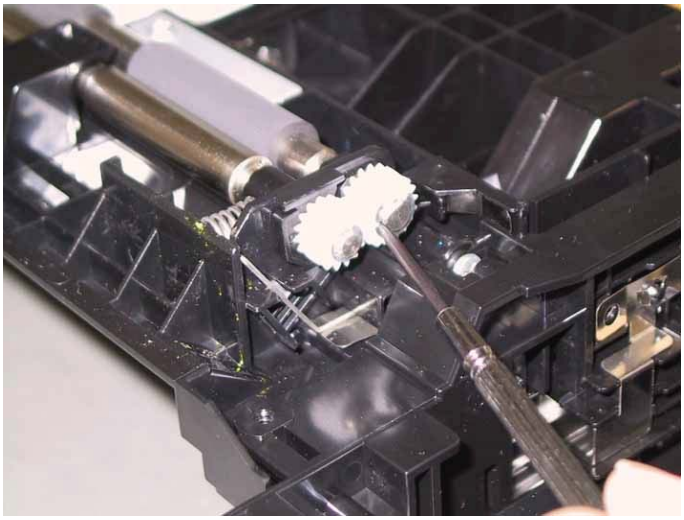
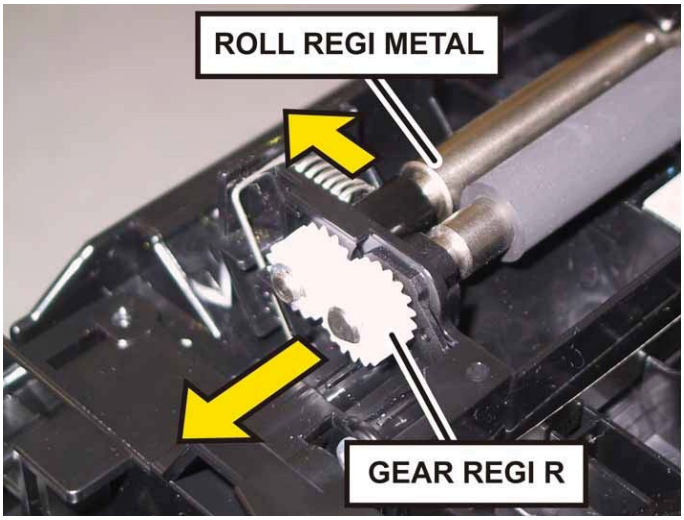
20) Remove the KIT PIVOT. (Removal 47)

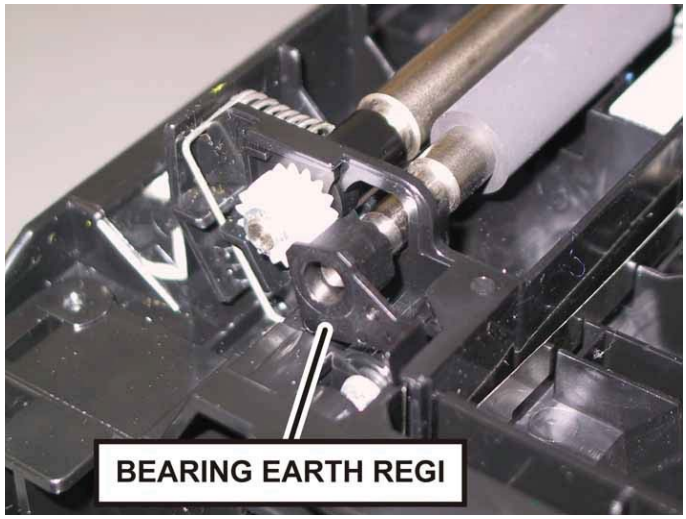
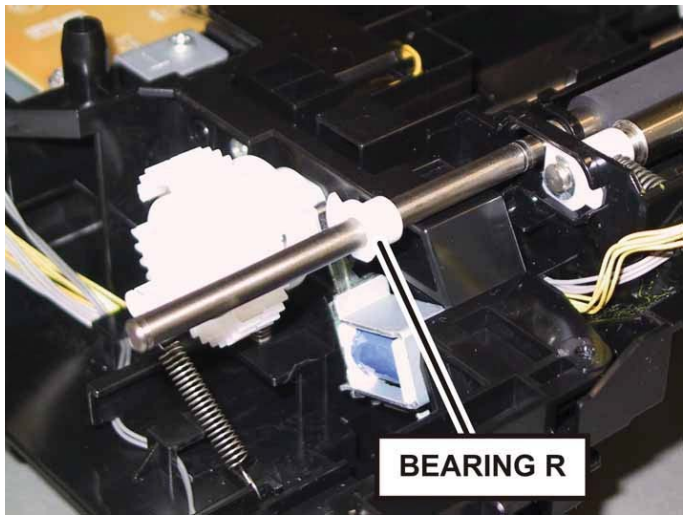
21) Remove the KIT TRANSFER & PIVOT. (Removal 48)

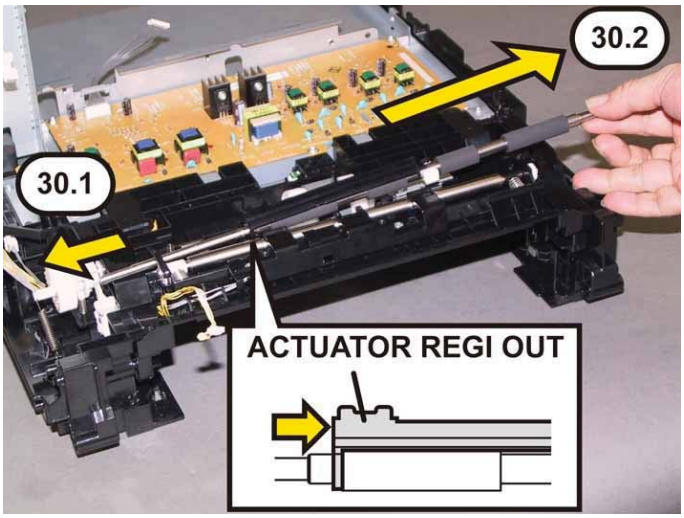
22) Remove the UPPER UNIT. (Removal 49)

23) Release the hook of the ACTUATOR REGI OUT (PL3.2.6), shift the ACTUATOR REGI ROLL (PL3.2.8) to right side.	

Note: When carrying out the work described next procedure, take care not to drop and lose the SPRING REGI OUT (PL3.2.7).

24) Release the ACTUATOR REGI OUT from the hook on the CHUTE UP (PL3.2.26), open the ACTUATOR REGI OUT.	
25) Remove the E-ring that fixes the GEAR REGI R (PL3.2.22) to the ROLL ASSY REGI (PL3.2.9), using a miniature screwdriver.	
26) Remove the GEAR REGI R from the ROLL ASSY REGI. **Note: When carrying out the work this procedure, it is easier to push the ROLL REGI METAL (PL3.2.10) to frontward.**	

27) Remove the BEARING EARTH REGI (PL3.2.21) from the ROLL ASSY REGI. **Note: When carrying out the work this procedure, it is easier to push the ROLL REGI METAL (PL3.2.10) to frontward.**	
28) Remove the E-ring that fixes the BEARING R (PL3.2.31) to the ROLL ASSY REGI, using a miniature screwdriver.	
29) Remove the BEARING R from the ROLL ASSY REGI. **Note: When carrying out the work this procedure, it is easier to push the ROLL REGI METAL (PL3.2.10) to frontward.**	

30) Shift the ROLL ASSY REGI to left to remove the right shaft of the ROLL ASSY REGI, remove the ROLL ASSY REGI from the FEEDER ASSY NV AIO (PL10.4.97) together with the ACTUATOR REGI OUT and the ACTUATOR REGI ROLL. **Note: When carrying out the work this procedure, move the ACTUATOR REGI OUT to right until it stops.**	

Removal 53 ACTUATOR REGI IN (PL3.2.11)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

17) Remove the COVER SIDE L LOW. (Removal 20)

18) Remove the KIT SHAFT PIVOT. (Removal 45)

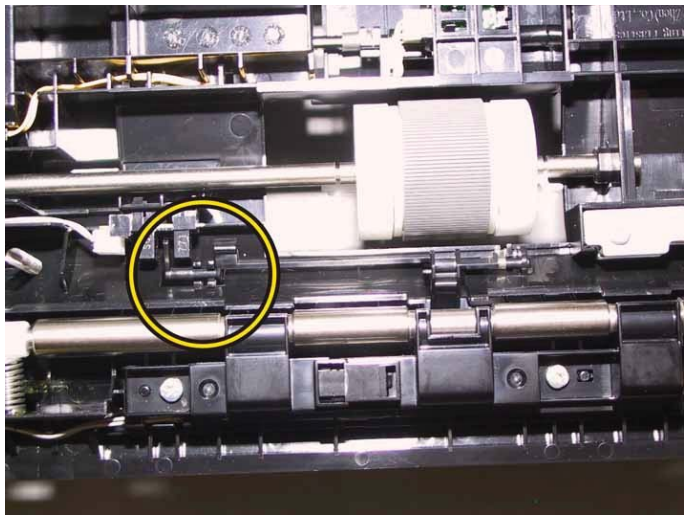
19) Remove the COVER ASSY FRONT. (Removal 46)

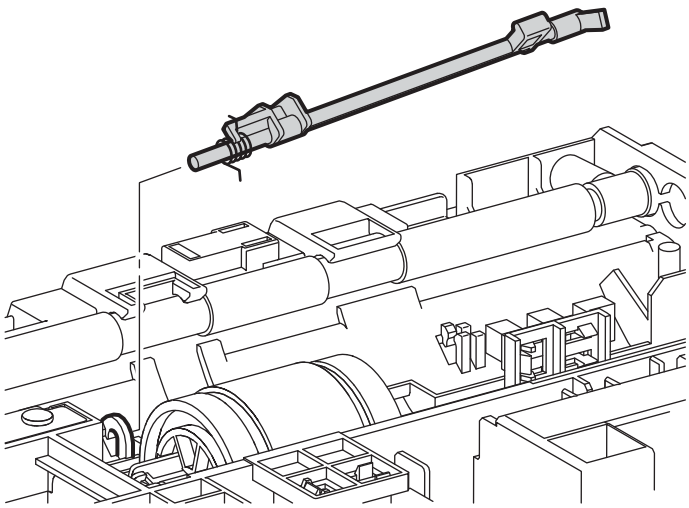
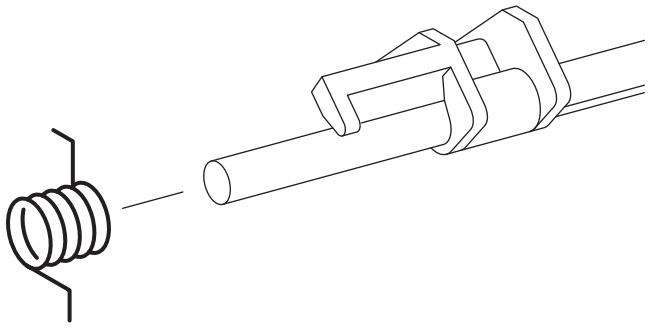
20) Remove the KIT PIVOT. (Removal 47)

21) Remove the KIT TRANSFER & PIVOT. (Removal 48)

22) Remove the UPPER UNIT. (Removal 49)

23) Remove the ROLL ASSY REGI. (Removal 52)

24) Release the left shaft of the ACTUATOR REGI IN (PL3.2.11) from the hook of the CHUTE UP (PL3.2.26).	

25) Remove the ACTUATOR REGI IN and the SPRING ACT REGI (PL3.2.12) by releasing the right shaft of the ACTUATOR REGI IN from the hole of the CHUTE UP.	
26) Remove the SPRING ACT REGI from the ACTUATOR REGI IN.	

Removal 54 SENSOR PHOTO: CST NO PAPER (PL3.2.13)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

17) Remove the COVER SIDE L LOW. (Removal 20)

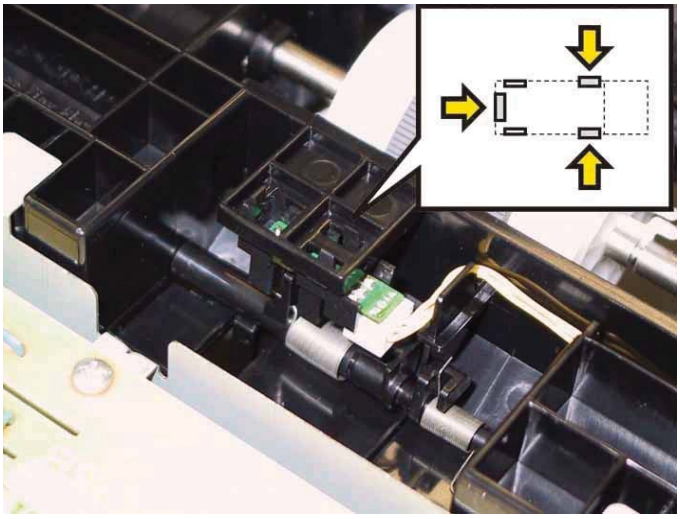
18) Remove the KIT SHAFT PIVOT. (Removal 45)

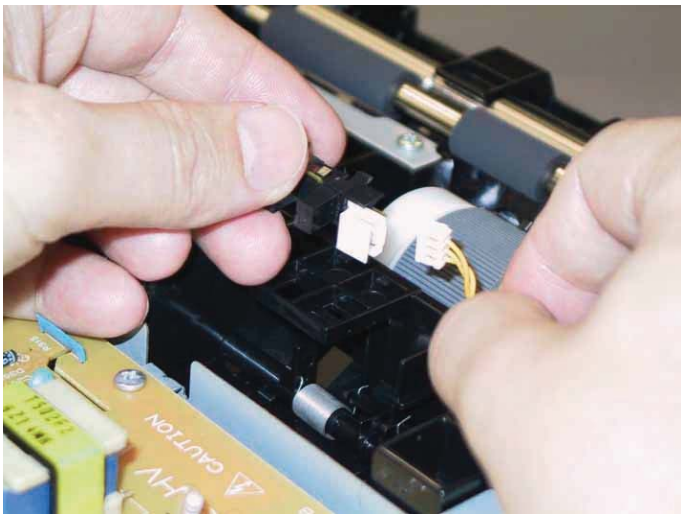
19) Remove the COVER ASSY FRONT. (Removal 46)

20) Remove the KIT PIVOT. (Removal 47)

21) Remove the KIT TRANSFER & PIVOT. (Removal 48)

22) Remove the UPPER UNIT. (Removal 49)

23) Release the three hooks that fix the SENSOR PHOTO: CST NO PAPER (PL3.2.13) to the FEEDER ASSY NV AIO (PL10.4.97), and remove the SENSOR PHOTO: CST NO PAPER.	

24) Disengage the connector (P/J234) of the SENSOR PHOTO: CST NO PAPER.	

Removal 55 ACTUATOR ASSY NO PAPER (PL3.2.32)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

9) Remove the COVER REAR. (Removal 17)

10) Remove the COVER TOP. (Removal 18)

11) Remove the SHIELD ASSY ESS. (Removal 22)

12) Remove the CHASSIS ASSY LVPS. (Removal 28)

13) Remove the COVER SCANNER LOW. (Removal 37)

14) Remove the COVER POLE IN. (Removal 38)

15) Remove the PLATE ASSY DUCT. (Removal 39)

16) Remove the CHASSIS ASSY BREAKER. (Removal 40)

17) Remove the COVER SIDE L LOW. (Removal 20)

18) Remove the KIT SHAFT PIVOT. (Removal 45)

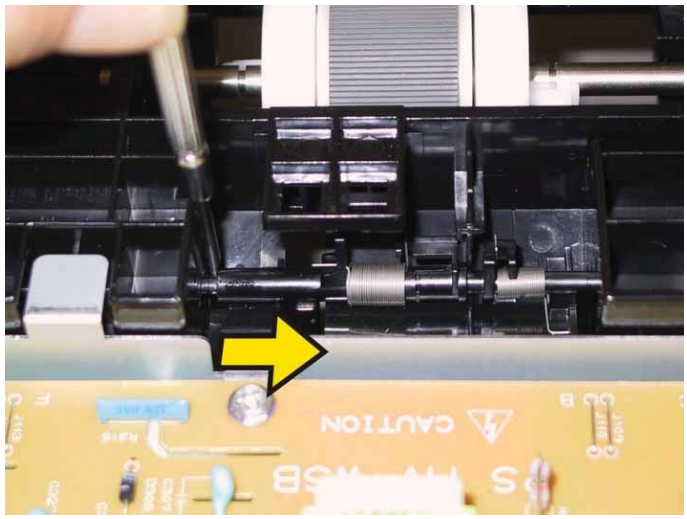
19) Remove the COVER ASSY FRONT. (Removal 46)

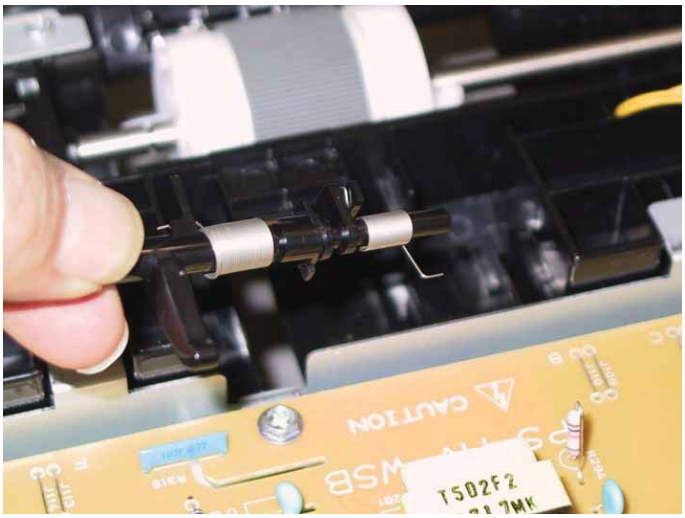
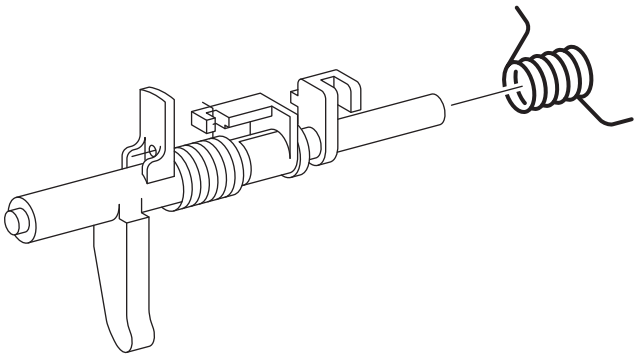
20) Remove the KIT PIVOT. (Removal 47)

21) Remove the KIT TRANSFER & PIVOT. (Removal 48)

22) Remove the UPPER UNIT. (Removal 49)

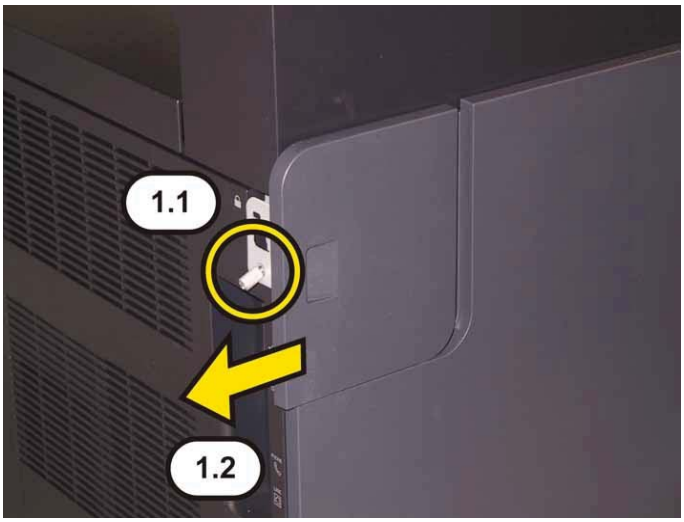
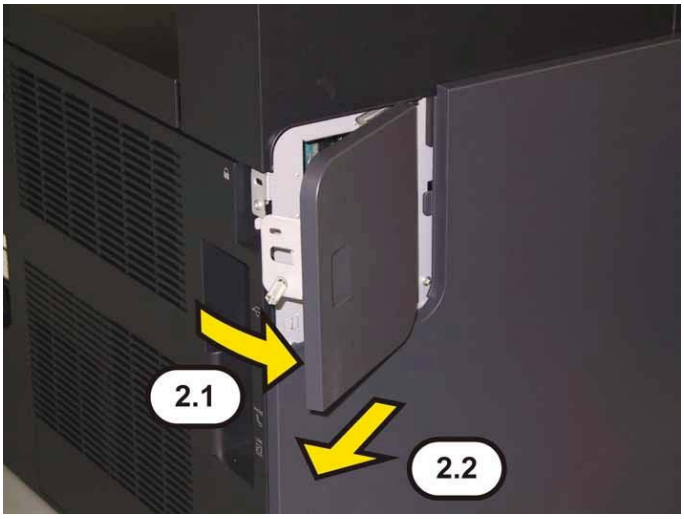
23) Remove the SENSOR PHOTO: CST NO PAPER. (Removal 54)

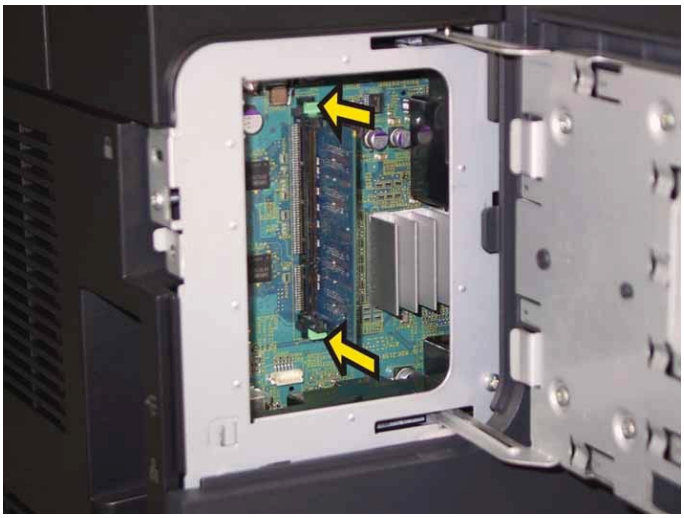
24) Release the right shaft of the ACTUATOR ASSY NO PAPER (PL3.2.32) from the hole of the CHUTE UP (PL3.2.26), using a miniature screwdriver.	

25) Remove the ACTUATOR ASSY NO PAPER and the SPRING STP (PL3.2.16) by releasing the left shaft of the ACTUATOR ASSY NO PAPER from the hole of the CHUTE UP.	
26) Remove the SPRING STP from the ACTUATOR ASSY NO PAPER.	

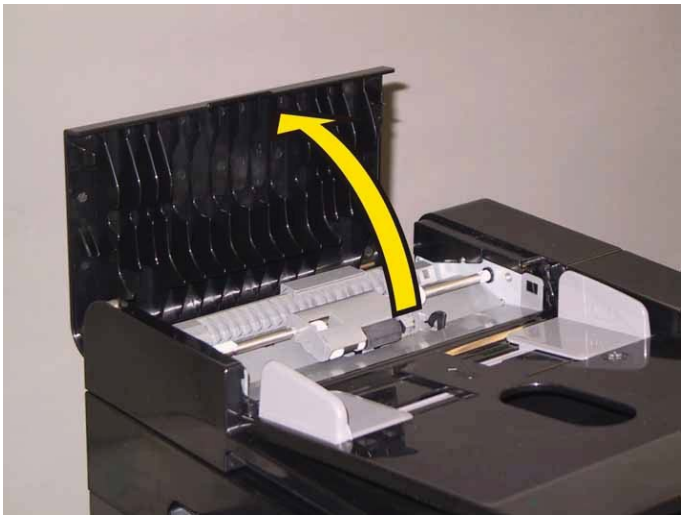
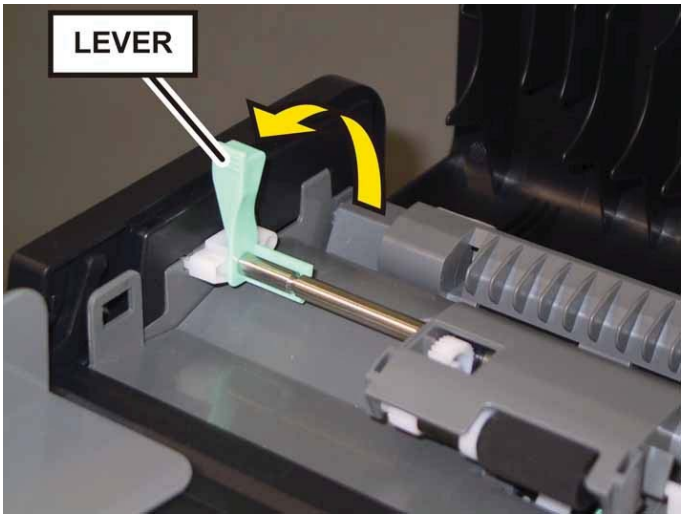
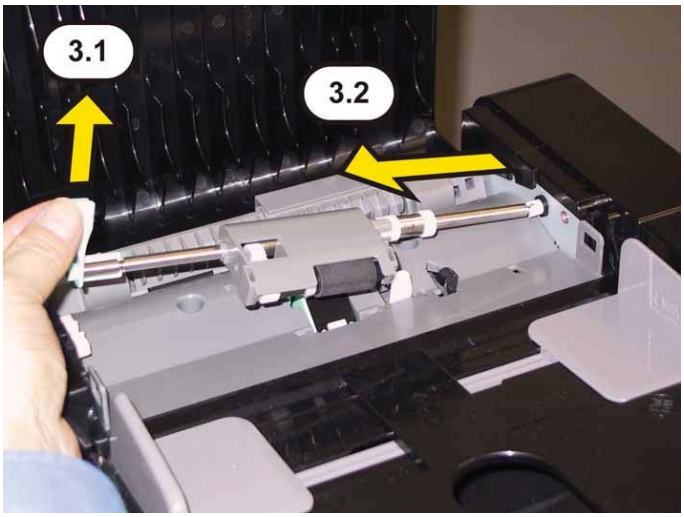
Removal 56 MEMORY CARD (PL10.6.8)

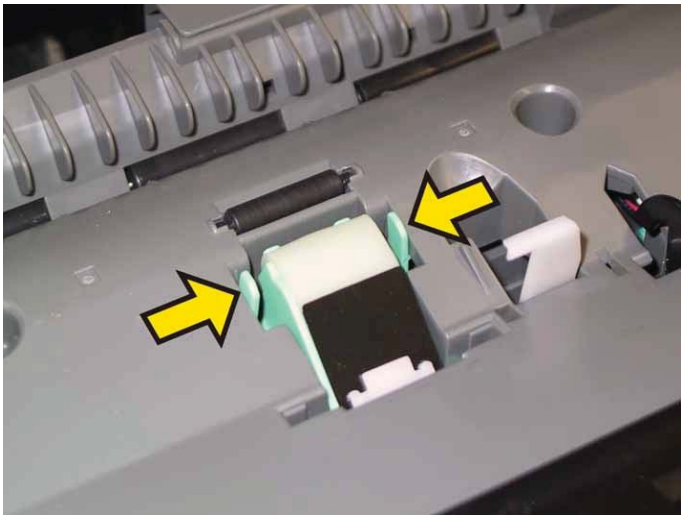
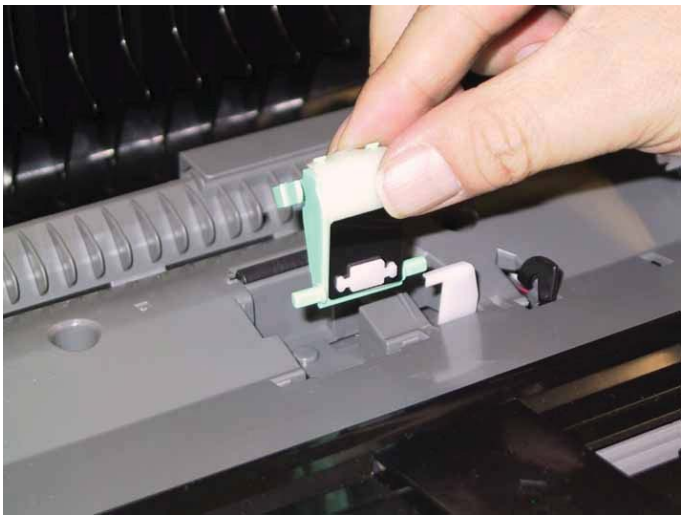
Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Loosen the SCREW KNURLING, shift the COVER ASSY ESS (PL10.1.11) to rear side.	
2) Slowly pull the COVER ASSY ESS until it stop, and then slide it rearward obliquely. **Note: Do not pull the COVER ASSY ESS fast. Otherwise, the hinge may be caught and damaged.**	
3) Open the COVER ASSY ESS completely.	

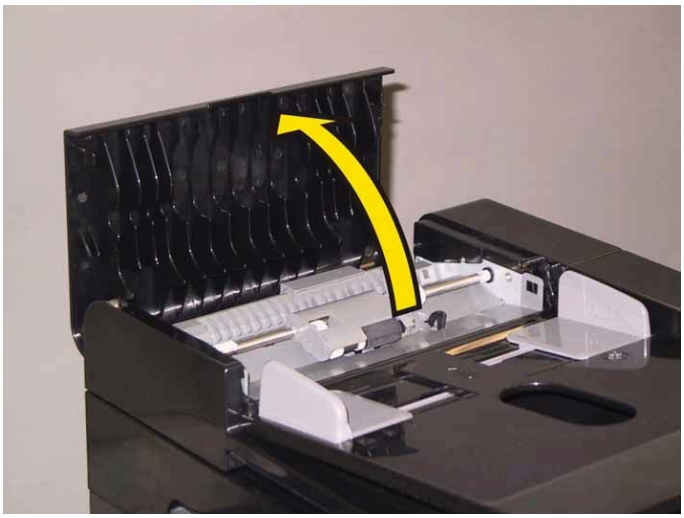
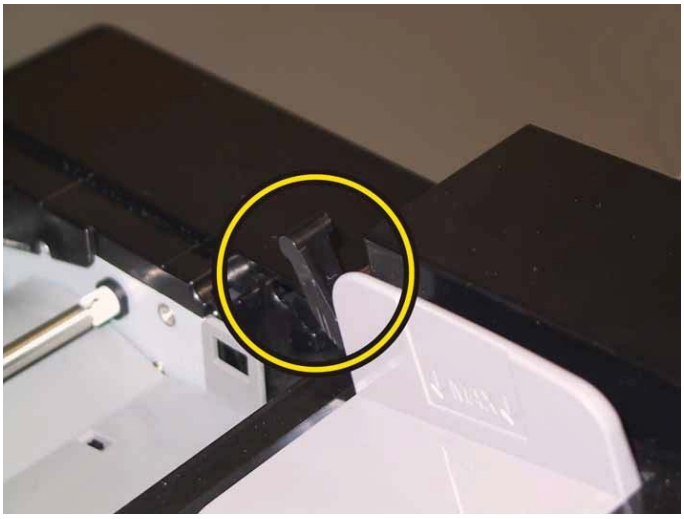
4) Push the release latches of the socket to release the MEMORY CARD (PL10.6.8).	
5) Remove the MEMORY CARD.	

Removal 57 ADF FEED ROLL & SEPARATOR ROLL KIT (PL10.10.97)

1) Open the COVER ADF JAM (PL10.10.2).	
2) Raise the LEVER of the ROLL ASSY FEED (PL10.10.3) by 90 degrees.	
3) After removing the lever of the ROLL ASSY FEED from the guide, pull the rear shaft out. Remove the ROLL ASSY FEED.	

4) Release the two hooks of the PAD ASSY SEPARATOR (PL10.10.4), raise the PAD ASSY SEPARATOR.	
5) Remove the PAD ASSY SEPARATOR.	

Removal 58 TRAY ASSY ADF INPUT (PL10.10.11)

1) Open the COVER ADF JAM (PL10.10.2).	
2) Bend the rear side hinge of the TRAY ASSY ADF INPUT (PL10.10.11), release the boss from the hole of the ADF ASSY.	
3) Release the front side boss of the TRAY ASSY ADF INPUT from the hole of the ADF ASSY, remove the RAY ASSY ADF INPUT.	

Removal 59 KIT IIT ASSY SUB (PL10.9.99)

1) Remove the Tray 1. (Removal 1)

2) Open the COVER ASSY FRONT (PL10.2.1).

Note: Cover the drum of the PHD unit to avoid exposure to light.

3) Remove the PHD Unit. (Removal 3)

Note: The FUSER part is very hot. Take added care not to get burned when performing the service operation.

4) Remove the FUSER ASSY. (Removal 9)

5) Remove the COVER ASSY SIDE R. (Removal 10)

6) Remove the COVER ASSY SIDE L. (Removal 14)

7) Remove the COVER POLE OUT. (Removal 15)

8) Remove the COVER ASSY ESS. (Removal 16)

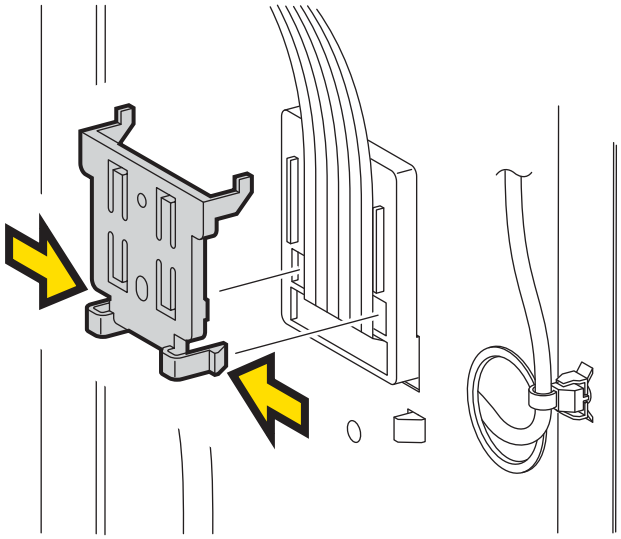
9) Remove the COVER REAR. (Removal 17)

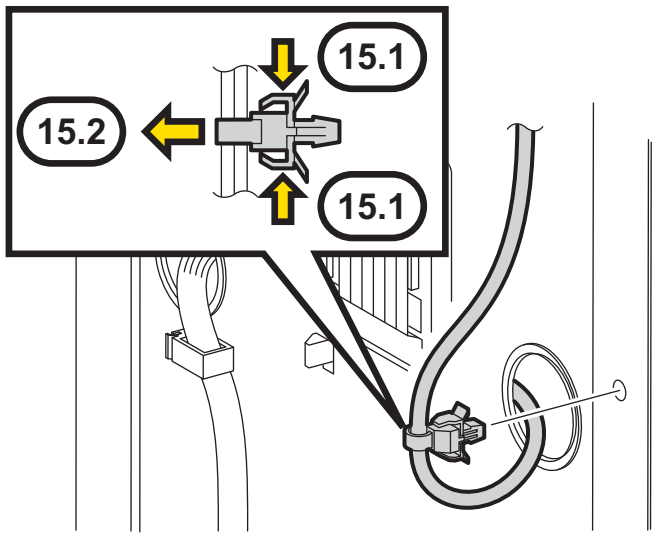
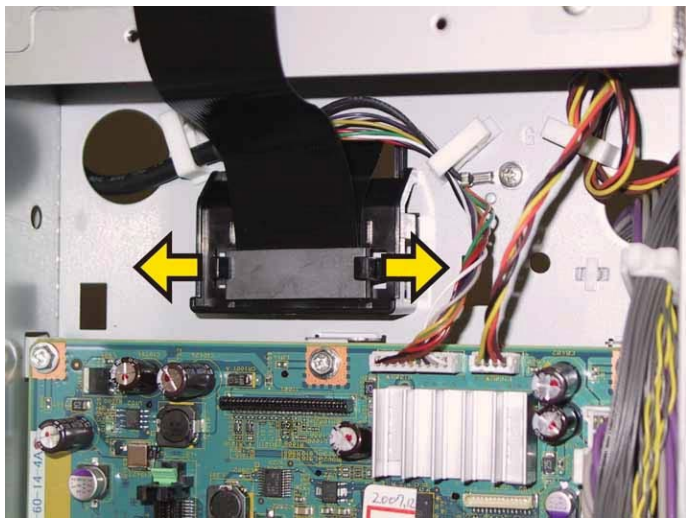
10) Remove the COVER TOP. (Removal 18)

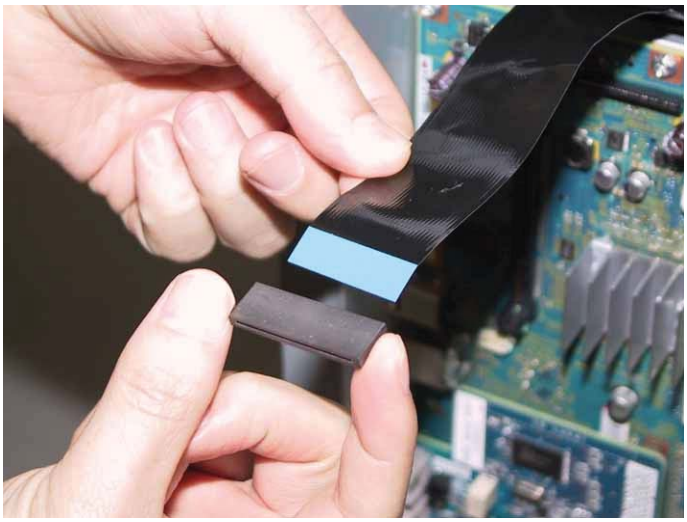
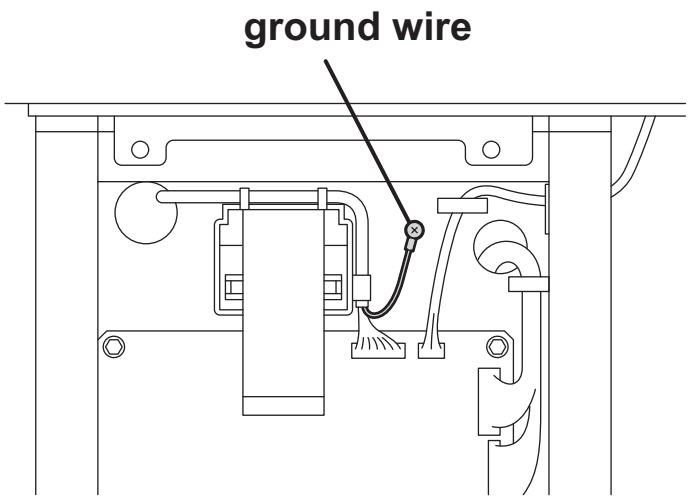
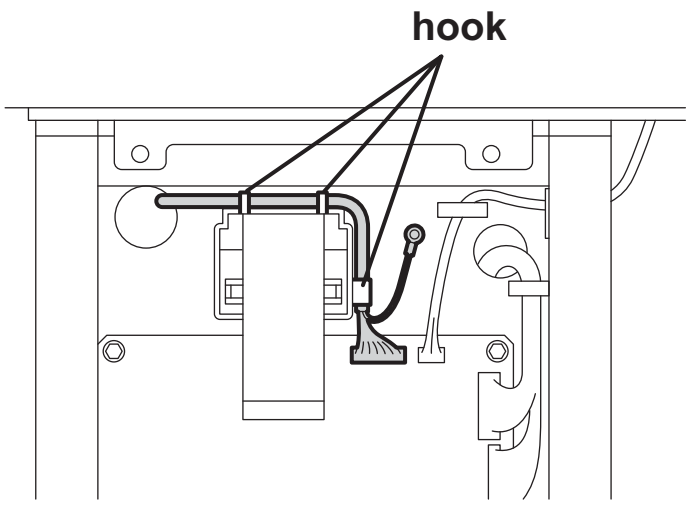
11) Remove the SHIELD ASSY ESS. (Removal 22)

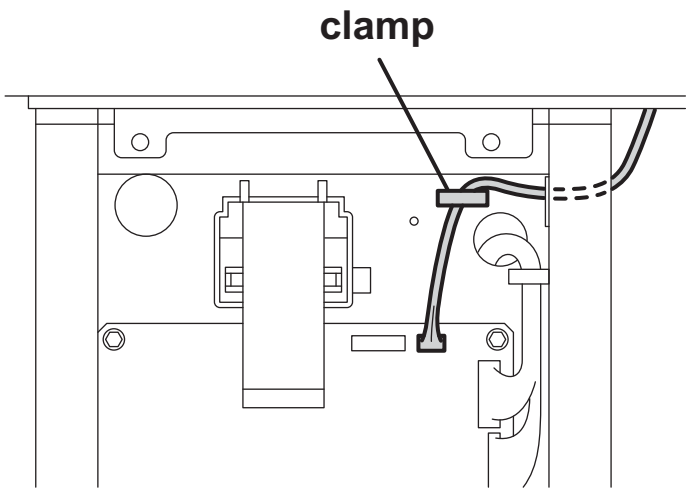
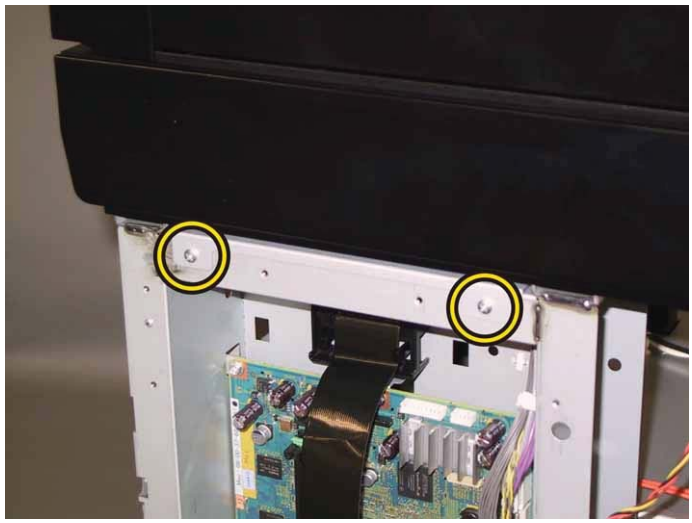
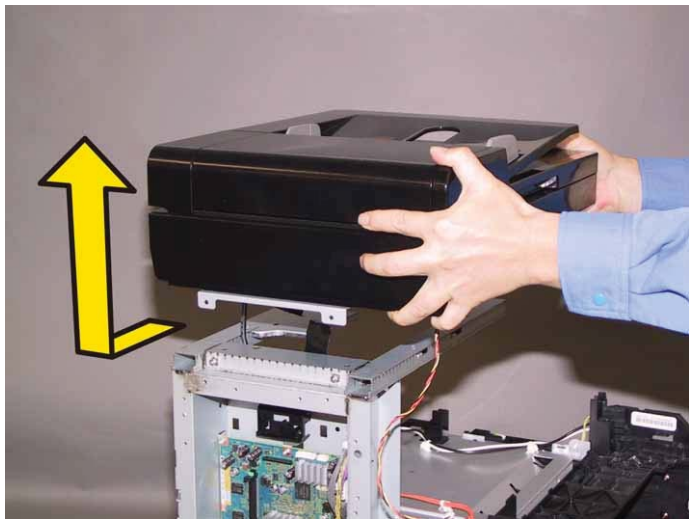
12) Remove the COVER SCANNER LOW. (Removal 37)

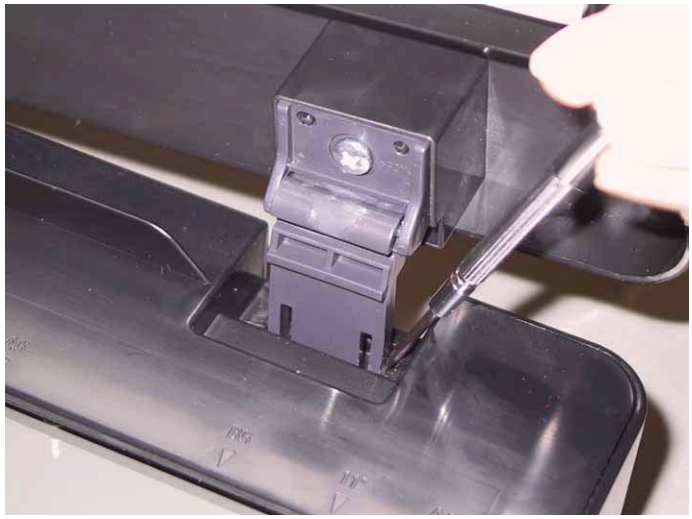
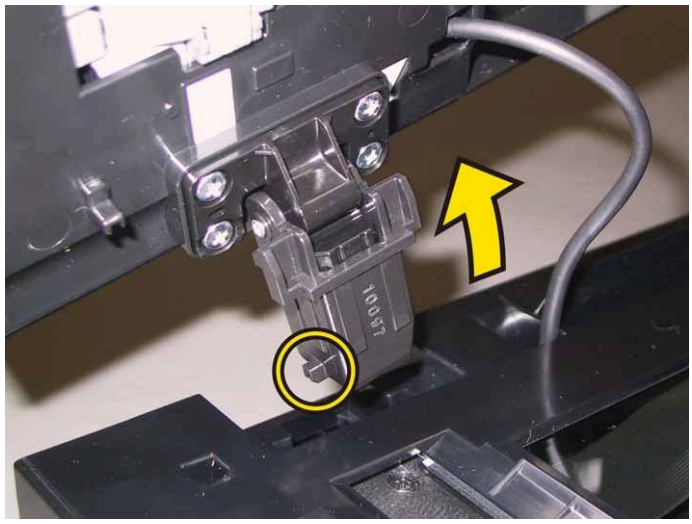
13) Remove the COVER POLE IN. (Removal 38)

14) Release the two hooks of the COVER FFC (PL10.5.9), remove the COVER FFC from the printer.	

15) Remove the clamp that fixes the harness of the ADF ASSY from the printer.	
16) Disengage the flat cable (P/J1001) of the IIT ASSY SUB (PL10.9.2) on the PWBA CONT AIO (PL10.6.6).	
17) Release the two hooks of the HOLDER FFC (PL10.5.4), remove the CORE FERR FFC (PL10.9.4) from the printer.	

18) Remove the CORE FERR FFC from the flat cable of the IIT ASSY SUB.	
19) Remove the one screw (silver, 6mm) that fixes the ground wire of the ADF ASSY (PL10.10.1).	
20) Disengage the connector (P/J1003) on the PWBA CONT AIO, release the harness of the ADF ASSY from the three hooks of the HOLDER FFC, pull it out to outside from the hole of the frame.	

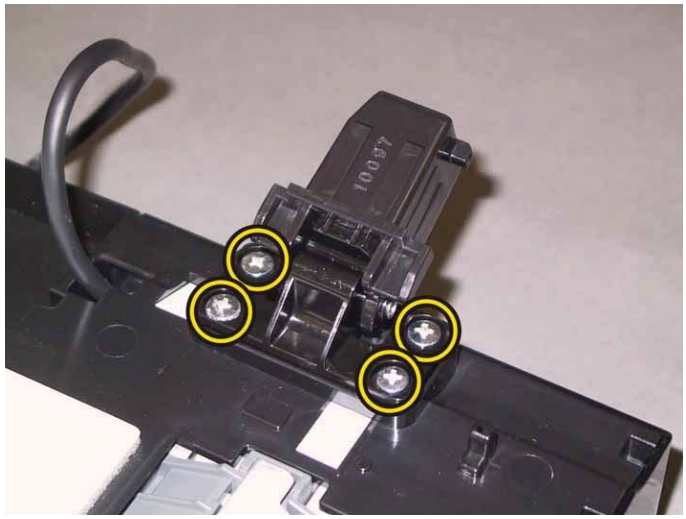
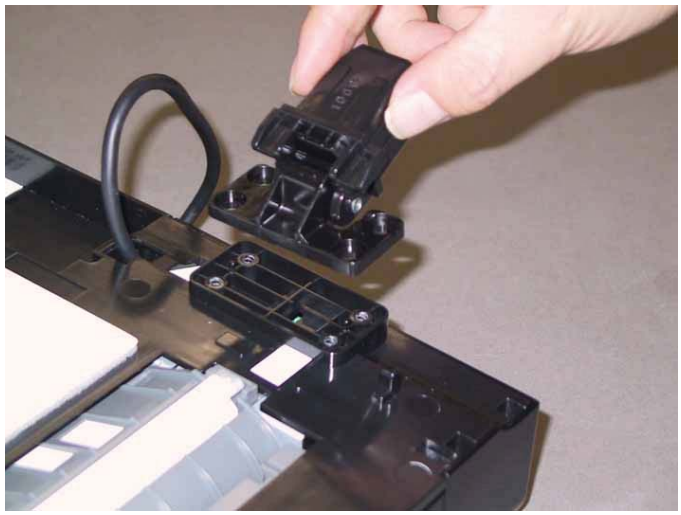
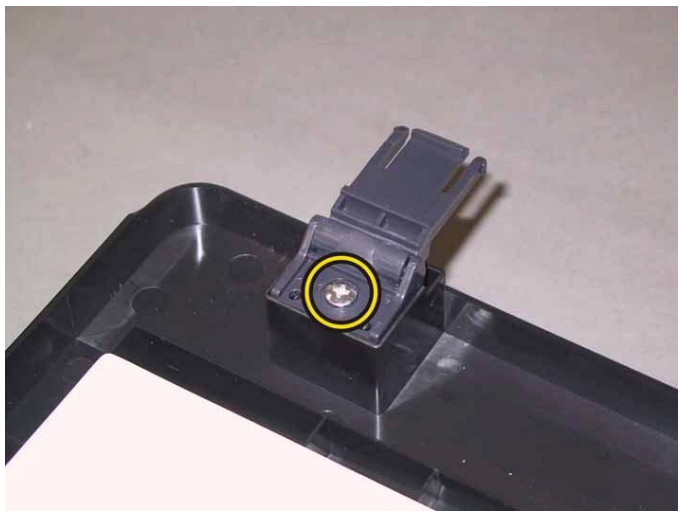
21) Disengage the connector (P/J1002) on the PWBA CONT AIO, release the harness of the IIT ASSY SUB from the clamp, pull it out to outside from the hole of the frame.	
22) Remove the two screws (silver, 6mm) that fix the IIT ASSY SUB to the printer.	
23) Shift the IIT ASSY SUB to left side to release the holes of the IIT ASSY SUB from the four studs, lift the IIT ASSY SUB up. Remove the IIT ASSY SUB together with the ADF ASSY.	

24) Release the hook of the COUNTER BALANCE R (PL10.10.23) using the miniature screwdriver, remove the COUNTER BALANCE R from the IIT ASSY SUB.	
25) Tilt the ADF ASSY to the right side, release the tab of the COUNTER BALANCE L (PL10.10.22) from the IIT ASSY SUB.	
26) Lift the ADF ASSY up, remove the harness from the hole of the IIT ASSY SUB. Remove the ADF ASSY from the IIT ASSY SUB.	

Removal 60 KIT COUNTER BALANCE (PL10.10.99)

1) Remove the TRAY ASSY ADF INPUT. (Removal 58)

2) Remove the ADF ASSY. (Removal 61).

3) Remove the four screws (silver, tap, 8mm) that fix the COUNTER BALANCE L (PL10.10.22) to the ADF ASSY.	
4) Remove the COUNTER BALANCE L from the ADF ASSY.	
5) Remove the one screw (silver, tap, 8mm) that fixes the COUNTER BALANCE R (PL10.10.23) to the ADF ASSY.	

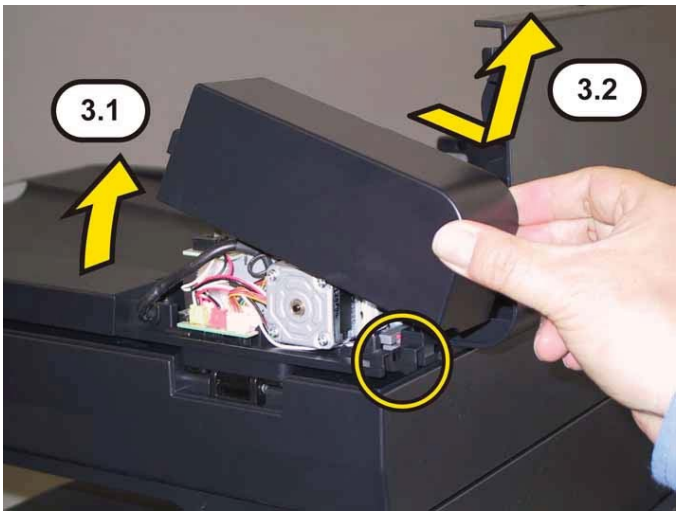
6) Remove the COUNTER BALANCE R from the ADF ASSY.	

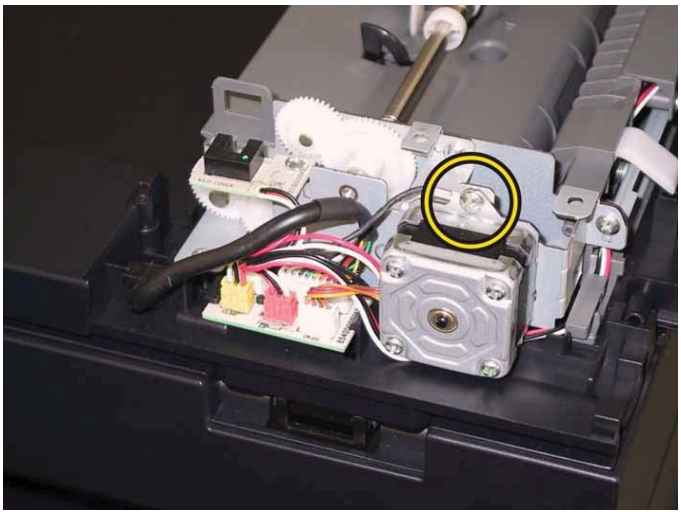
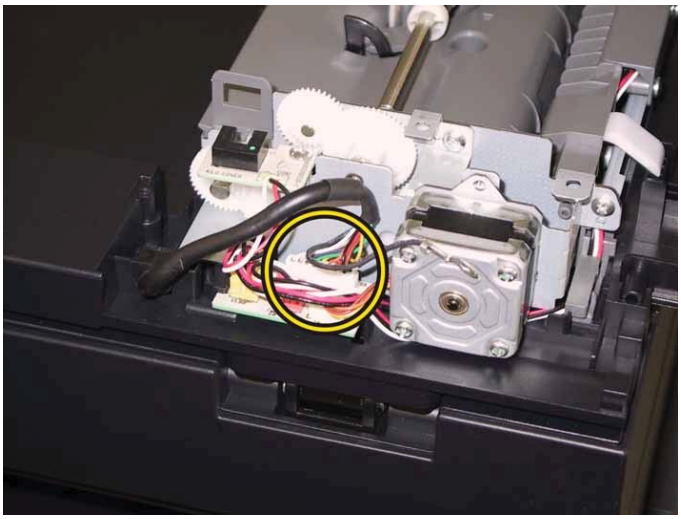
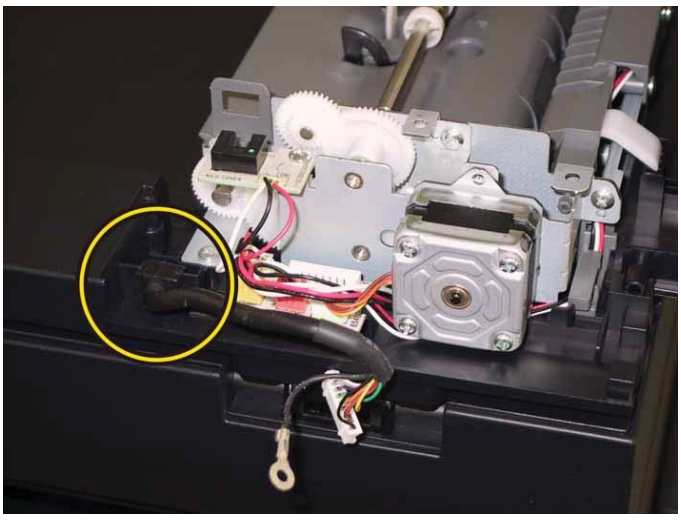
Removal 61 ADF ASSY (PL10.10.1)

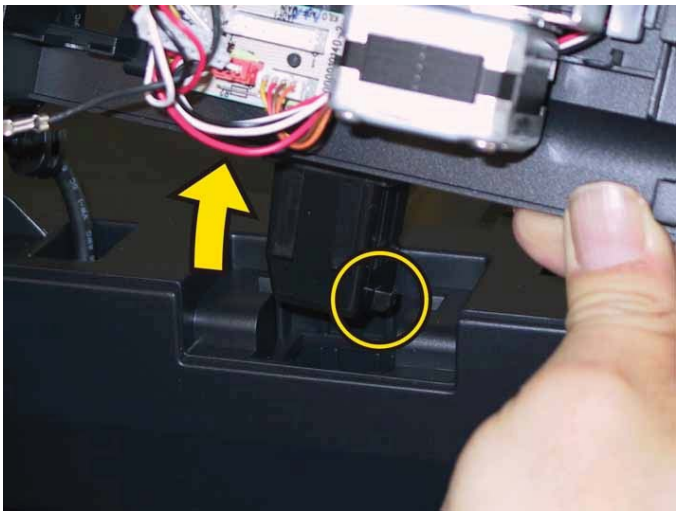
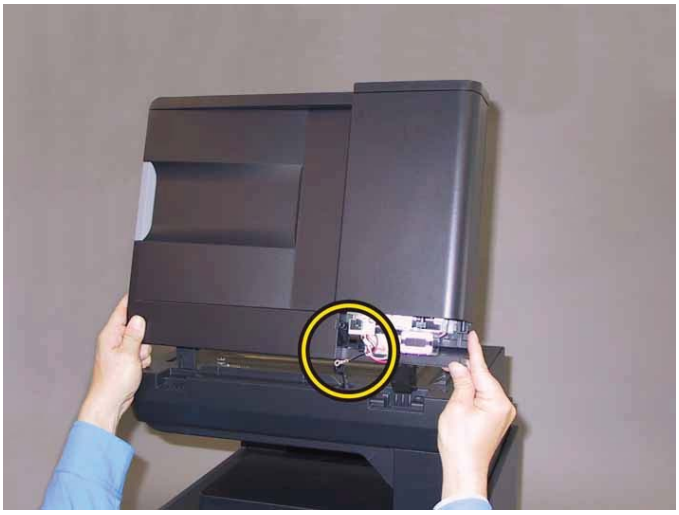
Note: The following steps show how to remove the ADF ASSY without removing the HARN ASSY ADF (PL10.10.7) from the printer.

For how to remove the ADF ASSY along with HARN ASSY ADF, refer to Removal 59 KIT IIT ASSY SUB.

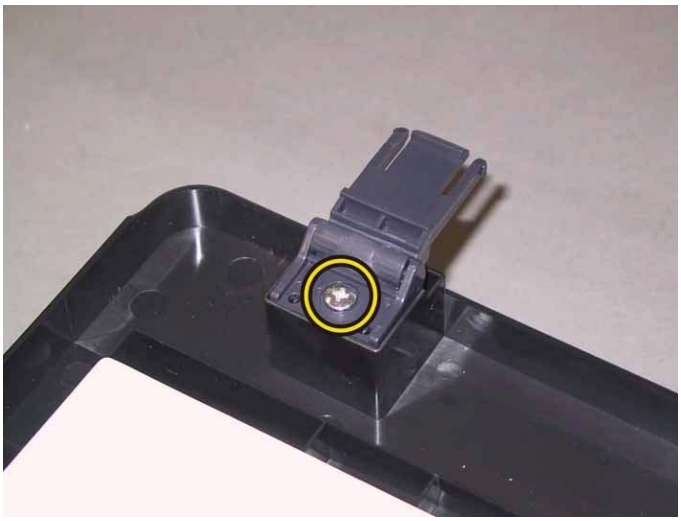
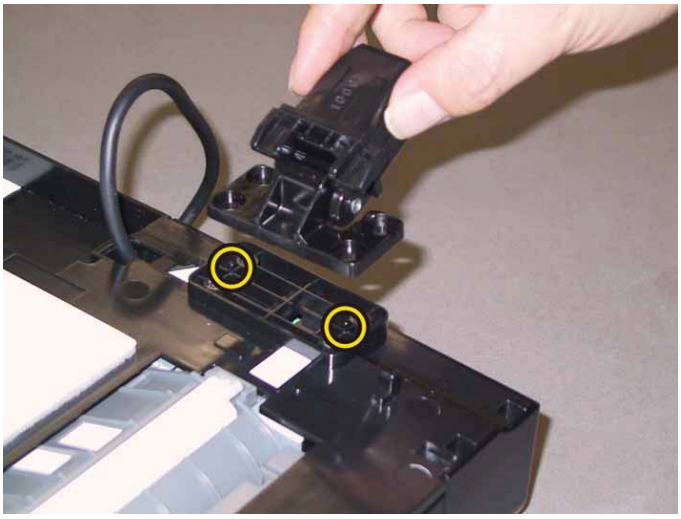
1) Remove the TRAY ASSY ADF INPUT. (Removal 58)

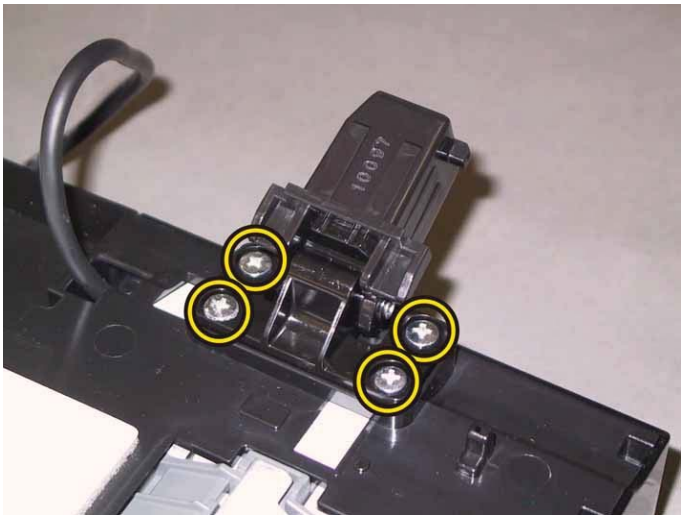
2) Remove the one screw (silver, tap, 8mm) that fixes the COVER ADF REAR (PL10.10.8) to the ADF ASSY (PL10.10.1).	
3) Slightly raise the right side of the COVER ADF REAR, and then move the COVER ADF REAR to the left until its two hooks are released.	

4) Remove the one screw (silver, 4mm) that fixes the grounding terminal of the HARN ASSY ADF (PL10.10.7) from the ADF ASSY.	
5) Disengage the connector (P/JADF1) of the HARN ASSY ADF on the PWBA.	
6) Remove the RUBBER BUSH of the HARN ASSY ADF from the ADF ASSY.	

7) Release the hook of the COUNTER BALANCE R (PL10.10.23) using the miniature screwdriver, remove the COUNTER BALANCE R from the IIT ASSY SUB (PL10.9.2).	
8) Tilt the ADF ASSY to the right side, release the tab of the COUNTER BALANCE L (PL10.10.22) from the IIT ASSY SUB.	
9) Lift the ADF ASSY up, remove the HARN ASSY ADF from the hole of the ADF ASSY. Remove the ADF ASSY from the IIT ASSY SUB.	

Replacement 1 KIT COUNTER BALANCE (PL10.10.99)

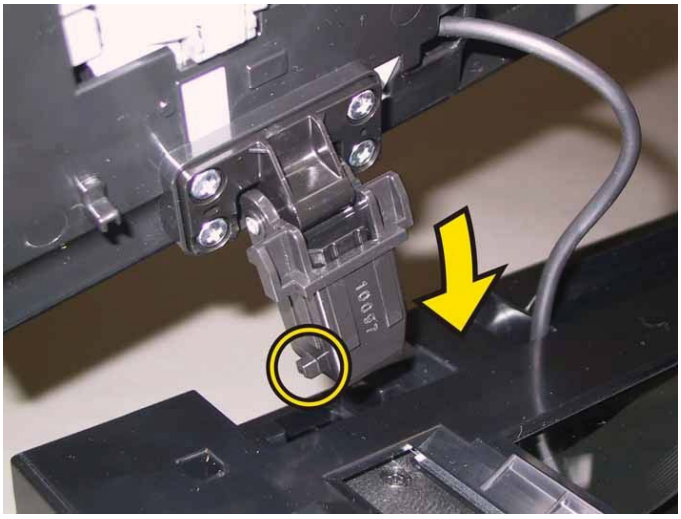
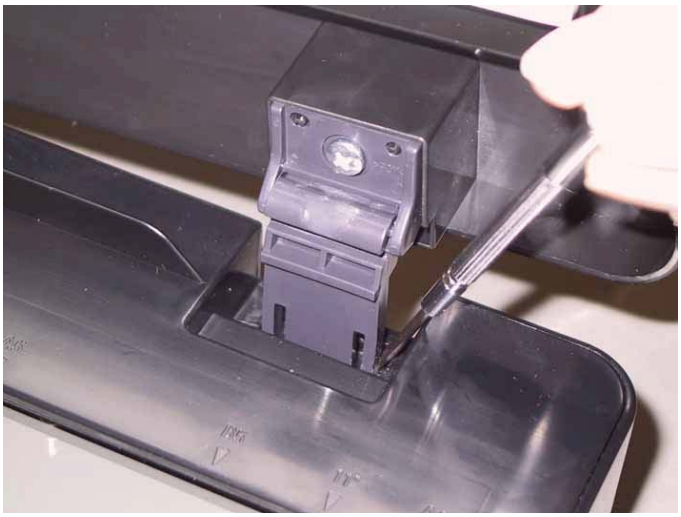
1) Mate the two holes of the COUNTER BALANCE R with the bosses of the ADF ASSY, attach the COUNTER BALANCE R.	
2) Secure the COUNTER BALANCE R to the ADF ASSY with the one screw (silver, tap, 8mm).	
3) Mate the two holes of the COUNTER BALANCE L with the bosses of the ADF ASSY, attach the COUNTER BALANCE L.	

4) Secure the COUNTER BALANCE L to the ADF ASSY with the four screws (silver, tap, 8mm).	

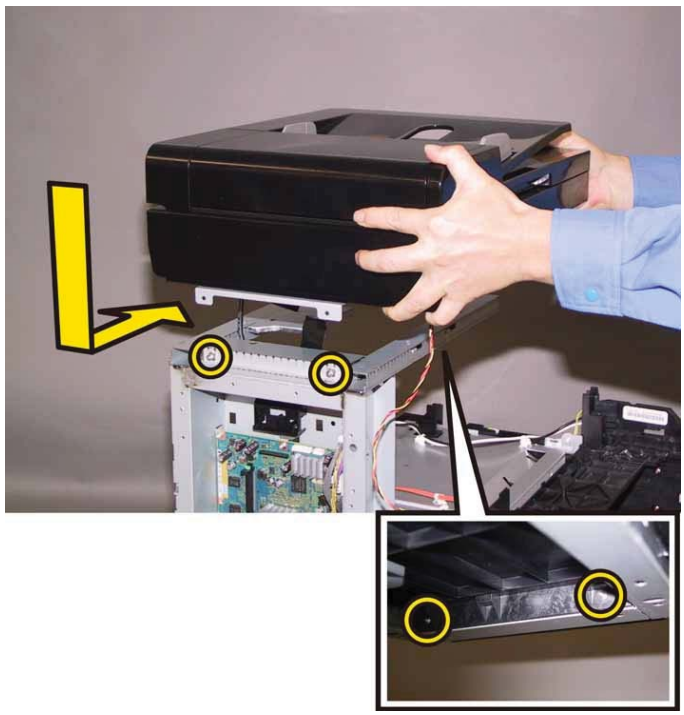
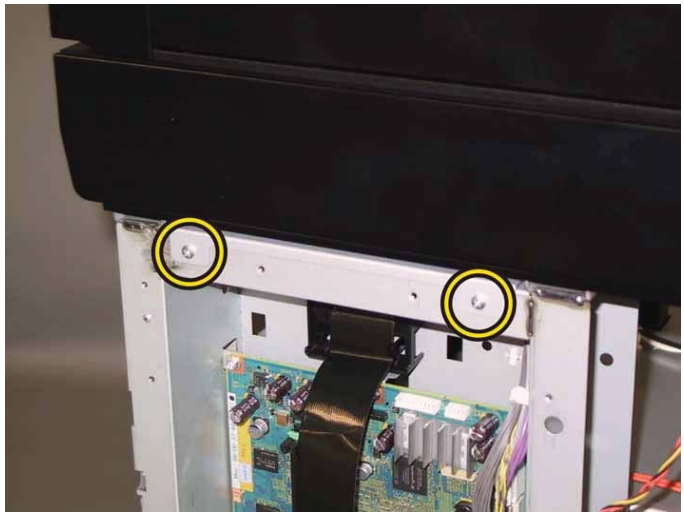
Go to the next replacement step:

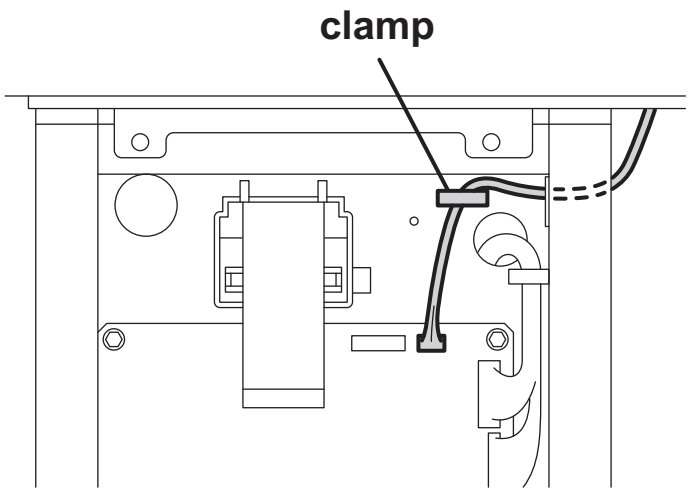
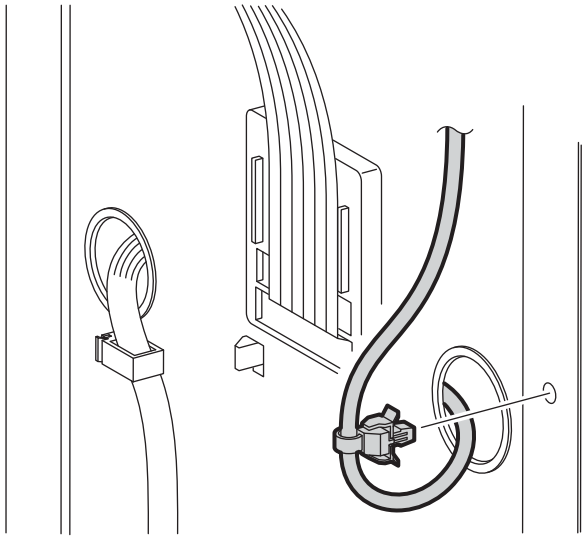
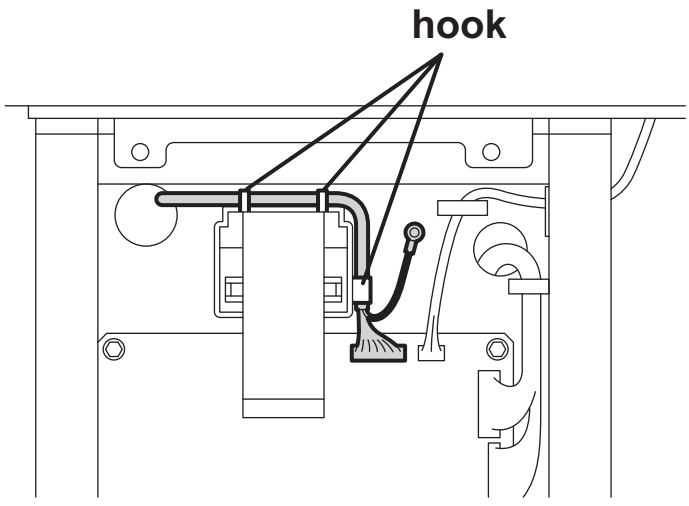
Replacement 61 ADF ASSY (PL10.10.1)

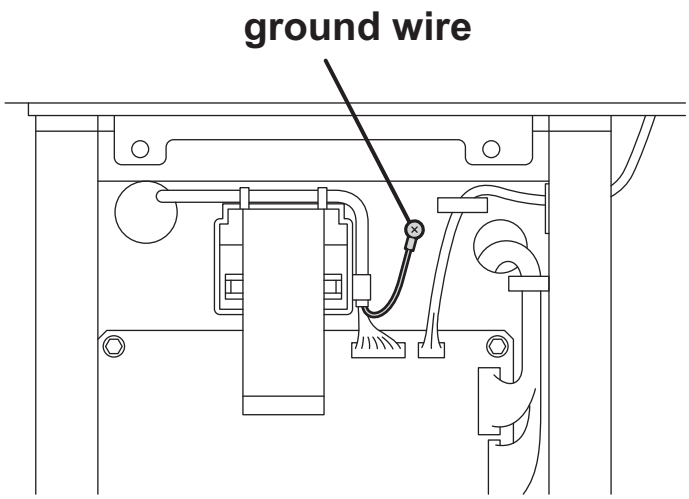
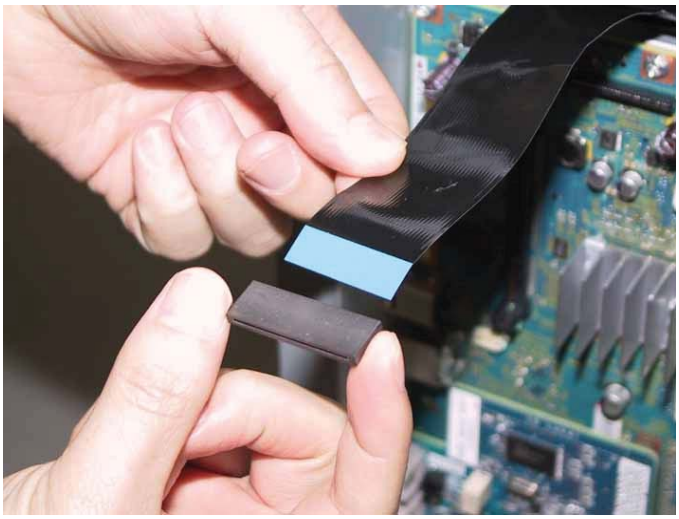
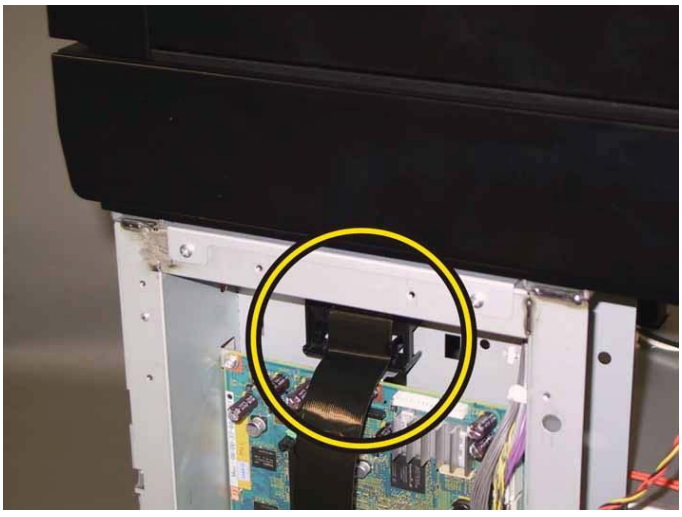
Replacement 2 KIT IIT ASSY SUB (PL10.9.99)

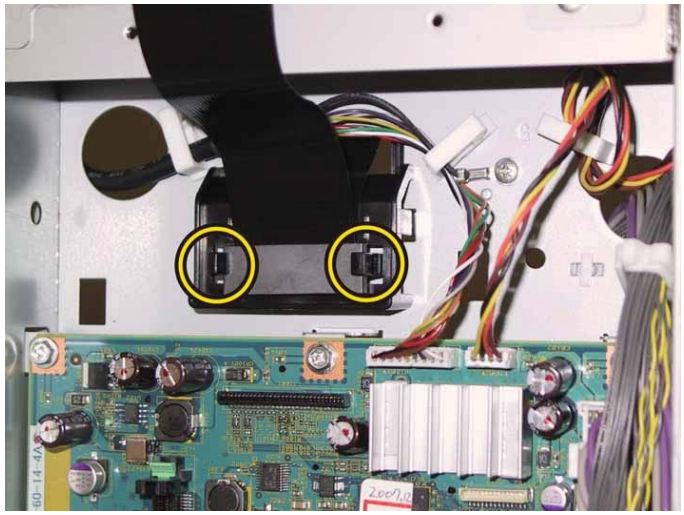
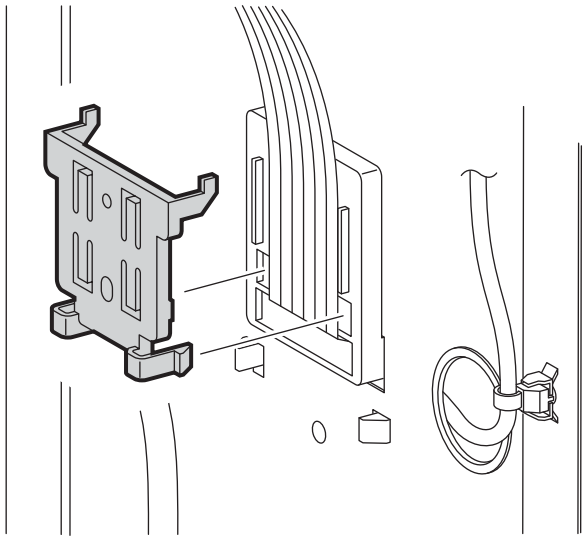
1) Route the harness of the ADF ASSY through the hole of the IIT ASSY SUB.	
2) Tilt the ADF ASSY to left side, put the tab of the COUNTER BALANCE L into the hole of the IIT ASSY SUB. Attach the COUNTER BALANCE L to the IIT ASSY SUB.	
3) Attach the COUNTER BALANCE R to the IIT ASSY SUB, fix the hook of the COUNTER BALANCE R. Attach the ADF ASSY to the IIT ASSY SUB.	

Note: When carrying out the work described next procedure, take care not to damage the harnesses of the ADF ASSY and IIT ASSY SUB by pinching them between the frame and the IIT ASSY SUB.

4) Put the IIT ASSY SUB on the frame, shift it to right side to mate the four holes of the IIT ASSY SUB with the studs of the frame. **Note: When carrying out the work this procedure, route the harness of the ADF ASSY and the flat cable into the printer, route the harness of the IIT ASSY SUB to outside.**	
5) Secure the IIT ASSY SUB to the printer with the two screws (silver, 6mm).	

6) Route the harness of the IIT ASSY SUB through the hole of the frame, fix it with the clamp, engage the connector (P/J1002) of the PWBA CONT AIO.	
7) Replace the clamp that secures the harness of the ADF ASSY to the printer.	
8) Route the harness of the ADF ASSY through the hole of the frame, route it to the three hooks of the HOLDER FFC, engage the connector (P/J1003) of the PWBA CONT AIO.	

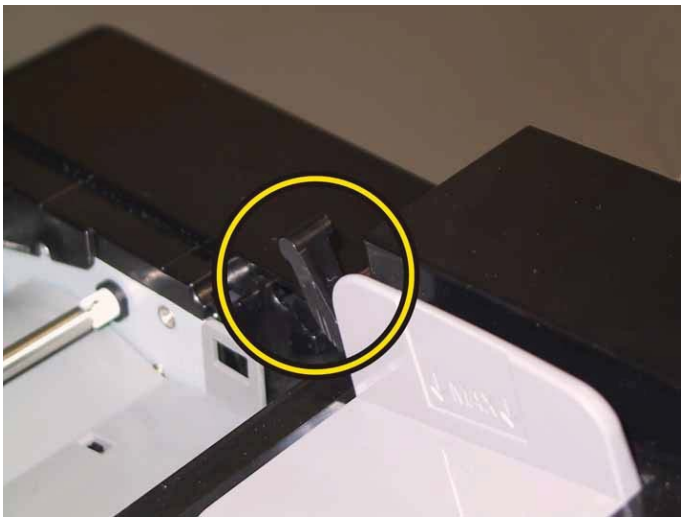
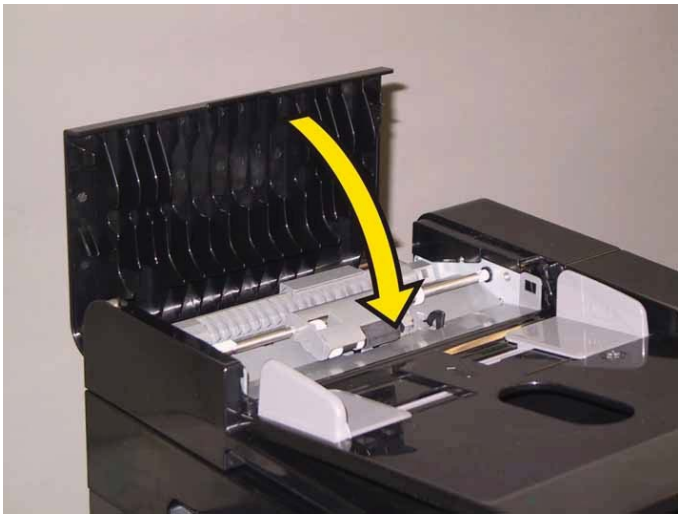
9) Secure the ground wire of the ADF ASSY to the printer with the one screw (silver, 6mm).	
10) Route the flat cable through the HOLDER FFC, attach the CORE FERR FFC to the flat cable of the IIT ASSY SUB. **Note: When carrying out this procedure, ensure that the flat cable is pulled out without a slack between the IIT ASST SUB and the frame.**	
11) With the flat cable stretched tight, bend it lightly so that it is aligned to the underside of the HOLDER FFC.	

12) Move the CORE FERR FFC to the bend of the flat cable, and then secure the CORE FERR FFC with the two hooks on the HOLDER FFC.	
13) Engage the flat cable (P/J1001) of the IIT ASSY SUB to the PWBA CONT AIO.	
14) Secure the COVER FFC to the printer with the two hooks.	

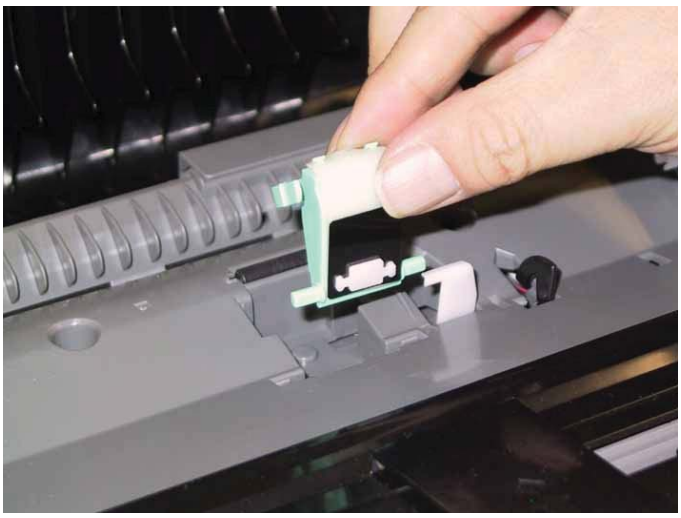
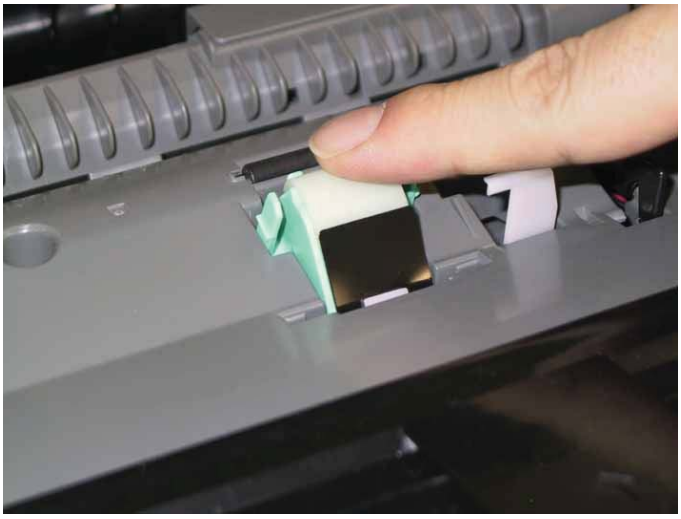
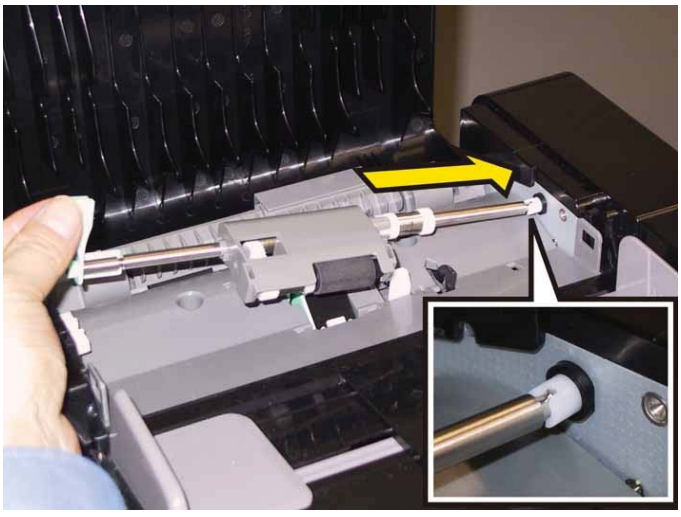
Go to the next replacement step:

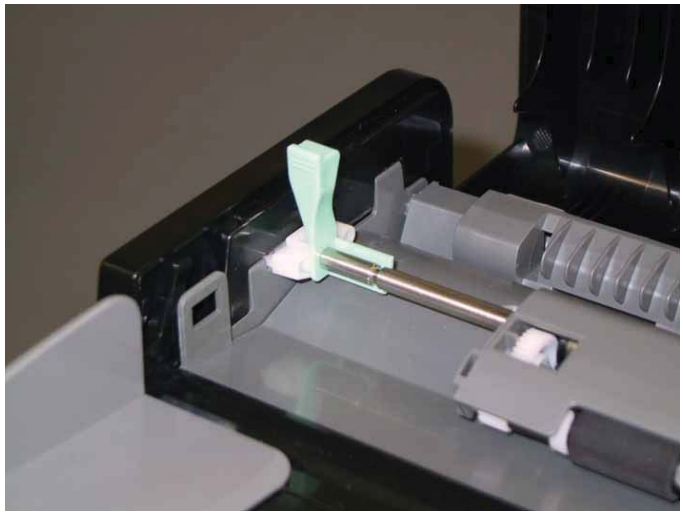
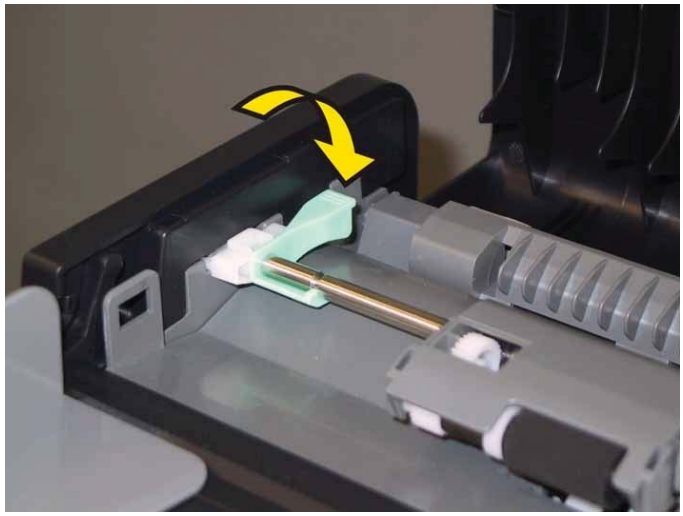
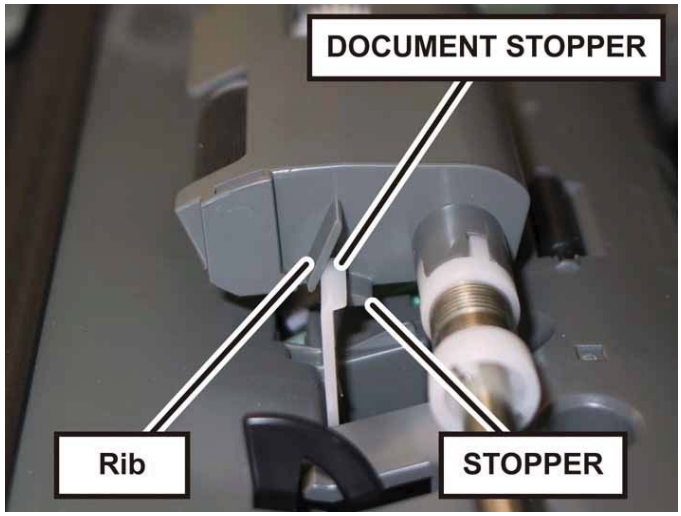
Replacement 22 COVER POLE IN (PL10.1.3)

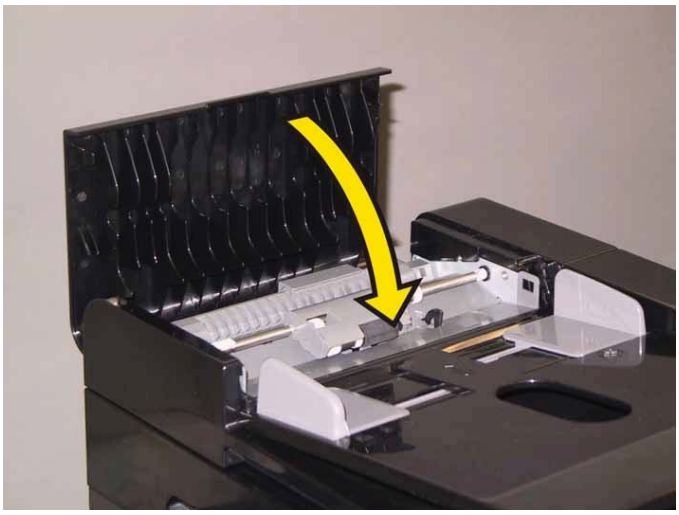
Replacement 3 TRAY ASSY ADF INPUT (PL10.10.11)

1) Mate the boss of the TRAY ASSY ADF INPUT with the hole of the ADF ASSY.	
2) Depress the hinge of the TRAY ASSY ADF INPUT to mate the boss of the TRAY ASSY ADF INPUT with the hole of the ADF ASSY. Attach the TRAY ASSY ADF INPUT.	
3) Close the COVER ADF JAM.	

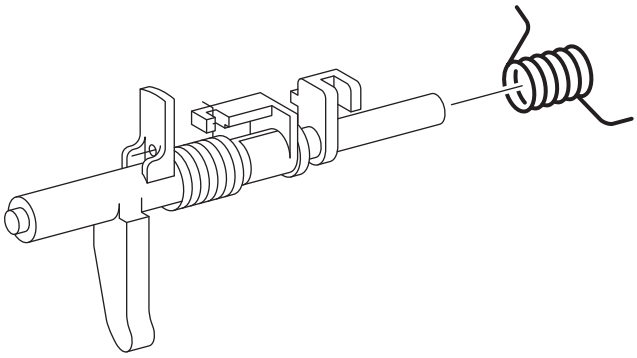
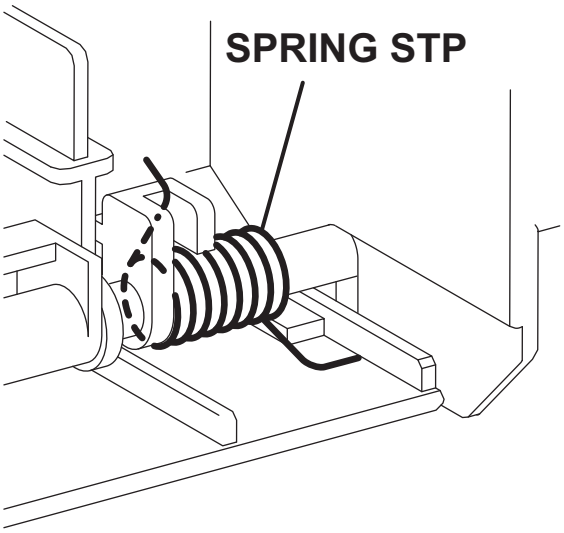
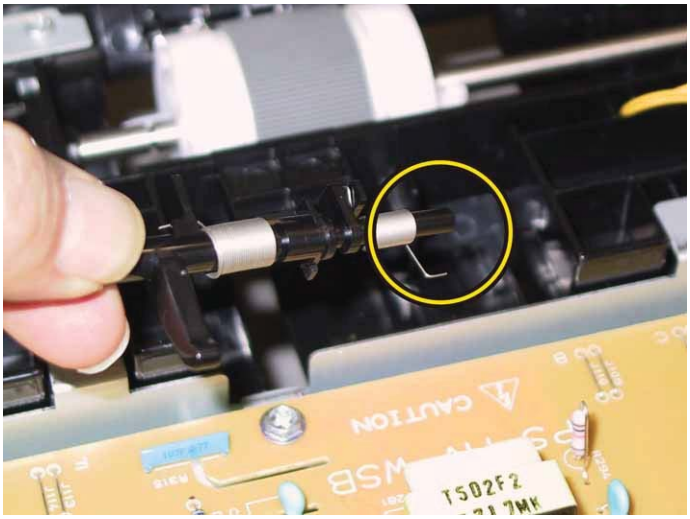
Replacement 4 ADF FEED ROLL & SEPARATOR ROLL KIT (PL10.10.97)

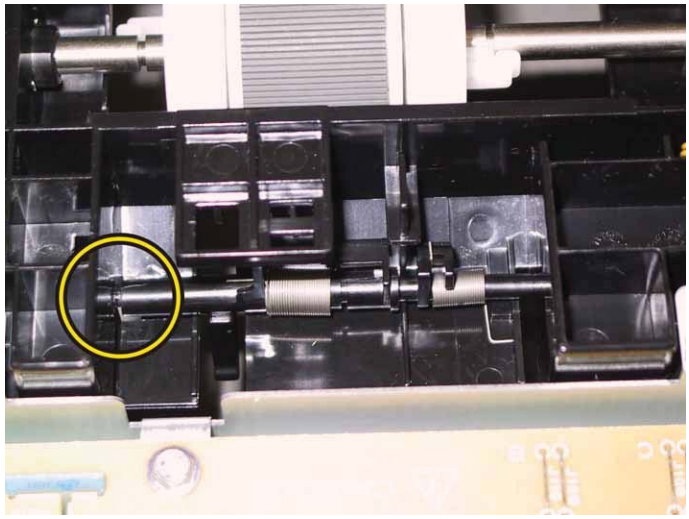
1) Mate the flat surface of the pivot on the PAD ASSY SEPARATOR with the groove of the ADF ASSY. Attach the PAD ASSY SEPARATOR.	
2) Tilt the PAD ASSY SEPARATOR to fix the two hooks of the PAD ASSY SEPARATOR.	
3) Mate the pin on the shaft of the ROLL ASSY FEED with the notch of the ADF ASSY.	

4) Mate the flat surface of the LEVER on the ROLL ASSY FEED with the guide of the ADF ASSY to attach the ROLL ASSY FEED.	
5) Tilt the LEVER of the ROLL ASSY FEED to fix the ROLL ASSY FEED.	
Note: After installing the ROLL ASSY FEED, make sure that the DOCUMENT STOPPER is positioned between the Rib and the Stopper on the ROLL ASSY FEED.	

6) Close the COVER ADF JAM.	

Replacement 5 ACTUATOR ASSY NO PAPER (PL3.2.32)

1) Attach the SPRING STP to the ACTUATOR ASSY NO PAPER.	
Note: When carrying out the work described next procedure, ensure that the SPRING STP is hung to ACTUATOR NO PAPER and the CHUTE UP correctly.	
2) Insert the left shaft of the ACTUATOR ASSY NO PAPER into the hole of the CHUTE UP, hang the SPRING STP to the CUHTE UP.	

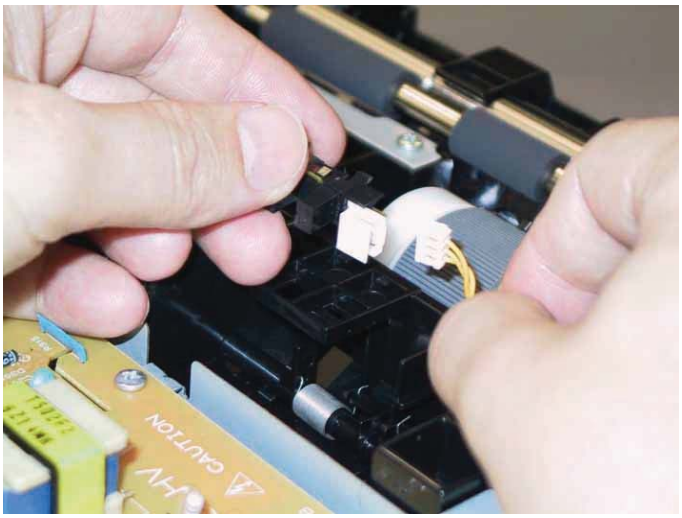
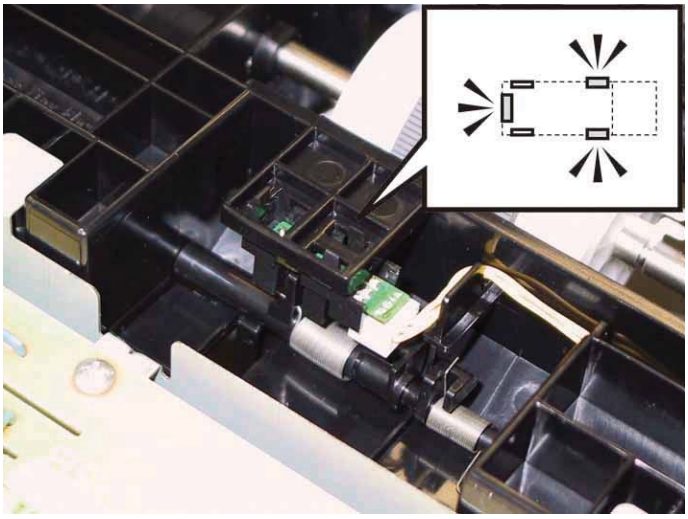
3) Insert the right shaft of the ACTUATOR ASSY NO PAPER into the hole of the CHUTE UP. Attach the ACTUATOR ASSY NO PAPER.	

Check the ACTUATOR ASSY NO PAPER movement, after the procedure 3 is completed.

Go to the next replacement step:

Replacement 6 SENSOR PHOTO: CST NO PAPER (PL3.2.13)

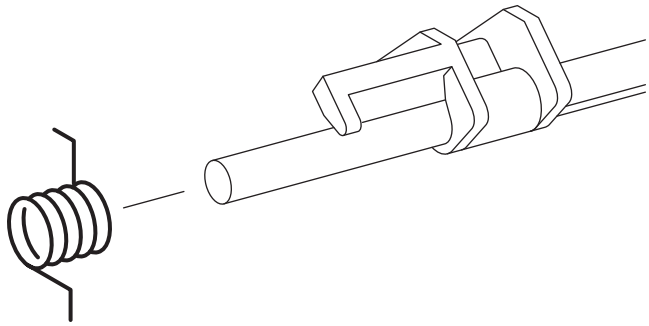
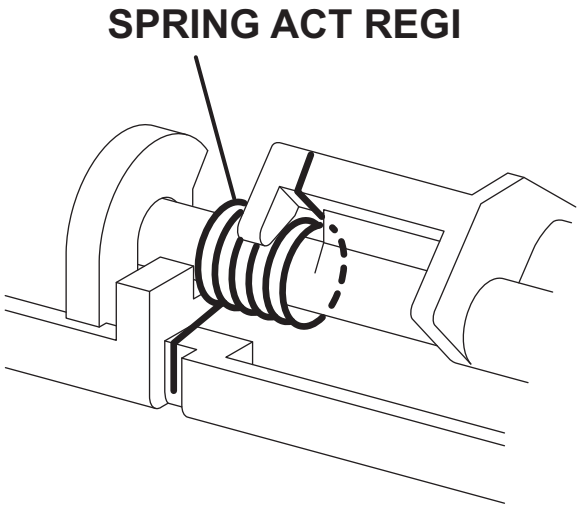
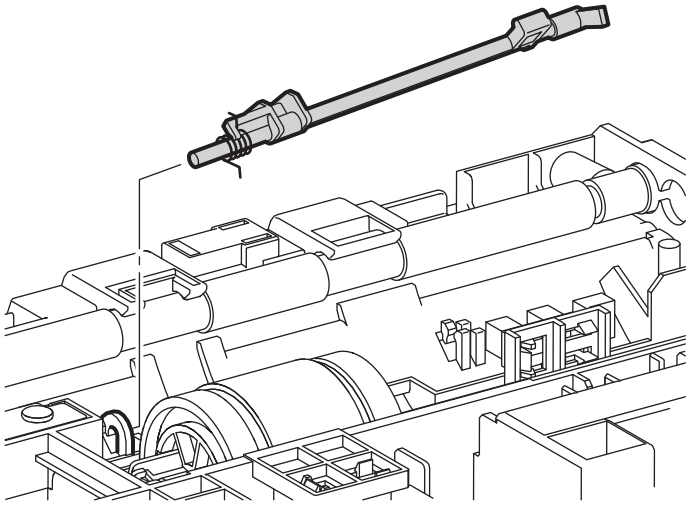
Replacement 6 SENSOR PHOTO: CST NO PAPER (PL3.2.13)

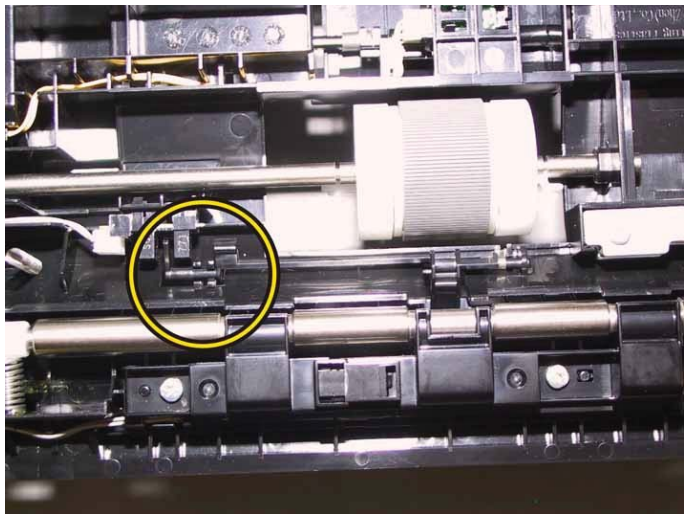
1) Engage the connector (P/J234) of the SENSOR PHOTO: CST NO PAPER.	
2) Replace the SENSOR PHOTO: CST NO PAPER to the FEEDER ASSY V by mating the hook of the SENSOR PHOTO: CST NO PAPER with its mounting position.	

Go to the next replacement step:

Replacement 11 UPPER UNIT (Reference only)

Replacement 7 ACTUATOR REGI IN (PL3.2.11)

1) Attach the SPRING ACT REGI to the ACTUATOR REGI IN.	
Note: When carrying out the work described next procedure, ensure that the SPRING ACT REGI is hung to ACTUATOR REGI IN and the CHUTE UP correctly.	
2) Insert the right shaft of the ACTUATOR REGI IN into the hole of the CHUTE UP, hang the SPRING ACT REGI to the CUHTE UP.	

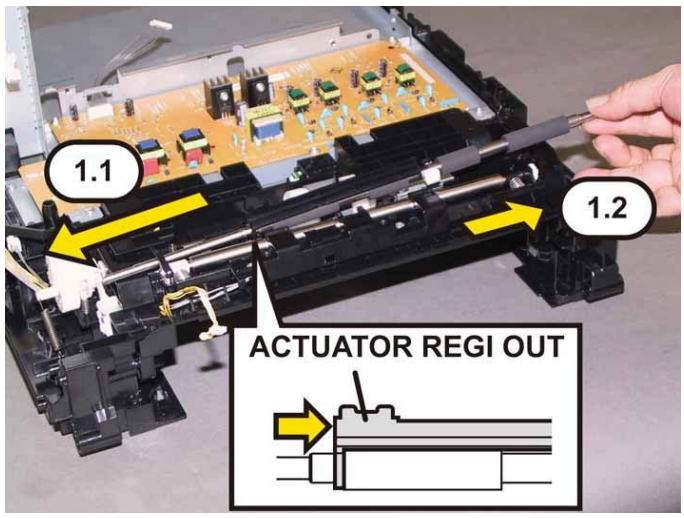
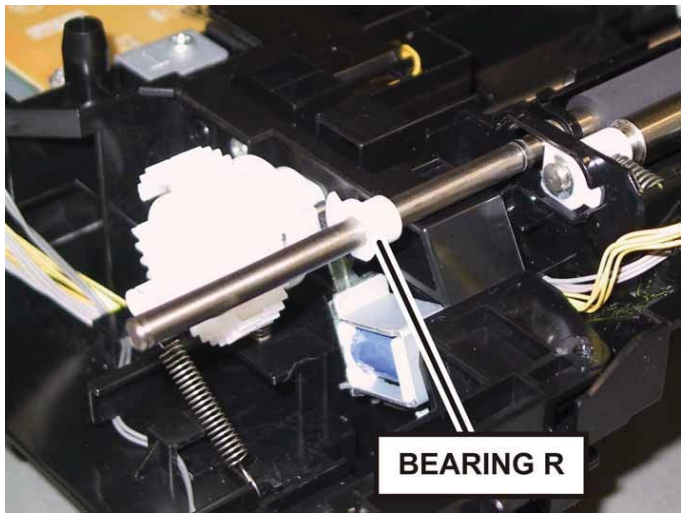
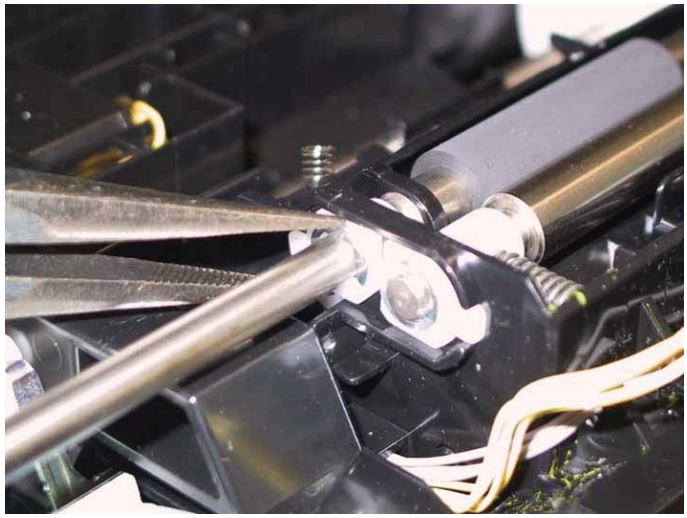
3) Fix the left shaft of the ACTUATOR REGI IN with the hook of the CHUTE UP to attach the ACTUATOR REGI IN.	

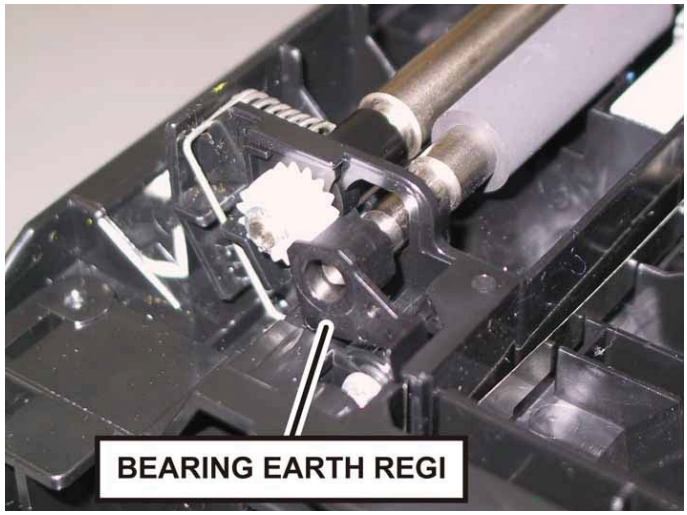
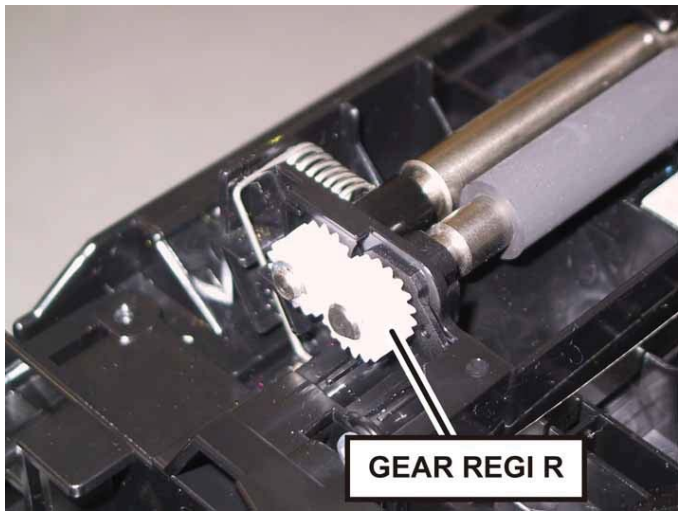
Check the ACTUATOR REGI IN movement, after the procedure 3 is completed.

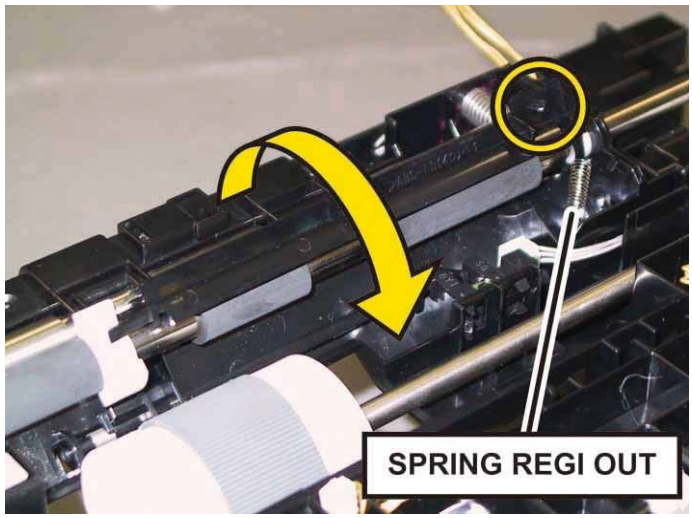
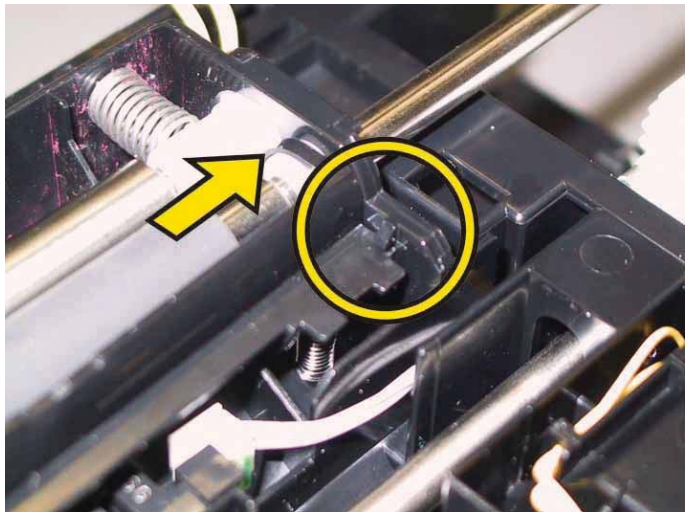
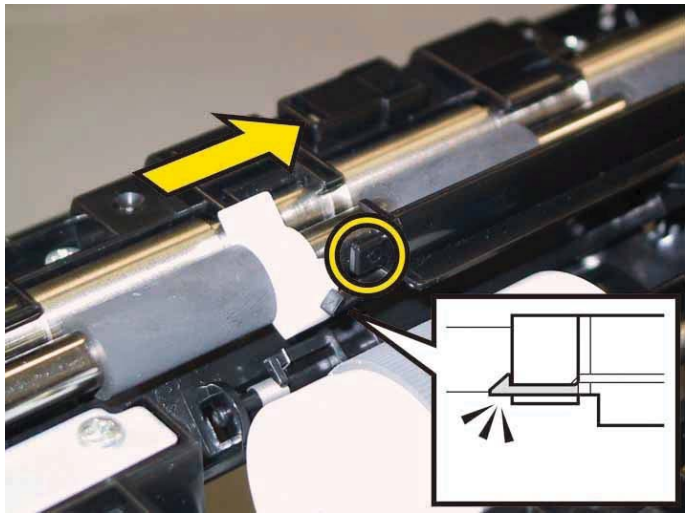
Go to the next replacement step:

Replacement 8 ROLL ASSY REGI (PL3.2.9)

Replacement 8 ROLL ASSY REGI (PL3.2.9)

1) After the inserting the left shaft of the ROLL ASSY REGI into the hole of the FEEDER ASSY NV AIO, insert the right shaft of the ROLL ASSY REGI into the hole. Attach the ROLL ASSY REGI together with the ACTUATOR REGI OUT and the ACTUATOR REGI ROLL. **Note: When carrying out the work this procedure, move the ACTUATOR REGI OUT to right until it stops.**	
2) Attach the BEARING R to the ROLL ASSY REGI. **Note: When carrying out the work this procedure, it is easier to push the ROLL REGI METAL (PL3.2.10) to frontward.**	
3) Secure the BEARING R to the ROLL ASSY REGI with the E-ring by using the pliers.	

4) Attach the BEARING EARTH REGI to the ROLL ASSY REGI. **Note: When carrying out the work this procedure, it is easier to push the ROLL REGI METAL (PL3.2.10) to frontward.**	
5) Attach the GEAR REGI R to the ROLL ASSY REGI. **Note: When carrying out the work this procedure, it is easier to push the ROLL REGI METAL (PL3.2.10) to frontward.**	
6) Secure the GEAR REGI R to the ROLL ASSY REGI with the E-ring by using the pliers.	

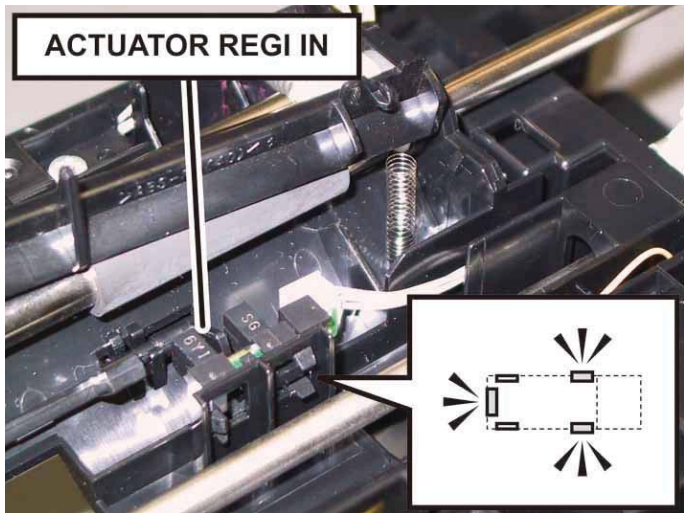
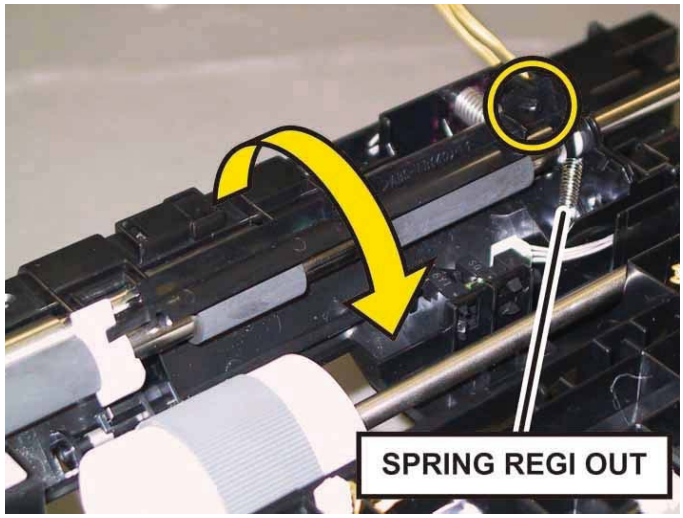
7) Close the ACTUATOR REGI OUT by inserting the boss of the ACTUATOR REGI OUT into the SPRING REGI OUT.	
8) Shift the ACTUATOR REGI OUT to left, fix the CHUTE UP using the hook.	
9) Attach the ACTUATOR REGI ROLL by mating the hole of the ACTUATOR REGI ROLL with the tab of the ACTUATOR REGI OUT. Fix it using the hook of the ACTUATOR REGI OUT.	

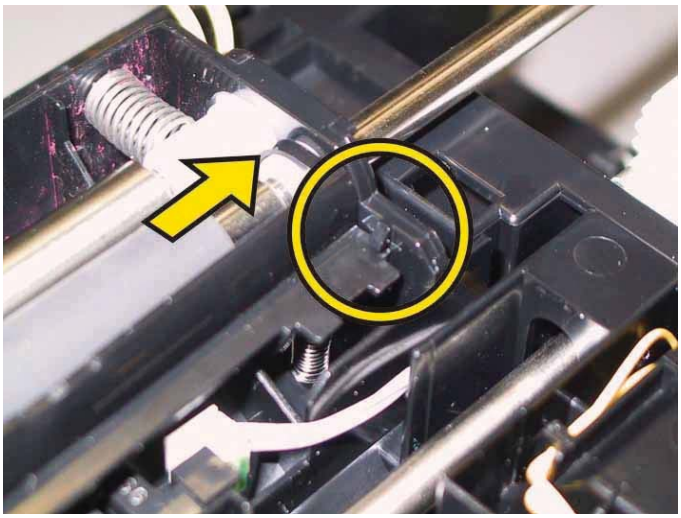
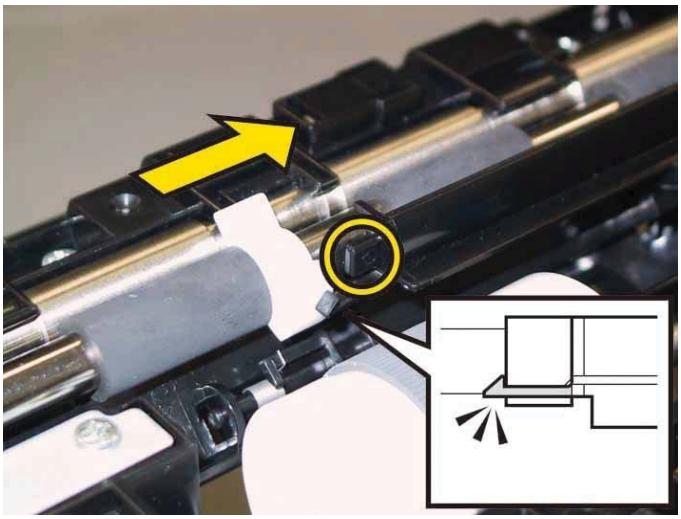
Note: Check the ACTUATOR REGI OUT and the ACTUATOR REGI IN movement, after the procedure 9 is completed.

Go to the next replacement step:

Replacement 11 UPPER UNIT (Reference only)

Replacement 9 SENSOR PHOTO: REGI (PL3.2.13)

1) Engage the connector (P/J232) of the SENSOR PHOTO: REGI.	
2) Replace the SENSOR PHOTO: REGI to the FEEDER ASSY V by mating the three hooks of the SENSOR PHOTO: REGI. **Note: When carrying out the work this procedure, it is easier to push the ACTUATOR REGI IN (PL3.2.11) to downward.**	
3) Close the ACTUATOR REGI OUT by inserting the boss of the ACTUATOR REGI OUT into the SPRING REGI OUT.	

4) Shift the ACTUATOR REGI OUT to left, fix the CHUTE UP using the hook.	
5) Attach the ACTUATOR REGI ROLL by mating the hole of the ACTUATOR REGI ROLL with the tab of the ACTUATOR REGI OUT. Fix it using the hook of the ACTUATOR REGI OUT.	

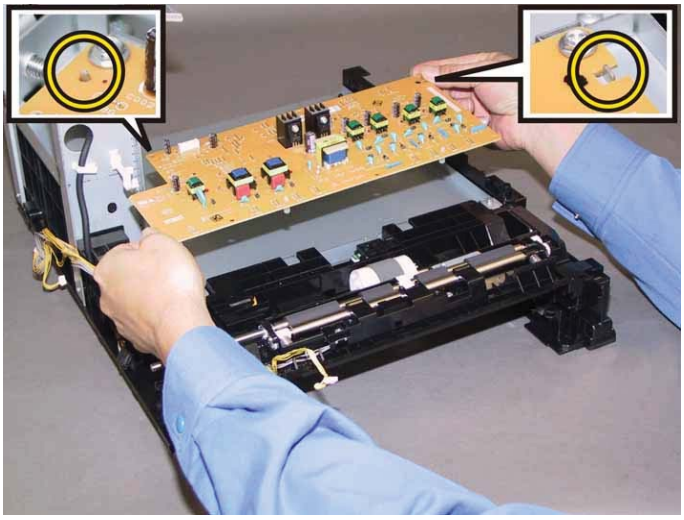
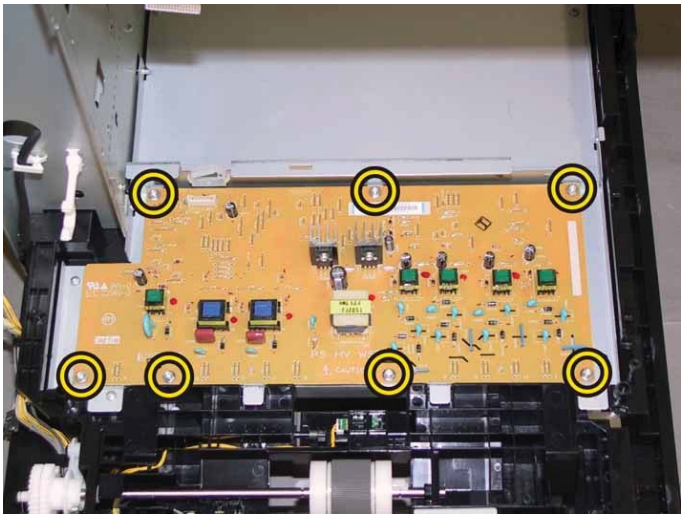
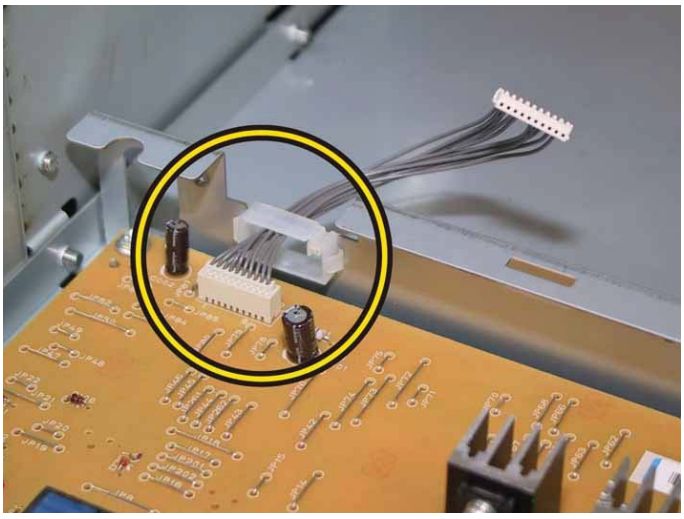
Note: Check the ACTUATOR REGI OUT and the ACTUATOR REGI IN movement, after the procedure 5 is completed.

Go to the next replacement step:

Replacement 11 UPPER UNIT (Reference only)

Replacement 10 PWBA HVPS (PL10.7.1)

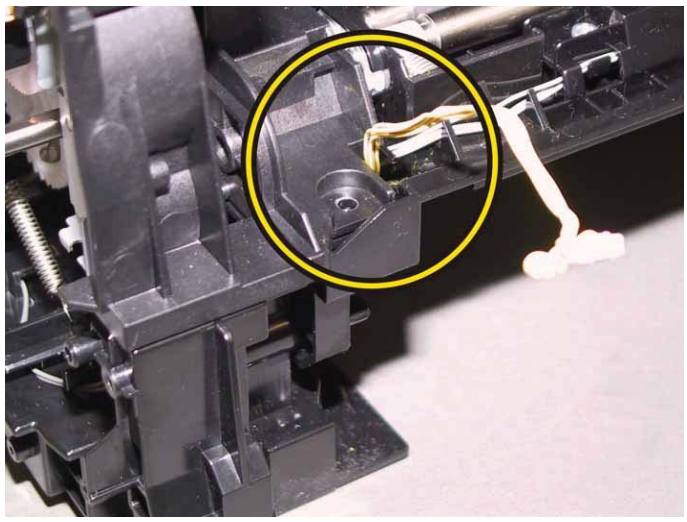
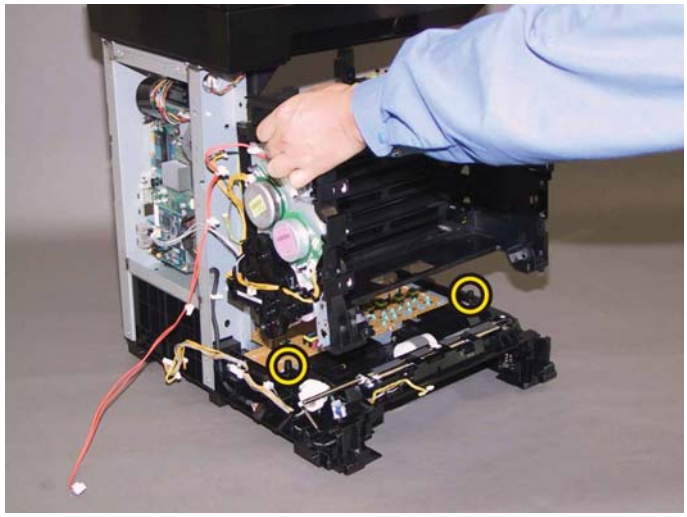
Note: Use the wrist strap to protect the PWB from the electrostatic.

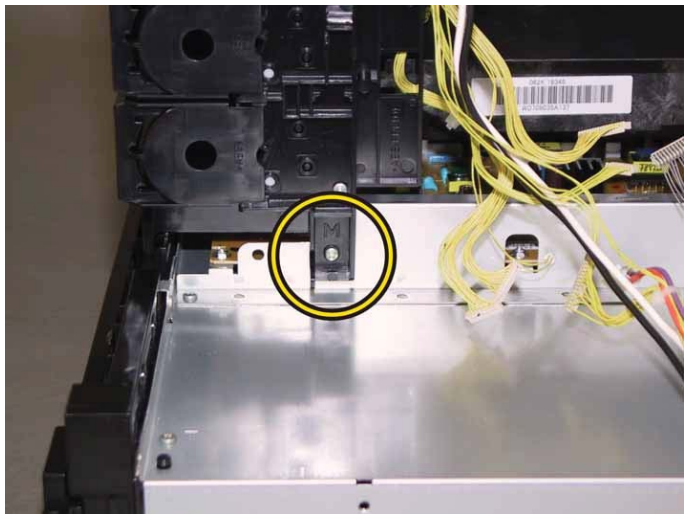
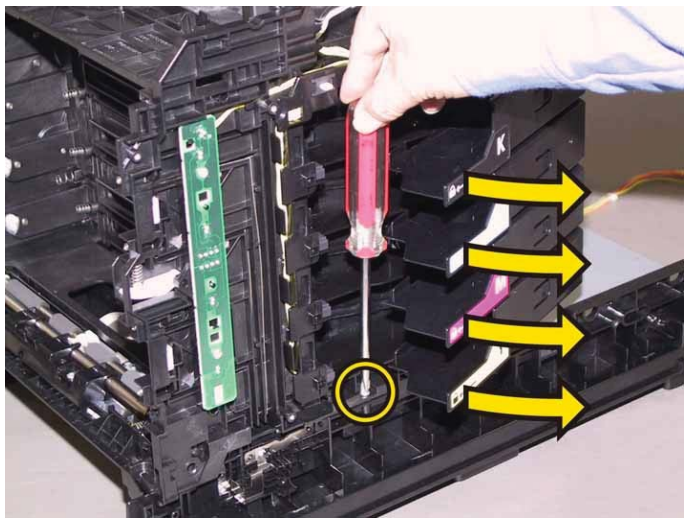
1) Mate the notch and hole of the PWBA HVPS with the tabs of the CHASSIS ASSY HVPS, attach the PWBA HVPS.	
2) Secure the PWBA HVPS to the CHASSIS ASSY HVPS with the seven screws (silver, with flange, 6mm).	
3) Engage the connector (P/J161) of the HARN ASSY HVPS to the PWBAHVPS, route the HARN ASSY HVPS to the EDGING SADDLE. Close the EDGING SADDLE.	

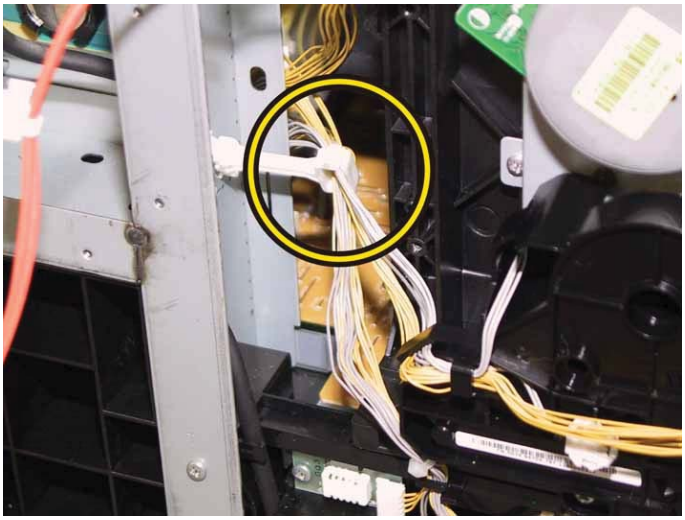
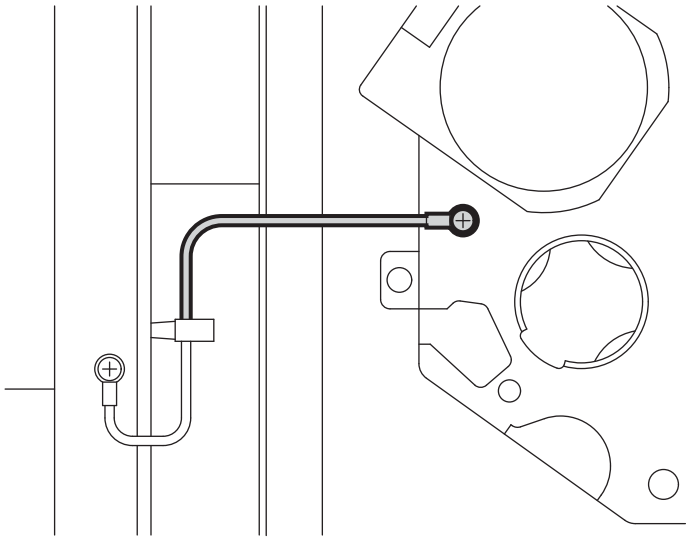
Go to the next replacement step:

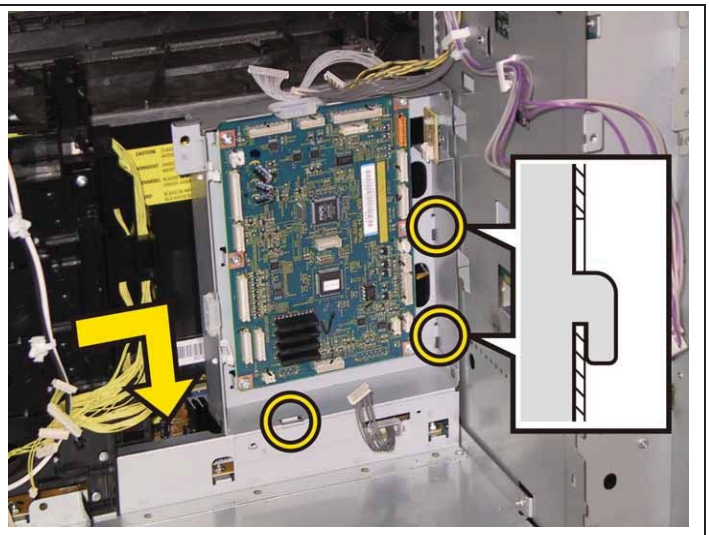
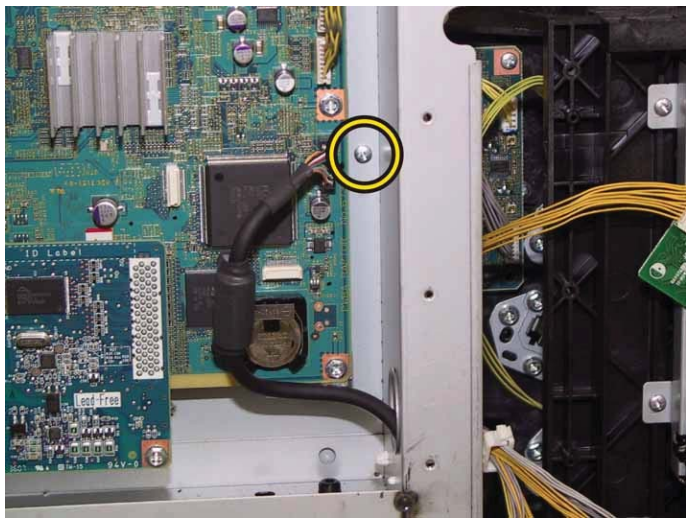
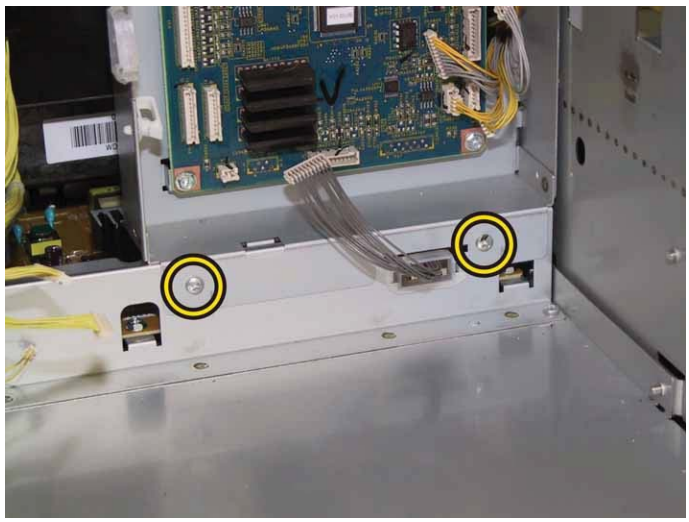
Replacement 11 UPPER UNIT (Reference only)

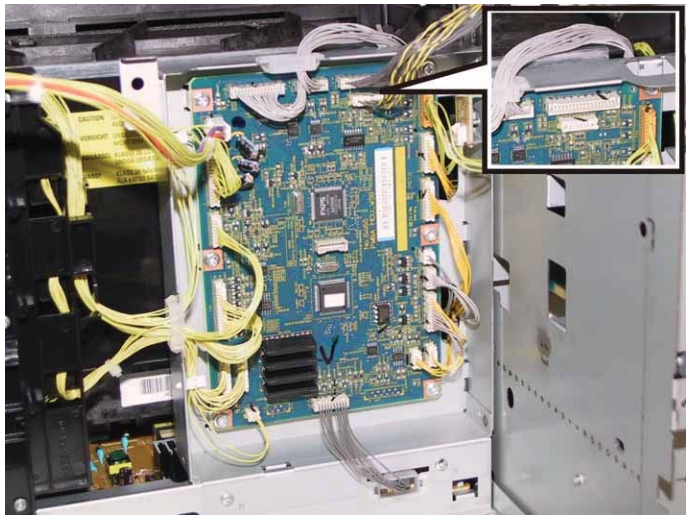
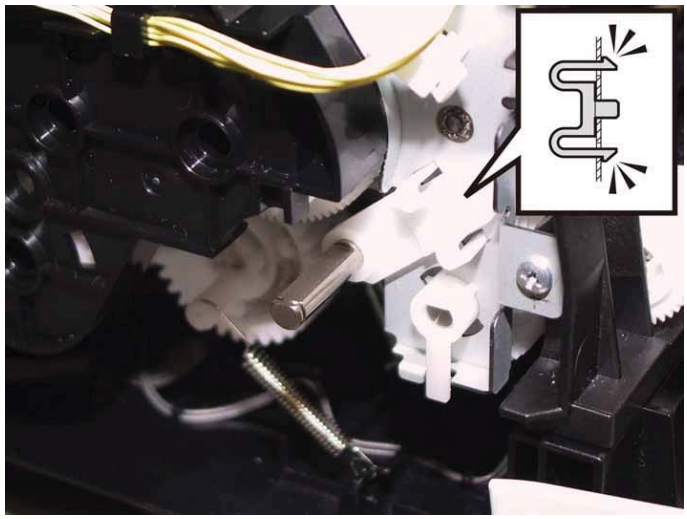
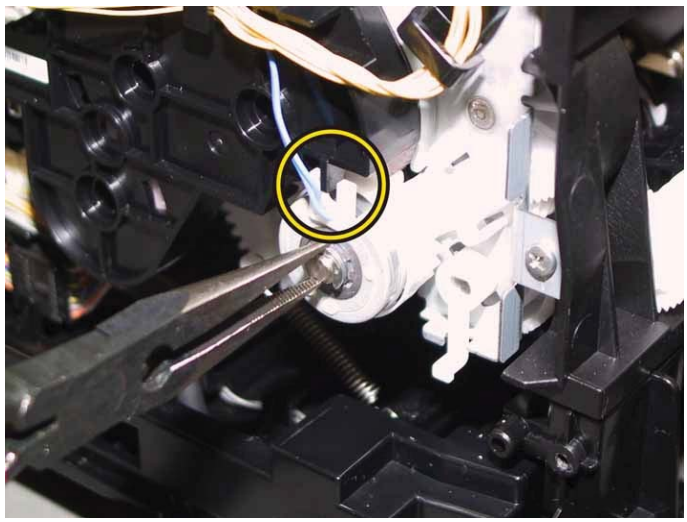
Replacement 11 UPPER UNIT (Reference only)

Note: When carrying out the work described next procedure, route the harness of the TRANSFER ASSY through the groove of the UPPER UNIT.	
1) Mate the two holes of the UPPER UNIT with the bosses of the FEEDER ASSY NV AIO and attach it.	
2) Secure the left side of the printer frame with the one screw (silver, tap, 8mm).	

3) Secure the rear side of the DISPENSER ASSY with the one screw (silver, M4, 6mm).	
4) Open the HOLDER ASSY TCRU (K), (C), (M) and (Y), secure the right side of the printer frame with the one screw (silver, tap, 8mm).	
5) Secure the under part of the DISPENSER ASSY with the two screws (silver, tap, 8mm).	

6) Secure the front side of the printer frame with the two screws (silver, tap, 8mm).	
7) Route the harness to the CLAMP LOCKING.	
8) Secure the HARN ASSY GFI GND with the one screw (silver, 6m) to the DRIVE ASSY SUB.	

9) Mate the three tabs of the CHASSIS MCU with the holes of the printer, attach the CHASSIS MCU to the printer together with the PWBA MCU.	
10) Secure the side part of the CHASSIS MCU with the one screw (silver, 6mm).	
11) Secure the under part of the CHASSIS MCU with the two screws (silver, 6mm).	

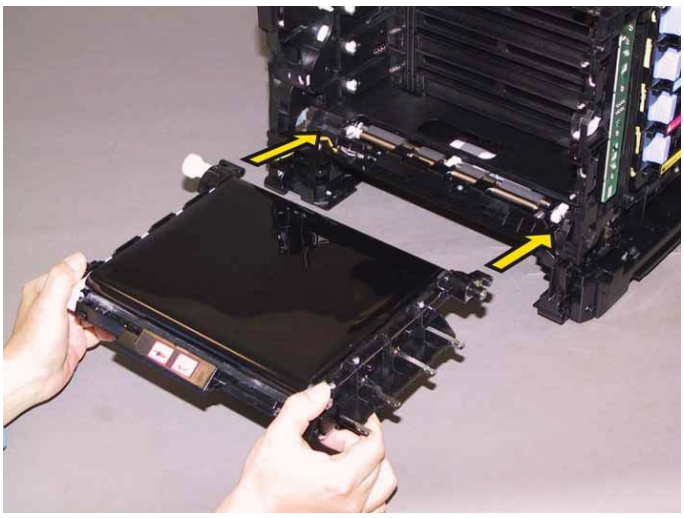
12) Route the harnesses through the hole of the CHASSIS MCU, engage all the connectors of the PWBA MCU and PWBA EEPROM. **Note: When carrying out the work this procedure, do not engage the two connectors (P10, P11).**	
13) Attach the BEARING REGI to the shaft of the ROLL ASSY REGI, secure the BEARING REGI with the hooks.	
14) Mate the notch of the CLUTCH ASSY DRV with the rib of the DRIVE ASSY PH, secure the CLUTCH ASSY DRV to the ROLL ASSY REGI with the E-ring by using a pliers.	

15) Route the harness of the CLUTCH ASSY DRV through the hook of the DRIVE ASSY PH.	
16) Engage the connector (P/J262) of the CLUTCH ASSY DRV, secure the relay connector with the pegs of the DRIVE ASSY PH.	

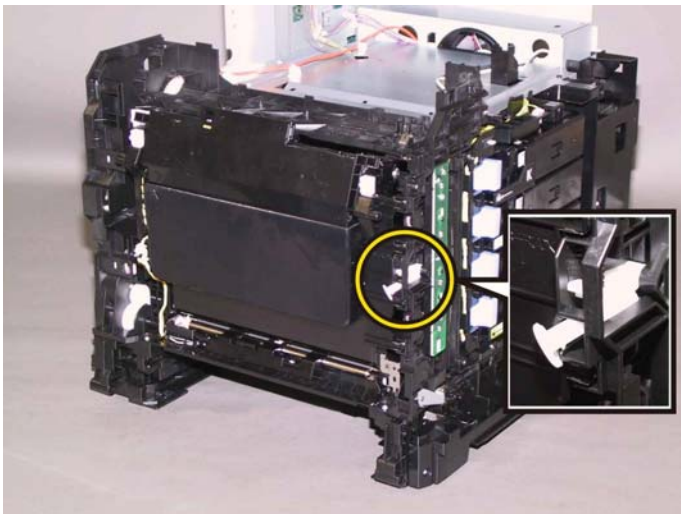
Go to the next replacement step:

Replacement 12 KIT TRANSFER & PIVOT (PL6.1.98)

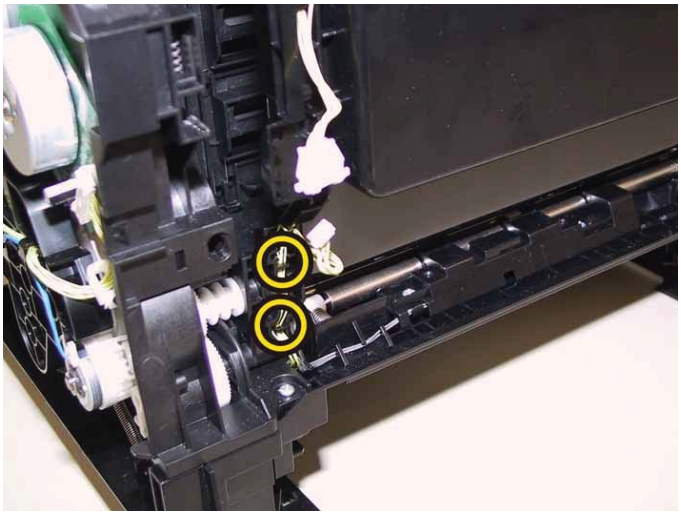
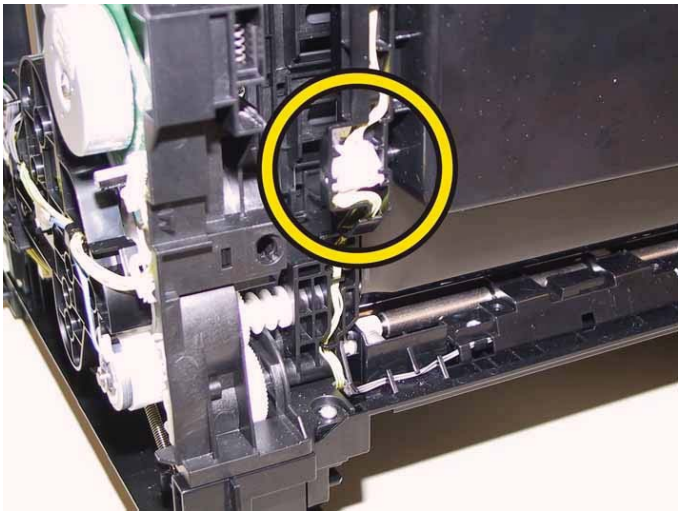
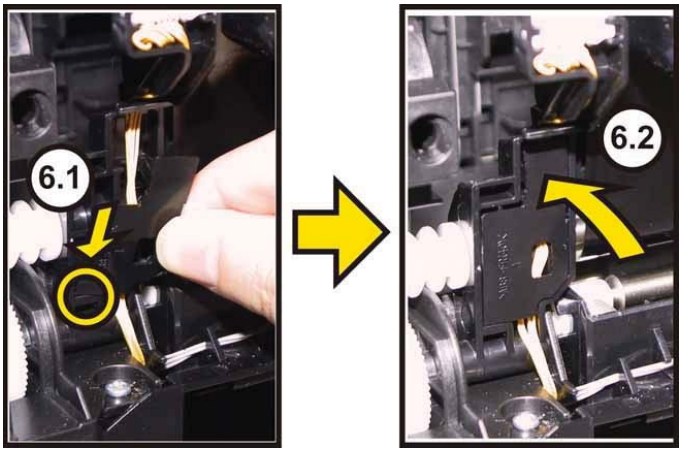
Replacement 12 KIT TRANSFER & PIVOT (PL6.1.98)

1) Attach the TRANSFER ASSY to the printer.	

2) Replacement the KIT PIVOT. (Replacement 13)

3) Insert the SHAFT PIVOT into the hole of the frame and fix it.	

Note: When carrying out the work described next procedure, take care not to scratch the belt surface of the TRANSFER ASSY.

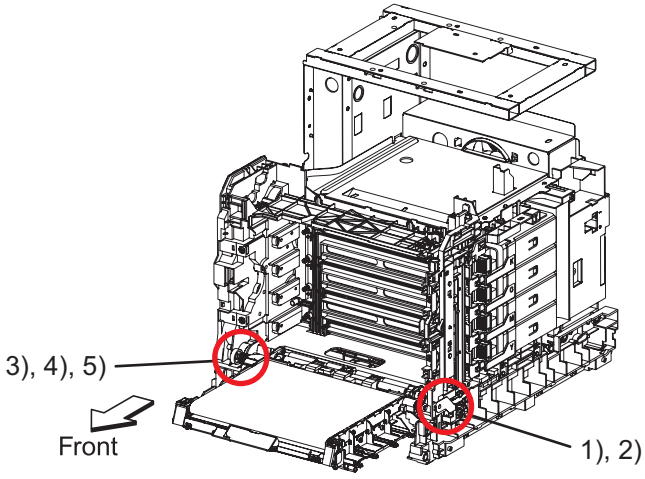
4) Route the harness of the printer through the hooks of the TRANSFER ASSY.	
5) Engage the connector (P/J281) of the TRANSFER ASSY, secure the relay connector with the pegs of the TRANSFER ASSY.	
6) Mate the tab of the COVER HARNESS 2 with the notch of the TRANSFER ASSY, attach the COVER HARNESS 2.	

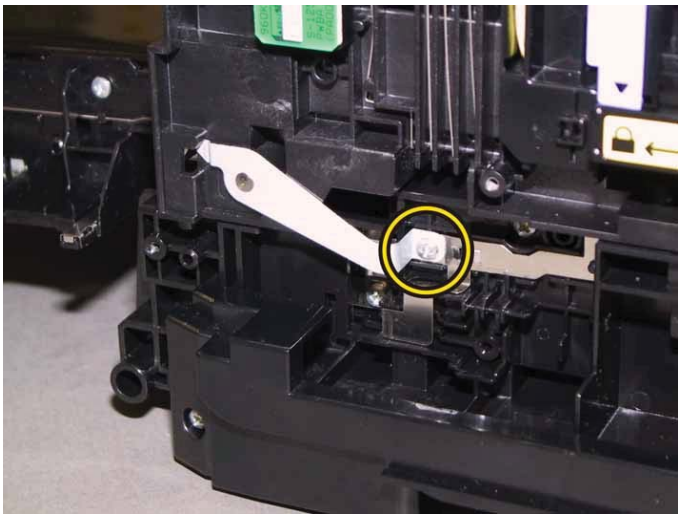
Go to the next replacement step:

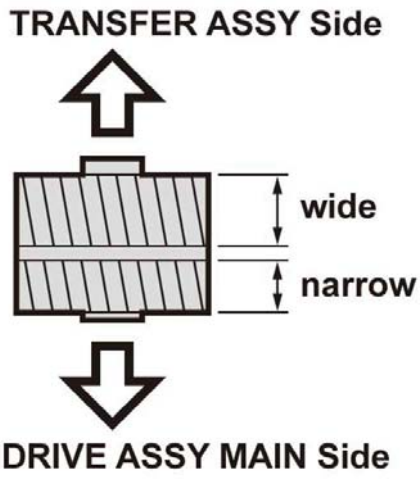
Replacement 14 COVER ASSY FRONT (PL10.2.1)

Replacement 13 KIT PIVOT (PL6.1.99)

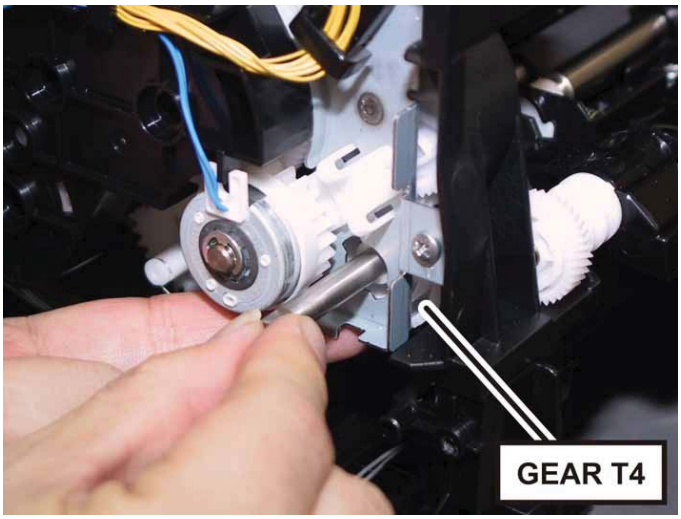
Accesses Position (All the numbers show the procedure number.)

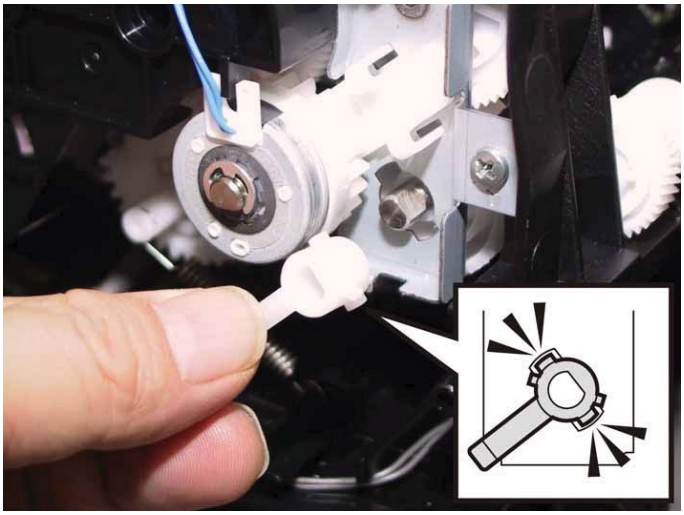
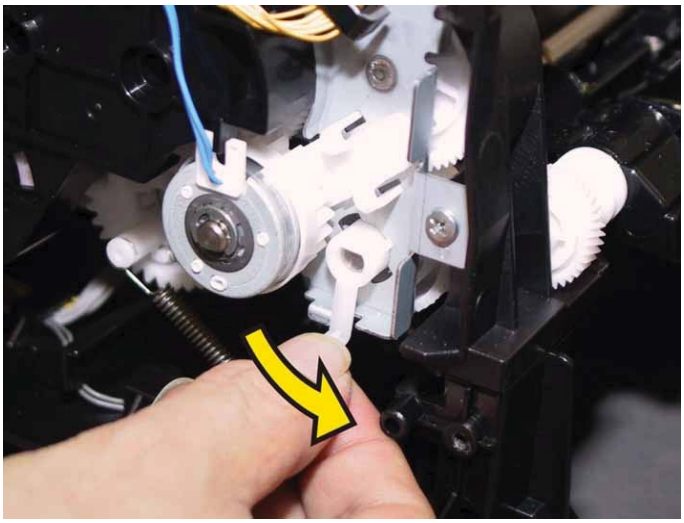


1) Mate the hole of the TRANSFER ASSY with the hole of the printer frame, attach the SHAFT ASSY PIVOT.	
2) Secure the SHAFT ASSY PIVOT to the printer with the one screw (silver, tap, 8mm).	

Note: When carrying out the work described next procedure, make sure that the position of the GEAR T4 is correctly.	

Note: When carrying out the work described next procedure, keep the TRANSFER ASSY slightly lifted for ease of work.

3) Attach the GEAR T4 to the printer, align the holes of the GEAR T4, the printer frame, and the TRANSFER ASSY, and then insert the PIVOT TRANS L.	
Note: When carrying out the work described next procedure, ensure that the flat face of the PIVOT TRANS L is oriented to the direction shown in the right.	

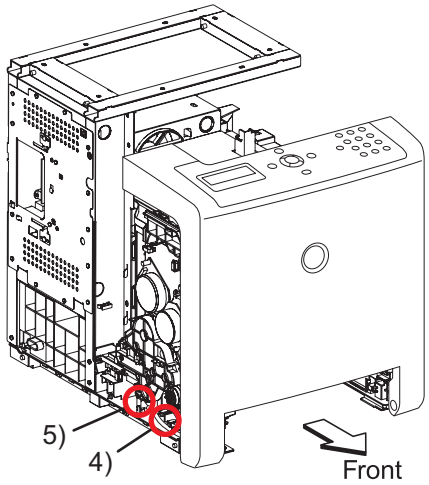
4) Mate the tab of the STOPPER PIVOT with the notch of the DRIVE ASSY MAIN, attach the STOPPER PIVOT to the PIVOT TRANS L.	
5) Rotate the STOPPER PIVOT to the left, secure the STOPPER PIVOT to the DRIVE ASSY MAIN frame.	

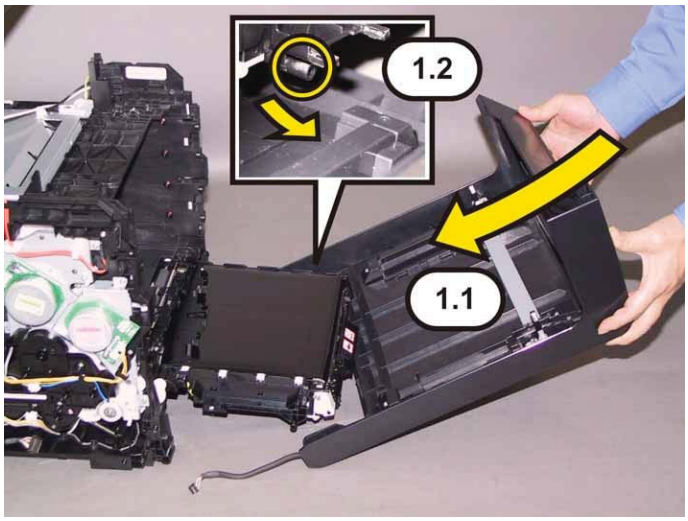
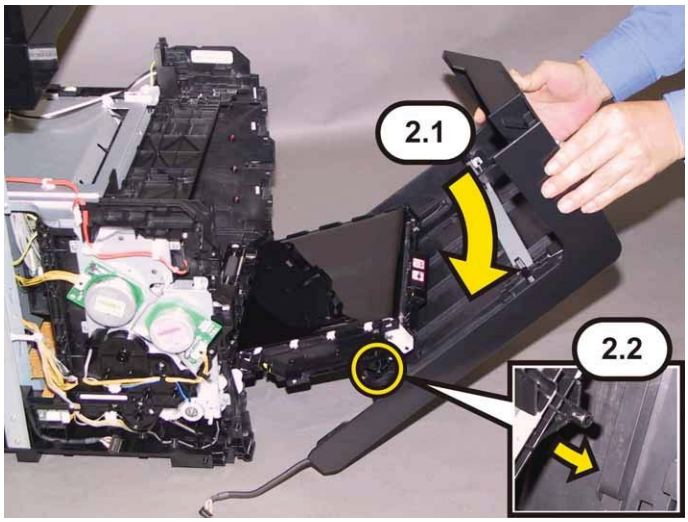
Go to the next replacement step:

Replacement 14 COVER ASSY FRONT (PL10.2.1)

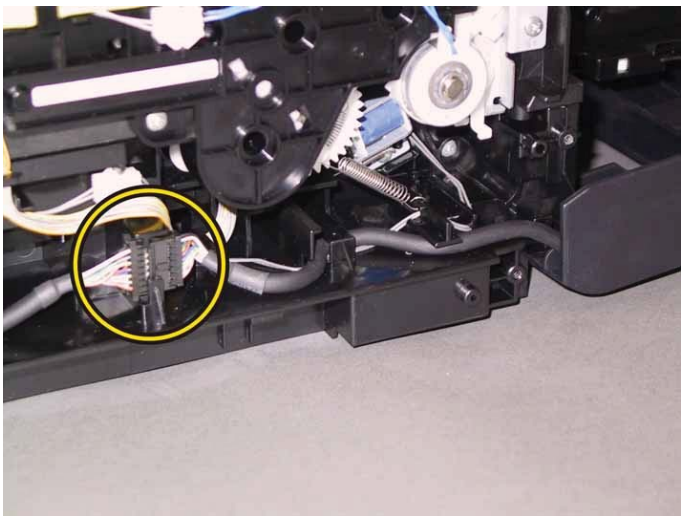
Replacement 14 COVER ASSY FRONT (PL10.2.1)

Accesses Position (The 4) and 5) show the procedure number.)



1) Insert the right side boss of the TRANSFER ASSY into the guide of the COVER ASSY FRONT.	
2) Insert the left side boss of the TRANSFER ASSY into the guide of the COVER ASSY FRON by tilting the COVER ASSY FRONT.	

3) Replacement the KIT SHAFT PIVOT. (Replacement 15)

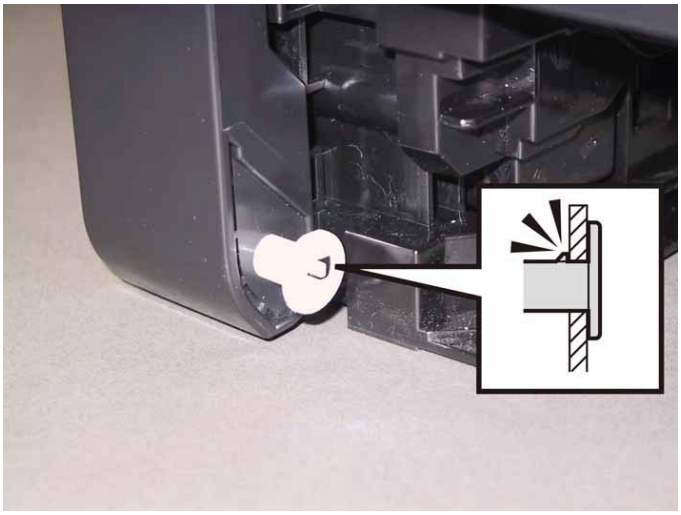
4) Route the HARNESS A-OP-OPP through the hooks of the printer.	
5) Engage the connector (P/J5301) of the HARNESS A-OP-OPP, secure the relay connector with the rib of the printer.	

Go to the next replacement step:

Replacement 40 COVER SIDE L LOW (PL10.1.9)

Replacement 15 KIT SHAFT PIVOT (PL10.2.99)

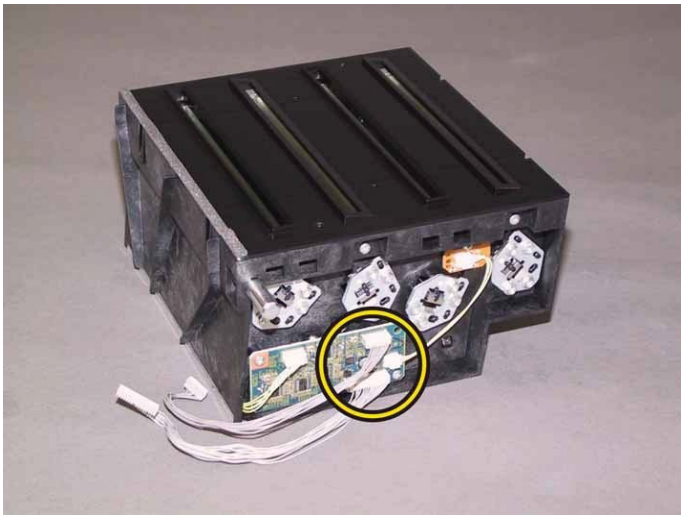
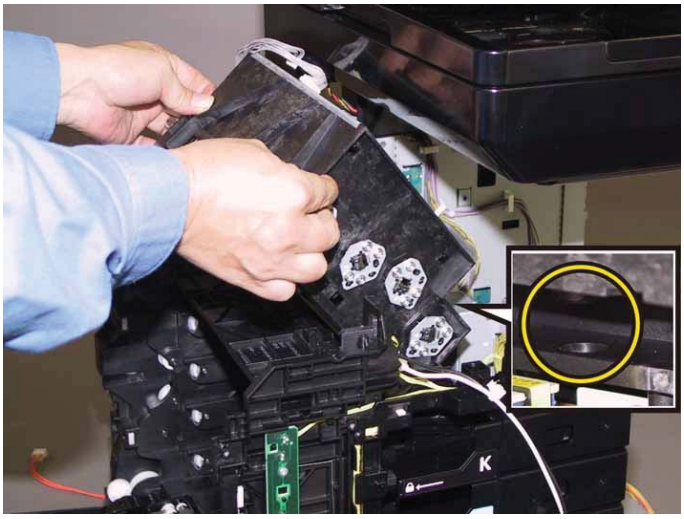
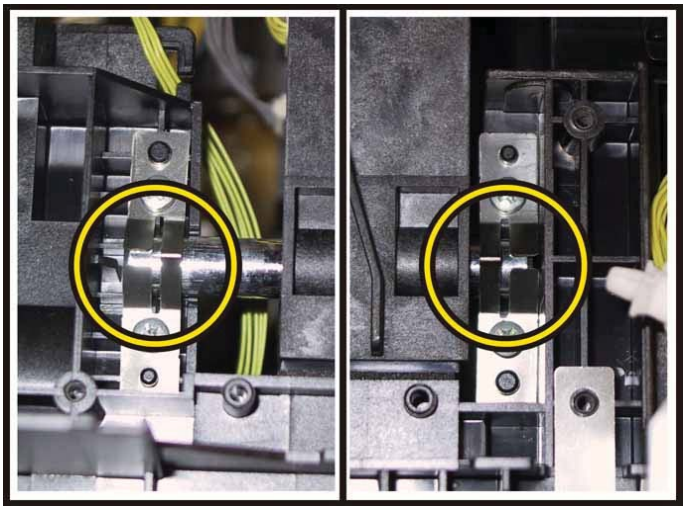
Note: Described below is the replacement procedure common among the left and right sides of the SHAFT PIVOTs (PL10.2.14).

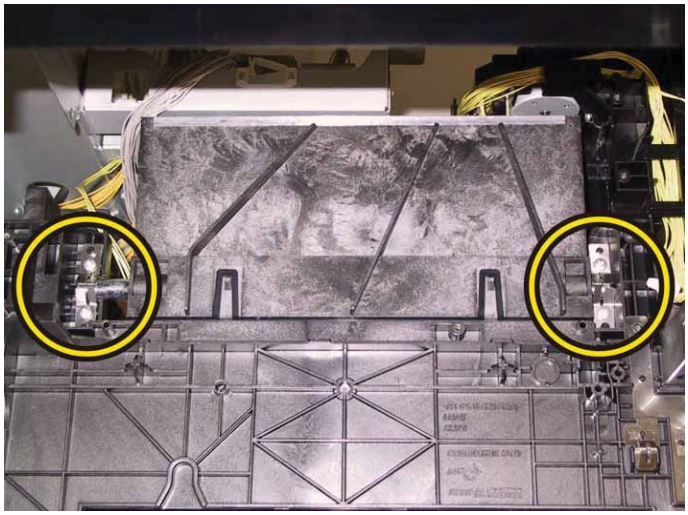
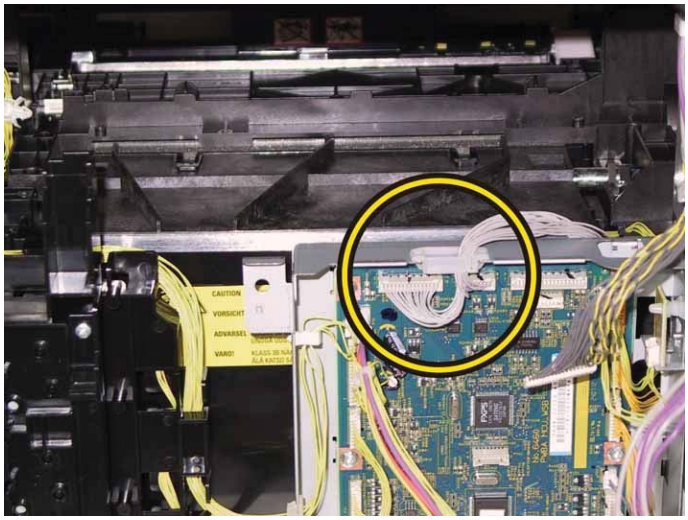
1) Mate the flat face of the SHAFT PIVOT with the hole of the COVER ASSY FRONT, push the SHAFT PIVOT until the hook is locked.	

Go to the next replacement step:

Replacement 59 Tray 1 (PL10.3.1)

Replacement 16 KIT ROS (PL4.1.99)

1) Engage the two connectors (P/J411, 412) of the ROS ASSY.	
2) Mate the under side boss of the ROS ASSY with the hole of the printer, attach the ROS ASSY.	
Note: When carrying out the work described next procedure, ensure that the SPRING ROS is oriented to the direction shown in the right.	

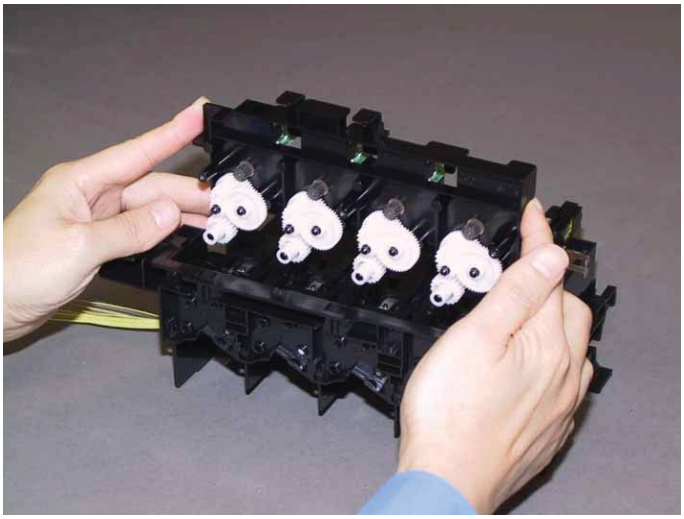
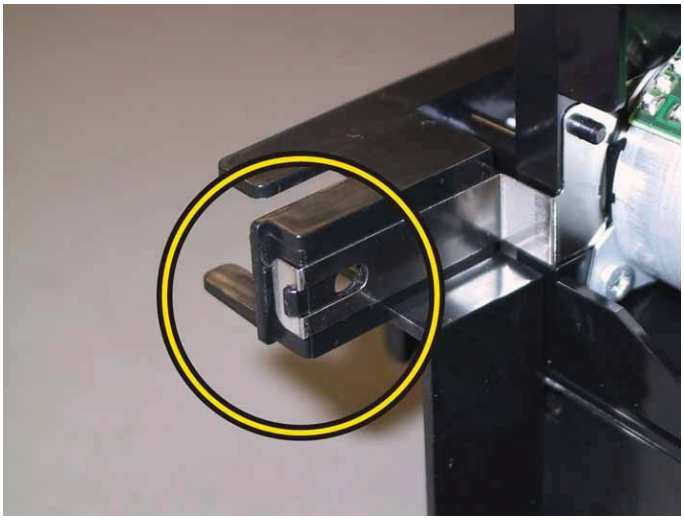
3) Mate the holes of the SPRING ROS with the bosses of the printer, secure it with the four screws (silver, tap, 8mm).	
4) Engage the two connectors (P/J40, 41) with the PWBA MCU, fix the harness using the EDGING SADDLE.	

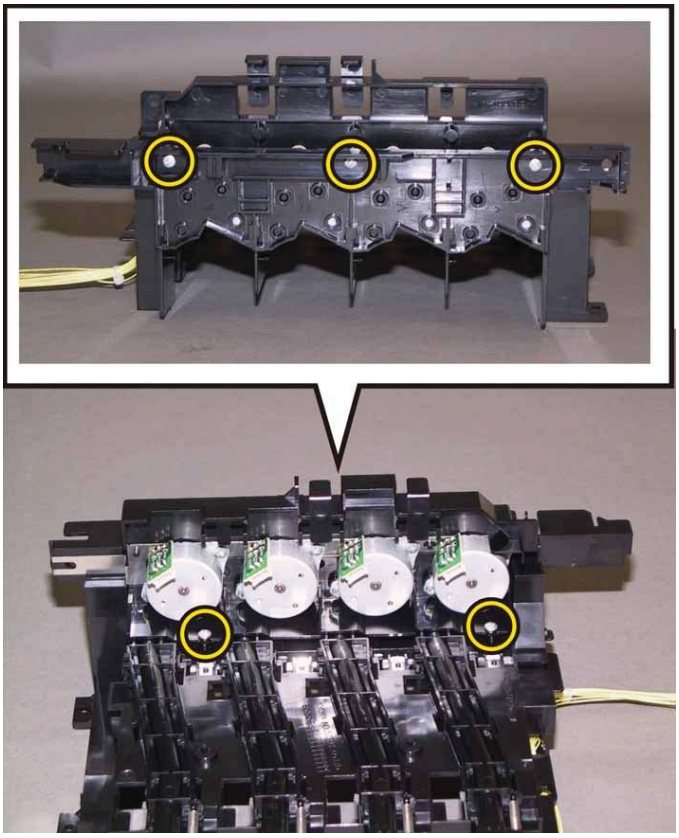
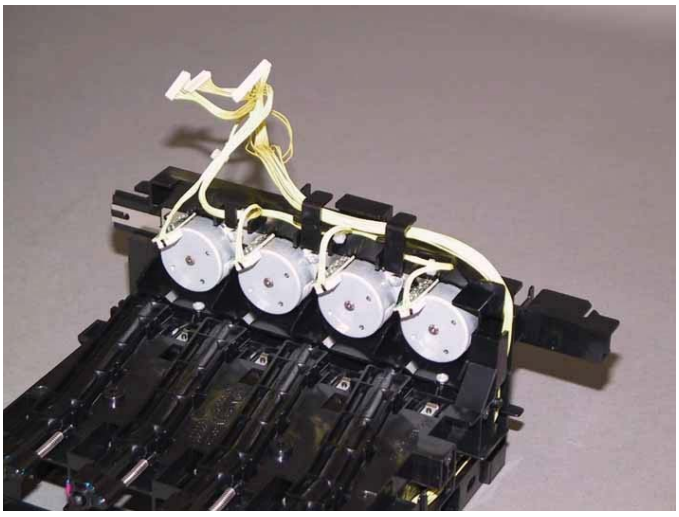
Go to the next replacement step:

Replacement 21 PLATE ASSY DUCT (PL10.6.1)

Replacement 17 FRAME ASSY MOT (PL5.1.2)

Note: When carrying out the work described next procedure, take care not to drop and lose the GEARs.

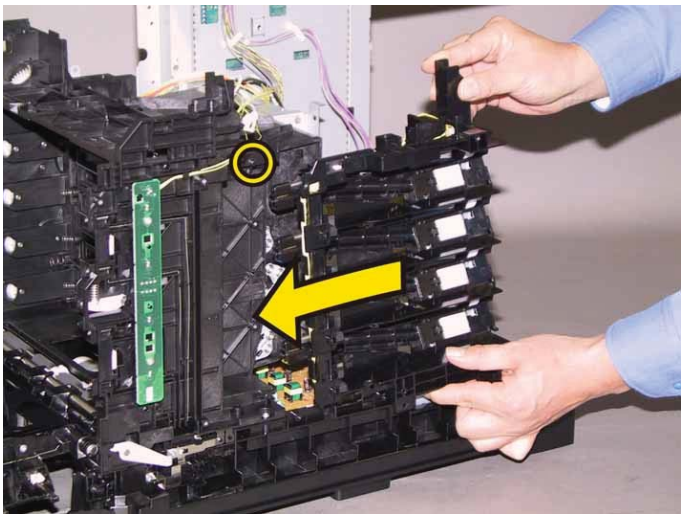
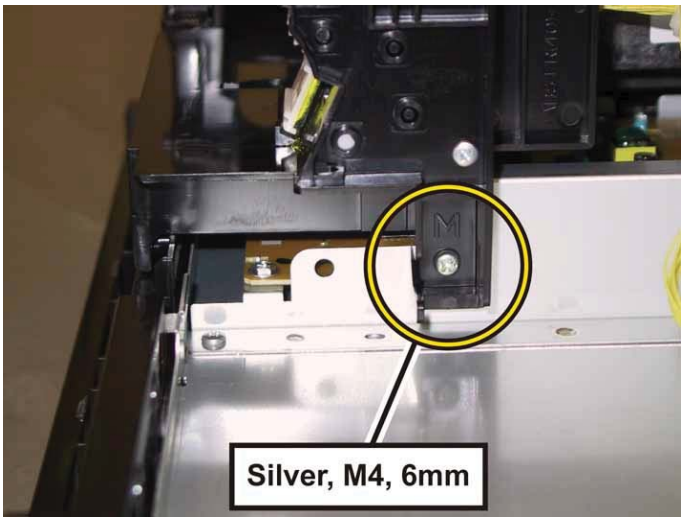
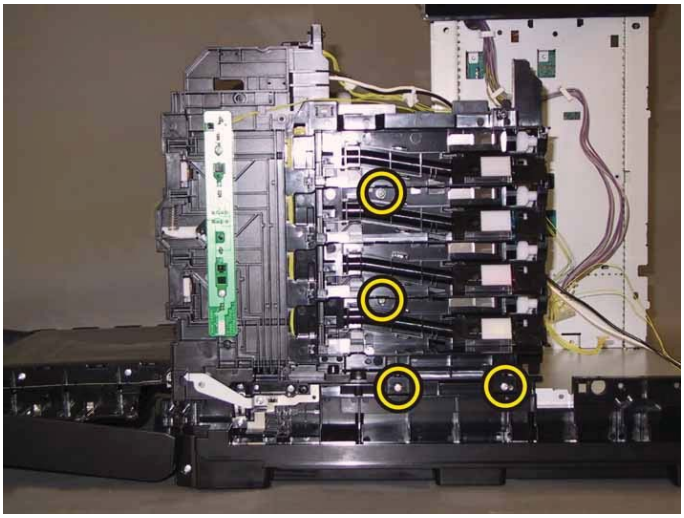
1) Attach the FRAME ASSY MOT to the DISPENSER ASSY.	
2) Hang the notch of the CONDUCTOR MOTOR to the hook of the FRAME DISP.	

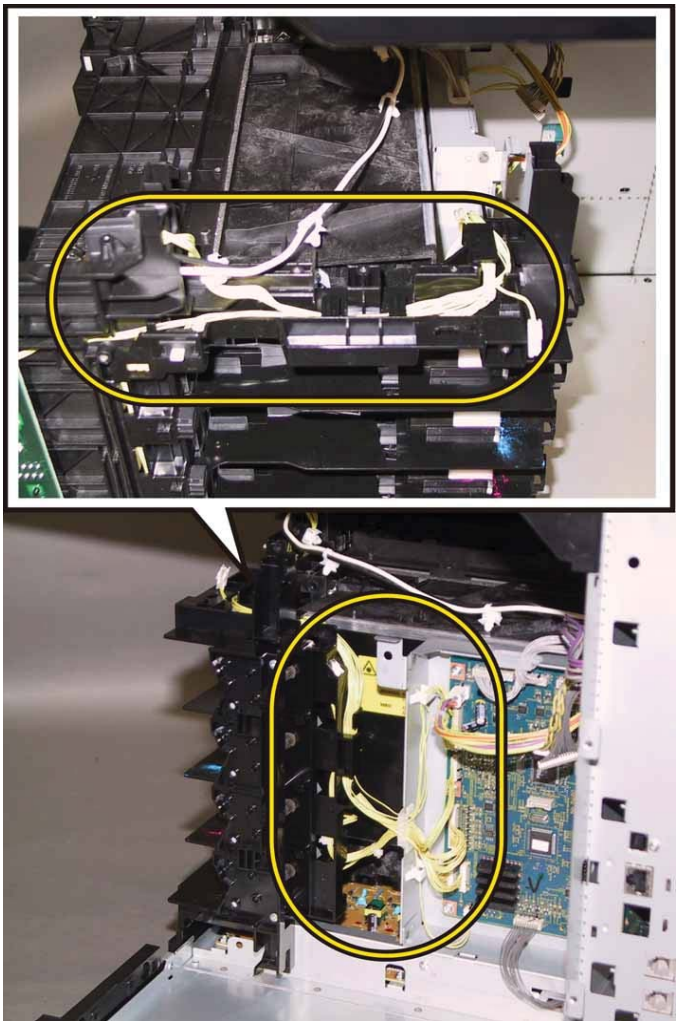
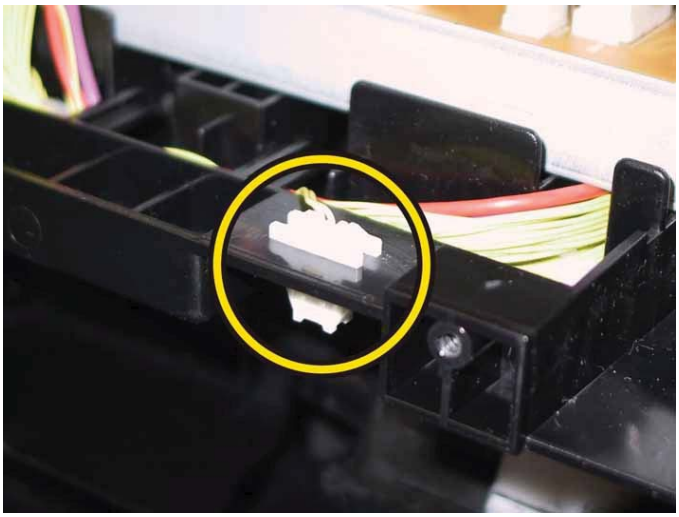
3) Secure the FRAME ASSY MOT to the DISPENSER ASSY with the five screws (silver, tap, 8mm).	
4) Route all the harness through the hooks of the FRAME ASSY MOT, engage all the connectors of the MOTOR ASSY DISP.	

Go to the next replacement step:

Replacement 18 DISPENSER ASSY (PL5.1.1)

Replacement 18 DISPENSER ASSY (PL5.1.1)

1) Insert the AUGER part of the DISPENSER ASSY into the hole of the printer, mate the hole of the DISPENSER ASSY with the boss of the printer, and then attach the DISPENSER ASSY.	
2) Secure the rear side of DISPENSER ASSY to the printer with the one screw (silver, M4, 6mm).	
3) Secure the DISPENSER ASSY to the printer with the four screws (silver, tap, 8mm).	

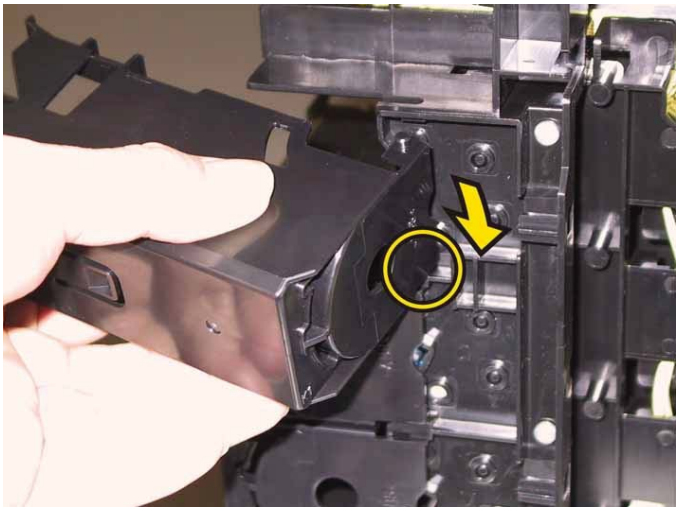
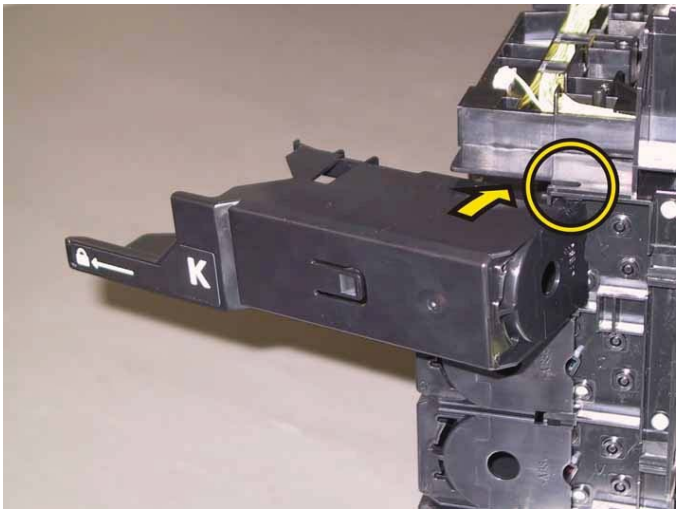
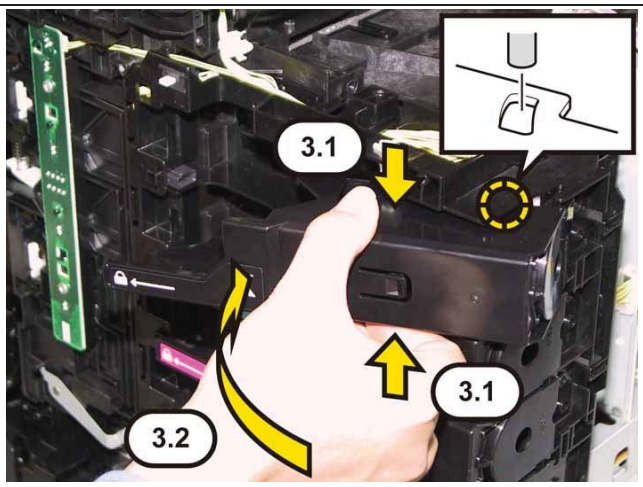
4) Route the HARN ASSY FUSER and HARN ASSY LVPS MAIN through the hooks of the DISPENSER ASSY, engage the seven connectors (P/J14, 15, 17, 18, 19, 29, 31) with the PWBA MCU.	
5) Attach the connector of the HARNESS ASSY LVPS MAIN to the DISPENSER ASSY.	

Go to the next replacement step:

Replacement 19 HOLDER ASSY TCRU (K), (C), (M), (Y) (PL5.1.17~20)

Replacement 19 HOLDER ASSY TCRU (K), (C), (M), (Y) (PL5.1.17~20)

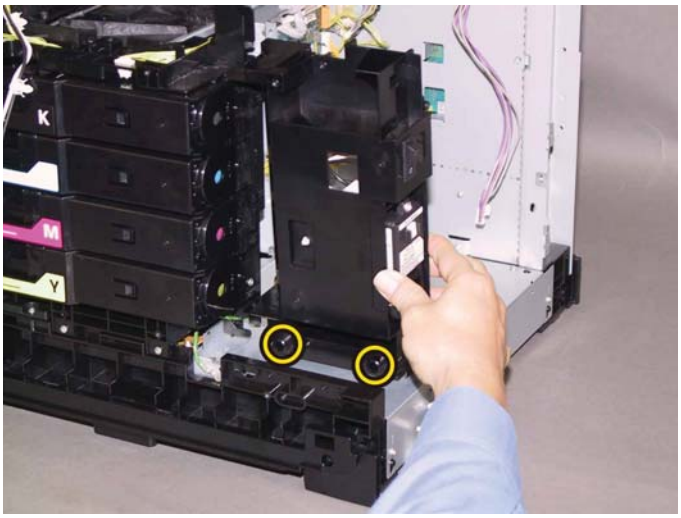
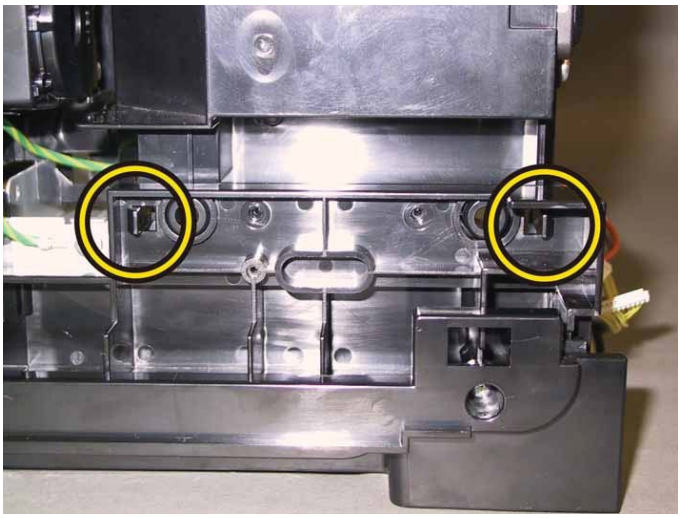
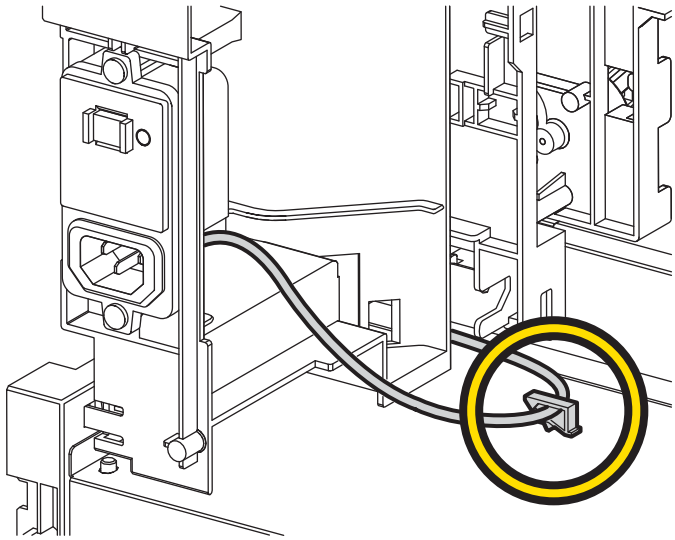
Note: Described below is the replacement procedure common among the four HOLDER ASSY TCRU.

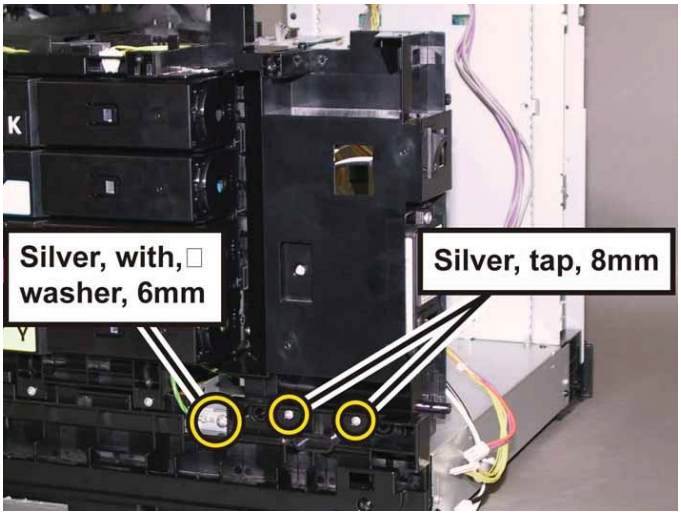
1) Mate the lower boss of the HOLDER ASSY TCRU with the hole of the FRAME DISP.	
2) Bend the HOLDER ASSY TCRU, mate the upper boss of the HOLDER ASSY TCRU with the hole of the FRAME DISP.	
3) Press the central part of the HOLDER ASSY TCRU, mate the hole of the HOLDER ASSY TCRU with the boss of the FRAME DISP.	

Go to the next replacement step:

Replacement 20 CHASSIS ASSY BREAKER (Reference only)

Replacement 20 CHASSIS ASSY BREAKER (Reference only)

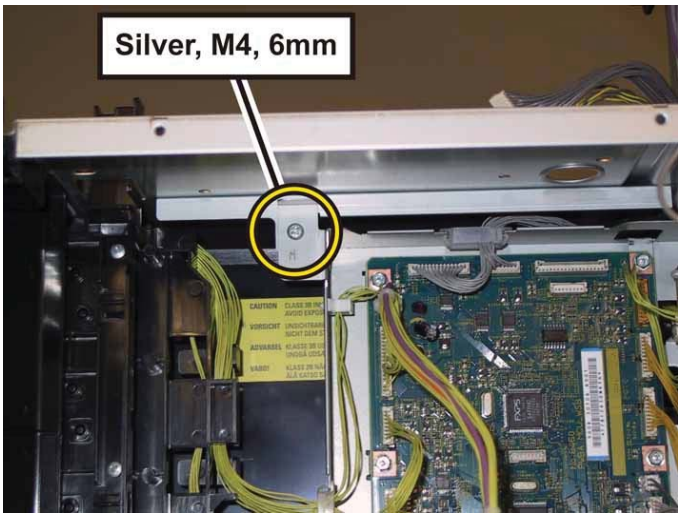
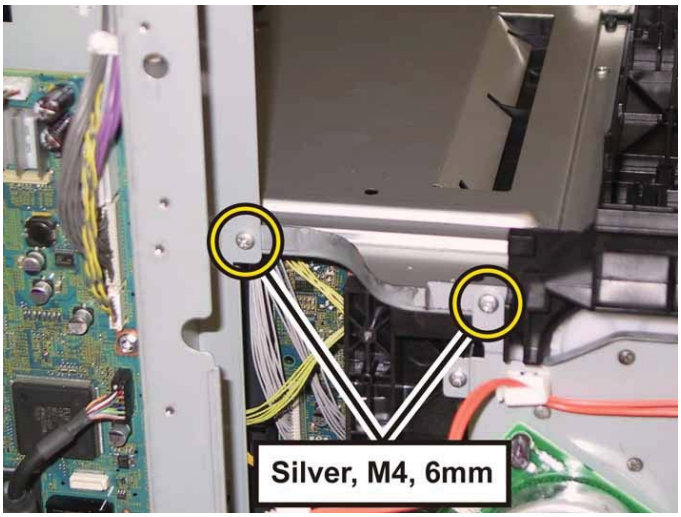
1) Mate the two bosses of the CHASSIS BREAKER with the hole of the printer, attach the CHASSIS BREAKER to the printer together with the BREAKER GFI, the HARN ASSY SW PWR and the HARN ASSY GFI GND.	
2) Secure the CHASSIS BREAKER to the printer with the two hooks.	
3) Secure the HARN ASSY GFI GND using the clamp.	

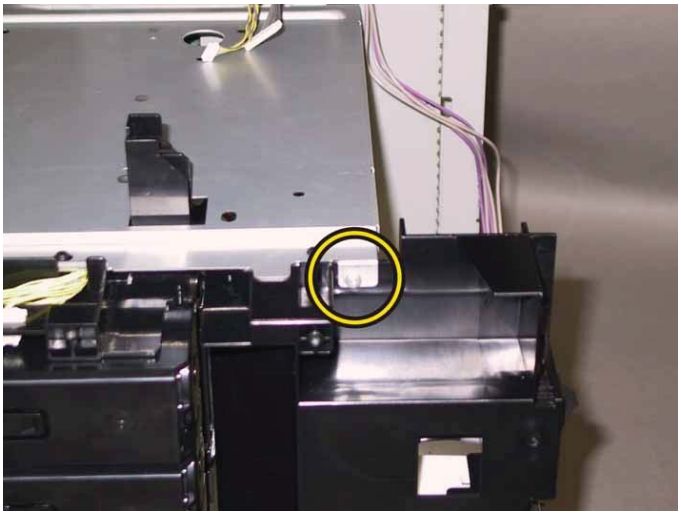
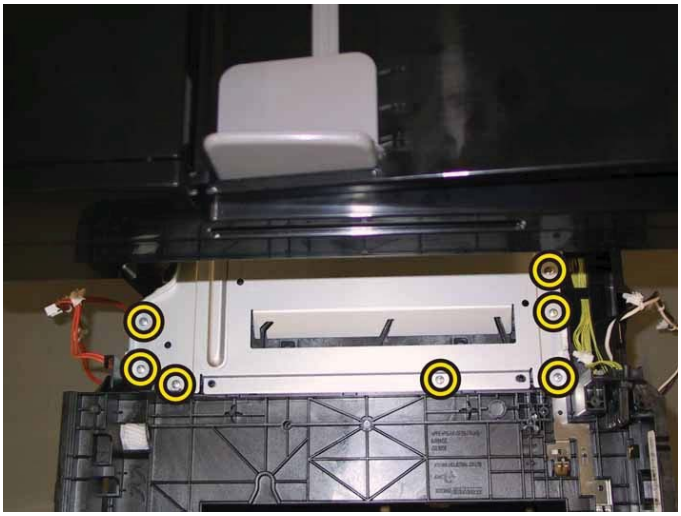
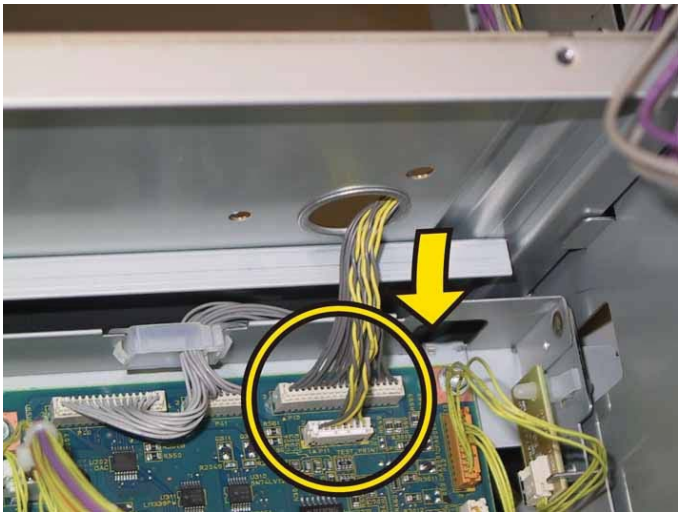
4) Secure the CHASSIS BREAKER to the printer with the two screws (silver, tap, 8mm), secure the grounding terminal of the HARN ASSY GFI GND to the printer with the one screw (silver, with washer, 6mm).	

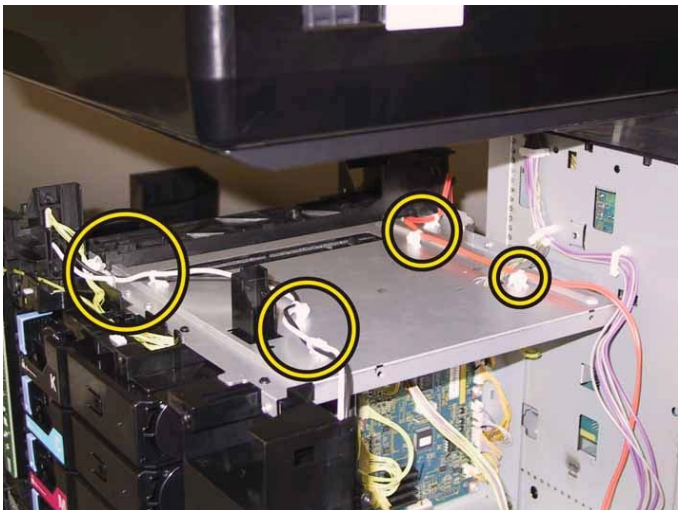
Go to the next replacement step:

Replacement 21 PLATE ASSY DUCT (PL10.6.1)

Replacement 21 PLATE ASSY DUCT (PL10.6.1)

1) Attach the PLATE ASSY DUCT to the printer.	
2) Secure the inside of the PLATE ASSY DUCT with the one screw (silver, M4, 6mm).	
3) Secure the left side of the PLATE ASSY DUCT with the two screws (silver, M4, 6mm).	

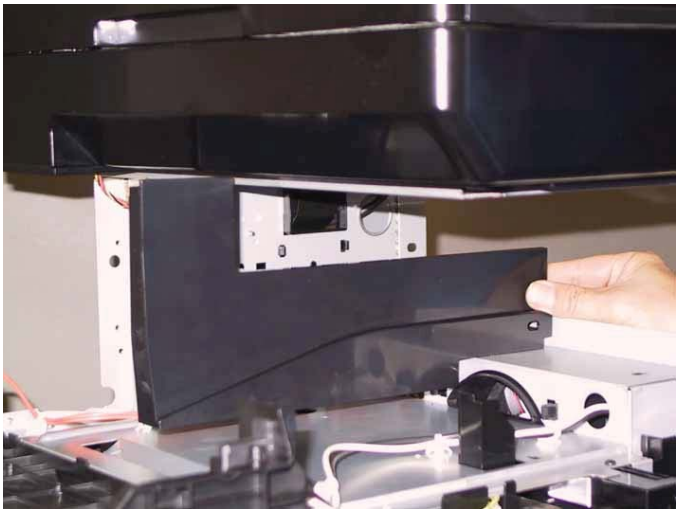
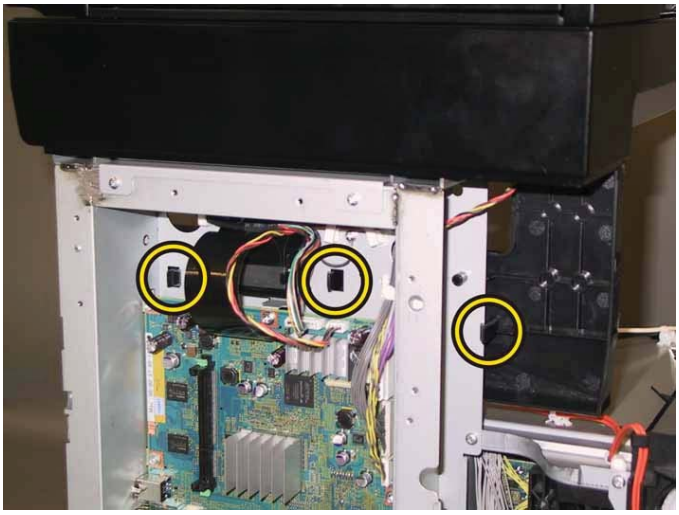
4) Secure the right side of the PLATE ASSY DUCT with the one screw (silver, tap, 8mm).	
5) Secure the upper side of the PLATE ASSY DUCT with the seven screws (silver, tap, 8mm).	
6) Route the HARN ASSY ESS (PL10.8.1) and the HARN ASSY ESS VIDEO (PL10.8.2) through the hole of the PLATE ASSY DUCT, engage the two connectors (P/J10, 11) with the PWBA MCU.	

7) Replace the seven clamps that secure the harness of the HARN ASSY FUSER and HARN ASSY INTERLOCK to the PLATE ASSY DUCT.	

Go to the next replacement step:

Replacement 22 COVER POLE IN (PL10.1.3)

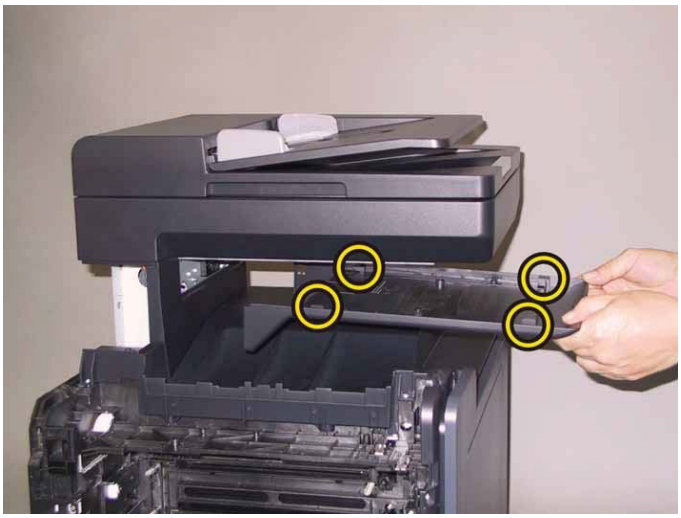
Replacement 22 COVER POLE IN (PL10.1.3)

1) Mate the two bosses of the COVER POLE IN with the holes of the printer, attach the COVER POLE IN.	
2) Secure the COVER POLE IN to the printer with the three hooks.	

Go to the next replacement step:

Replacement 38 SHIELD ASSY ESS (PL10.6.19)

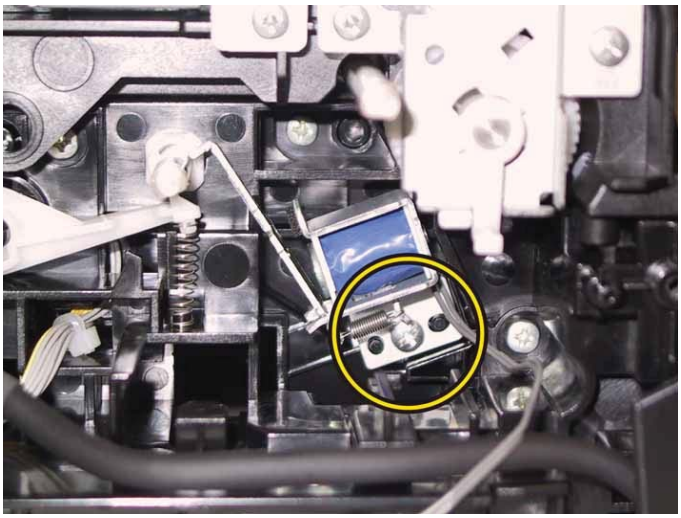
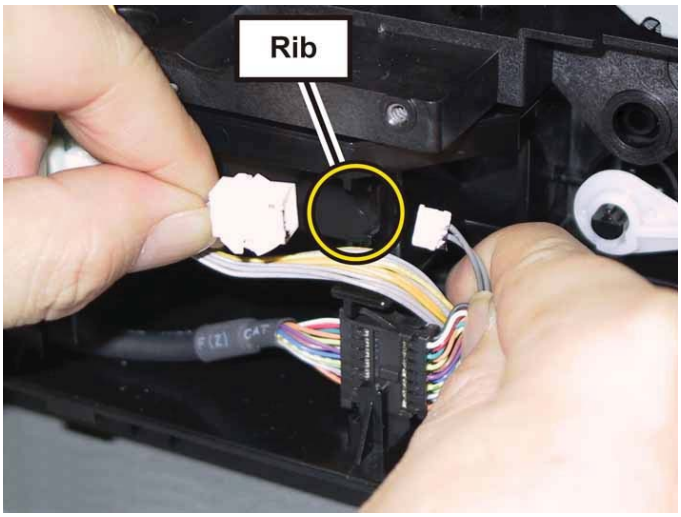
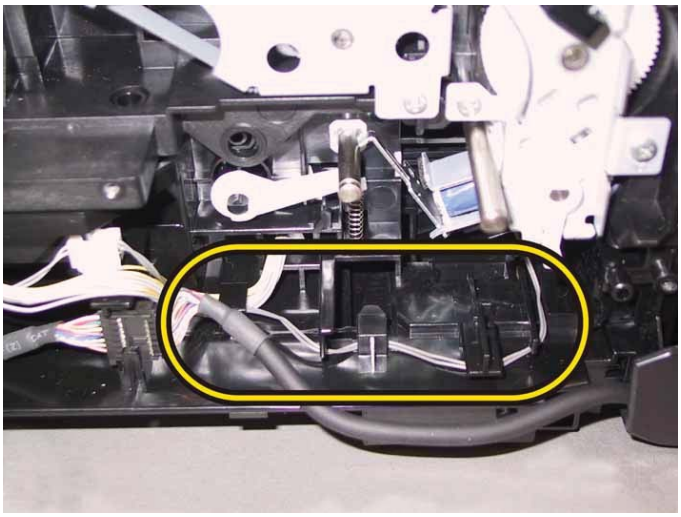
Replacement 23 COVER SCANNER LOW (PL10.1.2)

1) Mate the four hooks of the COVER SCANNER LOW with the holes of the printer.	
2) Shift the COVER SCANNER LOW to the left side, mate the one boss of the COVER SCANNER LOW with the holes of the frame.	

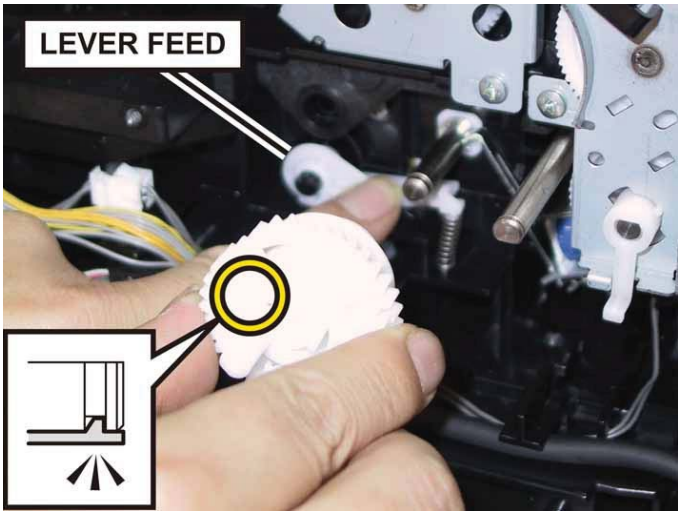
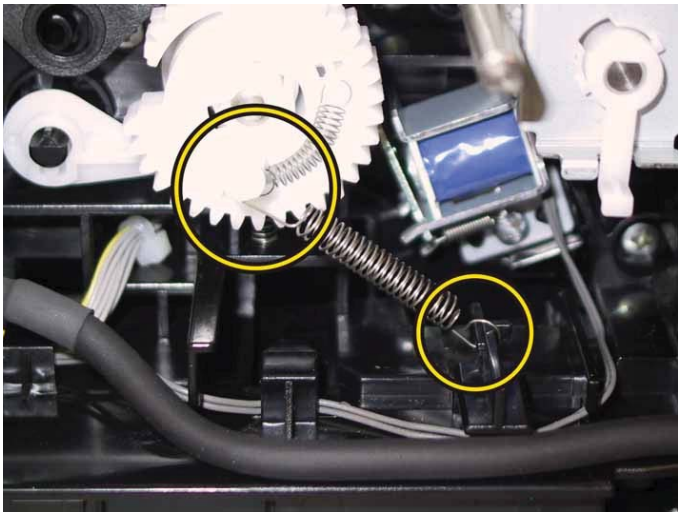
Go to the next replacement step:

Replacement 45 COVER POLE OUT (PL10.1.1)

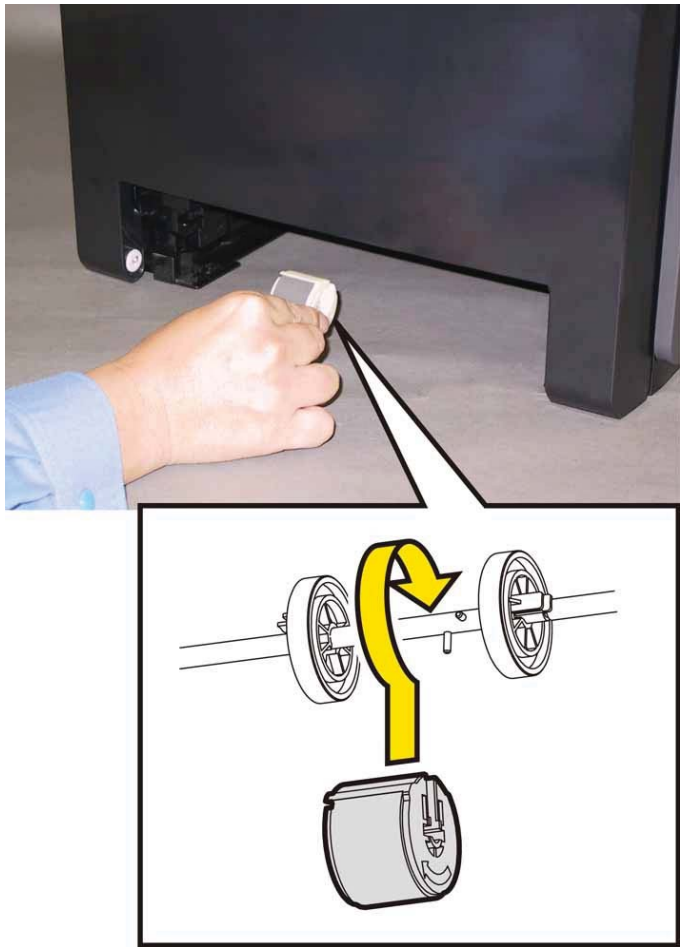
Replacement 24 KIT FEED ROLL/SOL/CLUTCH (PL10.4.99)

1) Mate the holes of the SOLENOID FEED MS with the two bosses of the printer, secure the SOLENOID FEED MSI with the one screw (silver, tap, 8mm).	
2) Engage the connecter (P/J231) of the SOLENOID FEED MSI, secure the relay connector with the rib of the printer.	
3) Route the harness of the SOLENOID FEED MSI through the hooks of the printer.	

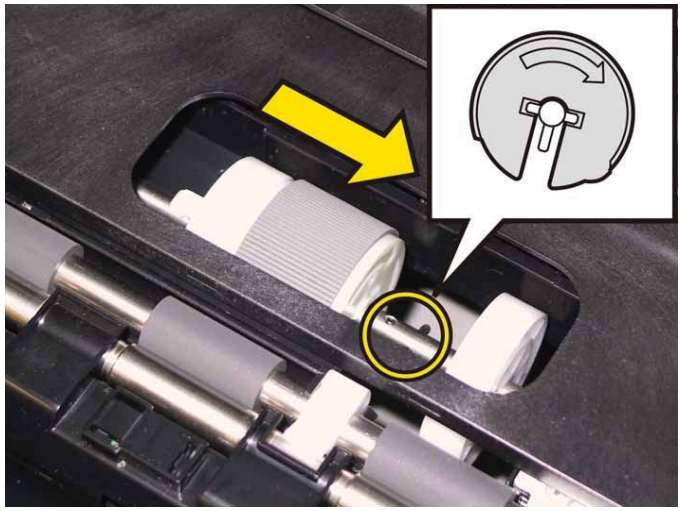
Note: When carrying out the work described next procedure, it is easier to put the D-cut surface of the SHAFT ASSY FEED on the front.

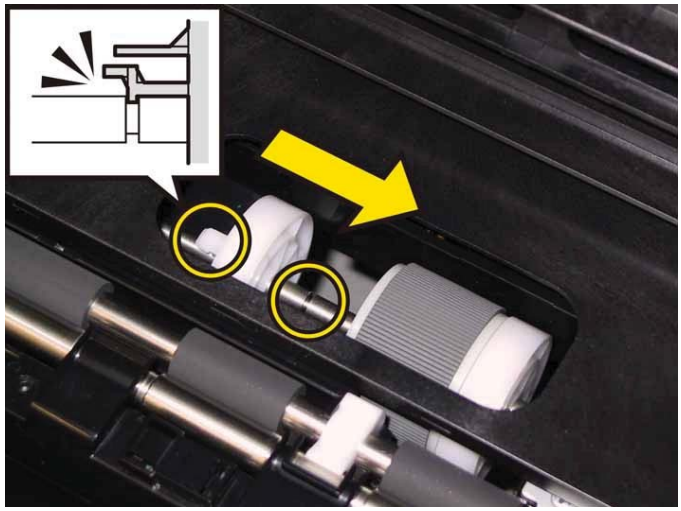
4) Attach the GEAR ASSY FEED to the SHAFT ASSY FEED by pushing down the LEVER FEED, mate the hook of the GEAR ASSY FEED with the groove of the SHAFT ASSY FEED.	
5) Hang the SPRING FEED OUT to the GEAR ASSY FEED and the printer. **Note: Ensure that the SPRING FEED OUT is oriented to the direction shown in the right.**	

6) Close the COVER ASSY FRONT.

7) Fit the ROLL ASSY FEED to the SHAFT ASSY FEED with the groove of the ROLL ASSY FEED facing upward, rotate the ROLL ASSY FEED 180 degrees so that the pin on the SHAFT ASSY FEED is aligned with the groove on the ROLL ASSY FEED.	

8) Open the COVER ASSY FRONT.

9) Move the ROLL ASSY FEED to the right side, put the groove of the ROLL ASSY FEED on the pin of the SHAFT ASSY FEED.	

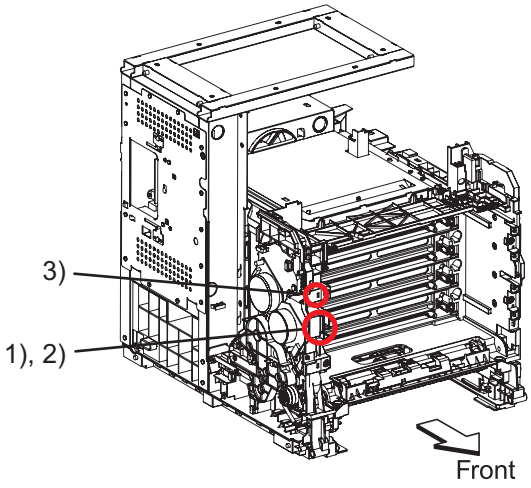
10) Move the ROLL CORE MSI to the right side, to secure the hook of the ROLL CORE MSI with the groove of the SHAFT ASSY FEED.	

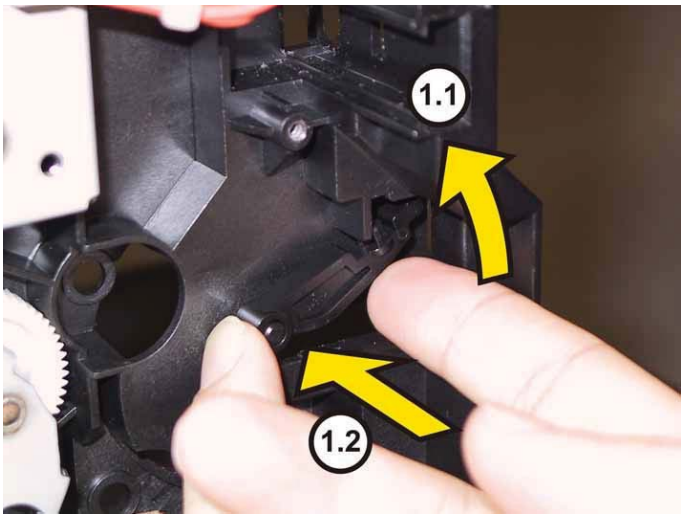
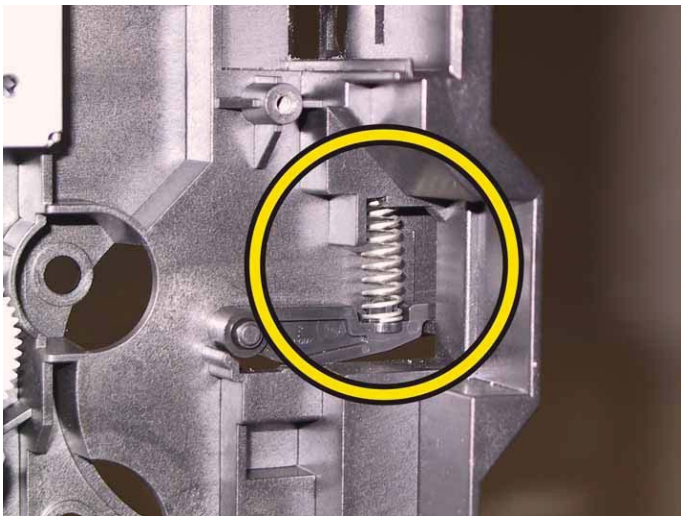
Go to the next replacement step:

Replacement 28 KIT DRIVE ASSY PH (PL7.1.99)

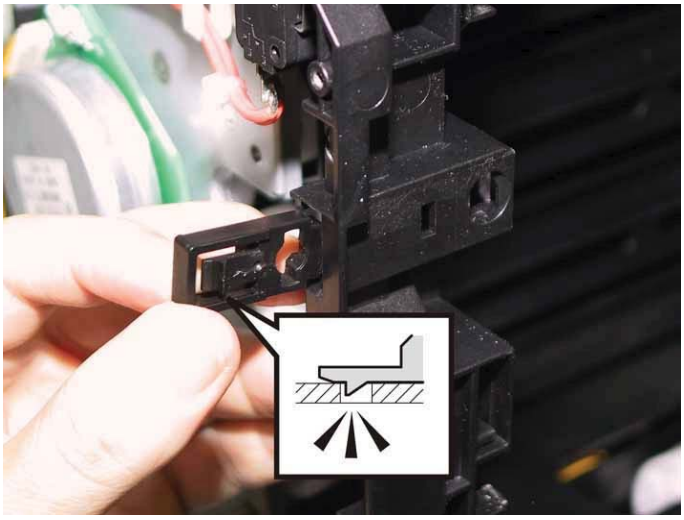
Replacement 25 KIT BLOCK PHD LEFT (PL4.1.98)

Accesses Position (The 1), 2) and 3) show the procedure number.)



1) Tilt the LEVER PHD slightly, attach the LEVER PHD to the printer.	
2) Attach the SPRING PHD to the printer.	

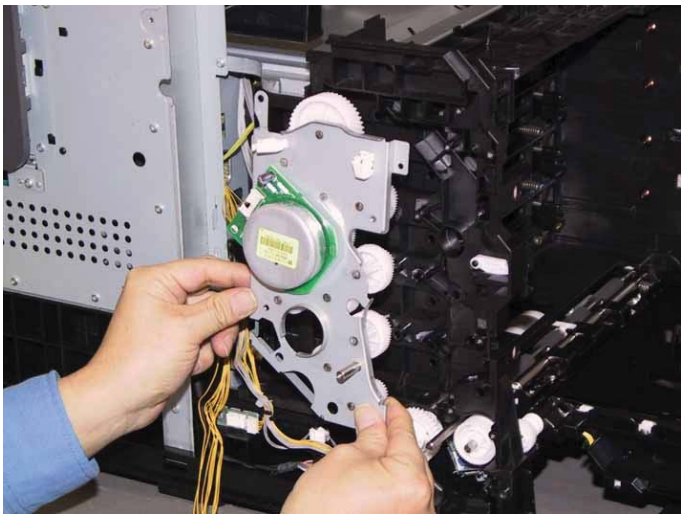
Note: Described below is the replacement procedure common among the upper and lower of the BLOCK STOPPER PHD D.

3) Push the BLOCK STOPPER PHD D to the printer until it is locked.	

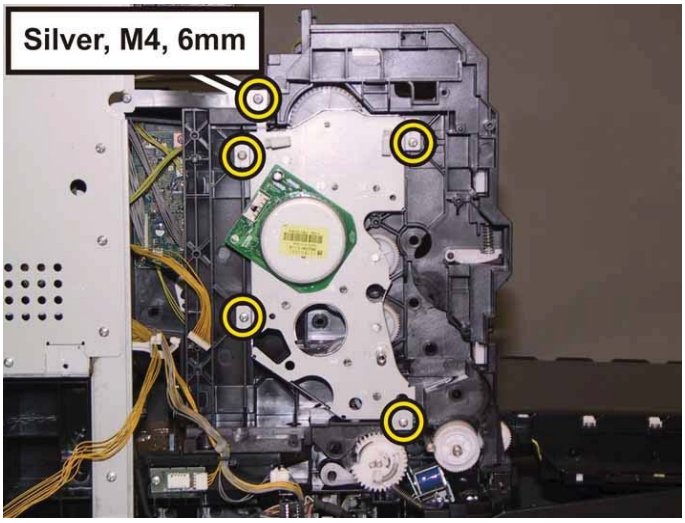
Go to the next replacement step:

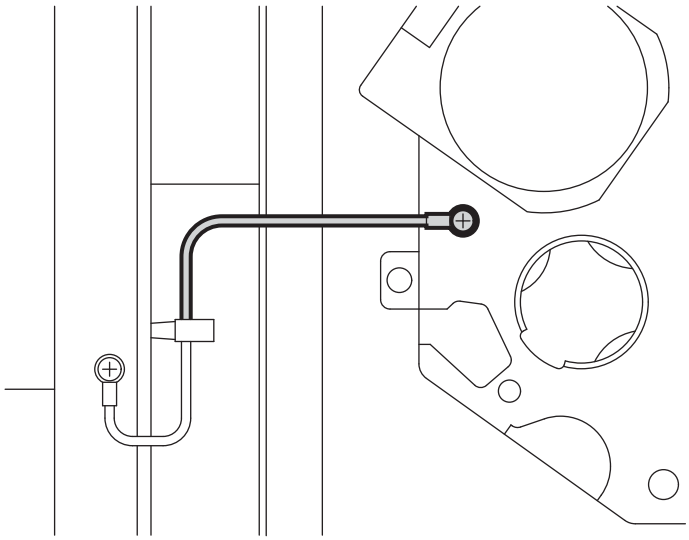
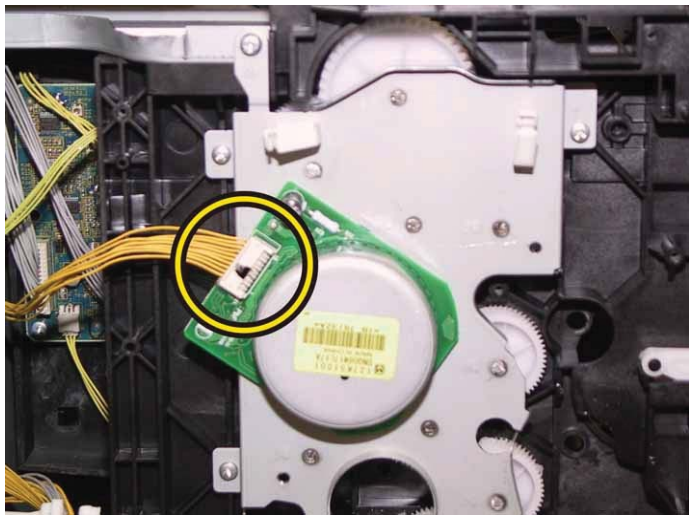
Replacement 27 KIT DRIVE ASSY MAIN (PL7.1.98)

Replacement 26 DRIVE ASSY SUB (PL7.1.1)

1) Attach the DRIVE ASSY SUB to the printer.	

Note: Since two types of screws are used for securing the DRIVE ASSY SUB, ensure that the right screws are used at their right securing positions.
The securing positions for tap screws are marked with [T].
The securing positions for metal screws are marked with [M].

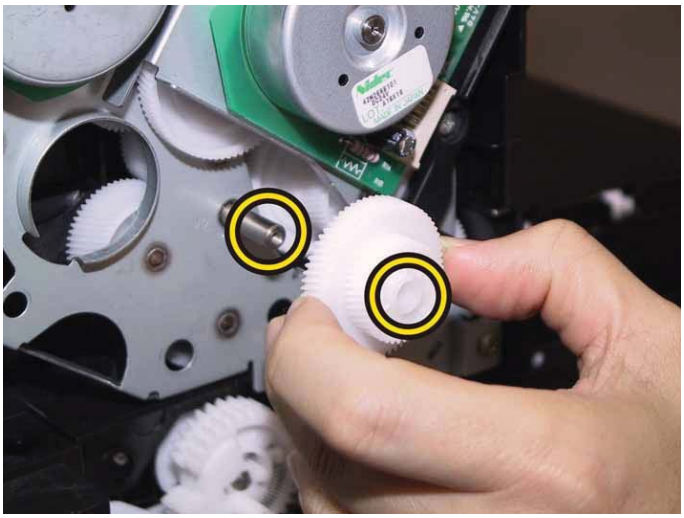
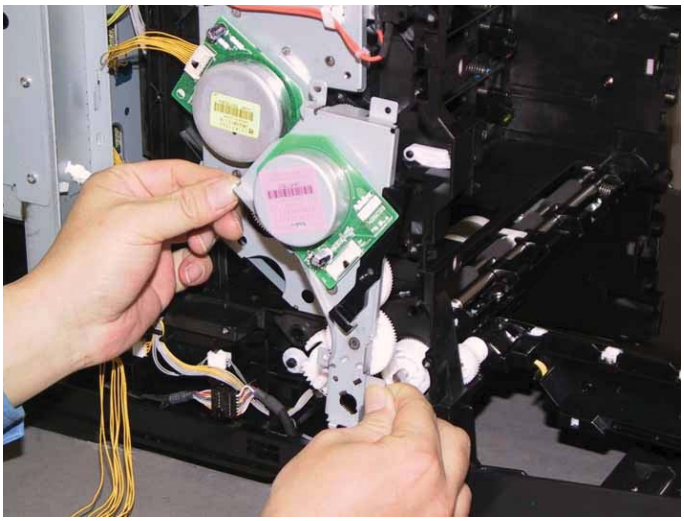
2) Secure the DRIVE ASSY SUB to the printer with the one screw (silver, M4, 6mm) and the four screws (silver, tap, 8mm).	

3) Secure the HARN ASSY GFI GND with the one screw (silver, 6m) to the DRIVE ASSY SUB.	
4) Engage the connecter (P/J221) of the DRIVE ASSY SUB.	

Go to the next replacement step:

Replacement 27 KIT DRIVE ASSY MAIN (PL7.1.98)

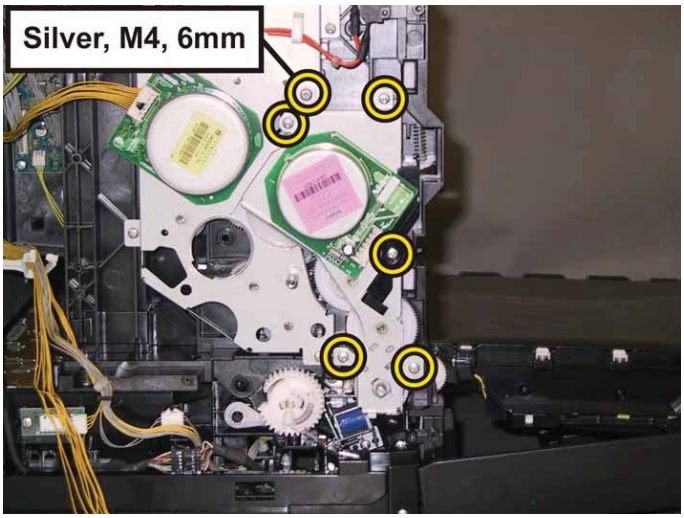
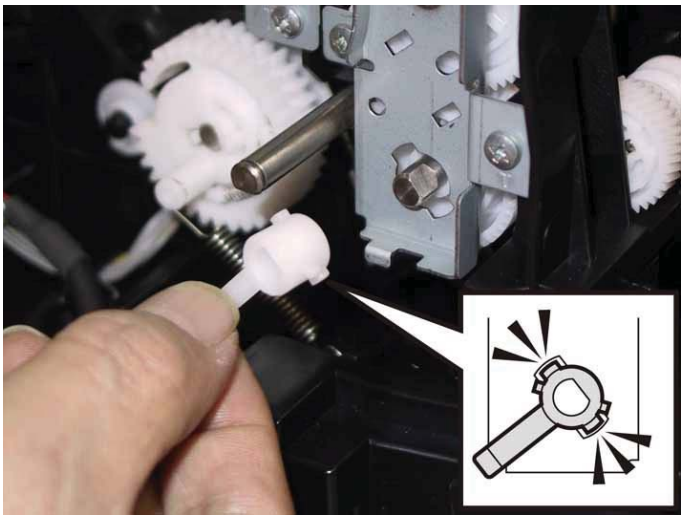
Replacement 27 KIT DRIVE ASSY MAIN (PL7.1.98)

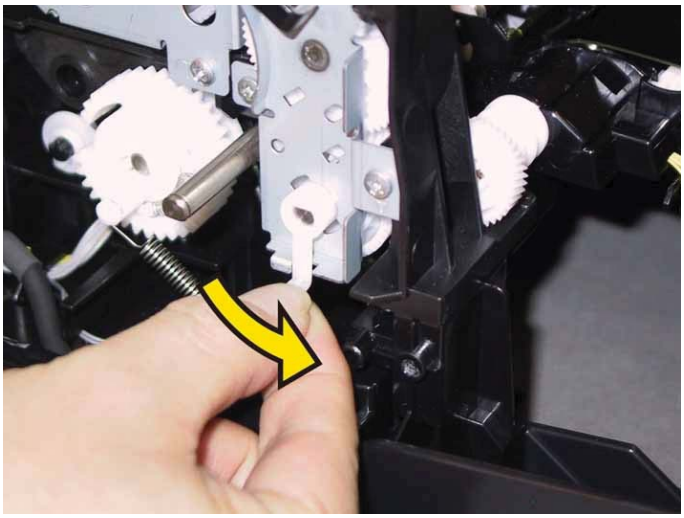
1) Attach the GEAR P2 to the shaft of DRIVE ASSY SUB. **Note: Ensure that the GEAR P2 is oriented to the direction shown in the right.**	
2) Attach the DRIVE ASSY MAIN to the printer.	

Note: Since two types of screws are used for securing the DRIVE ASSY MAIN, ensure that the right screws are used at their right securing positions.

The securing positions for tap screws are marked with [T].

The securing positions for metal screws are marked with [M].

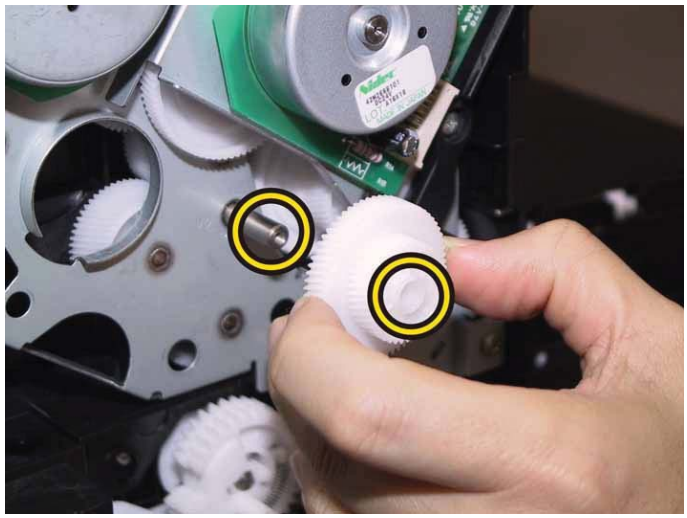
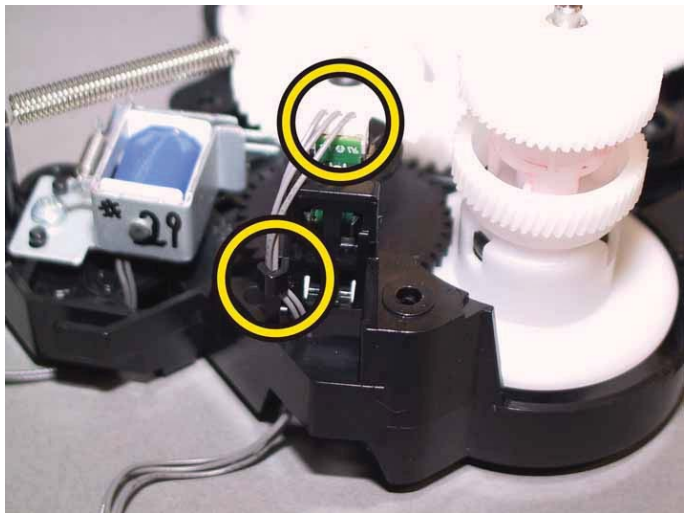
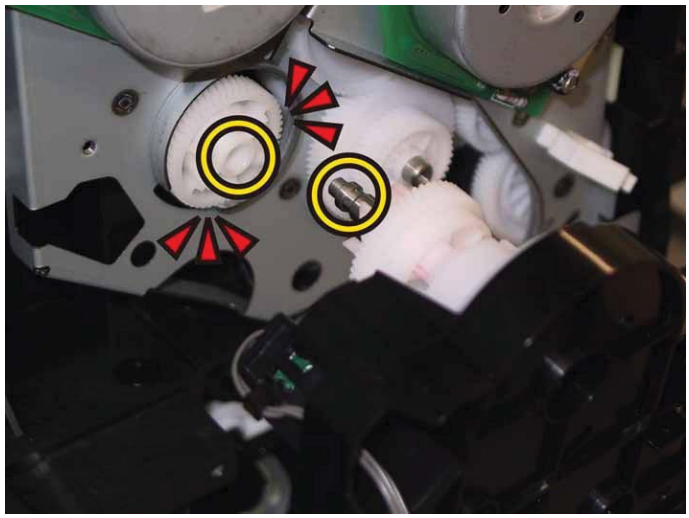
3) Secure the DRIVE ASSY MAIN to the printer with the one screw (silver, M4, 6mm) and the five screws (silver, tap, 8mm).	
Note: When carrying out the work described next procedure, ensure that the flat face of the PIVOT TRANS L is oriented to the direction shown in the right.	
4) Mate the tab of the STOPPER PIVOT with the notch of the DRIVE ASSY MAIN, attach the STOPPER PIVOT to the PIVOT TRANS L.	

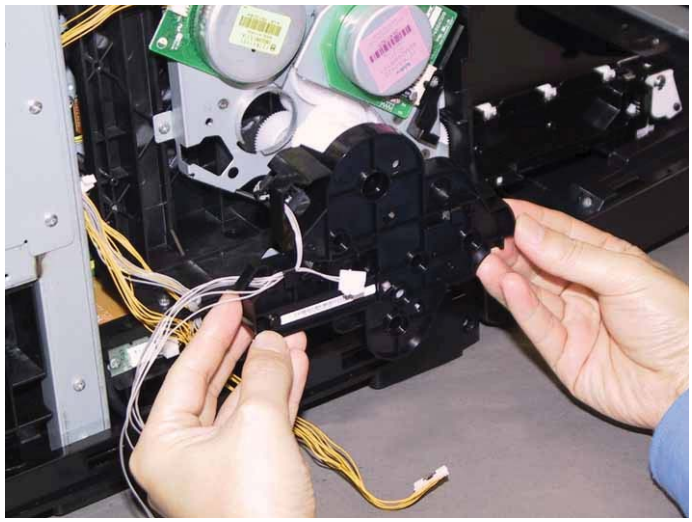
5) Rotate the STOPPER PIVOT to the left, secure the STOPPER PIVOT to the DRIVE ASSY MAIN frame.	

Go to the next replacement step:

Replacement 28 KIT DRIVE ASSY PH (PL7.1.99)

Replacement 28 KIT DRIVE ASSY PH (PL7.1.99)

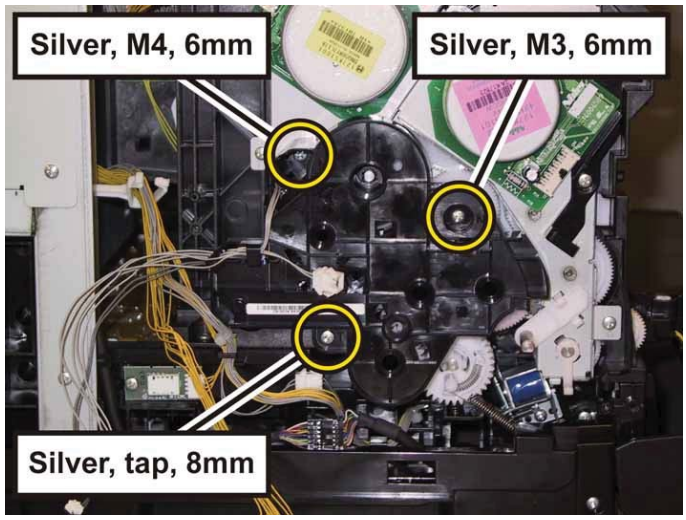
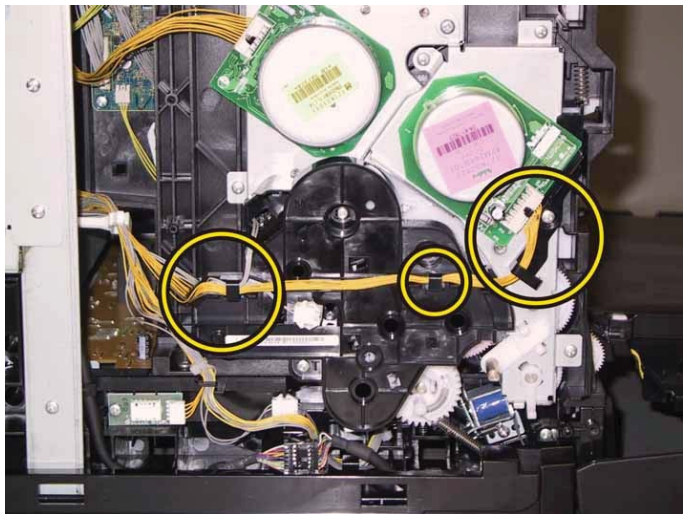
1) Attach the GEAR P2 to the shaft of DRIVE ASSY SUB. **Note: Ensure that the GEAR P2 is oriented to the direction shown in the right.**	
2) Engage the connector (J261) of the HARN ASSY KSNR REGCL with the Color mode switching sensor of the DRIVE ASSY PH, route the HARN ASSY KSNR REGCL through the hook of the DRIVE ASSY PH.	
Note: When carrying out the work described next procedure, take care not to drop the coupling gear to inside.	

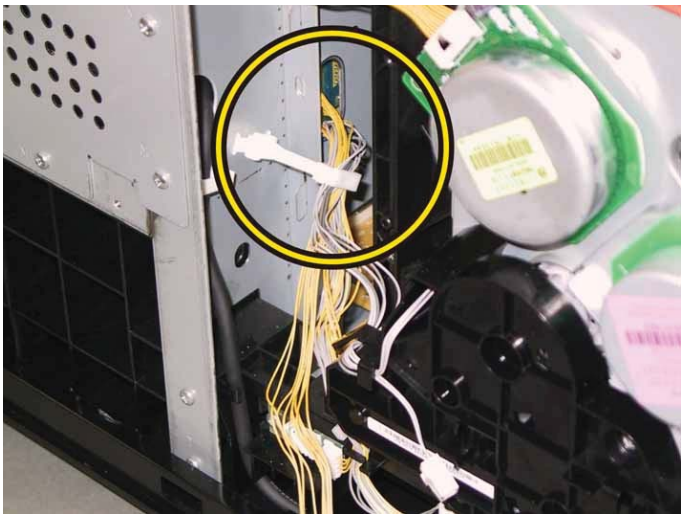
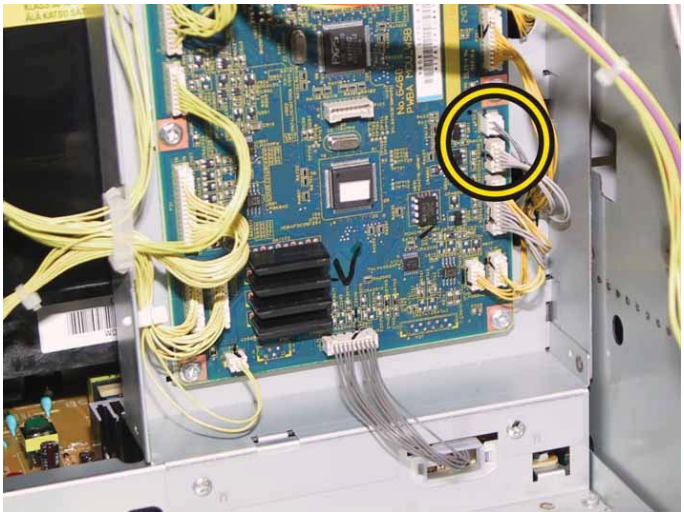
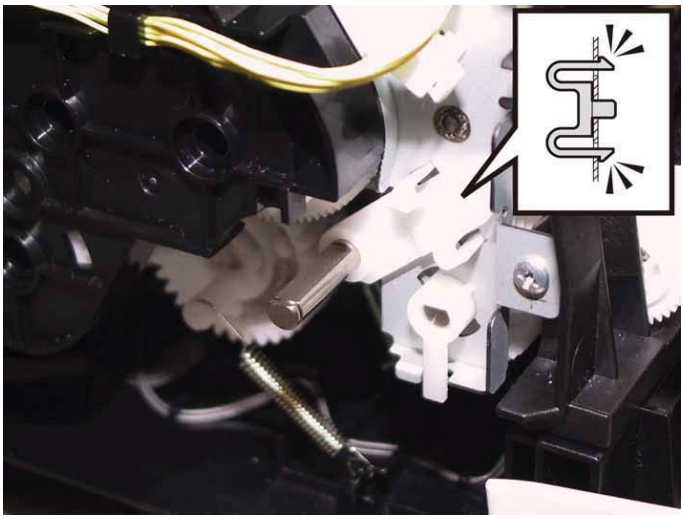
3) Attach the DRIVE ASSY PH to the printer.	

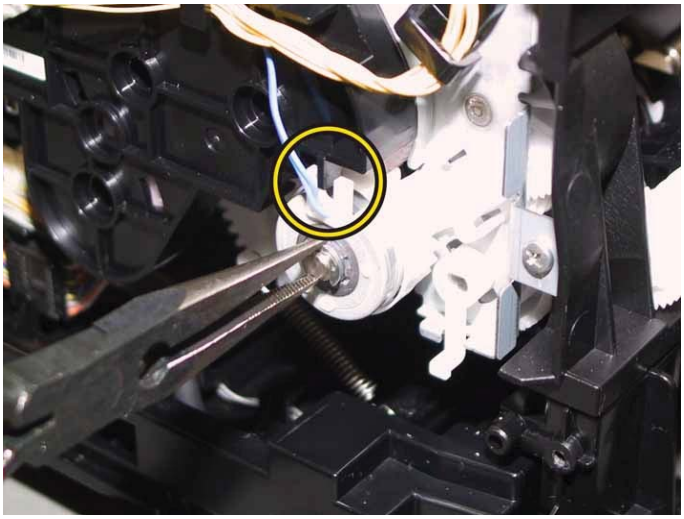
Note: Since three types of screws are used for securing the DRIVE ASSY PH, ensure that the right screws are used at their right securing positions.

The securing positions for tap screws are marked with [T].

The securing positions for metal screws are marked with [M].

4) Secure the DRIVE ASSY PH to the printer with the one screw (silver, M4, 6mm), the one screw (silver, M3, 6mm) and the one screw (silver, tap, 8mm).	
5) Route all the harness through the hooks of the DRIVE ASSY PH, engage the connector (P/J211) of the DRIVE ASSY MAIN.	

6) Route the harness of the DRIVE ASSY PH and the HARN ASSY KSNR REGCL into the hole of the CHASSIS MCU, secure the harness using the CLAMP LOCKING.	
7) Engage the two connectors (P/J24, 26) with the PWBA MCU.	
8) Attach the BEARING REGI to the shaft of the ROLL ASSY REGI, secure the BEARING REGI with the hooks.	

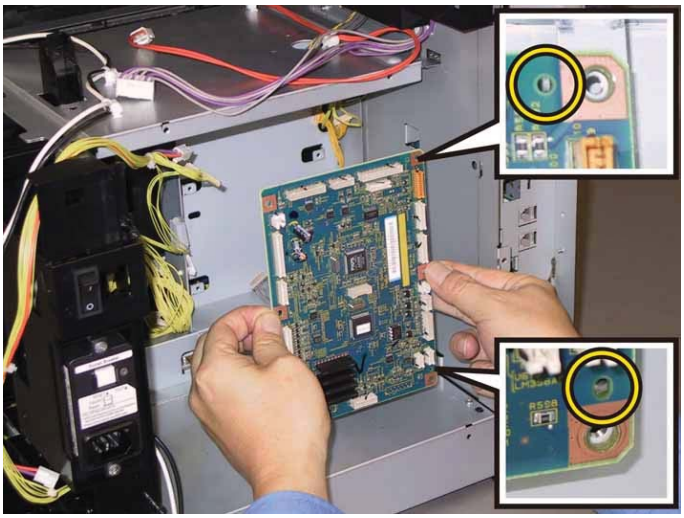
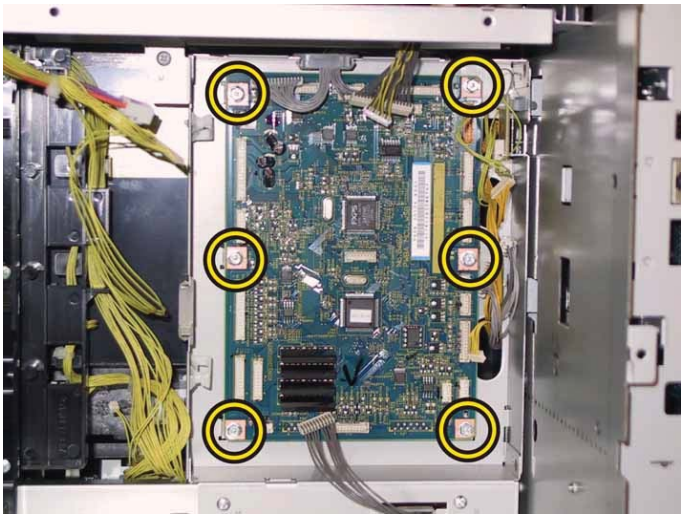
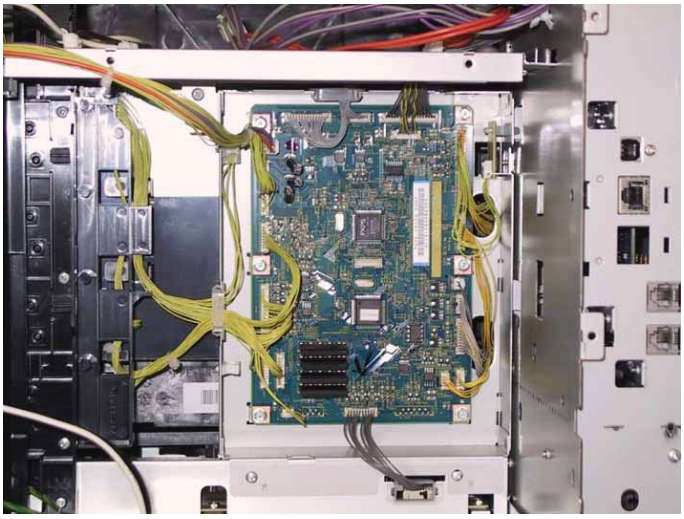
9) Mate the notch of the CLUTCH ASSY DRV with the rib of the DRIVE ASSY PH, secure the CLUTCH ASSY DRV to the ROLL ASSY REGI with the E-ring by using a pliers.	
10) Route the harness of the CLUTCH ASSY DRV through the hook of the DRIVE ASSY PH.	
11) Engage the connector (P/J262) of the CLUTCH ASSY DRV, secure the relay connector with the pegs of the DRIVE ASSY PH.	

Go to the next replacement step:

Replacement 32 CHASSIS ASSY LVPS (Reference only)

Replacement 29 KIT PWBA MCU (PL10.7.99)

Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Mate the holes of the PWBA MCU with the tabs of the printer, attach it.	
2) Secure the PWBA MCU to the printer with the six screws (silver, with flange, 6mm).	
3) Engage all the connectors of the PWBA MCU.	

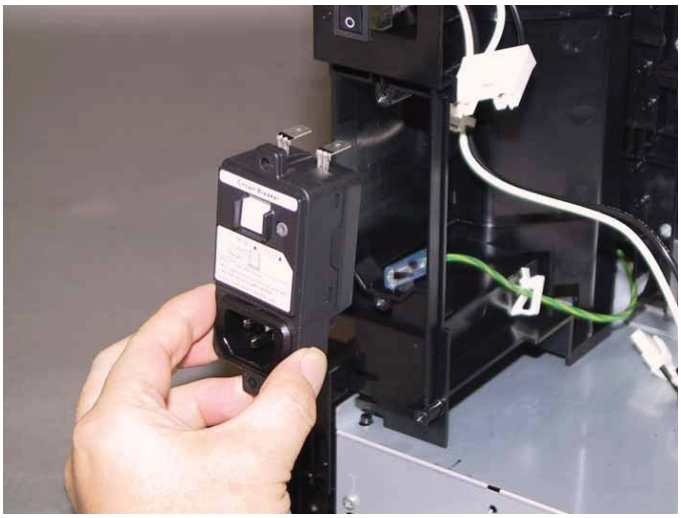
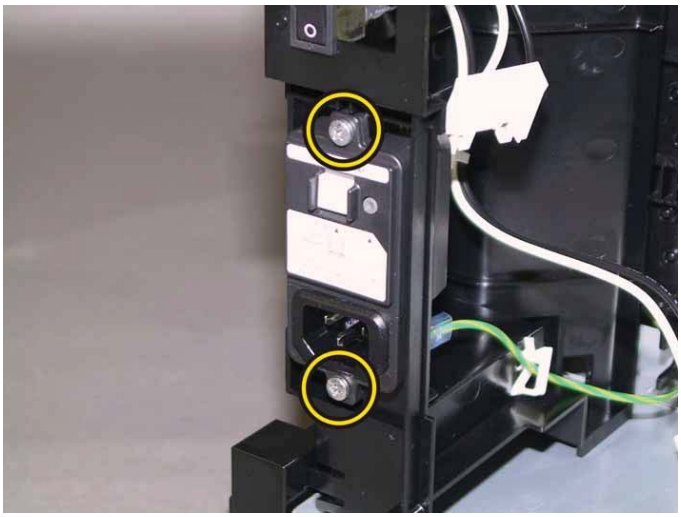
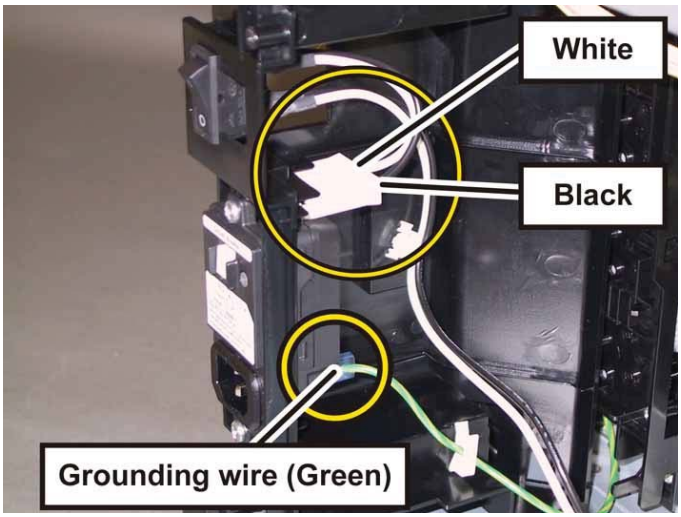
Go to the next replacement step:

Replacement 32 CHASSIS ASSY LVPS (Reference only)

Note: When the PWBA MCU is replaced with a new one, perform the following steps.
(After completing all steps up to Replacement 60.)

4) Plug in the power cord to the printer.
5) Execute diagnostic operation of NVM Load, and write the data into PWBA MCU.
6) Turn off the power.
7) Perform the diagnostic operation of NVM Load, and write the data into the MCU.
8) Turn on the power while pressing the "►" key, "◄" key, and [MENU] key on the control panel.
9) Enter the password, press the "▲"key twice, and press the " ✓ " key once. The diagnostic screen comes up.
10) Press the " ✓ " key once.
11) Press the "▼" key several times until "IOT Diag" is displayed. Press the " ✓ " key once.
12) Press the "▼" key several times until "NVM Settings" is displayed. Press the " ✓ " key once.
13) Press the "▼" key several times until "LoadNVM from ESS" is displayed. Press the " ✓ " key once.
14) Press the " ✓ " key once, and NVM Load is performed.
15) After NVM Load is complete, press the [CANCEL] key several times until "IOT Diag" is displayed.
16) Press the "▼" key several times until "Complete" is displayed.
17) Press the " ✓ " key two times. “COPY, SCAN and FAX” are displayed.
18) Turn off the power to exit.

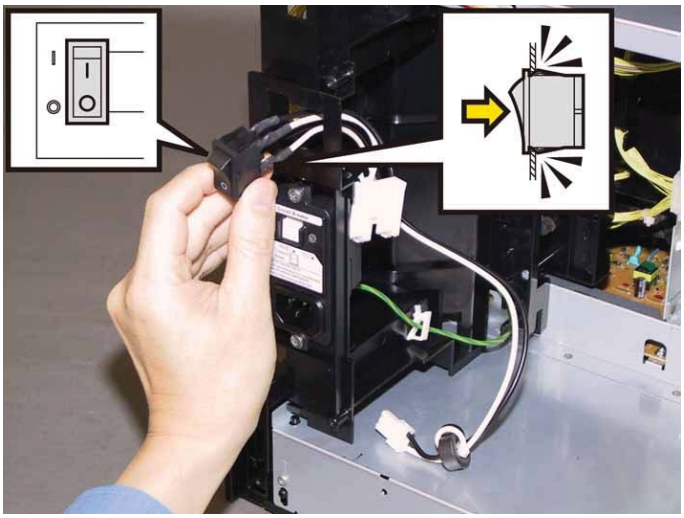
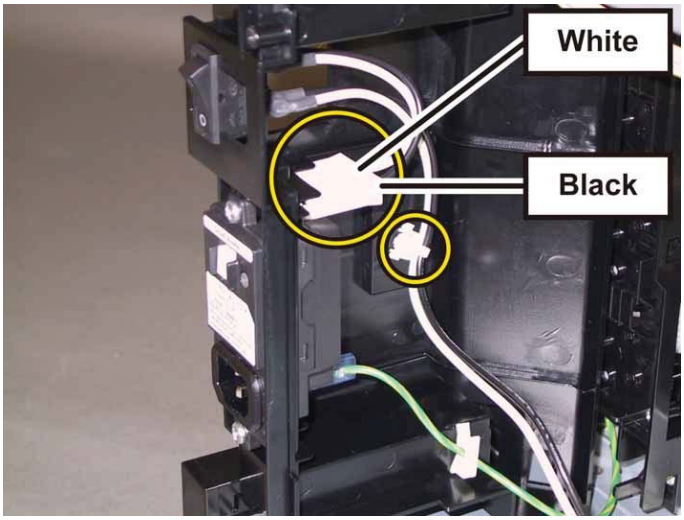
Replacement 30 BREAKER GFI (PL10.7.10)

1) Attach the BREAKER GFI to the printer.	
2) Secure the BREAKER GFI to the printer with the two screws (silver, tap, 12mm).	
3) Engage the connector (P/J482) and the FASTON terminal (FS484) to the BREAKER GFI. **Note: Take care not to engage the connectors to wrong position.**	

Go to the next replacement step:

Replacement 32 CHASSIS ASSY LVPS (Reference only)

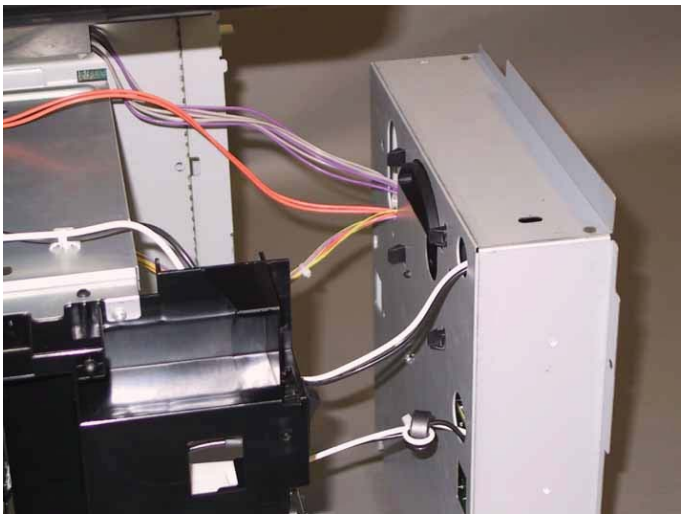
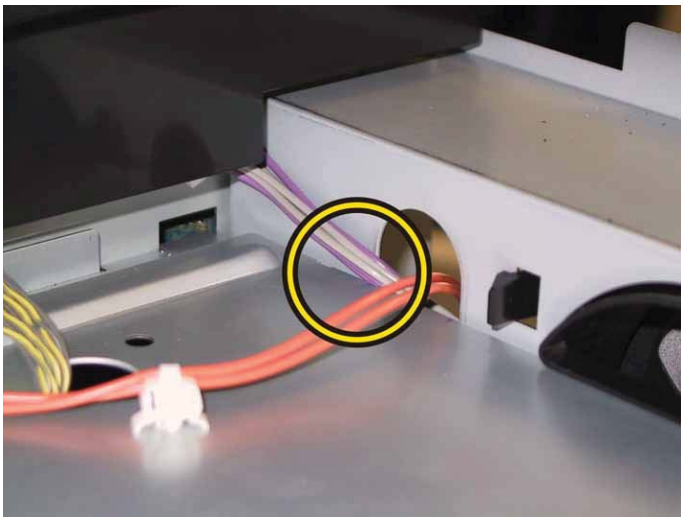
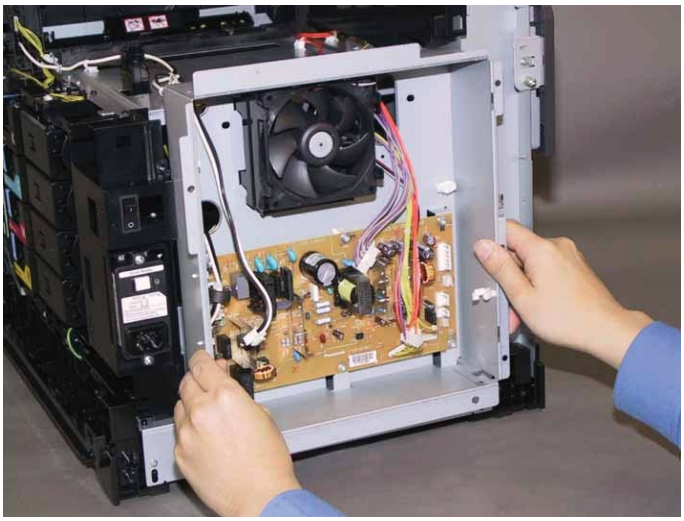
Replacement 31 HARN ASSY SW PWR (PL10.7.8)

1) Replace the POWER SWITCH to the printer, and secure it with the hooks. **Note: When replacing the HARN ASSY SW PWR, match the ON/OFF mark of the POWER SWITCH with the mark on the CHASSIS BREAKER.**	
2) Engage the connector (P/J482) to the BREAKER GFI, replace the clamp that secure the harness of the HARN ASSY SWPWR. **Note: Take care not to engage the connectors to wrong position.**	

Go to the next replacement step:

Replacement 32 CHASSIS ASSY LVPS (Reference only)

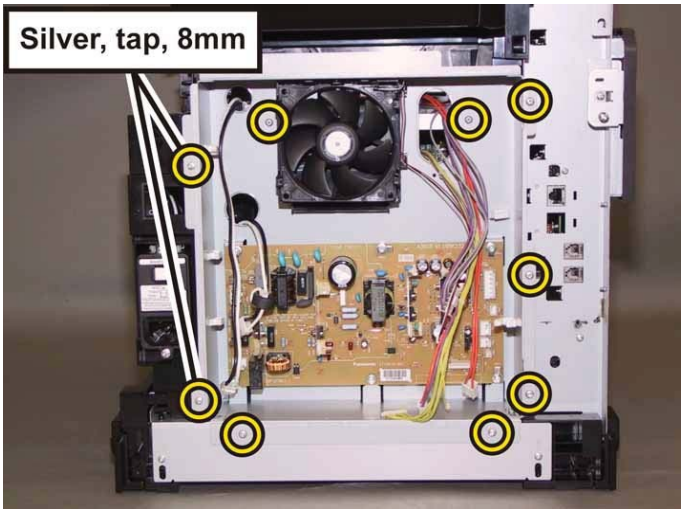
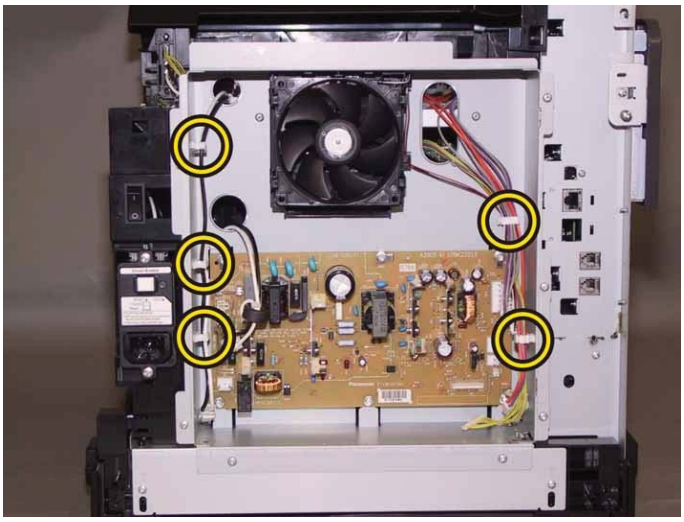
Replacement 32 CHASSIS ASSY LVPS (Reference only)

1) Route the harnesses into the hole of the CHASSIS LVPS. **Note: Take care not to route the harness through the wrong hole.**	
Note: When carrying out the work described next procedure, take care not to damage the harness by pinching it between the CHASSIS LVPS and the printer.	
2) Attach the CHASSIS LVPS to the printer together with the PWBA LVPS and the DUCT FAN ASSY.	

Note: Since three types of screws are used for securing the CHASSIS LVPS, ensure that the right screws are used at their right securing positions.

The securing positions for tap screws are marked with [T].

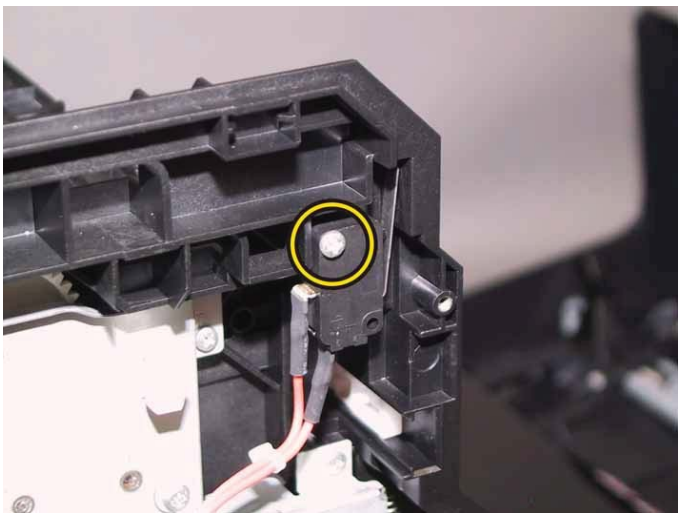
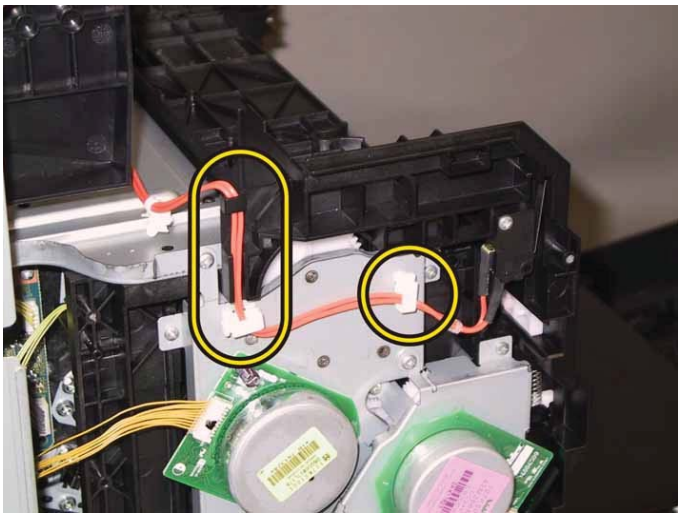
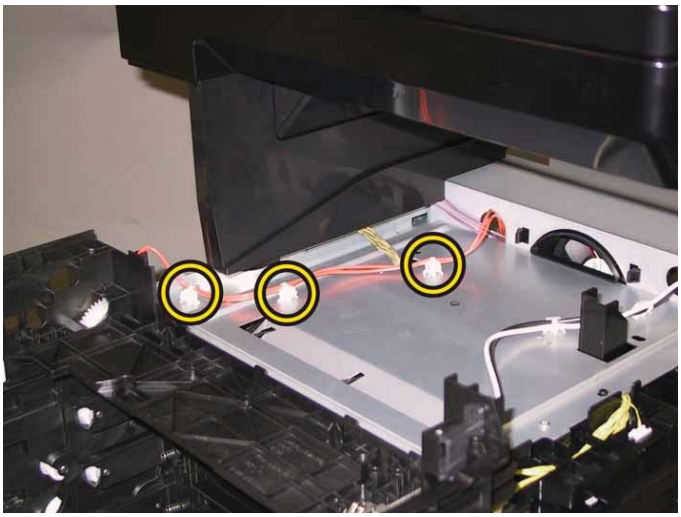
The securing positions for metal screws are marked with [M].

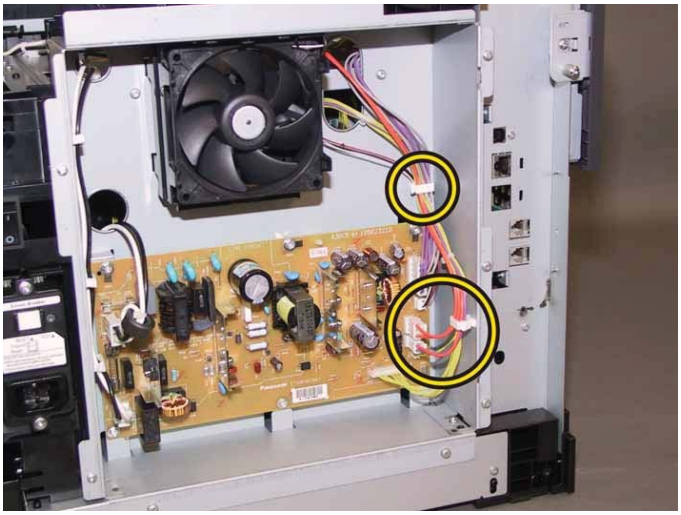
3) Secure the CHASSIS LVPS to the printer with the seven screws (silver, M4, 6mm) and the two screws (silver, tap, 8mm).	
4) Engage all the connectors of the PWBA LVPS, secure all the harness using the clamp.	

Go to the next replacement step:

Replacement 42 COVER TOP (PL10.1.4)

Replacement 33 HARN ASSY INTERLOCK (PL10.6.4)

1) Mate the hole of the switch with the boss of the printer, secure the switch with the one screw (silver, tap, 16mm).	
2) Secure the harness of the HARN ASSY INTERLOCK with the clamps.	
3) Route the HARN ASSY INTERLOCK through the hole of the CHASSIS LVPS , attach the three clamps that secure the harness of the INTERLOCK SWITCH to the PLATE ASSY DUCT.	

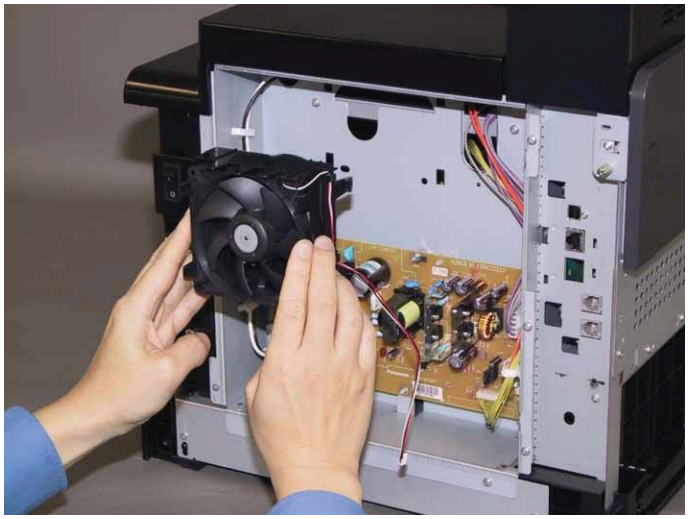
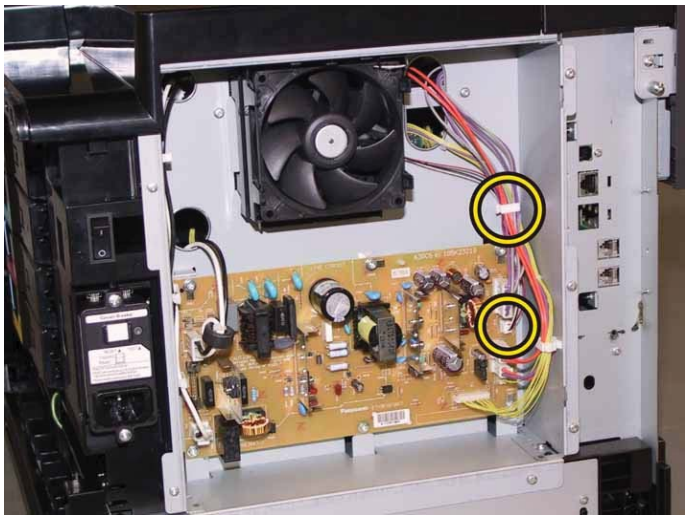
4) Engage the connector (P/J44) of the HARN ASSY INTERLOCK to the PWBA LVPS, secure the harness using the clamp.	

Go to the next replacement step:

Replacement 42 COVER TOP (PL10.1.4)

Replacement 34 DUCT FAN ASSY (PL10.6.17)

Note: When carrying out the work described next procedure, take care to check the orientation of the FAN. (Attach the FAN so that its labeled surface faces front.)

1) Secure the DUCT ASSY FAN to the printer with the four hooks.	
2) Engage the connector (P/J503) of the DUCT FAN ASSY to the PWBA LVPS, secure the harness using the clamp.	

Go to the next replacement step:

Replacement 43 COVER REAR (PL10.1.5)

Replacement 35 PWBA LVPS (PL10.6.16)

Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Mate the hole of the PWBA LVPS with the SUPPORT PWB, secure the hooks of the SUPPORT PWB.	
2) Secure the PWBA LVPS to the printer with the six screws (silver, with flange, 6mm).	
3) Engage all the connectors of the PWBA LVPS.	

Go to the next replacement step:

Replacement 43 COVER REAR (PL10.1.5)

Replacement 36 KIT ESS PWBA (PL10.6.99)

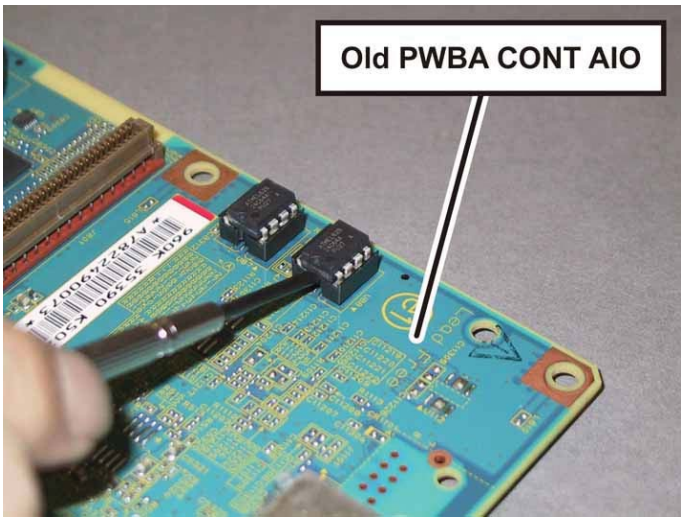
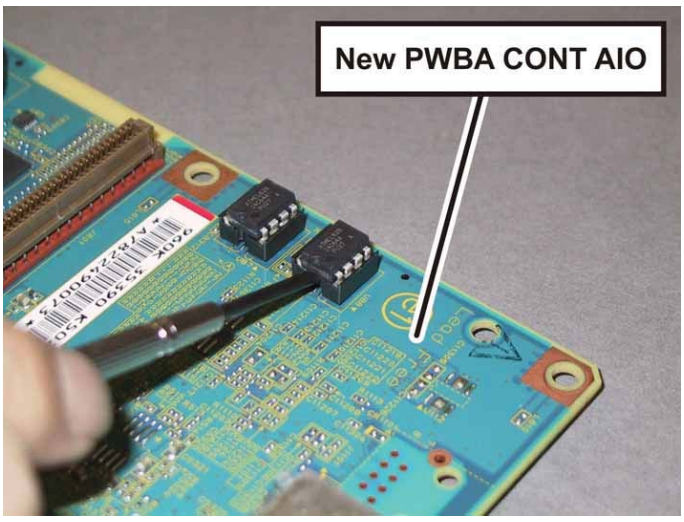
Note: Use the wrist strap to protect the PWB from the electrostatic.

Note: The replacement steps of procedure 1) to 3) are to be required for changing the PWBA CONT AIO. Those steps are not required for only removing it.

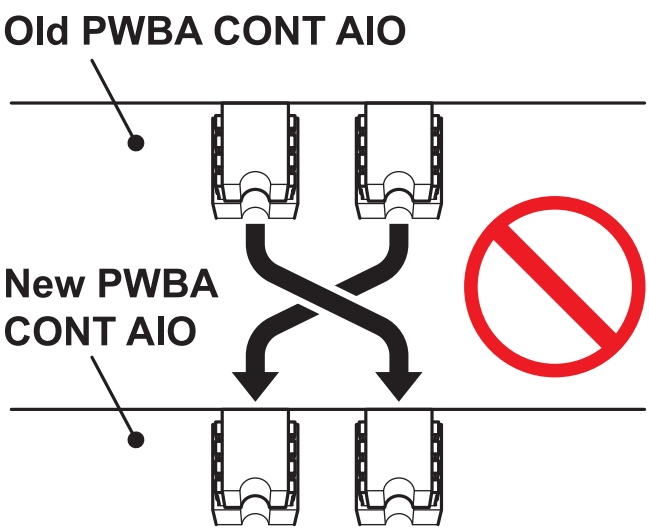
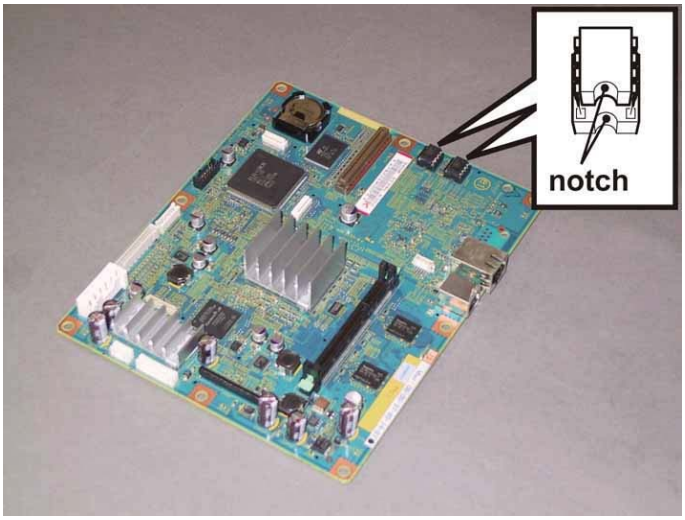
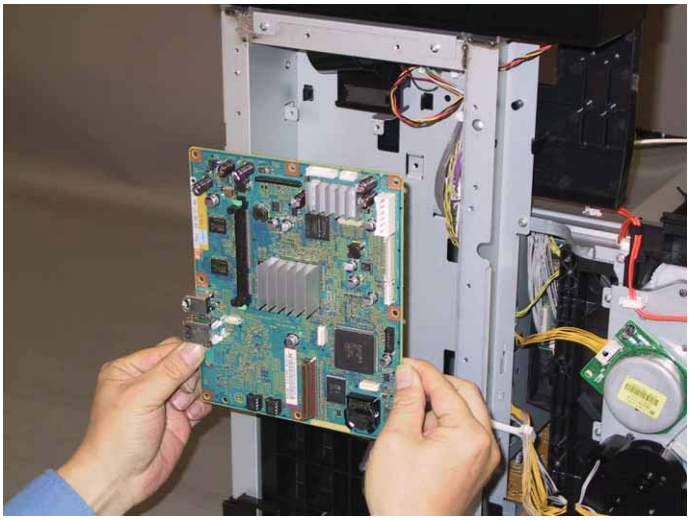
Note: There are two NVM ROM on the PWB, do not attach the NVM ROM to the wrong position.

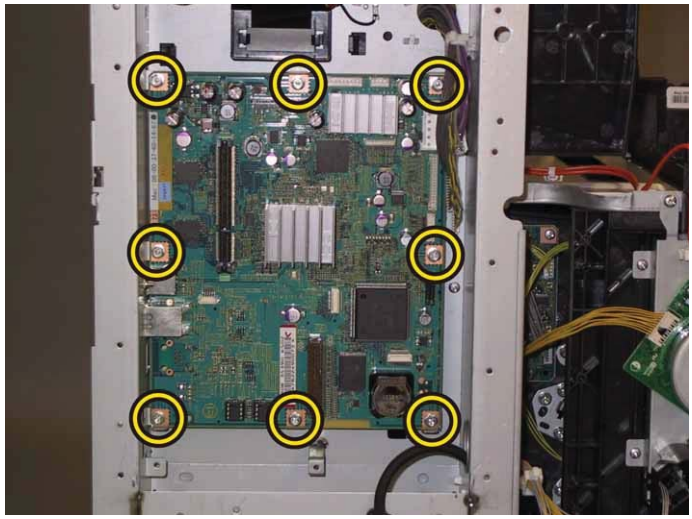
Note: Do not press the PWB when removing the NVM ROM.

Note: Take care not to bend the terminal section of NVM when carrying out the job described below.

1) Remove the NVMs, using a miniature screwdriver or the like, from the IC sockets on old PWBA CONT AIO that was removed from the printer.	
2) Remove the NVMs from IC socket on new PWBA CONT AIO using a miniature screwdriver or the like.	

Note: Do not use NVMs removed from new PWBA CONT AIO.

Note: Carefully check the correct orientation of NVM when carrying out the following job.	
3) Attach the NVMs that were removed from old PWBA CONT AIO on IC sockets of new PWBA CONT AIO with its notch aligned with the notch in IC socket.	
4) Attach the PWBA CONT AIO to the printer.	

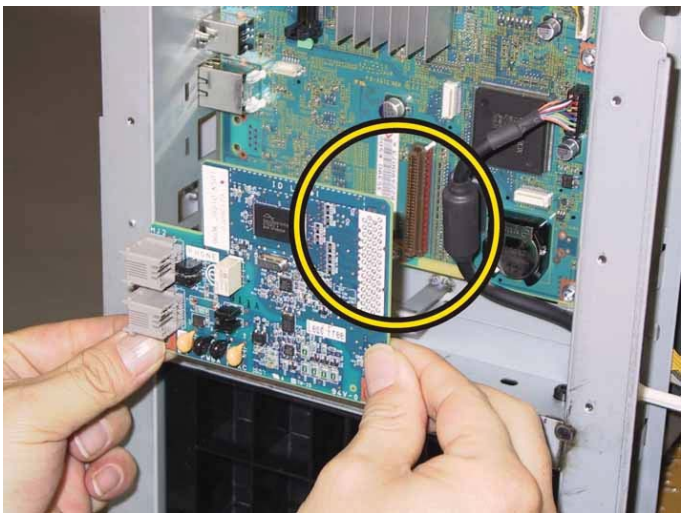
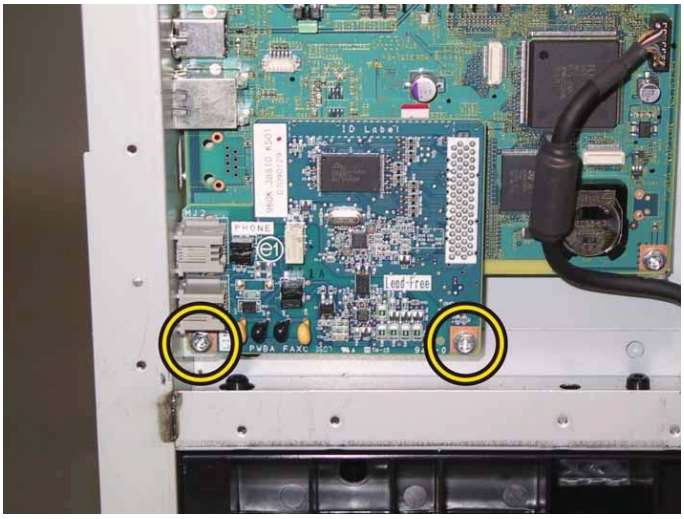
5) Secure the PWBA CONT AIO to the printer with the eight screws (silver, with flange, 6mm).	
6) Secure the USB connector of the PWBA CONT AIO to the printer with the one screw (silver, 6mm).	
7) Engage all the connectors of the PWBA CONT AIO.	

Go to the next replacement step:

Replacement 37 PWBA FAX (PL10.6.9)

Replacement 37 PWBA FAX (PL10.6.9)

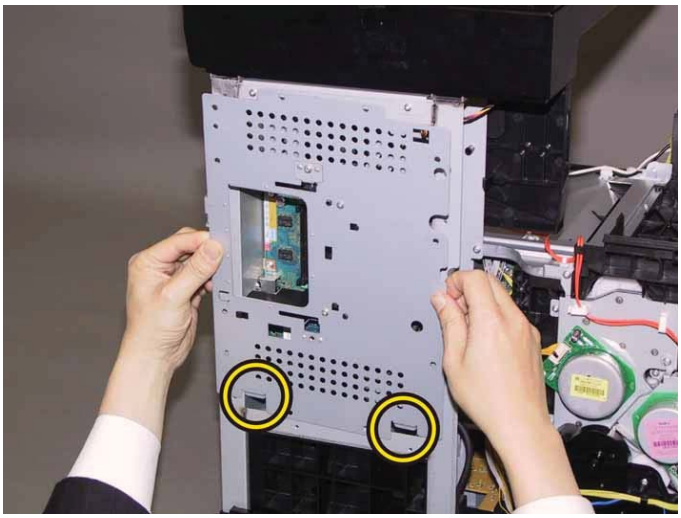
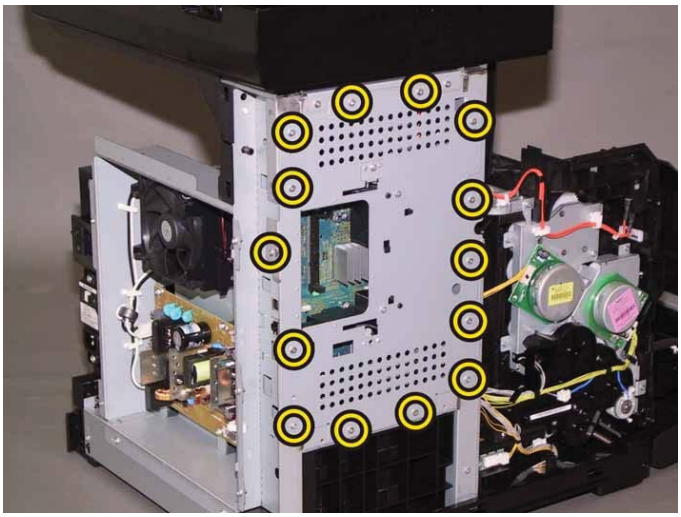
Note: Use the wrist strap to protect the PWB from the electrostatic.

1) Engage the connector (P/J801) of the PWBA FAX to the PWBA CONT AIO.	
2) Secure the PWBA FAX to the printer with the two screws (silver, with flange, 6mm).	

Go to the next replacement step:

Replacement 38 SHIELD ASSY ESS (PL10.6.19)

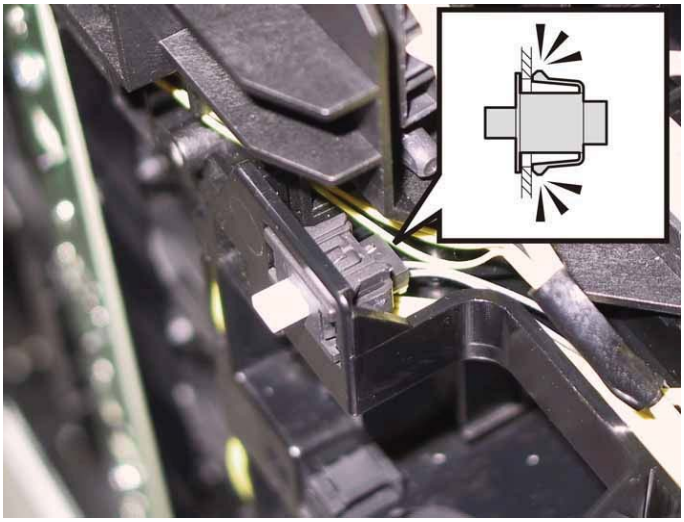
Replacement 38 SHIELD ASSY ESS (PL10.6.19)

1) Engage the two tabs of the SHIELD ASSY ESS to the frame, and then attach the SHIELD ASSY ESS to the printer.	
2) Secure the SHIELD ASSY ESS to the printer with the fourteen screws (silver, 6mm).	

Go to the next replacement step:

Replacement 43 COVER REAR (PL10.1.5)

Replacement 39 SWITCH (PL5.1.9)

1) Engage the connecter (P/J291) of the SWITCH.	
2) Attach the SWITCH to the printer, secure the SWITCH with the two hooks.	

Go to the next replacement step:

Replacement 42 COVER TOP (PL10.1.4)

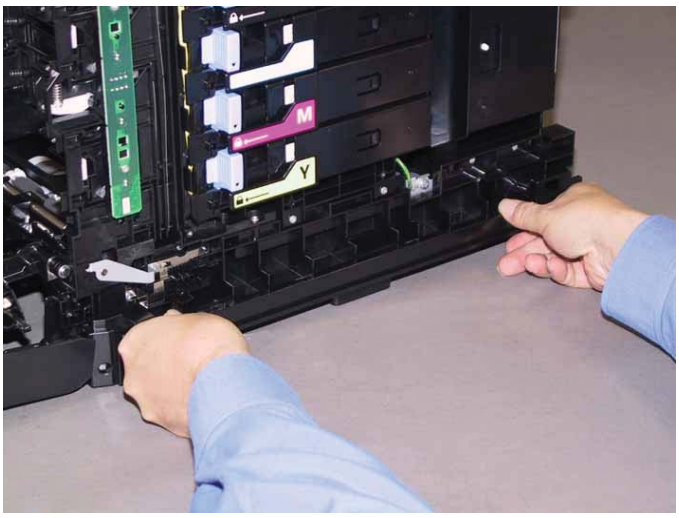
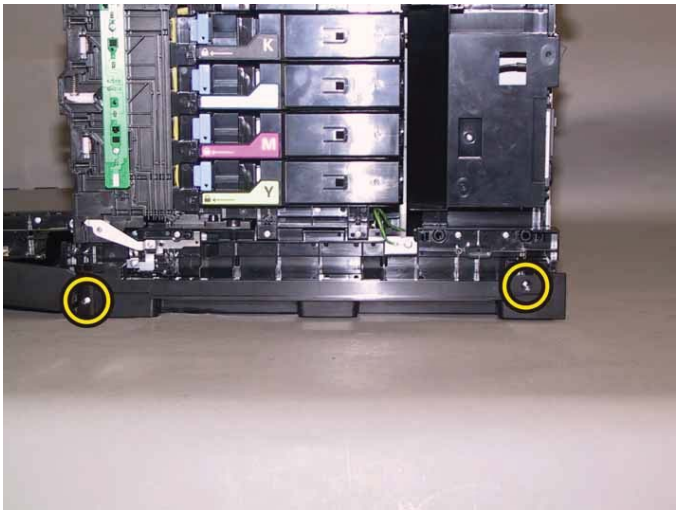
Replacement 40 COVER SIDE L LOW (PL10.1.9)

1) Attach the COVER SIDE L LOW to the printer.	
2) Secure the COVER SIDE L LOW to the printer with the two screws (silver, tap, 8mm).	

Go to the next replacement step:

Replacement 43 COVER REAR (PL10.1.5)

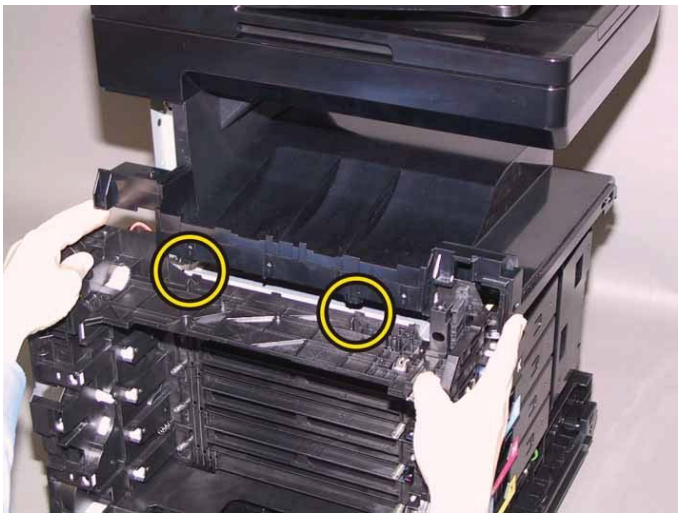
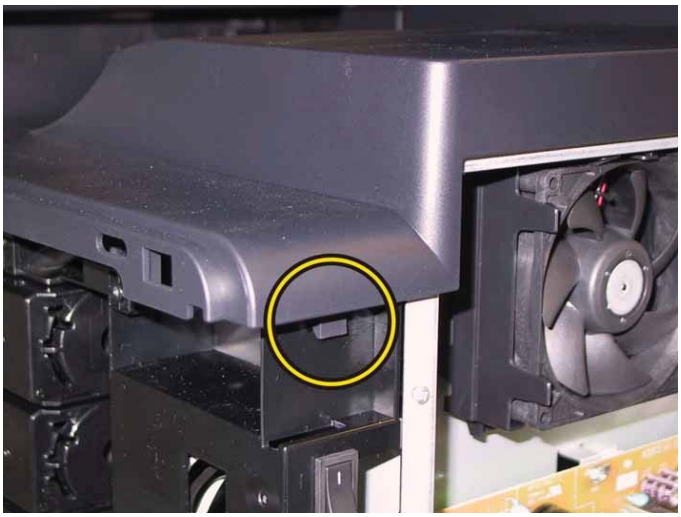
Replacement 41 COVER SIDE R LOW (PL10.1.8)

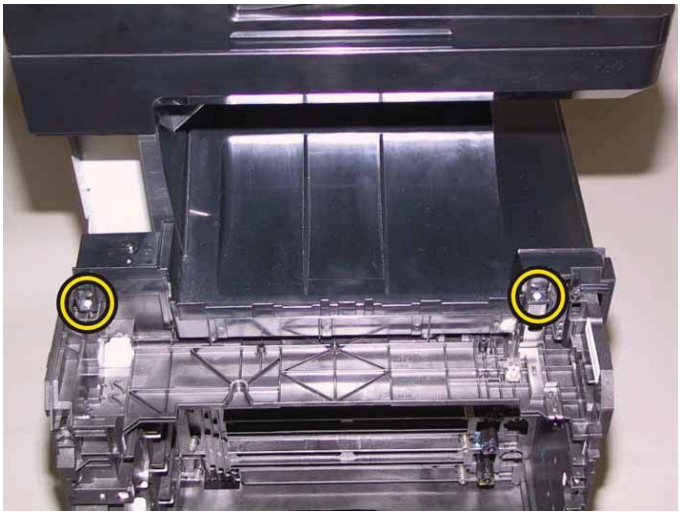
1) Attach the COVER SIDE R LOW to the printer.	
2) Secure the COVER SIDE R LOW to the printer with the two screws (silver, tap, 8mm).	

Go to the next replacement step:

Replacement 43 COVER REAR (PL10.1.5)

Replacement 42 COVER TOP (PL10.1.4)

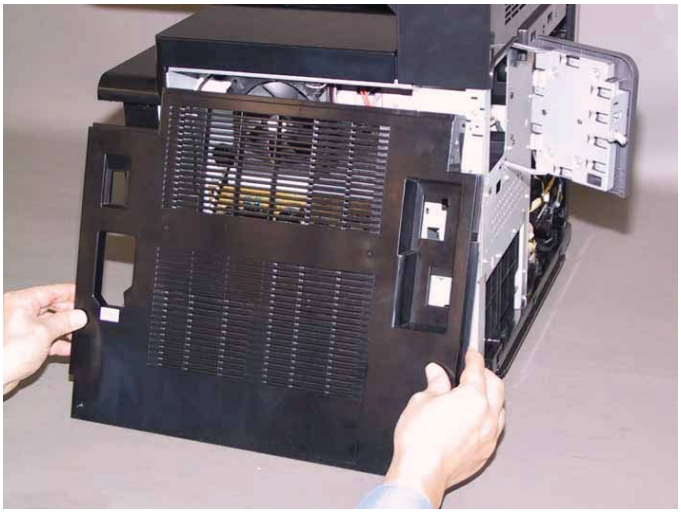
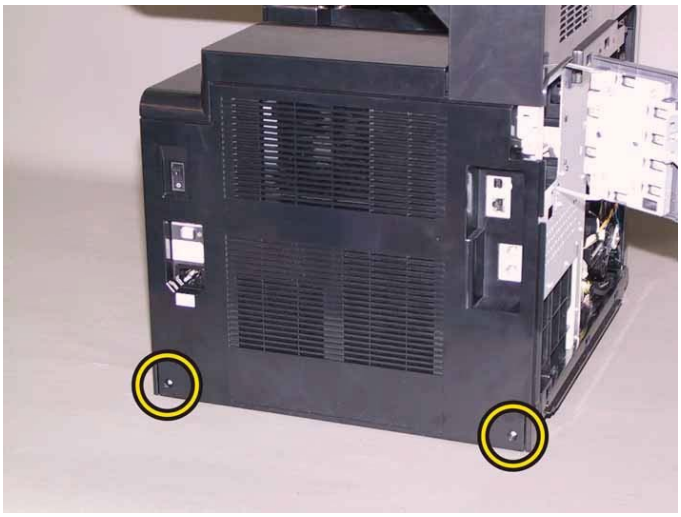
1) Mate the boss of the COVER TOP with the hole of the COVER POLE IN.	
2) Mate the two holes of the COVER TOP with the pegs of the printer by pulling down the COVER TOP.	
3) Secure the rear hook of the COVER TOP to the printer.	

4) Secure the COVER TOP to the printer with the two screws (silver, tap, 8mm).	

Go to the next replacement step:

Replacement 43 COVER REAR (PL10.1.5)

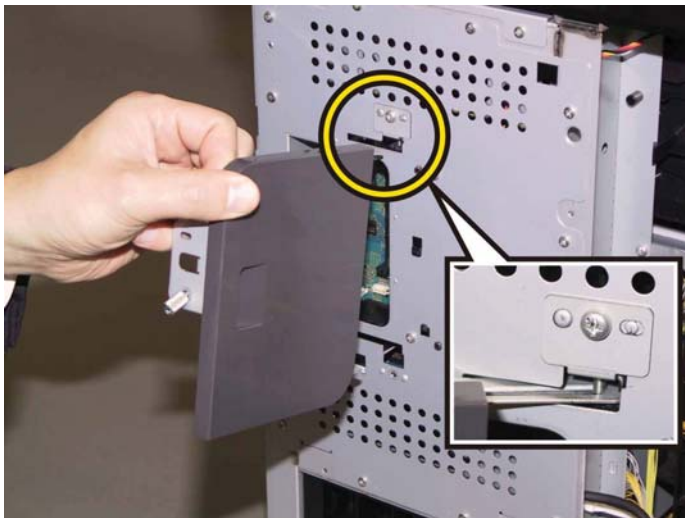
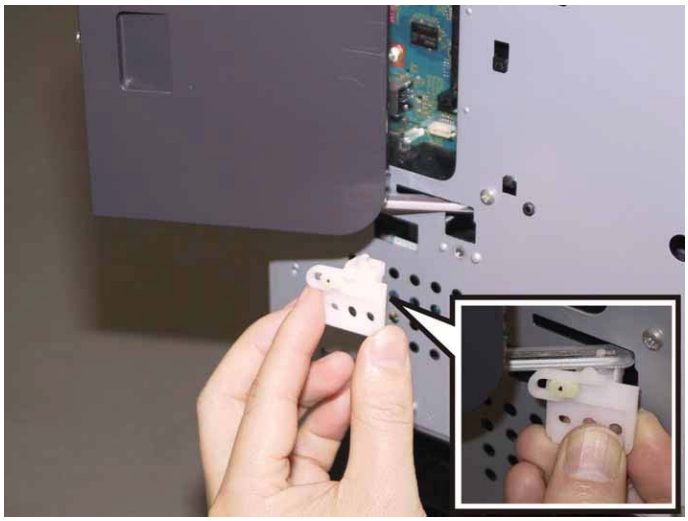
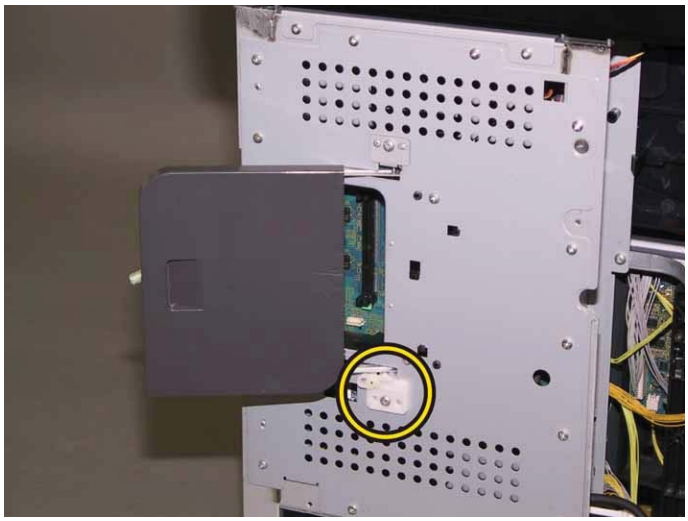
Replacement 43 COVER REAR (PL10.1.5)

1) Insert the rim on the upper side of the REAR COVER into the inside of the TOP COVER, attach the COVER REAR to the printer.	
2) Secure the COVER REAR to the printer with the two screws (silver, tap, 8mm).	

Go to the next replacement step:

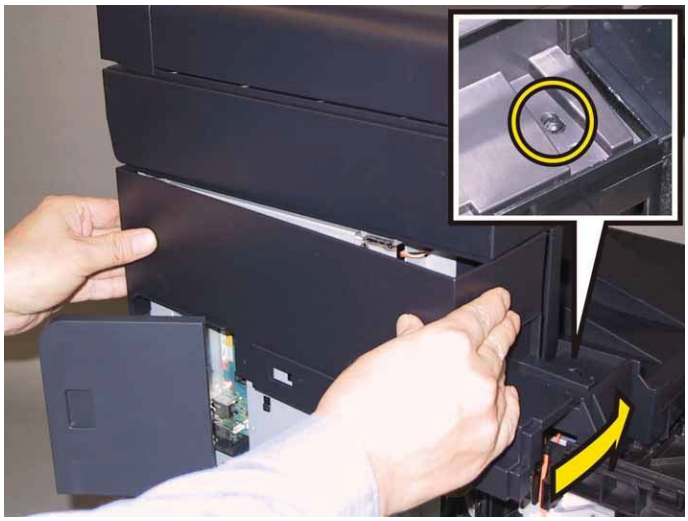
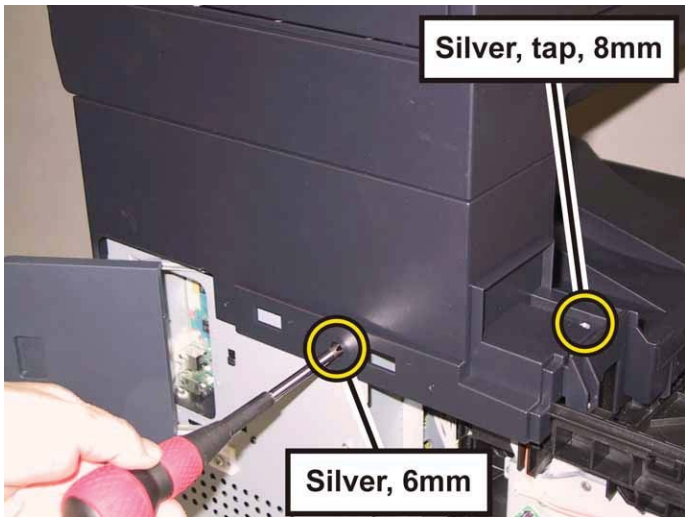
Replacement 46 COVER ASSY SIDE L (PL10.1.10)

Replacement 44 COVER ASSY ESS (PL10.1.11)

1) Mate the upper hole of the COVER ASSY ESS with the PIVOT ASSY.	
2) Insert the boss of the HOUSING PIVOT to the under part of the COVER ASSY ESS.	
3) Secure the HOUSING PIVOT to the printer with the one screw (silver, 6mm).	

Go to the next replacement step:
Replacement 45 COVER POLE OUT (PL10.1.1)

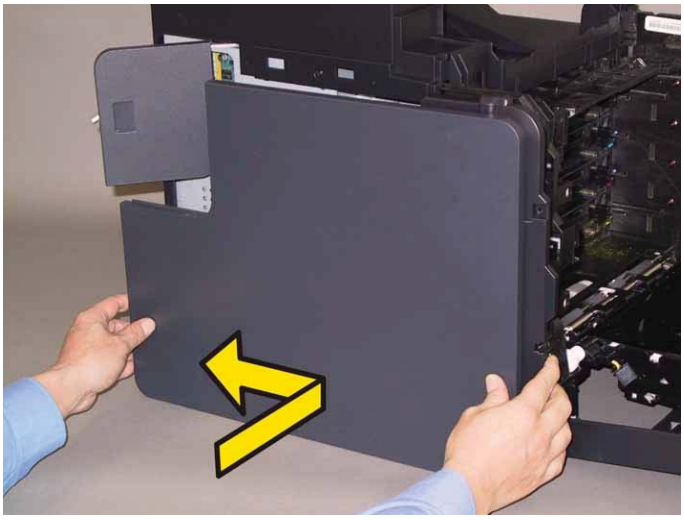
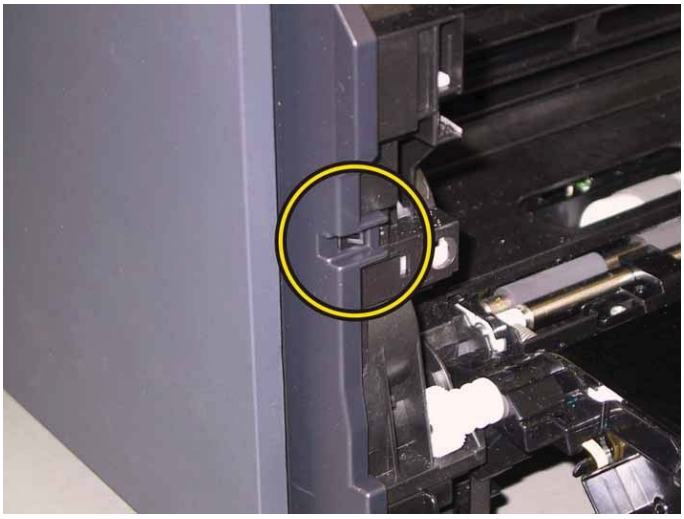
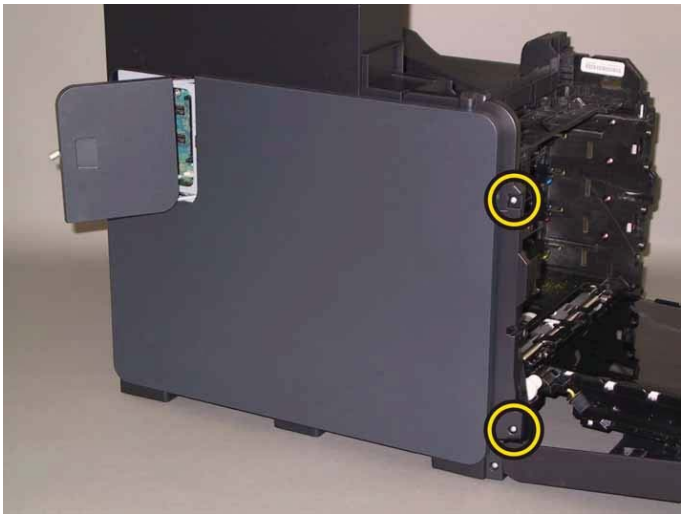
Replacement 45 COVER POLE OUT (PL10.1.1)

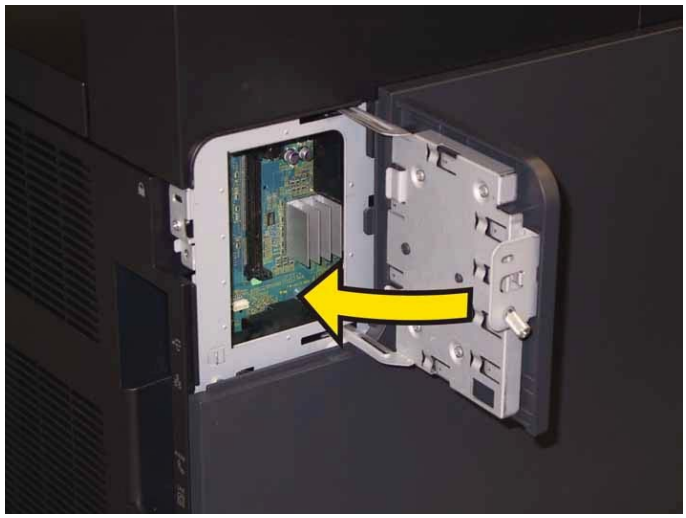
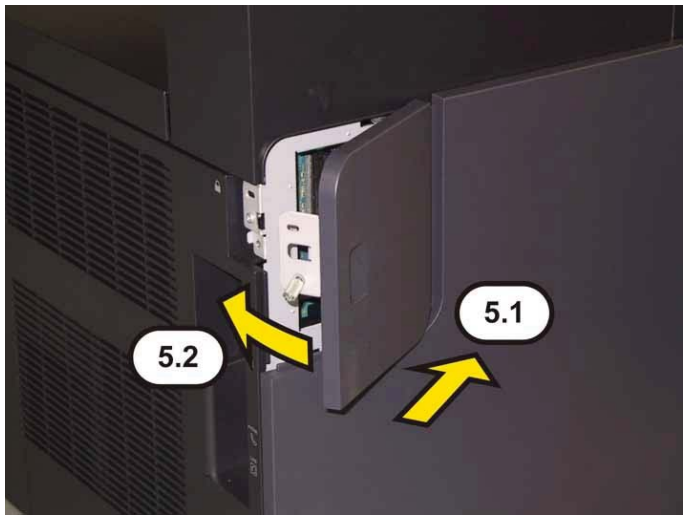
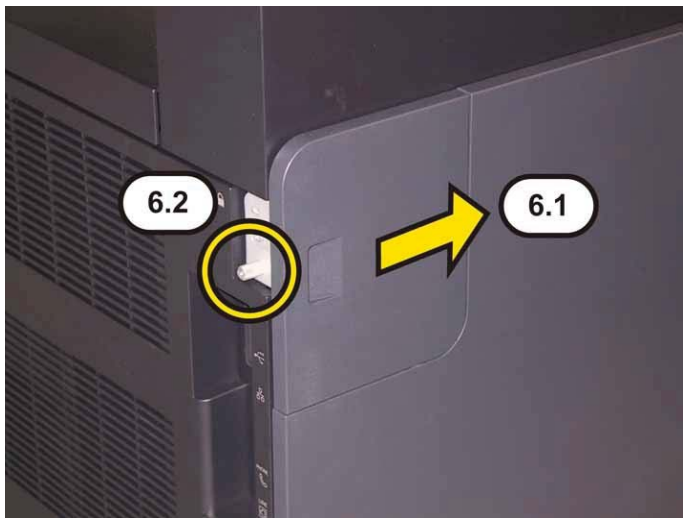
1) Mate the two hooks of the COVER POLE OUT with the holes of the printer.	
2) Mate the hole of the COVER POLE OUT with the boss of the COVER TOP.	
3) Secure the COVER POLE OUT to the printer with the one screw (silver, 6mm) and the one screw (silver, tap, 8mm).	

Go to the next replacement step:

Replacement 46 COVER ASSY SIDE L (PL10.1.10)

Replacement 46 COVER ASSY SIDE L (PL10.1.10)

1) Mate the six hooks of the COVER ASSY SIDE L with the holes of the printer.	
2) Shift the COVER ASSY SIDE L to rear side, secure the front hook of the COVER ASSY SIDE L to the printer.	
3) Secure the COVER ASSY SIDE L to the printer with the two screws (silver, tap, 8mm).	

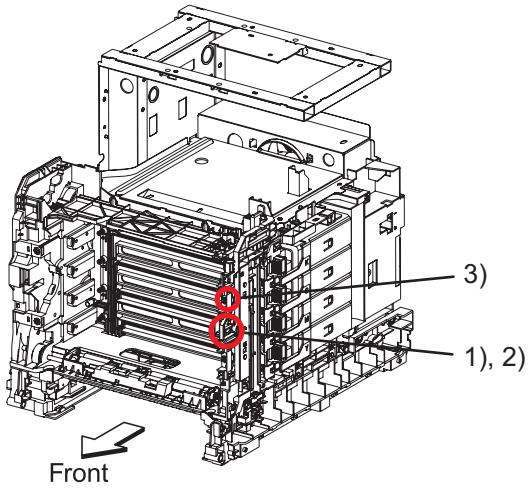
4) Slowly close the COVER ASSY ESS until it stops. **Note: Do not pull the COVER ASSY ESS fast. Otherwise, the hinge may be caught and damaged.**	
5) Slide the COVER ASSY ESS frontward obliquely, and then close the COVER ASSY ESS until it locks into place.	
6) Shift the COVER ASSY ESS to front side, secure the SCREW KNURLING.	

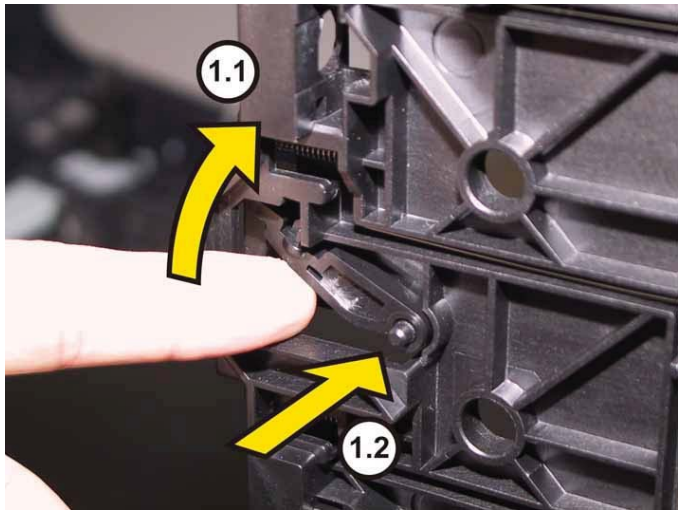
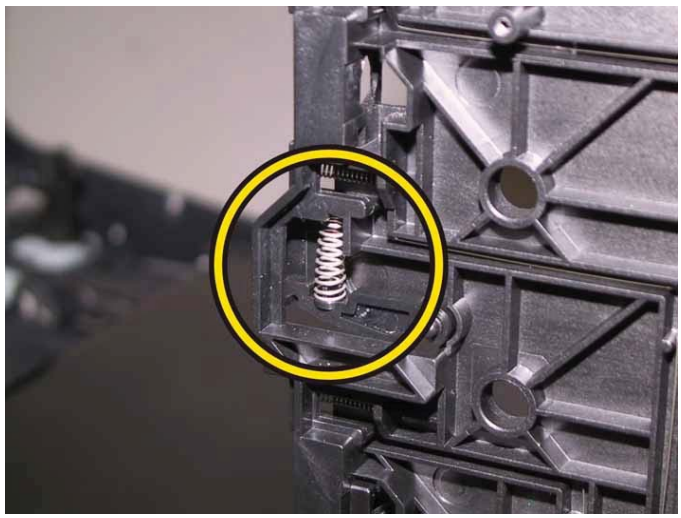
Go to the next replacement step:

Replacement 51 FUSER ASSY (PL6.1.1)

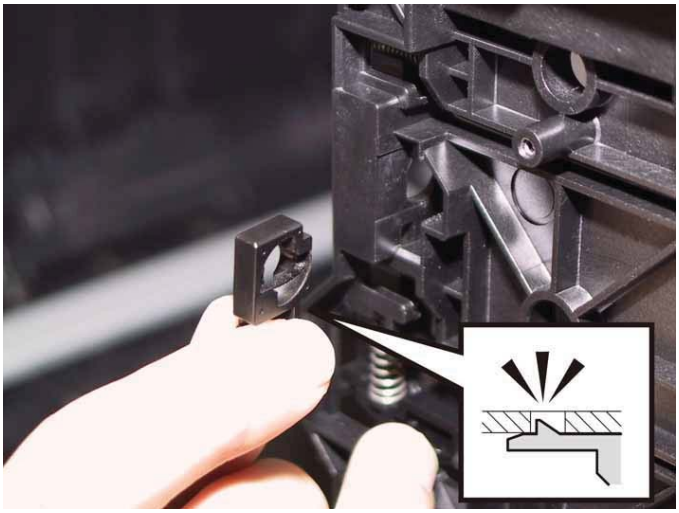
Replacement 47 KIT BLOCK PHD RIGHT (PL4.1.97)

Accesses Position (The 1), 2) and 3) show the procedure number.)



1) Tilt the LEVER PHD slightly, attach the LEVER PHD to the printer.	
2) Attach the SPRING PHD to the printer.	

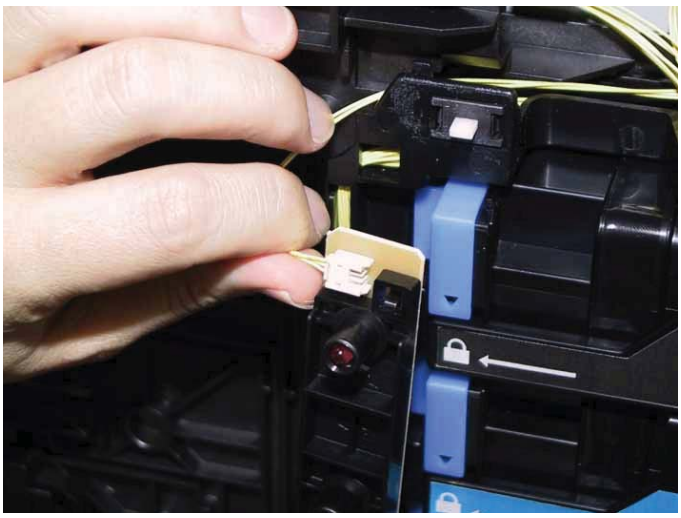
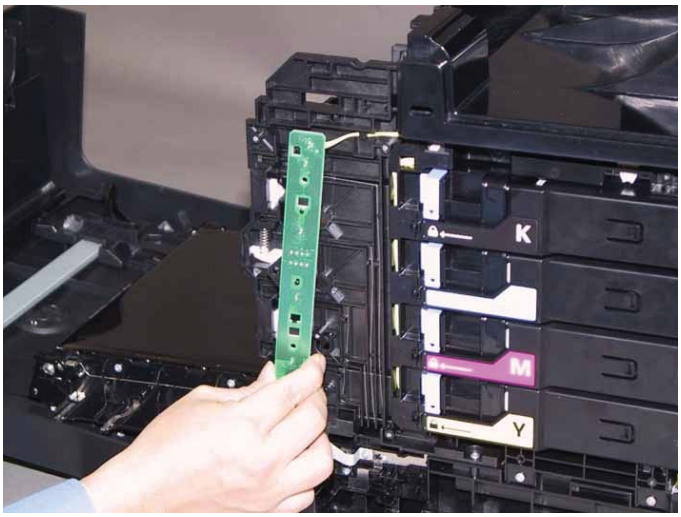
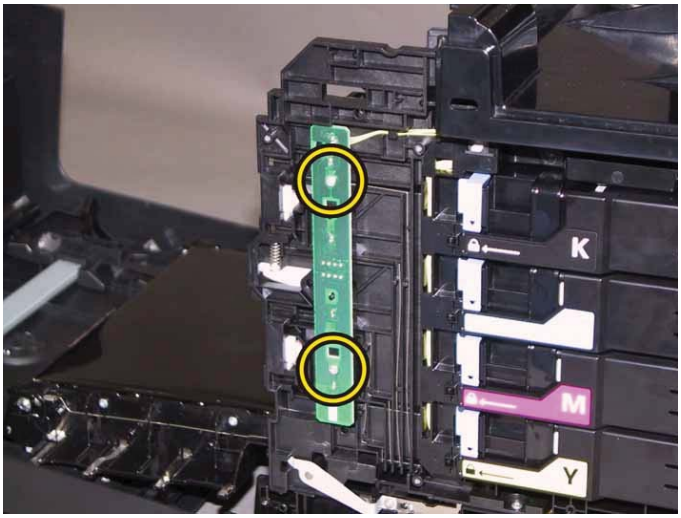
Note: Described below is the replacement procedure common among the upper and lower of the BLOCK STOPPER PHD ADs.

3) Push the BLOCK STOPPER PHD AD to the printer until it is locked.	

Go to the next replacement step:

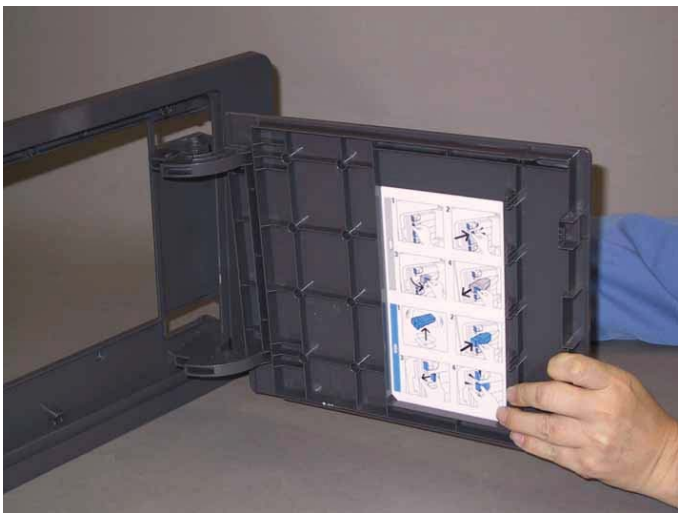
Replacement 48 LED ASSY ERASE (PL4.1.8)

Replacement 48 LED ASSY ERASE (PL4.1.8)

1) Engage the connecter (P/J141) of the LED ASSY ERASE.	
2) Attach the LED ASSY ERASE to the printer.	
3) Secure the LED ASSY ERASE to the printer with two screws (silver, tap, 8mm).	

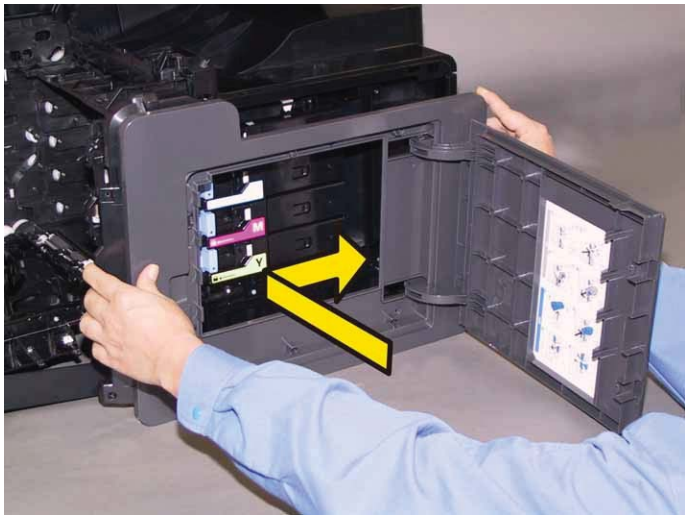
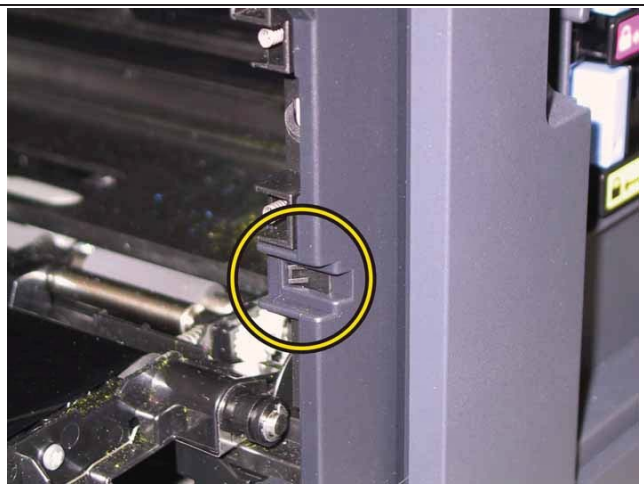
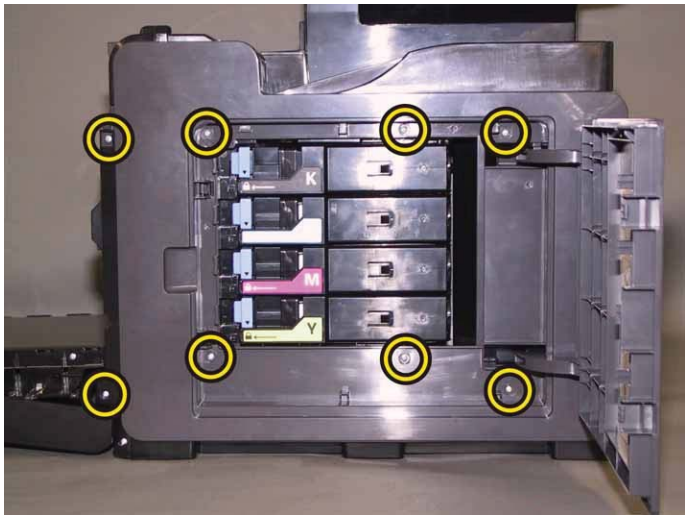
Go to the next replacement step:
Replacement 50 COVER ASSY SIDE R (PL10.1.6)

Replacement 49 COVER WINDOW TNR (PL10.1.7)

1) Insert the upper and lower hinges of the COVER WINDOW TNR into the hole of the COVER ASSY SIDE R.	
2) Mate the boss on the lower hinge of the COVER ASSY SIDE R with the hole of the COVER ASSY SIDE R.	
3) Mate the boss on the upper hinge of the COVER WINDOW TNR with the hole of the COVER WINDOW TNR to attach the COVER WINDOW TNR.	

Go to the next replacement step:
Replacement 50 COVER ASSY SIDE R (PL10.1.6)

Replacement 50 COVER ASSY SIDE R (PL10.1.6)

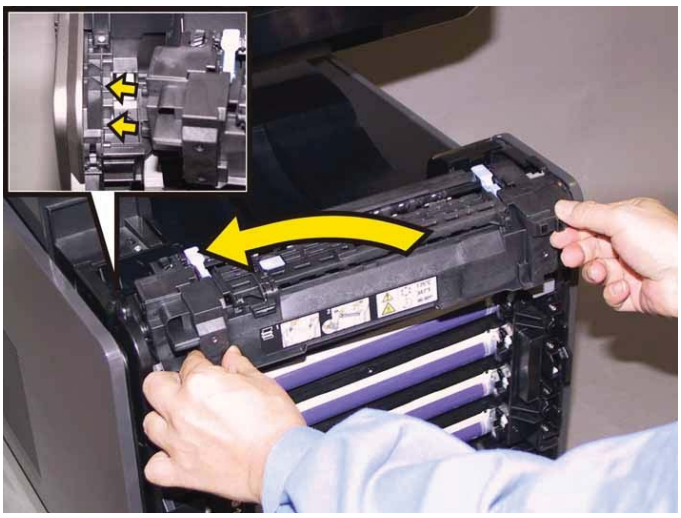
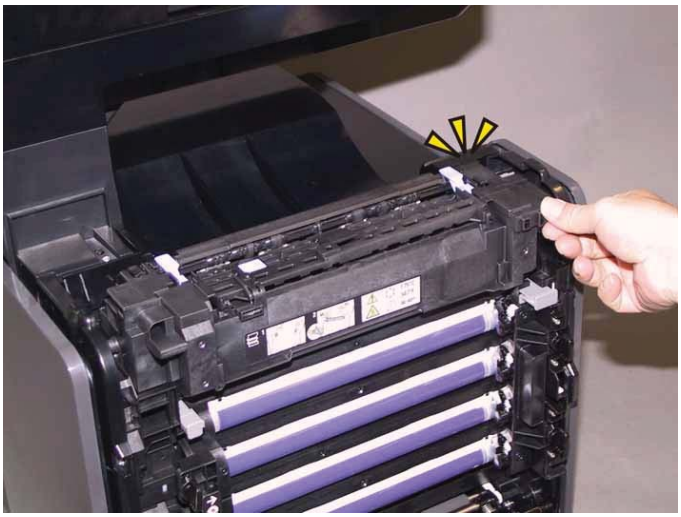
1) Mate the two hooks of the COVER ASSY SIDE R with the holes of the printer.	
2) Shift the COVER ASSY SIDE R to rear side, secure the front hook of the COVER ASSY SIDE R to the printer.	
3) Secure the COVER ASSY SIDE R to the printer with the eight screws (silver, tap, 8mm).	

4) Close the COVER WINDOW TNR.

Go to the next replacement step:

Replacement 51 FUSER ASSY (PL6.1.1)

Replacement 51 FUSER ASSY (PL6.1.1)

1) Insert the two studs of the FUSER ASSY into the holes of the printer.	
2) Engage the connector (P/J171) of the FUSER ASSY by pushing the FUSER ASSY.	

3) Close the COVER ASSY FRONT.

Note: When the FUSER ASSY is replaced with a new one, perform the following steps.

4) Plug in the power cord to the printer.

5) Initialize the Life Counter of the FUSER ASSY.

6) Turn off the power.

7) Turn on the power while pressing the "▲" key and"▼" key on the control panel.

8) When the "Customer Mode" is displayed, press the " ✓ " key once.

9) After displaying the "Please Wait . . .", the "Printer Diag" is displayed.

10) Press the "▼" key several times until "Parameter" is displayed. Press the " ✓ " key once.

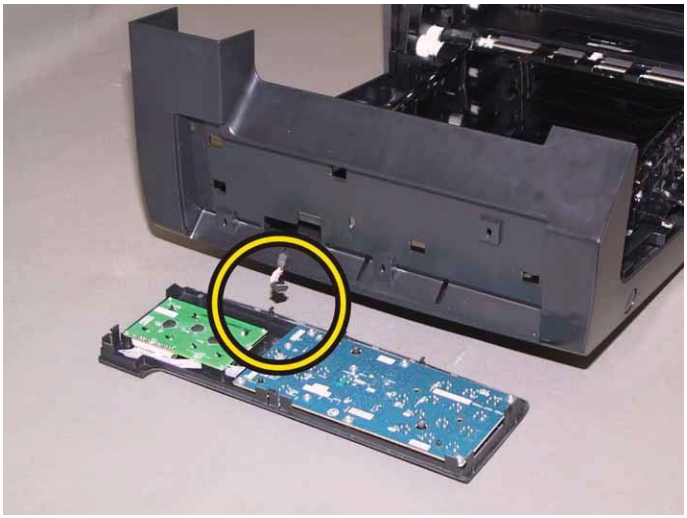
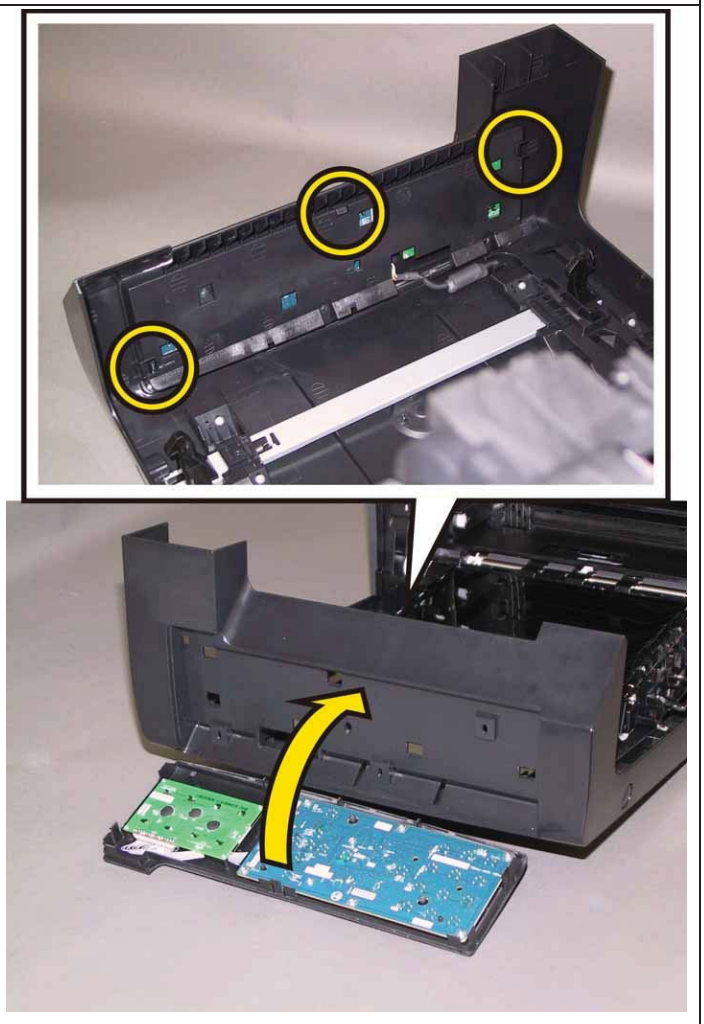
11) Press the "▼" key several times until "Life Fuser Sheet" is displayed. Press the " ✓ " key once.

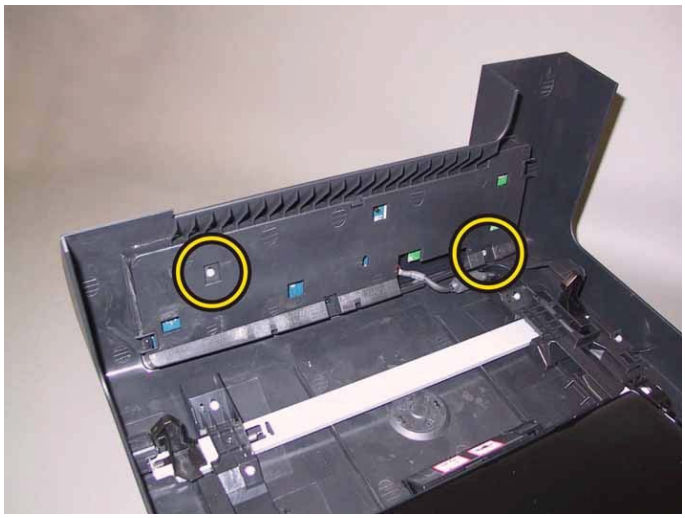
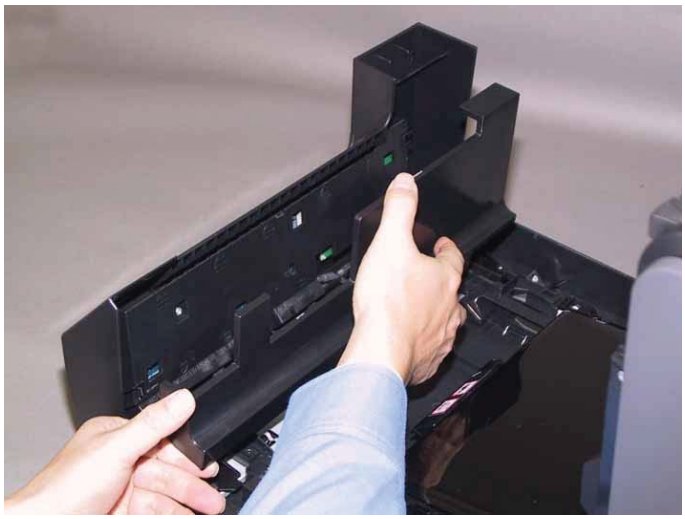
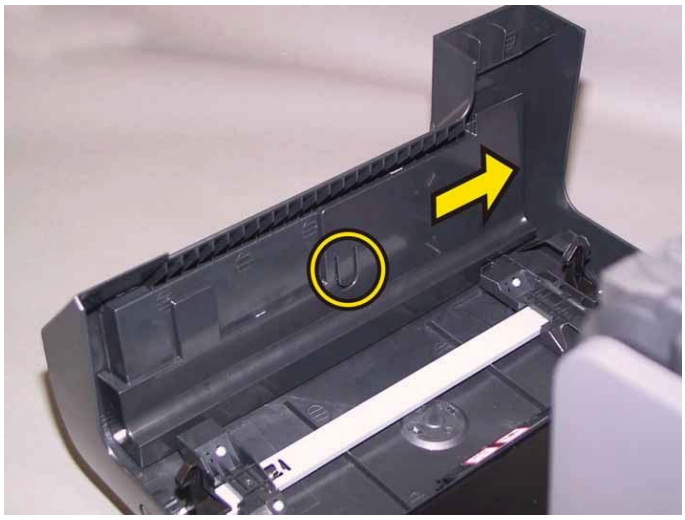
12) Press the "▼" key several times until "Initializing" is displayed. Press the " ✓ " key once.

13) Press the " ✓ " key once, and Initializing the Life Counter of the FUSER ASSY is performed.

14) Turn off the power to exit.

Replacement 52 CONSOLE ASSY PANEL (PL10.2.2)

1) Engage the connector (P/J202) of the CONSOLE ASSY PANEL.	
2) Attach the CONSOLE ASSY PANEL to the COVER ASSY FRONT, secure it with the three hooks.	

3) Secure the CONSOLE ASSY PANEL to the COVER ASSY FRONT with the two screws (silver, tap, 8mm).	
4) Mate the five hooks of the COVER INNER FRONT with the holes of the COVER ASSY FRONT.	
5) Shift the COVER INNER FRONT to the left side, mate the boss of the COVER INNER FRONT with the hole of the COVER ASSY FRONT.	

Go to the next replacement step:

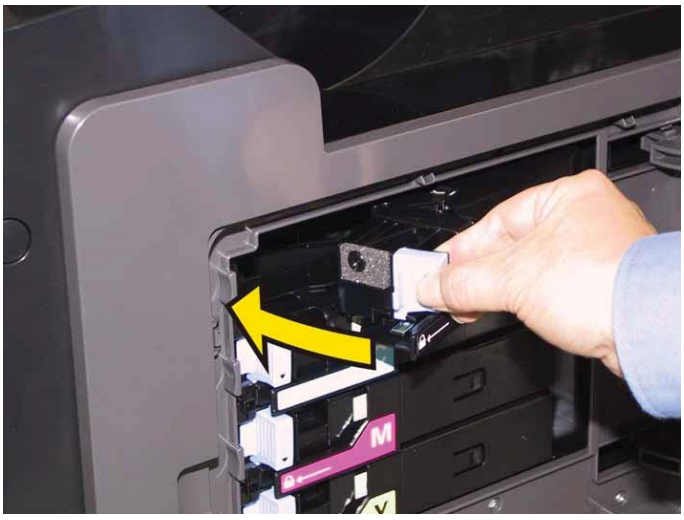
Replacement 57 PHD Unit (PL4.1.21)

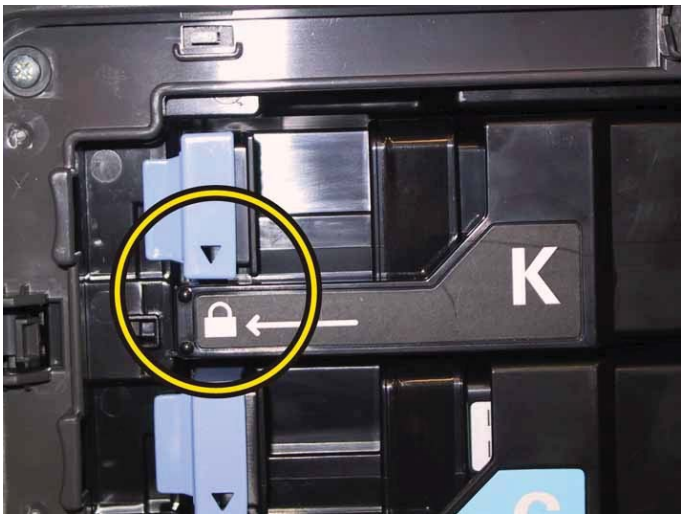
Replacement 53 Black, Cyan, Magenta, Yellow Cartridge (PL5.1.21~24)

Note: Described below is the replacement procedure common among the four Toner Cartridges.

1) Shake the Toner Cartridge five or six times for the distributing toner evenly.	
2) Insert the Toner Cartridge into the HOLDER ASSY TCRU slowly, attach it.	

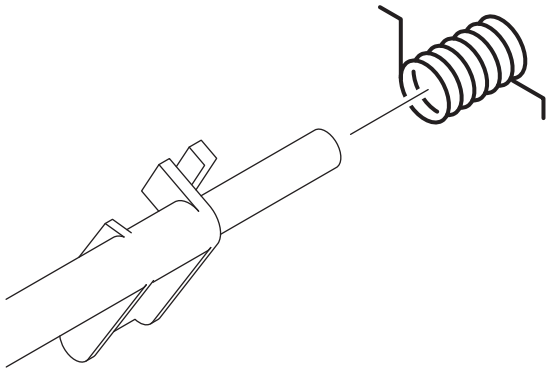
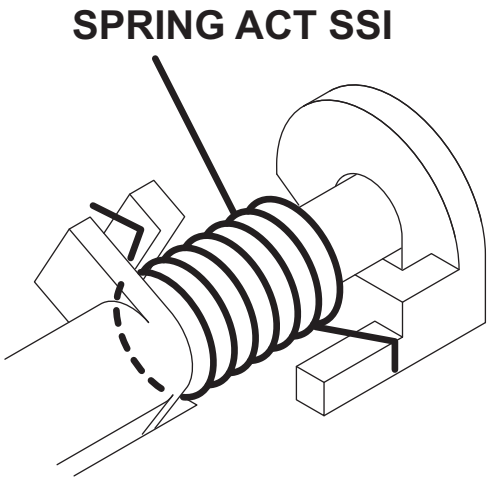
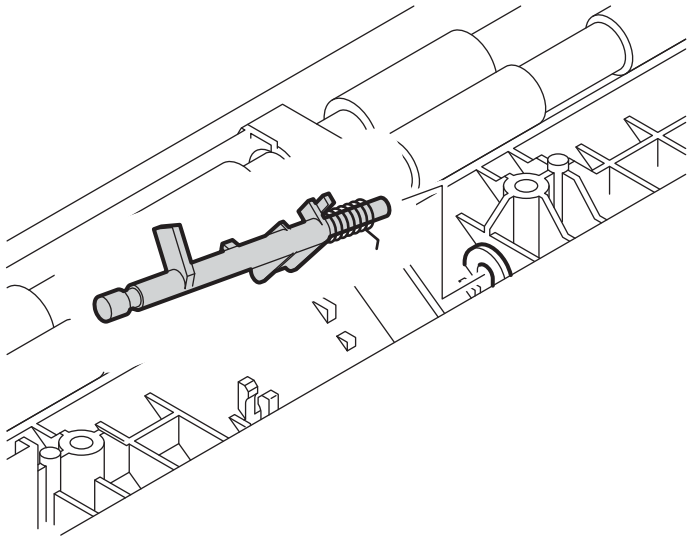
Note: Check that the Toner Cartridge is secured.

3) Close the HOLDER ASSY TCRU.	

Note: When performing the step described next procedure, mate the delta mark of the Handle with the lock mark on the cartridge holder.	
4) Move the handle to the front.	

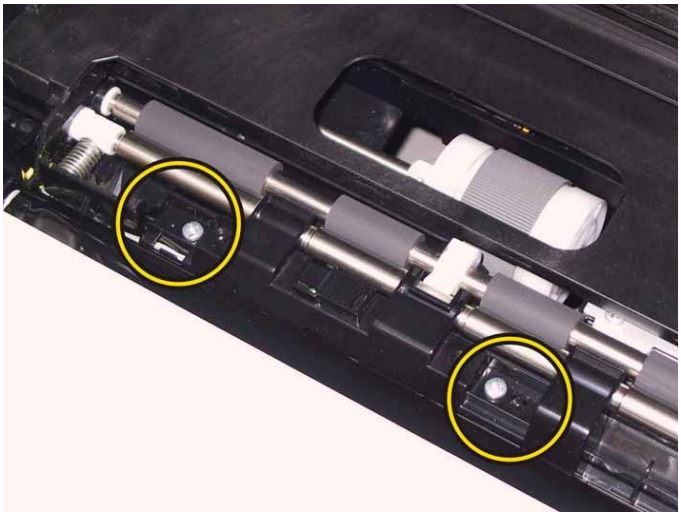
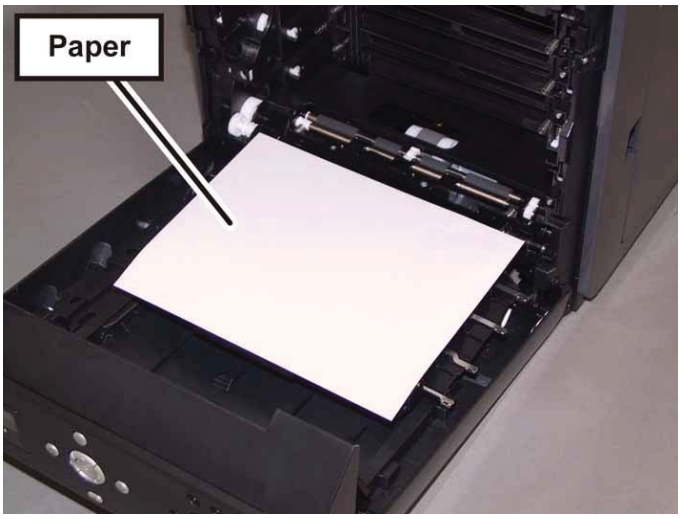
5) Close the COVER WINDOW TNR.

Replacement 54 ACTUATOR SSI (PL3.2.14)

1) Attach the SPRING ACT SSI to the ACTUATOR SSI.	
Note: When carrying out the work described next procedure, ensure that the SPRING ACT SSI is hung to ACTUATOR SSI and the CHUTE UP correctly.	
2) Insert the right shaft of the ACTUATOR SSI into the hole of the CHUTE UP, hang the SPRING ACT SSI to the CUHTE UP.	

3) Secure the left shaft of the ACTUATOR SSI with the hook of the CHUTE UP, attach the ACTUATOR SSI.	

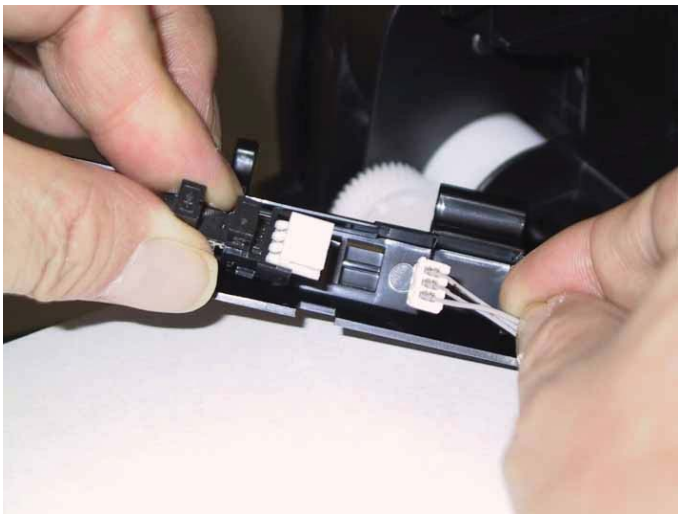
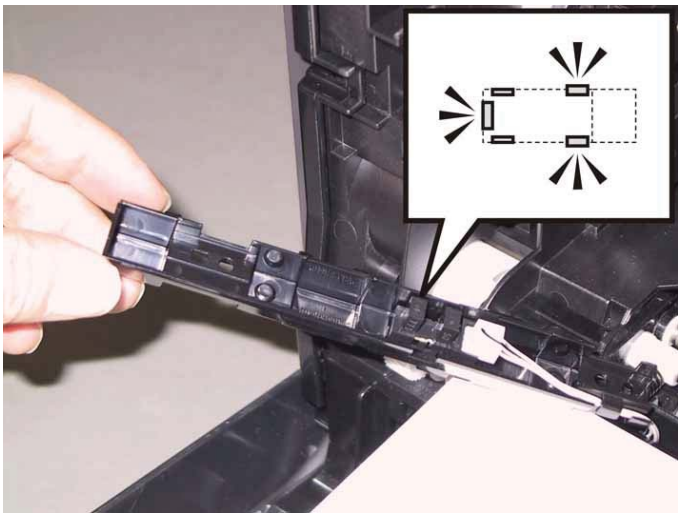
Check the ACTUATOR SSI movement, after the procedure 3 is completed.

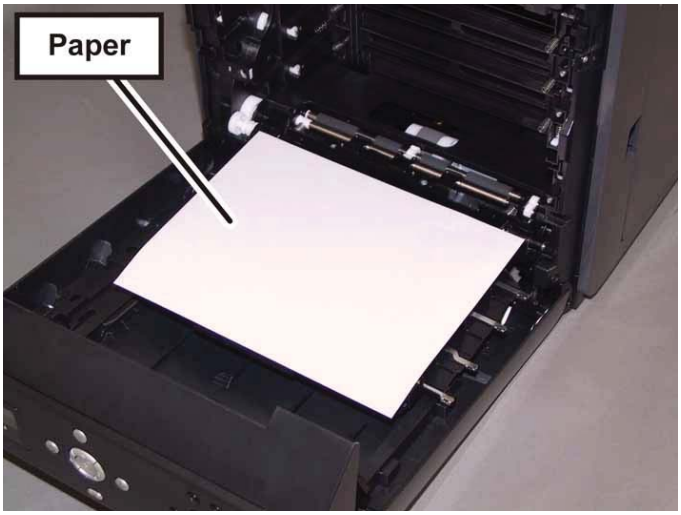
4) Mate the two holes of the BRACKET SNS with the bosses of the printer, secure it with the two screws (silver, tap, 8mm).	
5) Remove the paper from the TRANSFER ASSY.	

Go to the next replacement step:

Replacement 57 PHD Unit (PL4.1.21)

Replacement 55 SENSOR PHOTO: SSI NO PAPER (PL3.2.13)

1) Engage the connector (P/J233) of the SENSOR PHOTO: SSI NO PAPER.	
2) Replace the SENSOR PHOTO: SSI NO PAPER to the BRACKET SNS by mating the hook of the SENSOR PHOTO: SSI NO PAPER with its mounting position.	
3) Mate the two holes of the BRACKET SNS with the bosses of the printer, secure it with the two screws (silver, tap, 8mm).	

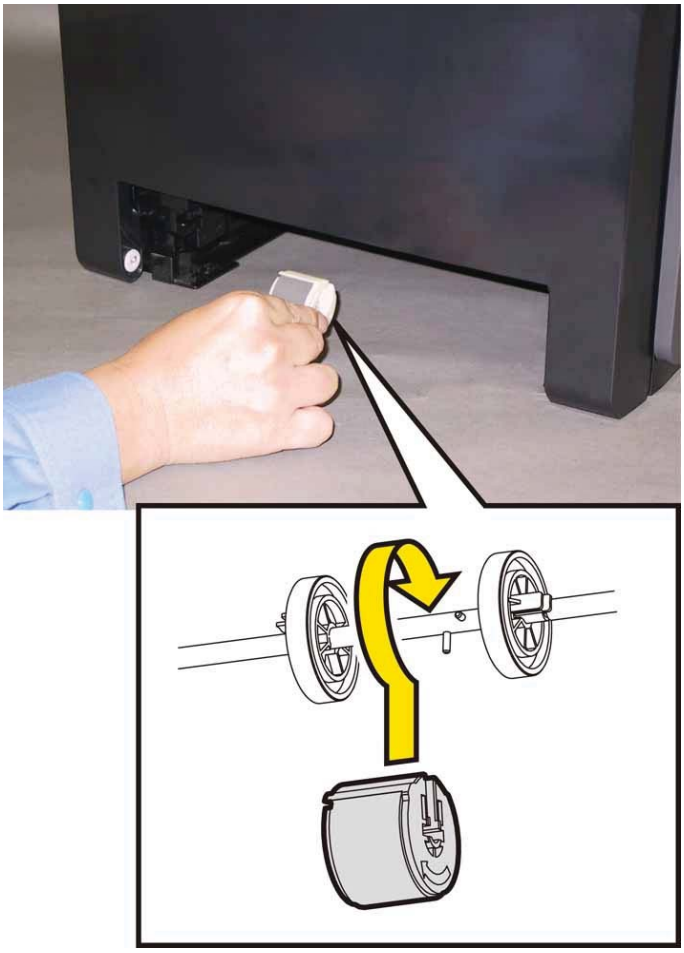
4) Remove the paper from the TRANSFER ASSY.	

Go to the next replacement step:

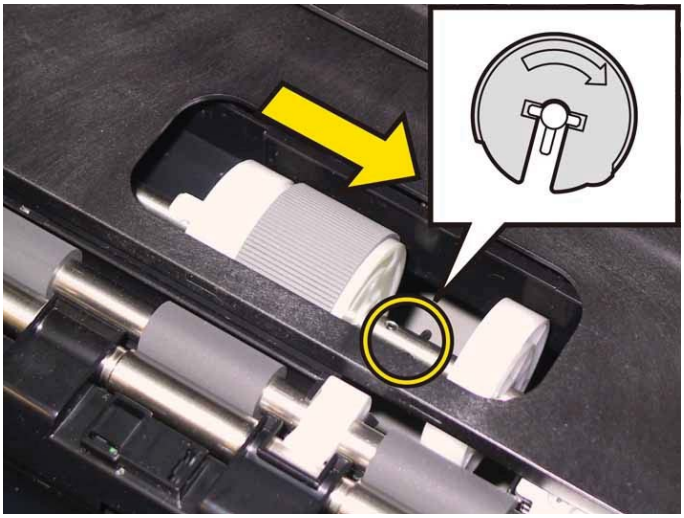
Replacement 57 PHD Unit (PL4.1.21)

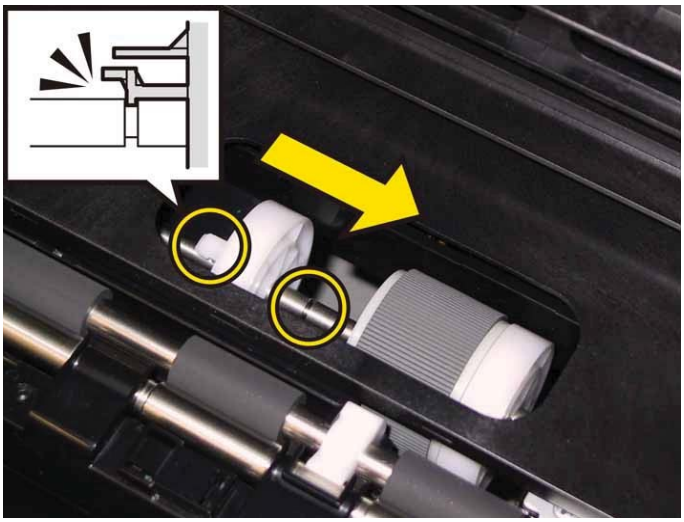
Replacement 56 KIT ROLL ASSY FEED (PL3.2.99)

1) Close the COVER ASSY FRONT.

2) Fit the ROLL ASSY FEED to the SHAFT ASSY FEED with the groove of the ROLL ASSY FEED facing upward, rotate the ROLL ASSY FEED 180 degrees so that the pin on the SHAFT ASSY FEED is aligned with the groove on the ROLL ASSY FEED.	

3) Open the COVER ASSY FRONT.

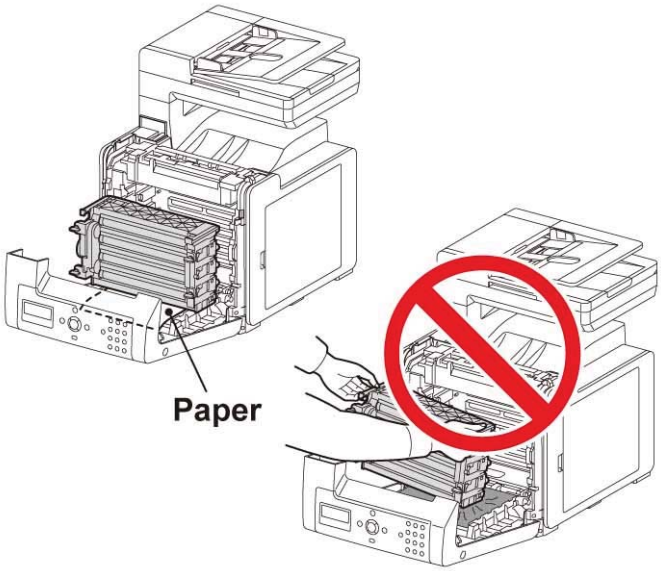
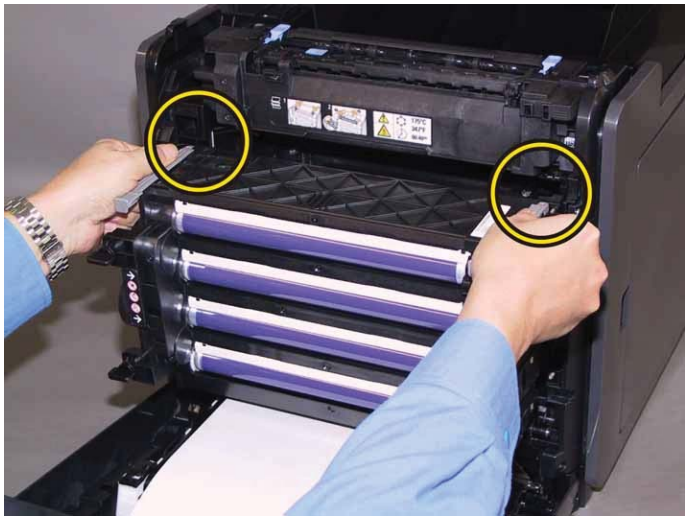
4) Move the ROLL ASSY FEED to the right side, put the groove of the ROLL ASSY FEED on the pin of the SHAFT ASSY FEED.	

5) Move the ROLL CORE MSI to the right side, to secure the hook of the ROLL CORE MSI with the groove of the SHAFT ASSY FEED.	

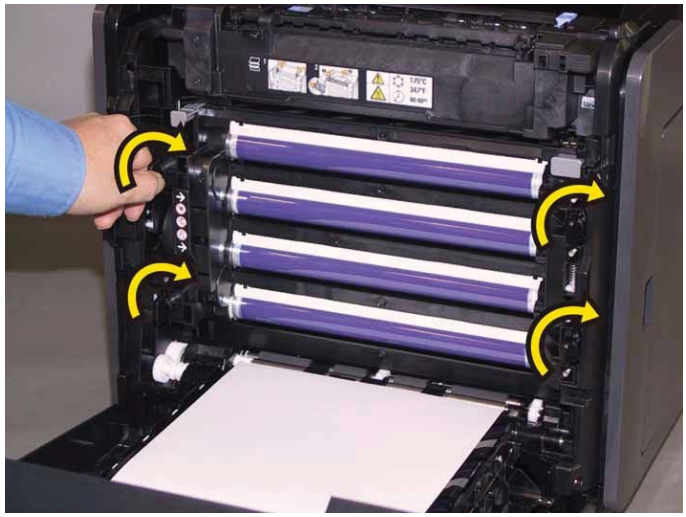
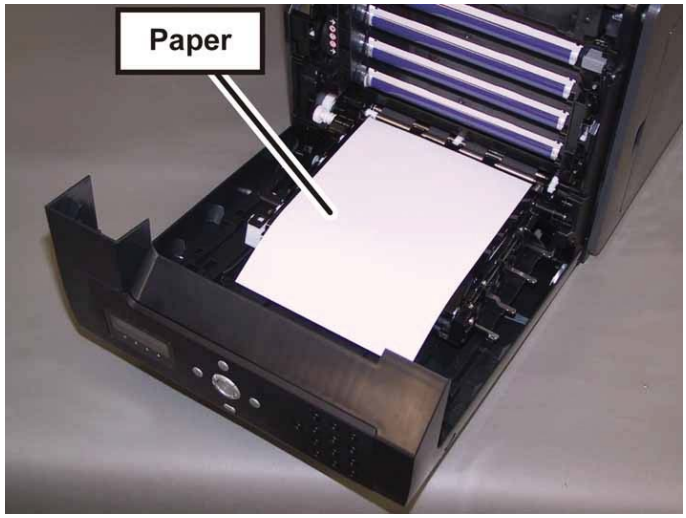
Go to the next replacement step:

Replacement 57 PHD Unit (PL4.1.21)

Replacement 57 PHD Unit (PL4.1.21)

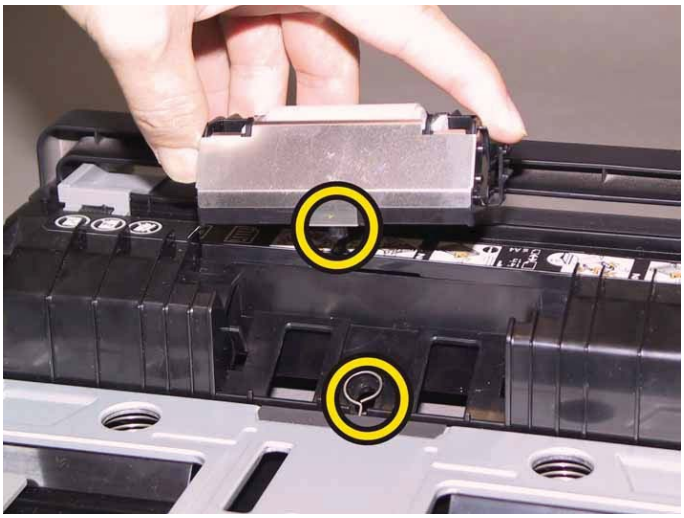
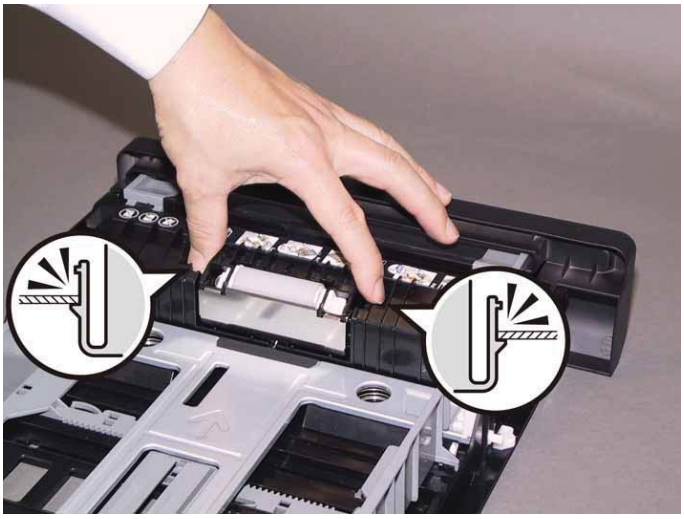
1) Put the paper on the TRANSFER ASSY (PL6.1.7) to protect the belt. **Note: When carrying out the work this procedure, take care not to cover the left and right of the belt guards with the paper.**	
2) Mate the left and right arrows on the Handle of the PHD Unit with the guides of the printer.	
3) Push the PHD Unit into the printer until it is stopped.	

Note: Check that the PHD Unit is secured.

4) Rotate the four Stoppers of the PHD Unit to clockwise.	
5) Remove the paper from the TRANSFER ASSY.	

6) Close the COVER ASSY FRONT.

Replacement 58 Separator Roller (PL10.3.99)

1) Mate the under tab of the Separator Roller with the hole of the Tray 1.	
2) Secure the left and right hooks of the Separator Roller.	

Go to the next replacement step:

Replacement 59 Tray 1 (PL10.3.1)

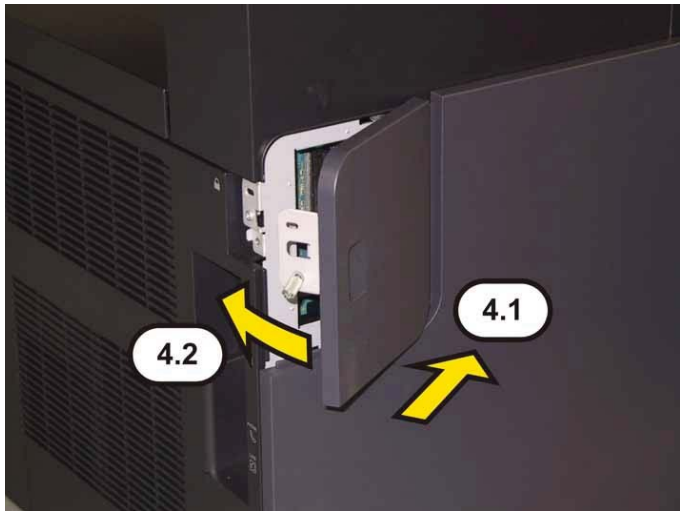
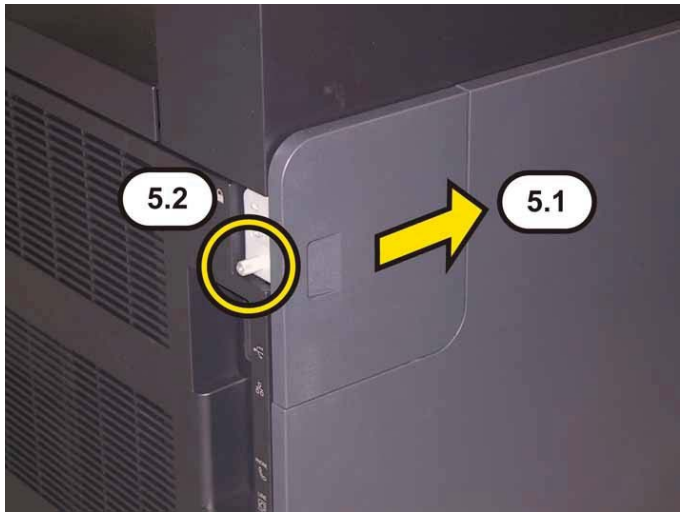
Replacement 59 Tray 1 (PL10.3.1)

1) Insert the Tray 1 into the printer.	

Replacement 60 MEMORY CARD (PL10.6.8)

Note: Use the wrist strap to protect the PWB from the electrostatic.

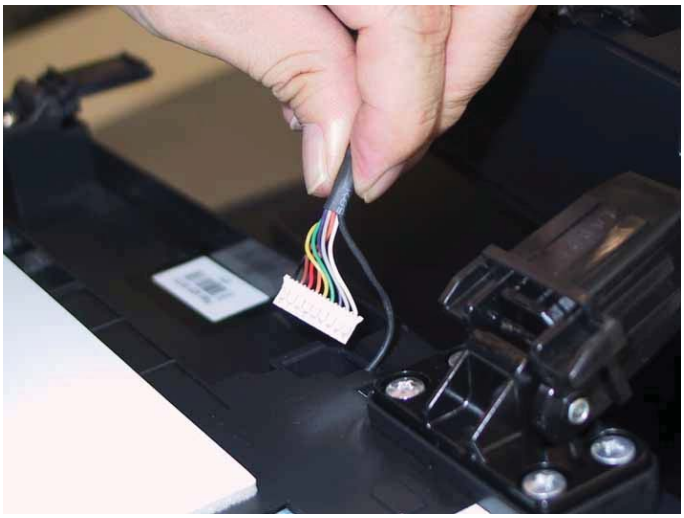
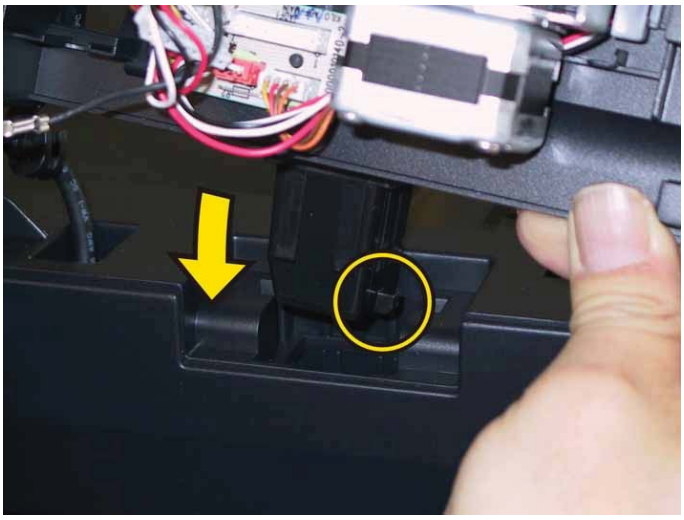
1) Fit the MEMORY CARD into the socket by mating the notch of the MEMORY CARD with the lug on the socket.	
2) Insert the MEMORY CARD to the socket until it locks.	
3) Slowly close the COVER ASSY ESS until it stops. **Note: Do not pull the COVER ASSY ESS fast. Otherwise, the hinge may be caught and damaged.**	

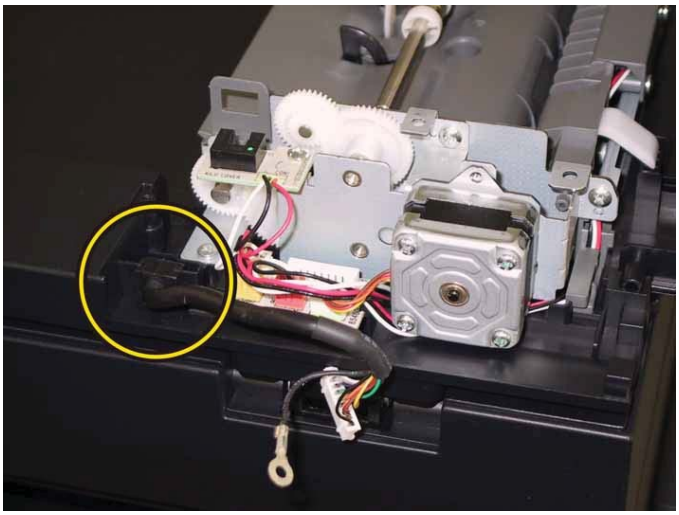
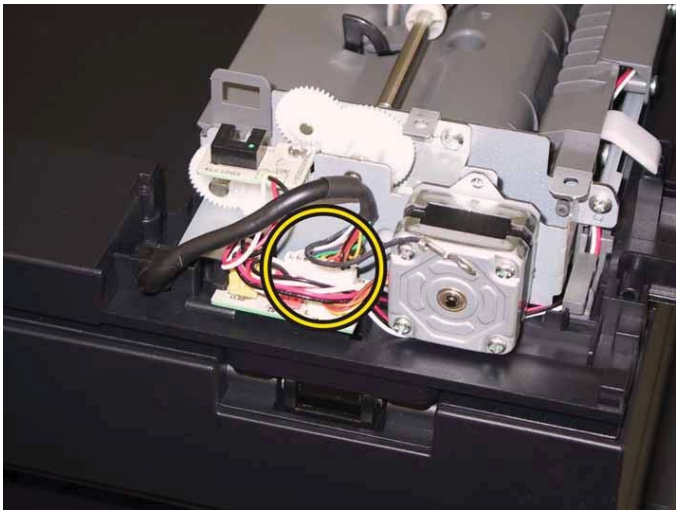
4) Slide the COVER ASSY ESS frontward obliquely, and then close the COVER ASSY ESS until it locks into place.	
5) Shift the COVER ASSY ESS to front side, secure the SCREW KNURLING.	

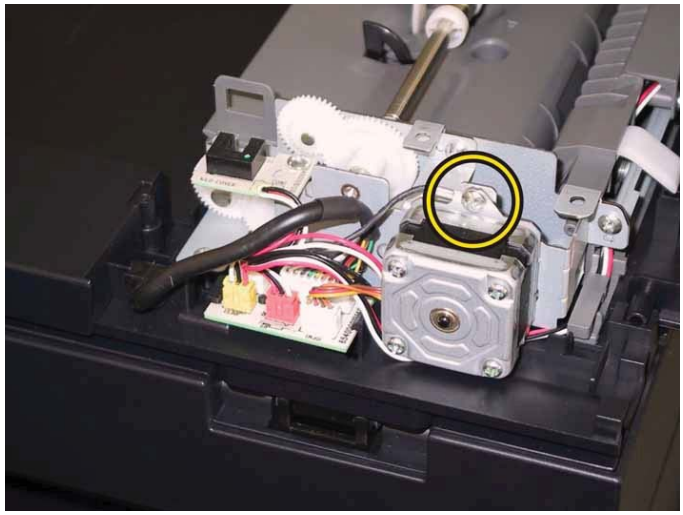
Replacement 61 ADF ASSY (PL10.10.1)

Note: The following steps show how to replace the ADF ASSY without replacing the HARN ASSY ADF (PL10.10.7) from the printer.

For how to replace the ADF ASSY along with HARN ASSY ADF, refer to Replacement 2 KIT IIT ASSY SUB.

1) Route the HARN ASSY ADF through the hole of the ADF ASSY.	
2) Tilt the ADF ASSY to left side, put the tab of the COUNTER BALANCE L into the hole of the IIT ASSY SUB. Attach the COUNTER BALANCE L to the IIT ASSY SUB.	

3) Attach the COUNTER BALANCE R to the IIT ASSY SUB, fix the hook of the COUNTER BALANCE R. Attach the ADF ASSY to the IIT ASSY SUB.	
4) Attach the RUBBER BUSH of the HARN ASSY ADF to the rib of the ADF ASSY.	
5) Engage the connector (P/JADF1) of the HARN ASSY ADF to the PWBA.	

6) Secure the grounding terminal of the HARN ASSY ADF to the ADF ASSY with the one screw (silver, 4mm).	
7) Install the COVER ADF REAR to the ADF ASSY by locking the two hooks in place. **Note: When performing this step, ensure that the notch on the front side of the COVER ADF REAR is aligned with the screw hole.**	
8) Secure the COVER ADF REAR to the ADF ASSY with the one screw (silver, tap, 8mm).	

Go to the next replacement step:

Replacement 3 TRAY ASSY ADF INPUT (PL10.10.11)

Chapter 4 Plug/Jack(P/J) Connector Locations CONTENTS

1. Connector [P (plug) / J (jack)] ..... 4 - 1
1.1 List of P/J ..... 4 - 1
1.2 IOT P/J layout diagram ..... 4 - 3

1. Connector [P (plug) / J (jack)]

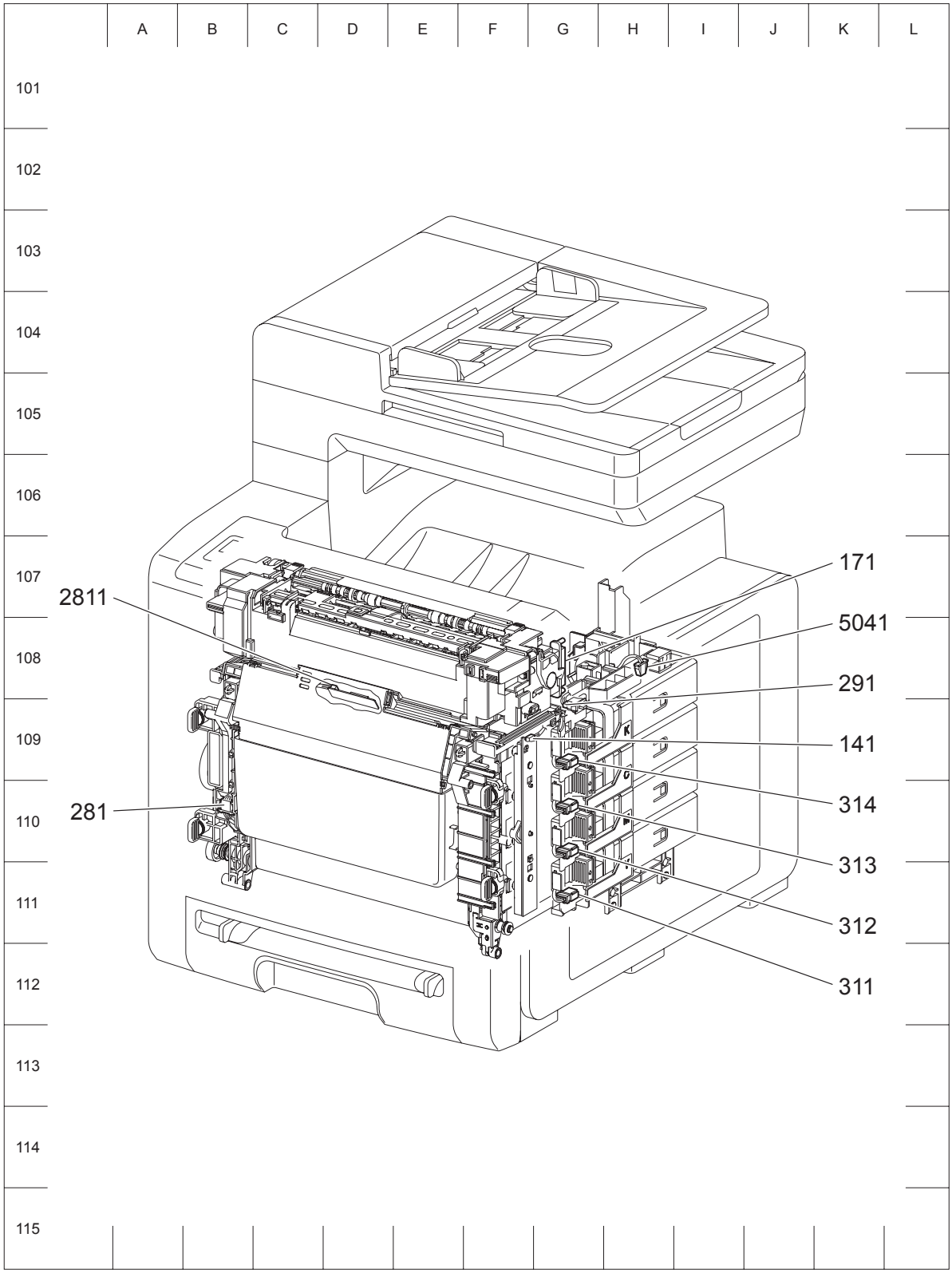
1.1 List of P/J

IOT

P/J	Coordiates	Remarks
10	J-157	Connects PWBA MCU and HARNESS ASSY ESS
11	J-157	Connects PWBA MCU and HARNESS ASSY ESS VIDEO
14	I-157	Connects PWBA MCU and HARNESS ASSY LVPS MAIN
15	I-157	Connects PWBA MCU and HARNESS ASSY LVPS MAIN
16	I-159	Connects PWBA MCU and HARNESS ASSY HVPS
17	I-157	Connects PWBA MCU and HARNESS ASSY FUSER
18	I-158	Connects PWBA MCU and HARNESS ASSY TNR MOT
19	I-158	Connects PWBA MCU and HARNESS ASSY TNR MOT
20	J-159	Connects PWBA MCU and HARNESS ASSY HUM
21	J-158	Connects PWBA MCU and HARNESS ASSY MAIN MOT
22	J-157	Connects PWBA MCU and HARNESS ASSY SUB MOT
23	J-158	Connects PWBA MCU and HARNESS ASSY L SIDE
24	J-158	Connects PWBA MCU and DRIVE ASSY PH (Color Mode Switching solenoid)
26	J-158	Connects PWBA MCU and HARNESS ASSY KSNR REGCL
28	J-159	Connects PWBA MCU and HARNESS ASSY L SIDE
29	I-159	Connects PWBA MCU and HARNESS ASSY SIDE SW
31	I-158	Connects PWBA MCU and HARNESS ASSY TONER CRUM
40	E-143	Connects PWBA LVPS and HARNESS ASSY IIT POWER
40	I-157	Connects PWBA MCU and HARNESS ASSY ROS RE
41	I-157	Connects PWBA MCU and HARNESS ASSY ROS VIDEO
42	J-157	Connects PWBA MCU and HARNESS ASSY PHD XPRO
44	E-143	Connects PWBA LVPS and INTERLOCK SWITCH
47	C-143	Connects PWBA LVPS and HARNESS ASSY FUSER
48	C-142	Connects PWBA LVPS and HARNESS ASSY SW PWR
141	G-109	Connects LED ASSY ERASE and HARNESS ASSY LVPS MAIN
144	G-151	Connects PWBA EEPROM and HARNESS ASSY PHD XPRO
161	F-154	Connects PWBA HVPS and HARNESS ASSY HVPS
171	G-108	Connects FUSER and HARNESS ASSY FUSER
181	D-152	Connects DISPENSER ASSY (Motor Assy DISP Y) and HARNESS ASSY TNR MOT
182	D-152	Connects DISPENSER ASSY (Motor Assy DISP M) and HARNESS ASSY TNR MOT
191	D-151	Connects DISPENSER ASSY (Motor Assy DISP C) and HARNESS ASSY TNR MOT
192	D-151	Connects DISPENSER ASSY (Motor Assy DISP K) and HARNESS ASSY TNR MOT
201	H-139	Connects FEEDER ASSY NV AIO (HUM Sensor) and HARNESS ASSY HUM
202	G-123	Connects CONSOLE ASSY PANEL and HARNESS ASSY A-OP-OPP
211	J-137	Connects DRIVE ASSY MAIN (Main Motor) and HARNESS ASSY MAIN MOT
221	I-137	Connects DRIVE ASSY SUB (Sub Motor) and HARNESS ASSY SUB MOT
231	D-127	Connects FEEDER ASSY NV AIO (Feed Solenoid) and HARNESS ASSY L SIDE

P/J	Coordiates	Remarks
232	F-126	Connects FEEDER ASSY NV AIO (REGI Sensor) and HARNESS ASSY L SIDE
233	G-126	Connects FEEDER ASSY NV AIO (SSI No Paper Sensor) and HARNESS ASSY L SIDE
234	G-126	Connects FEEDER ASSY NV AIO (Tray No Paper Sensor) and HARNESS ASSY L SIDE
261	H-138	Connects DRIVE ASSY PH (Color Mode Switching Sensor) and HARNESS ASSY KSNR REGCL
262	I-138	Connects CLUTCH ASSY DRV and HARNESS ASSY KSNR REGCL
281	B-110	Connects TRANSFER BELT (Harness Assy CTD SNR2) and HARNESS ASSY L SIDE
291	G-109	Connects DISPENSER ASSY (Side Cover Switch) and HARNESS ASSY SIDE SW
311	G-111	Connects DISPENSER ASSY (Connector CRUM Y) and HARNESS ASSY TONER CRUM
312	G-110	Connects DISPENSER ASSY (Connector CRUM M) and HARNESS ASSY TONER CRUM
313	G-110	Connects DISPENSER ASSY (Connector CRUM C) and HARNESS ASSY TONER CRUM
314	G-109	Connects DISPENSER ASSY (Connector CRUM K) and HARNESS ASSY TONER CRUM
403	G-137	Connects PWBA CONT AIO and HARNESS ASSY A-OP-ESS
411	E-124	Connects ROS ASSY and HARNESS ASSY ROS RE
412	E-124	Connects ROS ASSY and HARNESS ASSY ROS VIDEO
422	H-151	Connects PHD UNIT (Eeprom PHD) and HARNESS ASSY PHD XPRO
482	B-137	Connects BREAKER GFI and HARNESS ASSY SW PWR
484	B-138	Connects BREAKER GFI and HARNESS ASSY GFI GND
501	E-143	Connects PWBA LVPS and HARNESS ASSY LVPS MAIN
502	E-143	Connects PWBA LVPS and HARNESS ASSY LVPS MAIN
503	E-143	Connects PWBA LVPS and FAN
504	E-143	Connects PWBA LVPS and HARNESS ASSY LVPS MAIN
801	G-138	Connects PWBA CONT AIO and PWBA FAX
802	G-136	Connects PWBA CONT AIO and HARNESS ASSY IIT POWER
901	G-136	Connects PWBA CONT AIO and HARNESS ASSY ESS
902	G-137	Connects PWBA CONT AIO and HARNESS ASSY ESS VIDEO
1001	G-136	Connects PWBA CONT AIO and SCANNER ASSY (PCB CCD)
1002	G-136	Connects PWBA CONT AIO and SCANNER ASSY (Scanner Motor)
1003	G-136	Connects PWBA CONT AIO and SCANNER ASSY (ADF Assy)
2811	D-108	Connects ADC Sensor and HARNESS ASSY CTD SNR2 (TRANSFER BELT)
5041	H-108	Not Connects (Used in production process only)
5301	D-127	Connects HARNESS ASSY A-OP-OPP and HARNESS ASSY A-OP-ESS

1.2 IOT P/J layout diagram



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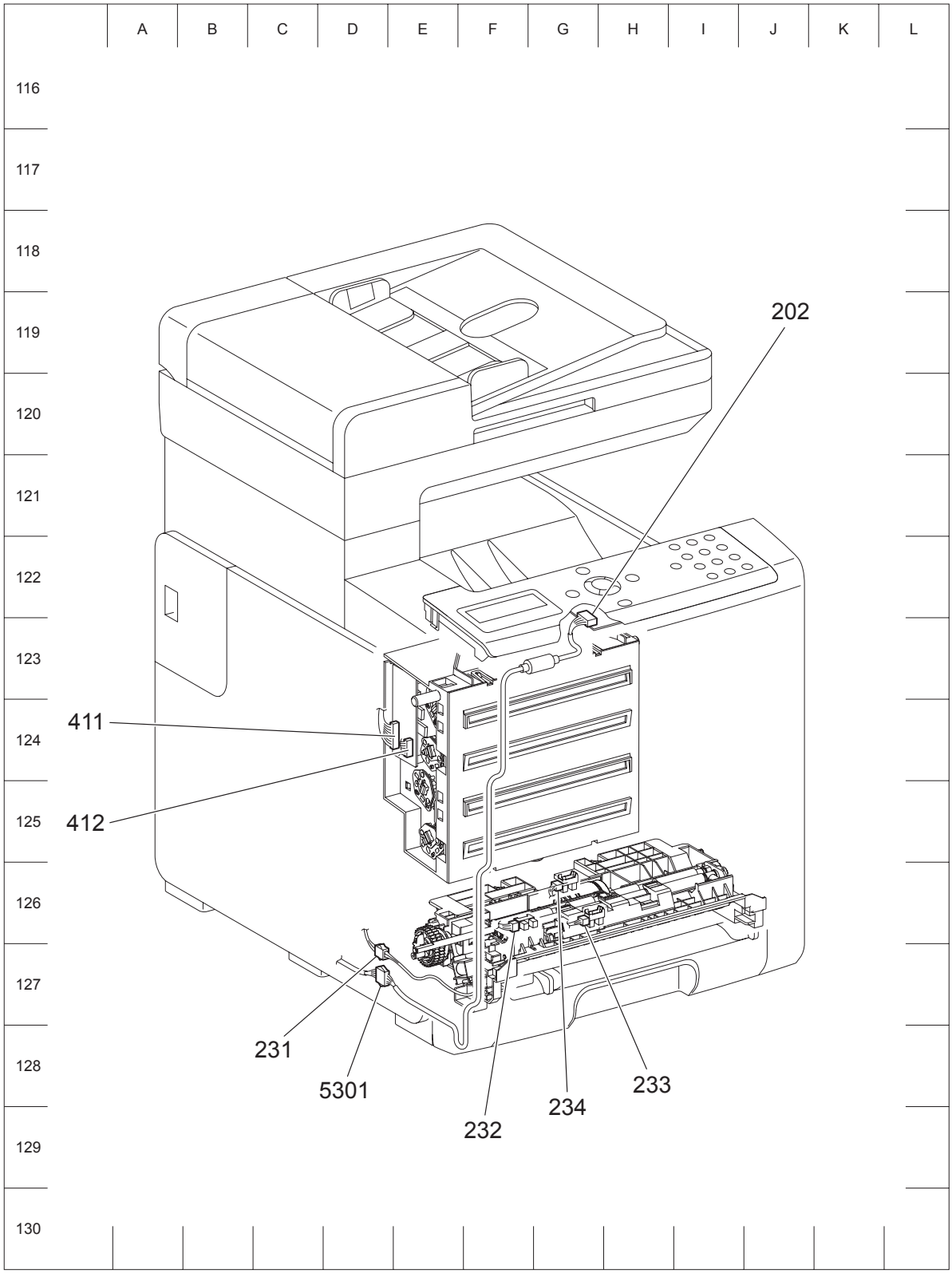
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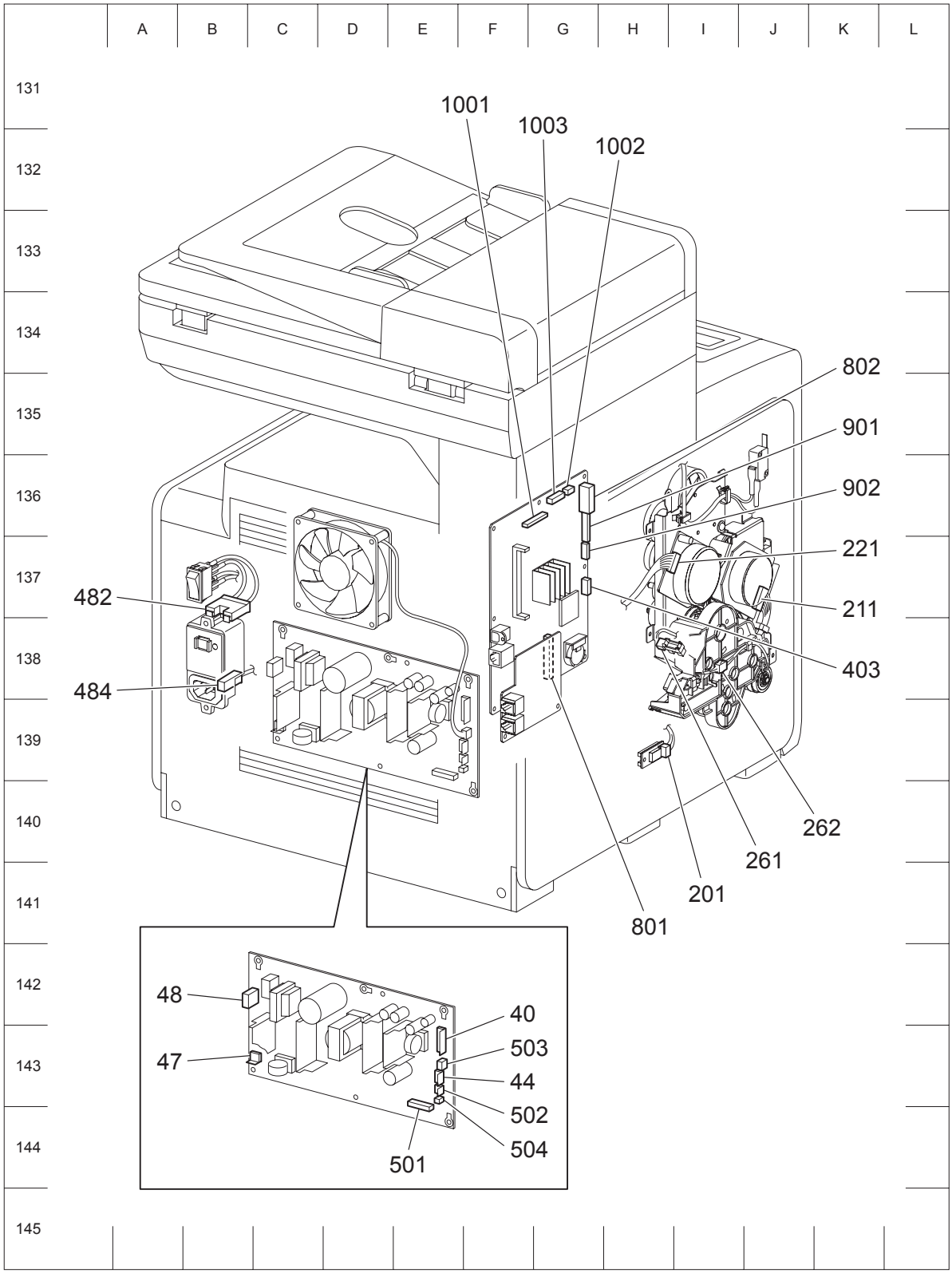
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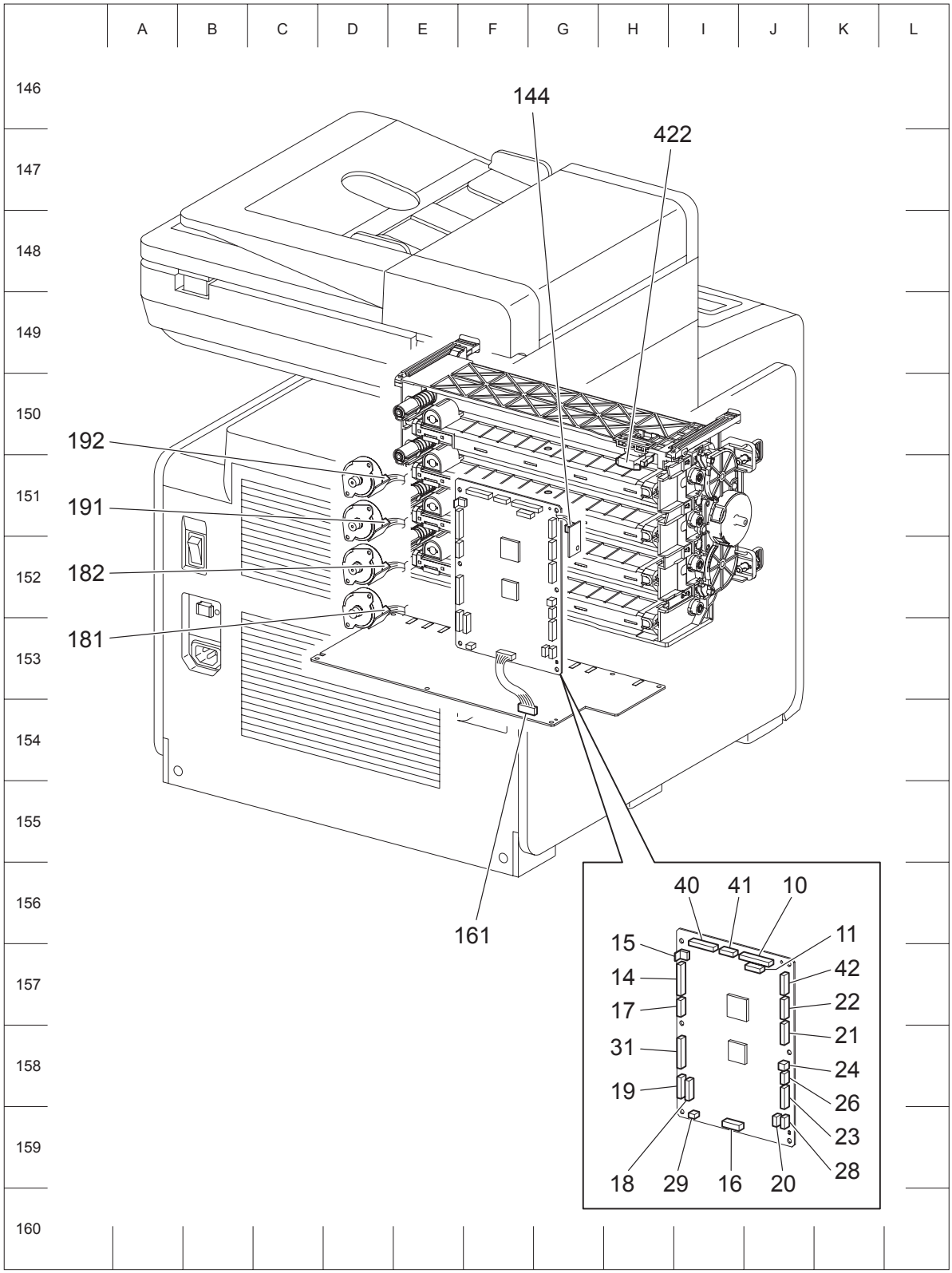
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Chapter 5 Parts List CONTENTS

1. Parts List

1.1 Caution for use of spare parts illustration

- Available spare parts are shown in the illustration by name.
- [Ref PL X.Y.Z] shown below the part name denotes the item is "Z" in the plate "PL X.Y" of the engineering part list.
- For the detailed composition of the KIT parts, check with the engineering part list.

1.2 Caution for use of engineering parts list

- The figures indicating the illustrations are the item No. in the list and present correspondence between the illustrations and parts.
- The notation of PL "X.Y.Z" is composed of the plate (PL), item "X.Y", and parts "Z".
- The alphabet characters in the illustrations represent screws and clips as follows:
  "S": screw, "E": E-ring, "KL": KL clip, "C": C-ring, and "N": nut
- "▼" mark in the illustrations are attached to items indicating assembly parts in the illustrations.
- Encircled alphabetical figures in the illustrations indicate interrupted leader lines. Same characters in the illustrations represent lines to be connected.
- The mark "(with 2-5)" attached to assembly parts on the illustrations and lists represents that the items "2, 3, 4, and 5" of that plate are contained and the mark "(with 2-5, PL6.1.1) represent that the item "2, 3, 4, and 5" of that plate and the item "1" of the plate "6.1" are contained.
- The mark "[Ref PLX.Y.Z]" attached to parts in the illustrations and lists resents that the parts is the same as the parts of the item "Z" of the plate "X.Y".
- The mark "∗" attached to parts in the list represents "Note" or "Reference" about that parts is contained in the same page.

NOTE

For spare parts, refer to the "Spare parts list" which is issued separately.

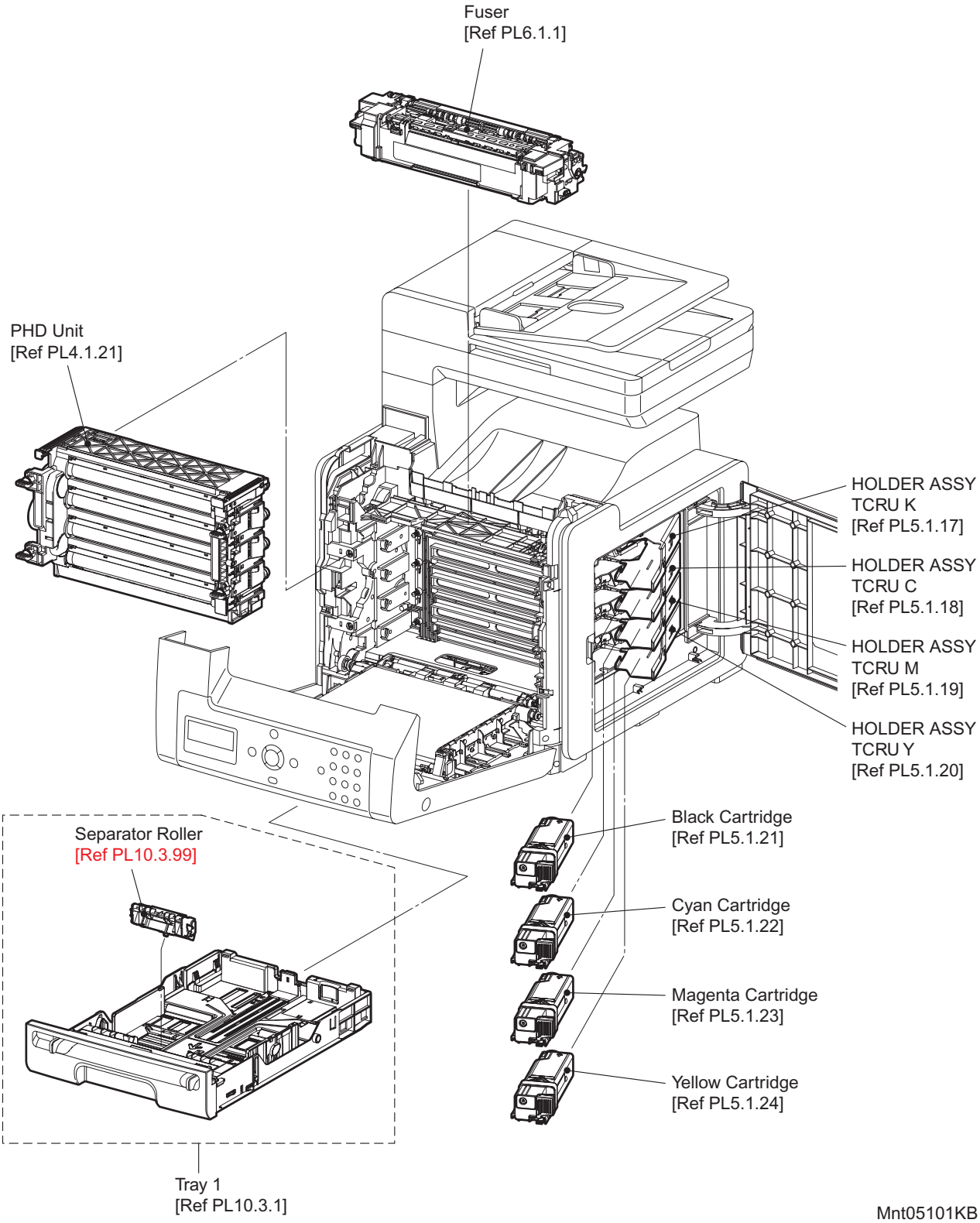
NOTE

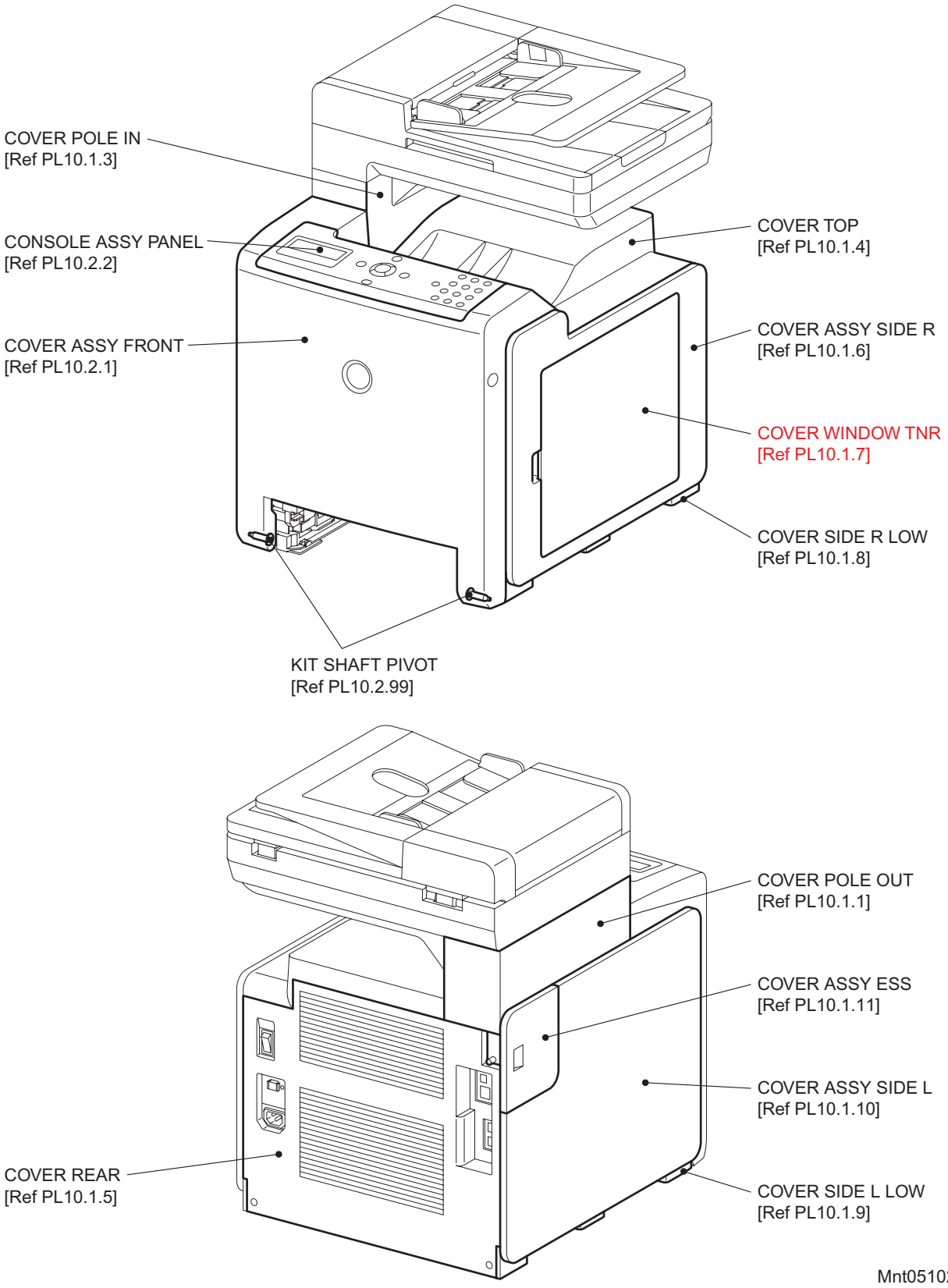
For the connector (P/J), parts such as harness, wire, etc. in the list, refer to "Chapter 7, Electric wiring"

NOTE

It should be noted that configuration of parts may be different or some parts are not used depending on specifications of OEM.

Customer Replaceable Parts Illustration




COVER POLE IN
[Ref PL10.1.3]
CONSOLE ASSY PANEL
[Ref PL10.2.2]
COVER ASSY FRONT
[Ref PL10.2.1]
KIT SHAFT PIVOT
[Ref PL10.2.99]
COVER TOP
[Ref PL10.1.4]
COVER ASSY SIDE R
[Ref PL10.1.6]
COVER WINDOW TNR
[Ref PL10.1.7]
COVER SIDE R LOW
[Ref PL10.1.8]
COVER POLE OUT
[Ref PL10.1.1]
COVER ASSY ESS
[Ref PL10.1.11]
COVER ASSY SIDE L
[Ref PL10.1.10]
COVER SIDE L LOW
[Ref PL10.1.9]
COVER REAR
[Ref PL10.1.5]
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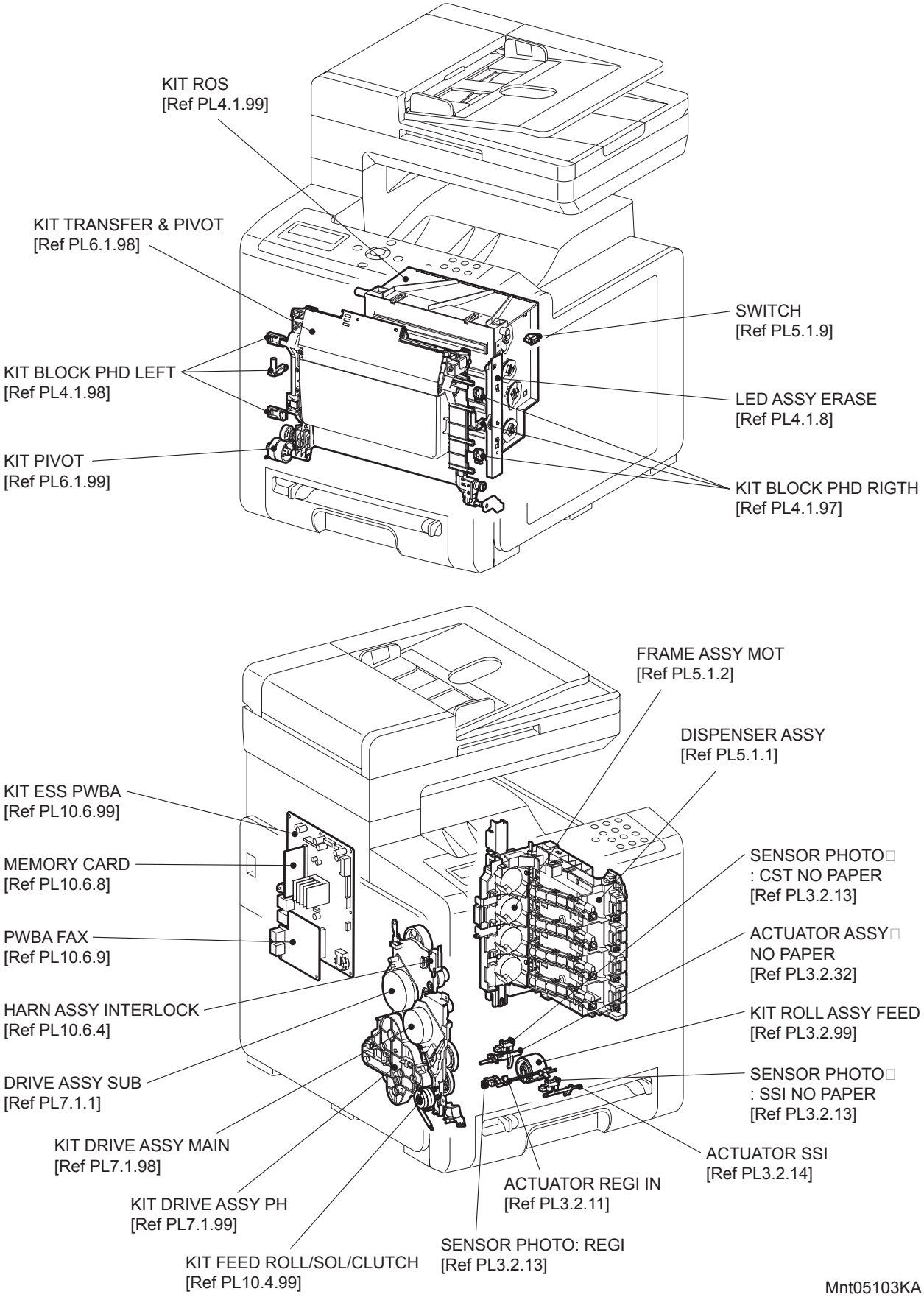
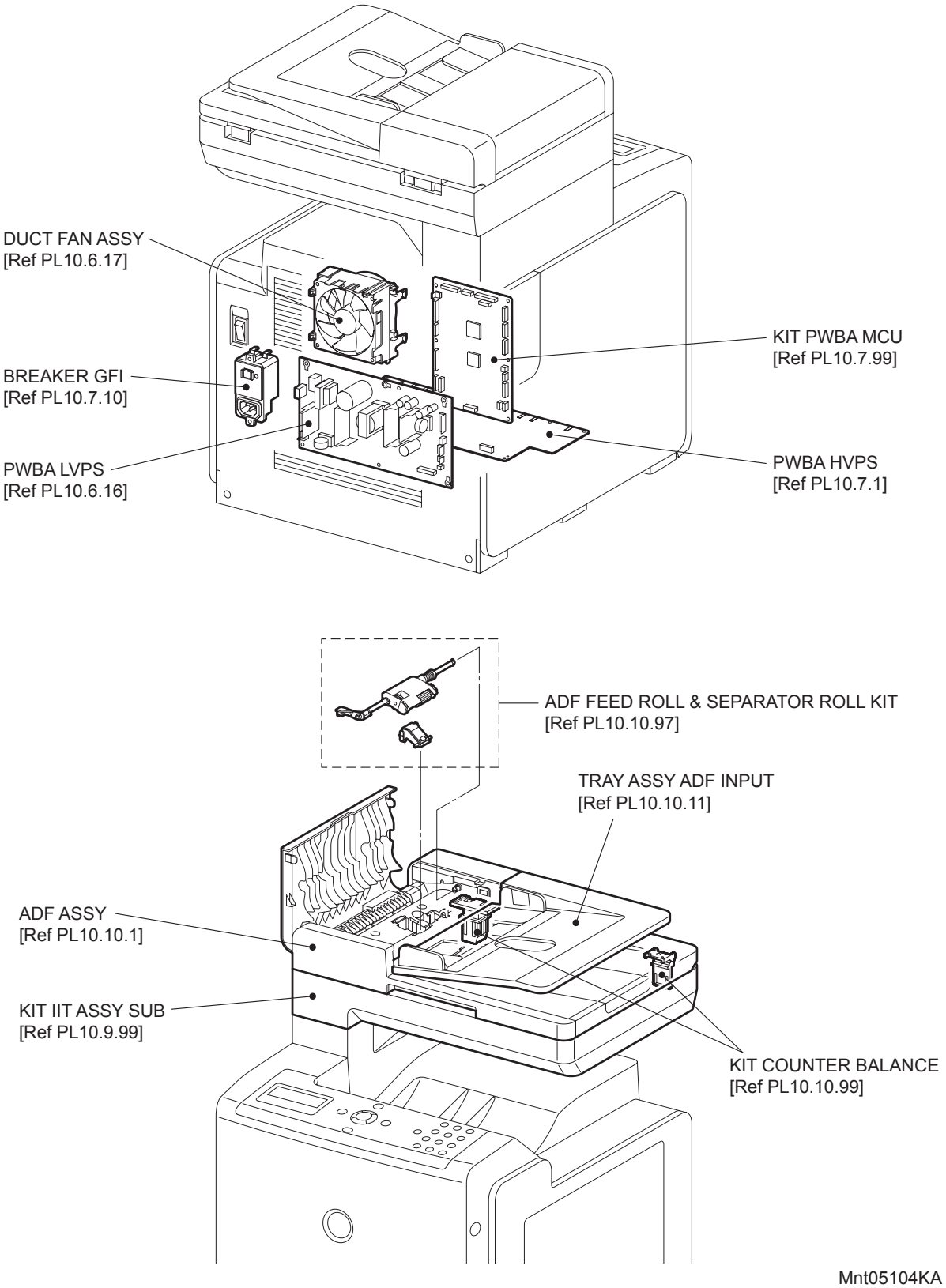

KIT ROS
[Ref PL4.1.99]
KIT TRANSFER & PIVOT
[Ref PL6.1.98]
SWITCH
[Ref PL5.1.9]
KIT BLOCK PHD LEFT
[Ref PL4.1.98]
LED ASSY ERASE
[Ref PL4.1.8]
KIT PIVOT
[Ref PL6.1.99]
KIT BLOCK PHD RIGTH
[Ref PL4.1.97]
FRAME ASSY MOT
[Ref PL5.1.2]
DISPENSER ASSY
[Ref PL5.1.1]
KIT ESS PWBA
[Ref PL10.6.99]
MEMORY CARD
[Ref PL10.6.8]
SENSOR PHOTO□
: CST NO PAPER
[Ref PL3.2.13]
PWBA FAX
[Ref PL10.6.9]
ACTUATOR ASSY□
NO PAPER
[Ref PL3.2.32]
HARN ASSY INTERLOCK
[Ref PL10.6.4]
KIT ROLL ASSY FEED
[Ref PL3.2.99]
SENSOR PHOTO□
: SSI NO PAPER
[Ref PL3.2.13]
DRIVE ASSY SUB
[Ref PL7.1.1]
KIT DRIVE ASSY MAIN
[Ref PL7.1.98]
ACTUATOR SSI
[Ref PL3.2.14]
ACTUATOR REGI IN
[Ref PL3.2.11]
KIT DRIVE ASSY PH
[Ref PL7.1.99]
SENSOR PHOTO: REGI
[Ref PL3.2.13]
KIT FEED ROLL/SOL/CLUTCH
[Ref PL10.4.99]
Mnt05103KA


DUCT FAN ASSY
[Ref PL10.6.17]
BREAKER GFI
[Ref PL10.7.10]
PWBA LVPS
[Ref PL10.6.16]
KIT PWBA MCU
[Ref PL10.7.99]
PWBA HVPS
[Ref PL10.7.1]
ADF FEED ROLL & SEPARATOR ROLL KIT
[Ref PL10.10.97]
TRAY ASSY ADF INPUT
[Ref PL10.10.11]
ADF ASSY
[Ref PL10.10.1]
KIT IIT ASSY SUB
[Ref PL10.9.99]
KIT COUNTER BALANCE
[Ref PL10.10.99]

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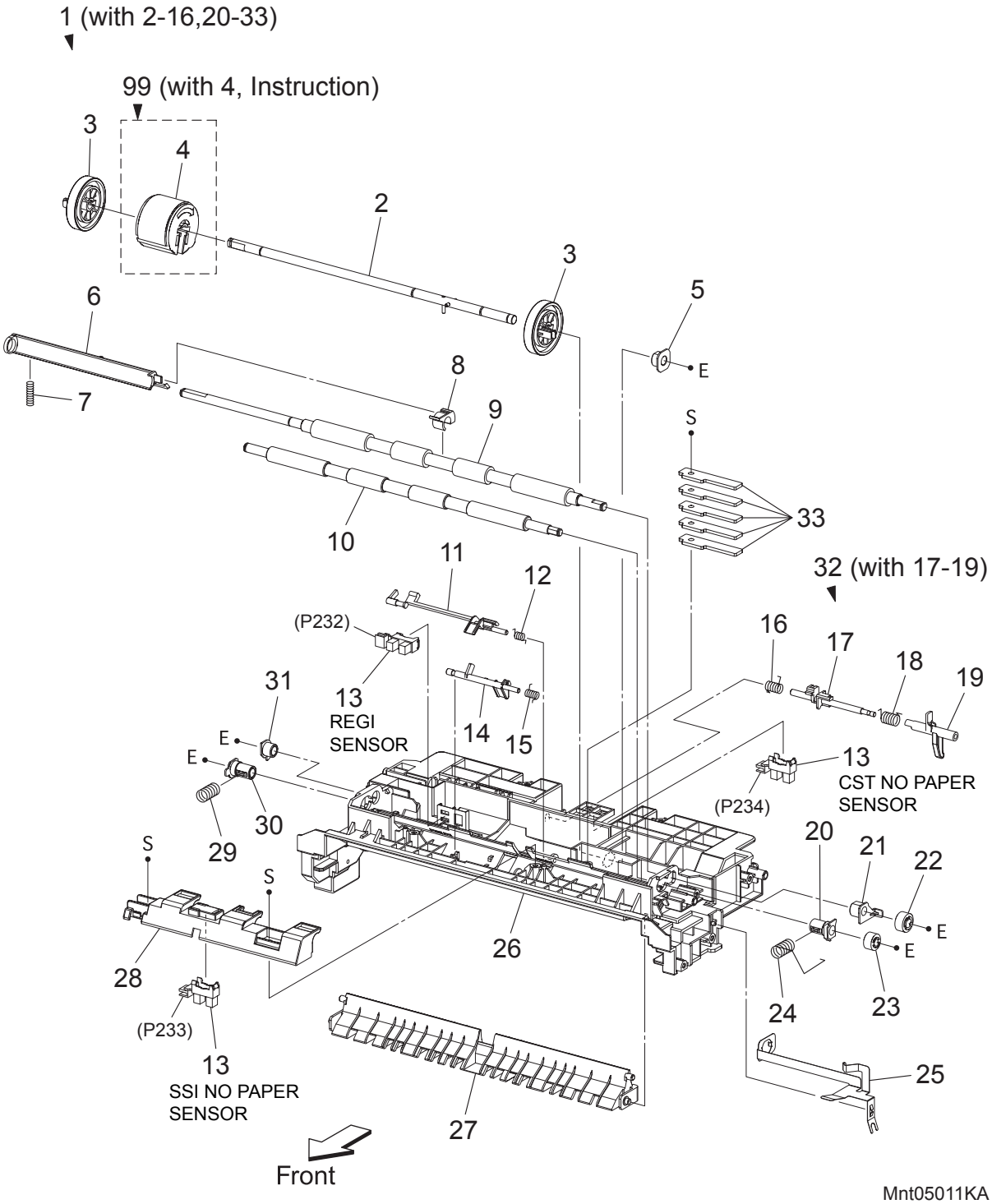
Engineering parts list

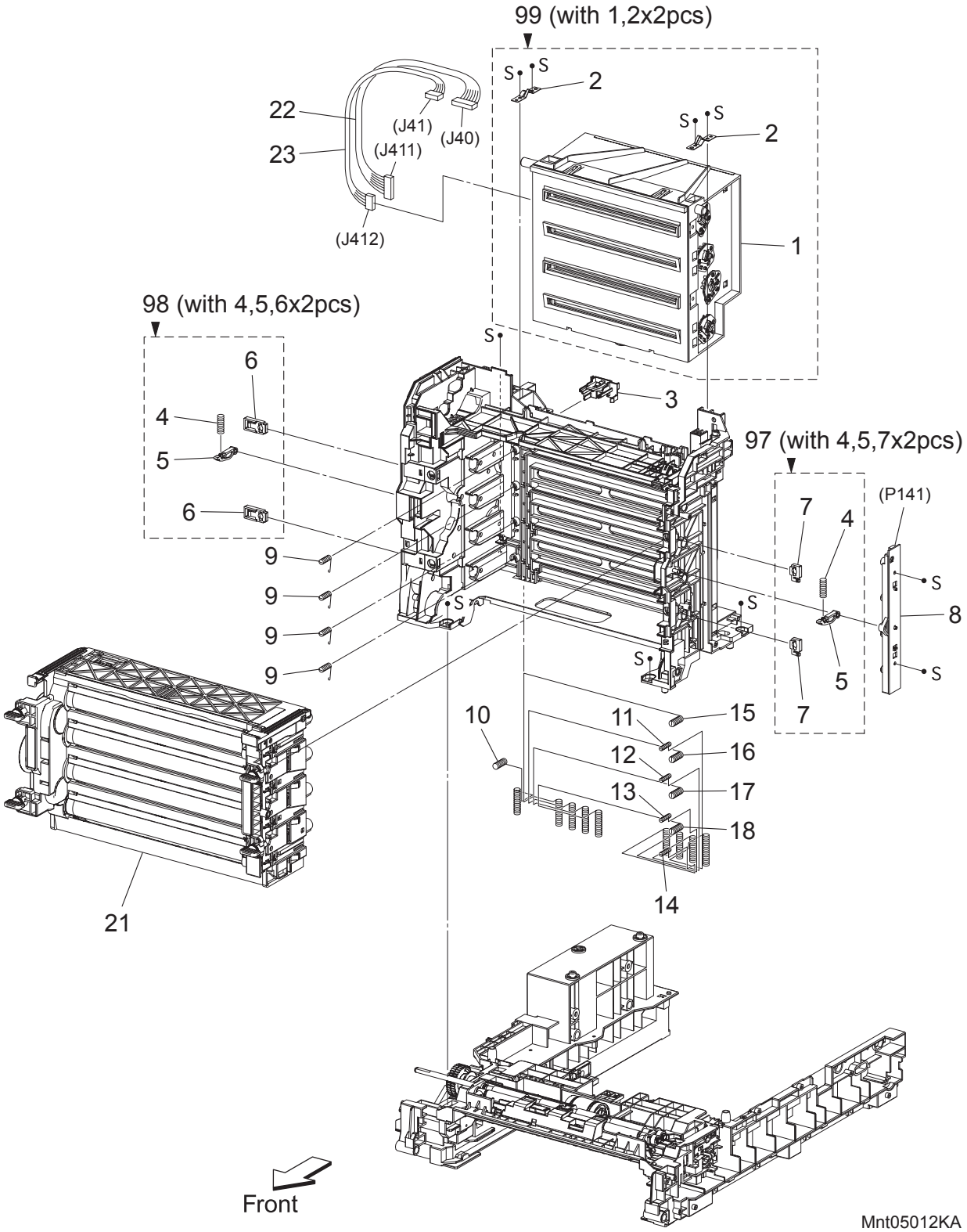
PL3.2 Paper Feeder [Illustration]



PL3.2 Paper Feeder [List]

Item	Parts name
1	CHUTE ASSY FDR REGI (with 2-16,20-33)
2	SHAF ASSY FEED
3	ROLL CORE MSI
4	ROLL ASSY FEED
5	BEARING EARTH
6	ACTUATOR REGI OUT
7	SPRING REGI OUT
8	ACTUATOR REGI ROLL
9	ROLL ASSY REGI
10	ROLL REGI METAL
11	ACTUATOR REGI IN
12	SPRING ACT REGI
13	SENSOR PHOTO
14	ACTUATOR SSI
15	SPRING ACT SSI
16	SPRING STP
17	STOPPER ACT
18	SPRING ACT NP
19	ACTUATOR NO PAPER
20	BEARING M EARTH
21	BEARING EARTH REGI
22	GEAR REGI R
23	GEAR REGI M
24	SPRING REGI R M
25	PLATE EARTH REGI
26	CHUTE UP
27	CHUTE LOW
28	BRACKET SNS
29	SPRING REGI L M
30	BEARING M
31	BEARING R
32	ACTUATOR ASSY NO PAPER (with 17-19)
33	PLATE WEIGHT
99	KIT ROLL ASSY FEED (with 4, Instruction)

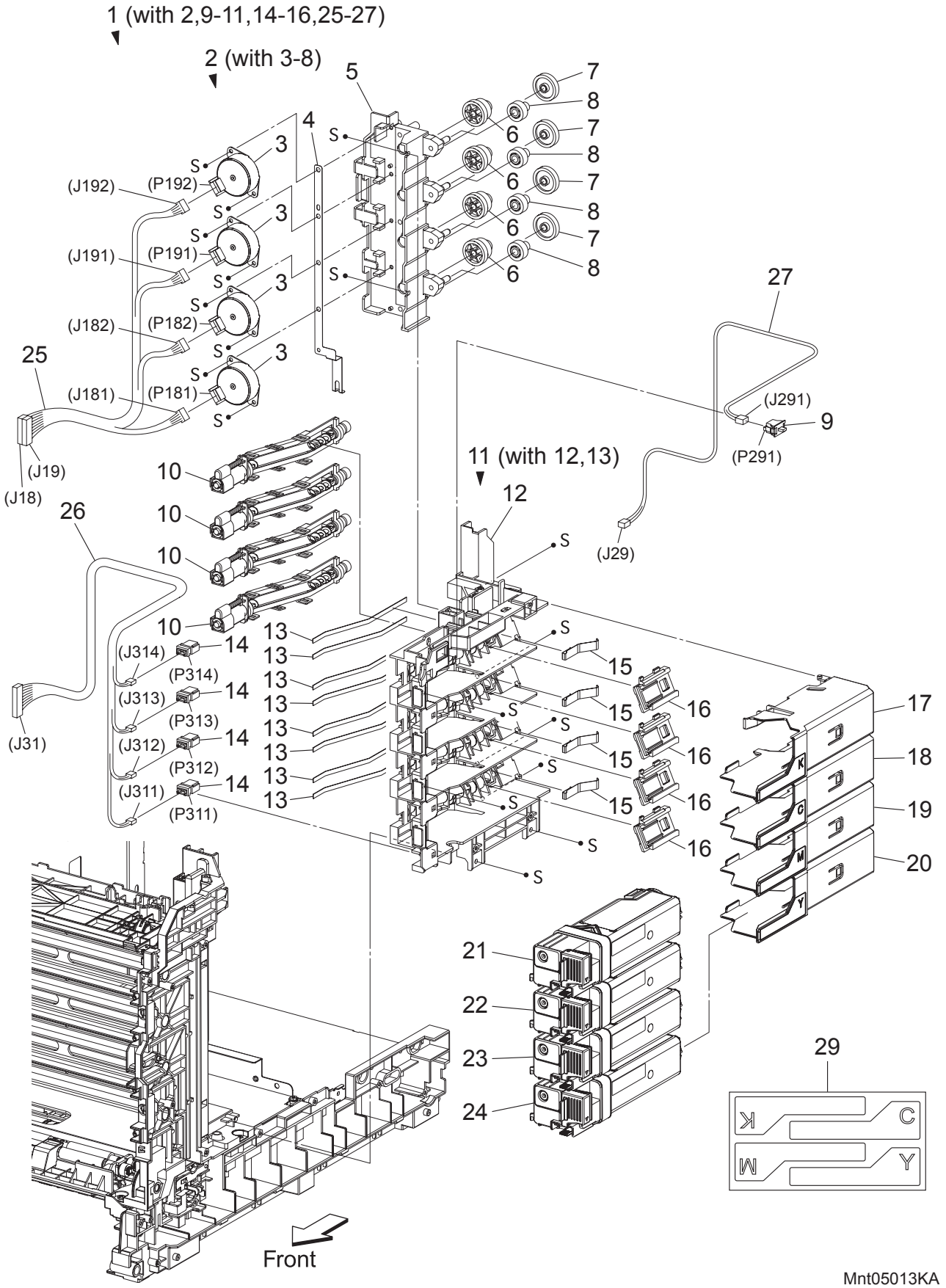
PL4.1 Xerographics [Illustration]



PL4.1 Xerographics [List]

Item	Parts name
1	ROS ASSY
2	SPRING ROS
3	HOLDER CRUM
4	SPRING PHD
5	LEVER PHD
6	BLOCK STOPPER PHD D
7	BLOCK STOPPER PHD AD
8	LED ASSY ERASE
9	SPRING TRACKING
10	SPRING CF
11	SPRING TR4
12	SPRING TR3
13	SPRING TR2
14	SPRING TR1
15	SPRING D4
16	SPRING D3
17	SPRING D2
18	SPRING D1
19	- -
20	- -
21	PHD ASSY
22	HARN ASSY ROS RE (J40-J411)
23	HARN ASSY ROS VIDEO (J41-J412)
97	KIT BLOCK PHD RIGHT (with 4,5,7 x 2pcs)
98	KIT BLOCK PHD LEFT (with 4,5,6 x 2pcs)
99	KIT ROS (with 1,2 x 2pcs)

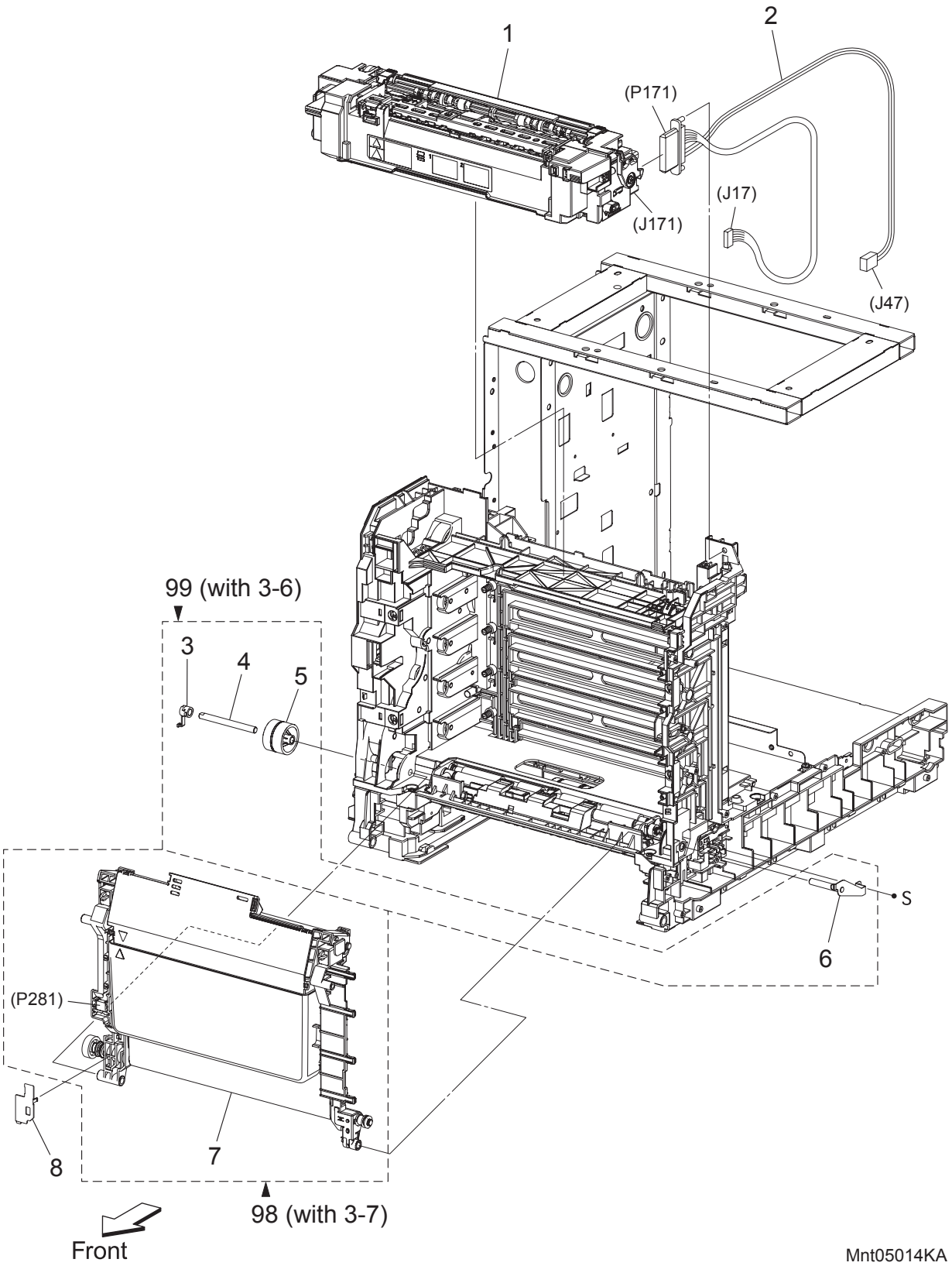
PL5.1 Dispenser [Illustration]



PL5.1 Dispenser [List]

Item	Parts name
1	DISPENSER ASSY (with 2,9-11,14-16,25-27)
2	FRAME ASSY MOT (with 3-8)
3	MOTOR ASSY DISP
4	CONDUCTOR MOTOR
5	FRAME MOTOR
6	GEAR IDLER
7	GEAR IDLER AUG
8	GEAR IDLER AGI
9	SWITCH
10	HOUSING ASSY AUGER
11	FRAME ASSY DISP (with 12,13)
12	FRAME DISP
13	SEAL DISP AUG
14	CONNECTOR CRUM
15	SPRING DISP
16	JOINT ASSY DISP
17	HOLDER ASSY TCRU K
18	HOLDER ASSY TCRU C
19	HOLDER ASSY TCRU M
20	HOLDER ASSY TCRU Y
21	TONER CARTRIDGE (K)
22	TONER CARTRIDGE (C)
23	TONER CARTRIDGE (M)
24	TONER CARTRIDGE (Y)
25	HARN ASSY TNR MOT (J18,J19-J181,J182,J191,J192)
26	HARN ASSY TONER CRUM (J31-J311,J312,J313,J314)
27	HARN ASSY SIDE SW (J29-J291)
28	- -
29	LABEL HOLDER

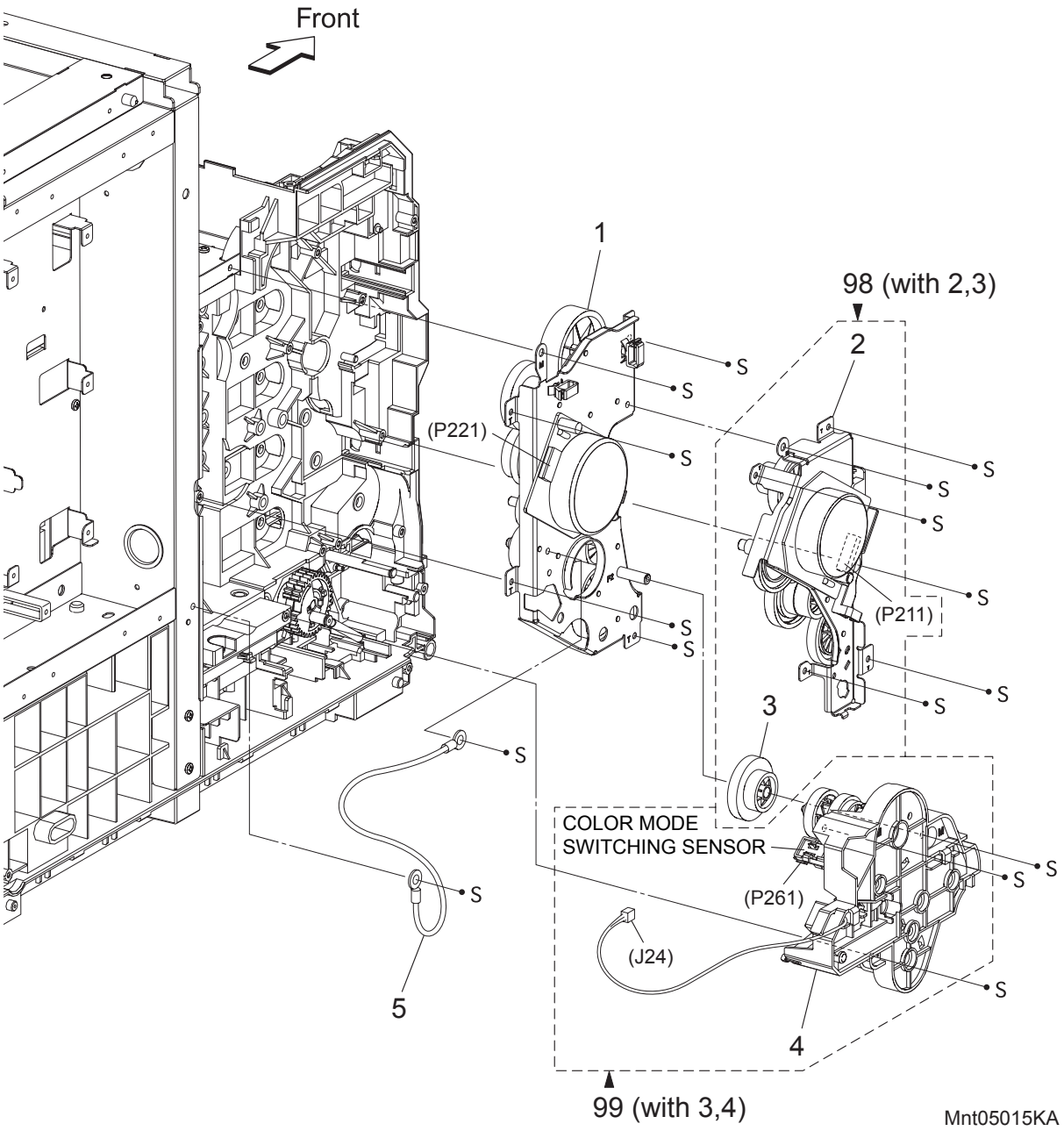
PL6.1 Transfer & Fuser [Illustration]



PL6.1 Transfer & Fuser [List]

Item	Parts name
1	FUSER ASSY
2	HARN ASSY FUSER (AIO) (J17,J47-P171)
3	STOPPER PIVOT
4	PIVOT TRANS L
5	GEAR T4
6	SHAFT ASSY PIVOT
7	TRANSFER ASSY
8	COVER HARNESS 2
98	KIT TRANSFER & PIVOT (with 3-7)
99	KIT PIVOT (with 3-6)

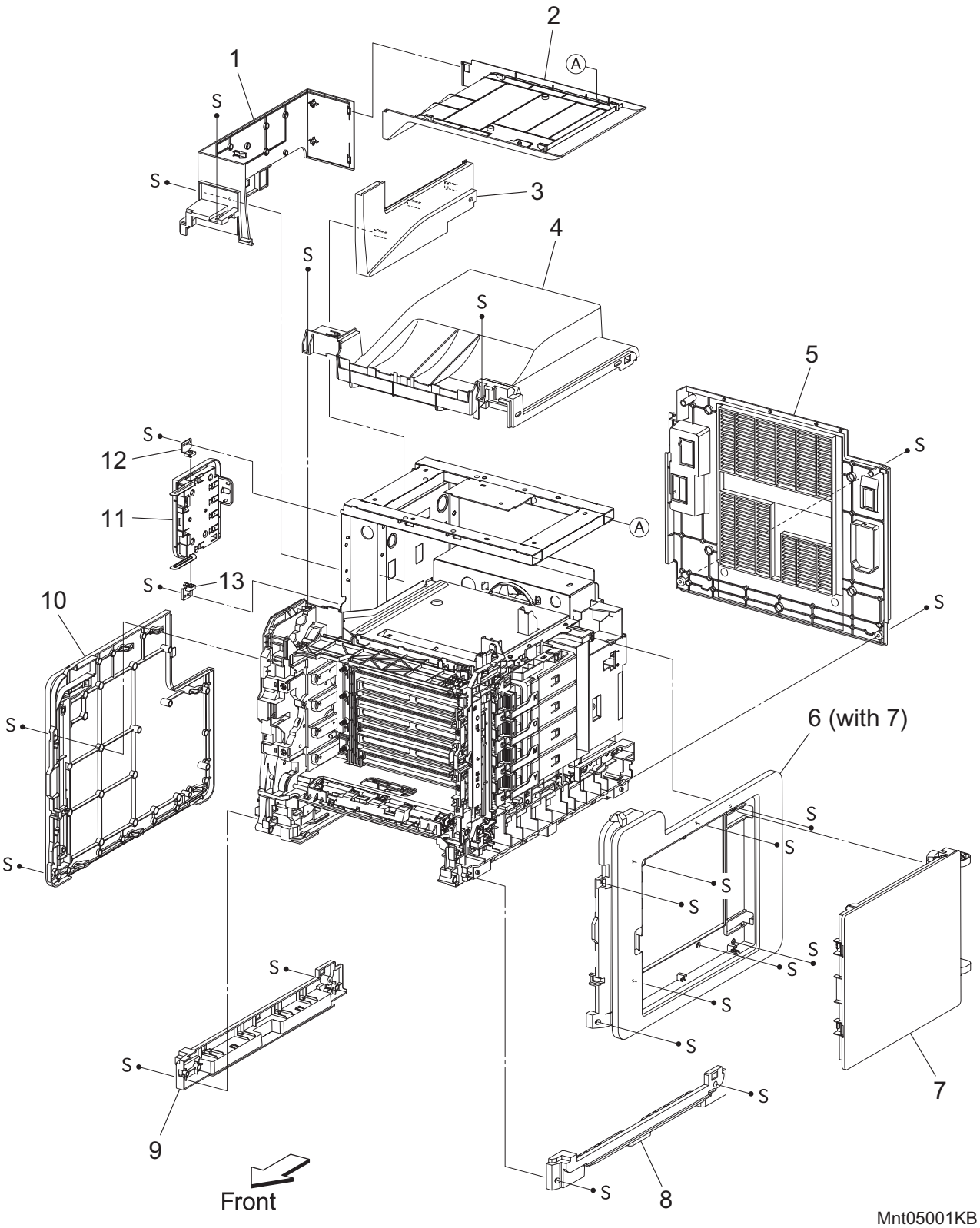
PL7.1 Drive [Illustration]



PL7.1 Drive [List]

Item	Parts name
1	DRIVE ASSY SUB
2	DRIVE ASSY MAIN
3	GEAR P2
4	DRIVE ASSY PH
5	HARNESS ASSY GND
98	KIT DRIVE ASSY MAIN (with 2,3)
99	KIT DRIVE ASSY PH (with 3,4)

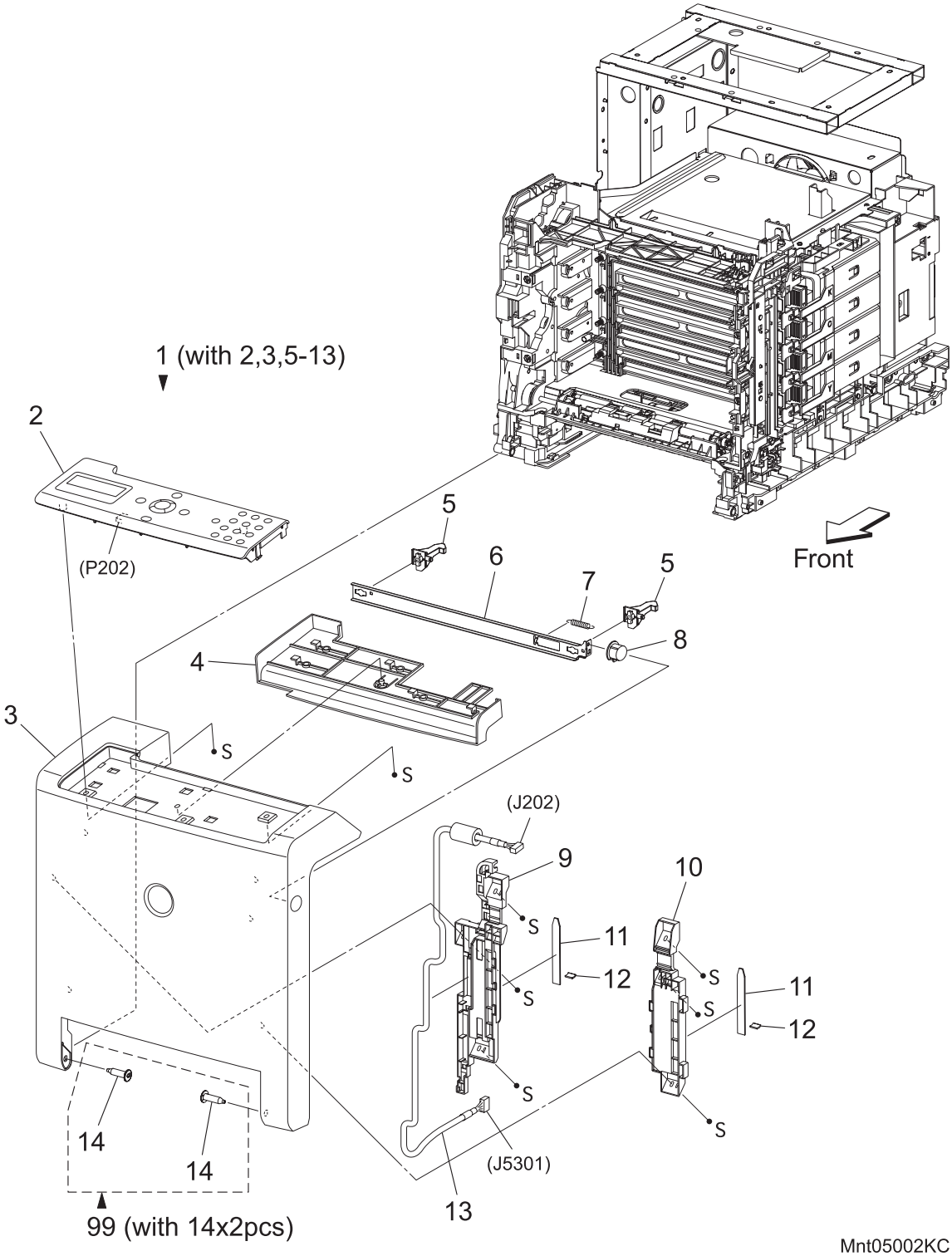
PL10.1 Cover (With Scanner Assy) (1/2) [Illustration]



PL10.1 Cover (With Scanner Assy) (1/2) [List]

Item	Parts name
1	COVER POLE OUT
2	COVER SCANNER LOW
3	COVER POLE IN
4	COVER TOP
5	COVER REAR
6	COVER ASSY SIDE R (with 7)
7	COVER WINDOW TNR
8	COVER SIDE R LOW
9	COVER SIDE L LOW
10	COVER ASSY SIDE L
11	COVER ASSY ESS
12	PIVOT ASSY
13	HOUSING PIVOT

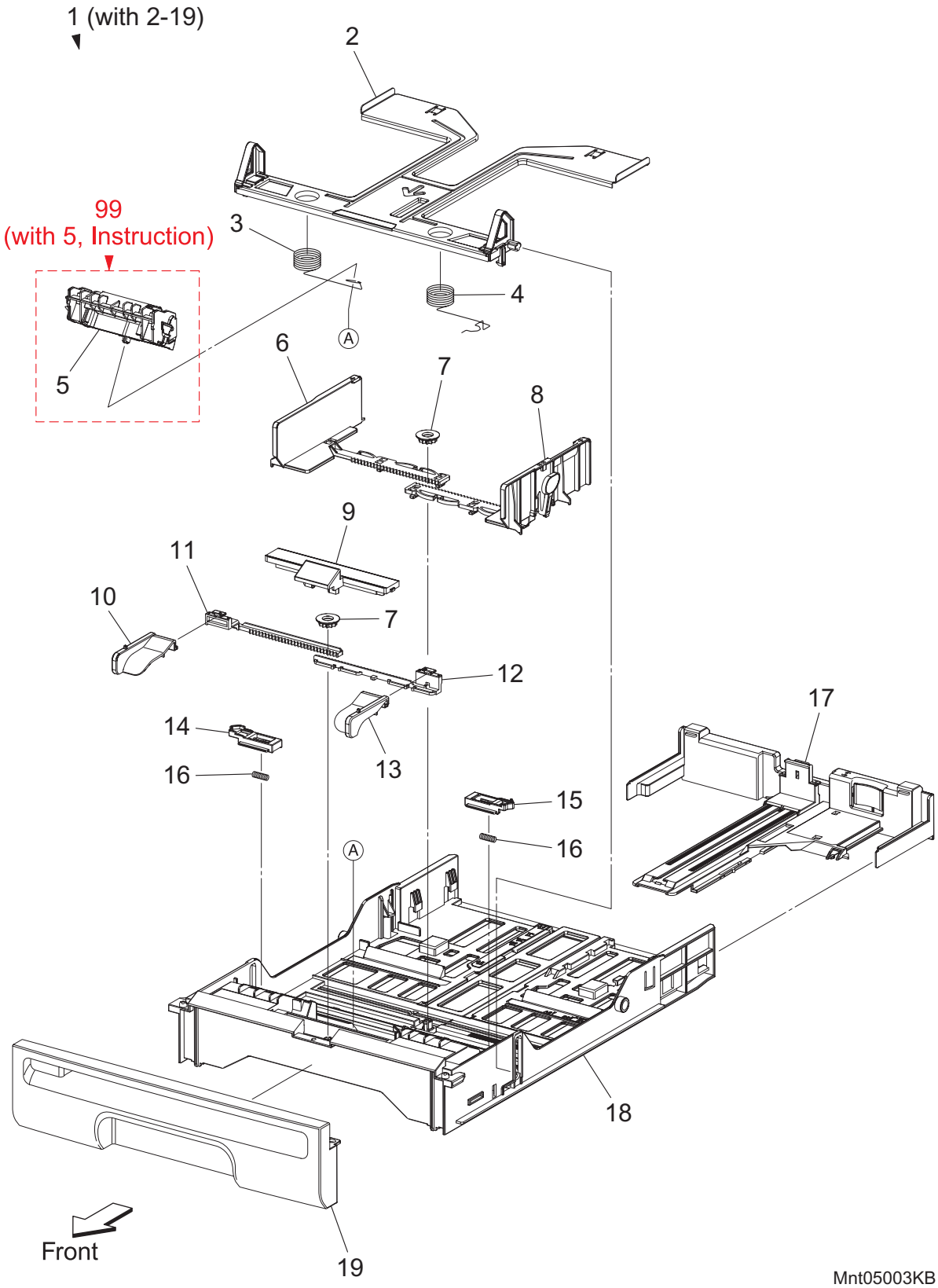
PL10.2 Cover (With Scanner Assy) (2/2) [Illustration]



PL10.2 Cover (With Scanner Assy) (2/2) [List]

Item	Parts name
1	COVER ASSY FRONT (with 2,3,5-13)
2	CONSOLE ASSY PANEL
3	COVER FRONT
4	COVER INNER FRONT
5	LATCH FRONT [Same as Sooners PL1.1.9]
6	PLATE LATCH [Same as Sooners PL1.1.10]
7	SPRING LATCH OUT [Same as Sooners PL1.1.11]
8	BUTTON LATCH
9	COVER HARNESS
10	GUIDE BELT R
11	DAMPER FRONT L AIO
12	DAMPER FRONT S [Same as Sooners PL1.1.14]
13	HARNESS A-OP-OPP (J202-J5301)
14	SHAFT PIVOT [Same as Sooners PL1.1.17]
99	KIT SHAFT PIVOT (with 14 x 2pcs) [Same as Sooners PL1.1.99]

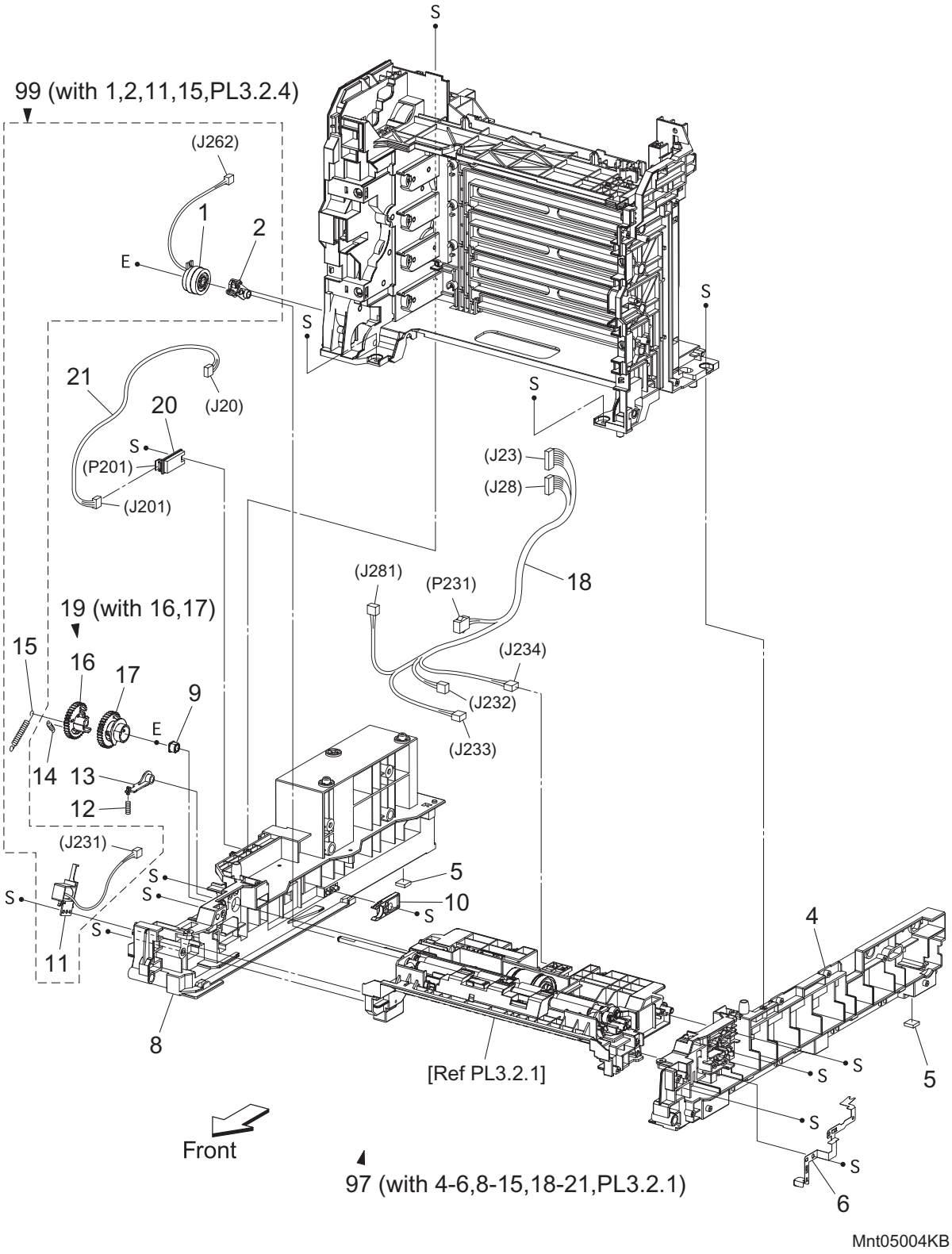
PL10.3 Paper Cassette (With Scanner Assy) [Illustration]



PL10.3 Paper Cassette (With Scanner Assy) [List]

Item	Parts name
1	CASSETTE ASSY 250 (with 2-19)
2	PLATE ASSY BOTTOM [Same as Sooners PL2.1.2]
3	SPRING N/F L [Same as Sooners PL2.1.3]
4	SPRING N/F R [Same as Sooners PL2.1.4]
5	SEPARATOR ROLLER ASSEMBLY [Same as Sooners PL2.1.5]
6	GUIDE SIDE L [Same as Sooners PL2.1.6]
7	GEAR PINION [Same as Sooners PL2.1.7]
8	GUIDE SIDE ASSY R [Same as Sooners PL2.1.8]
9	COVER SSI [Same as Sooners PL2.1.9]
10	GUIDE SIDE SSI L [Same as Sooners PL2.1.10]
11	RACK GUIDE SIDE SSI L [Same as Sooners PL2.1.11]
12	RACK GUIDE SIDE SSI R [Same as Sooners PL2.1.12]
13	GUIDE SIDE SSI R [Same as Sooners PL2.1.13]
14	LATCH BOTTOM L [Same as Sooners PL2.1.14]
15	LATCH BOTTOM R [Same as Sooners PL2.1.15]
16	SPRING LATCH B [Same as Sooners PL2.1.16]
17	TRAY ASSY EXTENSION [Same as Sooners PL2.1.17]
18	HOUSING CST 250 [Same as Sooners PL2.1.18]
19	HANDLE CST AIO
99	KIT HOLDER ASSY SEPARATOR (with 5, Instruction)

PL10.4 Paper Feeder (With Scanner Assy) [Illustration]



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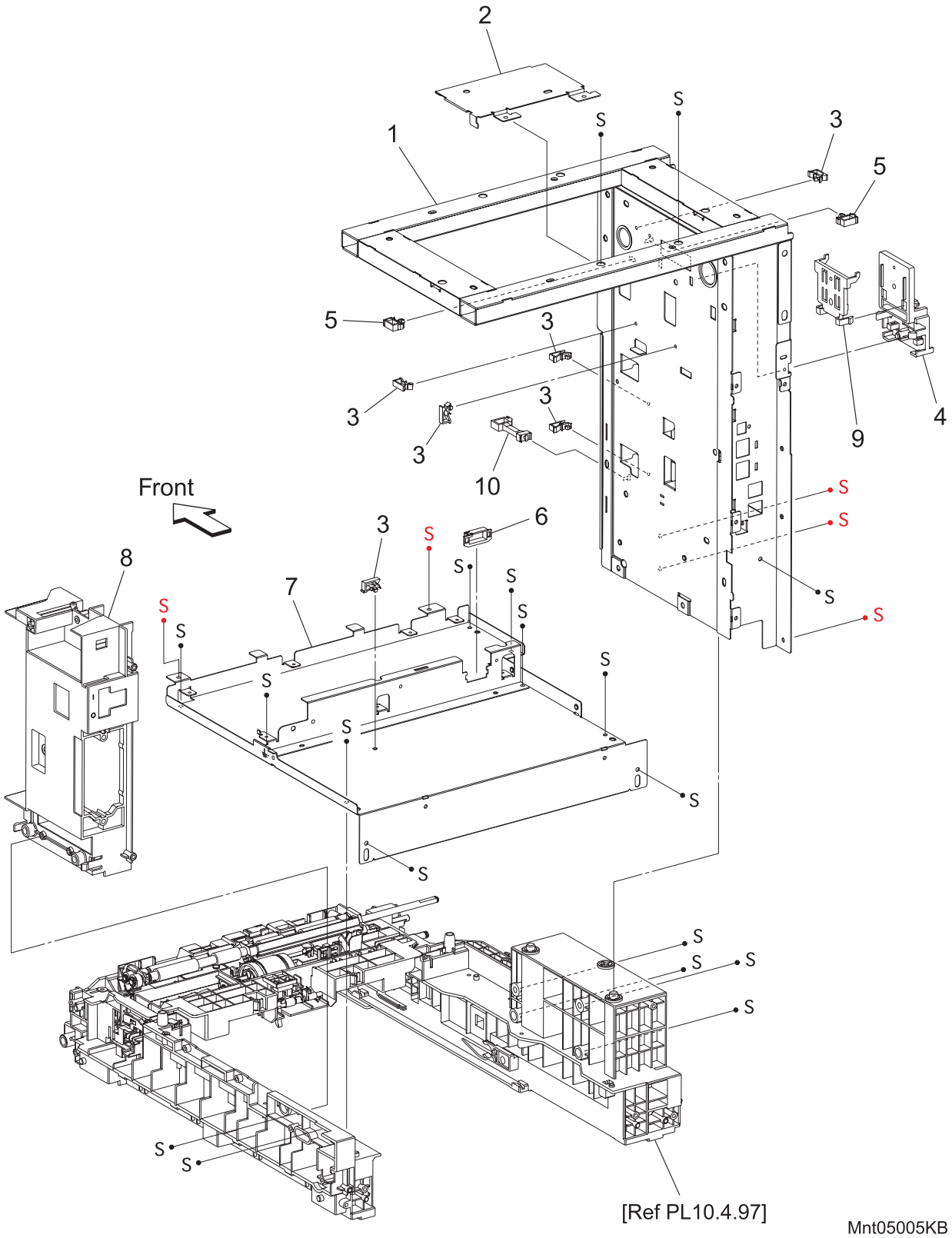
PL10.4 Paper Feeder (With Scanner Assy) [List]

Item	Parts name
1	CLUTCH ASSY DRV [Same as Sooners PL3.1.1]
2	BEARING REGI [Same as Sooners PL3.1.2]
3	- -
4	CHASSIS FDR R AIO
5	FOOT [Same as Sooners PL3.1.5]
6	PLATE EARTH PH [Same as Sooners PL3.1.6]
7	- -
8	CHASSIS FDR L AIO
9	BEARING [Same as Sooners PL3.1.9]
10	STOPPER CST [Same as Sooners PL3.1.10]
11	SOLENOID FEED MSI [Same as Sooners PL3.1.11]
12	SPRING LEVER [Same as Sooners PL3.1.12]
13	LEVER FEED [Same as Sooners PL3.1.13]
14	SPRING FEED IN [Same as Sooners PL3.1.14]
15	SPRING FEED OUT [Same as Sooners PL3.1.15]
16	GEAR FEED OUT [Same as Sooners PL3.1.16]
17	GEAR FEED IN [Same as Sooners PL3.1.17]
18	HARN ASSY L SIDE (J23,J28-P231,J232,J233,J234,J281) [Same as Sooners PL3.1.18]
19	GEAR ASSY FEED (with 16,17) [Same as Sooners PL3.1.19]
20	SENSOR HUM [Same as Sooners PL8.2.7]
21	HARN ASSY HUM (J20-J201) [Same as Sooners PL9.1.6]
97	FEEDER ASSY NV AIO (with 4-6,8-15,18-21,PL3.2.1)
98	- -
99	KIT FEED ROLL/SOL/CLUTCH (with 1,2,11,15,PL3.2.4)

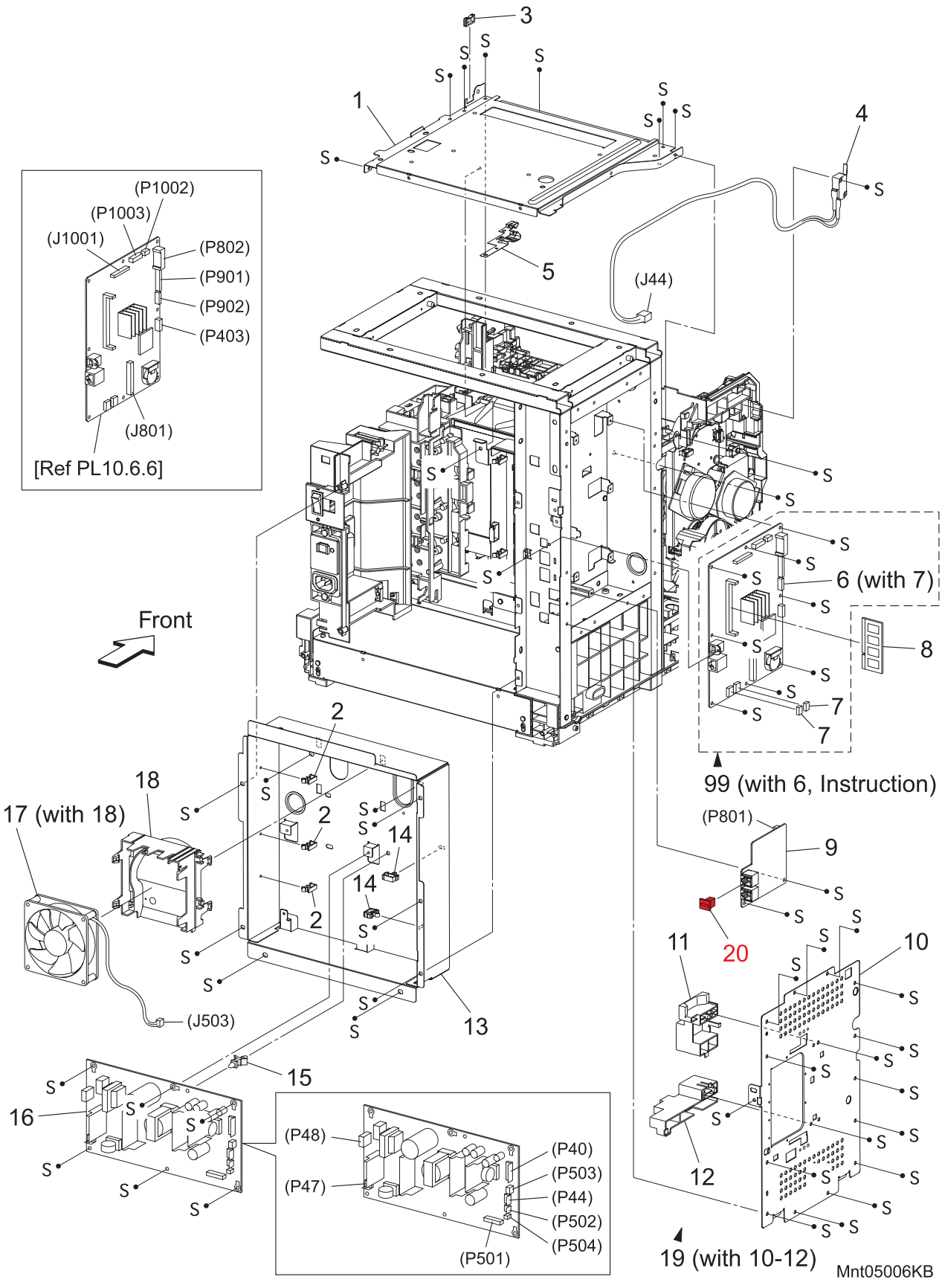
PL10.5 Frame (With Scanner Assy) [Illustration]



PL10.5 Frame (With Scanner Assy) [List]

Item	Parts name
1	FRAME ASSY AIO
2	SHIELD IIT
3	CLAMP MST-10V0
4	HOLDER FFC
5	CLAMP RLWC-1SV0
6	EDGING SADDLE
7	CHASSIS ASSY HVPS
8	CHASSIS BREAKER
9	COVER FFC
10	CLAMP LOCKING

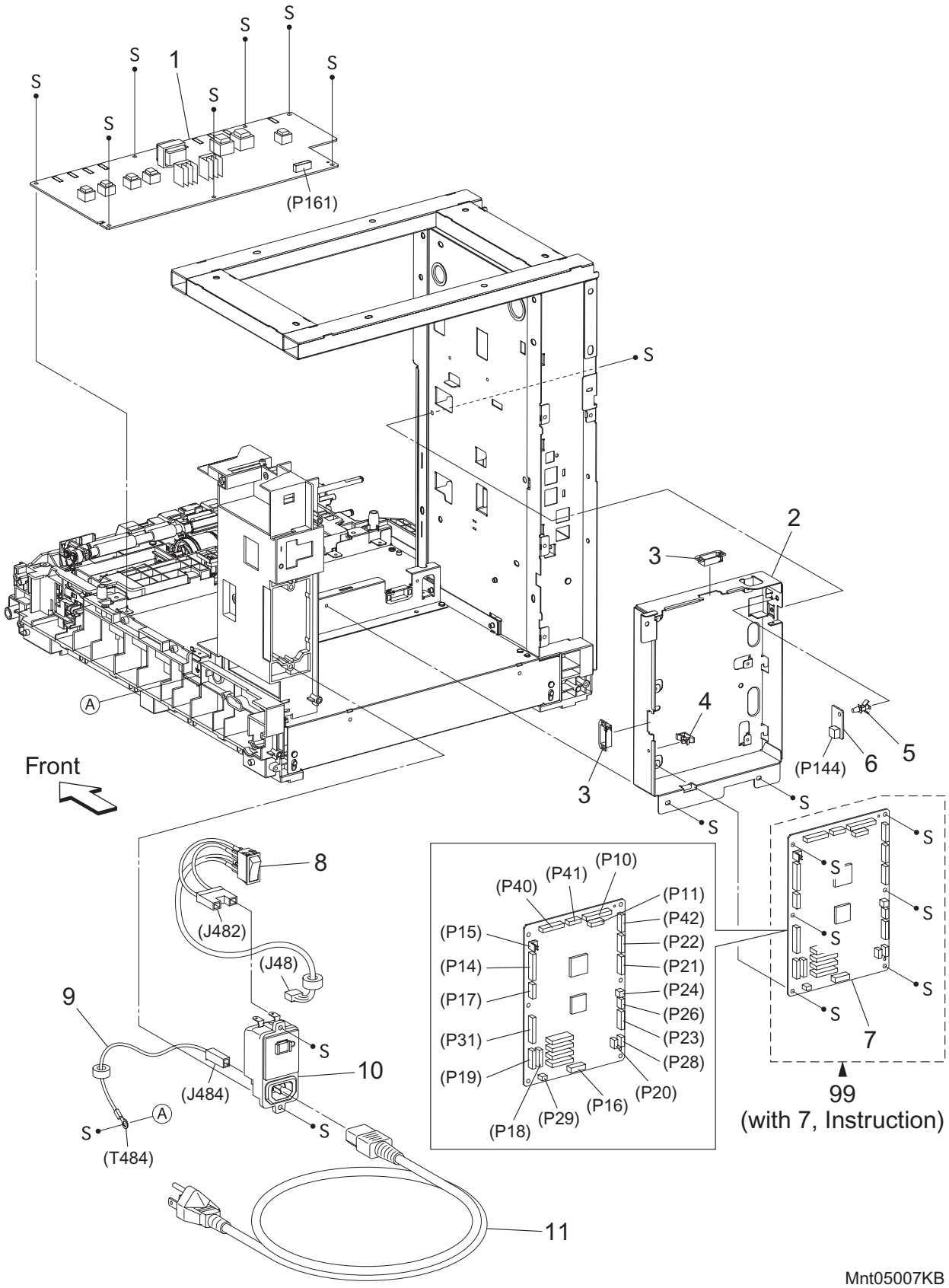
PL10.6 Electrical (With Scanner Assy) (1/2) [Illustration]



PL10.6 Electrical (With Scanner Assy) (1/2) [List]

Item	Parts name
1	PLATE ASSY DUCT
2	CLAMP MST-10V0
3	EDGE SADDLE
4	HARN ASSY INTERLOCK (AIO) (SW-J44)
5	PLATE EARTH [Same as Sooners PL8.2.4]
6	PWBA CONT AIO (with 7)
7	NVM ROM
8	MEMORY CARD (OPTION)
9	PWBA FAX
10	SHIELD ESS
11	COVER INNER UPR
12	COVER INNER BTM
13	CHASSIS LVPS
14	CLAMP
15	SUPPORT PWB
16	PWBA LVPS
17	DUCT FAN ASSY (with 18)
18	DUCT FAN
19	SHIELD ASSY ESS (with 10-12)
20	CAP PLUG RUBBER
99	KIT ESS PWBA (with 6, Instruction)

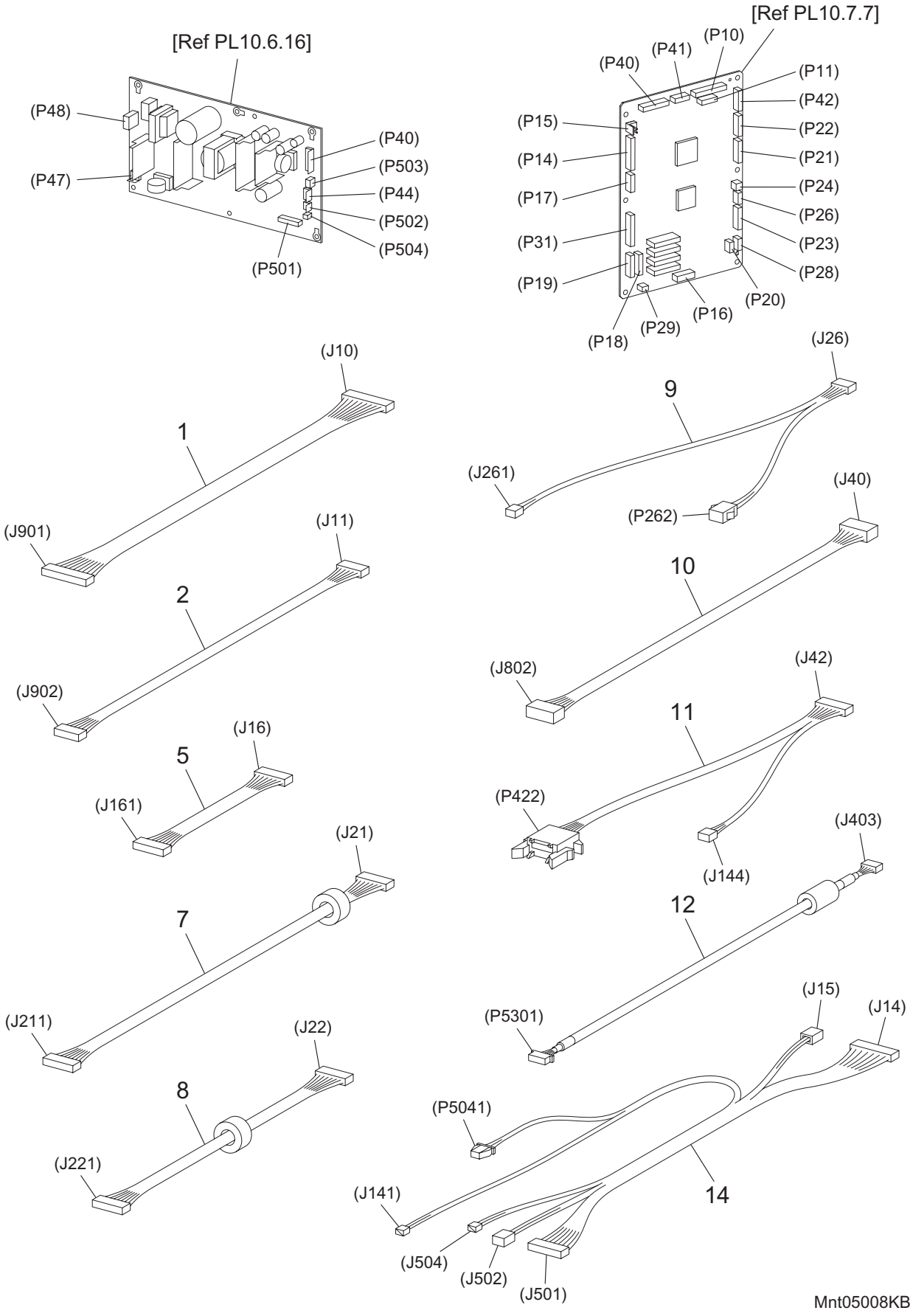
PL10.7 Electrical (With Scanner Assy) (2/2) [Illustration]



PL10.7 Electrical (With Scanner Assy) (2/2) [List]

Item	Parts name
1	PWBA HVPS
2	CHASSIS MCU
3	EDGING SADDLE
4	CLAMP MST-10V0
5	SUPPORT PWB RCBT-11S
6	PWBA EEPROM (XPRO) [Same as Sooners PL8.2.16]
7	PWBA MCU
8	HARN ASSY SW PWR (AIO) (SW-J48,J482)
9	HARN ASSY GFI GND (J484-T484) [Same as Sooners PL8.2.10]
10	BREAKER GFI [Same as Sooners PL8.2.11]
11	POWER CORD [Same as Sooners PL8.2.12]
99	KIT PWBA MCU (with 7, Instruction)

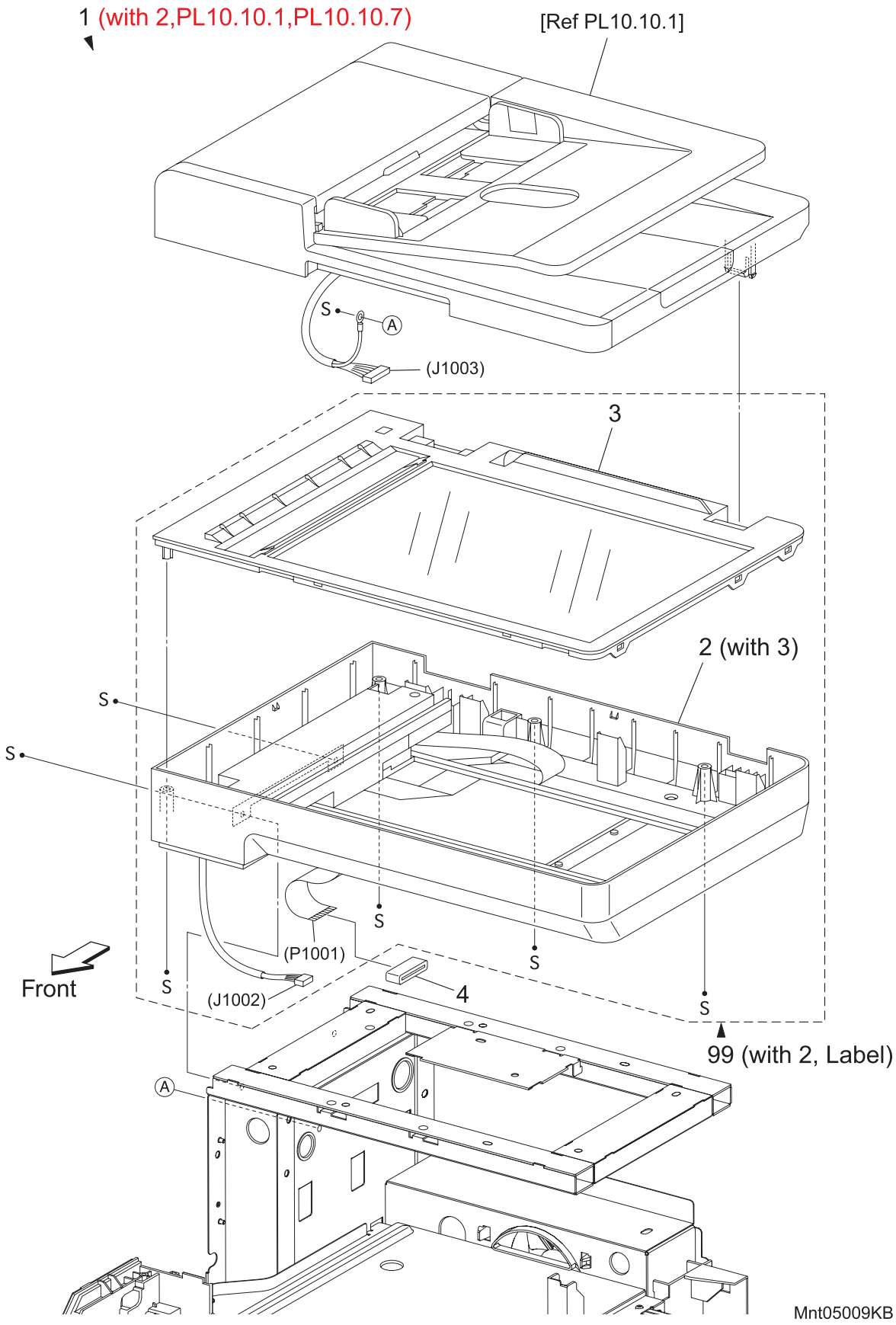
PL10.8 Harness (With Scanner Assy) [Illustration]



PL10.8 Harness (With Scanner Assy) [List]

Item	Parts name
1	HARN ASSY ESS (AIO) (J10-J901)
2	HARN ASSY ESS VIDEO (AIO) (J11-J902)
3	- -
4	- -
5	HARN ASSY HVPS (AIO) (J16-J161)
6	- -
7	HARN ASSY MAIN MOT (J21-J211) [Same as Sooners PL9.1.7]
8	HARN ASSY SUB MOT (AIO) (J22-J221)
9	HARN ASSY KSNR REGCL (J26-J261,P262) [Same as Sooners PL9.1.9]
10	HARN ASSY IIT POWER (J40-J802)
11	HARN ASSY PHD XPRO (J42-J144,P422) [Same as Sooners PL9.1.11]
12	HARNESS A-OP-ESS (J403-P5301)
13	- -
14	HARNESS ASSY LVPS MAIN (J14,J15,P5041-J141,J501,J502,J504)

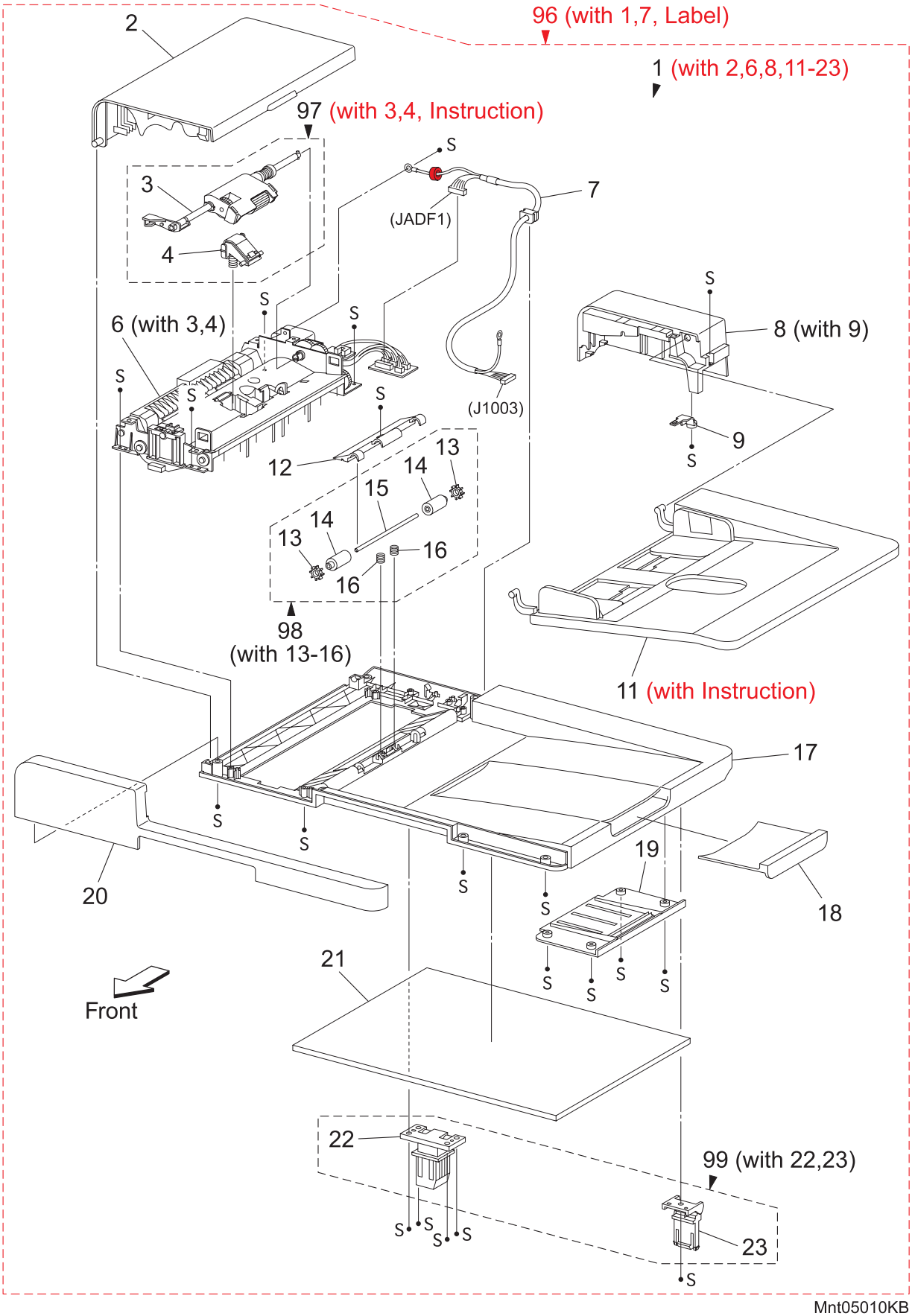
PL10.9 Scanner Assy (1/2) [Illustration]



PL10.9 Scanner Assy (1/2) [List]

Item	Parts name
1	SCANNER ASSY (with 2,PL10.10.1,PL10.10.7)
2	IIT ASSY SUB (with 3)
3	GLASS ASSY PLATEN
4	CORE FERR FFC
99	KIT IIT ASSY SUB (with 2, Label)

PL10.10 Scanner Assy (2/2) [Illustration]



PL10.10 Scanner Assy (2/2) [List]

Item	Parts name
1	ADF ASSY (with 2,6,8,11-23)
2	COVER ADF JAM
3	ROLL ASSY FEED
4	PAD ASSY SEPARATOR
5	- -
6	FEEDER ASSY ADF (with 3,4)
7	HARN ASSY ADF (J1003-JADF1)
8	COVER ADF REAR (with 9)
9	ARM INTERLOCK
10	- -
11	TRAY ASSY ADF INPUT (with Instruction)
12	COVER ROLL EXIT
13	ROLL FIN EXIT
14	ROLL PINCH EXIT
15	SHAFT ROLL EXIT
16	SPRING ROLL EXIT
17	COVER ADF BASE
18	OUTPUT TRAY EXTENSION
19	COVER TRAY EXTENSION
20	COVER ADF FRONT
21	CUSHION ADF PLATEN
22	COUNTER BALANCE L
23	COUNTER BALANCE R
96	KIT ADF ASSY (with 1,7, Label)
97	ADF FEED ROLL & SEPARATOR ROLL KIT (with 3,4, Instruction)
98	KIT ROLL PINCH EXIT (with 13-16)
99	KIT COUNTER BALANCE (with 22,23)

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1. Telephone System

1.1 Converting and Sending Voice in the Form of Electrical Signals

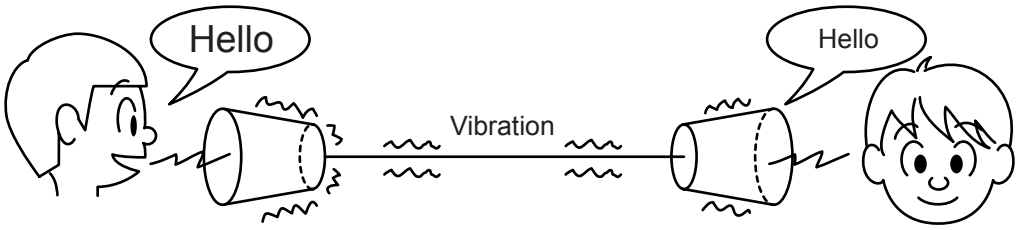
The human voice is a sound wave; in other words, air vibrations. Conversation between two people results when such vibrations travel through the air and reach each other's ears. A string telephone transmits the air vibrations generated between two people along a string stretched tight, thus allowing conversation over a distance. In this system, a paper cup at one end of the string receives the air vibrations, which are then transmitted along the string. A paper cup at the other end of the string transmits them back to the air, so that they again become again audible sound waves.

A telephone is a device that replaces the vibrations transmitted by string with electrical signals. The two paper cups correspond to microphone and speaker and the string to the telephone line. Because electrical signals travel over the telephone line at a high speed with minimal attenuation, the telephone enables conversation over great distances.

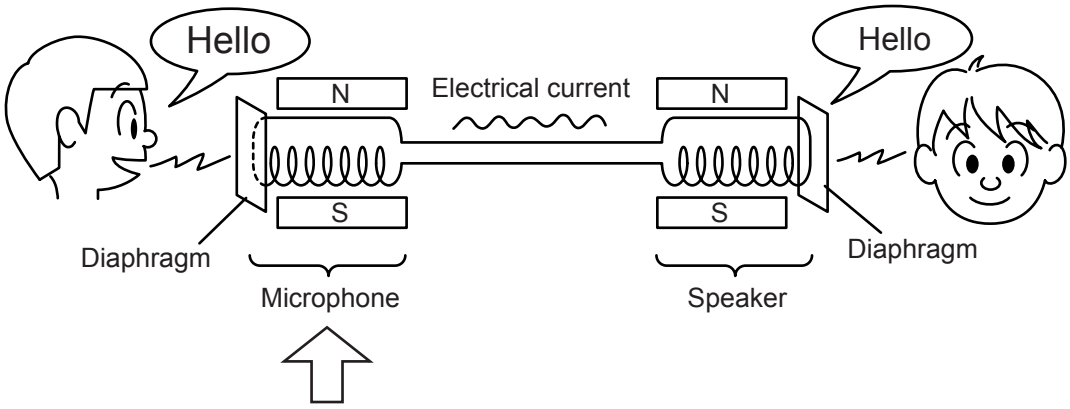
Voice is changed into electrical signals using electromagnetic induction, a process by which electrical signals are generated by vibrating a coil in a magnetic field. Both the microphone and speaker exploit this process. The microphone transduces sound into electrical signals using electromagnetic induction that occurs at a moving coil coupled to a diaphragm picking up air vibrations.

On the other hand, the speaker functions in the reverse manner, transducing electrical signals back to air vibrations. Therefore, its construction is basically the same as that of a microphone. Electrical signals passing through a coil in the magnetic field vibrate the coil, which in turn vibrate the air to reproduce the voice.

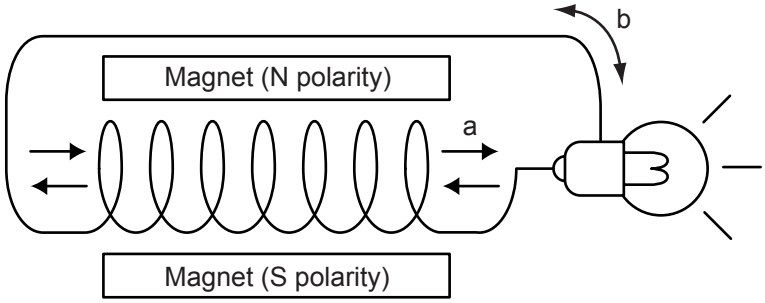
String telephone



Telephone



Electromagnetic induction



a. The coil in the magnetic field is vibrated.
II
The magnetic field around the coil is altered.
⇩
b. An electric current (alternating current) is generated in the coil.

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These electrical signals are analog signals that fluctuate in response to the volume of the voice.

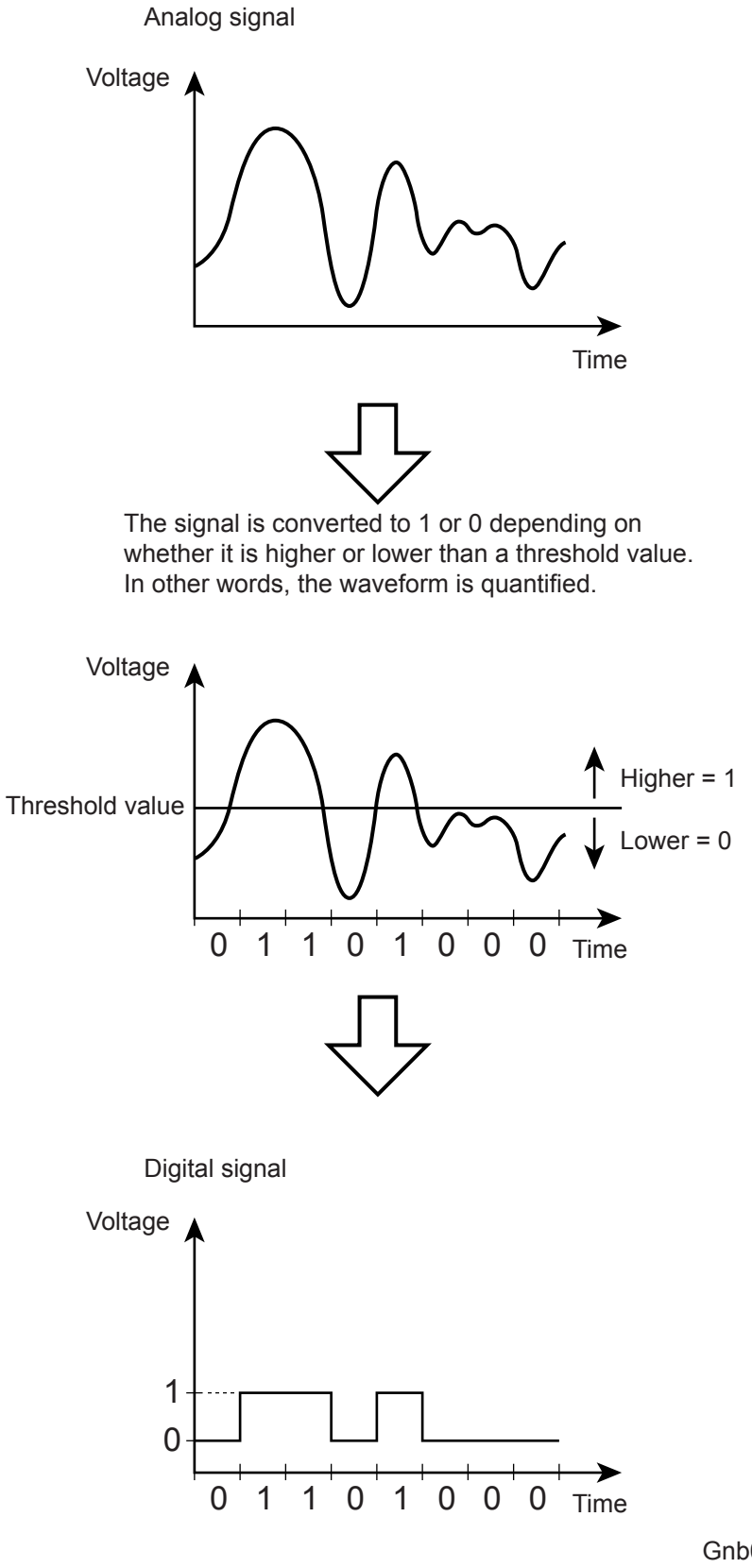
1.2 Analog and Digital Signals

An electrical signal generated by the telephone's microphone is an analog signal. The waveform of this analog signal fluctuates responsive to the voice volume. When the voice is loud, the amplitude (voltage) increases; when soft, the amplitude decreases. When the voice is high-pitched, the frequency (number of vibrations) increases; when low-pitched, the frequency decreases.

A signal whose values change in a continuous manner with time like this is called an analog signal. In contrast, a digital signal is a set of values that change with time in a discrete instead of continuous manner. In other words, an analog signal is like a hill. A digital signal is like stairs.

A digital signal is a series of values obtained by sampling a continuous analog signal at a certain required rate. For example, when sampling is by time, the rate is once a second, millisecond, etc. Because the sampling reduces the amount of data along the time axis, the converted signal is compressed and smaller in data size. Thus, once digitized, the signal information is thinned out compared to the original analog signal.

Moreover, digital signal transmission is performed by dividing a continuously changing electrical signal according to a certain rate of time, then converting each division to a value of 1 or 0, depending on whether it is greater or less than a specified threshold value. Compared to an analog signal, a digital signal offers precise data exchange because the only change that must be handled is that between 1 (high voltage) and 0 (low voltage) with respect to a standard value (the threshold value).


Analog signal
Voltage
Time
The signal is converted to 1 or 0 depending on whether it is higher or lower than a threshold value. In other words, the waveform is quantified.
Voltage
Threshold value
Higher = 1
Lower = 0
0 1 1 0 1 0 0 0
Time
Digital signal
Voltage
1
0
0 1 1 0 1 0 0 0
Time

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NOTE

The difference between analog and digital signals can be easily understood by comparing analog measuring instruments, such as clocks and scales with their needles and gradations to digital gauges that display results as a value. An analog instrument with a continuously moving needle, can, at least in theory, be read beyond the decimal point to infinitely small divisions (12.47253... g, 35.1864... g, etc.). A digital instrument, however, can only display results to the minimum necessary decimal place (12.5 g, 35.0 g, etc.).

NOTE

Conversion of an analog signal to digital signal is called AD conversion. The reverse is called DA conversion. Image data read by a FAX is a digital signal in which 0s and 1s are assigned according to whether or not there is black in the squares of a paper surface divided into a grid. FAX communications that use an analog telephone network perform DA conversion before transmitting the scanned image from the phone, and AD conversion before printing the received data.

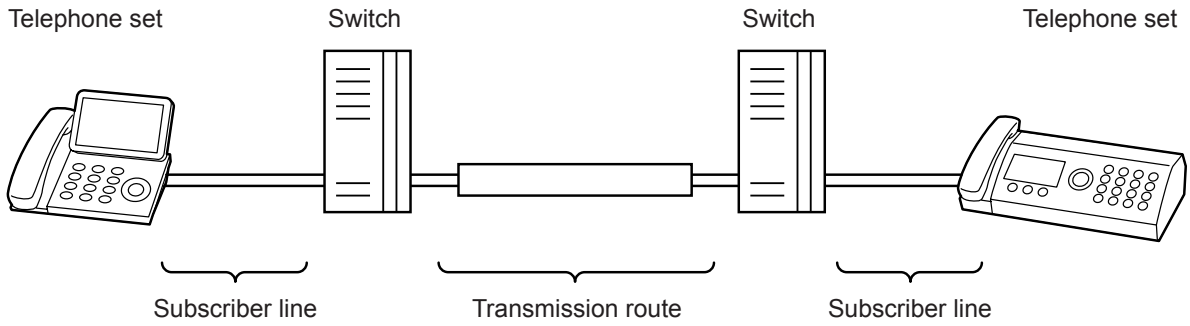
2. Telephone Call Connection Mechanism

2.1 Analog Telephone Network

To make a telephone call, the calling party and called party each must have a telephone set (telephone). These telephones must be connected by a transmission route. The transmission route includes switches located in central offices. The route itself comprises various components such as metallic cable and optical cable. The entire transmission path between the two telephones is called an analog telephone network.

An analog telephone network comprises the following four parts:

■ Analog Telephone Network Configuration



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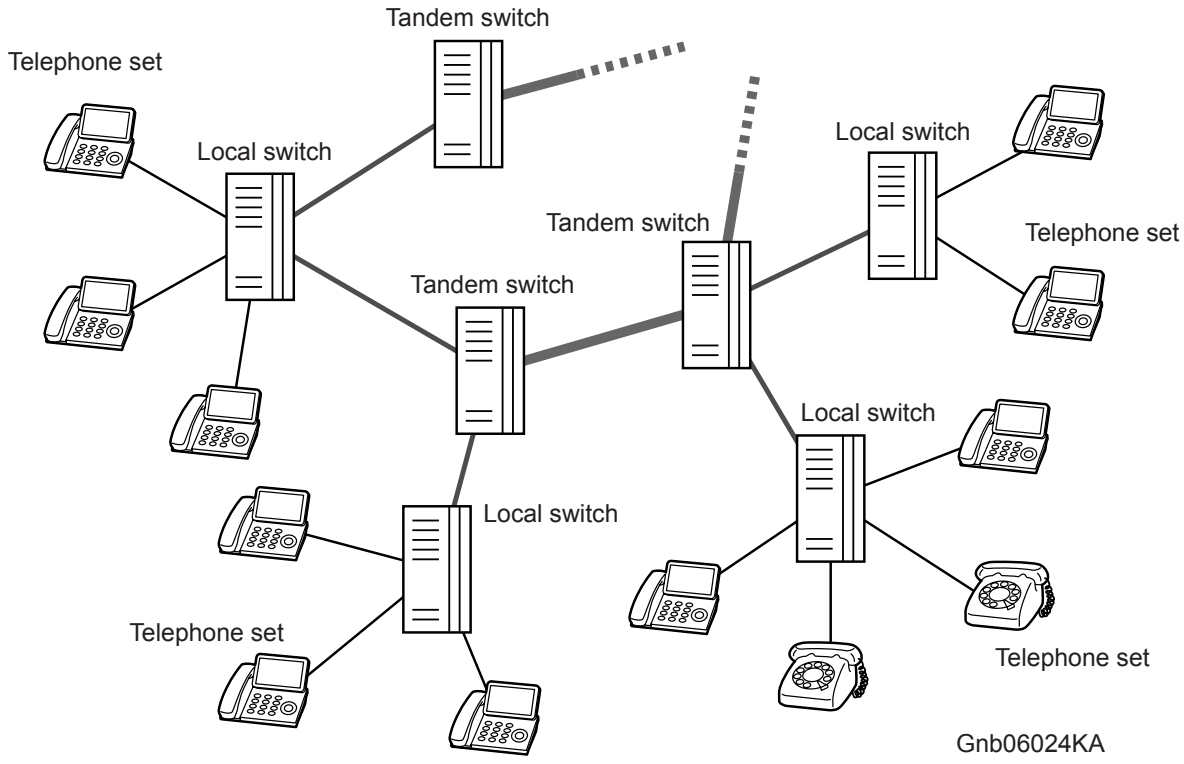
■ Switching Equipment Network



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2.2 Telephone Call Connection Mechanism

1) When the handset is lifted, the hook switch is activated and a transmission signal (400Hz/48VDC), called a dial tone (DT), is sent from the local switch. The dial tone is audible at the handset speaker, indicating that the calling party can start dialing.

2) Entering the telephone number by rotating the dial or pushing the buttons transmits the number to the local switch.

NOTE

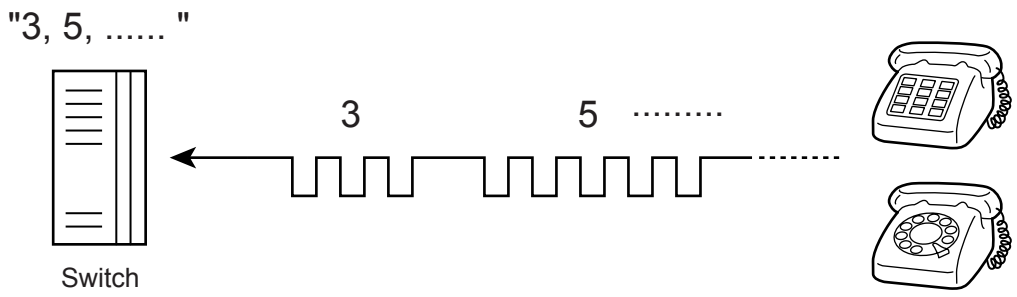
There are two types of telephone line corresponding to the two ways of transmitting the phone number. They are known as dial types. Most recent telephones can automatically distinguish the dial type.

One type is "Pulse Dialing (PD)", also called "Dial Pulse (DP)". After the rotary dial on a dial phone is rotated, the dial returns to its original position. While returning, the electric current is interrupted (dividing the signal into pulses) the number of times corresponding to the number dialed. The switch derives the number from the number of pulses. When the pulse repetition rate is ten pulses per second, it is referred to as 10PPS (Pulses Per Second), when twenty, 20PPS.

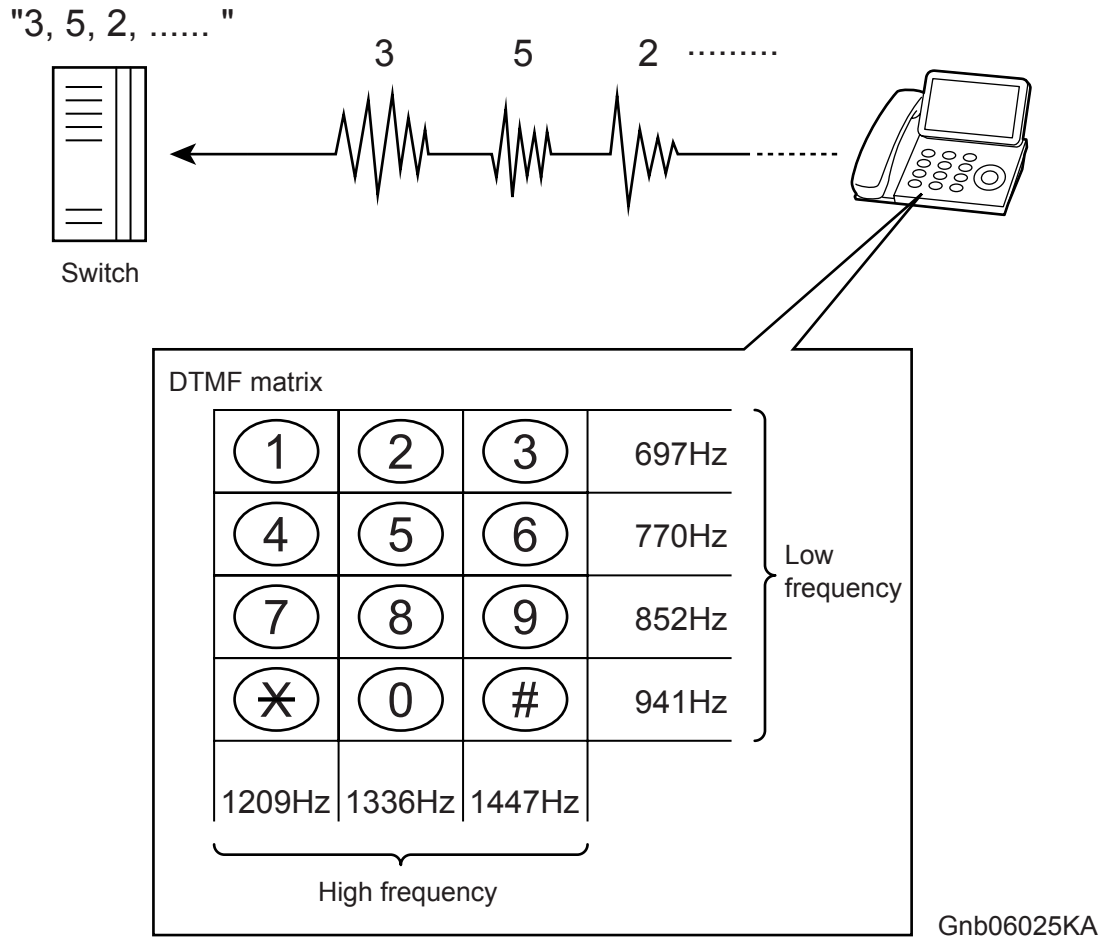
The other type is a method known as "Tone Dialing (TD)", formally called "Dual-Tone Multi-Frequency (DTMF)". Each button on a push-button phone is assigned a unique pair of frequencies (the "tone"), from which the switch derives the number.

■ Pulse Dialing & Tone Dialing

Pulse dialing



Tone dialing



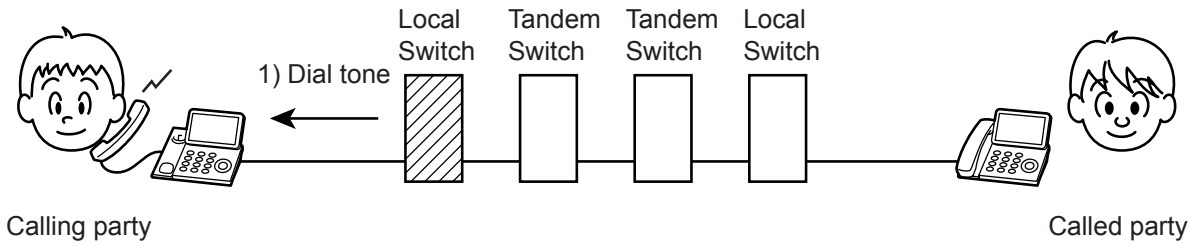
3) The switch connects lines according to the transmitted number.

4) When a connection between local switches is established, the local switch of the called party sends a ringing signal to the telephone of the called party. The telephone that receives the ringing signal emits its ringtone. At the same time, the called party's local switch sends a ring back tone (RBT) to the calling party's telephone to indicate that a connection to the called party has been established.

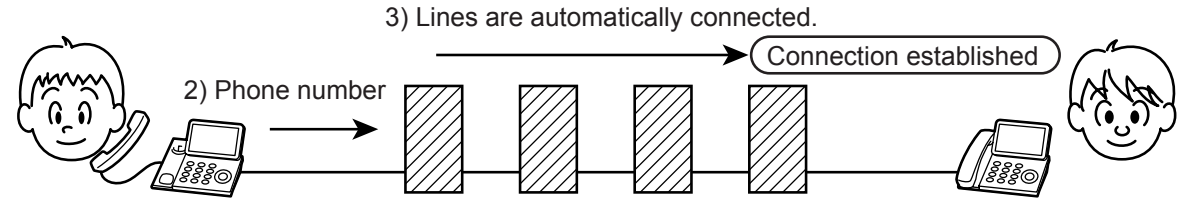
5) When the called party's handset is lifted, activating the hook switch, the local switch on the called party side receives a response signal and stops sending tones to the calling and called parties. This is when a communications path is established between the both parties.

■ Connecting Out-of-Town Calls

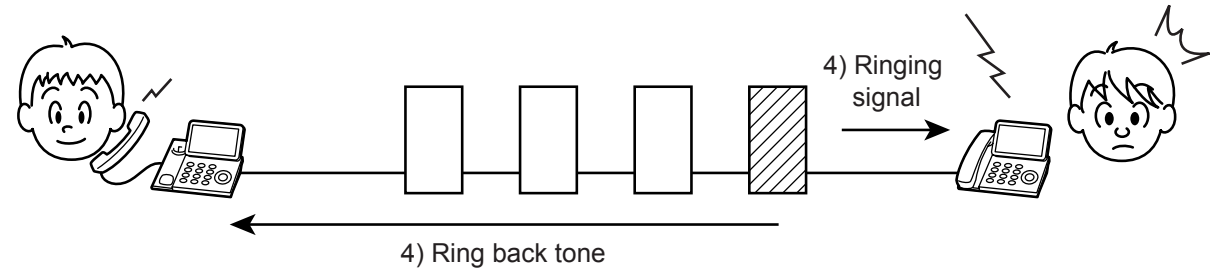
a. Lift the handset



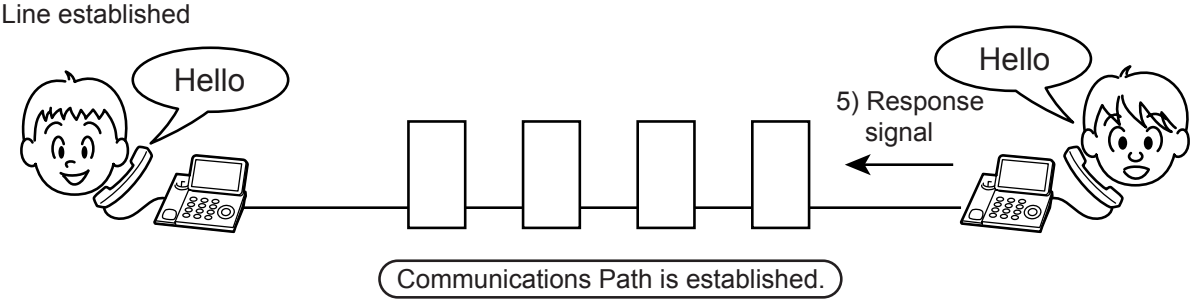
b. Dial the number



c. Calling



d. Line established



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3. Terminology

■ Line Types

- PSTN (Public Switched Telephone Network): Analog telephone network.
- If there is no switch on site, set the line type to PSTN.
- PBX (Private Branch Exchange): On-site switch that connects multiple analog telephones to a single line to establish an in-house phone system.
- If there is a switch on site, set the line type to PBX.

■ Dial Types

- Tone (Push) Dial/Pulse Dial (10PPS)/Pulse Dial (20PPS): See 2.2 Telephone Call Connection Mechanism

■ Other

- Branch Connection: To connect multiple telephones to a single line in parallel. Telephones and FAXes may not function properly in this configuration.

4. FAX System (Overview)

A FAX (abbreviation of facsimile) is a device that sends and receives image data using either an analog or a digital telephone line. The following describes the analog line system (For G3, see 6. FAX Standards).

The three basic units of a FAX are the scanner (for reading the image), the control circuit, and the printer.

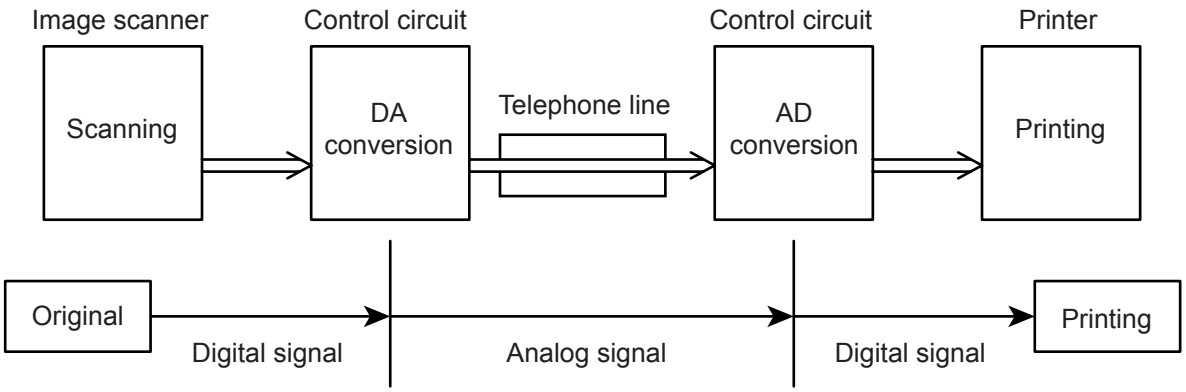
The scanner splits the image into a fine grid, then reads the brightness (white/black) of each cell. This operation is called scanning. The white/black information is converted to a digital signal: bright cells become 1, dark cells 0.

The digital signal from a scanned image is subjected to DA conversion (modulation) by the control circuit to enable transmission over an analog telephone line. After conversion, the data is sent as an analog signal. The sound audible during transmission is image data that has become an analog signal, that is, an audio signal.

The analog signal arriving over the telephone line is then subjected to AD conversion (demodulation) by the control circuit of the receiving FAX machine, and restored to a digital signal.

The black/white information obtained from the AD conversion is sent to the printer, where black cells are reproduced on the paper at the positions where they were on the original.

■ FAX System (Overview)



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5. Unit Mechanisms

■ Scanner

The scanner consists of a lamp (fluorescent lamp, etc.) that illuminates the original document with uniform light and charged coupled device (CCD) that reads the light reflected from the image.

A CCD is a light-receiving element that produces an electrical signal in response to light. In the case of a FAX, a number of CCDs (e.g. 2048) are arranged in a line.

The white areas of the original document reflect the light from the lamp. The black areas reflect no light. The CCDs read the light reflected from the original, outputting sequentially to the control circuit which areas are white and which black as binary data (1/0 digital data: 1 bit).

NOTE

To scan the original, the CCD device must be shifted a distance of one line after each line is scanned. When the original is scanned on the platen glass (as for a flatbed scanner), the CCD unit is moved with respect to the original. In the case of a FAX equipped with the ADF (Automatic Document Feeder), scanning via the ADF is performed by moving the original with the CCD fixed at one position. This is known as constant velocity transport (CVT).

NOTE

During scanning, the finer the grid into which the original is divided, the greater the scanning precision of the original image. For a G3 FAX (normal mode: G3 Normal), scanning is performed at the resolution of 8 divisions per millimeter (200 dpi) in the horizontal direction and 3.85 divisions per millimeter in the vertical direction. This means that the 200 dpi in-line CCD unit is shifted approximately four times per millimeter in the vertical direction. For an A4 original, the data amounts to approximately two million pixels. In the high-quality mode (G3 Fine), scanning resolution is 8 divisions per millimeter in the horizontal direction and 7.7 divisions per millimeter in the vertical direction, where the data amounts to approximately four million pixels. As resolution increases, the amount of data also increases, lengthening the transmission time.

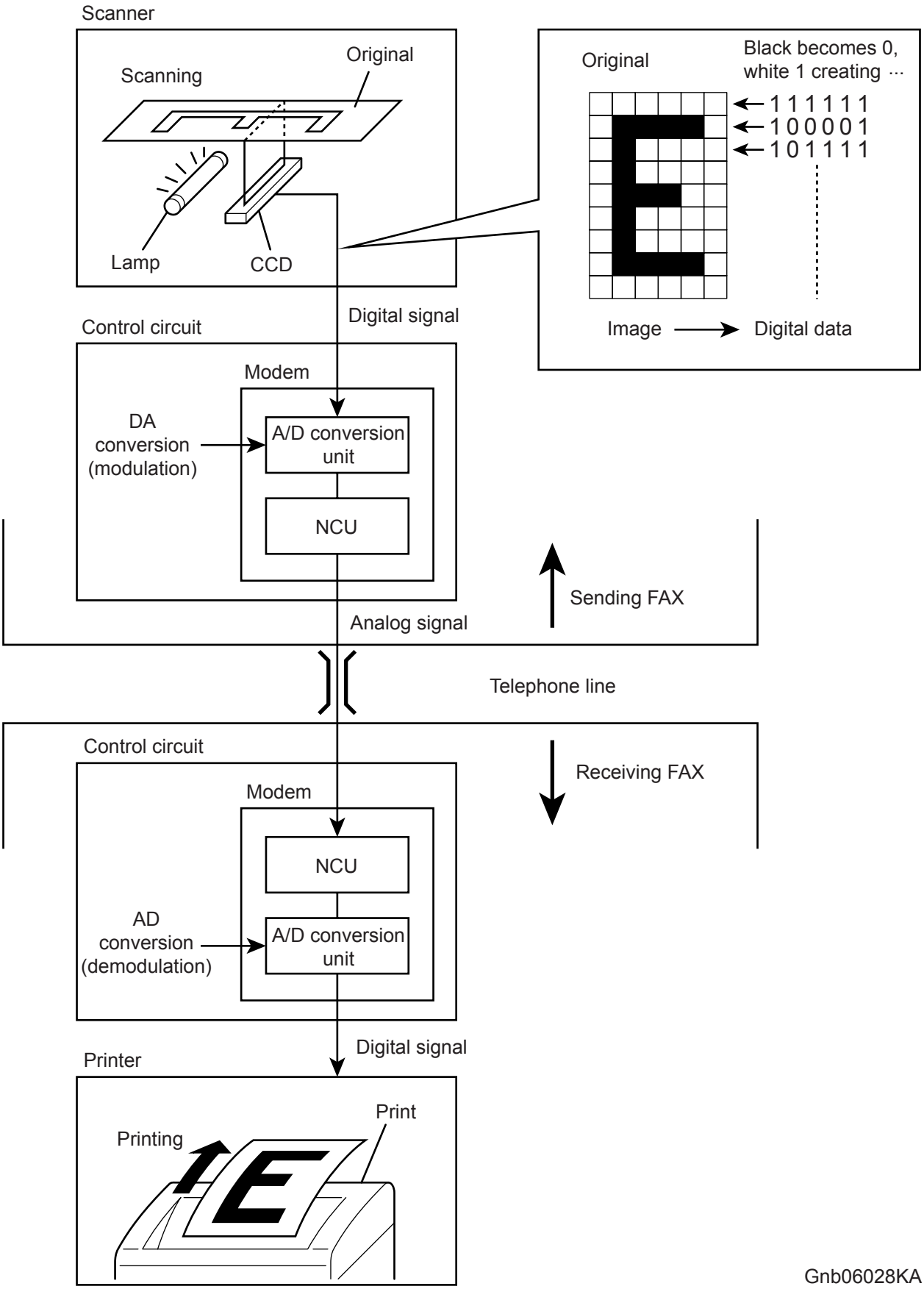
■ Control Circuit

The control circuit executes scanning of image data by controlling the image scanner. A line of CCDs scans the original image one line at a time. When scanning of one horizontal line is completed, the next line below is scanned. As this continues, the original is scanned from end to end one line at a time and converted to digital data as black-and-white information.

Because this image data is a set of digital signals, it cannot be transmitted using an analog telephone line. It must be subjected to DA conversion (modulation). On the other hand, the receiving FAX machine must perform AD conversion to restore the incoming digital data to analog data.

DA conversion, analog signal transmission, analog signal reception, and AD conversion are all performed by a modem (modulator/demodulator) in the control circuit. A modem consists of a network control unit (NCU) for connecting to the telephone line and an A/D conversion unit for performing DA and AD conversions.

■ FAX System (Detail)



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NOTE

After the telephone number is entered, the NCU automatically performs steps 1 and 2 of the line connection procedure described in 2.2 Telephone Call Connection Mechanism.

If on the receiving end, step 6 is automatically performed to answer.

The following is the line connection procedure between two FAXes based on the steps 1 to 5 of 2.2 Telephone Call Connection Mechanism. At the receiving FAX, step 6 is also automatically performed.

1) When an AT command (a modem control command) is sent from the control circuit to the modem, the hook switch is activated, and a state is obtained that is identical to that when the handset of a telephone is lifted. A dial tone (400Hz/48VDC) is sent from the local switch. The modem's speaker emits the dial tone as an audible sound.

2) After image scanning, the telephone number (a previously stored number, number entered by pressing phone buttons, etc.) is automatically dialed and transmitted to the local switch.

3) Steps 3, 4, and 5 for establishing a connection via the switches are identical to those for telephone.

6) The receiving party's FAX automatically answers when it receives the call signal, and the hook switch is activated. The local switch on the receiving party side receives a response signal and stops sending tones to the sending and receiving parties, thereby establishing a communications path between the both parties.

   In the case of a telephone call, only voice conversion between the two parties follows. For FAX, preparation for delivery of image data is required that includes the following types of exchanges:

   - The sending FAX indicates that the transmission is a FAX transmission.
   - The receiving FAX indicates that it is ready to receive and also its communications capacity.
   - The sending FAX then sends data in accordance with the receiving FAX's communications capacity.

   Once mutual preparation is completed, image data sending and receiving is started. Image data is modulated into an analog signal by the A/D converter at the sending FAX, then sent from its NCU. Image data received by the NCU of the receiving FAX is demodulated into a digital signal by its A/D converter and then sent to the control circuit. When image data reception is completed, the FAX automatically disconnects the line (hook is OFF).

   In summary, the NCU automatically executes a series of such operations from hook switch ON to hook switch OFF.

NOTE

The control circuit also retains other important functions such as data compression and memory. With data compression, any part of the scanned image data that consists of continuous white or black pixels is encoded into a single element, thus compressing the volume of data.
Memory temporarily stores data during transmission and reception.

■ Printer

The printer prints image data from the control circuit onto the surface of paper. The principle is the same as that of an ordinary printer in that black is applied to specified locations on the paper.

6. FAX Standards (ITU-T Recommendations)

International FAX standards (ITU-T recommendations) include G1 to G4. G1 to G3 use analog telephone networks. G4 uses a digital telephone network (ISDN). G3 is the standard currently in greatest use. FAXes conforming to Super G3, a recently added standard, are equipped with a fast 33.6kps modem and reduce transmission times to about half those of G3 FAXes.

Standard	Year Issued	Minimum Transmission Time for Single-Page A4 Document	Maximum Resolution	Maximum Transmission Speed	Features
Group 1 (G1)	1968	Approx. 6 min.	100 x 100dpi	- (Analog)	First standard. Analog transmission. No band compression technology
Group 2 (G2)	1976	Approx. 3 min.	100 x 100dpi	- (Analog)	Analog transmission. Band compression technology adopted.
Group 3 (G3)	1980	Approx. 1 min (14.4kbps) Approx. 3 sec (33.6kbps)	600 x 600dpi	14.4kbps (Super G3: 33.6kbps)	Connection to analog line using FAX modem. Image data in digital format. Data compression. Most common standard in use.
Group 4 (G4)	1988	Approx. 3 sec.	400 x 400dpi	64kbps (Using ISDN)	Digital transmission. Supported by various digital transmission services. Halftone supported.

7. Fault Isolation Procedure for FAX

Because a FAX is composed of multiple blocks, pinpointing a fault is problematic.
This section describes a simple fault isolation procedure that is based on the contents of 4. FAX System (Overview).

7.1 Fault Occurs

First, try using the copy function. If the copy function's printing results are correct, the probability of a fault in the FAX itself is low. The fault is likely in the telephone line or receiving FAX. If the fault is in the telephone line, first retry sending. If there is no improvement, contact the telephone company. If the copy function's printing results are incorrect, it can be determined if the fault is in the scanner or printer by operating each unit separately via a computer.

7.2 Send Fault

1) Problem with printing quality at receiving FAX, such as corrupt image, lines in image, top/bottom cut off.

a) If copy function is normal

Cause: Degraded telephone line connection caused by noise, etc.; or a fault in receiving FAX's printer.

Corrective Action:

Determine whether fault is in telephone line or at receiving FAX by trying copy function at receiving FAX.

NOTE

If the telephone line condition is degraded, white horizontal lines, missing rows, and/or cut-off top/bottom may occur.

NOTE

Branch connections or incoming call (call waiting) may also cause image corruption.

b) If copy function is faulty

Cause: Dirt or fault in scanner.

Corrective Action:

Clean platen glass or repair scanner. If the original is being sent from the ADF, try executing a copy with the original placed on the platen glass. If this solves the problem, the fault is in the ADF.

2) Cannot dial

Cause: Incorrect connection. Incorrect setup of dial type and/or line type.

Corrective Action:

Correct the connection. Reset the dial type and/or line type to correct settings.

NOTE **If the telephone line condition is degraded, white horizontal lines, missing rows, and/or cut-off top/bottom may occur.**

NOTE **Branch connections or incoming call (call waiting) may also cause image corruption.**

7.3 Receive Fault

1) Problem with printing quality, such as corrupt image, lines in image, top/bottom cut off.

a) If copy function is normal

Cause: Degraded telephone line connection caused by noise, etc.; or a fault in sending FAX's scanner.

Corrective Action:

Determine whether fault is in telephone line or at sending FAX by trying copy function at receiving FAX.

NOTE **If the telephone line condition is degraded, white horizontal lines, missing rows, and/or cut-off top/bottom may occur.**

NOTE **Branch connections or an incoming call (call waiting) may also cause image corruption.**

b) If copy function is faulty

Cause: Dirt or fault in printer.

Corrective Action:

Clean all parts of printer or repair printer.

2) Does not emit response signal

Cause: Incorrect connection. Incorrect setup of dial type, line type, and/or reception mode.

Corrective Action:

Correct the connection. Reset the dial type, line type, and/or receive mode to correct settings.

NOTE **If a call is made to the FAX from a telephone, and the FAX does not emit its ringing sound, a telephone line fault is highly probable.**

8. Other Problems

■ Branch Connection (Parallel Connection)

During FAX reception, if the handset of another telephone on a branch connection is lifted, the received image may be corrupted or a transmission error may occur. Branch connection may also interfere with caller identification, call waiting, the receiving operation of connected telephones.

■ Call Waiting

If a call comes in during FAX sending/reception, as with branch connections the image may be corrupted.

■ DSL (Digital Subscriber Line)

DSL, a high-speed digital transmission method using existing telephone lines, has several types. These include ADSL (Asymmetric Digital Subscriber Line) with differing upstream and downstream transmission speeds, SDSL (Symmetric Digital Subscriber Line) with symmetrical upstream and downstream transmission speeds, and VDSL (Very high bit rate Digital Subscriber Line) which features higher speed. However, because the line is used for both voice and data transmission, various problems may occur, such as noise during spoken conversation, low sound volume, and mis-dialing. Replacing the splitter may improve the situation.

■ Noise

If electronic equipment (television, computer, microwave, etc.) or devices equipped with motors are located near a FAX, noise from them may degrade the line condition.

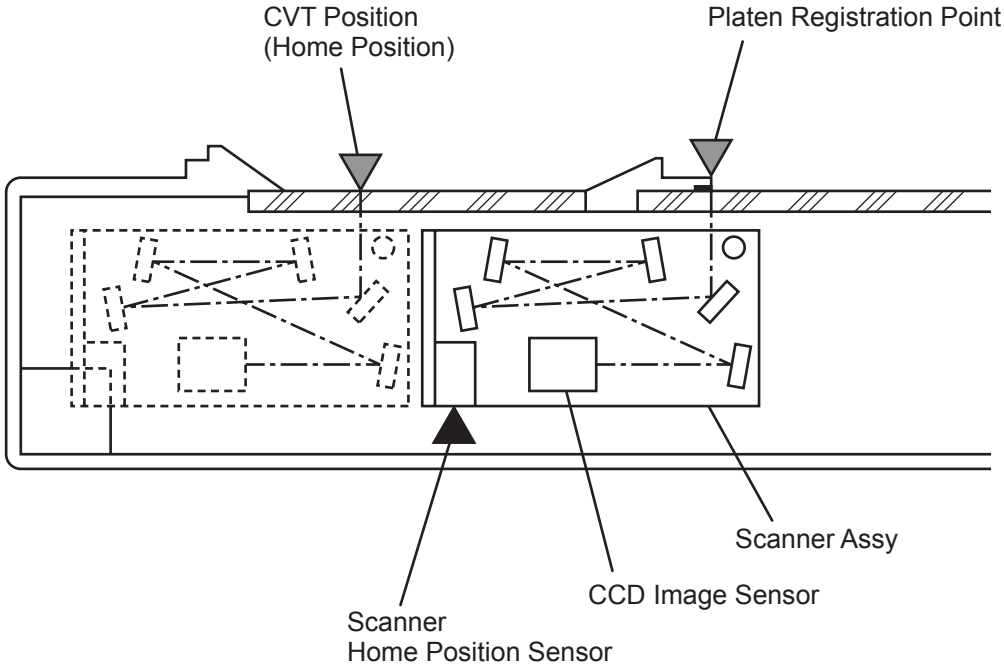
Also, a telephone line, acting as an antenna, may absorb electric waves generated from wireless or broadcasting equipment.

Because FAX data is audio data, the line quality affects the quality/stability of image data as well as that of conversation.

9. Document Scanning

The document scanning section of this machine consists of an Image Input Terminal (ITT), a scanner that reads a single-sheet document placed on the platen glass; and an Auto Document Feeder (ADF) that conveys the pages of a multiple-sheet document.

The optical image reflected from the document reaches the CCD image sensor via the light path shown in the figure below.



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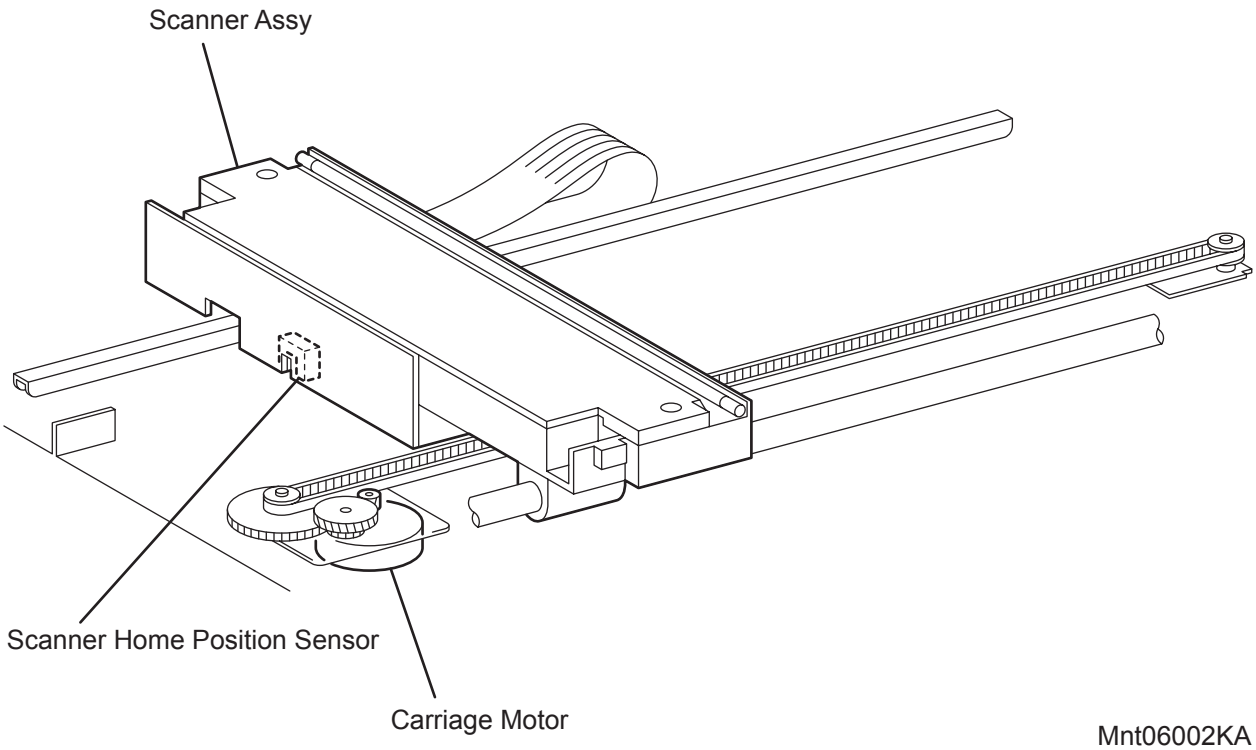
9.1 Document Scanning at Platen (IIT)

Shown below is an operational overview of document scanning at the platen.



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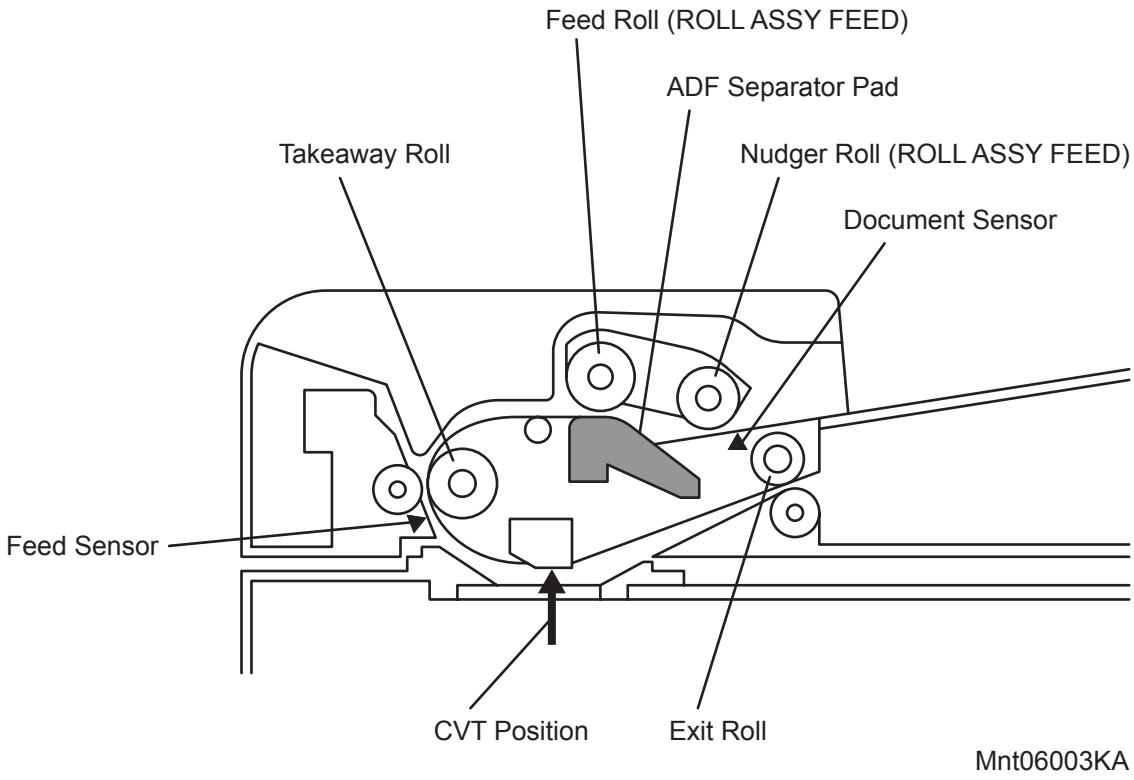
The Scanner ASSY travels to read the document.

The following are installed on the Scanner ASSY: Exposure Lamp that illuminates light onto the document, CCD image sensor that reads light reflected from the document, and the lenses and mirrors comprising the light path for the optical image.

9.2 Document Scanning at ADF

The following describes the document feed path from the ADF.



A document sheet set in the document tray is conveyed through the Nudger Roll, Feed Roll and Takeaway Roll. The document image is scanned at the CVT position, and the document sheet is ejected via the Exit Roll.

9.2.1 Setting a Document

When a document is set in the document tray and pushed into the tray until its lead edge stops, an actuator moves to place the ADF document sensor in the unshielded (unblocked) state, indicating detection of the document.

9.2.2 Preparation for Feed

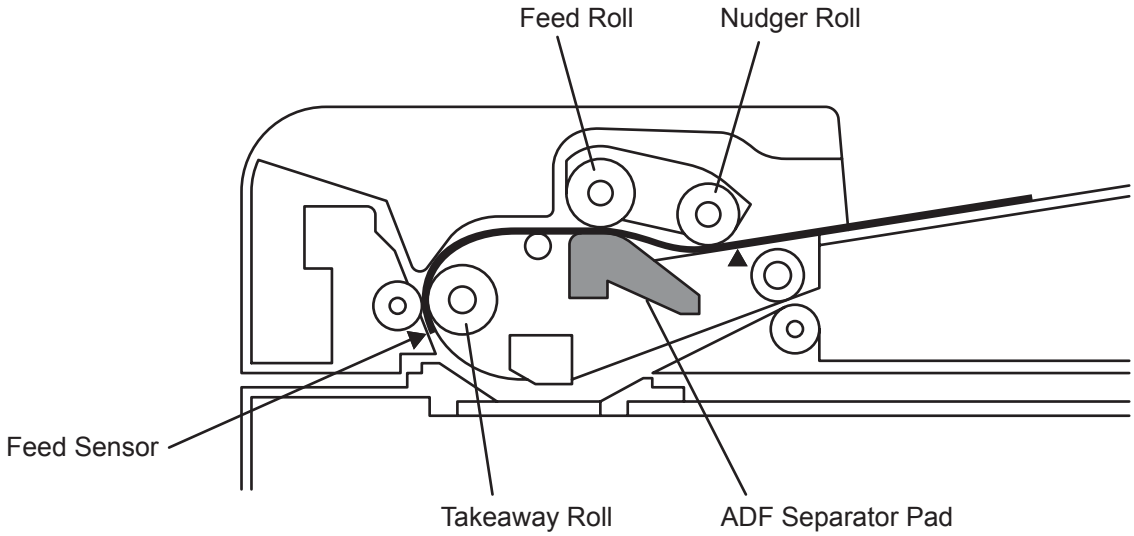
Pressing the Start button with the document set in the tray starts feeding of the document.

First, the Nudger Roll moves down and presses onto the document in the document tray to enable document feed. The Nudger Roll moves down with normal rotation of the ADF Motor. Upon completion of document feed, the ADF Motor reverses rotation to return the Nudger Roll to its normal position.

9.2.3 Prefeed

In the prefeed step, a document sheet is fed from the Feed Roll to the Takeaway Roll.

When the Nudger Roll is pressed down to the document sheet surface, (see "9.2.2 Preparation for Feed"), the ADF Motor rotates to drive the Nudger Roll and Feed Roll. The Nudger Roll feeds the top document sheet in the document tray to the Feed Roll. The Feed Roll, nipped by the ADF Separator Pad, feeds document sheets (coming from the Nudger Roll) one by one. When the Feed Sensor detects a document sheet, the machine recognizes that feed of the first document sheet is complete.



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9.2.4 Scan Control

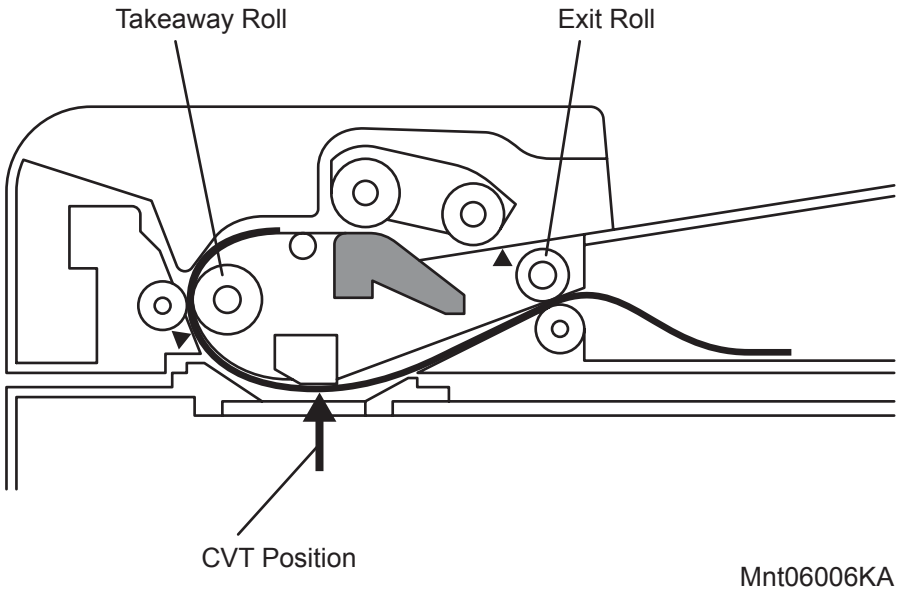
Scanning of the image illuminated with the Exposure Lamp of the Scanner ASSY is controlled by changing the feed speed according to the copy magnification.

When the document sheet passes the CVT position at the specified speed, the images on the document sheet are exposed by scanning with the Exposure Lamp of the Scanner ASSY, and read by the CCD Image Sensor.

9.2.5 Simplex Document

For simplex document sheets, feed is performed in the following sequence:

1) The document sheet is fed to the Takeaway Roll. (See "9.2.3 Prefeed.")
2) The document sheet is fed at the feed speed corresponding to the selected magnification, and the image on it is scanned with the Exposure Lamp at the CVT position. (See "9.2.4 Scan Control.")
3) As the image is scanned, the document sheet is fed and ejected by the Exit Roll that is driven by the ADF Motor.



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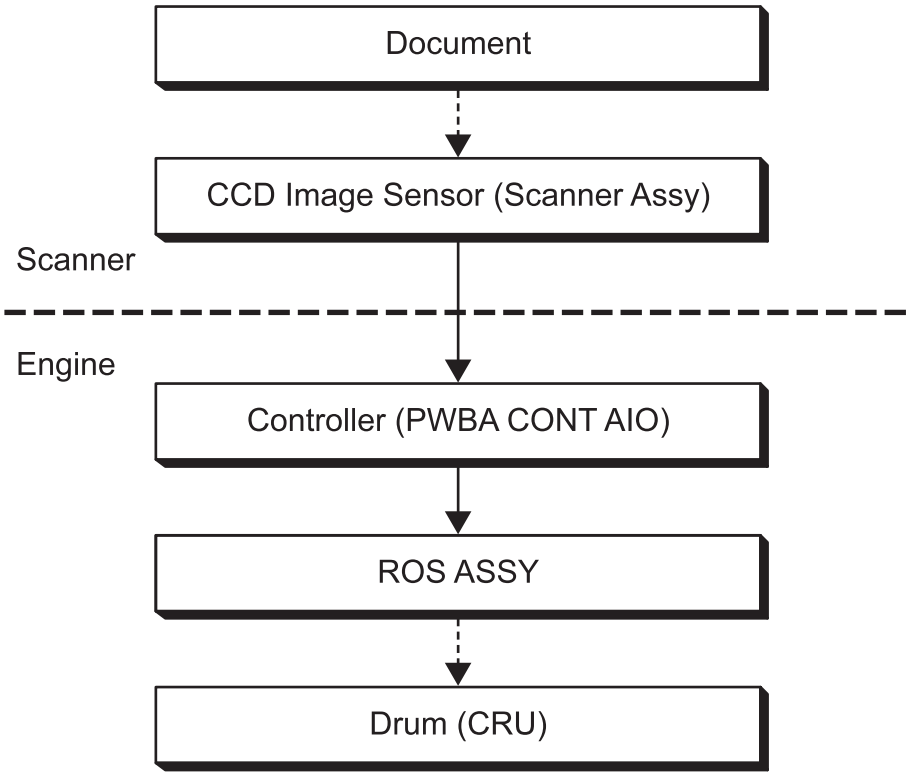
Blank Page

10. Image Data Flow

The image data from the document set on the IIT or ADF goes through the following components before it is printed at the Engine section.



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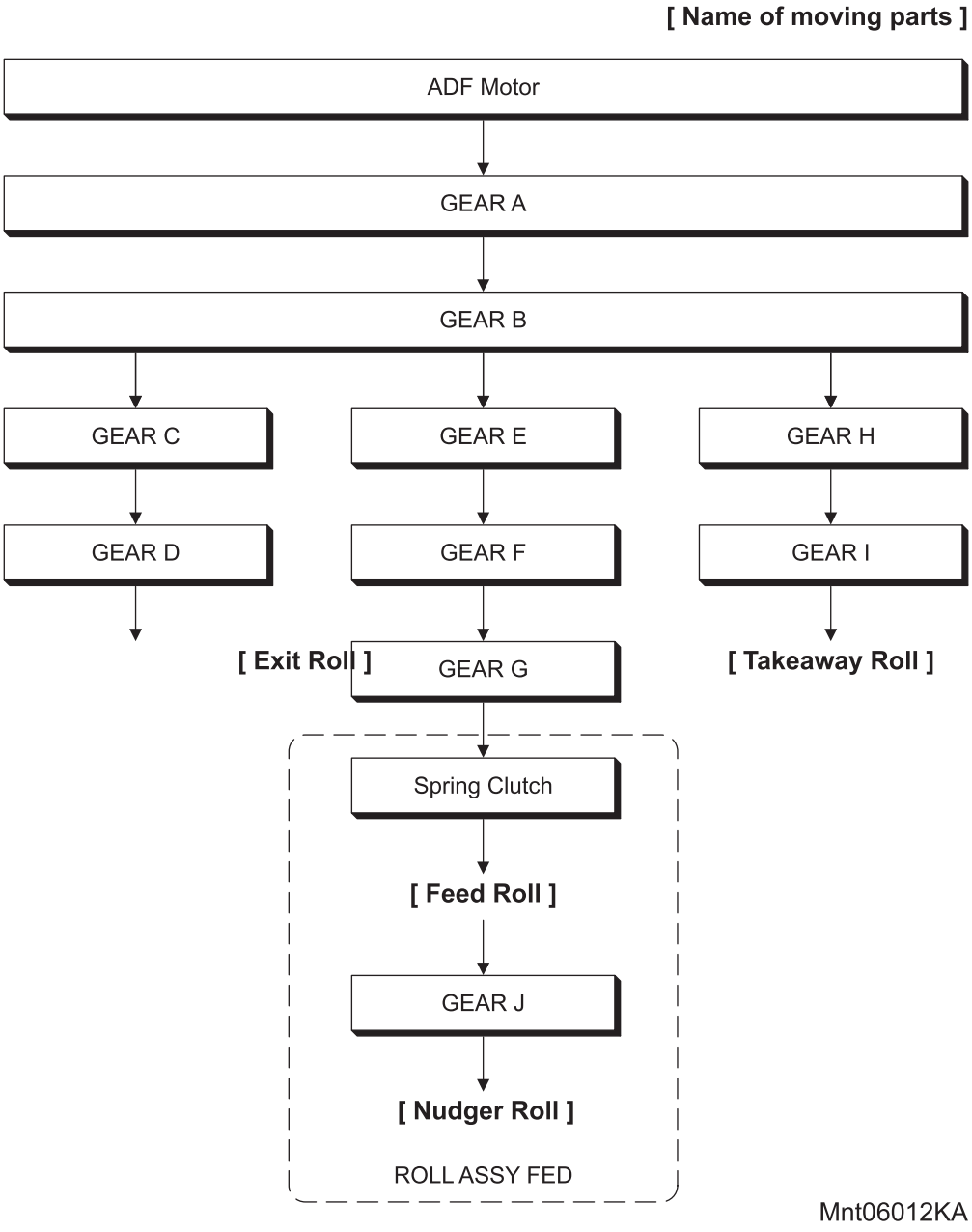
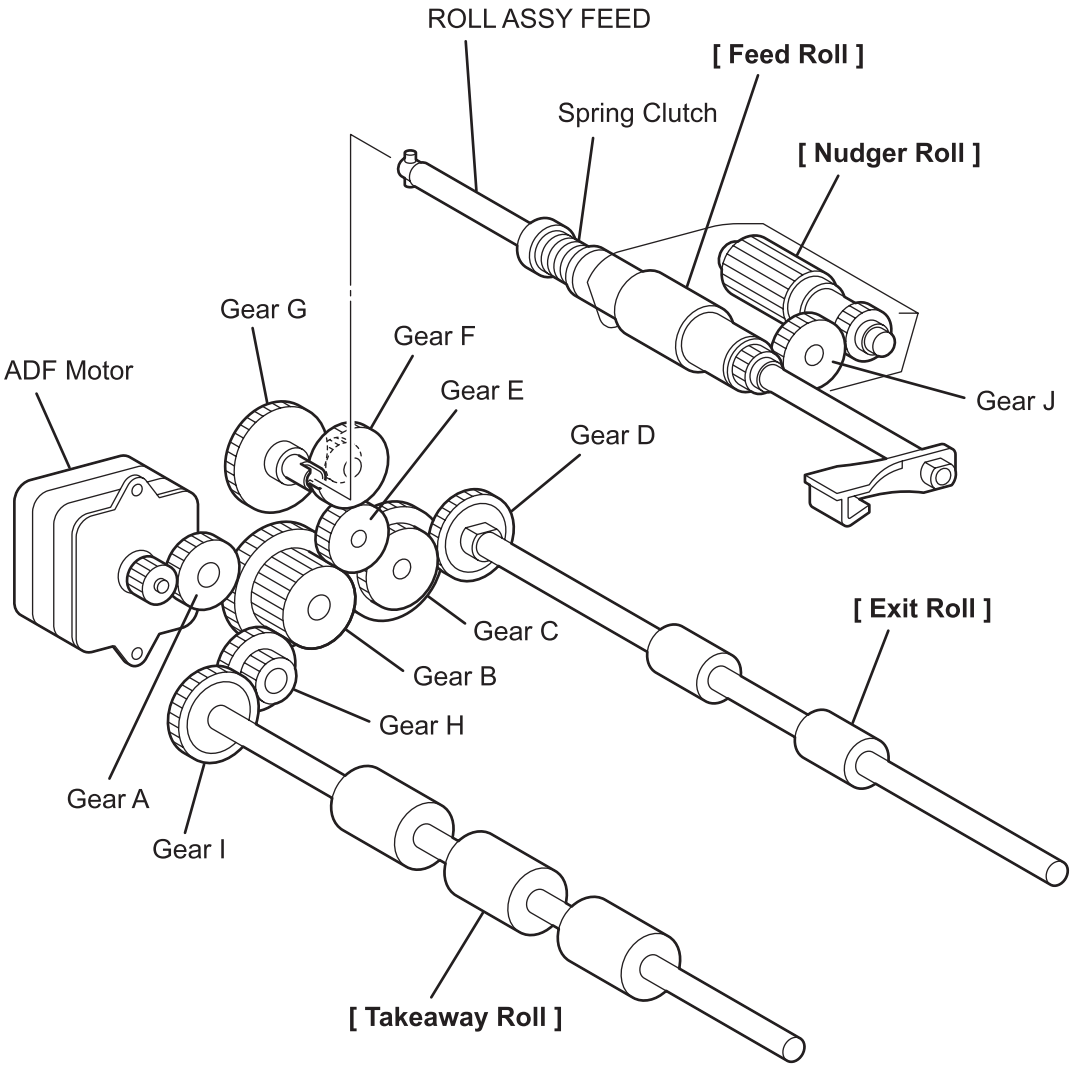
11. Drive Torque Transfer Scheme

11.1 ADF Motor

The torque of the ADF Motor is transferred to each document feeding roll as shown below.



11.2 Gear Layout



12. Names and Functions of Components

The sections below describe the functions of main components of the scanner.

4.1 IIT

4.2 ADF

12.1 IIT

Carriage Motor

A stepping motor that drives the Scanner ASSY.

Scanner Home Position Sensor

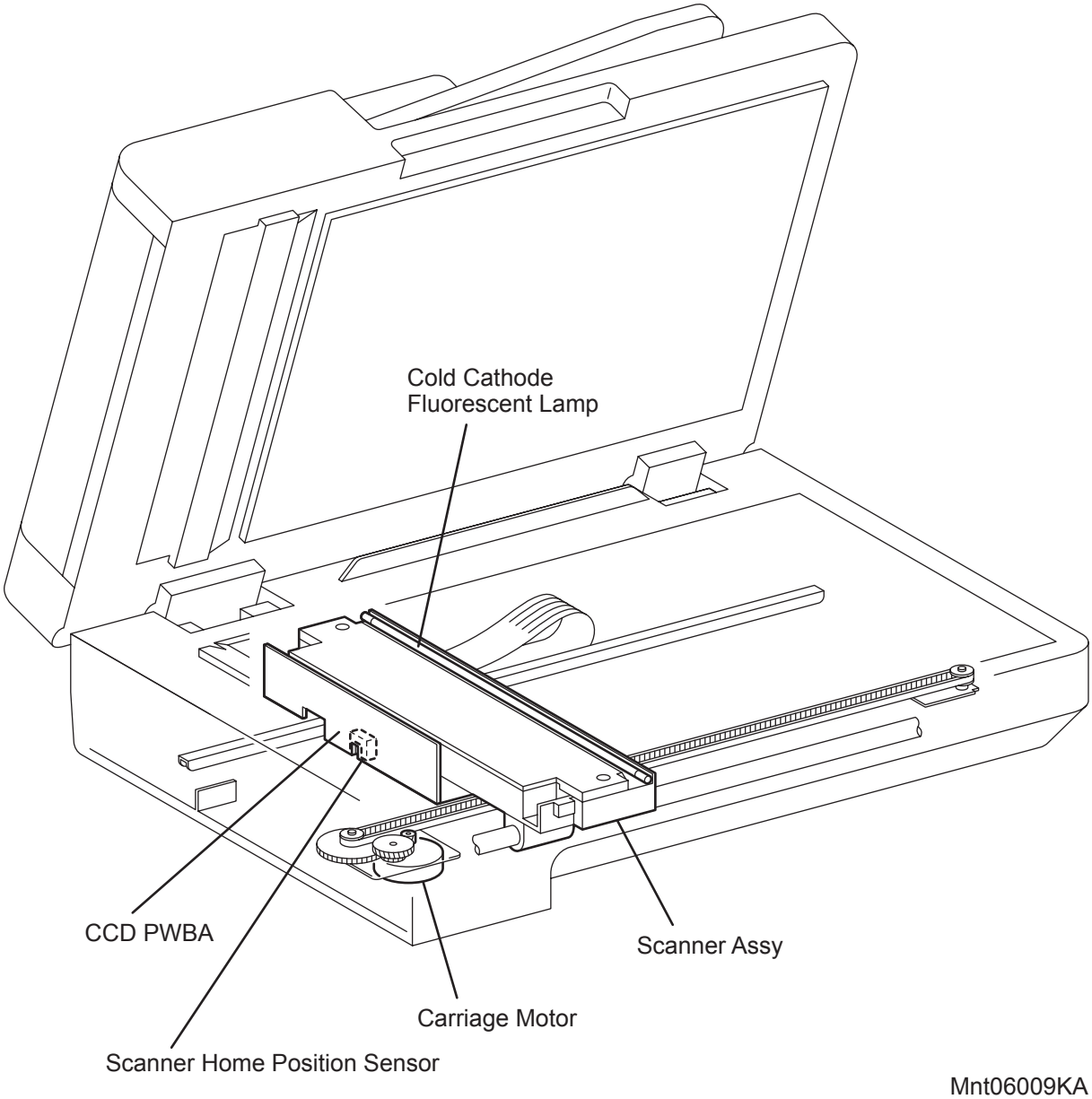
A part of the rear section of the Scanner ASSY frame functions as an actuator that shields the Scanner Home Position Sensor, thus detecting the Regi position.

Cold cathode fluorescent lamp (Exposure Lamp)

The lamp that exposes the document.

CCD PWBA

A CCD image sensor that converts optical images into electrical signals.


Cold Cathode
Fluorescent Lamp
CCD PWBA
Scanner Assy
Carriage Motor
Scanner Home Position Sensor

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12.2 ADF

Document Sensor

A sensor that detects the presence or absence of a document on the ADF Document Tray.

Cover Open Sensor

A switch that detects whether or not the ADF Top Cover is open.

PWBA ADF

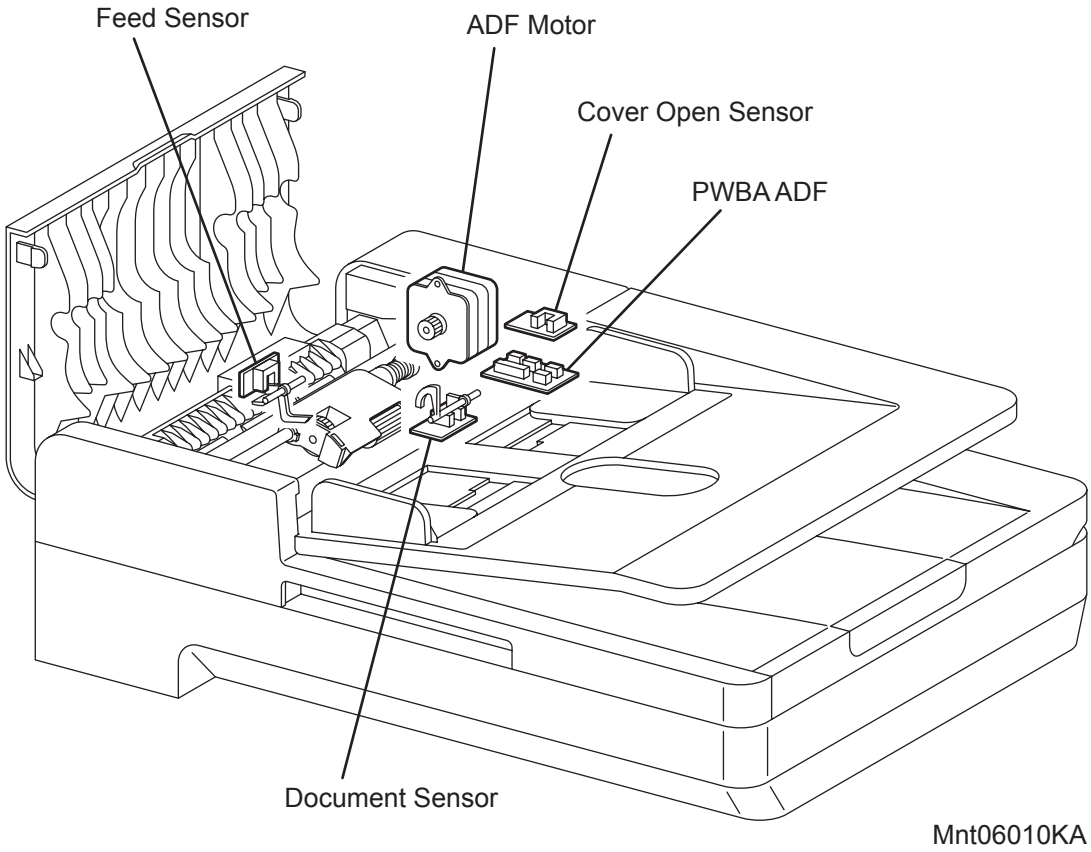
A PWB that controls the sensors and motor in the ADF.

Feed Sensor

The Feed Sensor is installed immediately downstream from the Feed Roll to detect completion of document feed.

ADF Motor

The ADF Motor rotates the Nudger Roll, Feed Roll, Takeaway Roll, Regi Roll, and Exit Roll.


Feed Sensor
ADF Motor
Cover Open Sensor
PWBA ADF
Document Sensor
Mnt06010KA

Document Stopper

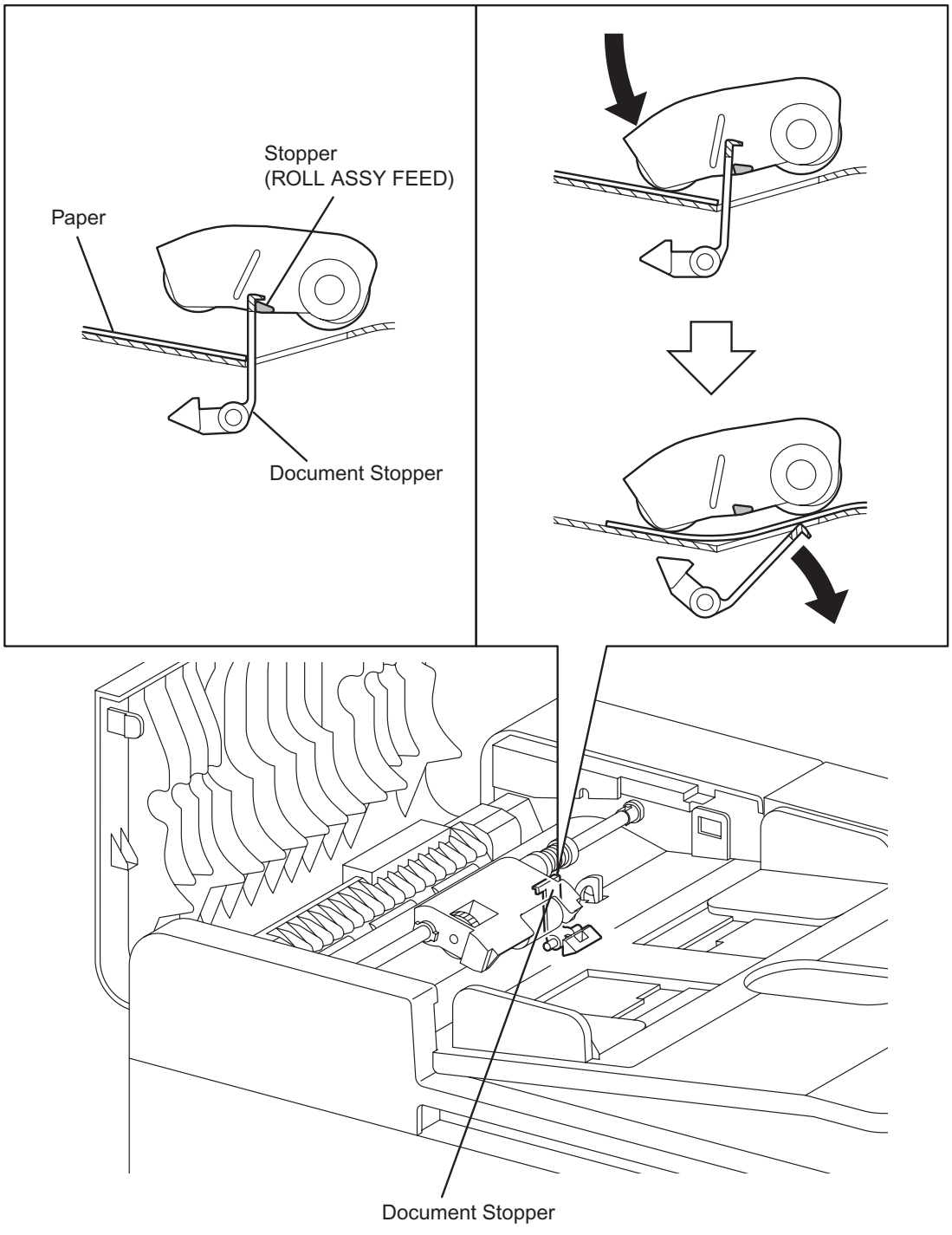
The Document Stopper is to properly adjust the lead edge of documents when they are set on the ADF.

When the Roll Assy Feed is in its home position, the Document Stopper is kept from moving by a stopper located in the side of the Roll Assy Feed.

By receiving drive power, the front portion of Roll Assy Feed lowers, and then its stopper releases the Document Stopper.

The Document Stopper is pressed down by the lead edge of a paper to be fed.

After the paper is fed into the device, the Document Stopper returns to its original position by the spring force.



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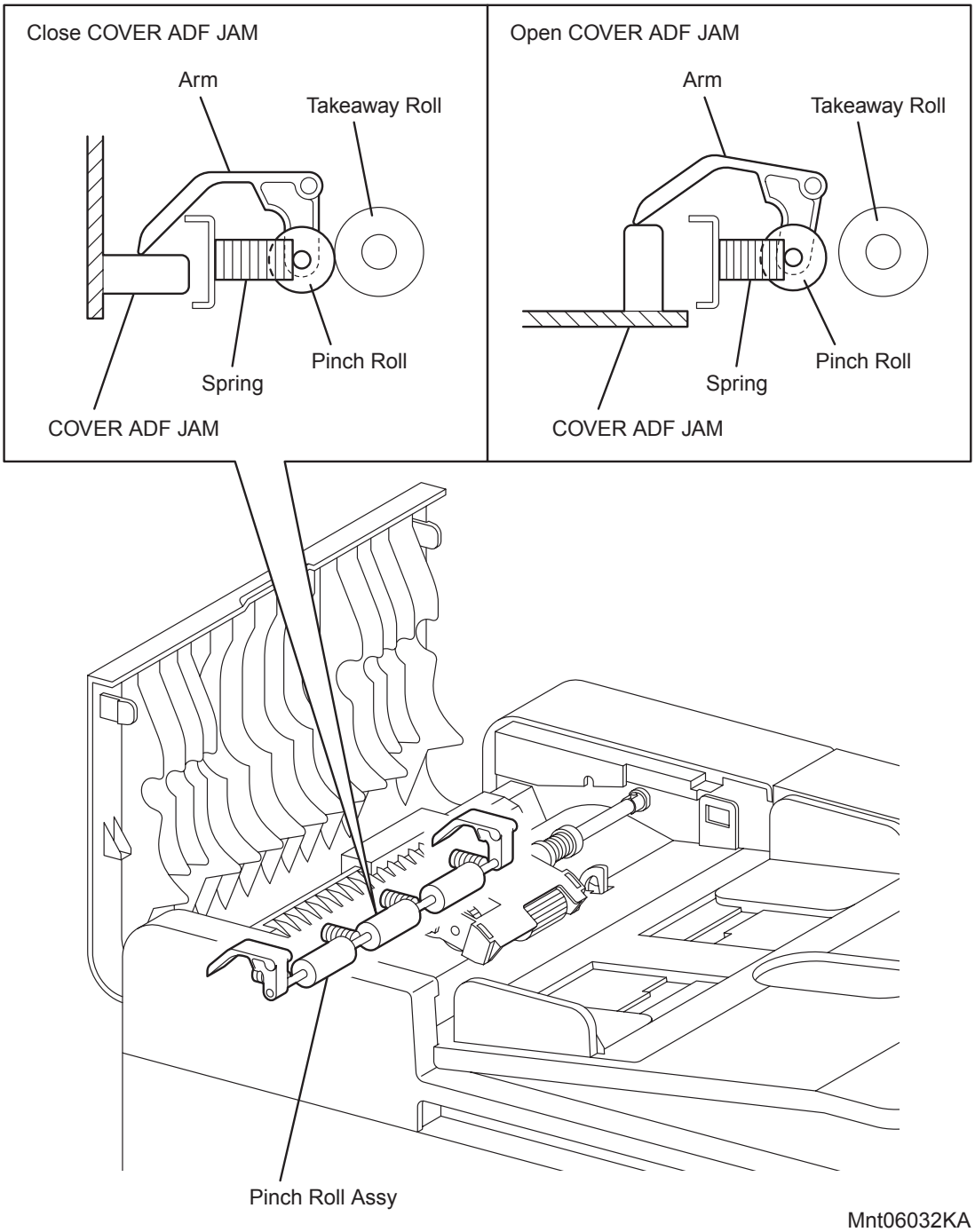
Pinch Roll Assy

The Pinch Roll Assy is normally pressed against the direction of the Takeaway Roll by the spring pressure.

Documents are fed through between the Pinch Rolls and the Takeaway Roll to the CVT Window by the rotation of the Takeaway Roll.

If a jam occurs between the Pinch Roll Assy and the Takeaway Roll, it is hard to retrieve documents due to the high spring pressure of Pinch Roll Assy.

In order to retrieve jammed documents, open the Cover Assy ADF to release the spring pressure, and make enough clearance between the Pinch Rolls and the Takeaway Roll.



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13. Control

13.1 Document Scanning Steps

A CCD Image Sensor is used to read image data from the document. To ensure stabilized image reading, the CCD Image Sensor output is adjusted. Adjustment includes Automatic Gain Control (AGC) and Automatic Offset Control (AOC).

Reference data for adjustment is collected and used to perform compensation on the read image data. Compensation includes shading compensation, white variation compensation, and black variation compensation. These adjustment and compensation steps are described below.

Reference data is obtained by reading image data from a white reference plate via the CCD image sensor.

13.1.1 AOC (Auto Offset Control)

AOC is performed by turning off the Exposure Lamp after AGC. This state is read by the CCD Image Sensor as the black reference value, which is used to adjust CCD Image Sensor output. (The order of AGC and AOC adjustment depends on the model.)

13.1.2 AGC (Auto Gain Control): White Level Variation Adjustment

During AGC, the Scanner ASSY is moved to the position of the white reference plate, and the Exposure Lamp is illuminated. The light reflected from the white reference plate is read by the CCD Image Sensor as the white reference value, which is used to adjust CCD Image Sensor output.

13.1.3 Shading Compensation

Shading compensation compensates for pixel-by-pixel sensitivity variations and the nonuniformity of lamp light in the fast scanning direction. The AGC and AOC adjustment values are used to compensate for the image data read by the CCD Image Sensor.

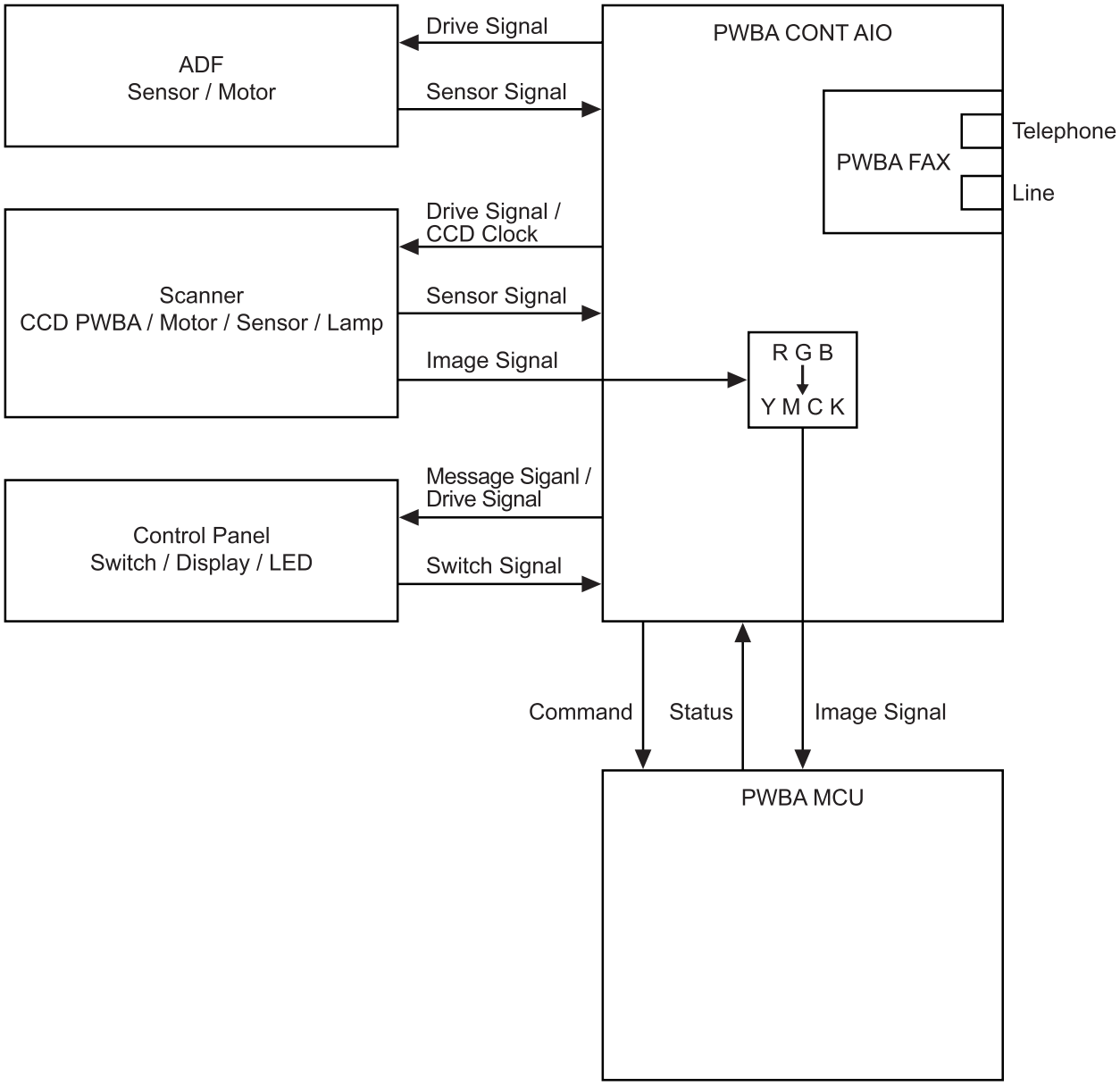
13.2 CCD Image Sensor Overview

The CCD Image Sensor is a four-color image sensor with three lines for the respective colors R (red), G (green), B (blue), and one line for B/W (black and white).

13.3 System Configuration

The PWBA CONT AIO controls the FAX, Scanner, and ADF. FAX and copy operations are performed according to data entered at the operation panel.

The following figure shows the system configuration.



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Chapter 7 Wiring Diagrams and Signal Information CONTENTS

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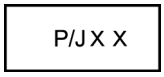
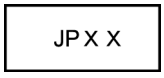
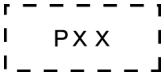
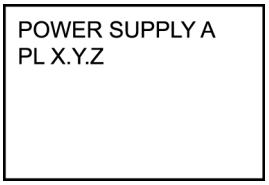
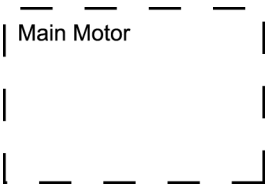
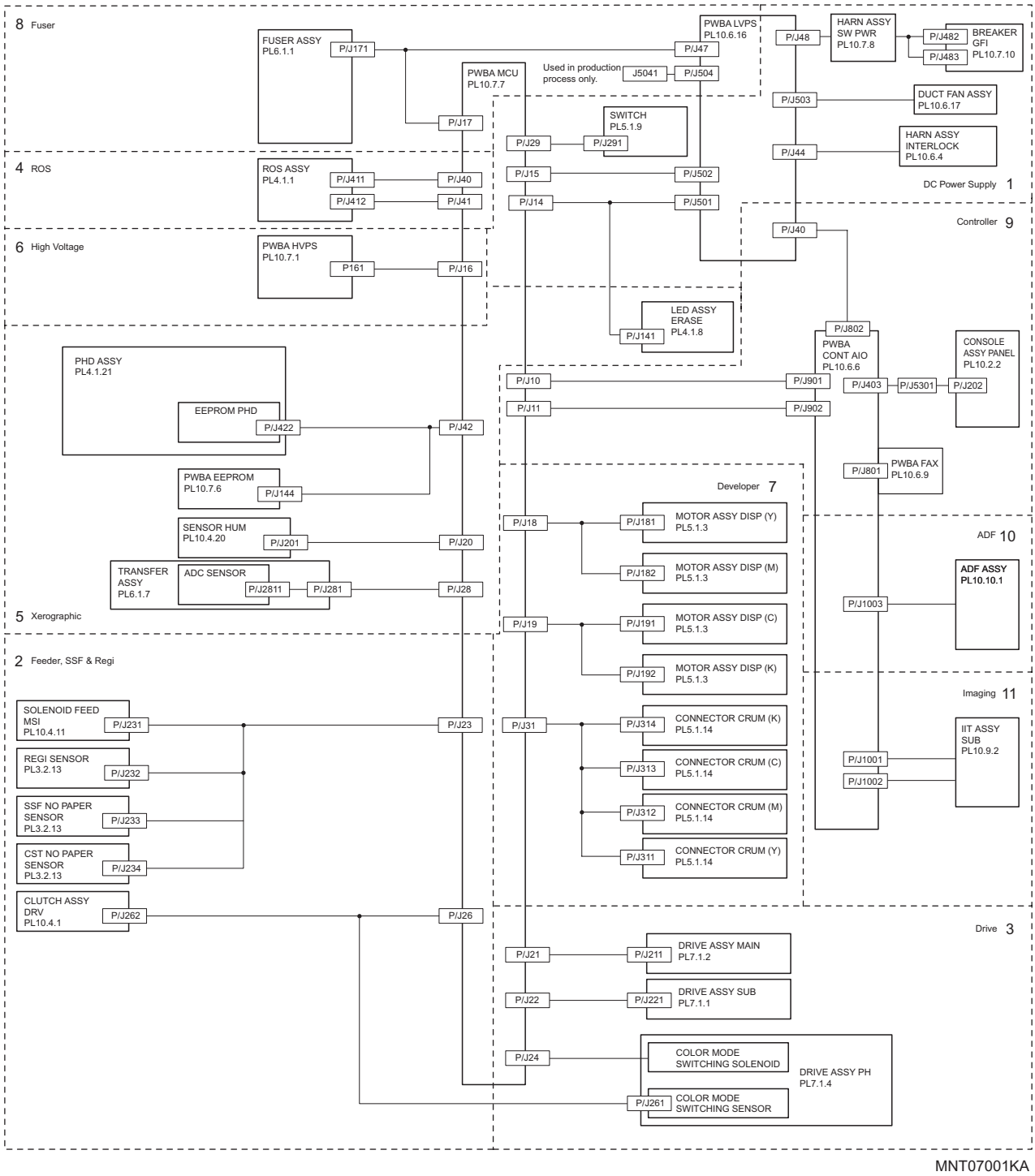
1. Connection Wiring Diagram

1.1 Symbols in the General Connection Wiring Diagram

The symbols in the general connection wiring diagram are described below.

Symbol	Description
	Represents an interconnection between parts using wiring harness or wire.
	Represents an interconnection which differs according to the specifications.
	Represents an interconnection between parts using a conductive member such as a plate spring.
	Represents a connection between parts by tightening of a screw.
	Indicates a frame ground.
	Represents a connector. The connector No. is indicated inside the box.
	Represents a connection terminal with a plate spring on the printed circuit board. The connector (terminal) No. is indicated inside the box.
	Represents a connector directly connected to the printed circuit board. The connector No. is indicated inside the box.
	The box containing a part name represents a part. "PL X.Y.Z" indicates the item "Z" of the plate (PL) "X.Y" described in Chapter 5 "Parts List."
	Represents a functional part within a part, and indicates the name of the functional part.
	Represents a section in "2. Interconnection Wiring Diagram of Parts," and indicates its section No.
	Represents a screw for fixing wiring harness and a conductive member such as a plate spring.
	Represents a conductive member such as a plate spring.

1.2 General Wiring Diagram



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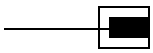
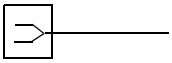
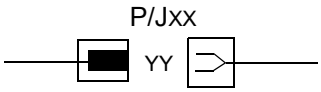
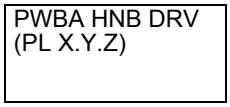
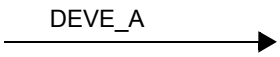
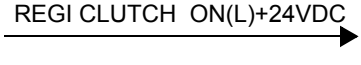
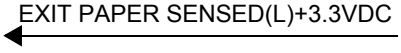
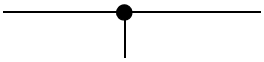
2. Interconnection Wiring Diagram of Parts

2.1 Notes on Using the Wiring Diagram between Parts

The following describes the legend of the wiring diagrams between parts shown on the following pages.

Symbols	Description
	Denotes a plug.
	Denotes a jack.
	Denotes Pin yy and Jack yy of the connector Pxx and Jxx.
	Denotes the parts. PL X.Y.Z implies the item "Z" of plate (PL) "X.Y" in Chapter 5. Parts List.
	Denotes functional parts attached with functional parts name.
	Denotes the control and its outline in PWB.
	Denotes a connection between parts with harnesses or wires, attached with signal name/contents.
	Denotes the function, and logic value of the signal to operate the function (Low: L, High: H). The given voltage is for signal in high status. The arrow indicates the direction of signal.
	Denotes the function, and logic value of the signal when the function operated (Low: L, High: H). The given voltage is for signal in high status. The arrow indicates the direction of signal.

Symbols	Description
	Denotes a connection between wires.
I/L +24VDC	Denotes DC voltage when the interlock switch in HNB MCU WITH CPU turns on.
+5VDC +3.3VDC	Denotes DC voltage.
SG	Denotes signal ground.
AG	Denotes analog ground.
RTN	Denotes the return.

2.2 Configuration of the Interconnection Wiring Diagram of Parts

The interconnection wiring diagram is divided into 12 sections. § 1 to § 12 indicate details of the interconnections of parts.

§ 1 DC POWER SUPPLY
Connections of PWBA LVPS with PWBA MCU.
Connections of HARN ASSY SW PWR with PWBA LVPS.
Connections of BREAKER GFI with HARN ASSY SW PWR.
Connections of FAN with PWBA LVPS.
Connections of HARN ASSY INTERLOCK with PWBA LVPS.
Connections of SWITCH with PWBA MCU.

§ 2 FEEDER, SSF & REGI
Connections of SOLENOID FEED with PWBA MCU.
Connections of REGI SENSOR with PWBA MCU.
Connections of SSF NO PAPER SENSOR with PWBA MCU.
Connections of CST NO PAPER SENSOR with PWBA MCU.
Connections of CLUTCH ASSY DRV with PWBA MCU.

§ 3 DRIVE
Connections of DRIVE ASSY PH with PWBA MCU.
Connections of DRIVE ASSY MAIN with PWBA MCU.
Connections of DRIVE ASSY SUB with PWBA MCU.

§ 4 ROS
Connections of ROS ASSY with PWBA MCU.

§ 5 XEROGRAPHIC
Connections of PWBA EEPROM with PWBA MCU.
Connections of PHD ASSY with PWBA MCU.
Connections of SENSOR HUM with PWBA MCU.
Connections of LED ASSY ERASE with PWBA MCU.
Connections of TRANSFER ASSY with PWBA MCU.

§ 6 HIGH VOLTAGE
Connections of PWBA HVPS with PWBA MCU.

§ 7 DEVELOPER

Connections of DISPENSE MOTOR (Y) with PWBA MCU.
Connections of DISPENSE MOTOR (M) with PWBA MCU.
Connections of DISPENSE MOTOR (C) with PWBA MCU.
Connections of DISPENSE MOTOR (K) with PWBA MCU.
Connections of CONNECTOR CRUM (Y) with PWBA MCU.
Connections of CONNECTOR CRUM (M) with PWBA MCU.
Connections of CONNECTOR CRUM (C) with PWBA MCU.
Connections of CONNECTOR CRUM (K) with PWBA MCU.

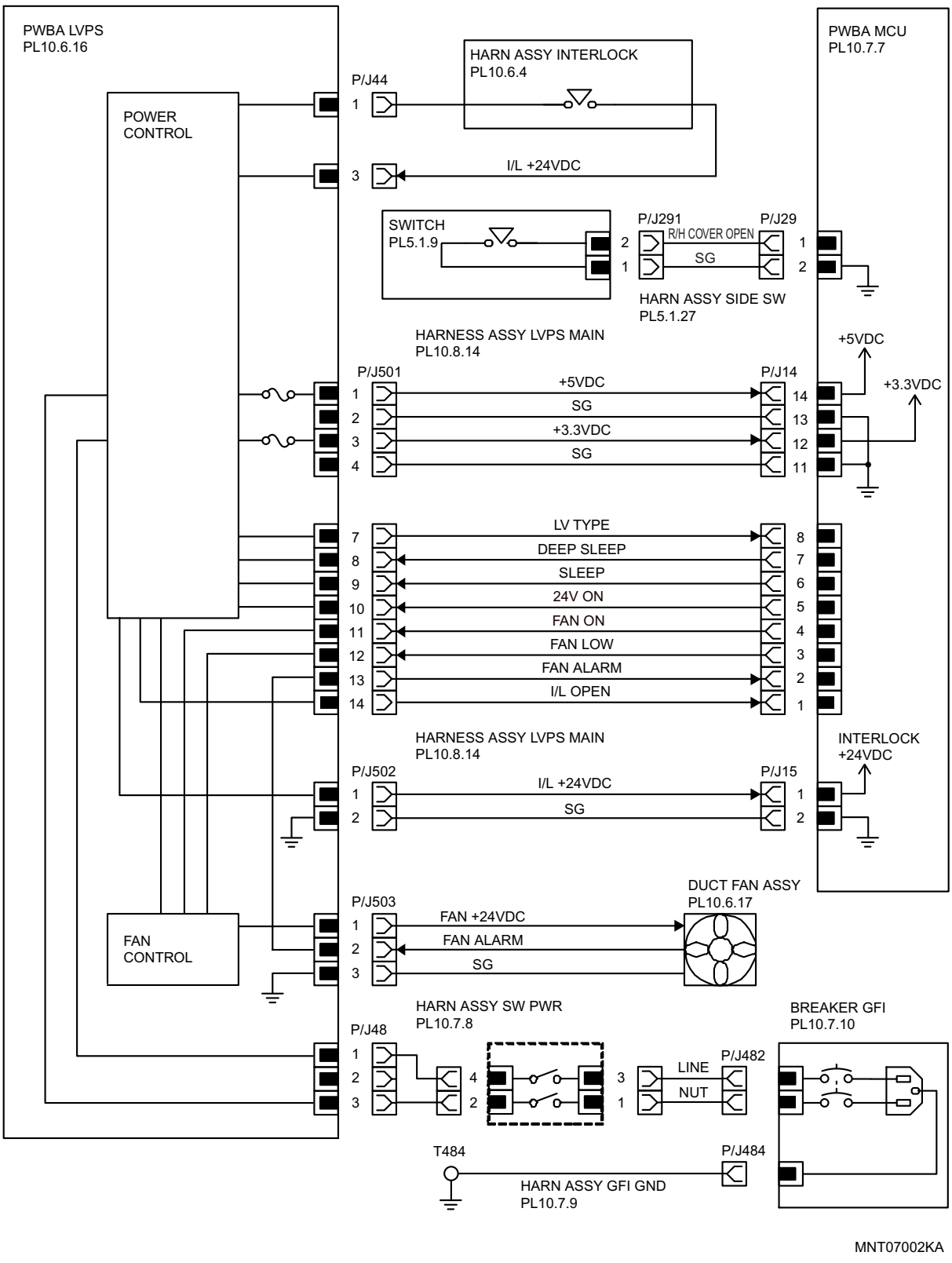
§ 8 FUSER

Connections of FUSER ASSY with PWBA MCU.
Connections of FUSER ASSY with PWBA LVPS.
Connections of PWBA MCU with PWBA LVPS.

§ 9 CONTROLLER

Connections of PWBA ESS with PWBA MCU.
Connections of CONSOLE ASSY PANEL with PWBA ESS.
Connections of PWBA LVPS with PWBA ESS.

§ 1 DC POWER SUPPLY



Signal line name	Description
LV TYPE DEEP SLEEP SLEEP 24V ON	Control signal of the LVPS
FAN ON FAN LOW FAN ALARM	Drive control signal of the SIDE FAN

- LVPS overcurrent protection circuit

  This circuit stops all outputs, if the power supply voltage 24VDC, 5VDC, or 3.3VDC is shorted.

- LVPS overvoltage protection circuit

  This circuit stops all outputs, if the power supply voltage 24VDC, 5VDC, or 3.3VDC exceeds the specified voltage respectively.

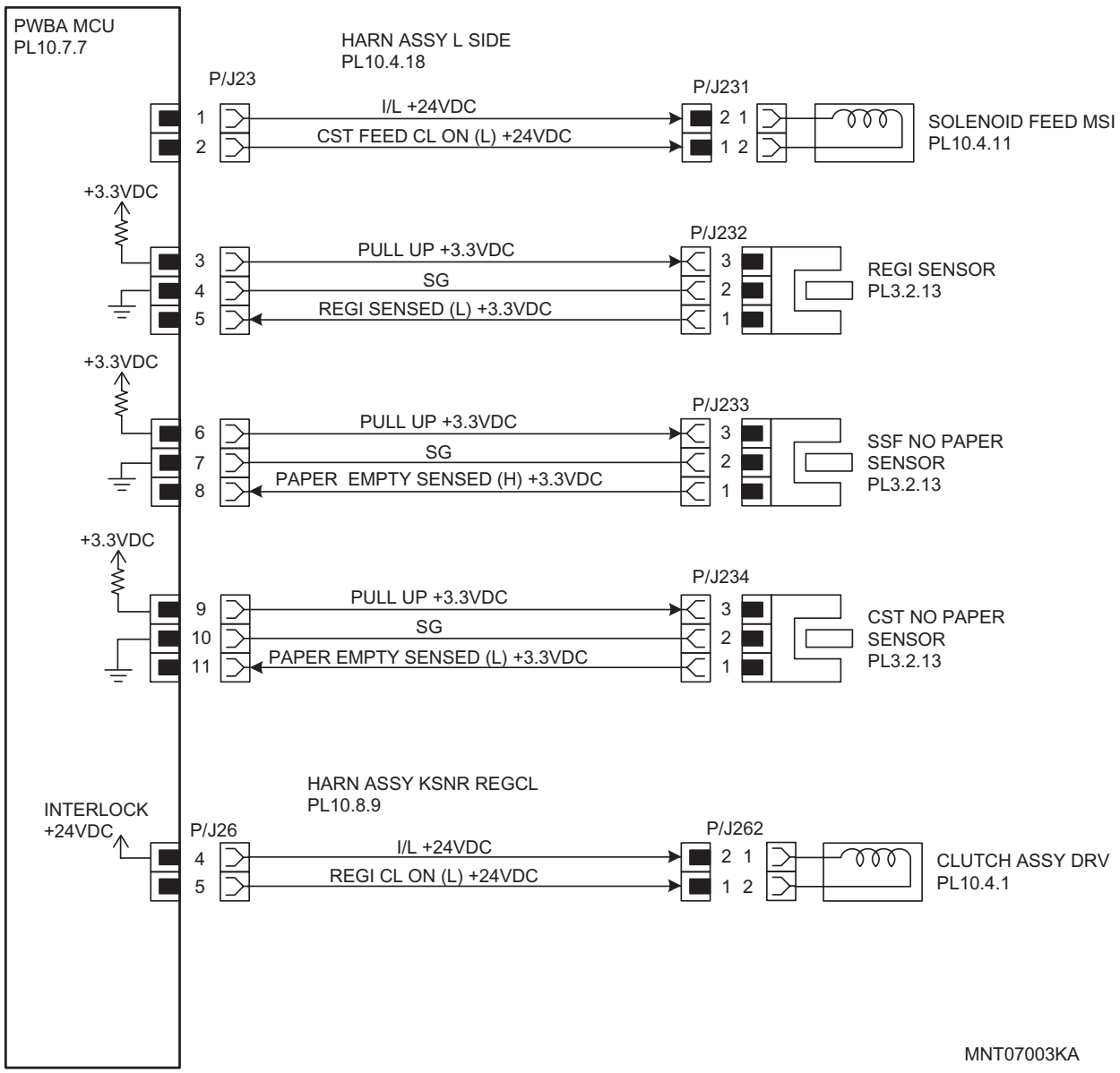
  At this time, the operating point is 36VDC or less for 24VDC, 7VDC or less for 5VDC and 3.3VDC.

- Sleep mode and deep sleep mode

  The output of the following power supply are stopped according to the these signals.

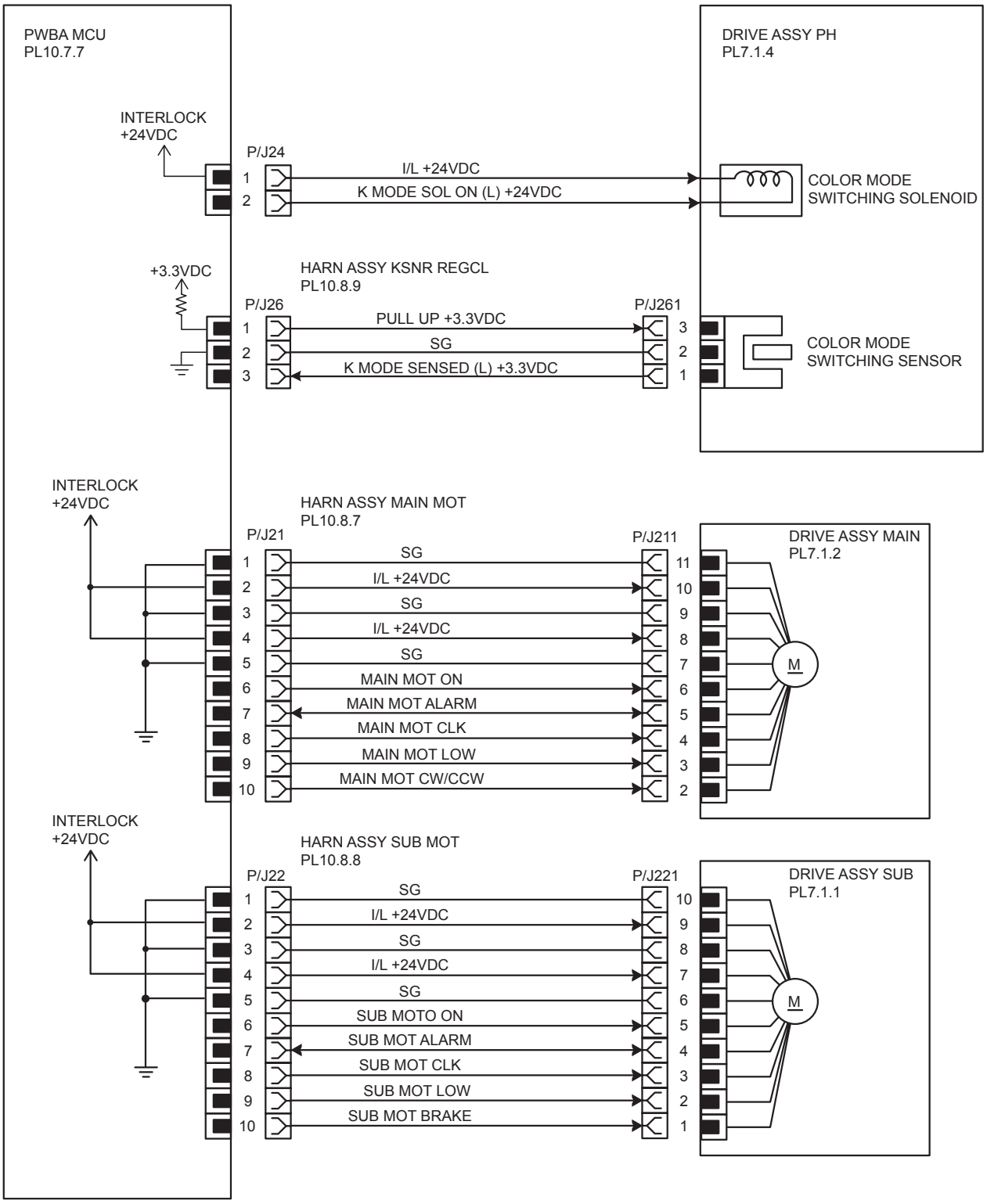
Output / Signal	+24VDC	+5VDC	+3.3VDC
Sleep	OFF	OFF	ON
Deep sleep	OFF	OFF	OFF

§ 2 FEEDER, SSF & REGI



Signal line name	Description
CST FEED CL ON (L) +24VDC	ON/OFF signal of the SOLENOID FEED
REGI SENSED (L) +3.3VDC	Paper detect signal of the Regi part by the Sensor Photo (REGI SENSOR)
PAPER EMPTY SENSED (H) +3.3VDC	Paper detect signal of the SSF by the Sensor Photo (SSF NO PAPER SENSOR)
PAPER EMPTY SENSED (L) +3.3VDC	Paper detect signal of the Paper Cassette by the Sensor Photo (CST NO PAPER SENSOR)
REGI CL ON (L) +24VDC	ON/OFF signal of the CLUTCH ASSY DRV

§ 3 DRIVE



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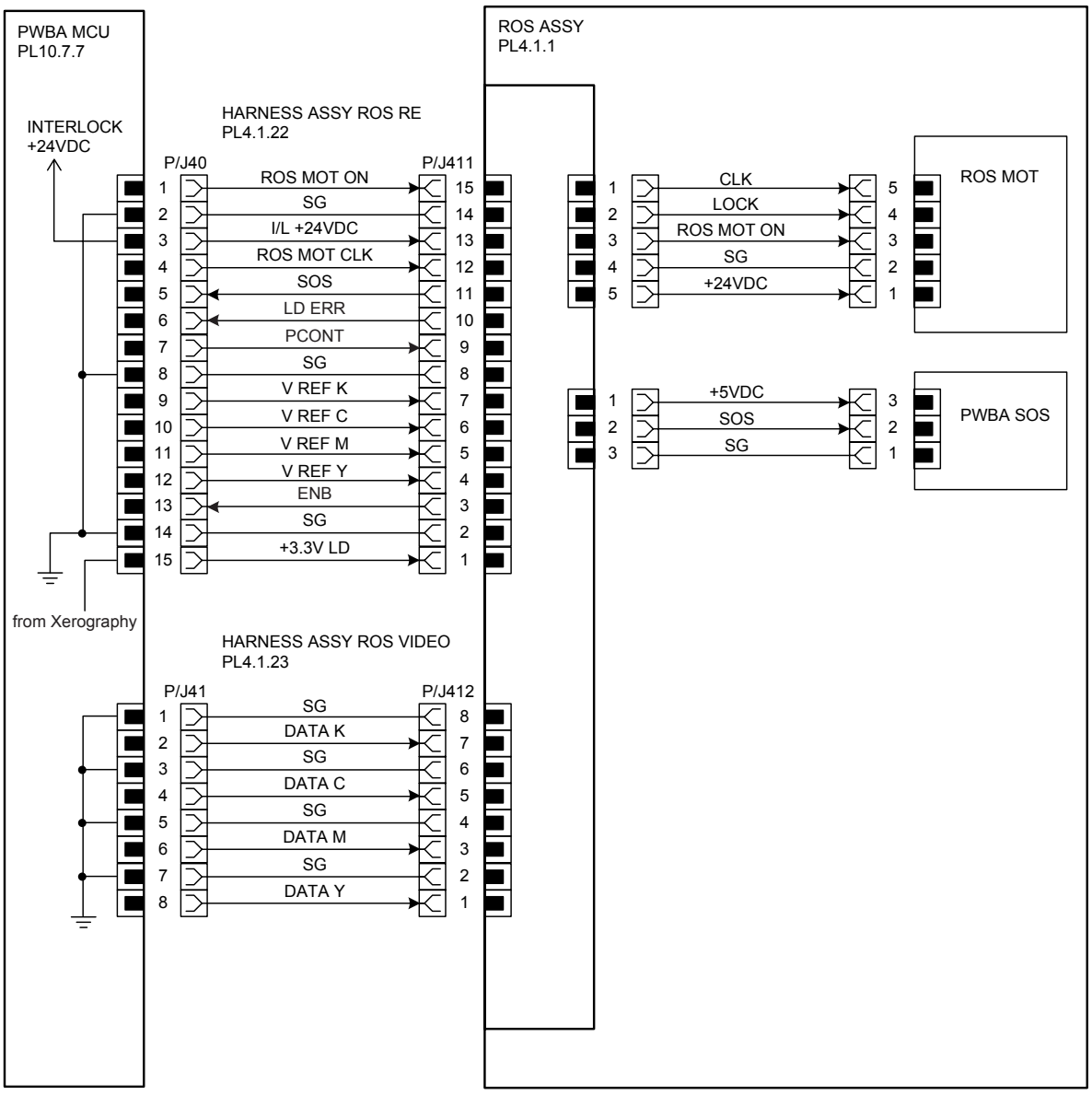
Signal line name	Description
K MODE SOL ON (L) +24VDC	ON/OFF signal of the COLOR MODE SWITCHING SOLENOID
K MODE SENSED (L) +3.3VDC	Color mode detect signal of the DRIVE ASSY PH by the Sensor Photo (COLOR MODE SWITCHING SENSOR)
MAIN MOT ON MAIN MOT ALARM MAIN MOT CLK MAIN MOT LOW MAIN MOT CW/CCW	Drive control signal of the DRIVE ASSY MAIN
SUB MOT ON SUB MOT ALARM SUB MOT CLK SUB MOT LOW SUB MOT BRAKE	Drive control signal of the DRIVE ASSY SUB

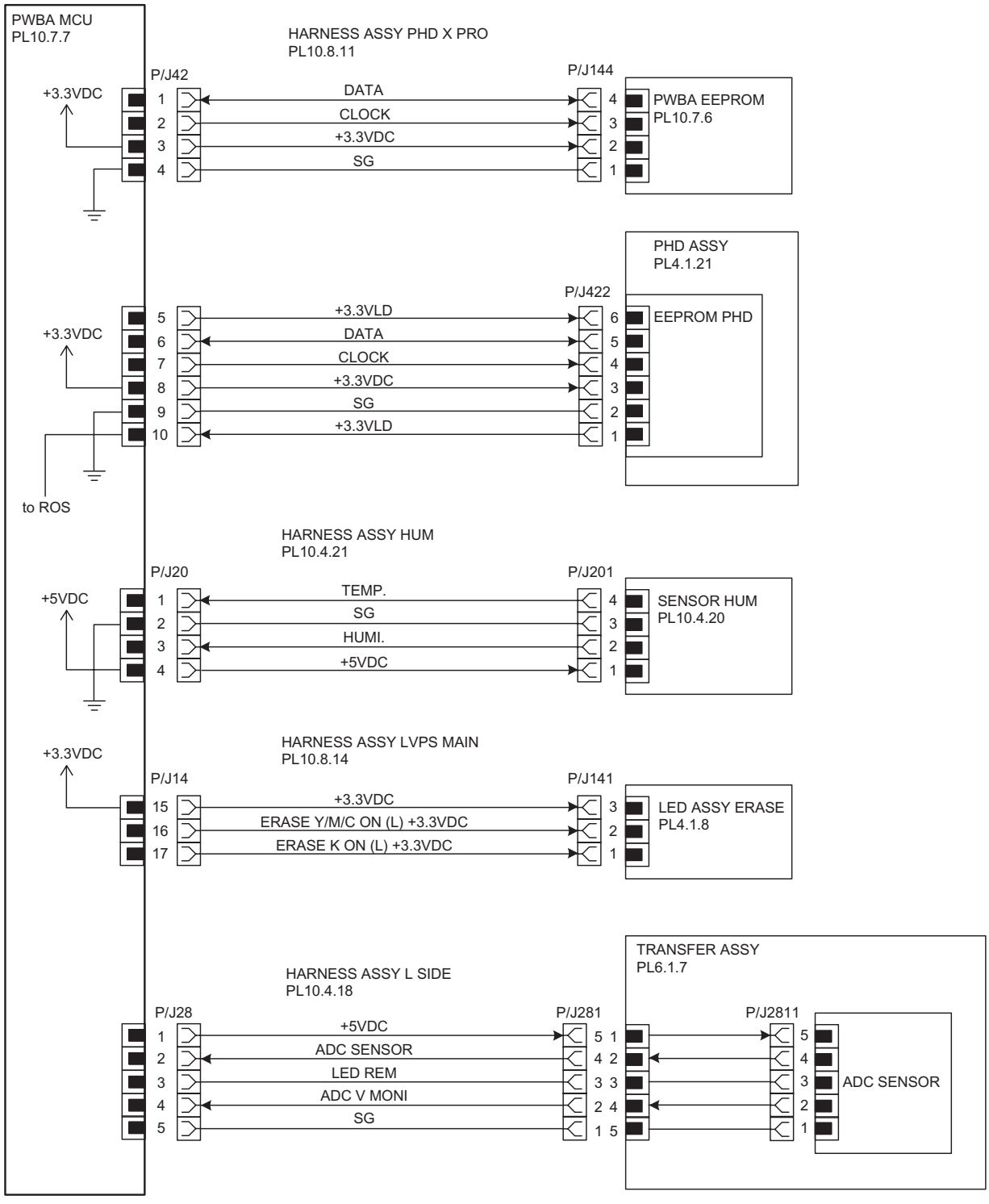
§ 4 ROS



MNT07006KA

Signal line name	Description
ROS MOT ON ROS MOT CLK	Drive control signal of the ROS MOTOR
SOS	Reference signal for scan start of LASER
V REF K V REF C V REF M V REF Y	Emission control signal of the laser diode
LD ERR	Error signal of the laser diode
PCONT	Power control signal of the laser diode
DATA K DATA C DATA M DATA Y	Video signal of the laser diode

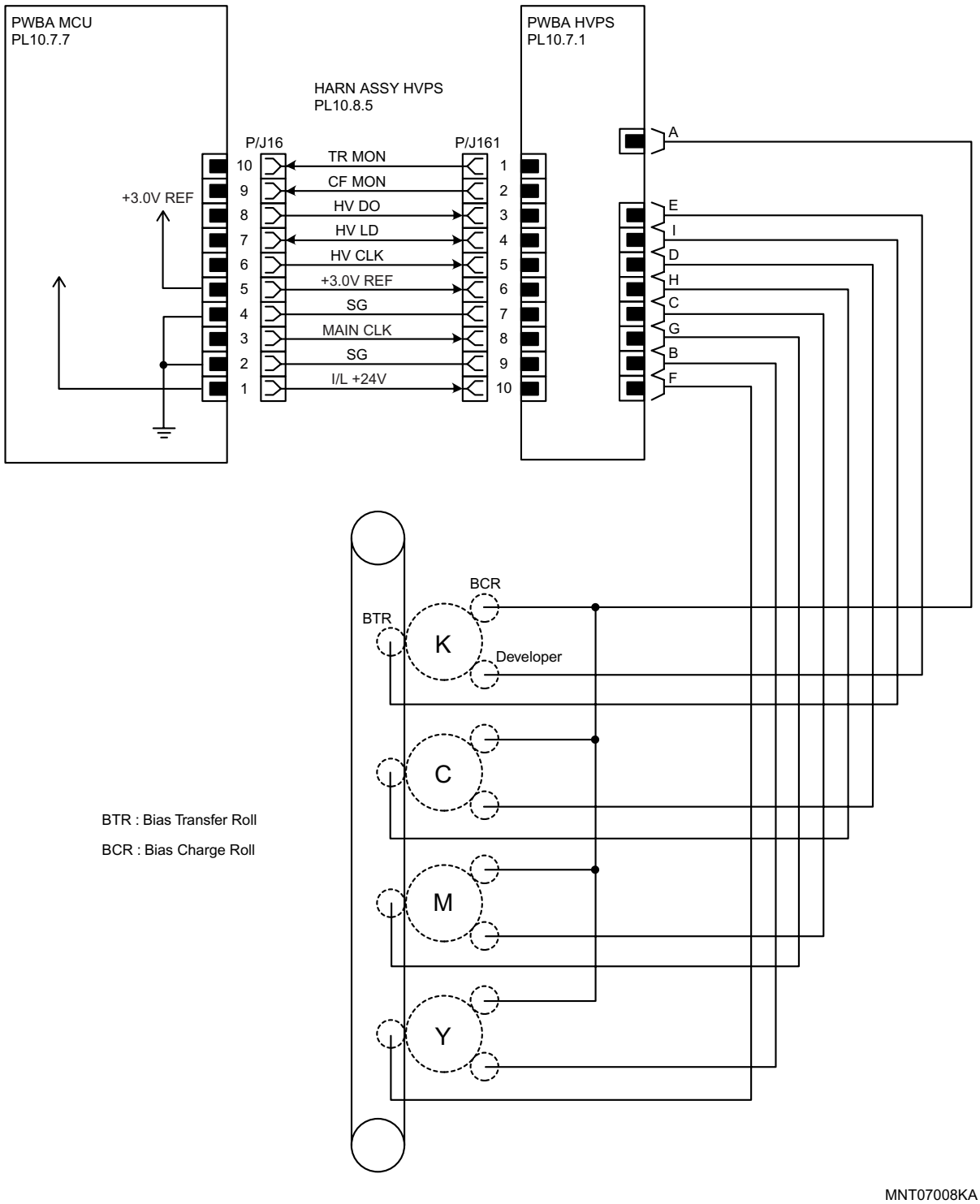
§ 5 XEROGRAPHIC



MNT07007KA

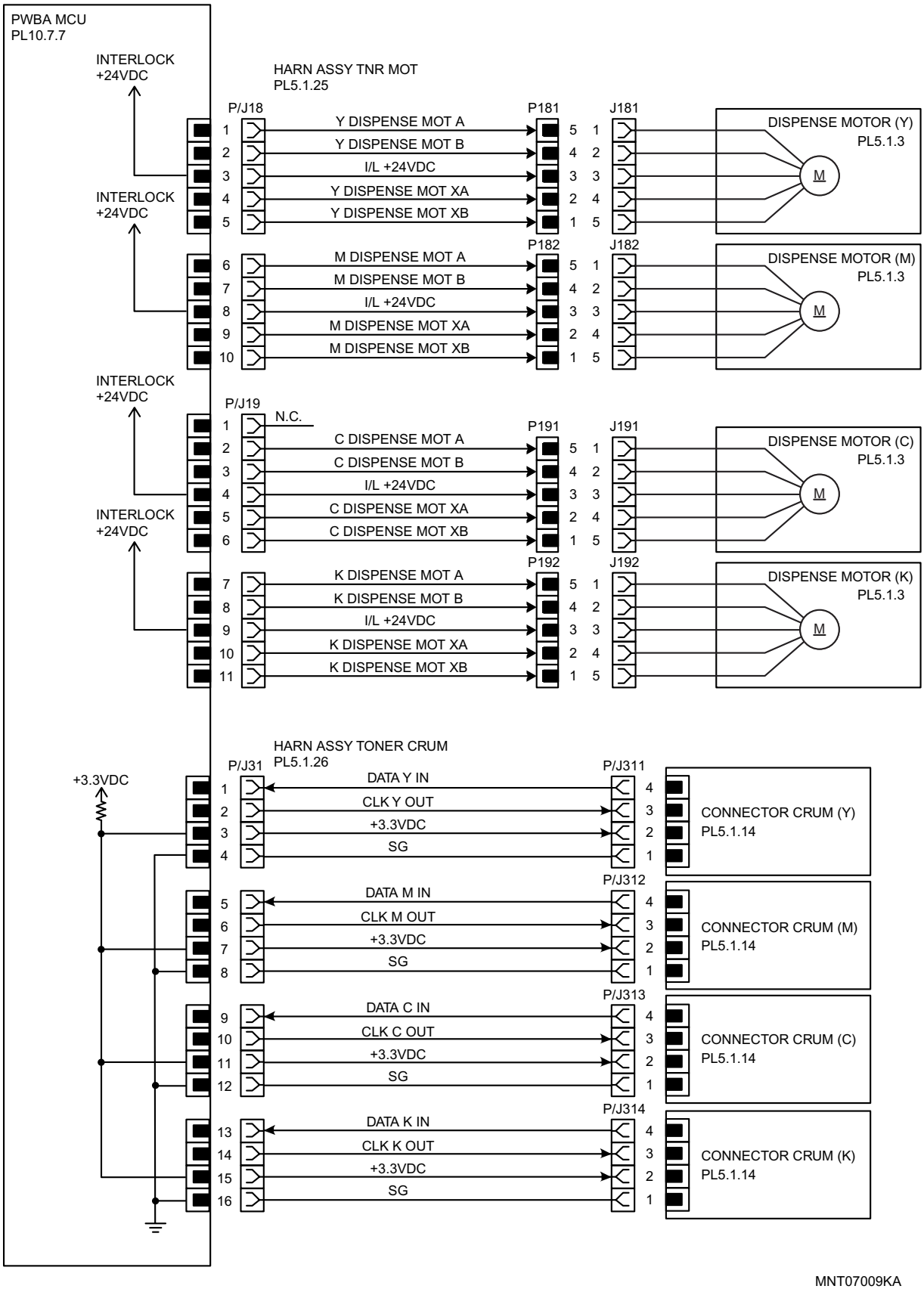
Signal line name	Description
CLOCK DATA	Control signal of the PWBA EEPROM
CLOCK DATA	Control signal of the EEPROM PHD
TEMP.	Temperature data in the printer by the SENSOR HUM (Analog value)
HUMI.	Humidity data in the printer by the SENSOR HUM (Analog value)
ERASE K ON (L) +3.3VDC ERASE Y/M/C ON (L) +3.3VDC	ON/OFF signal of the LED ASSY ERASE
ADC SENSOR	Toner patch density data measured by the ADC SENSOR (Analog value)
LED REM	Remote signal of the LED of ADC SENSOR
ADC V MONI	Control signal of the ADC SENSOR

§ 6 HIGH VOLTAGE



Signal line name	Description
TR MON CF MON HV DO HV LD HV CLK MAIN CLK	Control signal of the HVPS

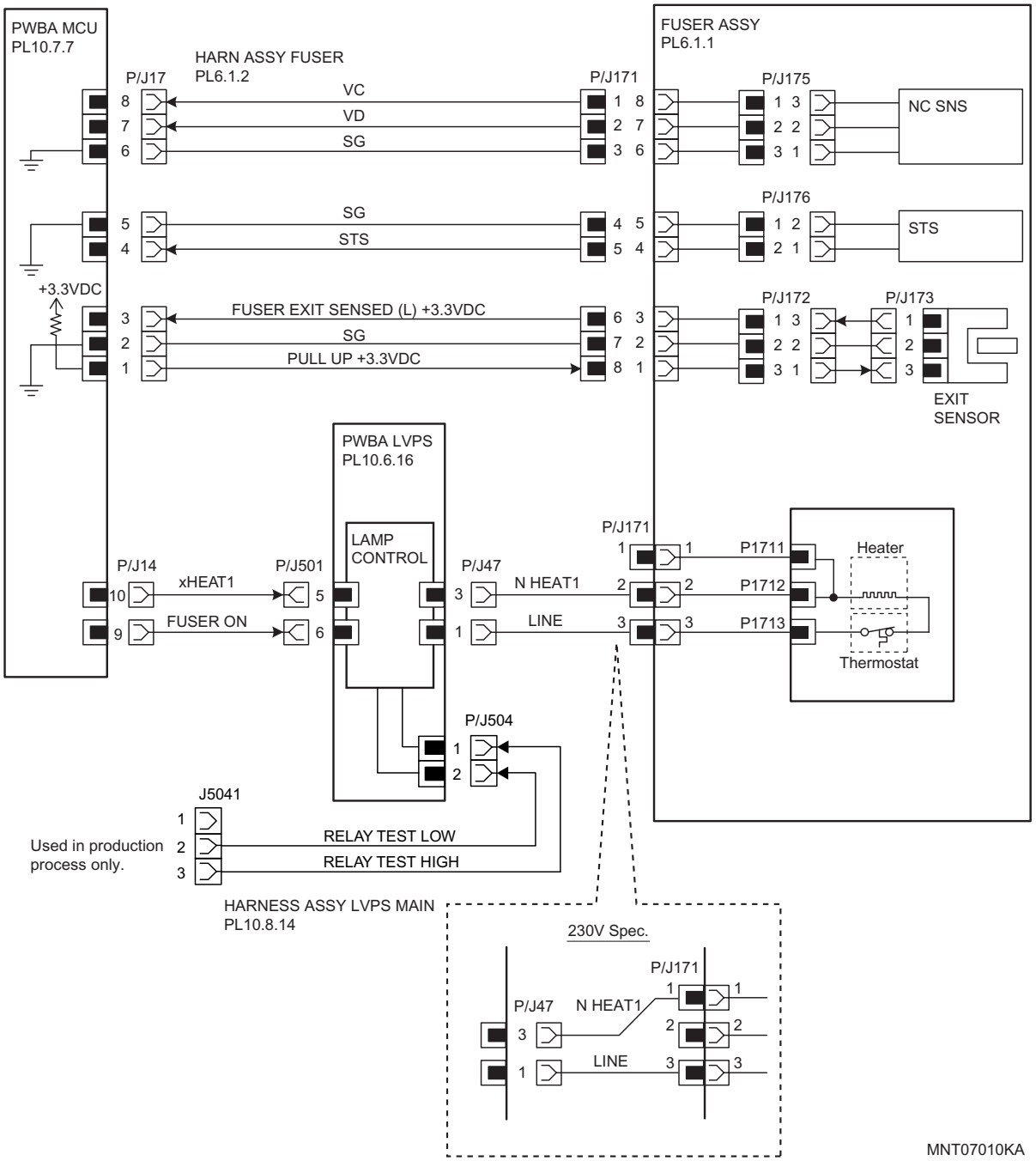
§ 7 DEVELOPER



MNT07009KA

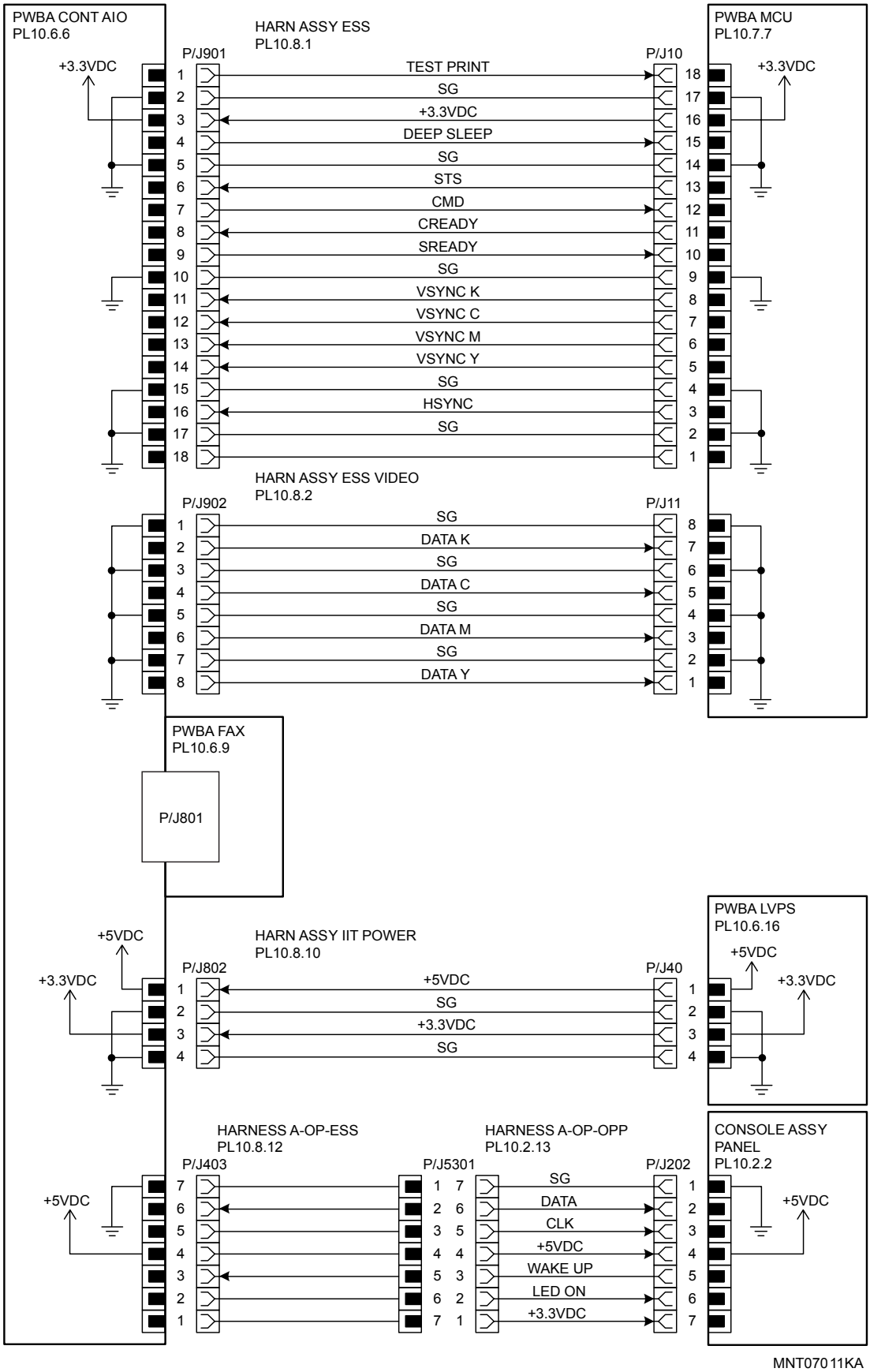
Signal line name	Description
Y DISPENSE MOT A Y DISPENSE MOT B Y DISPENSE MOT XA Y DISPENSE MOT XB	Drive control signal of the DISPENSE MOTOR (Y)
M DISPENSE MOT A M DISPENSE MOT B M DISPENSE MOT XA M DISPENSE MOT XB	Drive control signal of the DISPENSE MOTOR (M)
C DISPENSE MOT A C DISPENSE MOT B C DISPENSE MOT XA C DISPENSE MOT XB	Drive control signal of the DISPENSE MOTOR (C)
K DISPENSE MOT A K DISPENSE MOT B K DISPENSE MOT XA K DISPENSE MOT XB	Drive control signal of the DISPENSE MOTOR (K)
DATA Y IN CLK Y OUT	Control signal of the CONNECTOR CRUM (Y)
DATA M IN CLK M OUT	Control signal of the CONNECTOR CRUM (M)
DATA C IN CLK C OUT	Control signal of the CONNECTOR CRUM (C)
DATA K IN CLK K OUT	Control signal of the CONNECTOR CRUM (K)

§ 8 FUSER


PWBA MCU
PL10.7.7
HARN ASSY FUSER
PL6.1.2
P/J17
8
7
6
VC
VD
SG
P/J171
1 8
2 7
3 6
FUSER ASSY
PL6.1.1
P/J175
1 3
2 2
3 1
NC SNS
5
4
SG
STS
4 5
5 4
P/J176
1 2
2 1
STS
+3.3VDC
3
2
1
FUSER EXIT SENSED (L) +3.3VDC
SG
PULL UP +3.3VDC
6 3
7 2
8 1
P/J172
1 3
2 2
3 1
P/J173
1
2
3
EXIT
SENSOR
PWBA LVPS
PL10.6.16
LAMP
CONTROL
P/J14
10
9
xHEAT1
FUSER ON
P/J501
5
6
P/J47
3
1
N HEAT1
LINE
P/J171
1
2
3
P1711
P1712
P1713
Heater
Thermostat
P/J504
1
2
J5041
1
2
3
Used in production
process only.
RELAY TEST LOW
RELAY TEST HIGH
HARNESS ASSY LVPS MAIN
PL10.8.14
230V Spec.
P/J171
P/J47
N HEAT1
LINE
MNT07010KA

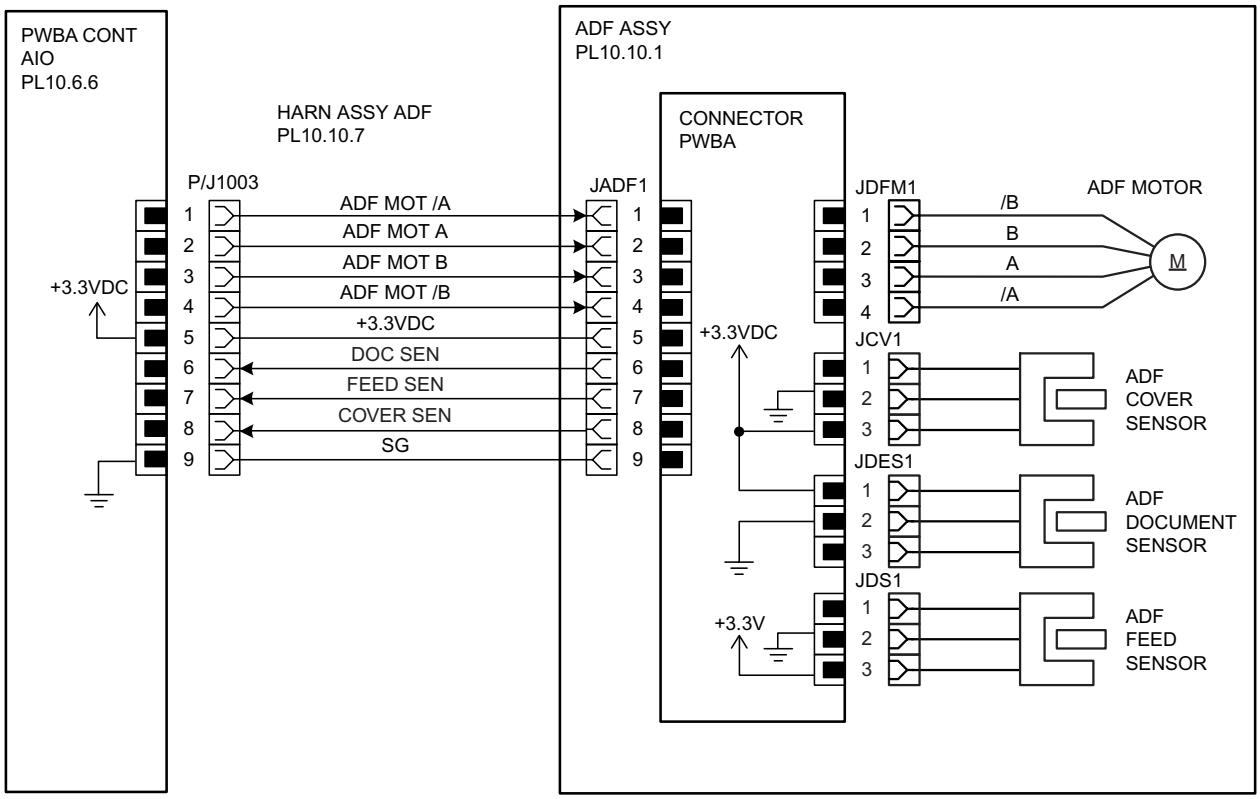
Signal line name	Description
VC VD	Temperature data measured by Temp. Sensor for controlling temperature (analog value)
STS	Heat Roll surface temperature data measured by Temp. Sensor for detecting high temperature (analog value)
FUSER EXIT SENSED (L) +3.3VDC	Paper detect signal of the Fuser Exit by the Sensor Photo (EXIT SENSOR)
FUSER ON	Lighting signal of Fuser Lamp
RELAY TEST LOW RELAY TEST HIGH	Test signal of the LVPS (Used in production process only)

§ 9 CONTROLLER



Signal line name	Description
TEST PRINT	Control signal for the TEST PRINT mode
DEEP SLEEP	Control signal for the DEEP SLEEP mode
STS	Status signal transmitted fro the PWBA MCU to the PWBA ESS
CMD	Command signal transmitted from the PWBA ESS to the PWBA MCU
CREADY SREADY	Signal for indicating weather or not the printer is ready for receiving command signal
VSYNC K VSYNC C VSYNC M VSYNC Y	Signal for indicating registration position of each of images Y, M, C and K
HSYNC	Signal for data
DATA K DATA C DATA M DATA Y	Video data of four colors
DATA CLK WAKE UP LED ON	Control signal of the CONSOLE ASSY

§ 10 ADF



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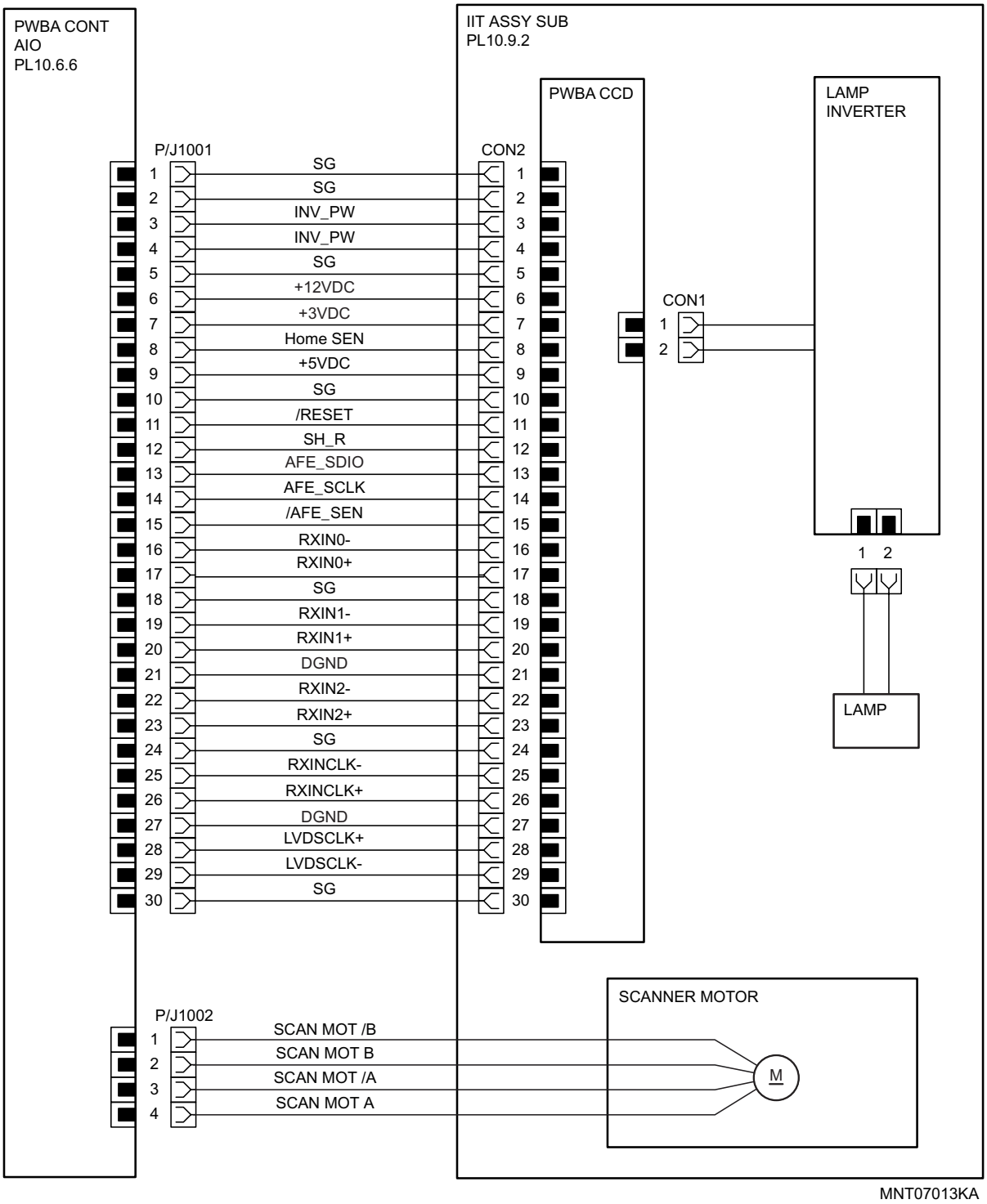
Signal line name	Description
ADF MOT /A ADF MOT A ADF MOT /B ADF MOT B	Drive control signal of the ADF MOTOR
DOC SEN	Document detect signal of the ADF by the Sensor Photo
FEED SEN	Document detect signal of the ADF by the Sensor Photo
COVER SEN	Cover open or close signal of the ADF by the Sensor Photo

§ 11 IMAGING


PWBA CONT
AIO
PL10.6.6
IIT ASSY SUB
PL10.9.2
PWBA CCD
LAMP
INVERTER
P/J1001
CON2
1 SG
2 SG
3 INV_PW
4 INV_PW
5 SG
6 +12VDC
7 +3VDC
8 Home SEN
9 +5VDC
10 SG
11 /RESET
12 SH_R
13 AFE_SDIO
14 AFE_SCLK
15 /AFE_SEN
16 RXIN0-
17 RXIN0+
18 SG
19 RXIN1-
20 RXIN1+
21 DGND
22 RXIN2-
23 RXIN2+
24 SG
25 RXINCLK-
26 RXINCLK+
27 DGND
28 LVDSCLK+
29 LVDSCLK-
30 SG
CON1
1
2
1 2
LAMP
SCANNER MOTOR
P/J1002
1 SCAN MOT /B
2 SCAN MOT B
3 SCAN MOT /A
4 SCAN MOT A
M
MNT07013KA

Signal line name	Description
INV_PW	Lamp Inverter Power
Home SEN	Home Sensor Signal
/RESET SH_R AFE_SDIO AFE_SCLK /AFE_SEN	Control signal of the PWBA CCD
RXIN0- RXIN0+	Image data of the document by the CCD
RXIN1- RXIN1+	Image data of the document by the CCD
RXIN2- RXIN2+	Image data of the document by the CCD
RXINCLK- RXINCLK+	Video Clock of image data by the PWBA CCD
LVDSCLK+ LVDSCLK-	Control signal of the PWBA CCD
SCAN MOT /B SCAN MOT B SCAN MOT /A SCAN MOT A	Drive control signal of the Scanner Motor

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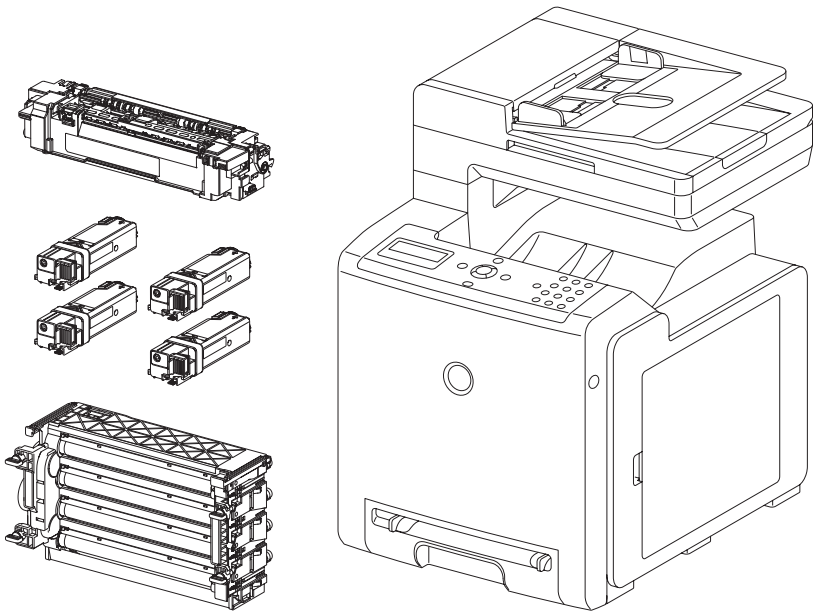
1. Configuration of Printer

1.1 Basic Configuration

The printer has the following basic configurations depending on the destination.

- print engine main unit (MPF and 250 feeder unit as the standard paper feeding)
- consumables (CRU)



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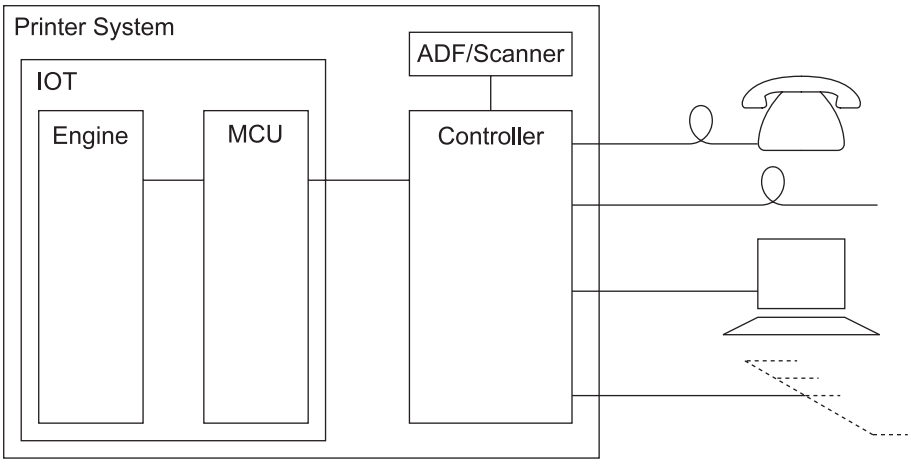
1.2 Functional Configuration

Functional configuration of this printer is shown below.



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2. Electrical Properties

2.1 Power Source

Two types of power source as follows are available for this printer, which are selected according to the specifications.

110-127V printer: ..... voltage: 110-127VAC ±10% (99 ~ 140V), frequency: 50/60Hz ± 3Hz

220-240V printer: ..... voltage: 220-240VAC ±10% (198 ~ 264V), frequency: 50/60Hz ± 3Hz

2.2 Power Consumption

Power consumption in each operation mode at rated voltage input

At standard configuration

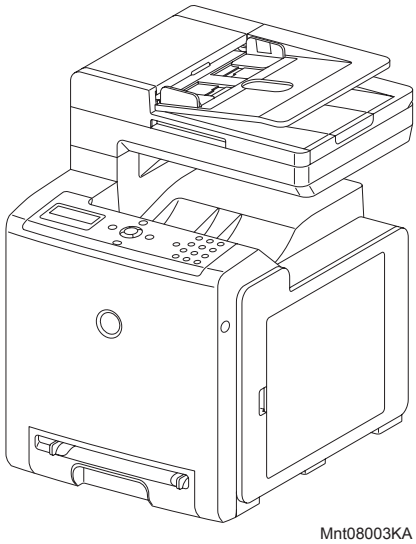
Operation mode	Average (Wh/h)
Running mode (F/C)	600 or less
Running mode (B/W)	600 or less
Ready mode	160 or less
Low power mode	35
Deep sleep mode	18.4

3. Mechanical Properties

3.1 Dimensions/Mass of Printer

Width(mm)	Depth(mm)	Height(mm)	Mass(kg)
436	497	580	28 or under

* Including MPF with its cover being closed. And the ejection stacker is also being contained in the main unit.



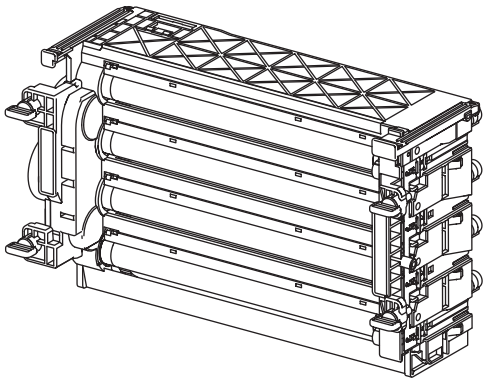
Mnt08003KA

3.2 Dimensions/Mass of Consumables and CRUs

3.2.1 PHD Unit

Width: 332mm
Depth: 138mm
Height: 196mm
Mass: 3.37K kg

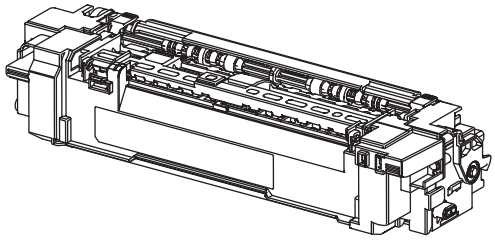
Reference: The PHD Unit has CRUM (CRU memory) to record information.



Wsb08006KA

3.2.2 FUSER CRU

Width: 393mm
Depth: 121mm
Height: 130mm
Mass: 1.5kg

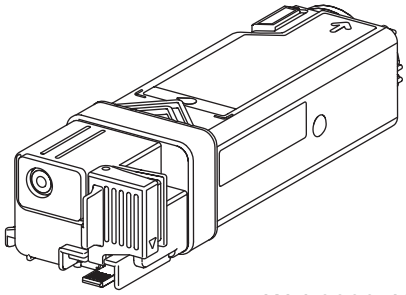


Wsb08004KA

3.2.3 Black toner cartridge

Width: 185.8mm
Depth: 63mm
Height: 40.5mm
Mass: 1K kg

Reference:The Black toner cartridge has CRUM (CRU memory) to record information.

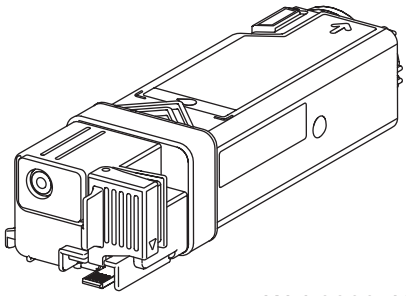


Wsb08005KA

3.2.4 Yellow toner cartridge

Width: 185.8mm
Depth: 63mm
Height: 40.5mm
Mass: 0.5K kg

Reference:The Yellow toner cartridge has CRUM (CRU memory) to record information.

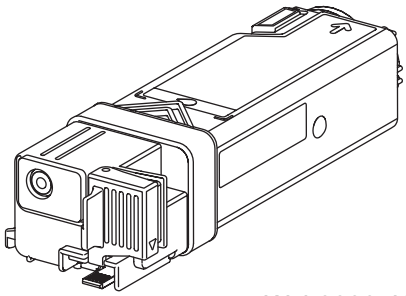


Wsb08005KA

3.2.5 Magenta toner cartridge

Width: 185.8mm
Depth: 63mm
Height: 40.5mm
Mass: 0.5K kg

Reference:The Magenta toner cartridge has CRUM (CRU memory) to record information.

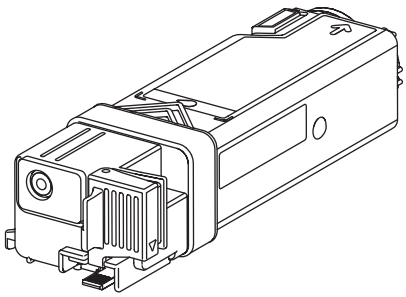


Wsb08005KA

3.2.6 Cyan toner cartridge

Width: 185.8mm
Depth: 63mm
Height: 40.5mm
Mass: 0.5K kg

Reference:The Cyan toner cartridge has CRUM (CRU memory) to record information.

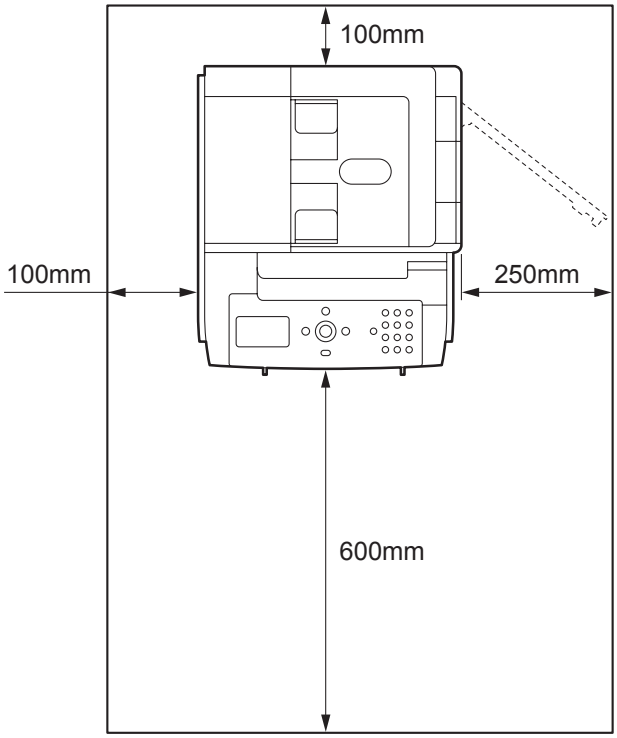


Wsb08005KA

3.3 Installation Space (min. installation space)

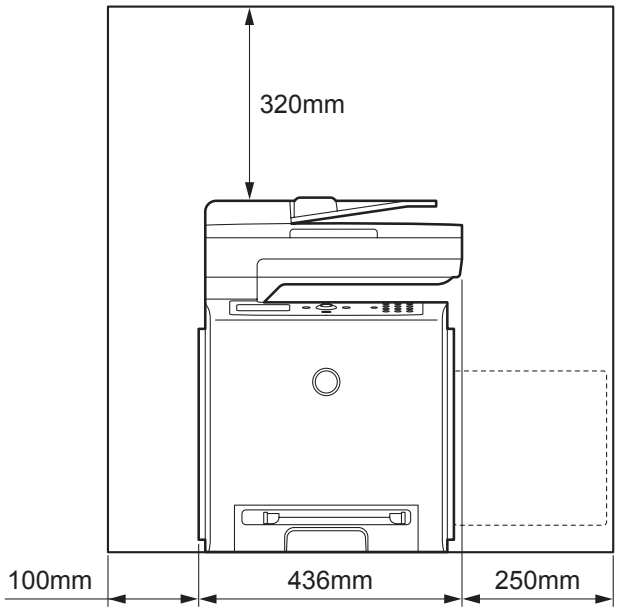
Minimum space as shown below is required to install the printer when it is used for normal objects. (Space occupied by the operator is not included.)

Top view

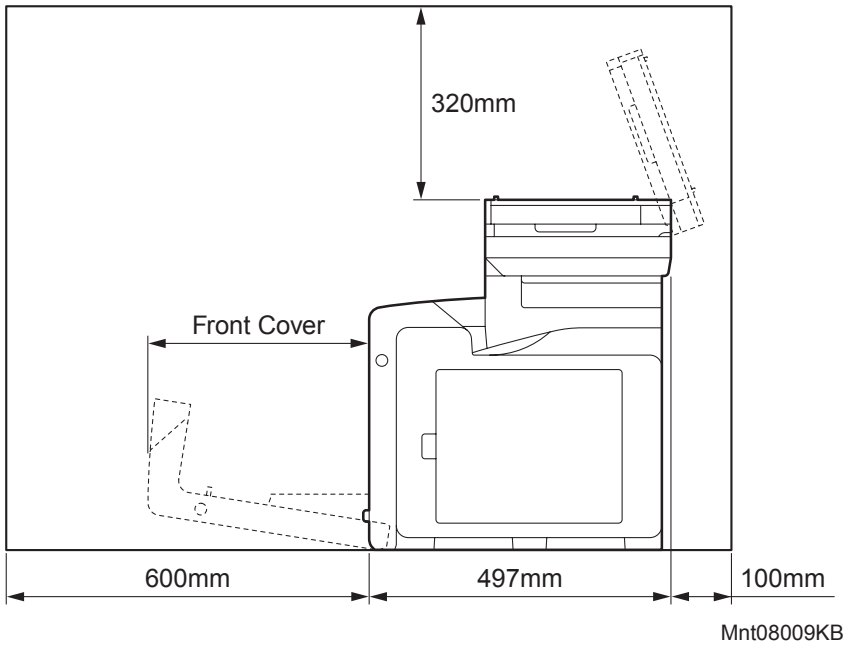


Mnt08007KB

Front view



Side view



4. Functions

4.1 Recording System

Electro-photographic system employing OPC drum and direct transfer by the transport belt

4.2 Exposure System

Semiconductor four laser beams scanning system

4.3 Development System

Development with dry type 2-component developer

4.4 Fixing System

Thermal fixing system by Free Belt Nip Fusing (FBNF)

4.5 Resolution

Max 1200 dots/25.4mm

4.6 Operation Mode

The printer can be operated in either of 5 operation modes. The modes are switched over by command from the printer controller or change of printer operation, etc.
Proceeding from power ON, low power mode or sleep mode to standby mode will take place after going through a warm up stage.

- Running mode (Printing)
  State in running or recording operation
  - Fixing system: Held at operating temperature.
  - Exposure system: Operating status
  - Recording system: Operating status
- Running mode (Scanning)
  - Exposure system: Operating status
- Ready mode
  Ready state
  - Fixing system: Held at ready temperature.
  - Exposure system: Stop status
  - Recording system: Stop status
- Low power mode
  Complete resting state. Compatible to E-Star requirement.
  - Fixing system: Stop status
  - Exposure system: Stop status
  - Recording system: Stop status
- Sleep mode
  Resting state from the sleep state.
  - Fixing system: Stop status
  - Exposure system: Stop status
  - Recording system: Stop status

4.7 Warm-up Time

When nominal voltage is applied, the printer will proceed to standby mode from POWER-ON within 30 seconds.

Reference: Measured at 22°C, 55% RH, nominal voltage.

4.8 FCOT (First Copy Output Time)

FCOT time of the printer is shown in the table below.
The time required for the first sheet of paper to be delivered after the Copy indication is given is calculated on the following conditions (rounded to one decimal place).

- IOT performance that the controller does not have IOT wait.
- The printer is in the standby mode. (ROS MOTOR OFF, FUSER READY)
- Paper is A4 SEF
- Document on the platen glass or the ADF.
- Except when process control is operating*1

*1:Process controller operation is process controls such as TC control, electric potential control, cleaning cycle, registration control, and so on. Sometimes, the printer stops feeding papers for a certain period of time while continuous printing for these operations.

- Color mode

B/W:	21.3 sec. or less
Color:	30.3 sec. or less

4.9 Input Properties

4.9.1 Paper pick-up system

- Paper pick-up with paper tray
  Feeding method of this printer is ARRF method.

4.9.2 Paper pick-up capacity

- Paper pick-up with paper tray
  • 250 sheet Paper Tray : 250 sheets or below 27.6mm of standard paper (Standard)

- MPF paper pick-up
  1 sheet

4.10 Output Properties

4.10.1 Paper delivery system

Paper can be delivered by the following method.

- FACE DOWN delivery

4.10.2 Paper delivery capacity

- FACE DOWN delivery

  150 sheets (Letter/A4 standard paper)

4.10.3 Delivery paper size/mass

- FACE DOWN delivery

  All paper sizes applicable to this printer

4.10.4 Full stack detection

non

4.11 Paper

4.11.1 Paper type

Paper which can be used with this printer is classified into standard paper, general paper and special paper.

- Standard paper

  Using this type of paper is recommended. Reliability, operability and print image quality are the application range of the specifications.

  Following paper is the standard paper.

	B/W	F/C
For overseas market	4200MP	X-pressions

- General paper

  General paper is plain paper except standard paper and special paper, and its reliability and running performance are within the specification, but the print image quality is out of the specification.

- Special paper

  Special paper except for plain paper. Reliability and operability are the applicable range of specifications but the print image quality is out of the applicable range of specifications.

4.11.2 Paper mass

- Paper feed from paper tray

  "60 to 216 gsm" (16 lb to 80 lb)

4.11.3 Paper size

Paper size which can be set to each paper pick-up unit is shown in the table below.

Cassette	Paper size
250 Sheet Paper Tray	A5, B5 (JIS, IOS), A4, Letter, Executive, Legal, Folio, Monarch, DL, C5, Yokei size2, Yokei size3, Yokei size4, Yokei size6, Yochokei size3, Chokei size3, Chokei size4, Kakukei size 3, Japanese post card Minimum size Width 76.2mm (3 in) x Length 127mm (5 in) Maximum size Width 215.9mm (8.5 in) x Length 355.6mm (14 in)

5. Consumables

Consumables are usually replaced by costumers. In the event of recovery of failure attributable to consumables or isolation of failure, you may replace them.

5.1 Items of Consumables

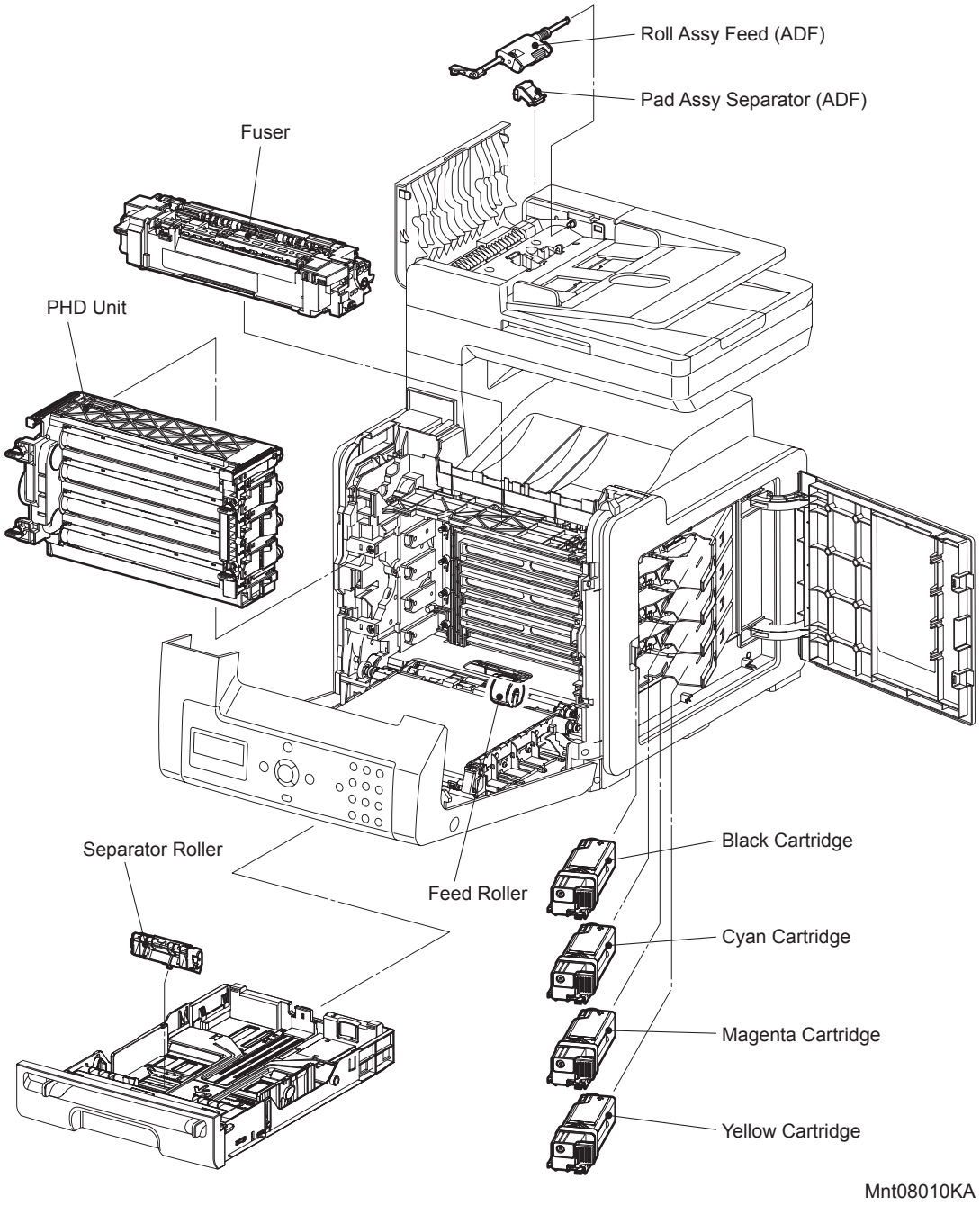
- Black toner cartridge
  Cartridge to supply black toner to the development unit.
  Black toner cartridge has CRUM (CRU memory) to record information.
- Yellow toner cartridge
  Cartridge to supply yellow toner to the development unit.
  Yellow toner cartridge has CRUM (CRU memory) to record information.
- Magenta toner cartridge
  Cartridge to supply magenta toner to the development unit.
  Magenta toner cartridge has CRUM (CRU memory) to record information.
- Cyan toner cartridge
  Cartridge to supply cyan toner to the development unit.
  Cyan toner cartridge has CRUM (CRU memory) to record information.

5.2 Consumable Life

- Black toner cartridge: 1k / 2.5kPV
- Yellow toner cartridge: 1k / 2.5kPV
- Magenta toner cartridge: 1k / 2.5kPV
- Cyan toner cartridge: 1k / 2.5kPV

5.3 Periodic Replacing Parts (Reference)

- SEPARATOR and FEED ROLLER	50kPV
- FUSER	50kPV
- PHD	24kPV (Run Length: 3)
- ROLL ASSY FEED (ADF)	35k Scans
- PAD ASSY SEPARATOR (ADF)	35k Scans


Roll Assy Feed (ADF)
Pad Assy Separator (ADF)
Fuser
PHD Unit
Separator Roller
Feed Roller
Black Cartridge
Cyan Cartridge
Magenta Cartridge
Yellow Cartridge
Mnt08010KA

6. Operating Environment

6.1 Installation Temperature / Humidity

Installation temperature and humidity on the condition without condensation is as follows.
At operating: 10-32 °C, 10-85%RH (No condensation)

6.2 Installation Altitude

0 to 3,100m

6.3 Installation Horizontality

This machine functions normally in a horizontal position or any position with the maximum allowable level difference of 5 mm or less in longitudinal direction, and 10 mm or less in lateral direction.

6.4 Ambient Lighting

3000 Lux or less (without no direct sun beams)

6.5 Storage Temperature of a Toner Cartridge

The guaranteed period of the print cartridge before unpacked is as follows:
Normal conditions: 12 months under 0 to 35°C, 15 to 80% RH.
Harsh conditions: Up to 48 hours (Max) under -20 to 0°C and 35 to 40°C, 5 to 15% RH and 80 to 95% RH.

The storage altitude shall be 0 to 3100m. Can be extended to 0 to 15000m when shipped by air. (Provided that the cargo bay is pressurized to 70.9275Kpa or higher.)

7. Safety / Environment Conditions

7.1 Safety Standard

- 100V / 120V system
  UL60950 1
  CSA C22.2 No.60950
- 220 / 240V system
  IEC60950

7.2 Laser Safety Standard

- 100V / 120V system
  FDA1040
- 220 / 240V system
  IEC60825 Amendment 1 + Amendment 2

7.3 EMI

- 120V system (US)
  FCC Part 15, Subpart B, Class B
- 220 / 240V system (EC)
  EN55022 (CISPR Publication 22), Class B

7.4 Noise

Noise of priting is as follows.

Noise / Printer	Noise Level (B)	Noise Level (B)
Standby	≤ 4	-
Running	≤ 6.16*1	≤ 6.46*2

*1: No ADF

*2: ADF

8. Print image Quality

8.1 Image Quality Guarantee Conditions

The image quality is specified and guaranteed under the following conditions.

8.1.1 Environmental conditions

Environment condition for evaluating image quality
Temperature: 15-28 °C
Humidity: 20-70%RH

8.1.2 Guaranteed paper

The print image quality specified here is guaranteed with standard paper fed from the paper tray.
Evaluation is performed with the maximum size of each standard paper.
- Fuji Xerox C2 paper (Color print)
- Fuji Xerox P paper (B&W print)

8.1.3 Paper condition

The paper is used fresh paper immediately after unpacked, which has been left in the operating environment for 12 hours before unpacking.

8.1.4 Printer condition

The print image quality specified in this section is guaranteed with the printer in normal condition.

8.1.5 Image quality guaranteed area

The print image quality specified in this section is guaranteed in the guaranteed image quality area specified in this manual. (Refer to Capter 1)

8.1.6 Criterion

The print image quality is guaranteed with the Spec. In rate = 90% (γ = 90%).

9. Option

9.1 Options to be Installed by Users

Users can install the following unit.

- Expansion memory (256MB)

10. ESS Specification

10.1 External Interface

10.1.1 USB

Item	Specification
Connector	Type-B x 1
Protocol	USB2.0, HighSpeed
Supported Client	Windows 2000 / XP / 2003 / Vista

10.1.2 Ethernet

Item	Specification
Connection	10 Base-T/100 Base-TX
Protocol	See “10.2 Network Protocol” for details
Supported Client	Windows 2000 / XP / 2003 / Vista

10.2 Network Protocol

10.2.1 Printing Protocol

Protocol	Transport	Maximum Session	Supported Client
LPD	TCP/IP	1	Windows 2000 / XP / 2003 / Vista
Port9100	TCP/IP	1	Windows 2000 / XP / 2003 / Vista

10.2.2 Other Protocols

Protocol	Transport	Support
SMTP	TCP/IP	E-Mail Alert
SNMP	UDP/IP	Driver, Installer
HTTP	TCP/IP	EWS
DHCP	UDP/IP	IP setup
BOOTP	UDP/IP	IP setup
RARP	TCP/IP	IP management
AutoIP	TCP/IP	Installer (device discovery)

10.2.3 MIB

The printer supports following MIB.

- RFC1213 MIB-II
- RFC1514 HostResources
- RFC1759 Printer MIB
- XCMI 2.4 (Fuji Xerox private MIB)

10.3 Decomposer

10.3.1 PDL

PDL	Interface port
PCL6, PCL5e	USB, TCP/IP

10.3.2 Font

81 fonts Sets for PCL are available as built-in font.

10.3.3 Image Area

Usable Area Size	Maximum : 215.9mm (8.5 in.) x 355.6mm (14 in.)
Unprintable Area	4.0 mm each from four edges (left, right, top and bottom) of paper
Printable Area	Maximum : 207.9mm (8.18 in.) x 347.6mm (13.68 in.)
Print Image Quality Guaranteed Area	Same as Printable Area

10.4 Job Control

10.4.1 Cancel Print

A print job in process can be cancelled at the operation panel.

10.4.2 Job Recovery

When a job fails due to a paper jam, the printer automatically restarts the job after the jammed paper is removed.

10.4.3 Job Time Out

When job transmission is interrupted for a certain period of time (Time can be changed at the operation panel and unlimited time can be selected), the print data is deleted as an error.

10.4.4 Printer Auditron

Auditron is a function to specify the availability of color print and to limit print volume per user. Only administrators are allowed to make limitation settings from the EWS.
User name and password is embedded in the print job in order to identify who the job is sent from.
User name and password are entered by user from the printer driver.
The printer can support maximum 50 accounts.

10.4.5 IP Filter

The user can select to accept or reject jobs for the specified IP address. Up to 5 IP addresses can be specified.
IP filter is available only to LPD and Port9100.

10.5 Logging

10.5.1 Job Logging

The printer can retain up to 10 job logs. Job log can be printed instantly according to the user's request or automatically printed when the number of the retained job logs has reached 10. Job log includes the following information:

- Job sent date and time
- Input interface (USB, Lpd etc.)
- Document name (File name)
- Output color
- User name/Host name
- Number of printed pages (Color/B/W)
- Number of printed impressions (Color/B/W)
- Paper size
- Result (Successful, Error, etc.)

10.5.2 Error Logging

The printer can retain up to 10 jam errors and up to 10 fatal errors.
The user can pirnt error log by the panel operation.
Jam error log includes the following information:

- PV when jam has occurred
- Name of Jam

Fatal error log includes the following information:

- PV when error has occurred
- Error code

10.5.3 Billing Count

NOTE

• The same data is stored in two or more addresses in one IC. Datacheck (checksum etc.) is conducted.

NOTE

• When ESS is replaced, IC can be transferred. (IC is mounted on socket)

Counter	Description
Color Print Counter	Count the number of paper printed in color (7 digits)
B/W Print Counter	Count the number of paper printed in B/W (7 digits)
Total Print Counter	Count the total number of paper printed in color and B/W (7 digits)

10.6 Non DELL Toner Mode

When life of toner cartridge has ended, the printer stops accepting print request (life of toner cartridge is counted by the counter in CRUM). Taking into consideration that some users use refilled toner cartridges, the printer can accept print request by the user's panel operation even if life of toner cartridge has ended. When the mode has changed so that the printer does not stop even after life of toner cartridge ends, the printer displays a message on the operation panel to inform the user of the mode change. When the printer operates in this mode, print image quality is not guaranteed. Also, remaining toner level is not displayed (as CRUM data can not be guaranteed).

10.7 Utility Print

10.7.1 Printer Settings List

Printer Settings List can be printed according to the user's request.
Printer Settings List is printed in B/W in the automatically selected paper tray.
Printer Settings List includes the following information:
Items on the list are slightly different from below when wireless LAN option is installed.

[Title]

Product name (Logo)

[General]

Printer Name, Service tag, Asset Number, Total Impressions, Color Impressions, Black Impressions, Serial Number, Memory capacity, Printer language, Number of fonts available, Firmware Version, Boot version, Engine Version, IIT Version, IPS Version, Default paper size, Default paper type for plain paper, Default paper type for label, Default panel display language

[Network]

Firmware version, MAC address, Ethernet Setting TCP/IP: LPD, Port9100, SNMP, E-Mail Alert, EWS, IP Filter

[Print Volume]

Print volume for each paper size

10.7.2 Panel Settings List Print

Panel Settings List can be printed by the user's operation.
Panel Settings List is printed in B/W on A4 size paper (Letter size paper for the US) in the automatically selected paper tray.

10.7.3 Font List Print

PCL or PS Font List and Color Bar (for color check) can be printed by the user's operation.
Font List is printed in color on A4 size paper (Letter size paper for the US) in the automatically selected paper tray.

10.7.4 Job History Report

The user can print Job History Report by requesting instant print or by setting auto print.
Job History Report in B/W on A4 size (Letter size for the US) in the automatically selected paper tray.

- Date
- Time
- Input Port
- Host/User Name
- Document Name
- Output Color
- Page Size
- Pages
- Sheets
- Result

10.7.5 Error History Report

Error History Report can be printed according to the user's request.
Error History Report in B/W on A4 size (Letter size for the US) in the automatically selected paper tray.

- System Fail History:
  Date/Time/Chain Link
- Paper Jam History:
  Date/Time/Paper Jam Type

11. IIT (Image Input Terminal) Specifications

11.1 Scanner

11.1.1 Scanning Method

- Platen Mode: The document is scanned directly on the platen grass.
- CVT (Constant Velocity Transport) mode: The document is scanned via the ADF (Auto Document Feeder).

11.1.2 Optical Resolution

- Fast Scanning: 1200dpi/600dpi
- Slow Scanning: 1200dpi/600dpi/400dpi/300dpi/200dpi

11.1.3 Fast Scanning Speed

- B/W: 665μsec/line (600dpi) /1330μsec/line (1200dpi)
- Color: 1330μsec/line (600dpi) /2660μsec/line (1200dpi)

11.1.4 Light Source

Cold cathode fluorescent lamp

11.1.5 Maximum Scanning Size

Platen Mode: 216mm x 297mm (8.5in. x 11.7in.)
CVT Mode: 216mm x 355.6mm (8.5in. x 14in.)

11.1.6 Input Bit Depth

- B&W: 8bit x 2ch. (Odd/Even)
- Color: 8bit x 3ch. (RGB)

11.2 ADF

11.2.1 Document Condition

Sheets without breakage, wrinkles, or folds.

11.2.2 Document Thickness

50 g/m^2 to 125g/m^2

11.2.3 Auto Document Size Detection

None

11.2.4 Document Feed System

FRPF: Friction Retard Pad Feeder (Top sheet feeding)

11.2.5 ADF Half-Open, Full-Open Angles

- Full-open: 85 +/- 5 (TBD) degrees
- Half-open: 10 +/- 5 degrees to 85 +/- 5 degrees
- Self-closing: 10 +/- 5 degrees or less

11.2.6 Document Registration

- ADF Mode: Center Registration

11.2.7 Capacity

- 35 sheets. (Plain Paper)

12. FAX Specifications

12.1 Communication

12.1.1 Communication Mode

- Priority 1: ITU-T Super G3
- Priority 2: ITU-T G3 ECM
- Priority 3: ITU-T G3

ITU: International Telecommunication Union

ITU-T: ITU Telecommunication Standardization Sector

ECM: Error Correction Mode

12.1.2 Density of Transmitting Pixels

- B&W (Fast Scan x Slow Scan)

Lines: 8 pixels X 3.851mm, 8 pixels X 7.71mm

Pixels: 400 ppi x 400ppi

12.1.3 Modem Signal Processing

The following protocols are supported:

- V. 34 (Max.33.6 kbps)
- V. 17 (14.4/12/9.6/7.2 kbps)
- V. 29 (9.6/7.2 kbps)
- V. 27ter (4.8/2.4 kbps)

12.1.4 Data Compression, Output Bit Depth

- B&W (1bit): JBIG, MMR, MR, MH

12.1.5 Communication Control Procedure

The procedure complies with ITU-T Recommendation T.30

12.1.6 Transmission Time

The time (T_P) to transmit image data in G3 communication is defined in the table below. Resolution is not converted during transmission and density is normal.

Chart / Mode	14.4Kbps (MMR)	28.8Kbps (MMR)	33.6Kbps (JBIG)*1
The Institute of Image Electronics Engineer of Japan No.4 / Super Fine (400dpi)	56 sec. or less	29 sec. or less	22 sec. or less
Fine	26 sec. or less	13 sec. or less	11 sec. or less
Standard	19 sec. or less	10 sec. or less	7 sec.or less
ITU-T No.1 / Super Fine	30 sec. or less	15 sec.or less	12 sec. or less
Fine	15 sec. or less	8 sec. or less	6 sec. or less
Standard	11 sec. or less	6 sec. or less	4 sec. or less
FX English Sales Chart / Standard	7 sec. or less	4 sec. or less	2 sec. or less
FX Japanese Sales Chart / Standard	9 sec. or less	5 sec. or less	4 sec. or less
The Institute of Image Electronics Engineer of Japan No.1 / Standard (Text/Photo)	75 sec. or less	38 sec. or less	20 sec. or less

*1: Reference

12.1.7 Protocol Control Time

When data error is not identified, protocol control time (Tm, Tn, Tu) is as follows:

- V.17, V.29, V.27ter

Mode	Before messages: Tm	Between messages: Tn	After messages: Tu	Total
Standard protocol	16.4 sec. or less	3.2 sec. or less	4.4 sec. or less	24.0 sec. or less

-V.34

Mode	Before messages: Tm	Between messages: Tn	After messages: Tu	Total
Standard protocol	9.9 sec. or less	1.0 sec. or less	0.9 sec. or less	11.8 sec. or less

12.1.8 Throughput

Sending time is calculated in the following formula:

Sending time = Setup time + Tm + (N X Tp) + {(N-1) X Tn} + Tu (sec.)

(N: Send quantity, TP: Image transmission time)

12.2 Cable Characteristics

With pseudo cable of 0 through 15Km, the highest speed is guaranteed for communication with V.17, V.29, and V.27ter respectively. As for V.34, 33600bps communication speed is guaranteed with 0 through 2Km cable, 31200bps communication speed with 2 through 9Km cable, 19200bps or higher communication speed with 9 through 15km cable.

12.3 Communication Load Characteristics

Data error characteristics for noise and cable loss during communication are as follows:
Error rate (Error frequency/Total communication quantity) ≤ 1/500

12.4 Incoming Call Level

Under ideal conditions (flat line, no noise, and no other line stress), the normal communication in the range of -3 dBm to 43 dBm shall be guaranteed.
As for V.17, V.29, and V.27 ter, the highest speed shall be guaranteed in the range of -6 dBm to -43 dBm. For V.34, the communication of 33600 bps or more shall be guaranteed in the range of -9 dBm to -19 dBm, as well as that of 16800 bps or more in the range of -19 dBm to -43 dBm.
However, the normal communication in conformance to V.34 shall be guaranteed in the range of -9 dBm to -43 dBm.