# imageRUNNER C1335/C1325 Series

## Service Manual Rev. 1.0

1 2 3 4 5 6 7 8 9

1 2
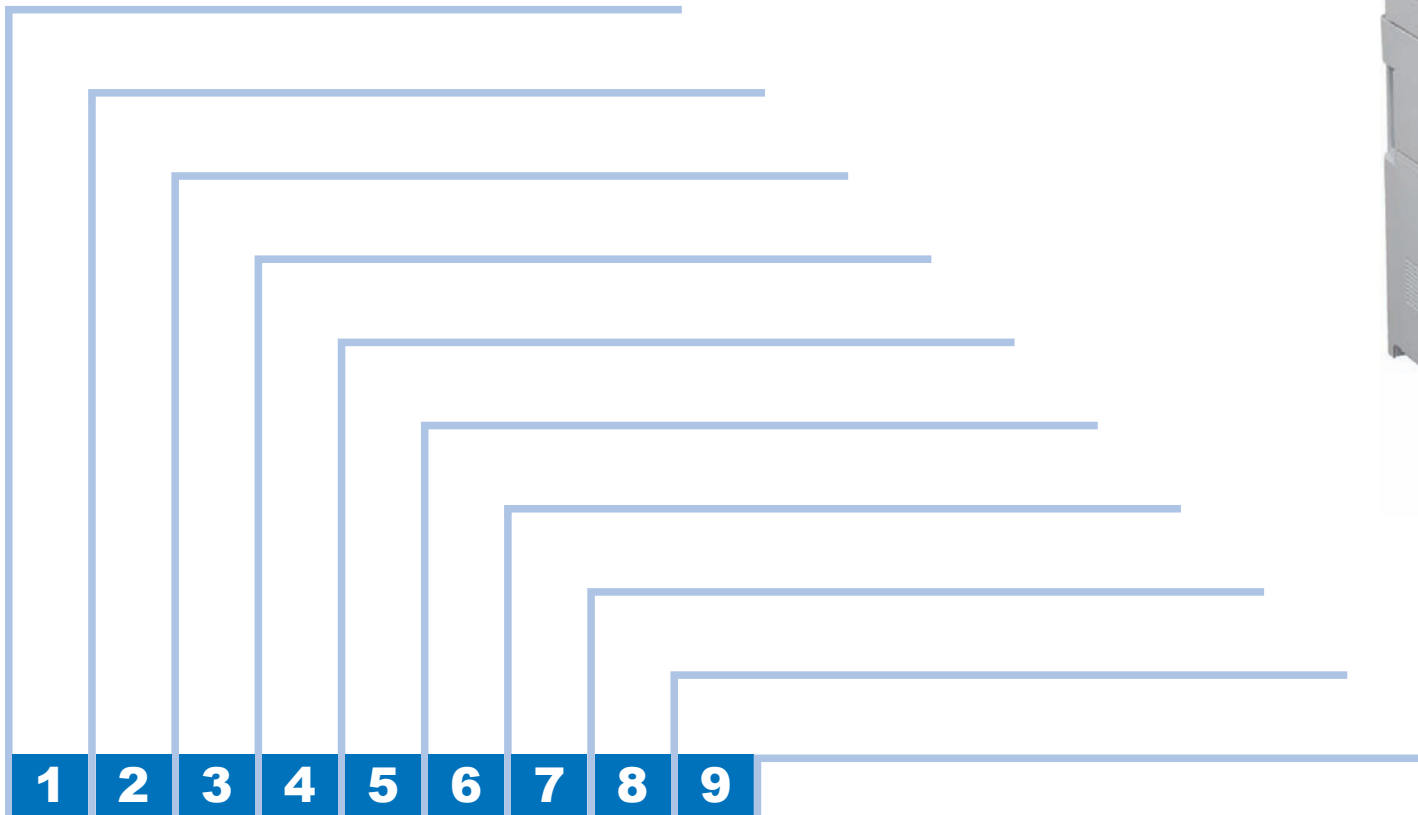
## Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products. This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

## Corrections

This manual may contain technical inaccuracies or typographical errors due to improvements or changes in products. When changes occur in applicable products or in the contents of this manual, Canon will release technical information as the need arises. In the event of major changes in the contents of this manual over a long or short period, Canon will issue a new edition of this manual.

The following paragraph does not apply to any countries where such provisions are inconsistent with local law.

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## Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

## Explanation of Symbols

The following symbols are used throughout this Service Manual.

| Symbols | Explanation | Symbols | Explanation |
|---|---|---|---|
| | Check. | 1x | Remove the claw. |
| | Check visually. | 1x | Insert the claw. |
| | Check a sound. | | Push the part. |
| 1x | Disconnect the connector. | | Connect the power cable. |
| 1x | Connect the connector. | | Disconnect the power cable. |
| 1x | Remove the cable/wire from the cable guide or wire saddle. | ON | Turn on the power. |
| 1x | Install the cable/wire to the cable guide or wire saddle. | OFF | Turn off the power. |
| 1x | Remove the screw. | 1x | Loosen the screw. |
| 1x | Install the screw. | 1x | Tighten the screw. |

| Symbols | Explanation | Symbols | Explanation |
|---|---|---|---|
| | Cleaning is needed. | | Measurement is needed. |

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.

   In the diagrams, ▭▭▭▭ represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow ⟶ indicates the direction of the electric signal.

   The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.

2. In the digital circuits, '1' is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low". (The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.

   In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.
All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine.

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# 5   Adjustment

# 6   Troubleshooting

# Appendix

# Safety Precautions

- Laser Safety
- Handling of Laser System
- Turn Power Switch ON
- Power Supply
- Safety of Toner
- Notes When Handling a Lithium Battery
- Notes Before Servicing
- Points to Note at Cleaning
- Notes On Assembly/ Disassembly

imageRUNNER C1335/ C1325 Series

## Laser Safety

Since radiation emitted inside the machine is completely confined within protective housings and external covers, the laser beame cannot escape from the machine during any phase of user operation.

Therefore this machine iz classified in Class 1 laser products that are regarded as safe during normal use according to International Standard IEC60825-1.

## Handling of Laser System

This machine is classified in Class 1 laser products.

However, inside the machine ,Class 3B laser beam is emitted and is hazardous when entered into an eye.

When servicing the area around the laser assembly, be sure to turn off the main power.

If you must service while the power is turned on, be sure to keep the followings:

- Do not use a screwdriver or tools that have a high level of reflectance in the laser path.

- Remove watches and rings before starting the work. (They can reflect the laser beam, possibly hitting the eye.)

The machine's covers that can reflect laser light are identified by means of a warning label (Figure). If you must detach a cover showing the label, be sure to take extra caution during the work.

The following warnings are given to comply with Safety Principles (EN60950-1).


Handhabung des Laserteils

Bei servicearbeiten am oder in der Nähe des Laserteils zuerst das Hauptgerät abschalten.


Bei Servicearbeiten, die unbedingt bei eingeschaltetem Gerät durchgeführt werden müssen, auf jeden Fall die folgenden Vorsichtsmaßnahmen beachten.


• Keine stark reflektierenden Schraubenzieher oder ähnliche Werkzeuge direkt in den Lichtpfad des Laserstrahls bringen.

• Vor Beginn der Arbeit Uhren, Ringe und ähnliche Gegenstände abnehmen. (Reflektierte Laserstrahlen könnten sonst in die Augen geraten.)


Abdeckungen, die möglicherweise Laserstrahlen reflektieren, haben in der auf dem Bild gezeigten Position einen Aufkleber. Bei Servicearbeiten auf der Innenseite von Abdeckungen mit Aufkleber ist besondere Vorsicht erforderlich.

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# Turn Power Switch ON

The machine is equipped with 2 power switches: main power switch and control energy saver key.

The machine goes on when the main power switch is turned on (i.e., other than in low power mode, sleep mode).

Energy Saver key
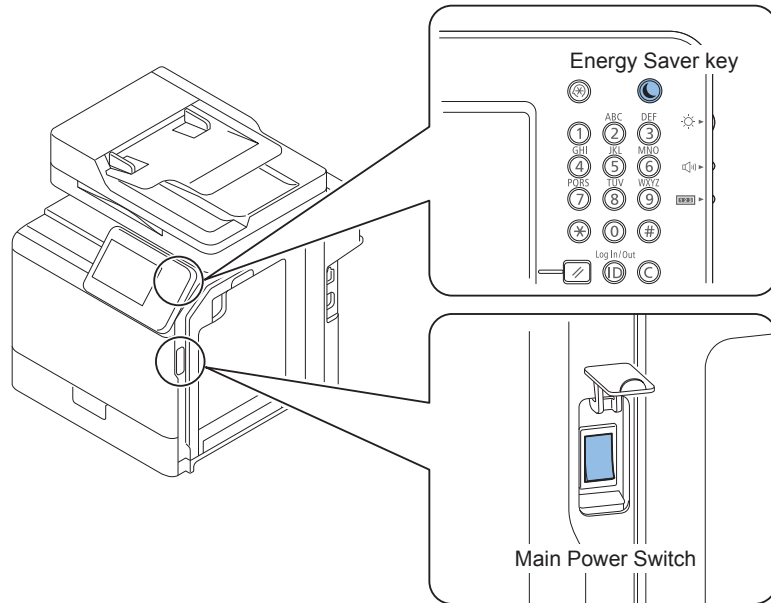
Main Power Switch

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CAUTION:

Do not turn off the main power switch while the progress bar is indicated, during whichaccess is made to the HDD. If deprived of power, the HDD can suffer a fault (E602).

# Power Supply

⚠️

1. As a general rule, do not use extension cords. Using an extension cord may result in a fire or electrical shock. If an extension cord must be used, however, use one for local rated voltage and over, untie the cord binding, and insert the power plug completely into the extension cord outlet to ensure a firm connection between the power cord and the extension cord.

2. The socket-outlet shall be installed near the equipment and shall be easily accessible.
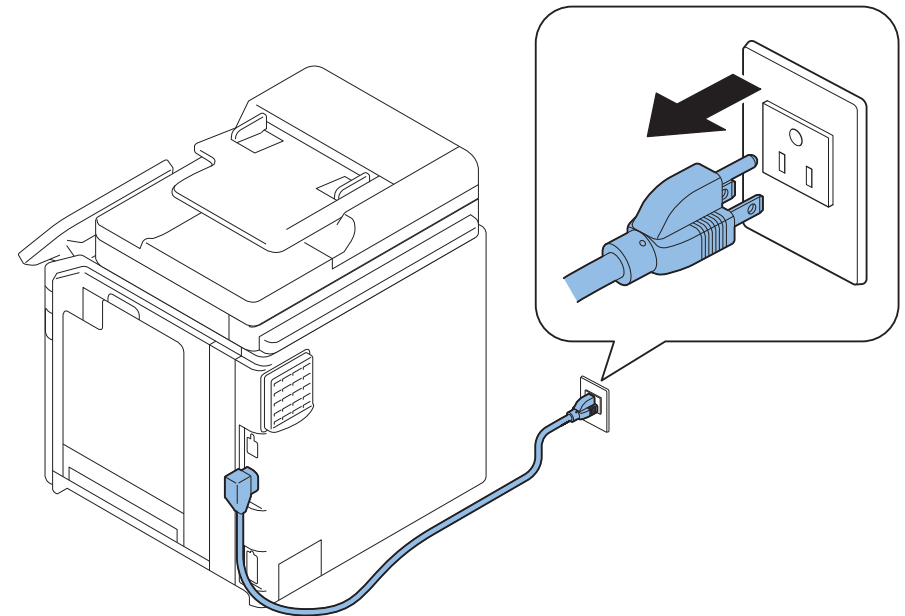
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# Safety of Toner

## About Toner

The machine's toner is a non-toxic material made of plastic, iron, and small amounts of dye.

⚠️

Do not throw toner into fire. It may cause explosion.

## Toner on Clothing or Skin

- If your clothing or skin has come into contact with toner, wipe it off with tissue; then, wash it off with water.
- Do not use warm water, which will cause the toner to jell and fuse permanently with the fibers of the cloth.
- Toner is easy to react with plastic material, avoid contact with plastic.

# Notes When Handling a Lithium Battery

⚠️ CAUTION:

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

The following warnings are given to comply with Safety Principles (EN60950).

⚠️ Achtung:

Wenn mit dem falschen Typ ausgewechselt, besteht Explosionsgefahr.

Gebrauchte Batterien gemäß der Anleitung beseitigen.

⚠️ 警告

如果更換不正確之電池型式會有爆炸的風險

請依製造商説明書處理用過之電池

# Notes Before Servicing

⚠️

At servicing, be sure to turn OFF the power source according to the specified steps and disconnect the power plug.

## Points to Note at Cleaning

CAUTION:

When performing cleaning using organic solvent such as alcohol, be sure to check that the component of solvent is vaporized completely before assembling.

## Notes On Assembly/Disassembly

Follow the items below to assemble/disassemble the device.

1. Disconnect the power plug to avoid any potential dangers during assembling/disassembling works.
2. If not specially instructed, reverse the order of disassembly to reinstall.
3. Ensure to use the right screw type (length, diameter, etc.) at the right position when assembling.
4. To keep electric conduction, binding screws with washers are used to attach the grounding wire and the varistor. Ensure to use the right screw type when assembling.
5. Unless it is specially needed, do not operate the device with some parts removed.
6. Never remove the paint-locked screws when disassembling.

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CAUTION

DOUBLE POLE/NEUTRAL FUSING
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ACHTUNG

Zweipolige bzw. Neutralleiter-Sicherung
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## ⬤ Points to Note when Tightening a Screw

For reduction in weight, thin plates are used in some parts of this machine.

In the case of a screw hole with a triangle mark near it as shown in the figure below, strongly tightening the screw may damage or deform the screw hole.

In the case of a screw hole with a triangle mark, take care not to apply too much force when tightening the screw.



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The recommended torque value is shown below as a reference value.

| Fastened member | | Type of Screws | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | RS tight | | W Sams | | Binding | | TP | |
| | | Metal | Resin | Metal | Resin | Metal | Resin | Metal | Resin |
| Tightening torque (N*m) | M4 | Approx. 1.6 | Approx. 1.6 | Approx. 1.6 | Approx. 0.8 | Approx. 1.6 | Approx. 0.8 | Approx. 1.6 | Approx. 0.8 |
| | M3 | Approx. 0.8 | Approx. 0.8 | Approx. 0.6 | Approx. 0.6 | Approx. 0.6 | Approx. 0.6 | Approx. 0.6 | Approx. 0.6 |

* For PCB, refer to the tightening torque value of resin (fastened member).

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| Type of Screws | | | |
|---|---|---|---|
| RS tight | W Sams | Binding | TP |
| | | | |



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**1**

# Product Overview

■Product Lineup
■Features
■Specifications
■Parts Name

# Product Lineup

## Host machine
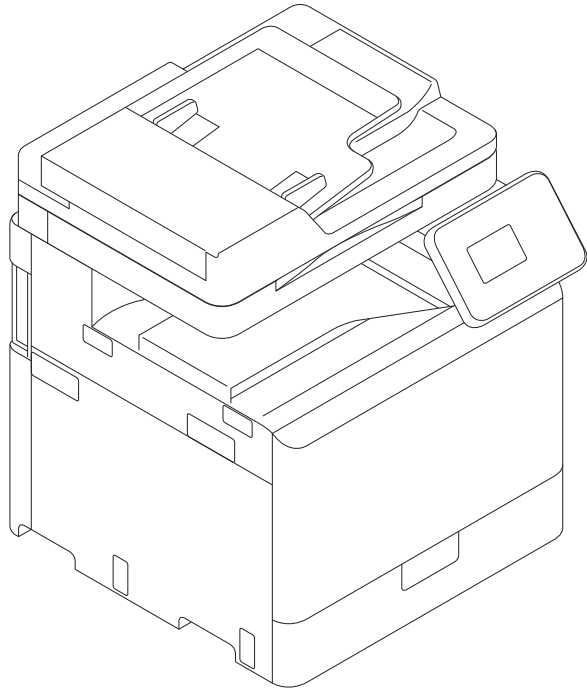


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### ■ Host machine configuration

| Configuration |
|---|
| Reader+ADF+Printer |

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### ■ Model type

| | imageRUNNER C1335 | imageRUNNER C1325 |
|---|---|---|
| Print Speed | 35 ppm | 25 ppm |

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## ⬤ Option

### ■ Pickup / Delivery / Image Reading System Options
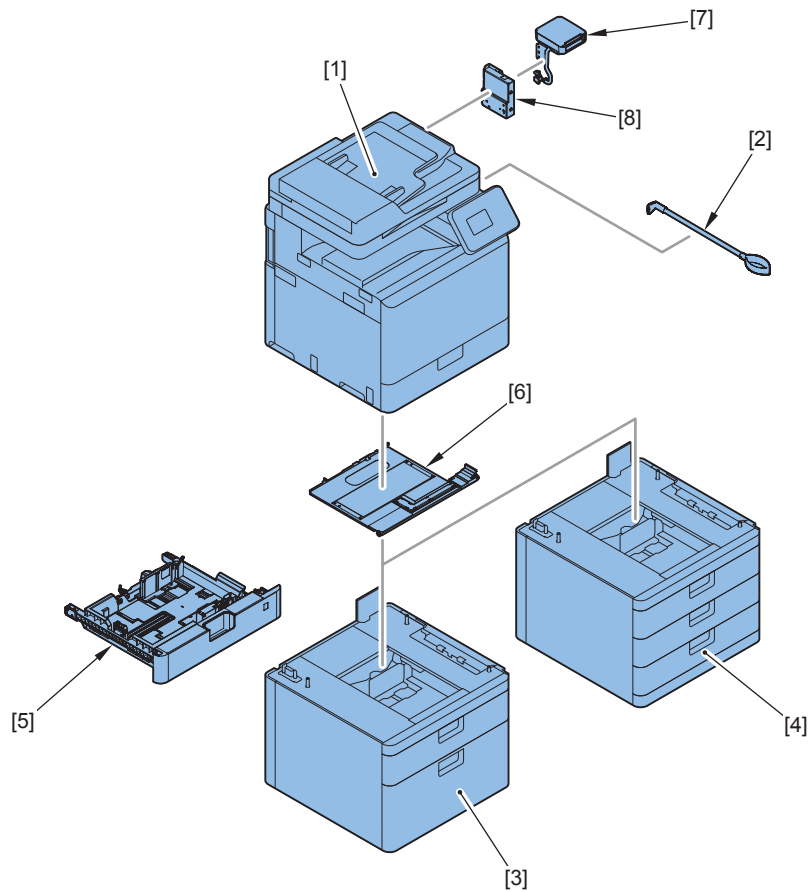


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| No. | Product name | Remarks and condition |
|---|---|---|
| 1 | imageRUNNER C1335/C1325 Series | |
| 2 | ADF Access Handle-A1 | |
| 3 | Cassette Feeding Unit-AJ1 | |
| 4 | Cassette Feeding Unit-AK1 | |
| 5 | Canon FL Cassette-AV1 | |
| 6 | Cassette Heater Unit-39 | |
| 7 | Copy Card Reader-F1 | To install the Copy Card Reader-F1, the Copy Card Reader Attachment Kit-H1 is required. |
| 8 | Copy Card Reader Attachment-H1 | |

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## ■ Function expansion system options



License option

[2]

[1]

[3]
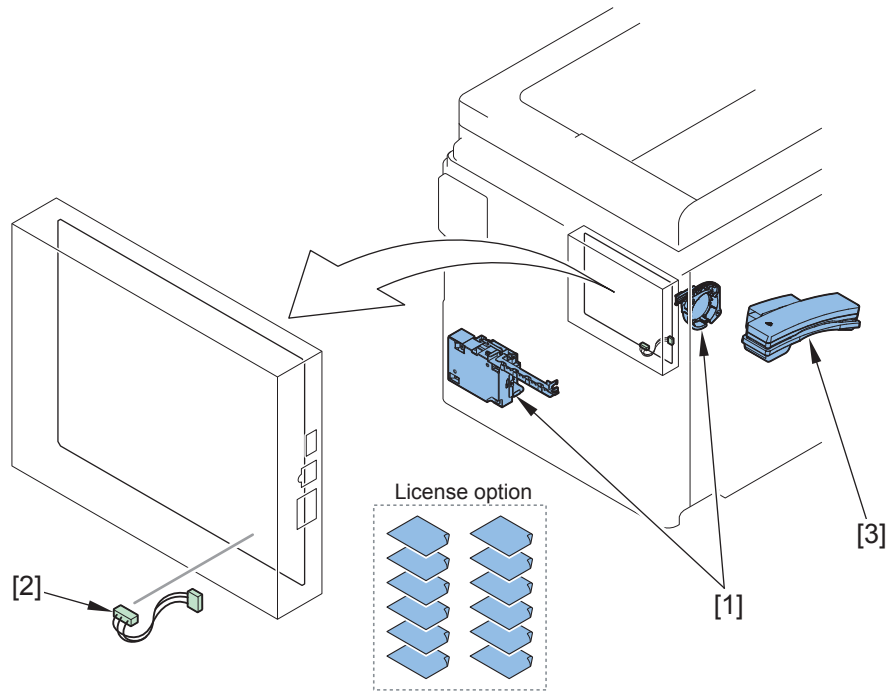
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### ● Hardware Products

| No. | Product name | Remarks and condition |
|---|---|---|
| 1 | Super G3 FAX Board-AQ1 | |
| 2 | Copy Control Interface Kit-C1 | |
| 3 | Handset-J1 | |
| - | eM Controller-C1 | |

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### ● License Products

At the time of installation, obtain the license number according to the license certificate included. Then, enter the obtained license number from the Control Panel of the machine, so that the applicable functions are enabled.

There is no physical installation work at the time of intallation.

| Product name | Remarks and condition |
|---|---|
| PCL Printer Kit-AZ1 | |
| USB Direct Print Kit (for PDF)-K1 | |
| Barcode Printing Kit-D1 | |
| Universal Send Security Feature Set-E1 | |

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# Features

## Product Features

Pickup Roller / Separation Roller / Separation Pad
• Easier replacement

Improved serviceability

Toner Container
• Reduction in toner soiling achieved by the new toner supply system

Improved usability

Fixing Assembly
ITB Unit
Secondary transfer outer Roller
Drum Unit (Y/M/C/Bk)
Waste Toner Container
• Easier replacement

Improved serviceability

Cassette/
Multi-purpose tray Roller
• Longer life

Low running cost

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# Specifications

## Specifications

| Item | Specifications |
|---|---|
| Copyboard | Original stream reading, original fixed reading |
| Machine installation method | Desktop |
| Light source | LED (RGB) |
| Photosensitive medium | OPC |
| Image reading system | CIS |
| Exposure method | Laser exposure |
| Charging method | Roller charging |
| Developing method | Dry, 2-component AC developing |
| Transfer method | Intermediate transfer (ITB) |
| Separation method | Curvature separation + Static Eliminator |
| Pickup method | Cassette: Retard separation<br>Multi-purpose Tray: Retard separation |
| Fixing method | On-demand fixing |
| Delivery method | Face-down |
| Magnification ratio | 25 to 400% (in 1% increment) |
| Drum cleaning method | Cleaning Blade |
| Transfer cleaning method | Cleaning Blade |
| Toner type | Non-magnetic negative toner |
| Toner supplying method | Toner Container method |
| Toner level detection function | Yes |
| Warm-up time | 30 sec. or less |
| Image gradations | 256 gradations |
| Resolution at writing | 600 x 600dpi |
| First print time | imageRUNNER C1335 series CL:10.4 sec. B/W: 8.9 sec.<br>imageRUNNER C1325 series CL:13.5 sec. B/W: 11.4 sec. |
| Paper type (Cassette) | Thin paper (60 to 63 g/m$^2$), Plain paper 1 (64 to 75 g/m$^2$), Plain paper 2 (76 to 90 g/m$^2$), Plain paper 3 (91 to 105 g/m$^2$), Recycled paper, Color paper, Pre-Punched paper,Heavy paper 1 (106 to 128 g/m$^2$), Heavy paper 2 (129 to 163 g/m$^2$), Envelope |
| Paper type (Multi-purpose Tray) | Thin paper (60 to 63 g/m$^2$), Plain paper 1 (64 to 75 g/m$^2$), Plain paper 2 (76 to 90 g/m$^2$), Plain paper 3 (91 to 105 g/m$^2$), Recycled paper, Color paper, Heavy paper 1 (106 to 128 g/m$^2$), Heavy paper 2 (129 to 163 g/m$^2$), Heavy paper 3 (164 to 220 g/m$^2$), Transparency, Postcard, Envelope |
| Paper size (Cassette) | A4, B5, A5, LGL, LTR, EXEC, STMT, 16K, Envelope and Custom size (98.4 x 190.5 to 215.9 x 355.6 mm) |
| Paper size (Multi-purpose Tray) | A4, B5, A5, LGL, LTR, EXEC, STMT, 16K, Postcard, Envelope and Custom size (98.4 x 148 to 215.9 x 355.6 mm) |
| Pickup capacity | Cassette: 550 sheets (80 g/m$^2$)<br>Multi-purpose Tray: 100 sheets (80 g/m$^2$) |

| Item | Specifications |
|---|---|
| Duplexing method | Through-pass duplex |
| Operation noise | 71.5dB or less (during printing)<br>imageRUNNER C1335 series :71.5dB or less (during printing)<br>imageRUNNER C1325 series: 68.5dB or less (during printing) |
| Ozone volume | Max 0.001ppm or less |
| Rated power supply | Americas: 120 to 127 V, 60 Hz, 7.5 A<br>Taiwan: 110 to 120 V, 60 Hz, 7.5 A<br>Europe/Asia-Oceania/China/Korea/Latin America: 220 to 240 V, 50/60 Hz, 4.0 A |
| Maximum power consumption | Maximum Power Consumption: 1.5 kW or less |
| Dimensions (W x D x H) | imageRUNNER C1335 series: 511mm x 564mm x 610mm<br>imageRUNNER C1325 series: 511mm x 549mm x 610mm. |
| Weight | Approx. 43kg |

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## Weight and Size

| Product name | Width (mm) | Depth (mm) | Height (mm) | Weight Approx. (kg) |
|---|---|---|---|---|
| imageRUNNER C1335 series | 511 | 564 | 610 | 43.0 |
| imageRUNNER C1325 series | 511 | 549 | 610 | 43.0 |
| Cassette Module-AJ1 (3 cassette) | 511 | 549 | 425 | 14.3 |
| Cassette Module-AK1 (1 cassette) | 511 | 549 | 425 | 18.9 |

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## Productivity (Print speed)

| Paper type | Size | imageRUNNER C1335IF | | | | imageRUNNER C1325/C1325IF | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Cassette | | Multi-purpose Tray | | Cassette | | Multi-purpose Tray | |
| | | 1-sided | 2-sided | 1-sided | 2-sided | 1-sided | 2-sided | 1-sided | 2-sided |
| Thin paper (60 to 63 g/m$^2$) Plain paper1 (64 to 75 g/m$^2$) Recycled paper1/Color paper (64 to 75 g/m$^2$) | A4 | 35 | 35 | 30 | 30 | 25 | 25 | 22 | 22 |
| | LTR | 36 | 36 | 31 | 31 | 26 | 26 | 23 | 23 |
| | LGL | 29 | 16 | 26 | 15 | 21 | 11 | 19 | 11 |
| | B5/16K | 3 to 26 | 3 to 26 | 3 to 23 | 3 to 23 | 3 to 26 | 3 to 26 | 3 to 23 | 3 to 23 |
| | A5R/STMTR | 2 to 26 | 2 to 26 | 2 to 23 | 2 to 23 | 2 to 26 | 2 to 26 | 2 to 23 | 2 to 23 |
| Plain paper2 (76 to 90 g/m$^2$) Recycled paper2 (76 to 90 g/m$^2$) Pre-Punched paper (76 to 90 g/m$^2$) | A4 | 35 | 35 | 30 | 30 | 25 | 25 | 22 | 22 |
| | LTR | 36 | 36 | 31 | 31 | 26 | 26 | 23 | 23 |
| | LGL | 29 | 16 | 26 | 15 | 21 | 11 | 19 | 11 |
| | B5/16K | 3 to 26 | 3 to 26 | 3 to 23 | 3 to 23 | 3 to 26 | 3 to 26 | 3 to 23 | 3 to 23 |
| | A5R/STMTR | 2 to 26 | 2 to 26 | 2 to 23 | 2 to 23 | 2 to 26 | 2 to 26 | 2 to 23 | 2 to 23 |
| Plain paper3 (91 to 105 g/m$^2$) Recycled paper3 (91 to 105 g/m$^2$) | A4 | 25 | 25 | 22 | 22 | 25 | 25 | 22 | 22 |
| | LTR | 26 | 26 | 23 | 23 | 26 | 26 | 23 | 23 |
| | LGL | 21 | 11 | 19 | 11 | 21 | 11 | 19 | 11 |
| | B5/16K | 3 to 26 | 3 to 26 | 3 to 23 | 3 to 23 | 3 to 26 | 3 to 26 | 3 to 23 | 3 to 23 |
| | A5R/STMTR | 2 to 26 | 2 to 26 | 2 to 23 | 2 to 23 | 2 to 26 | 2 to 26 | 2 to 23 | 2 to 23 |
| Heavy paper1 (106 to 128 g/m$^2$) | A4 | 17 | 17 | 15 | 15 | 17 | 17 | 15 | 15 |
| | LTR | 18 | 18 | 16 | 16 | 18 | 18 | 16 | 16 |
| | LGL | 14 | 8 | 13 | 8 | 14 | 8 | 13 | 8 |
| | B5/16K | 2 to 18 | 2 to 18 | 2 to 16 | 2 to 16 | 2 to 18 | 2 to 18 | 2 to 16 | 2 to 16 |
| | A5R/STMTR | 2 to 18 | 2 to 18 | 2 to 16 | 2 to 16 | 2 to 18 | 2 to 18 | 2 to 16 | 2 to 16 |
| Heavy paper2 (129 to 163 g/m$^2$) Label paper (127 to 160 g/m$^2$) | A4 | 17 | 17 | 15 | 15 | 17 | 17 | 15 | 15 |
| | LTR | 18 | 18 | 16 | 16 | 18 | 18 | 16 | 16 |
| | LGL | 14 | 8 | 13 | 8 | 14 | 8 | 13 | 8 |
| | B5/16K | 2 to 18 | 2 to 18 | 2 to 16 | 2 to 16 | 2 to 18 | 2 to 18 | 2 to 16 | 2 to 16 |
| | A5R/STMTR | 2 to 18 | 2 to 18 | 2 to 16 | 2 to 16 | 2 to 18 | 2 to 18 | 2 to 16 | 2 to 16 |
| Heavy paper3 (164 to 220 g/m$^2$) | A4 | - | - | 12 | - | - | - | 12 | - |
| | LTR | - | - | 12 | - | - | - | 12 | - |
| | LGL | - | - | 10 | - | - | - | 10 | - |
| | B5/16K | - | - | 2 to 12 | - | - | - | 2 to 12 | - |
| | A5R/STMTR | - | - | 2 to 12 | - | - | - | 2 to 12 | - |
| Transparency | A4 | - | - | 5 | - | - | - | 5 | - |
| | LTR | - | - | 5 | - | - | - | 5 | - |
| Postcard | - | - | - | 2 to 16 | - | - | - | 2 to 16 | - |
| Envelope | Monarch | 2 to 18 | - | 2 to 12 | - | 2 to 18 | - | 2 to 12 | - |
| | ISO-C5 | | | | | | | | |
| | COM10 | | | | | | | | |
| | DL | | | | | | | | |

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## Paper type

Following shows the types of usable papers.

See the table below for the custom paper size.

| Type | Feeding direction (mm) | Width direction (mm) |
|---|---|---|
| Custom paper size1 | 148.0 to 190.4 | 98.4 to 216.0 |
| Custom paper size2-1 | 190.5 to 209.9 | 98.4 to 216.0 |
| Custom paper size2-2 | 210.0 to 355.6 | 98.4 to 139.6 |
| Custom paper size3 | 210.0 to 355.6 | 139.7 to 216.0 |

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### ■ Pickup

Available paper types

| Paper Type | Size | Feeding direction (mm) | Width direction (mm) | Pickup position | | | | | Auto Duplex | 2-Side Setting |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Multi | CST1 | CST2 | CST3 | CST4 | | |
| Thin paper (60 to 63 g/m$^2$) | A4R | 297.0 | 210.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | B5R | 257.0 | 182.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | A5R | 210.0 | 148.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LGL | 355.6 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LTRR | 279.4 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | STMTR | 215.9 | 139.7 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | EXEC-R | 266.7 | 184.1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | 16K-R | 270.0 | 195.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | Custom paper size1 | 148.0 to 190.4 | 98.4 to 216.0 | Yes | No | No | No | No | No | Yes |
| | Custom paper size2-1 | 190.5 to 209.9 | 98.4 to 216.0 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | Custom paper size2-2 | 210.0 to 355.6 | 98.4 to 139.6 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | Custom paper size3 | 210.0 to 355.6 | 139.7 to 216.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Plain paper1 (64 to 75 g/m$^2$) Plain paper2 (76 to 90 g/m$^2$) Recycled paper1 (64 to 75 g/m$^2$) Recycled paper2 (76 to 90 g/m$^2$) Color paper (64 to 75 g/m$^2$) | A4R | 297.0 | 210.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | B5R | 257.0 | 182.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | A5R | 210.0 | 148.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LGL | 355.6 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LTRR | 279.4 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | STMTR | 215.9 | 139.7 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | EXEC-R | 266.7 | 184.1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | 16K-R | 270.0 | 195.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | Custom paper size1 | 148.0 to 190.4 | 98.4 to 216.0 | Yes | No | No | No | No | No | Yes |
| | Custom paper size2-1 | 190.5 to 209.9 | 98.4 to 216.0 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | Custom paper size2-2 | 210.0 to 355.6 | 98.4 to 139.6 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | Custom paper size3 | 210.0 to 355.6 | 139.7 to 216.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

| Paper Type | Size | Feeding direction (mm) | Width direction (mm) | Pickup position | | | | | Auto Duplex | 2-Side Setting |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Multi | CST1 | CST2 | CST3 | CST4 | | |
| Plain paper3 (91 to 105 g/m$^2$) Recycled paper3 (91 to 105 g/m$^2$) | A4R | 297.0 | 210.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | B5R | 257.0 | 182.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | A5R | 210.0 | 148.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LGL | 355.6 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LTRR | 279.4 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | STMTR | 215.9 | 139.7 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | EXEC-R | 266.7 | 184.1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | 16K-R | 270.0 | 195.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | Custom paper size1 | 148.0 to 190.4 | 98.4 to 216.0 | Yes | No | No | No | No | No | Yes |
| | Custom paper size2-1 | 190.5 to 209.9 | 98.4 to 216.0 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | Custom paper size2-2 | 210.0 to 355.6 | 98.4 to 139.6 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | Custom paper size3 | 210.0 to 355.6 | 139.7 to 216.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Heavy paper 1 (106 to 128 g/m$^2$) Heavy paper 2 (129 to 163 g/m$^2$) | A4R | 297.0 | 210.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | B5R | 257.0 | 182.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | A5R | 210.0 | 148.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LGL | 355.6 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LTRR | 279.4 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | STMTR | 215.9 | 139.7 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | EXEC-R | 266.7 | 184.1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | 16K-R | 270.0 | 195.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | Custom paper size1 | 148.0 to 190.4 | 98.4 to 216.0 | Yes | No | No | No | No | No | Yes |
| | Custom paper size2-1 | 190.5 to 209.9 | 98.4 to 216.0 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | Custom paper size2-2 | 210.0 to 355.6 | 98.4 to 139.6 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | Custom paper size3 | 210.0 to 355.6 | 139.7 to 216.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Heavy paper3 (164 to 220 g/m$^2$) | A4R | 297.0 | 210.0 | Yes | No | No | No | No | No | Yes |
| | B5R | 257.0 | 182.0 | Yes | No | No | No | No | No | Yes |
| | A5R | 210.0 | 148.0 | Yes | No | No | No | No | No | Yes |
| | LGL | 355.6 | 215.9 | Yes | No | No | No | No | No | Yes |
| | LTRR | 279.4 | 215.9 | Yes | No | No | No | No | No | Yes |
| | STMTR | 215.9 | 139.7 | Yes | No | No | No | No | No | Yes |
| | EXEC-R | 266.7 | 184.1 | Yes | No | No | No | No | No | Yes |
| | 16K-R | 270.0 | 195.0 | Yes | No | No | No | No | No | Yes |
| | Custom paper size1 | 148.0 to 190.4 | 98.4 to 216.0 | Yes | No | No | No | No | No | Yes |
| | Custom paper size2-1 | 190.5 to 209.9 | 98.4 to 216.0 | Yes | No | No | No | No | No | Yes |
| | Custom paper size2-2 | 210.0 to 355.6 | 98.4 to 139.6 | Yes | No | No | No | No | No | Yes |
| | Custom paper size3 | 210.0 to 355.6 | 139.7 to 216.0 | Yes | No | No | No | No | No | Yes |
| Labels | A4R | 297.0 | 210.0 | Yes | No | No | No | No | No | No |
| | LTRR | 279.4 | 215.9 | Yes | No | No | No | No | No | No |
| Pre-Punched paper | A4R | 297.0 | 210.0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LTRR | 279.4 | 215.9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | Custom paper size1 | 148.0 to 190.4 | 98.4 to 216.0 | No | No | No | No | No | No | Yes |
| | Custom paper size2-1 | 190.5 to 209.9 | 98.4 to 216.0 | No | No | No | No | No | No | Yes |
| | Custom paper size2-2 | 210.0 to 355.6 | 98.4 to 139.6 | No | No | No | No | No | No | Yes |
| | Custom paper size3 | 210.0 to 355.6 | 139.7 to 216.0 | No | No | No | No | No | Yes | Yes |

| Paper Type | Size | Feeding direction (mm) | Width direction (mm) | Pickup position | | | | | Auto Duplex | 2-Side Setting |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Multi | CST1 | CST2 | CST3 | CST4 | | |
| Transparency | A4R | 297.0 | 210.0 | Yes | No | No | No | No | No | No |
| | LTRR | 279.4 | 215.9 | Yes | No | No | No | No | No | No |
| Postcard | Postcard | 148.0 | 100.0 | Yes | No | No | No | No | No | Yes |
| | | 200.0 | 148.0 | Yes | No | No | No | No | No | Yes |
| | | 296.0 | 200.0 | Yes | No | No | No | No | No | Yes |
| Envelope | COM10 | 241.3 | 104.7 | Yes | Yes | No | No | No | No | Yes |
| | Monarch | 190.5 | 98.4 | Yes | Yes | No | No | No | No | Yes |
| | ISO-C5 | 229.0 | 162.0 | Yes | Yes | No | No | No | No | Yes |
| | DL | 220.0 | 110.0 | Yes | Yes | No | No | No | No | Yes |

T-1-10

# Parts Name

## External View

### ■ ADF
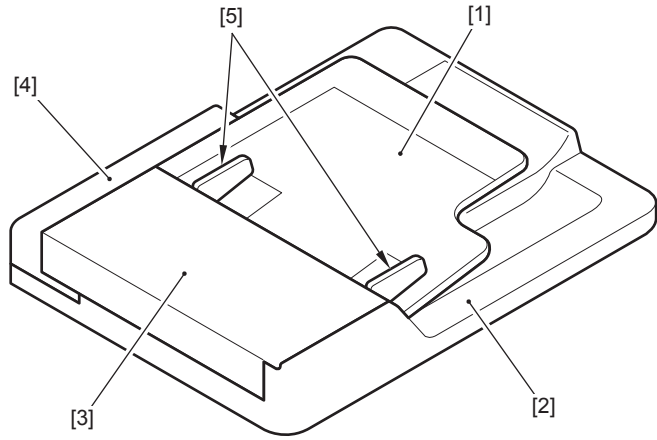


F-1-5

[1]　Original Tray　　　　　[2]　ADF Base
[3]　Feeder Cover　　　　　[4]　ADF Rear Cover
[5]　Side Guide Plate

### ■ Reader
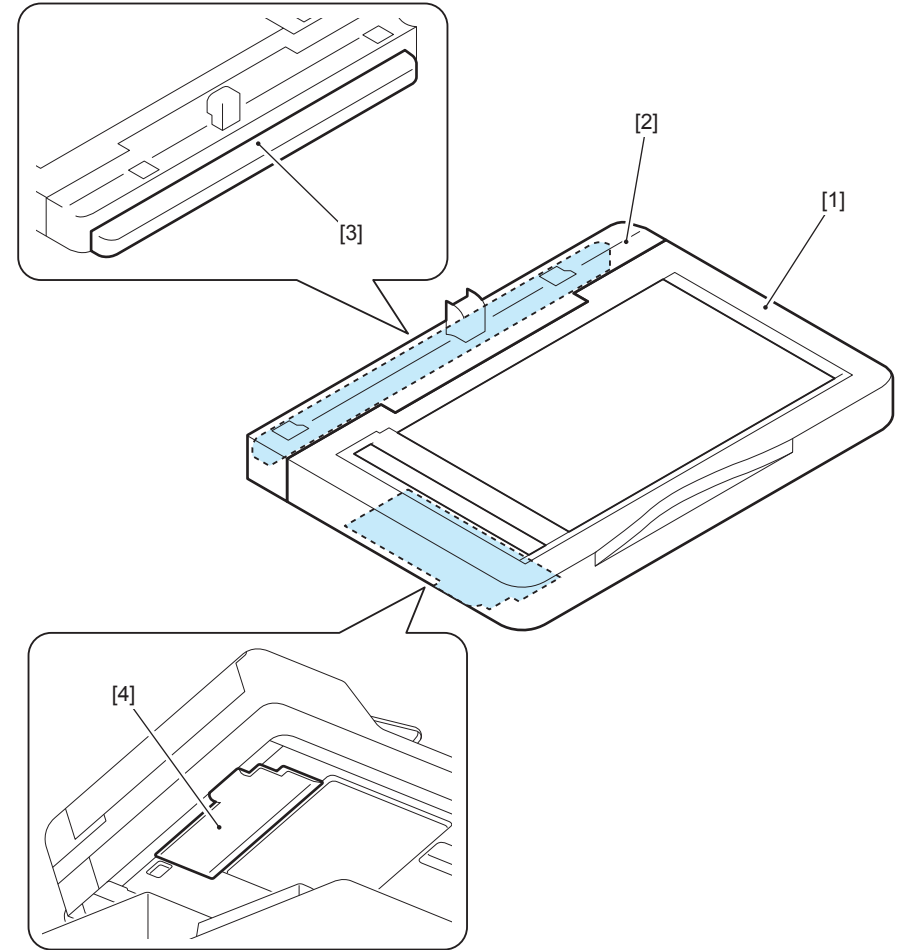


F-1-6

[1]　Copyboard Glass Unit　　　[2]　Reader Rear Cover 1
[3]　Reader Rear Cover 2　　　　[4]　Reader Motor Cover

## ■ Front view, Left side
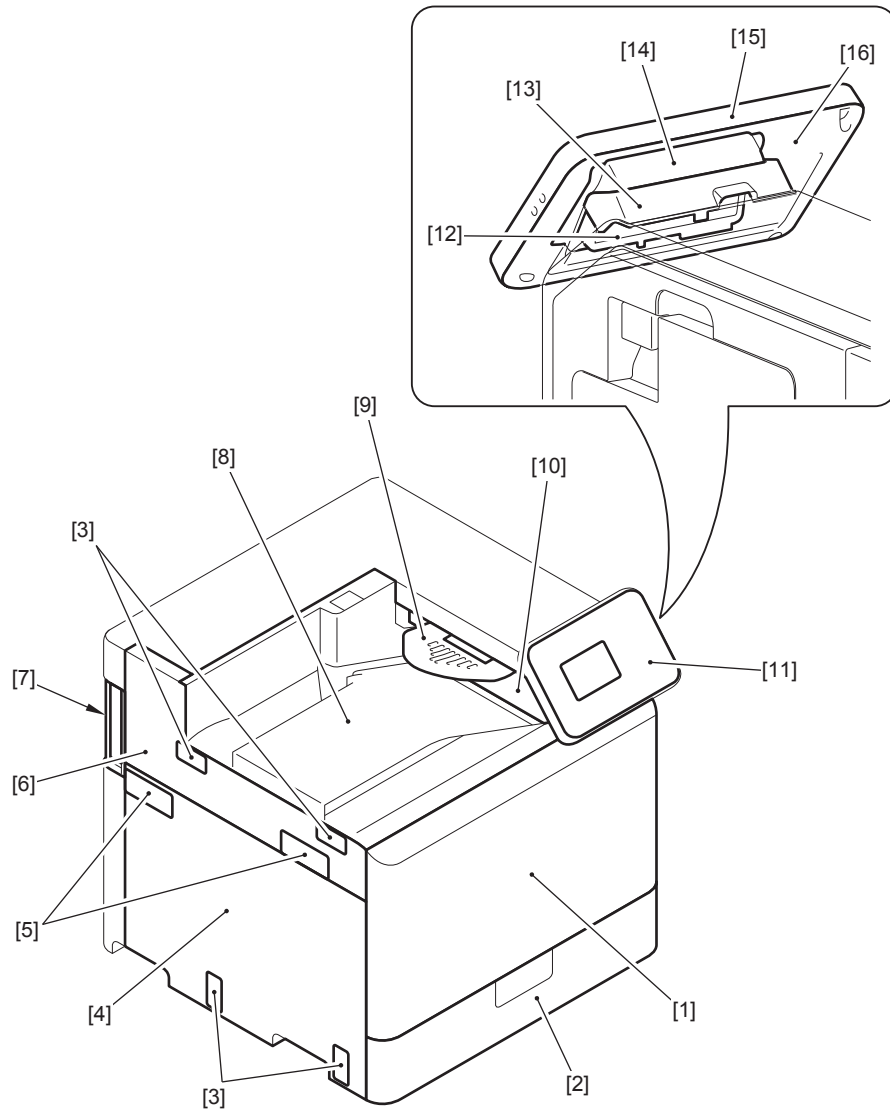


| | | | |
|---|---|---|---|
| [1] | Front Cover | [2] | Cassette |
| [3] | Face Cover | [4] | Left Lower Cover |
| [5] | Face Cover | [6] | Left Upper Cover |
| [7] | Rear Sub Cover | [8] | Delivery Cover |
| [9] | Reverse Tray | [10] | Upper Cover |
| [11] | Control Panel Front Cover | [12] | Control Panel Lower Hinge Cover |
| [13] | Control Panel Rear Hinge Cover | [14] | Control Panel Upper Hinge Cover |
| [15] | Control Panel Side Cover | [16] | Control Panel Rear Cover |

F-1-7

## ■ Rear view, Right side
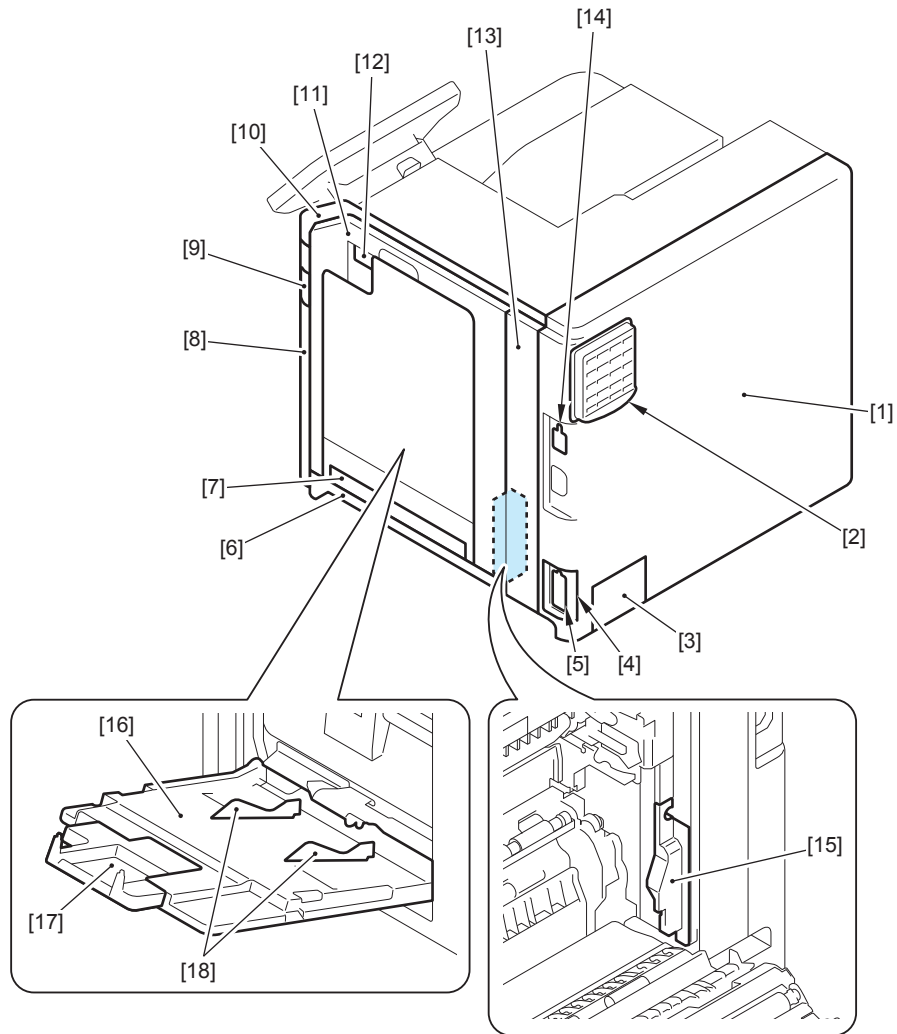


| | | | |
|---|---|---|---|
| [1] | Rear Cover 1 | [2] | FAN Cover |
| [3] | Environment Heater Cover | [4] | FAX Connector Cover |
| [5] | Multi-purpose Tray Lower Cover | [6] | Right Front Cover |
| [7] | Main Power Switch Cover | [8] | Right Upper Cover |
| [9] | Right Cover | [10] | Right Cover Open/Close Lever |
| [11] | Right Rear Cover | [12] | Environment Heater Switch Cover |
| [13] | Rear Upper Cover | [14] | Right Rear Lower Cover |
| [15] | Multi-purpose Tray | [16] | Multi-purpose Extension Tray |
| [17] | Multi-purpose Tray Side Guide Plate | | |

F-1-8

## ■ Front Inner
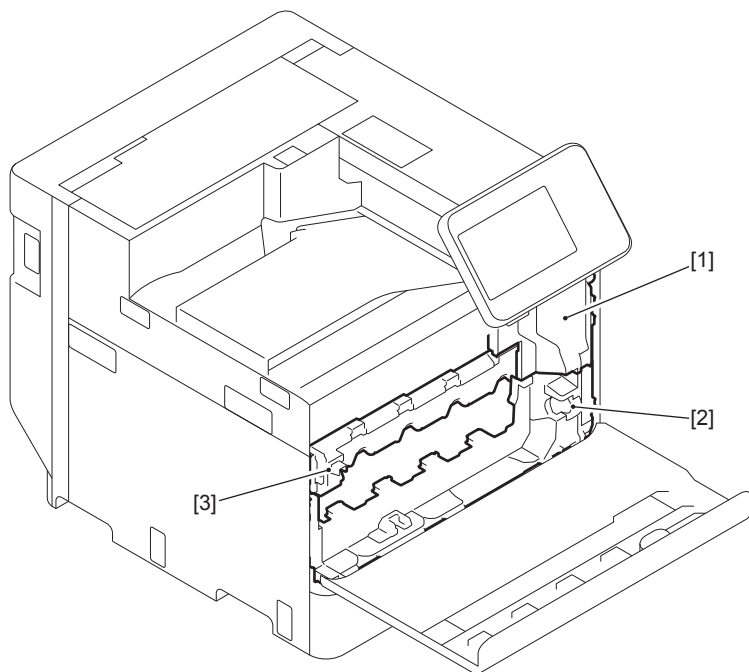


F-1-9

[1]    Front Inner Right Cover
[2]    Front Inner Lower Cover
[3]    Front Inner Upper Cover

## ● Cross Sectional View



F-1-10

[1]  ADF Unit
[3]  Separation Roller
[5]  Separation Pad
[7]  Original Tray
[9]  Platen Guide
[11]  Copyboard Glass
[13]  CIS Unit
[15]  Delivery Upper Roller
[17]  Right Door Unit
[19]  Duplex Feed Lower Roller
[21]  Pressure Roller
[23]  Toner Container (Y)
[25]  Toner Container (C)
[27]  ITB Unit
[29]  Secondary transfer inner Roller
[31]  ITB Cleaning Unit
[33]  Drum Unit (M)
[35]  Drum Unit (Bk)
[37]  Registration Unit
[39]  Pre-registration Roller
[41]  Cassette 1 feed Roller
[43]  Feed Paper Pickup Unit
[45]  Multi-purpose tray feed Roller

[2]  Pickup Roller
[4]  Feed Roller
[6]  Delivery Roller
[8]  ADF Base
[10]  Reader Unit
[12]  ADF Reading Glass
[14]  Delivery/Reverse Unit
[16]  Reverse Roller
[18]  Duplex Feed Upper Roller
[20]  Fixing Assembly
[22]  Fixing Film
[24]  Toner Container (M)
[26]  Toner Container (Bk)
[28]  Primary Transfer Roller
[30]  Secondary transfer outer Roller
[32]  Drum Unit (Y)
[34]  Drum Unit (C)
[36]  Laser Scanner Unit
[38]  Registration Roller
[40]  Cassette 1 pickup Roller
[42]   Cassette 1 separation Roller
[44]  Multi-purpose tray pickup  Roller
[46]  Multi-purpose tray separation Roller

## Operation

### ■ Power Switch

#### ● Types of Power Switches



Environment Switch
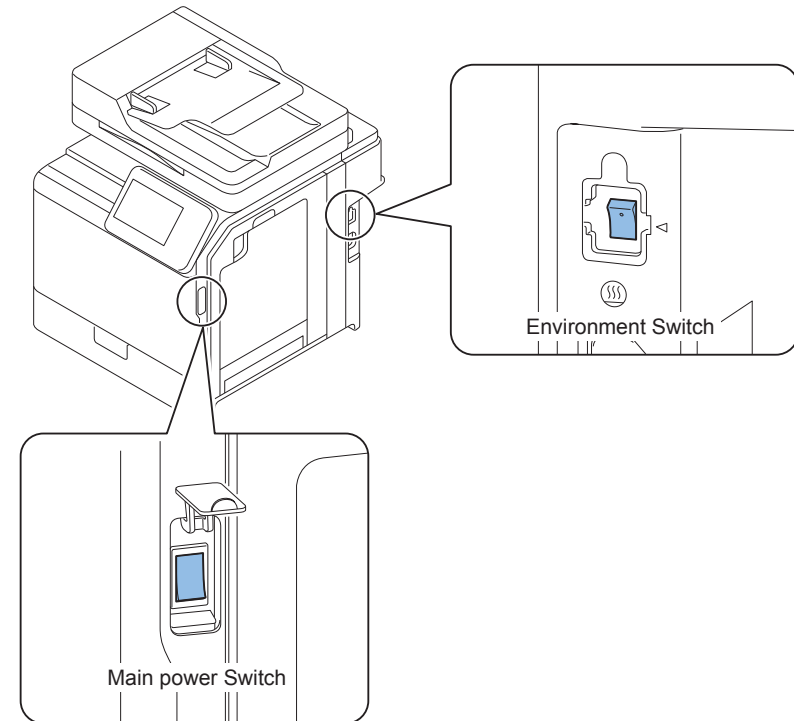
Main power Switch

F-1-11

This machine has the Main Power Switch and the Environment Switch.

[1] Main Power Switch
 This switch is used to turn OFF/ON the Main Power Switch.

[2] Environment Switch
 This switch is used to supply or shut power to Cassette Heater.

## ● Points to Note on Turning ON/OFF the Power Switch

- Be sure to turn OFF the Main Power Switch when turning off the power.
  (There is no need to perform the shutdown sequence which has been performed with the conventional machines.)
- After turning OFF the power (after turning OFF the Main Power Switch), do not turn ON the Main Power Switch unless the screen disappears.
- Do not turn OFF the power during downloading.

## ■ Description of Control Panel

### ● Control Panel



F-1-12
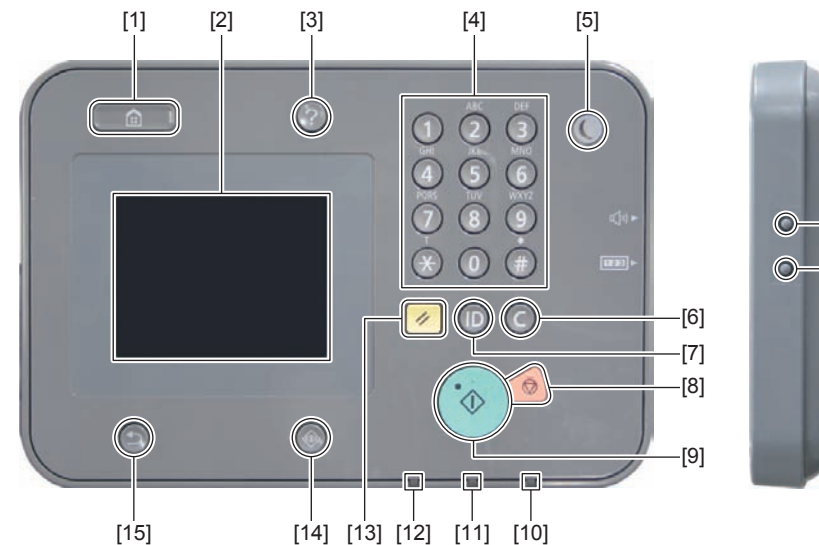
| | | | |
|---|---|---|---|
| [1] | Home key | [10] | Main Power Indicator |
| [2] | Touch Panel Display | [11] | Error Indicator |
| [3] | Quick Guide key | [12] | Processing / Data Indicator |
| [4] | Numeric key | [13] | Reset key |
| [5] | Energy Saver key | [14] | Status Monitor key |
| [6] | Clear key | [15] | Back key |
| [7] | ID (Log In/Out) key | [16] | Volume Settings key |
| [8] | Stop key | [17] | Counter Check key |
| [9] | Start key | | |

● Main Menu



F-1-13



F-1-14

| No | Name | Remarks |
|------|---------------------|---------------------------------|
| [1] | Copy | |
| [2] | Fax | Super G3 FAX Board-AQ1 is required. |
| [3] | Scan | |
| [4] | Memory Media Print | |
| [5] | Secure Print | |
| [6] | Paper Settings | |
| [7] | Home Screen Settings | |
| [8] | ID Card Copy | |

T-1-11

● Settings / Registration Menu
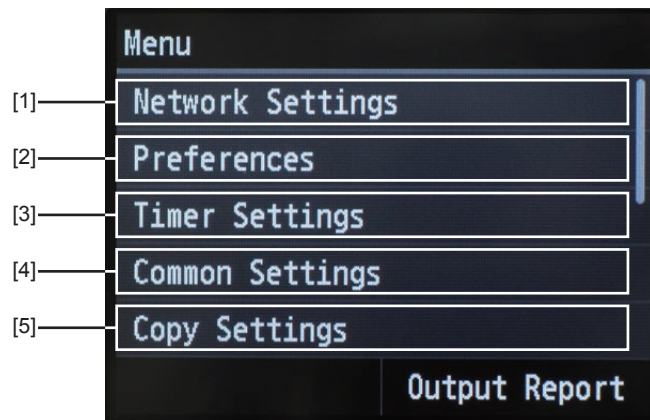


F-1-15
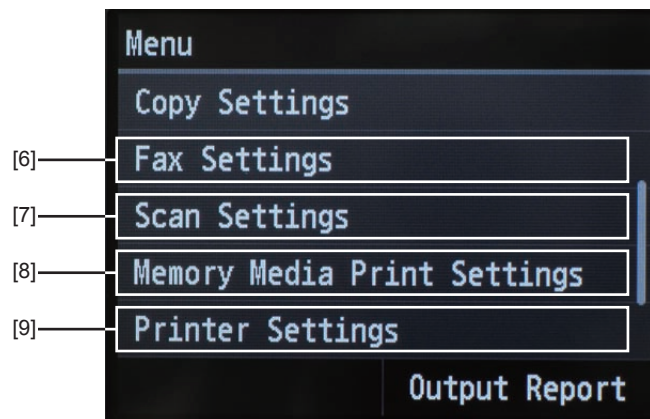


F-1-16
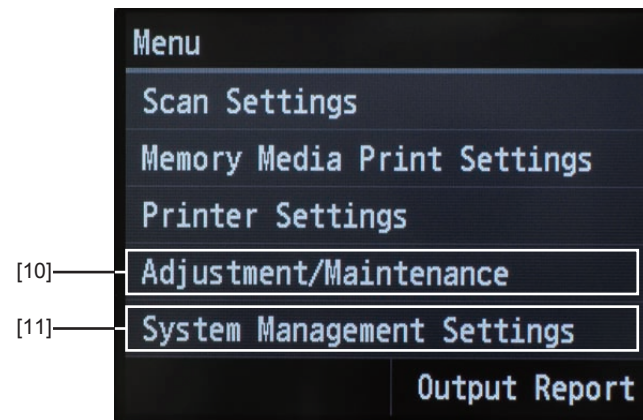


F-1-17

| No | Name | Remarks |
|---|---|---|
| [1] | Network Settings | |
| [2] | Preferences | |
| [3] | Timer Settings | |
| [4] | Common Settings | |
| [5] | Copy Settings | |
| [6] | Fax Settings | Super G3 FAX Board-AQ1 is required. |
| [7] | Scan Settings | |
| [8] | Memory Media Print Settings | |
| [9] | Printer Settings | |
| [10] | Adjustment/Maintenance | |
| [11] | System Management Settings | To log in as an administrator is necessary. |

T-1-12

# 2

# Technical Explanation

- Basic Configuration
- Original Exposure and Feed System
- Main Controller
- Laser Exposure System
- Image Formation System
- Fixing System
- Pickup / Feed System
- External Auxiliary System
- Embedded RDS

# Basic Configuration

## Functional Configuration

This machine consists of 6 major blocks: Original Exposure and Feed System, Controller System, Laser Exposure System, Image Formation System, Fixing System, and Pickup Feed System.
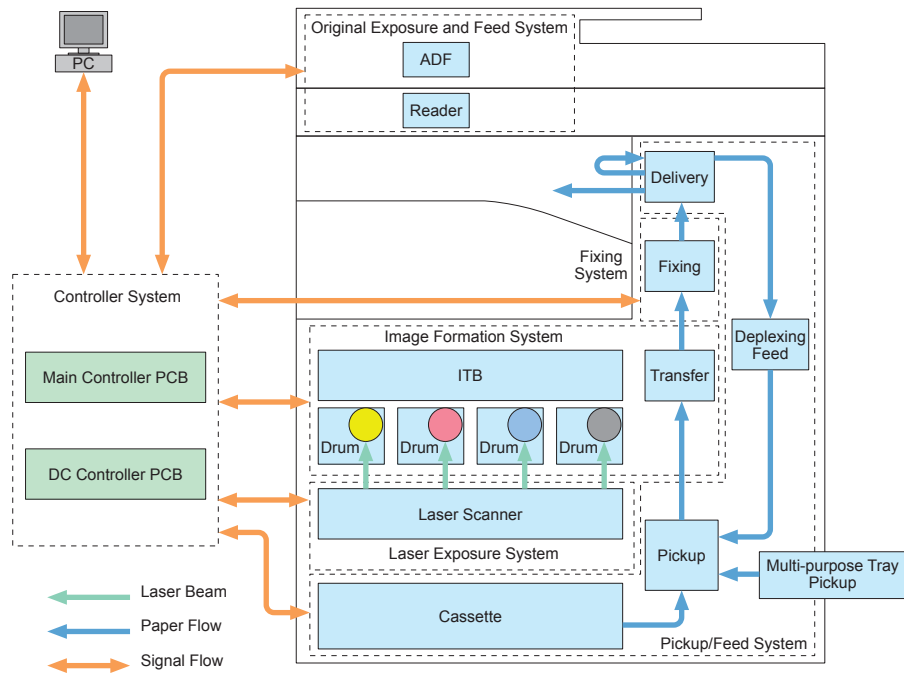


F-2-1

# Original Exposure and Feed System

## Construction

### ■ Specifications/controls/functions

The major specifications, controls and functions of the original exposure and feed system are described below.

| Item | | Specification/function |
|---|---|---|
| Original exposure | | LED |
| Original scan | In book mode | Original scan is performed by moving the contact image sensor (CIS). |
| | In ADF mode | Original stream reading is performed with the contact image sensor (CIS) fixed. |
| Read resolution | | 600 dpi x 600 dpi |
| Gradation | | 256 gradation |
| Carriage position detection | | CIS HP sensor (PS01) |
| Magnification | | 25% to 400% (in 1% increment) |
| | Main scanning direction | Image is processed on main controller PCB (UN81). |
| | Sub scanning direction | Image is processed on main controller PCB (UN81). |
| Lens | | Rod lens array |
| Original reading sensor | | Number of lens: 1 |
| | | Number of pixels: Total 5184 (incl. 5184 effective pixels) |
| | | Maximum original scan width: 216mm |
| CIS drive control | | Drive control by Reader motor (M01) |
| Original size detection | Reader | No |
| | ADF | Main scanning direction: No |
| | | Sub scanning direction: by original feeding length |
| ADF original pickup method | | Auto pickup/delivery method |
| ADF setting direction of original | | Face-up stacking |
| ADF setting position of original | | Center reference |
| ADF separation method of original | | Upper separation by separation pad |
| ADF scanning method of original | | Stream reading |
| ADF weight of original | 1-sided | 50 to 128 $g/m^2$ |
| | 2-sided | 64 to 105 $g/m^2$ |
| ADF original size | 1-sided | A4R, A5, A5R, B5R, B6, LGL, LTRR, STMT, STMTR Original width direction: 139.7 to 215.9 mm Original feed direction: 128 to 355.6 mm (In long length paper printing mode: maximum 630 mm; FAX mode only) |
| | 2-sided | A4R, A5, A5R, B5R, LGL, LTRR, STMTR Original width direction: 139.7 to 216 mm Original feed direction: 139.7 to 355.6 mm |

| Item | | Specification/function |
|---|---|---|
| ADF original tray capacity | | A4/LTR-R: 50 sheets (80 $g/m^2$) LGL: 30 sheets (80 $g/m^2$) |
| ADF original processing mode | | 1-sided original processing 2-sided original processing |
| ADF original size detection function | | No |
| ADF mixed original mode function | Mix of same configuration mode | Yes (weight of original same as continuous feed mode) Assured combination for mix with same configuration • LTR-R/LGL |
| | Mix of different configuration mode | No |
| Book original | | Supported (Heavy load up to 2 kg) |
| ADF done stamp function | | No |

T-2-1

## ■ Major Components

### ● Reader Unit

Following shows major components of reader unit.



F-2-2

| Item | Notation | Specification/function |
|------|----------|------------------------|
| Reader motor | M01 | Pulse Motor: controls the carriage drive. |
| Drive Pulley, Drive Belt | - | Controls the carriage drive. |
| CIS HP sensor | PS01 | Photo interrupter: detects the home position of CIS unit. |
| Contact image sensor | CIS | Reads the original. (LED + Light guide + Original reading sensor array unit) |

T-2-2

### ● ADF unit

Following shows major components of ADF unit.

1) Layout Drawing of Major Parts
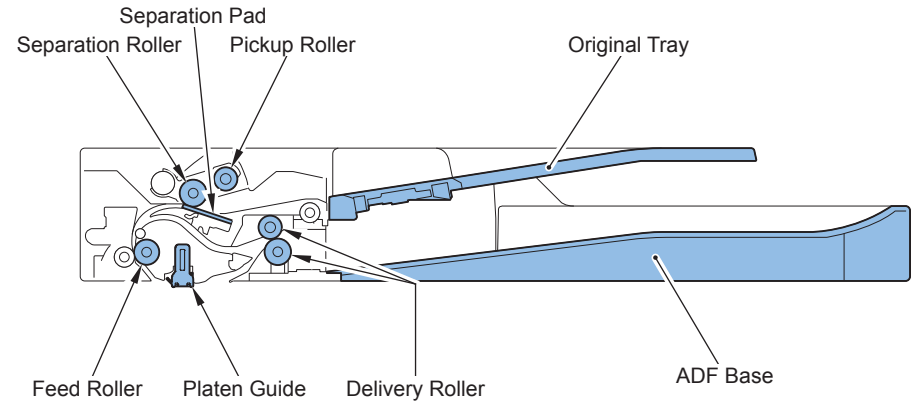


F-2-3

| Item | Specification/function |
|------|------------------------|
| Pickup roller | Picks up the original. |
| Separation Roller | Separates and feeds the original. |
| Separation pad | Separates the original. |
| Feed roller | Feeds the original. |
| Delivery Roller | Delivers and reverse feeds the originals. |
| Original delivery tray | Stacks the delivered originals. |
| ADF Base | Stacks the delivered originals. |
| Platen guide | Reading Assembly for originals. |

T-2-3

2)Layout Drawing of Sensors



F-2-4

3)Layout Drawing of Motor and Solenoid
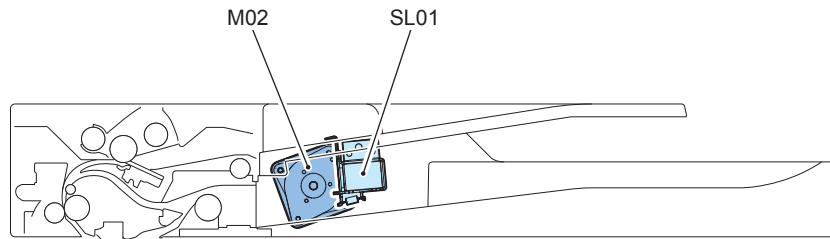


F-2-5

4)Drive System Drawing of Motor and Solenoid



F-2-6

| Item | Notation | Specification/function |
|------|----------|------------------------|
| ADF Motor | M02 | Pulse Motor: Feeds originals. |
| Disengagement Solenoid | - | When reverse feeding in the upward direction, disengages the roller from the Delivery Reverse Roller. |
| Document Sensor | PS03 | Photo Interrupter: Detects whether an original is present. |
| Document End Sensor | PS02 | Photo Interrupter: Detects the arrival of the leading edge and the passing of the trailing edge of an original. |

T-2-4

## Basic Operation

### ■ Basic Sequence

#### ● Basic Sequence at Power-On

```
                    ┌─────────────┐
                    │  Power-on   │
                    └─────────────┘
                           │
                           ▼
              ┌──────────────────────────┐
              │ Engine initialization starts │
              └──────────────────────────┘
                    │              │
                    ▼              ▼
        ┌──────────────────┐  ┌──────────────────┐
        │ Shift of carriage HP │  │ ADF initialization │
        └──────────────────┘  └──────────────────┘
                    │
                    ▼
        ┌──────────────────────┐
        │ Main power ON shading │
        └──────────────────────┘
                    │              │
                    ▼              │
        ┌──────────────────────────────┐
        │ Engine initialization is completed │
        └──────────────────────────────┘
```
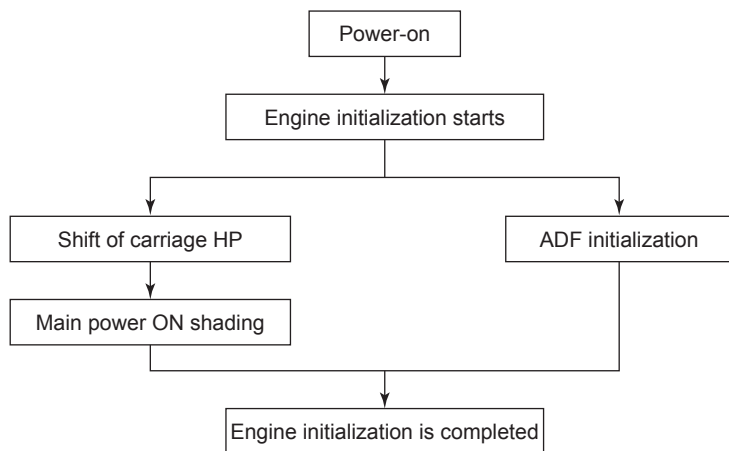
F-2-7

#### Shift of carriage HP

The carriage position in the vertical scanning direction is aligned.

The carriage shift behavior differs depending on the initial carriage position.

- When the carriage is on the right side of the CIS HP Sensor (PS01) (at power-on, at recovery from sleep)
  1) The Reader Motor activates and moves the carriage to the left.
  2) After the CIS HP Sensor (PS01) is turned ON, the carriage moves the designated distances and stops.

Related error code:
E202-0001: Scanner Unit HP error

  3) The Reader Motor activates and moves the carriage to the right.
  4) After the CIS HP Sensor (PS01) is turned OFF, the carriage moves the designated distances and stops.

Related error code:
E202-0002: Scanner Unit HP error

- When the carriage is on the left side of the CIS HP Sensor (PS02) (if the power was turned OFF in the middle of stream reading and then turned back ON, or if the carriage returned to the standby position after finishing stream reading)
  1) Step 3 above is executed.

#### Main power ON shading

Check operation of the CIS Unit reading function is performed. (Fixed shading is executed)
  1) The Reader Motor activates and moves the carriage to the left. (around the center of the White Plate)
  2) The CIS is put in the ON state.
  3) The White Plate is read with the LED turned off. (Black shading)
  4) The LED turns ON.
  5) The White Plate is read with the LED turned on. (White shading)
  6) The obtained luminance is checked.
     If the luminance is too low, the procedure is repeated from step 1.
     If the luminance is still too low even after the second time, E301-0001 is displayed.
  7) The CIS is put in the OFF state.
  8) The Reader Motor activates and moves the carriage to the right. (Standby position)

#### ADF initialization

Detection of remaining paper (jam detection), ejection of remaining paper on the downstream side of the Document End Sensor, and the disengagement mechanism of the Delivery Roller are initialized in the ADF.

● Basic Sequence at Start Key ON (Book mode)

```
                    ┌──────────────────┐
                    │      Start       │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │   CIS, AFE  ON   │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────────────┐
                    │ Black shading is executed │
                    └──────────────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │     LED  ON      │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────────────┐
                    │ White shading is executed │
                    └──────────────────────────┘
                             │
                             ▼
         ┌────────────────────────────────────────┐
         │ Carriage moves to acceleration start position │
         └────────────────────────────────────────┘
                             │
                             ▼
                    ┌──────────────────────┐
                    │ Scan operation starts │
                    └──────────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │     LED  OFF     │
                    └──────────────────┘
                             │
                             ▼
         ┌────────────────────────────────────┐
         │ Carriage moves to the standby position │
         └────────────────────────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │   CIS, AFE  OFF  │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────────┐
                    │  Scan operation ends │
                    └──────────────────────┘
```
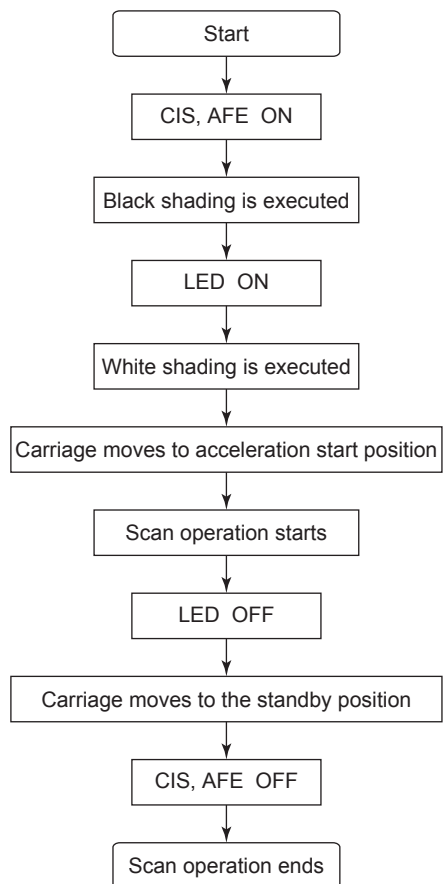
F-2-8

● Basic Sequence at Start Key ON (ADF mode)

```
                    ┌──────────────────┐
                    │     ADF scan     │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │   CIS, AFE  ON   │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────────────┐
                    │ Black shading is executed │
                    └──────────────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │     LED  ON      │
                    └──────────────────┘
                             │
                             ▼
         ┌──────────────────────────────────────────────┐
         │        White shading is executed             │
         │                   +                           │
         │ Carriage moves to stream reading position     │
         └──────────────────────────────────────────────┘
                             │
                             ▼
                    ┌──────────────────────────┐
                    │ ADF scan operation starts │
                    └──────────────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │     LED  OFF     │
                    └──────────────────┘
                             │
                             ▼
         ┌────────────────────────────────────────────┐
         │ Carriage moves to acceleration start position │
         └────────────────────────────────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │   CIS, AFE  OFF  │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────────────┐
                    │  ADF scan operation ends │
                    └──────────────────────────┘
```
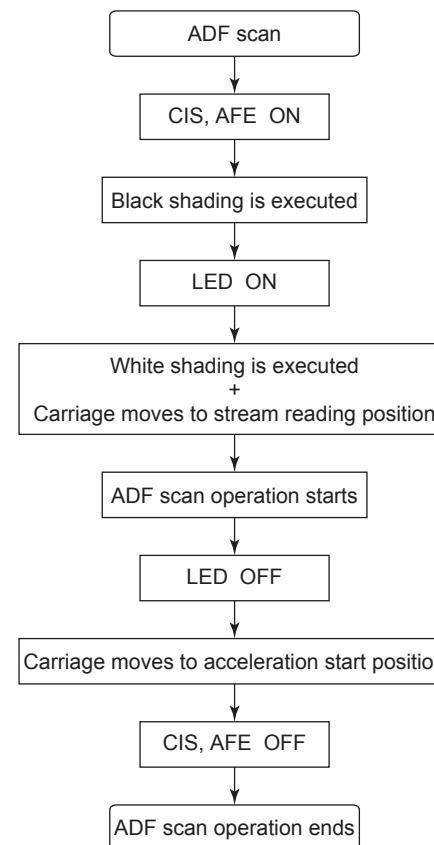
F-2-9

## ■ ADF Operation Mode

ADF has 4 operation modes.

Operation mode names and outline of operations and associated print modes are given in the following table:

| Operation mode name | Outline of operation | Associated print mode |
|---|---|---|
| Forward pickup/delivery | Picks up, reads, and then delivers an original. | Single-sided original -> Single-sided print |
| | | Single-sided original -> Double-sided print |
| Forward pickup/reversal delivery | An original is picked up, and reversed after completing the reading of the front side. After reading the back side, the original is reversed again and delivered. | Double-sided original -> Double-sided print |
| | | Double-sided original -> Single-sided print |

T-2-5

## ● Single-sided original reading

• Operation of single-sided original reading (2 originals)

Single-sided reading operation
(when 2 sheet of original is placed) 1/2

Single-sided reading operation
(when 2 sheet of original is placed) 2/2

- Setting of original

- Start of reading of the front side
  of the 1st Sheet
  & Pickup of the 2nd Sheet

- Passing of the 2nd Sheet reading position

- Pickup of the 1st Sheet
  & descent of Pickup Roller

- End of reading of the front side
  of the 1st Sheet & Feed of the 2nd Sheet

- Delivery of the 2nd sheet & ascent of Pickup Roller
  & End of job

F-2-11

- Feed of the 1st Sheet

- Waiting for reading of the front side
  of the 2nd Sheet

- Waiting for reading of the front side
  of the 1st Sheet
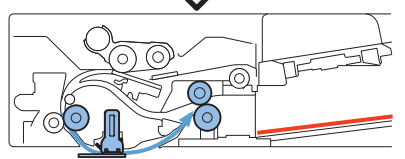
- Start of reading of the front side
  of the 2nd Sheet & descent of Pickup Roller
  & Delivery of the 2nd sheet

F-2-10

● Double-sided original reading

• Operation of double-sided original reading (2 originals)

Duplex reading operation
(when 2 sheet of original is placed)
1/5
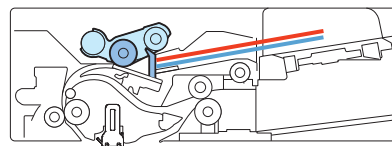


- Setting of original
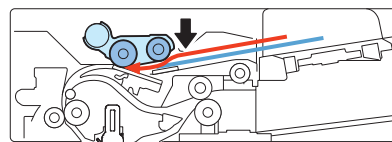
- Pickup of the 1st Sheet
  & descent of Pickup Roller
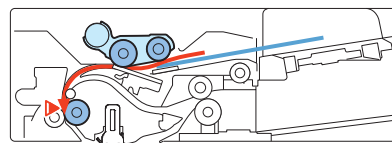
- Feed of the 1st Sheet
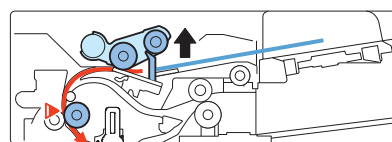
- Waiting for reading of the front side
  of the 1st Sheet & ascent of Pickup Roller
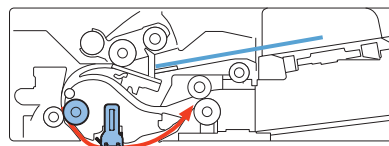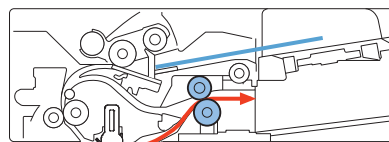
- Start of reading of the front side
  of the 1st Sheet

- End of reading of the front side
  of the 1st Sheet
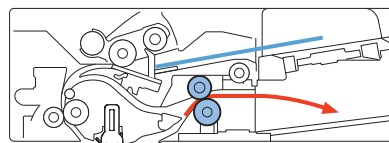
- Feed to the reverse point
  of the 1st Sheet
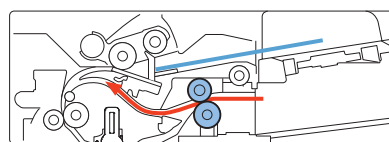
- Re-pickup of the 1st Sheet

F-2-12

Duplex reading operation
(when 2 sheet of original is placed)
2/5
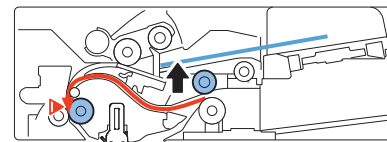


- Feed of the 1st Sheet
  & disengagement of Delivery Roller
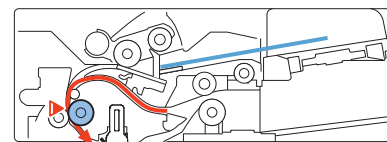
- Waiting for reading of the back side
  of the 1st Sheet
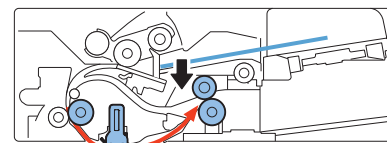
- Waiting for reading of the back side
  of the 1st Sheet & engagement of
  Delivery Roller
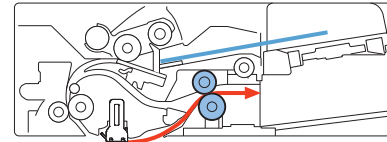
- End of reading of the back side
  of the 1st Sheet
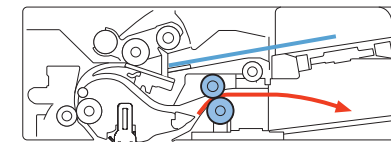
- Feed to the reverse point
  of the 1st Sheet
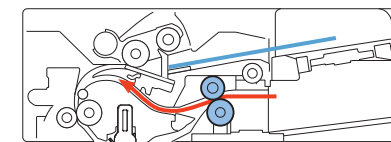
- Re-pickup of the 1st Sheet
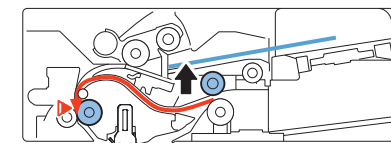
- Feed of the 1st Sheet
  & disengagement of Delivery Roller
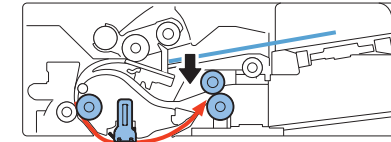
- Idle feed of the 1st Sheet
  & engagement of Delivery Roller

F-2-13

Duplex reading operation
(when 2 sheet of original is placed)
3/5
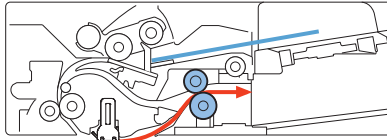


- Delivery of the 1st sheet
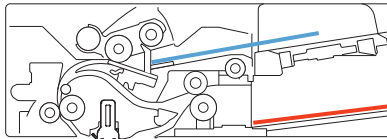


- End of job of the 1st sheet
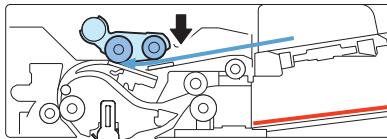


- Pickup of the 2nd Sheet
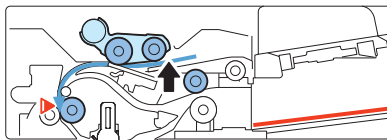


- Feed of the 2nd Sheet
  & disengagement of Delivery Roller
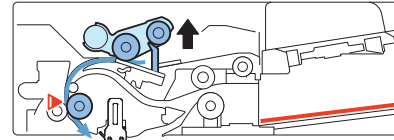


Waiting for reading of the front side
of the 2nd Sheet & ascent of Pickup Roller
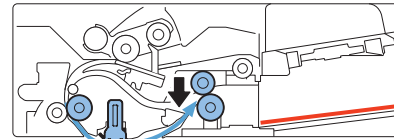


- Start of reading of the front side of
  the 2nd Sheet & engagement of
  Delivery Roller



- End of reading of the front side of
  the 2nd Sheet



- Feed to the reverse point of the 2nd Sheet

F-2-14
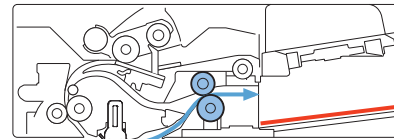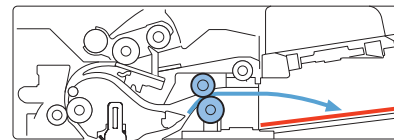
Duplex reading operation
(when 2 sheet of original is placed)
4/5
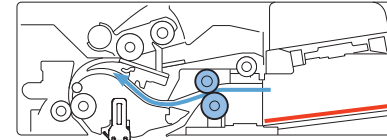


- Re-pickup of the 2nd Sheet
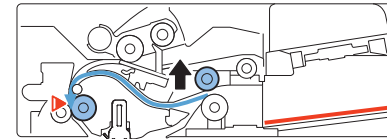


- Feed of the 2nd Sheet
  & disengagement of Delivery Roller
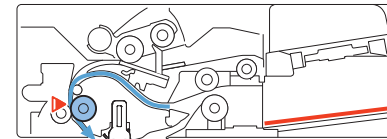


- Waiting for reading of the back side
  of the 2nd Sheet
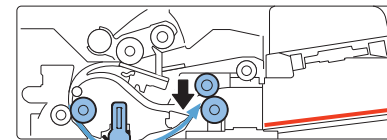


- Start of reading of the back side of
  the 2nd Sheet & engagement of
  Delivery Roller
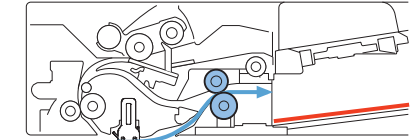


- End of reading of the back side of
  the 2nd Sheet
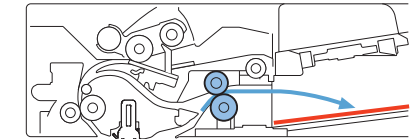


- Feed to the reverse point of the 2nd Sheet
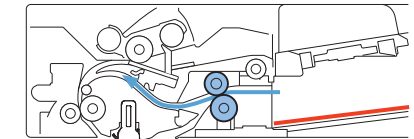


- Re-pickup of the 2nd Sheet
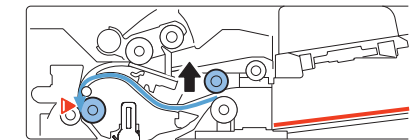


- Feed of the 2nd Sheet
  & disengagement of Delivery Roller

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Duplex reading operation
(when 2 sheet of original is placed)
5/5
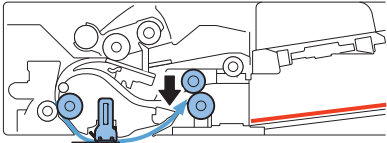


- Idle feed of the 2nd Sheet
  & engagement of Delivery Roller
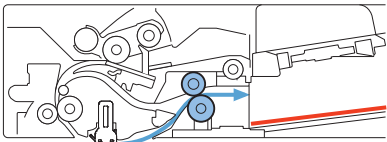


- Passing of the 2nd Sheet reading position
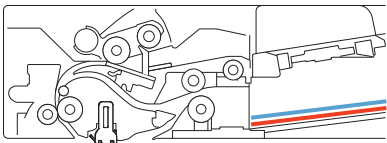


- Delivery of the 2nd sheet & End of job

## ● Reader Unit controls

### ■ Scanner Drive Control

#### ● Configuration of Drive System

The following shows the configuration of parts related to the scanner drive system.



F-2-16

| Item | Notation | Specification/function |
|------|----------|------------------------|
| Reader motor | M01 | Pulse Motor: controls the carriage drive. |
| Drive Pulley, Drive Belt | - | Controls the carriage drive. |
| CIS HP sensor | PS01 | Photo interrupter: detects the home position of CIS unit. |
| Contact image sensor | CIS | Reads the original. (LED + Light guide + Original reading sensor array unit) |

T-2-6

### ● Reader Motor Control

The rotation/stopping and rotation direction/speed of Reader Motor (M01) are controlled based on signals from the ASIC.
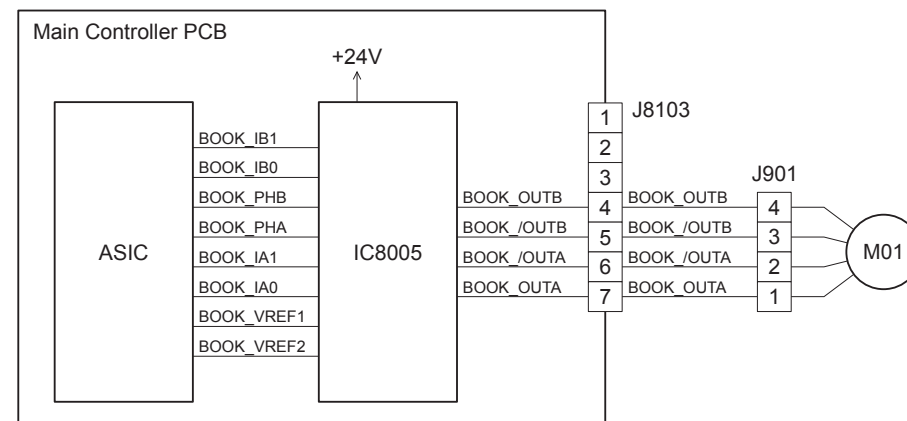


F-2-17

NOTE:
300dpi × 600dpi: 150.1 mm/sec (25ppm machine)
10.2 mm/sec (35ppm machine)
600dpi × 600dpi: 93.3 mm/sec (25ppm machine)
35.8 mm/sec (35ppm machine)

### ■ Magnification Ratio

#### ● For BOOK Mode/When Using ADF

This equipment does not vary the scanning speed according to copy magnification ratio. For an image scanned at the 300 dpi (horizontal scanning) x 600 dpi (vertical scanning) or 600 dpi (horizontal scanning) x 600 dpi (vertical scanning) resolution instructed by the controller, data processing is performed in the Main Controller PCB according to the copy ratio.

### ■ Original Detection

Original detection and original size detection are not performed in the Reader Assembly.

# Image Processing

## ■ Overview

The image processing is executed by the CIS Unit (AFE) and the Main Controller PCB.

The functions related to the image processing are shown below:

| Processing part | Function |
|---|---|
| CIS Unit (AFE) | Contact Image Sensor (CIS) |
| | Original Reading Sensor Drive |
| | LED Intensity Adjustment |
| | Analog Control Performed by the CIS |
| | Original Reading Sensor Output Gain Correction and Offset Correction |
| | Original Reading Sensor Output A/D Conversion |
| Main Controller (Reader ASIC) | Communication with CIS Unit (AFE) |
| | Shading Correction |
| | Dust Detection Control |

T-2-7
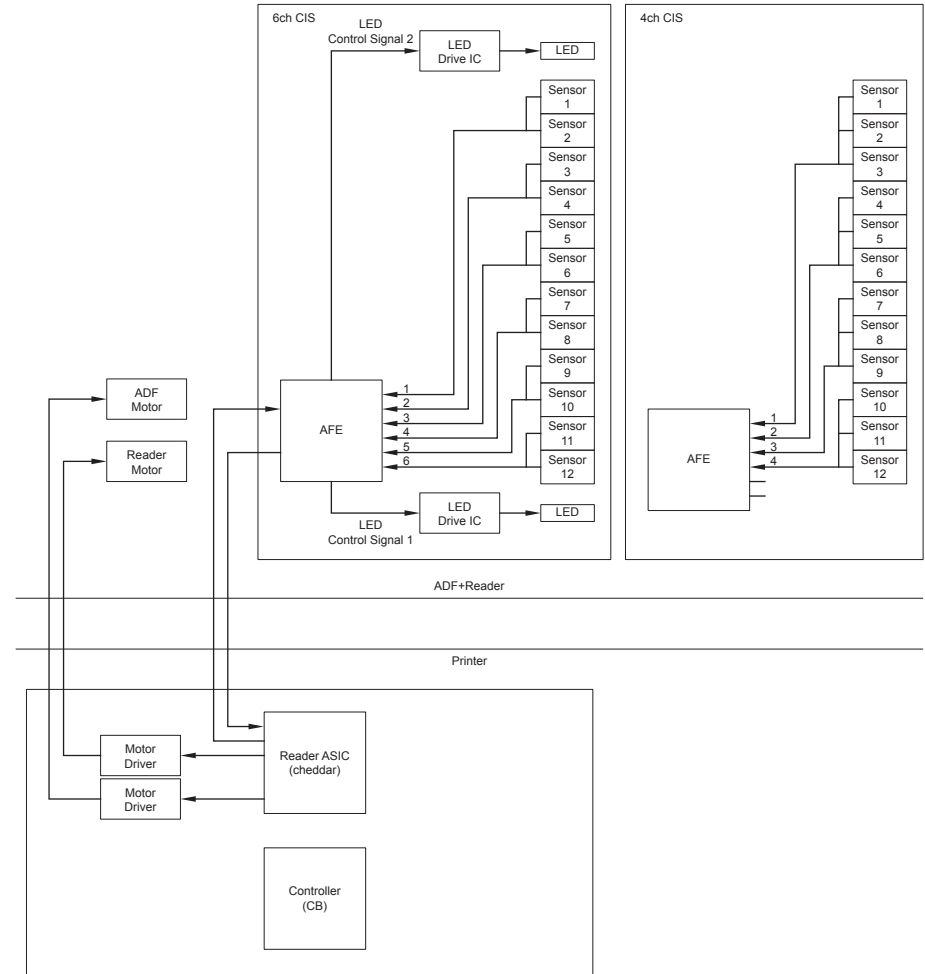


F-2-18

## ■ Image Processing by the CIS Unit (AFE)

### ● Contact Image Sensor (CIS)

The original is exposed to light and read using the contact image sensor (CIS) to read the image on a line-by-line basis.

In 35ppm machine, the total of 6 signals are output to the AFE in the CIS. Each signal consists of the output from 2 sensors (6 channels).

In 25ppm machine, the total of 4 signals are output to the AFE in the CIS. Each signal consists of the output from 3 sensors (4 channels).
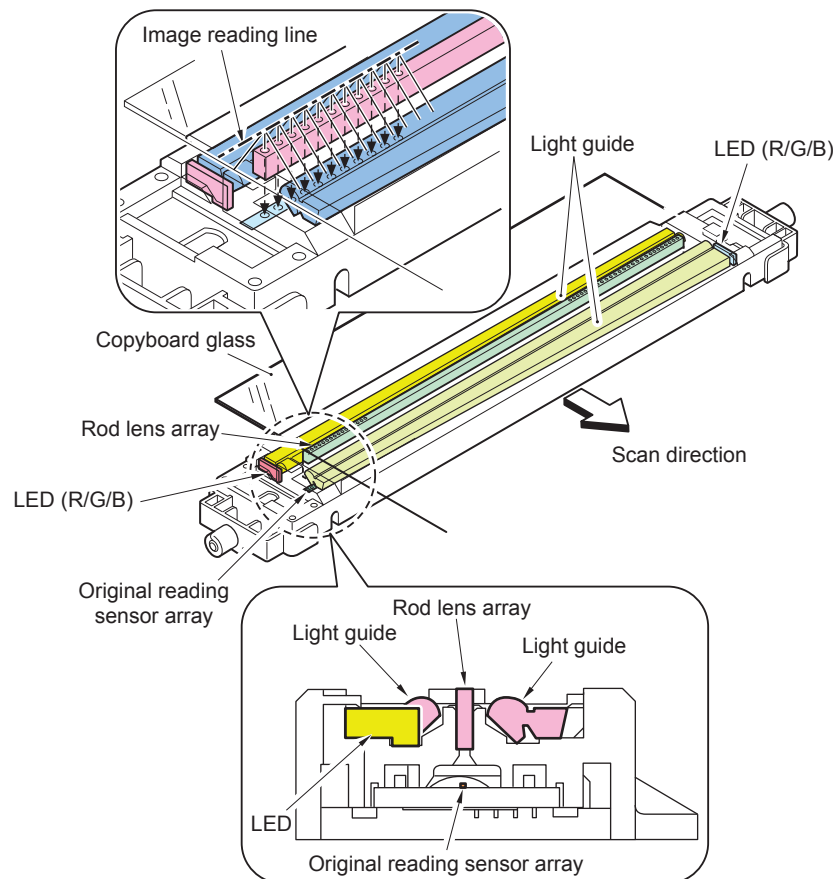


F-2-19

| Component | Function |
|---|---|
| LED | Illuminates the original. |
| Light guide | Illuminates the entire image line with the LED light. |
| Rod lens array | Collects the light reflected by the original. |
| Original reading sensor | Receives the light that passed through the rod lens array. |
| IC (AFE) | IC inside CIS |

T-2-8

Related error code:
E280-0004: Scanner Unit communication error
E280-0005: Scanner Unit communication error

### ● Original Reading Sensor Drive

The Image Reading Sensor installed in this machine consists of 5,184 light-receiving cells.

The signals which are converted to photoelectricity in the light-receiving part are output to the Main Controller for each channel of the 12 Image Reading Sensor arrays.

### ● LED Intensity Adjustment

The machine adjusts the length of time during which the LED turns on for each scan so that the image scan level of the original reading sensor will be specific level.

Variations in the light intensity between each color and the LED colors are prevented by changing the LED illumination duration of each color.

Related Service Mode:
- COPIER > ADJUST > CCD > GAIN2CL0 (Gain level adjustment of the CIS)
- COPIER > ADJUST > CCD > GAIN-CL0 (Gain level adjustment of the CIS)
- COPIER > FUNCTION > CCD > DF-WLVL2 (Copyboard scan, Color)
- COPIER > FUNCTION > CCD > DF-WLVL2 (Stream reading scan, Color)
- COPIER > FUNCTION > CCD > CL-AGC (B&W reference level adjustment)

2-15

**2** Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the CIS Unit (AFE)

2 Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the Main Controller PCB (Reader ASIC)

2-16

## ● Analog Control Performed by the CIS

The flow of analog image processing performed by the contact image sensor (CIS) is as follows:

a. The light reflected by the original is collected by the rod lens array.
b. The light is received by the original scan sensor.
c. The original scan sensor converts the received light to an electric signal and outputs it.
d. Gain correction and offset correction of the Image Reading Sensor.
e. A/D conversion of the Image Reading Sensor.

The Image Reading Sensor consists of 12 sensors.
Each channel is provided with an output correction table to output an image signal after performing gain correction for the input brightness signal.

## ● Original Reading Sensor Output Gain Correction and Offset Correction

The analog video signals output from the original reading sensor are corrected so that they will have a specific gain level (gain correction), and the output voltages generated in the absence of incident light are also corrected so that they will have a specific offset level (offset correction).

## ● Original Reading Sensor Output A/D Conversion

After completion of the gain correction and offset correction, the analog video signals are converted to digital signals corresponding to individual pixel voltage levels by the A/D converter.

## ■ Image Processing by the Main Controller PCB (Reader ASIC)

## ● Outline of Shading Correction

The original reading sensor outputs are necessary even for the following reasons even when the density of the original is uniform:

1) Variations in sensitivity of pixels of the Image Reading Sensor
2) Uneven light intensity of the Rod Lens array
3) Differences in transmission light intensity in the center and periphery of the lens
4) Differences in light intensity in the center and periphery of the LEDs
5) Deterioration of the LEDs

The machine performs shading correction to even out the original reading sensor output.
There are two types of shading correction: shading adjustment performed in the service mode and shading correction performed for each job.

2-16

2 Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the Main Controller PCB (Reader ASIC)

**2** Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the Main Controller PCB (Reader ASIC)

2-17

## ● Shading Correction

Due to the characteristics of each of the elements in the CIS, variations occur in the reading level in the horizontal scanning direction.
Reading is therefore performed with the LED on and with the LED off to correct the white and black levels for each horizontal scanning position and obtain a uniform reading level.
There are two types of shading correction: white shading and black shading.

### White shading (for copyboard reading)

The White Plate is illuminated by switching between R, G, and B at designated intervals to read and the luminance.
The reading of the white level in the horizontal scanning direction is made uniform by calculating the correction coefficient of the white level for each horizontal scanning position.



255

RED luminance

RED shading target
Luminance value before correction
Correction coefficient

0

Horizontal scanning position
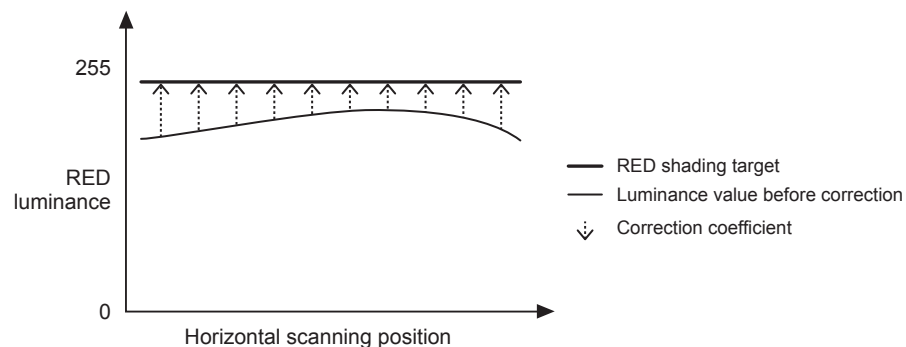
F-2-20

Related error code:
E301-0001: Surface light intensity error

### White shading (for stream reading)

The shading correction of stream reading is performed using the white level adjustment value (factory adjustment value).
White level correction of each horizontal scanning position is performed so that the value will match the factory adjustment value, which is regarded as a target value.

### Black shading

The White Plate is read with the LED off, and the correction coefficient of black level for each horizontal scanning position is calculated to make the black level reading in the horizontal scanning direction uniform.



255

Luminance

Luminance value before correction
Correction coefficient

0

Horizontal scanning position
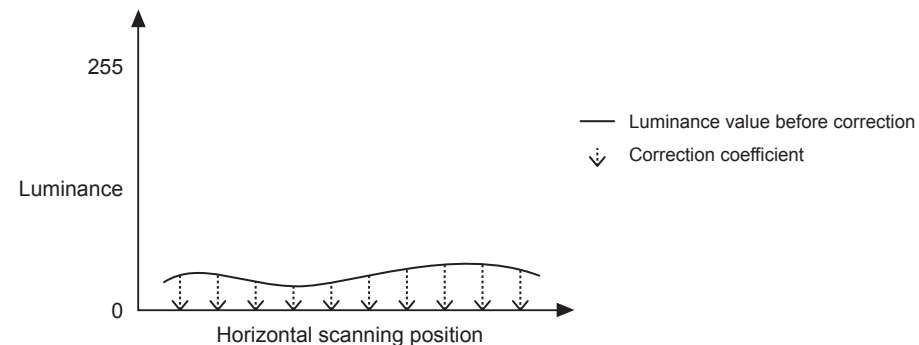
F-2-21

Related error code:
E301-0002: Surface light intensity error

2-17

**2** Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the Main Controller PCB (Reader ASIC)

**2** Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the Main Controller PCB (Reader ASIC)

2-18

● Dust Detection Control

### Overview

When an original is read in ADF mode, image correction or change in the original reading position is performed depending on the presence of dust on the ADF Reading Glass, and a control is executed by using the whiteness of the Platen Guide to prevent the dust from being captured in the image.
The control of dust detection is as follows:

  1)  Dust detection correction control

  2)  Dust detection preventive process

### Dust Detection Correction Control

When dust is detected on the ADF Reading Glass, the image is corrected so that the dust is not captured.

Execution timing:
    From when the original reaches the position immediately before reading until reading of the original is finished (each page) in stream reading jobs

Executed behavior:

```
        ┌─────────────────────────┐
        │     Dust correction     │
        └─────────────────────────┘
                    │
                    ▼
    ┌───────────────────────────────────┐
    │ (1) The Platen Guide is read and   │
    │     any points where dust may be   │
    │     adhered are detected           │
    └───────────────────────────────────┘
                    │
                    ▼
    ┌───────────────────────────────────┐
    │ (2) The shadow that appears at the │
    │     leading edge of the original   │
    │     is detected                    │
    └───────────────────────────────────┘
                    │
                    ▼
```

(3) Judgment of whether to execute duct correction — Not necessary → Dust correction is not executed

Necessary → Dust correction is executed
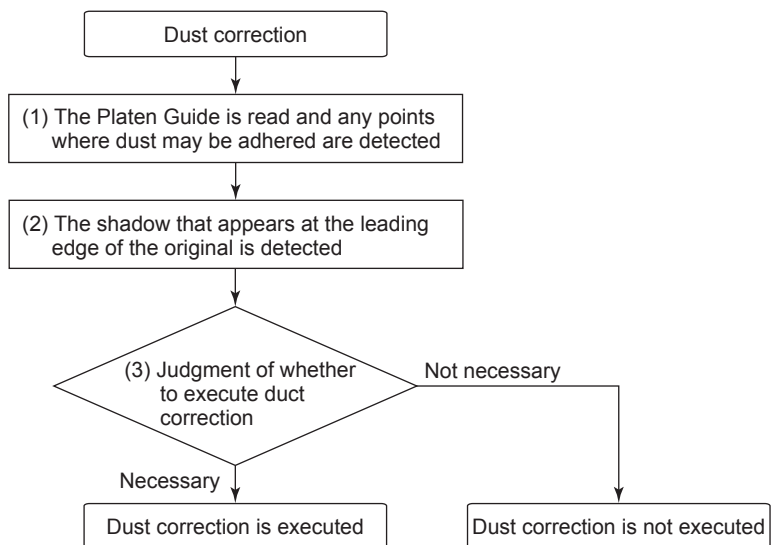
F-2-22

1) Before the original is fed, the Platen Guide is read through the Reading Glass to detect points where there is a possibility of dust.

2) The shadow that appears at the leading edge of the original is detected to detect the leading edge of the original.

3) If no dust is found at the points of dust detected in step 1) after comparing the results of dust detection before and after the shadow of the leading edge of the original appears on the Reading Glass, it is judged to be dust on the Platen Guide, and thus no dust correction is executed. If dust is found at the points detected in 1), it is judged to be dust on the Reading Glass, and therefore dust correction is performed.

NOTE:
• Dust on the Platen Guide is hidden by paper, and does not affect images. Because of this, dust correction is not performed.
• Dust on the Reading Glass affects images, and so dust correction is performed.

Size of dust that can be detected: 1 to 6 pixels
Number of dust locations that can be detected: 20 locations

Dust on the Platen Guide

Original

Dust on the Reading Glass

F-2-23

2-18

**2** Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the Main Controller PCB (Reader ASIC)

2 Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the Main Controller PCB (Reader ASIC)

2-19
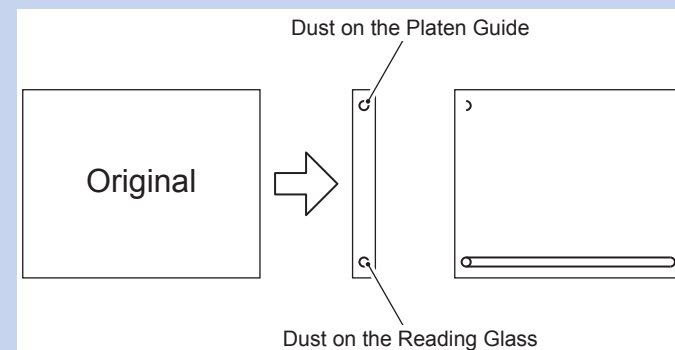
## Dust Detection Preventive Process

If dust is detected in paper of the last job, the reading position of the following stream reading jobs is changed to avoid the dust.

Executed behavior:

The amounts of adjustment for avoiding dust are -0.5 mm, 0 mm, and +0.5 mm.

Each time dust is detected in the last sheets of paper of a stream reading job, the reading position moves to the three positions in the order of 0 mm, -0.5 mm, +0.5 mm, and 0 mm.

At this time, if the following conditions are detected 6 times in a row, the Reading Glass is judged to be dirty and a message prompting for cleaning of the Reading Glass is displayed on the Control Panel.

Condition:
- Dust of 1 pixel or more and less than 5 pixels is detected in 11 locations
- Dust of 5 pixels or more is detected in 14 locations

Related Service Mode:
(Lv1) COPIER > OPTION > IMG-RDR > DFDST-L1
Adjustment of dust detection level when using DADF (between originals)



0.5mm    0.5mm

B A C

ADF Reading Glass

Platen Guide

Lens

Contact Image Sensor Unit
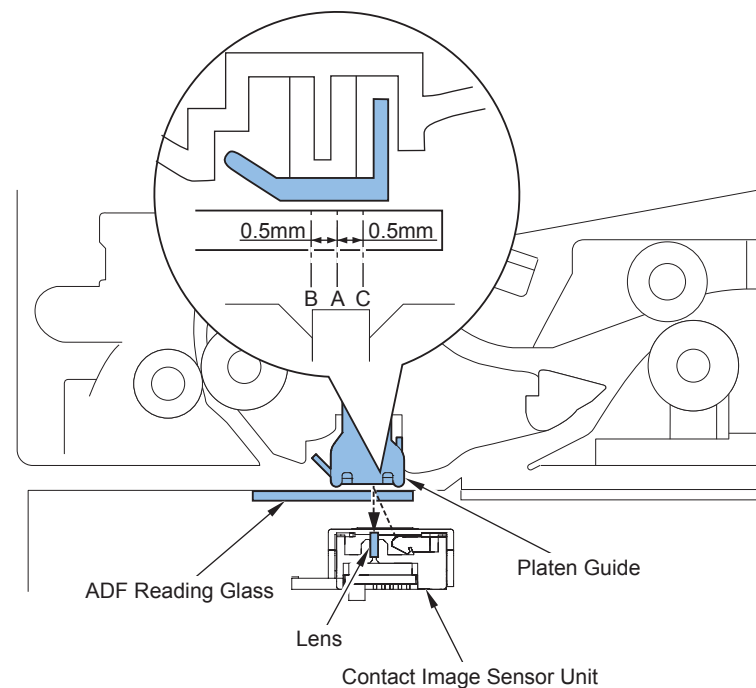
F-2-24

| Position | Description |
| --- | --- |
| A | Reference position for read |
| B | About 0.5 mm to the left of the reference position A |
| C | About 0.5 mm to the right of the reference position A |

T-2-9

2-19

2 Technical Explanation > Original Exposure and Feed System > Image Processing > Image Processing by the Main Controller PCB (Reader ASIC)

## ● Control of ADF

### ■ Pickup Control

#### ● Pickup Mechanism



ADF Motor (M02)

Pickup Roller

Paper

Stopper

Separation Roller

Separation Pad
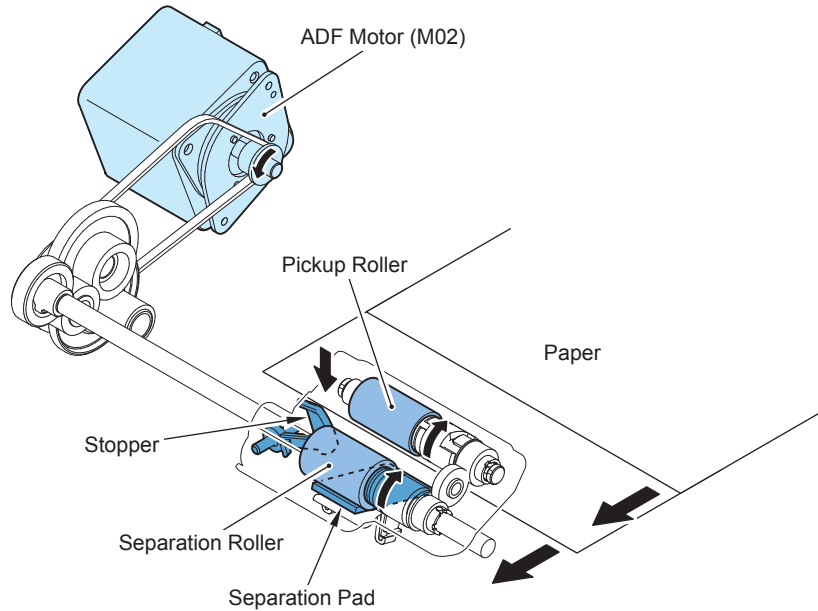
F-2-25

#### ● Pickup operation (1-sided/2-sided stream reading)

When the key to start printing is pressed while an original is placed on the Original Tray, the Pickup Roller is lowered by the drive of the ADF Motor (M02), causing the original to be picked up and fed.

At this time, double feed at pickup is prevented by the Separation Roller and Separation Pad.



M02

Original

Pickup Roller Unit

Stopper

Clockwise Rotation  M02

Pickup Roller Unit

Separation Pad

Separation Sheet
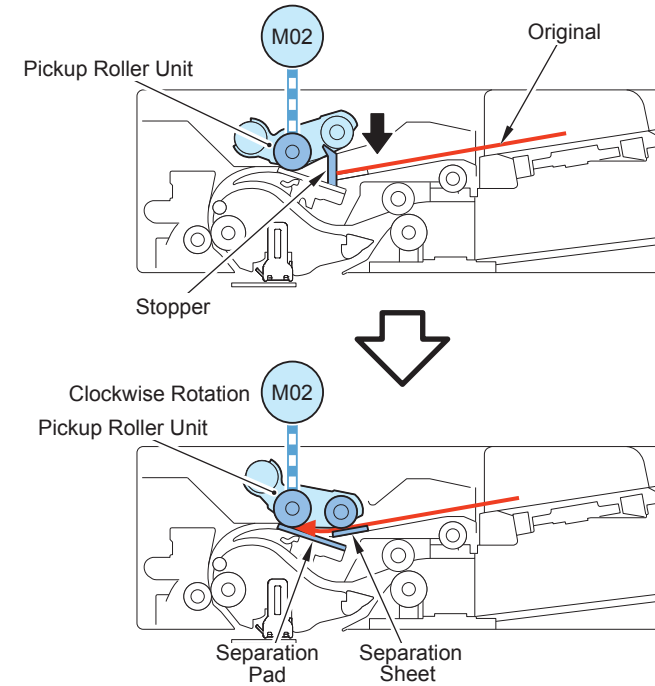
F-2-26

## ■ Feed Control

### ● At 1-sided stream reading

The drive of the ADF Motor (M02) rotates the Feed Roller, and feeds an original to the reading position.



Document End Sensor (PS02)

Feed Roller

Reading standby position

Document Sensor (PS03)
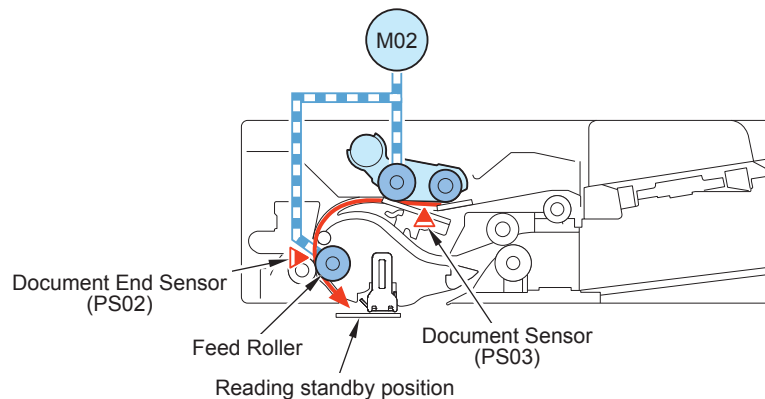
F-2-27

NOTE:
Preparation of the Main Controller may not be completed (the memory may not have been secured) when an original passes the Document End Sensor (PS02). When it is not completed, the original is stopped before the reading position. When the preparation of the Main Controller is completed, the original is fed to the reading position.



Original End Sensor (PS02)

Feed Roller

Position where the original is detected

Decelerated

Stopped

Accelerated

Waiting for stability

Reading position
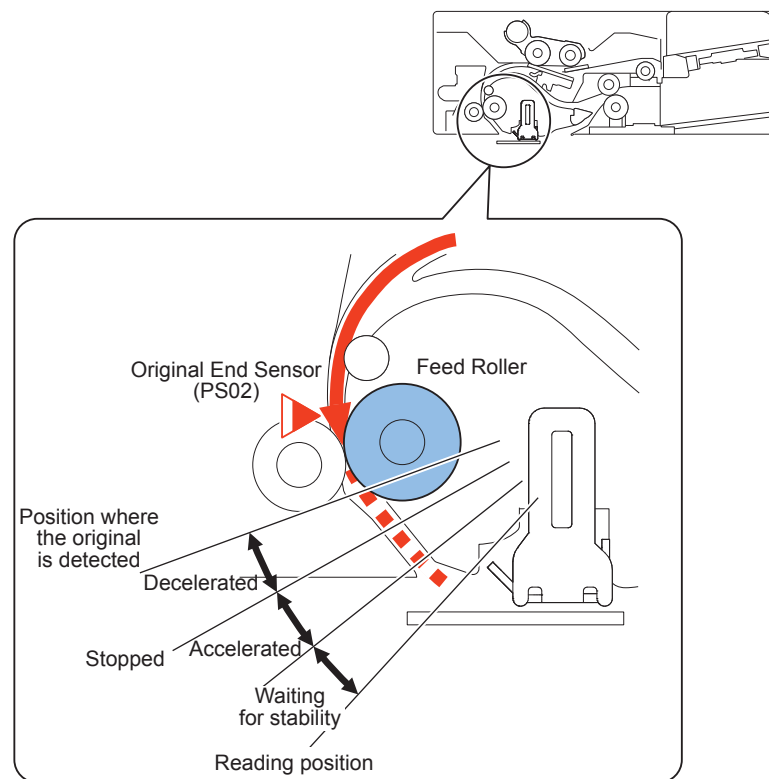
F-2-28

## ● At 2-sided stream reading

The drive (clockwise rotation) of the ADF Motor (M02) rotates the Feed Roller, and feeds an original. When the Document End Sensor (PS02) is turned ON, the ADF Motor (M02) is stopped to stop the original.

After a specified period of time, the drive (reverse rotation) of the ADF Motor (M02) rotates the Feed Roller, and feeds the original to the reading position. At this time, the Pickup Roller is lifted up.
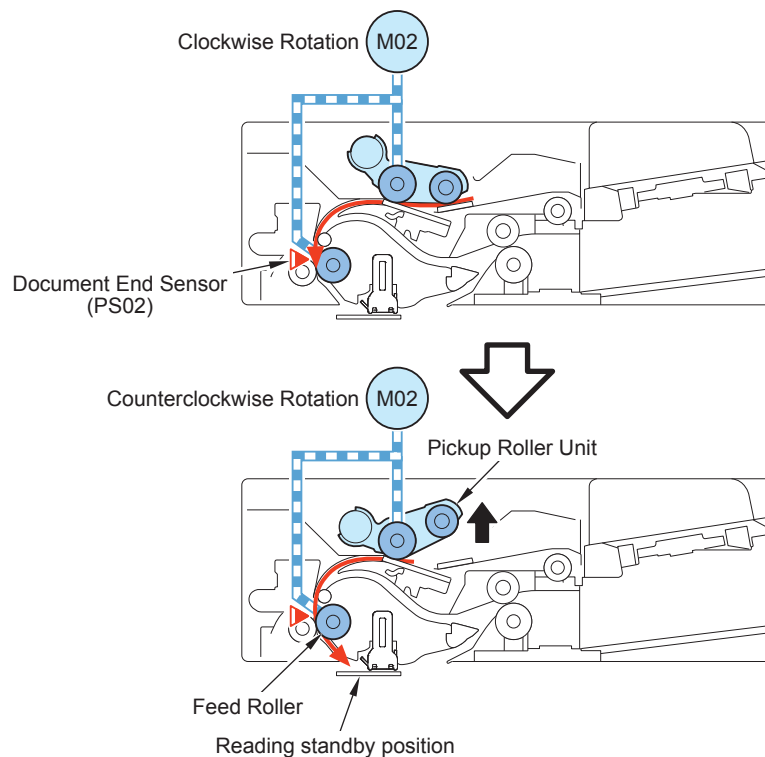
Clockwise Rotation M02

Document End Sensor
(PS02)

Counterclockwise Rotation M02

Pickup Roller Unit

Feed Roller

Reading standby position

F-2-29

F-2-30

Original End Sensor
(PS02)

Feed Roller

Position where
the original
is detected

Decelerated

Stopped    Accelerated

Constant Speed

Decelerated

Waiting for stability

Reading position

NOTE:
Preparation of the Main Controller may not be completed (the memory may not have been secured) when an original passes the Document End Sensor (PS02). When it is not completed, the original is stopped before the reading position. When the preparation of both the memory allocation and ascend of the Pickup Roller is completed, the original is fed to the reading position.
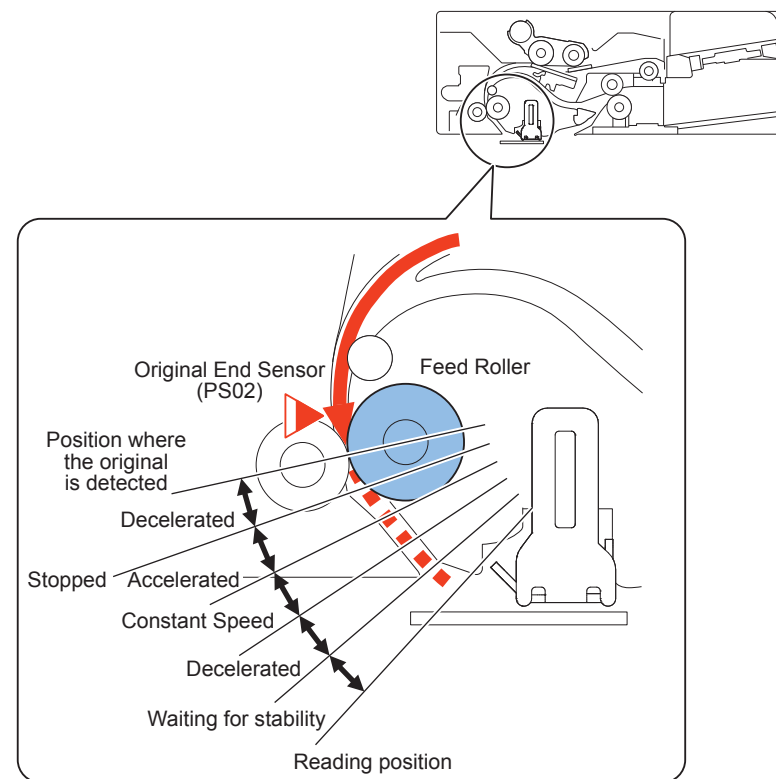
## ■ Read Control

When the edge of an original reaches the reading position, stream reading is started by sending the image leading edge signal to the host machine. Stream reading is a mode to move an original on the host machine's fixed scanner glass by the Feed Roller and scan it.
The read original is stored in the machine's memory.
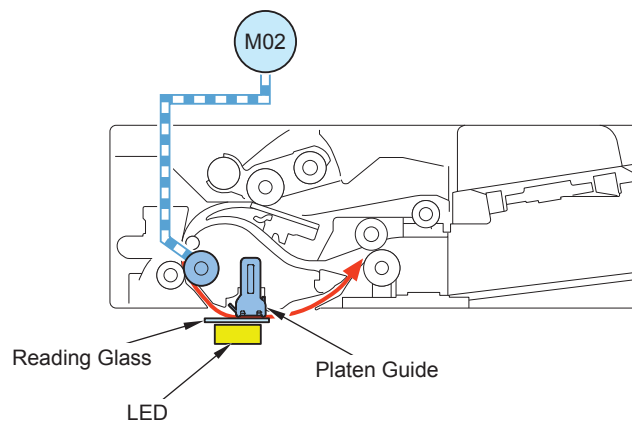


F-2-31

## ■ Reverse Control

### ● Basic operation

There are 2 types for the reverse operation of original: From the front side to the back side, and from the back side to the front side.
Here, the reverse operation from the front side to the back side is explained as the above 2 types of reverse operation are basically the same.

### ● Pickup of front side

1) The drive (clockwise rotation) of the ADF Motor (M02) rotates the Feed Roller, and reads the front side of an original.

2) When reading is completed, the Delivery Roller rotates to feed the original to the ejection area.

3) When the original has been fed for a certain distance, the ADF Motor (M02) stops.
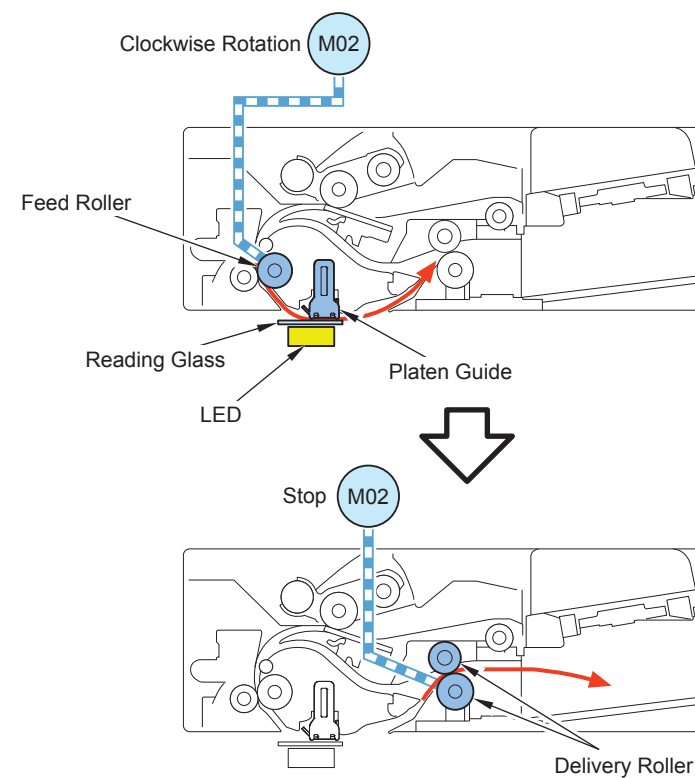


F-2-32

## ● Reverse/Feed

1) The drive (counterclockwise rotation) of the ADF Motor (M02) rotates the Feed Roller, and feeds an original.

2) When the Document End Sensor (PS02) is turned ON, the ADF Motor (M02) is stopped to stop the original. At this time, the Separation Solenoid (SL01) is turned ON to release the pressure of the Delivery Reverse Roller.

3) The drive (clockwise rotation) of the ADF Motor (M02) rotates the Feed Roller, and feeds the original to the reading position.

Counterclockwise Rotation M02

Delivery Roller

Deceleration M02    SL01

Document End Sensor (PS02)

Clockwise Rotation M02

Feed Roller

Reading Standby Position
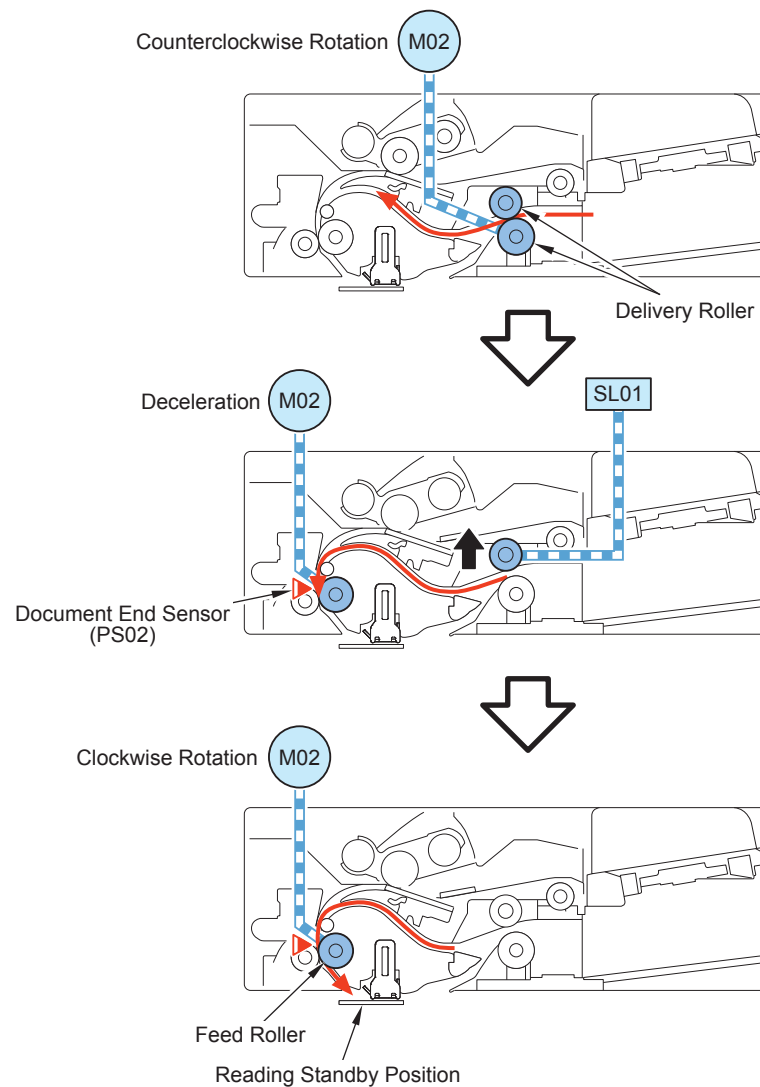
F-2-33

## ■ Feed/Delivery of Original

### ● Basic Operation

After stream reading on the Copyboard Glass is completed, the Feed Roller rotates to send an original to the Delivery Tray. Then, the ADF Motor (M02) stops.

M02    SL01

Delivery Roller

Stop   M02
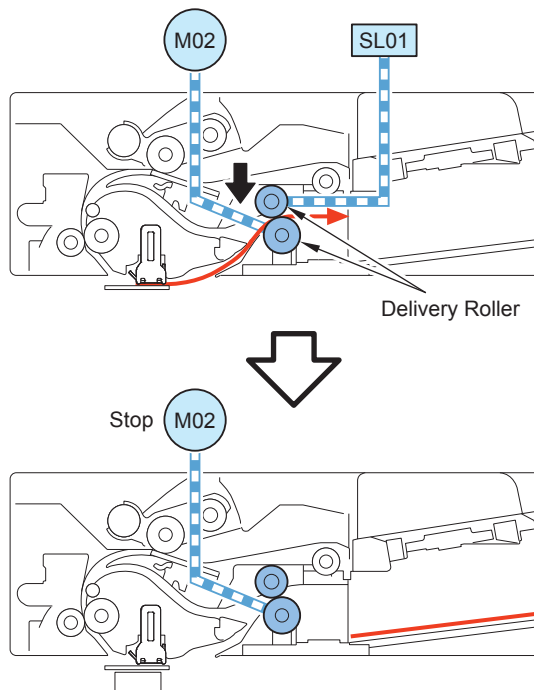
F-2-34

NOTE:
For single-sided reading after delivery, a processing to ascend the Pickup Roller is performed.
For duplex reading, it is not performed because it has already been executed.

## ■ Original Detection

### ● Detection of presence/absence of original

As the actuator is pushed up by placing an original on the Original Tray, the Original Sensor (PS03) is turned ON (light is transmitted -> light is blocked) so that the presence of an original is detected.

### ● Original size detection

The original size is determined by the time required from when the Document End Sensor (PS02) detects the original's leading edge to when it detects its trailing edge.
As the actuator is pushed up by the leading edge of the fed original, the Document End Sensor (PS02) is turned ON (light is blocked -> light is transmitted) so that the arrival of the original's leading edge is detected. In addition, when the trailing edge of the original passes the position of the actuator, the actuator returns to the original position, which causes the Document End Sensor (PS02) to turn OFF (light is transmitted -> light is blocked). The trailing edge of the original is detected by the time required for the Document End Sensor (PS02) to turn OFF from when it was turned ON.

PS02          PS03

| 6 | 5 | 4 | 3 | 2 | 1 | J903 |

DES  GND  +3.3V  DS  GND  +3.3V

J8102

| 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

Main Controller PCB
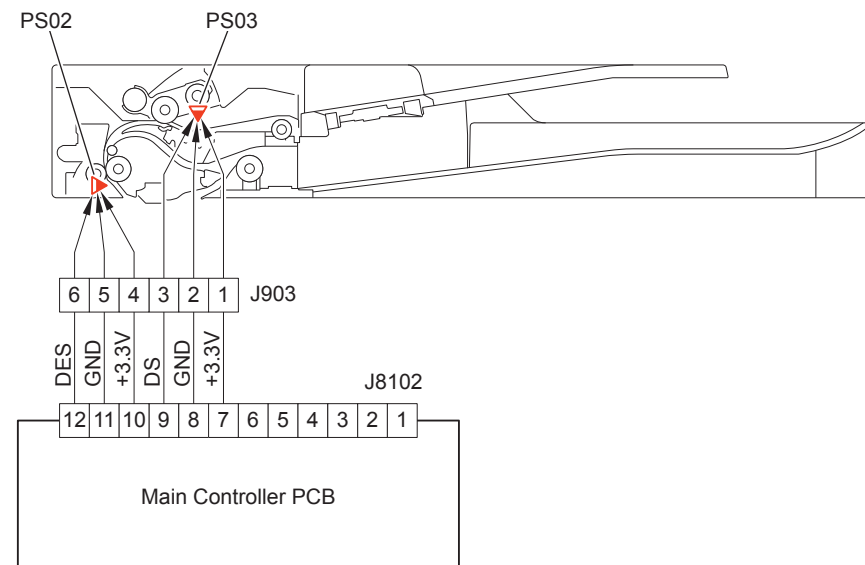
F-2-35

## ■ Jam Detection

This machine detects jam using the Document End Sensor (PS02) and the Document Sensor (PS03). The check timing to detect jam is already stored in the Main Controller PCB, which determines the occurrence of a jam by the presence of an original in the areas of corresponding sensors.

When a jam occurs, the machine stores the information by the code.

This machine's jam code can be checked by printing out a jam error history report from service mode.

| ACC ID | Jam Code | Type | Sensor Name | Sensor ID |
|--------|----------|------|-------------|-----------|
| 01 | 0001 | Delay | Document End Sensor | PS02 |
| 01 | 0002 | Stationary | Document End Sensor | PS02 |
| 01 | 0004 | Delay (at the time of reversing) | Document End Sensor | PS02 |
| 01 | 0005 | Stationary (at the time of reversing) | Document End Sensor | PS02 |
| 01 | 0021 | Timing | Document End Sensor | PS02 |
| 01 | 0071 | Timing Error | Timing Error Jam | - |
| 01 | 0094 | Power-on | Document End Sensor | PS02 |
| | | | Document Sensor | PS03 |
| 01 | 0096 | Limited function mode | DF Job Error Jam | - |

T-2-10

## ⬤ Service Tasks

### ■ Periodically Replaced Parts

None.

### ■ Consumable Parts

| No. | Parts name | Parts number | Quantity | Estimated life | Remarks |
|-----|------------|--------------|----------|----------------|---------|
| 1 | ADF Pickup Unit | FM4-9859 | 1 | 50,000 sheets | |
| 2 | Separation Pad | FM4-9857 | 1 | 50,000 sheets | |

T-2-11

### ■ Periodical Servicing

None.
Perform as needed.

### ■ Actions at Parts Replacement

• Actions at Copyboard Glass Unit Replacement

• Actions at Scanner Unit (Reader side CIS) Replacement

• Actions at ADF Unit Replacement

# Main Controller

## Overview

### ■ Configuration / Function



Main Controller PCB

Memory PCB
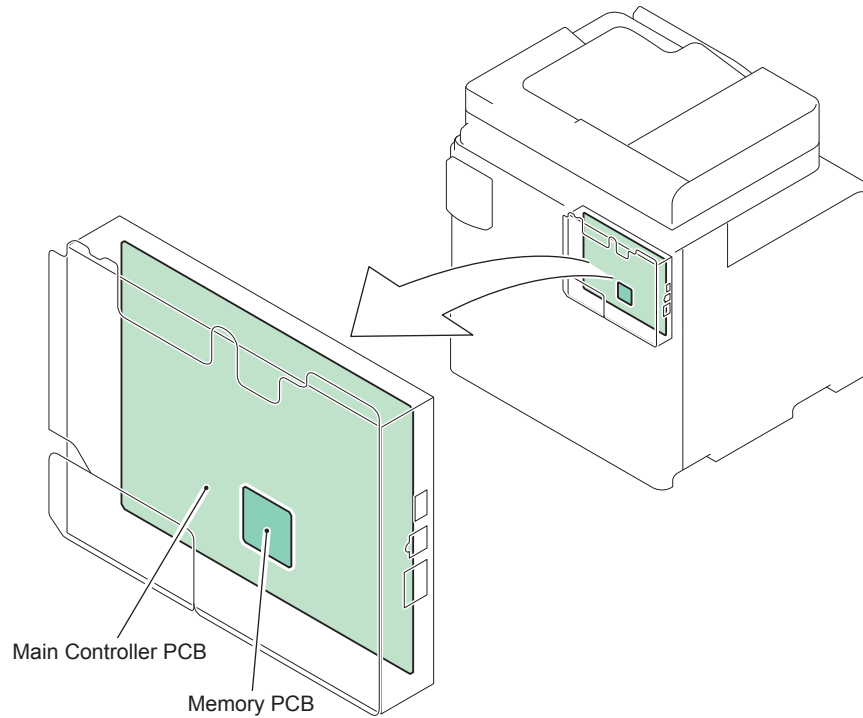
F-2-36

| Item | Function |
|------|----------|
| Main Controller PCB | System Control / Memory Control / Printer Output Image Processing Control, Reader Image Input Processing |

T-2-12

## ■ Main controller PCB
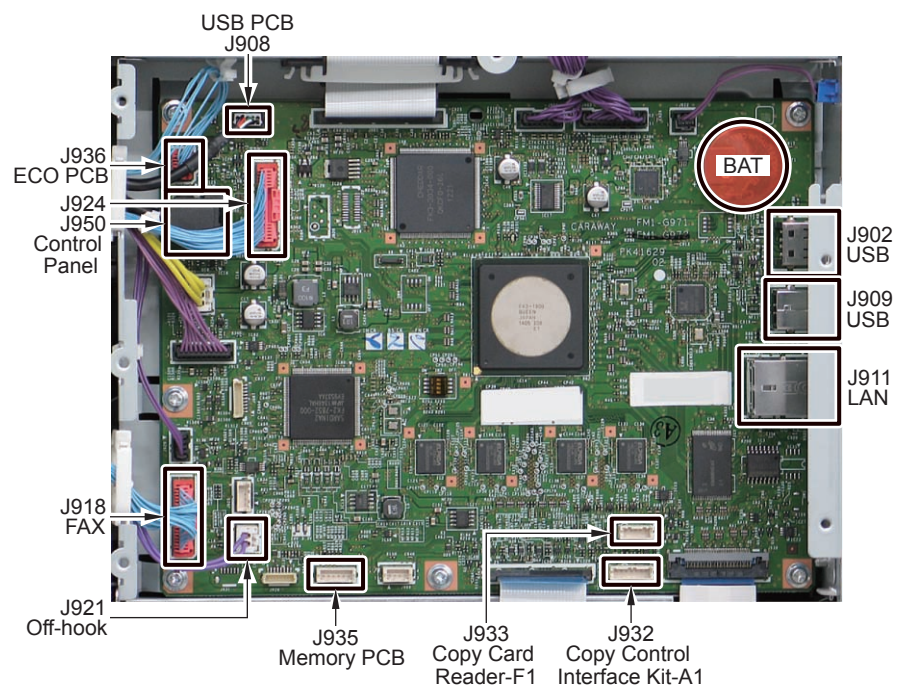


F-2-37

| No. | Function |
|------|----------------------------------|
| J902 | USB I/F |
| J908 | USB PCB |
| J909 | USB |
| J911 | LAN I/F |
| J918 | FAX Unit I/F |
| J921 | Off-hook PCB |
| J924 | Control Panel I/F |
| J932 | Copy Control Interface Kit-A1 I/F |
| J933 | Copy Card Reader-F1 I/F |
| J935 | Memory PCB |
| J936 | ECO PCB |
| J950 | Control Panel I/F |

T-2-13

# Laser Exposure System

## Overview

Laser exposure system forms the electrostatic latent image on the photosensitive drum by the laser exposure.

This system is composed of the laser assembly and the scanner motor assembly that are unified as the laser scanner unit.

This machine uses the 2-beam method that enables the exposure of 2 beams per scanning, and uses the 1-polygon 4-laser method in order to achieve a compact size.



Photosensitive Drum

Y/M/C/K Laser Assembly

Polygon Mirror

Scanner Motor Assembly

APC signal

Video signal

BD signal

Scanner Motor control signal

DC Controller PCB (UN04)

ITOP

Laser ON /OFF signal

Main Controller PCB (UN81)

F-2-38

Laser A
Laser B

[1]
[2]
[3]
[4]
[3]
[5]
[6]
[4]
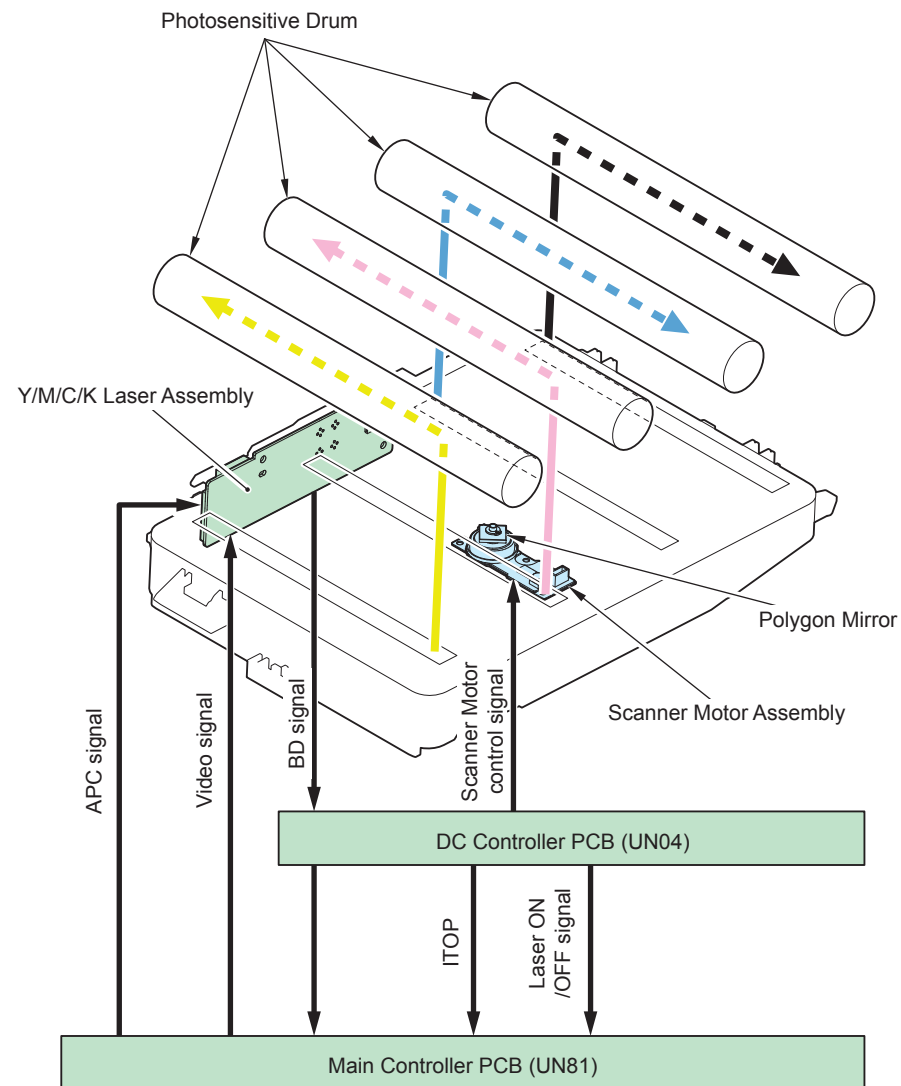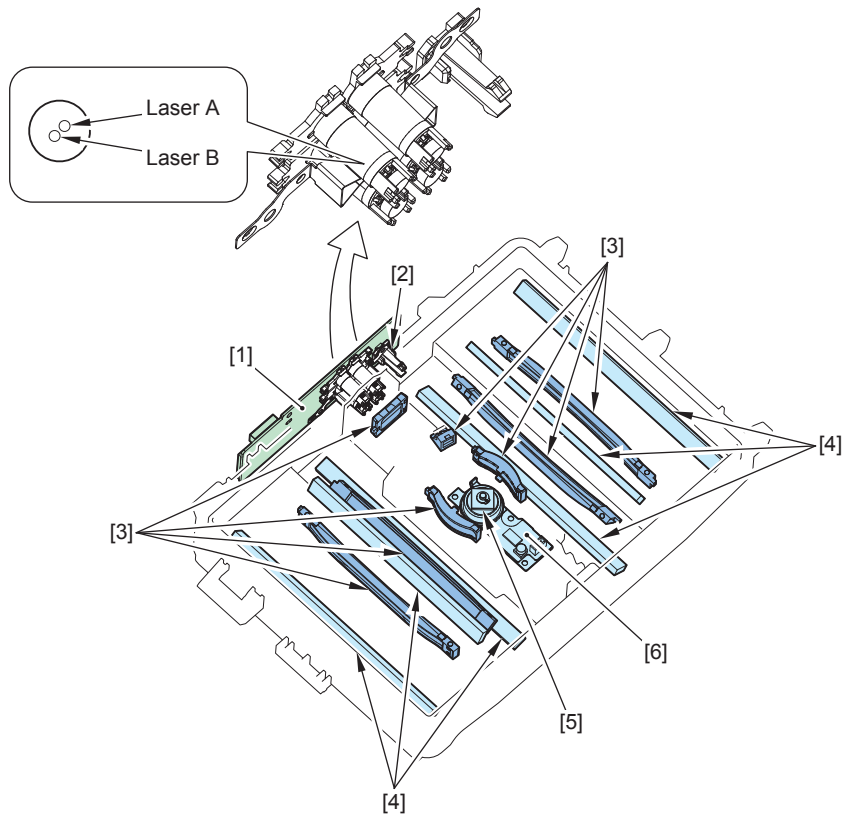
F-2-39

[1] Y/M/C/Bk Laser Driver PCB    [4] Reflection Mirror
[2] BD Circuit                   [5] Polygon Mirrors
[3] Imaging Lens                 [6] Scanner Motor

## Specification

| Item | Description |
|------|-------------|
| Wavelength | 780 to 800nm |
| Laser type | Red color laser (non-visible light) |
| Laser output | 7mW |
| Number of laser scanner unit | 1 |
| Number of laser light | 2 beam for each color |
| Resolution | 600dpi |
| Motor type | Brushless motor |
| Number of motor rotation | 35 ppm model: Approx.35433 rpm<br>25 ppm model: Approx.23917 rpm |
| Number of scanner mirror facet | 4 facet (phi 20) |

T-2-14

### ■ 1-Polygon 4-Laser Method

This method uses 1 scanner motor (polygon motor) and 4 laser diodes to execute laser scanning. This method allows to emit the 4 lasers on the multi-facet mirror on one scanner motor contributing to space-saving.
Following is the outline of the laser scanner unit.
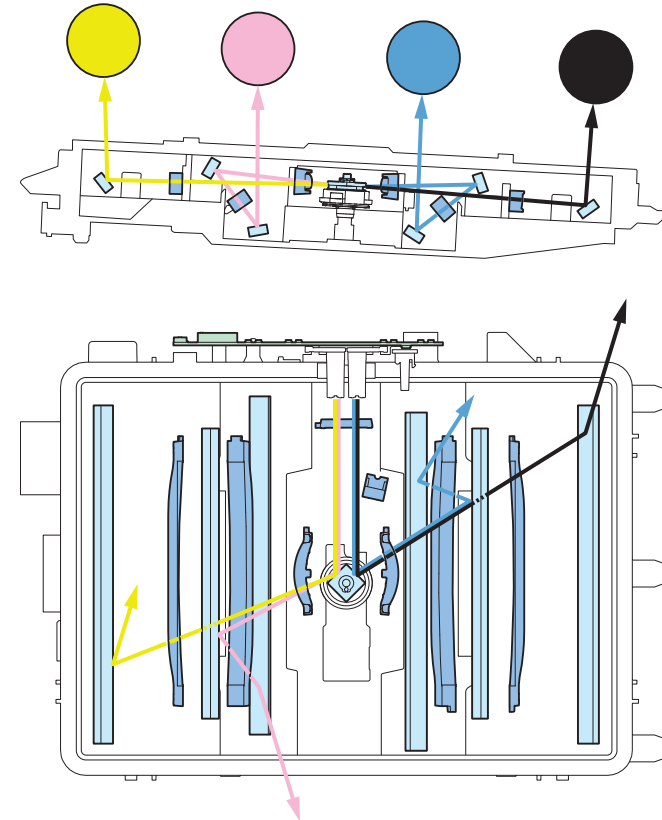


F-2-40

# Various Controls

## ■ Overview

| Item | Operation description |
|---|---|
| Laser ON / OFF control | Laser light is turned ON / OFF according to the combination of laser control signal |
| Horizontal scanning synchronous control | To align the writing start position in horizontal scanning direction. |
| Vertical scanning synchronous control | To align the writing start position in vertical scanning direction. |
| Image Mask Control | This control prevents the laser beam from being emitted in non-image area to avoid the Secondary transfer outer Roller from getting dirt. |
| Laser scanner motor control | To rotate the scanner mirror by the specified speed. |
| APC control | To make the laser light per 1 line consistent amount |
| BD correction control | To correct the gap BD timing gap due to the angle variation of Scanner Mirror. |

T-2-15
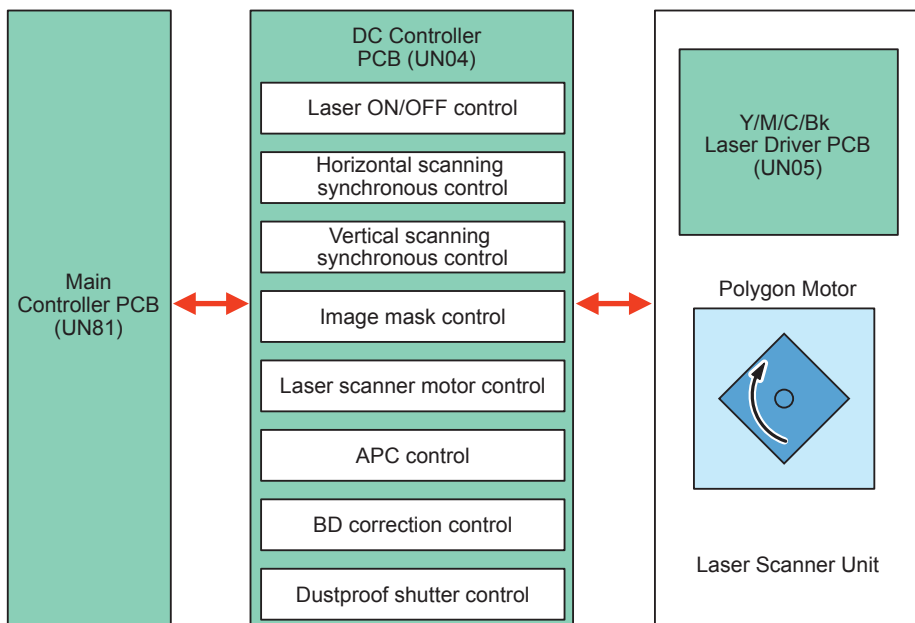


F-2-41

## ■ Laser ON/OFF control

### ● Purpose
Laser light is turned ON / OFF according to the combination of laser control signal.

### ● Execution timing
After the power ON

### ● Control detail
DC Controller switches the 4 modes (forcible OFF mode, APC mode, Print mode and standby mode) according to the laser control signal.
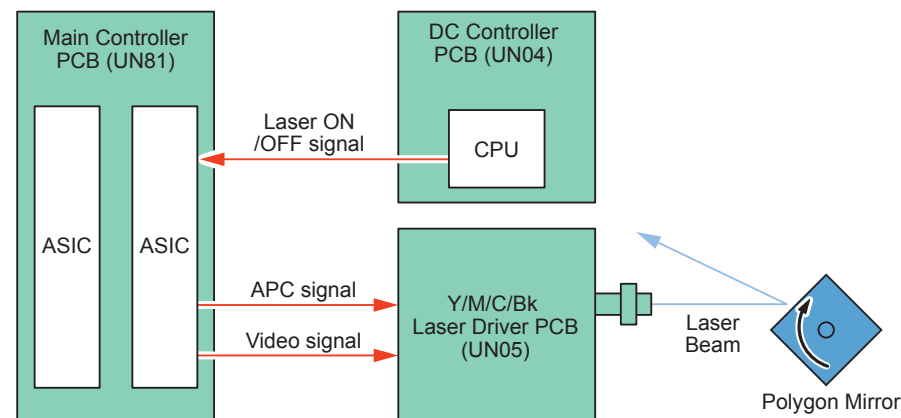


F-2-42

| Mode | Laser status | Remark |
|---|---|---|
| Forcible OFF mode | OFF | Light intensity setting decided on APC is cleared. |
| APC mode | ON | Laser light intensity adjustment |
| Print mode | ON / OFF | Laser is emitted according to the video signal. |
| Standby mode | OFF | Host machine is in standby status. |

T-2-16
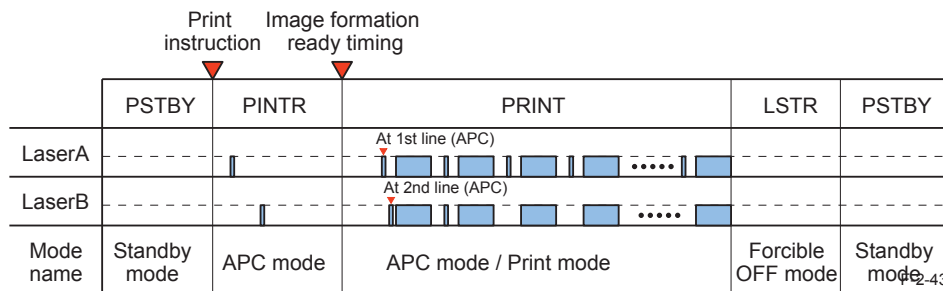


F-2-43

## ■ Horizontal scanning synchronous control

### ● Purpose

To align the writing start position in horizontal scanning direction.

### ● Execution timing

When printing starts (per line)

### ● Control detail

1) DC Controller forcibly emits the laser diode on Y/M/C/Bk Laser Driver PCB by setting the laser control signal of Bk -laser to APC mode.

2) The BD Circuit is located on the scanning light path of the laser beam of the Laser Bk, and the laser beam is emitted to the BD Circuit.

3) The BD Circuit detects the laser beam and then generates a BD signal, and sends it to the DC Controller.

4) The DC Controller performs synchronization based on this signal, and then sends a reference BD signal to the Main Controller as the horizontal scanning synchronous signal (BD) for every line.

5) When the Main Controller receives these signals, it outputs the video signals (Y_VDO, M_VDO, C_VOD, and Bk_VDO) to the DC Controller. This enables the Y/M/C/Bk Laser Driver PCB to emit a laser beam from a fixed position for every line.

NOTE:
- Since the BD signal is the horizontal scanning synchronous signal of the Bk color, the Bk color is the reference for horizontal scanning of each color.

&lt;Y, M color&gt;  &lt;C, Bk color&gt;

Feeding direction

Left standard  Right standard

F-2-44

DC Controller PCB (UN04)

Main Controller PCB (UN81)

Y/M/C/K Laser Driver PCB (UN05)

BD  BD Sensor

Bk Laser

C Laser

M Laser

Y Laser

Bk_VDO
C_VDO
M_VDO
Y_VDO
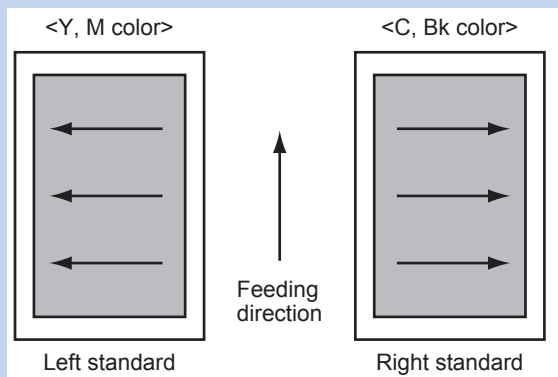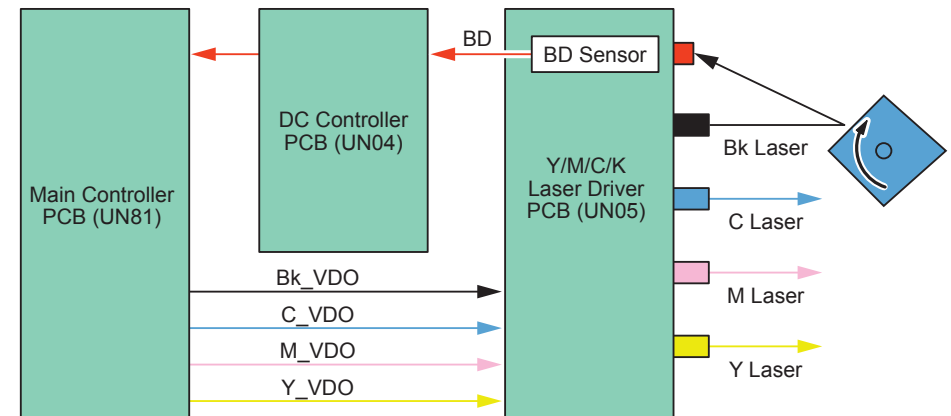
F-2-45

## ■ Vertical Scanning Synchronous Control

### ● Purpose

This is to align the writing start position in vertical scanning direction.

### ● Execution timing

Per printing

### ● Control detail

1) When the DC controller receives a print command, it creates the vertical synchronous signal (/TOP) based on the inner timer and sends the signal to the main controller.

2) After receiving /TOP signal, the main controller counts the horizontal scanning synchronous signal (/BD0) and outputs the video signal for 1 page of each color (DATA_Y, DATA_M, DATA_C, DATA_K) to the DC controller in the specified number of times of horizontal scanning.

As a result, the laser driver of each color emits the laser beam from the specified position for 1 page.
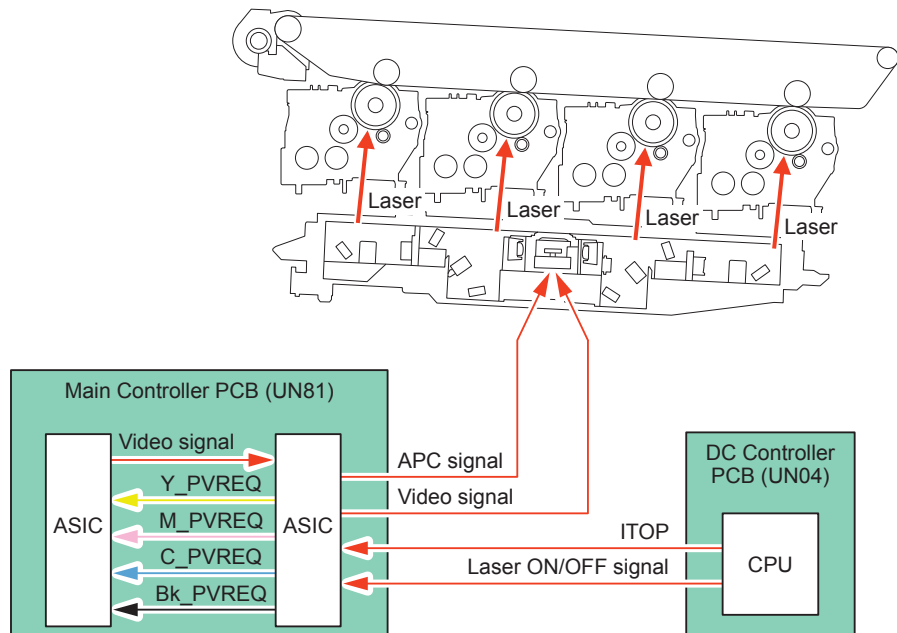


F-2-46

## ■ Laser scanner motor control

### ● Purpose

This is to rotate the scanner mirror by the specified speed.

### ● Execution timing

At power ON, Per printing

### ● Control detail

The rotation speed of the Scanner Motor is controlled by the DC Controller.

1) The DC Controller outputs the Scanner Motor control signals (acceleration signal: ACC, deceleration signal: DEC) to the Scanner Motor to rotate the Polygon Mirror.

2) The DC Controller controls the rotation speed of the Scanner Motor to keep it constant by using the Scanner Motor rotation speed signal (FG signal) as a reference.
(During the period from the Scanner Motor rotating until the motor reaches the target revolution and the printer starts the image formation process)

3) If the laser is emitted during image formation, the DC Controller detects the BD signal.

4) The DC Controller controls the Scanner Motor control signals (acceleration signal: ACC, deceleration signal: DEC) based on the input timing of the BD signal to control the rotation speed of the Scanner Motor.
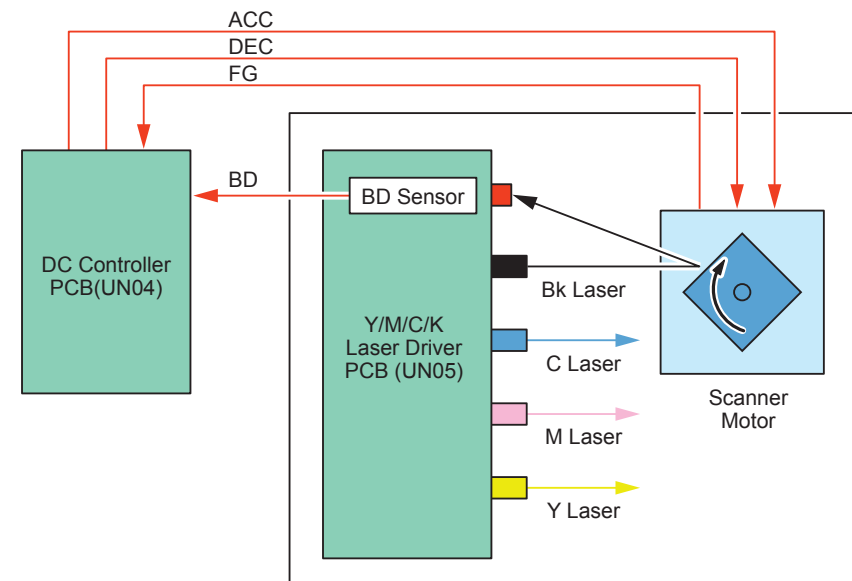


F-2-47

# ■ APC(Auto Power Control) Control

## ● Purpose

This is to make the laser light for 1 line consistent amount.

## ● Execution timing

Per 1 line. (before print writing)

## ● Control detail

1) The Main Controller outputs the APC signal to the Laser Driver IC in the Y/M/C/Bk Laser Driver PCB.
2) The Y/M/C/Bk Laser Driver PCB IC is set in APC mode, and forcibly emits laser diode of each color.  The photo diode (PD) monitors the laser diode (LD), and each Laser Driver IC adjusts the output of laser diode until the laser light intensity reaches a specified level.
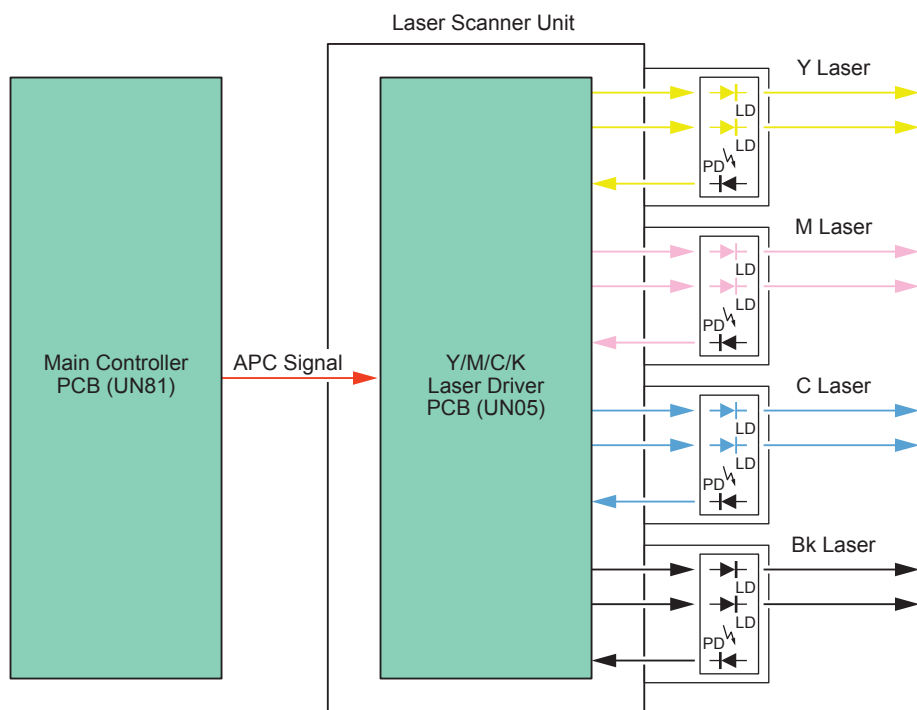
Related error code

- E100-0100: BD error

  The BD lock was unlocked although it had been locked once.
- E110-0001: Scanner Motor error (FG lock)

  The speed was not locked by FG control within 5.5 sec after startup.
- E110-0002: Scanner Motor error (BD speed lock)

  The speed was not locked by BD control within 5.5 sec after startup.
- E110-0003: Scanner Motor error (BD phase lock)

  The phase was not locked by BD control within 5.5 sec after startup.



F-2-48

## ■ BD correction control

### ● Purpose

This is to correct the displacement of writing start position of each color laser due to the angle variation of Polygon Mirror facet.

### ● Execution timing

At power-ON, per printing

### ● Control detail

1) The DC Controller measures the BD interval after the completion of constant speed rotation control of the Scanner Motor.
2) The DC Controller calculates the correction value from the offset of the BD interval.
3) The write start position is corrected by correcting the write start timing based on the above correction value.
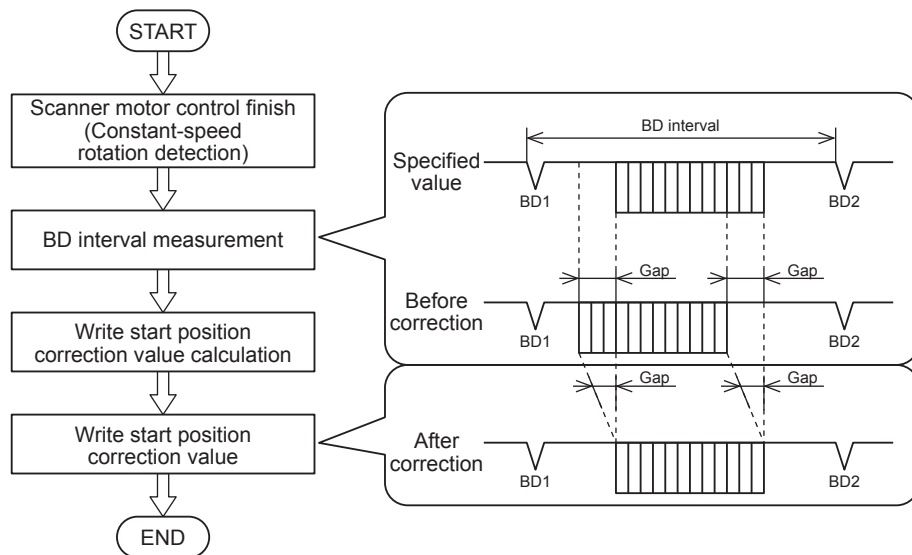


F-2-49

## ■ Dustproof shutter control

### ● Purpose

This is to prevent the residue toner from sticking to the dust-prevention glass. Or to prevent the laser light from emitting to the machine inside when the front cover / right cover is opened.

### ● Execution timing

At image formation and when the Waste Toner Container is removed and then installed.

### ● Control detail

The Waste Toner Container and the Shutter Lever of the Laser Scanner Assembly operate in conjunction with each other to open/close the Dustproof Shutter.
When the Waste Toner Container is inserted, the Dustproof Shutter opens, and when the Waster Toner Container is removed, the Dustproof Shutter closes.
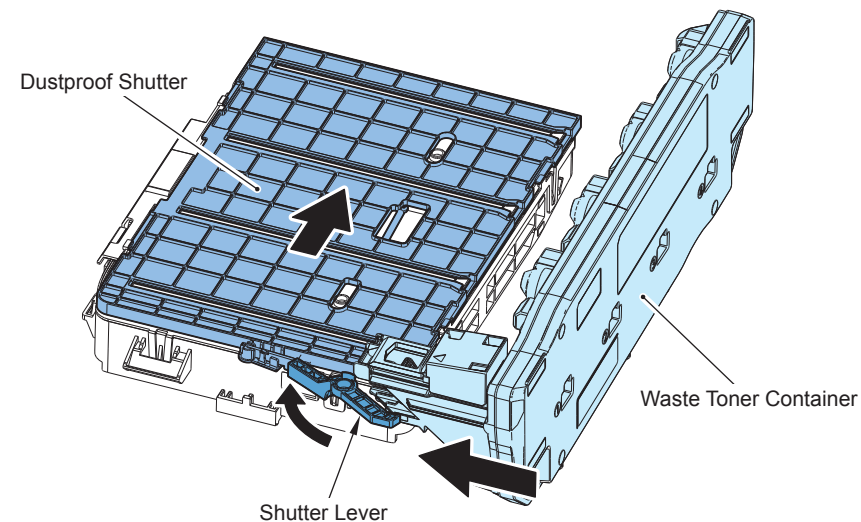


F-2-50

## Service Tasks

### ■ Periodically Replaced Parts

None.

### ■ Consumable Parts

None.

### ■ Periodical Servicing

None.
Perform as needed.

### ■ Actions at Parts Replacement

- Actions at Laser Scanner Unit Replacement

# Image Formation System

## ● Overview

### ■ Overview

Image formation system of this machine uses the Dry, 2-component AC developing for developing and the intermediate transfer method for transferring to form toner images.
To increase life of the Image Formation Unit, this machine uses the primary transfer disengagement method.
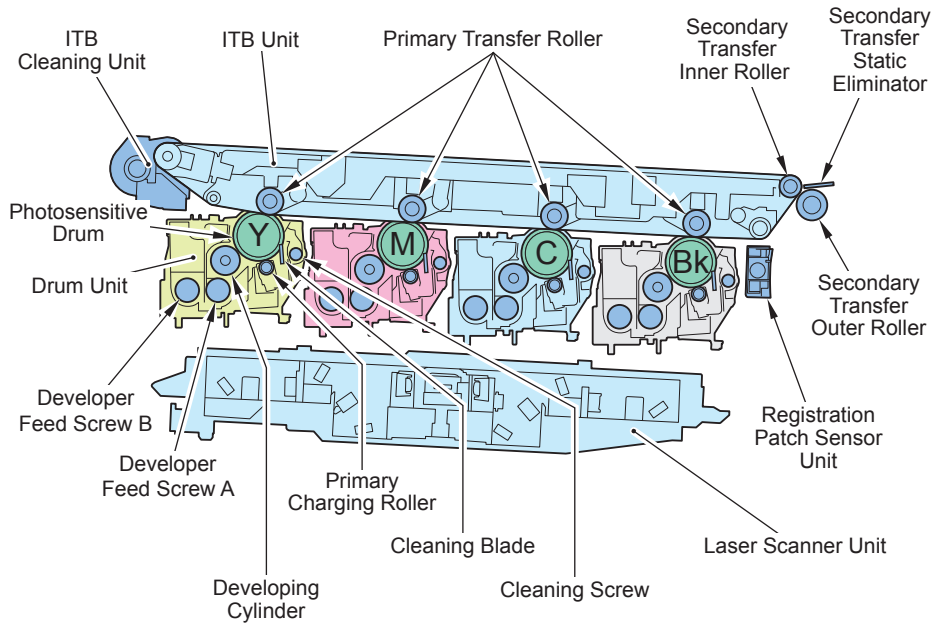


F-2-51

### ■ Specifications

| Item | | Function/Method |
|---|---|---|
| Photosensitive Drum | Material | OPC |
| | Drum diameter | 30mm dia |
| | Cleaning | Cleaning blade |
| | Process speed | 35 ppm model: 200 mm/s<br>25 ppm model: 135 mm/s |
| | Drum Heater | None |
| Developing Assembly | Developing Cylinder | 1 cylinder (single-developing method) |
| | Developing method | Dry, 2-component AC developing |
| | Toner | Non-magnetic negative toner |
| | Toner level detection | Yes (with the use of ATR Sensor) |
| Primary charging | Charging method | Roller charging |
| | Cleaning | Engagement Sheet |
| Toner Container | Toner Container detection | Yes |
| | Replacement of Toner Container (during continuous print) | Disabled |
| Transfer method | | Intermediate transfer (ITB) |
| ITB Unit | Circumferential length | Inner perimeter length: 791.9 mm |
| | Cleaning | Cleaning Blade |
| | Belt displacement correction | Yes (controlled by hardware configuration) |
| Primary transfer | Transfer method | Transfer Roller |
| | Disengagement mechanism | Yes |
| Secondary transfer | Transfer method | Transfer Roller |
| | Disengagement mechanism | None |
| | Cleaning | Static cleaning |
| Separation method | | Curvature separation + Static Eliminator |
| Patch Sensor | | Yes |

T-2-17

## ■ Parts Configuration

### ● Major Parts
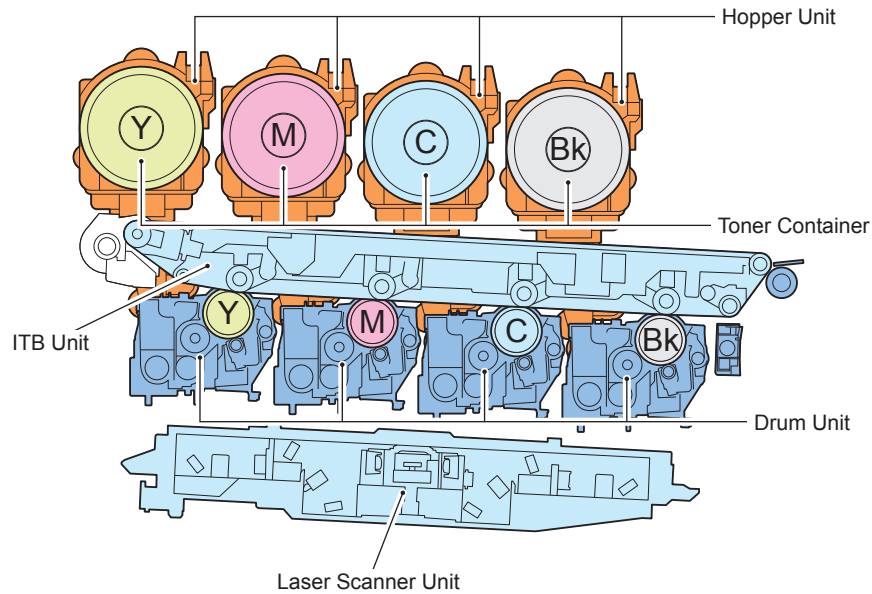


F-2-52

## ■ Print Process

### ● Overview
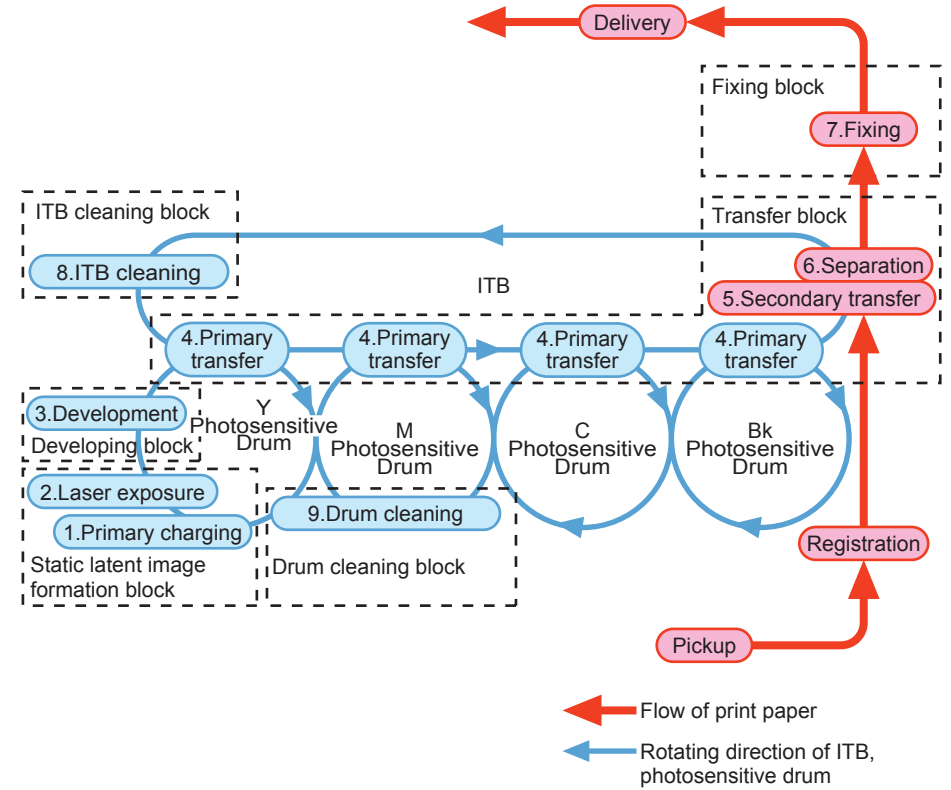


F-2-53

| Static latent image formation block | 1 | Primary charging | To charge the surface of photosensitive drum to be uniformed negative potential |
|---|---|---|---|
| | 2 | Laser exposure | To create static latent image on the surface of photosensitive drum by emitting laser light (image exposure: laser exposure area becomes image area) |
| Developing block | 3 | Developing | To attach negatively-charged toner from the developing cylinder to the photosensitive drum by Dry, 2-component AC developing. |
| Transfer block | 4 | Primary transfer | To apply positively-charged potential from the back surface of ITB to transfer toner on the surface of photosensitive drum to ITB. |
| | 5 | Secondary transfer | To apply positively-charged potential to the secondary transfer outer roller to transfer toner on the ITB to the paper. |
| | 6 | Separation | To separate paper from the ITB by curvature separation method. In the case of thin paper which has low elastic force, the static eliminator reduces potential on the surface of paper to separate thin paper more easily. |
| Fixing block | 7 | Fixing | To fix toner on the paper with heat and pressure. |
| ITB cleaning block | 8 | ITB cleaning | To remove residual toner on the ITB by the cleaning blade. |
| Drum cleaning block | 9 | Drum cleaning | To remove residual toner on the photosensitive drum by the cleaning blade. |

T-2-18

● Bias Types

The following 5 types of bias are used with this machine.

| Bias name | Bias types | Bias value (Reference value) | Application location | Control PCB |
|---|---|---|---|---|
| Primary charging bias (DC) | DC | -1600 to 0 V | Primary Charging Roller | Secondary Transfer High-voltage PCB (UN02) |
| Developing bias (DC) | DC | -700 to 0 V | Developing Cylinder | Developing High-voltage PCB (UN06) |
| Developing bias (AC) | AC | Amplitude: 1750 V | | |
| Primary transfer bias | DC | 0 to 3500 V | Primary Transfer Roller | Primary Transfer High-voltage PCB (UN03) |
| Secondary transfer bias | DC | -1600 to 6000 V | Secondary Transfer Outer Roller | Secondary Transfer High-voltage PCB (UN02) |

T-2-19

The abovementioned biases are generated by the 3 High Voltage PCBs and are also supplied to the loads used in printing process.
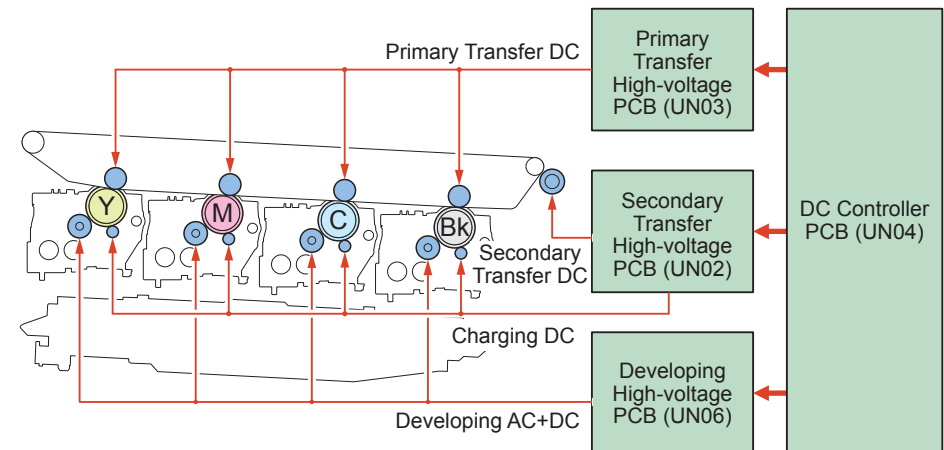


F-2-54

# Controls

## ■ Overview

| Primary charging |
|---|
| Primary charging bias control |

| Image stabilization control |
|---|
| D-max control |
| PASCAL control |
| D-half control |
| ARCDAT control |
| Color displacement correction control |

| Drum Unit (Developing/Drum) |
|---|
| Developing bias control |
| Drum Unit detection |
| Drum Unit Life Detection |

| Toner supply |
|---|
| Toner Cap opening |
| Toner supply control/Toner level detection |
| Toner Log Detection |
| ATR control |
| Driving the Toner Bottles |
| Toner supply control |
| Toner level detection control |

| Transfer/Separation |
|---|
| Primary Transfer Roller disengagement control |
| ATVC control |
| Primary transfer bias control |
| Secondary transfer bias control |
| ITB Displacement Correction |
| ITB cleaning |
| Secondary Transfer Outer Roller cleaning control |

| Waste toner feeding |
|---|
| Waste toner full level detection |
| Waste Toner Container detection |

| Drum cleaning |
|---|
| Drum cleaning control |

## ■ Primary Charging

### ● Overview

This machine uses the roller charging method for primary charging.



Photosensitive
Drum

Primary Charging
Roller
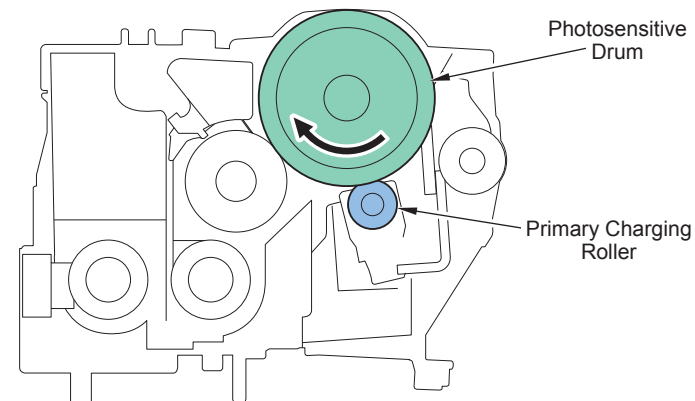
F-2-55

## ● Primary Charging Bias Control

DC charging (no AC charging) is a distinguishing feature of the primary charging of this machine.

The surface of the Photosensitive Drum is charged to make a uniform negative potential.

The primary charging bias (DC negative), which has been generated by the Secondary Transfer High-voltage PCB (UN02), is applied to the Primary Charging Roller.

The primary charging bias value is determined by the following conditions on the DC Controller PCB:

• Environment (humidity detected by the Environment Sensor (UN33))

• Life of the Photosensitive Drum
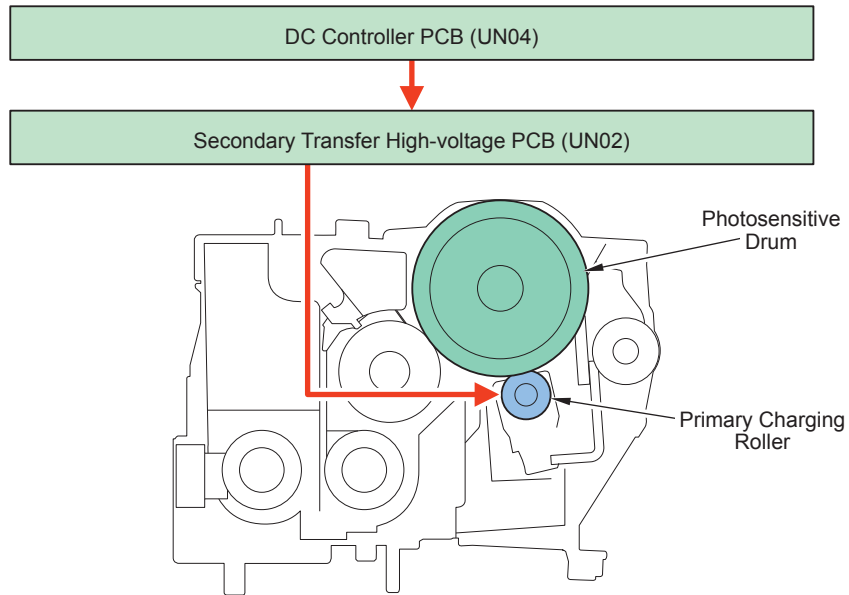
F-2-56

## ■ Drum Unit (Developing/Drum)

## ● Drum Unit Overview

The Drum Unit consists of the Developing Assembly and the Drum Assembly.
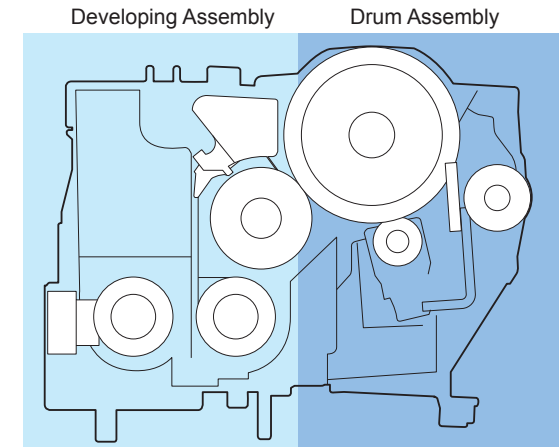
F-2-57

● Developing Overview/ Drive Configuration

Developing Cylinder

Developing Cylinder Clutch
(Y/M/C/Bk)

CL01
CL02
CL03
CL04

M03

Developing Motor

ATR Sensor (Y/M/C/Bk)
(UN34-UN37)

Developer Feed
Screw B

Developer Feed
Screw A
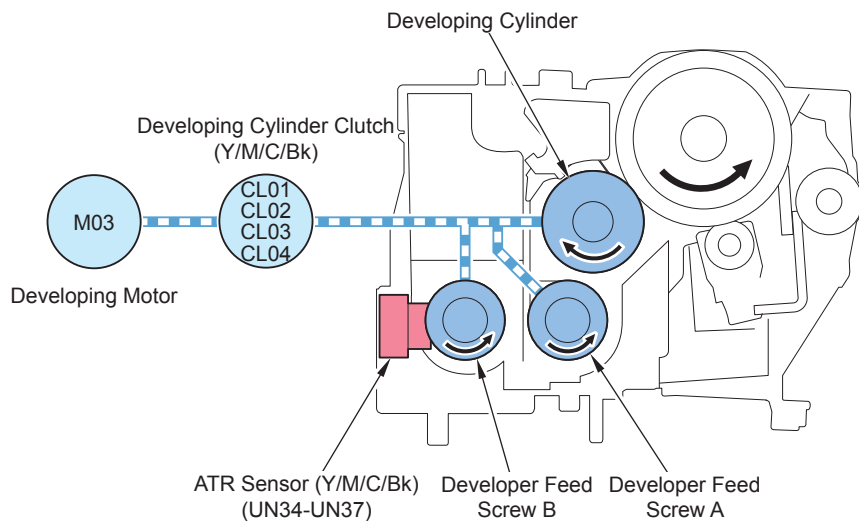
F-2-58

| Parts name | Function |
|---|---|
| Developing Assembly | To develop toner fed from the Hopper Unit to the Photosensitive Drum. |
| Developing Cylinder | The toner and carrier inside the Developer Container are supported on the surface and the toner is developed on the Photosensitive Drum. |
| Developer Feed Screw A | Toner and carrier in the Developer Container are supplied to the Developing Cylinder. |
| Developer Feed Screw B | Toner and carrier in the Developer Container are stirred and supplied to the Developer Feed Screw A. |

T-2-20

| Parts name | | Function |
|---|---|---|
| M03 | Developing Motor | To rotate the Y/M/C Developing Cylinder and the Developer Feed Screw. |
| UN34 to UN37 | ATR Sensor (Y,M,C,Bk) | To detect the ratio of developer (toner + carrier) in the Developing Assembly. |

T-2-21

● Developing bias control

A toner image is formed on the Photosensitive Drum by attaching toner to the Developing Cylinder.

Control description

The developing bias (AC, DC negative), which has been generated on the Developing High-voltage PCB (UN06), is applied to the Developing Cylinder.

- Developing DC bias: The bias to generate potential difference with the Photosensitive Drum.
  The bias value is determined based on the Environment Sensor (UN33).
- Developing AC bias: The bias to improve image quality.

DC Controller PCB (UN04)

Developing High-voltage PCB (UN06)

Developing Cylinder
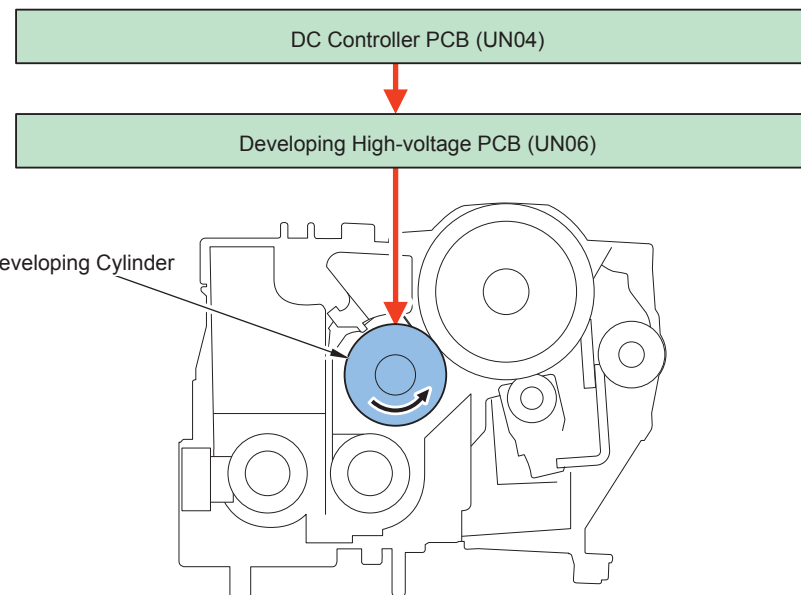
F-2-59

● Drum Overview
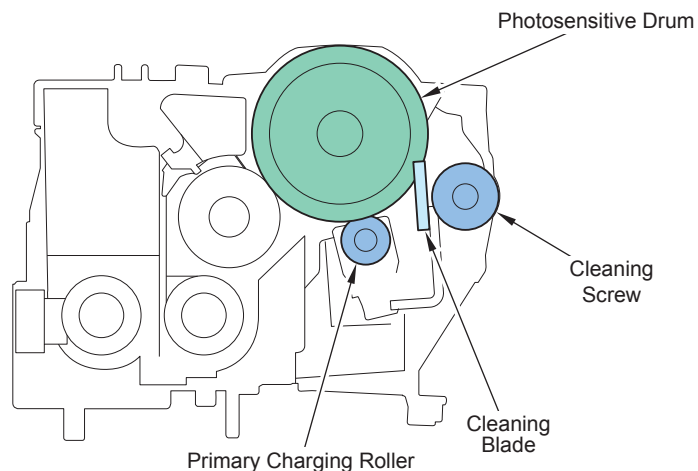


F-2-60

| Parts name | Function |
|---|---|
| Drum Assembly | After a static latent image has been formed on the Photosensitive Drum, a toner image is formed with the toner from the Developing Cylinder. |
| Photosensitive Drum | A toner image is formed on the Photosensitive Drum. |
| Primary Charging Roller | The surface of the Photosensitive Drum is charged to make a uniform potential. |
| Drum cleaning blade | To remove residual toner on the photosensitive drum. |
| Waste toner screw | To feed residual toner. |

T-2-22

● Drive Configuration
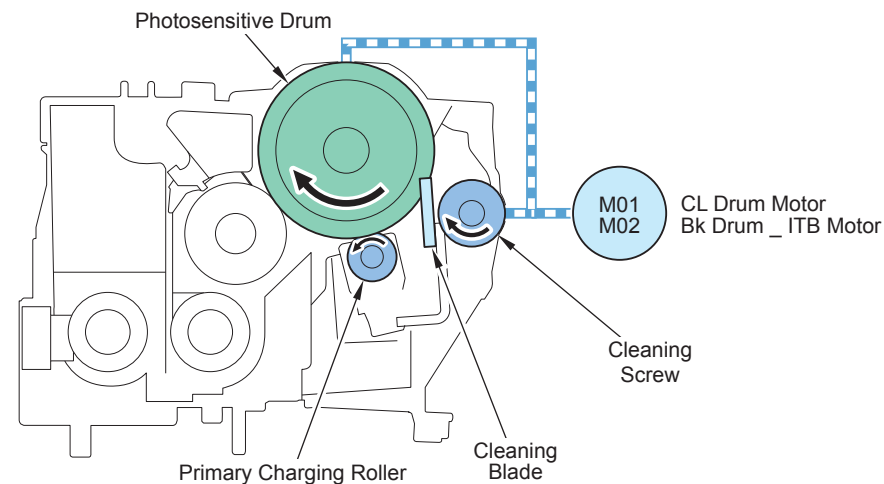


F-2-61

| Parts name | | Function |
|---|---|---|
| M01 | CL Drum Motor | Rotation of the Photosensitive Drum (Y/M/C) |
| M02 | Bk Drum _ ITB Motor | Rotation of the Photosensitive Drum (Bk) |

T-2-23

Related error codes
E010-0001 Bk Drum_ITB Motor startup error
E010-0002 Bk Drum_ITB Motor speed error
E010-0003 Bk Drum_ITB Motor lock detection error
E012-0001 CL Drum Motor startup error
E012-0002 CL Drum Motor speed error
E012-0003 CL Drum Motor lock detection error

● Drum Unit Detection

Whether the Drum Unit is installed or not is detected.

Detection timing

1) At power-on, at recovery from sleep mode (of 4 or more hours), when the Front Door and Right Door are opened/closed.

Detection description

This machine detects the presence/absence of a Drum Unit in the following order.

1) The Drum Unit Memory PCB of the Drum Unit is detected.

If the Drum Unit Memory PCB can be detected, it is judged that the Drum Unit is attached.

If the Drum Unit Memory PCB cannot be detected, step 2 is executed.

2) It is determined by the DC current monitor value at warm-up rotation.

When the current monitor value is less than the specified value (5 micro A):

Drum Unit absent

When the current monitor value is the specified value (5 micro A ) or higher:

Drum Unit present

Execution time

Within 1 second

Operation of the host machine

The machine is stopped and "No drum unit" is displayed on the Control Panel at the same time.
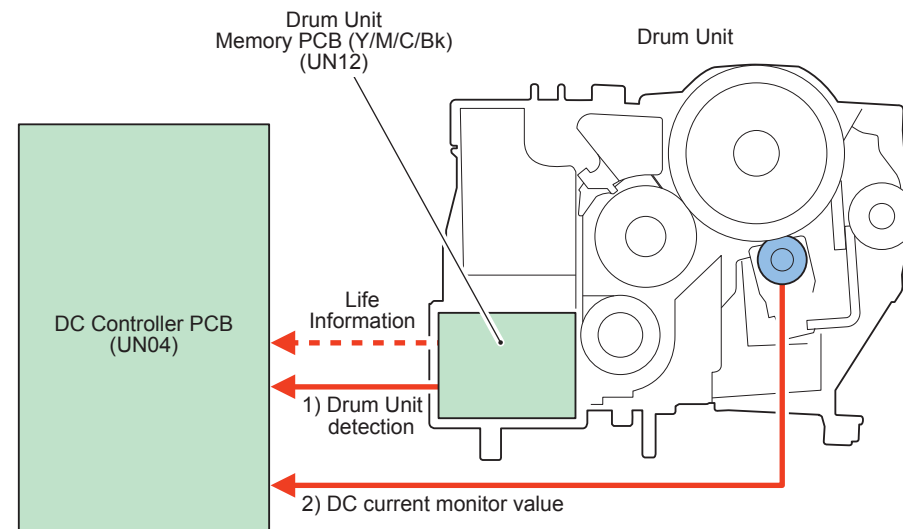


F-2-62

NOTE:
Drum Unit detection may not be executed at times such as at recovery from sleep mode (of 4 or more hours).
"No drum jam" is detected when a print job is executed with no Drum Unit installed in the machine.

Related jam codes
00-0B0D: No drum jam

## ● Drum Unit Life Detection

Life of the Drum Unit (Photosensitive Drum) is detected.

This machine does not have a Photosensitive Drum film thickness detection mechanism so the change in the film thickness is calculated by the rotation time of the Photosensitive Drum + time that the primary charging DC bias is applied.

Detection timing
- At power-on
- At every print
- At recovery from sleep mode

Detection description
1) The count value for the drum life is calculated by the rotation time of the Photosensitive Drum + time that the primary charging DC bias is applied as well as the time that the developing AC bias is applied.
2) The count value calculated in step 1 of "Control description" is added to the drum count value stored in the Drum Unit Memory PCB of the Drum Unit.

---

NOTE:
The life (displayed in %) can be checked by the following service mode:

- Drum counter life display (Y)
  COPIER > COUNTER > LF > Y-DRM-LF

- Drum counter life display (M)
  COPIER > COUNTER > LF > M-DRM-LF

- Drum counter life display (C)
  COPIER > COUNTER > LF > C-DRM-LF

- Drum counter life display (Bk)
  COPIER > COUNTER > LF > K-DRM-LF

---

| | Pre-toner Low Alarm | Display to prompt replacement | Completion of replacement |
|---|---|---|---|
| Timing | • Y/M/C/K-DRM-LF (*1) = 100% (initial value) The value can be changed in service mode.(*2) | 7 days after pre-toner low alarm is sent (Default: Hide (*3)) | When the Drum Unit is detected |
| Detected to (location) | Drum Unit Memory PCB | - | Drum Unit Memory PCB |
| Message (Operation of the host machine) | None | Replace the Drum Unit. | None |
| Alarm code | 40-0070 (Y), 0071 (M), 0072 (C), 0073 (Bk) (*4) | None | 35-0070 (Y), 0071 (M), 0072 (C), 0073 (Bk) (*5) |

T-2-24

*1: (Lv.1) COPIER > COUNTER> LF > Y/M/C/K-DRM-LF

*2: (Lv.1) COPIER > OPTION > FNC-SW > D-DLV-CL/BK

*3: Display/Hide can be switched in (Lv.2) COPIER > OPTION > USER > P-CRG-LF (0: Hide)

*4: During the period from when a pre-toner low alarm is sent to when a replacement completion alarm is sent, the next pre-toner low alarm is not sent. It is printed in JAM/ERR LOG REPORT (ALARM-2).

*5: It is printed in JAM/ERR LOG REPORT (ALARM-3).

## ■ Transfer/Separation

### ● Overview

The ITB Unit transfers a toner image on the Photosensitive Drum onto the ITB. Then, the toner image is transferred on the paper.
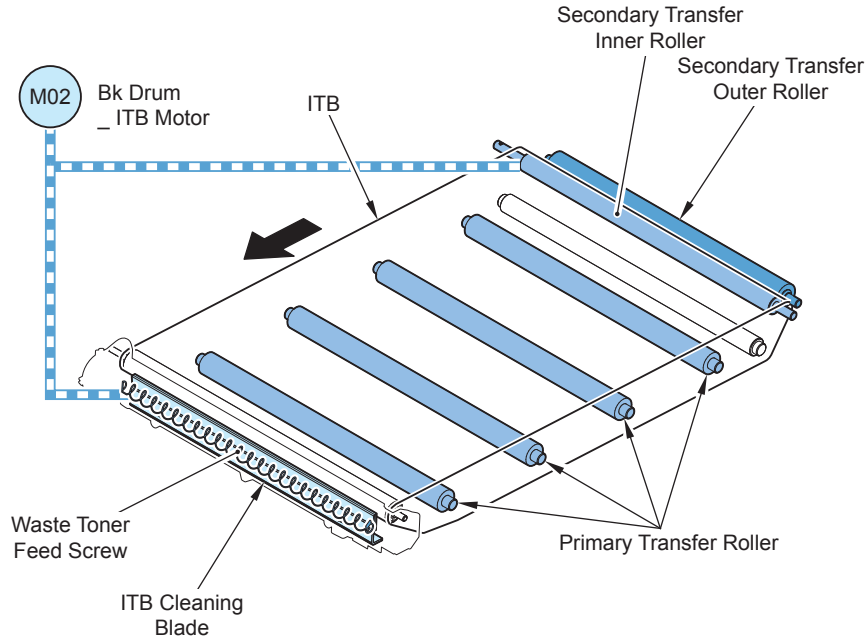


F-2-63

| Parts name | | Function |
|---|---|---|
| ITB Unit | | Toner on the Photosensitive Drum is transferred to a paper. |
| | ITB (Intermediate Transfer Belt) | Toner on the Photosensitive Drum is transferred to a paper. |
| | Primary Transfer Roller | Toner on the Photosensitive Drum is attracted to the ITB. |
| | Drive Roller | The ITB is driven. |
| | Cleaning Blade | Toner on the ITB is scraped. |
| | Waste Toner Feed Screw | Residual toner inside the ITB Cleaner Unit is fed. |
| Secondary Transfer Outer Roller | | As well as attracting toner on the ITB to the paper, paper is fed. |

T-2-25

### ● Drive Configuration
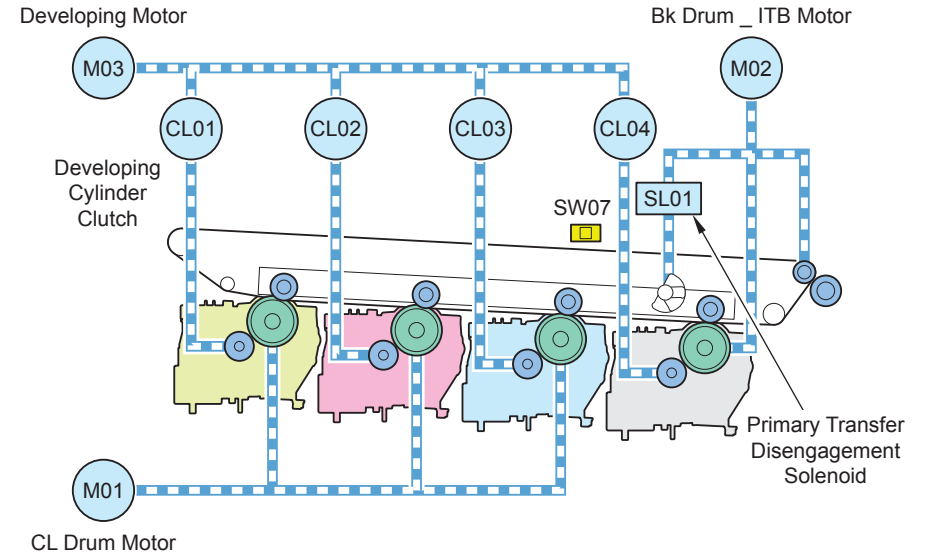


F-2-64

| | Parts name | Function |
|---|---|---|
| M2 | ITB Motor | Rotation of the ITB, the Photosensitive Drum (Bk) and the Waste Toner Screw. The Primary Transfer Roller (Y/M/C/Bk) is engaged. |
| SL01 | Primary Transfer Disengagement Solenoid | The Primary Transfer Roller (Y/M/C/Bk) is engaged. The disengagement status is switched. |
| SW07 | ITB Pressure Release Switch | The Primary Transfer Roller (Y/M/C/Bk) is engaged. The status of disengagement is detected. |
| CL01 - CL04 | Developing Cylinder Clutch | Switching drive of the Developing Cylinder ON and OFF |

T-2-26

Related error codes
E010-0001: Bk Drum_ITB Motor startup error
E010-0002: Bk Drum_ITB Motor speed error
E010-0003: Bk Drum_ITB Motor lock detection error

## ● Primary Transfer Roller Disengagement Control

The Primary Transfer Roller is usually disengaged.

### Timing of engagement

• When image formation is executed

> Related service mode:
> • Execution of the Primary Transfer Roller disengagement
> COPIER > FUNCTION > MISC-P > T1-UP
>
> • ON/OFF of init after ITB rplce:UI menu
> COPIER > OPTION > DSPLY-SW > ITB-DSP:
> To set whether to display "ITB" on Initialization screen after replacing parts in UI menu.
> When allowing the user to replace the ITB, set 1.

### Timing of disengagement

• At power-on
• At recovery from sleep mode
• When the Front Door or the Right Door is opened or closed (if not disengaged)
• When image formation is completed

M02 ITB Motor

SL01 Primary Transfer Disengagement Solenoid

Primary Transfer Roller
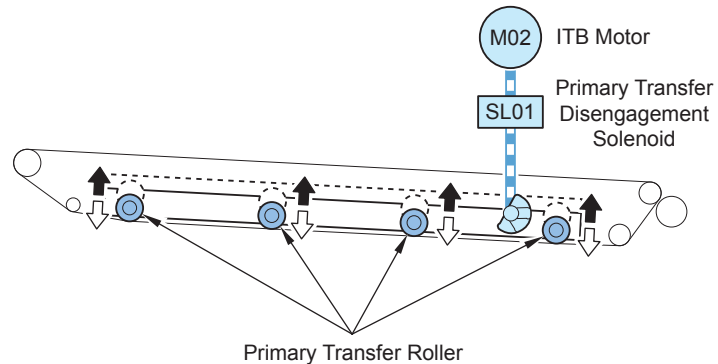
F-2-65

## ● ATVC Control

### Primary Transfer ATVC

The transfer voltage required to prevent transfer failure due to environmental changes and to obtain the target transfer current value is set.

Control timing
1) At power-on (when the fixing temperature is 80 deg C or higher)
2) At power-on (when the Right Door is opened/closed at times other than at jam removal)
3) When the internal temperature has been changed from the time of previous ATVC control by 3 deg C
4) At paper interval (equivalent to 80 images) during continuous printing
5) At last rotation after accumulated 50 images

Control description
1) Monitor current value of the primary transfer DC bias is detected.
2) Optimal target current value is determined based on temperature/humidity data of the Environment Sensor.
3) The primary transfer DC bias is determined that is to be applied to the Primary Transfer Roller.

## Secondary Transfer ATVC

The transfer voltage required to prevent transfer failure due to environmental changes or paper type and to obtain the target transfer current value is set.

Control timing

1) At the same timing as the paper interval (equivalent to 80 images) during continuous printing of the Primary Transfer ATVC
2) At initial rotation
3) At paper interval on a specified print basis (100 sheets or more)

Control description

1) Monitor current value of the secondary transfer DC bias is detected.
2) Optimal target current value is determined based on temperature/humidity data of the Environment Sensor and paper type.
3) The secondary transfer DC bias is determined that is to be applied to the Secondary Transfer Roller.
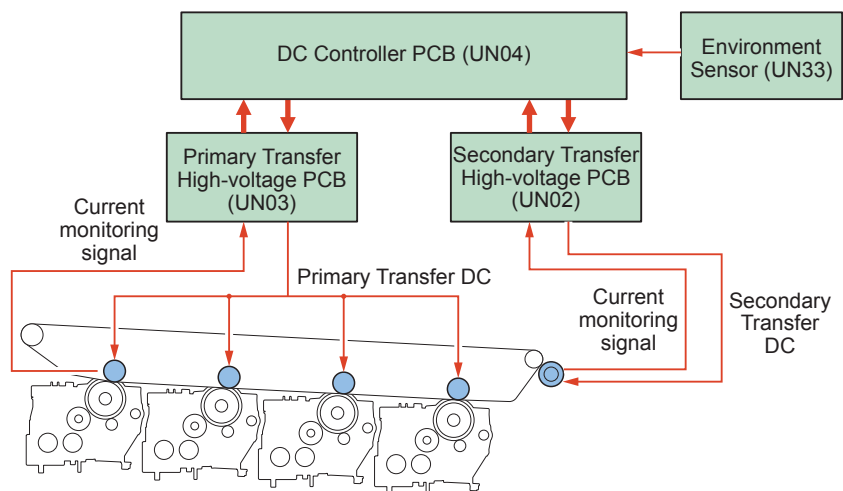
F-2-66

## ● Primary Transfer Bias Control

The primary transfer bias is divided into each color (Y, M, C, Bk) to be generated on the primary transfer bias generation circuit. The primary transfer bias (TR1-1, TR1-2, TR1-3, TR1-4), which has been generated, is applied to the Primary Transfer Roller.
The primary transfer bias value is determined by the ATVC control with the DC Controller, which makes constant current value running though the Primary Transfer Roller.
ON and OFF of the primary transfer bias can be switched by color, and it is possible to turn OFF the bias of the color which will not be used.
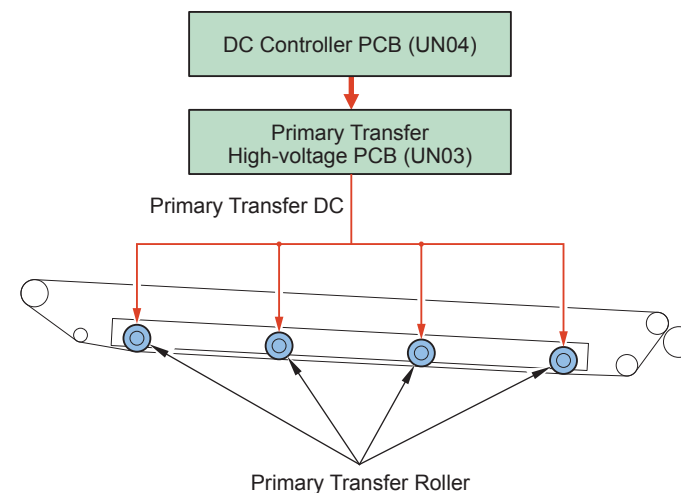
F-2-67

NOTE:
The ATVC control secures transfer performance that can be affected by change in resistance caused by the environment as well as deterioration of the Primary Transfer Roller. The ATVC control is performed respectively for the primary transfer bias in each color.

● Secondary Transfer Bias Control

Toner on the ITB is transferred to a paper.

The secondary transfer bias, which has been generated on the Secondary Transfer High-voltage PCB (UN02), is applied to the Secondary Transfer Outer Roller.

There are 2 types of the secondary transfer bias (the DC positive and the DC negative) to apply bias with the following purpose.

- DC positive: Toner on the ITB is transferred to a paper when printing.
- DC negative: Toner on the Secondary Transfer Outer Roller is attracted onto the ITB when cleaning.

The secondary transfer bias value is determined by the ATVC control with the DC Controller, which makes constant current value running though the Secondary Transfer Outer Roller.
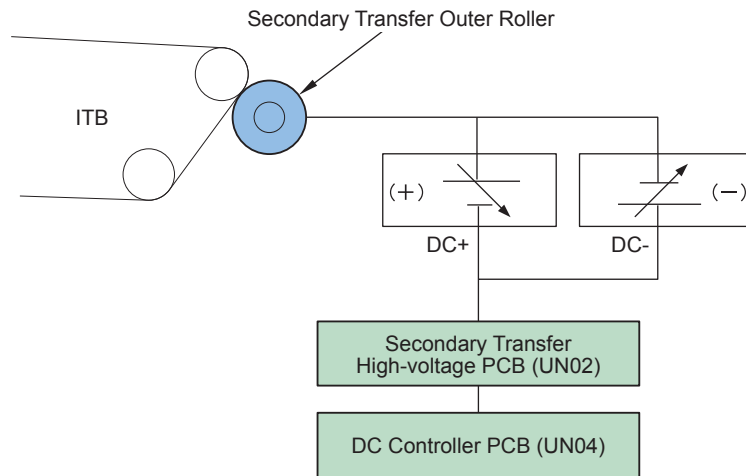


F-2-68

● ITB Displacement Correction

The newly developed ITB displacement control mechanism mechanically prevents full displacement of the belt.

Parts configuration

The following shows the configuration of the edge of the ITB Unit. The portion including the Steering Roller can be tilted around the steering shaft.
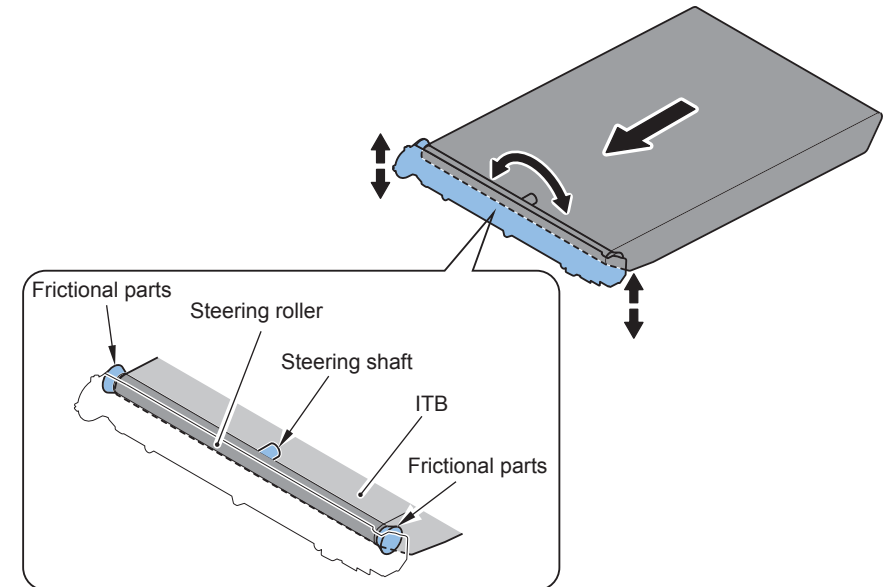


F-2-69

The Steering Roller has a configuration to rotate together with the rotation of the ITB, but the sliding members at both ends do not rotate.
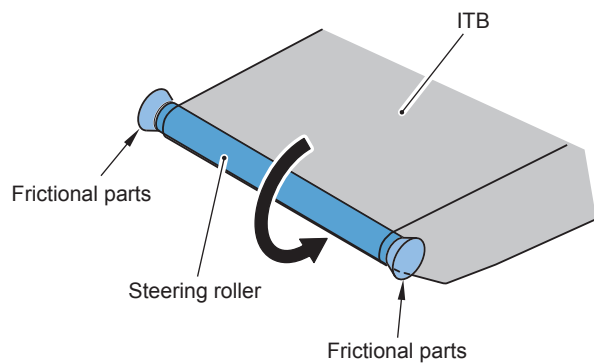


F-2-70

Mechanism for preventing displacement
1. The ITB is displaced toward one side.
2. The belt is displaced and driven onto the sliding member at the end. This sliding member does not rotate, and friction is generated between the belt and the sliding member. This force makes the roller tilt and the steering shaft tilt.
3. When the shaft is tilted, the belt moves toward the higher side, eliminating the displacement of the belt
4. When the displacement is eliminated and the friction between the belt and the sliding member is eliminated, the steering shaft goes back into the equilibrium state again.
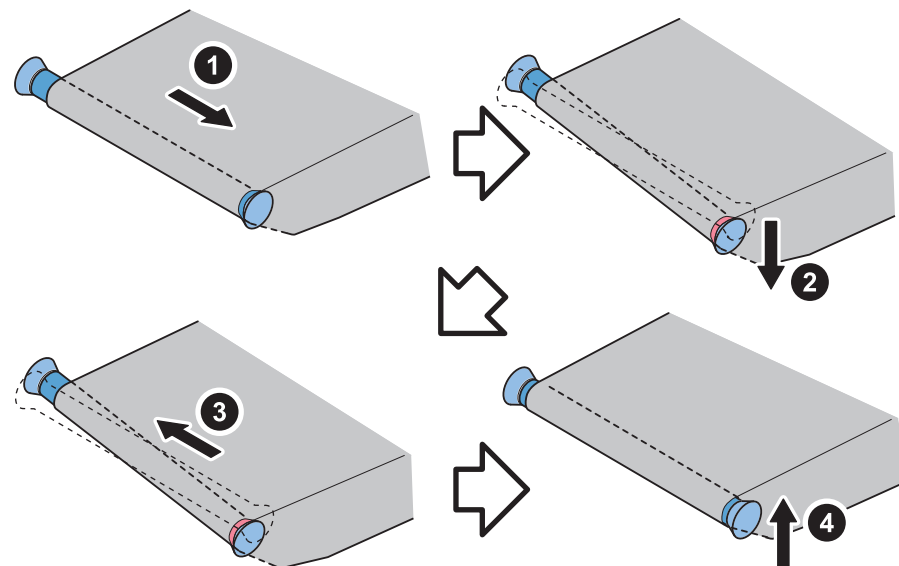


F-2-71

## ● ITB Cleaning

Residual toner on the ITB is removed.

Control description

1) The ITB Cleaning Blade scrapes toner on the ITB.

2) The scraped toner is fed to the Waste Toner Container with the Waste Toner Feed Screw.



M02 Bk Drum
_ ITB Motor

Waste Toner
Feed Screw
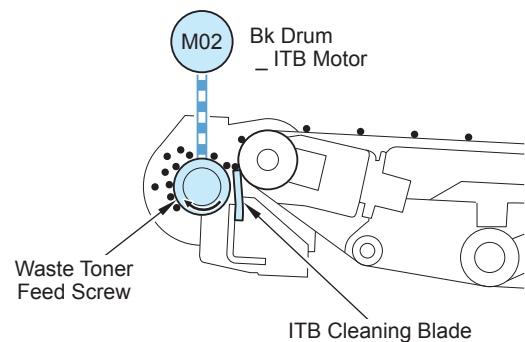
ITB Cleaning Blade

F-2-72

Related service mode:
• Setting of the interval (number of sheets) to conduct ITB cleaning
• Setting of the number of transparencies to execute ITB cleaning

## ● Secondary Transfer Outer Roller Cleaning Control

Soiling at the back of the sheet caused by soiling of the Secondary Transfer Outer Roller can be prevented.

Control timing

1) When image stabilization control (generation of patch image on the ITB) is executed during warm-up rotation

2) At last rotation

3) After executing the image stabilization control (generation of patch image on the ITB)

Control description

The secondary transfer cleaning bias (DC minus + DC plus), which has been generated on the Secondary Transfer High-voltage PCB (UN02), is applied to the Secondary Transfer Outer Roller.

Residual toner on the Secondary Transfer Outer Roller is attached to the ITB, and then collected by the ITB Cleaning Unit.



M02 Bk Drum
_ ITB Motor

Secondary Transfer
Inner Roller

Waste Toner
Feed Screw

ITB Cleaning Blade

Cleaning
Bias

Residual
toner

Secondary Transfer
Outer Roller
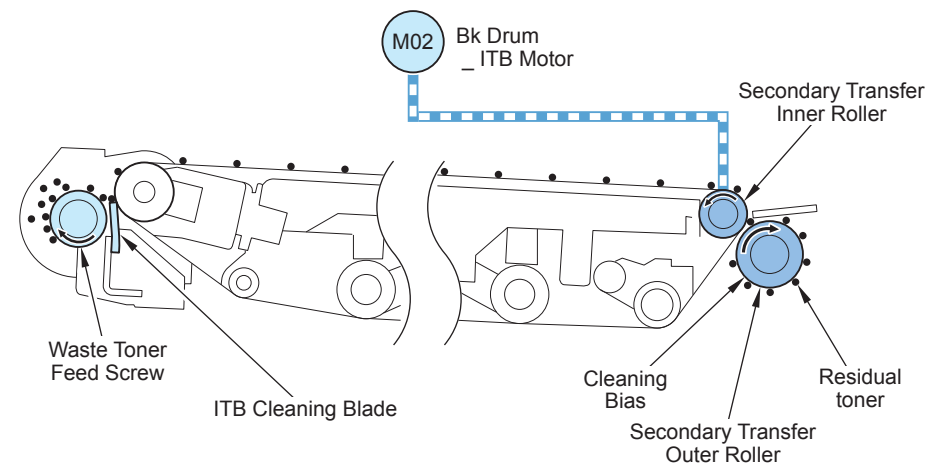
F-2-73

● Separation

This control separates paper from the ITB by elastic force of the paper (curvature separation method).

In the case of thin paper which has low elastic force, the Static Eliminator removes positive potential at the back of the paper.

This reduces electrostatic absorption force of the paper so that paper can be easily separated.
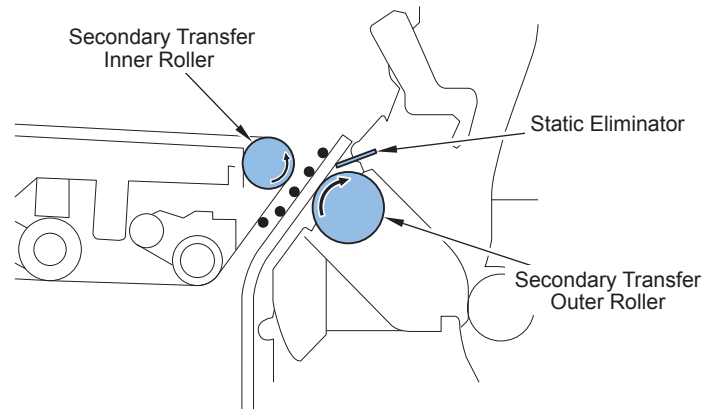


F-2-74

■ Drum Cleaning

● Drum cleaning control

To clean residual toner on the photosensitive drum

Residual toner on the drum is scraped by the drum cleaning blade.

Then, rotation of the waste toner screw feeds the residual toner to the waste toner case.
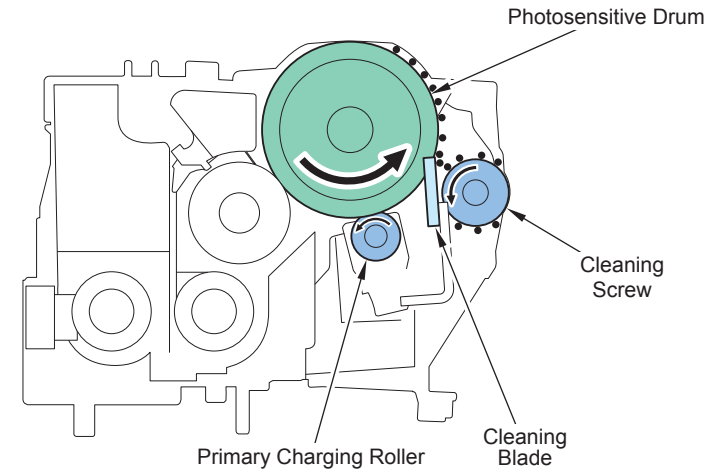


F-2-75

## ■ Image Stabilization Control

### ● Overview

Image failure due to change of the environment or deterioration of the Photosensitive Drum is prevented to ensure stabilized print.
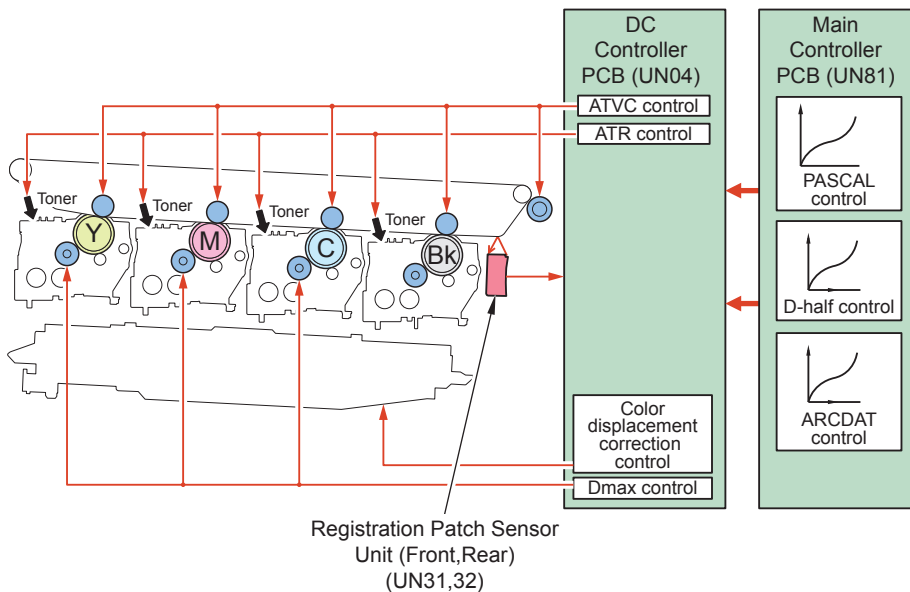


F-2-76

Related alarm codes
• 10-0006: Patch Sensor error 1
• 10-0007: Patch Sensor error 2

### ● Control timing

Execution items for image stabilization control differ according to the environment and condition of image formation parts.

Following shows the control items at each sequence and estimated downtime.

| Startup timing | Conditions for execution | D-max Control | PASCAL control | D-half Control | ARCDAT Control | Color Displacement Correction Control |
|---|---|:---:|:---:|:---:|:---:|:---:|
| At power-on | At power-on | | | | | ○ |
| At recovery from sleep mode | At recovery from sleep mode | | | | | ○ |
| At initial rotation | At initial rotation of PASCAL control or D-half control | ○ | | | | |
| At paper interval | At paper interval on a specified print basis (80 sheets or more) | | | ○ | | |
| At paper interval | At paper interval on a specified print basis (200 sheets or more) | ○ | | | | |
| At last rotation | At last rotation on a specified print basis (30 sheets or more) | | | ○ | | |
| At last rotation | At last rotation on a specified print basis (200 sheets or more) | ○ | | | | |
| At last rotation | At last rotation on a specified print basis (1000 sheets or more) | | | | ○ | |
| At last rotation | At last rotation after printing when the designated temperature difference or humidity difference from the previous execution has been exceeded | ○ | | | | |
| At last rotation | At last rotation when PASCAL control is executed | | | ○ | | |
| At last rotation | At last rotation of PASCAL control or D-half control | | | | ○ | |
| At installation or during parts replacement | When replacing the Drum Unit | ○ | | | ○ | |
| At installation or during parts replacement | During installation and when replacing the Drum Unit | | | ○ | | |
| When UI menu is executed | When calibration is executed (When "auto gradation adjustment -> full adjustment" is executed) | | ○ | | | |
| When UI menu is executed | When "Auto color displacement correction" is executed* | | | | | ○ |

T-2-27

* When it is determined necessary based on the predicted value for temperature inside the machine (according to the usage environment and continuous print state).

The control is executed based on the predicted value; therefore, there is no specific timing for control timing.

● D-max Control

The optimal laser output is determined.

Control timing

1) When replacing the Drum Unit

2) At last rotation or paper interval on a specified print basis (200 sheets or more)

3) At last rotation after printing when the designated temperature difference or humidity difference from the previous execution has been exceeded

4) At initial rotation of PASCAL control or D-half Control

Control description

1) Main Controller PCB forms patch pattern in the target color on the ITB.

2) The DC Controller measures patch density by the Registration Patch Sensor Unit (Front) (UN31)/Registration Patch Sensor Unit (Rear) (UN32) to correct developing bias, primary charging bias and laser output in each color to meet the target density.

F-2-77

Start

↓ Main Controller PCB (UN81)

Output of patch pattern data

↓ DC Controller PCB (UN04)

Patch pattern is created

↓ Registration Patch Sensor Unit (Front) (UN31)
Registration Patch Sensor Unit (Rear) (UN32)

Patch scanning

↓ DC Controller PCB (UN04)

Determination of laser output value (Y,M,C,Bk)

↓ DC Controller PCB (UN04)

Laser Power output is determined

Laser output
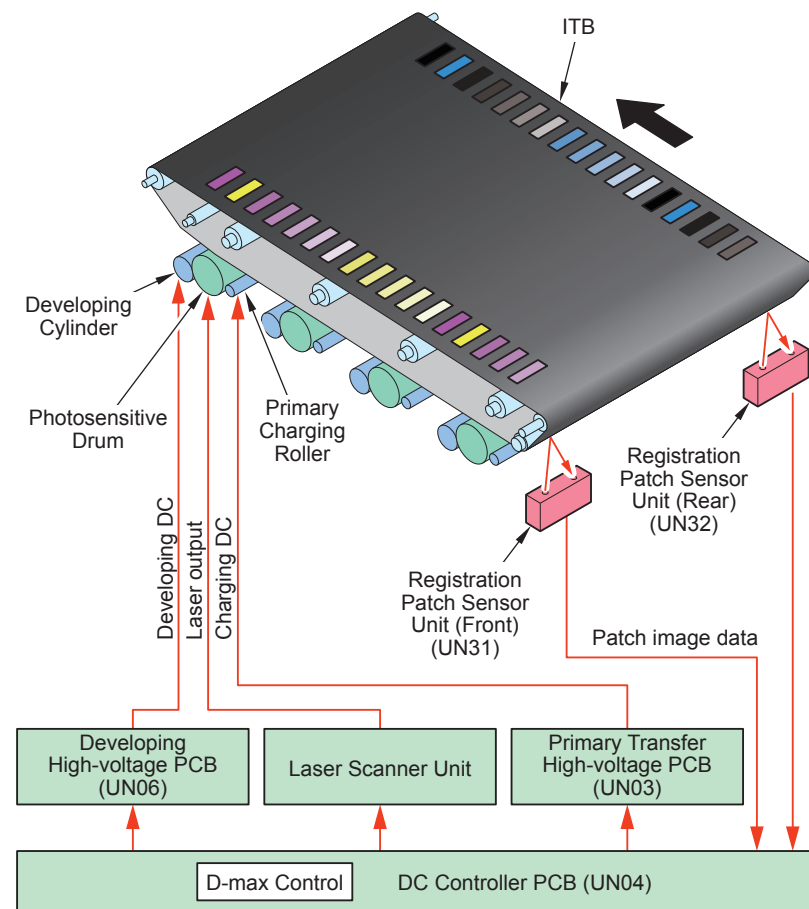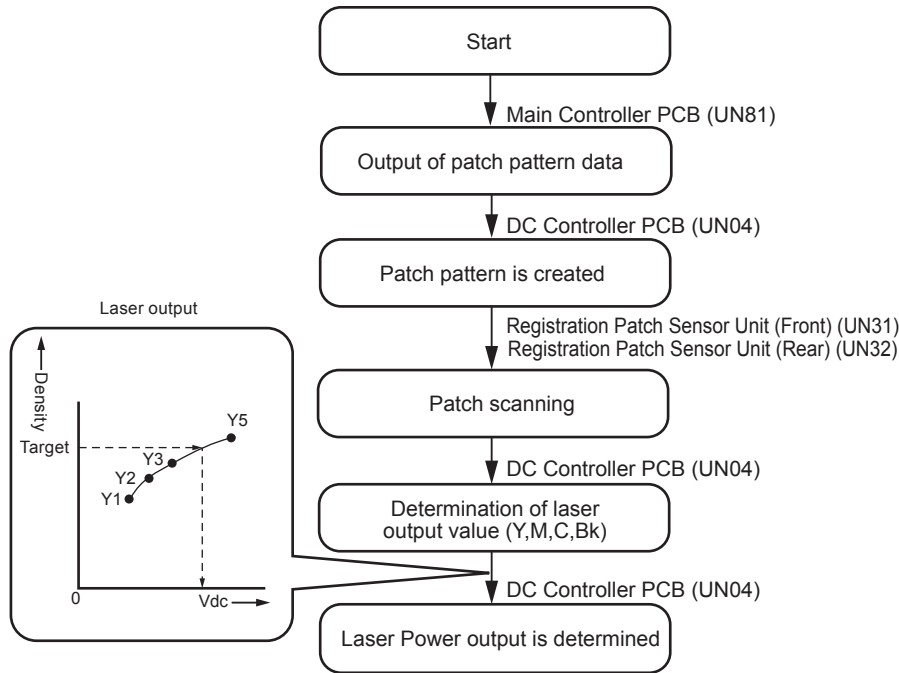
F-2-78

## ● PASCAL control

Gradation density characteristics on the image are stabilized.

This control is executed when the following is selected in UI menu: Auto Adjust Gradation > Full Adjust. Gradation density of the patch pattern on the test print is scanned by the Reader to create an image density correction table.

The foregoing table corrects image gradation density characteristics which change according to the environment change and deterioration of the Photosensitive Drum.
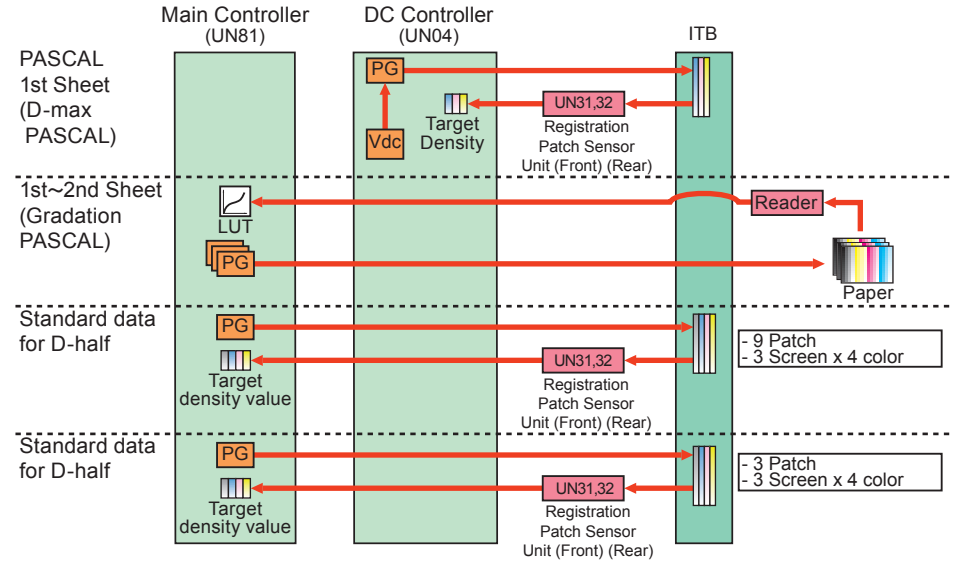


F-2-79

Control timing

   When executing calibration (during execution of "Auto Gradation Adjustment > Full Adjustment" in UI menu)

Control description

1) When the specified conditions are satisfied, the Main Controller PCB prints 3 types of memorized test prints (patch pattern).

2) Place the test prints in the Reader.

3) Reader scans the gradation density of the patch pattern on the test print.

4) The Main Controller PCB creates an image gradation density correction table from the gradation density data of patch pattern scanned by the Reader.

NOTE:
The following 3 types of patch patterns are formed with this control:
• A pattern for copy (39 patches for each color)
• A pattern for text (39 patches for each color)
• A pattern for photo (39 patches for each color)

Related service mode:
To set whether to display the modes for plain paper 3, recycled paper 3, heavy paper 1/2/3 on the Auto Adjust Gradation screen at the time of full adjustment.

COPIER > OPTION > DSPLY-SW > HPFL-DSP
0: OFF
1: Display plain paper 1,2/recycled paper 1,2 and plain paper 3/recycled paper 3
2: Display plain paper 1,2/recycled paper 1,2, plain paper 3/recycled paper 3, and heavy paper 1,2,3

Reader

↕ Patch image data

Printer

PASCAL control

F-2-80

Start

↓ Main Controller PCB (UN81)

Output of patch pattern data

↓ DC Controller PCB (UN04)

Patch pattern is created

↓

Patch patterns (2 types) printed on paper

↓

Printed test patterns are scanned by the reader

↓ Registration Patch Sensor Unit (Front,Rear) (UN31,UN32)

Patch scanning

↓ DC Controller PCB (UN04)

Output of density data

↓ Main Controller PCB (UN81)

PASCAL correction table is created (Y,M,C,BK)

(Y) PASCAL correction data

Actual gradation characteristics
···Y63 Y64
100
↑ Density data (D-CON)
Ideal gradation
···Y2 characteristics
Y1
0                    100
Data output (M-CON) →

100
Ideal gradation characteristics
↑ Density data (D-CON)
Gradation characteristics after correction
0                    100
Data output (M-CON) →

F-2-81

## ● D-half Control

Optimal image gradation is determined.

Control timing

1) During installation and when replacing the Drum Unit

2) At last rotation on a specified print basis (1000 sheets or more)

3) At last rotation when PASCAL control is executed

Control description

1) Main Controller PCB outputs patch data in each color (Y, M, C, and Bk) to the DC Controller PCB.

2) From the data above, the DC Controller PCB forms patch pattern in each color (Y, M, C, and Bk) on the ITB.

3) The DC Controller measures the patch pattern by the Registration Patch Sensor Unit (Front) (UN31) and the Registration Patch Sensor Unit (Rear) (UN32) and the result is returned to the Main Controller PCB.

4) Based on the data above, the Main Controller PCB executes gradation correction to obtain ideal halftone image.

NOTE:
The following 3 types of patch patterns are formed with this control:
- A pattern for copy (9 patches for each color)
- A pattern for text priority (9 patches in each color)
- A pattern for photo priority (8 patches in each color)



F-2-82

Start

↓ Main Controller PCB (UN81)

Output of patch pattern data

↓ DC Controller PCB (UN04)

Patch pattern is created

↓ Registration Patch Sensor Unit (Front,Rear)(UN31,UN32)

Patch scanning

↓ DC Controller PCB (UN04)

Output of density data

↓ Main Controller PCB (UN81)

D-half correction table is created (Y,M,C,Bk)

(Y) D-half correction table

Actual gradation characteristics

Y9  Y10

100

Ideal gradation characteristics

Y2

Y1

0                100

Density data (D-CON)

Data output (V-CON) →

100

Ideal gradation characteristics

0                100

Gradation characteristics after correction

Density data (D-CON)

Data output (V-CON) →

F-2-83

The flow to calculate correction value for ARCDAT control

Start

↓ Main Controller PCB (UN81)

Output of patch pattern data

↓ DC Controller PCB (UN04)

Reference patch pattern for ARCDAT is created (3Patch)

↓ Registration Patch Sensor Unit (Front,Rear)(UN31,UN32)

Patch scanning

↓ DC Controller PCB (UN04)

Output of density data (INT)

↓ Main Controller PCB (UN81)

Saved as reference data for ARCDAT

example) Reference data for ARCDAT of copy pattern

100

40

20

INT

10    40         100

Density data(D-CON)

Data output(D-CON) →

F-2-84

## ● ARCDAT Control (Automatic and Reciprocal Color Density Adjustment Technology)

While reducing downtime, the ideal gradation characteristics are realized.

Control timing
  1) When replacing the Drum Unit
  2) At paper interval on a specified print basis (80 sheets or more)
  3) At last rotation on a specified print basis (30 sheets or more)
  4) At last rotation of PASCAL control or D-half control

Control description
1) Main Controller PCB outputs patch data in each color (Y, M, C, and Bk) to the DC Controller PCB.
2) The DC Controller PCB forms patch pattern in each color (Y, M, C, and Bk) on the ITB. (Total of 12 patterns: 3 patch patterns for each color)
3) The DC Controller PCB measures the patch pattern by the Patch Sensor Front (UN44) and the Patch Sensor Rear (UN43) and the result is returned to the Main Controller PCB.
4) Main Controller PCB compares this measured data with the reference data for ARCDAT control that has been backed up. The difference by comparison is reflected to the D-half result as the offset value.



F-2-85

Start

Main Controller PCB (UN81)

Output of patch pattern data

DC Controller PCB (UN04)

Patch pattern is created

Registration Patch Sensor Unit (Front,Rear)(UN31,UN32)

Patch scanning

DC Controller PCB (UN04)

Measurement data (SIN) transmission

Main Controller PCB (UN81)

Comparison of measurement data (SIN) and reference data (INT)

Main Controller PCB (UN81)

Offset value (alpha) determination (i.e., difference between SIN and INT)

Main Controller PCB (UN81)

Inclusion of result in D-half correction table

example) Reference data for ARCDAT of copy pattern

Density data(D-CON)

40 — INT
α
20 — SIN

10    40

Data output(D-CON)

Density data(D-CON)

100

Current gradation characteristics

60

Gradation characteristics after correction

40

α

20

40

Data output(V-CON)

F-2-86

## ● Color Displacement Correction Control

Uneven exposure of the Laser Scanner Unit and color displacement caused by uneven rotation of the drum or the ITB is corrected.

Short patch pattern

Long patch pattern
Medium patch pattern

Registration Patch Sensor Unit (Front) (UN31)

Registration Patch Sensor Unit (Front) (UN31)

ITB Unit

ITB Unit

Registration Patch Sensor Unit (Rear) (UN32)

Registration Patch Sensor Unit (Rear) (UN32)

Patch

Patch
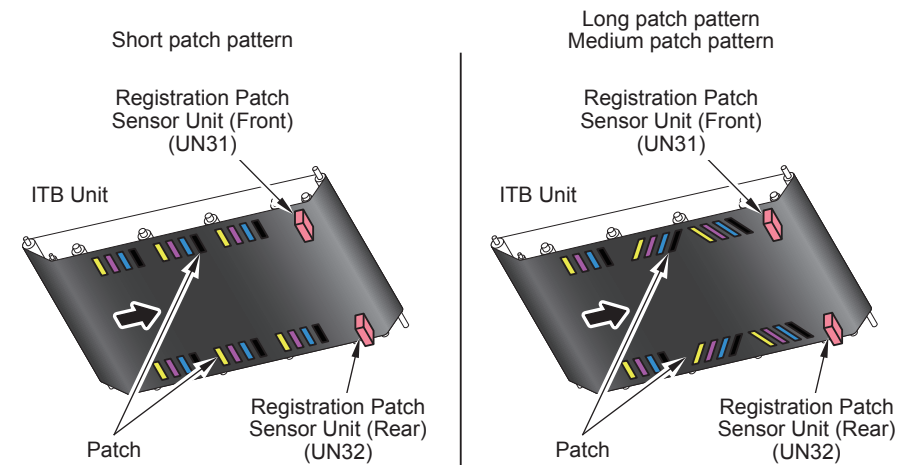
F-2-87

### Startup timing

1)Execution of this control is determined according to the status of the host machine at power-on or recovery from sleep mode.
2)When execution is determined necessary based on the predicted value for temperature inside the machine (according to the usage environment and continuous print state).
The control is executed based on the predicted value; therefore, there is no specific timing for control timing.

### Control description 1: Color displacement correction based on patch pattern

1)The Main Controller forms patch pattern in each color on the ITB.
2)The DC Controller PCB scans the patch pattern by the Registration Patch Sensor Unit (Front) (UN31) and the Registration Patch Sensor Unit (Rear) (UN32) to detect the degree of color displacement comparing to the reference color (Y).
3)Based on the abovementioned detection result, the DC Controller PCB executes correction according to the degree of color displacement.

## Control description 2: Color displacement correction based on temperature prediction

1) The degree of color displacement is measured based on the operating condition (mainly temperature).

2) Exposure timing for MCBk is adjusted with reference to Y.

3) The color displacement correction is performed with the patch pattern above.

| Control type | | Correction description |
|---|---|---|
| Correction in horizontal scanning direction | Write start correction | Write-start timing in horizontal scanning direction is changed. |
| | Entire magnification ratio correction | Pixels in horizontal scanning direction is increased/reduced (at the both edges of the image) |
| Correction in vertical scanning direction | Write start correction | Write-start timing in vertical scanning direction is changed. |
| | Image skew correction | Image data is corrected. |

T-2-28

## ■ Toner Supply Assembly

### ● Overview

Toner is supplied from the Toner Container to the Developing Assembly. The toner level of the Toner Container is detected at the same time.
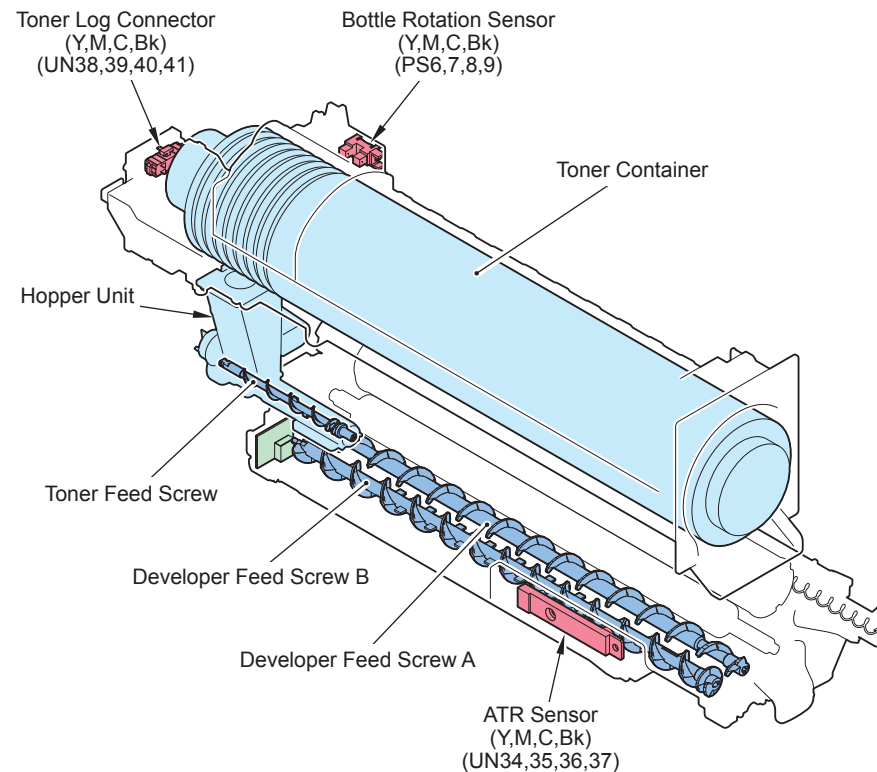


F-2-88

| Parts name | Function |
|---|---|
| Hopper unit | To supply toner in the hopper unit to the developing assembly. |
| Toner Feed Screw | Toner is supplied from the Hopper Unit to the Developing Assembly. |
| Toner Log Connector (Y/M/C/Bk) | Detects a Toner Log. |
| Bottle Rotation Sensors (Y/M/C/Bk) | Detects presence/absence of Toner Container. |

T-2-29

## ● Toner Head Assembly Opening

This control automatically opens/closes the head assembly of toner container.

Control timing
   When replacing a toner container
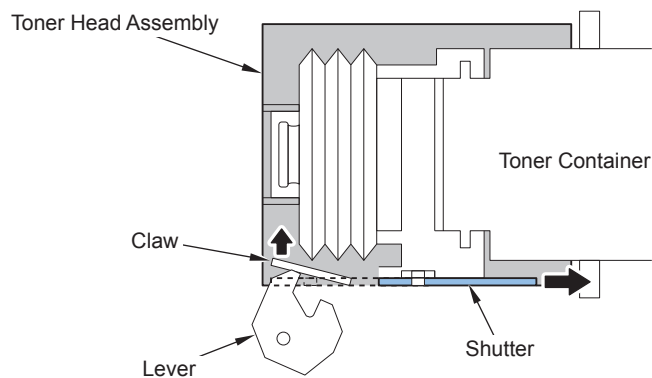


F-2-89

## ● Toner Container Detection

The presence/absence of the Toner Container is detected.

The Bottle Rotation Sensors (Y/M/C/Bk) (PS06/PS07/PS08/PS09) are located as shown in the figure below, which turn ON when a Toner Container is inserted to detect the presence of the Toner Container.
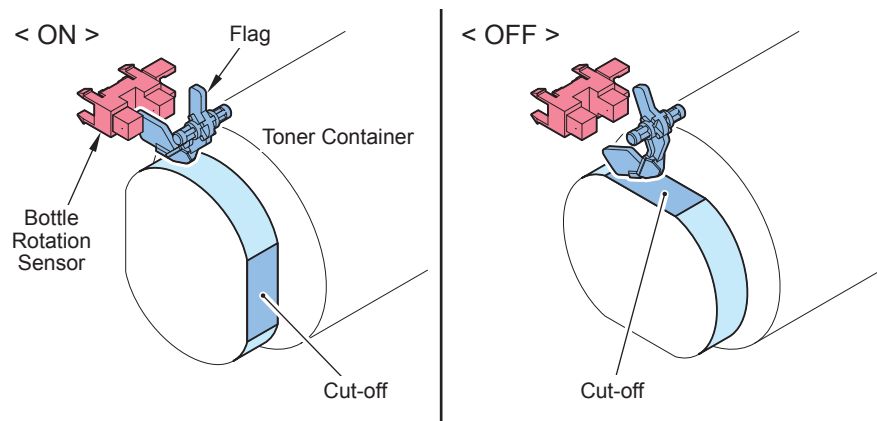


F-2-90

## ● Toner Log Detection

A Toner Log is detected.

Detection timing
   When replacing Toner Container

Detection description
   The Toner Log Connector (Y/M/C/Bk) (UN38, UN39, UN40, UN41) detect a Toner Log.
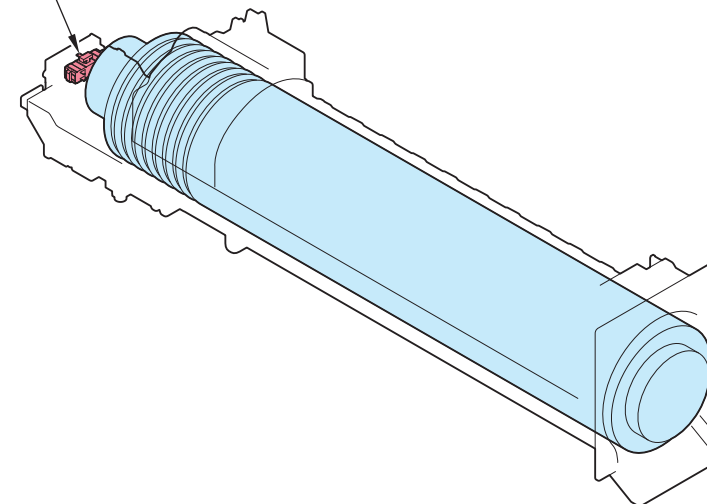


F-2-91

● ATR Control (Auto Toner Replenishment)

Toner is supplied to the Developing Assembly to make the developer (toner + carrier) in the assembly to meet at an ideal ratio.

Control timing
• At every print job (each page)

Control description

Supply amount of the toner for each color is calculated by the abovementioned startup timing, and toner is supplied to the Drum Unit. The DC Controller PCB determines toner supply amount by the following 2 data:
   • ATR Sensor output value (DC Controller)
   • Video count value (Main Controller)
The DC Controller PCB turns ON the Bottle Motor (YM) (M09) and Bottle Motor (CK) (M10) when it determines that toner supply is necessary.
This makes the Toner Feed Screw and the Developer Feed Screw A/B rotate so that the specified amount of toner is supplied to the Developing Assembly.
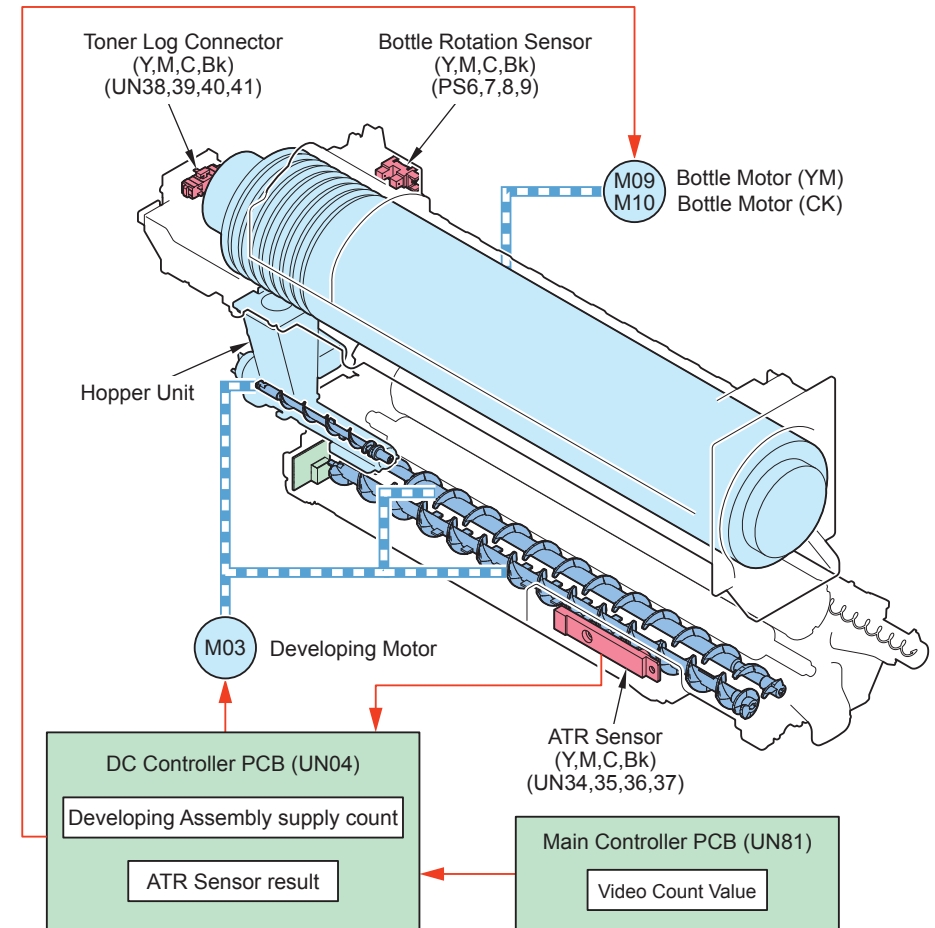


F-2-92

Related error codes
X indicates the target color (1=Y, 2=M, 3=C, 4=Bk)
E020-0XA8: ATR Sensor (Y/M/C/Bk) output error (during printing)
E020-0XB8: ATR Sensor (Y/M/C/Bk) output error (at initialization)
E020-0XC0: Error in take-up of Sealing Member (Y/M/C/Bk)
E020-0XF0: When the ATR Sensor cannot be detected, Toner density error

● Driving the Toner Bottles

This machine has only 2 Toner Bottle Motors, and toner is supplied by driving Toner Bottles of two colors alternately by one motor.

The following shows the image of the Drive Unit viewed from the back side.

Bottle Drive Unit

Motor

Bk Toner Bottle

C Toner Bottle

**REAR VIEW**
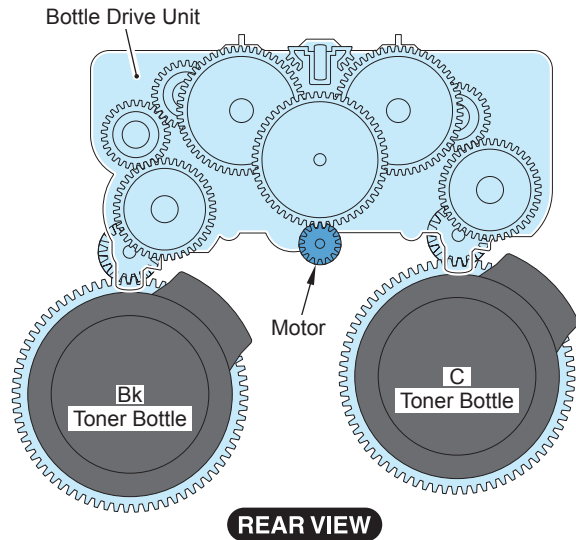
F-2-93

The operation is going to be explained taking Bk and C as an example.

1. The motor rotates. At the same time, the gear in the center moves.
2. The driving force is transmitted only to the gears on the side toward which the gear moved, and the Toner Bottle rotates.

Bk

C

**REAR VIEW**

F-2-94

3. When the motor rotates in the reverse direction, the gear in the center moves to the opposite direction.

4. The driving force is transmitted only to the gears on the side toward which the gear moved, and the Toner Bottle rotates.



REAR VIEW

F-2-95

● Toner Supply Control

Toner is supplied from the Toner Container to the Developing Assembly.

This machine uses a Toner Container that has a bellows mechanism at the edge. The Toner Bottle is rotated and the bellows section is operated by driving the Bottle Motor. At that time, air pressure is used to supply toner to the Hopper Unit.



F-2-96

| Title | Supply to the Hopper | Supply to the Developing Assembly |
|---|---|---|
| Description | Toner is supplied from the Toner Container to the Hopper Unit. | Toner is supplied from the Hopper Unit to the Developing Assembly. |
| Supply timing | Toner is supplied when supply is determined necessary from the result of ATR control. | Toner supply from the Hopper Unit to the Developing Assembly is synced with the Toner Feed Screw. |
| Operation of the host machine | The Bottle Motor (YM) (M09) and the Bottle Motor (CK) (M10) are driven*. | The Toner Feed Screw is turned to supply toner to the Developing Assembly. |

T-2-30

*) The supply amount is determined based on the output value at the time of ATR Sensor output and the time of video count.

The Bottle Rotation Sensor (Y/M/C/Bk) (PS06/PS07/PS08/PS09) starts while it is turned ON at the time of feeding. Driving the Bottle Motor (YM) (M09) or the Bottle Motor (CK) (M10) rotates the Toner Bottle, causing the flag of the Bottle Rotation Sensor to drop to the cut-off part of the Toner Bottle as shown in the figure below, which in turn switches OFF the sensor. When the flag then moves away from the cut-off part of the Bottle Rotation Sensor, the sensor is switched ON.
While the Bottle Rotation Sensor is in turned OFF, 1 block's worth of toner is supplied to the Hopper Unit.
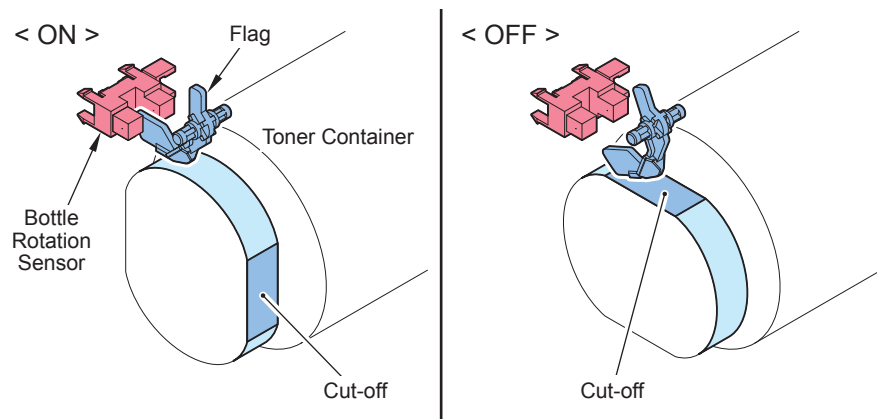


F-2-97
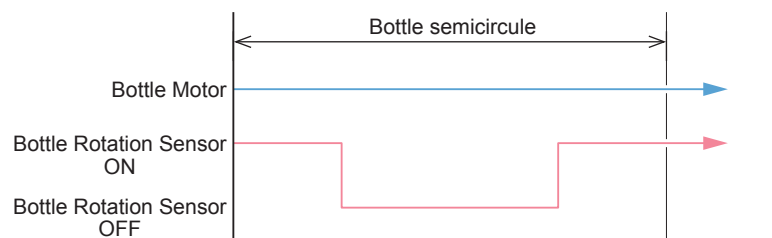


F-2-98

## ● Toner Level Detection

| Detection description | Prior delivery alarm | Display Remaining Toner error (*5) | Empty toner |
|---|---|---|---|
| The residual quantity of the toner | Default: xx %* The value can be changed in service mode. (*1) | Default: xx %* The value can be changed in service mode. (*2) | 0% |
| Detection timing | Prediction from the toner supply count (Judged from the number of supplying toner to the Hopper Unit.) | | When the output signal from the ATR Sensor does not fall below the designated value even after performing a toner supply operation. |
| Detecting to (location) | Developing Assembly supply count. *3 | | ATR Sensor |
| Message (machine operation) | None | Please prepare a toner container(Continuous printing is enabled.) | Replace the toner cartridge. (Host machine is stopped.) |
| Alarm Code | 10-0017 (Y) 10-0018 (M) 10-0019 (C) 10-0020 (Bk) | 10-0001 (Bk) *4 10-0002 (C) *4 10-0003 (M) *4 10-0004 (Y) *4 | None |

T-2-31

*: The default differs depending on the country.
*1: (Lv.1) COPIER > OPTION > FNC-SW > T-DLV-CL/BK
*2: (Lv.2) COPIER > OPTION > DSPLY-SW > T-LW-LVL

> Caution:
>
> Toner-out message may be displayed before remaining toner error message is displayed if the value of (Lv.2) COPIER>OPTION>DSPLY-SW>T-LW-LVL is lowered than the initial value due to the margin of the developing supply count.

*3: The toner supply count shows the amount of toner supplied from the Toner Container to the Developing Assembly.
*4: Alarms generated by UGW are not recorded in the alarm log of LUI.
*5: Whether or not to display the Remaining Toner Error Message can be set in COPIER > OPTION > DSPLY-SW > TNR-WARN (Lv.1).

● Detection of the completion of toner replacement

| Detection of the completion of replacement | |
|---|---|
| Detection timing | When a replacement of Toner Container is detected |
| Alarm Code | 10-0100 |
| Remarks | The toner supply count is reset at the same time. |

T-2-32

NOTE:
The Hopper Assembly of this machine is extremely small, so printing will not be possible after detecting the absence of toner since there will be no toner in the Hopper Assembly. Therefore, the 3-level display, which is available with, for example, imageRUNNER ADVANCE C5051 series, is not available.
* Whether or not to display the Remaining Toner Error Message can be set in COPIER > OPTION > DSPLY-SW > TNR-WARN (Lv.1).

Related error codes:
E025-0110 Bottle Motor (YM) lock detection error (Y)
E025-0210 Bottle Motor (YM) lock detection error (M)
E025-0310 Bottle Motor (CK) lock detection error (C)
E025-0410 Bottle Motor (CK) lock detection error (Bk)

E025-0168 No toner detection error (Y)
E025-0268 No toner detection error (M)
E025-0368 No toner detection error (C)
E025-0468 No toner detection error (Bk)

## ■ Waste Toner Feeding Area

● Overview

To feed waste toner of the drum cleaning unit and the ITB cleaning unit to the Waste Toner Container.
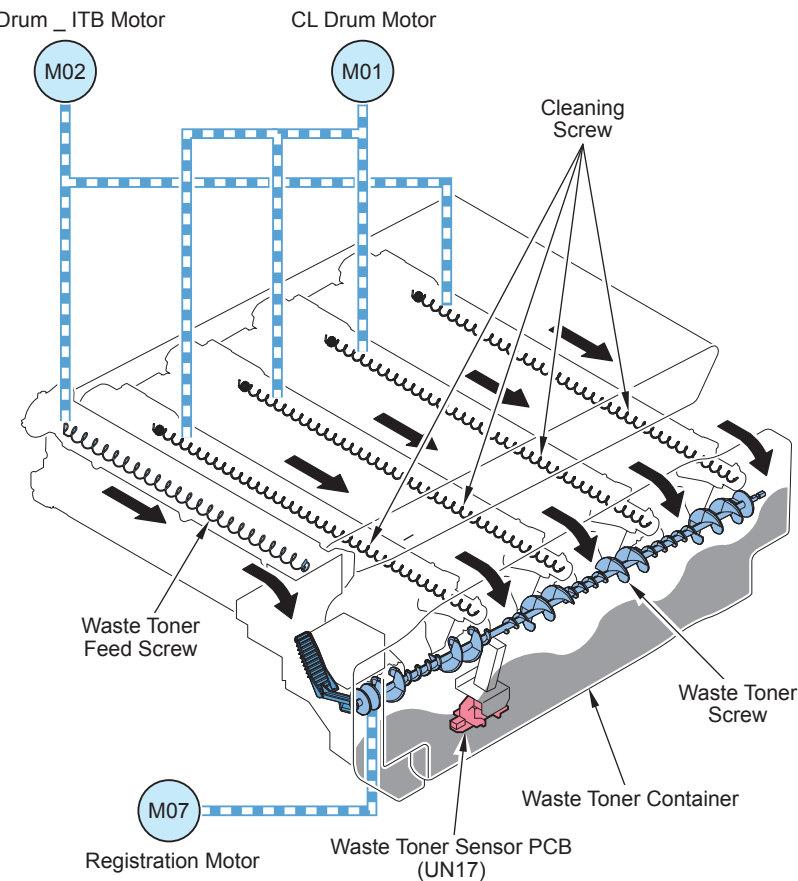


F-2-99

| Parts name | Function |
|---|---|
| Waste Toner Feed Screw | Waste toner from the ITB Cleaning Unit is fed. |
| Waste Toner Container | Waste toner is collected. |
| Cleaning Screw | Residual toner is fed. |
| Waste Toner Screw | Waste toner inside the Waste Toner Container is raked. |
| Registration Motor | Rotates the Waste Toner Feed Screws. |
| Waste Toner Sensor PCB | Detects the toner amount in the Waste Toner Container. |

T-2-33

## ● Waste Toner Container Full Level Detection

To detect toner level accumulated in the waste toner case.
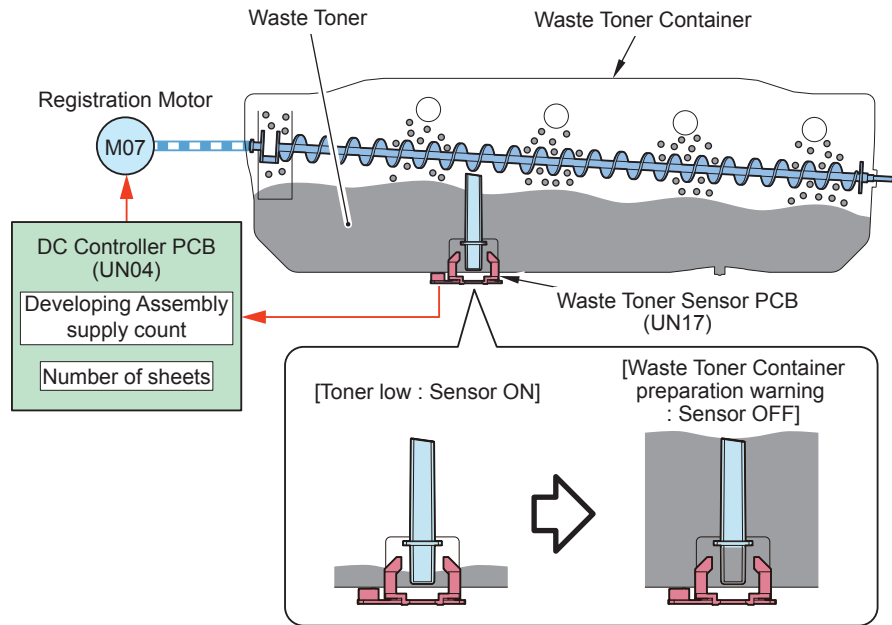


F-2-100

| Detection description | Auto delvry alarm/Waste Toner Container preparation warning (*1) | Full level of waste toner |
|---|---|---|
| Detection timing | When the output result of the Waste Toner Sensor PCB (UN17) changed from ON to OFF | Either of the following cases that comes first: When approx. 1000 sheets (full color, calculated at the image ratio of 5%) have been fed since the preparation warning, or when 1000 sheets (default value) have been fed since the preparation warning (the Waste Toner Container may not have reached full level depending on the toner density). (*2) |
| Detecting to (location) | Waste Toner Sensor PCB (UN17) | Developing supply count value, or the number of sheets fed |
| Message (machine operation) | Please prepare a waste toner container (Continuous printing is enabled.) | Replace the waste toner container. (Host machine is stopped.) |
| Alarm code | 11-0010 | 11-0001 |

T-2-34

*1: Whether to display or hide the Waste Toner Container preparation warning message can be set in COPIER > OPTION > DSPLY-SW > WT-WARN (Lv.1).

*2: The setting for the number of sheets to be fed after the waste toner full detection can be changed in COPIER > OPTION > FNC-SW > WT-FL-LM (Lv.2).

## ● Detection of the completion of waste toner replacement

| Detection timing | When the Waste Toner Sensor PCB (UN17) is turned ON for 3 seconds after the Front Door is opened/closed while "preparation warning" or "waste toner full level" is detected |
|---|---|
| Remarks | The parts counter is automatically cleared. |

T-2-35

## ■ Other Controls

### ● Special Controls

This machine has the following sequences as the special sequence.

Black Band Sequence
Solid black band

Developing Discharge
Sequence
Solid color band (Y/M/C/BK)
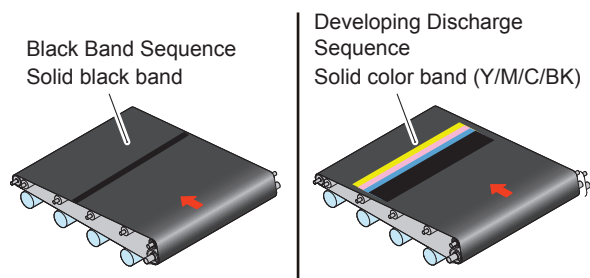
F-2-101

### Black Band Sequence

Control timing: If the travel distance of the drum or the ITB has exceeded the designated value

If you perform continuous printing while toner is not being fed to the Drum Cleaning Blade and ITB Cleaning Blade, the cleaning blades may become warped.
Toner (solid image of each color, width: full width of the developing area, length: 20 mm) is therefore transferred onto the drum and ITB to supply toner to the Drum Cleaning Blade and ITB Cleaning Blade.

### Developing Discharge Sequence

Control timing: When the average image ratio per sheet reaches 2% or less

Developing performance can decrease when performing continuous printing with low image ratio. To prevent this error, the average image ratio for each color is calculated with the ATR control and adequate amount of toner based on the calculation (width = A4, length = a solid color band according to the deteriorated toner amount) is transferred to the ITB.

## ■ Warm-up Rotation

### ● Operation overview

This operation is performed to check the status of sensor/motor at power-on or recovery from sleep mode. According to the conditions, one of the following 3 patterns of warm-up rotation is performed: none, short, or long.

| Conditions | Fixing temperature | |
|---|---|---|
| | 255 deg C or more | less than 80 deg C |
| At power-on | None | Long |
| 24 hours or more in sleep mode | - | Long |
| 4 hours or more but less than 24 hours in sleep mode | - | Short |
| Less than 4 hours in sleep mode | None | None |

T-2-36

| Warm-up rotation control | Long | Short | None |
|---|---|---|---|
| Primary Transfer Roller Disengagement Control | Yes | Yes | No |
| Waste Toner Container stirring | Yes | Yes | No |
| Idle rotation of the Developing Assembly | Yes | Yes | No |
| Drum Unit Detection | Yes | Yes | No |
| Drum Unit Life Detection | Yes | Yes | No |
| Primary Transfer ATVC | Yes | Yes | No |
| Primary Transfer Roller Disengagement Control | Yes | No | No |

T-2-37

## Service Tasks

### ■ Periodically Replaced Parts

None.

### ■ Consumable Parts

| No. | Parts name | Parts number | Quantity | Estimated life | Remarks |
|---|---|---|---|---|---|
| 1 | ITB Unit | FM1-A153 | 1 | 150,000 sheets | |
| 2 | Secondary transfer outer Roller | FC0-5848 | 1 | 150,000 sheets | |
| 3 | Waste Toner Container | FM0-0015 | 1 | 30,000 sheets | |

T-2-38

### ■ Periodical Servicing

None.

Perform as needed.

# Fixing System

## ⬤ Overview

### ■ Features

This machine uses the on-demand fixing method.
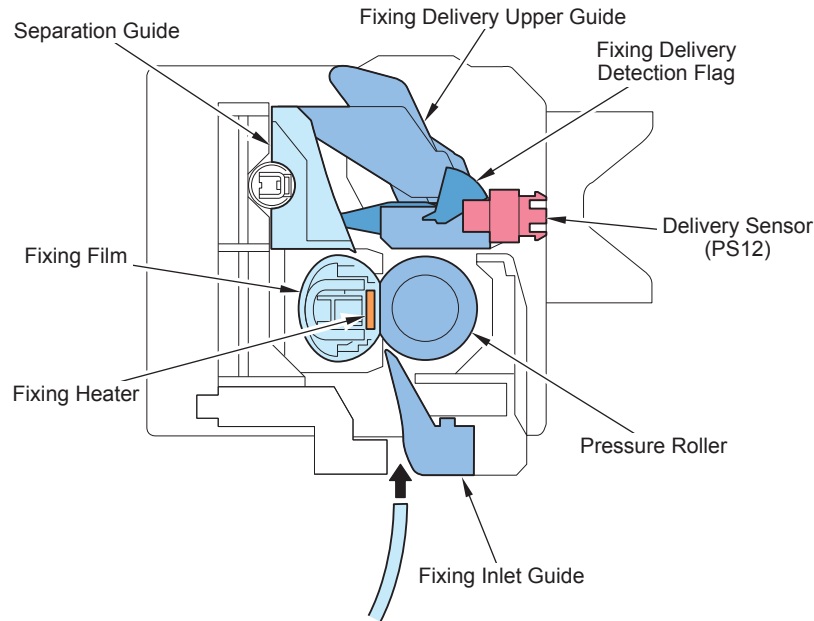


F-2-102

## ■ Specifications

| Item | Function/method | | |
|---|---|---|---|
| Fixing method | On-demand fixing | | |
| Fixing speed | 35-ppm model | 1/1 speed | 200 mm/sec |
| | | 2/3 speed | 135 mm/sec |
| | | 1/2 speed | 100 mm/sec |
| | 25-ppm model | 1/1 speed | - |
| | | 2/3 speed | 135 mm/sec |
| | | 1/2 speed | 100 mm/sec |
| Fixing Heater | Ceramic Heater | | |
| Control temperature | 35-ppm model | plain paper 1 | Full Color: 200 deg C* Black: 195 deg C* |
| | | plain paper 2 | Full Color: 210 deg C* Black: 205 deg C* |
| | 25-ppm model | plain paper 1 | Full Color: 175 deg C* Black: 170 deg C* |
| | | plain paper 2 | Full Color: 185 deg C* Black: 180 deg C* |
| Temperature Control | Main Thermistor | | |
| Edge temperature rising control | Down sequence | | |
| Fixing Arch Control | Arch Sensor | | |
| Protection function | Main Thermistor (Rated operational temperature: 265 deg C) | | |
| | Sub Thermistor (Rated operational temperature: 290 deg C) | | |
| | Thermoswitch (Rated operational temperature: 240 deg C) | | |

T-2-39

\* If the temperature is under 50 deg C at the start of startup or the environment temperature is 23 deg C

Varies depending on the temperature at the start of startup and environment temperature +10 deg C if the paper width is A4R or larger

## ■ Major Components



Pressure Roller

Fixing Film

**FRONT**

F-2-103



Fixing Pressure Release Sensor (PS13)

Fixing Heater (H01)

Fixing Thermoswitch (TP01)

Delivery Sensor (PS12)

Sub Thermistor (Rear) (TH02)

Main Thermistor (TH01)

**FRONT**
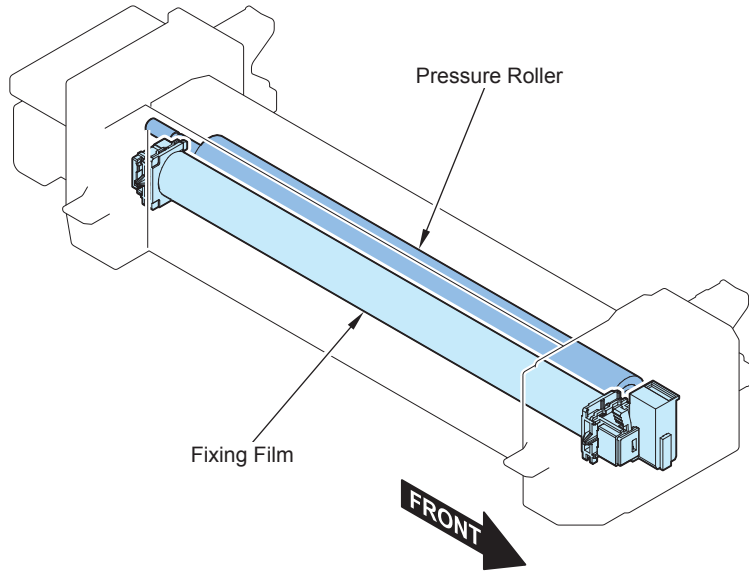
Sub Thermistor (Front) (TH03)
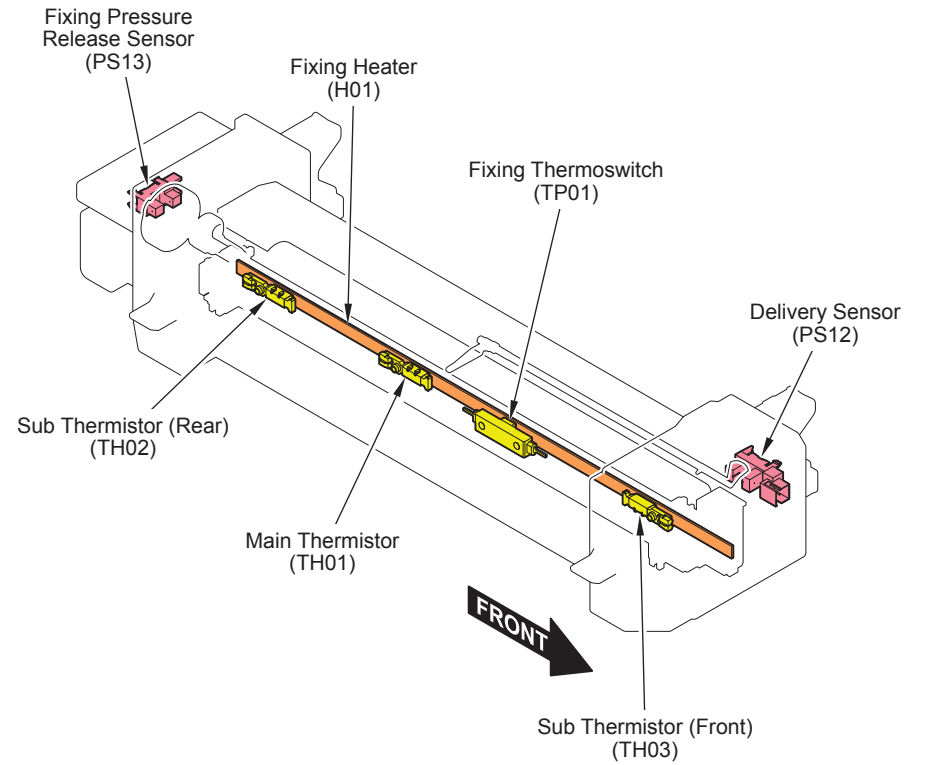
F-2-104

| Part name | | Function / method |
|---|---|---|
| --- | Fixing Film | A toner image on paper is fixed by applying heat/pressure. |
| --- | Pressure Roller | |
| H01 | Fixing Heater | Ceramic Heater |
| TH01 | Main Thermistor | Engaged with the heater<br>Temperature control and abnormal temperature rising detection |
| TH02 | Sub Thermistor (Rear) | Engaged with the heater<br>Temperature control, abnormal temperature rising detection, edge temperature-rising/cooling control |
| TH03 | Sub Thermistor (Front) | |
| TP01 | Thermoswitch | A kind not engaged with the heater.<br>AC power supply is blocked at detection of a failure. |
| PS13 | Fixing Pressure Release Sensor | Detection of pressure application/release to the Film Unit |
| PS12 | Delivery Sensor | Jam Detection |

T-2-40

## Controls

### ■ Fixing Temperature Control (temperature control)
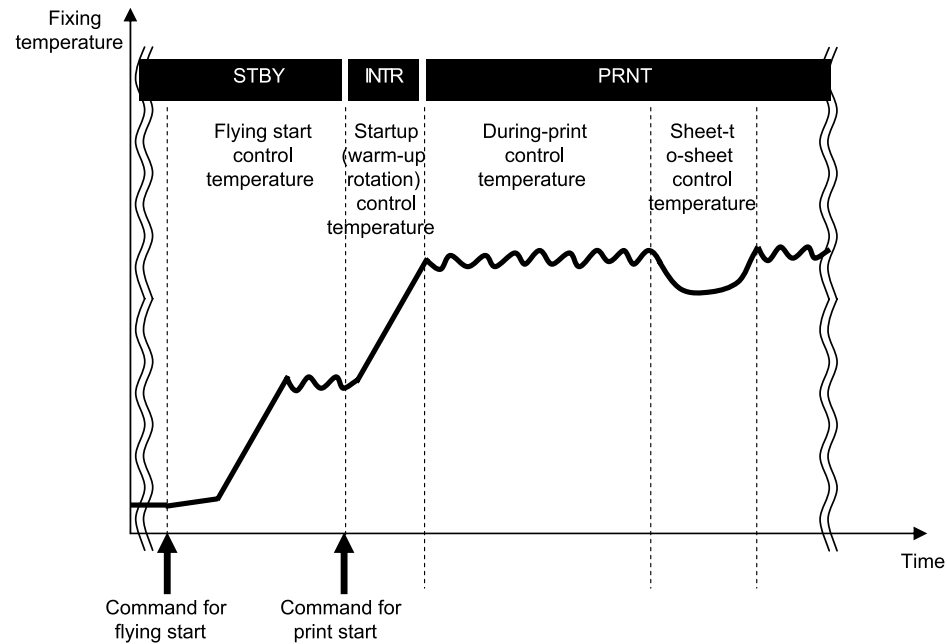


F-2-105

### ● Standby Temperature Control

This is a control to pre-heat the Fixing Assembly to reduce time to start printing.

• Flying Start

### ● Print Temperature Control

This is a control to increase fixing temperature to the target level and keep it during printing.

• Startup (initial rotation) temperature control
• Print temperature control
• Paper interval temperature control

### ● Down Sequence Control

This is a control to prevent fixing failure due to temperature increase at the edge or temperature decrease. Productivity (throughput) decreases.

• Down sequence when feeding small-size paper
• Down sequence when switching paper size

## ■ Standby Temperature Control
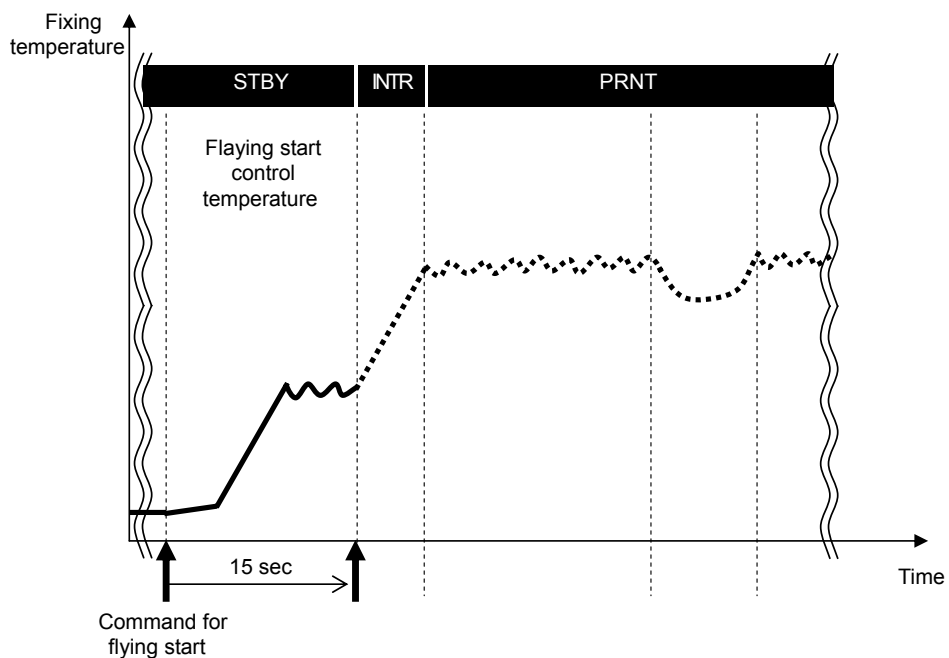


F-2-106

## ● Flying Start

Purpose:

To reduce time to print the first sheet (FCOT).

Startup conditions:
- When Control Panel Numeric Keypad/Touch Panel is pressed
- When the Main Power Switch is turned ON*[1]
- When recovering from sleep mode to standby mode*[1]
- When the jam process completes*[1]
- When the Right Door is opened/closed*[1]

    *1: This control is performed regardless of setting whether to execute Service Mode
    COPIER > OPTION > IMG-FIX > FLYING.

Control description:

The temperature control target is set at 105 to 170 deg C and the Fixing Motor is controlled at half-speed to start operation. The control continues for 15 sec at most until the machine receives a command to start printing.

Related Service Mode
- To set ON/OFF of flying start temperature control.
  (Lv.2) COPIER > OPTION > IMG-FIX> FLYING

&lt;Setting value&gt;
    0 to 1
    0: ON, 1: OFF

## ■ Print Temperature Control



Fixing temperature

| STBY | INTR | PRNT |

Startup (warm-up rotation) control temperature

During print control temperature

Sheet-to-sheet control temperature

Time

Command for Flying start    Command for print start
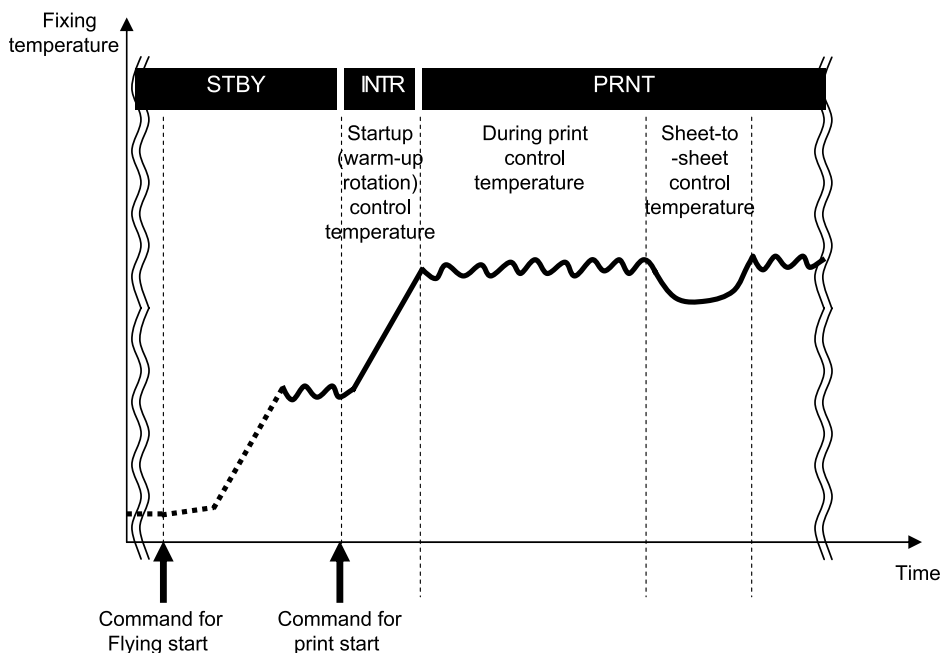
F-2-107

### ● Startup (initial rotation) Temperature Control

A fixing temperature is increased to a printable temperature after receiving a command to start printing.

### ● Print Temperature Control

To set optimal target temperature to prevent fixing failure or offset, and keep the specified target temperature during printing

A. Setting the target temperature

A target temperature is determined according to the paper type/size, time which elapsed from when fixing temperature control (including standby control) finished the last time, and fixing temperature when startup control started.

B. Temperature control during printing

When the paper passes through the Fixing Assembly, temperature is controlled to keep the target temperature (see the next page) according to the detected temperature of the Main Thermistor.

C. Paper interval temperature control

A paper interval temperature is decreased to prevent temperature increase when the paper interval became wider than a normal condition during the down sequence (*1).
Paper Interval Temperature = Target temperature during printing - (0 to 20 deg C)*2

*1: At down sequence
  • The interval between the first side and the second side at 2-sided printing
  • At execution of various controls (ATR control, registration control, and ATVC control)
  • At continuous printing of small size paper (smaller than A4R and LTR in width direction)
  • When the target temperature cannot be maintained due to low power
  • When the Sub Thermistor detects abnormally high temperature even for A4R size or larger
*2: The fixing temperature is determined depending on the elapsed time since the time paper has passed through the fixing nip.

## ● Target temperature during printing

The control temperature is determined according to the fixing mode and fixing temperature at the start of Startup control. 11 fixing modes are available according to the selected pickup cassette and paper type.

The following shows an example of control temperature when the fixing temperature at the start of Startup control is 65 deg C or higher and lower than 70 deg C: (Temperature at standby with 20 deg C room temperature)

| Model | Paper type | Fixing speed | Target temperature | Remarks |
|---|---|---|---|---|
| 35-ppm model | Thin paper (60 to 63 g/m$^2$) | 1/1speed 200 mm/s | 183 to 219 deg C | • For B&W, target temperature is -5 deg C<br>• If the paper width is A4R or larger, target temperature +10 deg C<br>• For the 2nd side of 2-sided print, target temperature is -3 deg C |
| | Plain paper 1 (64 to 75 g/m$^2$) Recycled paper 1 (64 to 75 g/m$^2$) Color paper (64 to 75 g/m$^2$) Pre-punched paper (64 to 75 g/m$^2$) | | 188 to 224 deg C | |
| | Plain paper 2 (76 to 90 g/m$^2$) Recycled paper 2 (76 to 90 g/m$^2$) | | 198 to 234 deg C | |
| | Plain paper 3(91 to 105 g/m$^2$) Recycled paper 3(91 to 105 g/m$^2$) | 2/3speed 135 mm/s | 183 to 221 deg C | |
| | Heavy paper 1 (106 to 128 g/m$^2$) | 1/2speed 100 mm/s | 168 to 201 deg C | • If the paper width is A4R or larger, target temperature +10 deg C<br>• For envelope DL size, target temperature is + 10 deg C<br>• For the 2nd side of 2-sided print, target temperature is -3 deg C |
| | Heavy paper 2 (129 to 163 g/m$^2$) Label paper (127 to 160 g/m$^2$) | | 183 to 216 deg C | |
| | Heavy paper 3 (164 to 220 g/m$^2$) Bond paper Postcard | | 188 to 221 deg C | |
| | Envelope | | 168 to 201 deg C | |
| | Transparency | | 180 to 215 deg C | |
| 25-ppm model | Thin paper (60 to 63 g/m$^2$) | 2/3speed 135 mm/s | 158 to 194 deg C | • For B&W, target temperature is -5 deg C<br>• If the paper width is A4R or larger, target temperature +10 deg C<br>• For the 2nd side of 2-sided print, target temperature is -3 deg C |
| | Plain paper 1(64 to 75 g/m$^2$) Recycled paper 1(64 to 75 g/m$^2$) Color paper (64 to 75 g/m$^2$) Pre-punched paper (64 to 75 g/m$^2$) | | 163 to 199 deg C | |
| | Plain paper 2 (76 to 90 g/m$^2$) Recycled paper 2 (76 to 90 g/m$^2$) | | 173 to 209 deg C | |
| | Plain paper 3(91 to 105 g/m$^2$) Recycled paper 3(91 to 105 g/m$^2$) | | 183 to 221 deg C | |
| | Heavy paper 1 (106 to 128 g/m$^2$) | 1/2speed 100 mm/s | 168 to 201 deg C | • If the paper width is A4R or larger, target temperature +10 deg C<br>• For envelope DL size, target temperature is + 10 deg C<br>• For the 2nd side of 2-sided print, target temperature is -3 deg C |
| | Heavy paper 2 (129 to 163 g/m$^2$) Label paper (127 to 160 g/m$^2$) | | 183 to 216 deg C | |
| | Heavy paper 3 (164 to 220 g/m$^2$) Bond paper Postcard | | 188 to 221 deg C | |
| | Envelope | | 168 to 201 deg C | |
| | Transparency | | 180 to 215 deg C | |

T-2-41

Related Service Mode:
(Lv.1) COPIER > DISPLAY > ANALOG
   > FIX-E (To display the center temperature of the Fixing Heater detected by the Main Thermistor.)
   > FIX-E2 (To display the front edge temperature of the Fixing Heater detected by the Sub Thermistor (Front).)
   > FIX-E3 (To display the front edge temperature of the Fixing Heater detected by the Sub Thermistor (Rear).)

(Lv.1) COPIER > OPTION > CUSTOM
> TEMP-TBL Plain paper 1
> TMP-TBL2 Heavy paper 1
> TMP-TBL3 Heavy paper 2
> TMP-TBL4 Heavy paper 3
> TMP-TBL5 Thin paper
> TMP-TBL6 Envelope
> TMP-TBL7 Plain paper 2
> TMP-TBL8 Transparency

<Setting value>
-2: - 10 degrees C
-1: - 5 degrees C
0: 0 degrees C [default]
+1: + 5 degrees C
+2: +10 degrees C

## ■ Down Sequence Control

### ● Down sequence when feeding small-size paper
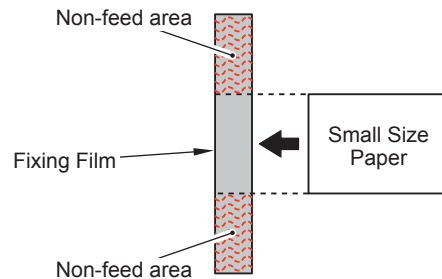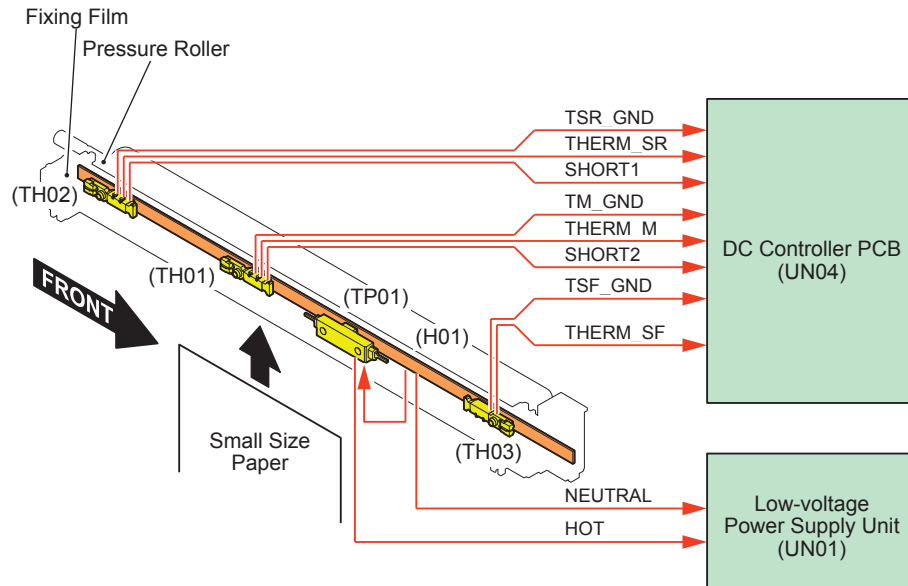


F-2-108

Purpose:
To prevent fixing offset and deterioration of the Fixing Film by controlling temperature increase at a non paper feed area at continuous printing of small-size paper (paper that has smaller than A4R/LTR of width-direction length)

Startup conditions:
When the temperature detected by the Sub Thermistor (Rear) (TH02) or the Sub Thermistor (Front) (TH03) is at the specified temperature or higher for at least 1 second, the down sequence starts.
Down sequence is performed in a stepwise manner. If the Sub Thermistor detection temperature exceeds the designated temperature during printing, the down sequence increases by one level and the number of prints (ppm) decreases each time this condition continues for a period of 1 second.

Operation:
Increasing paper interval (to make longer temperature control at a temperature lower than that of normal print) to reduce fixing temperature in 6 stages at most.

| Paper size | Speed | Paper type | Detected temperature | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | ppm | | | | | |
| | | | 1st stage | 2nd stage | 3rd stage | 4th stage | 5th stage | 6th stage |
| A4 </= * </= LTR | 200 (mm/s) 35 (ppm) | Thin paper (60 to 63 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 35 ppm | 15 ppm | 8 ppm | 6 ppm | 4 ppm | 1 ppm |
| | | Plain paper 1 (64 to 75 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 35 ppm | 15 ppm | 8 ppm | 6 ppm | 4 ppm | 1 ppm |
| | | Plain paper 2 (76 to 90 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 35 ppm | 15 ppm | 8 ppm | 6 ppm | 4 ppm | 1 ppm |
| | | Recycled paper 1 (64 to 75 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 35 ppm | 15 ppm | 8 ppm | 6 ppm | 4 ppm | 1 ppm |
| | | Recycled paper 2 (76 to 90 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 35 ppm | 15 ppm | 8 ppm | 6 ppm | 4 ppm | 1 ppm |
| | 135 (mm/s) 25 (ppm) | Thin paper (60 to 63 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 4 ppm | 2 ppm | 1 ppm |
| | | Plain paper 1 (64 to 75 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 4 ppm | 2 ppm | 1 ppm |
| | | Plain paper 2 (76 to 90 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 4 ppm | 2 ppm | 1 ppm |
| | | Plain paper 3 (91 to 105 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 4 ppm | 2 ppm | 1 ppm |
| | | Recycled paper 1 (64 to 75 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 4 ppm | 2 ppm | 1 ppm |
| | | Recycled paper 2 (76 to 90 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 4 ppm | 2 ppm | 1 ppm |
| | | Recycled paper 3 (91 to 105 g/m$^2$) | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | 240 to 265 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 4 ppm | 2 ppm | 1 ppm |
| | 100 (mm/s) 17 (ppm) | Heavy paper 1 (106 to 128 g/m$^2$) | 240 deg C | 240 deg C | 240 deg C | 240 deg C | 240 deg C | - |
| | | | 17 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm | 1 ppm |
| | | Heavy paper 2 (129 to 163 g/m$^2$) | 240 deg C | 240 deg C | 240 deg C | 240 deg C | 240 deg C | - |
| | | | 17 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm | 1 ppm |

| Paper size | Speed | Paper type | Detected temperature | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | ppm | | | | | |
| | | | 1st stage | 2nd stage | 3rd stage | 4th stage | 5th stage | 6th stage |
| A4 </= * </= LTR | 100 (mm/s) 15 (ppm) | Heavy paper 3 (164 to 220 g/m$^2$) | 240 deg C | 240 deg C | 240 deg C | 240 deg C | 240 deg C | - |
| | | | 15 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm | 1 ppm |
| | 100 (mm/s) 5 (ppm) | Transparency | 240 deg C | 240 deg C | 240 deg C | 240 deg C | 240 deg C | - |
| | | | 5 ppm | 5 ppm | 5 ppm | 4 ppm | 2 ppm | 1 ppm |
| B5 </= * < A4 | 135 (mm/s) 25 (ppm) | Thin paper (60 to 63 g/m$^2$) | 250 deg C | 250 deg C | 250 deg C | 240 deg C | 240 deg C | - |
| | | | 25 ppm | 15 ppm | 12 ppm | 8 ppm | 6 ppm | 3 ppm |
| | | Plain paper 1 (64 to 75 g/m$^2$) | 250 deg C | 250 deg C | 250 deg C | 240 deg C | 240 deg C | - |
| | | | 25 ppm | 15 ppm | 12 ppm | 8 ppm | 6 ppm | 3 ppm |
| | | Plain paper 2 (76 to 90 g/m$^2$) | 250 deg C | 250 deg C | 250 deg C | 250 deg C | 244 deg C | - |
| | | | 25 ppm | 15 ppm | 12 ppm | 8 ppm | 6 ppm | 3 ppm |
| | | Plain paper 3 (91 to 105 g/m$^2$) | 250 deg C | 250 deg C | 245 deg C | 240 deg C | 240 deg C | - |
| | | | 25 ppm | 15 ppm | 12 ppm | 8 ppm | 6 ppm | 3 ppm |
| | | Recycled paper 1 (64 to 75 g/m$^2$) | 250 deg C | 250 deg C | 250 deg C | 240 deg C | 240 deg C | - |
| | | | 25 ppm | 15 ppm | 12 ppm | 8 ppm | 6 ppm | 3 ppm |
| | | Recycled paper 2 (76 to 90 g/m$^2$) | 250 deg C | 250 deg C | 250 deg C | 250 deg C | 244 deg C | - |
| | | | 25 ppm | 15 ppm | 12 ppm | 8 ppm | 6 ppm | 3 ppm |
| | | Recycled paper 3 (91 to 105 g/m$^2$) | 250 deg C | 250 deg C | 245 deg C | 240 deg C | 240 deg C | - |
| | | | 25 ppm | 15 ppm | 12 ppm | 8 ppm | 6 ppm | 3 ppm |
| | 100 (mm/s) 17 (ppm) | Heavy paper 1 (106 to 128 g/m$^2$) | 250 deg C | 250 deg C | 245 deg C | 240 deg C | 240 deg C | - |
| | | | 17 ppm | 10 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Heavy paper 2 (129 to 163 g/m$^2$) | 250 deg C | 250 deg C | 250 deg C | 250 deg C | 240 deg C | - |
| | | | 17 ppm | 10 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | 100 (mm/s) 15 (ppm) | Heavy paper 3 (164 to 220 g/m$^2$) | 250 deg C | 250 deg C | 250 deg C | 250 deg C | 244 deg C | - |
| | | | 15 ppm | 10 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | 100 (mm/s) 17 (ppm) | Envelope | 250 deg C | 250 deg C | 250 deg C | 245 deg C | 245 deg C | - |
| | | | 17 ppm | 10 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |

| Paper size | Speed | Paper type | Detected temperature ppm | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1st stage | 2nd stage | 3rd stage | 4th stage | 5th stage | 6th stage |
| A5 </= * < B5 | 135 (mm/s) 25 (ppm) | Thin paper (60 to 63 g/m$^2$) | 235 deg C | 230 deg C | 230 deg C | 230 deg C | 230 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Plain paper 1 (64 to 75 g/m$^2$) | 235 deg C | 230 deg C | 230 deg C | 230 deg C | 230 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Plain paper 2 (76 to 90 g/m$^2$) | 235 deg C | 235 deg C | 229 deg C | 229 deg C | 229 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Plain paper 3 (91 to 105 g/m$^2$) | 235 deg C | 235 deg C | 235 deg C | 235 deg C | 228 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Recycled paper 1 (64 to 75 g/m$^2$) | 235 deg C | 230 deg C | 230 deg C | 230 deg C | 230 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Recycled paper 2 (76 to 90 g/m$^2$) | 235 deg C | 235 deg C | 229 deg C | 229 deg C | 229 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Recycled paper 3 (91 to 105 g/m$^2$) | 235 deg C | 235 deg C | 235 deg C | 235 deg C | 228 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | 100 (mm/s) 17 (ppm) | Heavy paper 1 (106 to 128 g/m$^2$) | 235 deg C | 230 deg C | 230 deg C | 230 deg C | 230 deg C | - |
| | | | 17 ppm | 8 ppm | 6 ppm | 4 ppm | 3 ppm | 2 ppm |
| | | Heavy paper 2 (129 to 163 g/m$^2$) | 235 deg C | 235 deg C | 235 deg C | 230 deg C | 230 deg C | - |
| | | | 17 ppm | 8 ppm | 6 ppm | 4 ppm | 3 ppm | 2 ppm |
| | 100 (mm/s) 15 (ppm) | Heavy paper 3 (164 to 220 g/m$^2$) | 235 deg C | 235 deg C | 235 deg C | 230 deg C | 230 deg C | - |
| | | | 15 ppm | 8 ppm | 6 ppm | 4 ppm | 3 ppm | 2 ppm |
| | 100 (mm/s) 17 (ppm) | Envelope | 235 deg C | 235 deg C | 235 deg C | 230 deg C | 230 deg C | - |
| | | | 17 ppm | 8 ppm | 6 ppm | 4 ppm | 3 ppm | 2 ppm |

| Paper size | Speed | Paper type | Detected temperature ppm | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1st stage | 2nd stage | 3rd stage | 4th stage | 5th stage | 6th stage |
| < A5 | 135 (mm/s) 25 (ppm) | Thin paper (60 to 63 g/m$^2$) | 235 deg C | 230 deg C | 230 deg C | 230 deg C | 230 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Plain paper 1 (64 to 75 g/m$^2$) | 235 deg C | 230 deg C | 230 deg C | 230 deg C | 230 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Plain paper 2 (76 to 90 g/m$^2$) | 235 deg C | 235 deg C | 229 deg C | 229 deg C | 229 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Plain paper 3 (91 to 105 g/m$^2$) | 235 deg C | 235 deg C | 235 deg C | 235 deg C | 228 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Recycled paper 1 (64 to 75 g/m$^2$) | 235 deg C | 230 deg C | 230 deg C | 230 deg C | 230 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Recycled paper 2 (76 to 90 g/m$^2$) | 235 deg C | 235 deg C | 229 deg C | 229 deg C | 229 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | | Recycled paper 3 (91 to 105 g/m$^2$) | 235 deg C | 235 deg C | 235 deg C | 235 deg C | 228 deg C | - |
| | | | 25 ppm | 12 ppm | 8 ppm | 6 ppm | 4 ppm | 2 ppm |
| | 100 (mm/s) 17 (ppm) | Heavy paper 1 (106 to 128 g/m$^2$) | 235 deg C | 230 deg C | 230 deg C | 230 deg C | 230 deg C | - |
| | | | 17 ppm | 8 ppm | 6 ppm | 4 ppm | 3 ppm | 2 ppm |
| | | Heavy paper 2 (129 to 163 g/m$^2$) | 235 deg C | 235 deg C | 235 deg C | 230 deg C | 230 deg C | - |
| | | | 17 ppm | 8 ppm | 6 ppm | 4 ppm | 3 ppm | 2 ppm |
| | 100 (mm/s) 15 (ppm) | Heavy paper 3 (164 to 220 g/m$^2$) | 235 deg C | 235 deg C | 235 deg C | 230 deg C | 230 deg C | - |
| | | | 15 ppm | 8 ppm | 6 ppm | 4 ppm | 3 ppm | 2 ppm |
| | 100 (mm/s) 17 (ppm) | Envelope | 235 deg C | 235 deg C | 235 deg C | 230 deg C | 230 deg C | - |
| | | | 17 ppm | 8 ppm | 6 ppm | 4 ppm | 3 ppm | 2 ppm |

T-2-42

Termination condition:

The termination condition is when the job ends.

Related Service Mode:
• Set small paper down sequence start temp
  (Lv.1) COPIER > OPTION > IMG-SPD > FX-D-TMP

<Setting value>
-4: -8 deg C
-3: -6 deg C
-2: -4 deg C
-1: -2 deg C
0: 0 deg C
1: 2 deg C
2: 4 deg C
3: 6 deg C
4: 8 deg C

● Down sequence when switching paper size

Purpose:

When feeding a sheet with a wider width than a preceding sheet during continuous printing, temperature at the non paper-feed area of the preceding sheet increases, and it can cause fixing offset and wrinkles when feeding the succeeding sheet. This down sequence controls temperature increase at the non paper feed area.
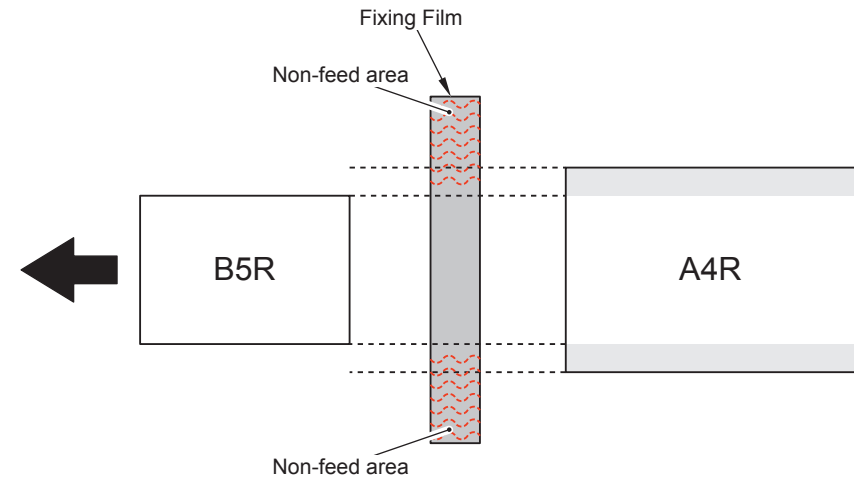


F-2-109

Starting conditions:

The difference between the higher temperature detected by either Sub Thermistor (Rear) (TH02) or Sub Thermistor (Front) (TH03) and the temperature of the Main Thermistor (TH01) has become higher than the specified temperature (5 deg C).

Operation:

This is a control to stop pickup of the succeeding sheet and power distribution to the Fixing Heater to reduce fixing temperature.

Termination conditions:
- When the highest of the temperatures detected by the Sub Thermistor (Rear) (TH02) and the Sub Thermistor (Front) (TH03) has become the specified temperature (150 deg C) or less.
- 30 seconds at maximum have elapsed since the preceding sheet passed the Fixing Nip.
- When the difference between the highest of the temperatures detected by the Sub Thermistor (Rear) (TH02) and the Sub Thermistor (Front) (TH03) and the temperature detected by the Main Thermistor (TH01) has become the specified temperature (5 deg C) or less.

● Film unit engagement / disengagement control

The Fixing Film Unit is disengaged from the Pressure Roller under a specific conditionfor the purpose of preventing deformation of the Fixing Film/Pressure Roller due to heat and pressure when the drive of the Pressure Roller stops and improving a jam removal processing.



F-2-110

&lt;Pressure state&gt;    &lt;Pressure Release state&gt;

Slit

Fixing
Pressure Release
Sensor (PS13)

Pressure Release
Gear

Pressure Release
Gear

Pressure Release
Cam

Pressure
Plate

Pressure Roller

Fixing Film

Pressure Roller
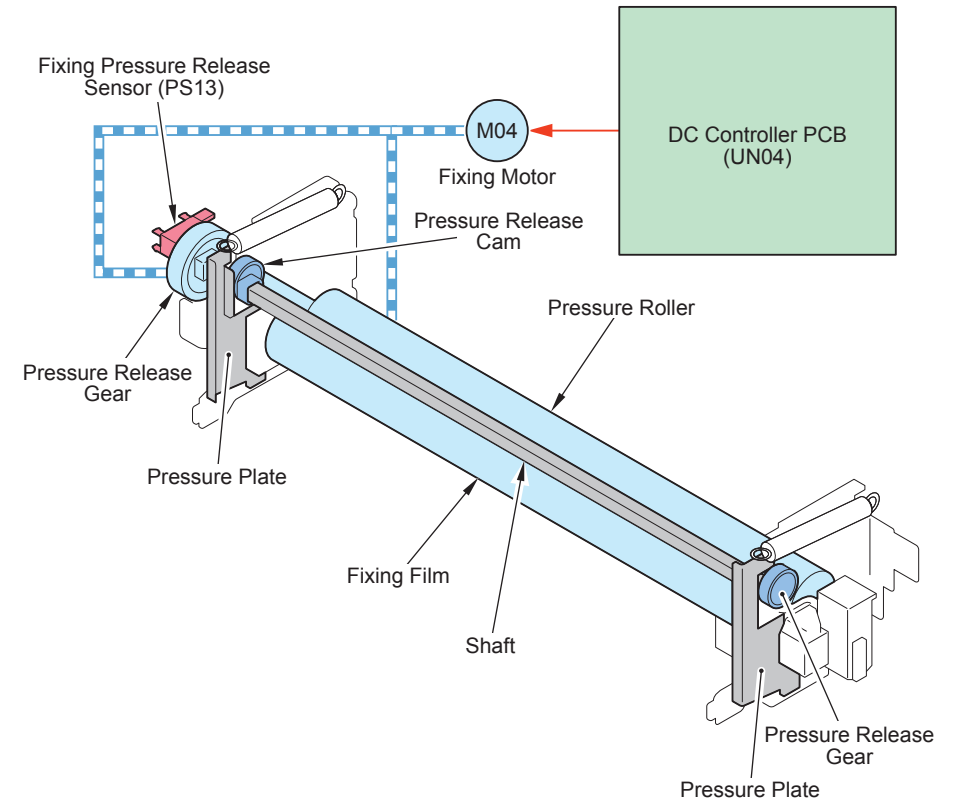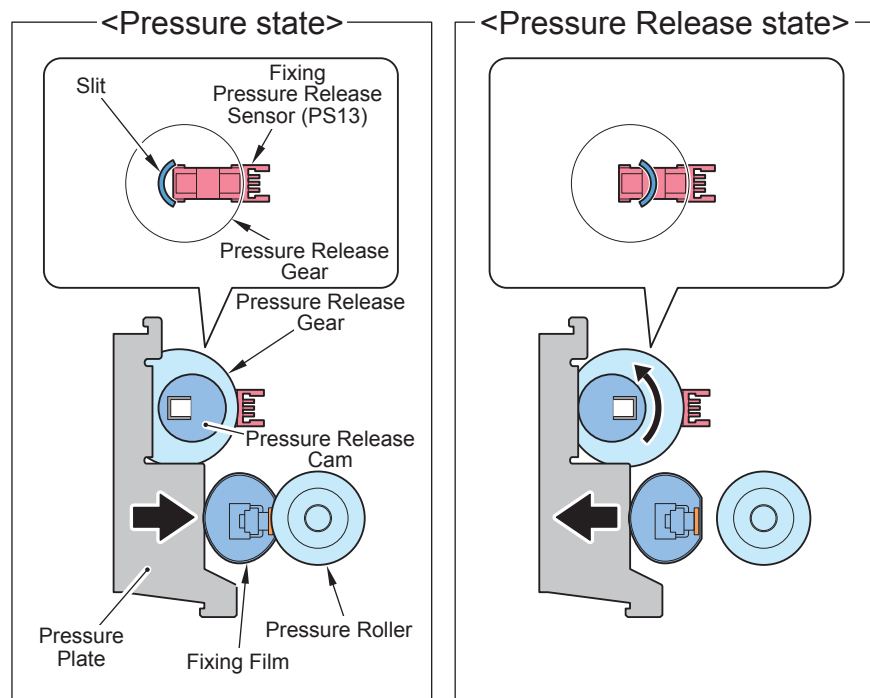
F-2-111

Execution conditions/timing of pressure application operation:
•  In case of disengaged state during printing

Execution conditions/timing of disengagement operation:
•  When the Front/Right door is opened
•  At power-off
•  When a jam occurs
•  When an error occurs
•  When the specified time elapses after printing ends

## ■ Pre-fixing arch level control

Purpose:
   To prevent image failure and feeding failure
   Since the feeding speed of the Pressure Roller and that of the Secondary Transfer Outer
   Roller are not the same when a sheet is fed to the Fixing Assembly, image failure, paper
   wrinkle, image stretching, etc. occur. To prevent these symptoms, Arch Sensors located
   at downstream of the Secondary Transfer Unit detect the slack of paper, and the rotation
   speed of the Fixing Motor is adjusted. This keeps an appropriate level of paper slack.

Starting conditions:
   This control is performed every time the paper is fed.

Fixing Film    Pressure Roller

Sensor Flag

ITB

Loop Sensor
(PS11)

Secondary Transfer Outer Roller

F-2-112

Fixing Film

Pressure Roller

Fixing Motor  M04

Sensor Flag

Arch Sensor
(PS11)

DC Controller PCB
(UN04)

FRONT
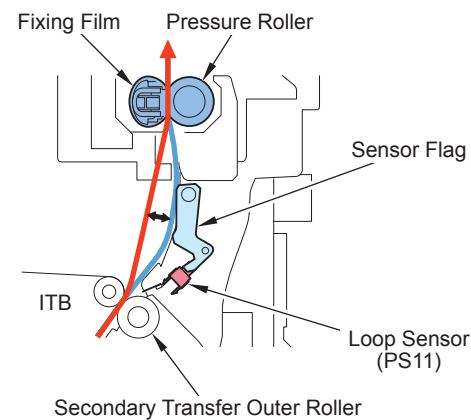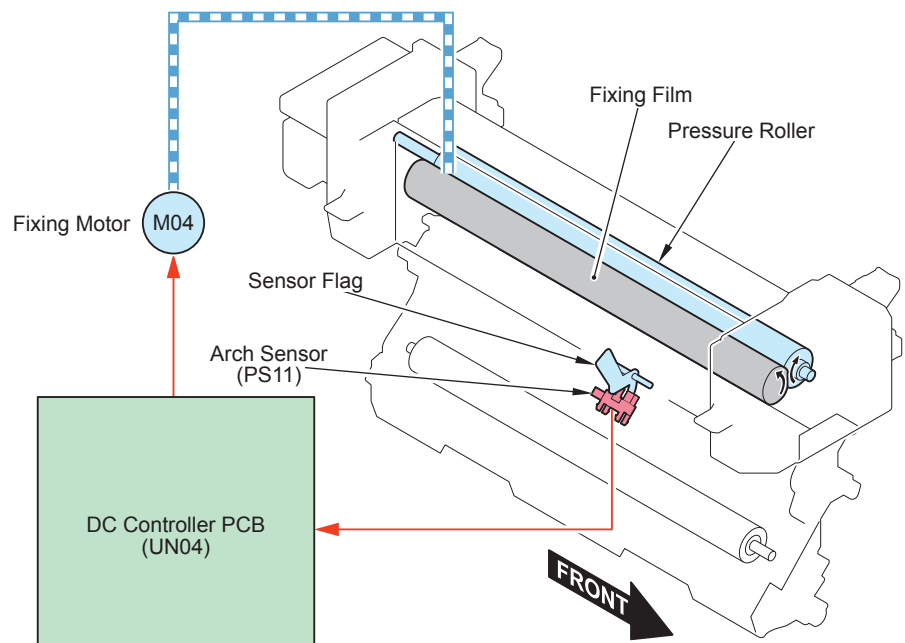
F-2-113

## ■ Arch Sensor control

Operation:

The Arch Sensor (PS11) detects a paper arch between the transfer nip and fixing nip to change the drive speed of the Fixing Motor.

1) When the paper's leading edge goes over 65 mm from the secondary transfer nip area by 65 mm, drive speed of the Fixing Motor is reduced by 1.0% against the process speed. The reduced speed is maintained until the paper leading edge goes over 80 mm from the secondary transfer nip area.

2) When Arch Sensor (PS11) is ON:
After ON has been detected for consecutive 16 msec or longer, drive speed of the Fixing Motor is increased by 1.0% against the process speed.
When Arch Sensor (PS11) is OFF:
After OFF has been detected for consecutive 16 msec or longer, drive speed of the Fixing Motor is reduced by 5.0% against the process speed.

3) The Fixing Motor drive speed switches depending on whether the Arch Sensor (PS11) is ON or OFF. (Arch Sensor (PS11) repeatedly turns ON and OFF)

4) When the paper's trailing edge goes over the designated distance* from the secondary transfer nip area, drive speed of the Fixing Motor is increased by 0.8% against the process speed.

NOTE:
* The value of the designated distance varies depending on the process speed (paper type).
When the process speed is 200 mm/sec:
When the paper trailing edge is 10 mm before passing through the secondary transfer nip area
When the process speed is 135 mm/sec:
When the paper trailing edge is 5 mm before passing through the secondary transfer nip area
When the process speed is 100 mm/sec (other than envelopes):
When the paper trailing edge passes through the secondary transfer nip area
When the process speed is 100 mm/sec (envelopes):
When the paper trailing edge goes over 10 mm from the secondary transfer nip area

5) Go back to step 1 in the case of continuous printing. In case of printing a single sheet, the Fixing Motor is stopped after the paper trailing edge passes through the Delivery Sensor. The machine shifts to perform the last rotation operation in case of printing small size paper.

Sensor : OFF
Slack of paper is small

Sensor : ON
Slack of paper is large

PS11

Fixing Film    Pressure Roller

F-2-114
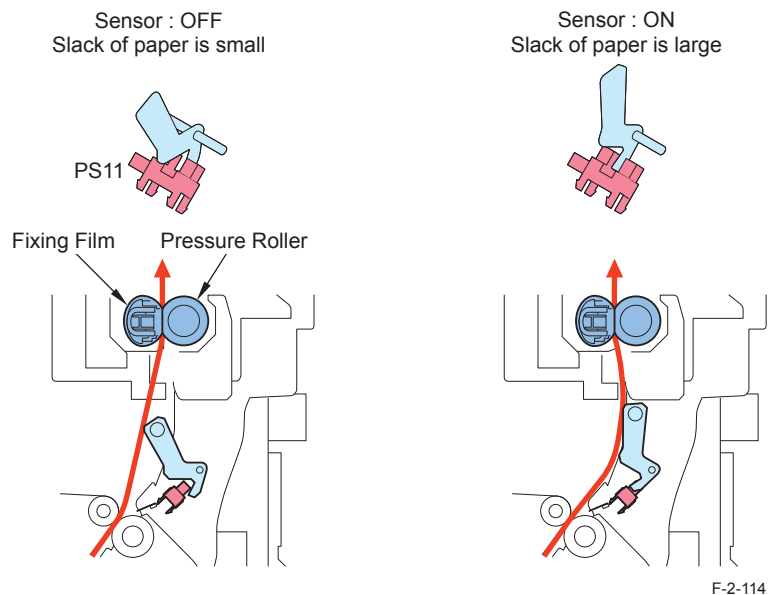
## ■ Protection function

| Code | | Description | Clearing of error |
|------|------|-------------|-------------------|
| E001 | | Fixing Assembly high temperature error | |
| | A001 | Main Thermistor detected a temperature of 265 deg C or higher for 0.1 sec or longer (software). | Not required |
| | A002 | Sub Thermistor (Front) detected a temperature of 290 deg C or higher for 0.1 sec or longer (software). | Not required |
| | A003 | Sub Thermistor (Rear) detected a temperature of 290 deg C or higher for 0.1 sec or longer (software). | Not required |
| | A004 | Main Thermistor detected a temperature of 270 deg C or higher (hardware). | Not required |
| | A005 | Sub Thermistor (Front) detected a temperature of 295 deg C or higher (hardware). | Not required |
| | A006 | Sub Thermistor (Rear) detected a temperature of 295 deg C or higher (hardware). | Not required |
| E002 | | Fixing Assembly temperature rise error | |
| | A004 | Main Thermistor detected a temperature increase of 1 deg C for less than 5 sec from startup until start of Temperature control. | Not required |
| | A005 | Main Thermistor detected a temperature of 40 deg C or lower for 3 sec or longer from startup until start of Temperature control. | Not required |
| | A006 | Sub Thermistor (Front) detected a temperature of 40 deg C or lower for 3 sec or longer from startup until start of Temperature control. | Not required |
| | A007 | Sub Thermistor (Rear) detected a temperature of 40 deg C or lower for 3 sec or longer from startup until start of Temperature control. | Not required |
| E003 | | Fixing Assembly temperature decrease error | |
| | A001 | Main Thermistor detected a temperature of 80 deg C or lower for 1 sec or longer from start of Temperature control until completion of the last rotation (the Fixing Heater is turned OFF). | Not required |
| | A002 | Sub Thermistor (Front) detected a temperature of 80 deg C or lower for 1 sec or longer from start of Temperature control until completion of the last rotation (the Fixing Heater is turned OFF). | Not required |
| | A003 | Sub Thermistor (Rear) detected a temperature of 80 deg C or lower for 1 sec or longer from start of Temperature control until completion of the last rotation (the Fixing Heater is turned OFF). | Not required |
| E004 | | Thermistor disconnection detection error | |
| | 0001 | Zero cross interruption was detected although the Fixing Relay was not turned ON. | Not required |
| | 0002 | Connection could not be detected within 0.5 sec when power was supplied to the Fixing Heater. | Not required |

| Code | Description | Clearing of error |
|---|---|---|
| E009 | Film unit engagement / disengagement error | |
| 0001 | Signal of the Fixing Pressure Release Sensor could not be detected at pressure application operation of the Fixing Pressure Release Cam, and the operation was not completed within 4 sec from the start of counterclockwise rotation of the Fixing Motor. | Not required |
| 0002 | Signal of the Fixing Pressure Release Sensor could not be detected at pressure release operation of the Fixing Pressure Release Cam, and the operation was not completed within 4 sec from the start of counterclockwise rotation of the Fixing Motor. | Not required |
| 0003 | Signal of the Fixing Pressure Release Sensor could not be detected at pressure application operation of the Fixing Pressure Release Cam, and the operation was not completed within 3 times from the start of counterclockwise rotation of the Fixing Motor. | Not required |
| 0004 | Signal of the Fixing Pressure Release Sensor could not be detected at pressure release operation of the Fixing Pressure Release Cam, and the operation was not completed within 3 times from the start of counterclockwise rotation of the Fixing Motor. | Not required |
| E808 | Error in zero cross signal | |
| 0001 | An electrical trouble caused by zero cross signal error. | Not required |
| 0002 | An electrical trouble caused by zero cross signal error. | Not required |

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● Remedy at occurrence of the Fixing Assembly error (E001/E002/E003)

Previously, if the error (E001/E002/E003) relating to the Fixing Assembly occurred, a service visit was necessary to clear the error in service mode (COPIER > FUNCTION > CLEAR > ERR). (This included an incidental error occurrence.)

This machine treats E001/E002/E003 errors as follows to avoid a service visit just for clearing these errors.

• 1st error detection: The error avoidance jam (00-0CF1) is displayed.
• 2nd and later error detection: An error code (E001/E002/E003) is displayed. (Detail Code: Axxx*)
    • If the issue occurred incidentally: The error can be recovered by turning OFF and then ON the main power switch.
    • If there is an issue with the Fixing Assembly: The same error is displayed after turning OFF and then ON the main power switch.
* 1st digit of detail code is "A": This indicates that "clearing the error in service mode (COPIER > FUNCTION > CLEAR > ERR) is unnecessary".

# Service Tasks

## ■ Periodically Replaced Parts

None.

## ■ Consumable Parts

| No. | Parts name | Parts number | Quantity | Estimated life | Remarks |
|---|---|---|---|---|---|
| 1 | Fixing Assembly | FM0-0033(100V) | 1 | 150,000 sheets | |
| | | FM0-0072(120V) | | | |
| | | FM0-0073(230V) | | | |

T-2-44

## ■ Periodical Servicing

None.

Perform as needed.

# Pickup / Feed System

## Overview

### ■ Specifications

| Item | | Description |
|---|---|---|
| Paper storage method | | Front-loading method |
| Pickup method | Cassette | Retard separation |
| | Multi-purpose Tray | Retard separation |
| Stacking capacity | Cassette | 550 sheets (80 g/m$^2$) |
| | Multi-purpose Tray | 100 sheets (80 g/m$^2$) |
| Paper feed reference | | Center reference |
| Paper size | Cassette | Width: 98.4 to 216.0 mm<br>Length: 148.0 to 355.6 mm<br>A4-R, A5-R, B5-R, LGL, LTR-R, STMT-R, EXEC-R, 16K, special standard-size |
| | Multi-purpose Tray | Width: 98.4 to 216.0 mm<br>Length: 148.0 to 355.6 mm *<br>A4-R, A5-R, B5-R, LGL, LTR-R, STMT-R, EXEC-R,<br>16K-R, Envelopes (No.10 (COM10), ISO-C5, Monarch,<br>DL, Nagagata 3, Yougatanaga 3) |
| Paper weight | Cassette | 60 to 163 g/m$^2$ |
| | Multi-purpose Tray | 60 to 220 g/m$^2$ |
| Paper size switching | Cassette | Auto switching |
| | Multi-purpose Tray | Manual switching |
| Supported size for 2-sided print | Cassette | Width: 98.4 to 216.0 mm<br>Length: 148.0 to 355.6 mm |
| | Multi-purpose Tray | Width: 98.4 to 216.0 mm<br>Length: 148.0 to 355.6 mm |
| 2-sided print method | | Through-pass duplex |
| Transparency Detection | | None |

T-2-45

*: Long length paper is not supported by this machine.

## ■ Parts Configuration

### ● Rollers Layout drawing
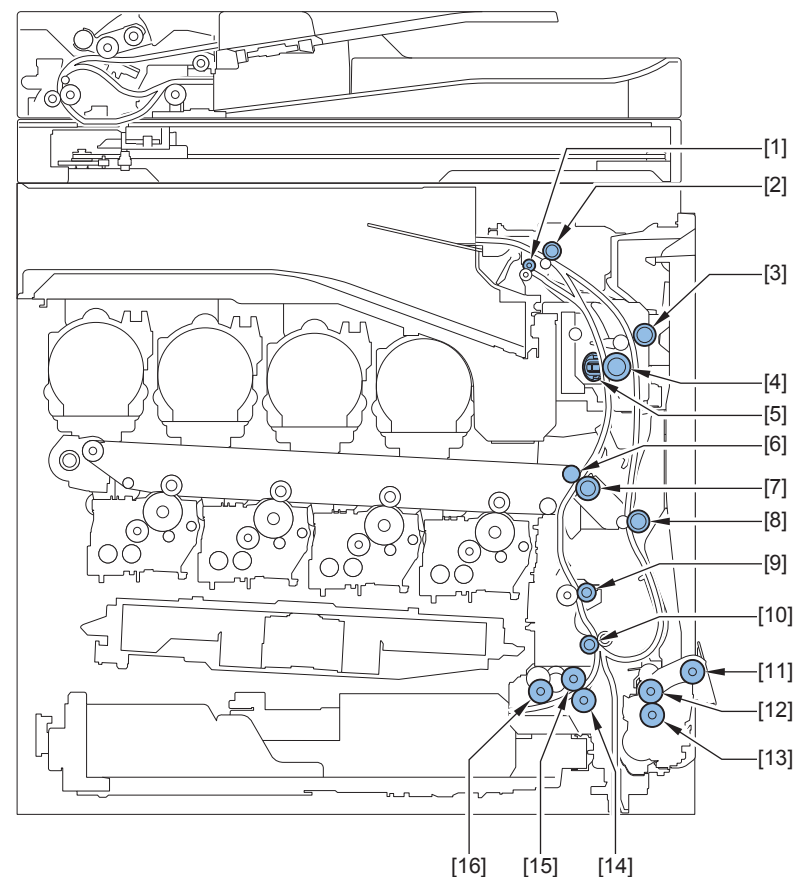


F-2-115

| | | | |
|---|---|---|---|
| [1] | Delivery Upper Roller | [9] | Registration Roller |
| [2] | Reverse Roller | [10] | Pre-registration Roller |
| [3] | Duplex Feed Upper Roller | [11] | Multi-purpose tray pickup  Roller |
| [4] | Pressure Roller | [12] | Multi-purpose tray feed Roller |
| [5] | Fixing Film | [13] | Multi-purpose tray separation Roller |
| [6] | Secondary transfer inner Roller | [14] | Cassette 1 separation Roller |
| [7] | Secondary transfer outer Roller | [15] | Cassette 1 feed Roller |
| [8] | Duplex Feed Lower Roller | [16] | Cassette 1 pickup Roller |

● Sensors Layout Drawing
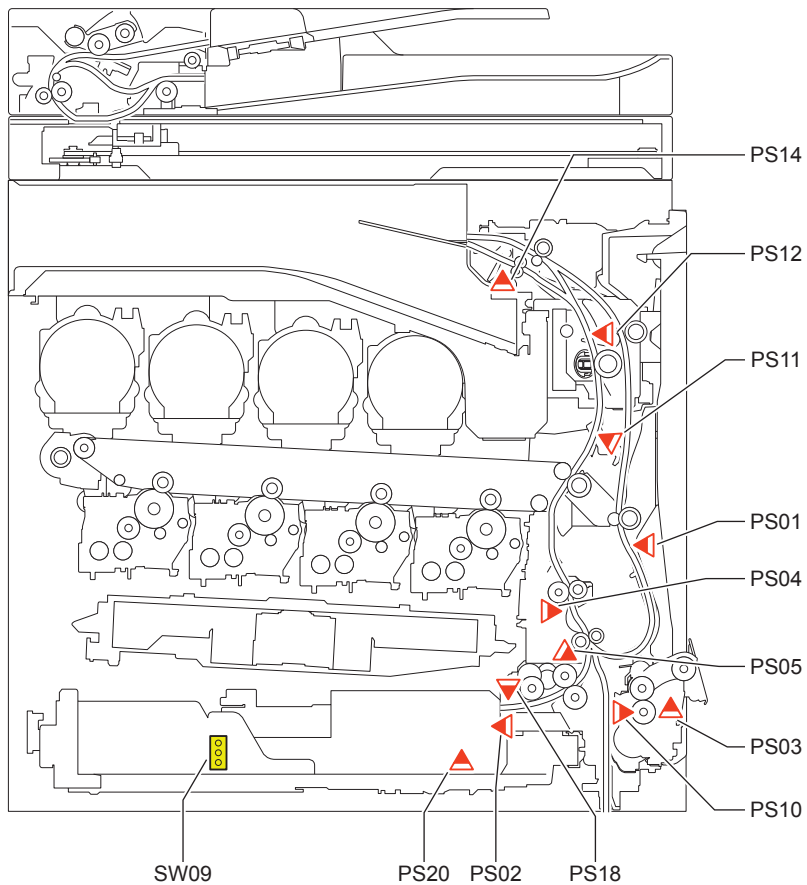


F-2-116

PS01 Duplex Sensor
PS02 Cassette 1 Paper Sensor
PS03 Multi-purpose Tray Paper Sensor
PS04 Pre-Registration Sensor
PS05 Cassette 1 Pickup Sensor
PS10 Multi-purpose Tray HP Sensor

PS11 Arch Sensor
PS12 Delivery Sensor
PS14 Delivery Paper Full Sensor
PS18 Cassette 1 Paper Surface Sensor
PS20 Cassette 1 Paper Level Sensor
SW09 Cassette 1 size switch

● Route of Drive
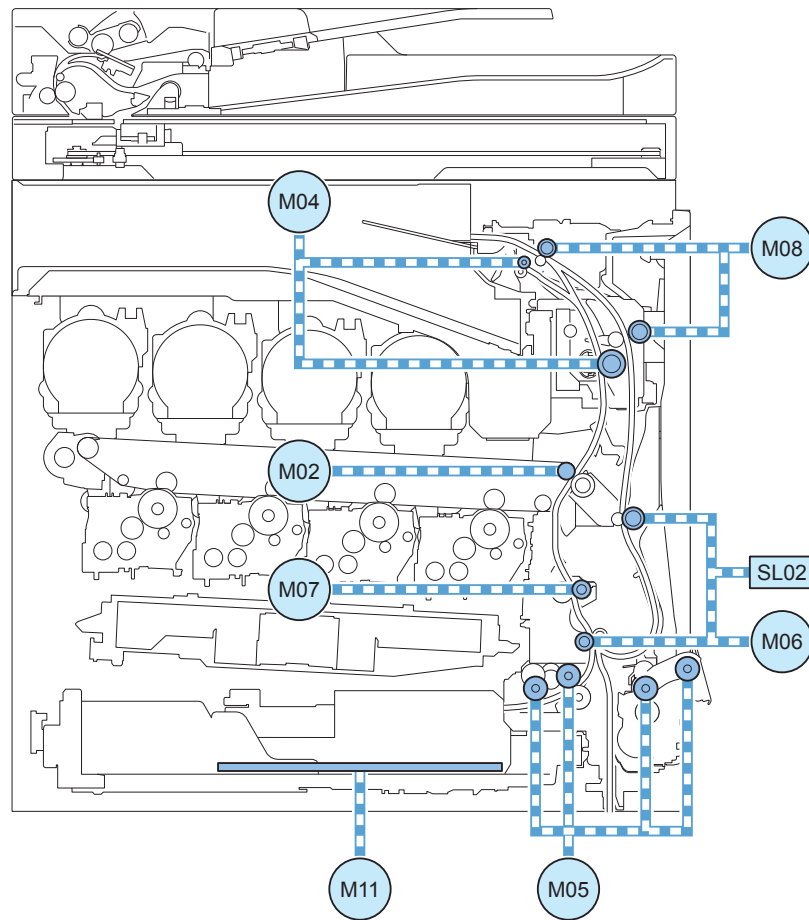


F-2-117

M02 Bk Drum _ ITB Motor
M04 Fixing Motor
M05 Cassette 1 _ Multi-purpose Tray
Pickup Motor
M06 Pre-registration Motor

M07 Registration Motor
M08 Reverce Motor
M11 Cassette 1 Lifter Motor
SL02 Duplex Solenoid

## ■ Paper Path



Reversing point

Delivery point

Pickup from cassette

Pickup from manual feeder

F-2-118

# ● Controls

## ■ Overview



Reverse /Duplex Assembly

Delivery Assembly

Fixing /Registration Assembly

Cassette Pickup Assembly
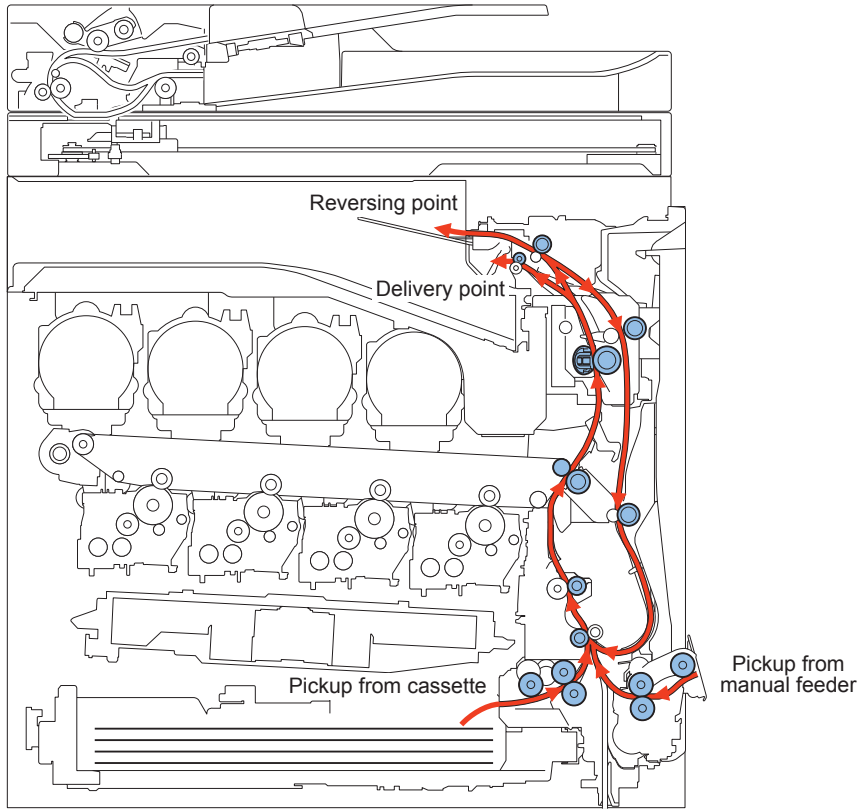
Multi-purpose Tray Pickup Assembly
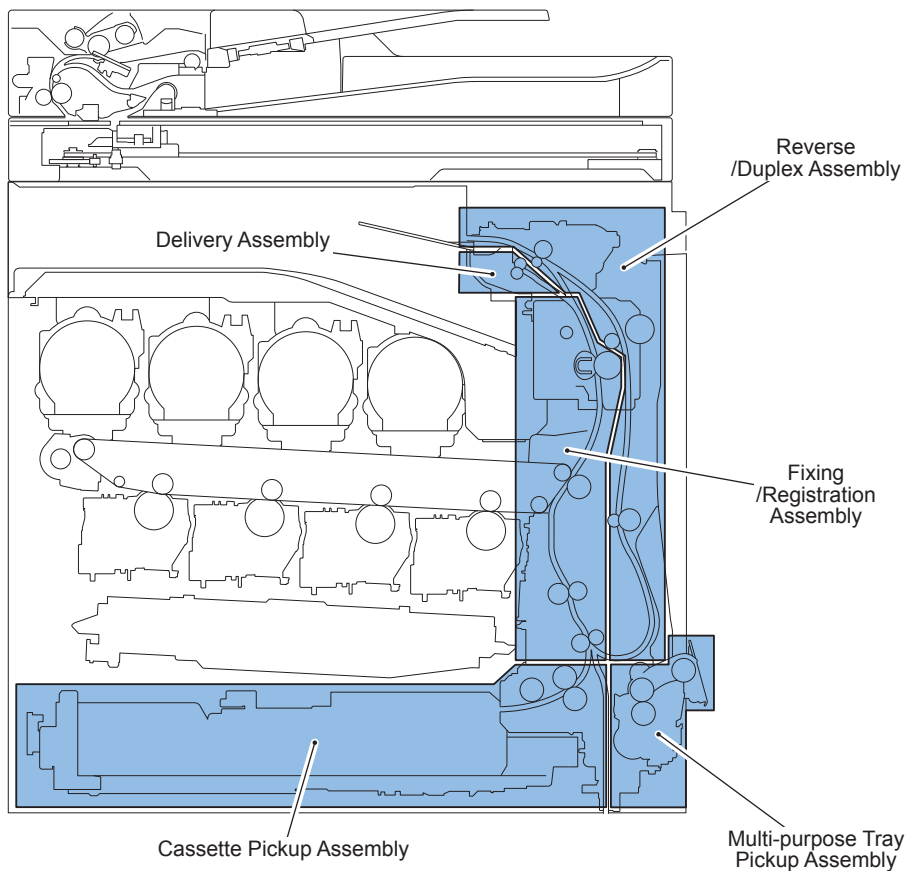
F-2-119

| Area | Detection/Control | |
|---|---|---|
| Cassette Pickup Assembly | Pickup Retry Control | Paper Detection Control |
| | Paper Size Detection Control | Paper Level Detection Control |
| | Lifter Control | - |
| Multi-purpose Tray Pickup Assembly | Pickup Retry Control | Paper Size Detection |
| | Paper Detection | - |
| Fixing/Registration Assembly | Registration Control | Stop Registration Control |
| | Non-stop Registration Control | Size Mismatch Detection Control |
| Delivery Assembly | Delivery Control | Delivery Full Detection |
| Reverse/Duplex Assembly | Reverse Flapper Operation | Duplex Re-pickup Control |
| | Duplex Reverse Control | Duplex Circulation |
| Jam Detection | List of Jam Codes | Forcible Paper Feed Control |

T-2-46

## ■ Cassette Pickup Assembly

### ● Overview

Paper inside a cassette is lifted up by the Lifter Plate.

The Lifter Plate rises by the rotation of the Cassette 1 Lifter Motor (M11). When the Pickup Roller comes in contact with the surface of paper, paper is picked up by rotation of the Cassette 1_Multi-purpose Tray Pickup Motor (M05), and only a single sheet of paper is moved to the feed path by the Cassette Feed Roller and the Cassette Separation Roller.

Then, it is moved from the Pre-registration Roller to the Registration Roller by the rotation of the Pre-registration Motor (M06).

If the Cassette 1 Pickup Sensor (PS05) is ON when starting pickup (in the case that the succeeding paper is also picked up when a paper is picked up and fed), the feed speed is decreased.

The Cassette 1 Pickup Roller, the Cassette 1 Feed Roller and Cassette 1 separation Roller are driven by the Cassette 1_Multi-purpose Tray Pickup Motor (M05) while the Pre-registration Roller is moved by the rotation of the Pre-registration Motor (M06).
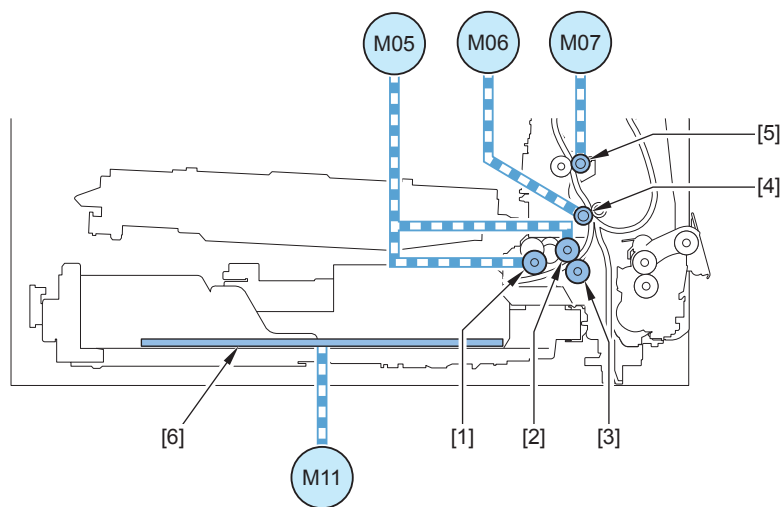


F-2-120

[1]   Cassette 1 pickup Roller
[2]   Cassette 1 feed Roller
[3]   Cassette 1 separation Roller
[4]   Pre-registration Roller
[5]   Registration Roller
[6]   Lifting Plate

### ● Pickup Retry Control

If the Cassette 1 Pickup Sensor (PS05) is not turned ON within a specified period of time after the start of pickup operation of the top paper, operation of the Cassette 1 Multi-purpose Tray Pickup Motor (M05) is suspended once, and the pickup operation is executed again.

NOTE:
It is executed only on the first page of B&W jobs.

● Paper Size Detection Control

The paper size in the cassette is automatically detected by the "Cassette 1 Size Switch (SW09)" after the position of the Guide Plate is adjusted and the cassette is installed in the host machine.

By shifting the Guide Plate, concavo-convex area of the Cassette Size Dial is switched and the Cassette Size Switch at the printer side is switched. The switch consists of 3 microswitches, and the length is detected in accordance with the combination of ON/OFF. (When the switch is pressed: ON) For standard size paper, any of AB configuration, inch configuration, or AK configuration can be used. However, distinction between A5-R and STMT-R should be made manually on the check screen.

Distinction between EXEC-R and 16K-R, and between LTR-R and 16K-R is automatically made according to the country setting.

  *: Whether to select A5-R or STMT-R can be registered in the UI menu setting.

    Settings/Registration > Preferences > Paper Settings > A5R/STMTR Paper Selection

    Setting value per cassette: A5R. STMTR

Cassette 1 Size Switch (SW09)
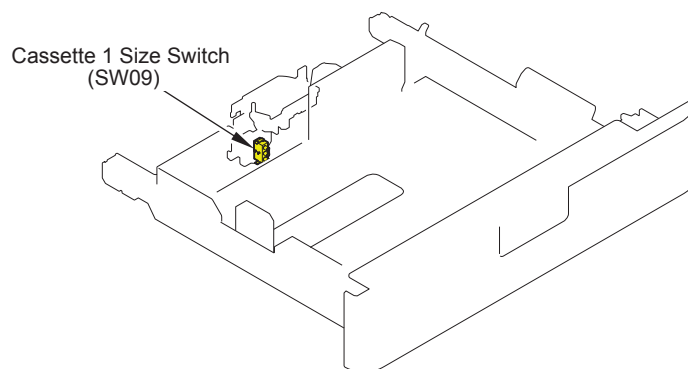
F-2-121

| | | Length Detection | | |
|---|---|---|---|---|
| Size | Length | 1 | 2 | 3 |
| A5-R | 210.0 | ON | OFF | OFF |
| STMT-R | 215.9 | ON | OFF | OFF |
| B5-R | 257.0 | ON | OFF | ON |
| EXEC-R | 267.0 | ON | ON | ON |
| 16K-R | 270.0 | ON | ON | ON |
| | | ON | ON | OFF |
| LTR-R | 279.4 | ON | ON | OFF |
| | | OFF | ON | OFF |
| A4-R | 297.0 | OFF | ON | ON |
| LGL | 355.6 | OFF | OFF | ON |
| (No cassette) | - | OFF | OFF | OFF |

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[1] A5-R
STMT-R

[2] B5-R

[3] EXEC-R
16K-R

[4] 16K-R
LTR-R

[5] LTR-R

[6] A4-R

[7] LGL
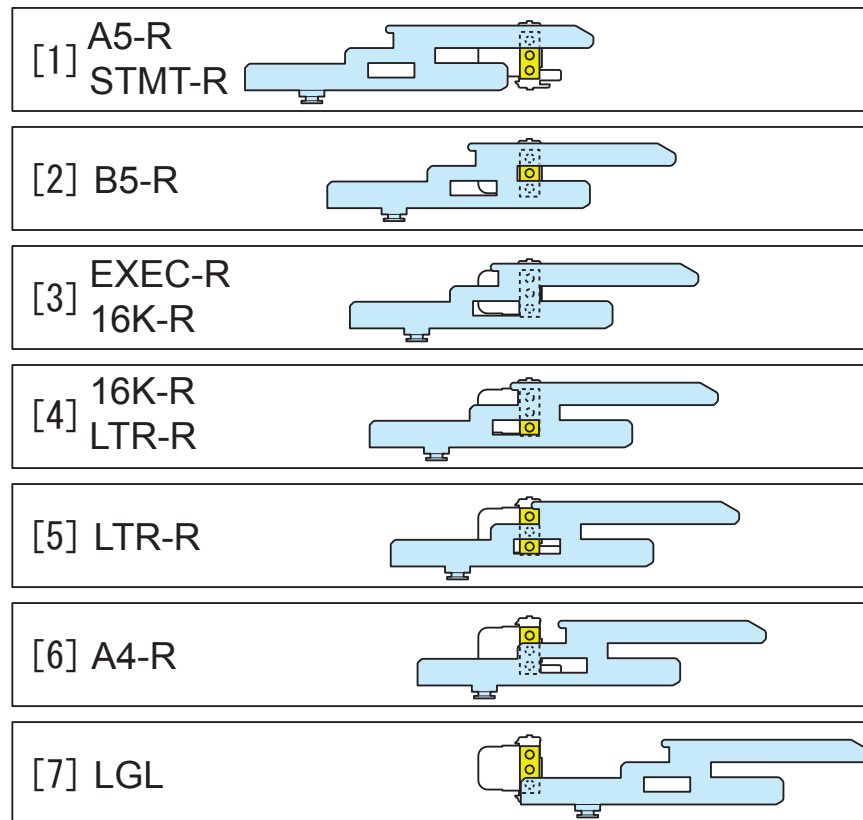
F-2-122

| Paper size*1 | | All modes | AB configuration | Inch-configuration | AK configuration |
|---|---|---|---|---|---|
| A5-R | 210.0 | [1] | [1] | - | [1] |
| STMT-R | 215.9 | | - | [1] | - |
| B5-R | 257.0 | [2] | [2] | Paper load error | Paper load error |
| EXEC-R | 267.0 | [3] | Paper load error | [3] | - |
| 16K-R | 270.0 | [3] | Paper load error | - | [3] |
| | | [4] | Paper load error | - | [4] |
| LTR-R | 279.4 | [4] | Paper load error | [4] | - |
| | | [5] | Paper load error | [5] | Paper load error |
| A4-R | 297.0 | [6] | [6] | Paper load error | [6] |
| LGL | 355.6 | [7] | Paper load error | [7] | Paper load error |
| (No cassette)*2 | - | [8] | - | - | - |

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*1 Paper sizes can be registered in UI menu setting.

[Settings/Registration] > [Preferences] > [Paper Settings] > [Paper Type Settings]

*2 Presence of the cassette is detected when the size switch is pushed.

(If no switch is pushed, it is judged as no cassette.)



TOP VIEW

Size Plate

Cassette 1
Size Switch
(SW09)

Link Arm

Guide Plate
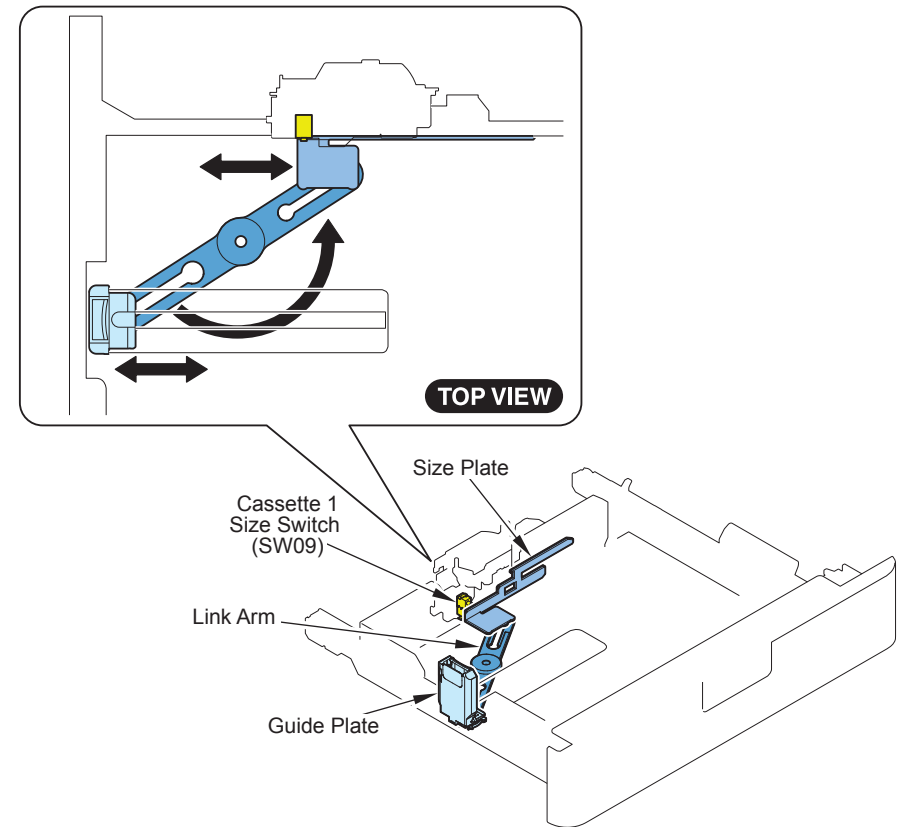
F-2-123

● Paper Level Detection Control

Paper level inside the cassette is detected by the sensors shown in the following table.

The paper level in the cassette is detected by the Cassette 1 Lifter Motor (M11), Cassette 1 Paper Sensor (PS02), Cassette 1 Paper Surface Sensor (PS18), and Cassette 1 Paper Level Sensor (PS20).

| Cassette 1 Paper Sensor (PS02) | Cassette 1 Paper Surface Sensor (PS18) | Cassette 1 Paper Level Sensor (PS20) | Paper level | Display on the Control Panel |
|---|---|---|---|---|
| OFF | ON | OFF* | 100% to 50%* | ≣ |
| OFF | ON | OFF | Approx. 50% to approx. 50 sheets | ⊟ |
| OFF | ON | ON | Approx. 50 sheets or less | ⊔ |

T-2-49

The control that switches the paper level display on the Control Panel is as follows:

• From 3 bars to 2 bars on the Control Panel:

The paper level is detected based on the time for which Cassette 1 Lifter Motor is continuously turned ON. Or, it is detected based on the time from when the Cassette 1 Paper Sensor (PS02) is turned ON to when the Cassette 1 Paper Surface Sensor (PS18) is turned ON.

The paper level during paper feed is detected based on the number of times the Cassette 1 Lifter Plate is lifted up.

> Related Service Mode
> *: The paper level in the cassette is displayed by executing the following service mode.
> You can adjust the timing of switching the scale from "3" to "2".
> Lv.2) COPIER > ADJUST > CST-ADJ > CST-VLMX (Threshold adjustment for detecting the level in the cassette X)
> X indicates the cassette number (1 to 4).

• From 2 bars to 1 bar on the Control Panel:

The Control Panel switches to display 1 bar when the Cassette 1 Paper Level Sensor (PS02) is turned ON.



F-2-124

Cassette 1
Paper Sensor
(PS02)

OFF

FRONT

Cassette 1 Paper
Surface Sensor
(PS18)

Paper

OFF

Paper

OFF

FRONT VIEW

Cassette 1 Paper
Level Sensor
(PS20)

Cassette 1
Paper Sensor
(PS02)

FRONT

OFF

Cassette 1 Paper
Surface Sensor
(PS18)

Paper

OFF

Paper

ON

FRONT VIEW

Cassette 1 Paper
Level Sensor
(PS20)

F-2-126

OFF

FRONT

OFF

OFF

FRONT VIEW
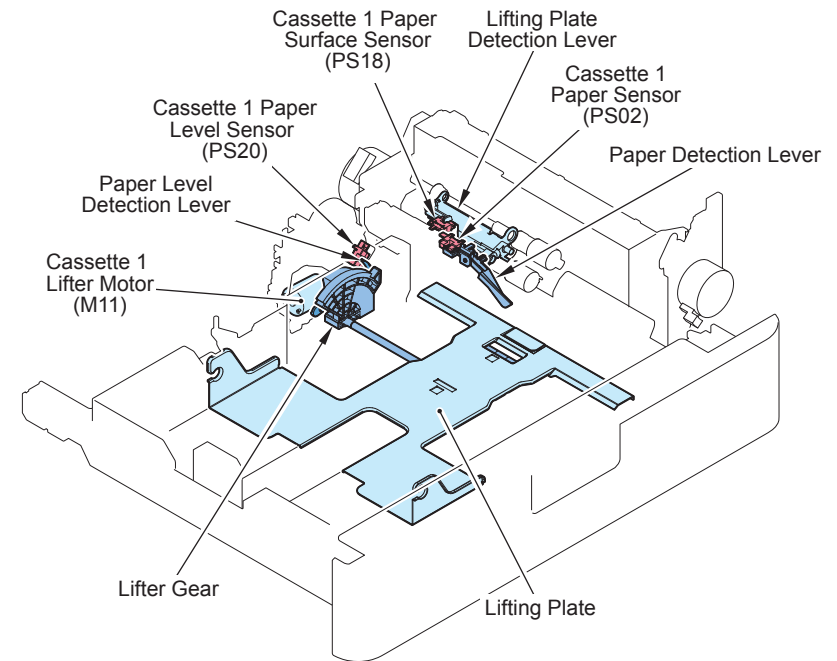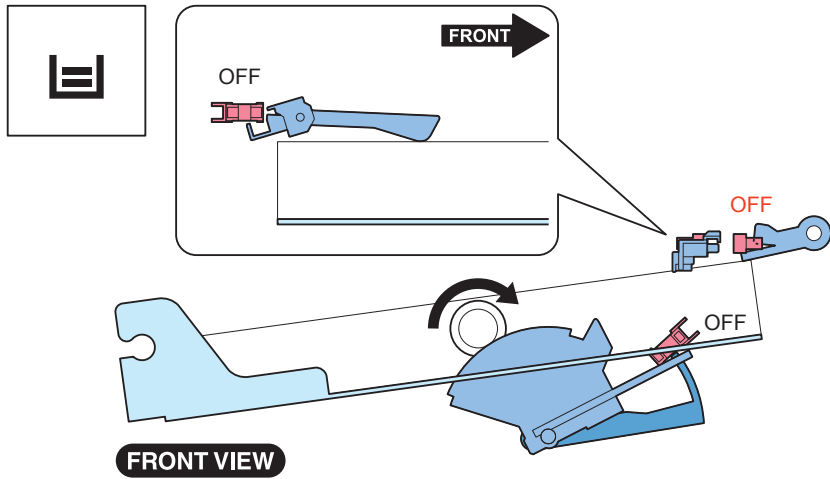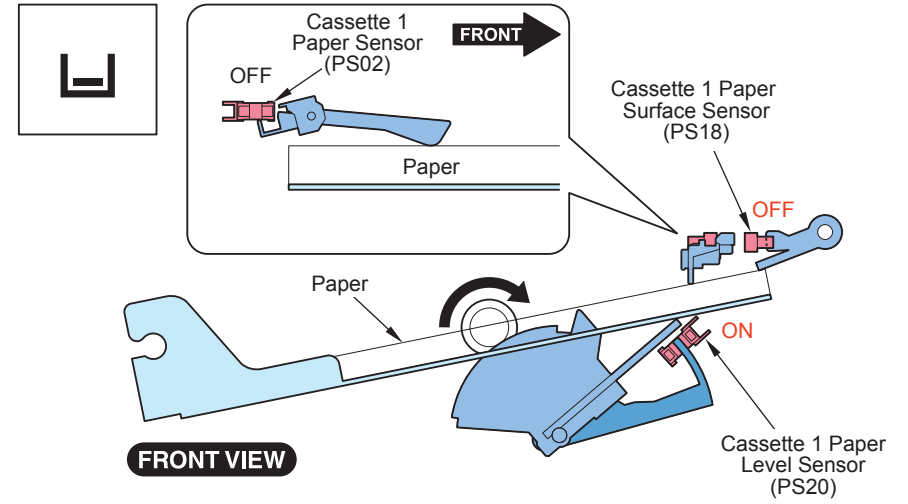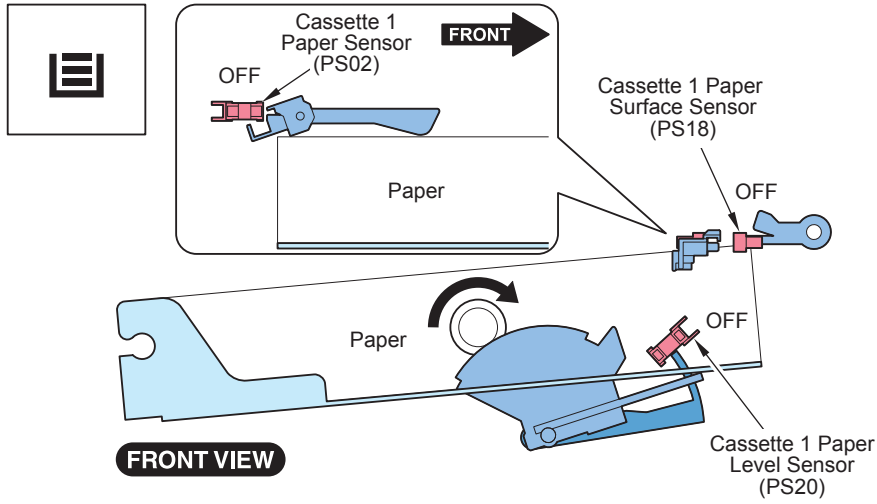
F-2-125

## ● Paper Detection Control

Paper is detected by the Cassette 1 Size Switch (SW09), Cassette 1 Paper Surface Sensor (PS18) and Cassette 1 Paper Sensor (PS02).

The absence of paper is notified when the Cassette 1 Paper Sensor (PS02) is turned ON at the time the Cassette 1 Size Switch (SW09) is turned ON (it is detected that the Cassette is in the host machine) and the Cassette 1 Paper Surface Sensor (PS18) is turned OFF (the Lifter Plate is raised to the pickup position).

Cassette 1 Paper Surface Sensor (PS18)
Lifting Plate Detection Lever
Cassette 1 Paper Sensor (PS02)
Cassette 1 Paper Level Sensor (PS20)
Paper Detection Lever
Paper Level Detection Lever
Cassette 1 Lifter Motor (M11)
Lifter Gear
Lifting Plate
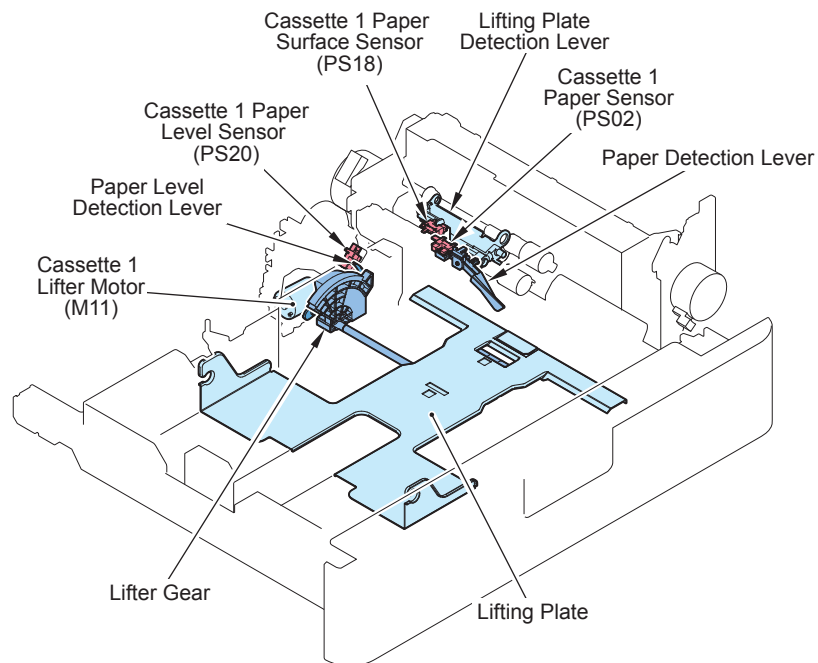
F-2-127

## ● Lifter Control

### When Cassette is set

When the cassette is set, the Cassette 1 Lifter Motor (M11) rotates to raise the Lifter Plate so that the paper is raised to the position to be picked up.

## ■ Multi-purpose Tray Pickup Assembly

## ● Overview

Paper on the Multi-purpose Tray Pickup Tray of the Multi-purpose Tray Pickup Unit is picked up by the rotation of the Cassette 1_Multi-purpose Tray Pickup Motor (M05).

The Multi-purpose Tray Pickup Roller is lowered by the rotation of the Cassette 1_Multi-purpose Tray Pickup Motor. When the Multi-purpose Tray Pickup Roller comes in contact with the surface of paper, a sheet of paper is picked up by rotation of the Cassette 1_Multi-purpose Tray Pickup Motor (M05), and is moved to the feed path by the Multi-purpose Tray Feed Roller and the Multi-purpose Tray Separation Roller. Then, it is moved from the Pre-registration Roller to the Registration Roller by the rotation of the Pre-registration Motor (M06). The Multi-purpose Tray Pickup Roller and the Multi-purpose Tray Feed Roller are driven by the Cassette 1_Multi-purpose Tray Pickup Motor (M05) while the Pre-registration Roller is moved by the rotation of the Pre-registration Motor (M06).

Multi-purpose Tray
Multi-purpose Tray Feed Roller
Multi-purpose Tray Pickup Roller
Multi-purpose Tray Separation Roller
Pickup Roller Disengagement Cam
Paper Detection Lever
Multi-purpose Tray Paper Sensor (PS03)
Multi-purpose Tray HP Sensor (PS10)
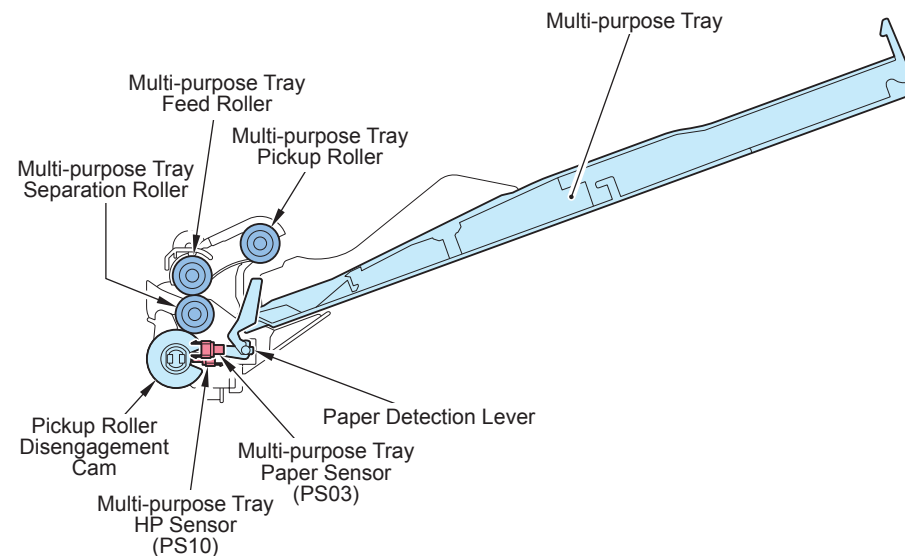
F-2-128

● Pickup Retry Control

If the Pre-Registration Sensor (PS03) is not turned ON within the specified period of time after the start of pickup operation, the Cassette 1_Multi-purpose Tray Pickup Motor (M05) is suspended once, and the pickup operation is executed again.

NOTE:
This control is executed in the following cases:
• The top paper of a B&W job
• Envelope/Heavy Paper 3/Label Paper/Transparency whose length is 190 mm or more

● Paper Detection

Presence/absence of paper is detected by the Multi-purpose Tray Paper Sensor (PS03).
When absence of paper is detected but the same size and same type of papers exist in another paper source, auto cassette change is executed.

● Paper Size Detection

The machine does not have the paper size detection function. The user has to specify the paper size in the Multi-purpose Tray using the Control Panel.
In addition, the user has to register the fixed size in UI menu.

■ Fixing/Registration Assembly

● Registration Control

It is a control to align paper and image on the ITB at a specified timing.
Based on the leading edge detection by the Pre-Registration Sensor (PS04), the following 2 controls are used:
• Non-stop registration control
• Stop registration control
Basically, the non-stop registration control is used.
However, if paper passes the Pre-registration Sensor (PS04) earlier than a specified timing, stop registration control is executed to align paper and image on the ITB at the specified timing.
Meanwhile, if the paper passes the Pre-registration Sensor (PS04) significantly later than a specified timing, paper and image on the ITB cannot be aligned at the specified timing, and therefore jam is generated. (Jam code: 0A90)
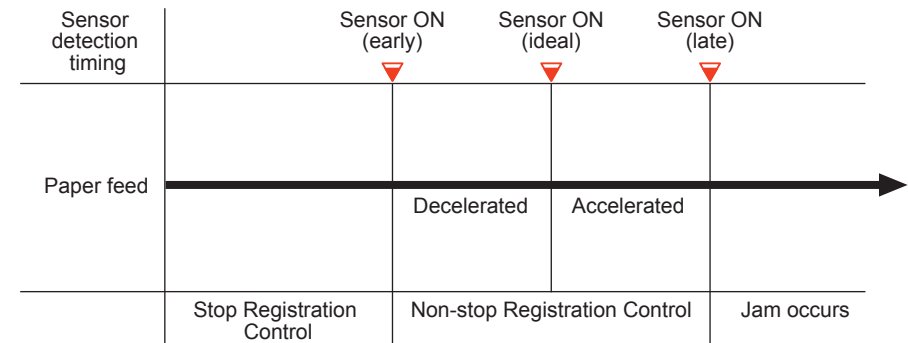


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● Non-stop Registration Control

It is a control to align paper and image on the ITB at a specified timing by increasing or decreasing the paper feed speed.
Since paper is not stopped at the registration position, paper interval can be shortened and productivity can be improved.

## ● Stop Registration Control

It is a control to stop paper at the registration position, align paper and image on the ITB at a specified timing, and then resume paper feed.

Stop registration control stops the Pre-registration Roller. Paper fed by the Pre-registration Roller after being picked up from the cassette or Multi-purpose Tray generates an arch due to being pushed against the Registration Roller which has been stopped. This control stops paper while an arch is still generated to align paper and image on ITB at a specified timing, aligns paper and image on the ITB at a specified timing, and then resumes paper feed.



Image

PS04

Registration
Roller
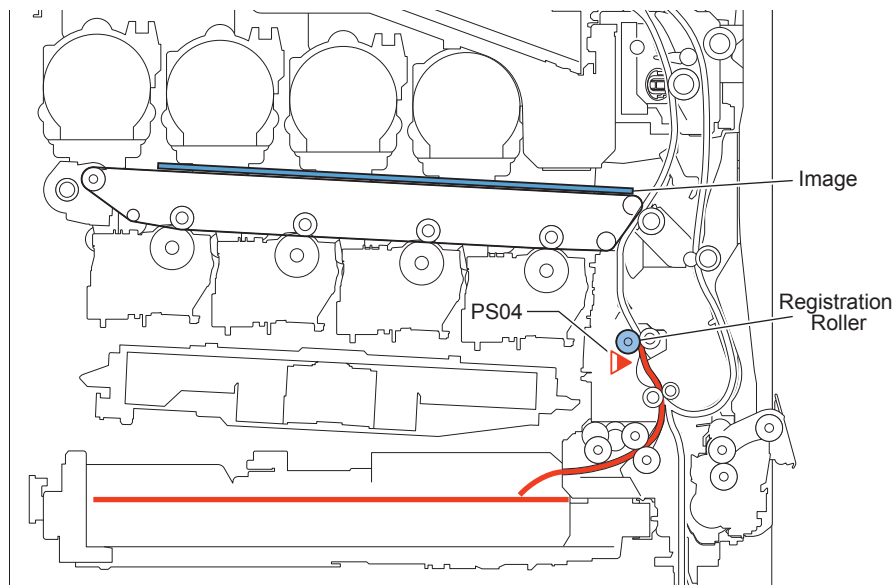
F-2-130

## ● Size Mismatch Detection Control

Whether the size is mismatched is determined by paper length.

The time a paper passes through the Pre-Registration Sensor (PS04) is converted into distance. The converted distance and the paper size (specified by the user in case of the Multi-purpose Tray Pickup Tray) detected by the Cassette Size Detection Switch are compared, and if there is a difference of 20 mm or more between the two, it is judged that the size is mismatched.

In this case, paper is not delivered, but stopped instead with a jam detected. (Jam code: 0D91)

## ■ Delivery Assembly

### ● Delivery Control

This machine executes face-down delivery (delivers paper to the machine's Delivery Tray with printed surface down).

When face-up delivery (delivering paper to the Delivery Tray with printed surface up) is specified in a job, image is created on the front side of the paper, and then the paper is passed through the duplex path and delivered with no image created on the back.

### ● Delivery Full Detection

If the Delivery Paper Full Sensor (PS14) is ON for a specified period of time, it is notified to the Main Controller PCB.

After notification, printing stops.



Delivery Paper
Full Sensor
(PS14)

Delivery Paper
Full Detection Flag

Delivery point
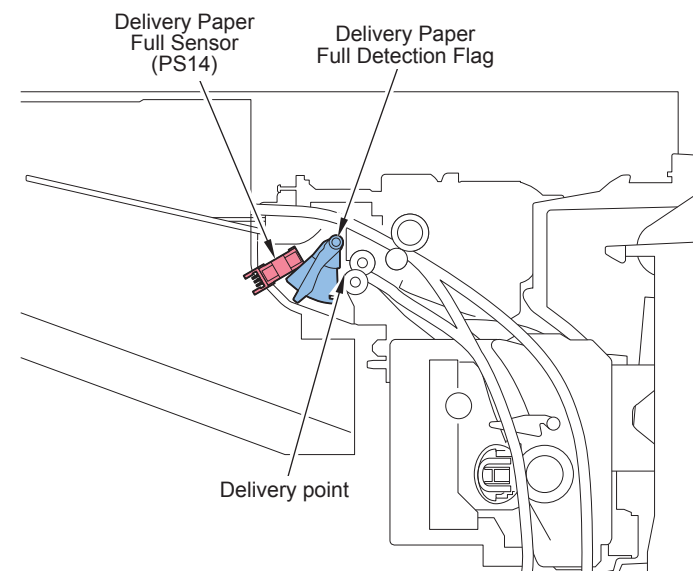
F-2-131

## ■ Reverse/Duplex Assembly

### ● Reverse Flapper Operation

The Reverse Flapper operates in accordance with the Reverse Motor (M08).

- When the Reverse Motor is stopped: Feed to the Delivery Outlet
- When the Reverse Motor is operating: Feed to the Reverse Mouth

Reverse Flapper

M08
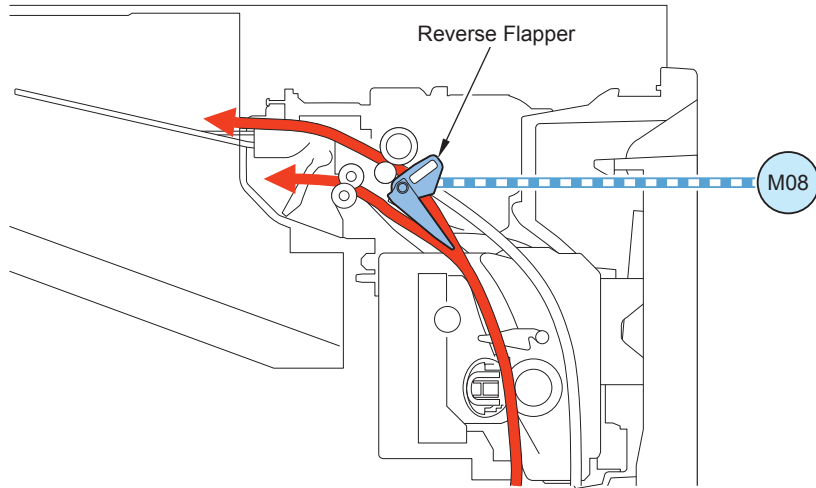
F-2-132

### ● Duplex Reverse Control

Paper is reversed outside the machine using the Reverse Mouth.
Paper stops at the duplex reverse stop position after a specified time has elapsed since passing the Delivery Sensor (PS12). After a specified time has elapsed, paper is reversed, and duplex feed starts.

M08

Duplex reverse stop position
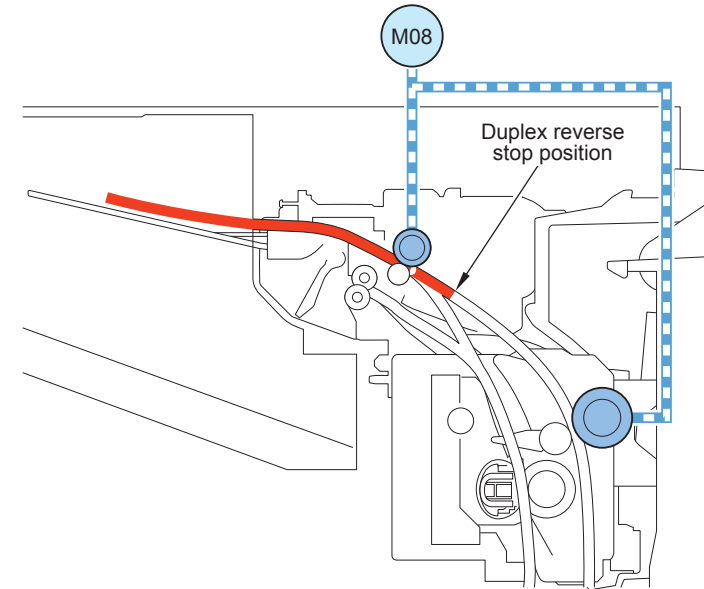
F-2-133

● Duplex standby control

If it is possible to secure necessary paper interval by estimating the paper interval with the preceding paper when the Duplex Sensor (PS01) is ON, the paper is re-picked up to the pre-registration.

If the necessary paper interval cannot be secured, the paper stays at the duplex standby position (22.3 mm downstream from the Pre-registration Roller). After recalculated standby time has passed, re-pickup is executed.
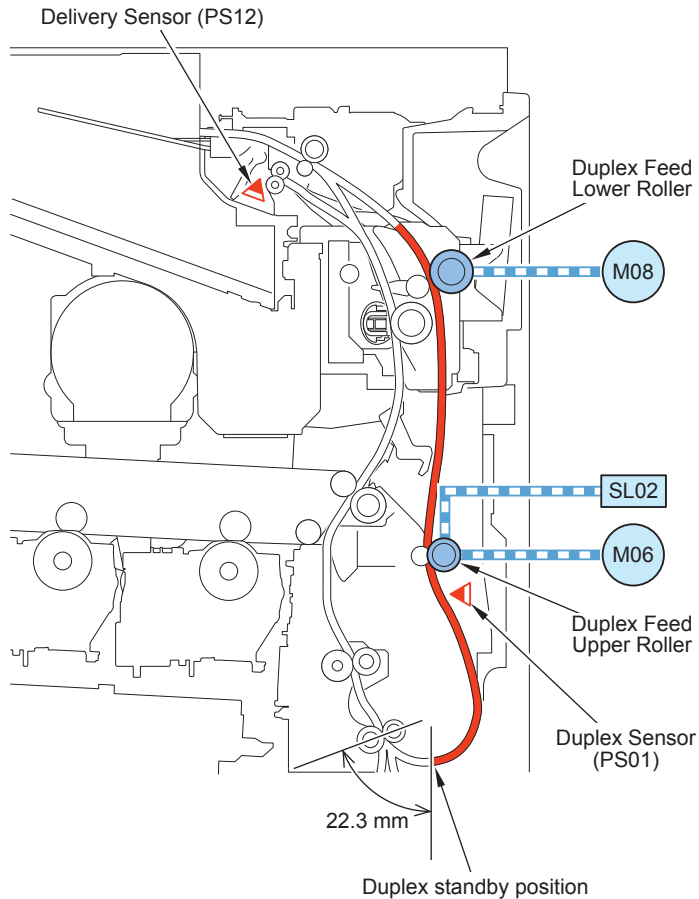


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● Duplex Pre-standby control

When the succeeding paper has not finished the registration control (non-stop registration control and stop registration control), the paper stops before the nip of the Duplex Feed Lower Roller (15 mm downstream from the Duplex Feed Lower Roller).

When the speed changes to the process speed after the succeeding paper finishes the registration control, the Reverse Motor (M08) is rotated to start the paper feed.
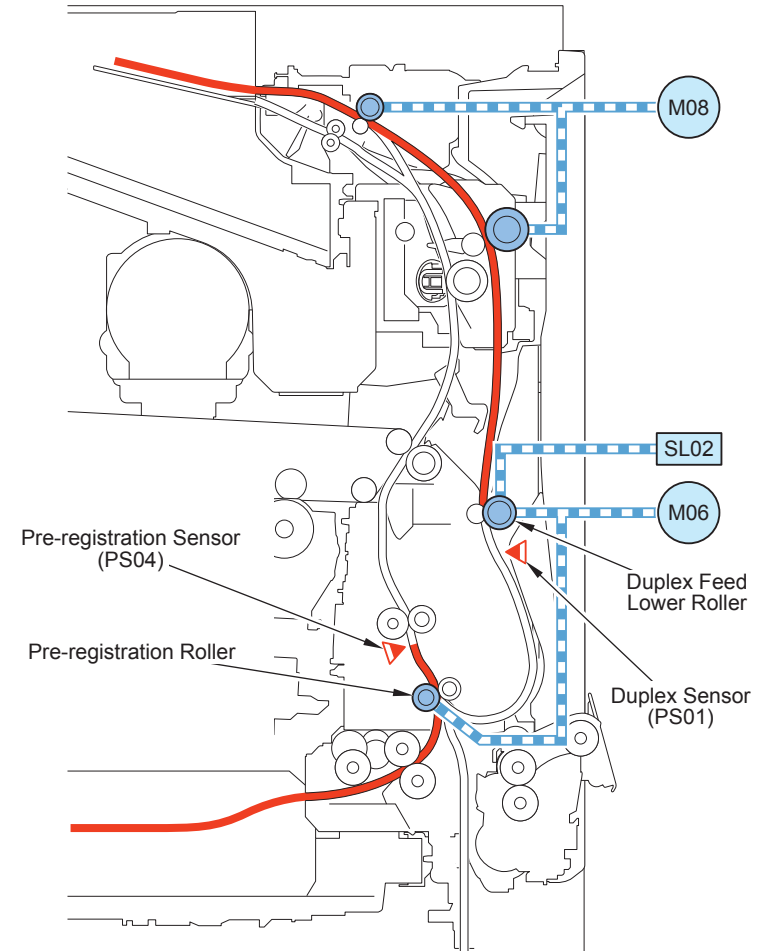


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The Duplex Solenoid (SL02) is turned ON 100 msec before the leading edge of the fed paper reaches the duplex standby position. After the Duplex Solenoid (SL02) is turned ON, the drive of the Duplex Feed Lower Roller is terminated, and the paper stops at the duplex standby position. After the designated time has elapsed, the Duplex Solenoid is turned OFF, the Duplex Feed Lower Roller is driven, and then the paper is picked up again.

Delivery Sensor (PS12)

Duplex Feed Lower Roller

M08

SL02

M06

Duplex Feed Upper Roller

Duplex Sensor (PS01)

22.3 mm

Duplex standby position
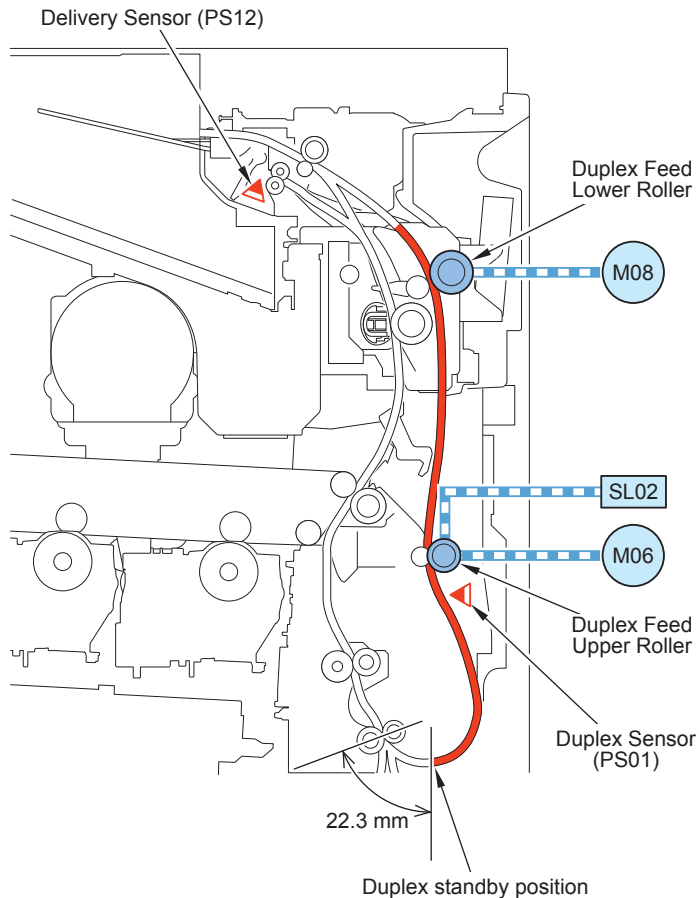
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● Duplex Circulation

The following shows the number of circulating sheets at the 2-sided print.

| Length in paper feed direction | Number of circulating sheets |
|---|---|
| 297.0 mm or less | 3 |
| Greater than 297.0 mm | 1 |

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■ Jam Detection

● List of Jam Codes

A jam code consists of 4 alphanumeric characters.

The upper 2 digits indicate the jam type, and the lower 2 digits indicate the sensor that detected a jam.

| ACC ID | Jam Code | Type | Sensor Name | Sensor ID |
|---|---|---|---|---|
| 00 | 0101 | Delay | Cassette 1 Pickup Sensor | PS5 |
| 00 | 0102 | Delay | Cassette 2 Pullout Sensor | PS101 |
| 00 | 0103 | Delay | Cassette 3 Pullout Sensor | PS102 |
| 00 | 0104 | Delay | Cassette 4 Pullout Sensor | PS103 |
| 00 | 0105 | Delay | Pre-Registration Sensor | PS4 |
| 00 | 0106 | Delay | Delivery Sensor | PS12 |
| 00 | 0107 | Delay | Duplex Sensor | PS1 |
| 00 | 0202 | Stationary | Cassette 2 Pullout Sensor | PS101 |
| 00 | 0203 | Stationary | Cassette 3 Pullout Sensor | PS102 |
| 00 | 0204 | Stationary | Cassette 4 Pullout Sensor | PS103 |
| 00 | 0205 | Stationary | Pre-Registration Sensor | PS4 |
| 00 | 0206 | Stationary | Delivery Sensor | PS12 |
| 00 | 0706 | Fixing paper wrapping | Fixing paper wrapping jam | - |
| 00 | 0709 | Fixing paper wrapping | Fixing paper wrapping jam | - |
| 00 | 0A01 | Power ON | Cassette 1 Pickup Sensor | PS5 |
| 00 | 0A02 | Power ON | Cassette 2 Pullout Sensor | PS101 |
| 00 | 0A03 | Power ON | Cassette 3 Pullout Sensor | PS102 |
| 00 | 0A04 | Power ON | Cassette 4 Pullout Sensor | PS103 |
| 00 | 0A06 | Power ON | Delivery Sensor | PS12 |
| 00 | 0A07 | Power ON | Duplex Sensor | PS1 |
| 00 | 0A08 | Power ON | Arch Sensor | PS11 |
| 00 | 0A90 | Power ON | Pre-Registration Sensor | PS4 |
| 00 | 0A91 | Power ON | Multi-purpose Tray HP Sensor | PS10 |
| 00 | 0A92 | Power ON | Multi-purpose Tray HP Sensor | PS10 |
| 00 | 0B00 | Door Open | - | - |
| 00 | 0B0D | No drum jam* | - | - |
| 00 | 0CA1 | Sequence | Software sequence (Feed status cannot be returned) | - |
| 00 | 0CA2 | Sequence | Software sequence (ImageReady cannot be sent) | - |
| 00 | 0CA3 | Sequence | Software sequence (Stop due to jam is not possible) | - |
| 00 | 0CA4 | Sequence | Software sequence (Finisher-related) | - |
| 00 | 0CA9 | Sequence | Software sequence error (Automatic adjustment-related) | - |
| 00 | 0CAF | Sequence | Finisher sequence jam | - |

| ACC ID | Jam Code | Type | Sensor Name | Sensor ID |
|--------|----------|------|-------------|-----------|
| 00 | 0CC1 | Sequence | Software sequence error (Automatic adjustment: Transfer-related) | - |
| 00 | 0CC2 | Sequence | Software sequence error (Automatic adjustment: Image formation-related) | - |
| 00 | 0CC3 | Sequence | Software sequence error (Automatic adjustment: Last rotation-related) | - |
| 00 | 0CC5 | Sequence | Software sequence error (Transfer-related) | - |
| 00 | 0CC6 | Sequence | Software sequence error (Prevention of ITB displacement) | - |
| 00 | 0CF1 | Sequence | Error avoidance jam | - |
| 00 | 0CF2 | Sequence | Software sequence error (Vsync error) | - |
| 00 | 0D91 | Size Error | Wrong size (small) | - |
| 00 | 1CF1 | Error avoidance | Finisher error avoidance jam | - |

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*:Drum Unit detection may not be executed at times such as at recovery from sleep mode (of 4 or more hours).

"No drum jam" is detected when a print job is executed with no Drum Unit installed in the machine.

# Service Tasks

## ■ Periodically Replaced Parts

None.

## ■ Consumables

None

## ■ Periodical Servicing

None.
Perform as needed.

# External Auxiliary System

## Controls

### ■ Software counter

Count-up timing differs depending on the following conditions:

- Print mode (1-sided/2nd side of 2-sided print, 1st side of 2-sided print)
- Differs depending on the delivery position (Staple Finisher)

| Delivery position | | Print mode | |
|---|---|---|---|
| | | 1-sided print/2nd side of 2-sided print | 1st side of 2-sided print |
| | | Count-up timing | |
| Host machine | Delivery Tray | Delivery Sensor (PS12) | Duplex Sensor (PS01) |
| Staple Finisher | | Feed Path Sensor (S2) | |

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Default counters for each country (model) are listed below.

| Target | Display number of each counter (in service mode) / item | | | | | | | | Country Code |
|---|---|---|---|---|---|---|---|---|---|
| | Counter 1 | Counter 2 | Counter 3 | Counter 4 | Counter 5 | Counter 6 | Counter 7 | Counter 8 | |
| 120V UL model type1 (Conventional method) | Total 1 | Total (Black 1) | Copy (Full Color + Single Color/ Small) | Print (Full Color + Single Color/ Small) | *1 | *1 | *1 | *1 | US |
| | 101 | 108 | 230 | 322 | 000 | 000 | 000 | 000 | |
| 120V UL model type2 (New method) | Total 2 | Total (Black 2) | Copy (Full Color + Single Color/ Small) | Print (Full Color + Single Color/ Small) | *1 | *1 | *1 | *1 | US |
| | 102 | 109 | 230 | 322 | 000 | 000 | 000 | 000 | |
| 230V General model | Total 1 | Total (Black 1) | Copy + Print (Full Color/ Small) | Total (Single Color 1) | Total1 (2-Sided) | *1 | *1 | *1 | SG/KO/ CN |
| | 101 | 108 | 402 | 118 | 114 | 000 | 000 | 000 | |

| Target | Display number of each counter (in service mode) / item | | | | | | | | Country Code |
|---|---|---|---|---|---|---|---|---|---|
| | Counter 1 | Counter 2 | Counter 3 | Counter 4 | Counter 5 | Counter 6 | Counter 7 | Counter 8 | |
| 240V UK model type1 (Conventional method) | Total (Black/ Small) | Total (Full Color + Single Color/ Small) | Scan (Total 1) | Print (Total 1) | *1 | *1 | *1 | *1 | GB |
| | 113 | 123 | 501 | 301 | 000 | 000 | 000 | 000 | |
| 240V UK model type2 (New method) | Total 1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | GB |
| | 101 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| 240V CA model | Total 1 | Total (Black 1) | Copy (Full Color + Single Color/ Small) | Print (Full Color + Single Color/ Small) | *1 | *1 | *1 | *1 | AU |
| | 101 | 108 | 230 | 322 | 000 | 000 | 000 | 000 | |
| 230V FRN model type1 (Conventional method) | Total (Black/ Small) | Total (Full Color + Single Color/ Small) | Scan (Total 1) | Print (Total 1) | *1 | *1 | *1 | *1 | FR |
| | 113 | 123 | 501 | 301 | 000 | 000 | 000 | 000 | |
| 230V FRN model type2 (New method) | Total 1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | FR |
| | 101 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| 230V GER model type1 (Conventional method) | Total (Black/ Small) | Total (Full Color + Single Color/ Small) | Scan (Total 1) | Print (Total 1) | *1 | *1 | *1 | *1 | DE |
| | 113 | 123 | 501 | 301 | 000 | 000 | 000 | 000 | |
| 230V GER model type2 (New method) | Total 1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | DE |
| | 101 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |

| Target | Display number of each counter (in service mode) / item | | | | | | | | Country Code |
|---|---|---|---|---|---|---|---|---|---|
| | Counter 1 | Counter 2 | Counter 3 | Counter 4 | Counter 5 | Counter 6 | Counter 7 | Counter 8 | |
| 230V AMS model type1 (Conventional method) | Total (Black/ Small) | Total (Full Color + Single Color/ Small) | Scan (Total 1) | Print (Total 1) | *1 | *1 | *1 | *1 | ES/SE/ PT/NO/ DK/FI/ PL/HU/ CZ/SI/ GR/EE/ RU/NL/ SK/RO/ HR/BG/ TR |
| | 113 | 123 | 501 | 301 | 000 | 000 | 000 | 000 | |
| 230V AMS model type2 (New method) | Total 1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | ES/SE/ PT/NO/ DK/FI/ PL/HU/ CZ/SI/ GR/EE/ RU/NL/ SK/RO/ HR/BG/ TR |
| | 101 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| 230V ITA model type1 (Conventional method) | Total (Black/ Small) | Total (Full Color + Single Color/ Small) | Scan (Total 1) | Print (Total 1) | *1 | *1 | *1 | *1 | IT |
| | 113 | 123 | 501 | 301 | 000 | 000 | 000 | 000 | |
| 230V ITA model type2 (New method) | Total 1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | IT |
| | 101 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |

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<Explanation of the list>

- Large: Large size paper (when paper length exceeds 324 mm in paper feed direction)
- Small: Small size paper (when paper length is 324 mm or less in paper feed direction)
- Total: Copy + Print; 1 count up
- 2-Sided: 1 count up when auto 2-sided copy
- Country code change of CONFIG is executed from COPIER > OPTION > FNC-SW > CONFIG.
- Three-digit number in the counter column shows the setting value of the following service mode items.
  (Lv.1) COPIER > OPTION > USER > COUNTER 1 to 8
- COUNTER2 to 8 can be changed from the service mode (COPIER > OPTION > USER).
- The change of the counter display type (New method/Conventional method) can be changed from the service mode (COPIER > OPTION > USER> CNT-SW).
  *1: Nothing is displayed as default. However, you can change this setting from the service mode.

| Country Code | | |
|---|---|---|
| JP:  Japan | FR:  France | CZ:  Czech |
| TW:  Taiwan | DE:  Germany | SI:  Slovenia |
| US:  North America | ES:  Spain | GR:  Greece |
| SG:  Singapore | SE:  Sweden | EE:  Estonia |
| KR:  Korea | PT:  Portugal | RU:  Russia |
| TH:  Thailand | NO:  Norway | SK: Slovak |
| VN:  Vietnam | DK:  Denmark | RO: Romania |
| CN:  China | FI:  Finland | HR: Croatia |
| GB:  The U.K. | PL:  Poland | BG: Bulgaria |
| AU:  Australia | HU:  Hungary | TR: Turkey |
| | | IT:  Italy |

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# Fan

## Location of Fans
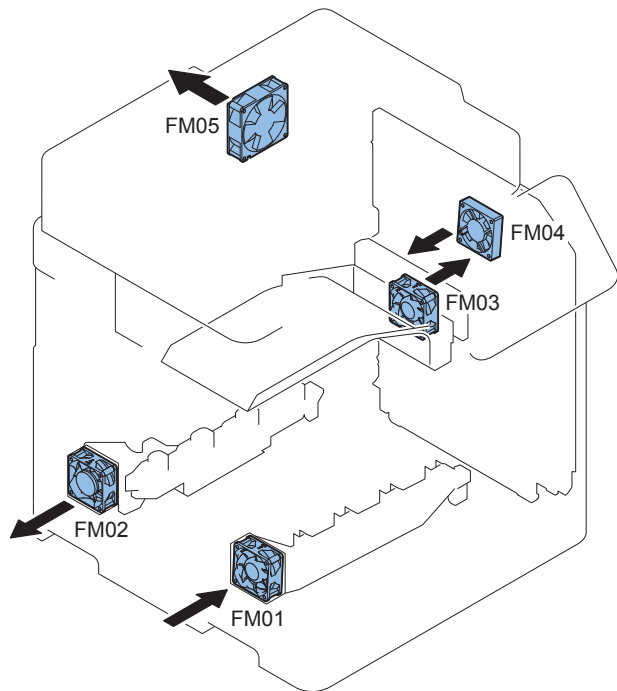


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| No. | Service name | Pre rotation | Initial rotation | Stand by | Copy/print 1- | Copy/print 2- | Post rotation | JAM | ERR | Reader | Sleep1 | Deep Sleep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM1 | Drum Unit Suction Cooling Fan | | | | Half speed | Full speed | | | | | | |
| FM2 | Drive Unit Cooling Fan | | | | Half speed | Full speed | | | | | | |
| FM3 | Delivery Cooling Fan | | | | Half speed | Full speed | | | | | | |
| FM4 | Duplex Cooling Fan | Half speed | Half speed | | Full speed | Full speed | | | | | | |
| FM5 | Power Supply Cooling Fan | Full speed | | | Full speed | Full speed | Full speed | Half speed | Half speed | Full speed | | |

■ : Full speed

■ : Half speed

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*: Fan drive sequence in an environment with a temperature of 27 deg C or lower

| No. | Name | Function | Error codes |
|---|---|---|---|
| FM01 | Drum Unit Suction Cooling Fan | To cool the Developing Assembly and laser | E806-0100 / E806-0101 |
| FM02 | Drive Unit Cooling Fan | To cool the Drive Unit | E806-0200 / E806-0201 |
| FM03 | Delivery Cooling Fan | To cool the Delivery Assembly | E806-0300 / E806-0301 |
| FM04 | Duplex Cooling Fan | To cool the Duplex Feed Assembly and Fixing Assembly | E806-0400 / E806-0401 |
| FM05 | Power Supply Cooling Fan | To cool the power supply | E804-0000 |

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■ Power supply

● Internal power supply
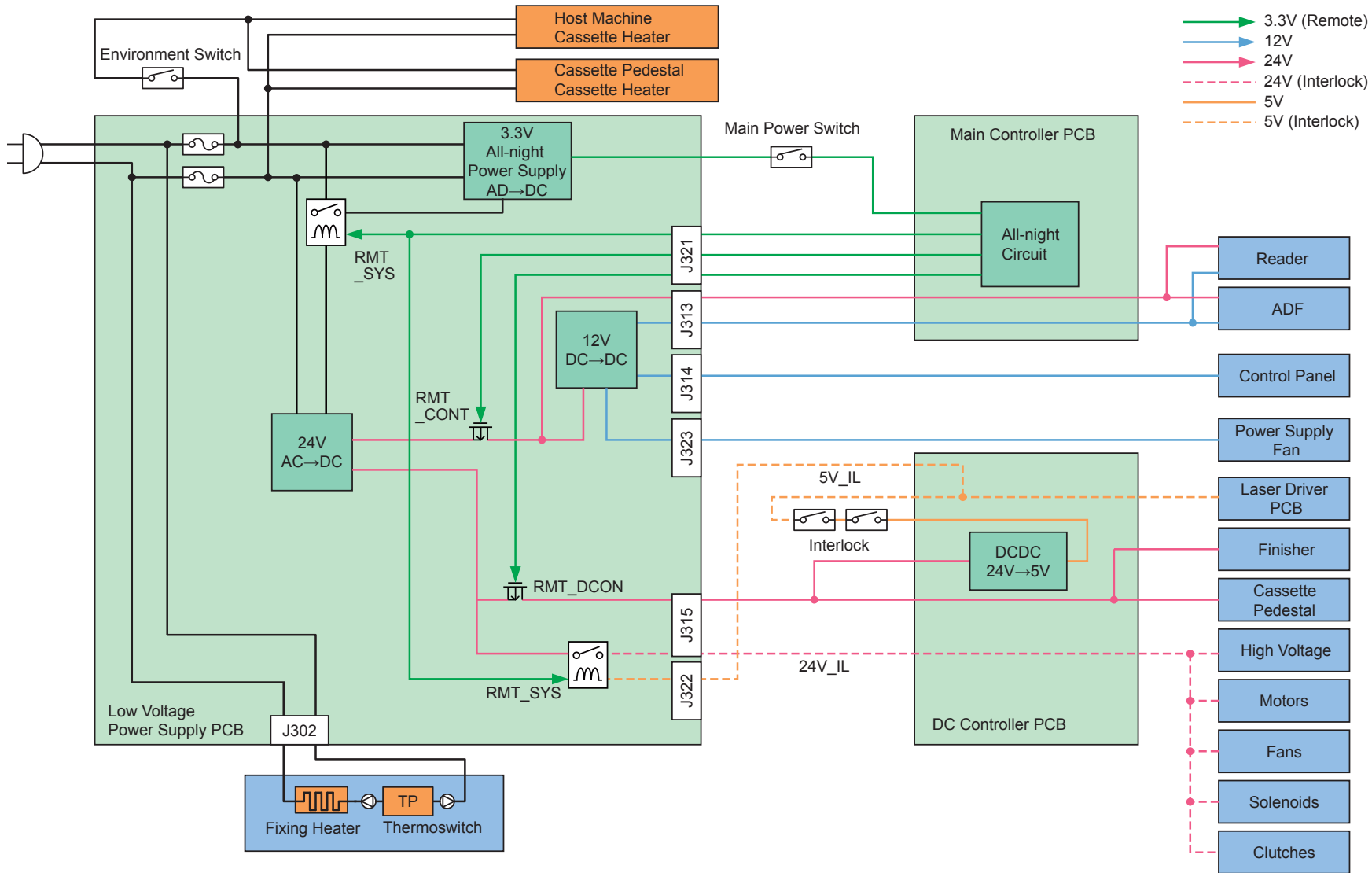


F-2-139

## ■ Power supply connection with the options
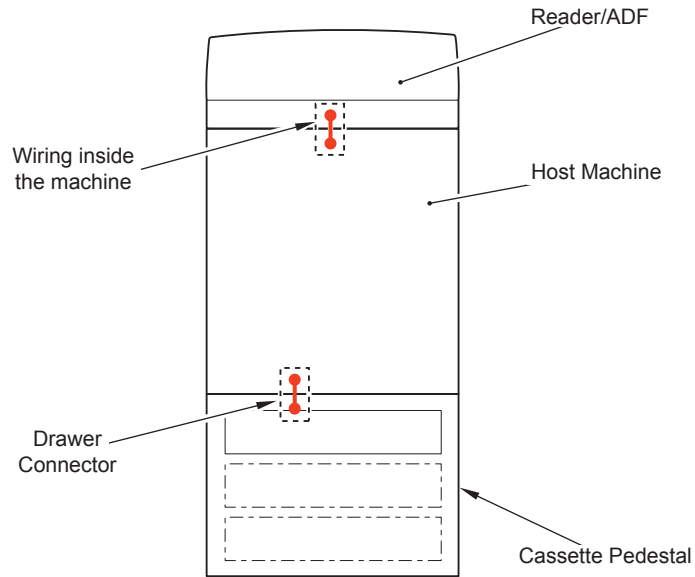


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The Drawer Connectors connect to the 1-cassette Pedestal and 3-cassette Pedestal.

An external cable is used to connect to the ADF and Finisher.

## ■ Power-Saving Mode

This is the function to save power consumed by the printer.

The table below lists various power-saving modes.

| Power-Saving Mode | | Status |
|---|---|---|
| Stand-by | | at power-OFF on the reader |
| Power-saving | | at power-OFF on the reader and the display (LCD) |
| Sleep | Sleep 1 | at power-OFF on the reader, engine and the display (LCD) |
| | Sleep 2 | at power-OFF on the reader and the engine. |
| | Sleep 3 (3W sleep) | at power-off on the reader, the engine and the display (LCD) The main controller enters the power-saving mode. |
| Automatic shutdown* | | The Main Power Switch is turned OFF when a specified period of time has passed (default: 4 hours) after the machine has entered sleep mode (excluding sleep 2). |

*: In the case of a model without fax

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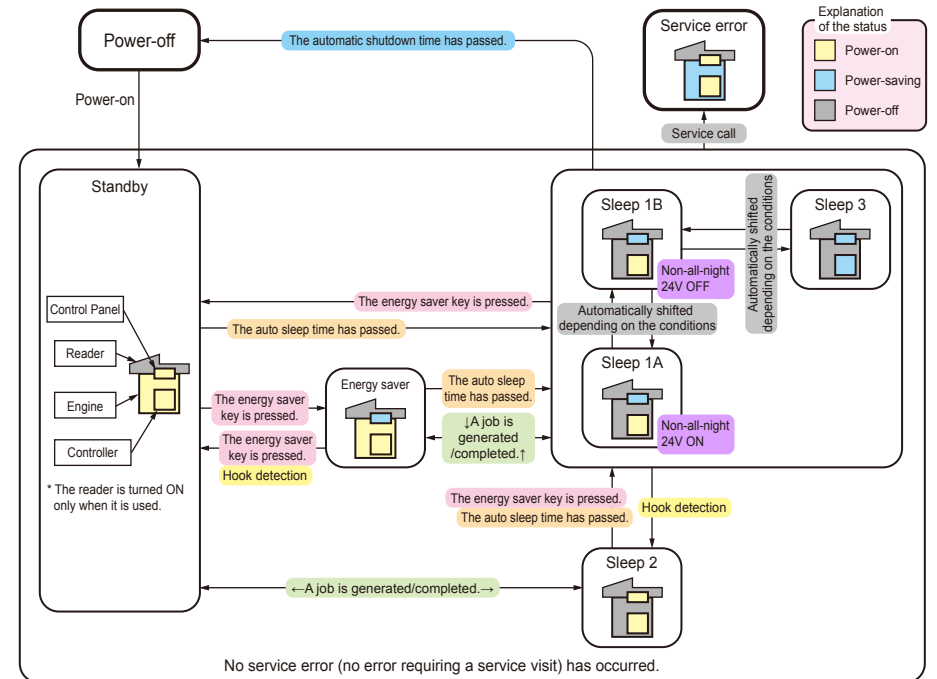


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# Service Tasks

## ■ Periodically Replaced Parts

None.

## ■ Consumable Parts

None.

## ■ Periodical Servicing

None.
Perform as needed.

# Embedded RDS

## ● Product Overview

### ■ Overview

Embedded RDS (hereinafter referred to as E-RDS) is a monitoring program that runs on the host machine. When the monitoring option is enabled by making the setting on this machine, information such as the status change of the machine, counter information, and failure information are collected. The collected device information is sent to a remote maintenance server called UGW (Universal Gateway Server) via Internet, thus allowing for e-Maintenance/ imageWARE Remote (Remote Diagnosis System).

The following device information/ status can be monitored.
• Billing counts
• Parts counter
• Firmware info
• Service call error log
• Jam log
• Alarm log
• Status changes (Toner low/ out, etc.)

Since high confidentiality is required for the information shown above, it performs communication between this machine and the UGW using HTTPS/ SOAP protocol.



Customer Environment
This machine
DNS Server   Proxy Server   Administrator
Internet
Firewall
UGW
Sales Company
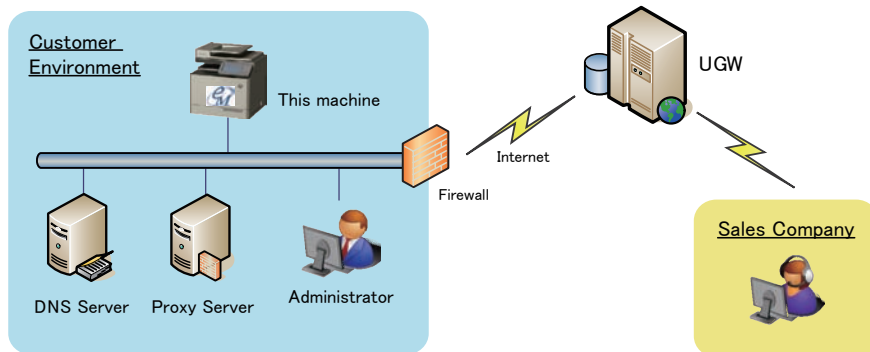
The e-Maintenance/ imageWARE Remote system configuration

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### ■ Features and benefits

E-RDS embedded with a network module in advance can realize a front-end processing of e-Maintenance/ imageWARE Remote system without attaching any extra hardware equipment.

### ■ Major Functions

#### ● Service mode menu Transmission

E-RDS sends the target service mode menu data to UGW in the following cases:
• When a specific alarm and service call error are detected
• When the setting is changed in service mode

The following shows the transmission timing and the target data for transmission in service mode menu:

| Transmission timing | Transmitting data | | | Error retry |
|---|---|---|---|---|
| When the following alarm is detected.<br><br>Alarm codes for transmission:<br>0x060002,               // Fixing<br>0x060004 - 0x069999,  // Fixing<br>0x090005 - 0x099999,  // Dram<br>0x100006 - 0016, 0x100022 - 0099,<br>0x100101 - 9900,        // Development<br>0x300001 - 0x309999   // High voltage | COPIER | Display | ANALOG | No |
| | | | HV-STS | |
| | | | CCD | |
| | | | DPOT | |
| | | | DENS | |
| | | | FIXING | |
| | | | SENSOR | |
| | | | MISC | |
| | | | HT-C | |
| | | | HV-TR | |
| | | | P-PASCAL | |
| When the following service call error is detected.<br><br>Error codes for transmission:<br>E000 - E00F,  // Fixing<br>E020,            // Development ATR<br>E060 - E06F   // High voltage | COPIER | Display | ANALOG | No |
| | | | HV-STS | |
| | | | CCD | |
| | | | DPOT | |
| | | | DENS | |
| | | | FIXING | |
| | | | SENSOR | |
| | | | MISC | |
| | | | HT-C | |
| | | | HV-TR | |
| | | | P-PASCAL | |
| When a value is set to [COPIER - Adjust] subordinate's Service mode menu.<br>(Transmission will be done at 60 min, later of setting) | COPIER | Adjust | | Yes |

| Transmission timing | Transmitting data | | | Error retry |
|---|---|---|---|---|
| When the first communication test is done. (For transmission process, 5 minutes after the execution) | COPIER | Display | ANALOG | Yes |
| | | | HV-STS | |
| | | | CCD | |
| | | | DPOT | |
| | | | DENS | |
| | | | FIXING | |
| | | | SENSOR | |
| | | | MISC | |
| | | | HT-C | |
| | | | HV-TR | |
| | | | P-PASCAL | |
| | | Adjust | | |

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## Limitations

### ■ Service Mode Menu Transmission Function

1) In the following cases, service mode menu data is not transmitted.
   • When an unsent alarm log or service call log has been detected by E-RDS at power-on
   • When an alarm log or service call log to be resent due to a transmission failure is detected
   • When transmission of service mode menu executed at the time of detection of an alarm or a service call error ended in failure
   • If a new alarm or service call error occurs while service mode menu data is being obtained after detection of an alarm or a service call error, the data being obtained is not sent.

2) If alarms/service call errors successively occur, and if the time of the host machine is corrected or changed while the log is being sent, service mode menu data may not be properly sent. It is because a Link No.* may be applied to the old log although it should be applied to the new log.

   * Link No.:
     A common number for linking the service mode menu data with the alarm log/service call log data to be sent
     After completion of log transmission, the service mode menu data is obtained, and is sent with this number attached.

3) Transmission of the data of changes made in service mode menu settings is not performed instantly, but performed when a specified period of 60 minutes elapse after the change of service mode menu settings is detected or when a communication test is performed at the time of power-on. (There is a time lag.)

4) When service mode menu settings ([COPIER] > [Adjust]) are made, transmission is performed even when no change is made in the target data to be transmitted. Transmission of service mode data is also performed when changes are made in the service mode setting value not subject to transmission or when settlement of a value is performed without changing the setting value.

## Service cautions

1) After clearing RAM of the Main Controller PCB, initialization of the E-RDS setting (ERDS-DAT) and a communication test (COM-TEST) need to be performed.
Failure to do so will result that the counter transmitting value to the UGW may become unusual.
Also, after replacing the main controller board, all settings must be reprogrammed.

2) The following settings in service mode must not be change unless there are specific instructions to do so. Changing these values will cause error in communication with UGW.
- Set port number of UGW
[SERVICE MODE] > [COPIER] > [FUNCTION] > [INSTALL] > [RGW-PORT]
Default : 443

3) If the e-Maintenance/ imageWARE Remote contract of the device is invalid, be sure to turn OFF the E-RDS setting (ERDS : 0).

## E-RDS Setup

### ■ Confirmation and preparation in advance

To monitor this machine with e-Maintenance/ imageWARE Remote, the following settings are required.

1) Advance confirmation
Confirm with the UGW administrator that the device to be monitored with e-Maintenance/ imageWARE Remote is registered in the UGW.

2) Advance preparations
The following network-related information needs to be obtained from the user's system administrator in advance.

Information item 1
IP address settings
- Automatic setting : DHCP, RARP, BOOTP
- Manual setting : IP address, subnet mask and gateway address to be set

Information item 2
Is there a DNS server in use?
If there is a DNS server in use, find out the following.
- Primary DNS server address
- Secondary DNS server address

Information item 3
Is there a proxy server?
If there is a proxy server in use, find out the following.
- Proxy server address
- Port No. for proxy server

Information item 4
Is proxy server authentication required?
If proxy server authentication is required, find out the following.
- User name and password required for proxy authentication

**3) Network settings**

Based on the results of the information obtained in 2) Advance preparations, make this machine network related settings.

See Users' Guide for detailed procedures.

> CAUTION:
>
> When changes are made to the above-mentioned network settings, be sure to turn OFF and then ON the main power of this machine.

## ■ Steps to E-RDS settings

1) Start [Service Mode].

2) Select [COPIER] > [FUNCTION] > [CLEAR] > [ERDS-DAT] and press the [Start] key.

> NOTE:
> This operation initializes the E-RDS settings to factory setting values.
> For the setting values to be initialized, see the section of "Initializing E-RDS settings".

3) Select [COPIER] > [FUNCTION] > [INSTALL] > [ERDS].

4) Press the numeric key [1] on the control panel (the setting value is changed to 1) and press the [Start] key. (The data is reflected to the setting value field.)

> NOTE:
> This operation enables the communication function with UGW.

> CAUTION:
>
> The settings of RGW-PORT in Service mode must not be change unless there are specific instructions to do so.
>
> Changing these values will cause error in communication with UGW.

5) Select [COM-TEST].

> NOTE:
> This initiates the communication test between the device and the UGW.

6) Select [COM-RSLT].

If the communication is successful, "OK!" is displayed. If "NG!" (failed) appears, refer to the "Troubleshooting" and repeat until "OK!" is displayed.

> NOTE:
> The communication results with UGW can be distinguished by referring to the COM-LOG. By performing the communication test with UGW, E-RDS acquires schedule information and starts monitoring and meter reads operation.

## ■ Initializing E-RDS settings

It is possible to clear the FLASH data of E-RDS and change the E-RDS setting back to the default value.

### ● Initialization procedure

1) Start [Service Mode].

2) Select [COPIER] > [FUNCTION] > [CLEAR] > [ERDS-DAT] and press the [Start] key.

### ● Setting values and data to be initialized

The following E-RDS settings, internal data, and Alarm filtering information are initialized.
- COPIER > FUNCTION > INSTALL > ERDS
- COPIER > FUNCTION > INSTALL > RGW-PORT
- COPIER > FUNCTION > INSTALL > COM-LOG

## FAQ

### No.1

Q: In what case does a communication test with UGW fail?

A: The following cases can be considered in the becoming "NG!" case.

- Name resolution was failed due to an incorrect host name or DNS server has been halted.
- Network cable is blocked off.
- Proxy server settings is not correct.

### No.2

Q: When does E-RDS send counter information to UGW? How many data is sent?

A: The schedule of data transmitting, the start time are determined by settings in the UGW side. The send time cannot be specified on the E-RDS side. Data is sent once every 16 hours.
The data size of counter information is approx. 285 KB.

### No.3

Q: Will data which failed to be sent due to an error in communication with UGW be resent?

A: Data shown below will be resent.

- Jam log
- Service call log
- Alarm log
- Service mode menu
  The newest data is resent only when the settings are changed in service mode.
- Browser information
  It is resent only when the web browser option is enabled.

Data is resent endlessly (after 5, 10, 15, 20, 25, and 30 minutes since the occurrence of communication error; once 30 minutes have passed, it is resent at 30-minute intervals) until it is sent successfully. Resend continues even if the power is turned OFF and then ON.

### No.4

Q: What is the upper limit of the number of COM-LOGs?

A: Up to 5 log data can be saved.

### No.5

Q: Although Microsoft ISA as a proxy server is introduced, the authentication check is failed. Can E-RDS adopt with Microsoft ISA?

A: E-RDS must comply with "Basic" while "Integrated" authentication is used for Microsoft ISA (as default); therefore, authentication with E-RDS is available if you change the setting to "Basic" authentication on the server.

### No.6

Q: Can I turn this machine power off during the e-Maintenance/ imageWARE Remote system operation?

A: While operating the e-Maintenance/ imageWARE Remote system, the power of the device must be ON. If power OFF is needed, do not leave the device power OFF for long time.
It will become "Device is busy, try later" errors if the power supply of network equipment such as HUB is made prolonged OFF.

### No.7

Q: Although a Service call error may not be notified to UGW, the reason is what?

A: If a service technician in charge turns off the power supply of this machine immediately after error occurred once, It may be unable to notify to UGW because data processing does not take a time from the controller of this machine to NIC though, the data will be saved on the RAM.
If the power supply is blocked off while starting up, the data will be inevitably deleted.

### No.8

Q: How does E-RDS operate while this machine is placed in the sleep mode?

A: While being in Real Deep Sleep, and if data to be sent is in E-RDS, the system wakes up asleep, then starts to send the data to the UGW. The system also waits for completion of data transmission and let the device to shift to asleep status again.
However, transition time to the Real Deep Sleep depends on the device, and the transition to sleep won't be done if the next data transmission will be done within 10 minutes.

### No.9

Q: Is E-RDS compatible with Department counter?

A: No, E-RDS does not support Department counter.

### No.10

Q: Is there any setting to be made on the device side to enable the service mode menu transmission function? Moreover, what is Service mode menu set as the object of transmission?

A: No steps peculiar to Transmitting Service mode menu. As for the data that applies to transmission of the service mode, see the "Service mode menu Transmission".

### No.11

Q: Counter information could not be sent at the scheduled send time due to the power of this machine being turned OFF. Will the counter information be sent later when the power of this machine is turned ON?

A: Yes. When a scheduled send such as that for counter could not be executed due to the power of this machine being turned OFF, etc., and the scheduled send time has already passed at power-on, the send is executed immediately.

The following shows data send according to the status of this machine.

| Send types | Status of this machine | | |
|---|---|---|---|
| | Power ON | Power OFF | Sleep |
| Scheduled send | Sent | Not sent[*1] | Sent[*2] |
| Immediate send (Service call log / Alarm log / Jam log) | Sent | - | Sent[*2] |

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*1: Immediately sent if the send time has already passed at power-on.

*2: Sent after recovery from sleep mode.

### No.12

Q: What is the number of the network port used by E-RDS?

A: The port number used by E-RDS for communication with UGW is "443".
If this setting is changed, an error occurs during communication with UGW. Therefore this setting should not be changed unless otherwise instructed.

### No.13

Q: After the setting for E-RDS was made, the IP address of the host machine was changed. In that case, is it necessary to execute COM-TEST again?

A: It is not necessary to execute COM-TEST again because the IP address used by E-RDS is automatically changed. However, it is necessary to turn OFF and then ON the main power of this machine to reflect the change in the setting of the IP address

## Troubleshooting

### No.1

Symptom: A communication test (COM-TEST) results NG!

Cause: Initial settings or network conditions is incomplete.

Remedy 1: Check and take actions mentioned below.

1) Check network connections

Is the status indicator LED for the HUB port to which this machine is connected ON?

YES: Proceed to Step 2).

NO: Check that the network cable is properly connected.

2) Confirm loop back address (* In case of IPv4 )

Select [Menu] > [Network Settings] and enter System Manager ID and PIN.

Select [TCP/IP Settings] > [IPv4 Settings] > [PING Command], enter "127.0.0.1", and touch the [Apply] button.

Does the screen display "Response from the host."? (See the next figure.)

YES: Proceed to Step 3).

NO: There is a possibility that this machine's network settings are wrong. Check the details of the IPv4 settings once more.

3) Confirmation from another PC connected to same network.

Request the user to ping this machine from a PC connected to same network.

Does this machine respond?

YES: Proceed to Step 4).

NO: Confirm the details of this machine's IP address and subnet mask settings.

4) Confirm DNS connection

(a) Select [Menu] > [Network Settings] and enter System Manager ID and PIN.
Select [TCP/IP Settings] > [IPv4 Settings] > [DNS Settings] > [DNS Server Settings] > [Primary DNS Server] and [Secondary DNS Server], write down the primary and secondary addresses of the DNS server, and press the [Back] key.

(b) Press the [Back] key.

(c) Select [IPv4 Settings] > [PING Command], enter the primary DNS server noted down in step a) as the IP address, and touch the [Apply] button.

Does the screen display "Response from the host."?
YES: Proceed to Remedy 2.
NO: Enter the secondary DNS server noted down in step a) as the IP address, and then touch the [Apply] button.

Does the screen display "Response from the host."?
YES: Proceed to Remedy 2.
NO: There is a possibility that the DNS server address is wrong. Reconfirm the address with the user's system administrator.

Remedy 2: Troubleshooting using communication error log (COM-LOG)
1) Start [Service Mode].

2) Select [COPIER] > [FUNCTION] > [INSTALL] > [COM-LOG].
The communication error log list screen is displayed.

3) When a code is displayed, take an appropriate action referring to "Error code and strings".

No.2
Symptom: A communication test results NG! even if network setting is set properly.
Cause: The network environment is inappropriate, or RGW-PORT settings for E-RDS have been changed.
Remedy: The following points should be checked.
1) Check network conditions such as proxy server settings and so on.

2) Check the E-RDS setting values.
• Check the communication error log from COM-LOG.
• Check RGW-PORT settings has changed. If RGW-PORT settings has changed, restore initial values. For initial values, see "Service cautions".

No.3
Symptom: Registration information of the E-RDS machine was deleted from the device information on Web Portal, and then registered again. After that, if a communication test is left unperformed, the device setting in the UGW becomes invalid.
Cause: When the registration information of the E-RDS machine is deleted, information related to E-RDS is also deleted.
Therefore, when 7 days have passed without performing a communication test after registering the E-RDS machine again, the device setting becomes invalid.
Remedy: Perform a communication test before the device setting becomes invalid.

No.4
Symptom: There was a log, indicating "Network is not ready, try later" in error details of COM-LOG list.
Cause: A certain problem occurred in networking.
Remedy: Check and take actions mentioned below.
1) Check networking conditions and connections.

2) Turn on the power supply of this machine and perform a communication test about 60 seconds later.

No.5
Symptom: "Unknown error" is displayed though a communication test (COM-TEST) has done successfully.
Cause: It could be a problem at the UGW side or the network load is temporarily faulty.
Remedy: Try again after a period of time. If the same error persists, check the UGW status with a network and UGW administrator.

No.6
Symptom: When a communication test (COM-TEST) is repeatedly executed, an error occurs.
Cause: During communication conducted after execution of a COM-TEST, another COM-TEST was executed again.
Remedy: When repeatedly executing COM-TEST, execute COM-TEST at intervals of 5 minutes or more.

## Error code and strings

The following error information is displayed on the communication error log details screen.

(Here, "server" means UGW.)

| No. | Code | Cause | Remedy |
|---|---|---|---|
| 1 | 0000 0000 | Unmatched Operation Mode | Initialize the E-RDS setting (ERDS-DAT). |
| 2 | 0500 0003 | Turning OFF and then ON the main power of this machine while the communication test had not been performed although E-RDS is enabled. | Perform a communication test (COM-TEST). |
| 3 | 0xxx 0003 | Blank schedule data have been received from UGW. | Perform and complete a communication test (COM-TEST). |
| 4 | 0xxx 0003 | Communication test has not completed. | Perform and complete a communication test (COM-TEST). |
| 5 | 84xx 0003 | A communication test has been attempted with the E-RDS switch being OFF. | Set E-RDS switch (ERDS) to 1, and then perform a communication test (COM-TEST). |
| 6 | 8600 0002 8600 0003 8600 0101 8600 0201 8600 0305 8600 0306 8600 0401 8600 0403 8600 0414 8600 0415 | Processing (event processing) within the device has failed. | Turn the device OFF/ ON. If the error persists, replace the device system software. (Upgrade) |
| 7 | 8700 0306 | Improper value is written in at the head of the NVMEM domain (nonvolatile memory domain) of E-RDS. | Turn the device OFF/ ON. |
| 8 | 8700 0306 | Improper value is written in at the head of the NVMEM domain (nonvolatile memory domain) of Ae-RDS. | Turn the device OFF/ ON. |
| 9 | 8xxx 0004 | Method which E-RDS is not supporting attempted. | Contact help desk. |
| 10 | 8xxx 0101 | Communication with UGW has been successful, but an error of some sort has prevented UGW from responding. When (Null) is displayed at the end of the message, this indicates that there has been an error in the HTTPS communication method. | Perform and complete a communication test (COM-TEST). |

| No. | Code | Cause | Remedy |
|---|---|---|---|
| 11 | 8xxx 0201 8xxx 0202 8xxx 0203 8xxx 0204 8xxx 0206 | During the communication test, there has been some kind of error in the schedule values passed from UGW. | When the error occurs, report the details to the support section. After the UGW side has responded, try the communication test again. |
| 12 | 8xxx 0207 8xxx 0208 | The schedule data in the inside of E-RDS is not right. | Perform a communication test (COM-TEST). |
| 13 | 8xxx 0221 | Alarm/Alert filtering error: The number of elements of the list specified by the server is over restriction value. | Alert filtering is not supported by UGW. |
| 14 | 8xxx 0222 | Alarm filtering error: Unjust value is included in the element of the list specified by the server. | Alert filtering is not supported by UGW. |
| 15 | 8xxx 0304 | The semaphore consumption error at the time of a communication test. | Try again a communication test after a period of time. |
| 16 | 8xxx 0709 | When upgrading firmware, the TrackingID notified by Updater differs from the thing of UGW designates. | Obtain the sublog, and contact the support department of the sales company. |
| 17 | 8xxx 2000 | Some other kind of communication error has occurred. | Perform and complete a communication test (COM-TEST). |
| 18 | 8xxx 2001 | The header of the URL of the registered UGW is not in https format. | Contact help desk. |
| 19 | 8xxx 2002 | A URL different to that specified by the UGW has been set. | Contact help desk. |
| 20 | 8xxx 2003 | Communication attempted without confirming network connection, just after turning OFF and then ON the main power of this machine in which the network preparations are not ready. | Check the network connection, as per the initial procedures described in the troubleshooting. Perform a communication test (COM-TEST) about 60 seconds later, after turn on the device. |
| 21 | 8xxx 2004 | Communication with UGW has been successful, but an error of some sort has prevented UGW from responding. | Try again after a period of time. Check detailed error code (Hexadecimal) and [Error details in UGW] from UGW displayed after the message. |
| 22 | 8xxx 200A | • TCP/IP communication fault • The IP address of device is not set. | • Check the network connection, as per the initial procedures described in the troubleshooting. • When proxy is used, make the settings for proxy, and check the status of the proxy server. |
| 23 | 8xxx 200B | Server address name resolution has failed. | Check that Internet connection is available in the environment. |
| 24 | 8xxx 2014 | Could not connect to proxy server due to improper address. | Check proxy server address / port and re-enter as needed. |

| No. | Code | Cause | Remedy |
|---|---|---|---|
| 25 | 8xxx 2015 | Could not connect to proxy server due to name resolution error of proxy address. | • Check that the proxy server name is correct. If the proxy server name is correct, check the DNS connection, as per the initial procedures described in the troubleshooting.<br>• Specify the IP address as the proxy server name. |
| 26 | 8xxx 201E | Proxy authentication is failed. | Check the user name and password required in order to login to the proxy, and re-enter as needed. |
| 27 | 8xxx 2028 | • No route certificate installed in device.<br>• Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device.<br>• The date and time of the device is not correct. | • Install the latest device system software. (Upgrade)<br>• Correctly set the date and time of the device. |
| 28 | 8xxx 2029 | The server certificate verification error occurred. | Contact help desk. |
| 29 | 8xxx 2046 | • The route certificate registered with the device has expired.<br>• Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device.<br>• The device time and date is outside of the certificated period. | Check that the device time and date are correctly set.<br>If the device time and date are correct, upgrade to the latest system software. |
| 30 | 8xxx 2047 | Due to network congestion, etc., the response from UGW does not come within the specified time. (HTTPS level time out) | If this error occurs when the communication test is being run or Service Browser is being set, try again after a period of time. |
| 31 | 8xxx 2048 | There is a mistake in the UGW URL, and UGW cannot be accessed. (Path is wrong) | Contact help desk. |
| 32 | 8xxx 2052 | The data which is not URL is inputted into URL field. | Contact help desk. |
| 33 | 8xxx 2058 | SOAP Client fails to obtain SOAP Response.<br>Possibility of a problem in UGW or of a temporary problem in the network load. | Perform and complete a communication test (COM-TEST). |
| 34 | 8xxx 2063 | SOAP communication error has occurred. | Check that the value of port number of UGW (RGW-PORT) is 443. |
| 35 | xxxx xxxx | An internal error, such as memory unavailable, etc., has occurred during a device internal error phase. | Turn the device OFF/ ON.<br>Or replace the device system software. (Upgrade) |
| 36 | xxxx xxxx | Internal error occurred at the initiating E-RDS. | Turn the device OFF/ ON. |

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# 3 Periodical Service

■ List of periodically replacement parts, consumable parts and locations for cleaning

**3** Periodical Service > List of periodically replacement parts, consumable parts and locations for cleaning > Periodically Replacement Parts

3-2

## List of periodically replacement parts, consumable parts and locations for cleaning

### Periodically Replacement Parts

There are no periodically replacement parts in this machine.

3-2

**3** Periodical Service > List of periodically replacement parts, consumable parts and locations for cleaning > Periodically Replacement Parts

**3** Periodical Service > List of periodically replacement parts, consumable parts and locations for cleaning > Consumable parts

3-3
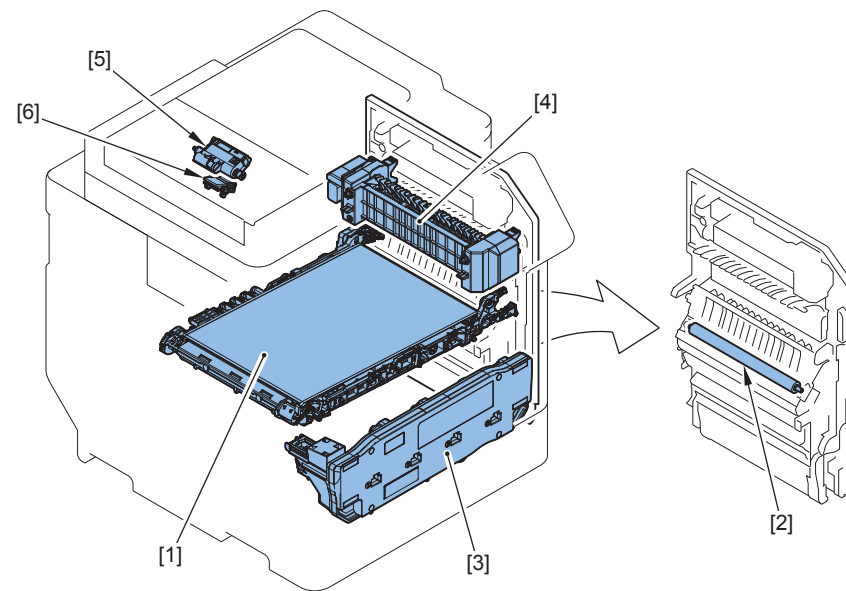
# ● Consumable parts



F-3-1

●: Replaced (consumables)

| No. | Type | Item | Parts number | Q'ty | Estimated life | Work interval | | | Parts counter | |
|-----|------|------|--------------|------|----------------|----------------|----------------|-----------------|-------------------------------------|--------|
| | | | | | | Every 30,000 sheets | Every 50,000 sheets | Every 150,000 sheets | Service mode: COPIER> COUNTER> | |
| 1 | Image Formation System | ITB Unit | FM1-A153 | 1 | 150,000 sheets | | | ● | DRBL-1 | TR-BLT |
| 2 | | Secondary transfer outer Roller | FC0-5848 | 1 | 150,000 sheets | | | ● | DRBL-1 | 2TR-ROLL |
| 3 | | Waste Toner Container | FM0-0015 | 1 | 30,000 sheets (Color ratio: 30%) | ● | | | DRBL-1 | WST-TNR |
| 4 | Fixing System | Fixing Assembly | FM0-0072(120V) FM0-0073(230V) | 1 | 150,000 sheets | | | ● | DRBL-1 | FX-UNIT |
| 5 | Original Exposure and Feed System | ADF Pickup Unit | FM4-9859 | 1 | 50,000 sheets | | ● | | DRBL-2 | DF-PU-RL |
| 6 | | Separation Pad | FM4-9857 | 1 | 50,000 sheets | | ● | | DRBL-2 | DF-SP-PD |

T-3-1

●: Consumable parts - Options

The options of this machine do not have consumable parts.

3-3

**3** Periodical Service > List of periodically replacement parts, consumable parts and locations for cleaning > Consumable parts

# 4

# Disassembly/Assembly

- Preface
- List of Parts
- List of Connectors
- External Cover/Interior System
- Original Exposure/Feed System
- Controller System
- Laser Exposure System
- Image Formation System
- Fixing System
- Pickup/Feed System
- Cleaning Procedure

# Preface

## Outline

This chapter describes disassembly and reassembly procedures of the printer.

The service technician is to identify the cause of printer failures according to the "Chapter 6 TROUBLESHOOTING" and to follow the disassembly procedures of each part to replace the defective parts or the consumable parts.

Note the following precautions when working on the printer.

1. CAUTION: Before disassembling or reassembling the printer, be sure to disconnect its power cord from the electrical outlet

2. During disassembly, reassembly or transportation of the printer, remove the cartridge if required.

   When the cartridge is out of the printer, put it in a protective bag even in a short period of time to prevent the adverse effect of light.

3. Reassembling procedures are followed by the reverse of disassembly unless otherwise specified.

4. Note the length, diameters, and locations of screws as you remove them. When reassembling the printer, be sure to use them in their original locations.

5. Do not run the printer with any parts removed as a general rule.

6. Ground yourself by touching the metal part of the printer before handling the PCB to reduce the possibility of damage caused by static electricity.

7. When you replace the part that the rating plate or the product code label is attached, be sure to remove the rating plate or the product code label and put it to the new part.

The color or the shape of the cover may be different from the actual one.

It has been confirmed that this does not affect the work procedure.

## Points to Note when Tightening a Screw

For reduction in weight, thin plates are used in some parts of this machine.

In the case of a screw hole with a triangle mark near it as shown in the figure below, strongly tightening the screw may damage or deform the screw hole.

In the case of a screw hole with a triangle mark, take care not to apply too much force when tightening the screw.



F-4-1

The recommended torque value is shown below as a reference value.

| Fastened member | | Type of Screws | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | RS tight | | W Sams | | Binding | | TP | |
| | | Metal | Resin | Metal | Resin | Metal | Resin | Metal | Resin |
| Tightening torque (N*m) | M4 | Approx. 1.6 | Approx. 1.6 | Approx. 1.6 | Approx. 0.8 | Approx. 1.6 | Approx. 0.8 | Approx. 1.6 | Approx. 0.8 |
| | M3 | Approx. 0.8 | Approx. 0.8 | Approx. 0.6 | Approx. 0.6 | Approx. 0.6 | Approx. 0.6 | Approx. 0.6 | Approx. 0.6 |

T-4-1

* For PCB, refer to the tightening torque value of resin (fastened member).

| Type of Screws | | | |
|---|---|---|---|
| RS tight | W Sams | Binding | TP |
|  |  |  |  |

F-4-2

# List of Parts

## ⬤ External / Internal Cover

### ◼ ADF UNIT
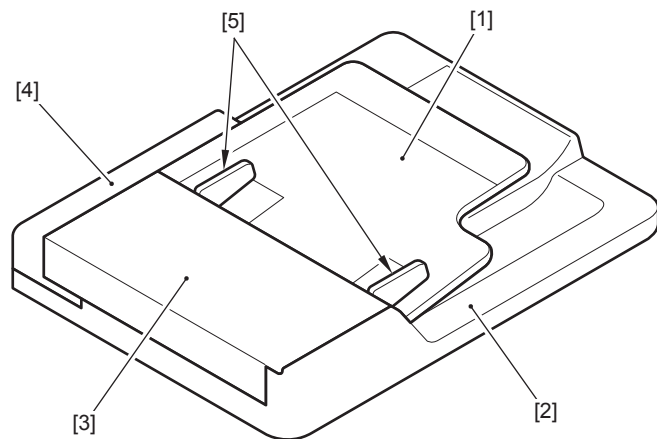


F-4-3

| No. | Parts Name | Reference |
|-----|-----------|-----------|
| [1] | Original Tray | |
| [2] | ADF Base | |
| [3] | Feeder Cover | |
| [4] | ADF Rear Cover | |
| [5] | ADF Side Guide Plate | |

T-4-2

## ◼ Reader Unit
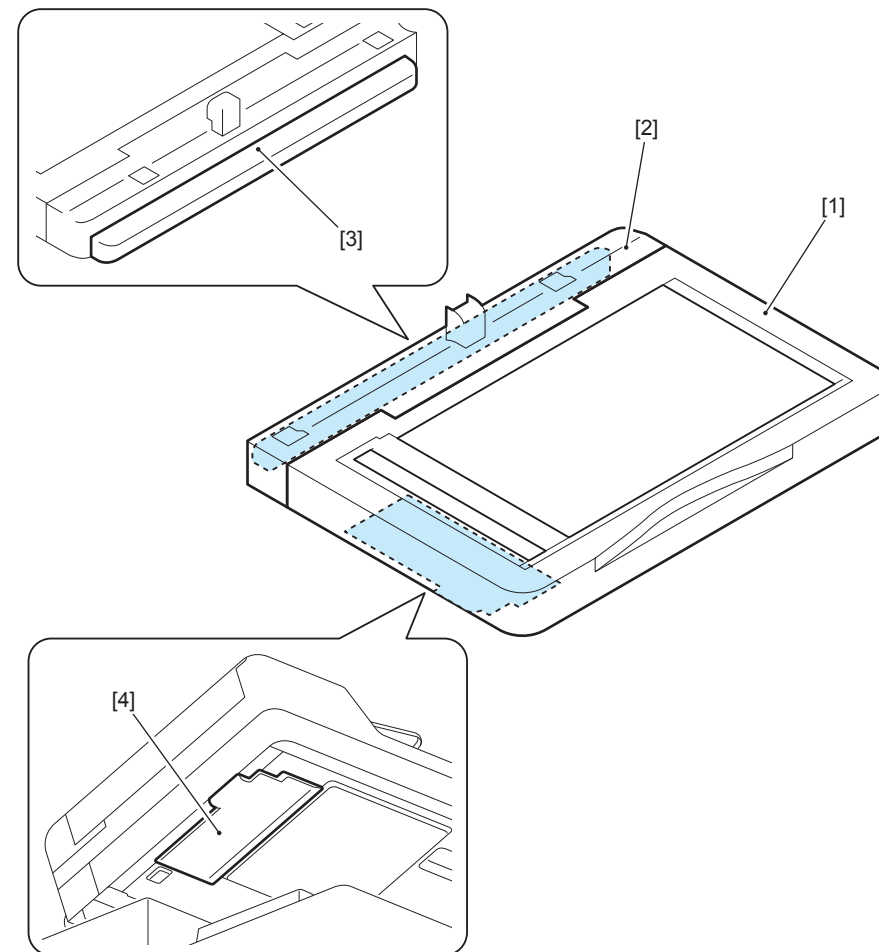


F-4-4

| No. | Parts Name | Reference |
|-----|-----------|-----------|
| [1] | Copyboard Glass Unit | (Refer to page 4-69) |
| [2] | Reader Rear Cover 1 | |
| [3] | Reader Rear Cover 2 | |
| [4] | Reader Motor Cover | |

T-4-3

## ■ Printer (Front Side)
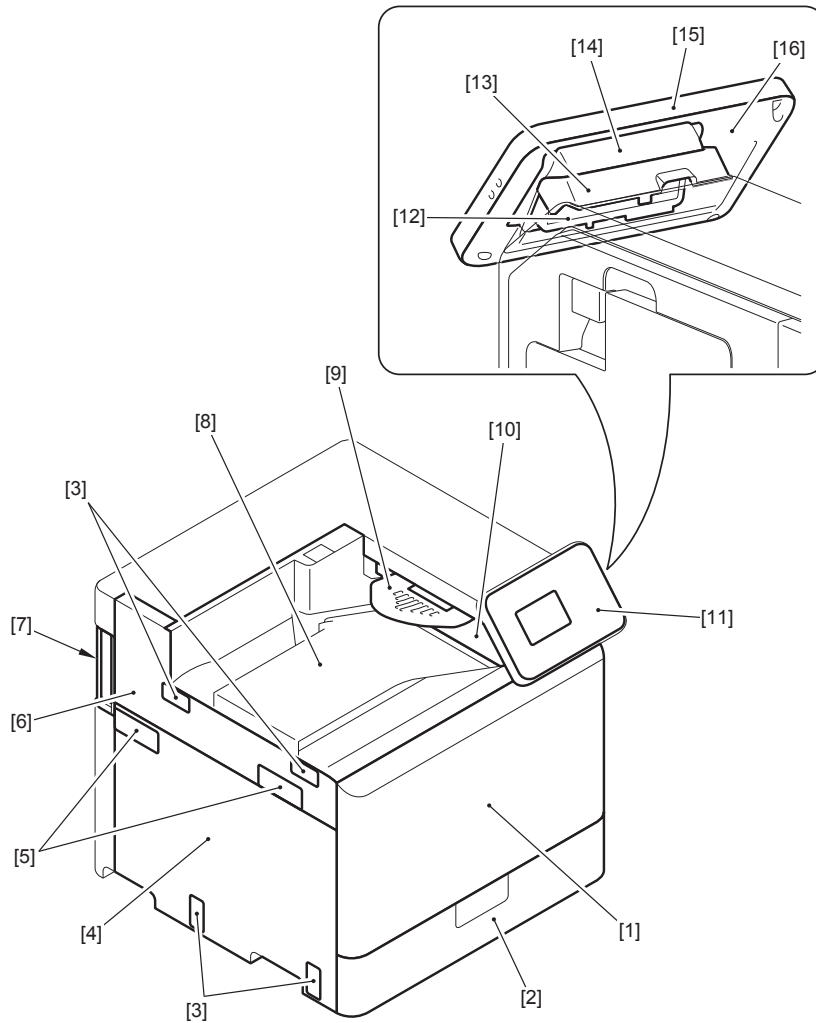
| No. | Parts Name | Reference |
|---|---|---|
| [1] | Front Cover | (Refer to page 4-33) |
| [2] | Cassette | |
| [3] | Face Cover | |
| [4] | Left Lower Cover | (Refer to page 4-36) |
| [5] | Face Cover | |
| [6] | Left Upper Cover | (Refer to page 4-36) |
| [7] | Rear Sub Cover | |
| [8] | Delivery Cover | |
| [9] | Reverse Tray | |
| [10] | Upper Cover | (Refer to page 4-46) |
| [11] | Control Panel Front Cover | |
| [12] | Control Panel Lower Hinge Cover | |
| [13] | Control Panel Rear Hinge Cover | |
| [14] | Control Panel Upper Hinge Cover | |
| [15] | Control Panel Side Cover | |
| [16] | Control Panel Rear Cover | |

T-4-4

F-4-5

## ■ Printer (Rear Side)



F-4-6

| No. | Parts Name | Reference |
|---|---|---|
| [1] | Rear Cover | (Refer to page 4-34) |
| [2] | FAN Cover | |
| [3] | Environment Heater Cover | |
| [4] | FAX Connector Cover | |
| [5] | Face Cover | |
| [6] | Right Lower Cover | |
| [7] | Multi-purpose Tray Lower Cover | |
| [8] | Right Front Cover | (Refer to page 4-37) |
| [9] | Main Power Switch Cover | |
| [10] | Right Upper Cover | (Refer to page 4-39) |
| [11] | Right Cover | (Refer to page 4-41) |
| [12] | Right Cover Open/Close Lever | |
| [13] | Right Rear Cover | (Refer to page 4-38) |
| [14] | Environment Heater Switch Cover | |
| [15] | Right Rear Lower Cover | (Refer to page 4-38) |
| [16] | Multi-purpose Tray | (Refer to page 4-44) |
| [17] | Multi-purpose Extension Tray | |
| [18] | Multi-purpose Tray Side Guide Plate | |

T-4-5

## ■ Internal View
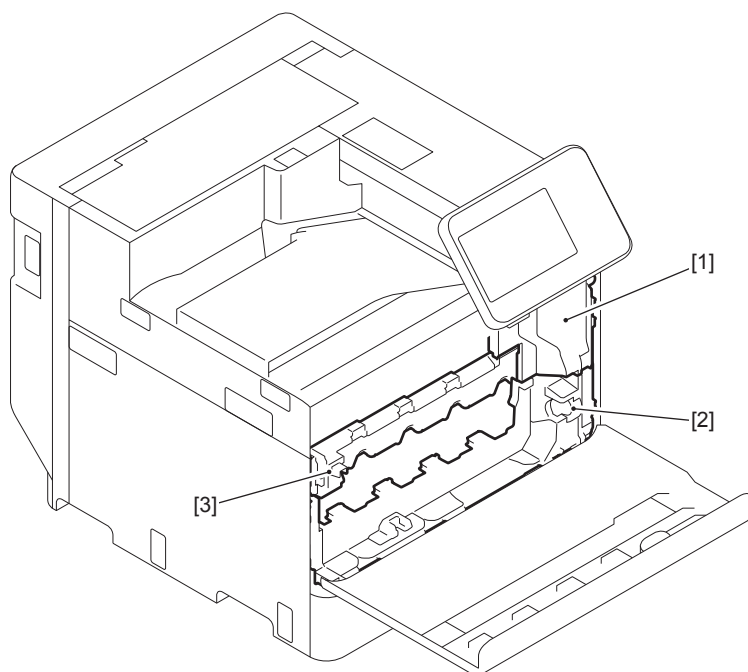


F-4-7

| No. | Parts Name | Reference |
|-----|-----------|-----------|
| [1] | Front Inner Right Cover | |
| [2] | Front Inner Lower Cover | |
| [3] | Front Inner Upper Cover | |

T-4-6

## ● List of Main Unit

### ■ ADF UNIT
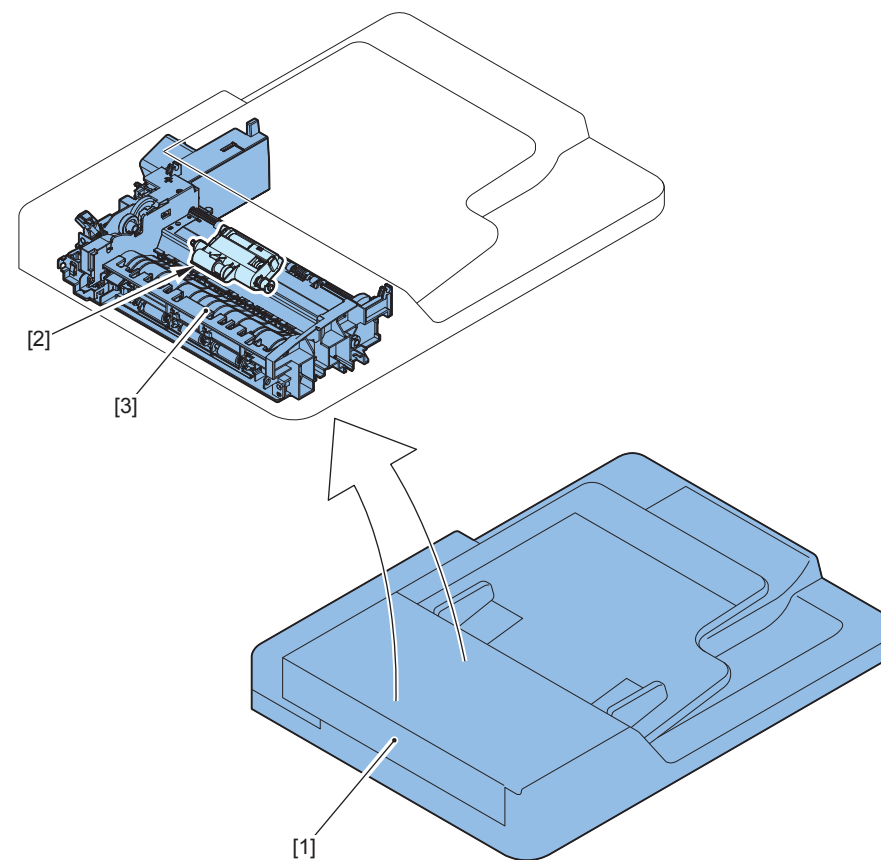


F-4-8

| No. | Parts Name | Reference |
|-----|-----------|-----------|
| [1] | ADF Unit | (Refer to page 4-51) |
| [2] | ADF Pickup Unit | (Refer to page 4-59) |
| [3] | ADF Pickup Feed Unit | (Refer to page 4-61) |

T-4-7

## ■ Reader Unit
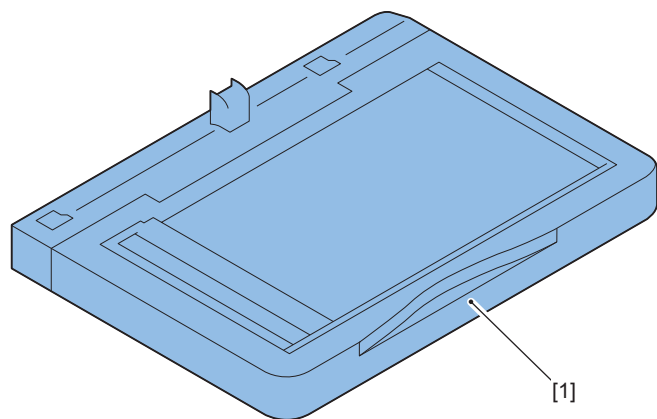
F-4-9

| No. | Parts Name | Reference |
|-----|-----------|-----------|
| [1] | Reader Unit | (Refer to page 4-66) |

T-4-8

## ■ Printer (Front Side) (1/2)
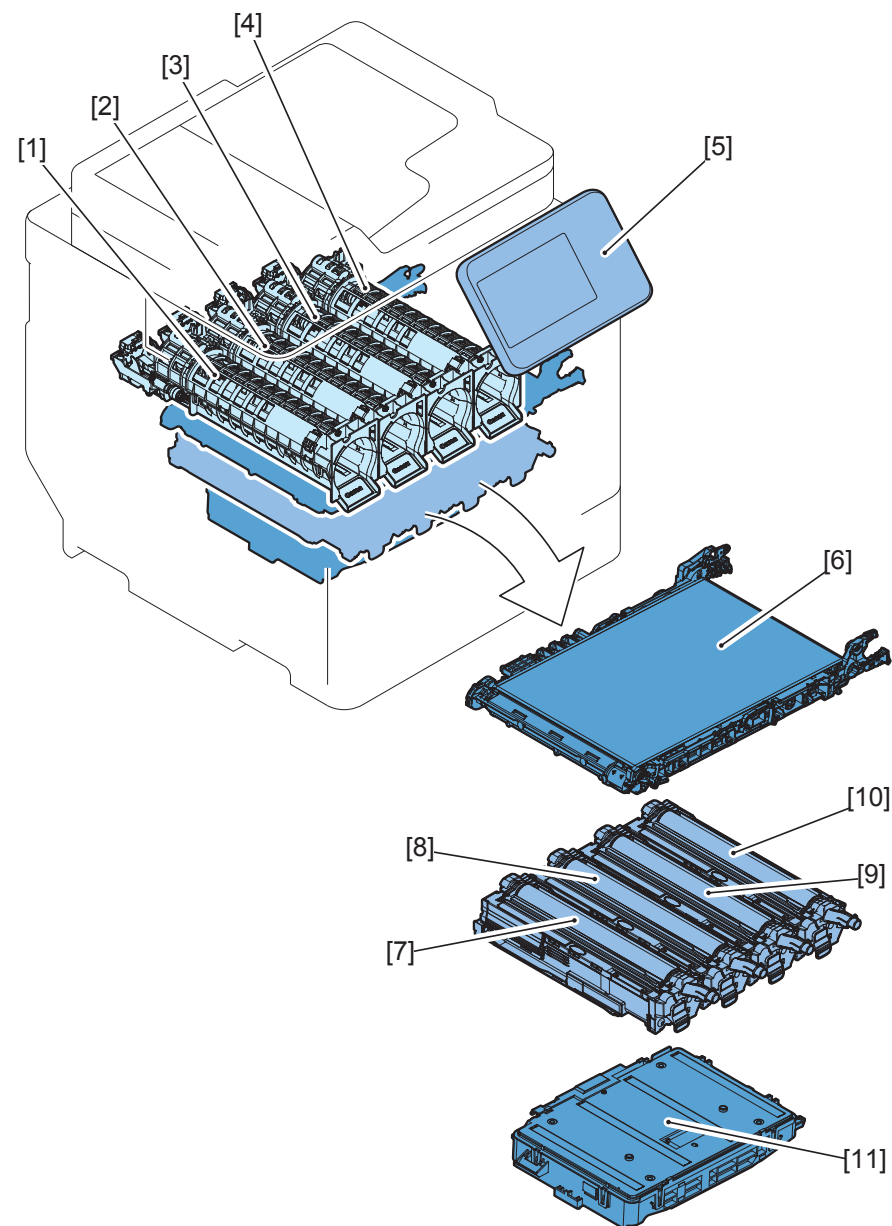
F-4-10

| No. | Parts Name | Reference |
|---|---|---|
| [1] | Toner Bottle Mount Unit (Y) | (Refer to page 4-132) |
| [2] | Toner Bottle Mount Unit (M) | (Refer to page 4-132) |
| [3] | Toner Bottle Mount Unit (C) | (Refer to page 4-132) |
| [4] | Toner Bottle Mount Unit (Bk) | (Refer to page 4-132) |
| [5] | Control Panel Unit | (Refer to page 4-47) |
| [6] | ITB Unit | (Refer to page 4-112) |
| [7] | Drum Unit (Y) | (Refer to page 4-109) |
| [8] | Drum Unit (M) | (Refer to page 4-109) |
| [9] | Drum Unit (C) | (Refer to page 4-109) |
| [10] | Drum Unit (Bk) | (Refer to page 4-109) |
| [11] | Laser Scanner Unit | (Refer to page 4-102) |

T-4-9

## ■ Printer (Front Side) (2/2)
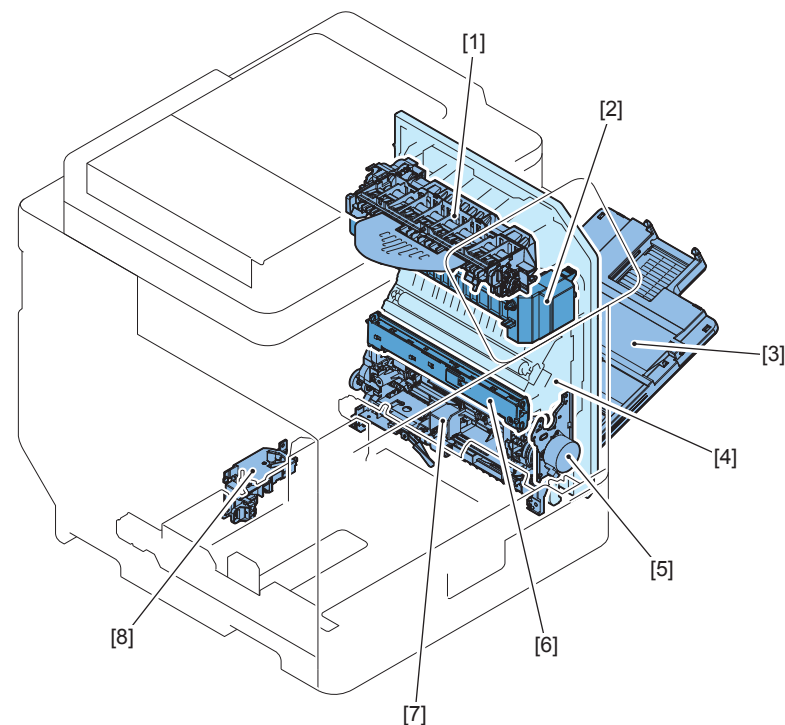


F-4-11

| No. | Parts Name | Reference |
|---|---|---|
| [1] | Delivery/Reverse Unit | (Refer to page 4-163) |
| [2] | Fixing Assembly | (Refer to page 4-137) |
| [3] | Multi-purpose Tray | (Refer to page 4-44) |
| [4] | Right Cover Unit | (Refer to page 4-41) |
| [5] | Registration Drive Unit | (Refer to page 4-123) |
| [6] | Registration Patch Sensor Unit | (Refer to page 4-117) |
| [7] | Regist/Paper Pickup Unit | (Refer to page 4-155) |
| [8] | Cassette 1 Auto Close Unit | |

T-4-10

## ■ Printer (Rear Side)
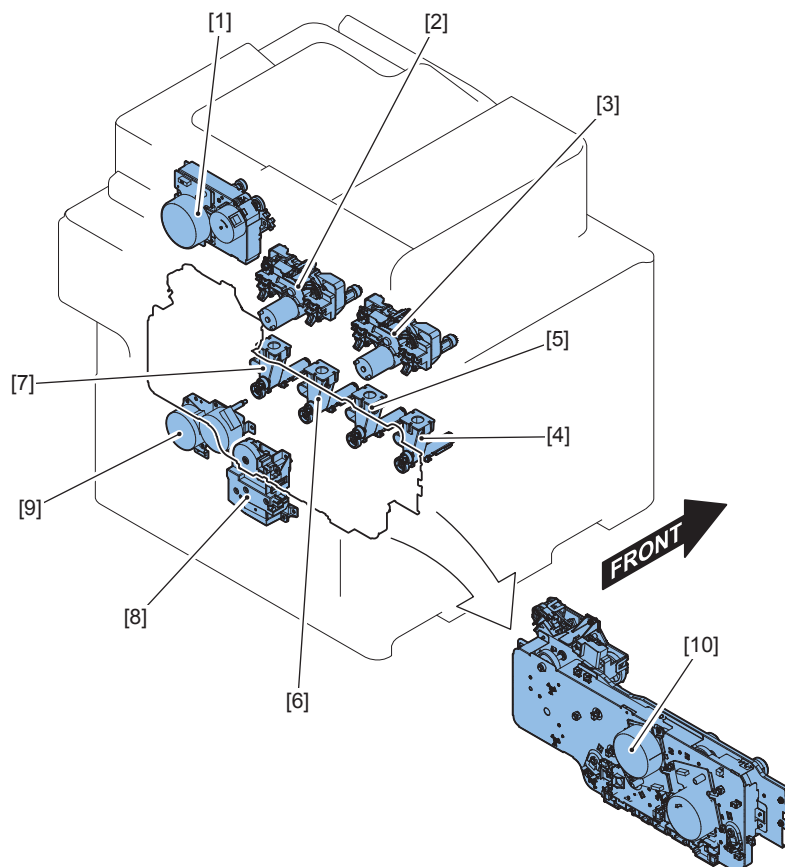


F-4-12

| No. | Parts Name | Reference |
|-----|-----------|-----------|
| [1] | Fixing Drive Unit | (Refer to page 4-138) |
| [2] | Bottle Drive Unit (CK) | (Refer to page 4-131) |
| [3] | Bottle Drive Unit (YM) | (Refer to page 4-131) |
| [4] | Hopper Unit (Y) | (Refer to page 4-127) |
| [5] | Hopper Unit (M) | (Refer to page 4-127) |
| [6] | Hopper Unit (C) | (Refer to page 4-127) |
| [7] | Hopper Unit (Bk) | (Refer to page 4-127) |
| [8] | Cassette 1 Lifter Drive Unit | (Refer to page 4-164) |
| [9] | Cassette 1 Pickup Drive Unit | (Refer to page 4-167) |
| [10] | Main Drive Unit | (Refer to page 4-125) |

T-4-11

## ● Electrical Components

### ■ ADF Unit

#### ● Motor
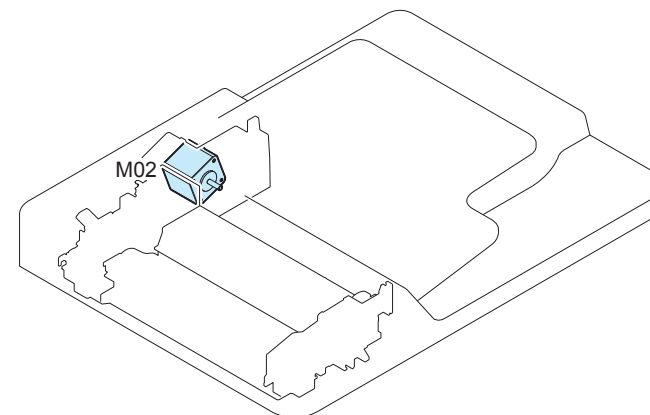


F-4-13

| No. | Parts Name | Main Unit | Reference |
|-----|-----------|-----------|-----------|
| M02 | ADF Motor | ADF Pickup Unit | |

T-4-12

● Sensor
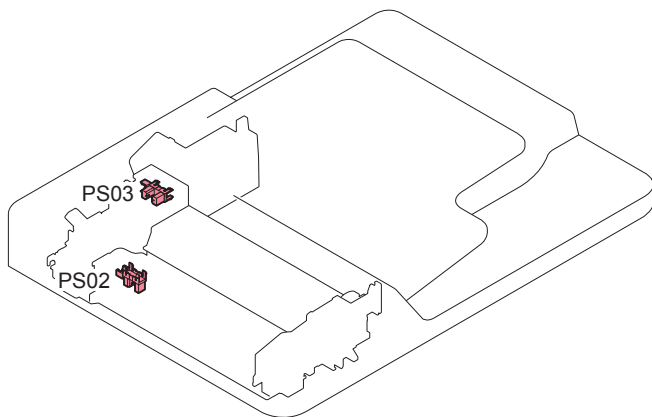


F-4-14

| No. | Parts Name | Main Unit | Reference |
|---|---|---|---|
| PS02 | Document End Sensor | ADF Pickup Unit | |
| PS03 | Document Sensor | ADF Pickup Unit | |

T-4-13

● Solenoid
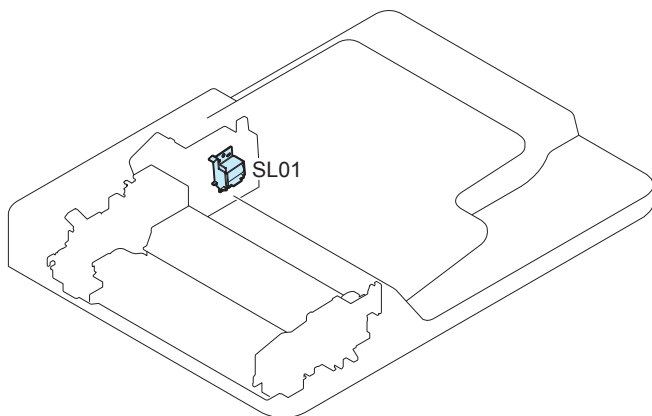


F-4-15

| No. | Parts Name | Main Unit | Reference |
|---|---|---|---|
| SL01 | Disengagement Solenoid | ADF Pickup Unit | |

T-4-14

■ Reader Unit

● Motor
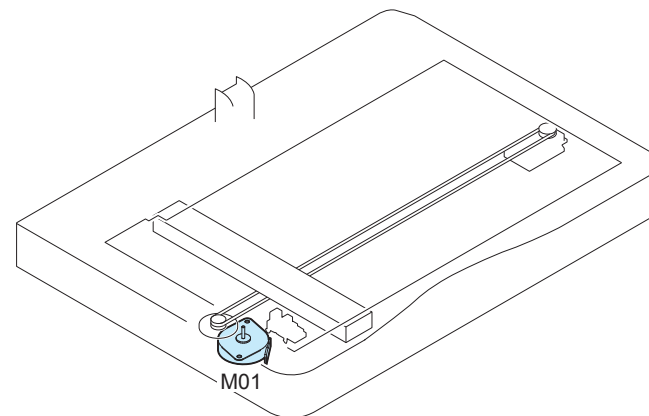


F-4-16

| No. | Parts Name | Main Unit | Reference |
|---|---|---|---|
| M01 | Reader Motor | Reader Unit | (Refer to page 4-78) |

T-4-15

● Sensor
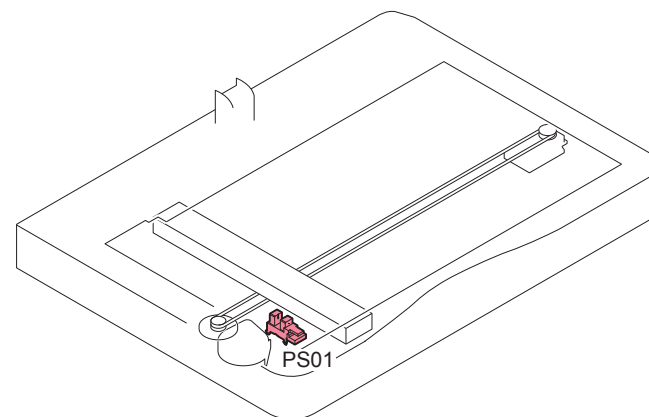


F-4-17

| No. | Parts Name | Main Unit | Reference |
|---|---|---|---|
| PS01 | CIS Unit HP Sensor | Reader Unit | |

T-4-16

■ **Printer**

● **Motor**
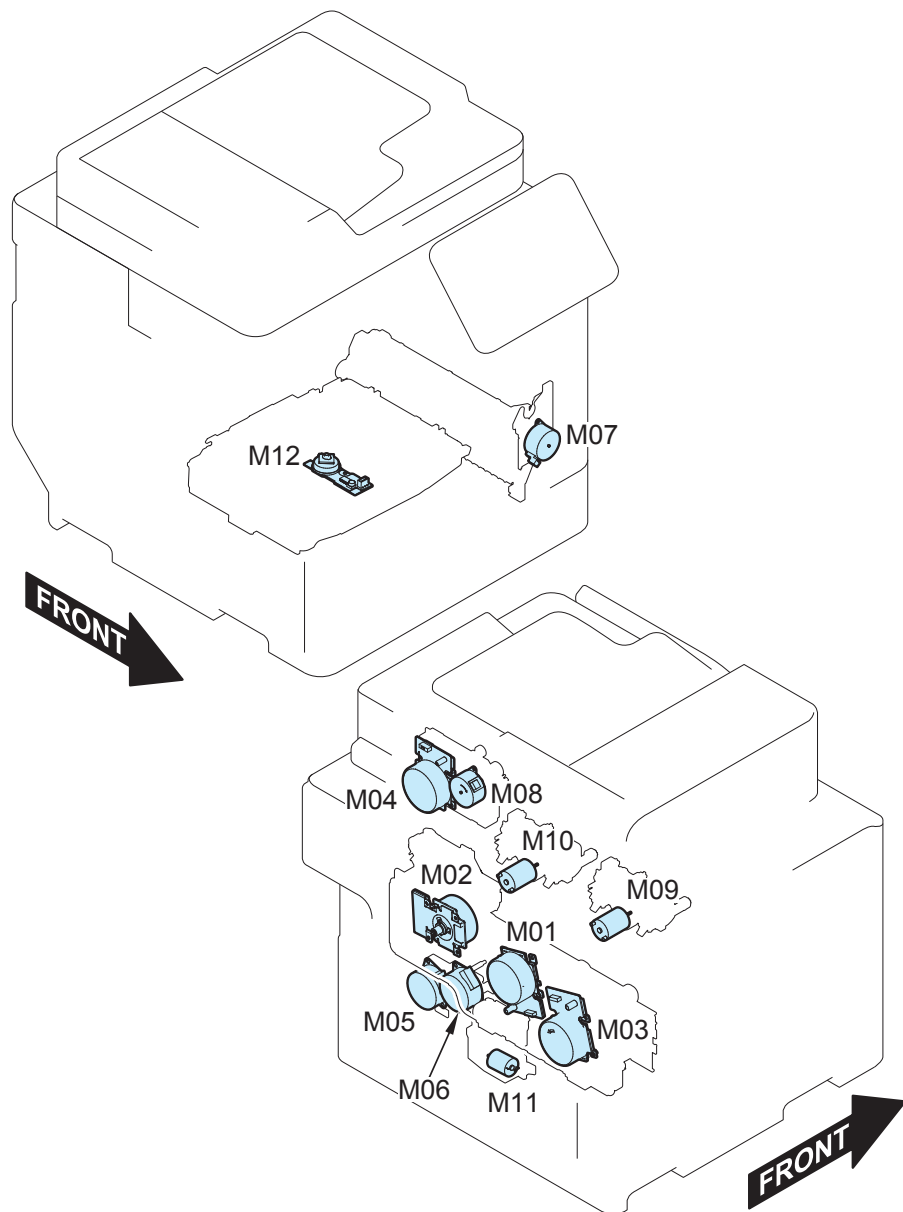
| No. | Parts Name | Main Unit | Reference |
|-----|-----------|-----------|-----------|
| M01 | CL Drum Motor | Main Drive Unit | |
| M02 | Bk Drum _ ITB Motor | Main Drive Unit | |
| M03 | Developing Motor | Main Drive Unit | |
| M04 | Fixing Motor | Fixing Drive Unit | |
| M05 | Cassette 1 _ Multi-purpose Tray Pickup Motor | Cassette 1 Pickup Drive Unit | |
| M06 | Pre-registration Motor | Cassette 1 Pickup Drive Unit | |
| M07 | Registration Motor | Registration Drive Unit | |
| M08 | Reverce Motor | Fixing Drive Unit | |
| M09 | Bottle Motor (YM) | Bottle Drive Unit (YM) | |
| M10 | Bottle Motor (CK) | Bottle Drive Unit (CK) | |
| M11 | Cassette 1 Lifter Motor | Cassette 1 Lifter Drive Unit | |
| M12 | Scanner Motor | Laser Scanner Unit | |

T-4-17

M12    M07

FRONT

M04    M08

M10

M02    M09

M01

M05    M03

M06    M11

FRONT

F-4-18

● Fan
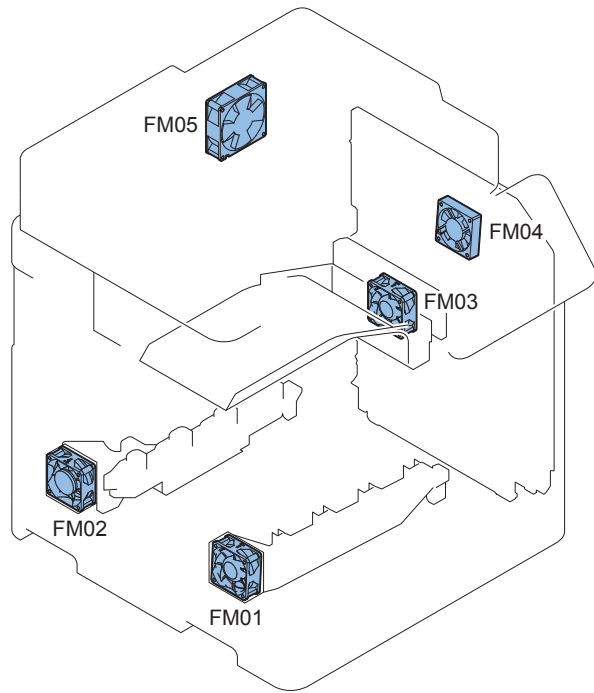


F-4-19

| No. | Parts Name | Main Unit | Reference |
|-----|------------|-----------|-----------|
| FM01 | Drum Unit Suction Cooling Fan | Product Configuration | |
| FM02 | Drive Unit Cooling Fan | Product Configuration | |
| FM03 | Delivery Cooling Fan | Product Configuration | |
| FM04 | Duplex Cooling Fan | Right Cover Unit | |
| FM05 | Power Supply Cooling Fan | Product Configuration | |

T-4-18

● Clutch
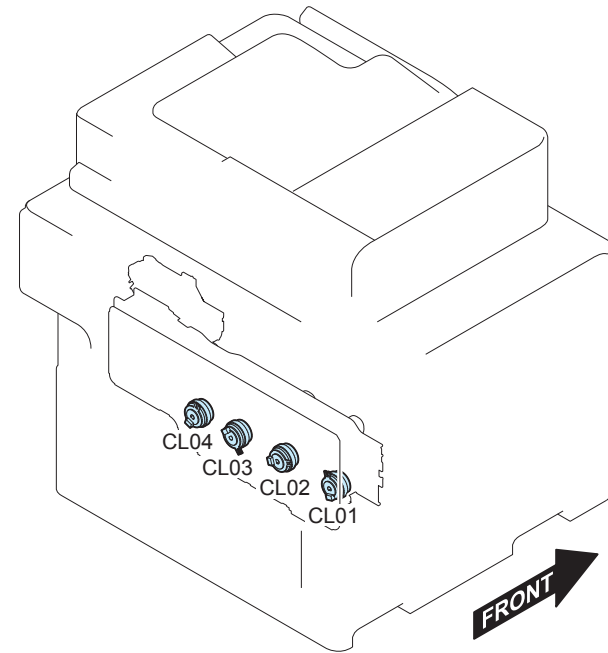


F-4-20

| No. | Parts Name | Main Unit | Reference |
|-----|------------|-----------|-----------|
| CL01 | Developing Cylinder Clutch (Y) | Main Drive Unit | |
| CL02 | Developing Cylinder Clutch (M) | Main Drive Unit | |
| CL03 | Developing Cylinder Clutch (C) | Main Drive Unit | |
| CL04 | Developing Cylinder Clutch (Bk) | Main Drive Unit | |

T-4-19

● Solenoid
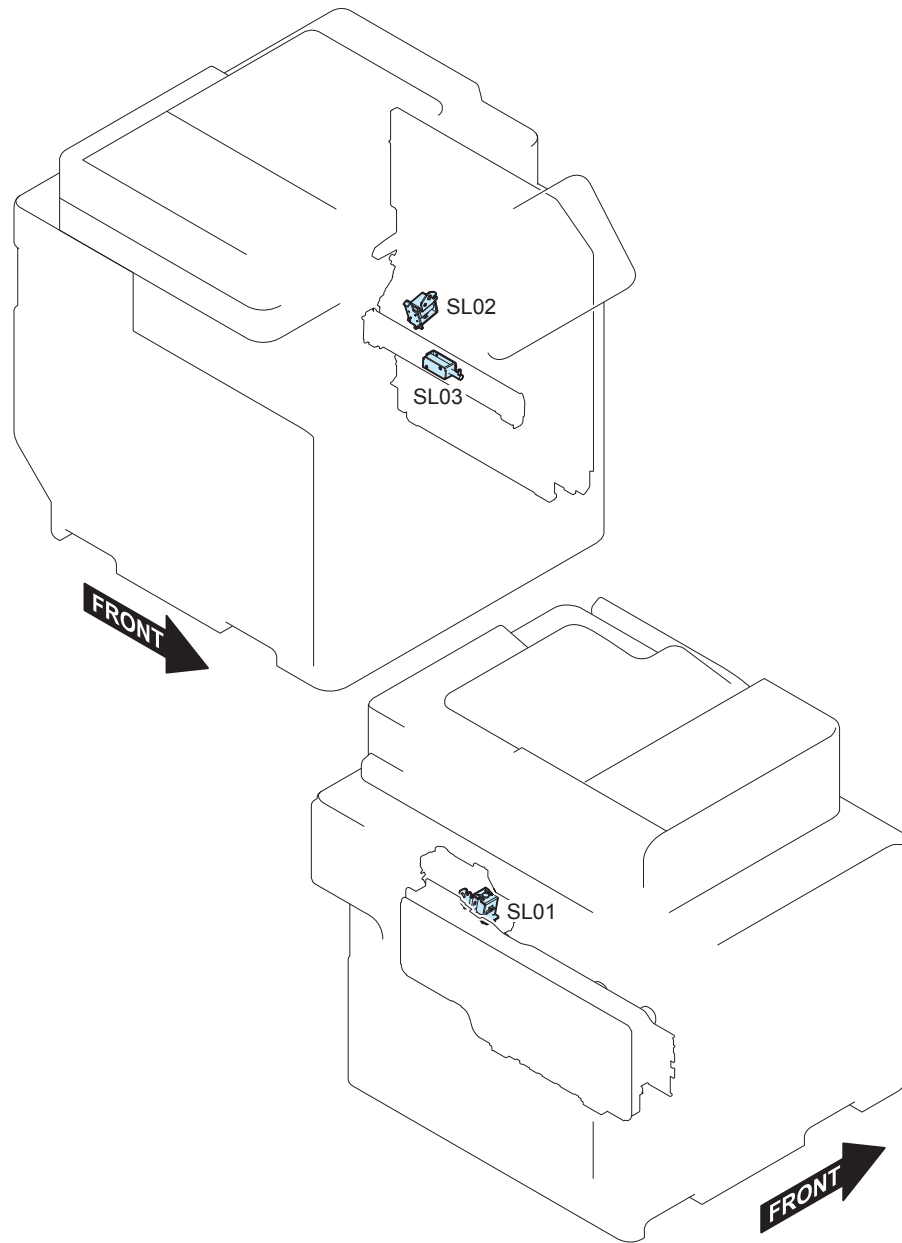


F-4-21

| No. | Parts Name | Main Unit | Reference |
|-----|-----------|-----------|-----------|
| SL01 | Primary Transfer Disengagement Solenoid | Main Drive Unit | |
| SL02 | Duplex Solenoid | Right Cover Unit | |
| SL03 | Registration Shutter Solenoid | Registration Patch Sensor Unit | |

T-4-20

● Heater/Speaker
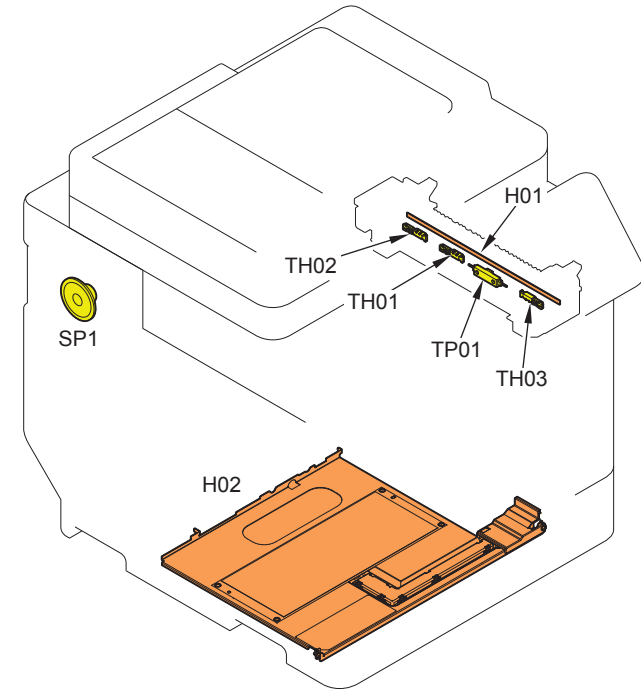


F-4-22

| No. | Parts Name | Main Unit | Reference |
|-----|-----------|-----------|-----------|
| H01 | Fixing Heater | Fixing Assembly | |
| H02 | Cassette Heater | Product Configuration | |
| SP1 | Speaker | Product Configuration | (Refer to page 4-100) |
| TH01 | Main Thermistor | Fixing Assembly | |
| TH02 | Sub Thermistor (Rear) | Fixing Assembly | |
| TH03 | Sub Thermistor (Front) | Fixing Assembly | |
| TP01 | Fixing Thermoswitch | Fixing Assembly | |

T-4-21

● Sensor (1/2)
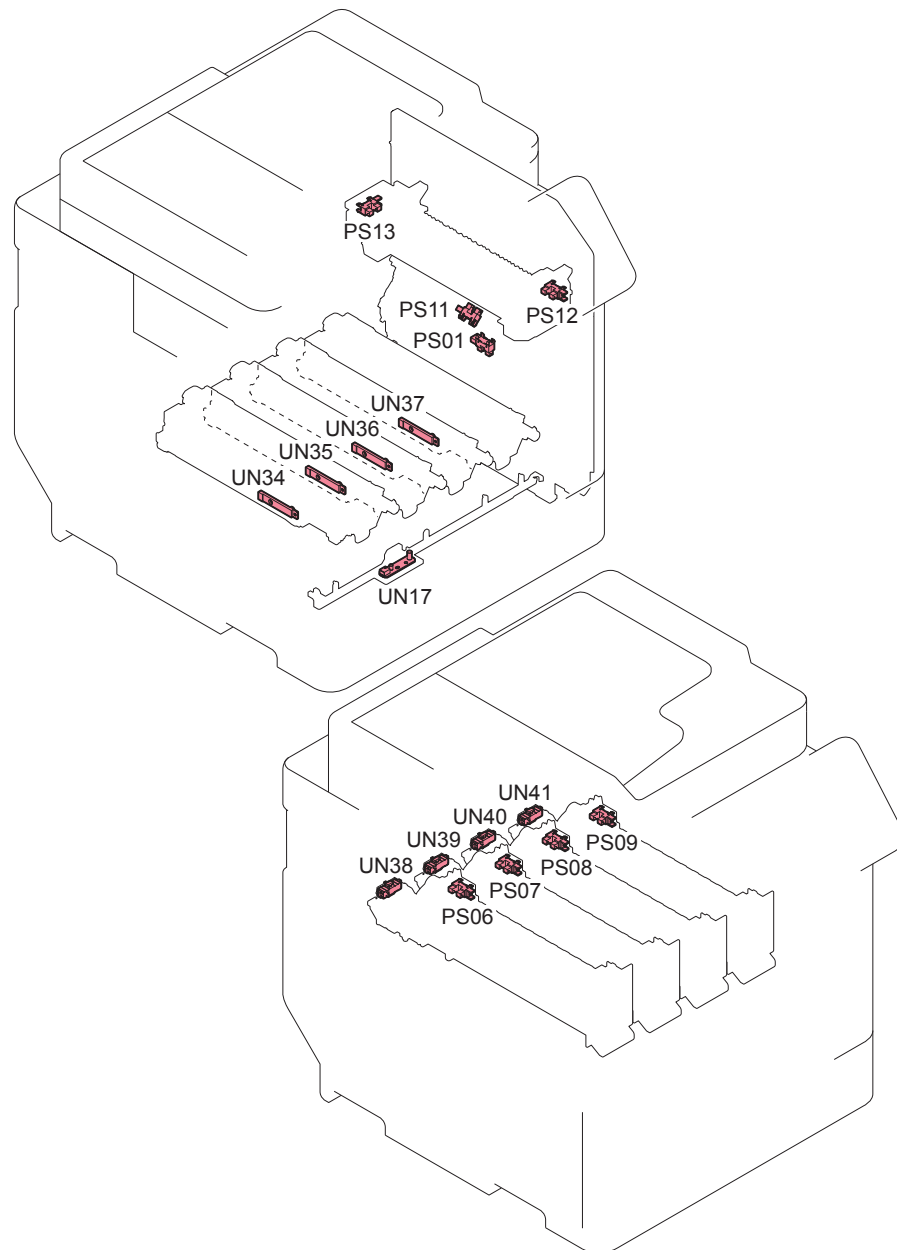


F-4-23

| No. | Parts Name | Main Unit | Reference |
|-----|-----------|-----------|-----------|
| PS01 | Duplex Sensor | Right Cover Unit | |
| PS06 | Bottle Rotation Sensor (Y) | Toner Bottle Mount Unit (Y) | |
| PS07 | Bottle Rotation Sensor (M) | Toner Bottle Mount Unit (M) | |
| PS08 | Bottle Rotation Sensor (C) | Toner Bottle Mount Unit (C) | |
| PS09 | Bottle Rotation Sensor (Bk) | Toner Bottle Mount Unit (Bk) | |
| PS11 | Arch Sensor | Right Cover Unit | |
| PS12 | Delivery Sensor | Fixing Assembly | |
| PS13 | Fixing Pressure Release Sensor | Fixing Assembly | |
| UN17 | Waste Toner Sensor PCB | Product Configuration | |
| UN34 | ATR Sensor (Y) | Drum Unit (Y) | |
| UN35 | ATR Sensor (M) | Drum Unit (M) | |
| UN36 | ATR Sensor (C) | Drum Unit (C) | |
| UN37 | ATR Sensor (Bk) | Drum Unit (Bk) | |
| UN38 | Toner Log Connector (Y) | Toner Bottle Mount Unit (Y) | |
| UN39 | Toner Log Connector (M) | Toner Bottle Mount Unit (M) | |
| UN40 | Toner Log Connector (C) | Toner Bottle Mount Unit (C) | |
| UN41 | Toner Log Connector (Bk) | Toner Bottle Mount Unit (Bk) | |

T-4-22

● Sensor (2/2)
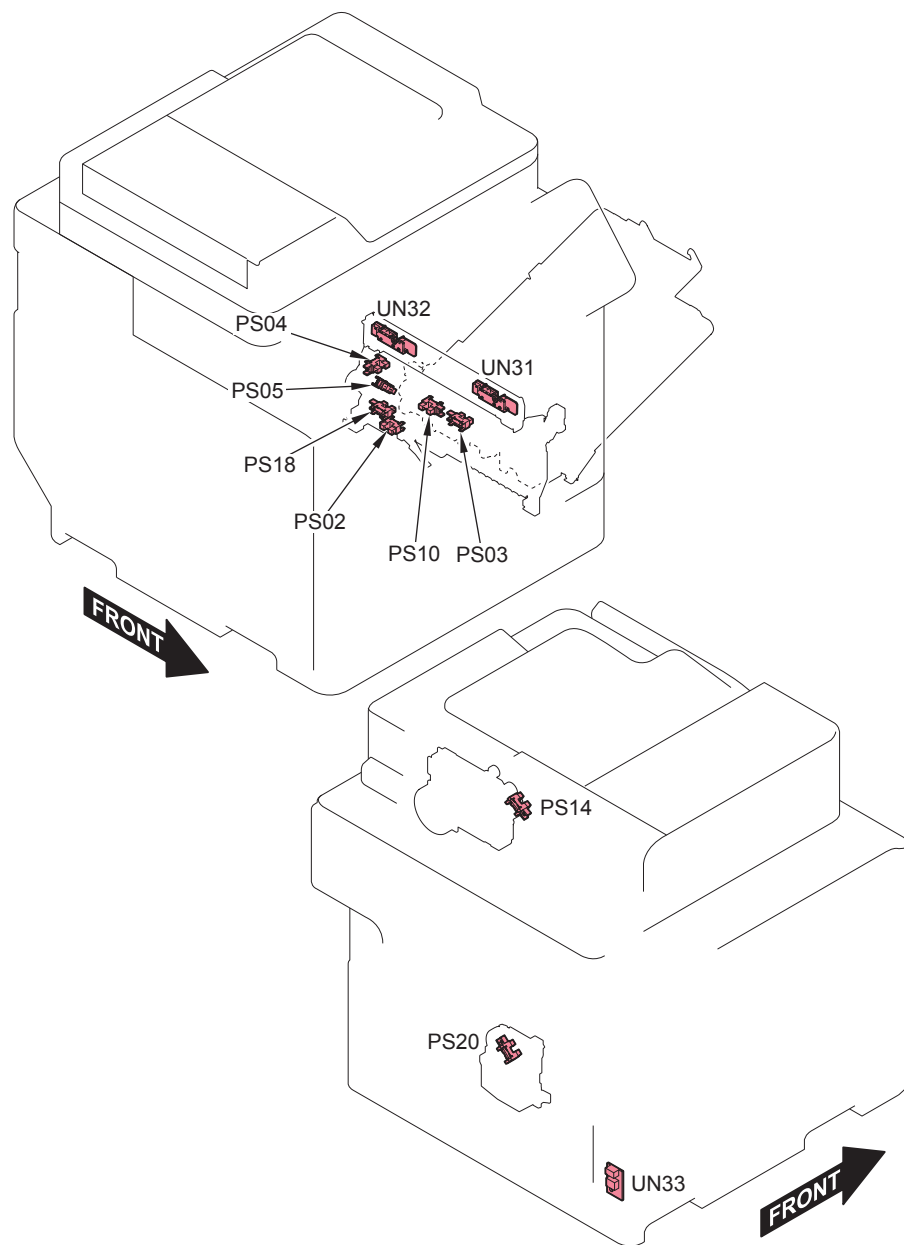


F-4-24

| No. | Parts Name | Main Unit | Reference |
|---|---|---|---|
| PS02 | Cassette 1 Paper Sensor | Regist/Paper Pickup Unit | |
| PS03 | Multi-purpose Tray Paper Sensor | Right Cover Unit | |
| PS04 | Pre-registration Sensor | Regist/Paper Pickup Unit | |
| PS05 | Cassette 1 Pickup Sensor | Regist/Paper Pickup Unit | |
| PS10 | Multi-purpose Tray HP Sensor | Right Cover Unit | |
| PS14 | Delivery Paper Full Sensor | Fixing Drive Unit | |
| PS18 | Cassette 1 Paper Surface Sensor | Regist/Paper Pickup Unit | |
| PS20 | Cassette 1 Paper Level Sensor | Cassette 1 Lifter Drive Unit | |
| UN31 | Registration Patch Sensor Unit (Front) | Registration Patch Sensor Unit | |
| UN32 | Registration Patch Sensor Unit (Rear) | Registration Patch Sensor Unit | |
| UN33 | Environment Sensor | Product Configuration | |

T-4-23

● Switch
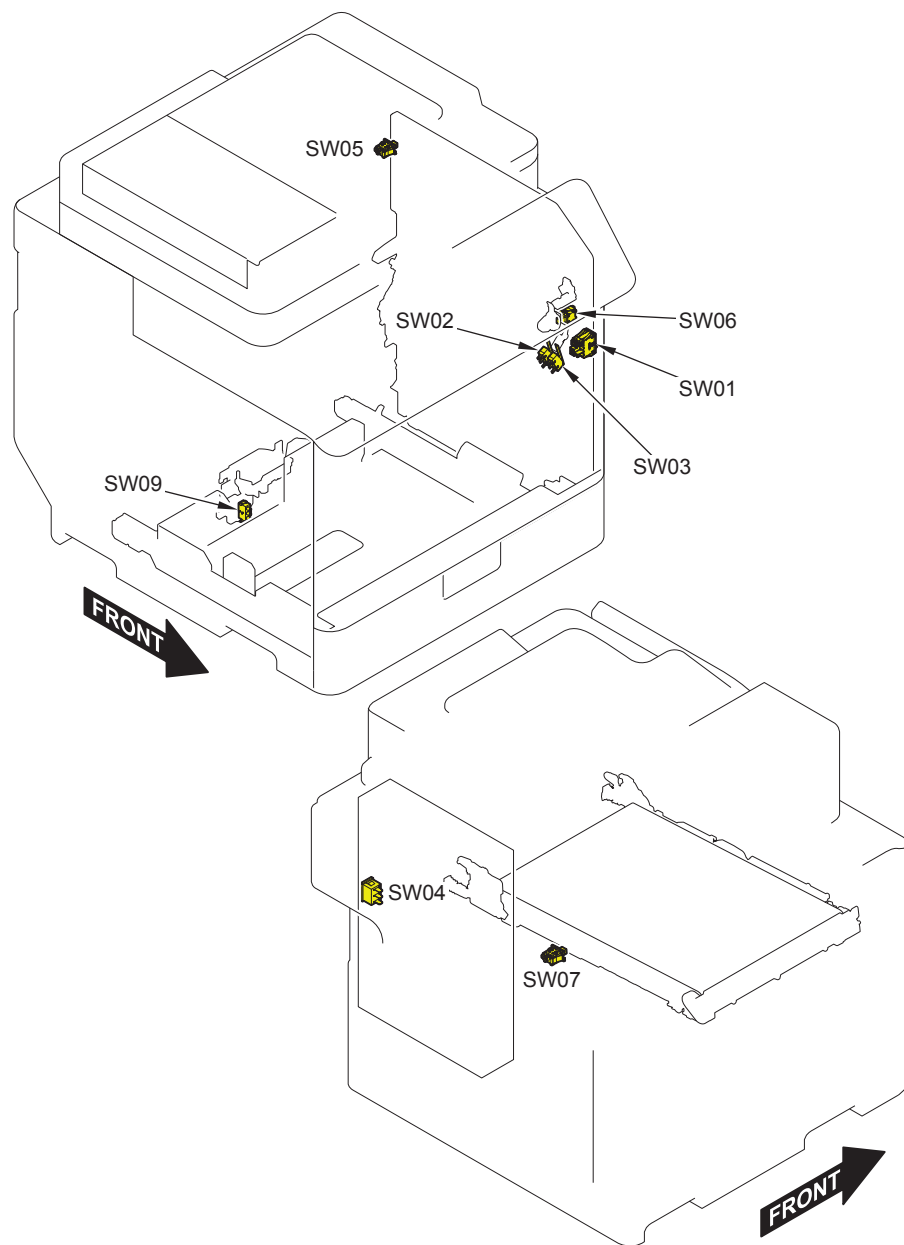


F-4-25

| No. | Parts Name | Main Unit | Reference |
|---|---|---|---|
| SW01 | Main Power Supply Switch | Product Configuration | |
| SW02 | Interlock Switch 1 | Product Configuration | |
| SW03 | Interlock Switch 2 | Product Configuration | |
| SW04 | Environment Switch | Product Configuration | |
| SW05 | Right Cover Open/Close Detection Switch | Product Configuration | |
| SW06 | Front Cover Open/Close Switch | Product Configuration | |
| SW07 | ITB Pressure Release Switch | Product Configuration | (Refer to page 4-130) |
| SW09 | Cassette 1 Size Switch | Cassette 1 Auto Close Unit | |

T-4-24

● PCB (1/2)
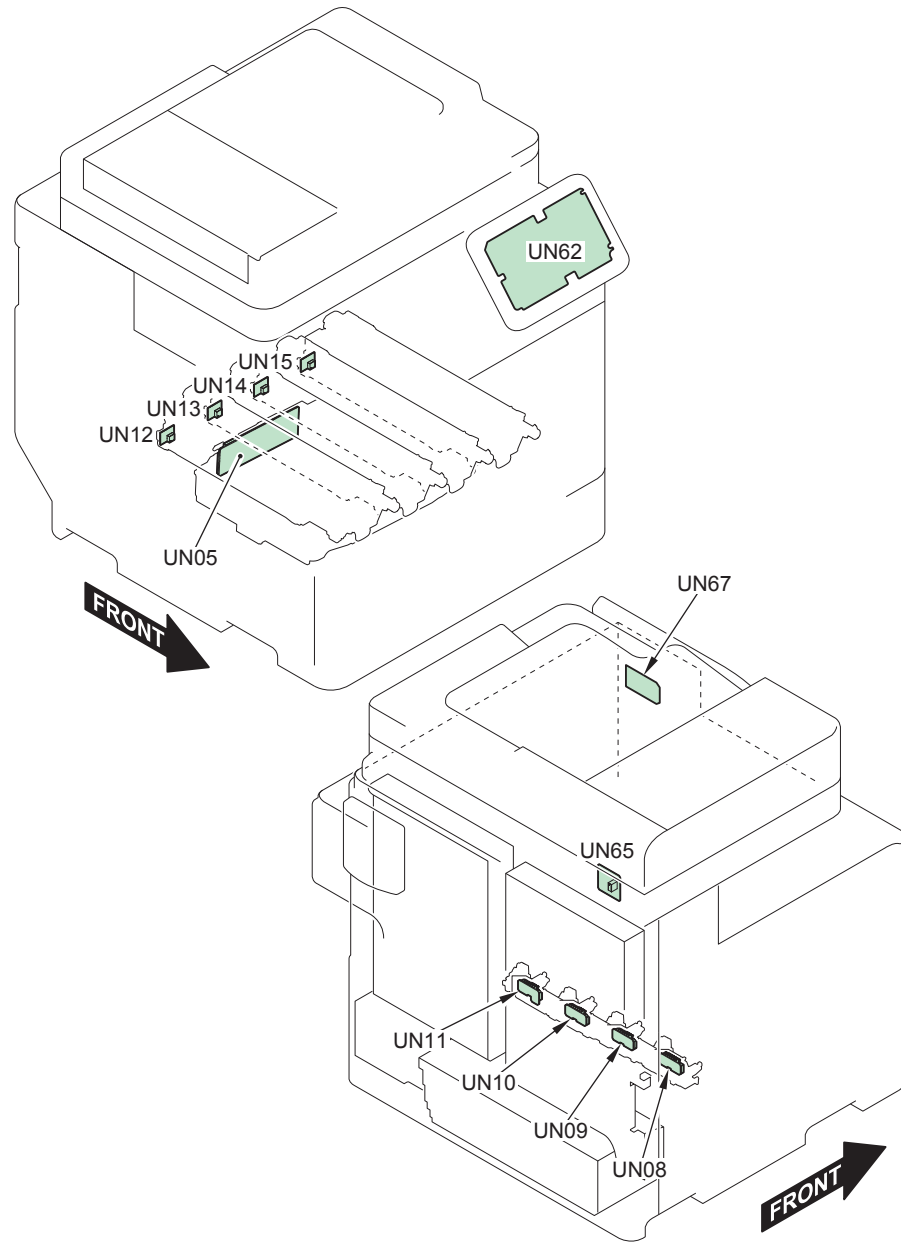


| No. | Parts Name | Main Unit | Reference |
|---|---|---|---|
| UN05 | Y/M/C/Bk Laser Driver PCB | Laser Scanner Unit | (Refer to page 4-102) |
| UN08 | Drum Unit Relay PCB (Y) | Product Configuration | |
| UN09 | Drum Unit Relay PCB (M) | Product Configuration | |
| UN10 | Drum Unit Relay PCB (C) | Product Configuration | |
| UN11 | Drum Unit Relay PCB (Bk) | Product Configuration | |
| UN12 | Drum Unit Memory PCB (Y) | Drum Unit (Y) | |
| UN13 | Drum Unit Memory PCB (M) | Drum Unit (M) | |
| UN14 | Drum Unit Memory PCB (C) | Drum Unit (C) | |
| UN15 | Drum Unit Memory PCB (Bk) | Drum Unit (Bk) | |
| UN62 | Control Panel PCB | Control Panel Unit | (Refer to page 4-97) |
| UN65 | ECO PCB | Product Configuration | |
| UN67 | USB PCB | Product Configuration | |

T-4-25

F-4-26

● PCB (2/2)
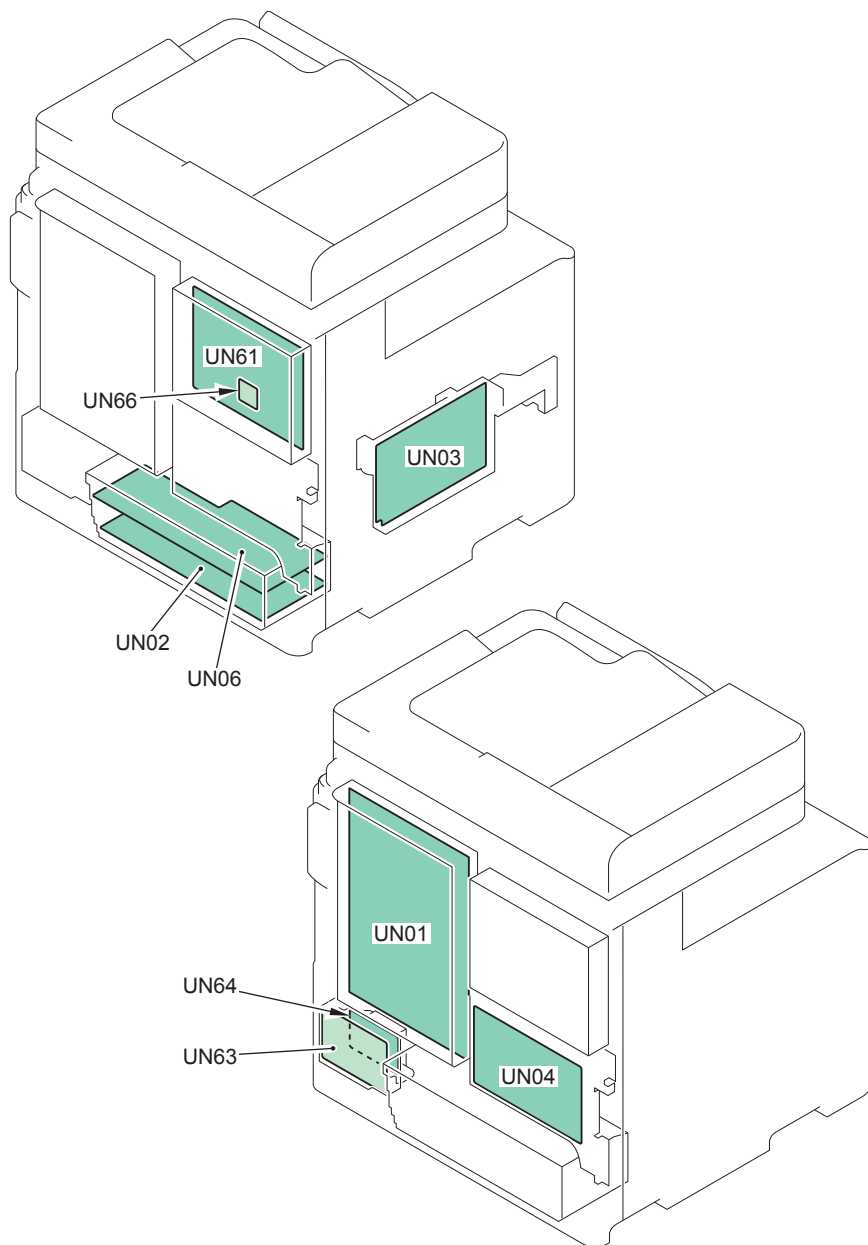


| No. | Parts Name | Main Unit | Reference |
|---|---|---|---|
| UN01 | Low-voltage Power Supply PCB | Product Configuration | (Refer to page 4-93) |
| UN02 | Secondary Transfer High-voltage PCB | Product Configuration | (Refer to page 4-88) |
| UN03 | Primary Transfer High-voltage PCB | Product Configuration | (Refer to page 4-90) |
| UN04 | DC Controller PCB | Product Configuration | (Refer to page 4-84) |
| UN06 | Developing High-voltage PCB | Product Configuration | (Refer to page 4-88) |
| UN61 | Main Controller PCB | Product Configuration | (Refer to page 4-81) |
| UN63 | FAX-NCU PCB | Product Configuration | |
| UN64 | Off-hook PCB | Product Configuration | |
| UN66 | Memory PCB | Main Controller | |
| UN91 | TPM PCB | Main Controller | |
| UN95 | Memorey PCB | Main Controller | |
| UN96 | FLASH PCB | Main Controller | |

T-4-26

F-4-27

# List of Connectors
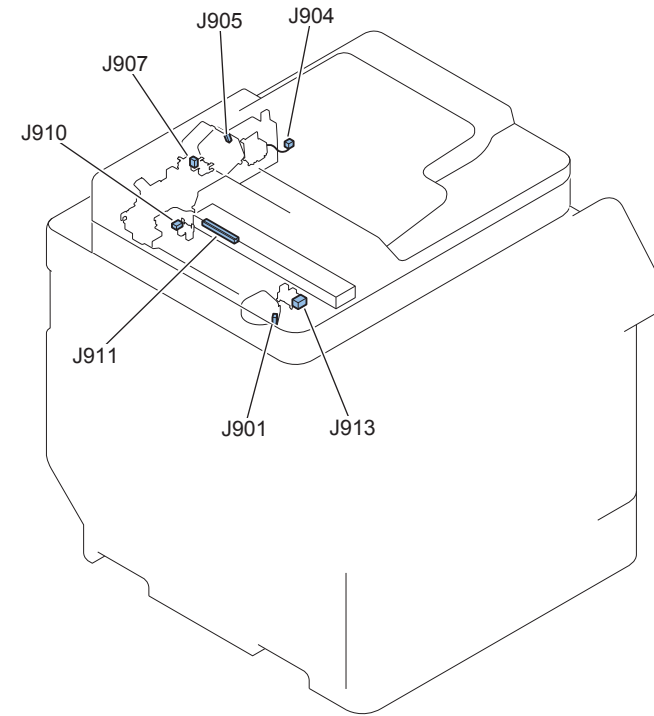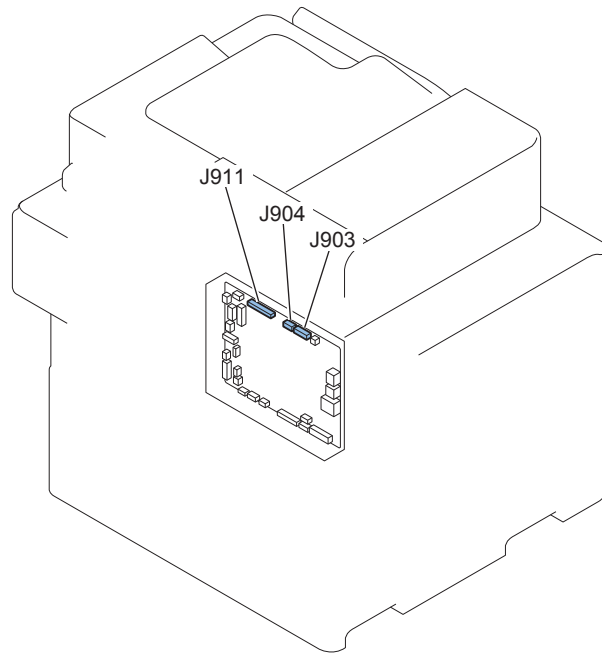


F-4-28

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| J901 | UN61 | Main Controller PCB | | | | J911 | - | CIS Unit | |
| J904 | UN61 | Main Controller PCB | J904 | | | J904 | SL01 | Disengagement Solenoid | |
| | | | | | | J905 | M02 | ADF Motor | |
| | | | J903 | | | J907 | PS03 | Document Sensor | |
| | | | J903 | J908 | | J910 | PS02 | Document End Sensor | |
| J903 | UN61 | Main Controller PCB | J901 | | | J901 | M01 | Reader Motor | |
| | | | J902 | | | J913 | PS01 | CIS Unit HP Sensor | |

T-4-27
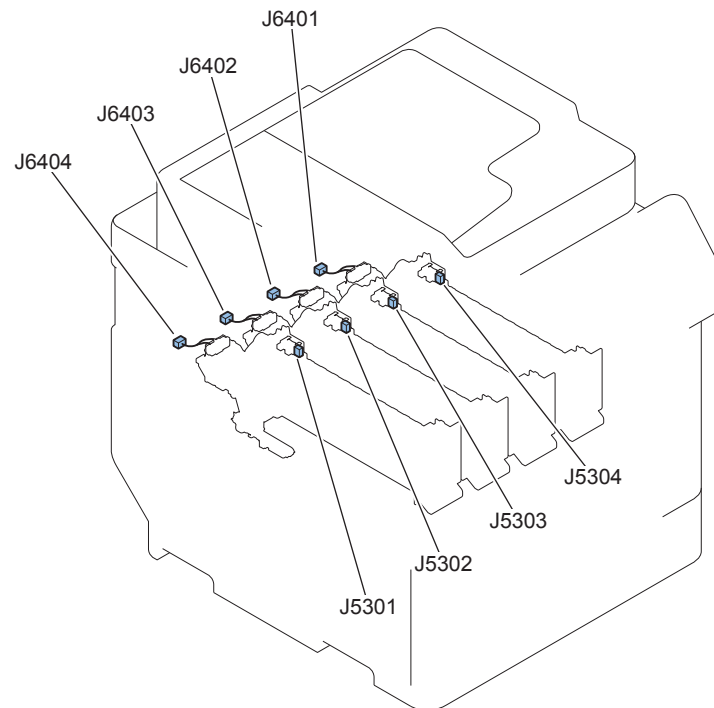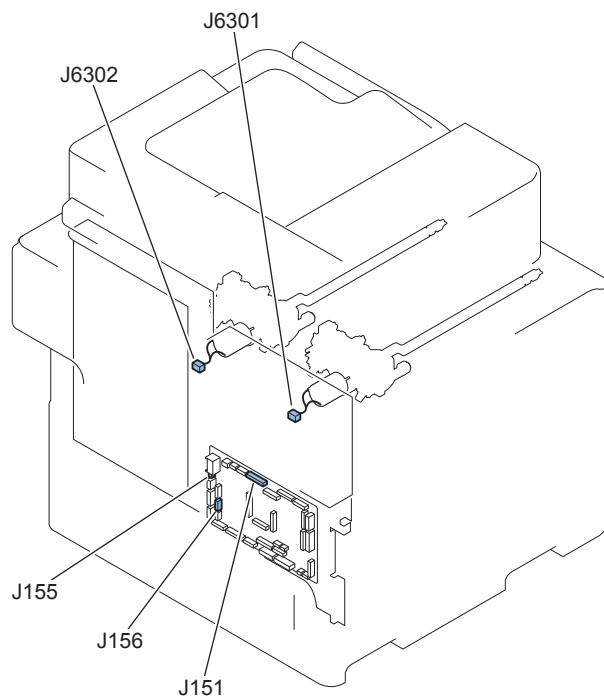
F-4-29

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|-------|--------|------|-----------------|--|--|-------|--------|------|---------|
| J151 | UN04 | DC Controller PCB | | | | J5301 | PS06 | Bottle Rotation Sensor (Y) | |
| | | | | | | J5302 | PS07 | Bottle Rotation Sensor (M) | |
| | | | | | | J5303 | PS08 | Bottle Rotation Sensor (C) | |
| | | | | | | J5304 | PS09 | Bottle Rotation Sensor (Bk) | |
| J155 | UN04 | DC Controller PCB | J6301 | | | J6301 | M09 | Bottle Motor (YM) | |
| | | | J6302 | | | J6302 | M10 | Bottle Motor (CK) | |
| J156 | UN04 | DC Controller PCB | J6401 | | | J6401 | UN38 | Toner Log Connector(Y) | |
| | | | J6402 | | | J6402 | UN39 | Toner Log Connector (M) | |
| | | | J6403 | | | J6403 | UN40 | Toner Log Connector (C) | |
| | | | J6404 | | | J6404 | UN41 | Toner Log Connector (Bk) | |

T-4-28
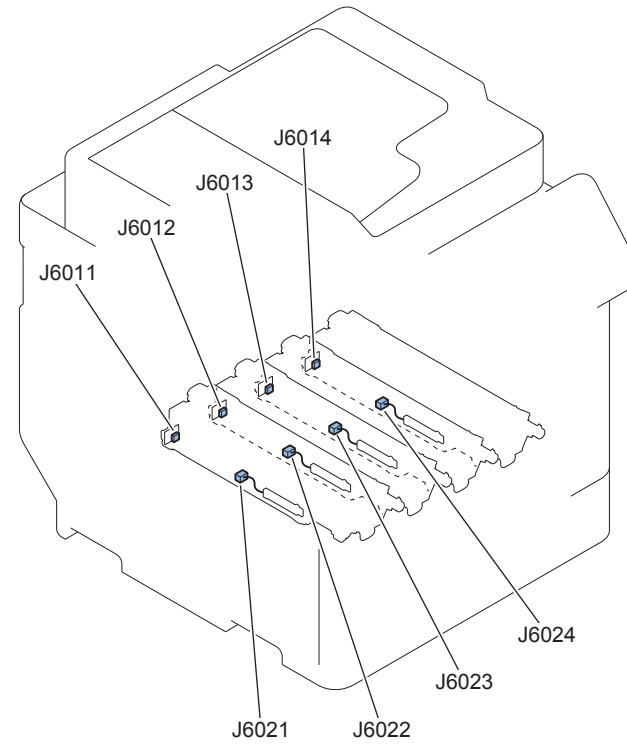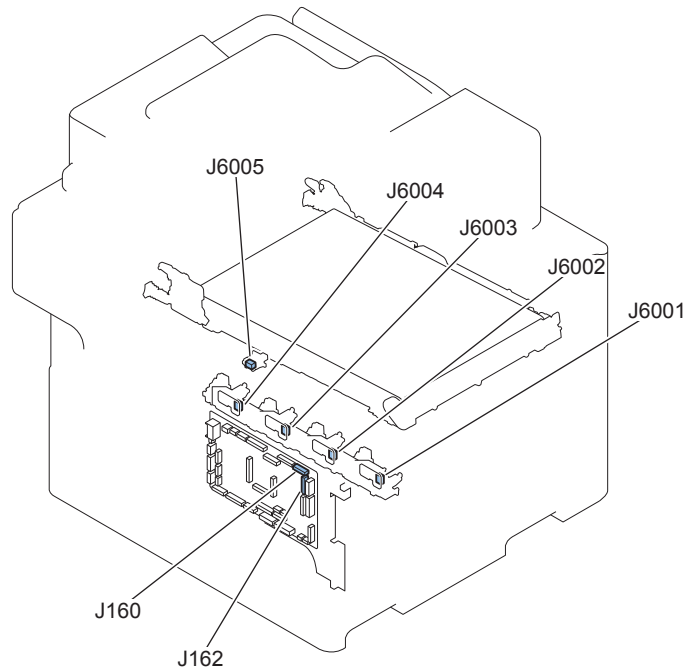
F-4-30

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| J160 | UN04 | DC Controller PCB | | | | J6001 | UN08 | Drum Unit Relay PCB (Y) | |
| | | | | | | J6002 | UN09 | Drum Unit Relay PCB (M) | |
| J162 | UN04 | DC Controller PCB | | | | J6003 | UN10 | Drum Unit Relay PCB (C) | |
| | | | | | | J6004 | UN11 | Drum Unit Relay PCB (Bk) | |
| | | | J6005 | J6006 | | J6007 | SW07 | ITB Pressure Release Switch | |
| J6011 | UN12 | Drum Unit Memory PCB (Y) | | | | J6021 | UN34 | ATR Sensor (Y) | |
| J6012 | UN13 | Drum Unit Memory PCB (M) | | | | J6022 | UN35 | ATR Sensor (M) | |
| J6013 | UN14 | Drum Unit Memory PCB (C) | | | | J6023 | UN36 | ATR Sensor (C) | |
| J6014 | UN15 | Drum Unit Memory PCB (Bk) | | | | J6024 | UN37 | ATR Sensor (Bk) | |

T-4-29
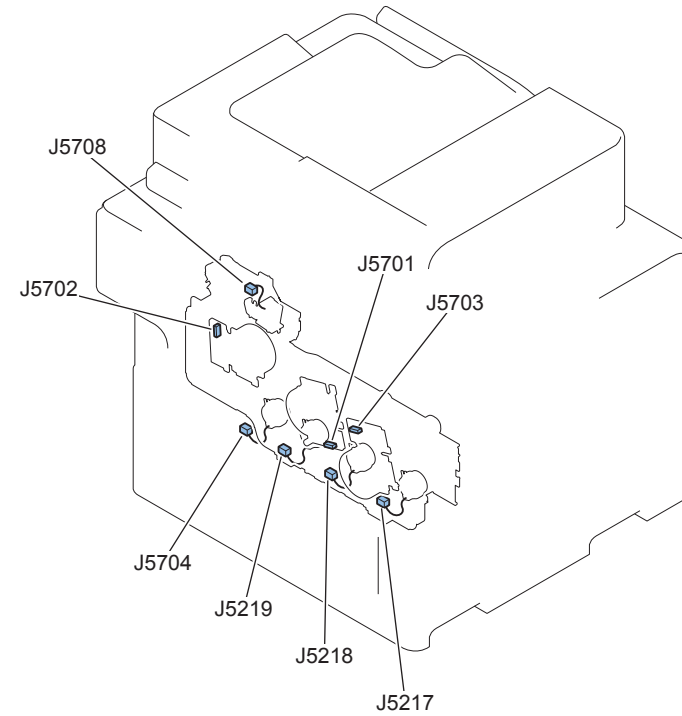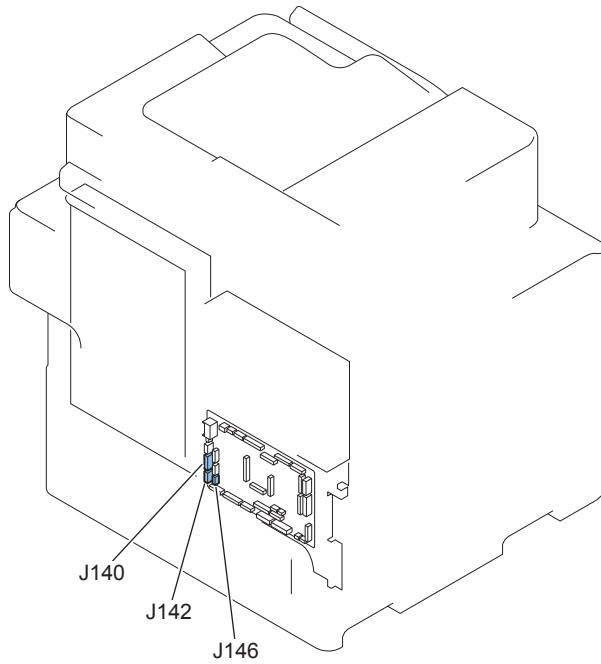
F-4-31

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|-------|--------|------|------|------|------|-------|--------|------|---------|
| J140 | UN04 | DC Controller PCB | | | | J5701 | M01 | Reader Motor | |
| | | | J5705 | | | J5702 | M02 | ADF Motor | |
| | | | J5708 | | | J5708 | SL01 | Disengagement Solenoid | |
| J142 | UN04 | DC Controller PCB | | | | J5703 | M03 | Developing Motor | |
| | | | J5704 | | | J5704 | CL04 | Developing Cylinder Clutch (Bk) | |
| J146 | UN04 | DC Controller PCB | J5217 | | | J5217 | CL01 | Developing Cylinder Clutch (Y) | |
| | | | J5218 | | | J5218 | CL02 | Developing Cylinder Clutch (M) | |
| | | | J5219 | | | J5219 | CL03 | Developing Cylinder Clutch (C) | |

T-4-30
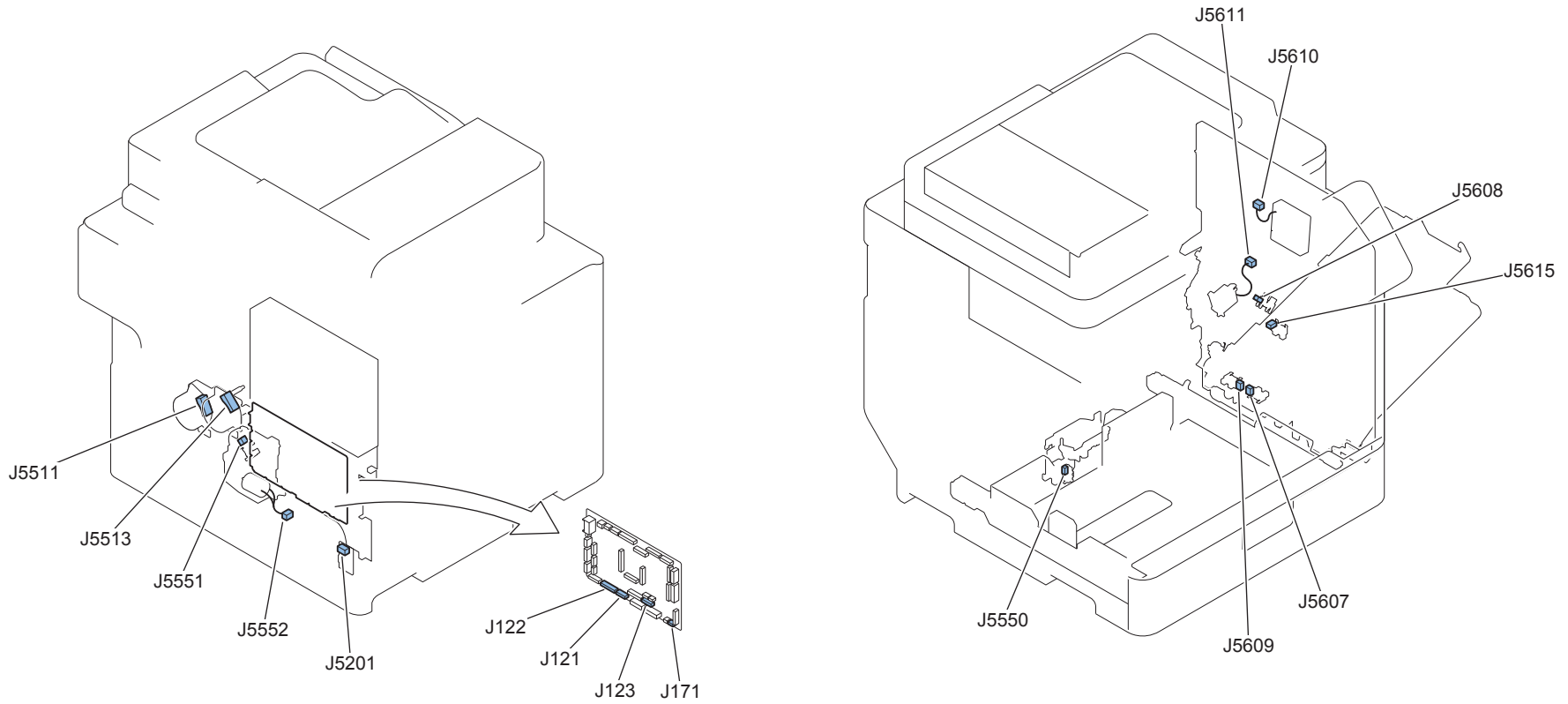
F-4-32

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| J121 | UN04 | DC Controller PCB | J5509 | | | J5511 | M05 | Cassette 1 _ Multi-purpose Tray Pickup Motor | |
| | | | J5509 | | | J5513 | M06 | Pre-registration Motor | |
| J122 | UN04 | DC Controller PCB | J5605 | J5613 | | J5608 | PS11 | Arch Sensor | |
| | | | J5605 | J5614 | J5610 | J5610 | FM04 | Duplex Cooling Fan | |
| | | | J5605 | J5611 | | J5611 | SL02 | Duplex Solenoid | |
| | | | J5605 | | | J5615 | PS01 | CIS Unit HP Sensor | |
| | | | J5605 | J5616 | | J5607 | PS03 | Document Sensor | |
| | | | J5605 | J5616 | | J5609 | PS10 | Multi-purpose Tray HP Sensor | |
| J123 | UN04 | DC Controller PCB | J5553 | | | J5550 | SW09 | Cassette 1 Size Switch | |
| | | | J5554 | | | J5551 | PS20 | Cassette 1 Paper Level Sensor | |
| | | | J5552 | | | J5552 | M11 | Cassette 1 Lifter Motor | |
| J171 | UN04 | DC Controller PCB | | | | J5201 | UN33 | Environment Sensor | |

T-4-31
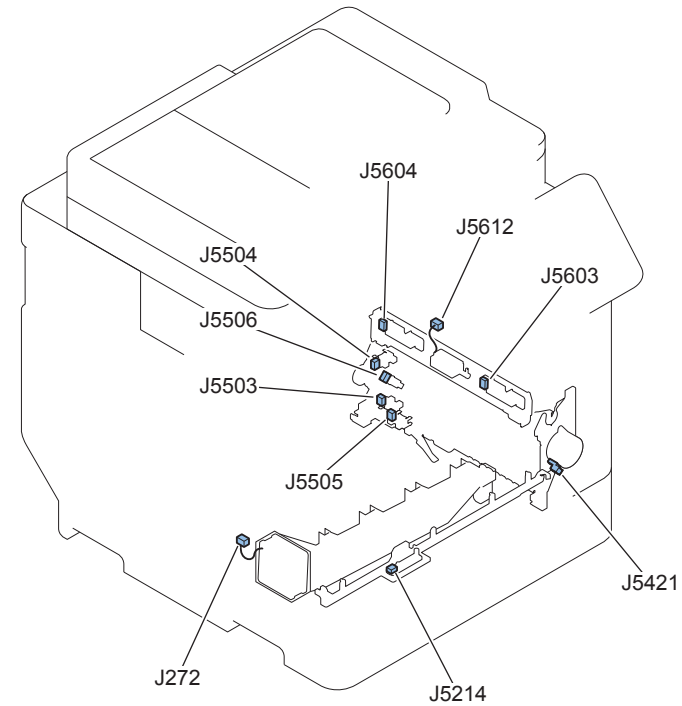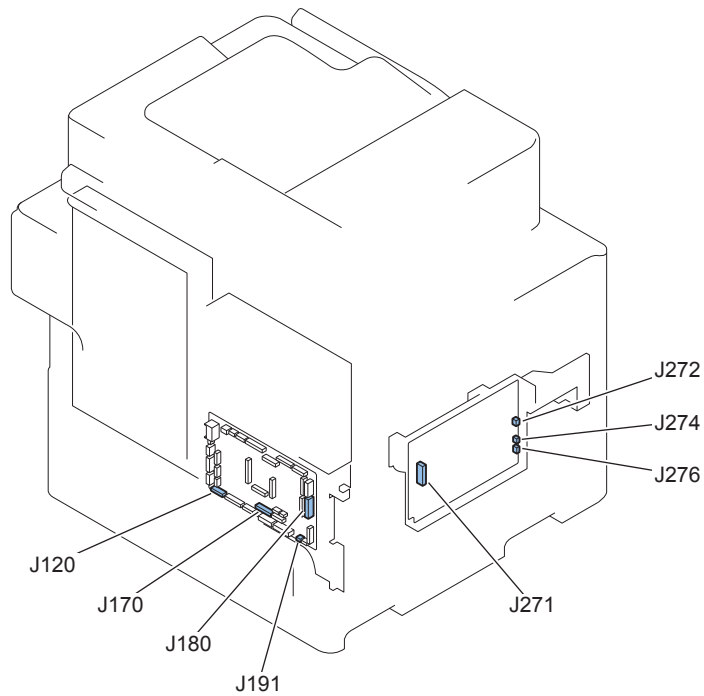
F-4-33

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| J120 | UN04 | DC Controller PCB | J5501 | | | J5503 | PS18 | Cassette 1 Paper Surface Sensor | |
| | | | J5501 | | | J5504 | PS04 | Pre-registration Sensor | |
| | | | J5501 | | | J5505 | PS02 | Document End Sensor | |
| | | | J5501 | | | J5506 | PS05 | Cassette 1 Pickup Sensor | |
| J170 | UN04 | DC Controller PCB | J5601 | J5602 | | J5603 | UN31 | Registration Patch Sensor Unit (Front) | |
| | | | J5601 | J5602 | | J5604 | UN32 | Registration Patch Sensor Unit (Rear) | |
| | | | J5601 | J5602 | J5612 | J5612 | SL03 | Registration Shutter Solenoid | |
| J180 | UN04 | DC Controller PCB | | | | J271 | UN03 | Primary Transfer High-voltage PCB | |
| J191 | UN04 | DC Controller PCB | | | | | | | Not use |
| J272 | UN03 | Primary Transfer High-voltage PCB | | | | J272 | FM01 | Drum Unit Suction Cooling Fan | |
| J274 | UN03 | Primary Transfer High-voltage PCB | | | | J5214 | UN17 | Waste Toner Sensor PCB | |
| J276 | UN03 | Primary Transfer High-voltage PCB | | | | J5421 | M07 | Registration Motor | |

T-4-32
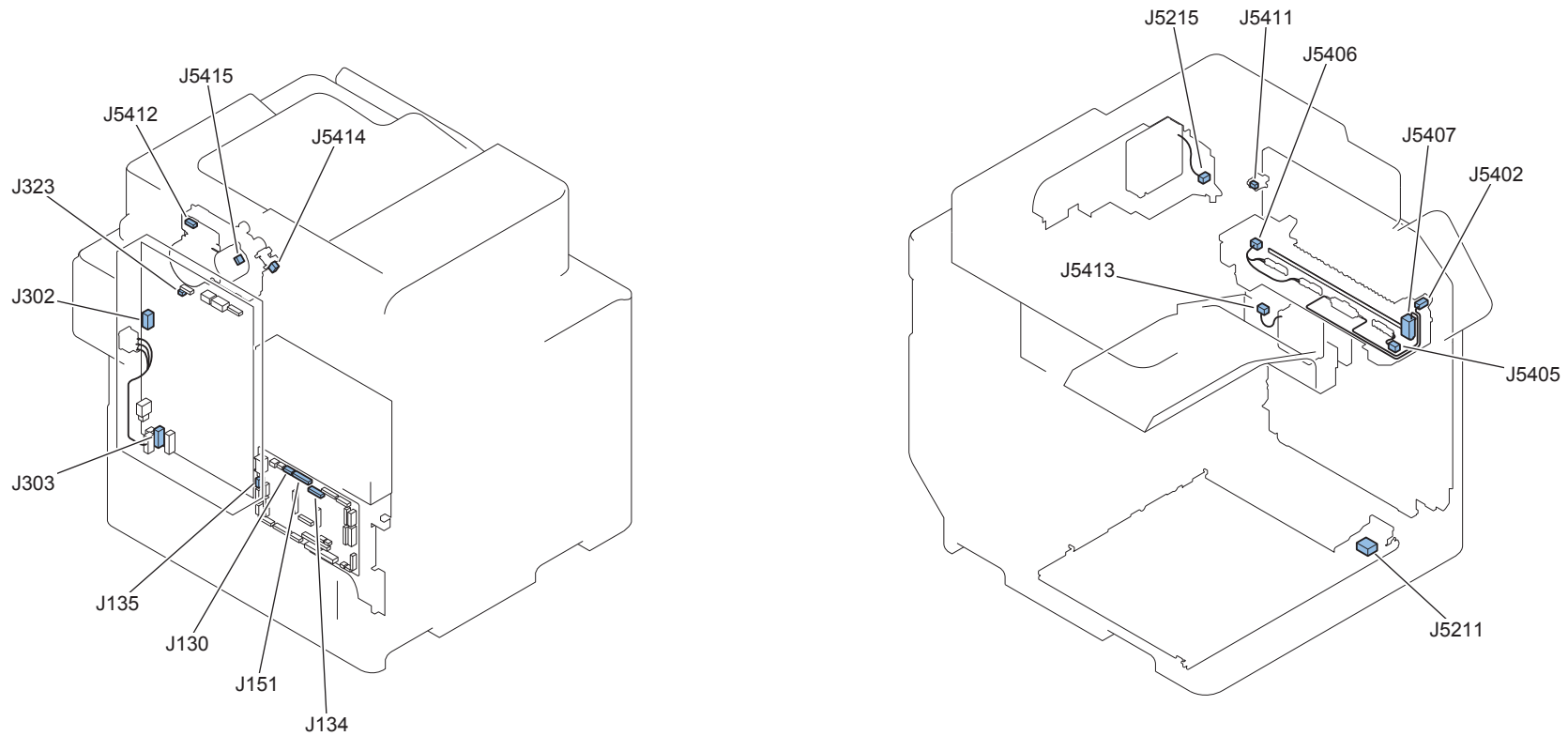
F-4-34

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| J130 | UN04 | DC Controller PCB | | | | J5411 | SW05 | Right Cover Open/Close Detection Switch | |
| | | | | | | J5415 | M08 | Reverce Motor | |
| J135 | UN04 | DC Controller PCB | | | | J5412 | M04 | Fixing Motor | |
| J151 | UN04 | DC Controller PCB | J5413 | | | J5413 | FM03 | Delivery Cooling Fan | |
| | | | | | | J5414 | PS14 | Delivery Paper Full Sensor | |
| J134 | UN04 | DC Controller PCB | J5401 | J5405 | | J5405 | TH03 | Sub Thermistor (Front) | |
| | | | J5401 | J5406 | | J5406 | TH01 | Main Thermistor | |
| | | | J5401 | J5406 | | J5406 | TH02 | Sub Thermistor (Rear) | |
| J302 | UN01 | Low-voltage Power Supply PCB | J5401 | J5402 | | J5402 | TP01 | Fixing Thermoswitch | |
| | | | J5401 | J5402 | | J5407 | H01 | Fixing Heater | |
| J303 | UN01 | Low-voltage Power Supply PCB | J5210 | J5211 | | J5211 | H02 | Cassette Heater | |
| | | | | | | J303 | SW04 | Environment Switch | Only for 120V |
| | | | J5207 | | | - | - | Option Cassette Heater | Option |
| J323 | UN01 | Low-voltage Power Supply PCB | J5215 | | | J5215 | FM05 | Power Supply Cooling Fan | |

T-4-33
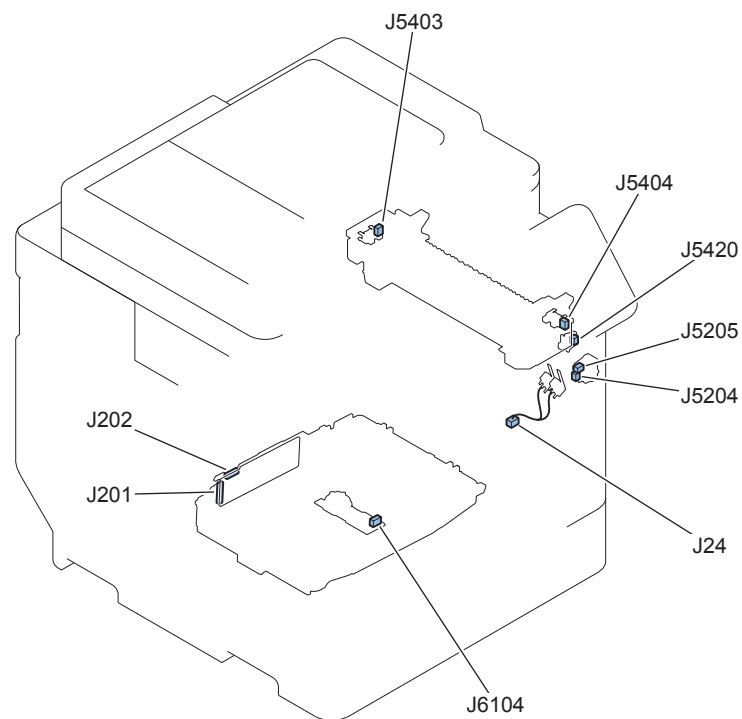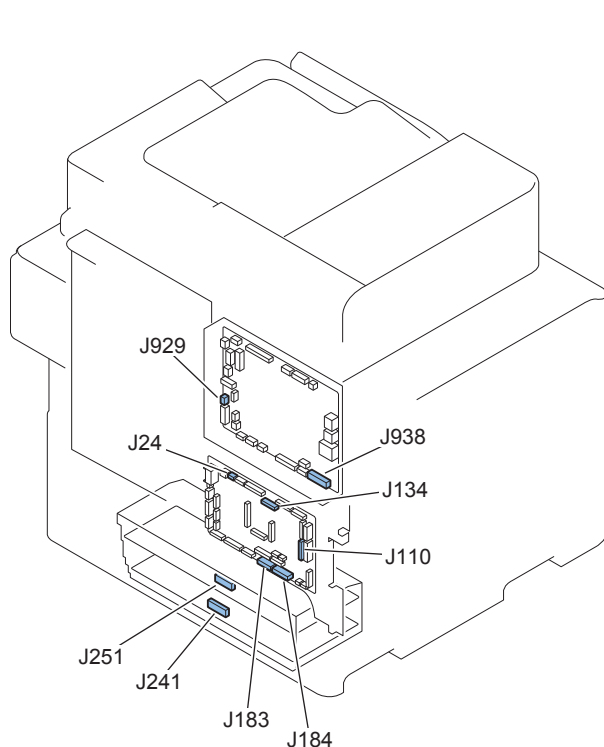
F-4-35

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| J134 | UN04 | DC Controller PCB | J5401 | | | J5404 | PS12 | Delivery Sensor | |
| | | | J5401 | | | J5403 | PS13 | Fixing Pressure Release Sensor | |
| J110 | UN04 | DC Controller PCB | J6103 | | | J6104 | M12 | Scanner Motor | |
| | | | | | | J202 | UN05 | Y/M/C/Bk Laser Driver PCB | |
| J938 | UN61 | Main Controller PCB | | | | J201 | UN05 | Y/M/C/Bk Laser Driver PCB | |
| J929 | UN61 | Main Controller PCB | J5204 | | | J5204 | SW01 | Main Power Supply Switch | |
| | | | J5205 | | | J5205 | SW01 | Main Power Supply Switch | |
| J24 | UN04 | DC Controller PCB | | | | J24 | SW02 | Interlock Switch 1 | |
| | | | | | | J24 | SW03 | Interlock Switch 2 | |
| | | | | | | J5420 | SW06 | Front Cover Open/Close Switch | |
| J183 | UN04 | DC Controller PCB | | | | J251 | UN02 | Secondary Transfer High-voltage PCB | |
| J184 | UN04 | DC Controller PCB | | | | J241 | UN06 | Developing High-voltage PCB | |

T-4-34
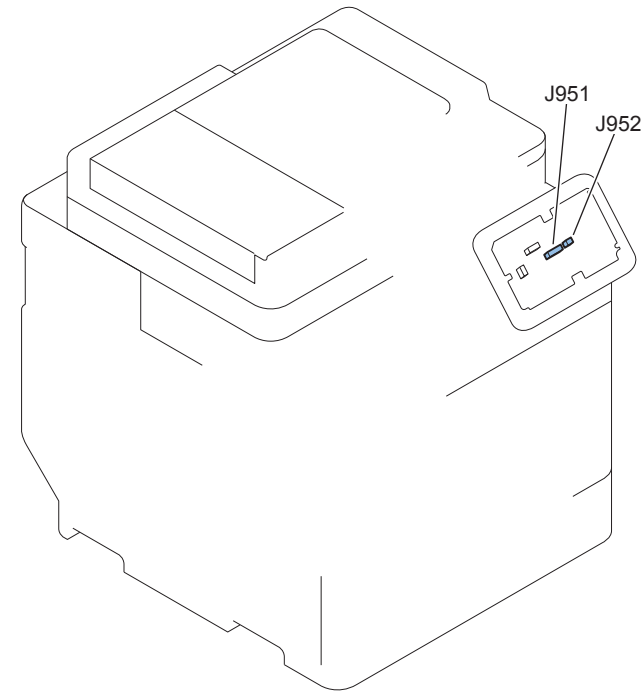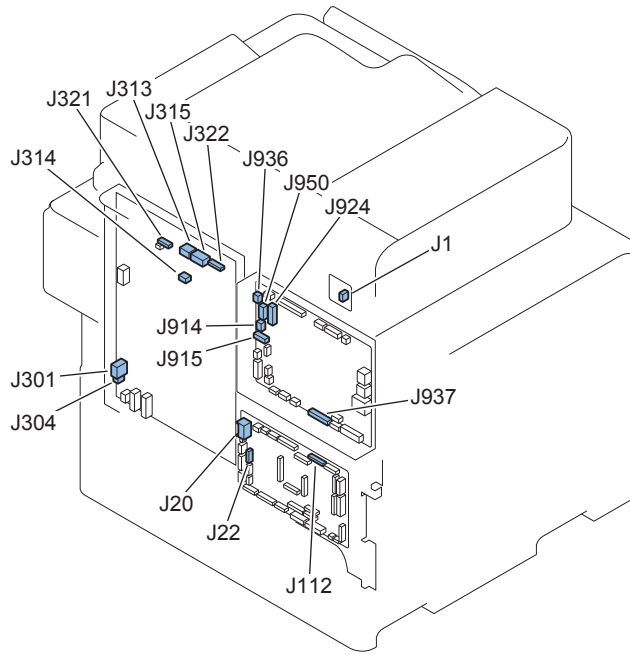
F-4-36

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|-------|--------|------|-----------------|---|---|-------|--------|------|---------|
| J924 | UN61 | Main Controller PCB | | | | J951 | UN62 | Control Panel PCB | |
| J950 | UN61 | Main Controller PCB | | | | J952 | UN62 | Control Panel PCB | |
| J313 | UN01 | Low-voltage Power Supply PCB | | | | J914 | UN61 | Main Controller PCB | |
| J321 | UN01 | Low-voltage Power Supply PCB | | | | J915 | UN61 | Main Controller PCB | |
| J301 | UN01 | Low-voltage Power Supply PCB | | | | J301 | - | INLET | |
| J315 | UN01 | Low-voltage Power Supply PCB | | | | J20 | UN04 | DC Controller PCB | |
| J322 | UN01 | Low-voltage Power Supply PCB | | | | J22 | UN04 | DC Controller PCB | |
| J937 | UN61 | Main Controller PCB | | | | J112 | UN04 | DC Controller PCB | |
| J936 | UN61 | Main Controller PCB | | | | J1 | UN65 | ECO PCB | |

T-4-35
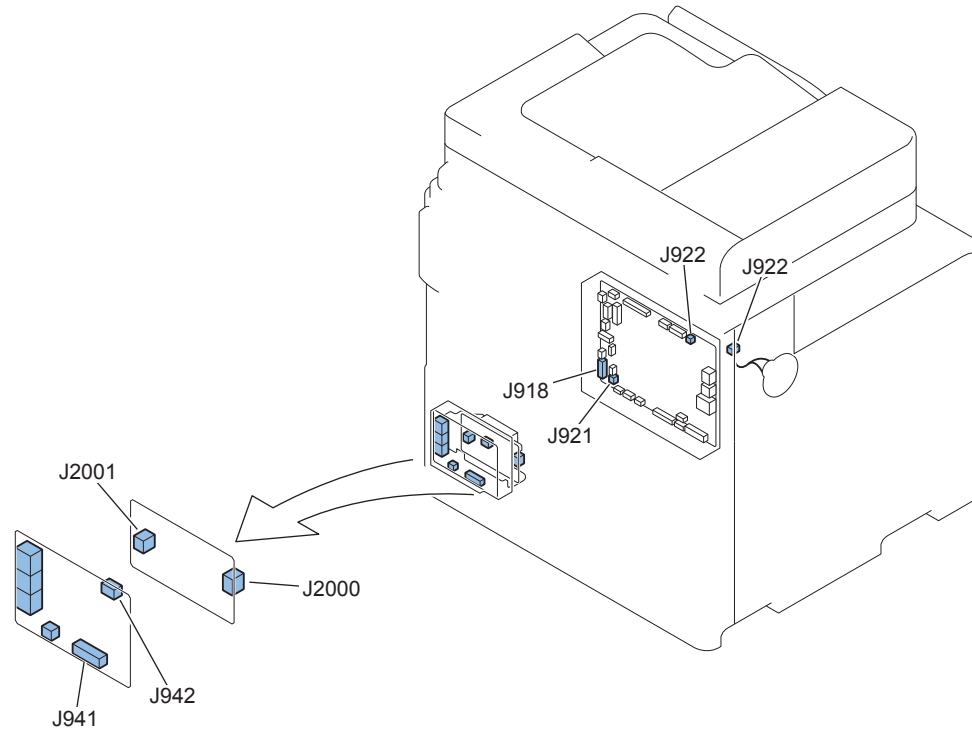
F-4-37

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| J918 | UN61 | Main Controller PCB | | | | J941 | UN63 | FAX-NCU PCB | |
| J921 | UN61 | Main Controller PCB | | | | J2000 | UN64 | Off-hook PCB | |
| J2001 | UN64 | Off-hook PCB | | | | J942 | UN63 | FAX-NCU PCB | |
| J922 | UN61 | Main Controller PCB | J922 | | | J922 | SP1 | Speaker | |

T-4-36
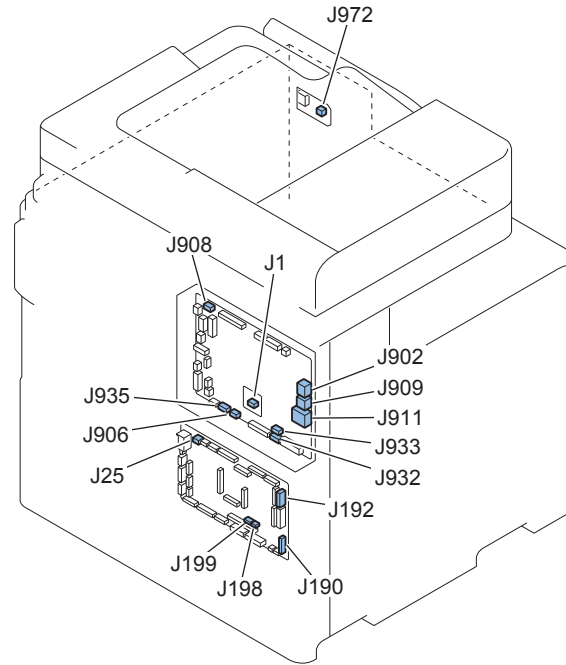
F-4-38

| J No. | Symbol | Name | Relay connector | | | J No. | Symbol | Name | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| J902 | UN61 | Main Controller PCB | | | | | | | USB |
| J906 | UN61 | Main Controller PCB | | | | - | - | RS232C Board | Option |
| J908 | UN61 | Main Controller PCB | | | | J972 | UN67 | USB PCB | |
| J909 | UN61 | Main Controller PCB | | | | | | | USB |
| J911 | UN61 | Main Controller PCB | | | | | | | LAN |
| J932 | UN61 | Main Controller PCB | | | | - | - | Copy Control Interface Kit-A1 | Option |
| J933 | UN61 | Main Controller PCB | | | | - | - | Copy Card Reader-F1 | Option |
| J935 | UN61 | Main Controller PCB | | | | J1 | UN66 | Memory PCB | |
| J7005 | UN61 | Main Controller PCB | | | | | | | Not use |
| J190 | UN04 | DC Controller PCB | J5904 | | | - | - | Cassette Feeding Unit-AJ1,Cassette Feeding Unit-AK1 | Option |
| J198 | UN04 | DC Controller PCB | | | | | | | Not use |
| J199 | UN04 | DC Controller PCB | | | | | | | Not use |
| J25 | UN04 | DC Controller PCB | J5401 | | | | | | Not use |

T-4-37

# External Cover/Interior System

## Layout Drawing

### ■ ADF UNIT
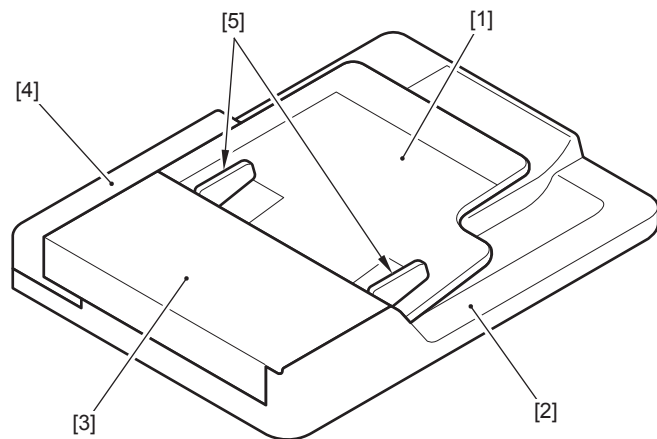


F-4-39

| No. | Parts Name | Reference |
|---|---|---|
| [1] | Original Tray | |
| [2] | ADF Base | |
| [3] | Feeder Cover | |
| [4] | ADF Rear Cover | |
| [5] | ADF Side Guide Plate | |

T-4-38

### ■ Reader Unit
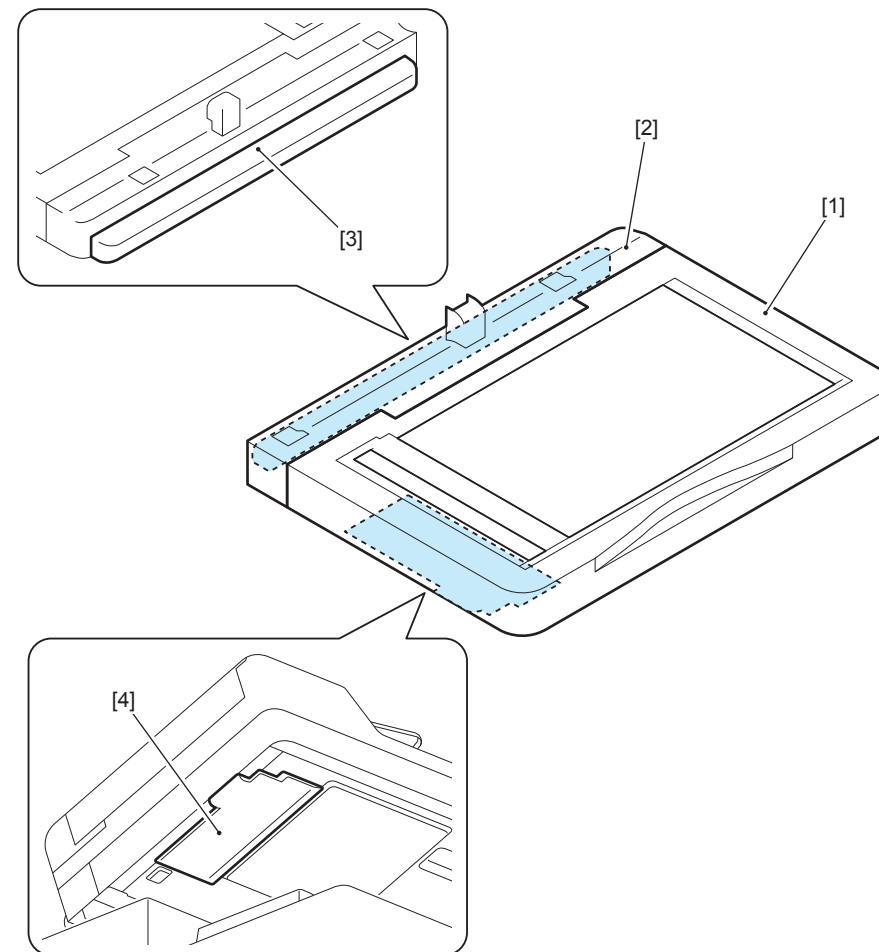


F-4-40

| No. | Parts Name | Reference |
|---|---|---|
| [1] | Copyboard Glass Unit | (Refer to page 4-69) |
| [2] | Reader Rear Cover 1 | |
| [3] | Reader Rear Cover 2 | |
| [4] | Reader Motor Cover | |

T-4-39

## ■ Printer (Front Side)
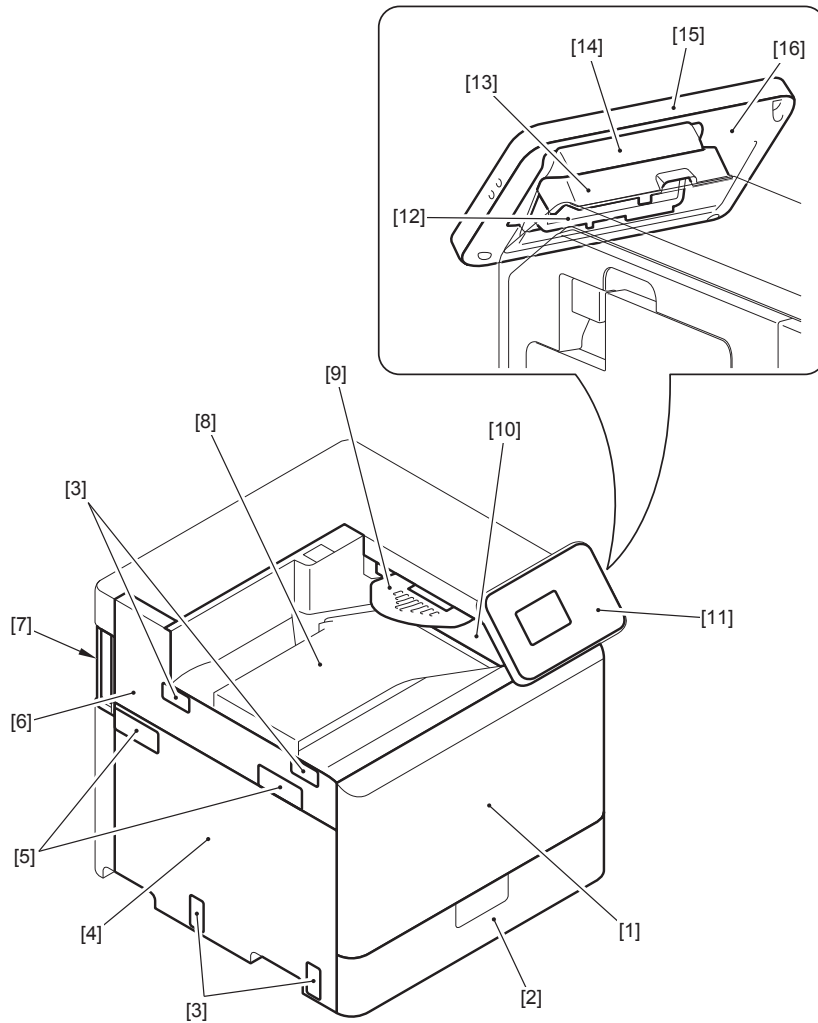


F-4-41

| No. | Parts Name | Reference |
|---|---|---|
| [1] | Front Cover | (Refer to page 4-33) |
| [2] | Cassette | |
| [3] | Face Cover | |
| [4] | Left Lower Cover | (Refer to page 4-36) |
| [5] | Device Port Cover | |
| [6] | Left Upper Cover | (Refer to page 4-36) |
| [7] | Rear Sub Cover | |
| [8] | Delivery Tray | |
| [9] | Reverse Tray | |
| [10] | Delivery Cover | (Refer to page 4-45) |
| [11] | Control Panel Front Cover | |
| [12] | Control Panel Lower Hinge Cover | |
| [13] | Control Panel Rear Hinge Cover | |
| [14] | Control Panel Upper Hinge Cover | |
| [15] | Control Panel Side Cover | |
| [16] | Control Panel Rear Cover | |

T-4-40

## ■ Printer (Rear Side)



F-4-42

| No. | Parts Name | Reference |
|-----|-----------|-----------|
| [1] | Rear Cover | (Refer to page 4-34) |
| [2] | FAN Cover | |
| [3] | Environment Heater Cover | |
| [4] | FAX Connector Cover | |
| [5] | Face Cover | |
| [6] | Right Lower Cover | |
| [7] | Multi-purpose Tray Lower Cover | |
| [8] | Right Front Cover | (Refer to page 4-37) |
| [9] | Main Power Switch Cover | |
| [10] | Right Upper Cover | (Refer to page 4-39) |
| [11] | Right Cover | (Refer to page 4-41) |
| [12] | Right Cover Open/Close Lever | |
| [13] | Right Rear Cover | (Refer to page 4-38) |
| [14] | Environment Heater Switch Cover | |
| [15] | Right Rear Lower Cover | (Refer to page 4-38) |
| [16] | Multi-purpose Tray | (Refer to page 4-44) |
| [17] | Multi-purpose Extension Tray | |
| [18] | Multi-purpose Tray Side Guide Plate | |

T-4-41

## ■ Internal View
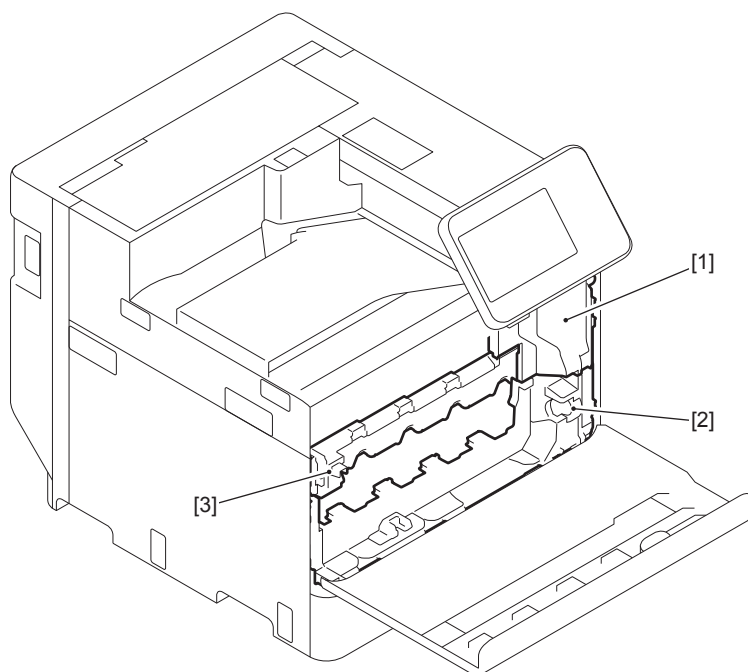


F-4-43

| No. | Parts Name | Reference |
|-----|------------|-----------|
| [1] | Front Inner Right Cover | |
| [2] | Front Inner Lower Cover | |
| [3] | Front Inner Upper Cover | |

T-4-42

## ● Removing the Front Cover



F-4-44

## ■ Procedure

1) Open the Front Cover [1].
2) Remove the Front Cover Retainer Band [2].
- 1 Boss [3]
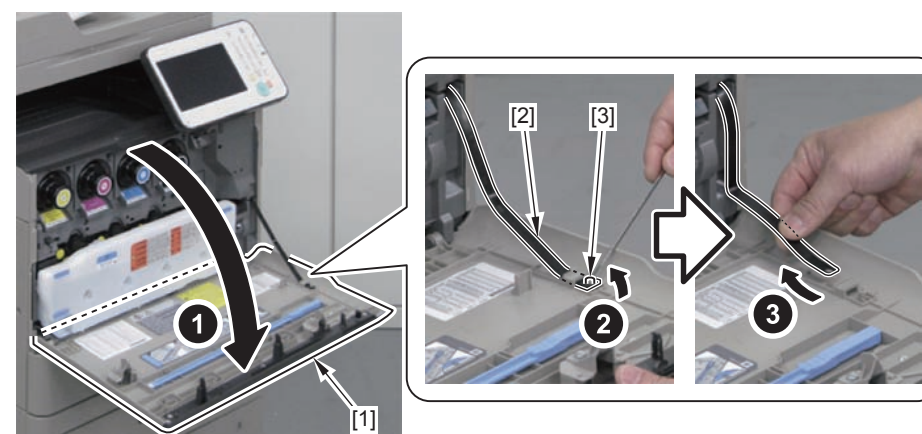


F-4-45

3) Pull out the cassette [1].

4) Remove the Front Cover [2] while it is halfway open.

• 1 Claw [3]

• 2 Shafts [4]



F-4-46

## Removing the Rear Cover 1



F-4-47

### ■ Procedure

NOTE:
If the optional Copy Card Reader [1] is installed, be sure to remove it first.
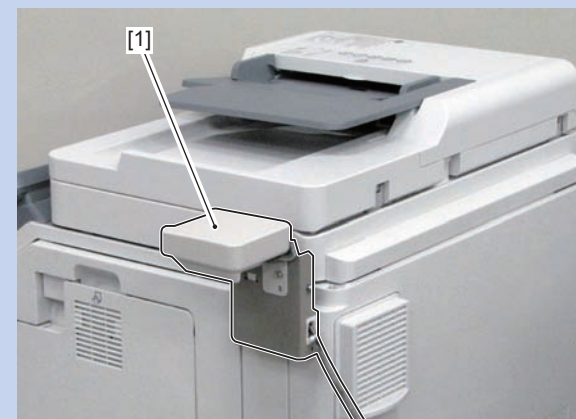


F-4-48

1) Remove the Reader Rear Cover 2 [1].

• 2 Claws [2]

• 2 Hooks [3]
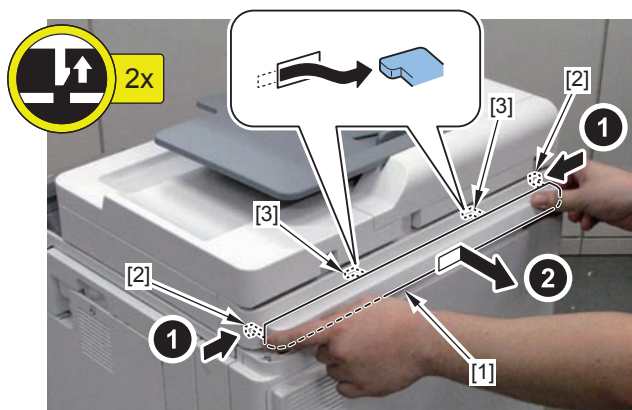

F-4-49

2-1) When the Cassette Pedestal is not installed, go to step 4.

2-2) When the Cassette Pedestal is installed, remove the 2 Face Covers [1].

• 1 Claw [2] for each location
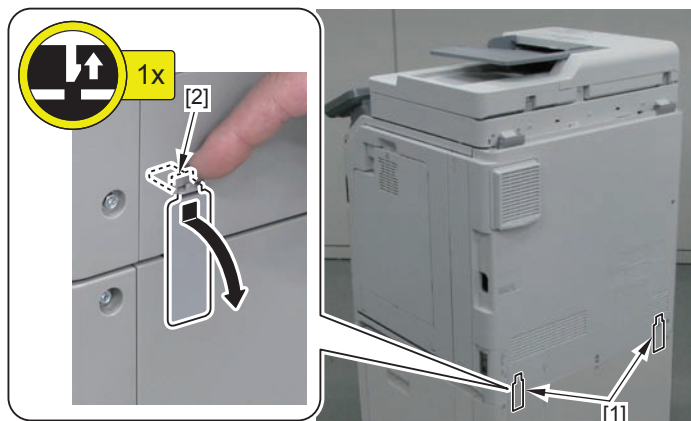

F-4-50

3) When the Cassette Pedestal is installed, remove the fixture [1].

• 1 Knurled Screw [2]
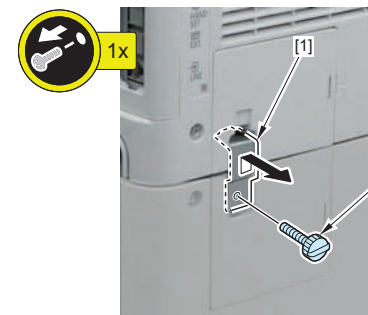

F-4-51

4) Remove the Rear Cover 1 [1].

• 6 Screws [2]

• 2 Claws [3]
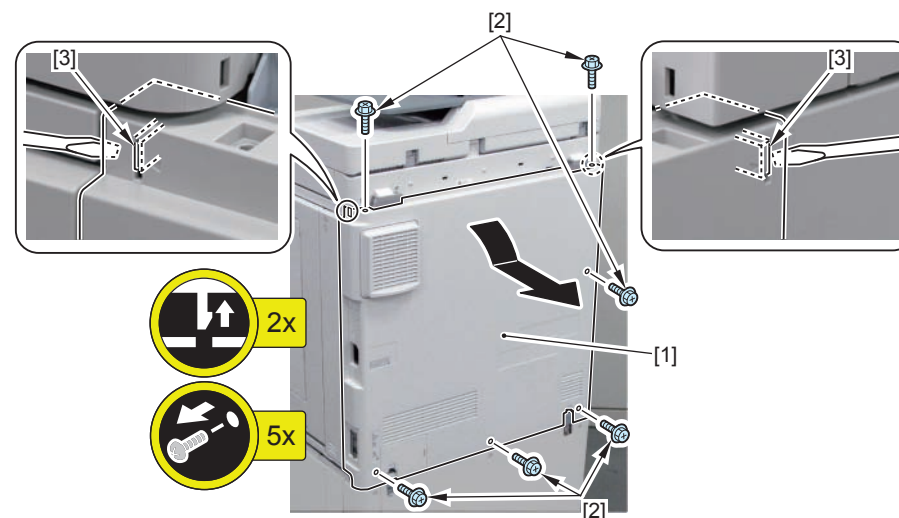

F-4-52

# Removing the Left Upper Cover
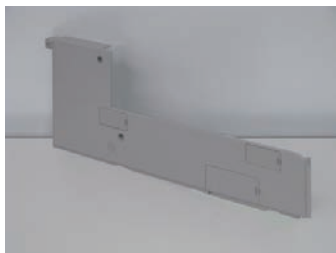


F-4-53

## ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

## ■ Procedure

1) Remove the Upper Left Cover [1].
- 3 Screws [2]
- 2 Hooks [3]



F-4-54

# Removing the Left Lower Cover



F-4-55

## ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

## ■ Procedure

1) Pull out the Cassette [1], and open the Front Cover [2].
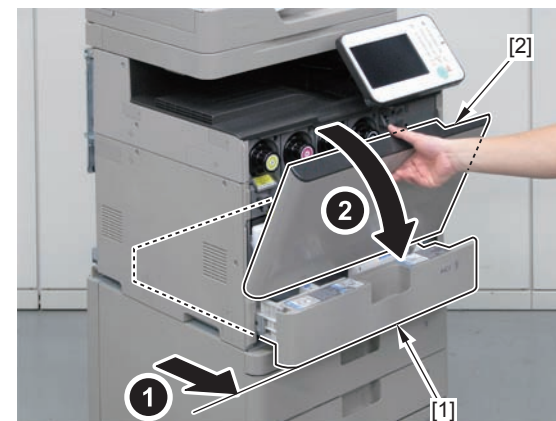


F-4-56

2) Remove the Left Lower Cover [1].

- 3 Screws [2]
- 2 Hooks [3]
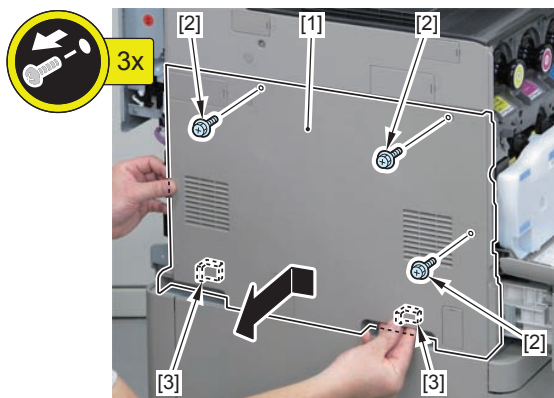


F-4-57

## Removing the Right Front Cover



F-4-58

■ **Pre-check items**

NOTE:
The 4 claws [1] of the Right Front Cover are shown in the figure below.



F-4-59

**4** Disassembly/Assembly > External Cover/Interior System > Removing the Right Rear Cover/Right Rear Lower Cover > Procedure

4-38
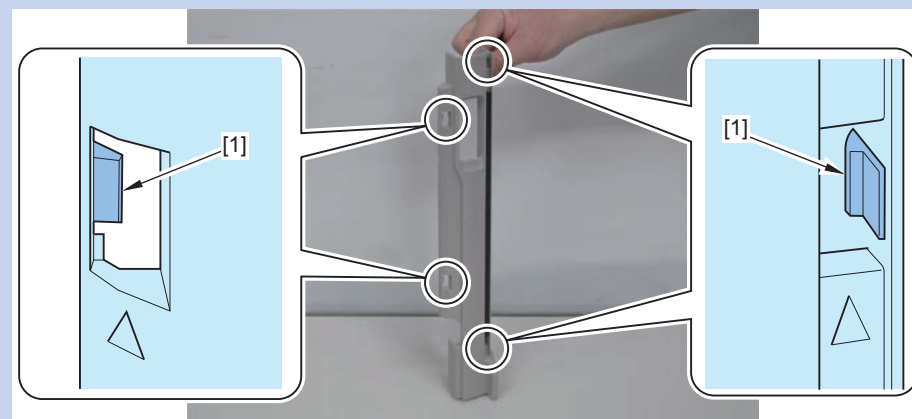
## ■ Procedure

1) Pull out the cassette [1], and open the Front Cover [2].
2) Pull the Right Cover Open/Close Lever [3], and open the Right Cover Unit [4].
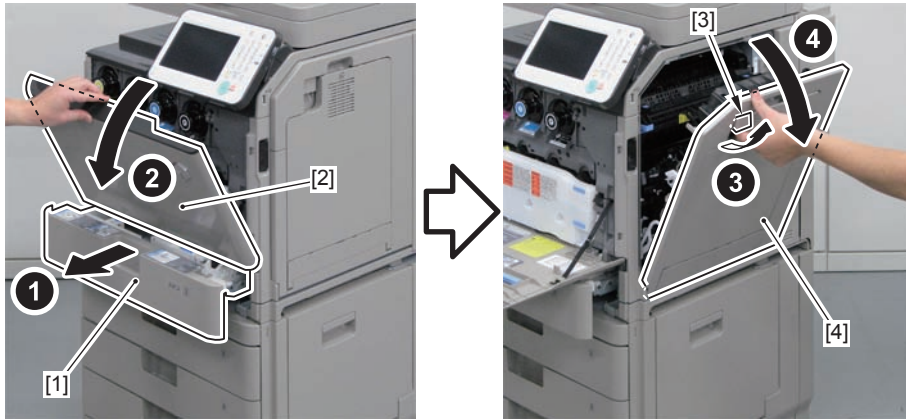


F-4-60

3) Remove the Right Front Cover [1].
- 4 Claws [2]
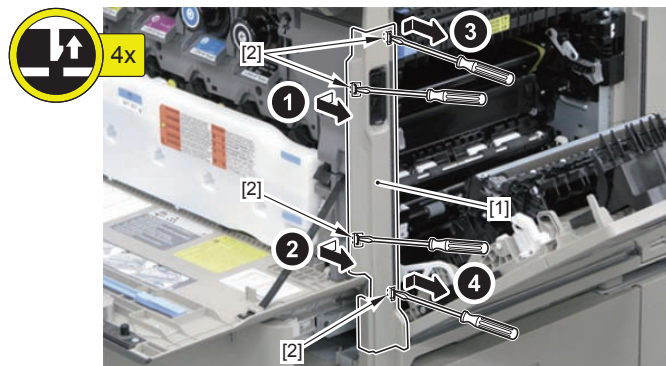


F-4-61

## ● Removing the Right Rear Cover/Right Rear Lower Cover



F-4-62

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

### ■ Procedure

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
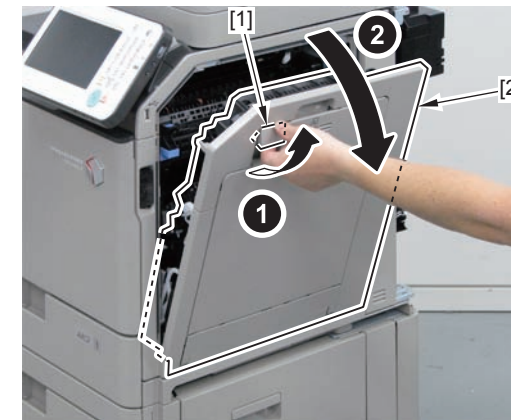


F-4-63

4-38

**4** Disassembly/Assembly > External Cover/Interior System > Removing the Right Rear Cover/Right Rear Lower Cover > Procedure

2) Release the lock of the Right Cover Stopper Front [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].
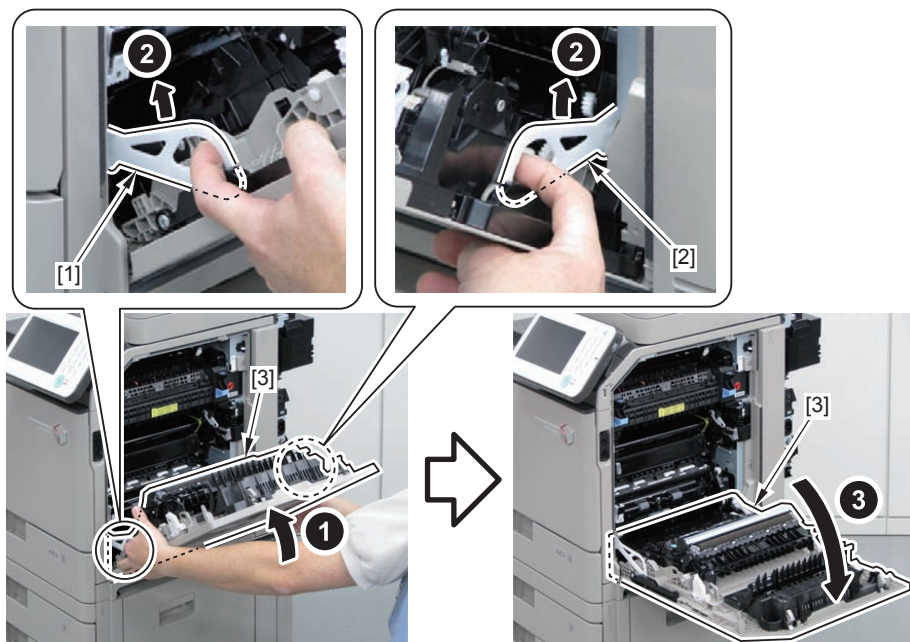


F-4-64

3) Remove the Right Rear Cover [1] and the Right Rear Lower Cover [2].
- 2 Screws [3]
- 2 Hooks [4]
- 2 Bosses [5]
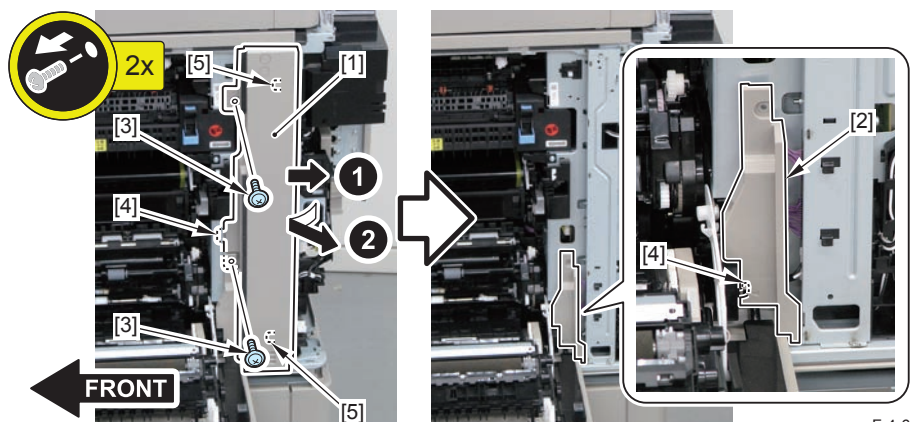


F-4-65

## Removing the Right Upper Cover



F-4-66

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Right Rear Cover/Right Rear Lower Cover(Refer to page 4-38).

### ■ Pre-check items

NOTE:
The 9 claws [1] of the Right Upper Cover are shown in the figure below.
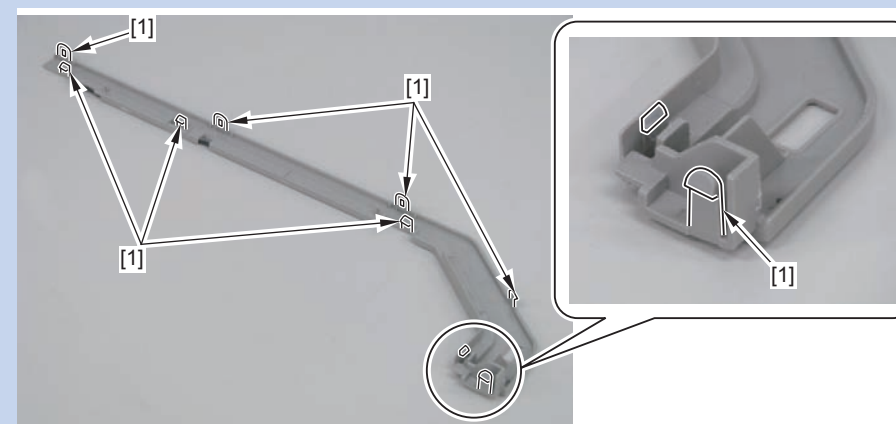


F-4-67

## ■ Procedure

1) Open the ADF Unit + Reader Unit [1].



F-4-68

2) Remove the Right Upper Cover [1].

• 9 Claws [2]

• 2 Bosses [3]
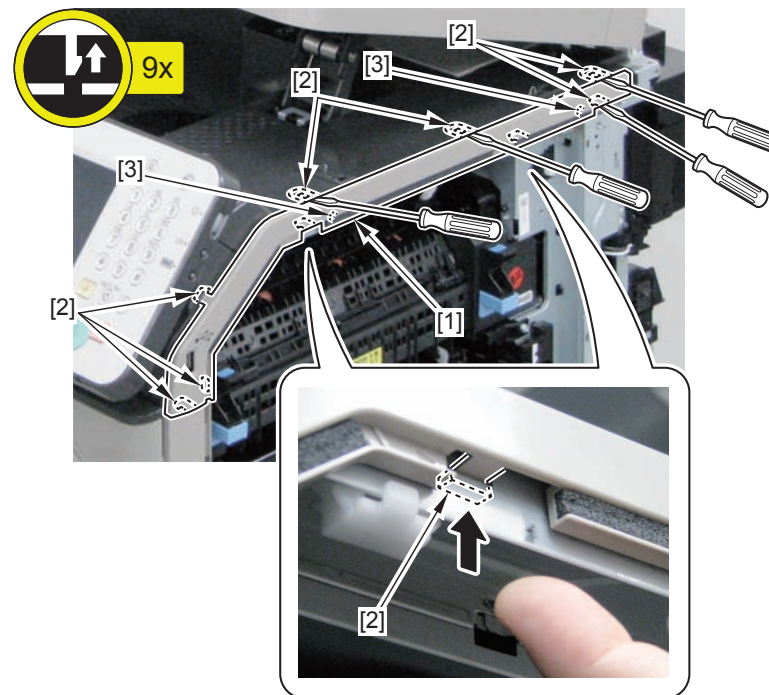


F-4-69

## Removing the Right Cover Unit
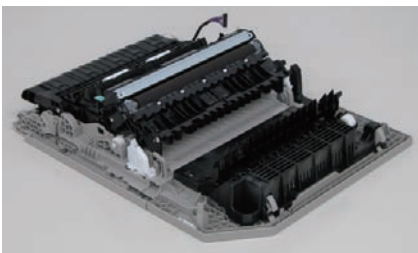


F-4-70

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Right Rear Cover/Right Rear Lower Cover(Refer to page 4-38).

### ■ Procedure

⚠ CAUTION:

- Be sure not to touch the roller surface [A] of the Secondary Transfer Outer Roller Unit when disassembling/assembling.
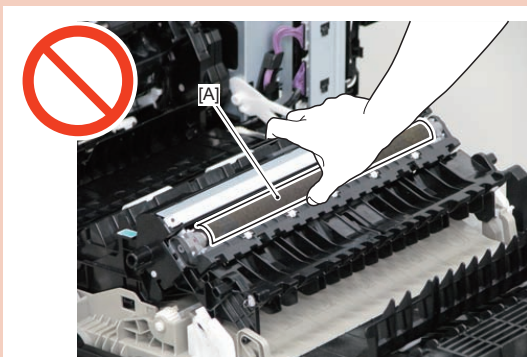


F-4-71

⚠ CAUTION:

- Be careful not to drop the Right Cover Unit [1] when disassembling/assembling.
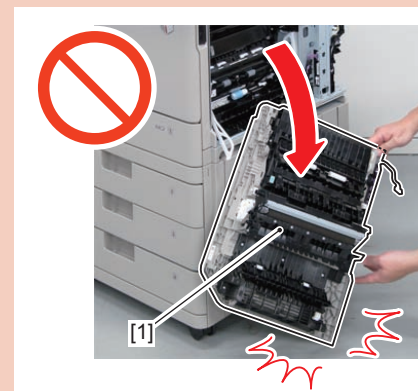


F-4-72

- Do not place the Right Cover Unit [2] directly on the floor after removing the Multi-purpose tray [1]. This is because the Multi-purpose Tray Pickup Roller/Multi-purpose Tray Feed Roller Unit [3] may be damaged.
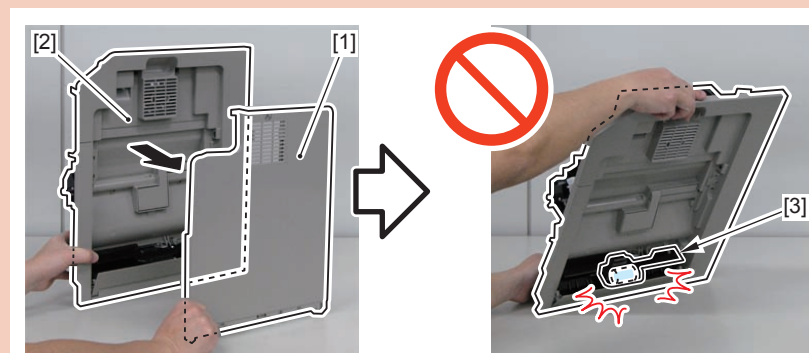


F-4-73

1) Disconnect the Connector [1].
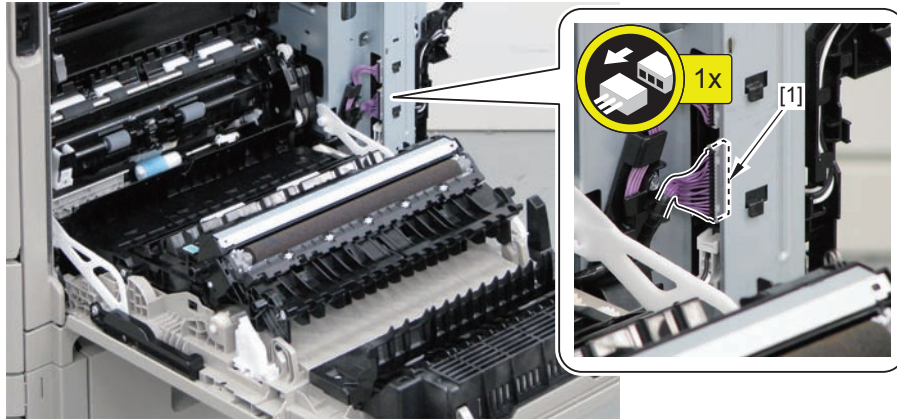


F-4-74

> ⚠ CAUTION:
>
> Be sure to disassemble/assemble by holding the Right Cover Unit [1] after step 2.
>
> 
>
> F-4-75
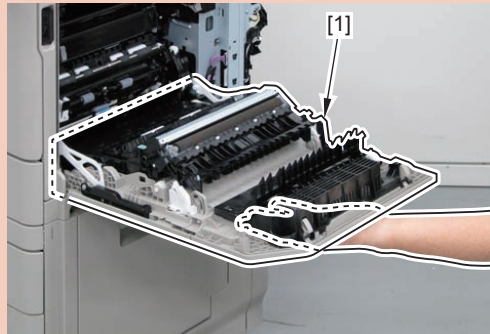
2) Remove the Right Cover Stopper Rear Holder [1].

- 1 Screw [2]
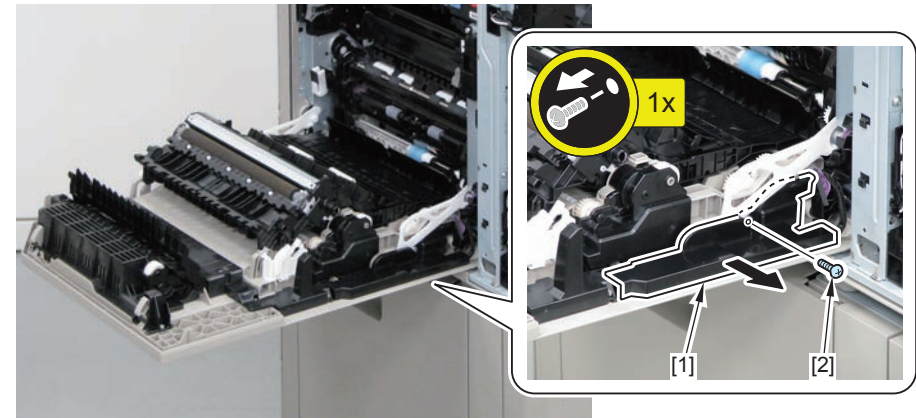


F-4-76

> NOTE: How to assemble the Right Cover Stopper Rear Holder
> When assembling, be sure to align the hook [1] and the boss [2], and align the shaft [3] of the Right Cover Stopper Rear with the groove [A] of the Right Cover Unit and the groove [B] of the Right Cover Stopper Rear Holder to install the holder.
>
> 
>
> F-4-77
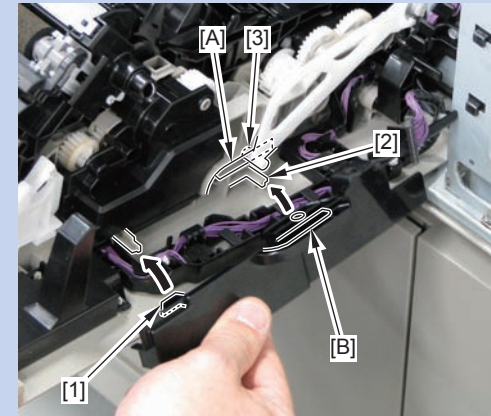
3)Remove the Right Cover Stopper Front Holder [1].

• 1 Screw [2]
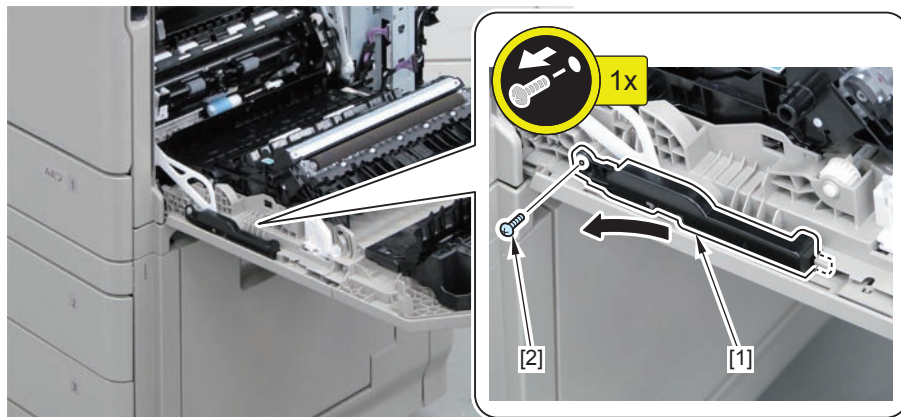


F-4-78

NOTE: How to assemble the Right Cover Stopper Front Holder
When assembling, align the hook [1] and the boss [2], and align the shaft [3] of the Right Cover Stopper Front with the groove [A] of the Right Cover Unit and the groove [B] of the Right Cover Stopper Front Holder.
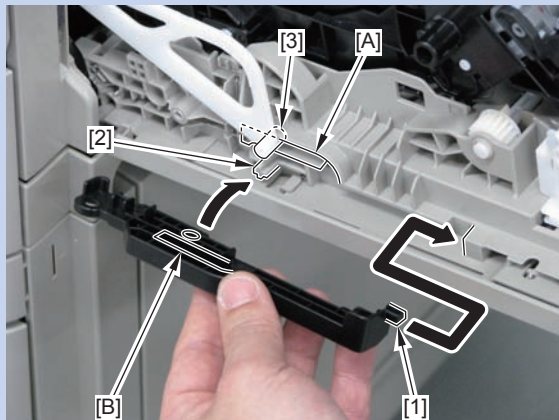


F-4-79

4)Remove the Right Cover Rear Support Holder [1].

• 1 Screw [2]
• 1 Boss [3]
• 2 Hooks [4]
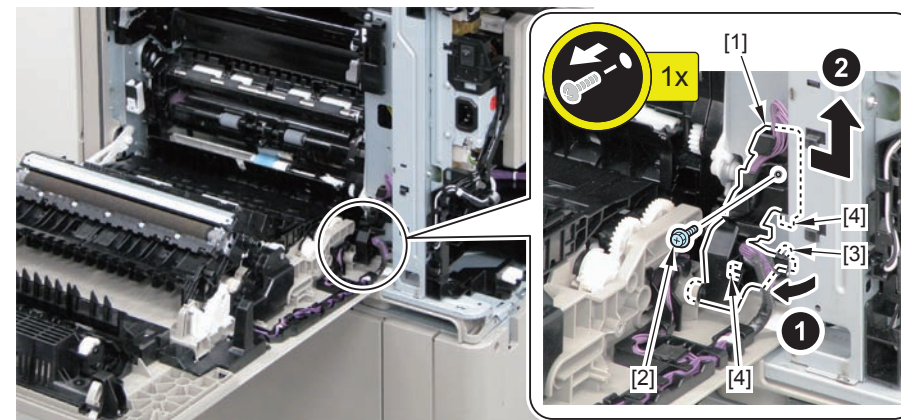


F-4-80

5)Remove the Right Cover Unit [1].

• 2 Shafts [2]
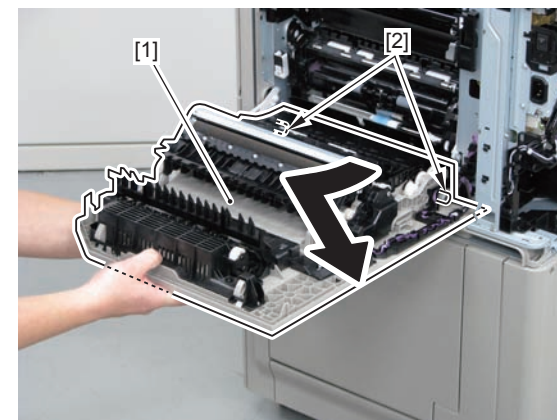


F-4-81

## Removing the Multi-purpose Tray



F-4-82

### ■ Procedure

CAUTION:

Be careful not to drop the Multi-purpose Tray Shaft Holder [2] in the host machine when disassembling/assembling.



F-4-83

1) Open the Multi-purpose Tray Lower Cover [1], and release the Multi-purpose Tray Shaft Holder [2].
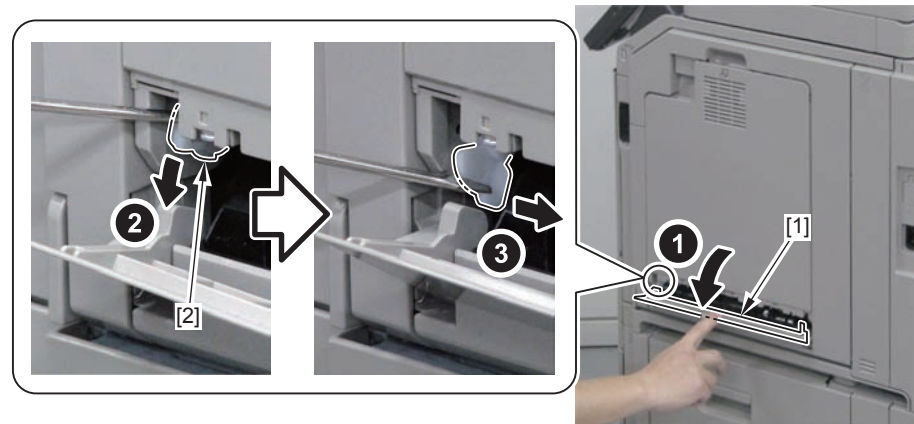


F-4-84

2) Remove the Multi-purpose Tray [1] and the Multi-purpose Tray Shaft Holder [2].

- 2 Shafts [3]
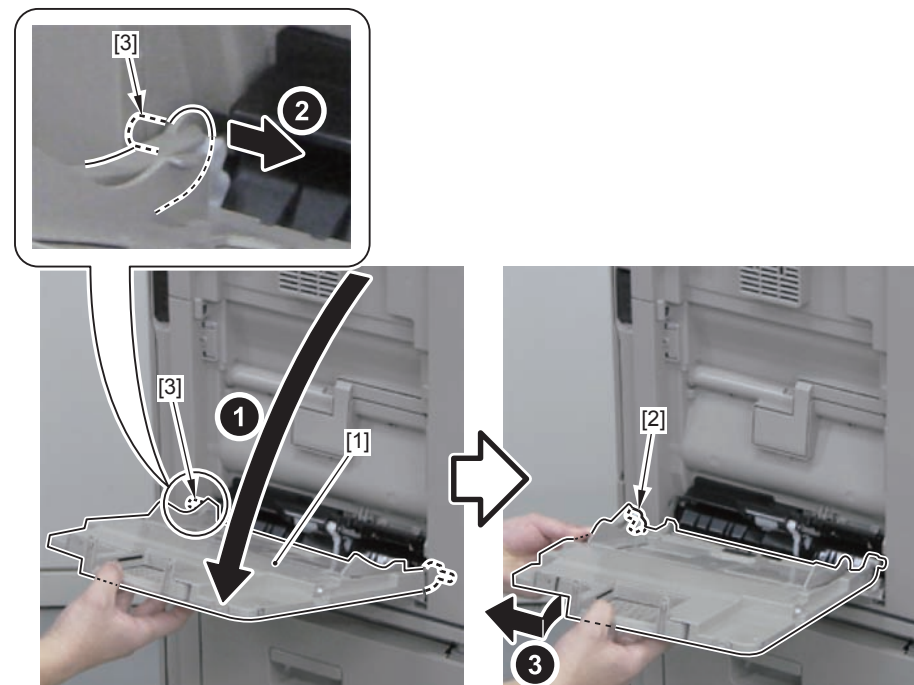


F-4-85

## Removing the Delivery Tray
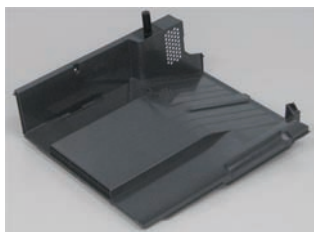


F-4-86

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Left Upper Cover(Refer to page 4-36).
3) Open the ADF Unit + Reader Unit [1] and the Front Cover [2](Refer to page 4-66)

### ■ Procedure

1) Remove the Delivery Tray [2] while pressing the damper [1].
• 2 Screws [3]
• 1 Hook [4]
• 4 Bosses [5]
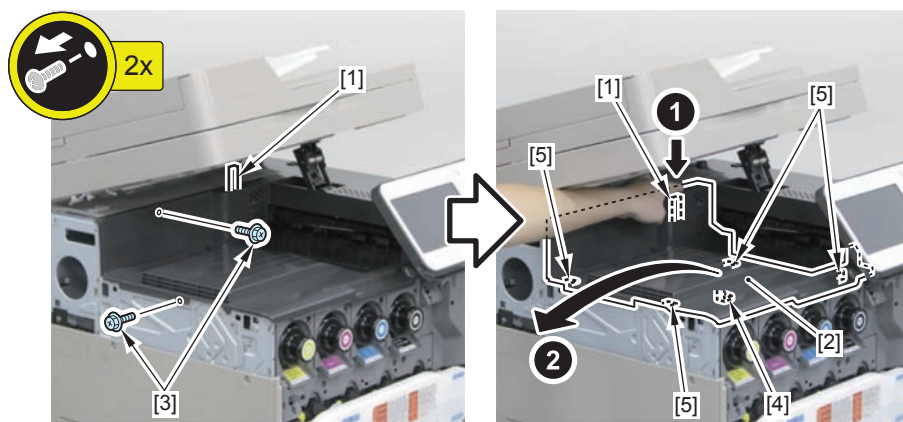


F-4-87

## Removing the Rear Upper Cover



F-4-88

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Open the ADF Unit + Reader Unit [1] and the Front Cover [2](Refer to page 4-66)

### ■ Procedure

⚠ CAUTION:

Be careful not to drop the ADF Unit + Reader Unit [1] when disassembling/assembling.



F-4-89

1) Remove the Rear Upper Cover [1].

• 2 Bosses [2]
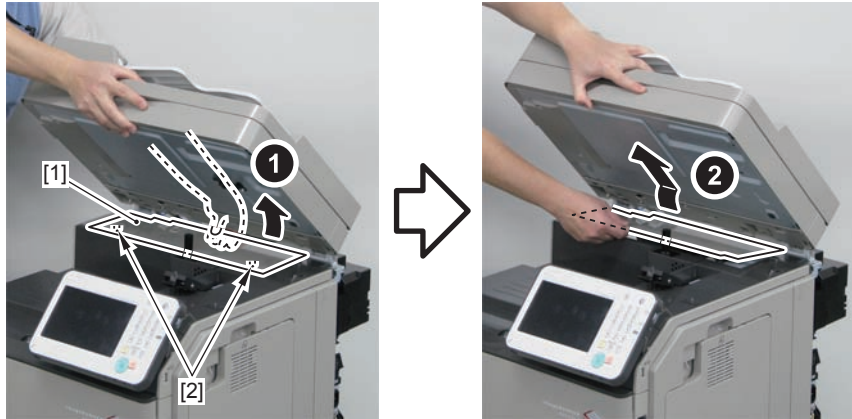


F-4-90

## Removing the Upper Cover
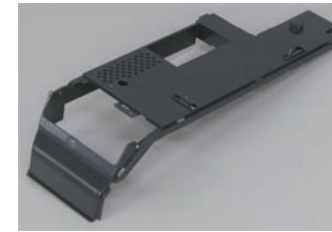


F-4-91

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

2) Remove the Right Rear Cover/Right Rear Lower Cover(Refer to page 4-38).

3) Remove the Right Upper Cover(Refer to page 4-39).

4) Remove the Control Panel Unit(Refer to page 4-47) .

5) Remove the Rear Upper Cover (Refer to page 4-45).

### ■ Procedure

1) Open the Front Cover [1].
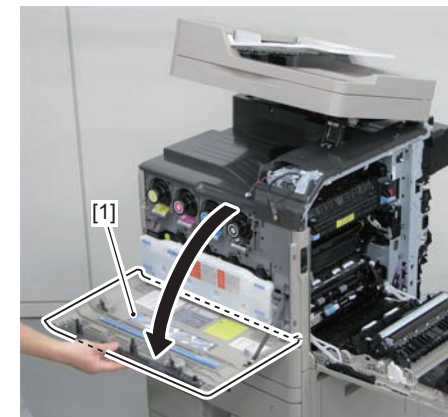


F-4-92

2) Remove the Upper Cover [2] while pressing the ADF Unit + Reader Unit [1].
- 1 Screw [3]
- 1 Boss [4]
- 1 Hook [5]

⚠ CAUTION:

Be careful not to drop the ADF Unit + Reader Unit [1] when disassembling/assembling.
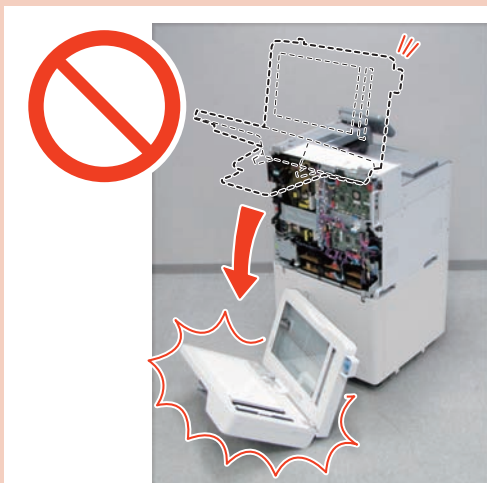
F-4-93
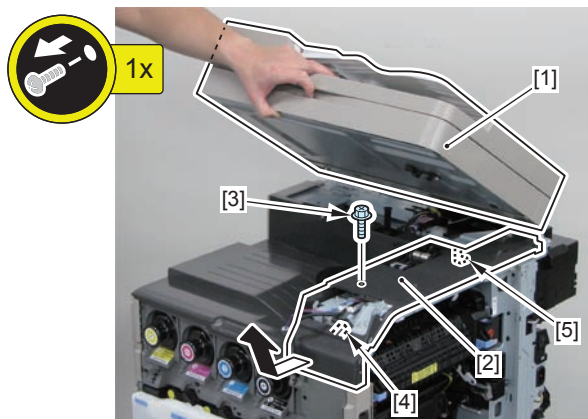
F-4-94

## ● Removing the Control Panel Unit

F-4-95

### ■ Procedure

1) Remove the Control Panel Rear Hinge Cover [1].
- 2 Bosses [2]
- 1 Claw [3]
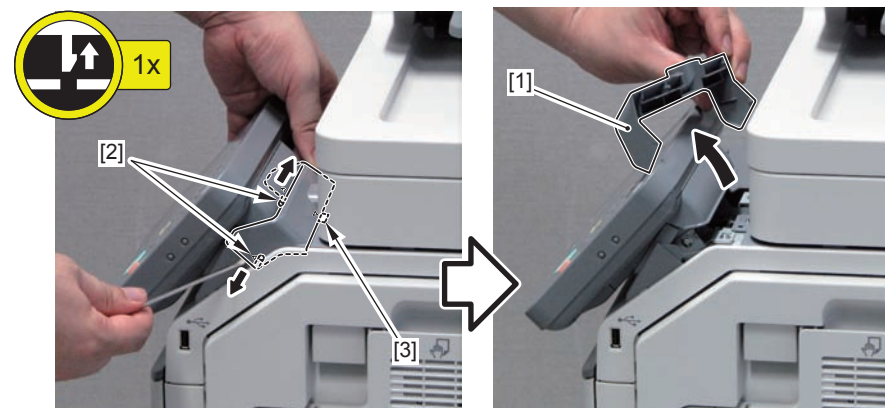
F-4-96

2) Remove the Control Panel Unit [1].

• 3 Screws [2]

• 2 Hooks [3]
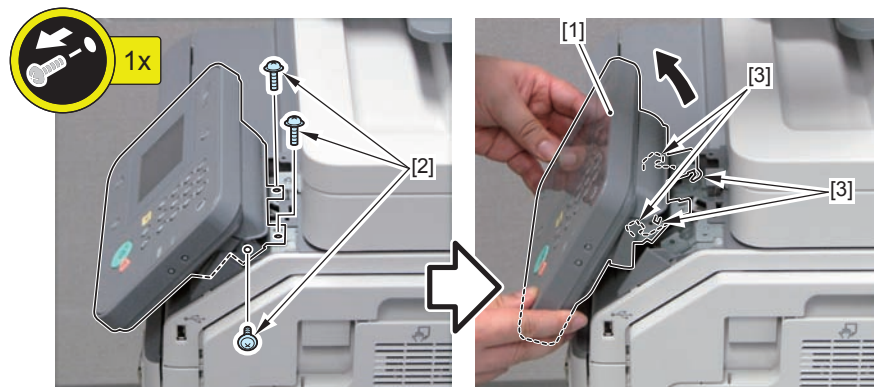


F-4-97

3) Remove the Control Panel Lower Hinge Cover [1].

• 2 Bosses [2]
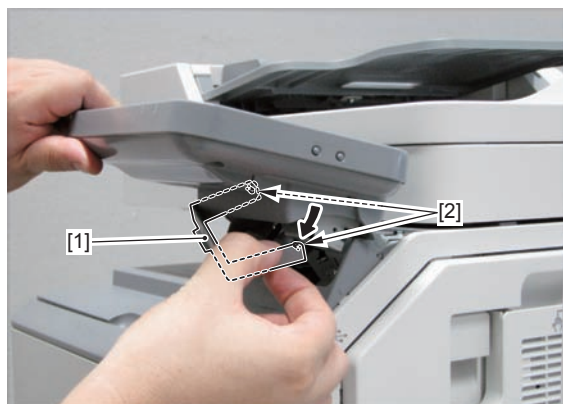


F-4-98

4) Free the 2 harnesses [1] on the Control Panel.

• Harness Guide [A]
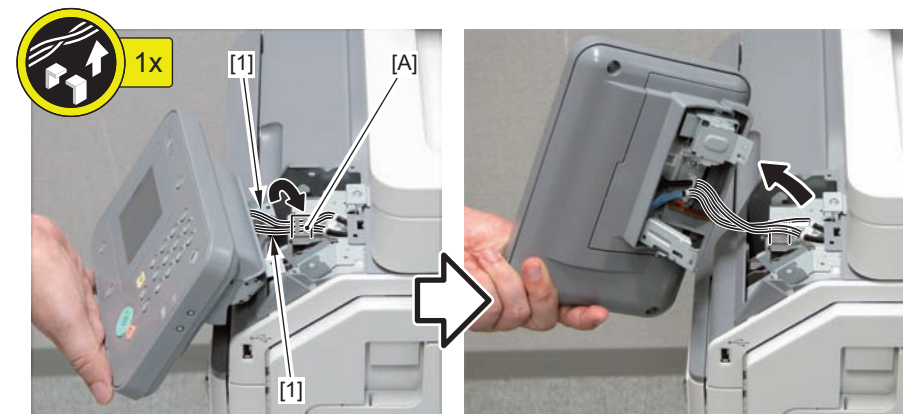


F-4-99

5) Remove the Control Panel Upper Hinge Cover [1].

• 2 Bosses [2]

• 2 Hooks [3]



F-4-100

8)Remove the Control Panel Unit [1] and the Control Panel Lower Hinge Cover [2].

- 1 Wire Saddle [3]
- 1 Reuse Band [4]
- 1 Control Panel Communication Connector [5]
- 1 Connector [6]
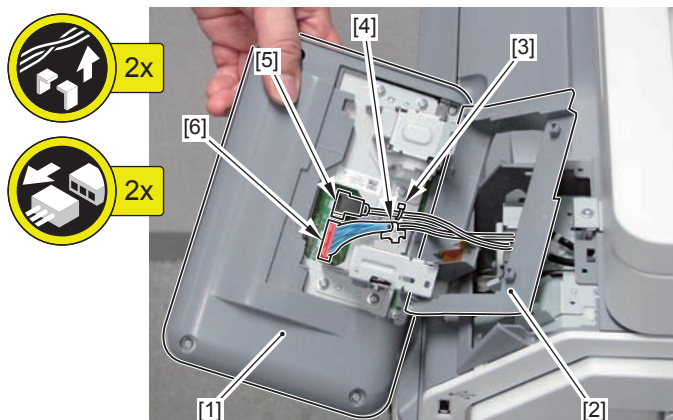


F-4-101

# Original Exposure/Feed System

## Layout Drawing



F-4-102
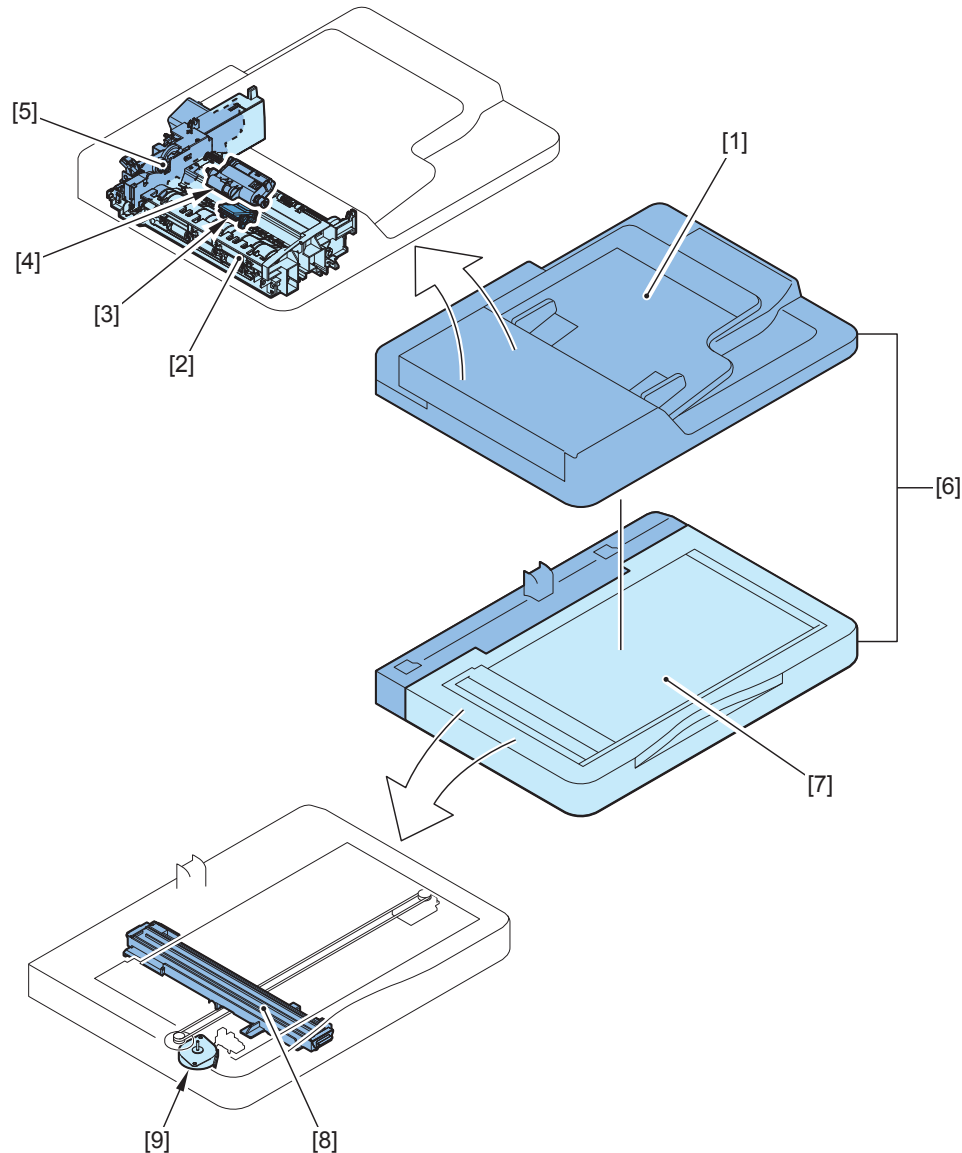
| No. | Parts Name | Main Unit | Remarks | Reference |
|-----|-----------|-----------|---------|-----------|
| [1] | ADF Unit | Product Configuration | | (Refer to page 4-51) |
| [2] | ADF Pickup Feed Unit | ADF Unit | | (Refer to page 4-61) |
| [3] | Separation Pad | ADF Unit | | (Refer to page 4-60) |
| [4] | ADF Pickup Unit | ADF Unit | | (Refer to page 4-59) |
| [5] | ADF Feed Drive Unit | ADF Pickup Feed Unit | | (Refer to page 4-64) |
| [6] | ADF Unit + Reader Unit | Product Configuration | | (Refer to page 4-66) |
| [7] | Copyboard Glass Unit | Reader Unit | | (Refer to page 4-69) |
| [8] | CIS Unit | Reader Unit | | (Refer to page 4-73) |
| [9] | Reader Motor | Reader Unit | M01 | (Refer to page 4-78) |

T-4-43

## Removing the ADF Unit
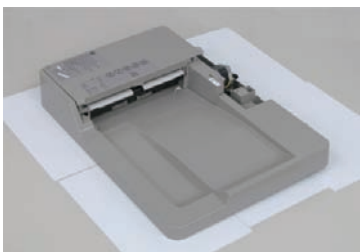


F-4-103

### ■ Procedure

> ⚠ CAUTION:
>
> Be careful not to drop the ADF [1] when disassembling/assembling.
>
> 
>
> F-4-104

> CAUTION:
>
> Be careful not to damage the White Sheet [1] and the White Plate [2] of the ADF Unit when disassembling/assembling.
>
> 
>
> F-4-105

1) Open the Feeder Cover [1].
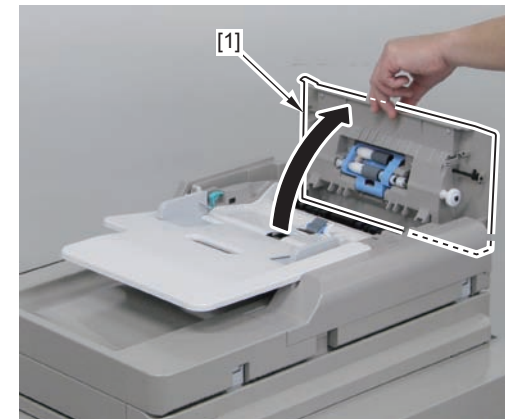


F-4-106

2) Remove the Original Tray [1].

- 1 Claw [2]
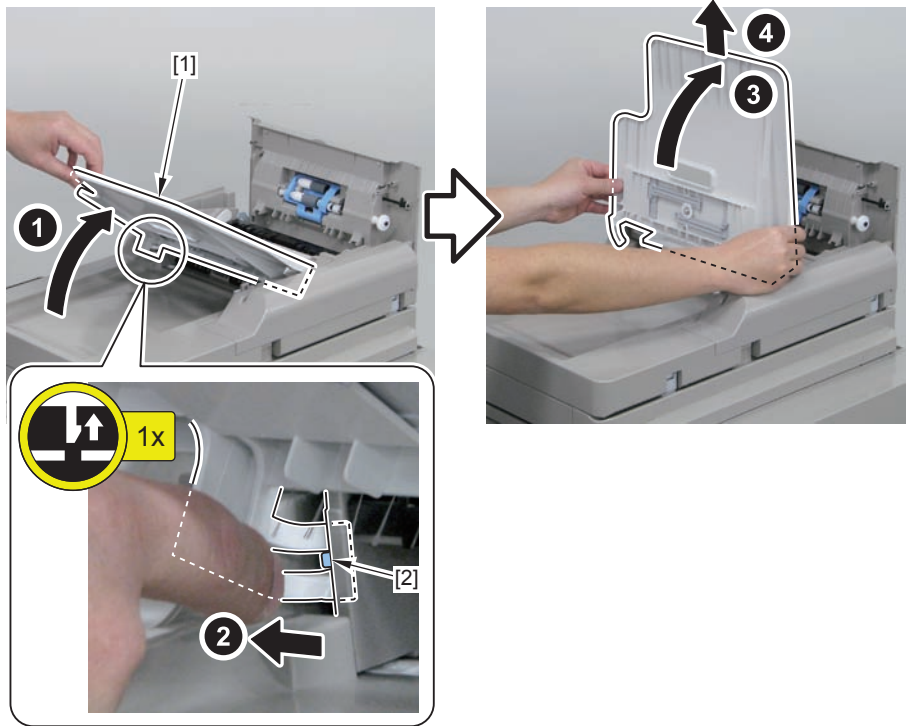


F-4-107

3) Remove the ADF Rear Cover [1].

- 1 Boss [2]
- 5 Hooks [3]
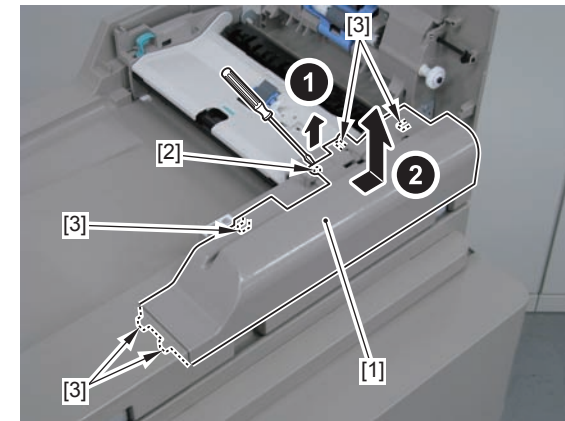


F-4-108

4) Disconnect the terminal [1] of the Grounding Wire.

- 1 Screw [2]

5) Disconnect the 3 connectors [3].

- 1 Reuse Band [4]
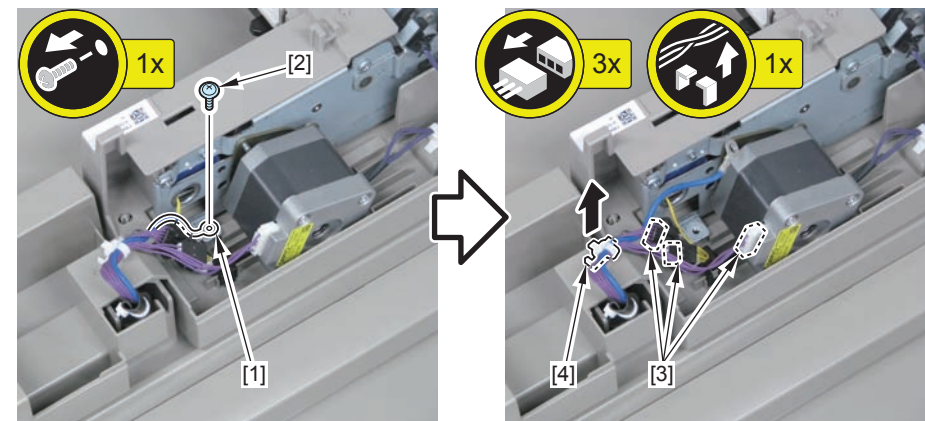


F-4-109

6) Close the Feeder Cover [1].
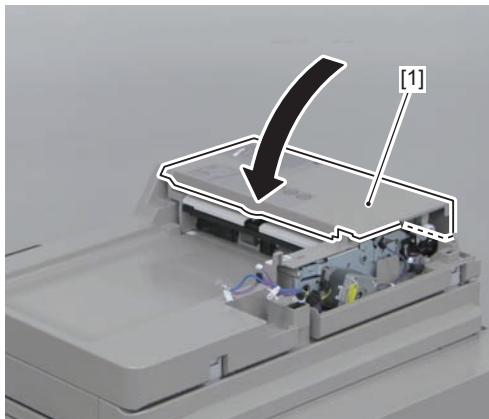


F-4-110

7) Remove the ADF Unit [2] while freeing the harness [1].

- Harness Guide [A]
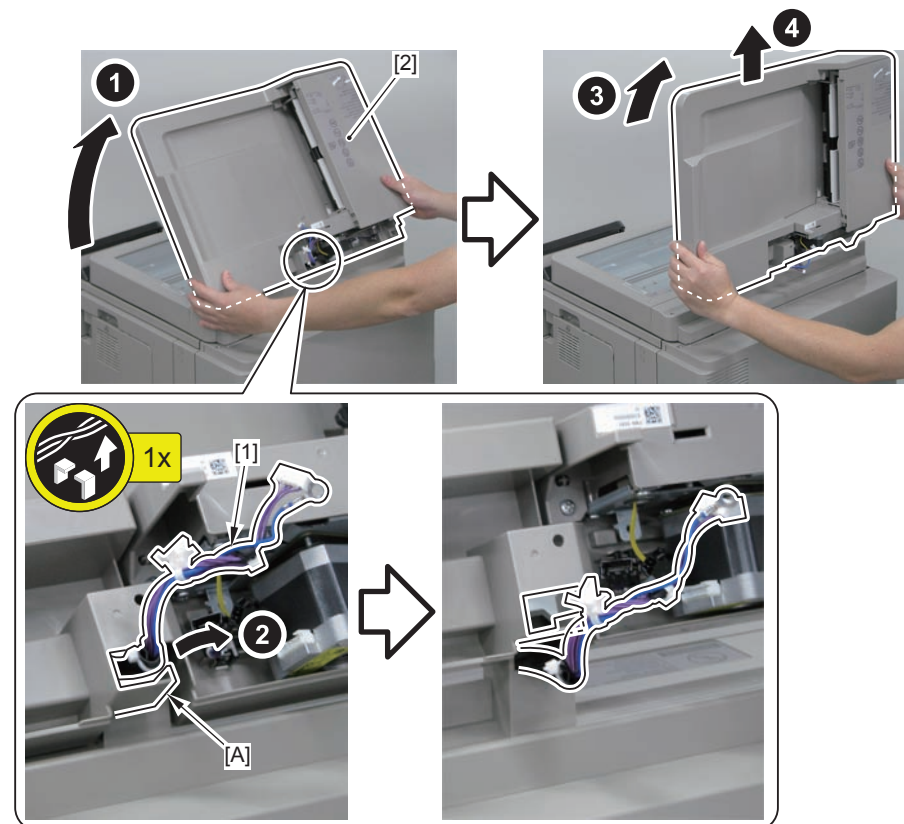


F-4-111

## ■ ADF Unit

### ● Prepare before Adjustment

Prepare a test chart. A test chart is made when there is no test chart.

A test chart is drawn the rectangle that the end of 4 is smaller by 10 mm than a paper, and a test chart is made in the form of A4 or LTR.

> NOTE:
> Write a character and a mark to know the direction of the copied image.
> (Make sure that the face, back, leading edge and trailing edge of paper can be indetified.)

10 mm

10 mm       10 mm

10 mm

F-4-112

### ● Procedure after Replacement

> CAUTION:
>
> When the ADF has been replaced or removed from the reader, the following adjustment is necessary.

## Adjustment of the Degree of a Right Angle

1) Set a test chart on ADF, and give one sheet of copy.
2) Confirm the degree of a right angle of the image on the leading edge of the test chart and the copied form.
   Measure the dimension of A and B at the leading edge of the copied form.
   When the amount of skew is not in the following standard, adjust it from the step 3).
   - Standard Value: A - B = 0 +/- 1.5 mm

A

Feed direction    Copy of the test chart

B

F-4-113

3) Loosen the 4 Fixing Screws of the Right Hinge, and then move the hinge to adjust the squareness.

[2]      [2]

4x

[1]      [1]

F-4-114

4) After completion of the adjustment, tighten the 4 Fixing Screws of the Right Hinge you loosened in step 3).

## DADF reading position adjustment

After executing the reading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|---|---|
| 1 | STRD-POS |

T-4-44

| No. | COPIER > ADJUST > ADJ-XY > |
|---|---|
| 2 | STRD-POS |

T-4-45

## Adjustment of the leading edge margin of image at ADF reading (single-sided)

1) Set a test chart on ADF, and give one sheet of single-sided copy.
2) Compare the leading edge registration of the test chart and the copy of the test chart.
   Carry out the following process when adjustment is necessary.
3) Select the item in the service mode.

| FEEDER > ADJUST > |
|---|
| DOCST |

T-4-46

4) Input value, and adjust an image.
   - When a copied image moves to the trailing edge: Increase value
   - When a copied image moves to the leading edge: Decrease value
   - Adjustment unit: 0.1 mm

< When a copied image moves to the rear >   < When a copied image moves to the front >
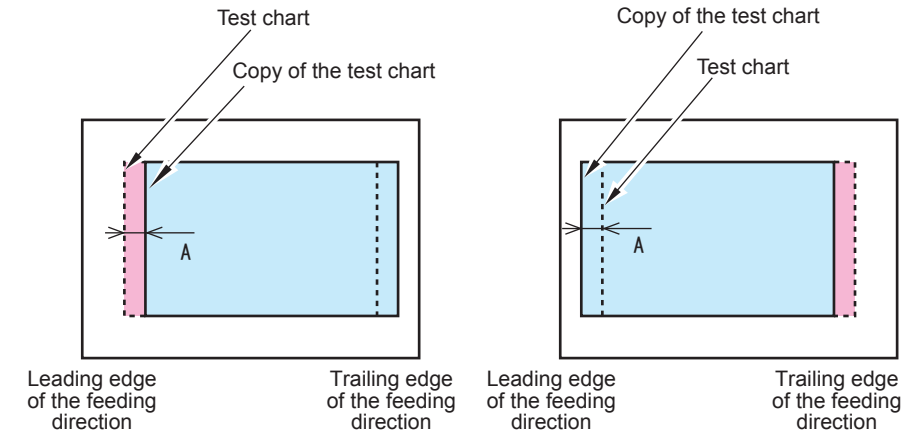


F-4-115

5) Write the new changed value in the service label.
6) Exit the service mode.

CAUTION:

Confirm that the Degree of a Right Angle is correct after you finish this adjustment.

Adjust again from the Adjustment of the Degree of a Right Angle when the Degree of a Right Angle is not correct.

## Adjustment of the leading edge margin of image at ADF reading (duplex/front side)

1) Set a test chart on ADF, and give one sheet of copy.

2) Compare the leading edge registration of the test chart and the copy of the test chart.
   Carry out the following process when adjustment is necessary.

3) Select the item in the service mode.

| FEEDER > ADJUST > |
|---|
| DOCSTDUP |
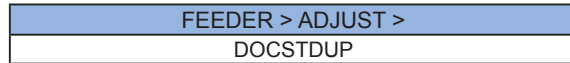
T-4-47

4) Input value, and adjust an image.
   - When a copied image moves to the trailing edge: Increase value
   - When a copied image moves to the leading edge: Decrease value
   - Adjustment unit: 0.1 mm

< When a copied image moves to the rear >    < When a copied image moves to the front >



F-4-116

5) Write the new changed value in the service label.

6) Exit the service mode.

> **CAUTION:**
>
> Confirm that the Degree of a Right Angle is correct after you finish this adjustment.
>
> Adjust again from the Adjustment of the Degree of a Right Angle when the Degree of a Right Angle is not correct.

## Adjustment of the leading edge margin of image at ADF reading (duplex/back side)

1) Set a test chart on ADF, and give one sheet of copy.

2) Compare the leading edge registration of the test chart and the copy of the test chart.
   Carry out the following process when adjustment is necessary.

3) Select the item in the service mode.

| FEEDER > ADJUST > |
|---|
| DOCST2 |

T-4-48

4) Input value, and adjust an image.
   - When a copied image moves to the trailing edge: Increase value
   - When a copied image moves to the leading edge: Decrease value
   - Adjustment unit: 0.1 mm

< When a copied image moves to the rear >    < When a copied image moves to the front >



F-4-117

5) Write the new changed value in the service label.

6) Exit the service mode.

> **CAUTION:**
>
> Confirm that the Degree of a Right Angle is correct after you finish this adjustment.
>
> Adjust again from the Adjustment of the Degree of a Right Angle when the Degree of a Right Angle is not correct.

## Adjust the image position (horizontal scanning direction/front side) at ADF reading.

1) Place a test chart on the ADF, and make one single-sided copy.
2) Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

10 +/- 2mm

Feed direction     Copy of the test chart

F-4-118

3) Select the item in the service mode.

| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-Y-DF |

T-4-49

4) Input value, and adjust an image.
  • When a copied image moves to the rear: Decrease value
  • When a copied image moves to the front: Increase value
  • Adjustment unit: 0.1 mm

< When a copied image moves to the rear >   < When a copied image moves to the front >

Copy of the test chart          Copy of the test chart

Test chart             Test chart

A                 A

Feed direction                Feed direction

F-4-119

5) Write the new changed value in the service label.
6) Exit the service mode.

## Fine adjustment of the image magnification ratio at ADF reading (front side)

1) Set the image of the test chart upward in ADF, and give one sheet of copy.
2) Compare the image length of the feed direction of the test chart and the copy of the test chart.
   Carry out the following process when adjustment is necessary.
3) Select the item in the service mode.

| FEEDER > ADJUST > |
| --- |
| LA-SPEED |

T-4-50

4) Input value, and adjust an image.
   • When a copied image is long: Increase value (The feeding speed increases)
   • When a copied image is short: Decrease value (The feeding speed decreases)
   • Adjustment unit: 0.1 %

< When a copied image moves to the rear >　　< When a copied image moves to the front >



F-4-120

5) Write the new changed value in the service label.
6) Exit the service mode.

## Fine adjustment of the image magnification ratio at ADF reading (back side)

1) Set the image of the test chart downward in ADF, and give one sheet of copy.
2) Compare the image length of the feed direction of the test chart and the copy of the test chart.
   Carry out the following process when adjustment is necessary.
3) Select the item in the service mode.

| FEEDER > ADJUST > |
| --- |
| LA-SPD2 |

T-4-51

4) Input value, and adjust an image.
   • When a copied image is long: Increase value (The feeding speed increases)
   • When a copied image is short: Decrease value (The feeding speed decreases)
   • Adjustment unit: 0.1 %

< When a copied image moves to the rear >　　< When a copied image moves to the front >



F-4-121

5) Write the new changed value in the service label.
6) Exit the service mode.

## Adjustment the White Level for ADF Scanning

1) Take the action stated below in the service mode.

(Lv.1) COPIER > FUNCTION > CCD > DF-WLVL1/2 (White level adj in book/DADF mode)

1. Place a sheet of paper that the user usually uses on the Copyboard Glass, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
| --- |
| DF-WLVL1 |

White level adj in book mode: color

T-4-52

2. Place a sheet of paper that the user usually uses on the DADF, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
| --- |
| DF-WLVL2 |

White level adj in DADF mode:

T-4-53

NOTE:
The result of the adjustment is reflected to COPIER> ADJUST> CCD>  DFTAR-R/ DFTAR-G/ DFTAR-B / DFTAR2-R/ DFTAR2-G/ DFTAR2-B / DFTAR3-R/ DFTAR3-G/ DFTAR3-B

## Removing the ADF Pickup Unit



F-4-122

## ■ Procedure

CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.
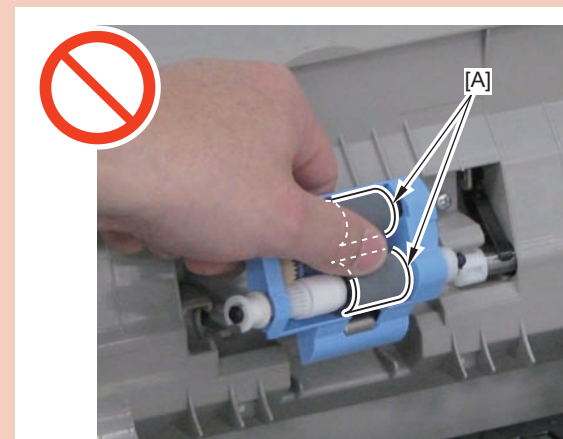


F-4-123

1) Open the Feeder Cover [1].
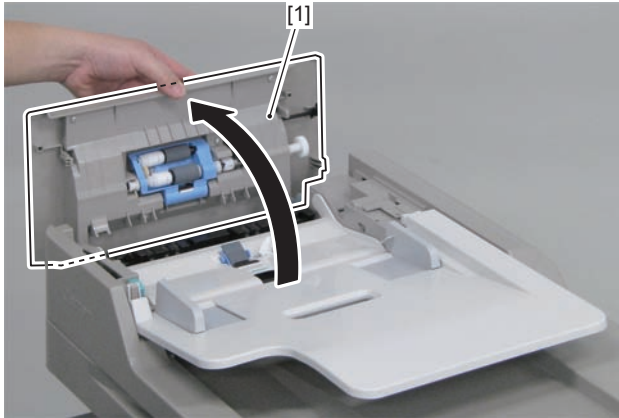


F-4-124

2) Remove the ADF Pickup Unit [1].

- 1 Claw [2]
- 1 Shaft [3]
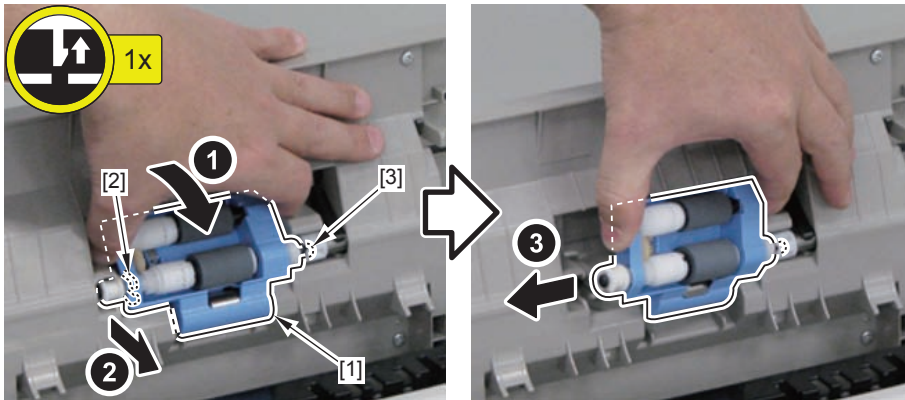


F-4-125

## Removing the ADF Separation Pad
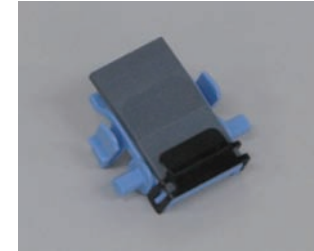


F-4-126

## ■ Procedure

CAUTION:

Be sure not to touch the surface [A] of the pad when disassembling/assembling.



F-4-127

1) Open the Feeder Cover [1].
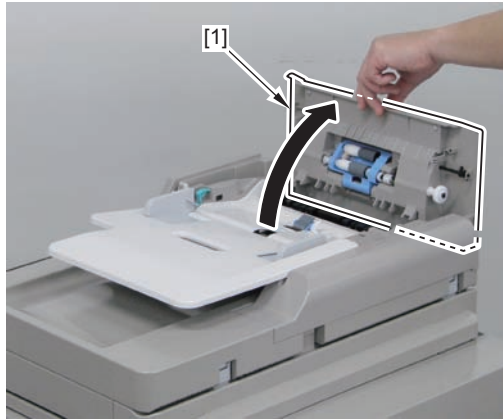


F-4-128

2) Remove the ADF Separation Pad [1].
- 2 Claws [2]
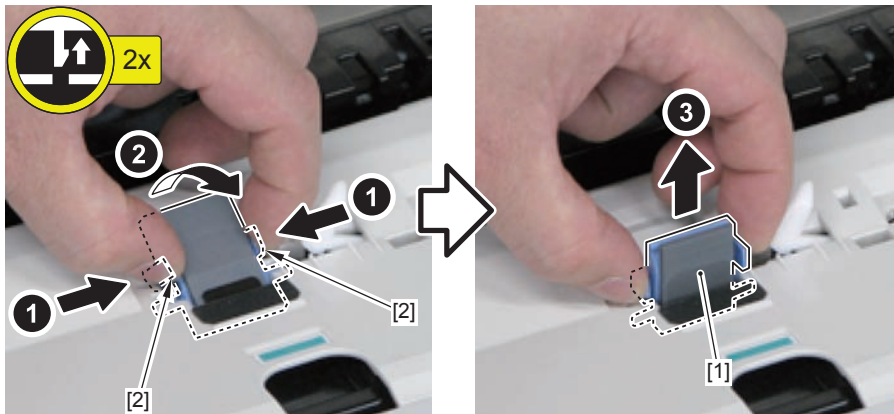


F-4-129

## Removing the ADF Pickup Feed Unit



F-4-130

## ■ Procedure

CAUTION:

Be careful not to damage the white sheet [1] of the ADF Unit when disassembling/assembling.



F-4-131

1) Open the ADF Unit [1] to remove the White Plate [2].

• 4 Hooks [3]
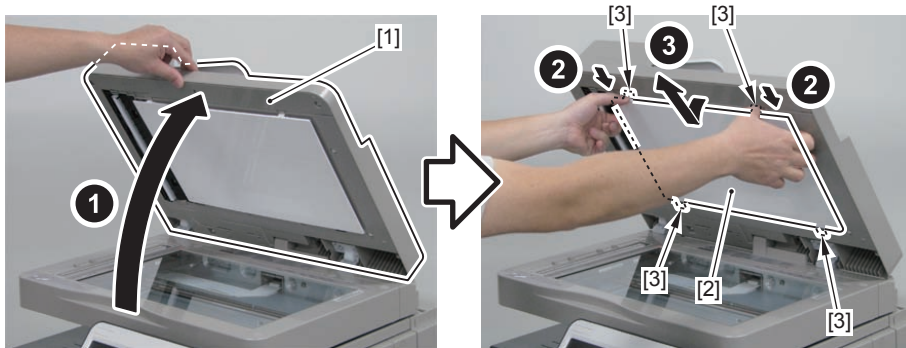


F-4-132

2) Remove the 2 screws [1], and then close the ADF Unit [2].
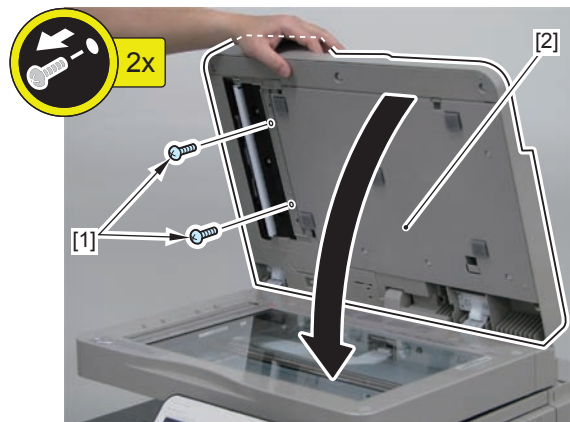


F-4-133

3) Open the Feeder Cover [1].
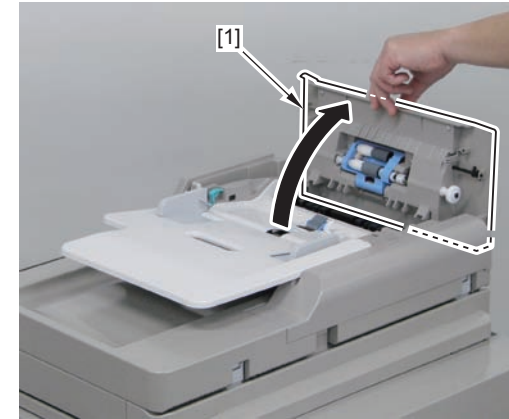


F-4-134

4) Remove the Original Tray [1].

• 1 Claw [2]
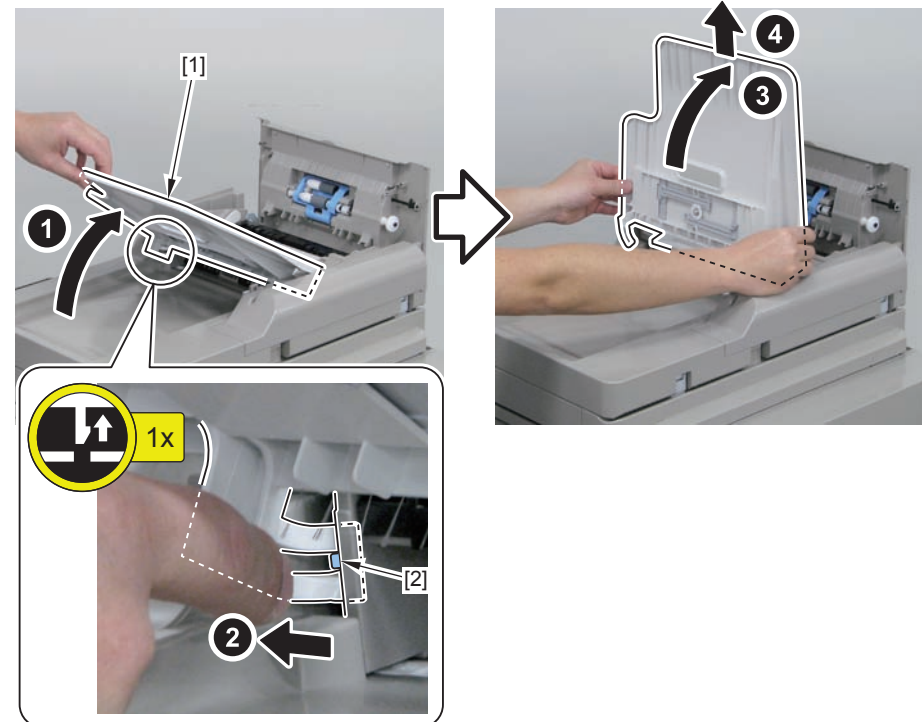


F-4-135

5) Remove the ADF Rear Cover [1].

- 1 Boss [2]
- 5 Hooks [3]
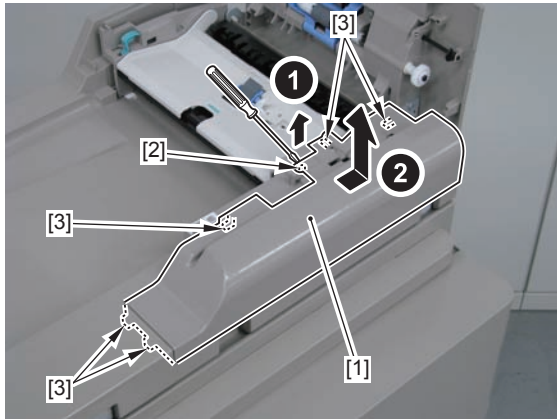
F-4-136

6) Disconnect the terminal [1] of the Grounding Wire.

- 1 Screw [2]

7) Disconnect the 5 connectors [3].

1x

5x
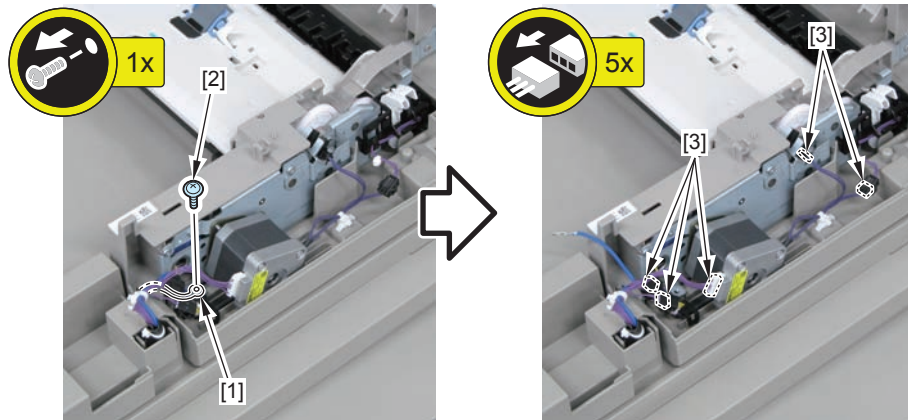
F-4-137

8) Remove the 4 screws [1].

9) Close the Feeder Cover [2], and then remove the ADF Pickup Feed Unit [3].

CAUTION:

Be sure not to touch the surface [A] of the Delivery Roller when disassembling/assembling.

F-4-138

4x
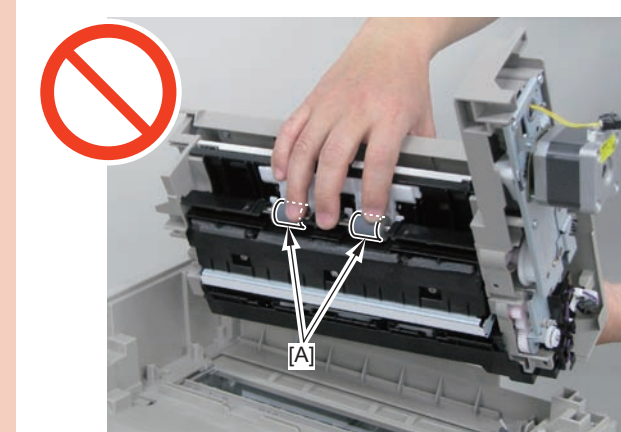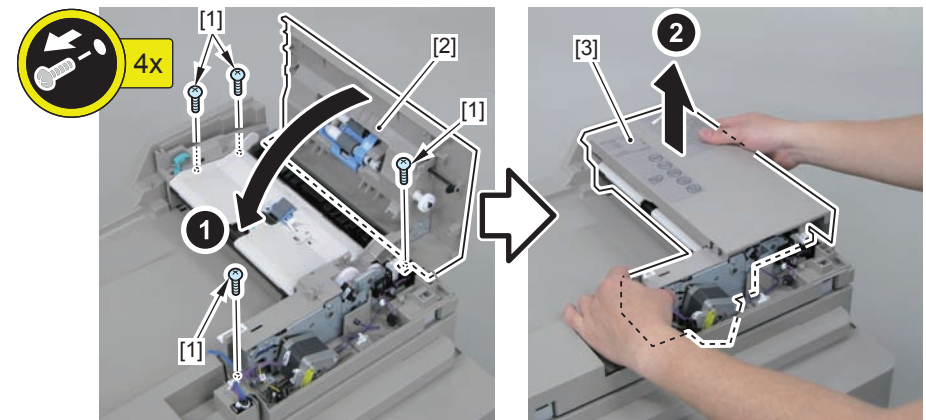
F-4-139

## Removing the ADF Feed Drive Unit
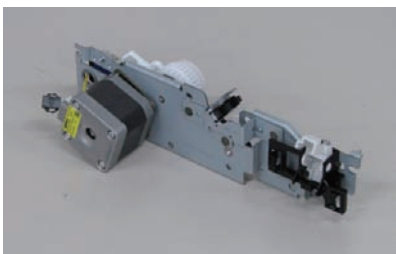


F-4-140

### ■ Preparation

1) Remove the ADF Pickup Feed Unit(Refer to page 4-61).

### ■ Procedure

1) Remove the Feeder Cover [1].
- 1 Screw [2] (to loosen)
- 2 Shafts [3]
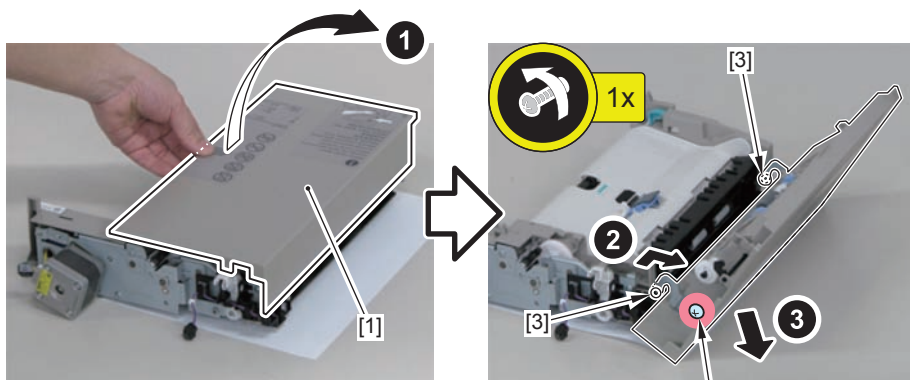


F-4-141

CAUTION:

Be sure to perform work carefully so as not to shift the phase of the inner gear [2] on the ADF Feed Drive Unit [1] when disassembling/assembling.
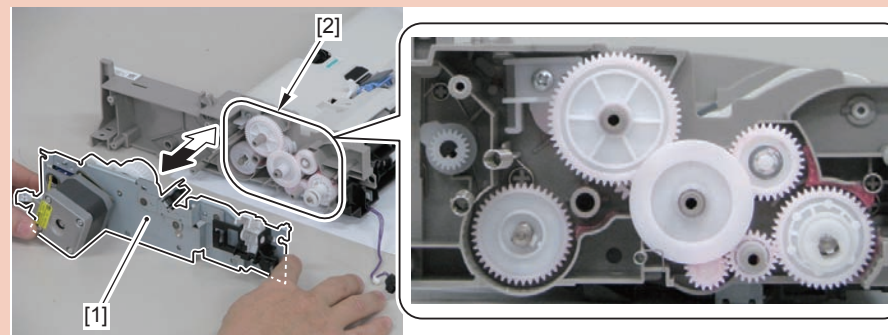


F-4-142

2) Remove the ADF Feed Drive Unit [1].

• Harness Guide [A]
• 1 Spring [2]
• 5 Screws [3]

5x    1x
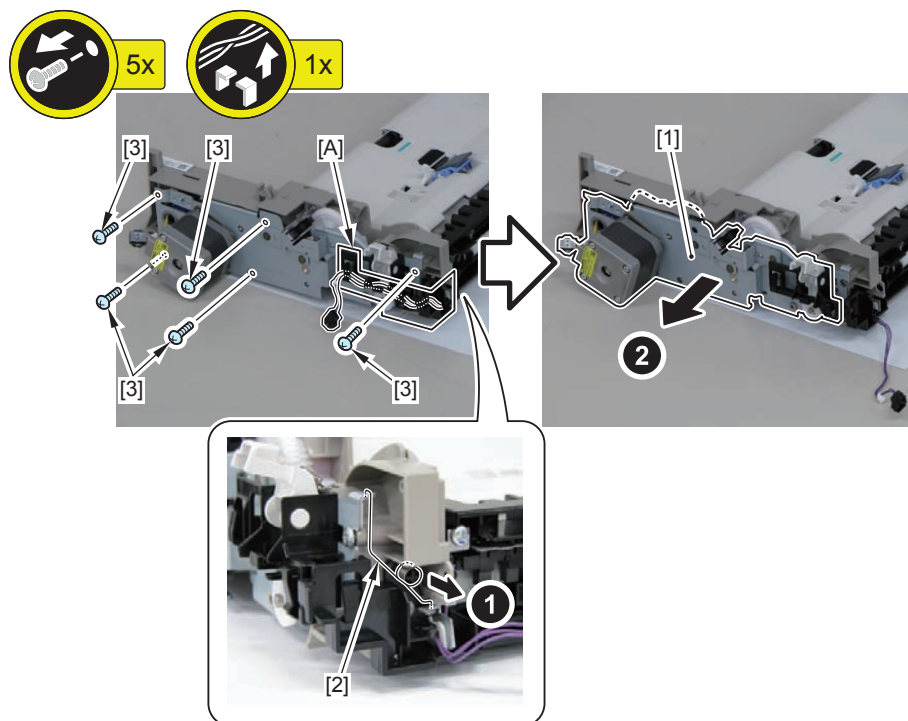


F-4-143

NOTE: How to install the ADF Feed Drive Unit
The arm edge [B] must not be laid on top of the [A] part of the coupling [1].
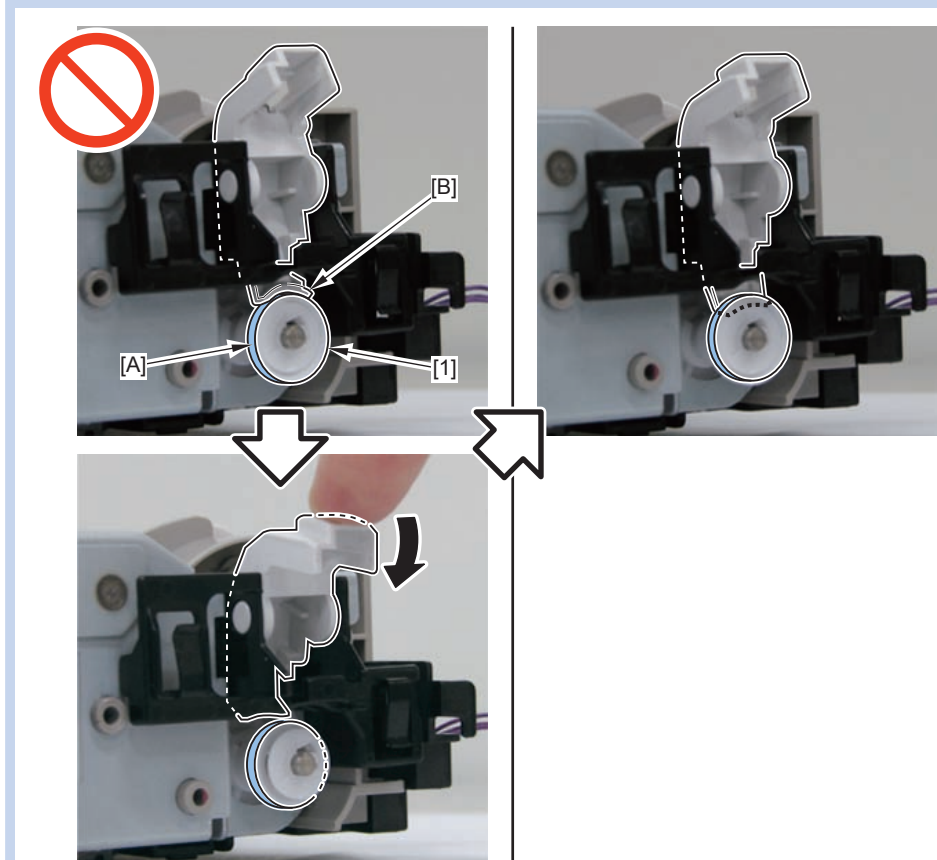


F-4-144

## Opening the ADF Unit + Reader Unit



F-4-145

### ■ Procedure

⚠ CAUTION:

Be careful not to drop the ADF Unit + Reader Unit [1] when disassembling/assembling.



F-4-146

1) Remove the Rear Cover 2 [1]
- 2 Claws [2]
- 2 Hooks [3]
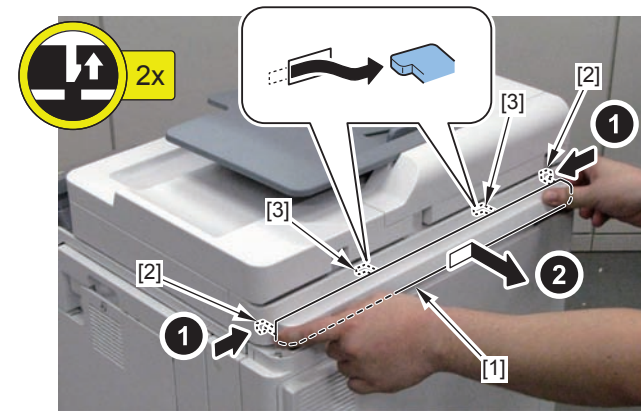


F-4-147

2) Remove the Control Panel Rear Hinge Cover [1].
- 2 Bosses [2]
- 1 Claw [3]
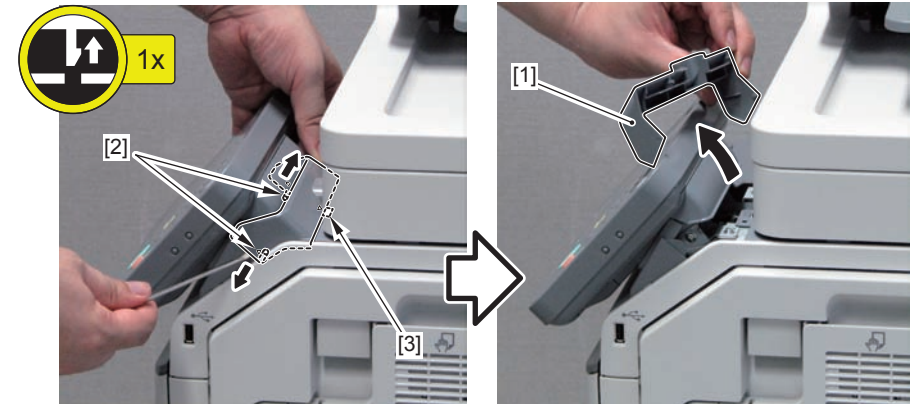


F-4-148
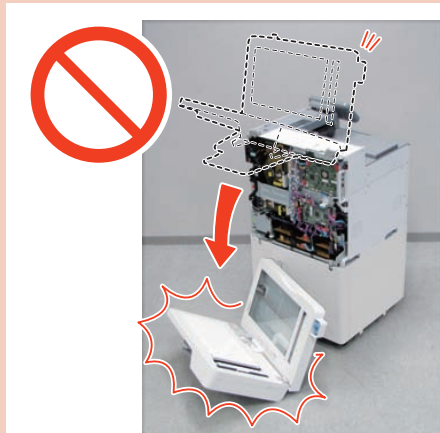
3)Open the ADF Unit + Reader Unit [1]



F-4-149

## ⬤ Removing the ADF Unit + Reader Unit



F-4-150

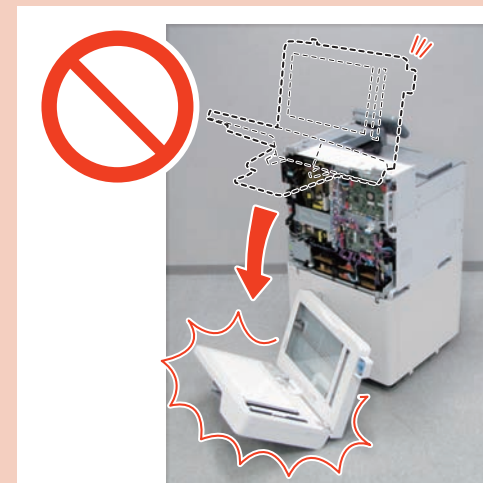### ■ Preparation

1)Remove the Rear Cover 1(Refer to page 4-34).
2)Open the ADF Unit + Reader Unit(Refer to page 4-66)

### ■ Procedure

⚠ CAUTION:

Be careful not to drop the ADF Unit + Reader Unit [1] when disassembling/assembling.
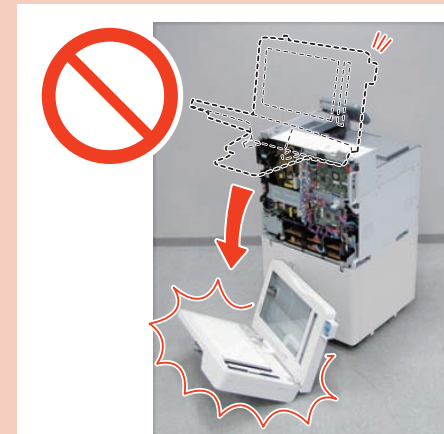


F-4-151

1)Remove the Connector Cover [1]
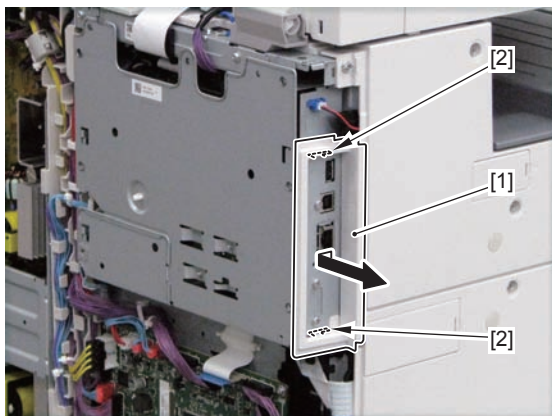
• 2 Hooks [2]

F-4-152

2) Remove the Main Controller Sub Cover [1].

• 3 Screw [2]

• 2 Hooks [3]

3x
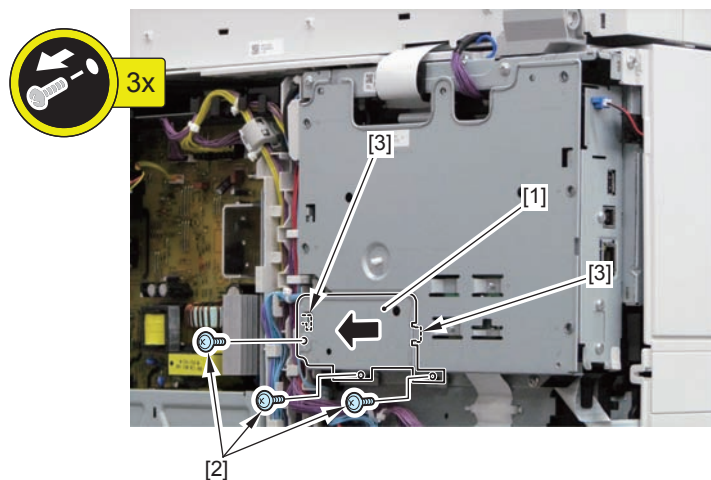
F-4-153

3)Remove the Main Controller Cover [1].

• 1 Connectors [2]

• 6 Screw [3]

• 2 Hooks [4]

1x

6x
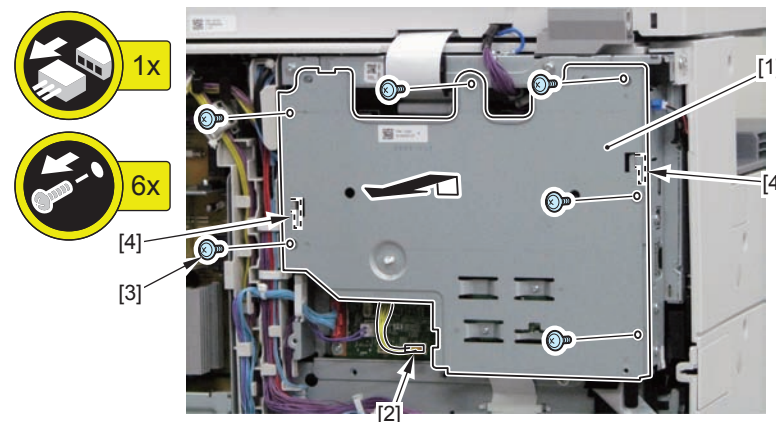
F-4-154

4)Disconnect the terminal [1] of the Grounding Wire.

• 1 Screw [2]

5)Remove the Flat Cable [3].

• Harness Guide [A]

• 1 Flat Cable Retainer [4]

6)Disconnect the 2 connectors [5].

• 1 Wire Saddle [6]

Note: How to remove the Flat Cable

1. Pull out the Fixation Member [1].
2. Pull out the Flat Cable [2].
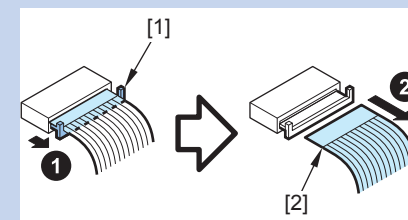
F-4-155
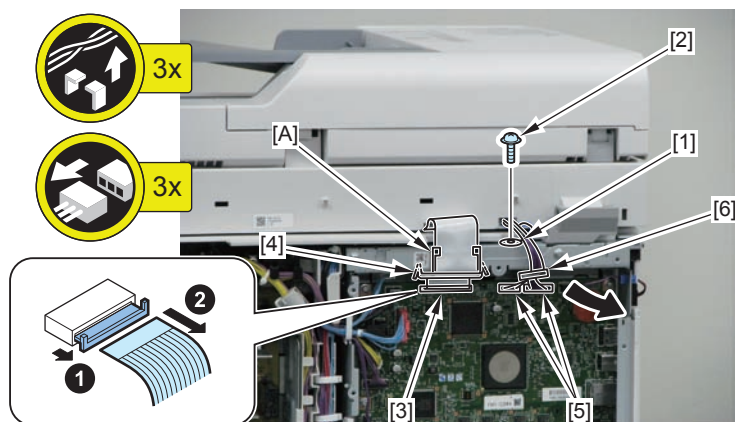
F-4-156

7) Remove the ADF Arm [1], and then remove the ADF Unit + Reader Unit [2].

- 2 Shafts [3]
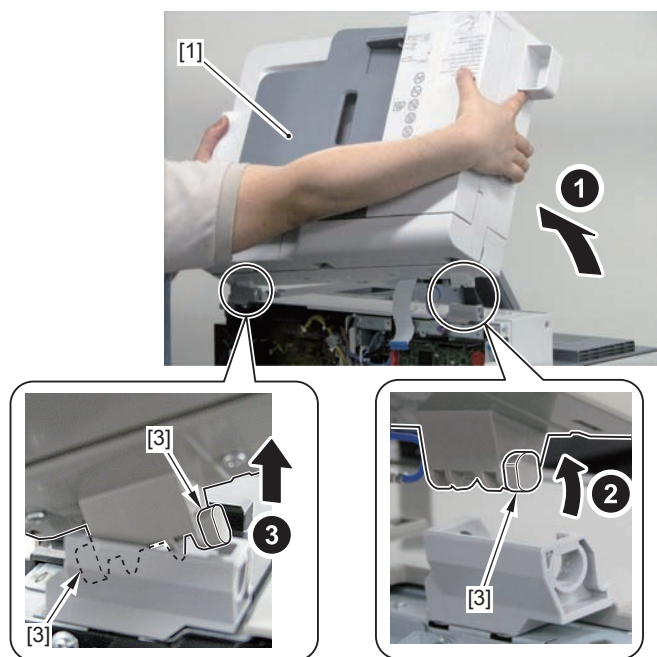


F-4-157

## Removing the Copyboard Glass Unit
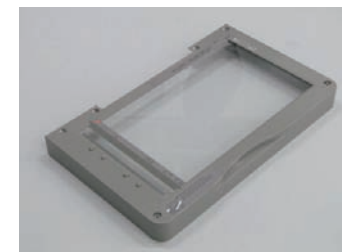


F-4-158

## ■ Procedure

CAUTION:

- Put the removed Copyboard Glass on a cloth etc. so as not to damage the sheet on the bottom.
- When removing the Copyboard Glass, be careful not to touch the glass surface.
- When it is dirty, clean the Copyboard Glass with a glass cleaning sheet.



F-4-159

1) Open the ADF [1].

2) Remove the Copyboard Glass Unit [2].

• 6 Face Rubbers [3]

• 6 Screws [4]
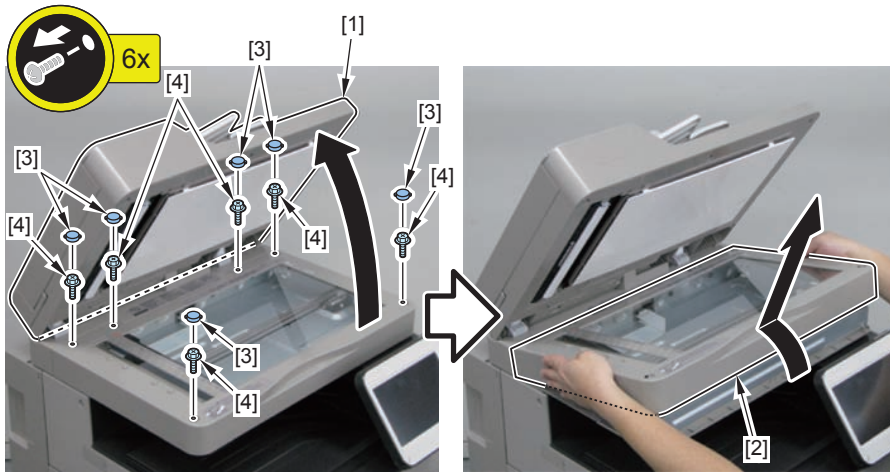


F-4-160

## ■ Copyboard Glass Unit

### ● Procedure of Replacement

1) Enter the value (White level data entry of white plate) indicated on the platen glass as shown in the following service mode:

| COPIER > ADJUST > CCD > | | |
|---|---|---|
| W-PLT-X | W-PLT-Y | W-PLT-Z |

T-4-54

CAUTION:

Be sure to make the white plate data adjustment before ADF white level adjustment.
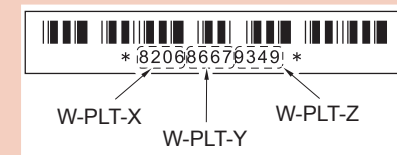


F-4-161

2) Write down the new numerical value in the service label.

3) Turn OFF/ON the main power switch.

4) Execute the Scan Unit white/black reference level adjustment (AGC).(Close the ADF)

| COPIER > FUNCTION > CCD > |
|---|
| CL-AGC |

T-4-55

5) Turn OFF/ON the main power switch.

6) After executing the shading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|---|---|
| 1 | RDSHDPOS |

T-4-56

| No. | COPIER > ADJUST > ADJ-XY > |
|---|---|
| 2 | ADJ-S |

T-4-57

7) After executing the reading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|-----|-------------------------------|
| 1   | STRD-POS                      |

T-4-58

| No. | COPIER > ADJUST > ADJ-XY > |
|-----|----------------------------|
| 2   | STRD-POS                   |

T-4-59

8) Take the action stated below in the service mode (White level adj in book/DADF mode).
   1. Place a sheet of paper that the user usually uses on the Copyboard Glass, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
|---------------------------|
| DF-WLVL1                  |

White level adj in book mode: color

T-4-60

   2. Place a sheet of paper that the user usually uses on the DADF, enter the following service mode.

| COPIER > FUNCTION > CCD > |
|---------------------------|
| DF-WLVL2                  |

White level adj in DADF mode: color

T-4-61

NOTE:
The result of the adjustment is reflected to COPIER> ADJUST> CCD>  DFTAR-R/ DFTAR-G/ DFTAR-B / DFTAR2-R/ DFTAR2-G/ DFTAR2-B / DFTAR3-R/ DFTAR3-G/ DFTAR3-B

9) Adjust the image position (horizontal scanning direction/front side) at ADF reading.
   1. Place a test chart on the ADF, and make one single-sided copy.
   2. Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

10 +/- 2mm

Feed direction

Copy of the test chart
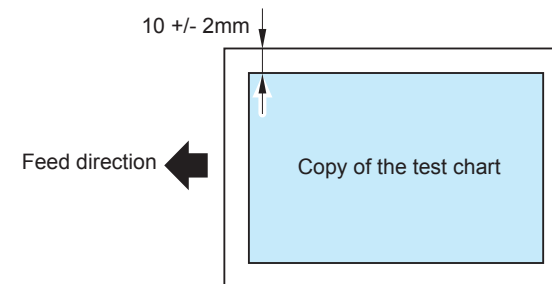
F-4-162

   3. Select the item in the service mode.

| COPIER > ADJUST > ADJ-XY > |
|----------------------------|
| ADJ-Y-DF                   |

T-4-62

   4. Input value, and adjust an image.
      • When a copied image moves to the rear: Decrease value
      • When a copied image moves to the front: Increase value
      • Adjustment unit: 0.1 mm

< When a copied image moves to the rear >    < When a copied image moves to the front >

Test chart    Copy of the test chart        Test chart    Copy of the test chart

A                                            A

Feed direction                               Feed direction

F-4-163

   5. Write the new changed value in the service label.
   6. Exit the service mode.

10) Adjust the image position (horizontal scanning direction) at copyboard reading.

    1. Place a test chart on the Copyboard Glass, and make one single-sided copy.

    2. Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

Feed direction — Copy of the test chart

F-4-164

    3. Select the item in the service mode.

| COPIER > ADJUST > ADJ-XY > |
| --- |
| ADJ-Y |

T-4-63

4. Input value, and adjust an image.
- When a copied image moves to the rear: Decrease value
- When a copied image moves to the front: Increase value
- Adjustment unit: 0.1 mm

< When a copied image moves to the rear >  < When a copied image moves to the front >

Test chart  Copy of the test chart    Test chart  Copy of the test chart

A        A

Feed direction      Feed direction

F-4-165

5. Write the new changed value in the service label.

6. Exit the service mode.

11) Adjust the image position (vertical scanning direction) at copyboard reading.

    1. Place a test chart on the Copyboard Glass, and make one single-sided copy.

    2. Compare the image leading edge of the test chart with that of the copied paper, and perform adjustment if necessary.

Feed direction — Copy of the test chart

F-4-166

    3. Press ADJ-X from the service mode screen.

| COPIER > ADJUST > ADJ-XY > |
| --- |
| ADJ-X |

T-4-64

4. Input value, and adjust an image.
- When a image is displaced toward the trailing edge: Decrease value
- When a image is displaced toward the leading edge: Increase value
- Adjustment unit: 0.1 mm

< When a copied image moves to the rear >  < When a copied image moves to the front >

Test chart       Copy of the test chart

Copy of the test chart      Test chart

A        A

Leading edge of the feeding direction  Trailing edge of the feeding direction  Leading edge of the feeding direction  Trailing edge of the feeding direction

F-4-167

5. Write the new changed value in the service label.

6. Exit the service mode.

12) Make a fine adjustment of image magnification ratio (vertical scanning direction) at copyboard reading.
  1. Set the image of the test chart upward in Copyboard Glass, and give one sheet of single-sided copy.
  2. Compare the image length of the feed direction of the test chart and the copy of the test chart.
    Carry out the following process when adjustment is necessary.
  3. Press ADJ-X-MG from the service mode screen.

| COPIER> ADJUST> ADJ-XY |
| --- |
| ADJ-X-MG |

T-4-65

  4. Input value, and adjust an image.
    • When a copied image is enlarged: Increase value
    • When a copied image is reduced: Decrease value
    • Adjustment unit: 0.1 %

< When a copied image is long >      < When a copied image is short >

Test chart   Copy of the test chart    Copy of the test chart

Test chart

A          A

Feed direction         Feed direction

F-4-168

  5. Write the new changed value in the service label.
  6. Exit the service mode.

13) Make a copy and check the copied image.

## Removing the CIS Unit

F-4-169

### ■ Preparation

1) Remove the Copyboard Glass Unit(Refer to page 4-70).

### ■ Procedure

CAUTION:

Do not touch the sensor [A] part of the CIS Unit when disassembling/assembling.

[A]

F-4-170

1) Move the CIS Unit [1] to the center.
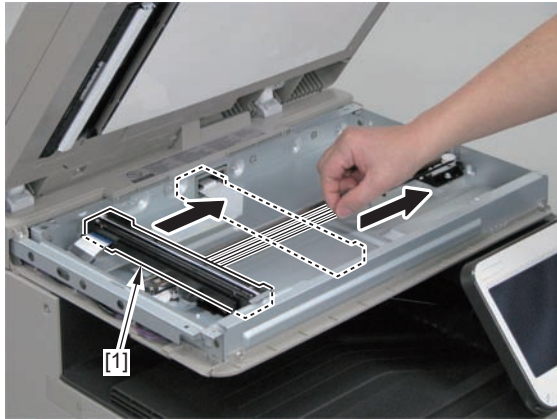


F-4-171

2) Remove the 2 spacers [1] and the Flat Cable [2].
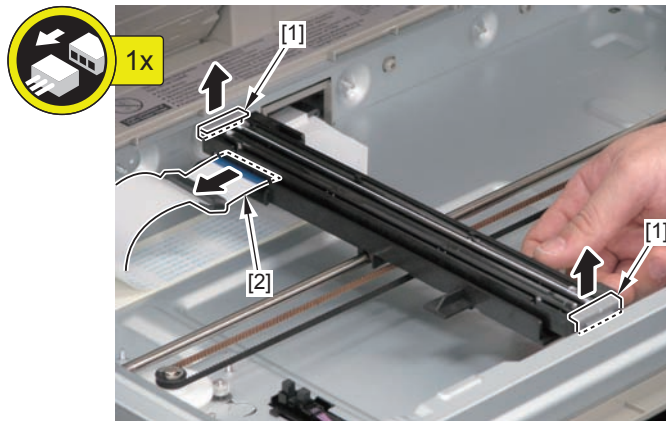


F-4-172

3) Remove the CIS Unit [1].

• 2 Shafts [2]
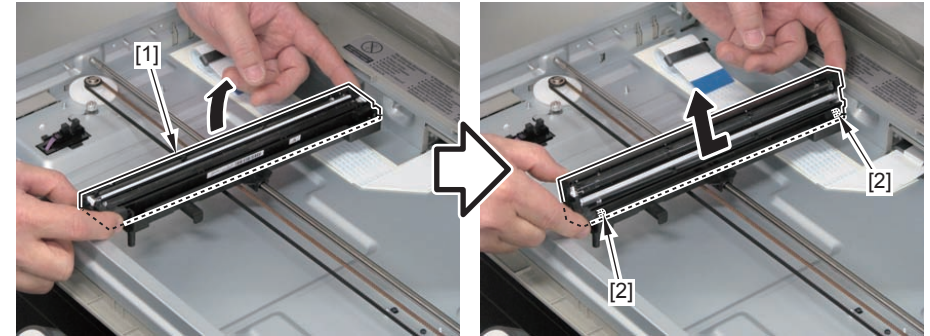


F-4-173

Caution:

When replacing the CIS Unit [1], be sure to replace the CIS Unit [1] and the CIS Spacer [2], which are included in the package of the service part, at the same time.

If a different spacer is used, image reading error may occur.



F-4-174

**4** Disassembly/Assembly > Original Exposure/Feed System > Removing the CIS Unit > After Replacing the Scanner Unit (Reader side CIS)

4-75
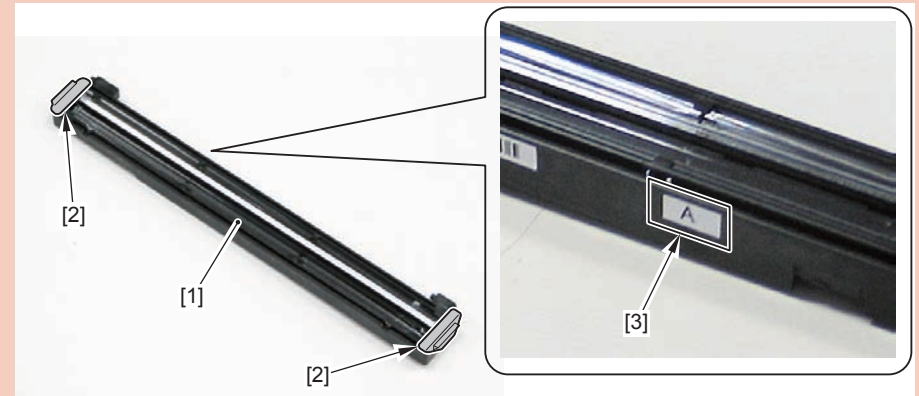
Caution:

- When the CIS Spacers are mixed up or lost, check the CIS Rank Label [3] to use, and use the appropriate CIS Spacer that fits the rank of the CIS Unit.

| Rank | Color of spacer | Dimension (Height of spacer) |
|---|---|---|
| rank A | gray | 1.13 mm |
| rank B | white | 1.23 mm |
| rank C | brown | 1.33 mm |

T-4-66
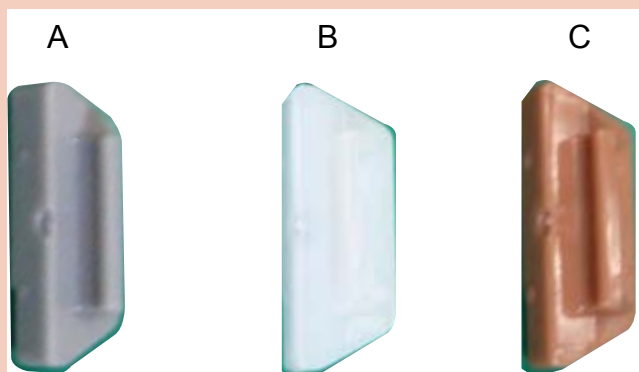


F-4-175

CAUTION:

The groove [1] of the CIS Unit Holder must be hooked on the belt [2] when assembling.
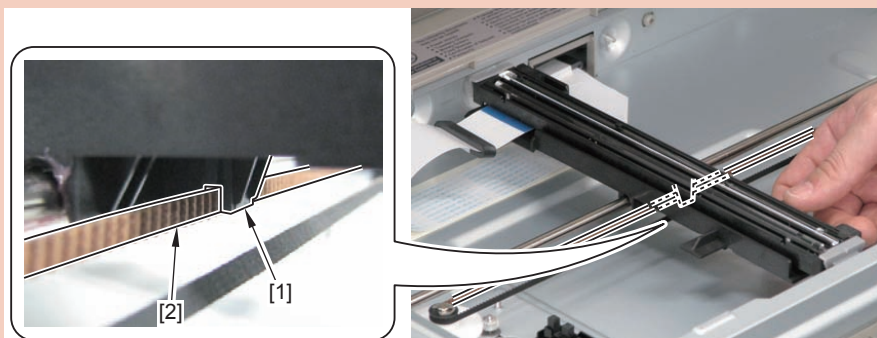


F-4-176

## ■ After Replacing the Scanner Unit (Reader side CIS)

1) Perform the following steps.
   1. Enter the value (White level data entry of white plate) indicated on the platen glass in the following service mode:

| COPIER > ADJUST > CCD > | | |
|---|---|---|
| W-PLT-X | W-PLT-Y | W-PLT-Z |

T-4-67

CAUTION:

Be sure to make the white plate data adjustment before ADF white level adjustment.



F-4-177

   2. Write down the new numerical value in the service label.
   3. Turn OFF/ON the main power switch.

2) Enter the adjustment values of all items described on the service label (on the back of the machine's Front Cover) in service mode.
3) Execute the Scan Unit white/black reference level adjustment (AGC).(Close the ADF)

| COPIER > FUNCTION > CCD > |
|---|
| CL-AGC |

T-4-68

4-75

**4** Disassembly/Assembly > Original Exposure/Feed System > Removing the CIS Unit > After Replacing the Scanner Unit (Reader side CIS)

**4** Disassembly/Assembly > Original Exposure/Feed System > Removing the CIS Unit > After Replacing the Scanner Unit (Reader side CIS)

4-76

4) Turn OFF/ON the main power switch.

5) After executing the shading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|---|---|
| 1 | RDSHDPOS |

T-4-69

| No. | COPIER > ADJUST > ADJ-XY > |
|---|---|
| 2 | ADJ-S |

T-4-70

6) After executing the reading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|---|---|
| 1 | STRD-POS |

T-4-71

| No. | COPIER > ADJUST > ADJ-XY > |
|---|---|
| 2 | STRD-POS |

T-4-72

7) Take the action stated below in the service mode (White level adj in book/DADF mode).
　　1. Place a sheet of paper that the user usually uses on the Copyboard Glass, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
|---|
| DF-WLVL1 |

White level adj in book mode: color

T-4-73

　　2. Place a sheet of paper that the user usually uses on the DADF, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
|---|
| DF-WLVL2 |

White level adj in DADF mode: color

T-4-74

NOTE:
The result of the adjustment is reflected to COPIER> ADJUST> CCD>  DFTAR-R/ DFTAR-G/ DFTAR-B / DFTAR2-R/ DFTAR2-G/ DFTAR2-B / DFTAR3-R/ DFTAR3-G/ DFTAR3-B

8) Adjust the image position (horizontal scanning direction/front side) at ADF reading.
　　1. Place a test chart on the ADF, and make one single-sided copy.
　　2. Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

10 +/- 2mm

Feed direction

Copy of the test chart
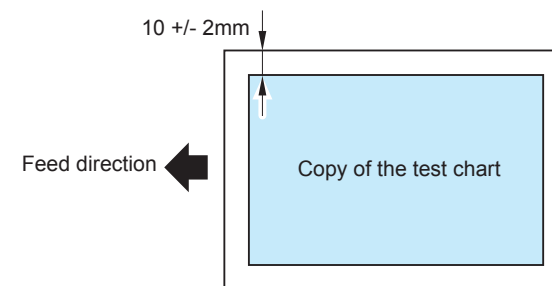
F-4-178

　　3. Select the item in the service mode.
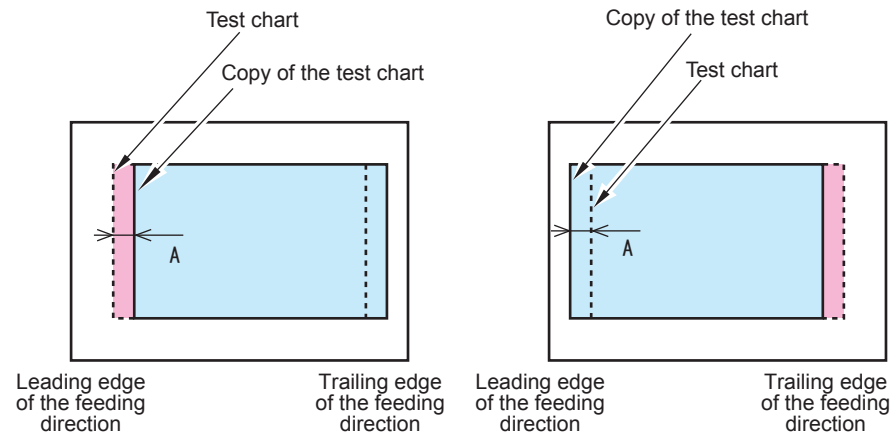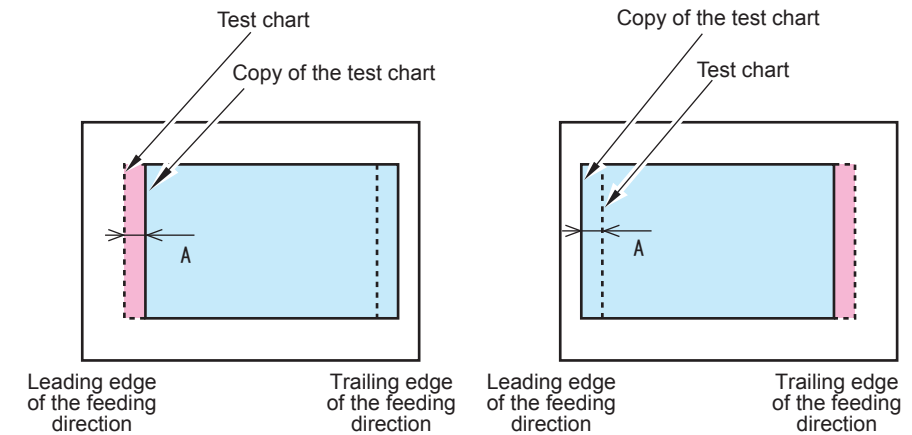
| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-Y-DF |

T-4-75

　　4. Input value, and adjust an image.
　　　　• When a copied image moves to the rear: Decrease value
　　　　• When a copied image moves to the front: Increase value
　　　　• Adjustment unit: 0.1 mm

< When a copied image moves to the rear >　　< When a copied image moves to the front >

Test chart　　Copy of the test chart

Test chart　　Copy of the test chart

A

A

Feed direction　　　　　　　　　　　　Feed direction

F-4-179

　　5. Write the new changed value in the service label.
　　6. Exit the service mode.

4-76

**4** Disassembly/Assembly > Original Exposure/Feed System > Removing the CIS Unit > After Replacing the Scanner Unit (Reader side CIS)

**4** Disassembly/Assembly > Original Exposure/Feed System > Removing the CIS Unit > After Replacing the Scanner Unit (Reader side CIS)
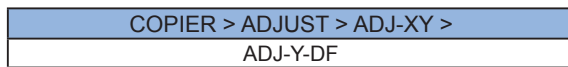
4-77

9) Adjust the image position (horizontal scanning direction) at copyboard reading.
   1. Place a test chart on the Copyboard Glass, and make one single-sided copy.
   2. Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

Feed direction — Copy of the test chart

F-4-180

   3. Select the item in the service mode.

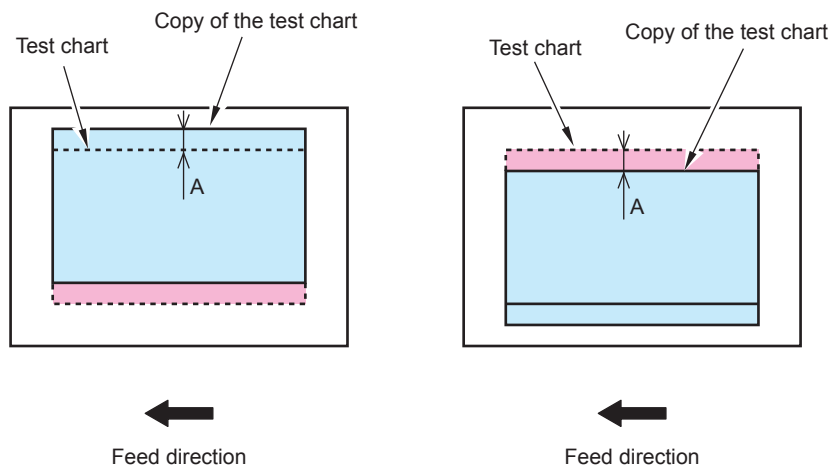| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-Y |

T-4-76

   4. Input value, and adjust an image.
     • When a copied image moves to the rear: Decrease value
     • When a copied image moves to the front: Increase value
     • Adjustment unit: 0.1 mm

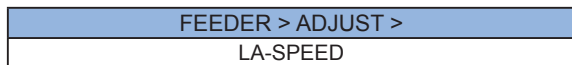< When a copied image moves to the rear >  < When a copied image moves to the front >

Copy of the test chart
Test chart
A

Test chart
Copy of the test chart
A

Feed direction      Feed direction

F-4-181

   5. Write the new changed value in the service label.
   6. Exit the service mode.

10) Adjust the image position (vertical scanning direction) at copyboard reading.
   1. Place a test chart on the Copyboard Glass, and make one single-sided copy.
   2. Compare the image leading edge of the test chart with that of the copied paper, and perform adjustment if necessary.

Feed direction — Copy of the test chart

F-4-182

   3. Press ADJ-X from the service mode screen.

| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-X |

T-4-77

   4. Input value, and adjust an image.
     • When a image is displaced toward the trailing edge: Decrease value
     • When a image is displaced toward the leading edge: Increase value
     • Adjustment unit: 0.1 mm

< When a copied image moves to the rear >  < When a copied image moves to the front >

Test chart
Copy of the test chart
A

Copy of the test chart
Test chart
A

Leading edge of the feeding direction  Trailing edge of the feeding direction  Leading edge of the feeding direction  Trailing edge of the feeding direction

F-4-183

   5. Write the new changed value in the service label.
   6. Exit the service mode.

4-77

**4** Disassembly/Assembly > Original Exposure/Feed System > Removing the CIS Unit > After Replacing the Scanner Unit (Reader side CIS)

11) Make a fine adjustment of image magnification ratio (vertical scanning direction) at copyboard reading.

    1. Set the image of the test chart upward in Copyboard Glass, and give one sheet of single-sided copy.

    2. Compare the image length of the feed direction of the test chart and the copy of the test chart.

      Carry out the following process when adjustment is necessary.
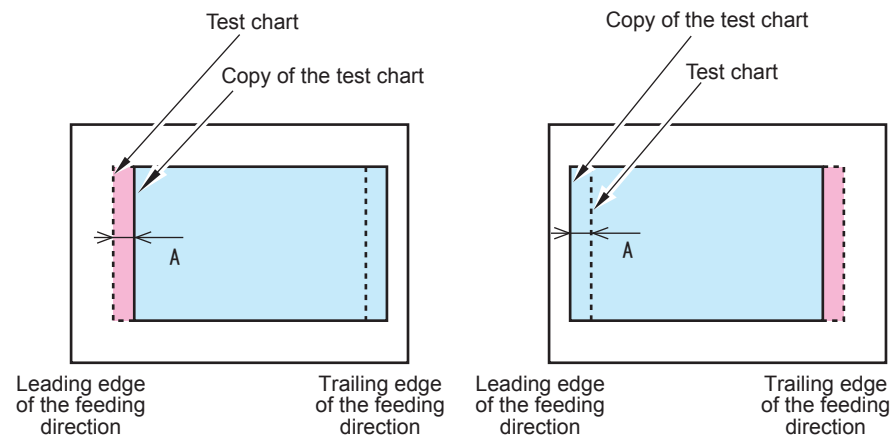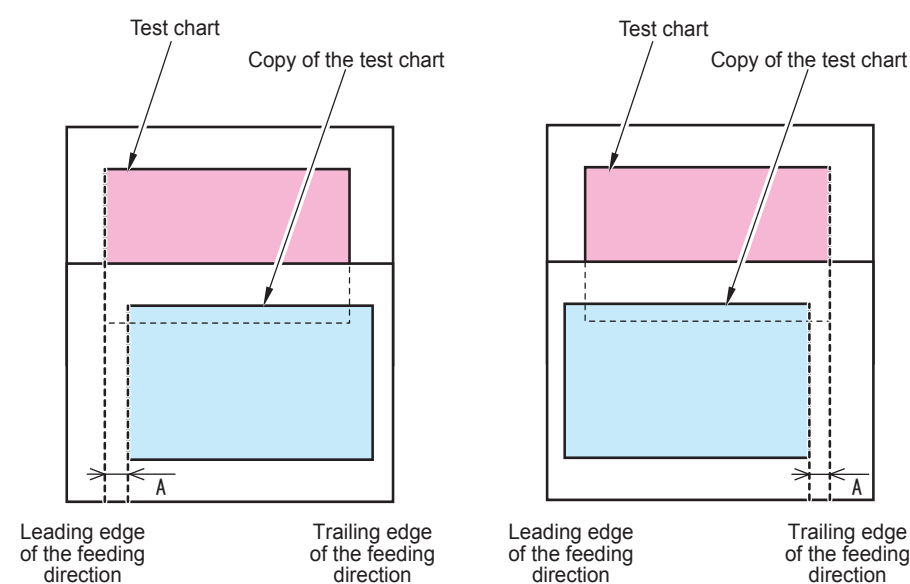
    3. Press ADJ-X-MG from the service mode screen.

| COPIER> ADJUST> ADJ-XY |
|---|
| ADJ-X-MG |

T-4-78

    4. Input value, and adjust an image.
- When a copied image is enlarged: Increase value
- When a copied image is reduced: Decrease value
- Adjustment unit: 0.1 %

< When a copied image is long >        < When a copied image is short >

Test chart    Copy of the test chart    Copy of the test chart

Test chart

A    A

Feed direction    Feed direction

F-4-184

    5. Write the new changed value in the service label.

    6. Exit the service mode.

12) Make a copy and check the copied image.

# Removing the Reader Motor

F-4-185

## ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Removing the ADF Unit + Reader Unit(Refer to page 4-66)

## ■ Procedure

1) Flip over the ADF Unit + Reader Unit [1].
2) Remove the Reader Motor Cover [2].
- 2 Screws [3]

2x

[1]    [3]

[2]
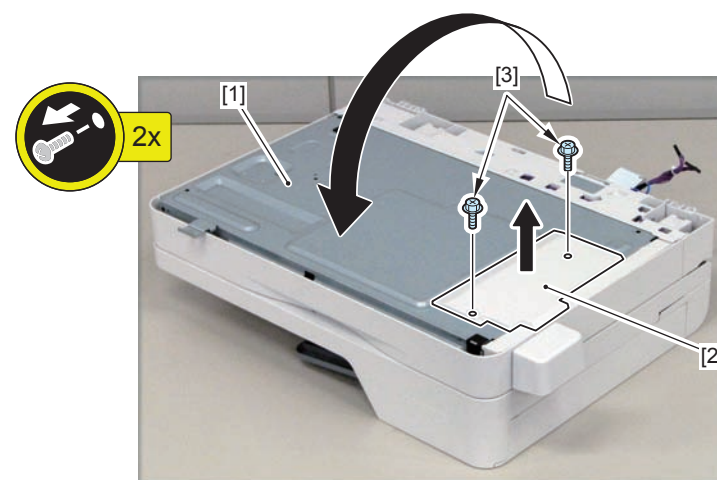
F-4-186

3) Remove the Reader Motor [1].

- 1 Connector [2]
- 1 Wire Saddle [3]
- 2 Screws [4]
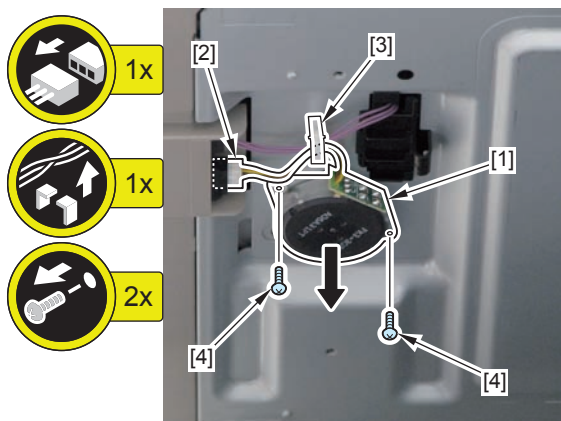


F-4-187

# Controller System

## Layout Drawing
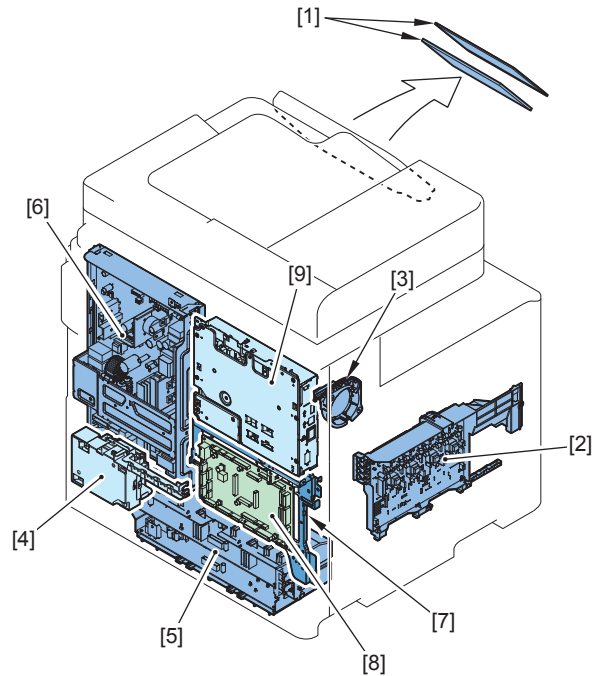


F-4-188

| No. | Parts Name | Main Unit | Remarks | Reference |
|---|---|---|---|---|
| [1] | Touch Panel / LCD | Control Panel Unit | | (Refer to page 4-97) |
| [2] | Primary Transfer High-voltage PCB Unit | Product Configuration | UN03 | (Refer to page 4-90) |
| [3] | Speaker | Product Configuration | SP1 | (Refer to page 4-100) |
| [4] | FAX Unit | Product Configuration | UN86 / UN88,89,90 / UN92 | (Refer to page 4-101) |
| [5] | Secondary Transfer High-voltage PCB / Developing High-voltage PCB Unit | Product Configuration | UN02 / UN06 | (Refer to page 4-88) |
| [6] | Low-voltage Power Supply PCB Unit | Product Configuration | UN01 | (Refer to page 4-93) |
| [7] | DC Controller PCB Unit | Product Configuration | | (Refer to page 4-86) |
| [8] | DC Controller PCB | DC Controller PCB Unit | UN04 | (Refer to page 4-84) |
| [9] | Main Controller Unit | Product Configuration | UN81 | (Refer to page 4-81) |

T-4-79

## Removing the Main Controller Unit



F-4-189

## ■ Before Replacing

| Before Replacing | 1) Backup the Settings/Registration data.<br>   Use RUI or a USB memory<br>   Log in as an administrator (mode).<br>   Settings/Registration > Import/Export<br>2) Service mode backup<br>   Use a USB memory<br>   COPIER > FUNCTION > SYSTEM > EXPORT<br>3) If the data cannot be exported, write down the values of the items on the service<br>   label. (Enter them after replacement.) |
|---|---|

T-4-80

## ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

## ■ Procedure

1) Remove the Connector Cover [1].
- 2 Hooks [2]
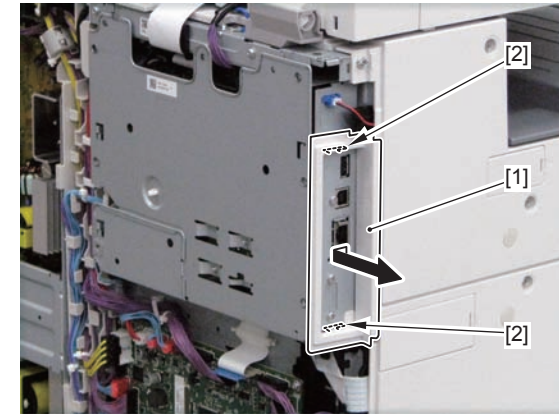


F-4-190

2) Remove the Main Controller Sub Cover [1].
- 3 Screws [2]
- 2 Hooks [3]
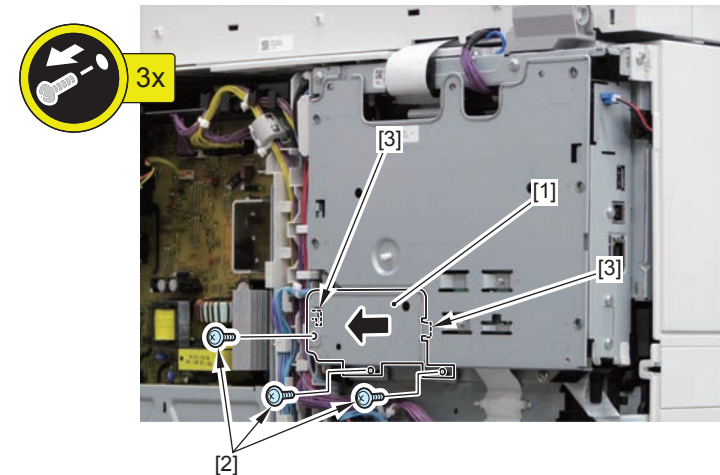


F-4-191

3) Remove the Main Controller Cover [1].
- 1 Connector [2]
- 6 Screws [3]
- 2 Hooks [4]

1x

6x

[4]

[3]

[2]

[1]

[4]
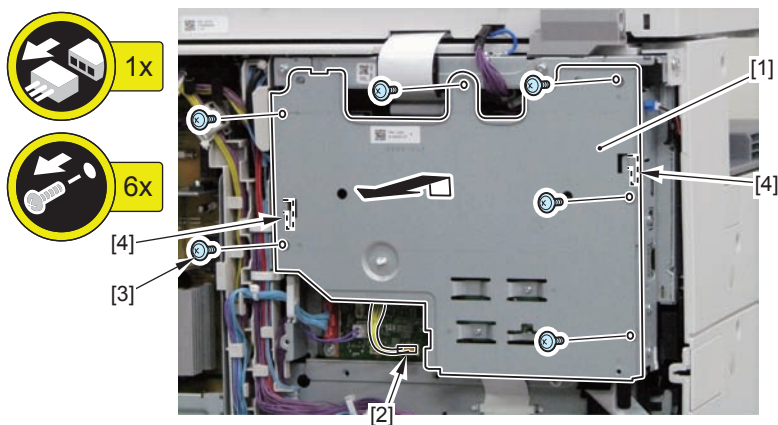
F-4-192

4) If the Fax Unit is installed, remove the Edge Saddle [2] and the 3 connectors [1].

1x

3x

[2]

[1]

[1]
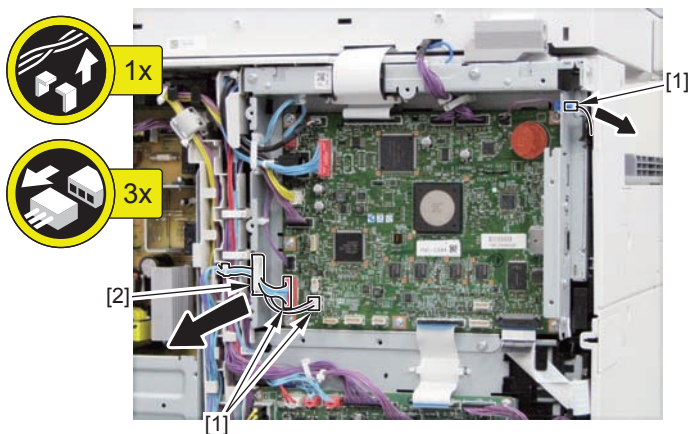
F-4-193

5) Remove the harness connected to the Main Controller Unit [1].
- 8 Connectors [2]
- 1 Control Panel Communication Connector [3]
- 3 Flat Cables [4]
- 3 Wire Saddles [5]
- 1 Edge Saddle [6]

Note: How to remove the Flat Cable
There are 2 types of Flat Cables on the Main Controller PCB.
They can be removed as follows.

Type 1:
1. Raise the Fixation Member [1].
2. Lift and remove the Flat Cable [2].

[1]          [2]
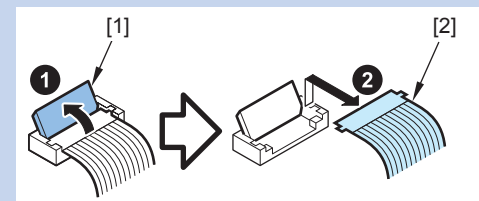
F-4-194

Type 2:
1. Pull out the Fixation Member [1].
2. Pull out the Flat Cable [2].

[1]

[2]
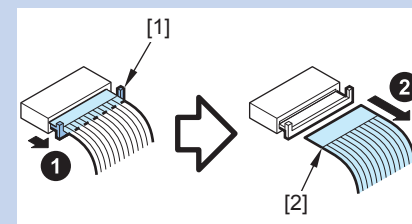
F-4-195
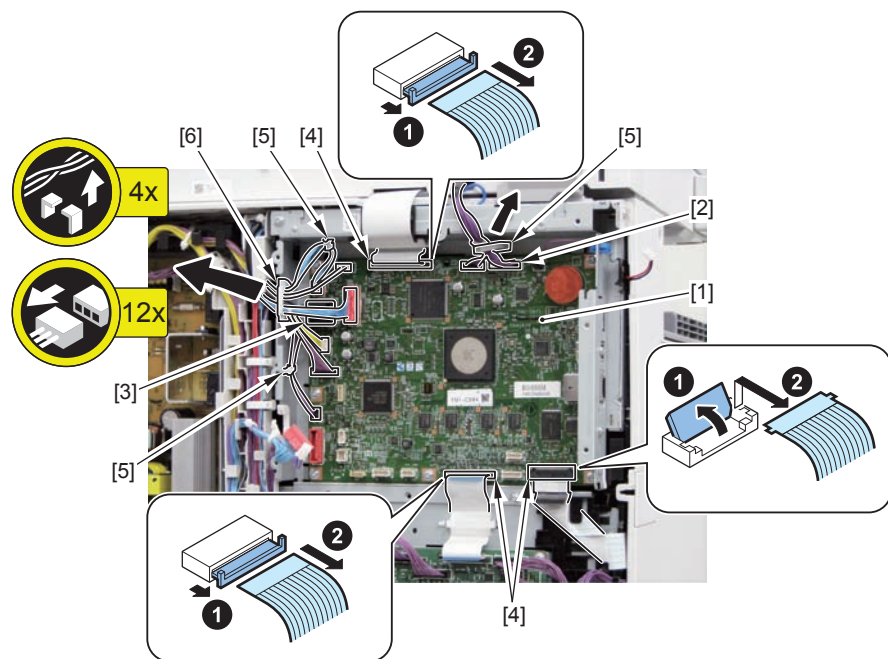
F-4-196

6) Remove the Flat Cable Retainer [1] and the Harness Guide [A].

- 2 Claws [2]
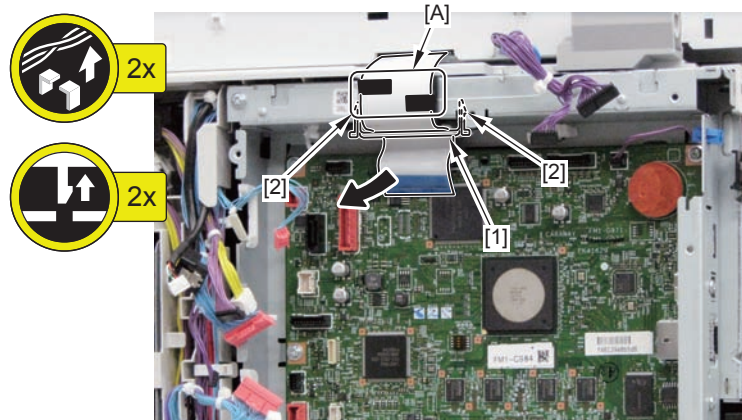


F-4-197

7) Remove the Main Controller Unit [1].

- 3 Screws [2]
- 2 Hooks [3]
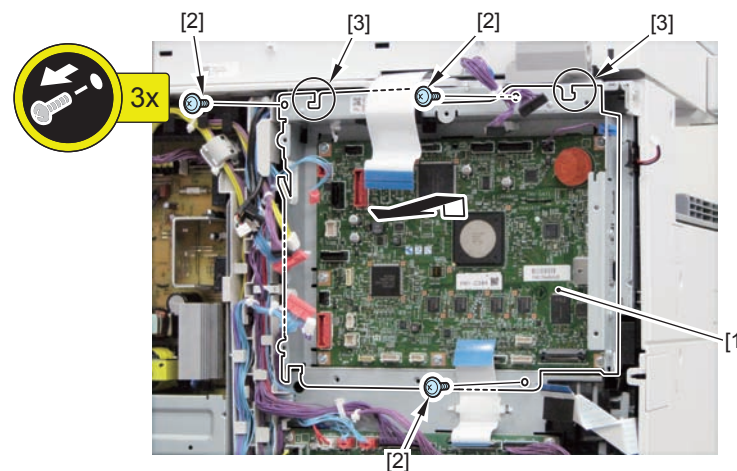


F-4-198

NOTE:
The completed assembly of the Main Controller Unit [1] is shown below.



F-4-199

## ■ Aftter Replacing

| Aftter Replacing | 1) After the parts are assembled, turn ON the power.<br>2) Setting of the paper size group<br>   COPIER > OPTION > BODY > SIZE-LC<br>   [Setting value]<br>   1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/inch configuration<br>3) Clearing the data<br>   COPIER > FUNCTION > CLEAR > ALL (clearing of all data)<br>   When executing this item, the following data is cleared according to the value set in step 2 and the serial number.<br>   Settings/Registration data (the initial value according to the location is set.)<br>   Service mode data (the initial value according to the location is set.)<br>   System administrator ID and password (They are changed back to the default values. ID: 0, PWD: 0)<br>   Each log data<br>   Date data<br>   COPIER > FUNCTION > CLEAR > R-CON (clearing of the factory adjustment values related to the Reader and ADF)<br>4) Migrating service mode data<br>   Import the service mode data backed up before replacement from the USB memory.<br>   COPIER > FUNCTION > SYSTEM > IMPORT<br>   If the data could not be backed up, enter the values on the service label to the respective entry fields.<br>5) Turn OFF and then ON the power.<br>6) The initial installation mode will be activated. Operate according to the instruction on the screen.<br>   (Setting the date/time, executing the auto gradation adjustment)<br>7) Migrating user data<br>   Import the user data backed up using the means (RUI or USB memory) you used before replacement.<br>   Log in as an administrator (mode).<br>   Settings/Registration > Import/Export<br>8) Uninstalling the drivers<br>   Uninstall the drivers on the user's PC.<br>   Printer driver<br>   Fax driver<br>   Scanner driver<br>   Network Scan Utility<br>* For the procedure, refer to the Startup Guide.<br>9) Reinstalling the drivers<br>   Install the drivers which were uninstalled in step 8.<br>* For the procedure, refer to the Startup Guide.<br>** The MAC address information and the USB ID are changed after replacement of the Main Controller Unit. As a result, the PC can no longer recognize the host machine. It becomes therefore necessary to reinstall the drivers after replacing the Main Controller Unit. |
|---|---|

T-4-81

## ● Removing the DC Controller PCB



F-4-200

## ■ Before Replacing

| Before Replacing | 1) Backup of DCON service mode setting values<br>   Execute the following: COPIER > FUNCTION > VIFFNC > STOR-DCN<br>2) Turn OFF the main power when the above work is complete. |
|---|---|

T-4-82

## ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

## ■ Procedure

1) Disconnect the connector connected to the DC Controller PCB [1].

• 28 Connectors [2]

• 1 Flat Cable [3]
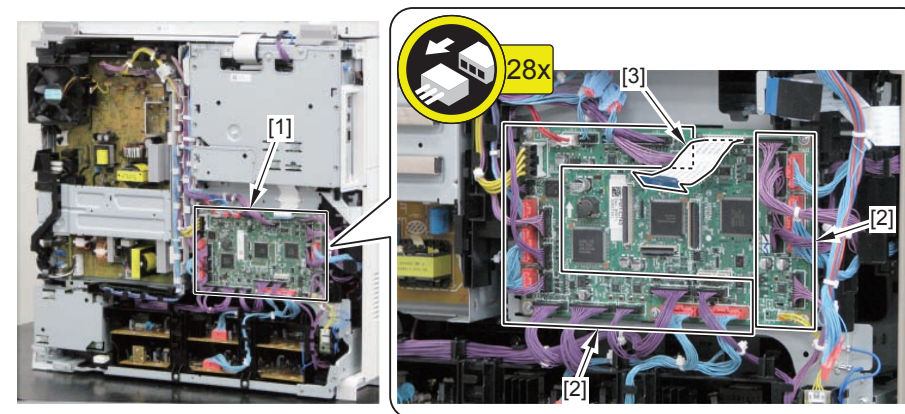


F-4-201

2) Remove the DC Controller PCB [1].

• 5 Screws [2]

F-4-202

| Aftter Replacing | 1) Restore the backup data.<br>Execute the following: COPIER > FUNCTION > VIFFNC > RSTR-DCN<br>2) When backup data cannot be uploaded before replacement due to reasons such as damage of the DC Controller PCB, enter the value of each service mode item described on the service label.<br>3) Turn OFF and then ON the power. (For accurate reflection of the restored items) |
|---|---|

T-4-83

NOTE:
The completed assembly of the DC Controller PCB is shown below.
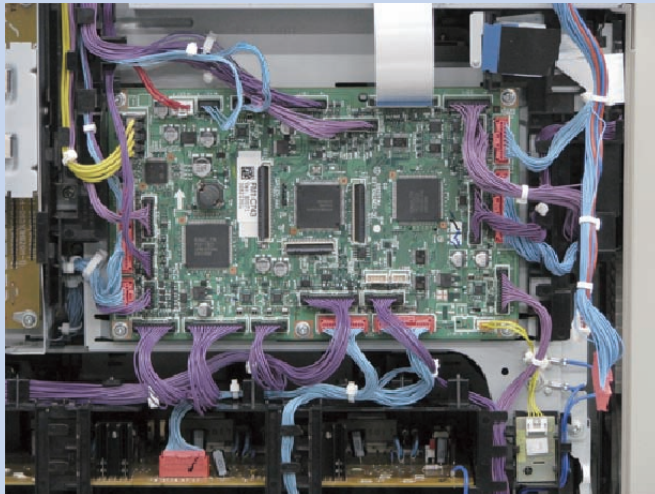


F-4-203

## ■ Aftter Replacing

## Removing the DC Controller PCB Unit



F-4-204

### ■ Before Replacing

| Before Replacing | 1) Backup of DCON service mode setting values<br>   Execute the following: COPIER > FUNCTION > VIFFNC > STOR-DCN<br>2) Turn OFF the main power when the above work is complete. |
|---|---|

T-4-84

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-101).

3) Remove the Main Controller Unit(Refer to page 4-81).

4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).

### ■ Procedure

1) Disconnect the connector connected to the DC Controller PCB [1].

• 27 Connectors [2]

2) Remove the 2 round shape terminals [3].

• 2 Screws [4]
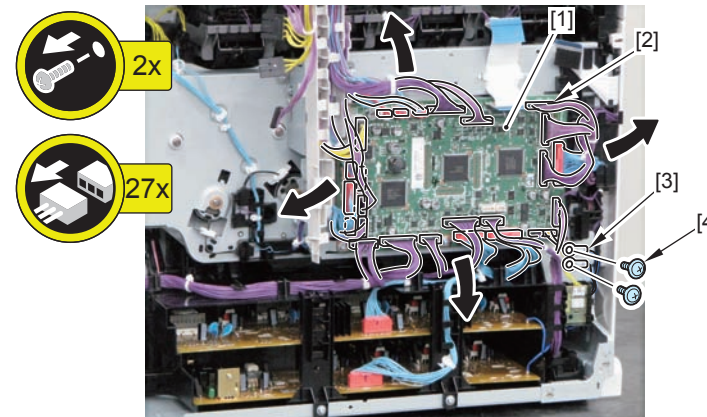


F-4-205

3) Remove the Flat Cable [1] and the 2 harnesses [2] from the Harness Guide [A].
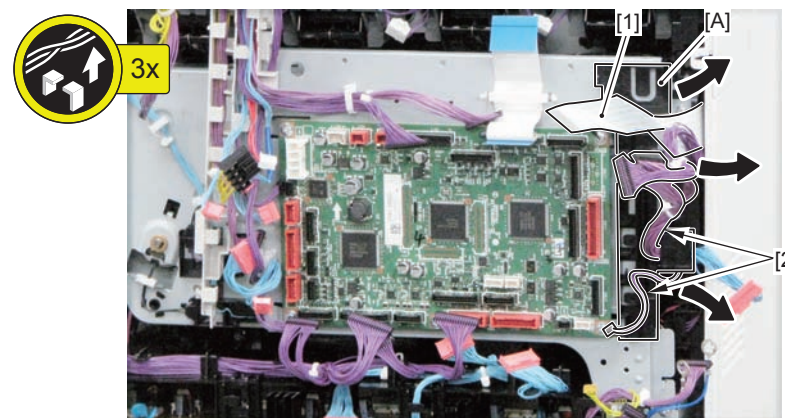


F-4-206

4) Remove the DC Controller PCB Unit [1].

• 3 Wire Saddles [2]

• 4 Screws [3]

• 3 Hooks [4]
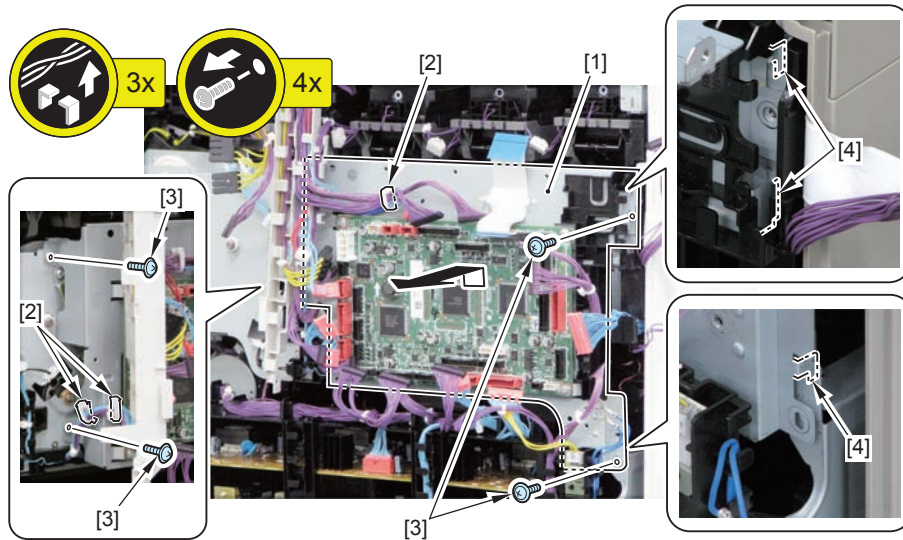


F-4-207

NOTE:
The completed assembly of the DC Controller PCB Unit is shown below.



F-4-208

## ■ Aftter Replacing

| Aftter Replacing | 1) Restore the backup data.<br>Execute the following: COPIER > FUNCTION > VIFFNC > RSTR-DCN<br>2) When backup data cannot be uploaded before replacement due to reasons such as damage of the DC Controller PCB, enter the value of each service mode item described on the service label.<br>3) Turn OFF and then ON the power. (For accurate reflection of the restored items) |
|---|---|

T-4-85

**4** Disassembly/Assembly > Controller System > Removing the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit > Procedure

4-88

## Removing the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit



F-4-209

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

### ■ Procedure

1) Remove the 5 connectors [1] and the 2 round shape terminals [2].

• 2 Screws [3]
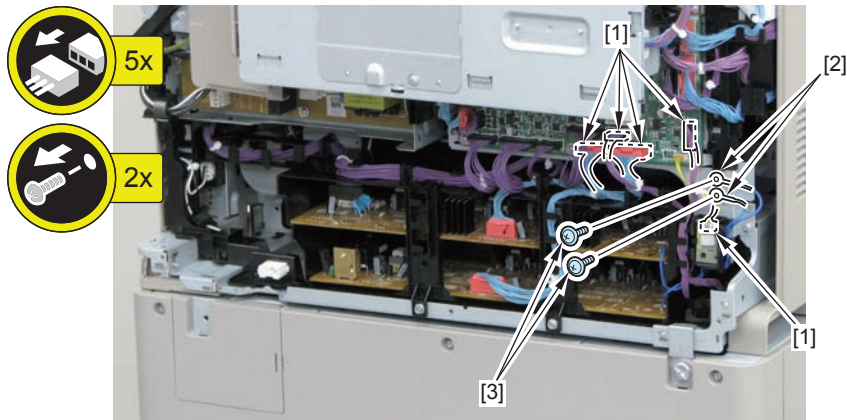


F-4-210

2) Free the harness [1] from the Harness Guides [A] and [B].

• 1 Reuse Band [2]



F-4-211

4-88

**4** Disassembly/Assembly > Controller System > Removing the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit > Procedure

**4** Disassembly/Assembly > Controller System > Removing the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit > Procedure

4-89
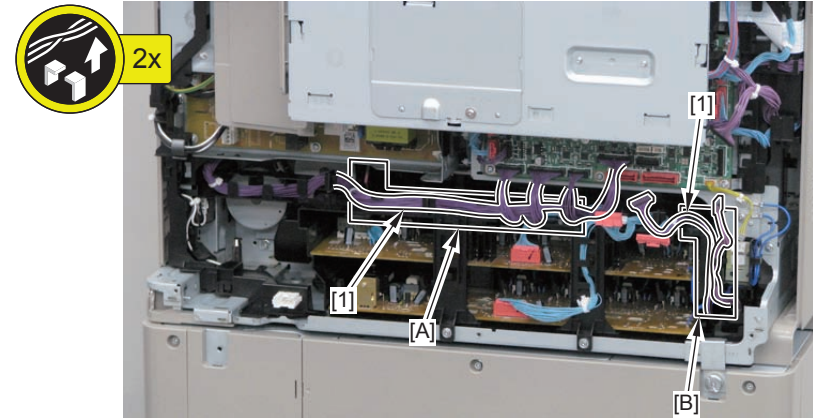
3) Remove the Harness Guide [1].

• 1 Hook [2]

4) Remove the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit [3].

• 2 Screws [4]
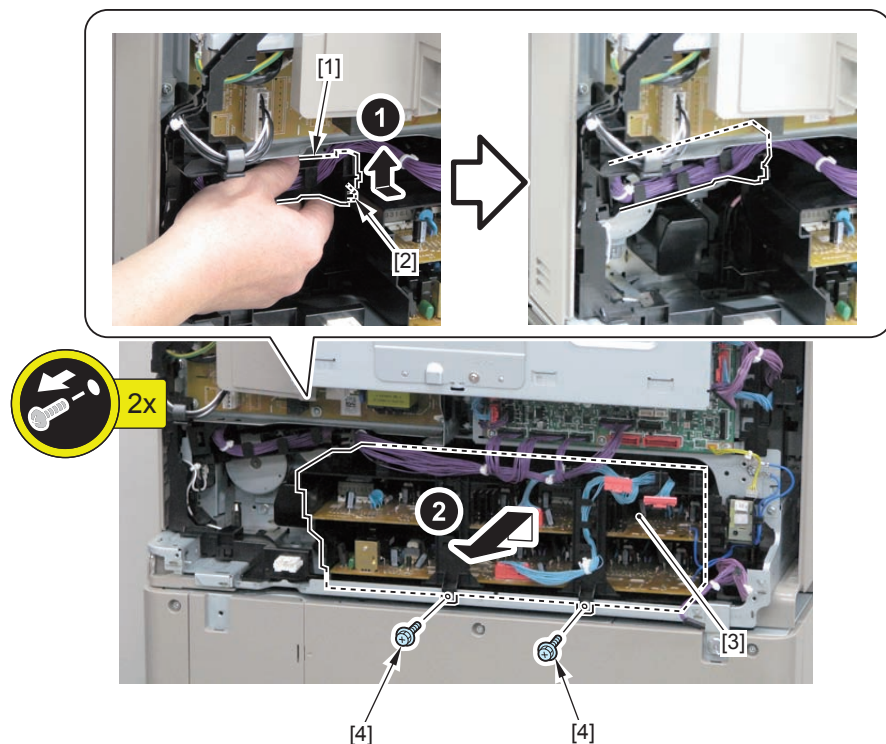


F-4-212

5) Remove the Environment Sensor [1] from the Secondary Transfer High-voltage PCB/
Developing High-voltage PCB Unit.
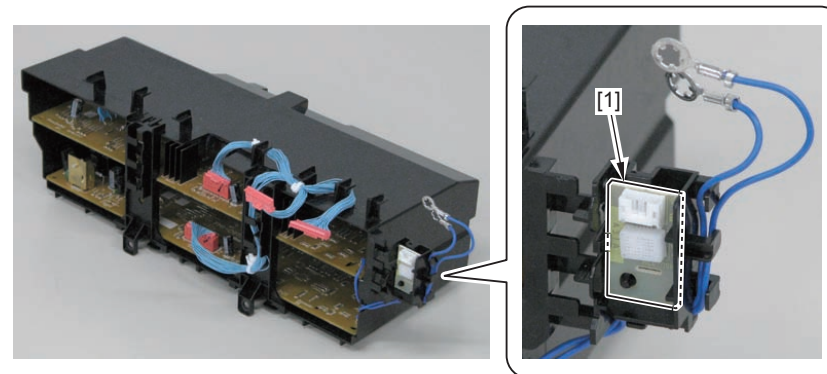


F-4-213

> NOTE:
> Be sure to install the removed Environment Sensor when replacing the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit.

> NOTE:
> The completed assembly of the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit is shown below.



F-4-214

4-89

**4** Disassembly/Assembly > Controller System > Removing the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit > Procedure

NOTE: Actions after assembly
Execute Auto Adjust Gradation.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust

# Removing the Primary Transfer High-voltage PCB Unit
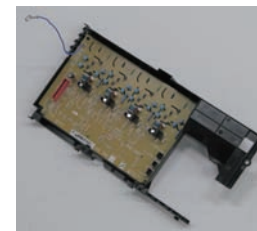


F-4-215

## ■ Preparation

1) Removing the ITB Unit(Refer to page 4-112).

2) Removing the Waste Toner Container(Refer to page 4-108).

3) Removing the Drum Unit (Y/M/C/Bk)(Refer to page 4-109).

4) Remove the Rear Cover 1(Refer to page 4-34).

5) Remove the Left Lower Cover(Refer to page 4-36).

## ■ Procedure

1) Remove the Drum Unit Suction Cooling Fan [1].

• 1 Connector [2]

• 1 Claw [3]

• 2 Hooks [4]

F-4-216

2) Remove the round shape terminal [1].
- 1 Screw [2]
- Harness Guide [A]

3) Disconnect the 3 connectors [3], and free the harness [4] from the Harness Guide [B].
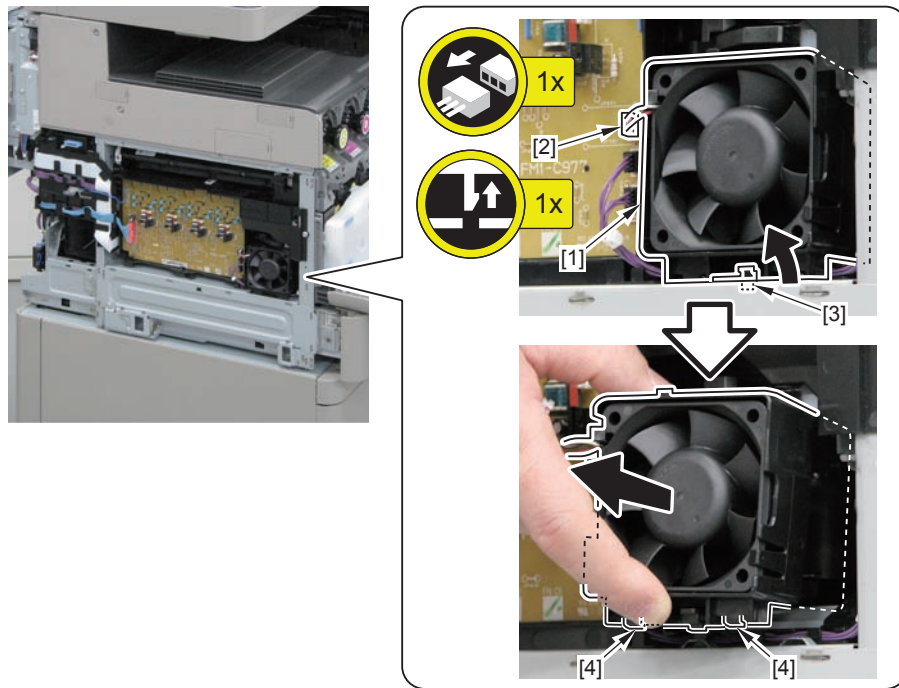


F-4-217

4) Remove the Primary Transfer High-voltage PCB Unit [1].
- 1 Screw [2]
- 1 Claw [3]
- 4 Hooks [4]



F-4-218
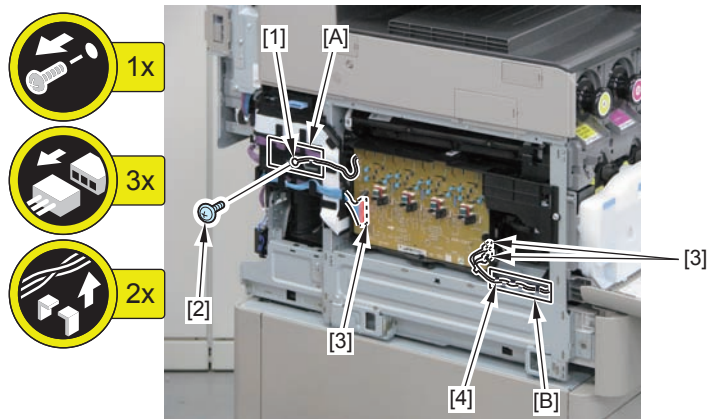
CAUTION:

- When disassembling/assembling, be sure to handle carefully so as to not scatter toner since the Collection Mouth [1] of the Waste Toner Container is located behind the Primary Transfer High-voltage PCB Unit [2].
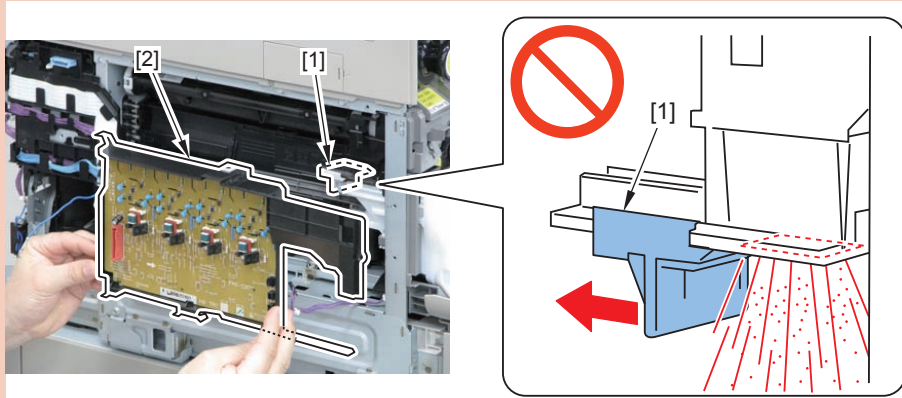


F-4-219

- When assembling, the contact point [A] of the Primary Transfer High-voltage PCB Unit must be contacted with the 4 Contact Springs [B] of the High-voltage Main Guide.
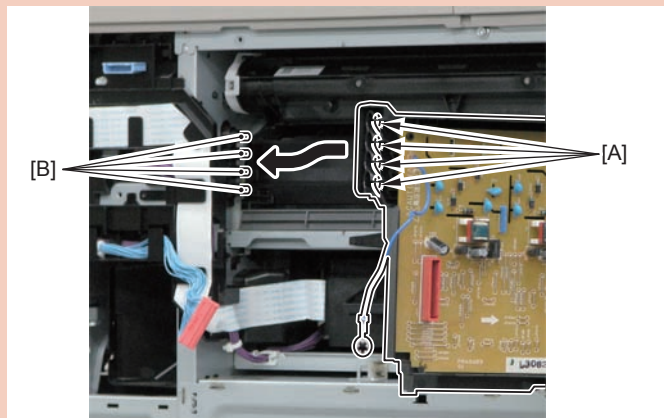


F-4-220

NOTE: Actions after assembly
Execute Auto Adjust Gradation.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust

## ● Removing the Power Supply Cooling Fan
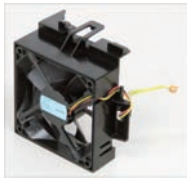


F-4-221

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

### ■ Procedure

1) Remove the Power Supply Fan [1].
- 1 Connector [2]
- 2 Claws [3]
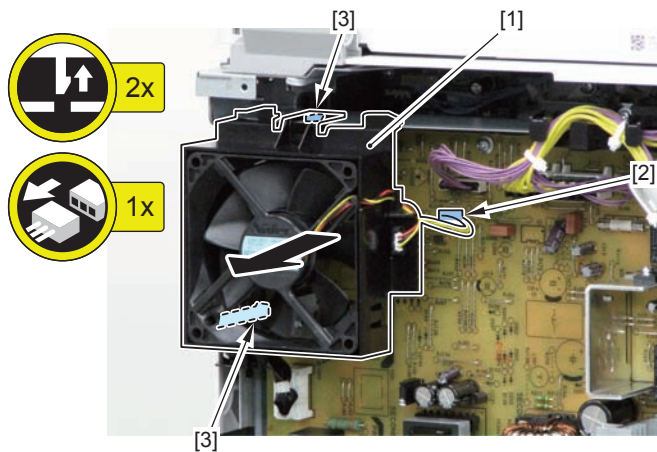


F-4-222

## ● Removing the Low-voltage Power Supply PCB Unit
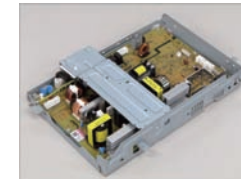


F-4-223

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Power Supply Fan(Refer to page 4-93).

### ■ Procedure

1) Disconnect the 6 connectors [2] installed in the Low-voltage Power Supply PCB [1].
2) Free the harness [3] from the Harness Guide [A].
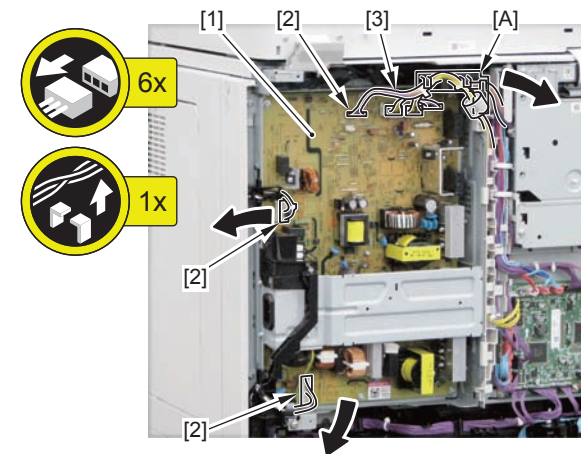


F-4-224

3) Remove the Power Switch Harness Guide [1].

- 1 Claw [2]
- 2 Bosses [3]
- 6 Hooks [4]
- 1 Connector [5]
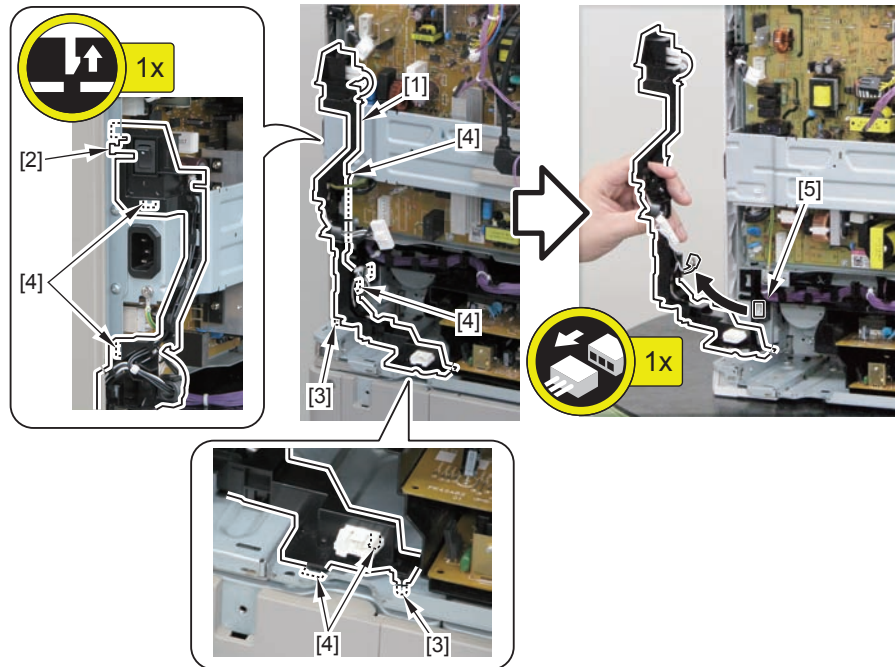
F-4-225

NOTE: How to install the Power Switch Harness Guide
Be sure to align the groove [A] of the Power Switch Harness Guide with the edge [B] of the side plate to install the guide.
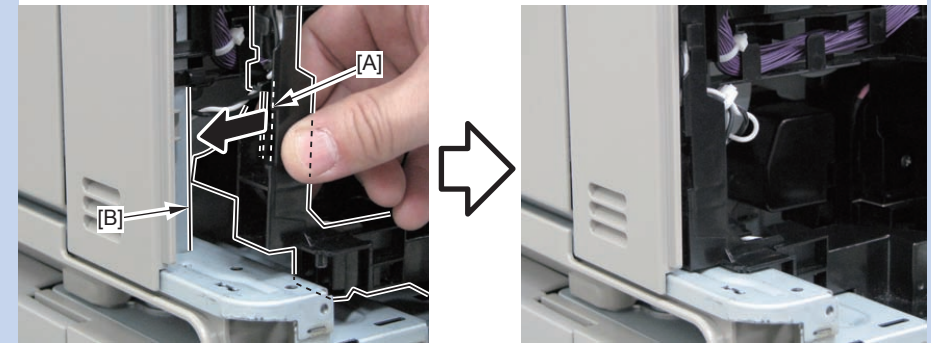
F-4-226

4) Remove the Fixing Harness Guide [1].

• 1 Boss [2]

• 2 Hooks [3]
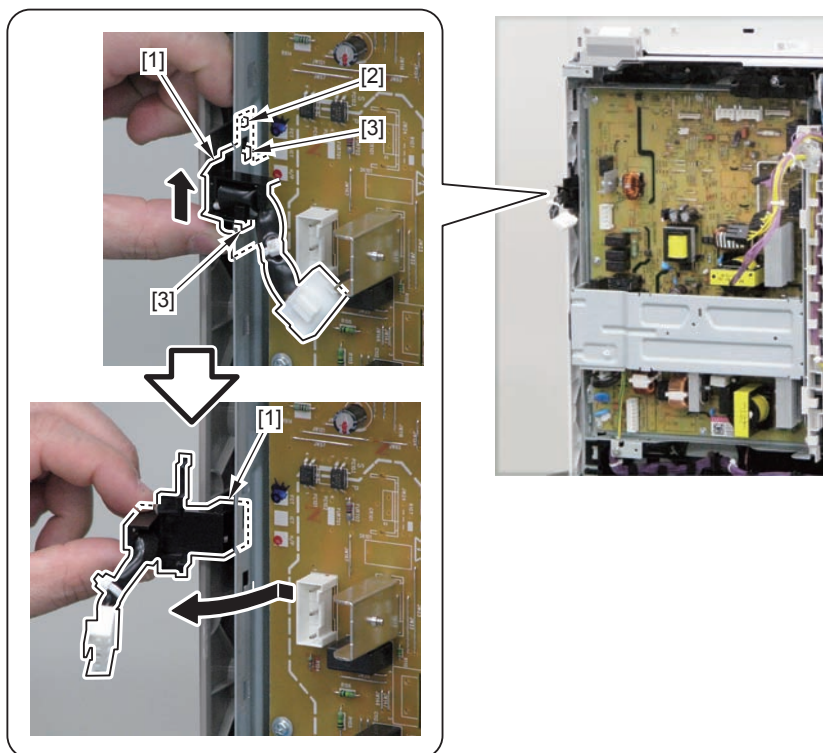


F-4-227

5) Remove the Power Supply Harness Guide [1].

• 2 Bosses [2]

• 1 Hook [3]
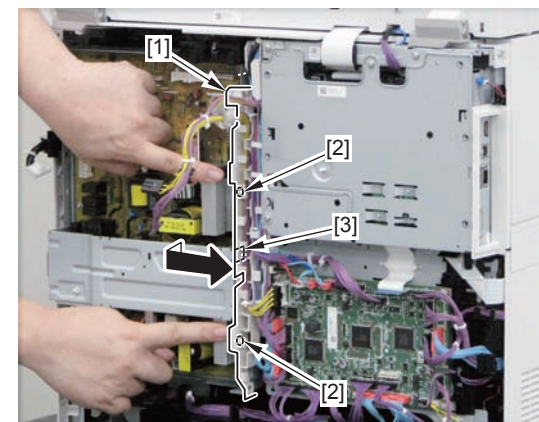


F-4-228

NOTE: How to install the Power Supply Harness Guide
Be sure to align the 2 grooves [A] of the Power Supply Harness Guide with the edge [B] of the side plate, and hook the hook [1] on the hole [2] in the side plate of the Low-voltage Power Supply PCB to install the guide.
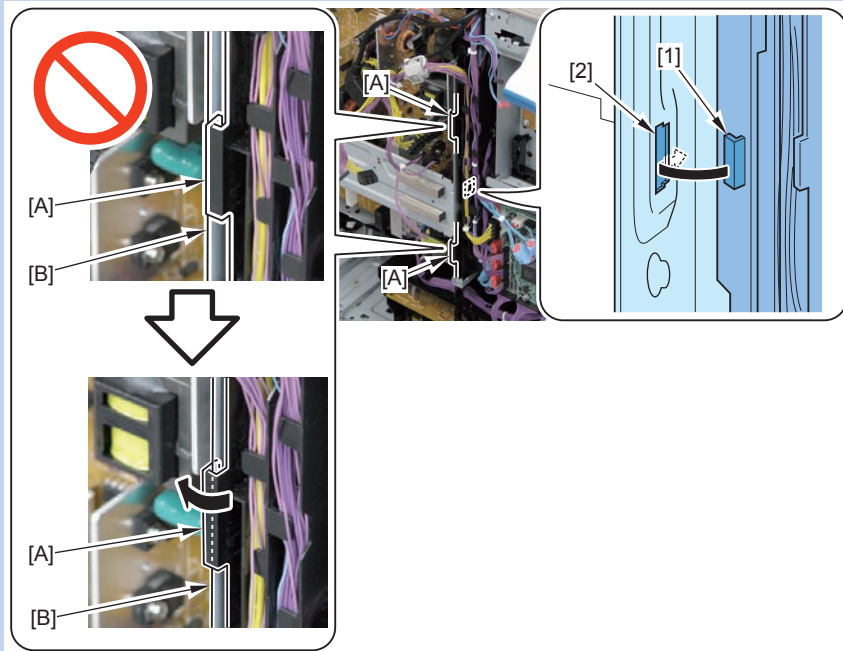
F-4-229

6) Remove the Low-voltage Power Supply PCB Unit [1].
- 4 Screws [2]
- 1 Hook [3]
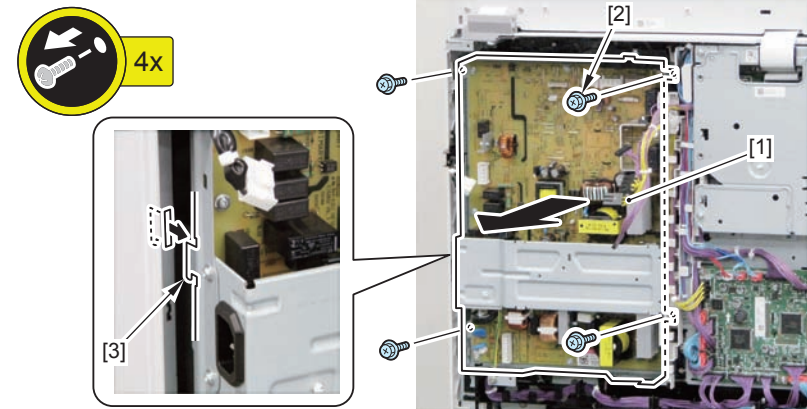
F-4-230

● When replacing the Low-voltage Power Supply Unit

7) Remove the Cable Guide [1].
- 1 Screw [2]
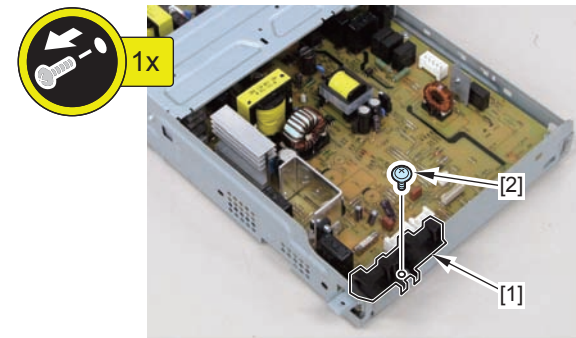
F-4-231

NOTE: Actions after assembly
Install the removed Cable Guide to the new Low-voltage Power Supply Unit.

**4** Disassembly/Assembly > Controller System > Removing the Touch Panel/Control Panel CPU PCB Unit /LCD Unit > Procedure

4-97

# Removing the Touch Panel/Control Panel CPU PCB Unit /LCD Unit
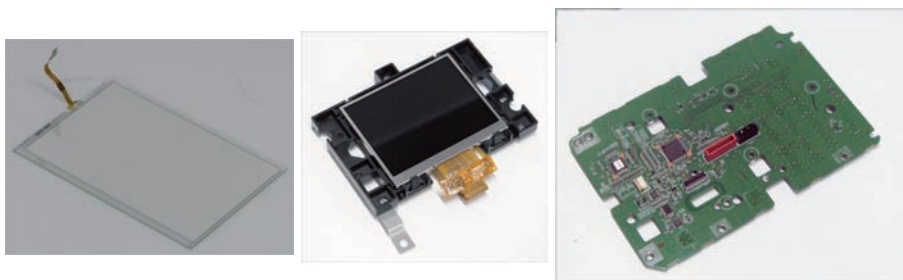


F-4-232

## ■ Preparation

1) Remove the Control Panel Unit.(Refer to page 4-47)

## ■ Procedure

CAUTION:

Be careful not to damage the Control Panel during disassembly/assembly.



F-4-233

CAUTION:

Do not touch the surface [A] of the Touch Panel and the surface [B] of the LCD Unit when disassembling/assembling.



[A]

[B]

F-4-234

4-97

**4** Disassembly/Assembly > Controller System > Removing the Touch Panel/Control Panel CPU PCB Unit /LCD Unit > Procedure
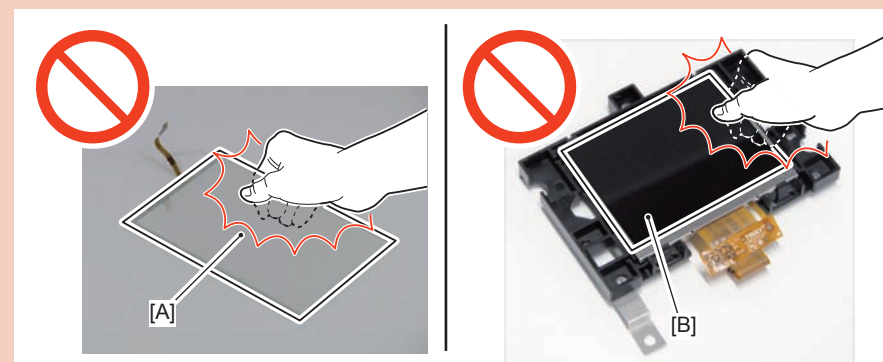
1) Remove the Control Panel Rear Cover [1].
• 4 Screws [2]



4x

[2]

[1]
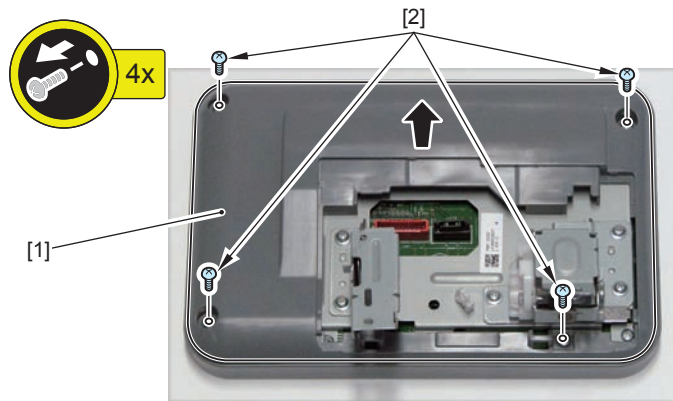
F-4-235

2) Remove the Control Panel Support Plate [1].
• 4 Screws [2]



4x

[2]

[1]
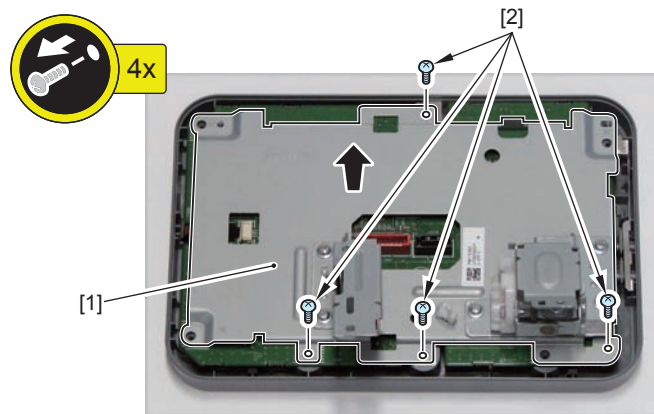
F-4-236

3) Remove the Control Panel CPU PCB Unit [1].
• 2 Flat Cables [2]
• 5 Screws [3]

Note: How to remove the Flat Cable
There are 2 types of Flat Cables on the Main Controller PCB.
They can be removed as follows.

Type 1:
1. Raise the Fixation Member [1].
2. Lift and remove the Flat Cable [2].



[1]          [2]

F-4-237

Type 2:
1. Pull out the Fixation Member [1].
2. Pull out the Flat Cable [2].



[1]

[2]

F-4-238

**4** Disassembly/Assembly > Controller System > Removing the Touch Panel/Control Panel CPU PCB Unit /LCD Unit > Procedure

4-99

[1]  [2]  [3]

2x

5x
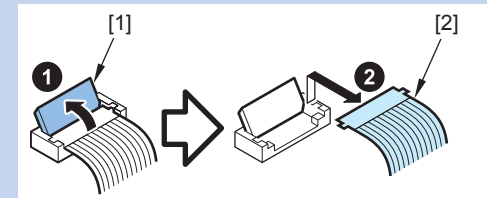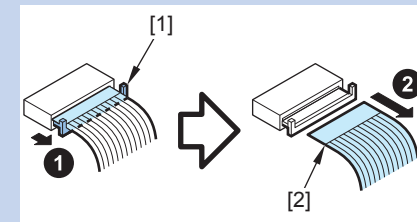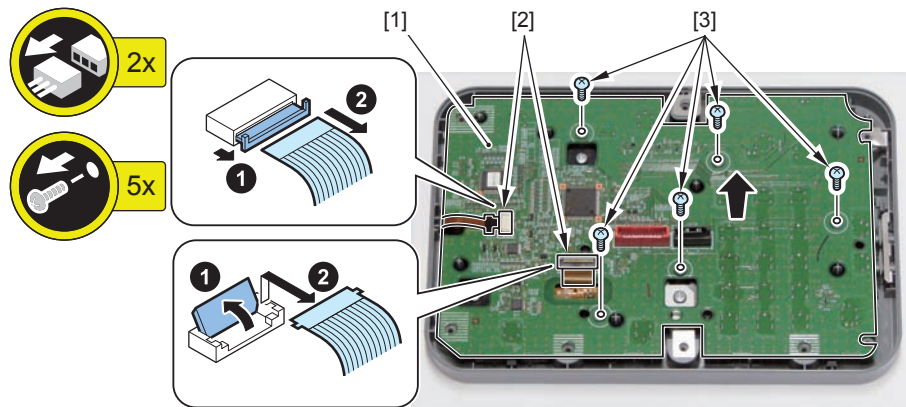
F-4-239

4) Remove the LCD Unit [1].

• 3 Screws [2]



3x

[1]  [2]
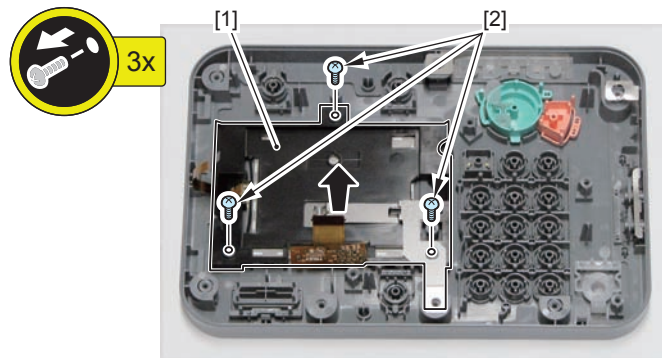
F-4-240

5)Remove the Touch Panel [1] while removing the double-sided tape.



[1]
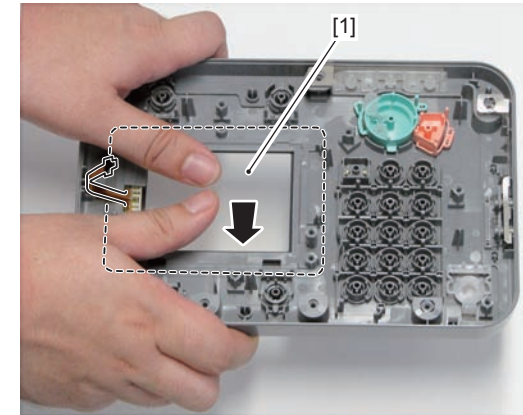
F-4-241

NOTE: Actions after assembly
The removed Touch Panel cannot be used again.
Replace it with a new Touch Panel.

4-99

**4** Disassembly/Assembly > Controller System > Removing the Touch Panel/Control Panel CPU PCB Unit /LCD Unit > Procedure

NOTE: How to install the Touch Panel
The following shows the locations of the 2 Control Panel Grounding Plates [1].

[1]
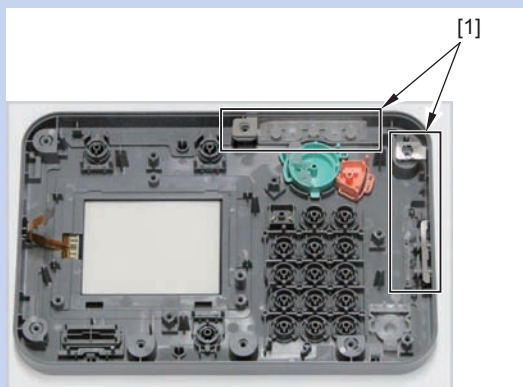
F-4-242

The following shows the locations of the key tops of the Control Panel.

F-4-243

## ■ After Replacing

| After Replacing | * Adjustment shown below is necessary only when replacing a single part.<br>   Execute the following: COPIER > ADJUST > PANEL > TOUCHCHK |
|---|---|

T-4-86

## Removing the Fax Speaker Unit

F-4-244

## ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

2) Remove the Left Upper Cover.(Refer to page 4-36)

## ■ Procedure

1) Remove the Fax Speaker Unit [1].

• 1 Connector [2]

• 1 Wire Saddle [3]

• 2 Screws [4]

1x

1x

2x

[3]  [1]
[2]
[4]
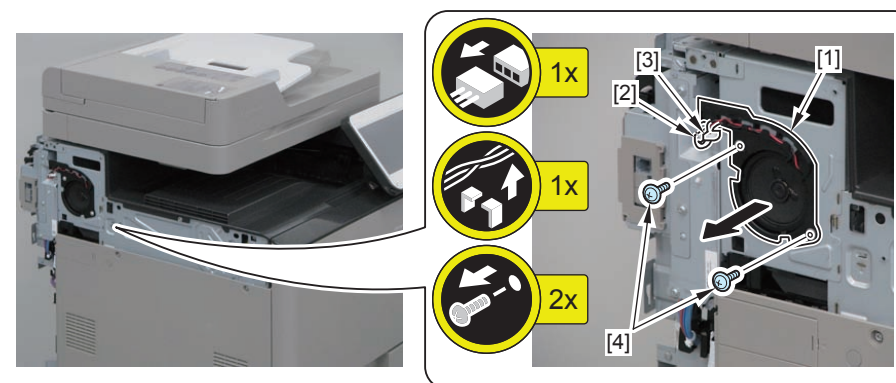
F-4-245

## Removing the Fax Unit
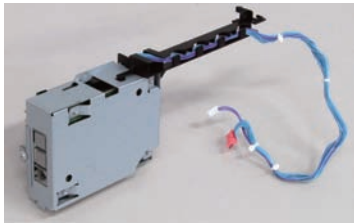


F-4-246

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

### ■ Procedure

1) Remove the Main Controller Sub Cover [1].

- 3 Screws [2]
- 2 Hooks [3]
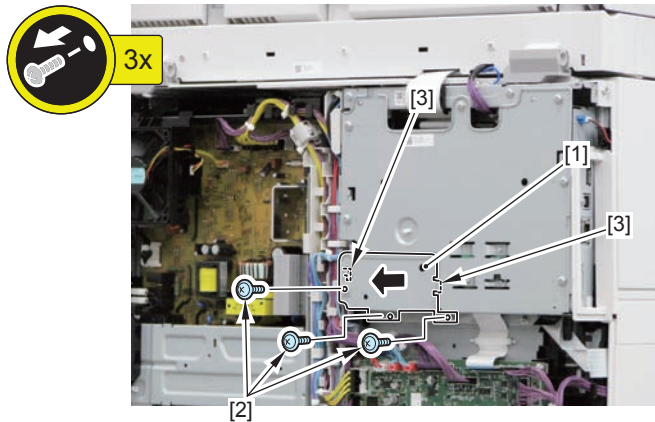


F-4-247

2) Free the Fax Cable [1] from the guide [A].

- 2 Connectors [2]
- 1 Edge Saddle [3]
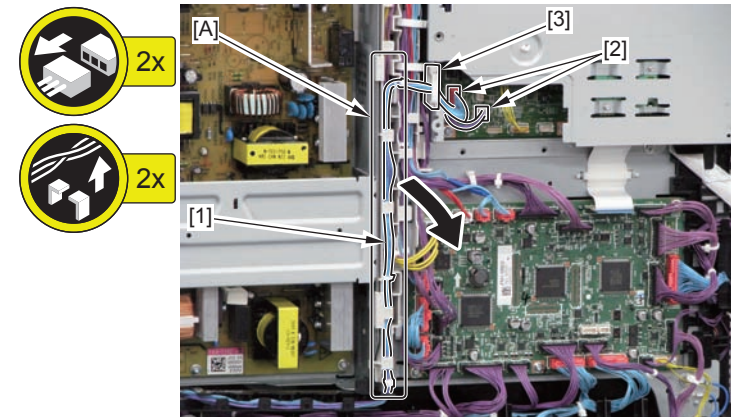


F-4-248

3) Remove the Fax Unit [1].

- 1 Screw [2]
- 1 Hook [3]
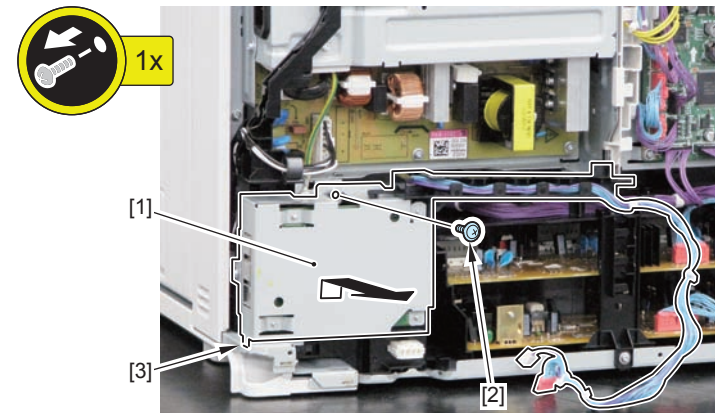


F-4-249

# Laser Exposure System

## ● Layout Drawing



[1]
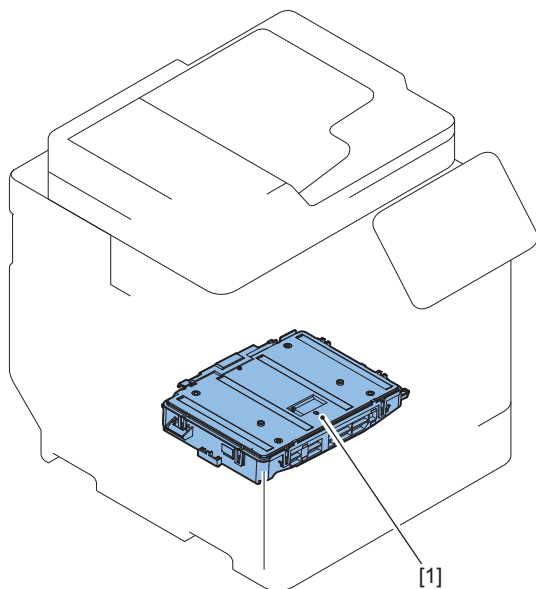
F-4-250

| No. | Parts Name | Main Unit | Remarks | Reference |
|-----|-----------|-----------|---------|-----------|
| [1] | Laser Scanner Unit | Product Configuration | | (Refer to page 4-102) |

T-4-87

## ● Removing the Laser Scanner Unit



F-4-251

### ■ Preparation

1) Removing the ITB Unit(Refer to page 4-112).
2) Removing the Waste Toner Container(Refer to page 4-108).
3) Removing the Drum Unit (Y/M/C/Bk)(Refer to page 4-109).
4) Remove the Rear Cover 1(Refer to page 4-34).
5) Remove the Left Lower Cover(Refer to page 4-36).
6) Remove the Primary Transfer High-voltage PCB Unit(Refer to page 4-90).

## ■ Procedure

CAUTION:

- • Be sure not to disassemble the Laser Scanner Unit because adjustment is required.
- • Disassembling the unit may cause functional problems.
- • Do not touch the toner outlet [A] because the toner may be scattered when disassembling/assembling.

F-4-252

1) Remove the Shutter Link Unit [1].
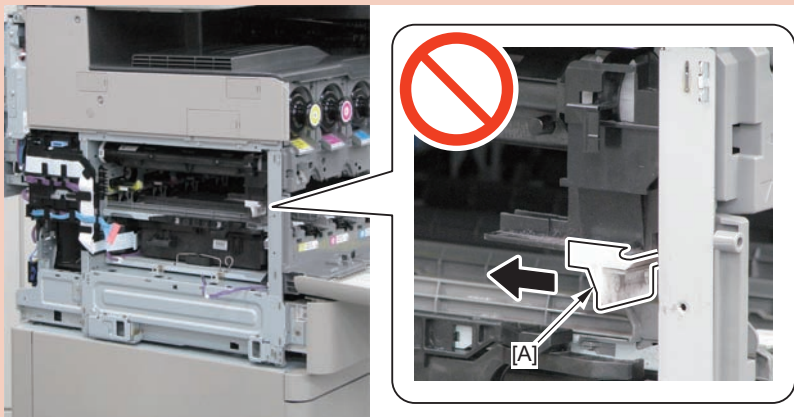
- • 1 Boss [2]
- • 3 Hooks [3]

F-4-253

2) Remove the Laser Scanner Fixation Spring [1].

- • 1 Hook [2]

F-4-254
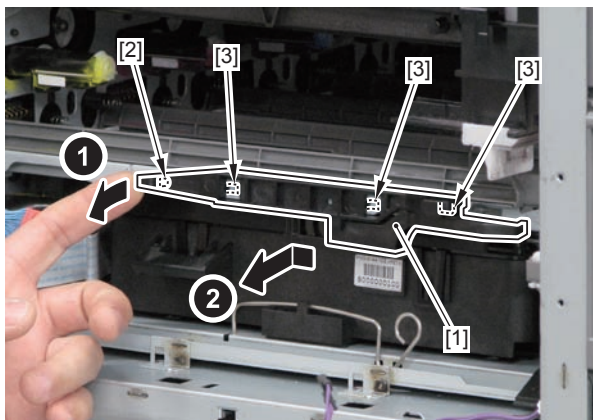
3) Pull out the Laser Scanner [1].

• 1 Edge Saddle [2]

> **CAUTION:**
>
> Do not touch the PCB installed on the Laser Scanner Unit when disassembling/ assembling.
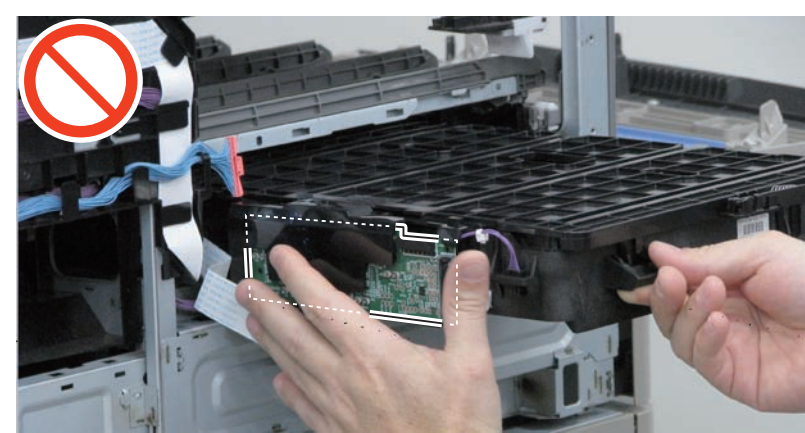


F-4-255



F-4-256

4) Free the Flat Cable [1] from the Wire Saddle [2], and disconnect the 2 connectors [3].
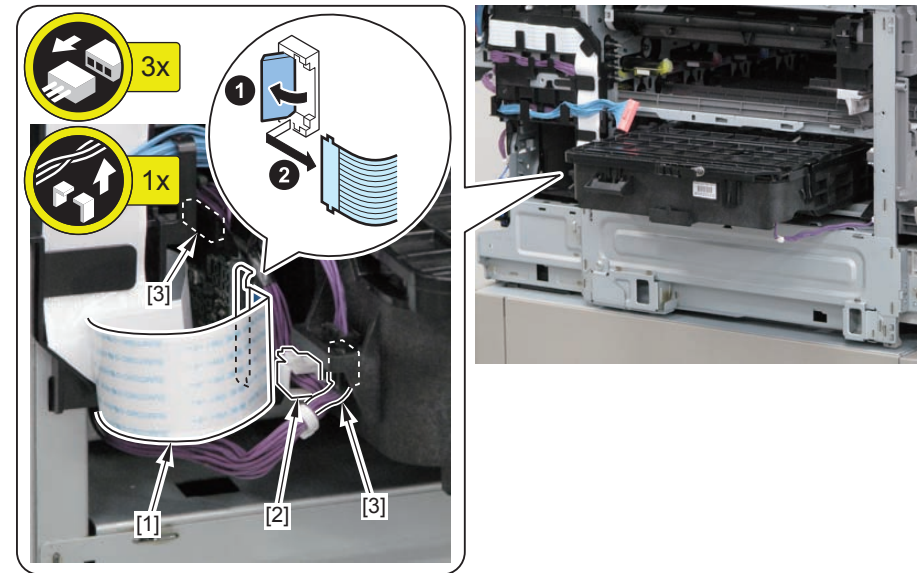


F-4-257

5) Remove the Laser Scanner Unit [1].
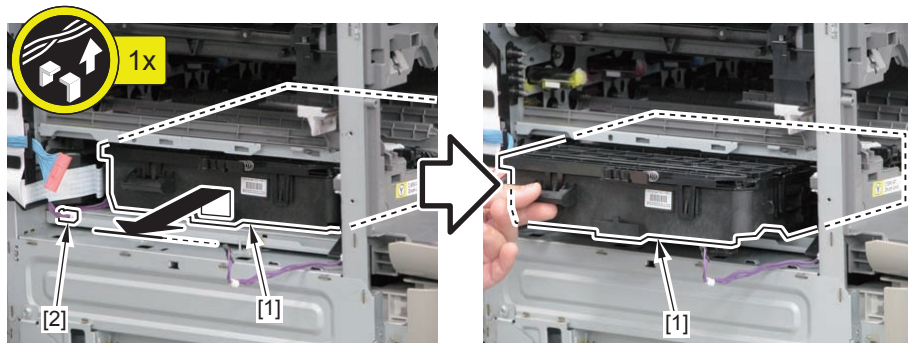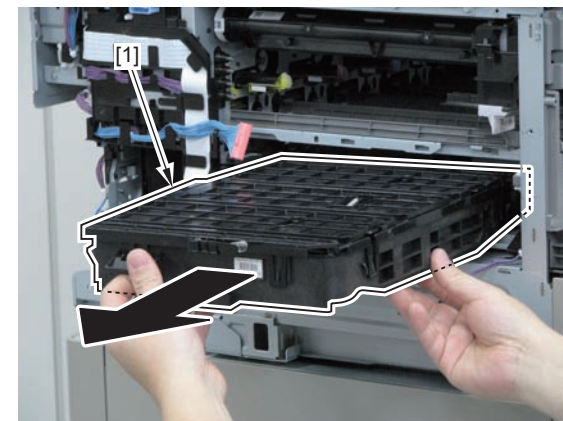


F-4-258

NOTE: How to install the Laser Scanner Unit

1) Insert the 3 protrusions [B] of the Laser Scanner Unit [1] into the 3 holes [A] of the plate.

2) Insert the boss [2] into the hole [C] of the plate.
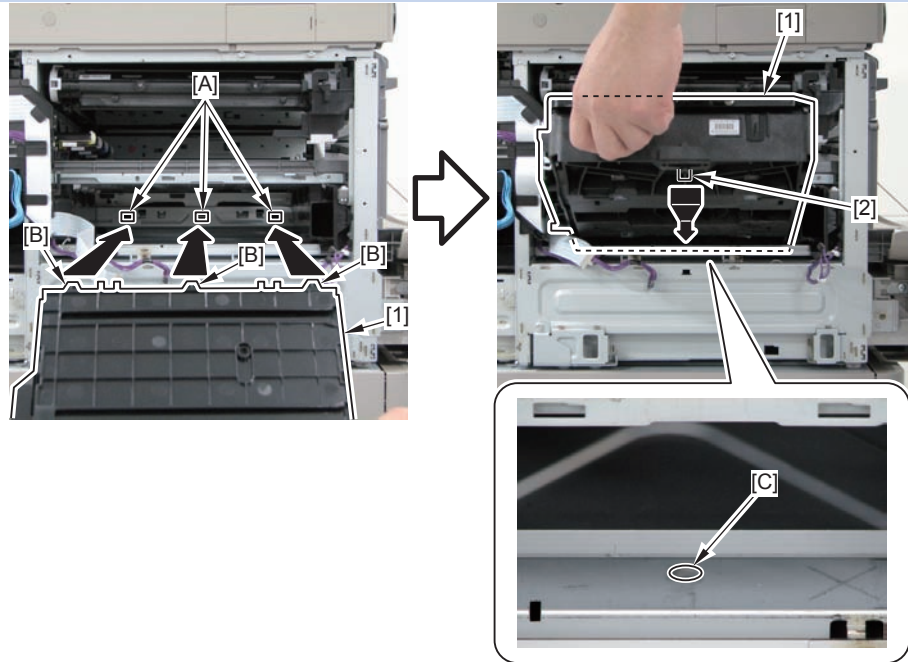


F-4-259

NOTE: Actions after assembly
Execute Auto Adjust Gradation and Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

# Image Formation System

## Layout Drawing
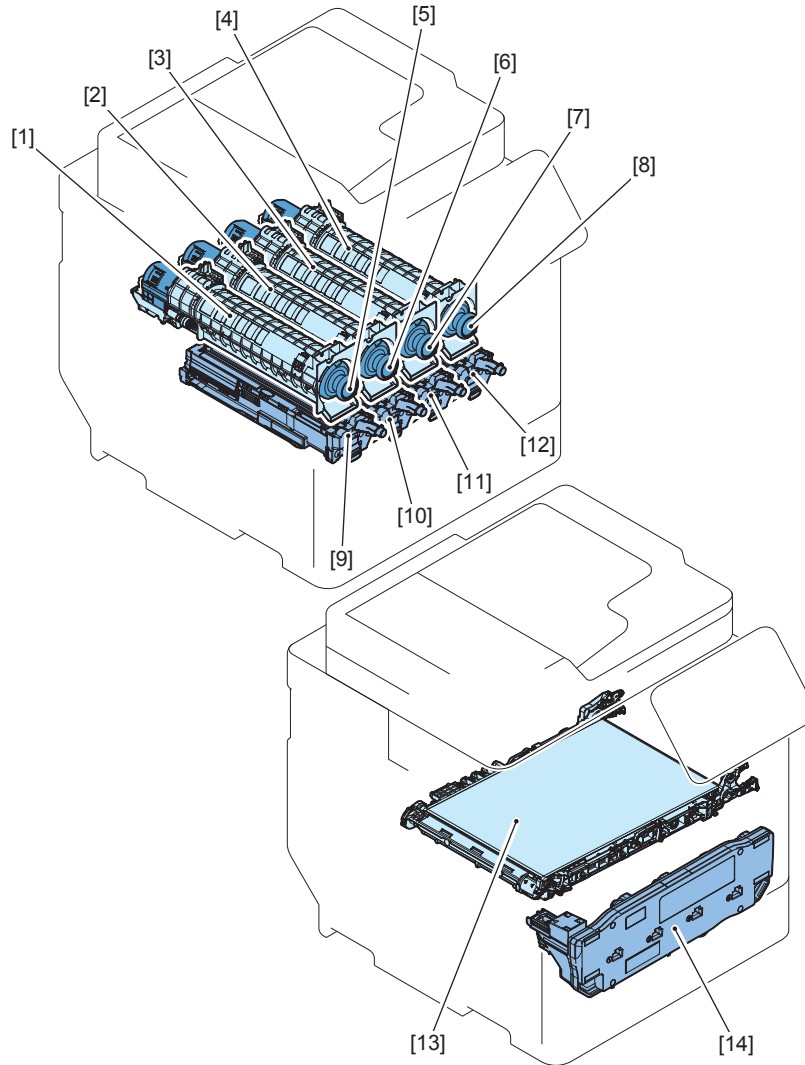


F-4-260

| No. | Parts Name | Main Unit | Remarks | Reference |
|-----|-----------|-----------|---------|-----------|
| [1] | Toner Bottle Mount Unit (Y) | Product Configuration | | (Refer to page 4-132) |
| [2] | Toner Bottle Mount Unit (M) | Product Configuration | | (Refer to page 4-132) |
| [3] | Toner Bottle Mount Unit (C) | Product Configuration | | (Refer to page 4-132) |
| [4] | Toner Bottle Mount Unit (Bk) | Product Configuration | | (Refer to page 4-132) |
| [5] | Toner Cartridge (Y) | Product Configuration | | (Refer to page 4-109) |
| [6] | Toner Cartridge (M) | Product Configuration | | (Refer to page 4-109) |
| [7] | Toner Cartridge (C) | Product Configuration | | (Refer to page 4-109) |
| [8] | Toner Cartridge (K) | Product Configuration | | (Refer to page 4-109) |
| [9] | Drum Unit (Y) | Product Configuration | | (Refer to page 4-109) |
| [10] | Drum Unit (M) | Product Configuration | | (Refer to page 4-109) |
| [11] | Drum Unit (C) | Product Configuration | | (Refer to page 4-109) |
| [12] | Drum Unit (Bk) | Product Configuration | | (Refer to page 4-109) |
| [13] | ITB Unit | Product Configuration | | (Refer to page 4-112) |
| [14] | Contaner Waste Toner | Product Configuration | | (Refer to page 4-108) |

T-4-88

FRONT

FRONT
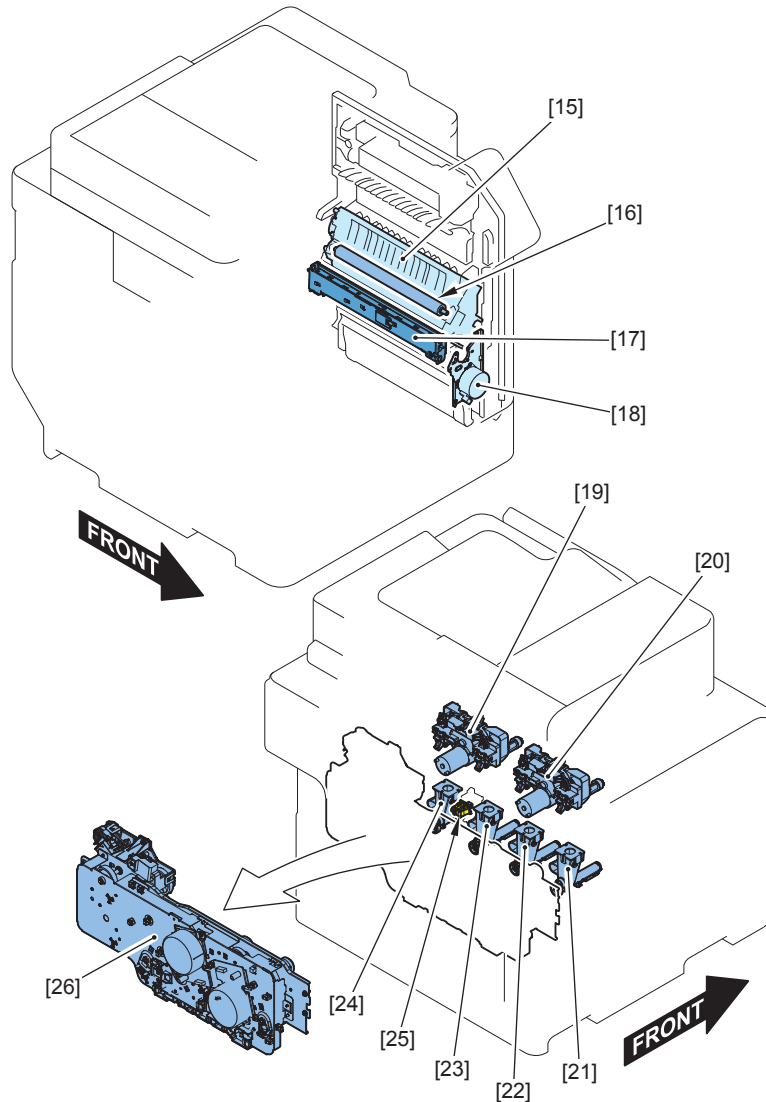
F-4-261

| No. | Parts Name | Main Unit | Remarks | Reference |
|---|---|---|---|---|
| [15] | Secondary transfer outer Roller Guide Unit | Right Cover Unit | | (Refer to page 4-120) |
| [16] | Secondary transfer outer Roller Unit | Secondary Transfer Outer Roller Guide Unit | | (Refer to page 4-119) |
| [17] | Registration Patch Sensor Unit | Product Configuration | | (Refer to page 4-117) |
| [18] | Registration Drive Unit | Product Configuration | | (Refer to page 4-123) |
| [19] | Bottle Drive Unit (CK) | Product Configuration | | (Refer to page 4-132) |
| [20] | Bottle Drive Unit (YM) | Product Configuration | | (Refer to page 4-132) |
| [21] | Hopper Unit (Y) | Product Configuration | | (Refer to page 4-127) |
| [22] | Hopper Unit (M) | Product Configuration | | (Refer to page 4-127) |
| [23] | Hopper Unit (C) | Product Configuration | | (Refer to page 4-127) |
| [24] | Hopper Unit (Bk) | Product Configuration | | (Refer to page 4-127) |
| [25] | ITB Pressure Release Switch | Product Configuration | SW07 | (Refer to page 4-130) |
| [26] | Main Drive Unit | Product Configuration | | (Refer to page 4-125) |

T-4-89

## Removing the Waste Toner Container



F-4-262

### ■ Procedure

CAUTION:

If the Waste Toner Container is tilted, toner [2] may spill out of the collection mouth [1] onto the floor.

For this reason, be sure to keep the Waste Toner Container in a horizontal position when removing the container.



F-4-263

1) Open the Front Cover [1], and remove the Waste Toner Container [2].



F-4-264
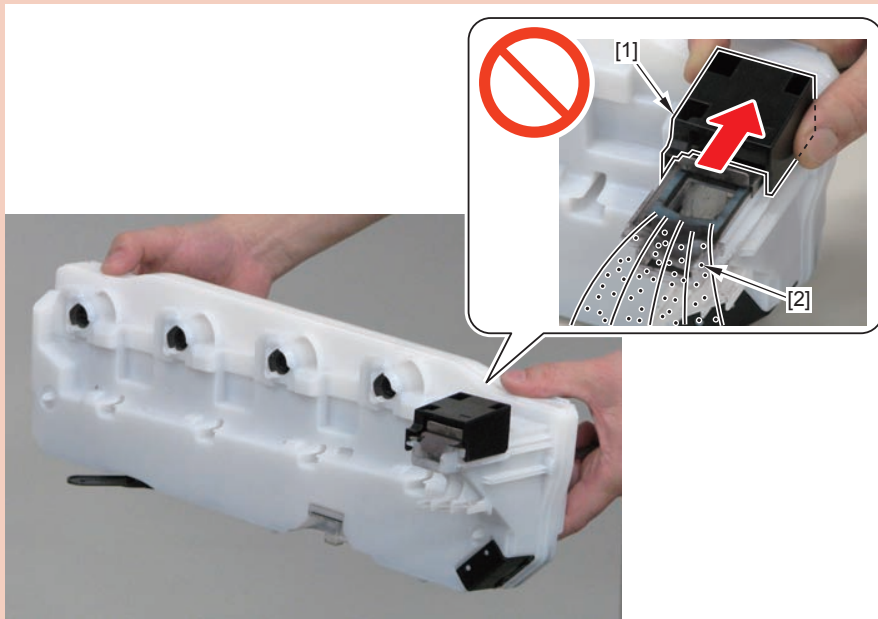
## Removing the Toner Container (Y/M/C/Bk)



F-4-265

### ■ Procedure

> NOTE:
> In this procedure, the procedure for the (Bk) color Toner Container Unit is described.
> Be sure to perform the same procedure for (Y/M/C) color.

1) Open the Front Cover [1], and remove the Toner Container (Bk) [2].
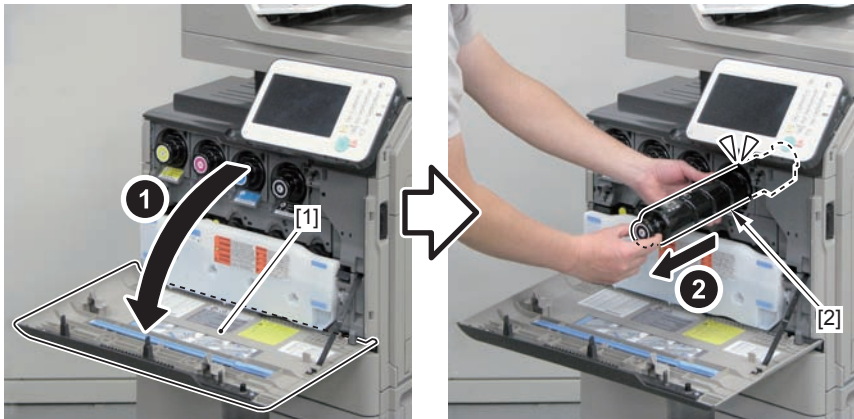


F-4-266

## Removing the Drum Unit (Y/M/C/Bk)



F-4-267

### ■ Preparation

1) Remove the Waste Toner Container(Refer to page 4-108).

### ■ Procedure

> NOTE:
> In this procedure, the procedure for the (Bk) color Drum Unit is described.
> Be sure to perform the same procedure for (Y/M/C) color.

CAUTION:

Touching the drum part [A] of the Drum Unit may cause finger oil to be attached on the drum.This makes the finger oil on the drum to be attached to toner, causing the risk of soiled image.

For this reason, be careful not to touch the drum part [A] when handling the Drum Unit.



F-4-268

CAUTION:

Exposing the Drum Unit to light for a long time may cause deterioration in sensitivity.

Therefore, be sure to block light to the drum part [A] using paper [1] when removing the Drum Unit from the host machine.
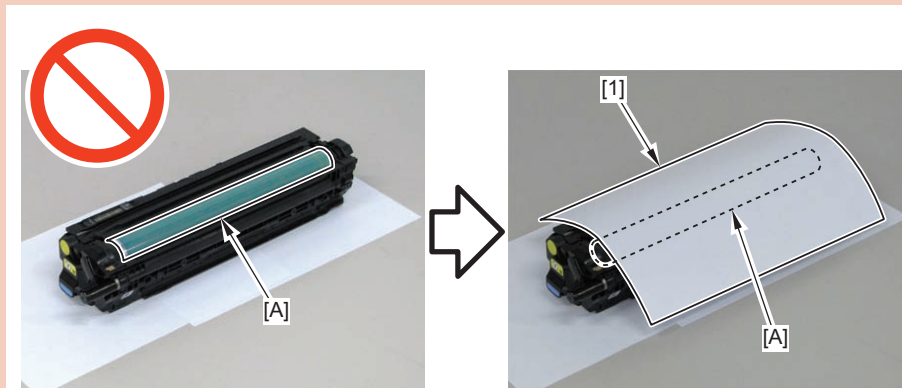


F-4-269

1)Remove the Drum Cartridge [1].
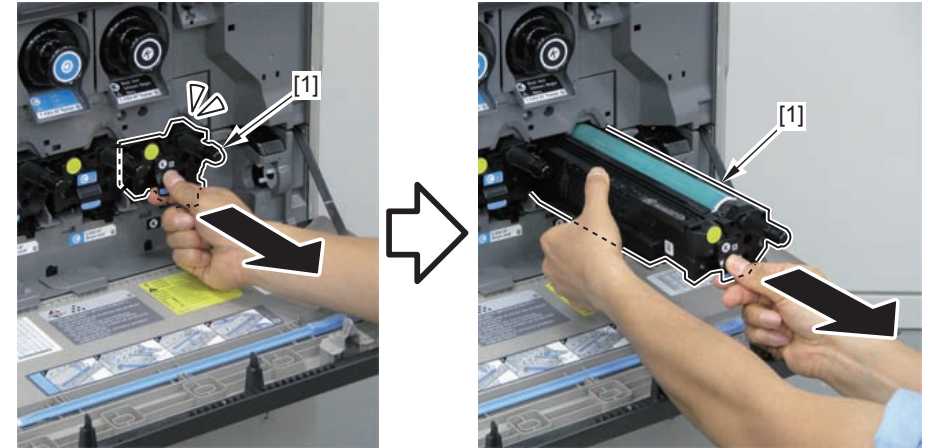


F-4-270

CAUTION:Handling of the Drum Unit at replacement

If a Drum Unit is vertically or horizontally kept for a long time, starter will be fixed in the Developing Assembly in the unit. As a result, starter in the Developing Assembly does not circulate, and image failure may occur.

When replacing the Drum Unit to a new one, be sure to loosen starter in the Developing Assembly by shaking the unit approx. 10 to 12 times as shown in the figure below before installing it to the host machine.



10~12
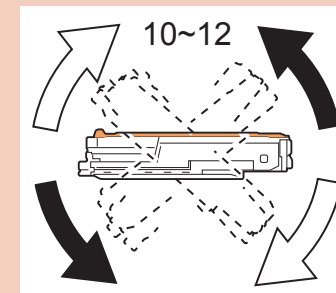
F-4-271

CAUTION:

When the Drum Unit [1] is installed to the host machine, if the Drum Unit is not installed properly, the Waste Toner Container [2] will protrude. As a result, when closing the Front Cover [3], the Front Cover [3] interferes with the Waste Toner Container and cannot be closed in some cases. When installing the Drum Unit [1] to the host machine, be sure to install the Drum Unit [1] properly by inserting it until it stops.

NOTE: Actions after assembly
Execute Auto Adjust Gradation.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust
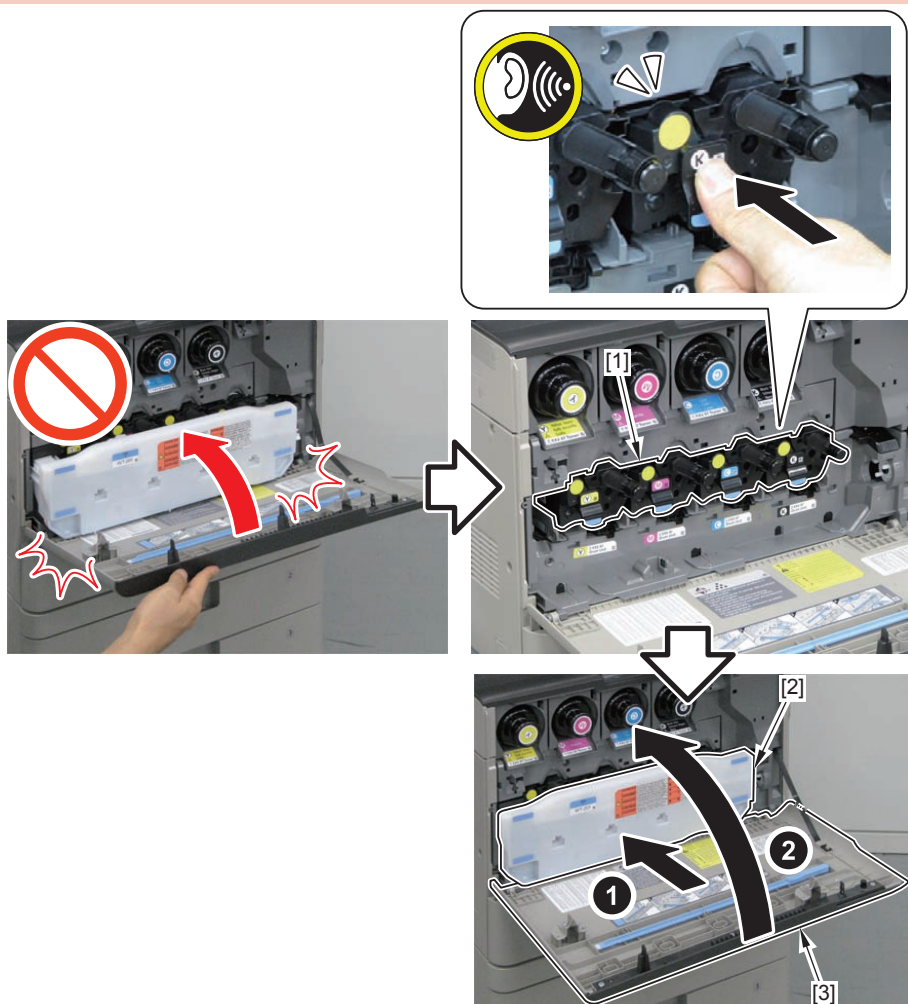


F-4-272

## Removing the ITB Unit



F-4-273

## ■ Procedure

> NOTE:
> If the duration level of the ITB Unit and that of the Secondary Transfer Outer Roller Unit are not equal, a color displacement may occur in the output image.

> CAUTION:
> • Place the paper [1] on a level space so as not to damage the ITB [2].
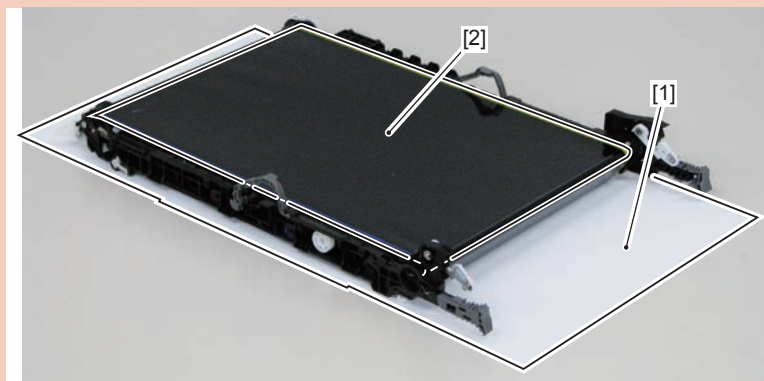


F-4-274

> CAUTION:
> • Do not damage the ITB [1] when disassembling/assembling.
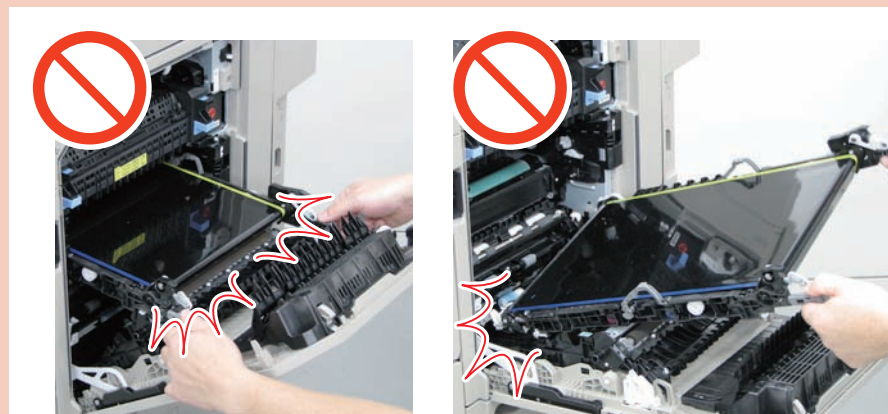


F-4-275

> • When removing the ITB Unit, do not hold the 2 Push Levers [1] to hold the unit.
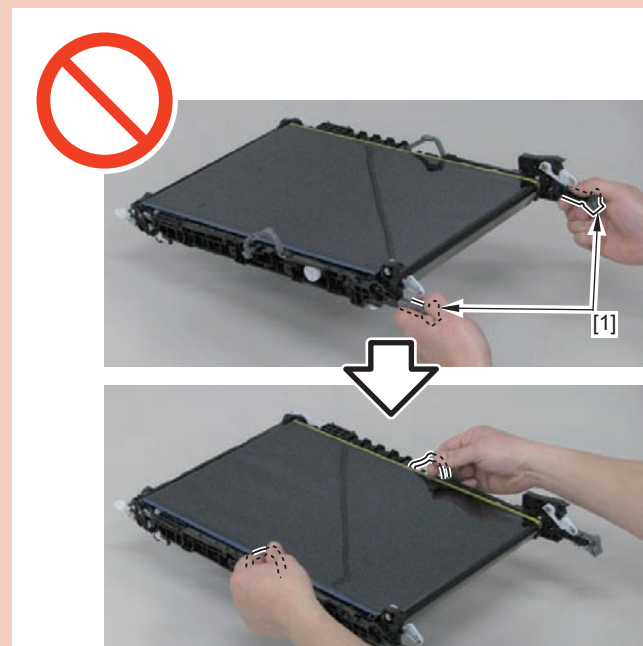


F-4-276

CAUTION:

- Do not open the outlet [A] of the Transfer Cleaning Shutter when disassembling/assembling. Otherwise, toner may scatter.
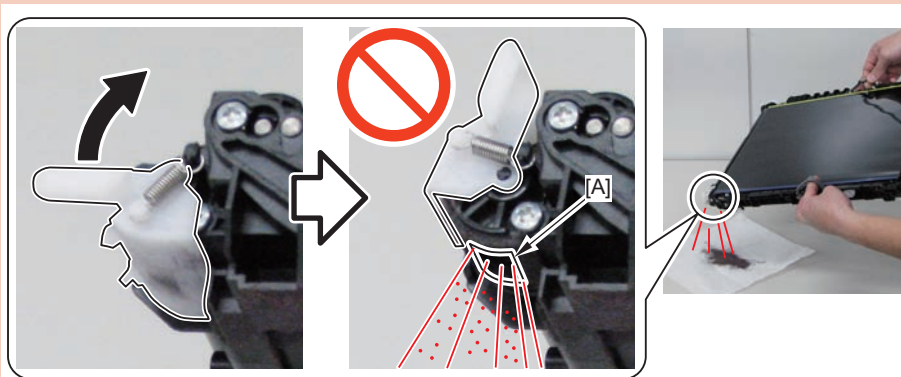


F-4-277

- Be sure to store the ITB Unit in the machine after checking that the outlet [A] is closed when assembling.
  There is a risk of damaging the ITB Unit if it is installed with the Transfer Cleaning Shutter [1] open.
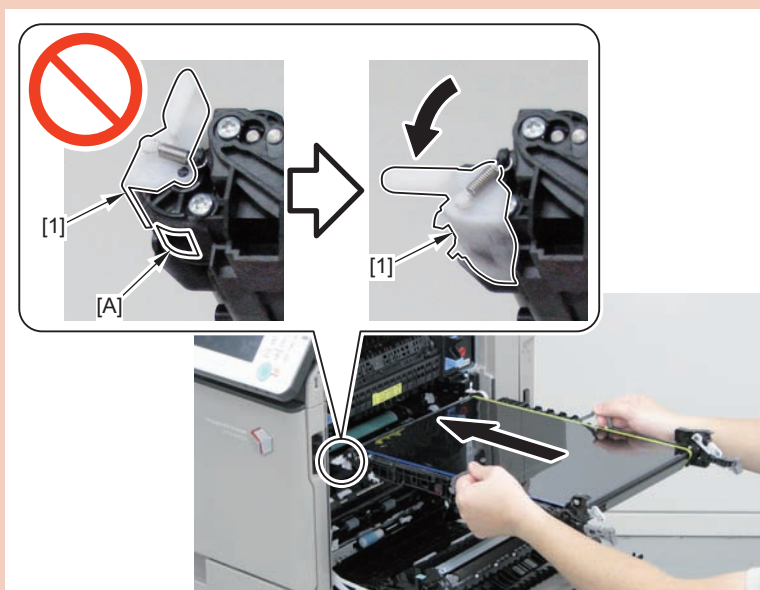


F-4-278
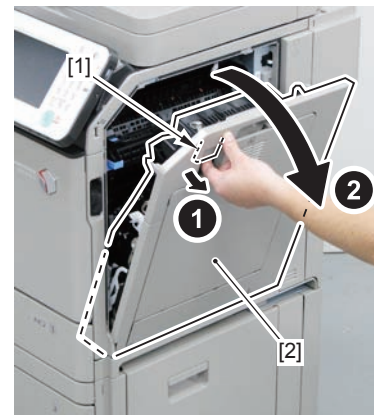
1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].



F-4-279

2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].



F-4-280

**4**  Disassembly/Assembly > Image Formation System > Removing the ITB Unit > Cleaning when installing/removing the ITB Unit

4-114
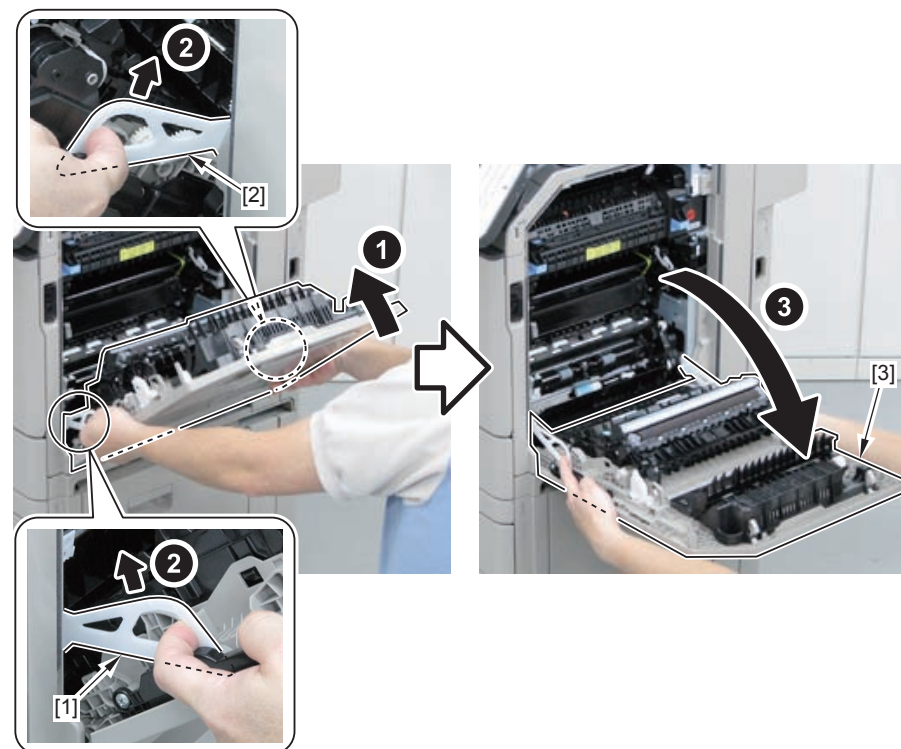
3) Hold the 2 Push Levers [1], and pull out the ITB Unit [3] to the position where the 2 handles [2] are lifted.
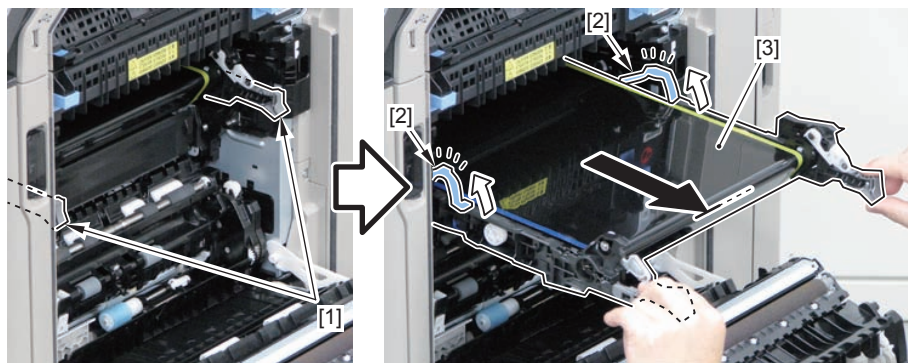


F-4-281

4) Now hold the 2 handles [1], and remove the ITB Unit [2].
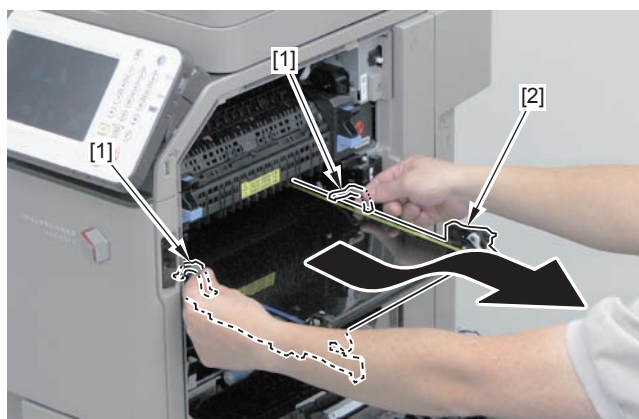


F-4-282

## ■ Cleaning when installing/removing the ITB Unit

Be sure to check for any soiling before cleaning since toner may be spilled over Drum Unit (Y) when installing/removing the ITB Unit.

### ● Preparation

1) Remove the Waste Toner Container.
2) Remove the Drum Unit (Y/M/C/Bk) (remove the Drum Unit of the Y color).

### ● Procedure

CAUTION:
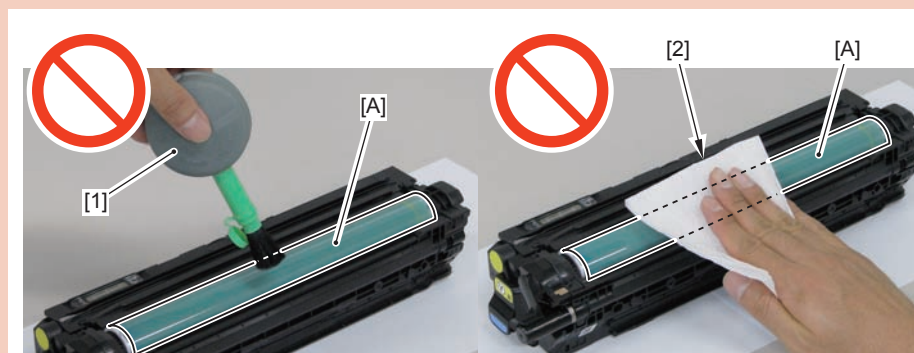
Do not clean the drum surface [A] with a blower [1] or lint-free paper [2].



F-4-283

4-114

**4**  Disassembly/Assembly > Image Formation System > Removing the ITB Unit > Cleaning when installing/removing the ITB Unit

**4** Disassembly/Assembly > Image Formation System > Removing the ITB Unit > Cleaning the Registration Patch Sensor Unit

4-115

1) Put the removed Drum Unit (Y) [1] on a sheet of paper [2].
2) Cover the removed Drum Unit (Y) [1] with a paper [3] to block the light for Drum (4).
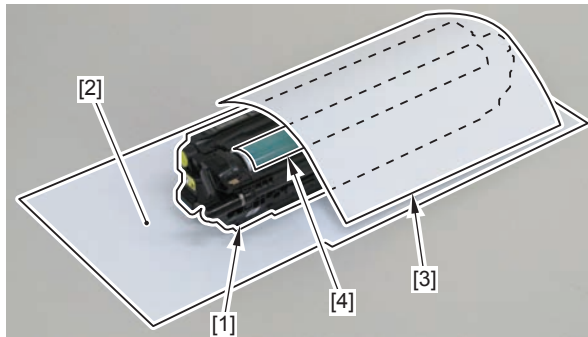
F-4-284

3) Clean the [A] part of the Drum Unit (Y) [1] with a blower [2].
4) Clean the [A] part of the Drum Unit (Y) [1] with lint-free paper [3].
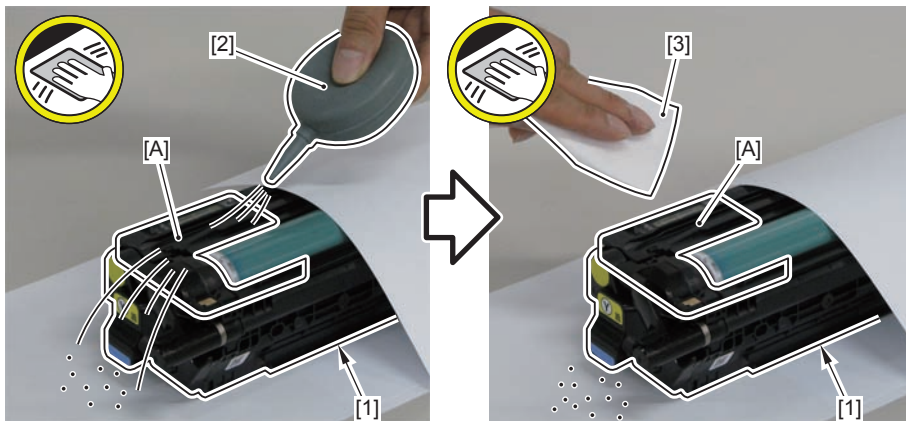
F-4-285

## ■ Cleaning the Registration Patch Sensor Unit

Be sure to clean the Registration Patch Sensor Unit when replacing the ITB Unit.

Preparation

### ● Preparation

1) Remove the Waste Toner Container.
2) Remove the Drum Unit (remove Bk color).
3) Remove the ITB Unit.

### ● Procedure

1) While opening the RD Sensor Shutter [1], clean the surface [A] of the Patch Sensor with a blower. After cleaning, check that there is no soiling caused by toner on the surface [A] of the sensor.
   If the soiling cannot be removed, perform step 2.
2) While opening the RD Sensor Shutter [1], clean the surface [A] of the Patch Sensor with tightly-wrung cotton swab moistened with water in a single direction.

CAUTION:

• Do not use alcohol because it causes melting and clouding of the sensor window.

• Do not dry wipe the sensor window because it is charged to attract toner.

F-4-286

4-115

**4** Disassembly/Assembly > Image Formation System > Removing the ITB Unit > Cleaning the Registration Patch Sensor Unit
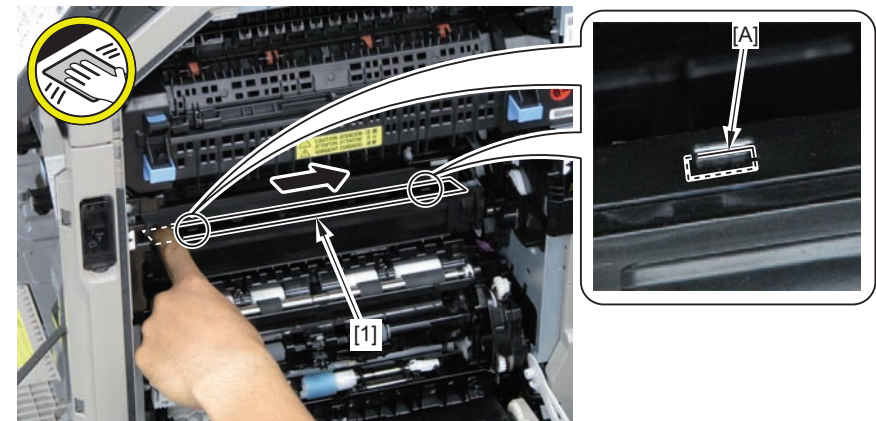
## ■ Installing the ITB Unit

### ● Procedure

1) Hold the 2 handles [1], align the 2 protrusions [B] of the ITB Unit [2] with the 2 grooves [A] of the rails of the ITB Unit, and then put the unit inside the machine.
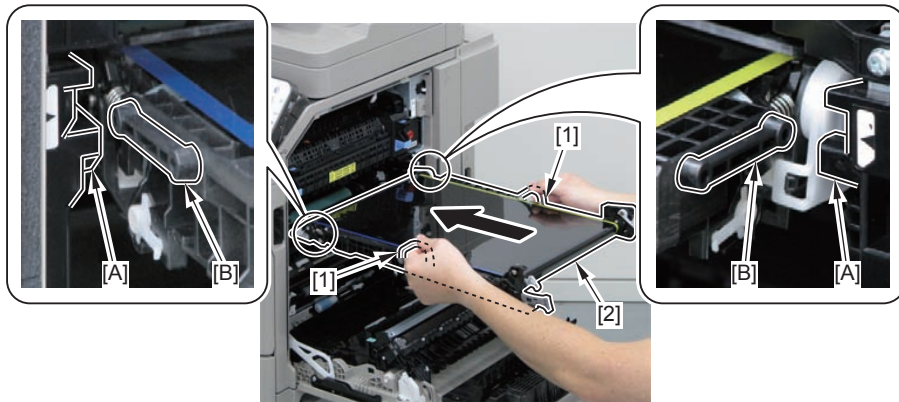


F-4-287

2) Push the 2 Push Levers [2] of the ITB Unit [1] to install the ITB Unit.

CAUTION:

When installing the ITB Unit, do not push it in the machine by pushing the ITB [1].
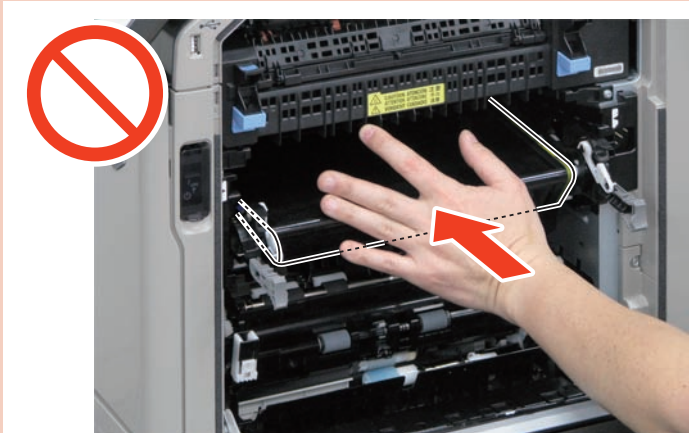


F-4-288
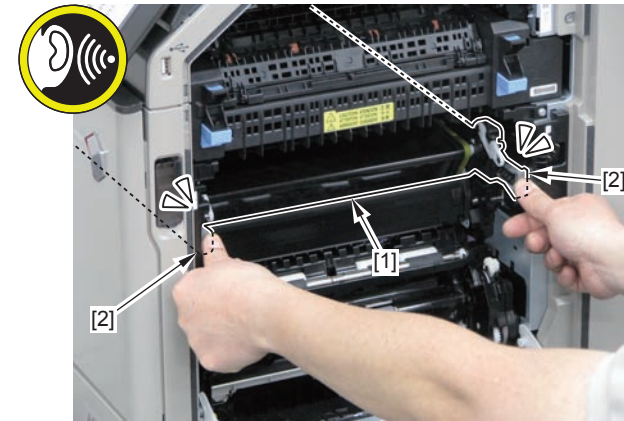


F-4-289

3) Close the Right Cover [1].
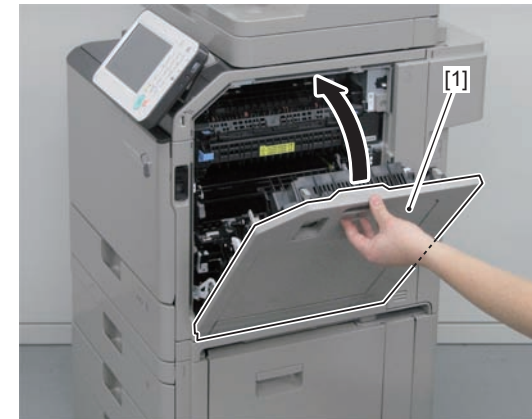


F-4-290

NOTE: Actions after assembly
Execute Auto Adjust Gradation and Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

## Removing the Registration Patch Sensor Unit



F-4-291

### ■ Preparation

1) Remove the ITB Unit(Refer to page 4-112).

2) Remove the Waste Toner Container(Refer to page 4-108).

3) Remove the Drum Unit (remove Bk color)(Refer to page 4-109).

### ■ Procedure

CAUTION:

- Do not disassemble the Registration Patch Sensor Unit because it requires adjustment.
- Do not to fold the Plastic Film Sheet [1] when disassembling/assembling.
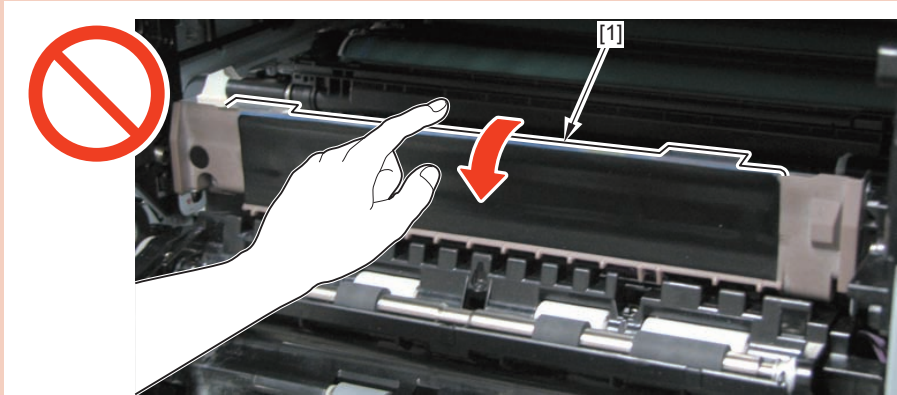


F-4-292

1) Remove the Registration Patch Sensor Unit [1].

- 1 Claw [2]
- 4 Shafts [3]
- 1 Connector [4]
- Harness Guide [A]
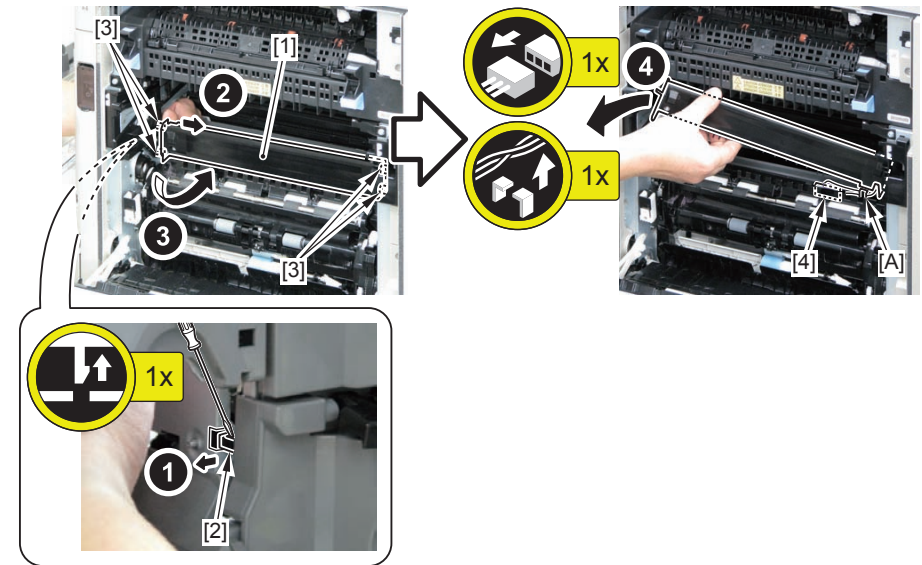


F-4-293

NOTE: How to install the Registration Patch Sensor Unit

1) When assembling, be sure to hook the protrusion [A] of the Registration Patch Sensor Unit over the 2 springs [1] to install the unit.
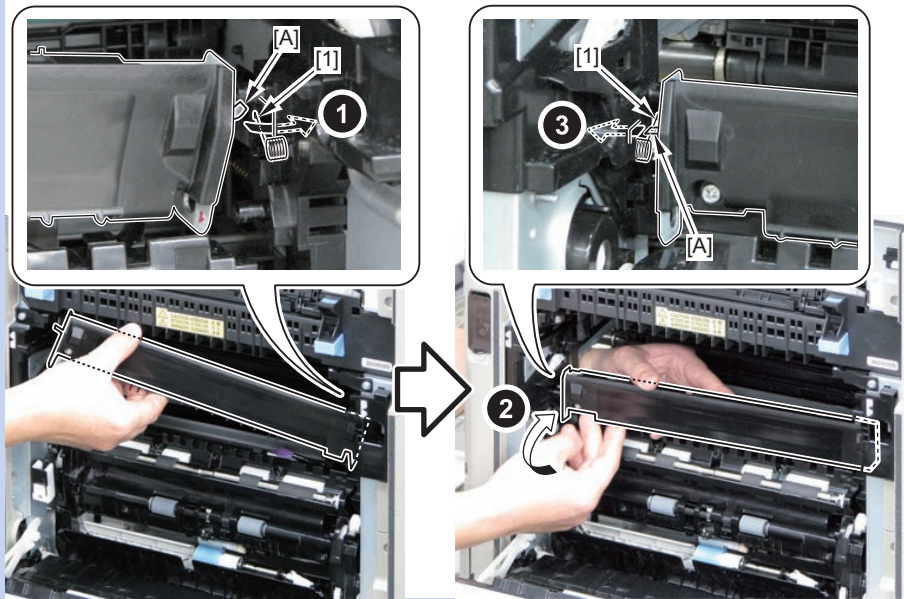


F-4-294

2) Hook the claw [2] on the hole [B] of the Registration Patch Sensor Unit.
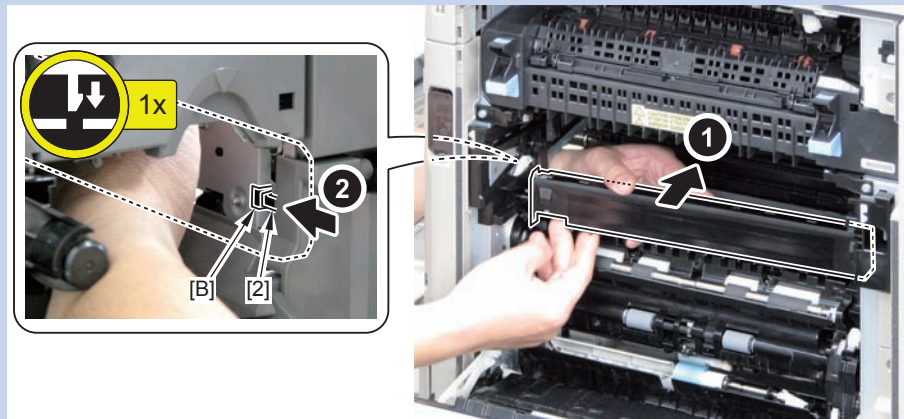


F-4-295

NOTE: Actions after assembly
Execute Auto Adjust Gradation and Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

## Removing the Secondary Transfer Outer Roller Unit



F-4-296

### ■ Procedure

> NOTE:
> If the duration level of the ITB Unit and that of the Secondary Transfer Outer Roller Unit are not equal, a color displacement may occur in the output image.
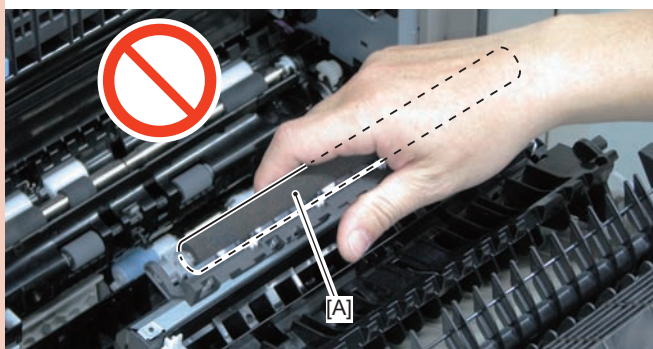
> CAUTION:
>
> Be sure not to touch the surface [A] of the roller when disassembling/assembling.
>
> 
>
> F-4-297

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
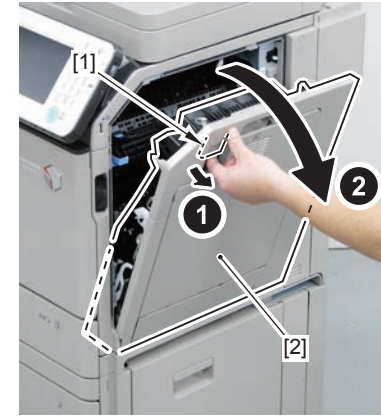


F-4-298

2) Hold the 2 edges [A], and remove the Secondary Transfer Outer Roller Unit [1].

• 2 Bosses [2]
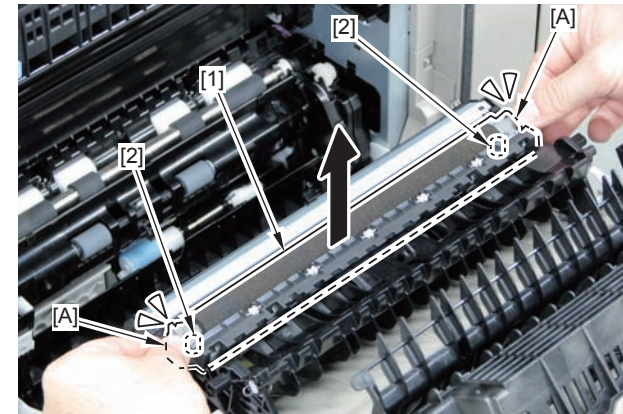


F-4-299

> NOTE: Actions after assembly
> Execute Auto Adjust Gradation.
> Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust

**4** Disassembly/Assembly > Image Formation System > Removing the Secondary Transfer Outer Roller Guide Unit > Procedure

4-120

## Removing the Secondary Transfer Outer Roller Guide Unit



F-4-300

### ■ Procedure

CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.
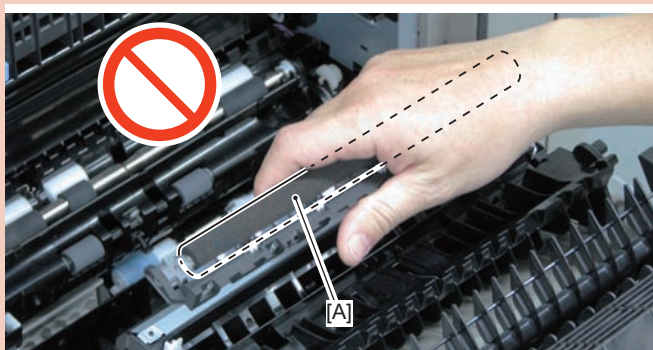


F-4-301

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
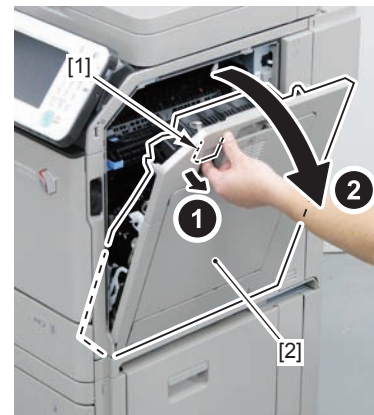


F-4-302

2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].



F-4-303

4-120

**4** Disassembly/Assembly > Image Formation System > Removing the Secondary Transfer Outer Roller Guide Unit > Procedure
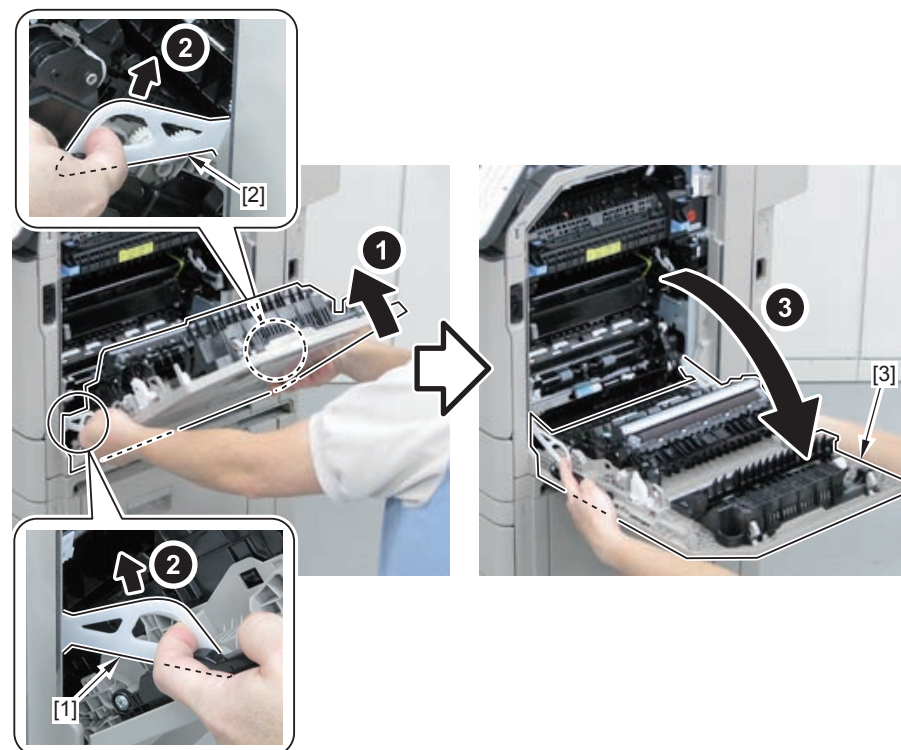
3) Remove the Right Cover Stopper Rear Holder [1].

• 1 Screw [2]
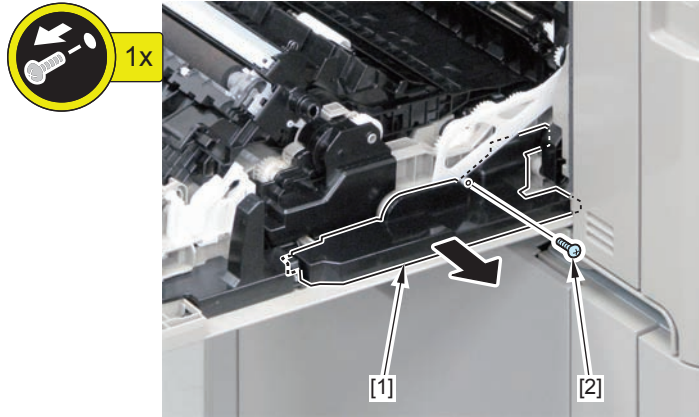


F-4-304

4) Remove the Duplex Gear Holder [1].

• 3 Claws [2]

CAUTION:

Be sure to perform work carefully so as not to damage the gear [1] when disassembling/assembling.



F-4-305



F-4-306

**4** Disassembly/Assembly > Image Formation System > Removing the Secondary Transfer Outer Roller Guide Unit > Procedure

4-122
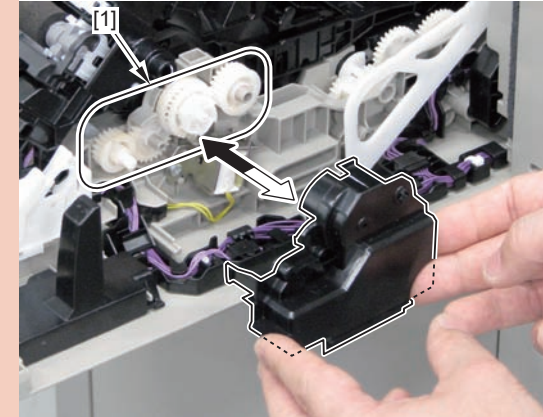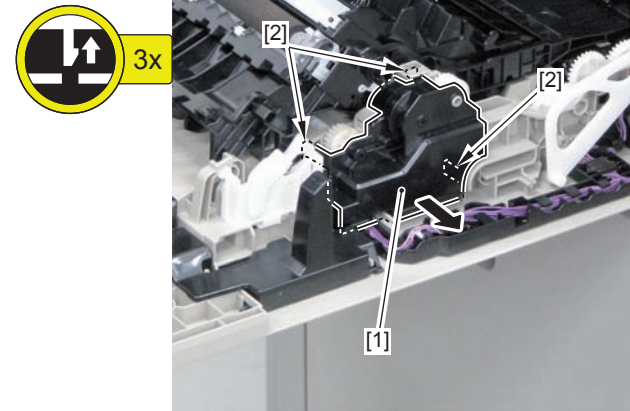
5) Remove the Lock Guide Rear [1].

• 1 Claw [2]
• 1 Boss [3]
• 2 Hook [4]
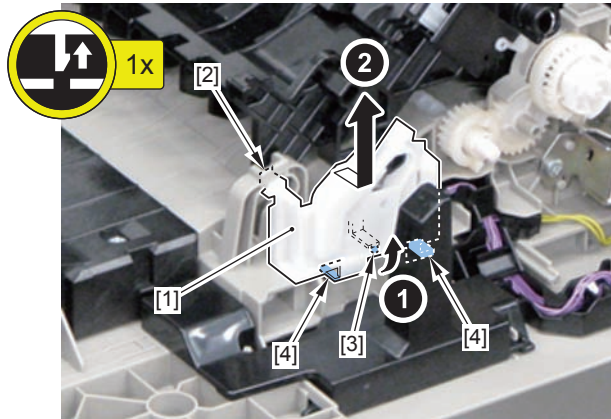
F-4-307

6) Free the Arch Sensor Harness [1].

• 1 Connector [2]
• Harness Guide [A]
• 1 Reuse Band [3]
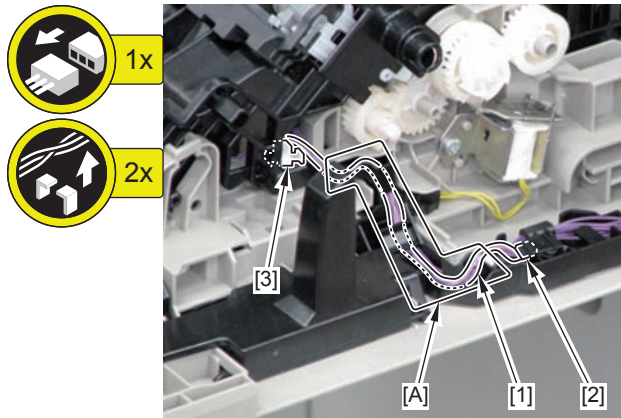
F-4-308

7) Remove the Secondary Transfer Outer Roller Guide Unit [1].
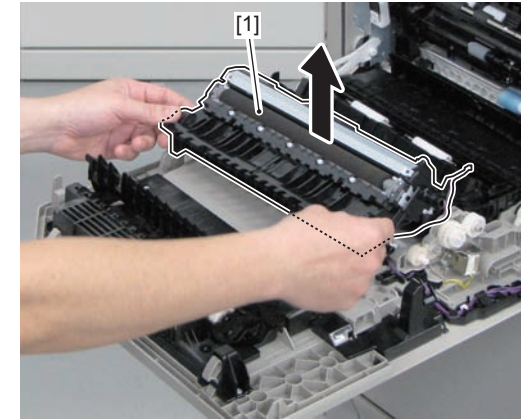
F-4-309

NOTE: How to Assemble the Secondary Transfer Outer Roller Guide Unit

Check that the harness [1] is stored in the guide [A] of the Secondary Transfer Outer Roller Guide Unit.
When it is not stored, paper skew may occur.
Related jam code: 00-0105, 00-0107

F-4-310

4-122

**4** Disassembly/Assembly > Image Formation System > Removing the Secondary Transfer Outer Roller Guide Unit > Procedure
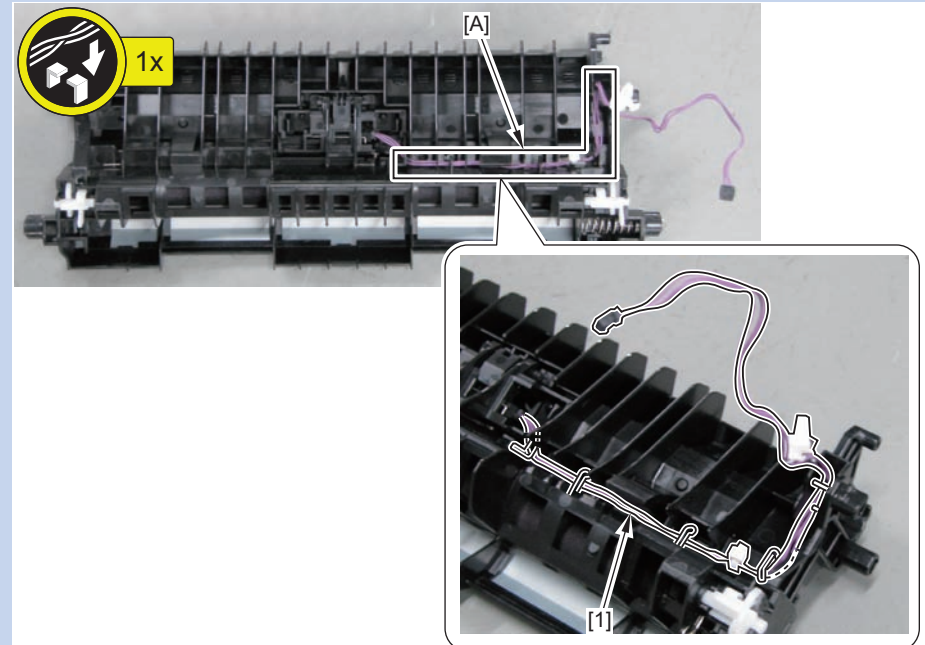
NOTE: How to assemble the Secondary Transfer Outer Roller Guid Unit
When assembling, insert the protrusion [A] of the Secondary Transfer Outer Roller Guid Unit into the groove [B] of the Right Cover Unit, and insert the protrusion [C] between the groove [D] of the Lock Guide and the spring [1] to install the unit.
Align the groove [E] of the Lock Guide with the protrusion [F] of the Right Cover Unit to lock the claw [2].
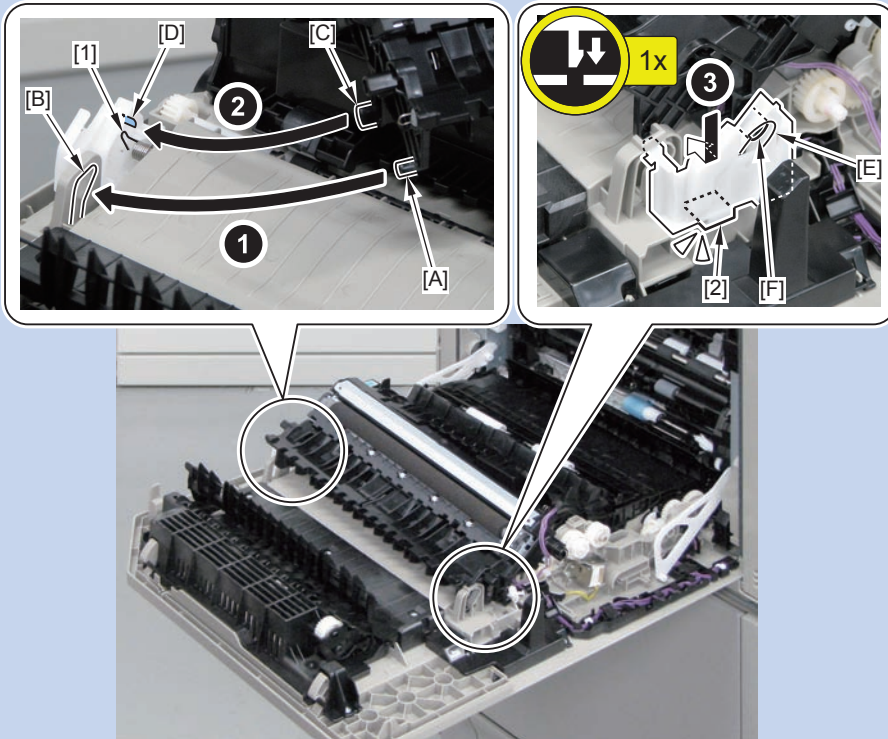
F-4-311

## Removing the Registration Drive Unit

F-4-312

### ■ Preparation

1) Remove the Front Cover(Refer to page 4-33).
2) Remove the Right Front Cover(Refer to page 4-37).
3) Remove the Waste Toner Container(Refer to page 4-108).

### ■ Procedure

1) Remove the Front Inner Lower Cover [1].
- 2 Screws [2]
- 4 Claws [3]
- 2 Bosses [4]
- 1 Hook [5]
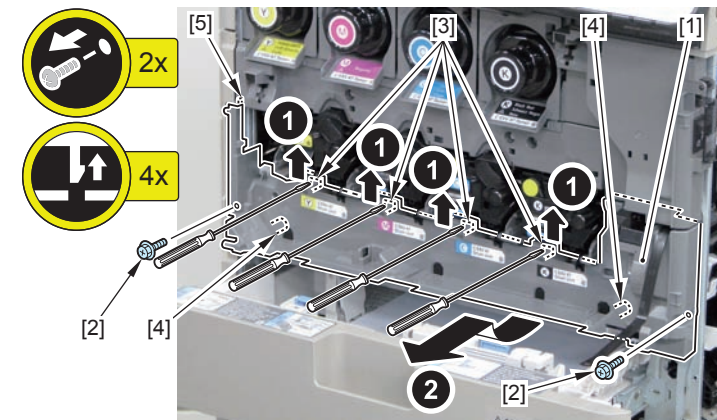
F-4-313

CAUTION:

- Do not install the Front Inner Lower Cover with the lens [1] of the Waste Toner Sensor PCB removed.
- Do not touch the surface [A] of the lens.
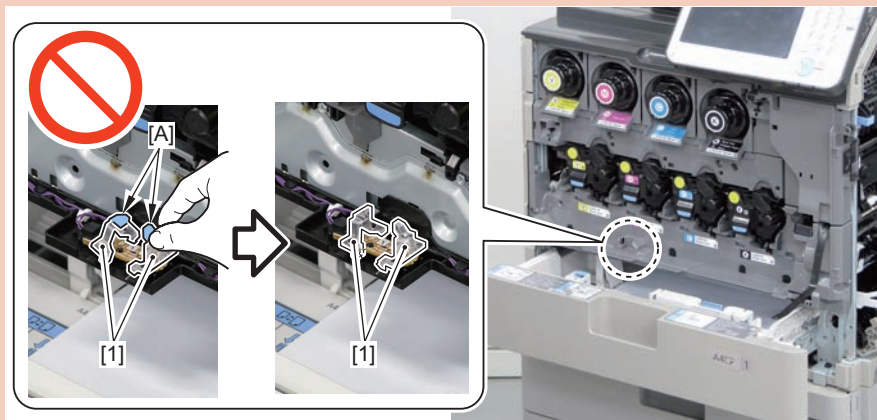
F-4-314

NOTE: Actions after assembly
Execute Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

2) Remove the Registration Drive Unit [1].
- 1 Connector [2]
- 2 Screws [3]
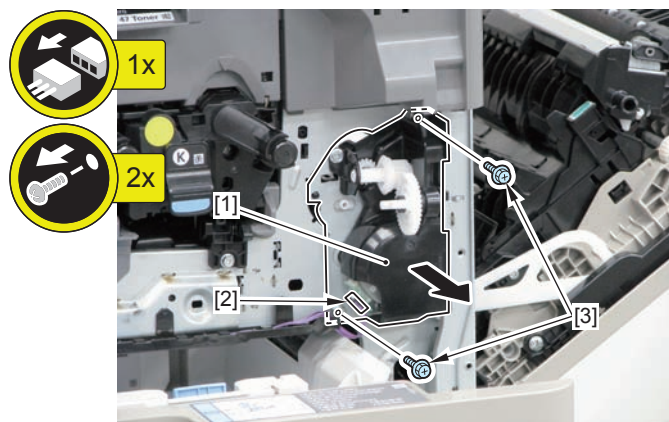
F-4-315

## Removing the Main Drive Unit
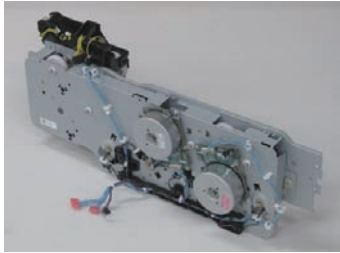


F-4-316

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-101).
3) Remove the Main Controller Unit(Refer to page 4-81).
4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).
5) Remove the DC Controller PCB Unit(Refer to page 4-86).

### ■ Procedure

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
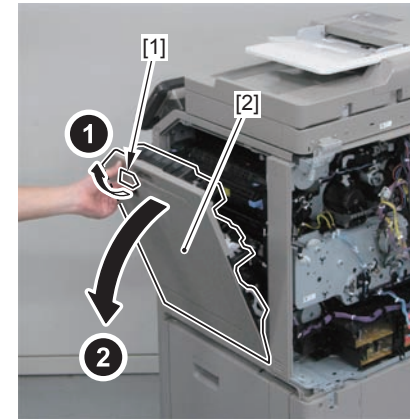


F-4-317

2) Remove the Main Drive Unit [1].
- 6 Screws [2]
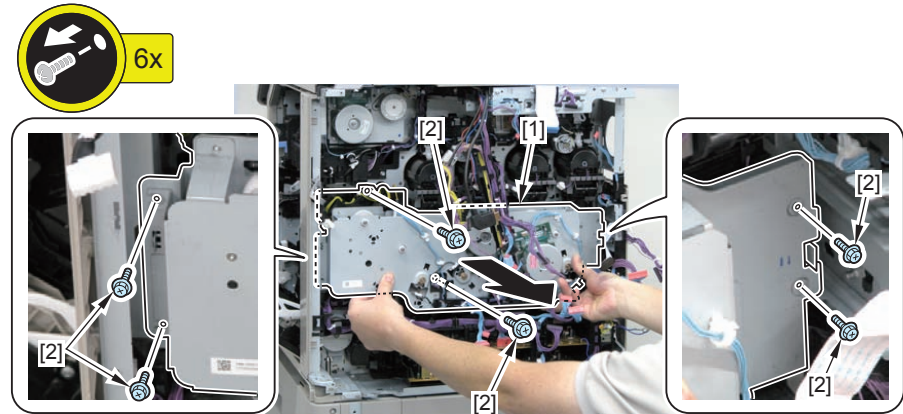


F-4-318

NOTE: How to assemble the Main Drive Unit
When assembling the Main Drive Unit, make sure to align one of 3 protrusions of the cam [2] on machine's side to the top position and then assemble it. If the position is not aligned, the Main Drive Unit [1] and cam [2] on machine's side may fail to properly assemble to cause the connection failure.
Also, check to make sure that there is no gap between the Rear Plate [A] and the plate [B] of the Main Drive Unit [1].
If there is a gap, make sure to align one of 3 protrusions of the cam [2] on machine's side to the top position and then assemble it.
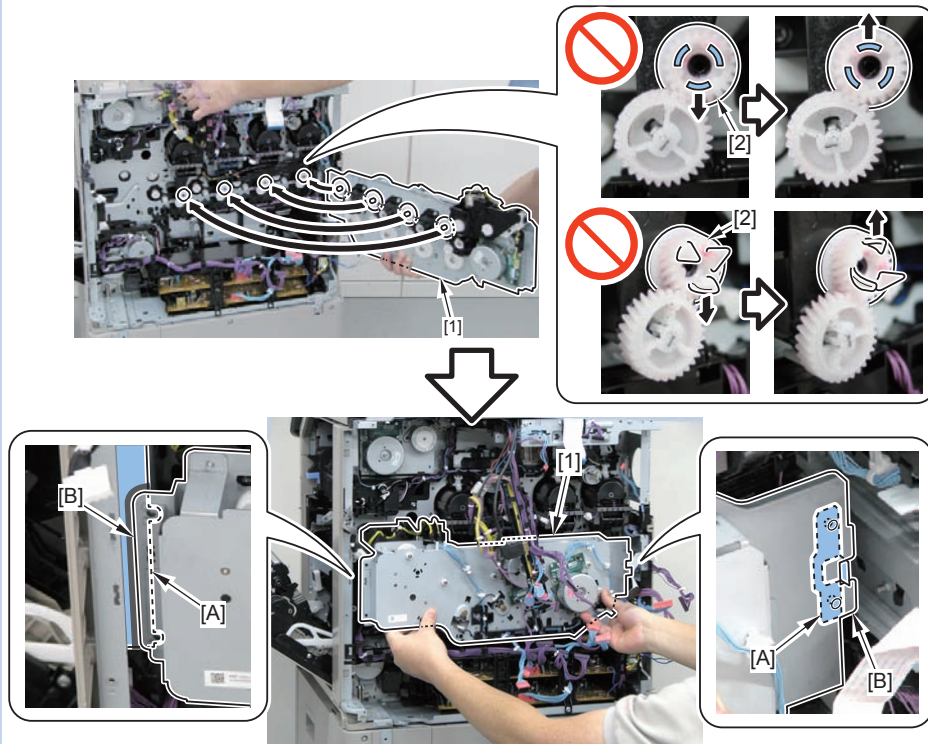
F-4-319

NOTE: How to assemble the Main Drive Unit
Check that there is no gap and then secure using 6 screws in the order indicated by the illustration below.

F-4-320

NOTE: Actions after assembly
Execute Auto Adjust Gradation and Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

**4** Disassembly/Assembly > Image Formation System > Removing the Hopper Unit (Y/M/C/Bk) > Preparation (for the Hopper Unit (Y/M/C))

4-127

## Removing the Hopper Unit (Y/M/C/Bk)



F-4-321

### Preparation (for the Hopper Unit (Y/M/C))

1) Remove the Rear Cover 1(Refer to page 4-34).

2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-101).

3) Remove the Main Controller Unit(Refer to page 4-81).

4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).

5) Remove the DC Controller PCB Unit(Refer to page 4-86).

6) Remove the Main Drive Unit(Refer to page 4-125).

7) Remove the Waste Toner Container(Refer to page 4-108).

8) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed)(Refer to page 4-109).

9) Remove the Drum Unit (Y/M/C/Bk) (remove the Drum Unit of the color to be removed) (Refer to page 4-109).

10) Remove the ITB Unit(Refer to page 4-112).

11) Remove the Left Lower Cover(Refer to page 4-36).

12) Remove the Primary Transfer High-voltage PCB Unit(Refer to page 4-90).

13) Free the harness [1] from the Harness Guide [A] of the High-voltage Contact Unit.



F-4-322

4-127

**4** Disassembly/Assembly > Image Formation System > Removing the Hopper Unit (Y/M/C/Bk) > Preparation (for the Hopper Unit (Y/M/C))

14) Remove the High-voltage Contact Unit [1].

- 2 Connector [2]
- 1 Boss [3]
- 2 Hooks [4]
- 2 Claws [5]



F-4-323

## ■ Preparation (for the Hopper Unit (Bk))

1) Remove the Rear Cover 1(Refer to page 4-34).

2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-101).

3) Remove the Main Controller Unit(Refer to page 4-81).

4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).

5) Remove the DC Controller PCB Unit(Refer to page 4-86).

6) Remove the Main Drive Unit(Refer to page 4-125).

7) Remove the Waste Toner Container(Refer to page 4-108).

8) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed)(Refer to page 4-109).

9) Remove the Drum Unit (Y/M/C/Bk) (remove the Drum Unit of the color to be removed) (Refer to page 4-109).

10) Remove the ITB Unit(Refer to page 4-112).

## ■ Procedure

NOTE:
In this procedure, the procedures for the Hopper Unit (Bk) are described.
Perform the same procedure for removing the Hopper Unit (Y/M/C).

CAUTION:

Perform work carefully so as not to scatter the toner when disassembling/assembling.
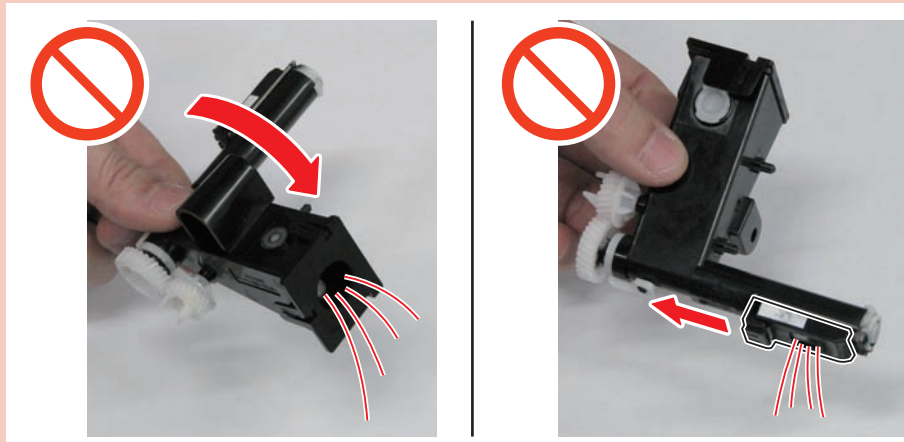
F-4-324

NOTE: Actions after assembly
Execute Auto Adjust Gradation and Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

1) Remove the Hopper Unit (Bk) [2] while holding the Open/Close Shutter [1].

• 1 Screw [3]
• 2 Bosses [4]
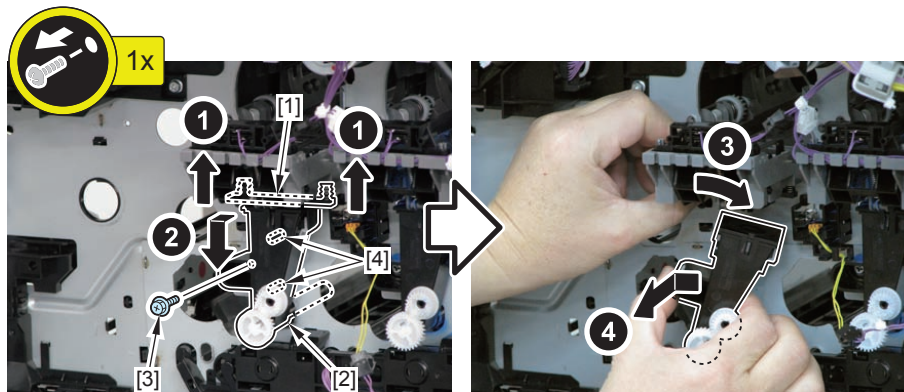
F-4-325

## Removing the ITB Pressure Release Switch



F-4-326

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-101).
3) Remove the Main Controller Unit(Refer to page 4-81).
4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).
5) Remove the DC Controller PCB Unit(Refer to page 4-86).
6) Remove the Main Drive Unit(Refer to page 4-125).

### ■ Procedure

1) Remove the ITB Pressure Release Switch [1].
- 1 Connector [2]
- Harness Guide [A]
- 1 Claw [3]
- 2 Hooks [4]
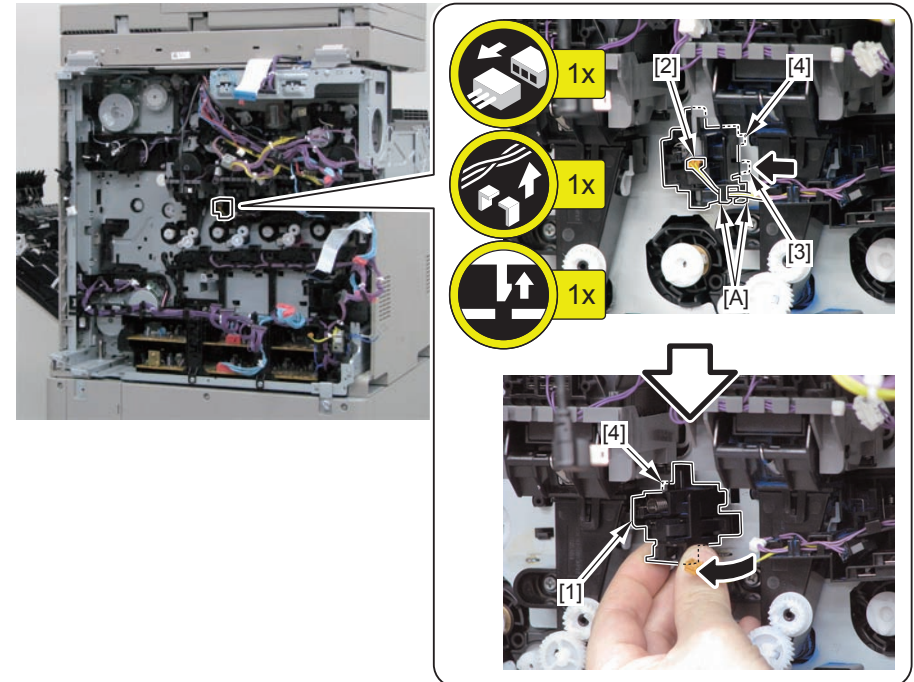


F-4-327

NOTE: Actions after assembly
Execute Auto Adjust Gradation and Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

## Removing the Bottle Drive Unit (Y/M/C/Bk)
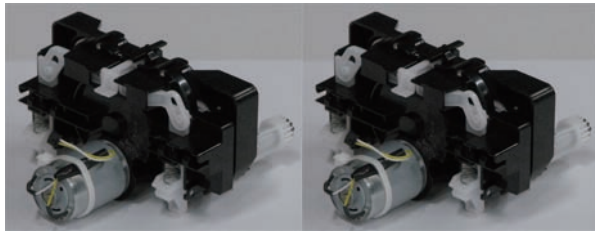
F-4-328          F-4-329

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).

2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-101).

3) Remove the Main Controller Unit(Refer to page 4-81).

4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).

5) Remove the DC Controller PCB Unit(Refer to page 4-86).

6) Remove the Delivery Tray(Refer to page 4-45).

7) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed)(Refer to page 4-109).

### ■ Procedure

NOTE:
In this procedure, the procedures for the Bottle Drive Unit (C Bk) are described.
Perform the same procedure for removing the Bottle Drive Unit (Y M).

1) Free the Harness [1].

• Harness Guide [A]
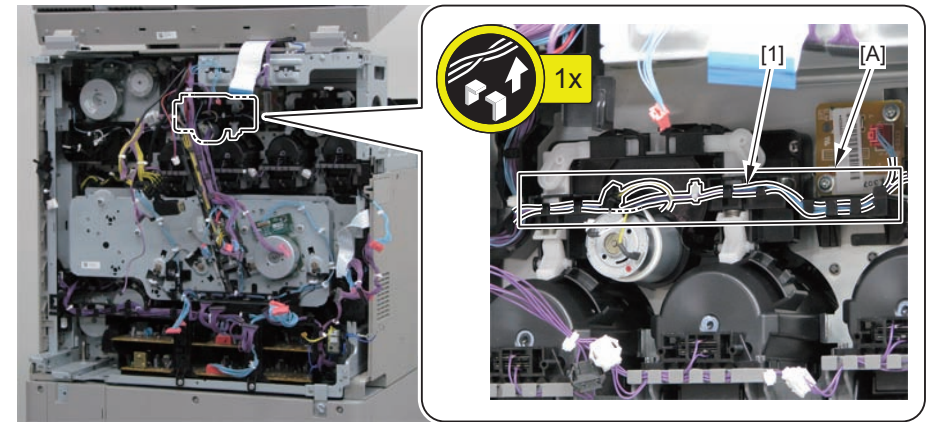
F-4-330

2) Remove the Bottle Drive Unit (C Bk) [1].

• 1 Connector [2]

• 4 Screws [3]

• 2 Bosses [4]

F-4-331

**4**  Disassembly/Assembly > Image Formation System > Removing the Toner Bottle Mount (Y/M/C/Bk) > Preparation (for the Toner Bottle Mount (Y/M/C))

4-132
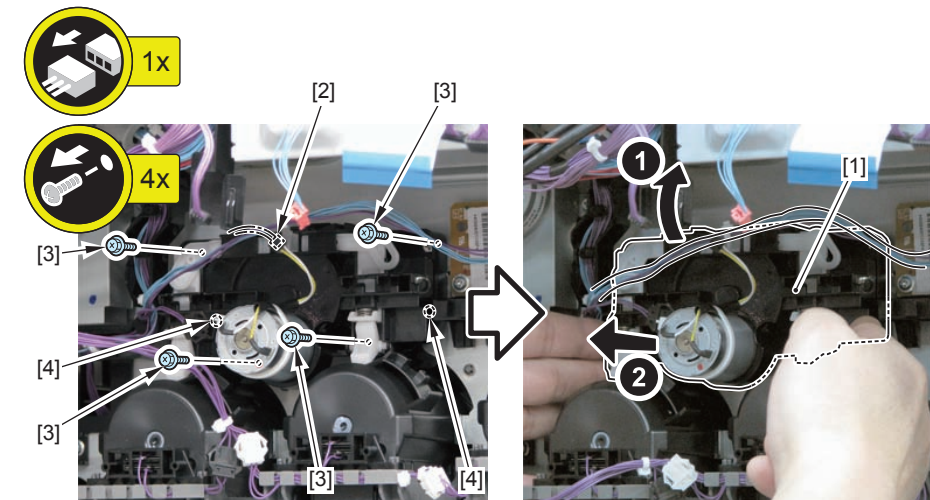
NOTE: How to install the Bottle Drive Unit (C Bk)
Be sure to align the hole [A] of the gear with the protrusion [B] of the shaft to install the unit.
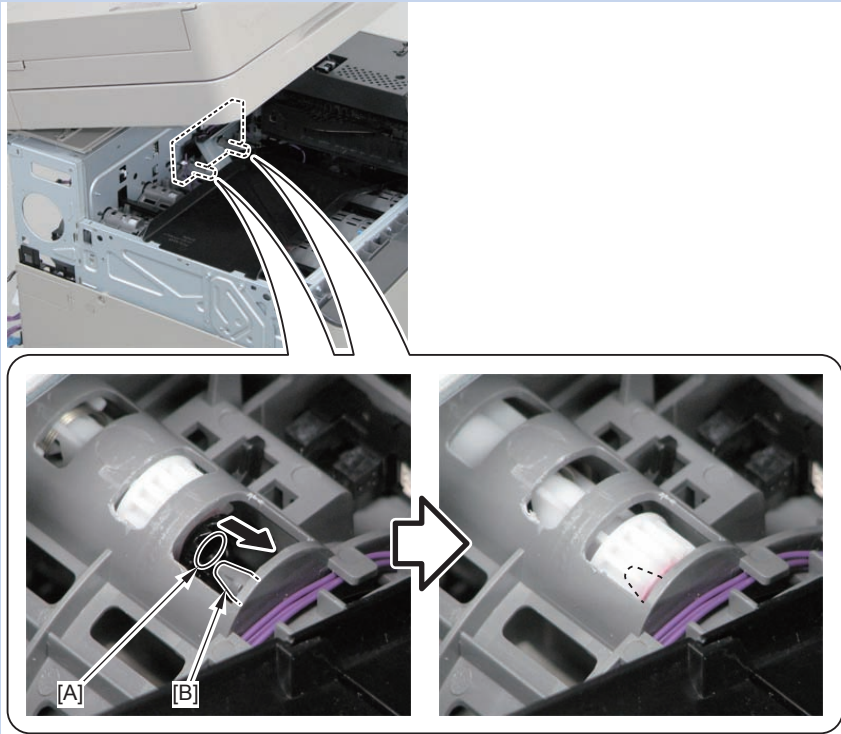
F-4-332

## Removing the Toner Bottle Mount (Y/M/C/Bk)
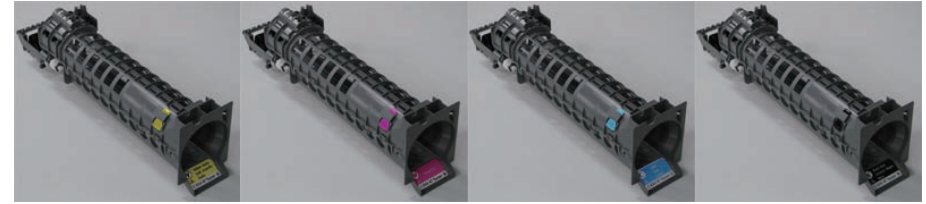
F-4-333

### ■ Preparation (for the Toner Bottle Mount (Y/M/C))

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-101).
3) Remove the Main Controller Unit(Refer to page 4-81).
4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).
5) Remove the DC Controller PCB Unit(Refer to page 4-86).
6) Remove the Main Drive Unit(Refer to page 4-125).
7) Remove the Waste Toner Container(Refer to page 4-108).
8) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed)(Refer to page 4-109).
9) Remove the Drum Unit (Y/M/C/Bk) (remove the drum Unit of the color to be removed)(Refer to page 4-109).
10) Remove the ITB Unit(Refer to page 4-112).
11) Remove the Left Lower Cover(Refer to page 4-36).
12) Remove the Primary Transfer High-voltage PCB Unit(Refer to page 4-90).

4-132

**4**  Disassembly/Assembly > Image Formation System > Removing the Toner Bottle Mount (Y/M/C/Bk) > Preparation (for the Toner Bottle Mount (Y/M/C))

**4** Disassembly/Assembly > Image Formation System > Removing the Toner Bottle Mount (Y/M/C/Bk) > Preparation (for the Toner Bottle Mount (Bk))

4-133

13) Remove the High-voltage Contact Unit [1].

- 2 Connector [2]
- 1 Boss [3]
- 2 Hooks [4]
- 2 Claws [5]



F-4-334

14) Remove the Hopper Unit (Y/M/C/Bk) (remove the Bottle Drive Unit of the color to be removed)(Refer to page 4-127).

15) Remove the Bottle Drive Unit (Y/M/C/Bk) (remove the Bottle Drive Unit of the color to be removed)(Refer to page 4-131).

16) Remove the Delivery Tray(Refer to page 4-45).

## ■ Preparation (for the Toner Bottle Mount (Bk))

1) Remove the Rear Cover 1(Refer to page 4-34).

2) Remove the Fax Unit (to be removed for models equipped with a fax) (Refer to page 4-101).

3) Remove the Main Controller Unit(Refer to page 4-81).

4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).

5) Remove the DC Controller PCB Unit(Refer to page 4-86).

6) Remove the Main Drive Unit(Refer to page 4-125).

7) Remove the Waste Toner Container(Refer to page 4-108).

8) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed) (Refer to page 4-109).

9) Remove the Drum Unit (Y/M/C/Bk) (remove the drum Unit of the color to be removed) (Refer to page 4-109).

10) Remove the ITB Unit(Refer to page 4-112).

11) Remove the Left Lower Cover(Refer to page 4-36).

12) Remove the Primary Transfer High-voltage PCB Unit(Refer to page 4-90).

13) Remove the Hopper Unit (Y/M/C/Bk) (remove the Hopper Unit of the Bk color) (Refer to page 4-127).

14) Remove the Bottle Drive Unit (Y/M/C/Bk) (remove the Bottle Drive Unit (C Bk)) (Refer to page 4-131).

15) Remove the Delivery Tray(Refer to page 4-45).

16) Remove the Delivery/Reverse Unit(Refer to page 4-163).

17) Remove the Right Rear Cover/Right Rear Lower Cover(Refer to page 4-38).

18) Remove the Right Upper Cover(Refer to page 4-39).

4-133

**4** Disassembly/Assembly > Image Formation System > Removing the Toner Bottle Mount (Y/M/C/Bk) > Preparation (for the Toner Bottle Mount (Bk))

**4** Disassembly/Assembly > Image Formation System > Removing the Toner Bottle Mount (Y/M/C/Bk) > Preparation (for the Toner Bottle Mount (Bk))

4-134

19) Remove the Control Panel Rear Hinge Cover [1].
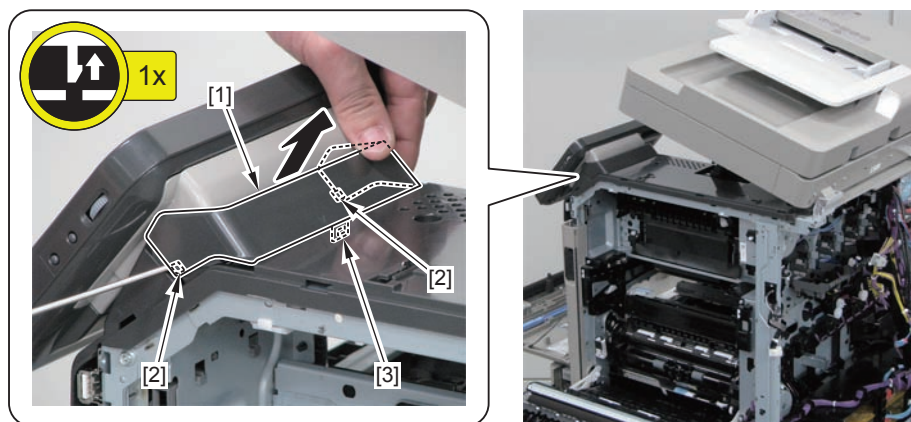
- 2 Bosses [2]
- 1 Claw [3]



F-4-335

20) Lift up the Control Panel Unit [1] to move the Upper Cover [2].

- 1 Screw [3]
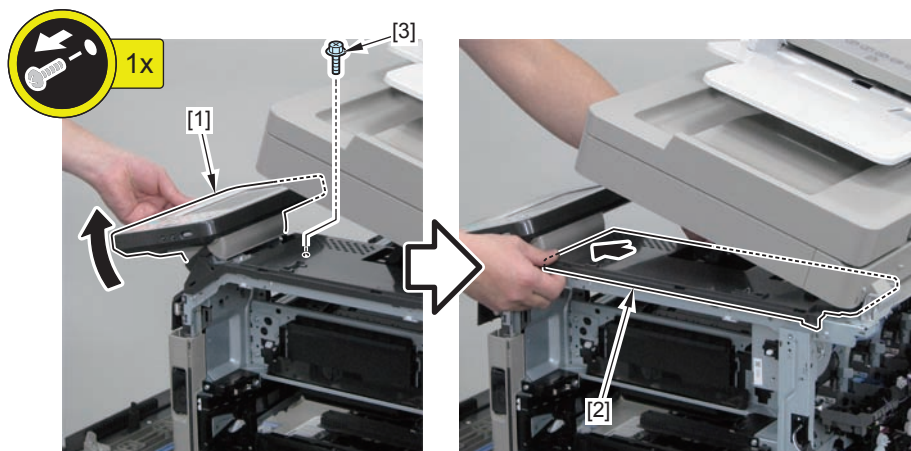


F-4-336

21) Remove the Delivery Guide [1].

- 1 Screw [2]
- 1 Hook [3]
- 1 Boss [4]
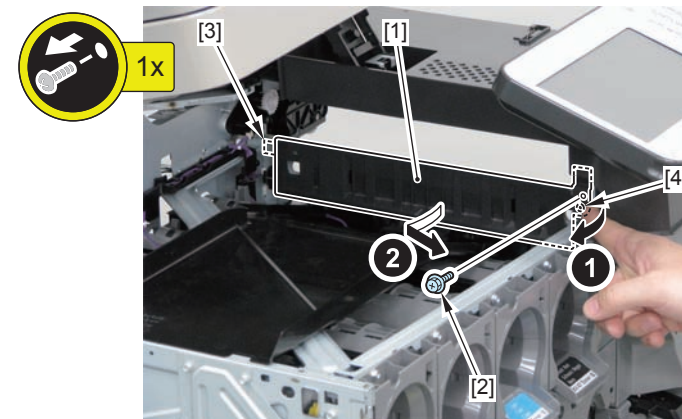


F-4-337

22) Remove the Delivery Tray Air Duct [1].

- 2 Bosses [2]
- 2 Hooks [3]



F-4-338

4-134

**4** Disassembly/Assembly > Image Formation System > Removing the Toner Bottle Mount (Y/M/C/Bk) > Preparation (for the Toner Bottle Mount (Bk))
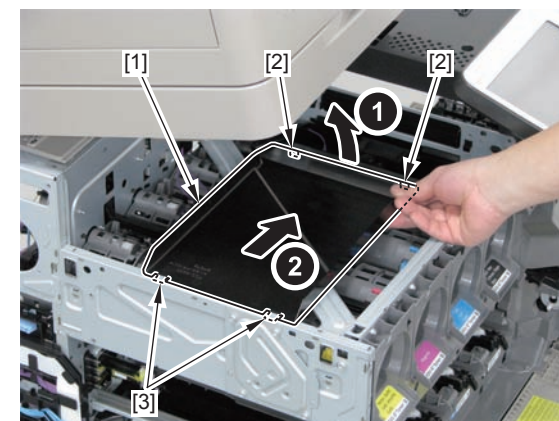
23) Remove the Delivery Cooling Fan Holder [1].

- 1 Connector [2]
- Harness Guide [A]
- 2 Claws [3]

1x
1x
2x
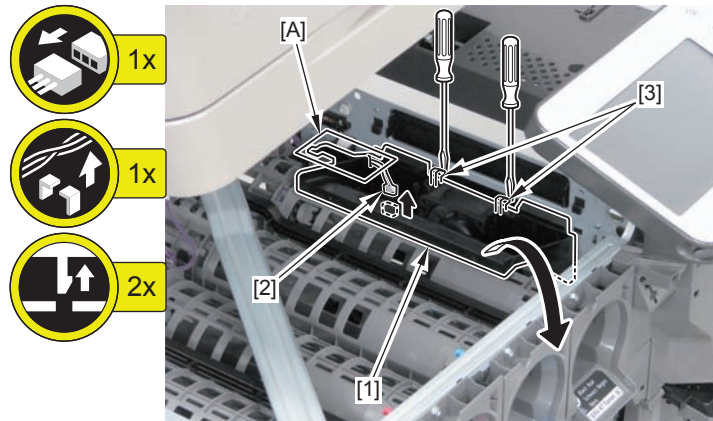
F-4-339

24) Remove the screw [1] of the Toner Bottle Mount (C).

(This is because it may be hooked when removing the Toner Bottle Mount (Bk).)

1x
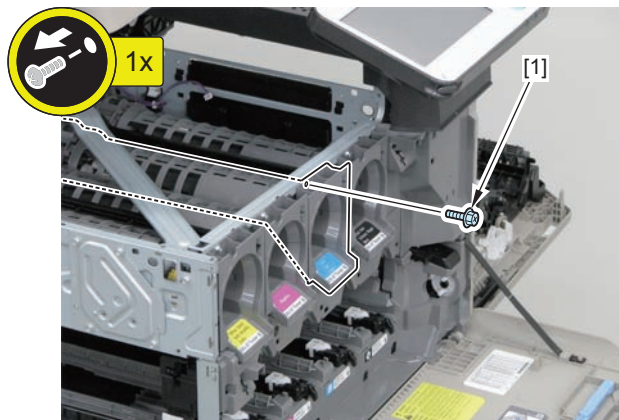
F-4-340

■ Procedure

> NOTE:
> In this procedure, the procedure for the Toner Bottle Mount (Bk) is described.
> Perform the same procedure for removing the Toner Bottle Mount (Y/M/C).a

1) Remove the tag [1].

- Harness Guide [A]
- 2 Claws [2]

2x
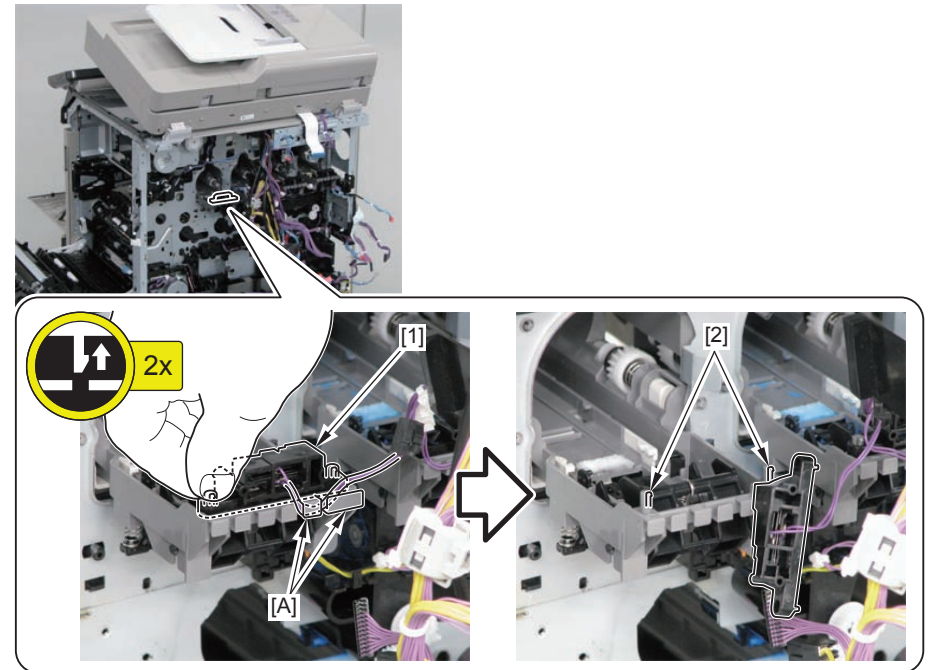
F-4-341

2) Disconnect the connector [1], and remove the Harness Guide [A] and the screw [2].
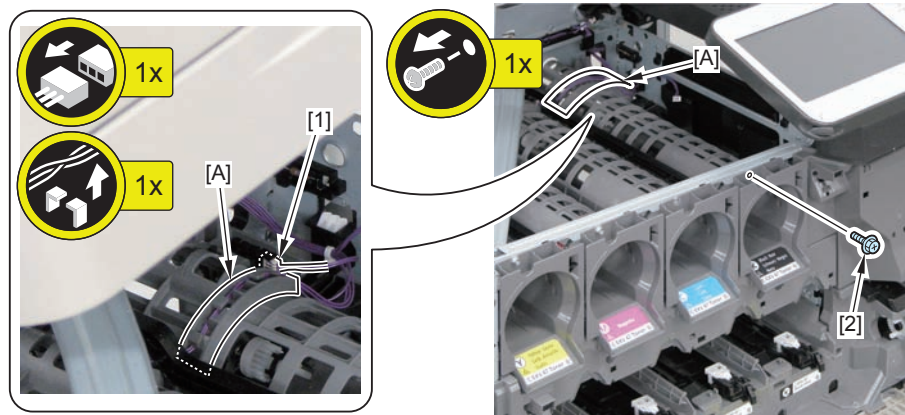


F-4-342

NOTE: Actions after assembly
Execute Auto Adjust Gradation and Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Auto Adjust Gradation > Full Adjust
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

3) Remove the Toner Bottle Mount (Bk) [2] while pressing down the shutter [1].

- 6 Bosses [3]
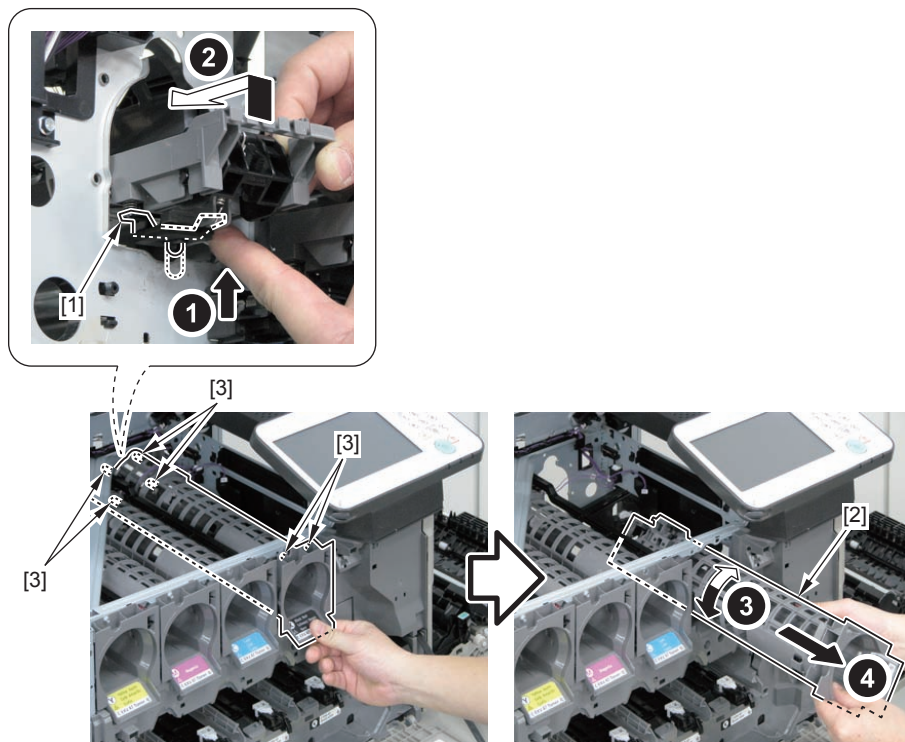


F-4-343

# Fixing System

## Layout Drawing
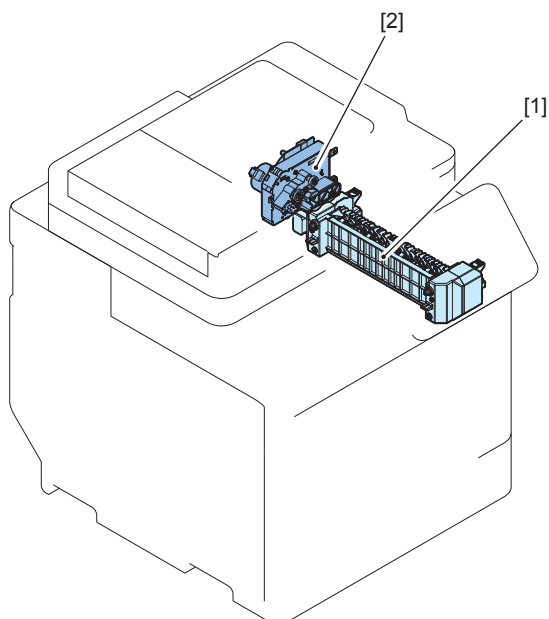


F-4-344

| No. | Parts Name | Main Unit | Remarks | Reference |
|-----|-----------|-----------|---------|-----------|
| [1] | Fixing Assembly | Product Configuration | | (Refer to page 4-137) |
| [2] | Fixing Drive Unit | Product Configuration | | (Refer to page 4-138) |

T-4-90

## Removing the Fixing Assembly



F-4-345

### ■ Procedure

⚠ CAUTION:

- Be sure to start removing the Fixing Assembly after it is cooled down enough. The Fixing Assembly may cause burn injuries due to the high temperature immediately after printing.

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
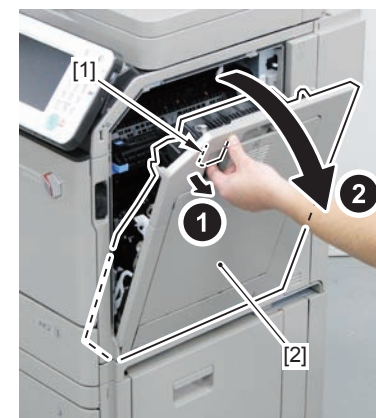


F-4-346

2) Hold the 2 Release Levers [1] of the Fixing Assembly, and remove the Fixing Assembly [2].
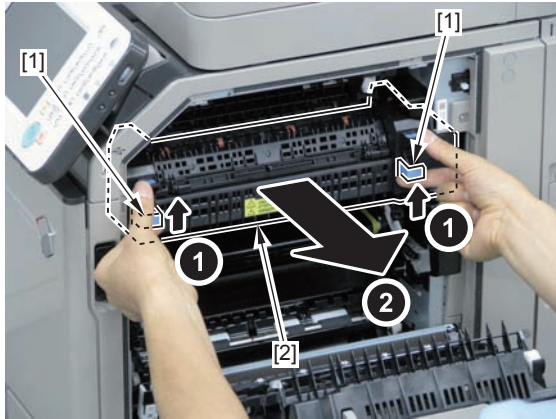


F-4-347

NOTE: How to install the Fixing Assembly
Be sure to push the Release Lever [A] of the Fixing Assembly with your finger until it locks.
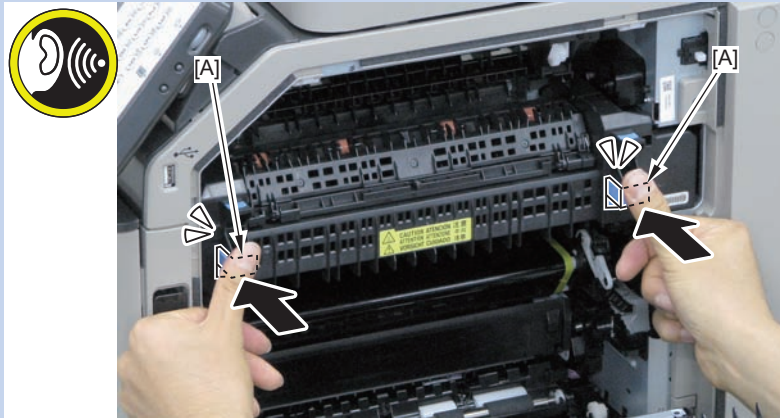


F-4-348

NOTE: Actions after assembly
Execute Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

# Removing the Fixing Drive Unit
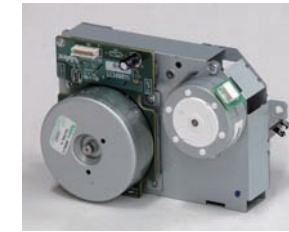


F-4-349

## ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Left Upper Cover (to be removed for models equipped with a fax) (Refer to page 4-36).
3) Remove the Fax Speaker Unit (to be removed for models equipped with a fax) (Refer to page 4-100).
4) Remove the Fax Unit (to be removed for models equipped with a fax) (Refer to page 4-101).
5) Remove the Main Controller Unit(Refer to page 4-81).
6) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).
7) Remove the DC Controller PCB Unit(Refer to page 4-84).
8) Remove the Fixing Assembly(Refer to page 4-137).
9) Remove the Delivery/Reverse Unit (Refer to page 4-163).

# ■ Procedure

1) Disconnect the 2 connectors [2], free the cable from the Reuse Band [3] and remove the 3 screws [4], all of which are of the Fixing Drive Unit [1].
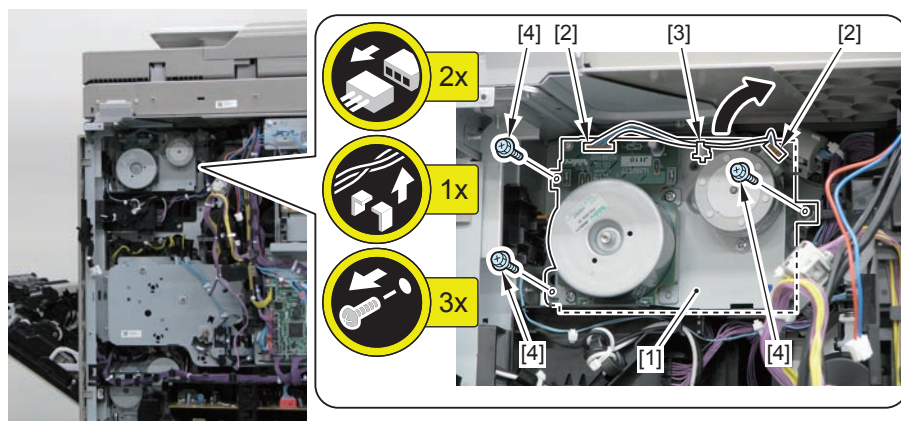


F-4-350

2) Remove the Fixing Drive Unit [2] while disconnecting the inner connector [1].
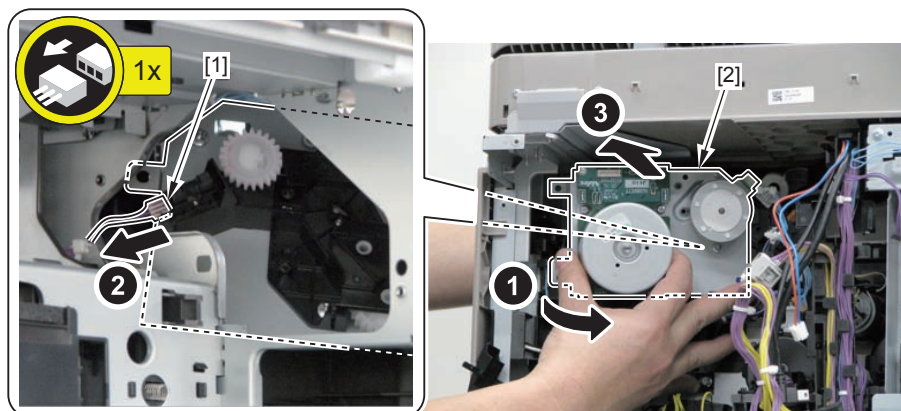


F-4-351

NOTE: Actions after assembly
Execute Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

# Pickup/Feed System

## Layout Drawing
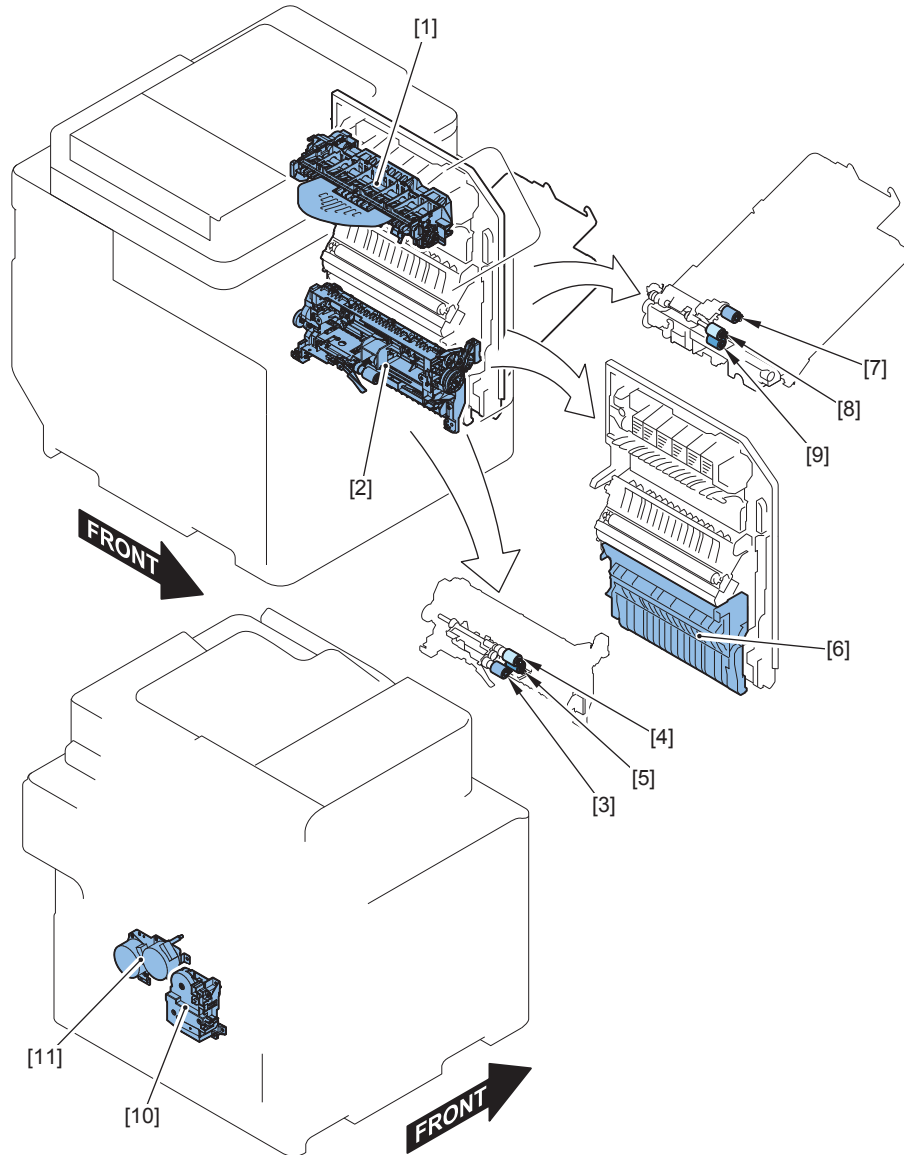


F-4-352

| No. | Parts Name | Main Unit | Remarks | Reference |
|-----|-----------|-----------|---------|-----------|
| [1] | Delivery/Reverse Unit | Product Configuration | | (Refer to page 4-163) |
| [2] | Regist/Paper Pickup Unit | Product Configuration | | (Refer to page 4-155) |
| [3] | Cassette 1 pickup Roller | Regist/Paper Pickup Unit | | (Refer to page 4-142) |
| [4] | Cassette 1 feed Roller | Regist/Paper Pickup Unit | | (Refer to page 4-142) |
| [5] | Cassette 1 separation Roller | Regist/Paper Pickup Unit | | (Refer to page 4-142) |
| [6] | Right Inner Cover Unit | Right Cover Unit | | (Refer to page 4-141) |
| [7] | Multi-purpose tray pickup Roller | Right Cover Unit | | (Refer to page 4-146) |
| [8] | Multi-purpose tray feed Roller | Right Cover Unit | | (Refer to page 4-146) |
| [9] | Multi-purpose tray separation Roller | Right Cover Unit | | (Refer to page 4-146) |
| [10] | Cassette 1 Lifter Drive Unit | Product Configuration | | (Refer to page 4-164) |
| [11] | Cassette 1 Pickup Drive Unit | Product Configuration | | (Refer to page 4-167) |

T-4-91

# Removing the Right Inner Cover Unit



F-4-353

## ■ Procedure

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
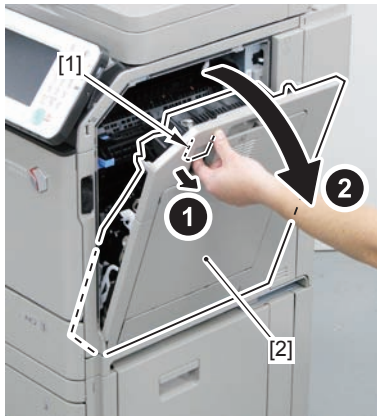


F-4-354

2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].



F-4-355

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller > Procedure

4-142
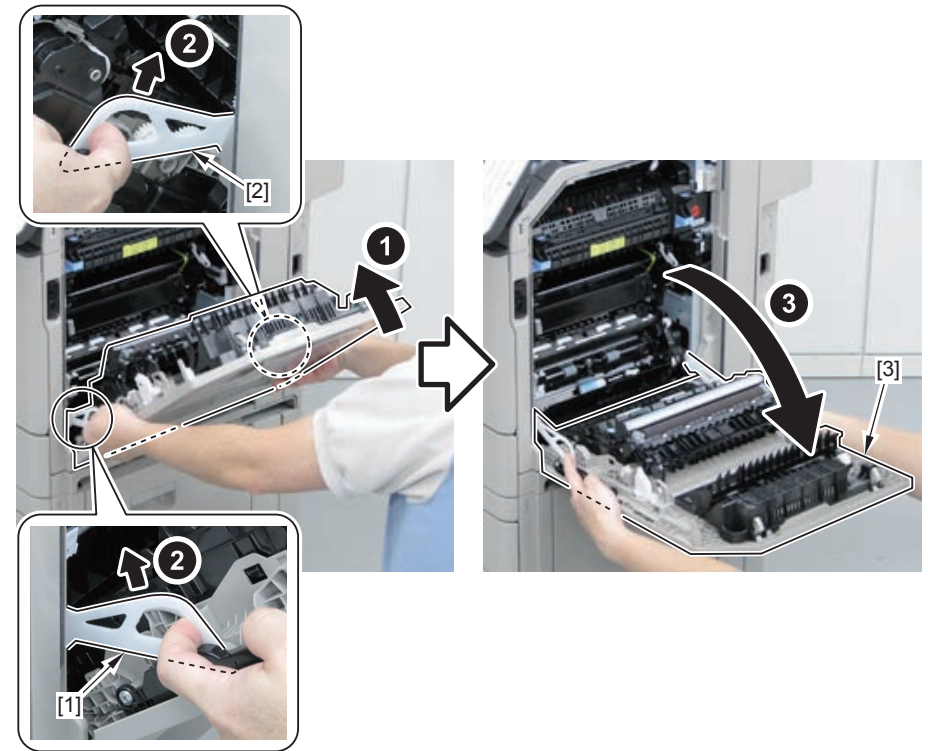
3) Remove the Right Inner Cover Unit [1].

• 2 Shafts [2]
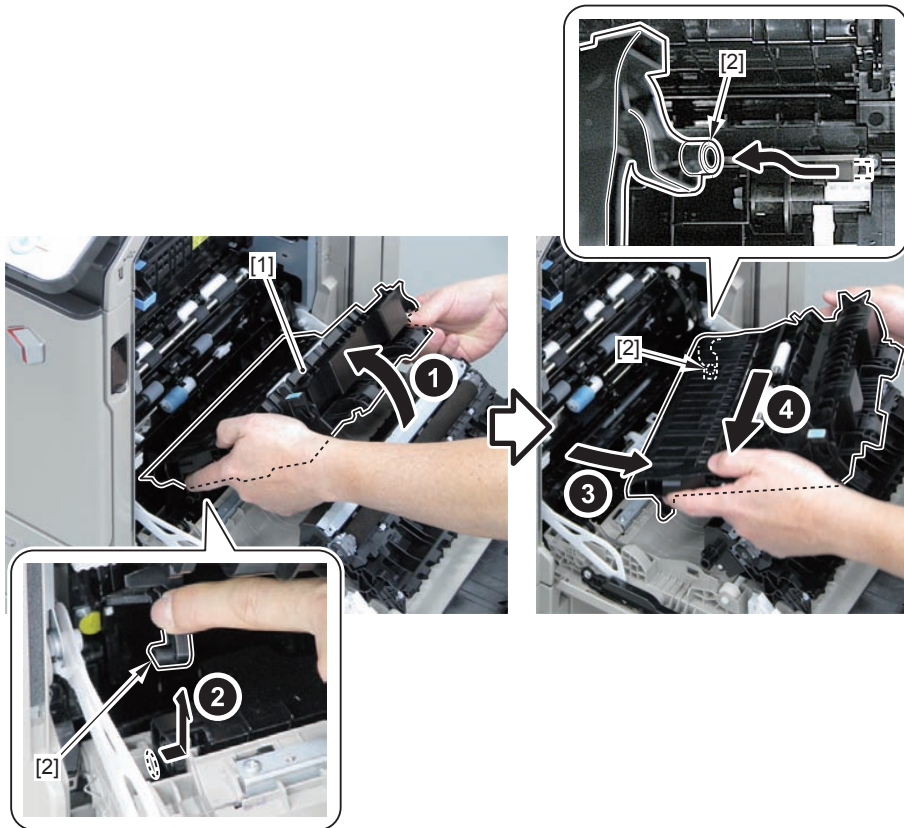


F-4-356

NOTE: Actions after assembly
Execute Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

## Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller
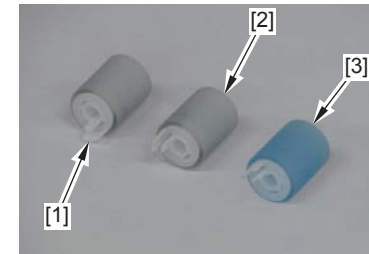


F-4-357

• Cassette Pickup Roller [1]

• Cassette Feed Roller [2]

• Cassette Separation Roller [3]

### ■ Procedure

NOTE:
The layout for the Cassette Pickup Roller [1] /Separation Roller [2] /Feed Roller [3] is shown below.



F-4-358

4-142

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller > Procedure

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller > Procedure

4-143

CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.

[A]  [A]

[A]
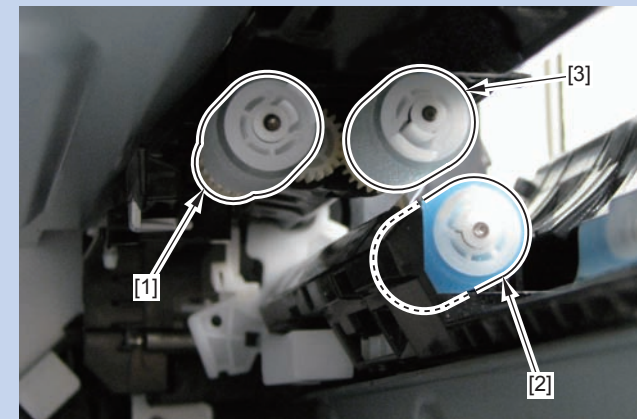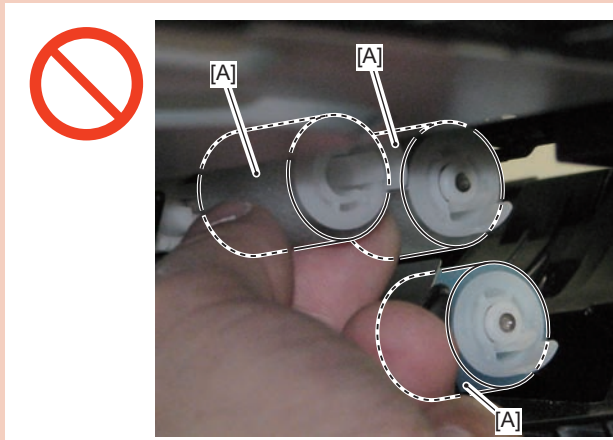
F-4-359

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].

[1]

[2]

F-4-360

2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].

[2]

[1]

[3]

F-4-361

3) Remove the Cassette [1].

[1]

F-4-362

4-143

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller > Procedure

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller > Procedure

4-144
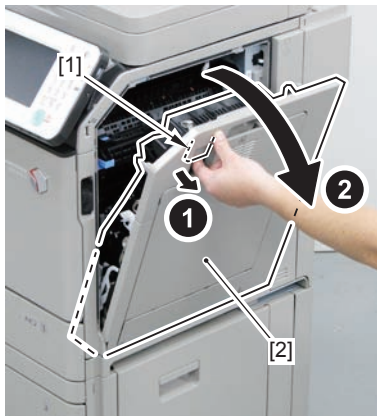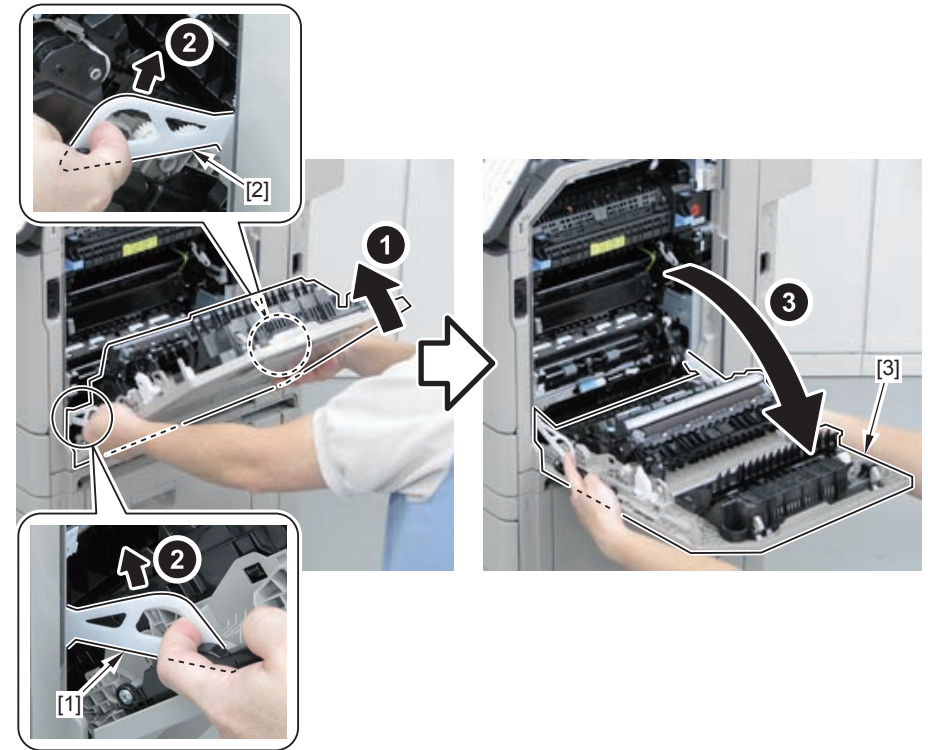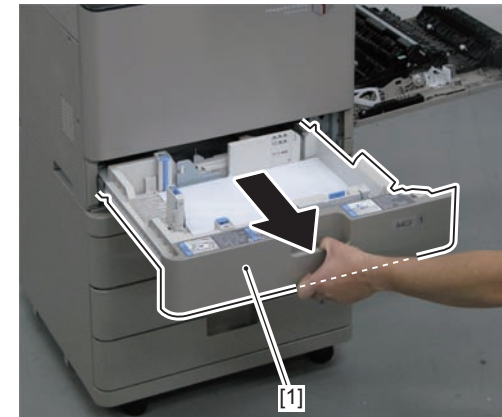
● When removing the Cassette Pickup Roller

4) Move the Pickup Guide Holder [1].
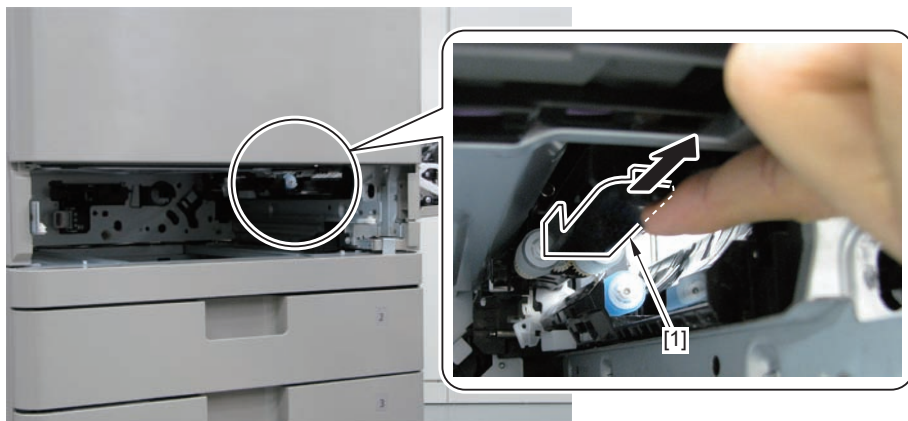


F-4-363

5) Remove the Cassette Pickup Roller [1].

• 1 Claw [2]
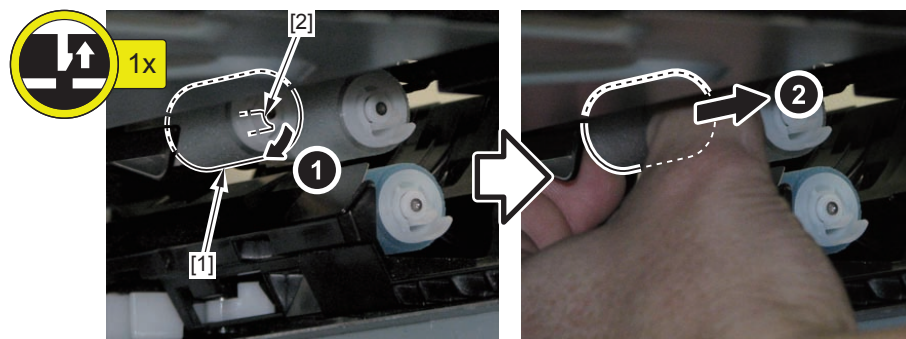


F-4-364

NOTE: How to install the Cassette Pickup Roller
• Be sure to align the groove [A] of the Cassette Pickup Roller [1] with the protrusion [B] of the gear to install the roller.
• Be sure to hook the claw [2].
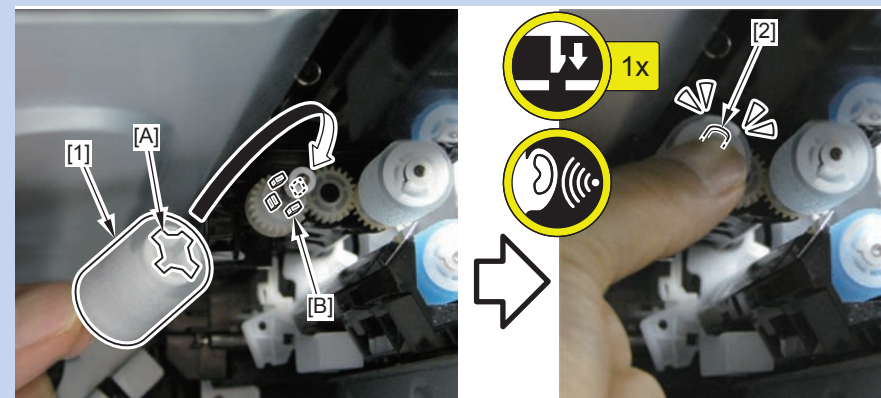


F-4-365

● When removing the Cassette Feed Roller

6) Move the Pickup Guide Holder [1].



F-4-366

4-144

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller > Procedure

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller > Procedure

4-145
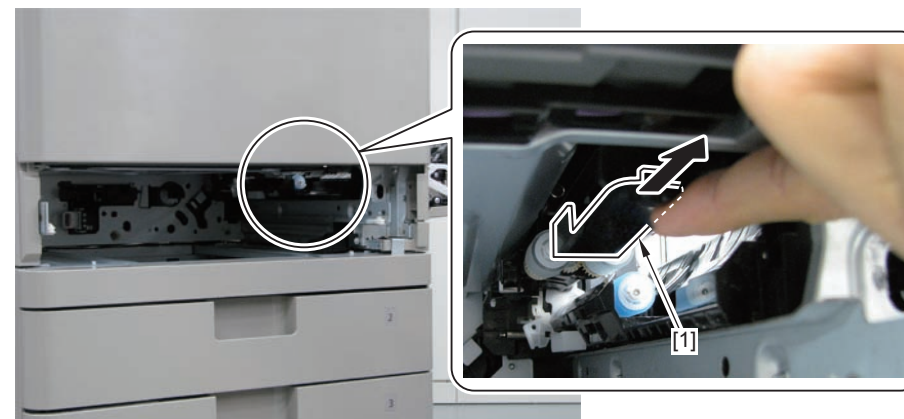
7) Remove the Cassette Feed Roller [1].
- 1 Claw [2]
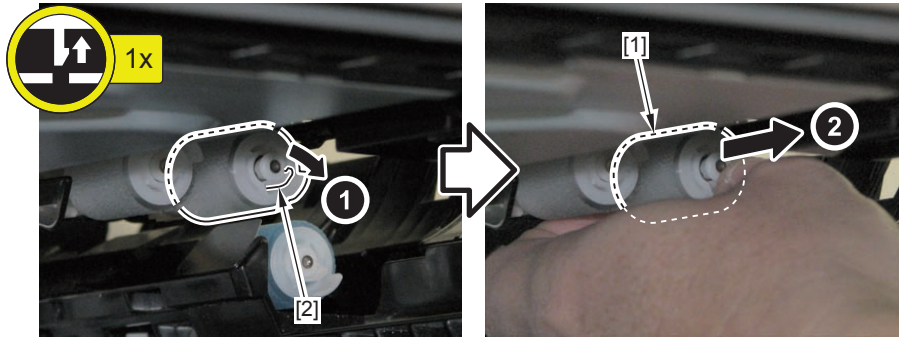


F-4-367

> NOTE: How to install the Cassette Feed Roller
> - Be sure to align the groove [A] of the Cassette Feed Roller [1] with the protrusion [B] of the coupling to install the roller.
> - Be sure to hook the claw [2].
>
> 
>
> F-4-368
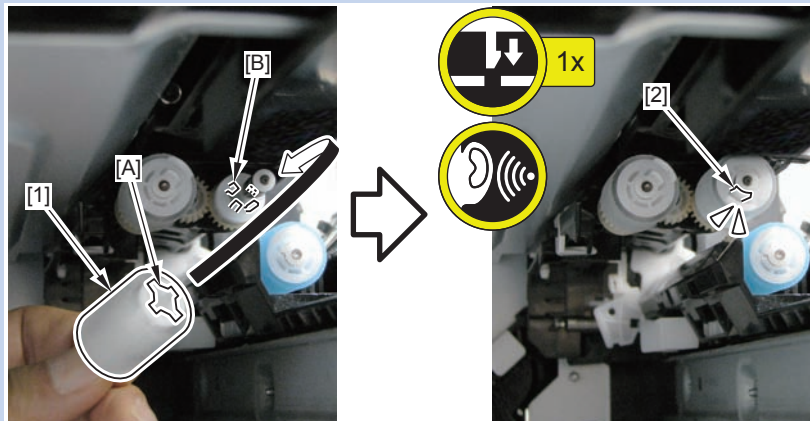
● When removing the Cassette Separation Roller

8) Remove the Cassette Separation Roller [1].
- 1 Claw [2]
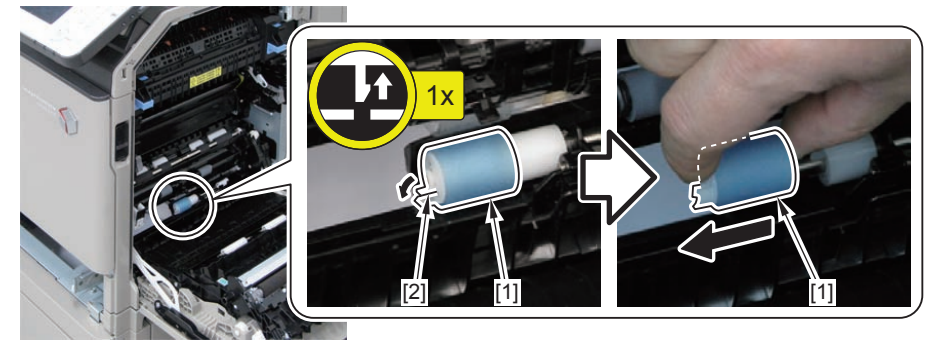


F-4-369

> NOTE: How to install the Cassette Separation Roller
> - Be sure to align the grove [A] of the Cassette Separation Roller [1] with the protrusion [B] of the coupling to install the roller.
> - Be sure to hook the claw [2].
>
> 
>
> F-4-370

> NOTE: Actions after assembly
> Execute Correct Print Color Mismatch.
> Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

4-145

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Cassette Pickup Roller/Cassette Separation Roller/Cassette Feed Roller > Procedure

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller > Procedure

4-146
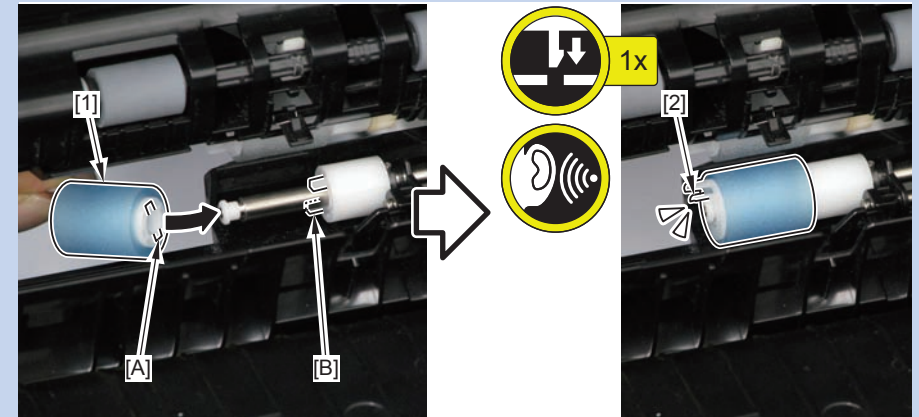
## Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller
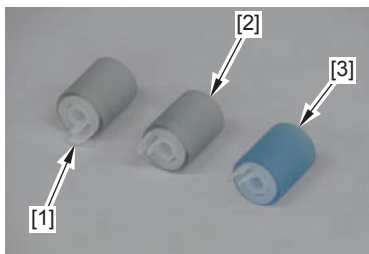


F-4-371

- Multi-purpose Tray Pickup Roller [1]

- Multi-purpose Tray Feed Roller [2]

- Multi-purpose Tray Separation Roller [3]

### ■ Preparation

1) Remove the Multi-purpose Tray(Refer to page 4-44).

(When the Multi-purpose Tray is removed, it broadens the working space and makes it easier to work.)

### ■ Procedure

NOTE: The layout for the Cassette Pickup Roller [1] /Separation Roller [2] /Feed Roller [3] is shown below.
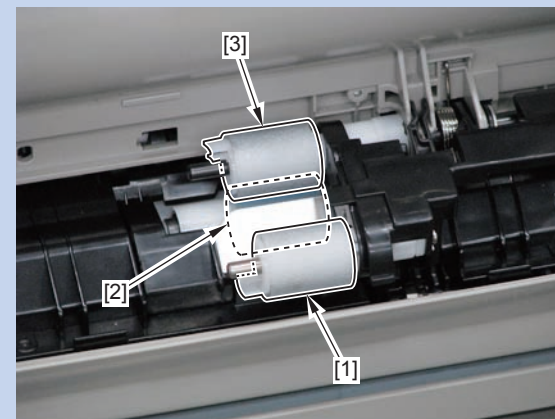


F-4-372

CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.



F-4-373

4-146

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller > Procedure

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller > Procedure

4-147
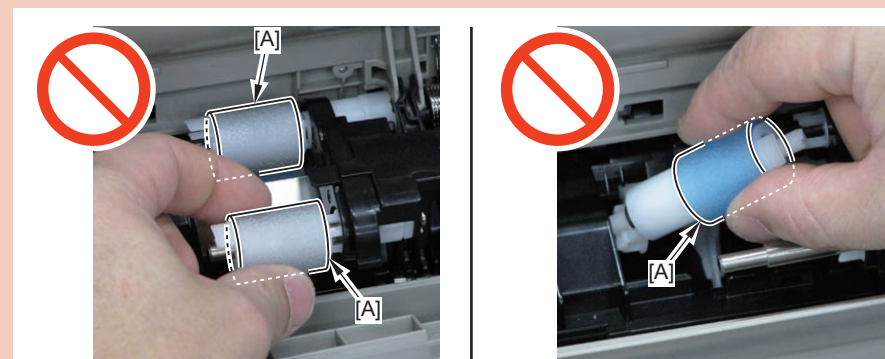
● Disassembling Procedure

1) Remove the Multi-purpose Tray Roller Holder 1 [1].

• 1 Boss [2]

• 2 Hooks [3]
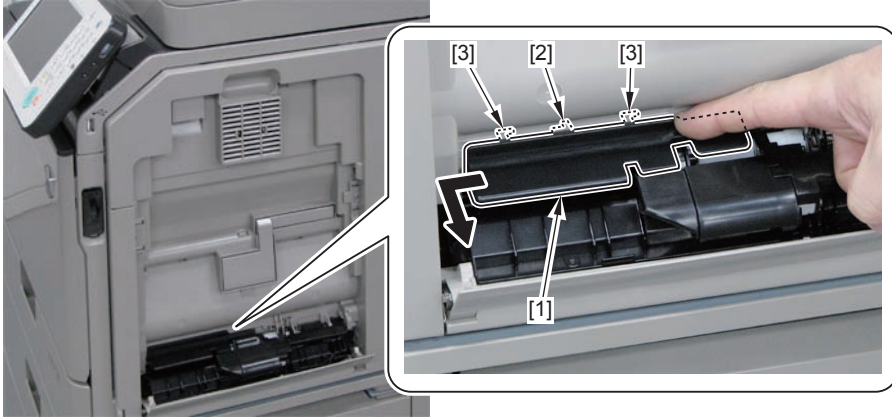


F-4-374

2) Remove the Multi-purpose Tray Roller Holder 2 [1].

• 2 Shaft Holes [2]

• 1 Hook [3]
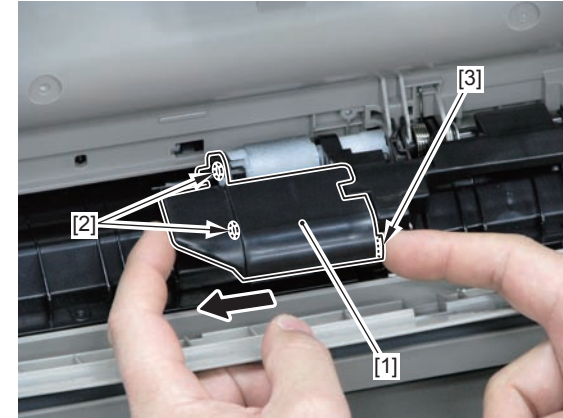


F-4-375

When removing the Multi-purpose Tray Pickup Roller

3) Remove the Multi-purpose Tray Pickup Roller [1].



F-4-376

4-147

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller > Procedure

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller > Procedure

4-148
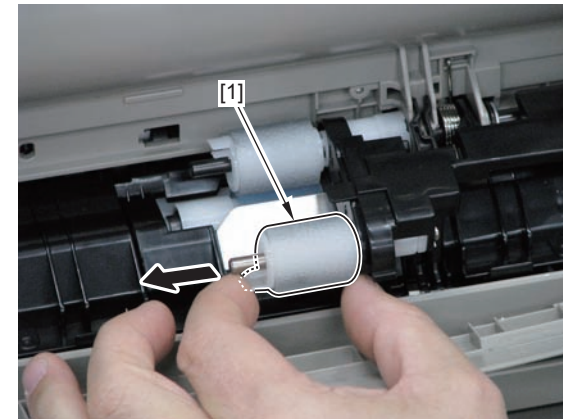
### When removing the Multi-purpose Tray Feed Roller

4) Remove the Multi-purpose Tray Feed Roller [2] while pressing the Torque Limiter [1].
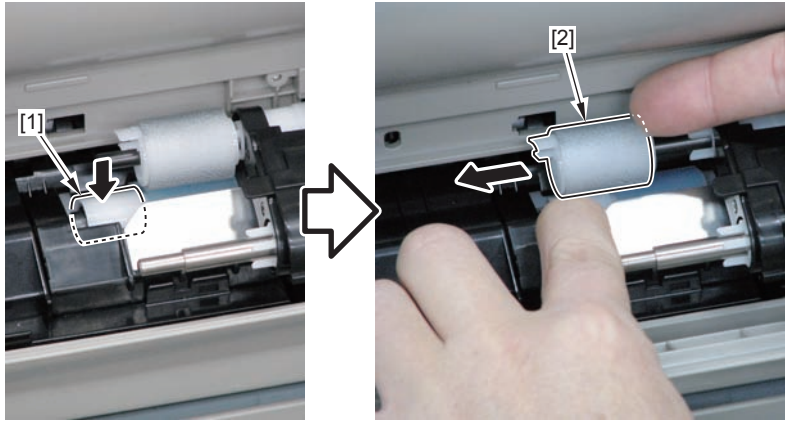


F-4-377
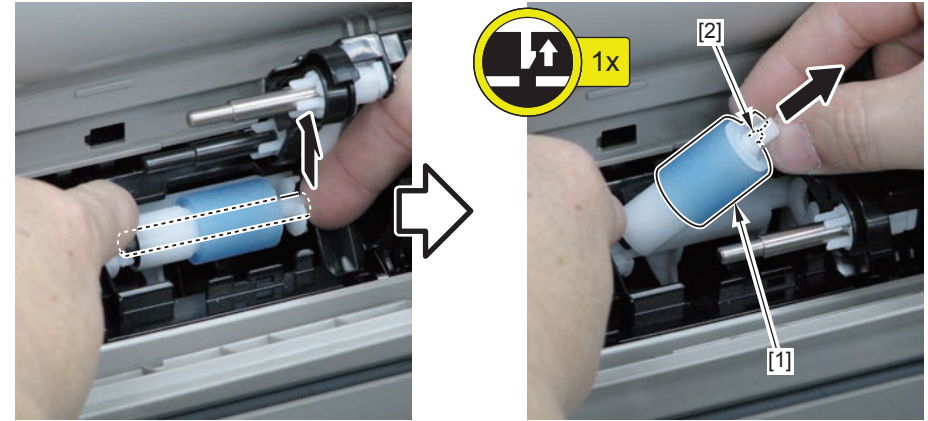
### When removing the Multi-purpose Tray Separation Roller

5) Remove he Multi-purpose Tray Feed Guide [2] while pressing the Multi-purpose Tray Separation Roller [1].

- 2 Claws [3]



F-4-378

6) Remove the Multi-purpose Tray Separation Roller [1].

- 1 Claw [2]



F-4-379
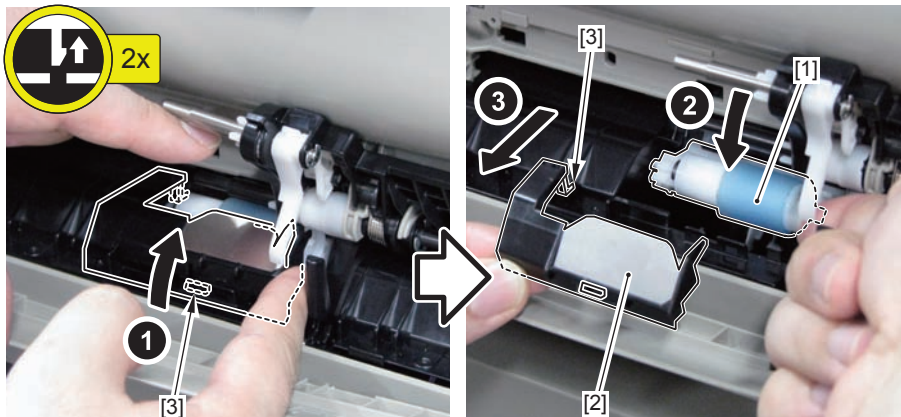
### ● Assembling Procedure

1) Align the groove [A] of the Multi-purpose Tray Separation Roller [1] with the protrusion [B] of the Torque Limiter to install.

- 1 Claw [2]



F-4-380

4-148

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller > Procedure

4 Disassembly/Assembly > Pickup/Feed System > Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller > Procedure

4-149
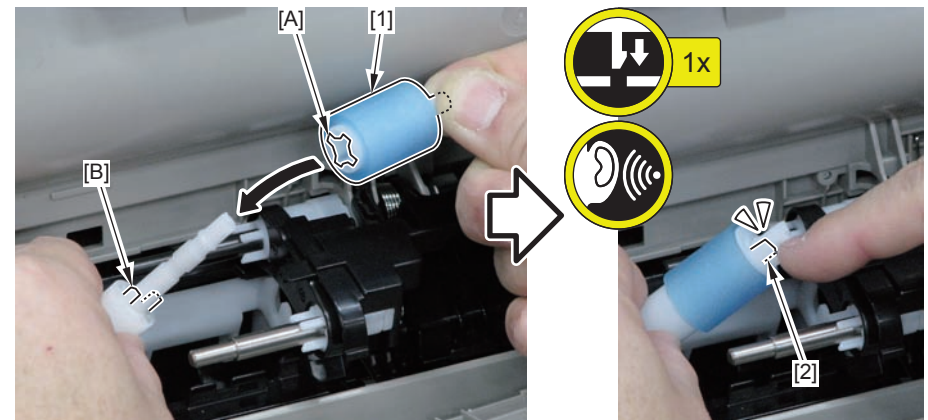
2) Store the Multi-purpose Tray Separation Roller [2] while paying attention not to remove its shaft [1].
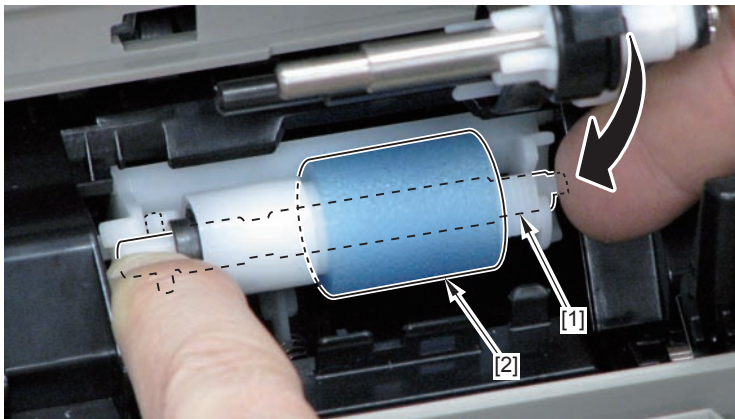


F-4-381

3) Install the Multi-purpose Tray Feed Guide [1].

• 2 Claws [2]
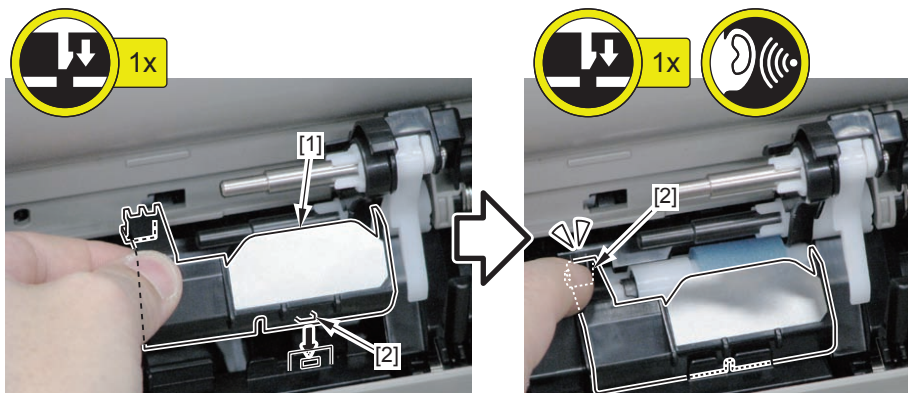


F-4-382

4) Align the groove [A] of the Multi-purpose Tray Feed Roller [2] with the protrusion [B] of the coupling while pressing the Torque Limiter [1] to install.
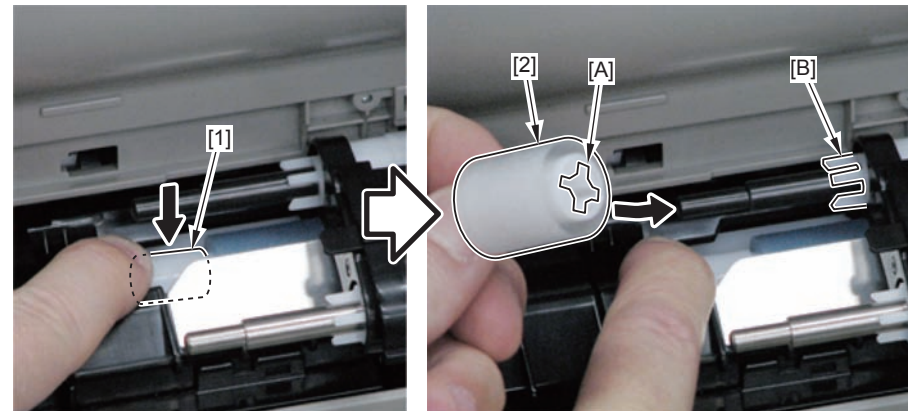


F-4-383

5) Align the groove [A] of the Multi-purpose Tray Pickup Roller [1] with the protrusion [B] of the coupling to install.



F-4-384

4-149

4 Disassembly/Assembly > Pickup/Feed System > Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller > Procedure

**4**    Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached

4-150
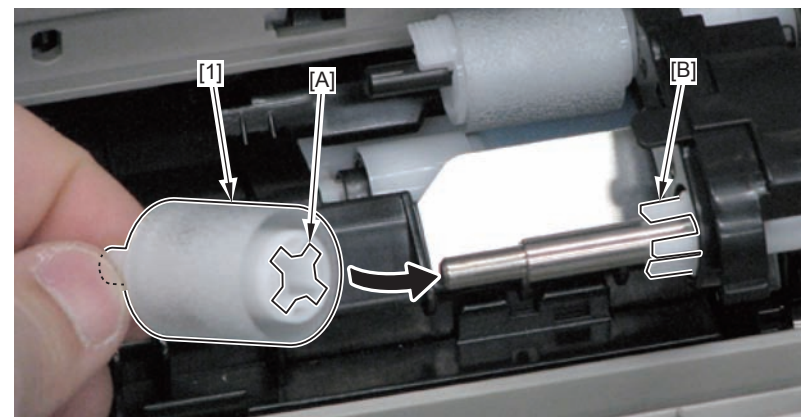
6) Install the Multi-purpose Tray Roller Holder 2 [1].
- 2 Shaft Holes [2]
- 1 Hook [3]
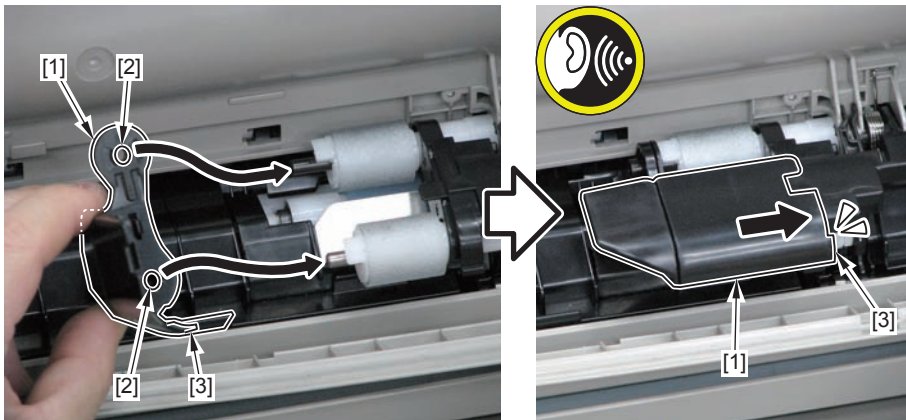


F-4-385

7) Align the Multi-purpose Tray Roller Holder 1 [1] to the corner [A] for installation.
- 1 Boss [2]
- 2 Hooks [3]
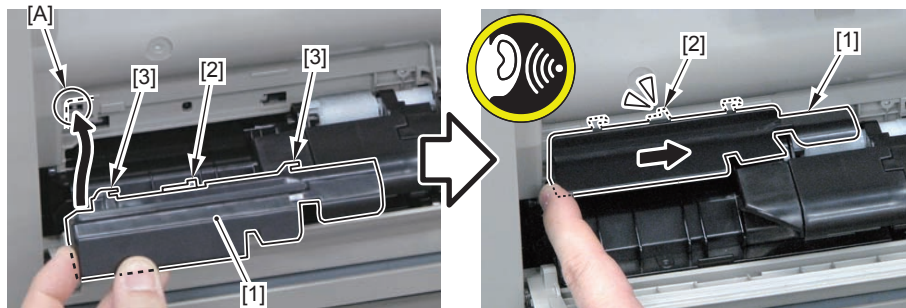


F-4-386

NOTE: Actions after assembly
Execute Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

## Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached

NOTE:
The following describes the state in which the Multi-purpose Tray Separation Roller Shaft is detached.



F-4-387

4-150

Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached
**4**

4 Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached

4-151
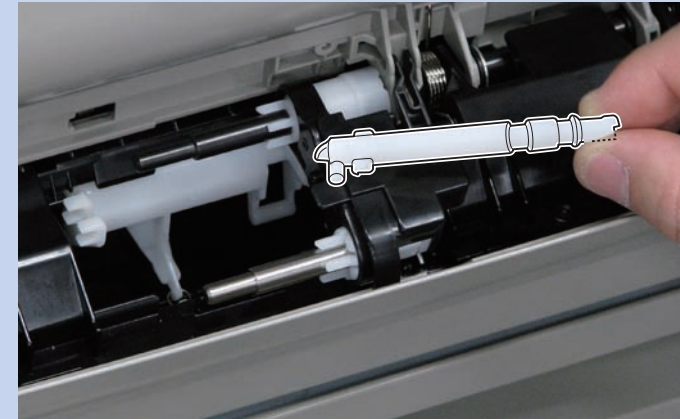
● **Procedure**

1) Hook the 2 shafts [2] on the 2 hooks [1].

> CAUTION:
>
> When assembling the Multi-purpose Tray Separation Roller Shaft [3], pay attention to the direction of installing it.
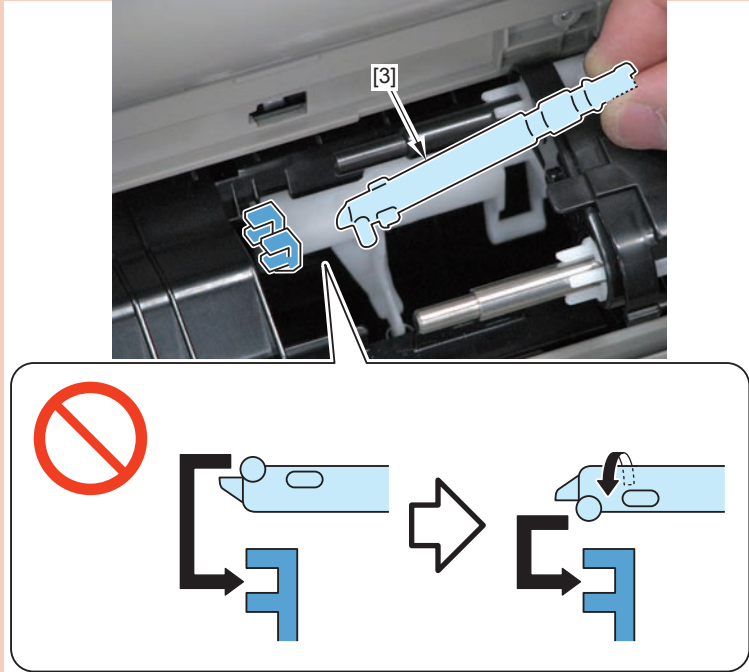


F-4-388
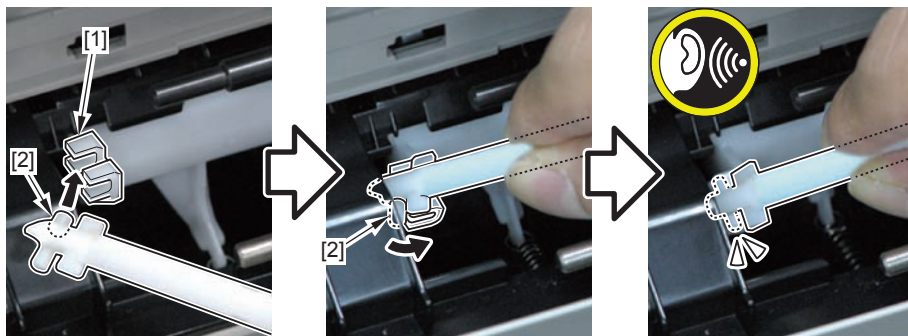


F-4-389

2) Assemble the Torque Limiter [2] on the Multi-purpose Tray Separation Roller Shaft [1].

> CAUTION:
>
> Be sure to align the groove [B] of the Torque Limiter [2] with the protrusion [B] of the Multi-purpose Tray Separation Roller Shaft [1] to assemble them.
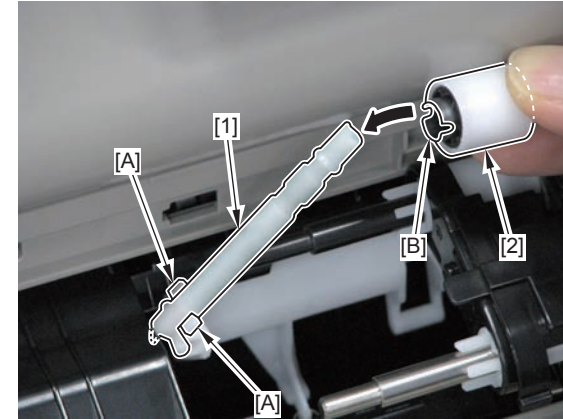


F-4-390

Be sure to reassemble according to steps 7 to 1 by referring to the Assembly Procedure.

4-151

4 Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached

**4** Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detache

4-152

## ■ Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached and dropped inside the host machine

NOTE:
The following describes the state in which the Multi-purpose Tray Separation Roller Shaft is detached and dropped inside the host machine.
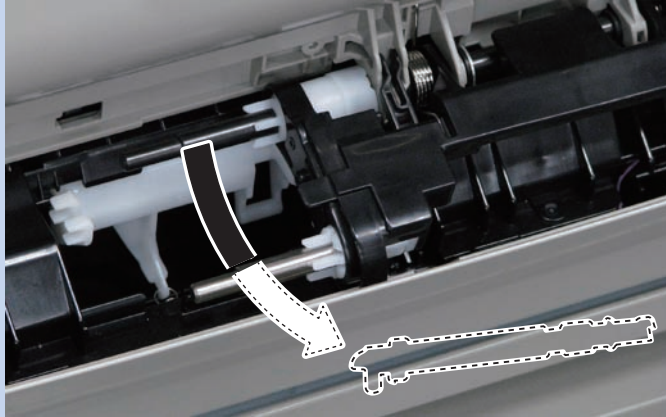
F-4-391

### ● Preparation

1) Remove the Right Inner Door Unit(Refer to page 4-44).

### ● Procedure

1) Remove the Right Cover Stopper Rear Holder [1].
- 1 Screw [2]

1x

[1]                    [2]
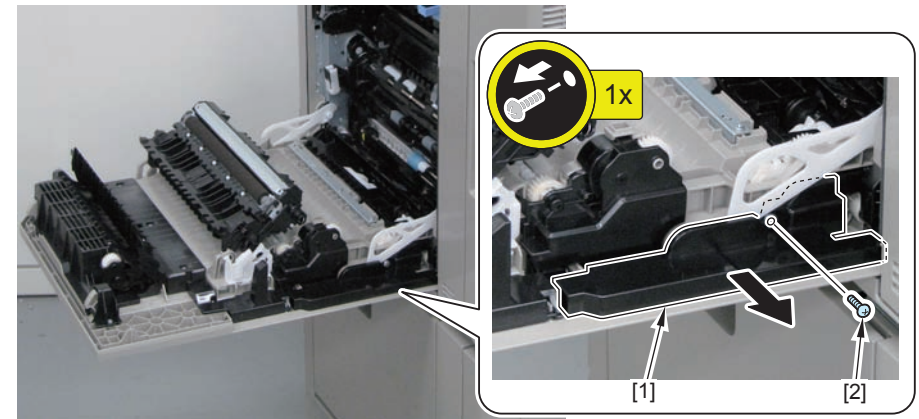
F-4-392

2) Lift the Right Cover Stopper Rear [1], and remove the Sensor Harness [2].
- 1 Connector [3]
- Harness Guide [A]

1x          1x

[1]
[3]            [A]                [2]
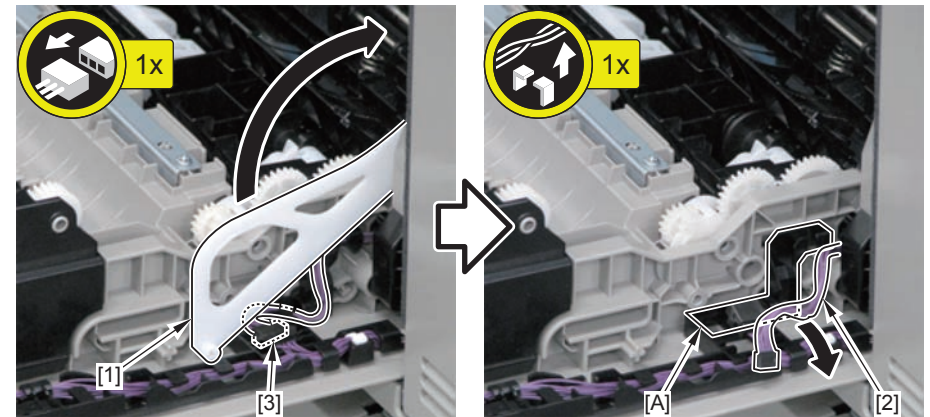
F-4-393

3) Remove the Multi-purpose Tray Separation Unit [1].
- 3 Screws [2]
- 2 Bosses [3]

4-152

**4** Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detache

**4** Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached

4-153



F-4-394

4) Remove the Multi-purpose Tray Separation Roller Holder [1].

• 1 Spring [2]
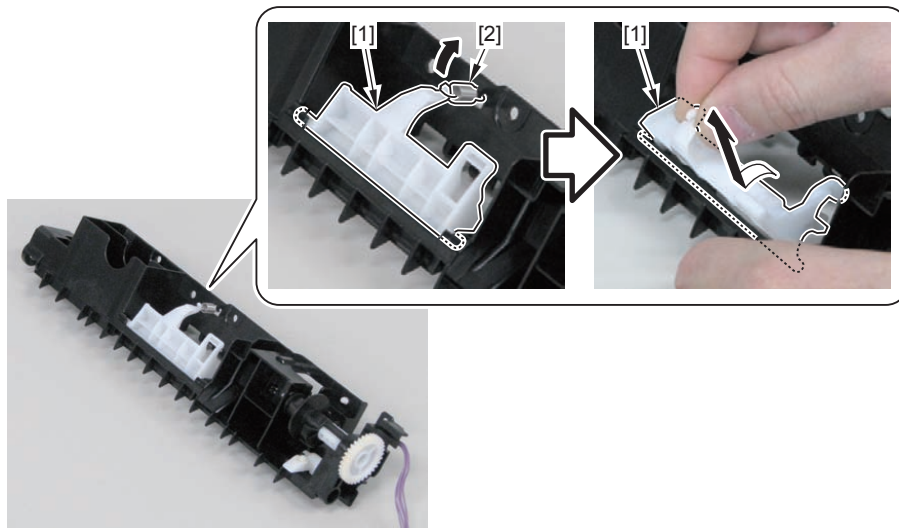


F-4-395

5) Assemble the Multi-purpose Tray Separation Roller Shaft [2] on the Multi-purpose Tray Separation Roller Holder [1].

CAUTION:

When assembling the Multi-purpose Tray Separation Roller Shaft [2], pay attention to the direction of installing it.



F-4-396



F-4-397

4-153

**4** Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached

**4** Disassembly/Assembly > Pickup/Feed System > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached > Reassembling when the Multi-purpose Tray Separation Roller Shaft is detache

4-154

6) Assemble the Torque Limiter [2] on the Multi-purpose Tray Separation Roller Shaft [1].

CAUTION:

Be sure to align the groove [A] of the Torque Limiter [2] with the protrusion [B] of the Multi-purpose Tray Separation Roller Shaft [1] to assemble.
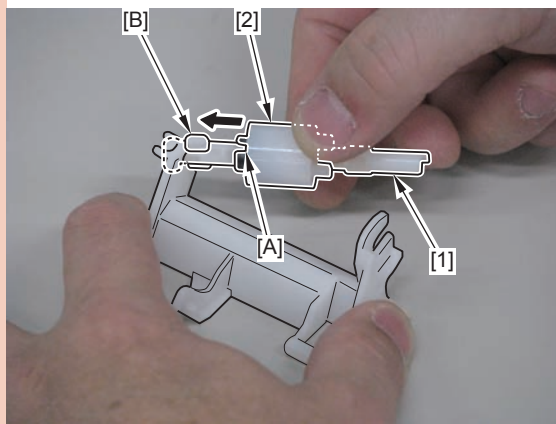


F-4-398
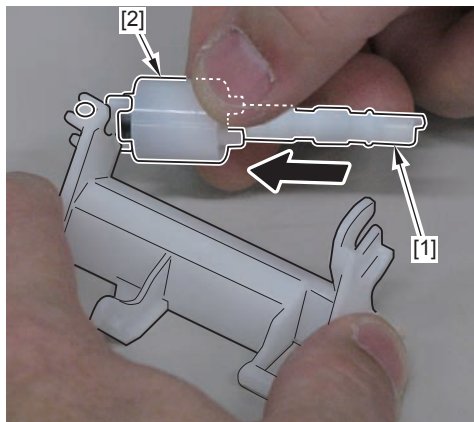


F-4-399

7) Assemble the Separation Roller [2] on the Multi-purpose Tray Separation Roller Shaft [1].

- 1 Claw [3]

CAUTION:

Be sure to align the groove [A] of the Separation Roller [2] with the protrusion [B] of the Torque Limiter [4] to assemble.
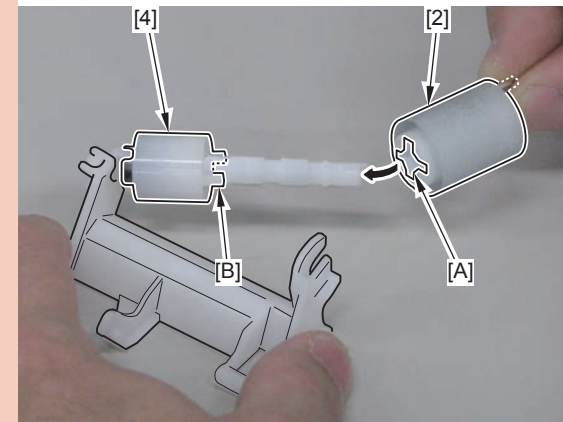


F-4-400
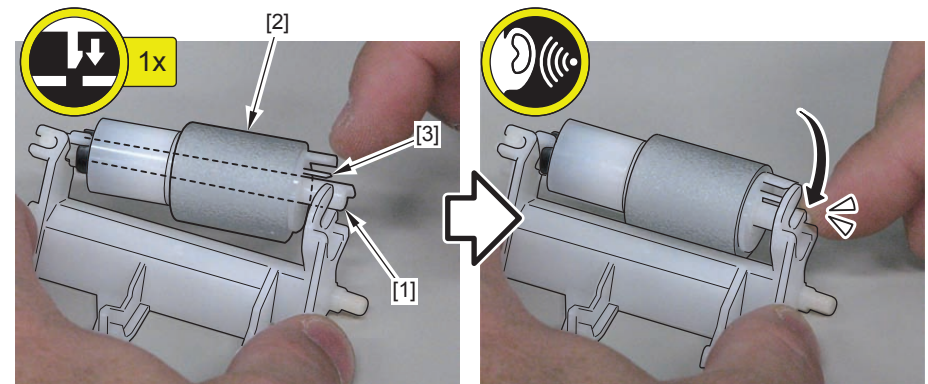


F-4-401

Be sure to reassemble according to steps 7 to 1 by referring to the Assembly Procedure.

# Removing the Registration/Pickup Unit



F-4-402

## Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Right Rear Cover/Right Rear Lower Cover(Refer to page 4-38).
3) Remove the Right Cover Unit(Refer to page 4-41).
4) Remove the Front Cover(Refer to page 4-33).
5) Remove the Right Front Cover(Refer to page 4-37).
6) Remove the Waste Toner Container(Refer to page 4-108).
7) Remove the Registration Drive Unit(Refer to page 4-123).

## Procedure

CAUTION:

• Be sure not to touch the surface [A] of the roller when disassembling/assembling.
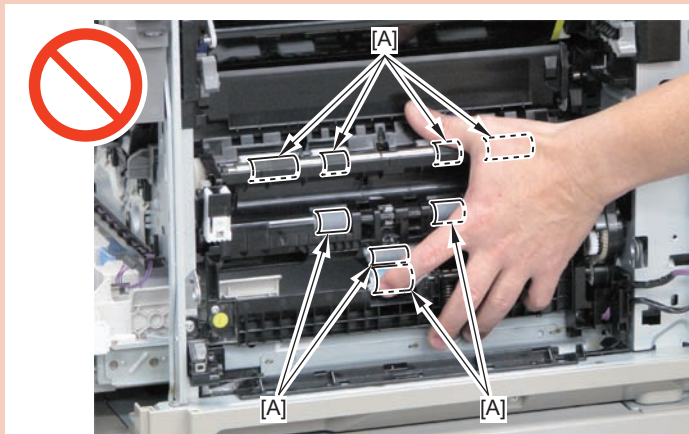


F-4-403

CAUTION:

• If the Registration Roller [1] and the Pre-registration Roller [2] are replaced separately, not simultaneously, it may generate a difference in feeding speed and cause feeding problems such as geometrical characteristics and jams.
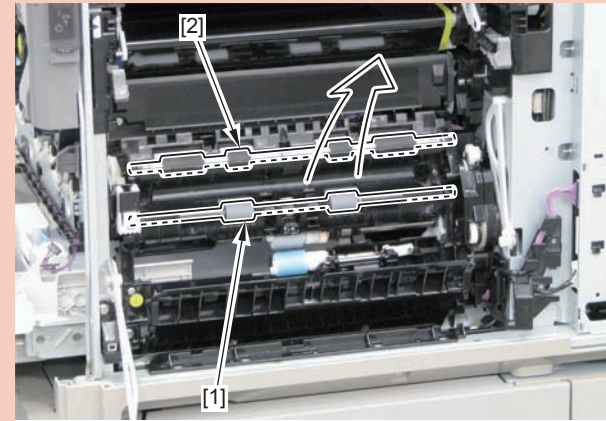


F-4-404

1) Remove the Right Cover Stopper Front [1] and the Right Cover Stopper Rear [2].

• 2 Hooks [3]
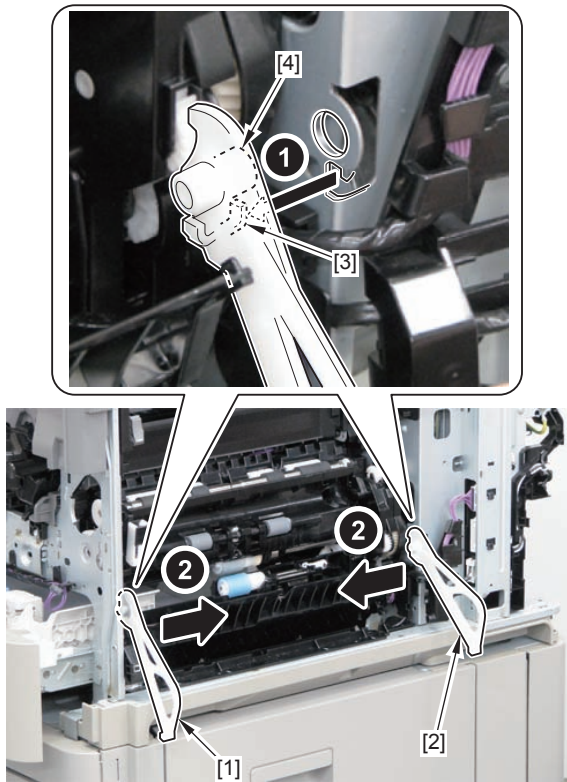
• 2 Shafts [4]

F-4-405

2) Remove the Swing Guide [1].

• 2 Shafts [2]
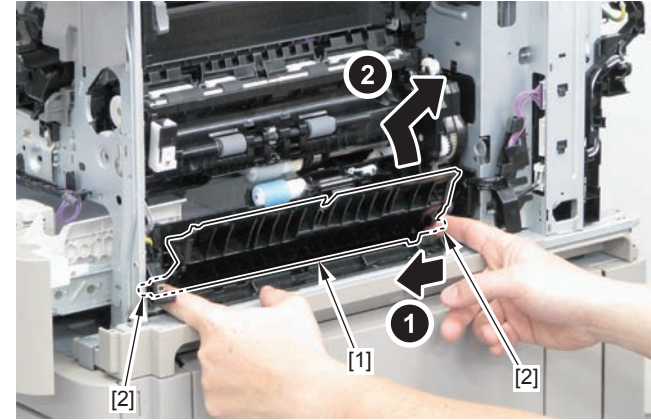
F-4-406

3) Remove the Right Cover Harness Guide [1].

• 1 Connector [2]

• Harness Guide [A]
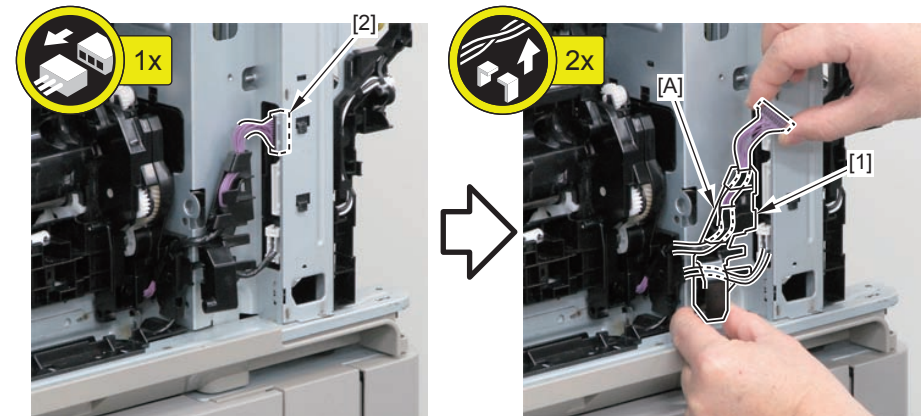
F-4-407

4) Remove the Registration/Pickup Unit [1].

- 5 Screws [2]
- 2 Bosses [3]

CAUTION:

Be careful not to drop the shaft [1] when disassembling/assembling.
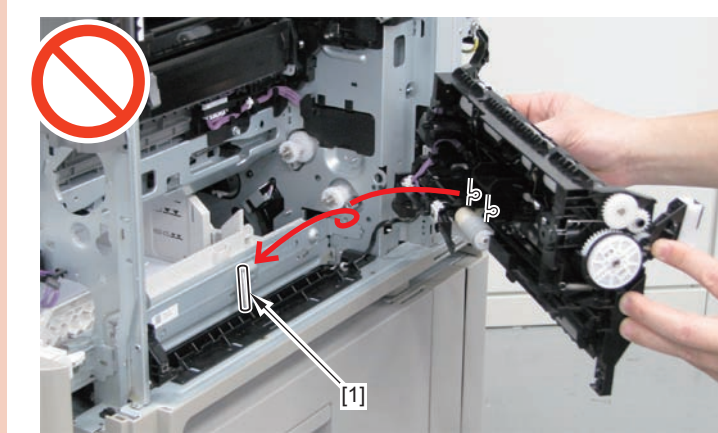
F-4-408

NOTE: Actions after assembly
Execute Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

5x

F-4-409

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after re

4-158
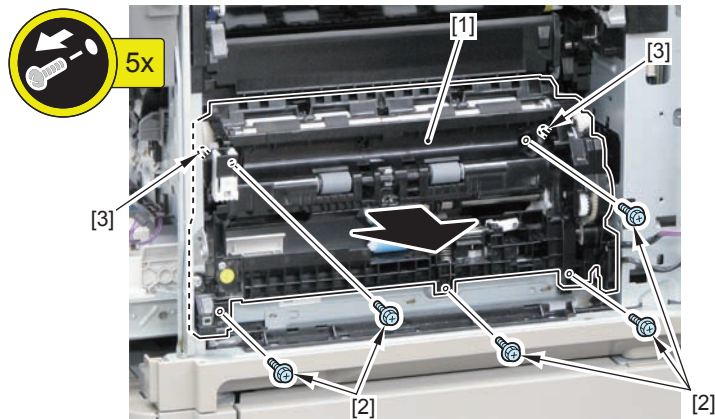
■ Procedure after replacement

When images with uneven density (white spots) are generated

after replacing the Registration Unit

● Image with uneven density (white spots) on the front side
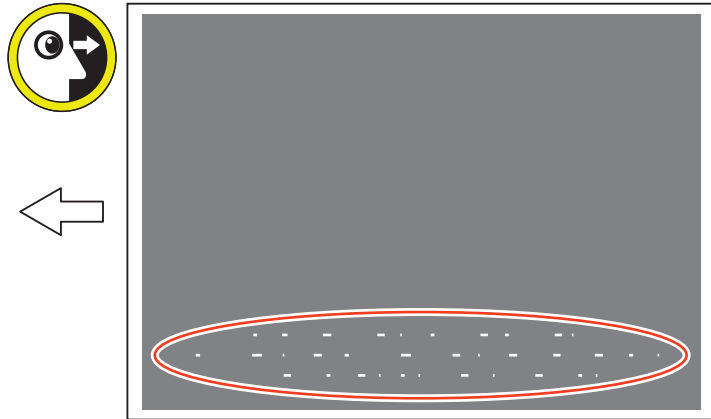


F-4-410

● Image with uneven density (white spots) on the rear side
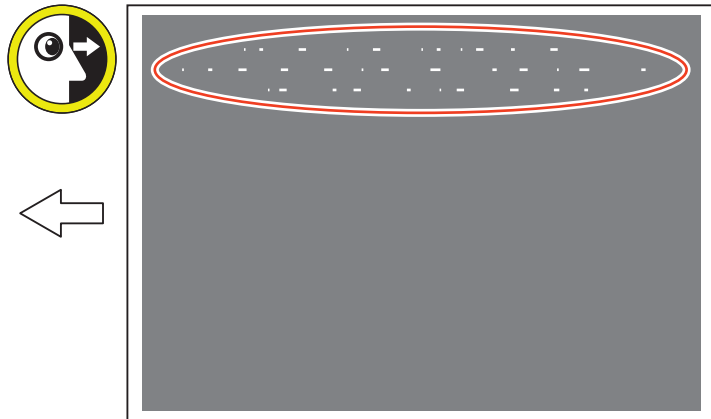


F-4-411

1) Test Print (output of halftone).

Service mode: Select 5 for COPIER > TEST > PG > TYPE.

2) Check if there is no image with uneven density (white spots).
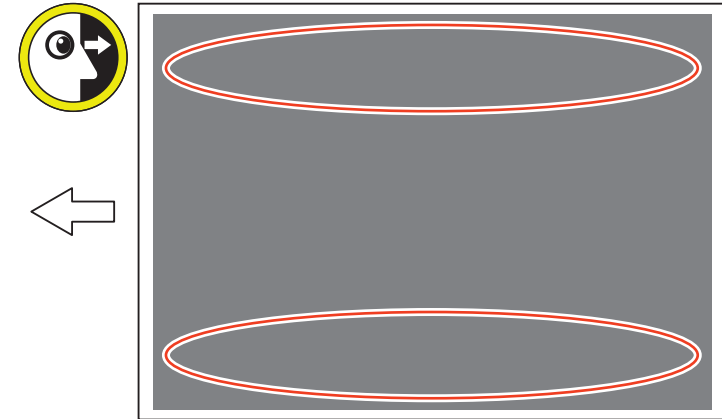


F-4-412

3) Perform the following remedy when images with uneven density (white spots) are generated when executing the service mode.

● Adjusting the Registration/Pickup Unit

Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Right Rear Cover/Right Rear Lower Cover(Refer to page 4-38).
3) Remove the Right Cover Unit(Refer to page 4-34).
4) Remove the Front Cover(Refer to page 4-33).
5) Remove the Right Front Cover(Refer to page 4-37).
6) Remove the Waste Toner Container(Refer to page 4-108).
7) Remove the Registration Drive Unit(Refer to page 4-123).

4-158

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after re

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after re

4-159

CAUTION:

• Be sure not to touch the surface [A] of the roller when disassembling/assembling.
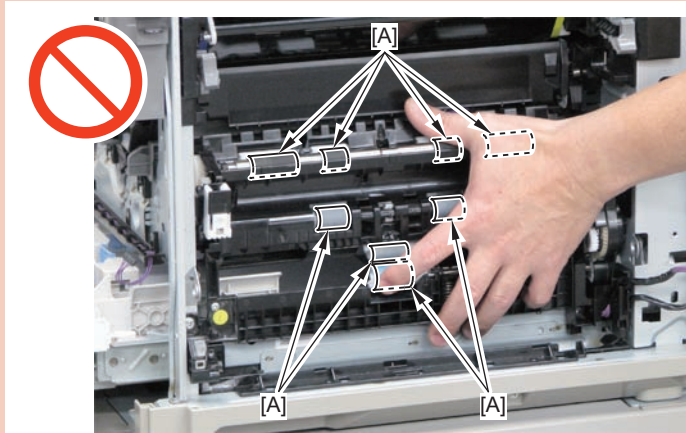


F-4-413

• If the Registration Roller [1] and the Pre-registration Roller [2] are replaced separately, not simultaneously, it may generate a difference in feeding speed and cause feeding problems such as geometrical characteristics and jams.
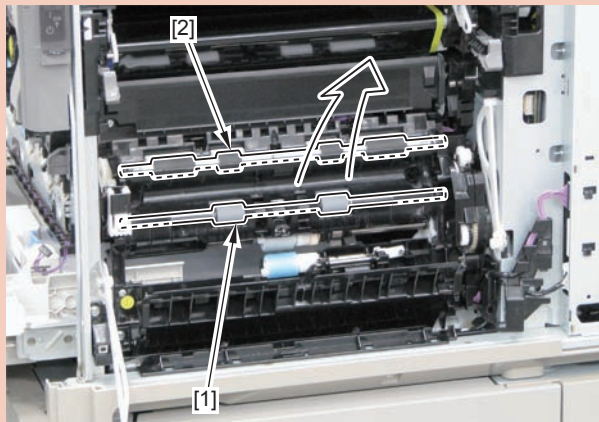


F-4-414

Procedure when images with uneven density (white spots) are generated on the front side
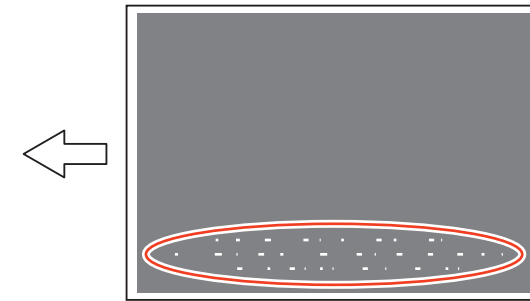


F-4-415

1) Remove the Right Cover Stopper Front [1] and the Right Cover Stopper Rear [2].

• 2 Hooks [3]
• 2 Shafts [4]



F-4-416

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after re

4-160
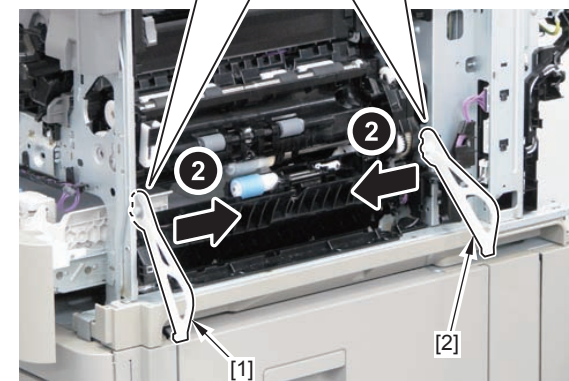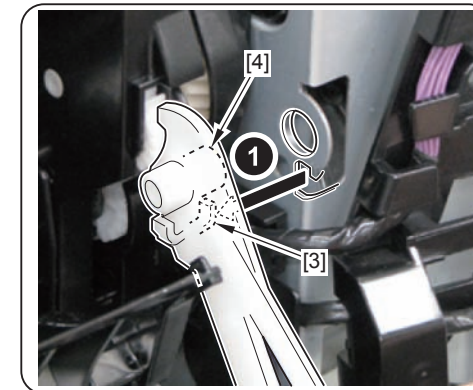
2)Remove the Swing Guide [1].

• 2 Shafts [2]
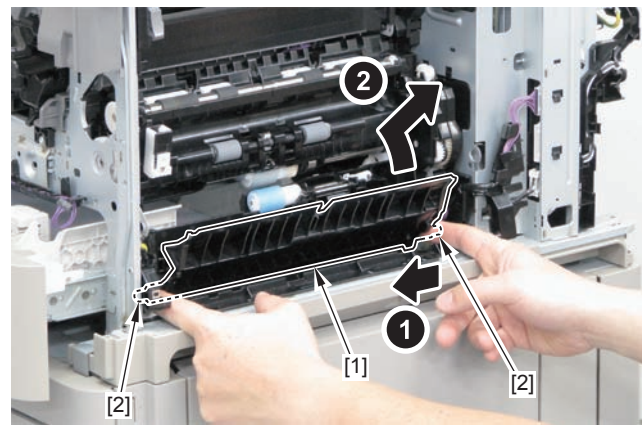


F-4-417

3)Remove the Right Cover Harness Guide [1].

• 1 Connector [2]

• Harness Guide [A]
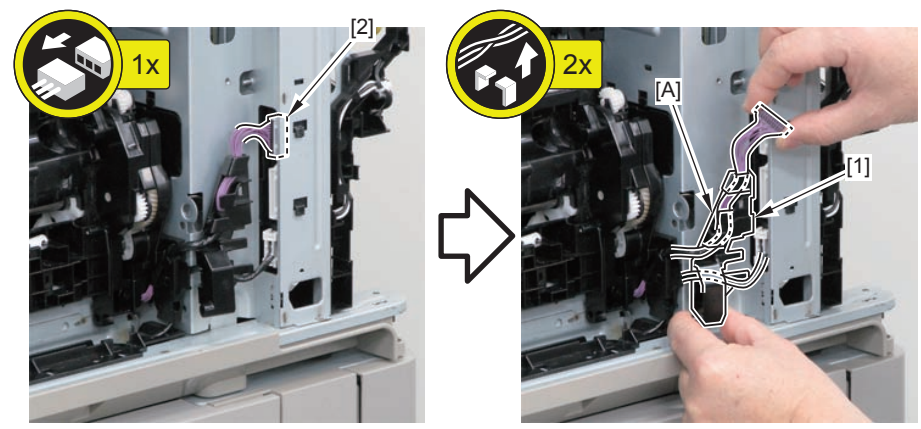


F-4-418

4)Loosen the 2 screws [2] of the Registration/Pickup Unit [1].
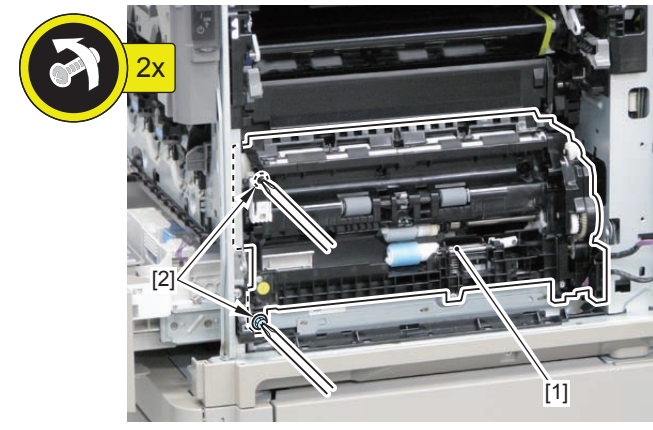


F-4-419

5)Lower the Registration/Pickup Unit [1], and tighten the 2 screws [2].
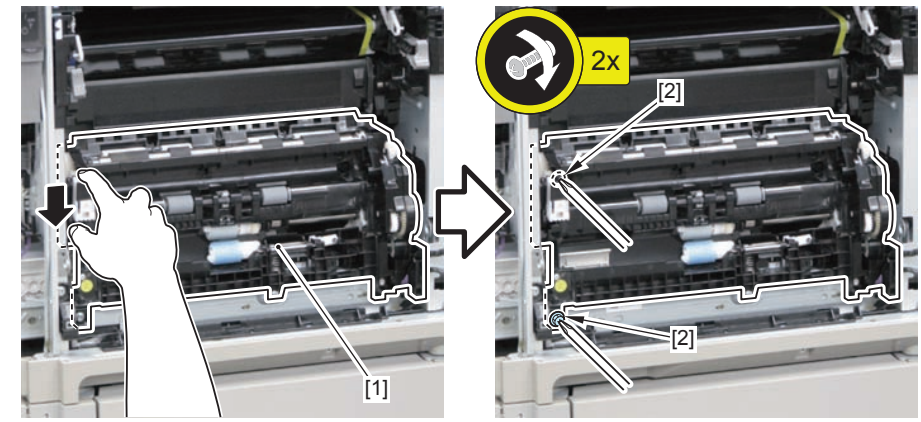


F-4-420

4-160

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after re

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after re

4-161

6) Assemble the Registration/Pickup Unit, output a test print, and confirm that images with uneven density (white spots) are not generated.



F-4-421

7) End if images with uneven density (white spots) are not generated.
Adjust again the Registration/Pickup Unit if images with uneven density (white spots) are generated.

Procedure when images with uneven density (white spots) are generated on the rear side
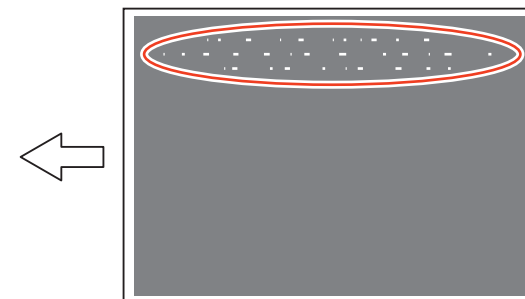


F-4-422

1) Remove the Right Cover Stopper Front [1] and the Right Cover Stopper Rear [2].
- 2 Hooks [3]
- 2 Shafts [4]



F-4-423

4-161

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after re

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after r

4-162
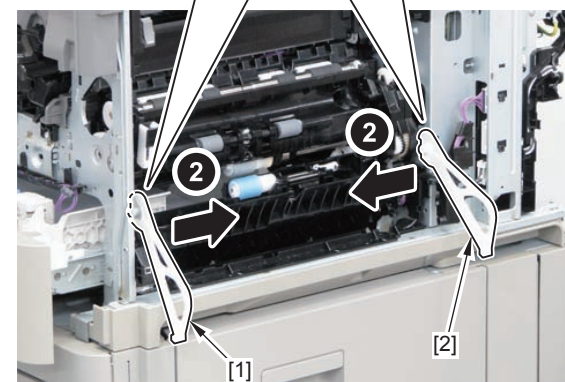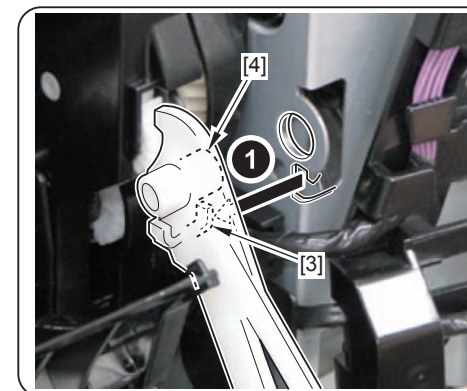
2)Remove the Swing Guide [1].

• 2 Shafts [2]
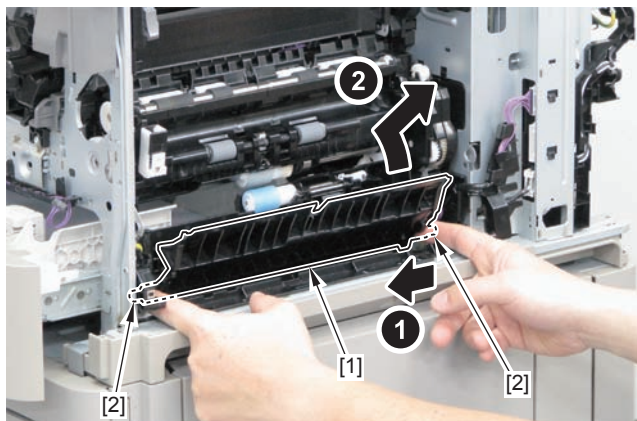


F-4-424

3)Remove the Right Cover Harness Guide [1].

• 1 Connector [2]

• Harness Guide [A]
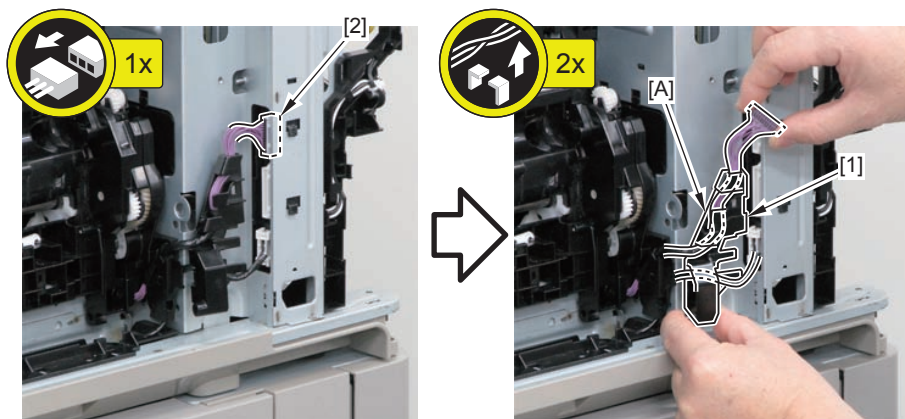


F-4-425

4)Loosen the 2 screws [2] of the Registration/Pickup Unit [1].
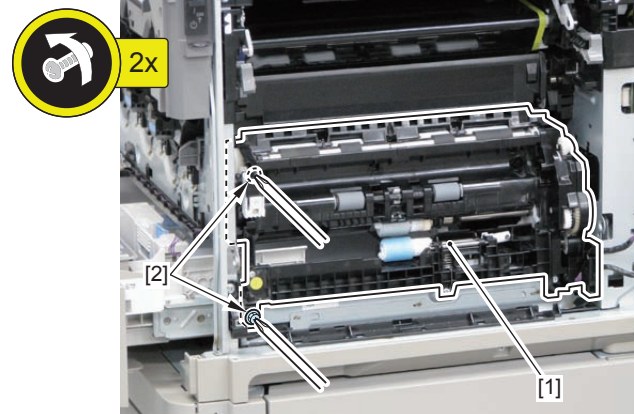


F-4-426

5)Lift the Registration/Pickup Unit [1], and tighten the 2 screws [2].
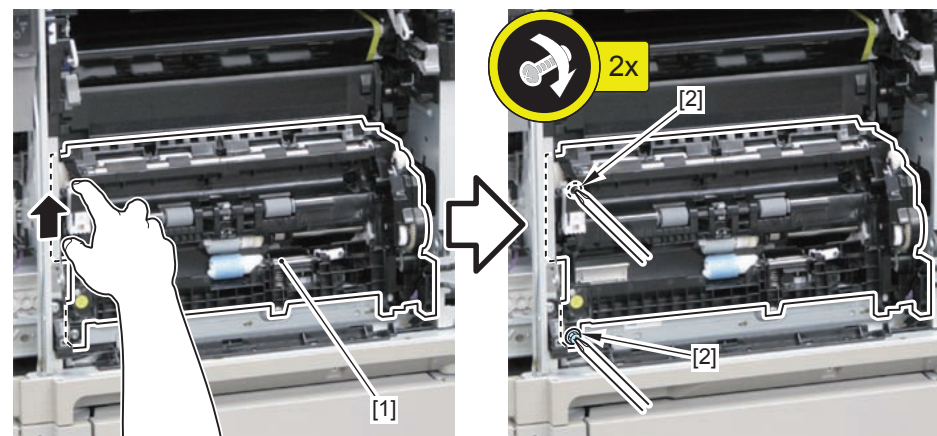


F-4-427

4-162

**4** Disassembly/Assembly > Pickup/Feed System > Removing the Registration/Pickup Unit > Procedure after replacement When images with uneven density (white spots) are generated after r

6) Assemble the Registration/Pickup Unit, output a test print, and confirm that images with uneven density (white spots) are not generated.



F-4-428

7) End if images with uneven density (white spots) are not generated.
   Adjust again the Registration/Pickup Unit if images with uneven density (white spots) are generated.

## Removing the Delivery/Reverse Unit
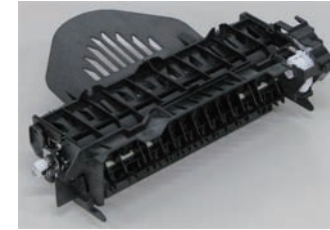


F-4-429

### ■ Preparation

1) Remove the Fixing Assembly(Refer to page 4-137).

### ■ Procedure

1) Remove the Delivery/Reverse Unit [1].
   • 4 Screws [2]
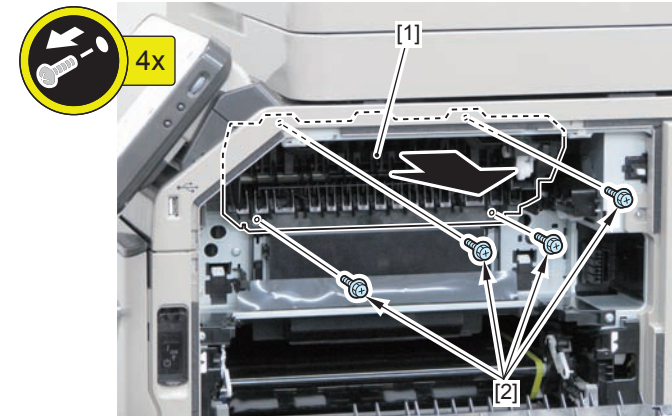


F-4-430

NOTE: How to assemble the Delivery/Reverse Unit
Be sure to lift up the Paper Full Detection Flag [1] to install the unit.

[1]
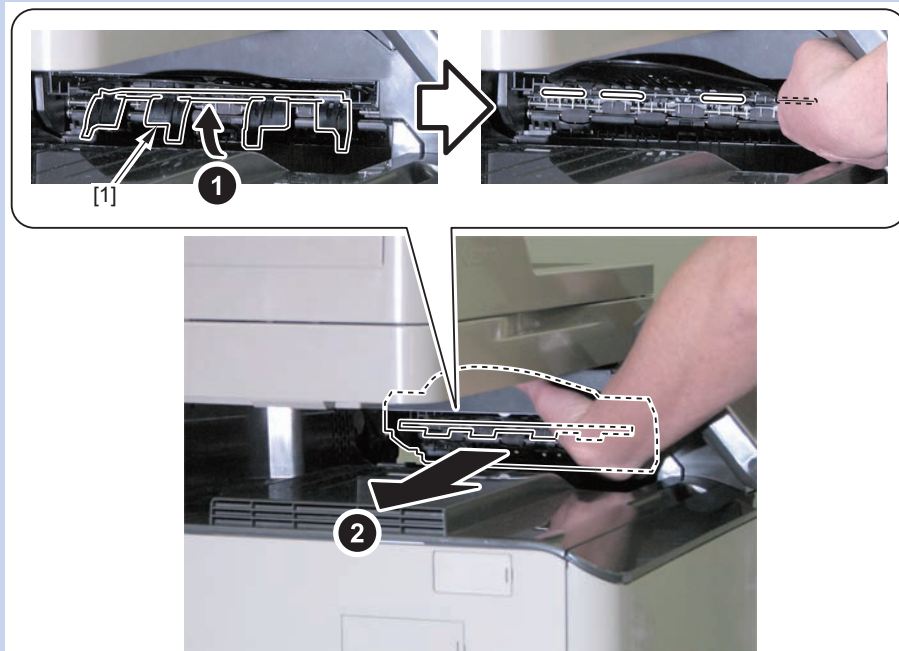
F-4-431

# Removing the Cassette 1 Lifter Drive Unit
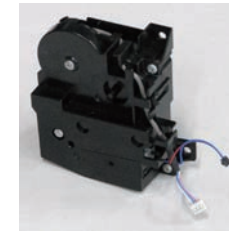
F-4-432

## ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Left Upper Cover (to be removed for models equipped with a fax)
   (Refer to page 4-36).
3) Remove the Fax Speaker Unit (to be removed for models equipped with a fax)
   (Refer to page 4-100).
4) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-101).
5) Remove the Main Controller Unit(Refer to page 4-81).
6) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-93).
7) Remove the DC Controller PCB Unit(Refer to page 4-86).
8) Remove the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit
   (Refer to page 4-88).

## ■ Procedure

1) Remove the High-voltage Contact Guide 1 [1].

- 1 Claw [2]
- 2 Hooks [3]
- 2 Bosses [4]
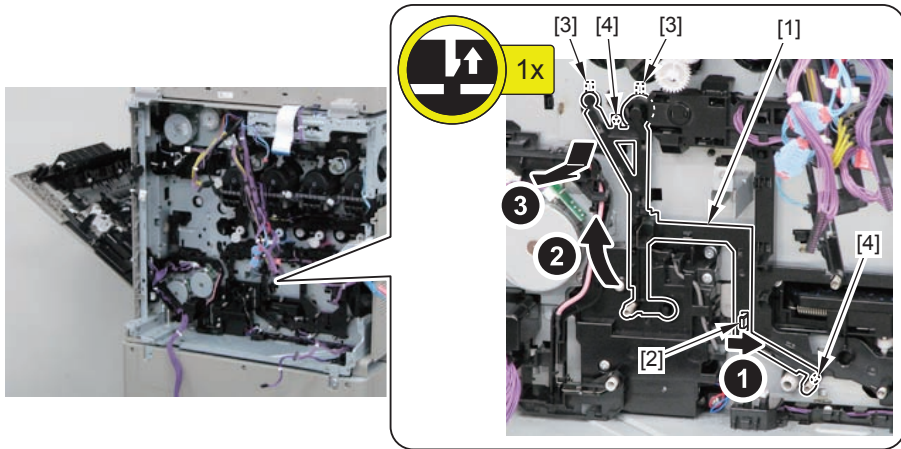


F-4-433

2) Move the High-voltage Contact Guide 2 [1].

- 1 Claw [2]
- 2 Bosses [3]
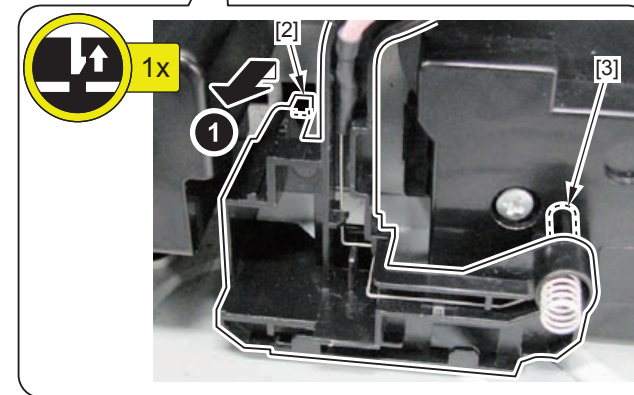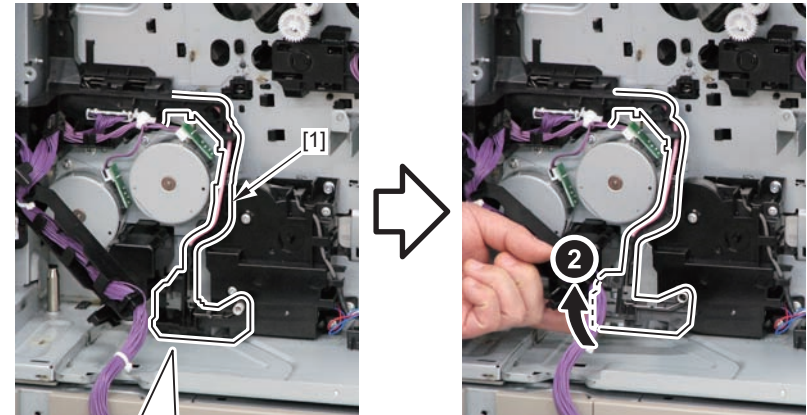


F-4-434

3) Remove the Cassette 1 Lifter Drive Unit [1].

• 2 Connectors [2]

• 2 Screws [3]

• 1 Hook [4]

• 2 Bosses [5]
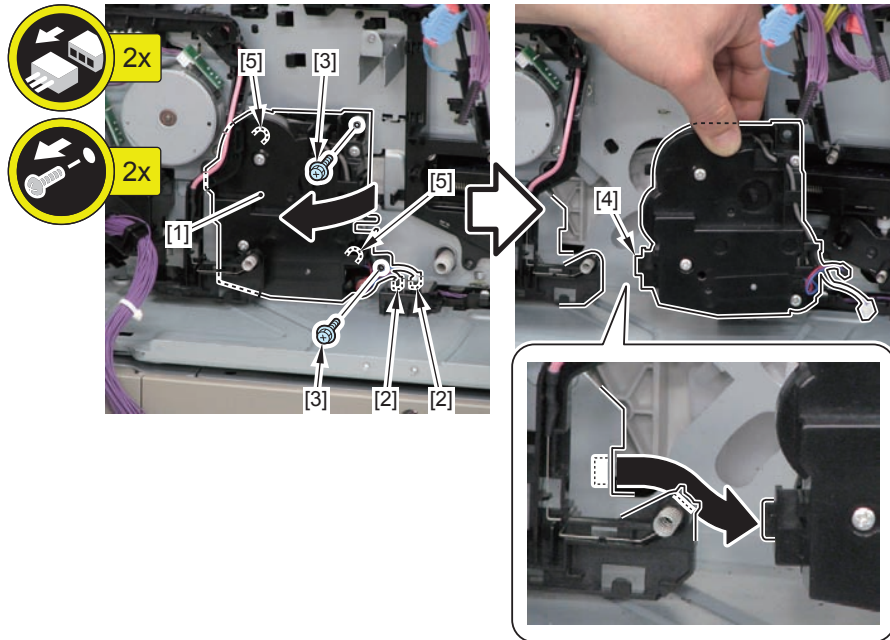


F-4-435

NOTE: How to assemble the Cassette 1 Lifter Drive Unit

1) Insert the hook [4] of the Cassette 1 Lifter Drive Unit [1] inside the hole [A] of the Rear Plate, and secure the unit in place with the 2 screws [3].

• 2 Bosses [5]

• 2 Connectors [2]
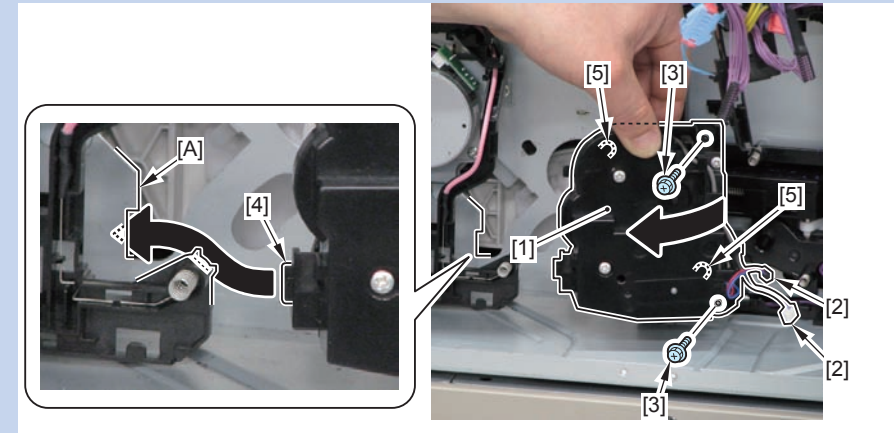


F-4-436

2) Install the High-voltage Contact Guide 2 [1].
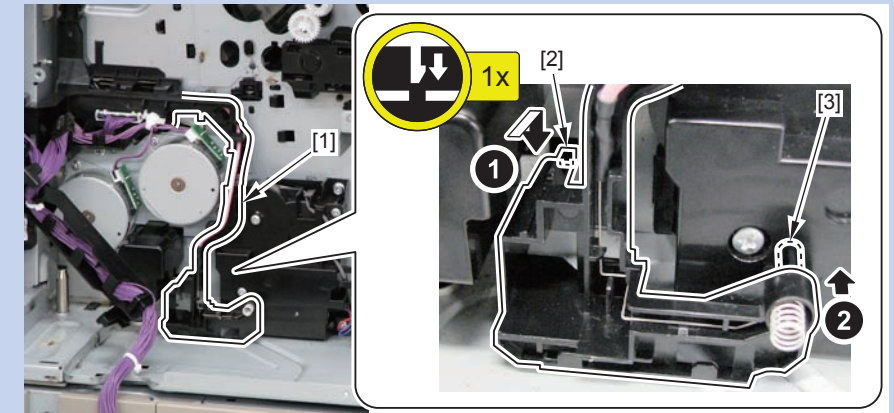
• 1 Claw [2]

• 2 Bosses [3]



F-4-437

NOTE: How to assemble the Cassette 1 Lifter Drive Unit

3) Install the High-voltage Contact Guide 1 [1].

- 1 Claw [2]
- 2 Hooks [3]
- 2 Bosses [4]
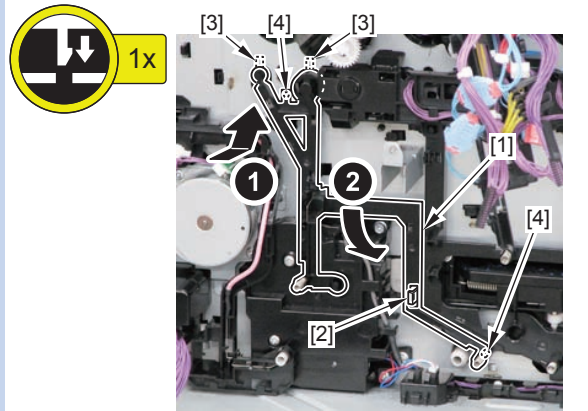


F-4-438

## Removing the Cassette 1 Pickup Drive Unit



F-4-439

### ■ Preparation

1) Remove the Rear Cover 1(Refer to page 4-34).
2) Remove the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit (Refer to page 4-88).
3) Remove the Cassette 1 Lifter Drive Unit(Refer to page 4-164).

### ■ Procedure

1) Pull out the cassette [1].



F-4-440

2)Move the Harness Guide [1].

• 1 Boss [2]

• 1 Hook [3]
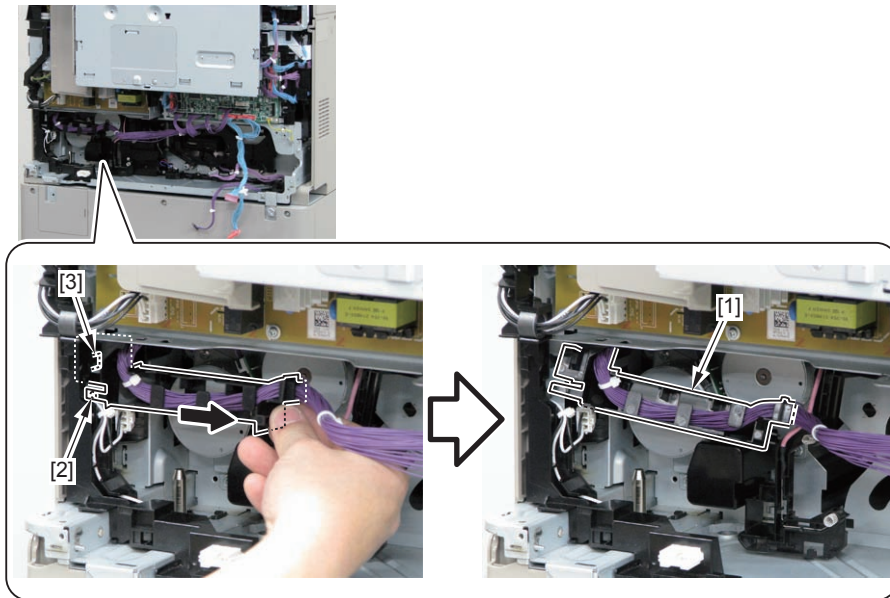


F-4-441

3)Remove the Rail Cover [1].

• 2 Claws [2]

• 1 Hook [3]
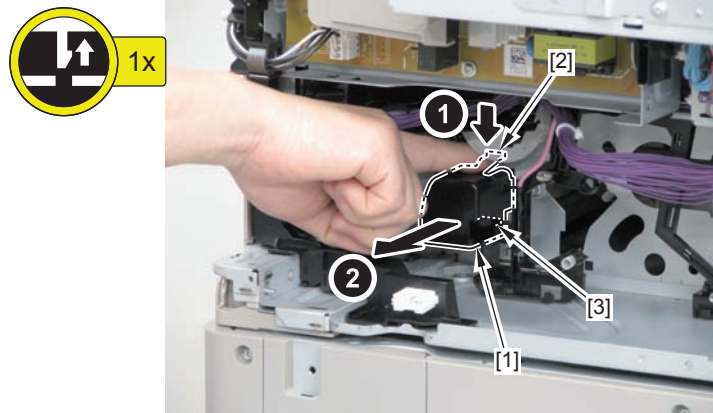


F-4-442

4)Remove the Cassette 1 Pickup Drive Unit [1].

• 4 Screws [2]

• 2 Connectors [3]
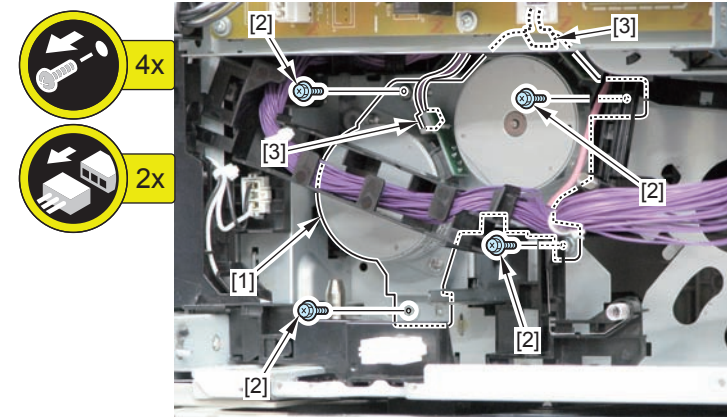


F-4-443

NOTE: Actions after assembly
Execute Correct Print Color Mismatch.
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

# Cleaning Procedure

## Layout Drawing
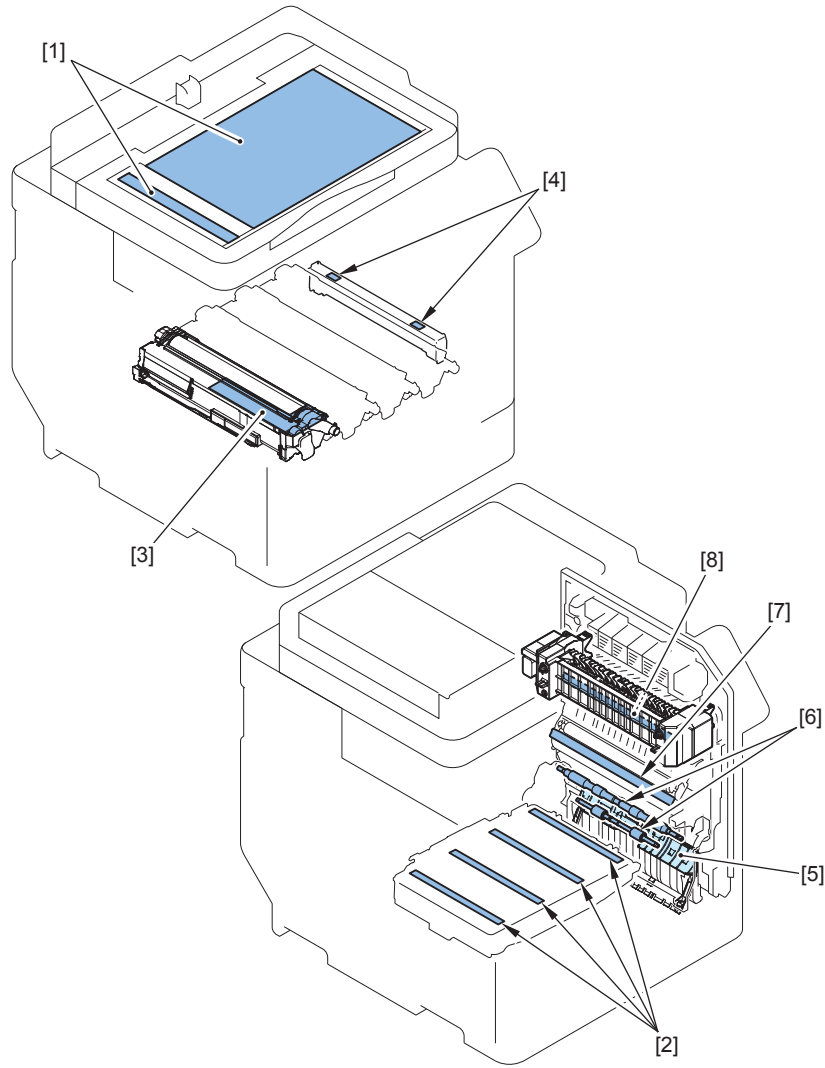


F-4-444

| No. | Parts Name | Reference |
|---|---|---|
| [1] | Cleaning the Copyboard Glass/Reading Glass | (Refer to page 4-170) |
| [2] | Cleaning the Dustproof Glass | (Refer to page 4-170) |
| [3] | Cleaning when installing/removing the ITB Unit | (Refer to page 4-171) |
| [4] | Cleaning the Registration Patch Sensor Unit | (Refer to page 4-172) |
| [5] | Cleaning the Registration Front Guide | (Refer to page 4-173) |
| [6] | Cleaning the Registration Roller/Pre-registration Roller | (Refer to page 4-174) |
| [7] | Cleaning the Secondary Transfer Guide | (Refer to page 4-175) |
| [8] | Cleaning the Fixing Inlet Guide | (Refer to page 4-177) |

T-4-92

## Cleaning the Copyboard Glass/Reading Glass

### ■ Procedure

1) Clean the Copyboard Glass [1]/Reading Glass [2] with a glass cleaning sheet [3].
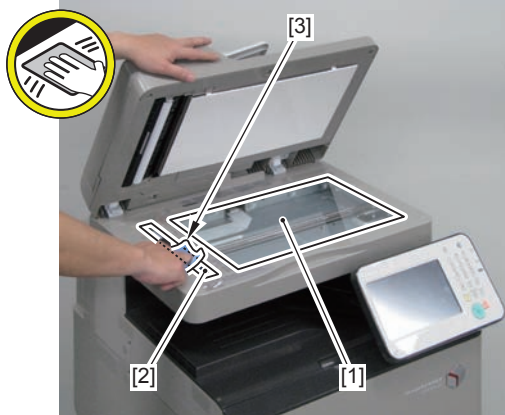


F-4-445

## Cleaning the Dustproof Glass

### ■ Procedure

1) Open the Front Cover [1].
2) Remove the Dustproof Glass Cleaning Tool [2].
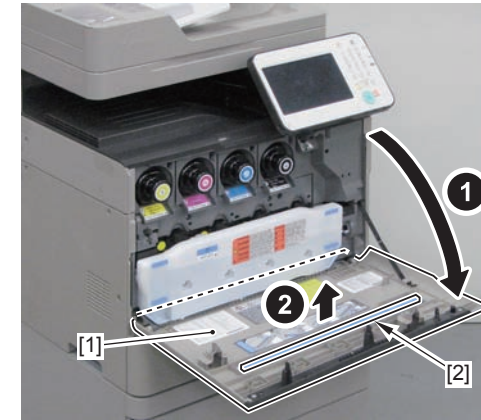


F-4-446

3) Clean the Dustproof Glass [1] from the hole [A] of the Waste Toner Container.
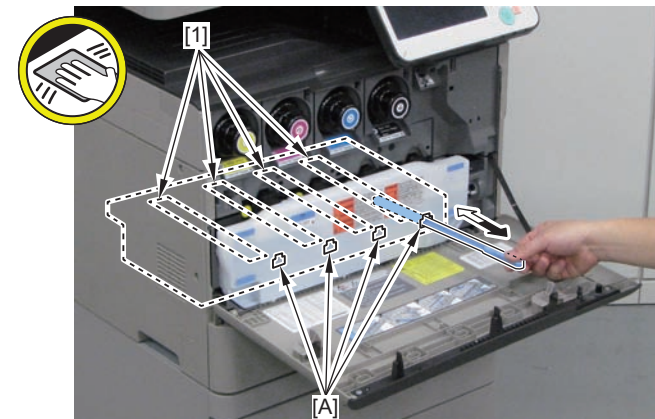


F-4-447

## Cleaning when installing/removing the ITB Unit

Be sure to check for any soiling before cleaning since toner may be spilled over Drum Unit (Y) when installing/removing the ITB Unit.

### ■ Preparation

1) Remove the Waste Toner Container(Refer to page 4-108).
2) Remove the Drum Unit (Y/M/C/Bk) (remove the Drum Unit of the Y color) (Refer to page 4-109).

### ■ Procedure

CAUTION:

Do not clean the drum surface [A] with a blower [1] or lint-free paper [2].
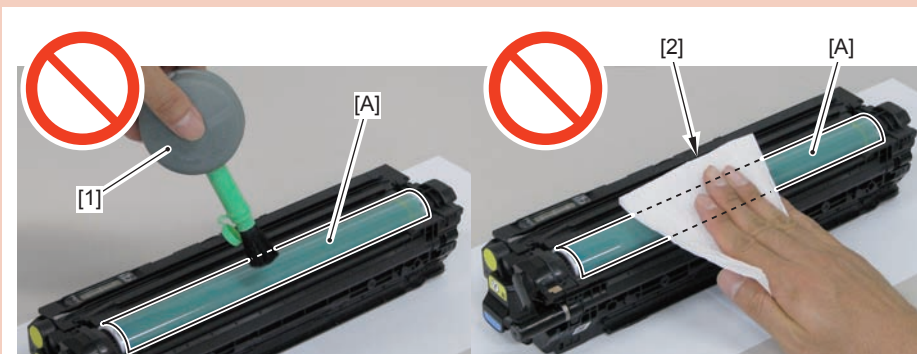


F-4-448

1) Put the removed Drum Unit (Y) [1] on a sheet of paper [2].
2) Cover the removed Drum Unit (Y) [1] with a paper [3] to block the light for Drum (4).
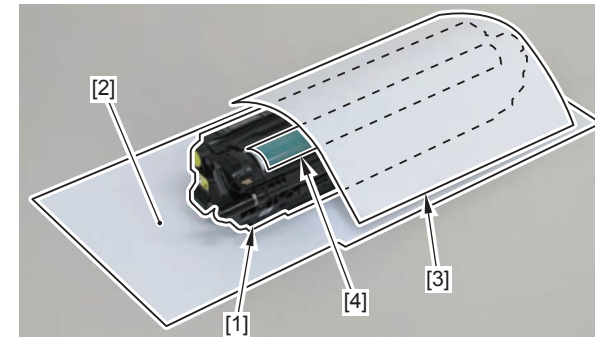


F-4-449

3) Clean the [A] part of the Drum Unit (Y) [1] with a blower [2].
4) Clean the [A] part of the Drum Unit (Y) [1] with lint-free paper [3].
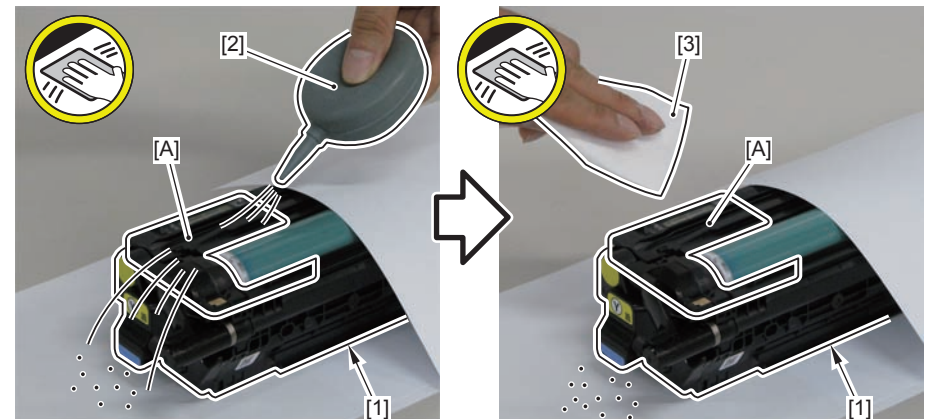


F-4-450

## Cleaning the Registration Patch Sensor Unit

Be sure to clean the Registration Patch Sensor Unit when replacing the ITB Unit.

Preparation

### ■ Preparation

1) Remove the Waste Toner Container(Refer to page 4-108).

2) Remove the Drum Unit (remove Bk color) (Refer to page 4-109).

3) Remove the ITB Unit(Refer to page 4-112).

### ■ Procedure

1) While opening the RD Sensor Shutter [1], clean the surface [A] of the Patch Sensor with a blower. After cleaning, check that there is no soiling caused by toner on the surface [A] of the sensor.
   If the soiling cannot be removed, perform step 2.

2) While opening the RD Sensor Shutter [1], clean the surface [A] of the Patch Sensor with tightly-wrung cotton swab moistened with water in a single direction.

CAUTION:

- Do not use alcohol because it causes melting and clouding of the sensor window.
- Do not dry wipe the sensor window because it is charged to attract toner.



F-4-451

NOTE: How to install the ITB Unit

1) Hold the 2 handles [1], align the 2 protrusions [B] of the ITB Unit [2] with the 2 grooves [A] of the rails of the ITB Unit, and then put the unit inside the machine.
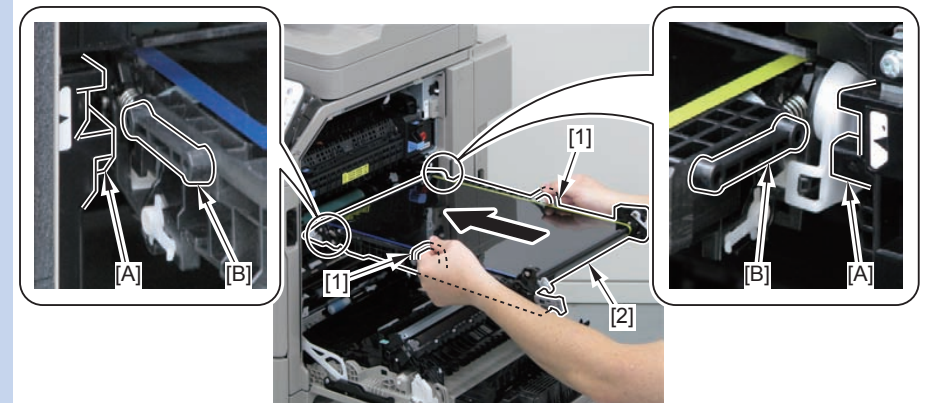


F-4-452
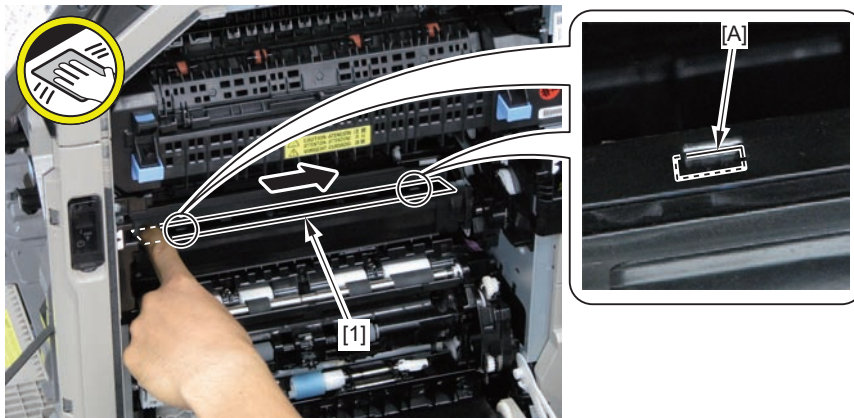
## Cleaning the Registration Front Guide

### ■ Procedure

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
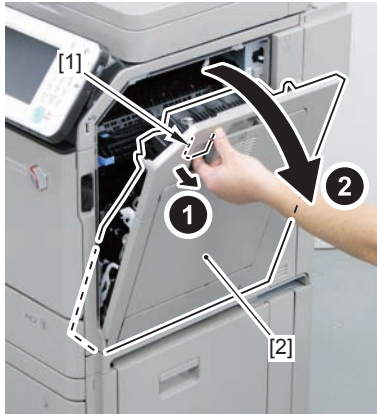


F-4-453

2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].
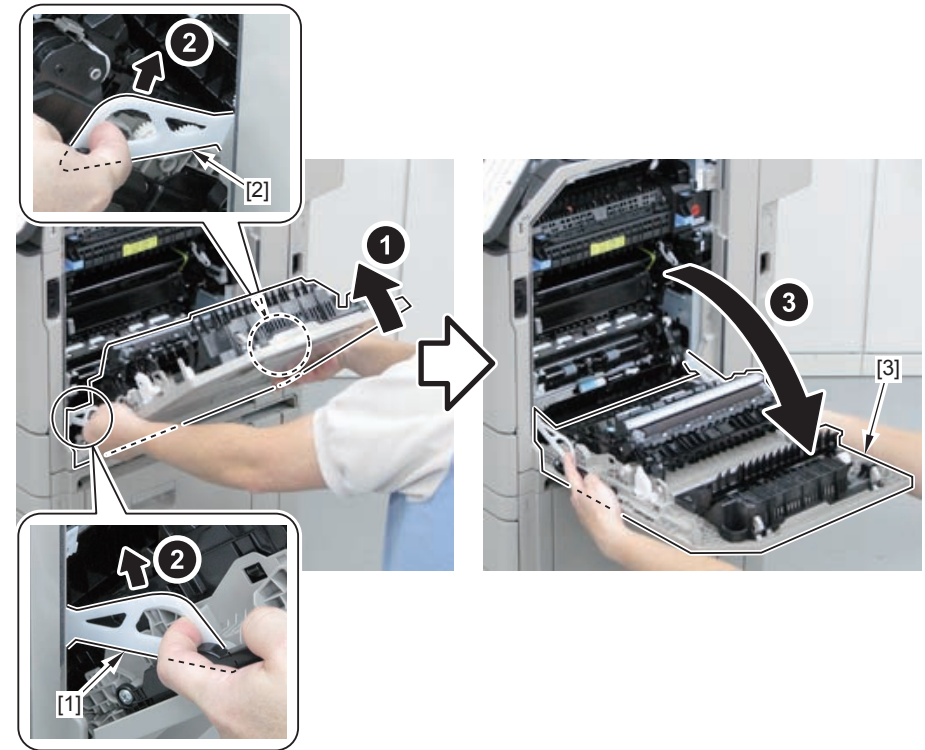


F-4-454

3) Clean the [A] part of the Registration Front Guide [2] using lint-free paper [1] soaked with alcohol.
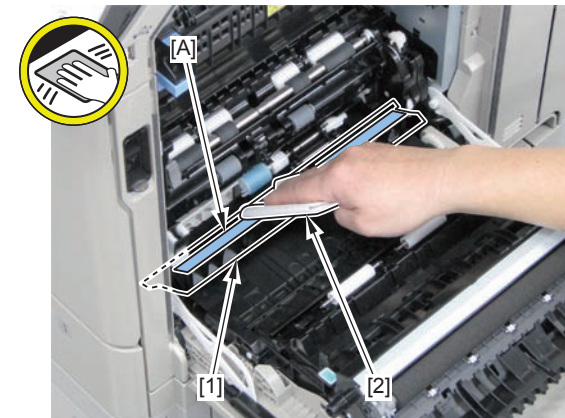


F-4-455

## ⬤ Cleaning the Registration Roller/Pre-registration Roller

### ■ Procedure

1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
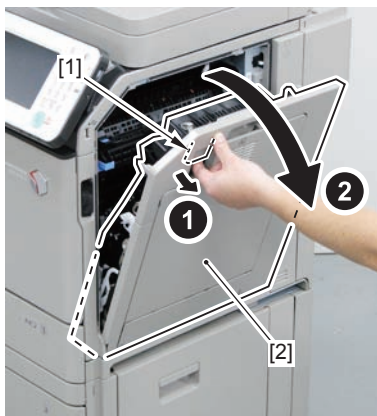
F-4-456

2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].
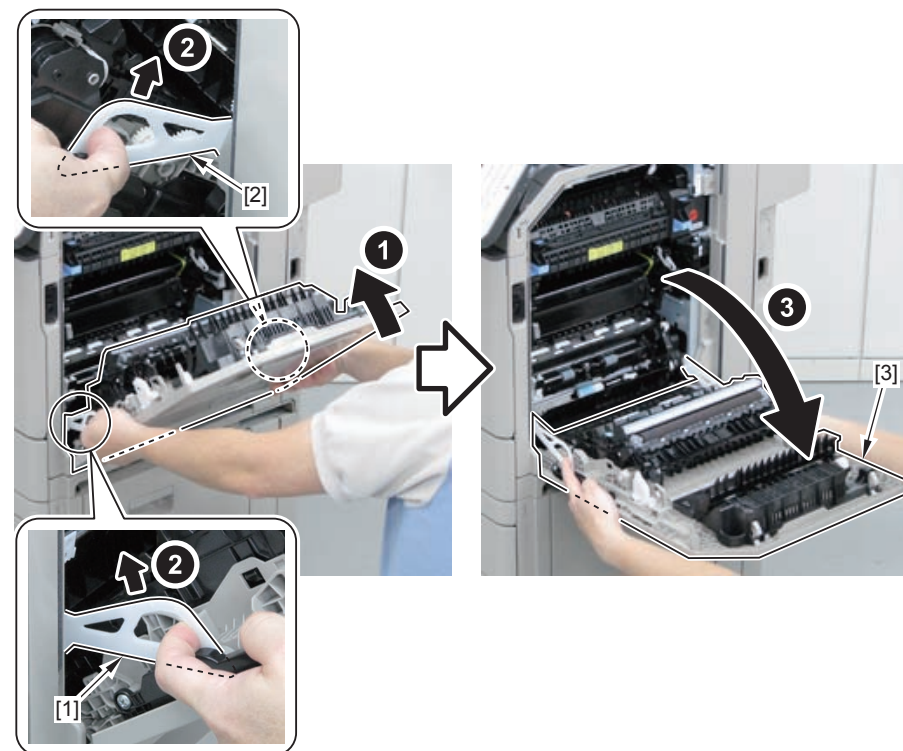
F-4-457

3) Clean the surface [A] using lint-free paper [1] soaked with alcohol while rotating the Registration Roller [2].
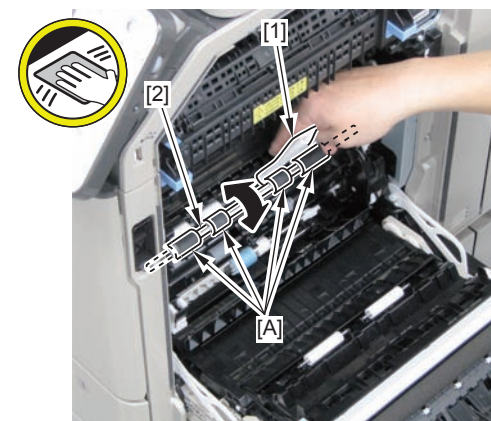
F-4-458

4)Clean the surface [A] using lint-free paper [1] soaked with alcohol while rotating the Pre-registration Roller [2].
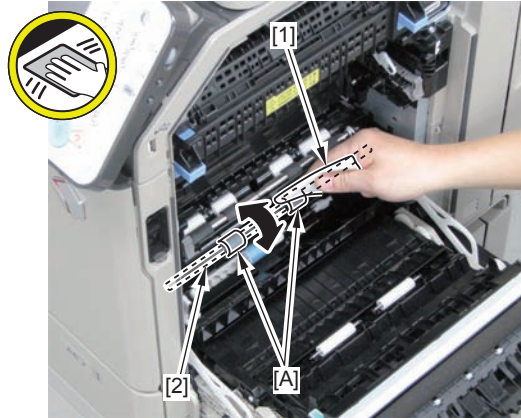


F-4-459

## Cleaning the Secondary Transfer Guide

### ■ Procedure

1)Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].
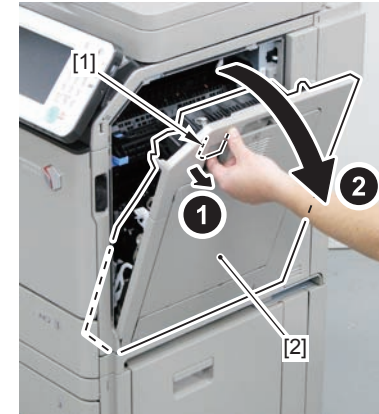


F-4-460

2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].
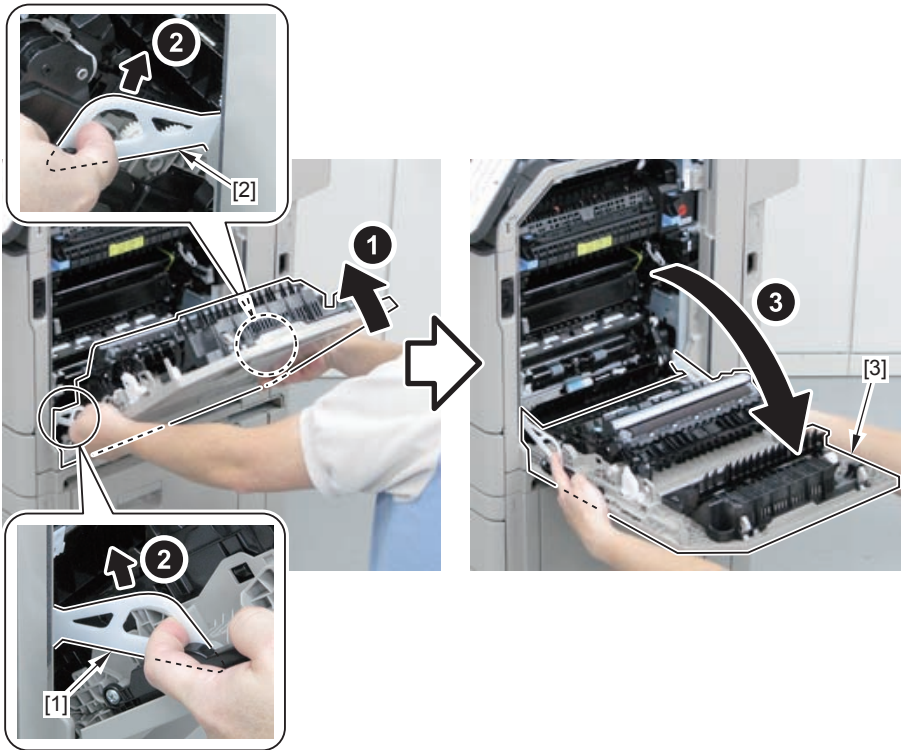
F-4-461

3) Clean the [A] part of the Secondary Transfer Guide [2] using lint-free paper [1] soaked with alcohol.
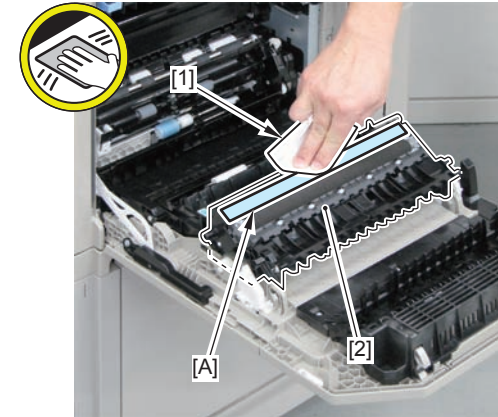
F-4-462

## Cleaning the Fixing Inlet Guide

### ■ Preparation

1) Remove the Fixing Assembly (Refer to page 4-137).

### ■ Procedure

⚠ CAUTION:

Be sure to start removing the Fixing Assembly after it is cooled down enough. The Fixing Assembly right after printing may cause burn injury.

1) Clean the Fixing Inlet Guide [A] with lint-free paper [1] moistened with alcohol.

CAUTION:

Do not damage the Fixing Film [1] when cleaning.
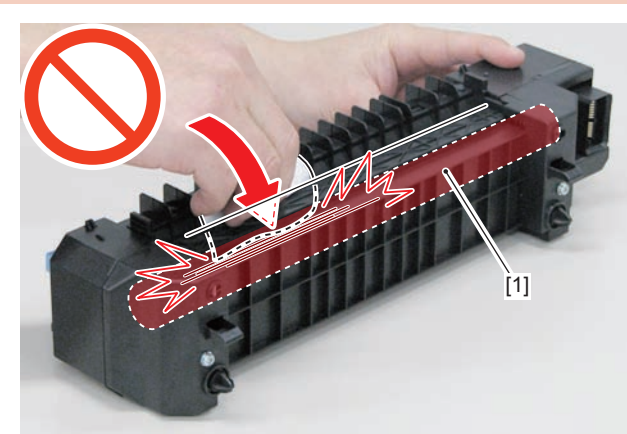
F-4-463
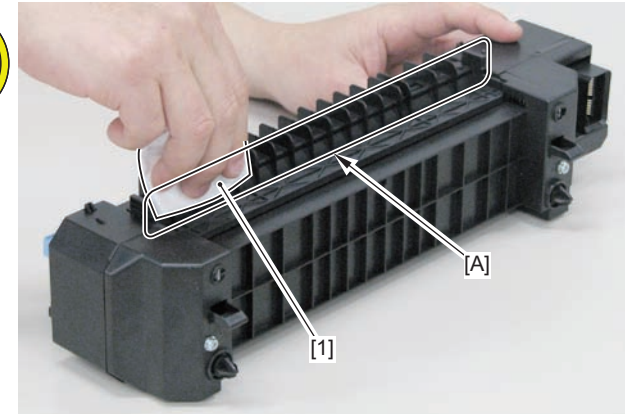
F-4-464

# 5

# Adjustment

■Document Exposure System

■Main Controller

■List of parts that require adjustment after disassembly

■Pickup Feed System

# Document Exposure System

## Service mode backup

The machine is adjusted one by one at the factory shipment and the adjustment values are written on the service label.

When the adjustment is carried out at a field and the service mode values are changed, be sure to write the changed values on the service label.

If there is no corresponding items on the service label, write the value to a blank field.

The service label is affixed to the back of the Front Cover.

In addition, backup and restoration in service mode is also possible.

- Backup

  Use a USB memory

| COPIER > FUNCTION > SYSTEM |
| --- |
| EXPORT |

T-5-1

- Restore

  Import the service mode data backed up before replacement from the USB memory.

| COPIER > FUNCTION > SYSTEM |
| --- |
| IMPORT |

T-5-2

NOTE:
When changing the service mode setting values, it is recommended to back them up in the above service mode.  Performing backup makes the work easier when replacing the Main Controller PCB, etc.

5    Adjustment > Document Exposure System > When clearing the Reader-related RAM data of the Main Controller PCB.

5-3

## When clearing the Reader-related RAM data of the Main Controller PCB.

Points to note before replacing the Reader Controller PCB:

- Back up the service mode setting values related to Main Controller PCB. (Excluding the case where service mode cannot be executed due to the Main Controller PCB not operating normally)

Use a USB memory

COPIER > FUNCTION > SYSTEM > EXPORT

1) Perform RAM clear.

| COPIER > FUNCTION > CLEAR > |
| --- |
| R-CON |

T-5-3

2) Turn OFF/ON the main power switch.

### When backup is performed normally

4) Import the service mode data backed up before replacement from the USB memory.

| COPIER > FUNCTION > SYSTEM |
| --- |
| IMPORT |

T-5-4

NOTE:
Work is completed when backup was normally performed.

### When backup is not performed normally

5) Enter the values written on the service label (on the back of the Front Cover).

| COPIER > ADJUST > ADJ-XY > | | | |
| --- | --- | --- | --- |
| ADJ-X | ADJ-Y | ADJ-X-MG | ADJ-Y-DF |

T-5-5

| COPIER > ADJUST > CCD > | | | |
| --- | --- | --- | --- |
| W-PLT-X | W-PLT-Y | W-PLT-Z | - |
| 50-RG | 50-GB | 100-RG | 100-GB |
| 50DF-RG | 50DF-GB | 100DF-RG | 100DF-GB |
| MTF2-M1 | MTF2-M6 | MTF2-S1 | MTF2-S6 |
| MTF2-M2 | MTF2-M7 | MTF2-S2 | MTF2-S7 |
| MTF2-M3 | MTF2-M8 | MTF2-S3 | MTF2-S8 |
| MTF2-M4 | MTF2-M9 | MTF2-S4 | MTF2-S9 |
| MTF2-M5 | - | MTF2-S5 | - |
| MTF-M1 | MTF-M6 | MTF-S1 | MTF-S6 |
| MTF-M2 | MTF-M7 | MTF-S2 | MTF-S7 |
| MTF-M3 | MTF-M8 | MTF-S3 | MTF-S8 |
| MTF-M4 | MTF-M9 | MTF-S4 | MTF-S9 |
| MTF-M5 | - | MTF-S5 | - |

T-5-6

| COPIER > ADJUST > PASCAL > | | | |
| --- | --- | --- | --- |
| OFST-P-Y | OFST-P-M | OFST-P-C | OFST-P-K |

T-5-7

| FEEDER > ADJUST > | | | | |
| --- | --- | --- | --- | --- |
| DOCST | LA-SPEED | DOCST2 | LASPD2 | DOCSTDUP |

T-5-8

5-3

5    Adjustment > Document Exposure System > When clearing the Reader-related RAM data of the Main Controller PCB.

## Original Exposure and Feed System (Reader)

### ■ Copyboard Glass Unit

#### ● Procedure of Replacement

1) Enter the value (White level data entry of white plate) indicated on the platen glass in the following service mode:

| COPIER > ADJUST > CCD > | | |
|---|---|---|
| W-PLT-X | W-PLT-Y | W-PLT-Z |

T-5-9

CAUTION:

Be sure to make the white plate data adjustment before ADF white level adjustment.



W-PLT-X
W-PLT-Y
W-PLT-Z
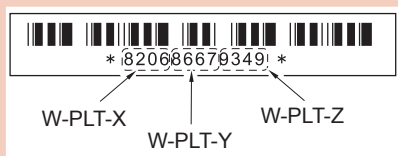
F-5-1

2) Write down the new numerical value in the service label.

3) Turn OFF/ON the main power switch.

4) Execute the Scan Unit white/black reference level adjustment (AGC).(Close the ADF)

| COPIER > FUNCTION > CCD > |
|---|
| CL-AGC |

T-5-10

5) Turn OFF/ON the main power switch.

6) After executing the shading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|---|---|
| 1 | RDSHDPOS |

T-5-11

| No. | COPIER > ADJUST > ADJ-XY > |
|---|---|
| 2 | ADJ-S |

T-5-12

7) After executing the reading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|---|---|
| 1 | STRD-POS |

T-5-13

| No. | COPIER > ADJUST > ADJ-XY > |
|---|---|
| 2 | STRD-POS |

T-5-14

8) Take the action stated below in the service mode (White level adj in book/DADF mode).

1. Place a sheet of paper that the user usually uses on the Copyboard Glass, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
|---|
| DF-WLVL1 |

White level adj in book mode: color

T-5-15

2. Place a sheet of paper that the user usually uses on the DADF, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
|---|
| DF-WLVL2 |

White level adj in DADF mode: color

T-5-16

NOTE:
The result of the adjustment is reflected to COPIER> ADJUST> CCD> DFTAR-R/ DFTAR-G/ DFTAR-B / DFTAR2-R/ DFTAR2-G/ DFTAR2-B / DFTAR3-R/ DFTAR3-G/ DFTAR3-B

9) Adjust the image position (horizontal scanning direction) at ADF reading.
   1. Place a test chart on the ADF, and make one single-sided copy.
   2. Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

10 +/- 2mm

Feed direction

Copy of the test chart

F-5-2

   3. Select the item in the service mode.

| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-Y-DF |

T-5-17

   4. Input value, and adjust an image.
     • When a copied image moves to the rear: Decrease value
     • When a copied image moves to the front: Increase value
     • Adjustment unit: 0.1 mm

< When a copied image moves to the rear >  < When a copied image moves to the front >

Copy of the test chart
Test chart
A

Test chart  Copy of the test chart
A

Feed direction      Feed direction

F-5-3

   5. Write the new changed value in the service label.
   6. Exit the service mode.

10) Adjust the image position (horizontal scanning direction) at copyboard reading.
   1. Place a test chart on the Copyboard Glass, and make one single-sided copy.
   2. Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

Feed direction

Copy of the test chart

F-5-4

   3. Select the item in the service mode.

| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-Y |

T-5-18

   4. Input value, and adjust an image.
     • When a copied image moves to the rear: Decrease value
     • When a copied image moves to the front: Increase value
     • Adjustment unit: 0.1 mm

< When a copied image moves to the rear >  < When a copied image moves to the front >

Test chart  Copy of the test chart
A

Test chart  Copy of the test chart
A

Feed direction      Feed direction

F-5-5

   5. Write the new changed value in the service label.
   6. Exit the service mode.

11) Adjust the image position (vertical scanning direction) at copyboard reading.
    1. Place a test chart on the Copyboard Glass, and make one single-sided copy.
    2. Compare the image leading edge of the test chart with that of the copied paper, and perform adjustment if necessary.



Feed direction

Copy of the test chart

F-5-6

    3. Press ADJ-X from the service mode screen.

| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-X |

T-5-19

    4. Input value, and adjust an image.
       • When a image is displaced toward the trailing edge: Decrease value
       • When a image is displaced toward the leading edge: Increase value
       • Adjustment unit: 0.1 mm

< When a copied image moves to the rear >       < When a copied image moves to the front >

Test chart                                        Copy of the test chart

Copy of the test chart                            Test chart



A                                                 A

Leading edge          Trailing edge          Leading edge          Trailing edge
of the feeding        of the feeding         of the feeding        of the feeding
direction             direction              direction             direction

F-5-7

    5. Write the new changed value in the service label.
    6. Exit the service mode.

12) Make a fine adjustment of image magnification ratio (vertical scanning direction) at copyboard reading.
    1. Set the image of the test chart upward in Copyboard Glass, and give one sheet of single-sided copy.
    2. Compare the image length of the feed direction of the test chart and the copy of the test chart.
       Carry out the following process when adjustment is necessary.
    3. Press ADJ-X-MG from the service mode screen.

| COPIER> ADJUST> ADJ-XY |
|---|
| ADJ-X-MG |

T-5-20

    4. Input value, and adjust an image.
       • When a copied image is enlarged: Increase value
       • When a copied image is reduced: Decrease value
       • Adjustment unit: 0.1 %

< When a copied image is long >       < When a copied  image is short >

Test chart     Copy of the test chart       Copy of the test chart

                                                              Test chart



A                                  A

Feed direction                     Feed direction

F-5-8

    5. Write the new changed value in the service label.
    6. Exit the service mode.

13) Make a copy and check the copied image.

**5** Adjustment > Document Exposure System > Original Exposure and Feed System (Reader) > After Replacing the Scanner Unit (Reader side CIS)

5-7

## ■ After Replacing the Scanner Unit (Reader side CIS)

### ● Procedure after Replacement

1) Perform the following steps.

   1. Enter the value (White level data entry of white plate) indicated on the platen glass in the following service mode:

| COPIER > ADJUST > CCD > | | |
|---|---|---|
| W-PLT-X | W-PLT-Y | W-PLT-Z |

T-5-21

---

**CAUTION:**

Be sure to make the white plate data adjustment before ADF white level adjustment.

```
*820686670349*
```

W-PLT-X         W-PLT-Z
      W-PLT-Y
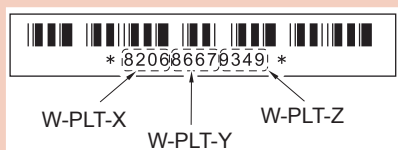
F-5-9

---

   2. Write down the new numerical value in the service label.

   3. Turn OFF/ON the main power switch.

2) Enter the adjustment values of all items described on the service label (on the back of the machine's Front Cover) in service mode.

3) Execute the Scan Unit white/black reference level adjustment (AGC).(Close the ADF)

| COPIER > FUNCTION > CCD > |
|---|
| CL-AGC |

T-5-22

4) Turn OFF/ON the main power switch.

5) After executing the shading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|---|---|
| 1 | RDSHDPOS |

T-5-23

| No. | COPIER > ADJUST > ADJ-XY > |
|---|---|
| 2 | ADJ-S |

T-5-24

6) After executing the reading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|---|---|
| 1 | STRD-POS |

T-5-25

| No. | COPIER > ADJUST > ADJ-XY > |
|---|---|
| 2 | STRD-POS |

T-5-26

7) Take the action stated below in the service mode (White level adj in book/DADF mode).

   1. Place a sheet of paper that the user usually uses on the Copyboard Glass, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
|---|
| DF-WLVL1 |

White level adj in book mode: color      T-5-27

   2. Place a sheet of paper that the user usually uses on the DADF, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
|---|
| DF-WLVL2 |

White level adj in DADF mode: color      T-5-28

---

**NOTE:**
The result of the adjustment is reflected to COPIER> ADJUST> CCD>  DFTAR-R/ DFTAR-G/ DFTAR-B / DFTAR2-R/ DFTAR2-G/ DFTAR2-B / DFTAR3-R/ DFTAR3-G/ DFTAR3-B

5-7

**5** Adjustment > Document Exposure System > Original Exposure and Feed System (Reader) > After Replacing the Scanner Unit (Reader side CIS)

**5** Adjustment > Document Exposure System > Original Exposure and Feed System (Reader) > After Replacing the Scanner Unit (Reader side CIS)

5-8

8) Adjust the image position (horizontal scanning direction/front side) at ADF reading.

    1. Place a test chart on the ADF, and make one single-sided copy.

    2. Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

10 +/- 2mm

Feed direction

Copy of the test chart

F-5-10

    3. Select the item in the service mode.

| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-Y-DF |

T-5-29

    4. Input value, and adjust an image.

      • When a copied image moves to the rear: Decrease value

      • When a copied image moves to the front: Increase value

      • Adjustment unit: 0.1 mm

< When a copied image moves to the rear >  < When a copied image moves to the front >

Copy of the test chart

Test chart

A

Test chart  Copy of the test chart

A

Feed direction

Feed direction

F-5-11

    5. Write the new changed value in the service label.

    6. Exit the service mode.

9) Adjust the image position (horizontal scanning direction) at copyboard reading.

    1. Place a test chart on the Copyboard Glass, and make one single-sided copy.

    2. Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

Feed direction

Copy of the test chart

F-5-12

    3. Select the item in the service mode.

| COPIER > ADJUST > ADJ-XY > |
|---|
| ADJ-Y |

T-5-30

    4. Input value, and adjust an image.

      • When a copied image moves to the rear: Decrease value

      • When a copied image moves to the front: Increase value

      • Adjustment unit: 0.1 mm

< When a copied image moves to the rear >  < When a copied image moves to the front >

Test chart  Copy of the test chart

A

Test chart  Copy of the test chart

A

Feed direction

Feed direction

F-5-13

    5. Write the new changed value in the service label.

    6. Exit the service mode.

5-8

**5** Adjustment > Document Exposure System > Original Exposure and Feed System (Reader) > After Replacing the Scanner Unit (Reader side CIS)

5   Adjustment > Document Exposure System > Original Exposure and Feed System (Reader) > After Replacing the Scanner Unit (Reader side CIS)

5-9

10) Adjust the image position (vertical scanning direction) at copyboard reading.

  1. Place a test chart on the Copyboard Glass, and make one single-sided copy.

  2. Compare the image leading edge of the test chart with that of the copied paper, and perform adjustment if necessary.



Feed direction

Copy of the test chart

F-5-14

  3. Press ADJ-X from the service mode screen.

| COPIER > ADJUST > ADJ-XY > |
| --- |
| ADJ-X |

T-5-31

  4. Input value, and adjust an image.
- When a image is displaced toward the trailing edge: Decrease value
- When a image is displaced toward the leading edge: Increase value
- Adjustment unit: 0.1 mm

< When a copied image moves to the rear >     < When a copied image moves to the front >



Test chart

Copy of the test chart

Copy of the test chart

Test chart

A     A

Leading edge of the feeding direction    Trailing edge of the feeding direction    Leading edge of the feeding direction    Trailing edge of the feeding direction

F-5-15

  5. Write the new changed value in the service label.

  6. Exit the service mode.

11) Make a fine adjustment of image magnification ratio (vertical scanning direction) at copyboard reading.

  1. Set the image of the test chart upward in Copyboard Glass, and give one sheet of single-sided copy.

  2. Compare the image length of the feed direction of the test chart and the copy of the test chart.

    Carry out the following process when adjustment is necessary.

  3. Press ADJ-X-MG from the service mode screen.

| COPIER> ADJUST> ADJ-XY |
| --- |
| ADJ-X-MG |

T-5-32

  4. Input value, and adjust an image.
- When a copied image is enlarged: Increase value
- When a copied image is reduced: Decrease value
- Adjustment unit: 0.1 %

< When a copied image is long >     < When a copied image is short >



Test chart    Copy of the test chart    Copy of the test chart    Test chart

A     A

Feed direction     Feed direction

F-5-16

  5. Write the new changed value in the service label.

  6. Exit the service mode.

12) Make a copy and check the copied image.

5-9

5   Adjustment > Document Exposure System > Original Exposure and Feed System (Reader) > After Replacing the Scanner Unit (Reader side CIS)

## ■ ADF Unit

### ● Prepare before Adjustment

Prepare a test chart. A test chart is made when there is no test chart.

A test chart is drawn the rectangle that the end of 4 is smaller by 10 mm than a paper, and a test chart is made in the form of A4 or LTR.

> NOTE:
> Write a character and a mark to know the direction of the copied image.
> (Make sure that the face, back, leading edge and trailing edge of paper can be indetified.)

F-5-17

### ● Procedure after Replacement

> CAUTION:
>
> When the ADF has been replaced or removed from the reader, the following adjustment is necessary.

### Adjustment of the Degree of a Right Angle

1) Set a test chart on ADF, and give one sheet of copy.
2) Confirm the degree of a right angle of the image on the leading edge of the test chart and the copied form.

   Measure the dimension of A and B at the leading edge of the copied form.

   When the amount of skew is not in the following standard, adjust it from the step 3).

   • Standard Value: A - B = 0 +/- 1.5 mm
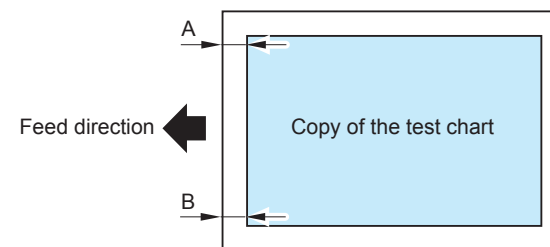
F-5-18

3) Loosen the 4 Fixing Screws of the Right Hinge, and then move the hinge to adjust the squareness.
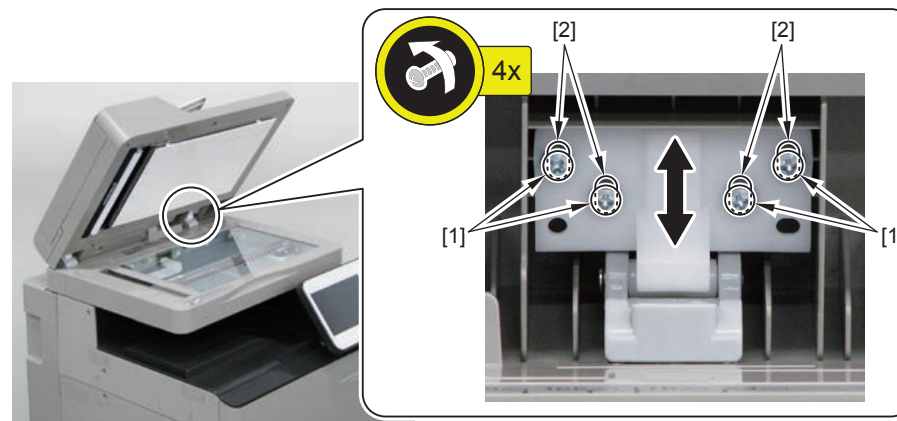
F-5-19

4) After completion of the adjustment, tighten the 4 Fixing Screws of the Right Hinge you loosened in step 3).

## DADF reading position adjustment

After executing the reading position adjustment with the following service mdoe 1, check the auto setting value with the following service mode 2 and write the value in the service label.

| No. | COPIER > FUNCTION > INSTALL > |
|-----|-------------------------------|
| 1 | STRD-POS |

T-5-33

| No. | COPIER > ADJUST > ADJ-XY > |
|-----|----------------------------|
| 2 | STRD-POS |

T-5-34

## Adjustment of the leading edge margin of image at ADF reading (single-sided)

1) Set a test chart on ADF, and give one sheet of single-sided copy.
2) Compare the leading edge registration of the test chart and the copy of the test chart. Carry out the following process when adjustment is necessary.
3) Select the item in the service mode.

| FEEDER > ADJUST > |
|-------------------|
| DOCST |

T-5-35

4) Input value, and adjust an image.
- When a copied image moves to the trailing edge: Increase value
- When a copied image moves to the leading edge: Decrease value
- Adjustment unit: 0.1 mm

< When a copied image moves to the rear >        < When a copied image moves to the front >



F-5-20

5) Write the new changed value in the service label.
6) Exit the service mode.

CAUTION:

Confirm that the Degree of a Right Angle is correct after you finish this adjustment.

Adjust again from the Adjustment of the Degree of a Right Angle when the Degree of a Right Angle is not correct.

## Adjustment of the leading edge margin of image at ADF reading (duplex/front side)

1)Set a test chart on ADF, and give one sheet of copy.

2)Compare the leading edge registration of the test chart and the copy of the test chart.

Carry out the following process when adjustment is necessary.

3)Select the item in the service mode.

| FEEDER > ADJUST > |
|---|
| DOCSTDUP |

T-5-36

4)Input value, and adjust an image.

- When a copied image moves to the trailing edge: Increase value
- When a copied image moves to the leading edge: Decrease value
- Adjustment unit: 0.1 mm

< When a copied image moves to the rear >        < When a copied image moves to the front >



F-5-21

5)Write the new changed value in the service label.

6)Exit the service mode.

CAUTION:

Confirm that the Degree of a Right Angle is correct after you finish this adjustment.

Adjust again from the Adjustment of the Degree of a Right Angle when the Degree of a Right Angle is not correct.

## Adjustment of the leading edge margin of image at ADF reading (duplex/back side)

1)Set a test chart on ADF, and give one sheet of copy.

2)Compare the leading edge registration of the test chart and the copy of the test chart.

Carry out the following process when adjustment is necessary.

3)Select the item in the service mode.

| FEEDER > ADJUST > |
|---|
| DOCST2 |

T-5-37

4)Input value, and adjust an image.

- When a copied image moves to the trailing edge: Increase value
- When a copied image moves to the leading edge: Decrease value
- Adjustment unit: 0.1 mm

< When a copied image moves to the rear >        < When a copied image moves to the front >



F-5-22

5)Write the new changed value in the service label.

6)Exit the service mode.

CAUTION:

Confirm that the Degree of a Right Angle is correct after you finish this adjustment.

Adjust again from the Adjustment of the Degree of a Right Angle when the Degree of a Right Angle is not correct.

## Adjust the image position (horizontal scanning direction/front side) at ADF reading.

1) Place a test chart on the ADF, and make one single-sided copy.
2) Compare the side registration of the test chart with that of the copied paper, and perform adjustment if necessary.

10 +/- 2mm

Feed direction

Copy of the test chart

F-5-23

3) Select the item in the service mode.

| COPIER > ADJUST > ADJ-XY > |
| --- |
| ADJ-Y-DF |

T-5-38

4) Input value, and adjust an image.
- When a copied image moves to the rear: Decrease value
- When a copied image moves to the front: Increase value
- Adjustment unit: 0.1 mm

< When a copied image moves to the rear >   < When a copied image moves to the front >

Copy of the test chart

Test chart

A

Test chart   Copy of the test chart

A

Feed direction                Feed direction

F-5-24

5) Write the new changed value in the service label.
6) Exit the service mode.

## Fine adjustment of the image magnification ratio at ADF reading (front side)

1) Set the image of the test chart upward in ADF, and give one sheet of copy.
2) Compare the image length of the feed direction of the test chart and the copy of the test chart.
   Carry out the following process when adjustment is necessary.
3) Select the item in the service mode.

| FEEDER > ADJUST > |
| --- |
| LA-SPEED |

T-5-39

4) Input value, and adjust an image.
- When a copied image is long: Increase value (The feeding speed increases)
- When a copied image is short: Decrease value (The feeding speed decreases)
- Adjustment unit: 0.1 %

< When a copied image moves to the rear >      < When a copied image moves to the front >

Test chart

Copy of the test chart

Copy of the test chart

Test chart

A                              A

Leading edge           Trailing edge        Leading edge           Trailing edge
of the feeding         of the feeding       of the feeding         of the feeding
direction              direction            direction              direction

F-5-25

5) Write the new changed value in the service label.
6) Exit the service mode.

## Fine adjustment of the image magnification ratio at ADF reading (back side)

1) Set the image of the test chart downward in ADF, and give one sheet of copy.
2) Compare the image length of the feed direction of the test chart and the copy of the test chart.

   Carry out the following process when adjustment is necessary.
3) Select the item in the service mode.

| FEEDER > ADJUST > |
| --- |
| LA-SPD2 |

T-5-40

4) Input value, and adjust an image.
   - When a copied image is long: Increase value (The feeding speed increases)
   - When a copied image is short: Decrease value (The feeding speed decreases)
   - Adjustment unit: 0.1 %

< When a copied image moves to the rear >          < When a copied image moves to the front >



F-5-26

5) Write the new changed value in the service label.
6) Exit the service mode.

## Adjustment the White Level for ADF Scanning

1) Take the action stated below in the service mode (White level adj in book/DADF mode).
   1. Place a sheet of paper that the user usually uses on the Copyboard Glass, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
| --- |
| DF-WLVL1 |

White level adj in book mode: color          T-5-41

   2. Place a sheet of paper that the user usually uses on the DADF, enter the following servicemode.

| COPIER > FUNCTION > CCD > |
| --- |
| DF-WLVL2 |
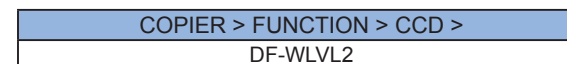
White level adj in DADF mode:          T-5-42

NOTE:
The result of the adjustment is reflected to COPIER> ADJUST> CCD>  DFTAR-R/ DFTAR-G/ DFTAR-B / DFTAR2-R/ DFTAR2-G/ DFTAR2-B / DFTAR3-R/ DFTAR3-G/ DFTAR3-B

# Main Controller

## Main controller PCB

| Before Replacing | 1) Backup the Settings/Registration data.<br>Use RUI or a USB memory<br>Log in as an administrator (mode).<br>Settings/Registration > Import/Export<br>2) Service mode backup<br>Use a USB memory<br>COPIER > FUNCTION > SYSTEM > EXPORT<br>3) If the data cannot be exported, write down the values of the items on the service label. (Enter them after replacement.) |
|---|---|
| Replacement | Transferring the parts from old PCB to new PCB<br>• Memory PCB |

| Aftter Replacing | 1) After the parts are assembled, turn ON the power.<br>2) Setting of the paper size group<br>COPIER > OPTION > BODY > SIZE-LC<br>[Setting value]<br>1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/inch configuration<br>3) Clearing the data<br>COPIER > FUNCTION > CLEAR > ALL (clearing of all data)<br>When executing this item, the following data is cleared according to the value set in step 2 and the serial number.<br>Settings/Registration data (the initial value according to the location is set.)<br>Service mode data (the initial value according to the location is set.)<br>System administrator ID and password (They are changed back to the default values. ID: 0, PWD: 0)<br>Each log data<br>Date data<br>COPIER > FUNCTION > CLEAR > R-CON (clearing of the factory adjustment values related to the Reader and ADF)<br>4) Migrating service mode data<br>Import the service mode data backed up before replacement from the USB memory.<br>COPIER > FUNCTION > SYSTEM > IMPORT<br>If the data could not be backed up, enter the values on the service label to the respective entry fields.<br>5) Turn OFF and then ON the power.<br>6) The initial installation mode will be activated. Operate according to the instruction on the screen.<br>(Setting the date/time, executing the auto gradation adjustment)<br>7) Migrating user data<br>Import the user data backed up using the means (RUI or USB memory) you used before replacement.<br>Log in as an administrator (mode).<br>Settings/Registration > Import/Export<br>8) Uninstalling the drivers<br>Uninstall the drivers on the user's PC.<br>Printer driver<br>Fax driver<br>Scanner driver<br>Network Scan Utility<br>* For the procedure, refer to the Startup Guide.<br>9) Reinstalling the drivers<br>Install the drivers which were uninstalled in step 8.<br>* For the procedure, refer to the Startup Guide.<br>** The MAC address information and the USB ID are changed after replacement of the Main Controller Unit. As a result, the PC can no longer recognize the host machine. It becomes therefore necessary to reinstall the drivers after replacing the Main Controller Unit. |
|---|---|

| Prohibited Operation | Do not transfer the following parts to another model (which has a different serial number). If you fail to do so, the Main Body does not activate normally and this might cause to fail the restoration. • Main Controller PCB • Memory PCB |
|---|---|

T-5-43

## DC controller PCB

| Before Replacing | 1) Backup of DCON service mode setting values Execute the following: COPIER > FUNCTION > VIFFNC > STOR-DCN 2) Turn OFF the main power when the above work is complete. |
|---|---|
| Aftter Replacing | 1) Restore the backup data. Execute the following: COPIER > FUNCTION > VIFFNC > RSTR-DCN 2) When backup data cannot be uploaded before replacement due to reasons such as damage of the DC Controller PCB, enter the value of each service mode item described on the service label. 3) Turn OFF and then ON the power. (For accurate reflection of the restored items) |

T-5-44

## Control Panel CPU PCB/Touch Panel

| After Replacing | Adjustment shown below is necessary only when replacing a single part. Execute the following: COPIER > ADJUST > PANEL > TOUCHCHK |
|---|---|

T-5-45

**5** Adjustment > List of parts that require adjustment after disassembly > List of parts that require adjustment after disassembly

5-17

# List of parts that require adjustment after disassembly

## ⬤ List of parts that require adjustment after disassembly

The following parts need adjustment after disassembly regardless of whether they have been replaced. Be sure to perform adjustment after disassembly.

| Parts / Unit | Auto Adjust Gradation | Correct Print Color Mismatch | Remedy |
|---|---|---|---|
| DC Controller PCB (Only replacing) | Require | Require | * Not required if backup and restoration can be executed. |
| Primary Transfer High-voltage PCB | Recommend | - | |
| Secondary Transfer High-voltage PCB | Recommend | - | |
| Laser Scanner Unit | Require | Require | |
| Drum Unit | Recommend | - | |
| ITB Unit | Require | Require | |
| Registration Patch Sensor Unit | Require | Require | |
| Secondary transfer outer Roller | Recommend | - | |
| Registration Drive Unit | - | Require | |
| Main Drive Unit | Require | Require | |
| Hopper Unit | Require | Require | |
| ITB Pressure Release Switch | Require | Require | |
| Bottle Drive Unit | Require | Require | |
| Fixing Assembly | - | Require | |
| Fixing Drive Unit | - | Require | |
| Right Cover Unit | - | Require | |
| Cassette Pickup Roller / Separation Roller / Feed Roller | - | Recommend | |
| Multi-purpose tray Pickup Roller / Separation Roller / Feed Roller | - | Recommend | |
| Registration Drive Unit | - | Recommend | |
| Cassette 1 Pickup Drive Unit | - | Recommend | |

T-5-46

5-17

**5** Adjustment > List of parts that require adjustment after disassembly > List of parts that require adjustment after disassembly

## Pickup Feed System

### ● Setting method when the size detection patterns are overlapped

The method of distinguishing between A5-R and STMT-R is using the following method or setting in the user settings.
- Related Service Mode
  Lv.1) COPIER > OPTION > CST > CSTX-P1 (Cassette X paper size settings (A5-R/ STMT-R))
  X indicates the cassette number (1 to 4).
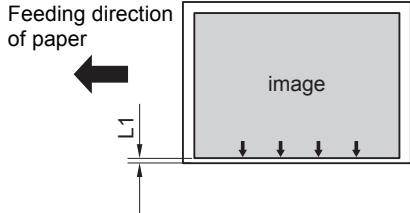
Setting sizes are as follows.
- Related service mode
  Lv.1) COPIER > OPTION > CST > CSTX-UY (Set the overseas special paper category used
  in Cassette)
  X indicates the cassette number (1 to 4), and Y indicates size category (1/2).
  Set "1" in service mode (Lv.1 COPIER >OPTION >CST >U1/2-NAME) to display the paper type on UI.

| U sizes | Settings |
|---------|----------|
| U1 | 0: A4-R/LTR-R, 1 to 23: Not used, 24: FLSC, 25: A-FLS, 26: Not used, 27: E-OFI, 28 to 29: Not used, 30:A-LTRR, 31 to 32: Not used, 33: A-LGL, 34: G-LGL, 35 Not used, 36: A-OFI, 37:M-OFI, 38 to 41 Not used, 42: FA4, 43 Not used |
| U2 | 0: 16K-R, 1 to 22: Not used, 23: K-LGL-R, 24 to 31: Not used, 32: G-LTRR, 33 to 34 Not used |

T-5-47

## Cassette Left Edge Margin Adjustment (1st side; Mechanical Adjsutment)

| Adjustment procedure | 1) Make copies using the Cassette 1, and check that the left edge margin is 2.5 ± 1.5 mm (for LTR/LGL: 4.2 ± 1.5 mm). |
|---|---|

Feeding direction of paper

image

L1

T-5-48

| Adjustment procedure | In Case of Nonstandard<br>2) Pull out the cassette.<br>3) Check the scale position on the adjusting plates. |
|---|---|

FRONT
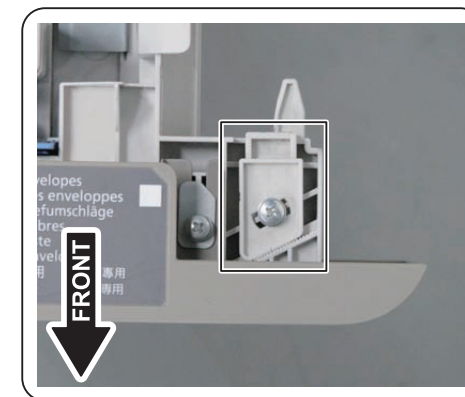
| Adjustment procedure | 4) Loosen the fixing screw.<br><br>T-5-49 |
|---|---|

| Adjustment procedure | 5) Move the Adjustment Plates right and left according to the scale values checked in step 3. As the Adjustment Plate is moved toward the left of the machine by 1 scale, the left edge margin is increased by 0.5 mm.<br> |
|---|---|
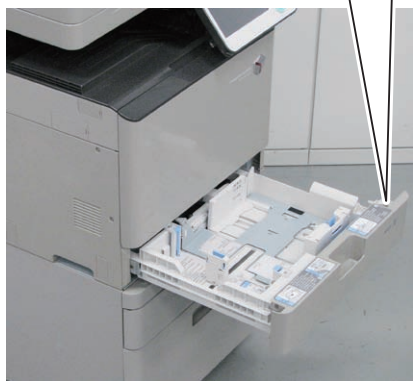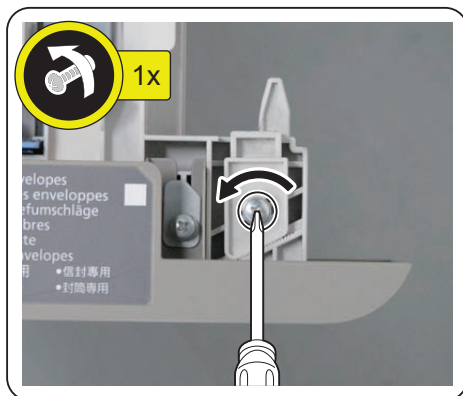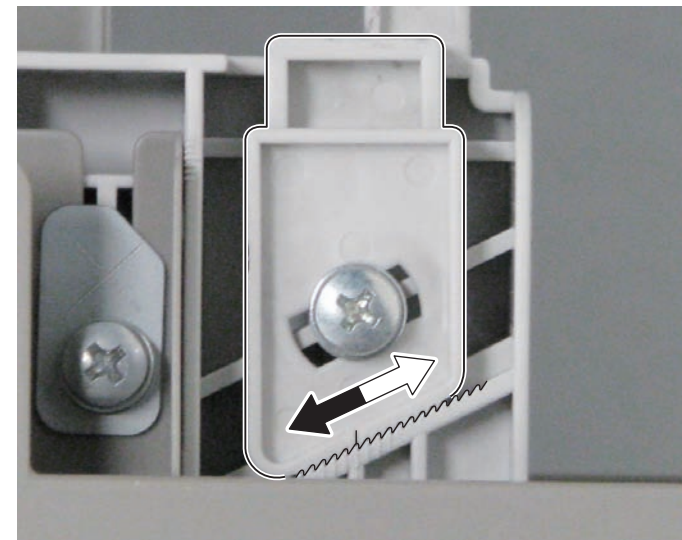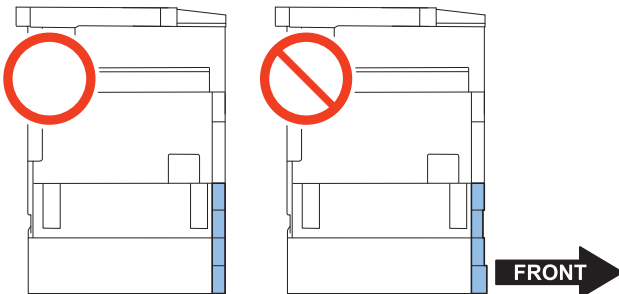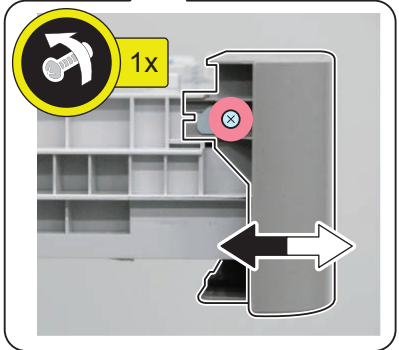
T-5-50

| Adjustment procedure | 6) Tighten the fixing screw.<br>7) Return the cassette to its original position.<br><br>NOTE:<br>When the cassette positions are uneven due to the mechanical adjustment, adjust them by loosening the 2 screws.<br><br>FRONT<br><br>1x<br><br>1x<br><br>8) Make copies using the Cassette 1, and check that the left edge margin is 2.5 ± 1.5 mm. |
| --- | --- |
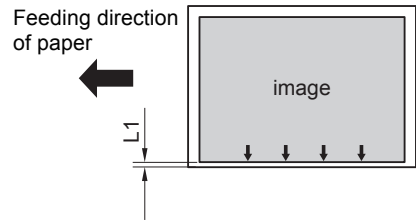
T-5-51

## Cassette Left Edge Margin Adjustment (1st side; Software Adjsutment)

| Adjustment procedure | 1) Make copies from cassette 1, and check that the left margin is 2.5 ± 1.5 mm (for LTR/LGL: 4.2 ± 1.5 mm) .<br><br>Feeding direction of paper     image     $L1$<br><br>2) If the left margin is out of the specification, change the adjustment value for the left margin on the 1st side in cassettte 1.<br>Service Mode > COPIER > ADJUST > FEED-ADJ > ADJ-C1; 1 increment of the value spreads out the left margin by 0.1 mm. (Image move to the right)<br>3) Make copies using the Cassette 1, and check that the left edge margin is 2.5 ± 1.5 mm.<br>4) Write down the new adjustment value on the service label.<br>  • ADJ-C1<br>5) Exit from Service Mode. |
| --- | --- |

T-5-52

## Cassette Left Edge Margin Adjustment (2nd side; Software Adjsutment)

| Adjustment procedure | 1) Make 2-sided copy from cassette 1, and check that the left margin on the 2nd side is 2.5 ± 2.0 mm (for LTR/LGL: 4.2 ± 2.0 mm). |
|---|---|
| | Feeding direction of paper<br><br>L1<br><br>image ↓ ↓ ↓ ↓<br><br>2) If the left margin is out of the specification, change the adjustment value for the left margin on the 2nd side in cassettte 1.<br>Service Mode > COPIER > ADJUST > FEED-ADJ > ADJ-C1RE; 1 increment of the value spreads out the left margin by 0.1 mm. (Image move to the right)<br>3) Make 2-sided copy using the Cassette 1, and check that the left edge margin is 2.5 ± 2.0 mm.<br>4) Write down the new adjustment value on the service label.<br>    • ADJ-C1RE<br>5) Exit from Service Mode. |

T-5-53

## Multi-purpose Tray Left Edge Margin Adjustment (1st side; Software Adjsutment)

| Adjustment procedure | 1) Make copies from the Multi Purpose Tray, and check that the left margin on the 1st side is 2.5 ± 1.5 mm for LTR/LGL: 4.2 ± 1.5 mm).<br>2) If the left margin is out of the specification, change the adjustment value for the left margin on the 1st side from the Multi Purpose Tray.<br>Service Mode > COPIER > ADJUST > FEED-ADJ > ADJ-MF; 1 increment of the value spreads out the left margin by 0.1 mm. (Image move to the right)<br>3) Write down the new adjustment value on the service label.<br>    • ADJ-MF |
|---|---|
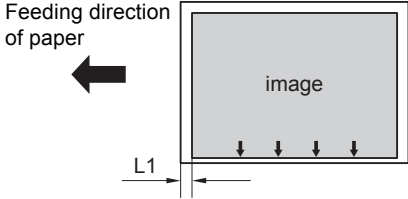
T-5-54

## Multi-purpose Tray Left Edge Margin Adjustment (2nd side; Software Adjsutment)

| Adjustment procedure | 1) Make 2-sided copy from the Multi Purpose Tray, and check that the left margin on the 2nd side is 2.5 ± 2.0 mm for LTR/LGL: 4.2 ± 2.0 mm).<br>2) If the left margin is out of the specification, change the adjustment value for the left margin on the 2nd side from the Multi Purpose Tray.<br>Service Mode > COPIER > ADJUST > FEED-ADJ > ADJ-MFRE ; 1 increment of the value spreads out the left margin by 0.1 mm. (Image move to the right)<br>3) Write down the new adjustment value on the service label.<br>    • ADJ-MFRE |
|---|---|
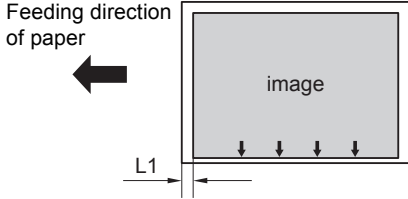
T-5-55

## Lead-edge Margin Adjustment (1st side/normal paper)

| Adjustment procedure | 1) Make copies from cassettte 1, and check that the lead-edge margin is L1 = 4.0 +1.5/-1.0 mm. If the lead-edge margin is out of the specification, go through the following steps to make adjustment.<br><br>Feeding direction of paper<br>image<br>L1<br><br>In Case of Nonstandard<br>2) Select the following in Service Mode: COPIER > ADJUST > FEED-ADJ > REGIST.<br>3) Change the setting value to make adjustment. (When the setting value is increased by "1", the leading edge margin is increased by 0.1 mm: Image move to the trailing edge)<br>4) Write down the new adjustment value on the service label.<br>    • REGIST |

T-5-56

## Lead-edge Margin Adjustment (2nd side)

| Adjustment procedure | 1) Make copies from cassette 1, and check that the lead-edge margin is L1 = 4.0 +1.5/-1.0 mm. If the lead-edge margin is out of the specification, go through the following steps to make adjustment.<br><br>Feeding direction of paper<br>image<br>L1<br><br>In Case of Nonstandard<br>2) Select the following in Service Mode: COPIER > ADJUST > FEED-ADJ > REG-DUP1.<br>3) Change the setting value to make adjustment. (When the setting value is increased by "1", the leading edge margin is increased by 0.1 mm: Image move to the trailing edge)<br>4) Write down the new adjustment value on the service label.<br>    • REG-DUP1 |

T-5-57

# 6

# Troubleshooting

■ Initial Check

■ Test Print

■ Troubleshooting Items

■ Special Management Mode

■ Version Upgrade

# Initial Check

## Initial check items list

| Item | No. | Detail | Check |
|---|---|---|---|
| Site Environment | 1 | The voltage of the power supply is as rated (±10%). | |
| | 2 | The site is not a high temperature / humidity environment (near a water faucet, water boiler, humidifi er), and it is not in a cold place. The machine is not near a source of fi re or dust. | |
| | 3 | The site is not subject to ammonium gas. | |
| | 4 | The site is not exposed to direct rays of the sun. (Otherwise, provide curtains.) | |
| | 5 | The site is well ventilated, and the fl oor keeps the machine level. | |
| | 6 | The machine's power plug remains connected to the power outlet. | |
| Checking the Paper | 7 | The paper is of a recommended type. | |
| | 8 | The paper is not moist. Try paper fresh out of package. | |
| Checking the Placement of Paper | 9 | Check the cassette and the manual feed tray to see if the paper is not in excess of a specifi c level. | |
| | 10 | If a transparency is used, check to make sure that it is placed in the correct orientation in the manual feed tray. | |
| Checking the Durables | 11 | Check the table of durables to see if any has reached the end of its life. | |
| Checking the Periodically Replaced Parts | 12 | Check the scheduled servicing table and the periodically replaced parts table, and replace any part that has reached the time of replacement. | |

T-6-1

# Test Print

## Overview

This product provides the following 8 test chart types to determine causes of faulty images.

The data for test charts are created in the main controller. If no problem is found on the output test charts, the cause may lie in the PDL input or the reader.

| TYPE NO. | Test chart type | Purpose |
|---|---|---|
| 0 | Pascal correction chart 1 | For checking density characteristic (Error diffusion) |
| 1 | Pascal correction chart 2 | For checking density characteristic (Screen) |
| 2 | Color chart | For checking color reproduction characteristic |
| 3 | Color displacement correction chart | For checking color displacement correction |
| 4 | Rainbow chart (vertical scanning direction) | For checking color displacement (Vertical scanning) |
| 5 | Rainbow chart (horizontal scanning direction) | For checking color displacement (Horizontal scanning) |
| 6 | Grid Bk | For checking geometric characteristicsand thin lines |
| 12 | Full half-tone | For checking transfer failure, black line (color line), white line, uneven pitch and Uneven density |

T-6-2

## Steps to select the test print PG-TYPE

1) Set the number of print, paper size etc.

2) Select: TESTMODE > PRINT > PG-TYPE.

3) Enter the desired PG-TYPE number and press start key.

4) Select the corresponding color (setting 1 means output) in SW-Y/M/C/K.

5) Set the density in DENS-Y/M/C/K (this is enabled for TYPE=12 only).

6) Select: TESTMODE > PRINT > START and Press start key.

**6** Troubleshooting > Troubleshooting Items > Image Failure > Color displacement in image due to a failure of Registration Patch Sensor Unit (Front) /(Rear)

6-4

# Troubleshooting Items

## List of Troubleshooting Items

| Category | Description | Reference |
|---|---|---|
| Image Failure | Color displacement in image due to a failure of Registration Patch Sensor Unit (Front) /(Rear) | 6-4 |
| | Fixing wrinkle due to foreign matter attached to the Fixing Inlet Guide | 6-5 |
| | Fixing wrinkle in envelopes due to a problem of feedability between the secondary transfer nip and the fixing nip | 6-6 |
| | Wrinkle when printing Yougata envelopes | 6-7 |
| | Dark spots on halftone image | 6-8 |
| | Fogging surrounding high density images in low humidity environment | 6-9 |
| Malfunction | Not able to remove the ITB Unit due to the Primary Transfer Roller disengagement failure | 6-11 |

T-6-3

## Image Failure

### ■ Color displacement in image due to a failure of Registration Patch Sensor Unit (Front) /(Rear)
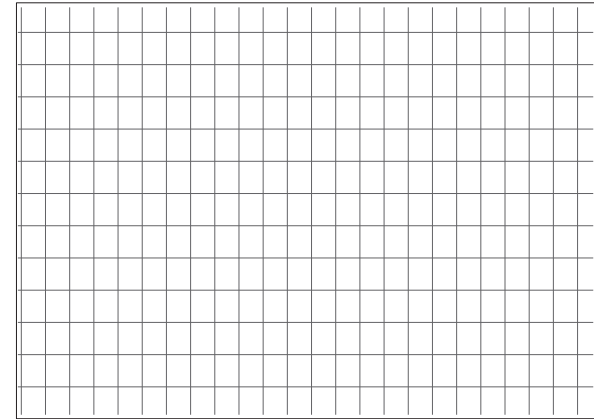


F-6-1

[Location]
Registration Patch Sensor Unit (Front) / (Rear)

[Cause]
When a failure occurs to the Registration Patch Sensor Unit (Front)/(Rear), color displacement may occur to an output image.

[Field Remedy]
1) Perform a test print (grid).
   COPIER > TEST > PG > TYPE=6
2) Check the image failure (color displacement) by the test print.
3) Check that the following alarm has occurred:
   Patch Sensor error 1: 10-0006
   Patch Sensor error 2: 10-0007
4) Perform the following remedies:
   4-1) Clean the Patch Sensor window.
   4-2) Check the connector connection of the Patch Sensor.
   4-3) Check the connector connection of the Patch Sensor Shutter Solenoid.
   4-4) Replace the Patch Sensor Unit.

6-4

**6** Troubleshooting > Troubleshooting Items > Image Failure > Color displacement in image due to a failure of Registration Patch Sensor Unit (Front) /(Rear)

**6** Troubleshooting > Troubleshooting Items > Image Failure > Fixing wrinkle due to foreign matter attached to the Fixing Inlet Guide

6-5

## ■ Fixing wrinkle due to foreign matter attached to the Fixing Inlet Guide
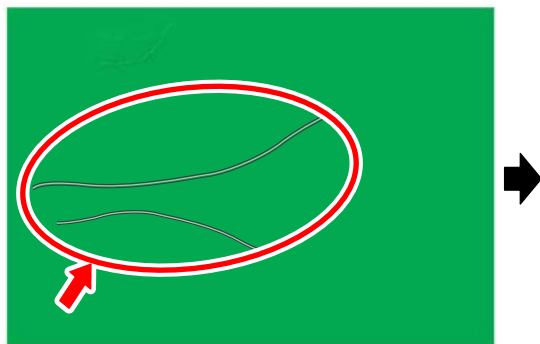


F-6-2

[Location]
Fixing Inlet Guide

[Cause]
When duplex printing of solid image is continued, toner dust or paper lint may be adhered to the rib surface or the leading edge of Fixing Inlet Guide together with the wax inside toner and be solidified.
This causes the paper leading edge to be caught by foreign matter when it enters the Fixing Inlet Guide, disrupting the paper entry balance and causing the possibility of wrinkle in the area from the leading edge to the trailing edge of paper.

[Condition]
When duplex copying or duplex printing of solid image is continued

[Field Remedy]
Following shows remedies in the order of priority:
    1. Clean the Fixing Inlet Guide with lint-free paper moistened with alcohol.

• Preparation
    1-1 Remove the Fixing Assembly (Refer to page 4-137).

• Procedure

> ⚠ CAUTION:
>
> Be sure to start removing the Fixing Assembly after it is cooled down enough. The Fixing Assembly right after printing may cause burn injury.

    1-2 Clean the Fixing Inlet Guide [A] with lint-free paper [1] moistened with alcohol.

> CAUTION:
>
> Do not damage the Fixing Film [1] when cleaning.
>
> 
>
> [1]
>
> F-6-3

6-5

**6** Troubleshooting > Troubleshooting Items > Image Failure > Fixing wrinkle due to foreign matter attached to the Fixing Inlet Guide

6 Troubleshooting > Troubleshooting Items > Image Failure > Fixing wrinkle in envelopes due to a problem of feedability between the secondary transfer nip and the fixing nip

6-6
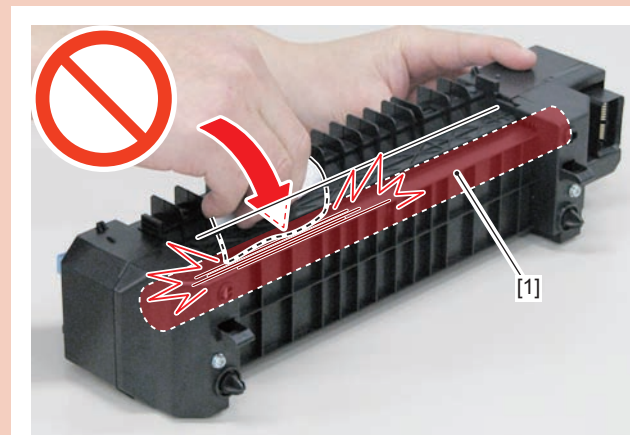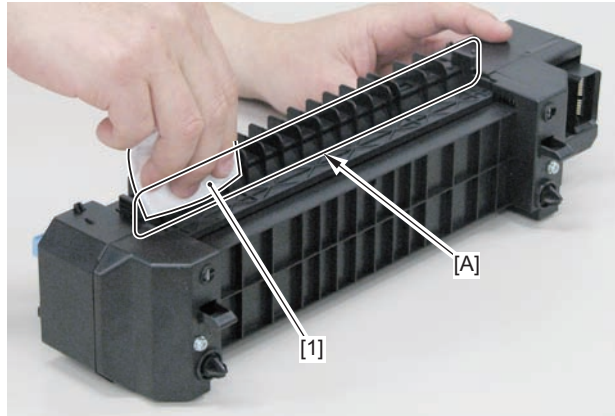
F-6-4

2. Replace the Fixing Assembly.

## ■ Fixing wrinkle in envelopes due to a problem of feedability between the secondary transfer nip and the fixing nip
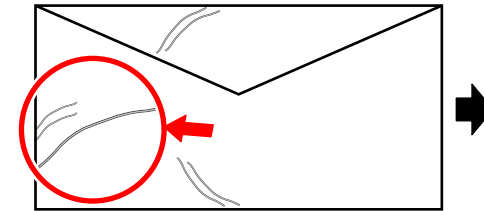


F-6-5

[Location]
Fixing nip

[Cause]
When envelopes are fed in both the secondary transfer nip and fixing nip, the behavior at the time of feed may cause wrinkle in envelopes.
It may occur more frequently to envelopes which have absorbed moisture.

[Condition]
When envelopes have not been loaded properly, or when the alignment between the secondary transfer nip and fixing nip has been shifted from the specified position

[Field Remedy]
Service mode (Lv.2)> COPIER> OPTION> BODY > EVLP-FS
Setting of fixing speed when feeding envelopes
The fixing speed when feeding envelopes can be changed by +/-20%.
There is a possibility of image displacement at the envelope's trailing edge, therefore change the setting value while checking the wrinkle and the image displacement.

## ■ Wrinkle when printing Yougata envelopes

[Location]
Cassette 1, Multi-purpose Tray

[Cause]
Yougata envelopes (COM10 No.10/Yougatanaga 3/Monarch/DL/ISO-C5) have been loaded with the grain of paper oriented against the feed direction in such a way that it is likely to cause wrinkle.

[Condition]
The paper grain direction of Yougata envelopes is not uniform.

[Field Remedy]
• Cassette 1
   When wrinkle occurs to envelopes loaded in a normal direction, change the direction to load them by rotating by 180 degrees as shown below.
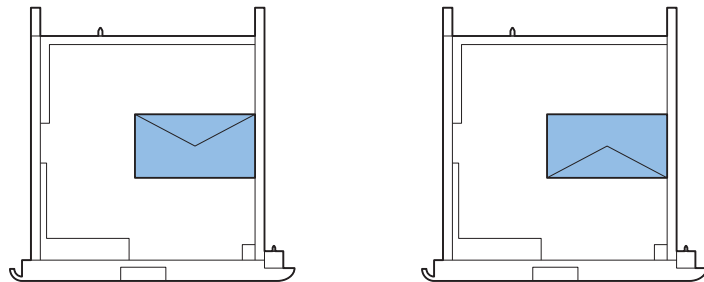


F-6-6

   • When printing, rotate the paper direction by 180 degrees also in the printing preferences screen of printer driver. For details, refer to the User's Manual.
   • When copying, rotate the direction to place an original by 180 degrees.

• Multi-purpose Tray
   When wrinkle occurs to envelopes loaded in a normal direction, change the direction to load them by rotating by 180 degrees as shown below.
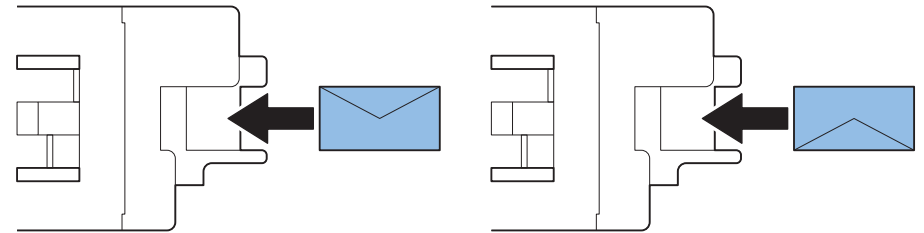


F-6-7

   • When printing, rotate the paper direction by 180 degrees also in the printing preferences screen of printer driver. For details, refer to the User's Manual.
   • When copying, rotate the direction to place an original by 180 degrees.

## ■ Dark spots on halftone image



F-6-8



F-6-9

[Location]

The ITB being in the initial phase (the surface resistance is high), and the drum unit being in the terminal phase of its use (the electric charge of toner is low).

[Cause]

When a halftone image is output, dark spots may appear locally. This symptom does not occur with black color.

A tiny amount of black developing carrier[1] is usually on the surface of the black drum[2]. When the color toner image[a] on the ITB[3] passes the Y drum, the M drum, and the C drum and reaches the Black drum[2], a portion of the surface of the color toner image[a] is slightly transferred onto the Black drum[2] (This transferring symptom is hereinafter referred to as retransferring).

In the image portion[b] where the developing carrier on the surface of the Black drum[2] is positioned, less amount of toner is retransferred. On the contrary, the portion[c] on the ITB[3] side, which corresponds to the position of the developing carrier, projects like a heap with more toner. Accordingly, when the toner image on the ITB[3] is secondary transferred to paper, the portion[c] of the heap appears as a dark spot on the image.
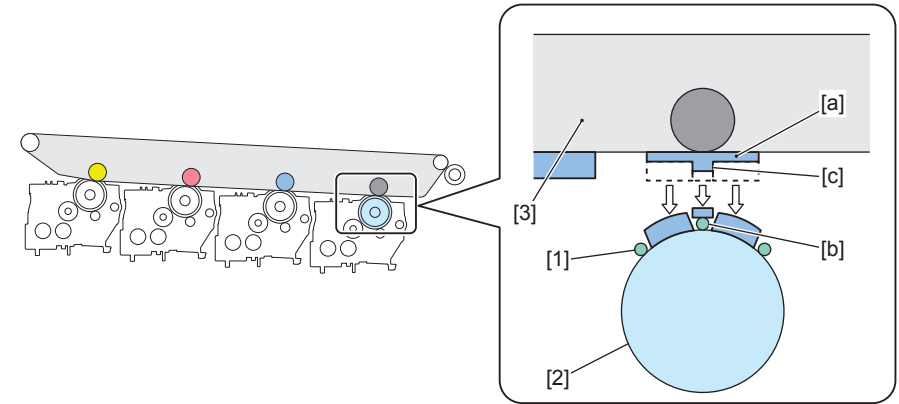
[Condition]

The symptom tends to occur under a combination of conditions including a low humidity environment, the ITB being in the initial phase (the surface resistance is high), and the drum unit being in the terminal phase of its use (the electric charge of toner is low).

**6** Troubleshooting > Troubleshooting Items > Image Failure > Fogging surrounding high density images in low humidity environment

6-9

[Field Remedy]

1) In Service Mode(LEVEL2): COPIER > Adjust > HV-TR > 1TR_xxxx, set "-3".

The setting range is from "-50" to "50" (default value: 0).

By changing the setting value by "1", the primary transfer current is changed by 1 microampere.

Select "1TR_xxxx" according to the type and size of paper used and the color with which the symptom occurs.

The following describes an example using Plain paper 1 (64 to 75gsm)/A4.

- When the symptom occurs with yellow: Change the setting value to "-3" in 1TR_TGM, 1TR_TGC, and 1TR_TGK4.
- When the symptom occurs with magenta: Change the setting value to "-3" in 1TR_TGC and 1TR_TGK4.
- When the symptom occurs with cyan: Change the setting value to "-3" in 1TR_TGK4.

| Paper type , Size / Color with which the symptom occurred | | Yellow | Magenta | Cyan |
|---|---|---|---|---|
| Plain paper 1 (64 to 75 gsm) Plain paper 2 (76 to 90 gsm) Recycled paper 1 (64 to 75 gsm) Recycled paper 2 (76 to 90 gsm) | Less than A4 (210mm) | 1TR_TGM3 1TR_TGC3 1TR_TK43 | 1TR_TGC3 1TR_TK43 | 1TR_TK43 |
| | A4 (210mm) or more | 1TR_TGM 1TR_TGC 1TR_TGK4 | 1TR_TGC 1TR_TGK4 | 1TR_TGK4 |
| Plain paper 3 (91 to 105 gsm) Recycled paper 3 (91 to 105 gsm) | ALL | 1TR_TGM3 1TR_TGC3 1TR_TK43 | 1TR_TGC3 1TR_TK43 | 1TR_TK43 |
| Other | ALL | 1TR_TGM2 1TR_TGC2 1TR_TK42 | 1TR_TGC2 1TR_TK42 | 1TR_TK42 |

T-6-4

2) Select Service Mode: COPIER > Function > MISC-P > "1ATVC-EX" and press the "OK" button to execute the primary transfer ATVC control.

3) Output the image that caused the symptom, and check to see that the symptom does not occur.

## ■ Fogging surrounding high density images in low humidity environment
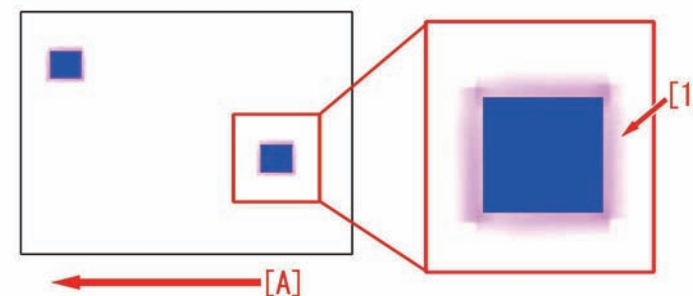


F-6-10

[Location]

High secondary transfer voltage

[Cause]

When paper that had been left in a low humidity environment was used, fogging [1] surrounding high density images appeared in some cases.

The arrow [A] indicates the paper feed direction.

High secondary transfer voltage is required to transfer a high density image on paper with high surface resistance.

When the surface resistance of paper is high, the secondary transfer voltage at the high density area becomes insufficient, so that the toner attached on the paper becomes impossible to be retained there and then is scattered to non-image area to generate the symptom.



Secondary Transfer Outer Roller

ITB

Paper

F-6-11

6-9

**6** Troubleshooting > Troubleshooting Items > Image Failure > Fogging surrounding high density images in low humidity environment

**6** Troubleshooting > Troubleshooting Items > Image Failure > Fogging surrounding high density images in low humidity environment

6-10
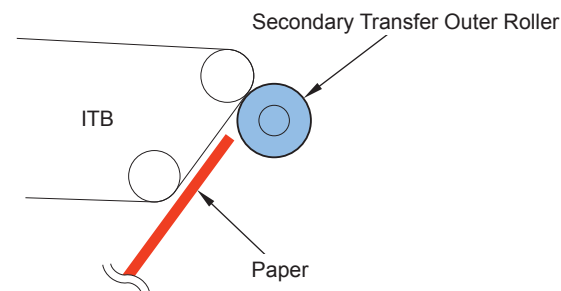
[Condition]

Leaving in a low humidity environment increases the surface resistance of paper and so it becomes more likely to generate the symptom.

[Field Remedy]

1) Find the corresponding parameter by checking the paper type, the 1st side and the 2nd side of the paper that is generating the issue with the correspondence table and change the set value to "10" from Service mode > Mode List > COPIER > Adjust > HV-TR.

| Paper type | Front side (the 1st side) | Back side (the 2nd side) |
|---|---|---|
| Thin paper | 2TR-TH-1 | 2TR-TH-2 |
| Plain paper 1 | 2TR-N1-1 | 2TR-N1-2 |
| Plain paper 2 | 2TR-N2-1 | 2TR-N2-2 |
| Plain paper 3 | 2TR-N3-1 | 2TR-N3-2 |
| Recycled paper 1 | 2TR-R1-1 | 2TR-R1-2 |
| Recycled paper 2 | 2TR-R2-1 | 2TR-R2-2 |
| Recycled paper 3 | 2TR-R3-1 | 2TR-R3-2 |
| Heavy paper 1 | 2TR-H1-1 | 2TR-H1-2 |
| Heavy paper 2 | 2TR-H2-1 | 2TR-H2-2 |
| Heavy paper 3 | 2TR-H3-1 | 2TR-H3-2 |
| Color paper | 2TR-CP-1 | 2TR-CP-2 |
| OHP | 2TR-O-1 | - |
| Labels | 2TR-LA-1 | - |
| Bond paper | 2TR-B-1 | 2TR-B-2 |
| Pre-punched paper | 2TR-PA-1 | 2TR-PA-2 |
| Envelope | 2TR-EN-1 | 2TR-EN-2 |

T-6-5

The possible range is between "-128" and "+127" (default: "0"). A change of the set value by "1" changes 30 V of the secondary transfer voltage.

CAUTION:

If secondary transfer voltage is too high or paper type has been changed, a faulty image (white spots) may occur at the high density portion attributed to the too strong secondary transfer voltage.

2) Output the image with which the symptom occurred and check to see if the same symptom does not occur.
If the symptom does not improve, increase the set value of the step 1) by "10" at a time to see if it works until the value reaches "30".

NOTE:
Improving a state of preservation of paper may be effective in resolving a trouble in some cases.
Explain to a customer that unused or remaining paper should be stored by being covered with wrapping paper in a place avoiding direct sunlight.

6-10

**6** Troubleshooting > Troubleshooting Items > Image Failure > Fogging surrounding high density images in low humidity environment

**6** Troubleshooting > Troubleshooting Items > Category: Malfunction > Not able to remove the ITB Unit due to the Primary Transfer Roller disengagement failure

6-11

## Category: Malfunction

### ■ Not able to remove the ITB Unit due to the Primary Transfer Roller disengagement failure

[Location]
ITB Unit

[Cause/Condition]
If unexpected situations coincide with unexpected conditions, disengagement failure of the Primary Transfer Roller may occur. As a result, the ITB Unit may not be able to be removed from the host machine.

[Field Remedy]
Follow the procedure shown below to remove the ITB Unit from the host machine.

1) Open the Front Cover [1].
2) Open the Right Cover Unit [2].
3) Insert a flat-blade screwdriver into the hole [B].
4) Rotate the flat-blade screwdriver in a counterclockwise direction until it creates an opening [A] between the Secondary Transfer Idler Roller Shaft Support [3] and the RD Sensor Stay [4].
5) Remove the Drum Unit.
6) Remove the ITB Unit.



F-6-12

6-11

**6** Troubleshooting > Troubleshooting Items > Category: Malfunction > Not able to remove the ITB Unit due to the Primary Transfer Roller disengagement failure
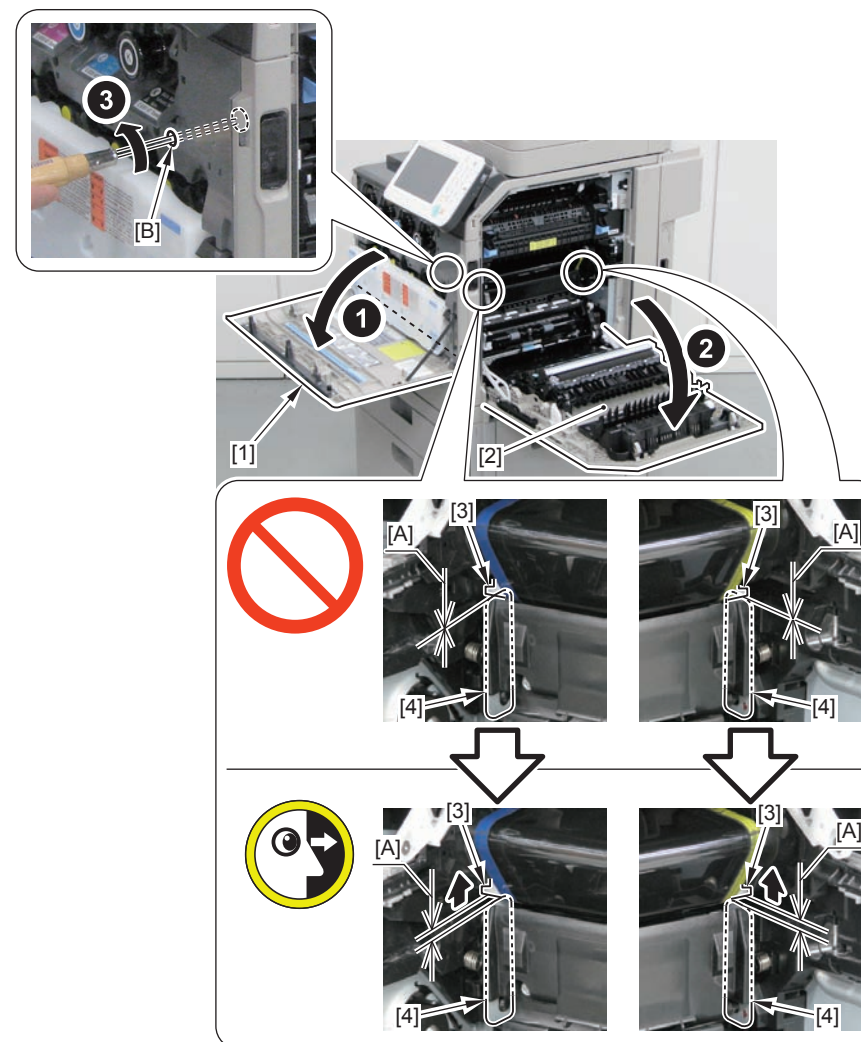
## Special Management Mode

### Overview

The Special Management Mode is the mode for taking a measure and solving the occurred problem by a user. However, information about this mode is not disclosed to users. Basically, if a problem is not solved when using the target item or when printing with a condition differs from the target item, be sure to return the setting to its original value. Otherwise, errors such as image error may occur.

> MEMO:
> • Items of the Special Management Mode can be set in service mode.
>   COPIER > FUNCTION > SPLMAN
> • When entering special management mode, if the "right key" is pressed for a specified period of time (0.2 seconds) or more, the machine does not enter the mode.

### Operational Description

Operational procedure of this mode is indicated below.

User Screen

1) Home key
2) [#] key
3) [3] key
4) [6] key
5) [9] key
6) [∗] key

[Back] key

Enter number & push START

Enter the Special Management Number with a numeric keypad, and then press the [Start] key.

[Back] key

xxxxx

▲
0

(0 - 1)

Enter the numeric value, and then press the [Start] key.
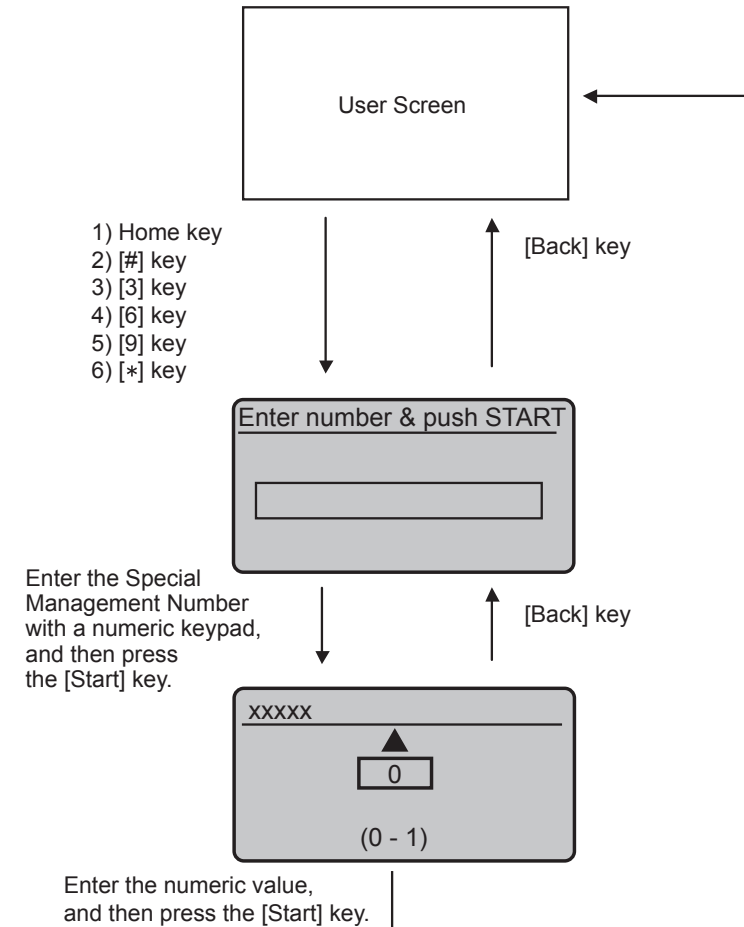
F-6-13

## Menu List

| COPIER> FUNCTION> SPLMAN | |
|---|---|
| SPL14159 | Fixing of USB device ID |
| Details | To fix the USB device ID to "000000000000".Driver for each machine is installed to a PC. However, by fixing the serial number, the PC considers that any connected machine to be the same machine; thus, there will be no need to install the drivers many times. |
| Adj/set/operate method | 1)Enter the value, and then press Start key. 2)Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1 0: OFF, 1: ON |
| Default value | 0 |
| SPL65677 | Increase of paper leading edge margin |
| Details | To increase the margin on the leading edge of paper. As the value is incremented by 1, the margin is increased by 0.1 mm. If the setting is incompatible with SPL68676 (decrease of margin), the setting is disabled (the margin will be standard). |
| Adj/set/operate method | 1)Enter the setting value, and then press Start key. 2)Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> SPLMAN> SPL68676 |
| SPL68676 | Decrease of paper leading edge margin |
| Details | To decrease the margin on the leading edge of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm. If the setting is incompatible with SPL65677(increase of margin), the setting is disabled (the margin will be standard). |
| Adj/set/operate method | 1)Enter the setting value, and then press Start key. 2)Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> SPLMAN> SPL65677 |
| SPL68677 | Increase of paper right and left margins |
| Details | To increase the margins on the right and left edges of paper. As the value is incremented by 1, the margin is increased by 0.1 mm. If the setting is incompatible with SPL25607 (decrease of margins), the setting is disabled (the margins will be standard). |
| Adj/set/operate method | 1)Enter the setting value, and then press Start key. 2)Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> SPLMAN> SPL25607 |

| COPIER> FUNCTION> SPLMAN | |
|---|---|
| SPL25607 | Decrease of paper right and left margins |
| Details | To decrease the margins on the right and left edges of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm.If the setting is incompatible with SPL68677 (increase of margins), the setting is disabled (the margins will be standard). |
| Adj/set/operate method | 1)Enter the setting value, and then press Start key. 2)Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> SPLMAN> SPL68677 |
| SPL93822 | Setting to avoid clearing of all department ID counts |
| Display/adj/set range | 0 to 1 0: Allow clearing 1: Prohibit clearing |
| Default value | 0 |
| SPL78788 | Setting to avoid clearing of department ID counts |
| Display/adj/set range | 0 to 1 0: Allow clearing 1: Prohibit clearing |
| Default value | 0 |
| SPL71100 | Setting of the duty of Off-hook PCB |
| Details | This is the mode to make handsets of particular manufacturers to be rung when fax reception mode is set to "FAX/TEL switching". |
| Display/adj/set range | 1 to 99 |
| Default value | 50 |
| SPL00171 | Change of the maximum value of auto sleep shift time |
| Display/adj/set range | 0 to 10 0: 60 min. 1: Maximum value by model |
| Default value | 1 |
| SPL80100 | Mask setting at copyboard scanning |
| Display/adj/set range | 0 to 10 0: Mask value according to the specifications of each job 1: No mask (0 mm) |
| Default value | 0 |
| SPL27354 | PC-less update, RMDS environment setting |
| Display/adj/set range | 0 to 5 0: Production environment/Release environment 1: Production environment/Staging environment 2: Maintenance environment 1/Release environment 3: Maintenance environment 1/Staging environment 4: Maintenance environment 2/Release environment 5: Maintenance environment 2/Staging environment |
| Default value | 0 |

| COPIER> FUNCTION> SPLMAN | |
|---|---|
| SPL84194 | Switching ON/OFF of E-RDS function |
| Display/adj/set range | 0 to 10<br>0: OFF<br>1: ON |
| Default value | 0 |
| SPL32620 | Switching to enable/disable PC-less update |
| Display/adj/set range | 0 to 10<br>0: Disabled<br>1: Enabled |
| Default value | 1 |
| SPL90001 | Setting of toner deposit amount |
| Display/adj/set range | 0 to 5 |
| Default value | 0 |
| SPL90002 | Setting of low screen ruling dither |
| Display/adj/set range | 0 to 1 |
| Default value | 0 |

T-6-6

# Version Upgrade

## Overview

To upgrade versions, use the user support tool (hereinafter UST) and download firmware from a personal computer (hereinafter PC) to this product.

Firm ware

USB cable

PC
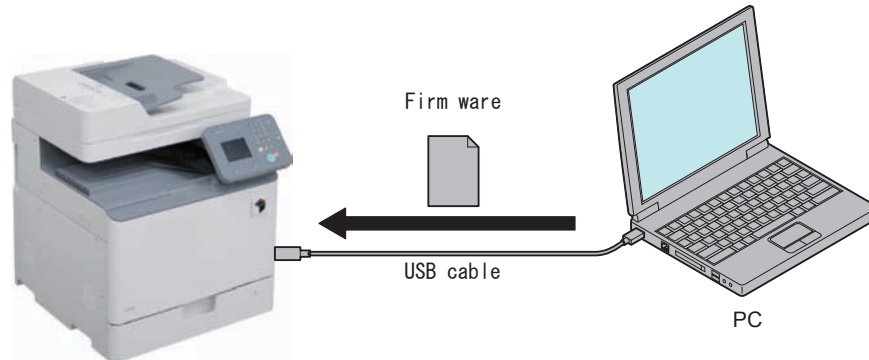
F-6-14

The USB cable uses A( flat type) to B( corner type).

Firmware configuration

| Firmware | Function | Stored in |
|----------|----------|-----------|
| BOOTROM | Start the main controller. | Main controller PCB |
| BOOTABLE | Control overall performance. | Main controller PCB |
| DCON | Control the printer unit. | DC controller PCB |

T-6-7

Some UST versions meet less numbers of firmware than those listed above.

## Preparation

### ■ System Requirements

- OS (one of the following)
    - Microsoft Windows 2000 Server/Professional
    - Microsoft Windows XP Professional/Home Edition
    - Microsoft Windows Server 2003
    - Microsoft Windows Vista*
       *: Only as for the 32 bit processor version
    - Microsoft Windows Server 2008
      (Microsoft Windows 7 to be supported)
    - Microsoft Windows 7
    - Microsoft Windows 8
    - Microsoft Windows 8.1
- PC
    - Compatible to the selected OS
    - Memory (RAM): 32MB or more free space
    - Hard Disk: 100MB or more free space
    - Display: 640x480 pixels or more in resolution, 256 tones or more
    - With USB ports
- UST file for this product*
    *: Download the corresponding file from the system CD or the service site (ask the service technician in charge for details)
- USB cable (USB A to B)

## ■ Preparation

1) Start the PC.

2) Connect the device to the PC with the USB cable.

3) Turn on the device on standby.

4) User mode: [Menu] > [System Management Settings]

5) Enter the "System Manager ID" and "PIN" with the numeric keys and press [ID].

6) Select [Update Firmware] > [Via PC].

The message, "Update firmware? Must turn main power OFF/ON after update.", is shown on the display. Select [Yes].

7) Automatically restart the device. "***DOWNLOAD MODE***" is shown on the display.

8) Wait for the motor of the host machine to stop.

Note:
Press [STOP] key to cancel Download mode and return to the normal operation.

## Downloading System Software

1) Open UST.

USTUPD.exe

F-6-15

2) Take a note of the firmware version to upgrade and click [Next] button.
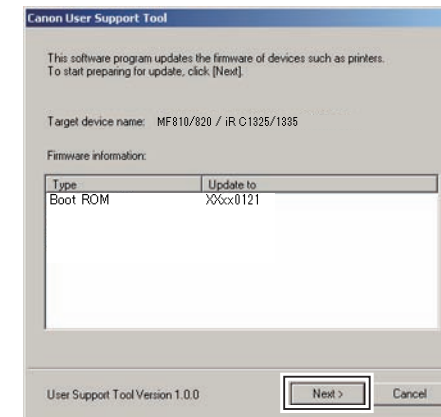
F-6-16

3) Click [Next] button.
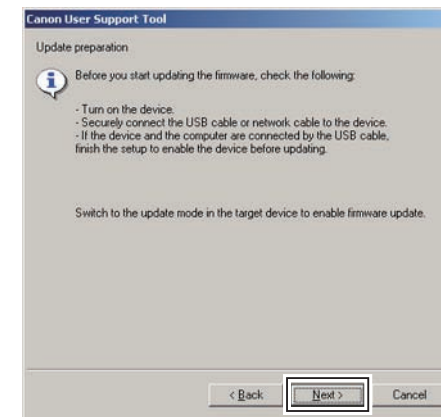
F-6-17

4) Select [USB Device] and click [Next] button.
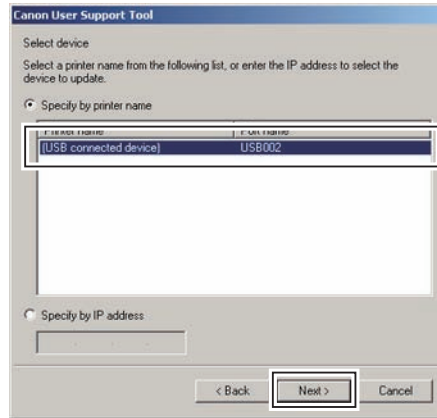


F-6-18

5) Click [Start] button.
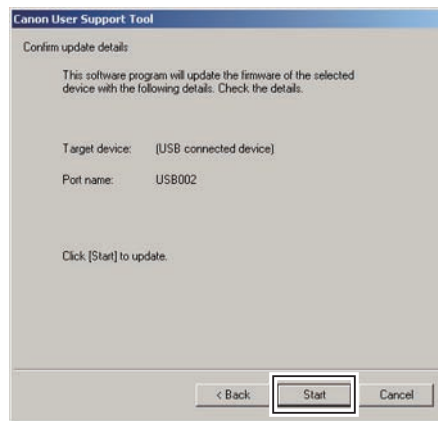


F-6-19

6) Click [Yes] button for the warning message to start download.
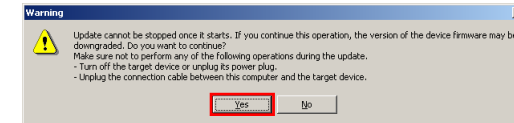


F-6-20
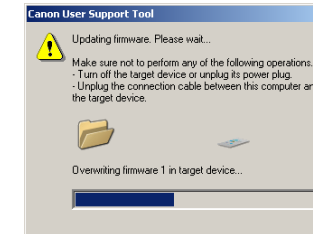


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7) Click [OK] button when download is completed.
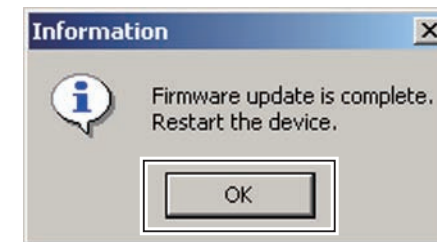


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8) Turn off and on the power to restart the device.

9) Output the spec report from Service mode to confirm if the firmware version is the same as
that on the note taken in Step 2).

COPIER > FUNCTION > MISC-P > SPEC

```
30/07 2014 11:57PM 1R C1335                                              0001

                              ***********************
                              ***   SPEC REPORT   ***
                              ***********************
           Device Info              1R C1335
           ROM Version
             MAIN                   01.15
             BOOT                   01.21
             LANG                   01.70
             ECONT                  00.16
             PANEL                  03.03
             ECO                    46.00
           Device Code              B0020218
           Size Locale              3
           USB Serial No.           123456789012
           MAC Address              F4-81-39-E8-B5-D8
           RCON Sensor 1            0
           RCON Sensor 2            0
           Total Count              2
           JAM                      8
           ERROR                    0
           Locale                   9
           Voltage Type             0
           BODY No.                 RMF00015

           Factory Flag             02000000
```

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# 7 Error•Jam•Alarm

- ■ Overview
- ■ Error Code
- ■ Jam Code
- ■ Alarm Code

# Overview

## Outline

### ■ Outline

This chapter describes various codes which are displayed when a failure occurs on the product. These are classified into 3 codes as follows.

| Code type | Explanation |
|---|---|
| Error code | This code is displayed when an error occurs on the machine. |
| Jam code | This code is displayed when a jam occurs inside the machine. |
| Alarm code | This code is sent when a specified value has been reached for the consumables (network connection required). It is not displayed on the UI; it is output by executing COPIER > FUNCTION > MISC-P > ERR-LOG. |

T-7-1

## Jam code

### ■ Location code

Location information is displayed as 1-digit number as follows.

| Device | Location code |
|---|---|
| Host machine | 3 |
| ADF | 4 |

T-7-2

### ■ Pickup position code

When jam occurs, pickup location is indicated with the following pickup position code.

| Pickup position | Pickup position code |
|---|---|
| ADF | - |
| Cassette 1 | 1 |
| Cassette 2 | 2 |
| Cassette 3 | 3 |
| Cassette 4 | 4 |
| Multi-purpose Tray | 0 |
| Duplex | 7 |

T-7-3

# Error Code

## Error Code Details

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E001 | A001 | Title | Fixing Main Thermistor high temperature detection error |
| | | Detection description | The Fixing Main Thermistor detected 265 deg C or higher for 0.1 sec or longer. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E001 | A002 | Title | Fixing Sub Thermistor (Front) high temperature detection error |
| | | Detection description | The Fixing Sub Thermistor (Front) detected 290 deg C or higher for 0.1 sec or longer. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E001 | A003 | Title | Fixing Sub Thermistor (Rear) high temperature detection error |
| | | Detection description | The Fixing Sub Thermistor (Rear) detected 290 deg C or higher for 0.1 sec or longer. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E001 | A004 | Title | Fixing Main Thermistor high temperature detection error |
| | | Detection description | The Fixing Main Thermistor detected 270 deg C or higher. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E001 | A005 | Title | Fixing Sub Thermistor (Front) high temperature detection error |
| | | Detection description | The Fixing Sub Thermistor (Front) detected 295 deg C or higher. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E001 | A006 | Title | Fixing Sub Thermistor (Rear) high temperature detection error |
| | | Detection description | The Fixing Sub Thermistor (Rear) detected 295 deg C or higher. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E002 | A001 | Title | Fixing Main Thermistor temperature increase detection error |
| | | Detection description | The Fixing Main Thermistor detected a temperature increase of 1 deg C for less than 5 sec from turning ON the main power until start of PI control. |
| | | Remedy | [Related parts]<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E002 | A002 | Title | Fixing Main Thermistor open circuit detection error |
| | | Detection description | The Fixing Main Thermistor detected a temperature of 40 deg C or lower for 3 sec or longer from turning ON the main power until start of PI control. |
| | | Remedy | [Related parts]<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E002 | A003 | Title | Fixing Sub Thermistor (Front) open circuit detection error |
| | | Detection description | The Fixing Sub Thermistor (Front) detected a temperature of 40 deg C or lower for 3 sec or longer from turning ON the main power until start of PI control. |
| | | Remedy | [Related parts]<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E002 | A004 | Title | Fixing Sub Thermistor (Rear) open circuit detection error |
| | | Detection description | The Fixing Sub Thermistor (Rear) detected a temperature of 40 deg C or lower for 3 sec or longer from turning ON the main power until start of PI control. |
| | | Remedy | [Related parts]<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E003 | A001 | Title | Fixing Main Thermistor low temperature detection error (during printing) |
| | | Detection description | The Fixing Main Thermistor detected a temperature of 80 deg C or lower for 1 sec or longer from start of PI control until completion of the last rotation (the Fixing Heater is turned OFF) during printing. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E003 | A002 | Title | Fixing Sub Thermistor (Front) low temperature detection error |
| | | Detection description | The Fixing Sub Thermistor (Front) detected a temperature of 80 deg C or lower for 1 sec or longer from start of PI control until completion of the last rotation (the Fixing Heater is turned OFF) during printing. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E003 | A003 | Title | Fixing Sub Thermistor (Rear) low temperature detection error |
| | | Detection description | The Fixing Sub Thermistor (Rear) detected a temperature of 80 deg C or lower for 1 sec or longer from start of PI control until completion of the last rotation (the Fixing Heater is turned OFF) during printing. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E004 | 0001 | Title | Fixing Relay welding detection error |
| | | Detection description | Zero cross interruption was detected although the Fixing Relay was not turned ON. |
| | | Remedy | [Remedy] Replace the Low-voltage Power Supply PCB. (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Caution] Since an electrical trouble due to error in fixing safety circuit relay is the cause of the error, be sure to replace the Low-voltage Power Supply PCB. |
| E004 | 0002 | Title | Fixing Main Thermistor and Fixing Sub Thermistor (Rear) disconnection detection error |
| | | Detection description | Connection could not be detected within 0.5 sec when power was supplied to the Fixing Heater. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E009 | 0001 | Title | Fixing pressure timeout error |
| | | Detection description | Signal of the Fixing Pressure Release Sensor could not be detected at pressure application operation of the Fixing Pressure Release Cam, and the operation was not completed within 4 sec from the start of counterclockwise rotation of the Fixing Motor. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Fixing Pressure Release Sensor (PS13/J5403) (Unit of replacement: CABLE, FIXING ASSEMBLY)<br>• Fixing Pressure Release Sensor (PS13) (Unit of replacement: PHOTO INTERRUPTER)<br>• Fixing Drive Unit (Unit of replacement: FIXING DRIVE ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E009 | 0002 | Title | Fixing disengagement timeout error |
| | | Detection description | Signal of the Fixing Pressure Release Sensor could not be detected at pressure release operation of the Fixing Pressure Release Cam, and the operation was not completed within 4 sec from the start of counterclockwise rotation of the Fixing Motor. |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY)<br>• Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE)<br>• Harness between the Fixing Drawer (DR01/J5401) and the Fixing Pressure Release Sensor (PS13/J5403) (Unit of replacement: CABLE, FIXING ASSEMBLY)<br>• Fixing Pressure Release Sensor (PS13) (Unit of replacement: PHOTO INTERRUPTER)<br>• Fixing Drive Unit (Unit of replacement: FIXING DRIVE ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E009 | 0003 | Title | Fixing pressure retry error |
| | | Detection description | Signal of the Fixing Pressure Release Sensor could not be detected at pressure application operation of the Fixing Pressure Release Cam, and the operation was not completed within 3 times from the start of counterclockwise rotation of the Fixing Motor. |
| | | Remedy | [Remedy] Replace the Fixing Assembly. (Unit of replacement: Fixing Assembly) |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E009 | 0004 | Title | Fixing disengagement retry error |
| | | Detection description | Signal of the Fixing Pressure Release Sensor could not be detected at pressure release operation of the Fixing Pressure Release Cam, and the operation was not completed within 3 times from the start of counterclockwise rotation of the Fixing Motor. |
| | | Remedy | [Remedy] Replace the Fixing Assembly. (Unit of replacement: Fixing Assembly) |
| E010 | 0001 | Title | Bk Drum_ITB Motor error |
| | | Detection description | It did not become the specified speed for 500 consecutive msec although 1000 msec have passed from the startup of the Bk Drum_ITB Motor in the Main Drive Unit. (The detection timing varies depending on the paper feed conditions.) |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harnesses connecting the Bk Drum_ITB Motor (M02/J5702), the Relay Connector (8P) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• Bk Drum_ITB Motor (M02) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the Bk Drum_ITB Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>　a. If they cannot be rotated, replace the Main Drive Unit.<br>　b. If they can be rotated, check the harnesses from the Bk Drum_ITB Motor to the DC Controller PCB.<br>2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester.<br>　a. If power is flowing to it (the measurement value is less than 1 ohm),<br>　　1. Replace the Bk Drum_ITB Motor.<br>　　2. Replace the DC Controller PCB.<br>　b. If the power is not flowing to it (the measurement value is 1 ohm or higher), replace the Low-voltage Power Supply PCB.<br>[Reference] Before replacing the DC Controller PCB, back up the service mode data (approx. 2 min) and restore the backup data after the replacement so the data may be able to be protected.<br>　• Backup: COPIER (LEVEL2)> FUNCTION> SYSTEM> DSRAMBUP<br>　• Restoration: COPIER (LEVEL2)> FUNCTION> SYSTEM> DSRAMRES |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E010 | 0002 | Title | Bk Drum_ITB Motor error |
| | | Detection description | The specified speed could not be detected for 500 consecutive msec although it became the specified speed at least once from the startup of the Bk Drum_ITB Motor in the Main Drive Unit. |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harnesses connecting the Bk Drum_ITB Motor (M02/J5702), the Relay Connector (8P) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• Bk Drum_ITB Motor (M02) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the Bk Drum_ITB Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>    a. If they cannot be rotated, replace the Main Drive Unit.<br>    b. If they can be rotated, check the harnesses from the Bk Drum_ITB Motor to the DC Controller PCB.<br>2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester.<br>    a. If power is flowing to it (the measurement value is less than 1 ohm),<br>        1. Replace the Bk Drum_ITB Motor.<br>        2. Replace the DC Controller PCB.<br>    b. If the power is not flowing to it (the measurement value is 1 ohm or higher), replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E010 | 0003 | Title | Bk Drum_ITB Motor error |
| | | Detection description | There was no FG signal input for 300 msec from the startup of the Bk Drum_ITB Motor in the Main Drive Unit. |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harnesses connecting the Bk Drum_ITB Motor (M02/J5702), the Relay Connector (8P) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• Bk Drum_ITB Motor (M02) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the Bk Drum_ITB Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>    a. If they cannot be rotated, replace the Main Drive Unit.<br>    b. If they can be rotated, check the harnesses from the Bk Drum_ITB Motor to the DC Controller PCB.<br>2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester.<br>    a. If power is flowing to it (the measurement value is less than 1 ohm),<br>        1. Replace the Bk Drum_ITB Motor.<br>        2. Replace the DC Controller PCB.<br>    b. If the power is not flowing to it (the measurement value is 1 ohm or higher), replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E012 | 0001 | Title | CL Drum Motor error |
| | | Detection description | It did not become the specified speed for 500 consecutive msec although 1000 msec have passed from the startup of the CL Drum Motor in the Main Drive Unit. (The detection timing varies depending on the paper feed conditions.) |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harness between the CL Drum Motor (M01/J5701) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• CL Drum Motor (M01) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the CL Drum Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>    a. If they cannot be rotated, replace the Main Drive Unit.<br>    b. If they can be rotated, check the harness between the CL Drum Motor and the DC Controller PCB.<br>2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester.<br>    a. If power is flowing to it (the measurement value is less than 1 ohm),<br>      1. Replace the CL Drum Motor.<br>      2. Replace the DC Controller PCB.<br>    b. If the power is not flowing to it (the measurement value is 1 ohm or higher), replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E012 | 0002 | Title | CL Drum Motor error |
| | | Detection description | The specified speed could not be detected for 500 consecutive msec although it became the specified speed at least once from the startup of the CL Drum Motor in the Main Drive Unit. |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harness between the CL Drum Motor (M01/J5701) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• CL Drum Motor (M01) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the CL Drum Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>    a. If they cannot be rotated, replace the Main Drive Unit.<br>    b. If they can be rotated, check the harness between the CL Drum Motor and the DC Controller PCB.<br>2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester.<br>    a. If power is flowing to it (the measurement value is less than 1 ohm),<br>      1. Replace the CL Drum Motor.<br>      2. Replace the DC Controller PCB.<br>    b. If the power is not flowing to it (the measurement value is 1 ohm or higher), replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E012 | 0003 | Title | CL Drum Motor error |
| | | Detection description | There was no FG signal input for 300 msec from the startup of the CL Drum Motor in the Main Drive Unit. |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harness between the CL Drum Motor (M01/J5701) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• CL Drum Motor (M01) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the CL Drum Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>    a. If they cannot be rotated, replace the Main Drive Unit.<br>    b. If they can be rotated, check the harness between the CL Drum Motor and the DC Controller PCB.<br>2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester.<br>    a. If power is flowing to it (the measurement value is less than 1 ohm),<br>    1. Replace the CL Drum Motor.<br>    2. Replace the DC Controller PCB.<br>    b. If the power is not flowing to it (the measurement value is 1 ohm or higher), replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E014 | 0001 | Title | Fixing Motor error |
| | | Detection description | It did not become the specified speed for 500 consecutive msec although 1000 msec have passed from the startup of the Fixing Motor. (The detection timing varies depending on the paper feed conditions.) |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Idler Gear in the Fixing Assembly (Unit of replacement: GEAR, 29T)<br>• Pressure Roller Gear in the Fixing Assembly (Unit of replacement: GEAR, 24T)<br>• Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE)<br>• Fuse in the DC Controller PCB (UN04/FU1) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Fixing Motor (M04) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check that the Fixing Assembly is pushed into the host machine so the handle is locked and there is no backlash while it is installed.<br>2. Remove the Fixing Assembly, and rotate the Idler Gear and the Pressure Roller Gear by hand to check visually that there is no bent or missing teeth or abnormal abrasion (edge of the gear is no longer tooth-shaped).<br>3. Replace the Fixing Assembly.<br>4. Check the harness between the DC Controller PCB and the Fixing Motor.<br>5. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>    a. If the measurement value is less than 1 ohm (conduction state),<br>        1. Replace the Fixing Motor.<br>        2. Replace the DC Controller PCB.<br>    b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E014 | 0002 | Title | Fixing Motor error |
| | | Detection description | The specified speed could not be detected for 500 consecutive msec although it became the specified speed at least once from the startup of the Fixing Motor. (The detection timing varies depending on the paper feed conditions.) |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Idler Gear in the Fixing Assembly (Unit of replacement: GEAR, 29T)<br>• Pressure Roller Gear in the Fixing Assembly (Unit of replacement: GEAR, 24T)<br>• Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE)<br>• Fuse in the DC Controller PCB (UN04/FU1) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Fixing Motor (M04) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check that the Fixing Assembly is pushed into the host machine so the handle is locked and there is no backlash while it is installed.<br>2. Remove the Fixing Assembly, and rotate the Idler Gear and the Pressure Roller Gear by hand to check visually that there is no bent or missing teeth or abnormal abrasion (edge of the gear is no longer tooth-shaped).<br>3. Replace the Fixing Assembly.<br>4. Check the harness between the DC Controller PCB and the Fixing Motor.<br>5. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>    a. If the measurement value is less than 1 ohm (conduction state),<br>      1. Replace the Fixing Motor.<br>      2. Replace the DC Controller PCB.<br>    b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E014 | 0003 | Title | Fixing Motor error |
| | | Detection description | There was no FG signal input for 300 msec from the startup of the Fixing Motor. (The detection timing varies depending on the paper feed conditions.) |
| | | Remedy | [Related parts]<br>• Fixing Assembly (Unit of replacement: Fixing Assembly)<br>• Idler Gear in the Fixing Assembly (Unit of replacement: GEAR, 29T)<br>• Pressure Roller Gear in the Fixing Assembly (Unit of replacement: GEAR, 24T)<br>• Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE)<br>• Fuse in the DC Controller PCB (UN04/FU1) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Fixing Motor (M04) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check that the Fixing Assembly is pushed into the host machine so the handle is locked and there is no backlash while it is installed.<br>2. Remove the Fixing Assembly, and rotate the Idler Gear and the Pressure Roller Gear by hand to check visually that there is no bent or missing teeth or abnormal abrasion (edge of the gear is no longer tooth-shaped).<br>3. Replace the Fixing Assembly.<br>4. Check the harness between the DC Controller PCB and the Fixing Motor.<br>5. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>    a. If the measurement value is less than 1 ohm (conduction state),<br>      1. Replace the Fixing Motor.<br>      2. Replace the DC Controller PCB.<br>    b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 01A8 | Title | ATR Sensor (Y)output error |
| | | Detection description | The output value of the ATR Sensor (Y) in the Drum Unit (Y) did not fall within the range from 10 or higher to 245 or less for 2 consecutive times during printing. |
| | | Remedy | [Related parts]<br>• ATR Sensor (Y) (UN34) (Unit of replacement: DEVE_UNIT_Y)<br>• Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y)<br>• Harness between the ATR Sensor (Y) (UN34/J6021) and the Drum Unit Memory PCB (Y) (UN12/J6011) (Unit of replacement: DEVE_UNIT_Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (Y) (UN08/J6001) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>    1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>    2. Visually check that the harness is not caught or open circuit.<br>    3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (Y) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 01B8 | Title | ATR Sensor (Y) output error |
| | | Detection description | a. The output value of the ATR Sensor (Y) in the Drum Unit (Y) did not fall within the range from 10 or higher to 990 or less for 2 consecutive times at initialization.<br>b. The output value did not exceed 140 although the control voltage of the ATR Sensor (Y) in the Drum Unit (Y) was increased to 248 or higher, or it did not fall below 140 although the voltage was decreased to 8 at initialization. |
| | | Remedy | [Related parts]<br>• ATR Sensor (Y) (UN34) (Unit of replacement: DEVE_UNIT_Y)<br>• Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y)<br>• Harness between the ATR Sensor (Y) (UN34/J6021) and the Drum Unit Memory PCB (Y) (UN12/J6011) (Unit of replacement: DEVE_UNIT_Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (Y) (UN08/J6001) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>    1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>    2. Visually check that the harness is not caught or open circuit.<br>    3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (Y) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 01C0 | Title | Error in take-up of Sealing Member (Y) |
| | | Detection description | The patch output value (SigR) failed to be 900 or less during initialization of the Drum Unit (Y). |
| | | Remedy | [Remedy] Replace the Drum Unit (Y). (Unit of replacement: DEVE_UNIT_Y) |
| E020 | 01F0 | Title | Error in toner density (Y) at communication failure of the Drum Unit Memory PCB (Y) |
| | | Detection description | Communication between the DC Controller PCB and the Drum Unit Memory PCB (Y) was not available, and the output value (SigR) of the ATR Sensor (Y) did not fall within the range from 50 or higher to 800 or less for 2 consecutive times. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (Y) (UN08/J6001) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (Y) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 02A8 | Title | ATR Sensor (M) output error |
| | | Detection description | The output value of the ATR Sensor (M) in the Drum Unit (M) did not fall within the range from 10 or higher to 245 or less for 2 consecutive times during printing. |
| | | Remedy | [Related parts]<br>• ATR Sensor (M) (UN35) (Unit of replacement: DEVE_UNIT_M)<br>• Drum Unit (M) (Unit of replacement: DEVE_UNIT_M)<br>• Harness between the ATR Sensor (M) (UN35/J6022) and the Drum Unit Memory PCB (M) (UN13/J6012) (Unit of replacement: DEVE_UNIT_M)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (M) (UN09/J6002) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (M) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 02B8 | Title | ATR Sensor (M) output error |
| | | Detection description | a. The output value of the ATR Sensor (M) in the Drum Unit (M) did not fall within the range from 10 or higher to 990 or less for 2 consecutive times at initialization.<br>b. The output value did not exceed 140 although the control voltage of the ATR Sensor (M) in the Drum Unit (M) was increased to 248 or higher, or it did not fall below 140 although the voltage was decreased to 8 at initialization. |
| | | Remedy | [Related parts]<br>• ATR Sensor (M) (UN35) (Unit of replacement: DEVE_UNIT_M)<br>• Drum Unit (M) (Unit of replacement: DEVE_UNIT_M)<br>• Harness between the ATR Sensor (M) (UN35/J6022) and the Drum Unit Memory PCB (M) (UN13/J6012) (Unit of replacement: DEVE_UNIT_M)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (M) (UN09/J6002) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (M) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 02C0 | Title | Error in take-up of Sealing Member (M) |
| | | Detection description | The patch output value (SigR) failed to be 900 or less during initialization of the Drum Unit (M). |
| | | Remedy | [Remedy] Replace the Drum Unit (M). (Unit of replacement: DEVE_UNIT_M) |
| E020 | 02F0 | Title | Error in toner density (M) at communication failure of the Drum Unit Memory PCB (M) |
| | | Detection description | Communication between the DC Controller PCB and the Drum Unit Memory PCB (M) was not available, and the output value (SigR) of the ATR Sensor (M) did not fall within the range from 50 or higher to 800 or less for 2 consecutive times. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (M) (UN09/J6002) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit (M) (Unit of replacement: DEVE_UNIT_M)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (M) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 03A8 | Title | ATR Sensor (C) output error |
| | | Detection description | The output value of the ATR Sensor (C) in the Drum Unit (C) did not fall within the range from 10 or higher to 245 or less for 2 consecutive times during printing. |
| | | Remedy | [Related parts]<br>• ATR Sensor (C) (UN36) (Unit of replacement: DEVE_UNIT_C)<br>• Drum Unit (C) (Unit of replacement: DEVE_UNIT_C)<br>• Harness between the ATR Sensor (C) (UN36/J6023) and the Drum Unit Memory PCB (C) (UN14/J6013) (Unit of replacement: DEVE_UNIT_C)<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (C) (UN10/J6003) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (C) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 03B8 | Title | ATR Sensor (C) output error |
| | | Detection description | a. The output value of the ATR Sensor (C) in the Drum Unit (C) did not fall within the range from 10 or higher to 990 or less for 2 consecutive times at initialization.<br>b. The output value did not exceed 140 although the control voltage of the ATR Sensor (C) in the Drum Unit (C) was increased to 248 or higher, or it did not fall below 140 although the voltage was decreased to 8 at initialization. |
| | | Remedy | [Related parts]<br>• ATR Sensor (C) (UN36) (Unit of replacement: DEVE_UNIT_C)<br>• Drum Unit (C) (Unit of replacement: DEVE_UNIT_C)<br>• Harness between the ATR Sensor (C) (UN36/J6023) and the Drum Unit Memory PCB (C) (UN14/J6013) (Unit of replacement: DEVE_UNIT_C)<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (C) (UN10/J6003) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (C) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 03C0 | Title | Error in take-up of Sealing Member (C) |
| | | Detection description | The patch output value (SigR) failed to be 900 or less during initialization of the Drum Unit (C). |
| | | Remedy | [Remedy] Replace the Drum Unit (C). (Unit of replacement: DEVE_UNIT_C) |
| E020 | 03F0 | Title | Error in toner density (C) at communication failure of the Drum Unit Memory PCB (C) |
| | | Detection description | Communication between the DC Controller PCB and the Drum Unit Memory PCB (C) was not available, and the output value (SigR) of the ATR Sensor (C) did not fall within the range from 50 or higher to 800 or less for 2 consecutive times. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (Y) (UN10/J6003) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit (C) (Unit of replacement: DEVE_UNIT_C)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (C) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 04A8 | Title | ATR Sensor (Bk) output error |
| | | Detection description | The output value of the ATR Sensor (Bk) in the Drum Unit (Bk) did not fall within the range from 10 or higher to 245 or less for 2 consecutive times during printing. |
| | | Remedy | [Related parts]<br>• ATR Sensor (Bk) (UN37) (Unit of replacement: P-UNIT_BK)<br>• Drum Unit (Bk) (Unit of replacement: P-UNIT_BK)<br>• Harness between the ATR Sensor (Bk) (UN37/J6024) and the Drum Unit Memory PCB (Bk) (UN15/J6014) (Unit of replacement: P-UNIT_BK)<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (Bk) (UN11/J6004) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (Bk) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 04B8 | Title | ATR Sensor (Bk) output error |
| | | Detection description | a. The output value of the ATR Sensor (Bk) in the Drum Unit (Bk) did not fall within the range from 10 or higher to 990 or less for 2 consecutive times at initialization.<br>b. The output value did not exceed 140 although the control voltage of the ATR Sensor (Bk) in the Drum Unit (Bk) was increased to 248 or higher, or it did not fall below 140 although the voltage was decreased to 8 at initialization. |
| | | Remedy | [Related parts]<br>• ATR Sensor (Bk) (UN37) (Unit of replacement: P-UNIT_BK)<br>• Drum Unit (Bk) (Unit of replacement: P-UNIT_BK)<br>• Harness between the ATR Sensor (Bk) (UN37/J6024) and the Drum Unit Memory PCB (Bk) (UN15/J6014) (Unit of replacement: P-UNIT_BK)<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (Bk) (UN11/J6004) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (Bk) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |
| E020 | 04C0 | Title | Error in take-up of Sealing Member (Bk) |
| | | Detection description | The patch output value (SigR) failed to be 900 or less during initialization of the Drum Unit (Bk). |
| | | Remedy | [Remedy] Replace the Drum Unit (Bk). (Unit of replacement: P-UNIT_BK) |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E020 | 04F0 | Title | Error in toner density (Bk) at communication failure of the Drum Unit Memory PCB (Bk) |
| | | Detection description | Communication between the DC Controller PCB and the Drum Unit Memory PCB (Bk) was not available, and the output value (SigR) of the ATR Sensor (Bk) did not fall within the range from 50 or higher to 800 or less for 2 consecutive times. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (Bk) (UN11/J6004) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit (Bk) (Unit of replacement: P-UNIT_BK)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (Bk) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E021 | 0001 | Title | Developing Motor error |
| | | Detection description | It did not become the specified speed for 500 consecutive msec although 1000 msec have passed from the startup of the Developing Motor. (The detection timing varies depending on the paper feed conditions.) |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harness between the Developing Motor (M03) and the DC Controller PCB (UN04/J142) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the DC Controller PCB (UN04/FU4) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Developing Motor (M03) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the Developing Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>a. If they cannot be rotated, replace the Main Drive Unit.<br>b. If they can be rotated, check the harness between the Developing Motor and the DC Controller PCB.<br>2. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the Developing Motor.<br>2. Replace the DC Controller PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E021 | 0002 | Title | Developing Motor error |
| | | Detection description | The specified speed could not be detected for 500 consecutive msec although it became the specified speed at least once from the startup of the Developing Motor. |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harness between the Developing Motor (M03) and the DC Controller PCB (UN04/J142) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the DC Controller PCB (UN04/FU4) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Developing Motor (M03) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the Developing Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>a. If they cannot be rotated, replace the Main Drive Unit.<br>b. If they can be rotated, check the harness between the Developing Motor and the DC Controller PCB.<br>2. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the Developing Motor.<br>2. Replace the DC Controller PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E021 | 0003 | Title | Developing Motor error |
| | | Detection description | There was no FG signal input for 300 msec from the startup of the Developing Motor. |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Harness between the Developing Motor (M03) and the DC Controller PCB (UN04/J142) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the DC Controller PCB (UN04/FU4) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Developing Motor (M03) (Unit of replacement: MOTOR, DC)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] It is highly possible that the Developing Motor is not rotating due to overload or an electrical trouble. Perform the following in the order while checking whether the error is cleared.<br>1. Check whether the gears of the Main Drive Unit can be rotated by hand.<br>a. If they cannot be rotated, replace the Main Drive Unit.<br>b. If they can be rotated, check the harness between the Developing Motor and the DC Controller PCB.<br>2. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the Developing Motor.<br>2. Replace the DC Controller PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E021 | 0120 | Title | Developing Screw rotation detection error (Y) |
| | | Detection description | The difference between the maximum and the minimum of sampling values detected by the ATR Sensor (Y) in the Drum Unit (Y) was 0.5 V or less. |
| | | Remedy | [Related parts]<br>• Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y)<br>• Harness between the Drum Unit Relay PCB (Y) (UN08/J6001) and the DC Controller PCB (UN04/J160) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit Relay PCB (Y) (UN08) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit Memory PCB (Y) (UN12) (Unit of replacement: DEVE_UNIT_Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (Y) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E021 | 0220 | Title | Developing Screw rotation detection error (M) |
| | | Detection description | The difference between the maximum and the minimum of sampling values detected by the ATR Sensor (M) in the Drum Unit (M) was 0.5 V or less. |
| | | Remedy | [Related parts]<br>• Drum Unit (M) (Unit of replacement: DEVE_UNIT_M)<br>• Harness between the Drum Unit Relay PCB (M) (UN09/J6002) and the DC Controller PCB (UN04/J160) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit Relay PCB (M) (UN09) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit Memory PCB (M) (UN13) (Unit of replacement: DEVE_UNIT_M)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>  1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>  2. Visually check that the harness is not caught or open circuit.<br>  3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (M) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E021 | 0320 | Title | Developing Screw rotation detection error (C) |
| | | Detection description | The difference between the maximum and the minimum of sampling values detected by the ATR Sensor (C) in the Drum Unit (C) was 0.5 V or less. |
| | | Remedy | [Related parts]<br>• Drum Unit (C) (Unit of replacement: DEVE_UNIT_C)<br>• Harness between the Drum Unit Relay PCB (C) (UN10/J6003) and the DC Controller PCB (UN04/J162) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit Relay PCB (C) (UN10) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit Memory PCB (C) (UN14) (Unit of replacement: DEVE_UNIT_C)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>  1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>  2. Visually check that the harness is not caught or open circuit.<br>  3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (C) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E021 | 0420 | Title | Developing Screw rotation detection error (Bk) |
| | | Detection description | The difference between the maximum and the minimum of sampling values detected by the ATR Sensor (Bk) in the Drum Unit (Bk) was 0.5 V or less. |
| | | Remedy | [Related parts]<br>• Drum Unit (Bk) (Unit of replacement: P-UNIT_BK)<br>• Harness between the Drum Unit Relay PCB (Bk) (UN11/J6004) and the DC Controller PCB (UN04/J162) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit Relay PCB (Bk) (UN11) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Drum Unit Memory PCB (Bk) (UN15) (Unit of replacement: P-UNIT_BK)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br><br>[Points to note at work]<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br>• If the Drum Unit Memory PCB (Bk) is soiled, clean it with a blower.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E025 | 0110 | Title | Bottle Motor (YM) error (Y) |
| | | Detection description | The Bottle Rotation Sensor (Y) did not detect rotation for 5 times in a row although 0.8 sec (2 sec in the case of right before replacement of the Toner Container) has passed after the Bottle Motor (YM) was turned ON. |
| | | Remedy | [Related parts]<br>• Toner Container (Y)<br>• Harness between the DC Controller PCB (UN04/J155) and the Bottle Motor (YM) (M09/J6301) (Unit of replacement: CABLE, MAIN)<br>• Harnesses from the DC Controller PCB to the Bottle Rotation Sensor (Y)<br>    1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN)<br>    2. Relay Connector (3P) to Bottle Rotation Sensor (Y) (PS06/J5301) (Unit of replacement: CABLE, BOTTLE SENSOR, Y/C)<br>• Bottle Rotation Sensor (Y) (PS06) (Unit of replacement: PHOTO INTERRUPTER)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Bottle Drive Unit (YM) (Unit of replacement: BOTTLE DRIVE ASSEMBLY)<br>• Hopper Unit (Y) (Unit of replacement: HOPPER ASSEMBLY)<br><br>[Points to note at work]<br>• Be sure to turn over the Door Lock Lever when removing the Bottle Drive Unit (YM) and rotating the drive section by hand.<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E025 | 0168 | Title | No toner detection error (Y) |
| | | Detection description | The state without toner was detected although the recovery sequence was performed for 5 times after replacement of the Toner Container (Y). |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Hopper Unit (Y) (Unit of replacement: HOPPER ASSEMBLY)<br>• Toner Bottle Mount Unit (Y) (Unit of replacement: BOTTLE MOUNT ASSEMBLY)<br>• Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y)<br>• Toner Container (Y)<br><br>[Remedy] Check/replace the related parts.<br><br>[Reference] If a user inserts an empty Toner Container (Y) repeatedly, the error may occur. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E025 | 0210 | Title | Bottle Motor (YM) error (M) |
| | | Detection description | The Bottle Rotation Sensor (M) did not detect rotation for 5 times in a row although 1.5 sec (2 sec in the case of right before replacement of the Toner Container) has passed after the Bottle Motor (YM) was turned ON. |
| | | Remedy | [Related parts]<br>• Toner Container (M)<br>• Harness between the DC Controller PCB (UN04/J155) and the Bottle Motor (YM) (M09/J6301) (Unit of replacement: CABLE, MAIN)<br>• Harnesses from the DC Controller PCB to the Bottle Rotation Sensor (M)<br>    1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN)<br>    2. Relay Connector (3P) to Bottle Rotation Sensor (M) (PS07/J5302) (Unit of replacement: CABLE, BOTTLE SENSOR, M/K)<br>• Bottle Rotation Sensor (M) (PS07) (Unit of replacement: PHOTO INTERRUPTER)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Bottle Drive Unit (YM) (Unit of replacement: BOTTLE DRIVE ASSEMBLY)<br>• Hopper Unit (M) (Unit of replacement: HOPPER ASSEMBLY)<br><br>[Points to note at work]<br>• Be sure to turn over the Door Lock Lever when removing the Bottle Drive Unit (YM) and rotating the drive section by hand.<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E025 | 0268 | Title | No toner detection error (M) |
| | | Detection description | The state without toner was detected although the recovery sequence was performed for 5 times after replacement of the Toner Container (M). |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Hopper Unit (M) (Unit of replacement: HOPPER ASSEMBLY)<br>• Toner Bottle Mount Unit (M) (Unit of replacement: BOTTLE MOUNT ASSEMBLY)<br>• Drum Unit (M) (Unit of replacement: DEVE_UNIT_M)<br>• Toner Container (M)<br><br>[Remedy] Check/replace the related parts.<br><br>[Reference] If a user inserts an empty Toner Container (M) repeatedly, the error may occur. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E025 | 0310 | Title | Bottle Motor (CK) error (C) |
| | | Detection description | The Bottle Rotation Sensor (C) did not detect rotation for 5 times in a row although 1.5 sec (2 sec in the case of right before replacement of the Toner Container) has passed after the Bottle Motor (CK) was turned ON. |
| | | Remedy | [Related parts]<br>• Toner Container (C)<br>• Harness between the DC Controller PCB (UN04/J155) and the Bottle Motor (CK) (M10/J6302) (Unit of replacement: CABLE, MAIN)<br>• Harnesses from the DC Controller PCB to the Bottle Rotation Sensor (C)<br>1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN)<br>2. Relay Connector (3P) to Bottle Rotation Sensor (C) (PS08/J5303) (Unit of replacement: CABLE, BOTTLE SENSOR, Y/C)<br>• Bottle Rotation Sensor (C) (PS08) (Unit of replacement: PHOTO INTERRUPTER)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Bottle Drive Unit (CK) (Unit of replacement: BOTTLE DRIVE ASSEMBLY)<br>• Hopper Unit (C) (Unit of replacement: HOPPER ASSEMBLY)<br><br>[Points to note at work]<br>• Be sure to turn over the Door Lock Lever when removing the Bottle Drive Unit (CK) and rotating the drive section by hand.<br>• When checking the harness/cable or connector, perform the following work.<br>  1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>  2. Visually check that the harness is not caught or open circuit.<br>  3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E025 | 0368 | Title | No toner detection error (C) |
| | | Detection description | The state without toner was detected although the recovery sequence was performed for 5 times after replacement of the Toner Container (C). |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Hopper Unit (C) (Unit of replacement: HOPPER ASSEMBLY)<br>• Toner Bottle Mount Unit (C) (Unit of replacement: BOTTLE MOUNT ASSEMBLY)<br>• Drum Unit (C) (Unit of replacement: DEVE_UNIT_C)<br>• Toner Container (C)<br><br>[Remedy] Check/replace the related parts.<br><br>[Reference] If a user inserts an empty Toner Container (C) repeatedly, the error may occur. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E025 | 0410 | Title | Bottle Motor (CK) error (Bk) |
| | | Detection description | The Bottle Rotation Sensor (Bk) did not detect rotation for 5 times in a row although 1.5 sec (2 sec in the case of right before replacement of the Toner Container) has passed after the Bottle Motor (CK) was turned ON. |
| | | Remedy | [Related parts]<br>• Toner Container (Bk)<br>• Harness between the DC Controller PCB (UN04/J155) and the Bottle Motor (CK) (M10/J6302) (Unit of replacement: CABLE, MAIN)<br>• Harnesses from the DC Controller PCB to the Bottle Rotation Sensor (Bk)<br>    1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN)<br>    2. Relay Connector (3P) to Bottle Rotation Sensor (Bk) (PS09/J5304) (Unit of replacement: CABLE, BOTTLE SENSOR, M/K)<br>• Bottle Rotation Sensor (Bk) (PS09) (Unit of replacement: PHOTO INTERRUPTER)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Bottle Drive Unit (CK) (Unit of replacement: BOTTLE DRIVE ASSEMBLY)<br>• Hopper Unit (Bk) (Unit of replacement: HOPPER ASSEMBLY)<br><br>[Points to note at work]<br>• Be sure to turn over the Door Lock Lever when removing the Bottle Drive Unit (CK) and rotating the drive section by hand.<br>• When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E025 | 0468 | Title | No toner detection error (Bk) |
| | | Detection description | The state without toner was detected although the recovery sequence was performed for 5 times after replacement of the Toner Container (Bk). |
| | | Remedy | [Related parts]<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Hopper Unit (Bk) (Unit of replacement: HOPPER ASSEMBLY)<br>• Toner Bottle Mount Unit (Bk) (Unit of replacement: BOTTLE MOUNT ASSEMBLY)<br>• Drum Unit (Bk) (Unit of replacement: P-UNIT_BK)<br>• Toner Container (Bk)<br><br>[Remedy] Check/replace the related parts.<br><br>[Reference] If a user inserts an empty Toner Container (Bk) repeatedly, the error may occur. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E029 | 5008 | Title | Registration Patch Sensor (Front) light intensity error |
| | | Detection description | The background regular reflection output of the Registration Patch Sensor at the front side did not fall within the specified range for 2 consecutive times at initialization. |
| | | Remedy | [Related parts]<br>• Registration Patch Sensor Unit (Front) (UN31) (Unit of replacement: REGISTRATION SENSOR ASSEMBLY)<br>• Registration Patch Sensor Unit (Front) Shutter (Unit of replacement: SHUTTER, REGISTRATION SENSOR)<br>• Registration Shutter Solenoid (SL03) (Unit of replacement: SOLENOID)<br>• Harness between the Registration Patch Sensor Unit (Front) and the DC Controller PCB<br>    1. Registration Patch Sensor Unit (Front) (UN31/J5603) to Relay Connector (16P) (Unit of replacement: CABLE, REG. DETECT)<br>    2. Relay Connector (16P) to Relay Connector (16P) (Unit of replacement: CABLE CONNECTING ASSEMBLY)<br>    3. Relay Connector (16P) to DC Controller PCB (UN04/J170) (Unit of replacement: 2ST TRANS. H.V. CONTACT ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>Check the background regular reflection output value (front) in COPIER (level 2)> DISPLAY> DENS> P-B-P-C.<br>a. If the value is less than 10,<br>1. Check if the sensor window of the Registration Patch Sensor Unit (Front) is soiled. If it is soiled, clean it with a blower.<br>2. Check that the Registration Patch Sensor Unit (Front) Shutter is properly installed and it is not damaged or deformed.<br>If it is deformed or damaged, replace the Registration Patch Sensor Unit (Front).<br>3. Check the operation of the Registration Shutter Solenoid.<br>3-1. If the Registration Shutter Solenoid moves,<br>3-1-1. Replace the Registration Patch Sensor Unit (Front).<br>3-1-2. Replace the DC Controller PCB.<br>3-2. If the solenoid does not move, replace the Registration Shutter Solenoid.<br>b. If the value is above 250,<br>1. Check the harness between the Registration Patch Sensor Unit (Front) and the DC Controller PCB.<br>2. Replace the harness between the Registration Patch Sensor Unit (Front) and the DC Controller PCB.<br>3. Replace the Registration Patch Sensor Unit (Front).<br>4. Replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E029 | 7008 | Title | Registration Patch Sensor (Rear) light intensity error |
| | | Detection description | The background regular reflection output of the Registration Patch Sensor at the rear side did not fall within the specified range for 2 consecutive times at initialization. |
| | | Remedy | [Related parts]<br>• Registration Patch Sensor Unit (Rear) (UN32) (Unit of replacement: REGISTRATION SENSOR ASSEMBLY)<br>• Registration Patch Sensor Unit (Rear) Shutter (Unit of replacement: SHUTTER, REGISTRATION SENSOR)<br>• Registration Shutter Solenoid (SL03) (Unit of replacement: SOLENOID)<br>• Harness between the Registration Patch Sensor Unit (Rear) and the DC Controller PCB<br>    1. Registration Patch Sensor Unit (Rear) (UN32/J5604) to Relay Connector (16P) (Unit of replacement: CABLE, REG. DETECT)<br>    2. Relay Connector (16P) to Relay Connector (16P) (Unit of replacement: CABLE CONNECTING ASSEMBLY)<br>    3. Relay Connector (16P) to DC Controller PCB (UN04/J170) (Unit of replacement: 2ST TRANS. H.V. CONTACT ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>Check the background regular reflection output value (rear) in COPIER (level 2)> DISPLAY> DENS> P-B-P-Y.<br>a. If the value is less than 10,<br>1. Check if the sensor window of the Registration Patch Sensor Unit (Rear) is soiled. If it is soiled, clean it with a blower.<br>2. Check that the Registration Patch Sensor Unit (Rear) Shutter is properly installed and it is not damaged or deformed.<br>If it is deformed or damaged, replace the Registration Patch Sensor Unit (Rear).<br>3. Check the operation of the Registration Shutter Solenoid.<br>3-1. If the Registration Shutter Solenoid moves,<br>3-1-1. Replace the Registration Patch Sensor Unit (Rear).<br>3-1-2. Replace the DC Controller PCB.<br>3-2. If the solenoid does not move, replace the Registration Shutter Solenoid.<br>b. If the value is above 250,<br>1. Check the harness between the Registration Patch Sensor Unit (Rear) and the DC Controller PCB.<br>2. Replace the harness between the Registration Patch Sensor Unit (Rear) and the DC Controller PCB.<br>3. Replace the Registration Patch Sensor Unit (Rear).<br>4. Replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E073 | 0001 | Title | Interlock error |
| | | Detection description | No detection of Interlock (24 V) although all the Doors (Front Cover and Right Cover) of the host machine were closed. |
| | | Remedy | [Related parts]<br>• Front Cover/Right Cover<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/pin 1 and 2) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315) and the DC Controller PCB (UN04/J20) (Unit of replacement: CABLE, POWER SUPPLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check that the Front Cover/Right Cover is closed.<br>2. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>3. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>4. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>5. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>6. Replace the DC Controller PCB.<br>7. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E074 | 0000 | Title | Primary Transfer Roller disengagement control error |
| | | Detection description | Signal was not detected although the ITB Pressure Release Switch was turned ON/OFF for 6 times. |
| | | Remedy | [Related parts]<br>• ITB Unit (Unit of replacement: INTER. TRANSFER BELT ASS'Y)<br>• Harnesses from the DC Controller PCB to the ITB Pressure Release Switch<br> 1. DC Controller PCB (UN04/J162) to Relay Connector (2P) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br> 2. Relay Connector (2P) to ITB Pressure Release Switch (SW07/J6005)<br>• Harness between the DC Controller PCB (UN04/J140) and the Primary Transfer Separation Solenoid (SL01/J5708) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the DC Controller PCB (UN04/FU07) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• ITB Guide Rail (Unit of replacement: RAIL, I.T.B., FRONT/RAIL, I.T.B., REAR)<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check that the ITB Unit is installed in the machine.<br>2. Replace the ITB Unit.<br>3. Check the harness between the DC Controller PCB and the ITB Pressure Release Switch.<br>4. Check the harness between the DC Controller PCB and the Primary Transfer Separation Solenoid.<br>5. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the ITB Guide Rail (Front/Rear).<br>2. Replace the Main Drive Unit.<br>3. Replace the DC Controller PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB.<br>[Caution] After replacing the DC Controller PCB, measure the resistance value between the Low-voltage Power Supply PCB (UN01/J315/4-pin) and the DC Controller PCB (UN04/J20/1-pin) using a tester before turning ON the main power to prevent blowout of a fuse again. If the measurement value is 1 ohm or higher (non conduction state), perform the following in the order while checking whether the error is cleared.<br>1. Replace the harness between the DC Controller PCB and the ITB Pressure Release Switch.<br>2. Replace the harness between the DC Controller PCB and the Primary Transfer Separation Solenoid. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E074 | 0002 | Title | Error in Primary Transfer Roller operation |
| | | Detection description | The ITB Pressure Release Switch could not detect the engagement operation within the specified period of time at engagement operation of the Primary Transfer Roller. |
| | | Remedy | [Related parts]<br>• ITB Unit (Unit of replacement: INTER. TRANSFER BELT ASS'Y)<br>• Harnesses from the DC Controller PCB to the ITB Pressure Release Switch<br>    1. DC Controller PCB (UN04/J162) to Relay Connector (2P) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>    2. Relay Connector (2P) to ITB Pressure (Unit of replacement: 1ST TRANS. H.V. CONTACT ASS'Y)<br>• Release Switch (SW07/J6005)<br>• Harness between the DC Controller PCB (UN04/J140) and the Primary Transfer Separation Solenoid (SL01/J5708) (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• Fuse in the DC Controller PCB (UN04/FU07) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• ITB Guide Rail (Unit of replacement: RAIL, I.T.B., FRONT/RAIL, I.T.B., REAR)<br>• Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check that the ITB Unit is installed in the machine.<br>2. Replace the ITB Unit.<br>3. Check the harness between the DC Controller PCB and the ITB Pressure Release Switch.<br>4. Check the harness between the DC Controller PCB and the Primary Transfer Separation Solenoid.<br>5. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the ITB Guide Rail (Front/Rear).<br>2. Replace the Main Drive Unit.<br>3. Replace the DC Controller PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB.<br>[Caution] After replacing the DC Controller PCB, measure the resistance value between the Low-voltage Power Supply PCB (UN01/J315/4-pin) and the DC Controller PCB (UN04/J20/1-pin) using a tester before turning ON the main power to prevent blowout of a fuse again. If the measurement value is 1 ohm or higher (non conduction state), perform the following in the order while checking whether the error is cleared.<br>1. Replace the harness between the DC Controller PCB and the ITB Pressure Release Switch.<br>2. Replace the harness between the DC Controller PCB and the Primary Transfer Separation Solenoid. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E100 | 0001 | Title | BD error |
| | | Detection description | The BD lock was unlocked although it had been locked once. |
| | | Remedy | [Related parts]<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Flexible Cable between the Main Controller PCB (UN81/J7002) and the Y/M/C/Bk Laser Driver PCB (UN05/J201) (Unit of replacement: CABLE, FLAT)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br>• Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E102 | 0001 | Title | EEPROM error |
| | | Detection description | An error has occurred in EEPROM of the Laser Scanner. |
| | | Remedy | [Related parts]<br>• Laser Scanner Unit (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Interlock Switch 1 and 2 (SW02 and SW03/J24/pin 1 and 2) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts.<br><br>[Caution] After replacing the related parts, execute "Settings/Registration> Adjustment/Maintenance> Adjust Image Quality> Auto Correct Color Mismatch". |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E110 | 0001 | Title | Scanner Motor error |
| | | Detection description | The speed was not locked by FG control within 5.5 sec after startup of Scanner Motor. |
| | | Remedy | [Related parts]<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Flexible Cable between the Main Controller PCB (UN81/J7002) and the Y/M/C/Bk Laser Driver PCB (UN05/J201) (Unit of replacement: CABLE, FLAT)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br>• Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E110 | 0002 | Title | Scanner Motor error |
| | | Detection description | The speed was not locked by BD control within 5.5 sec after startup of Scanner Motor. |
| | | Remedy | [Related parts]<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Flexible Cable between the Main Controller PCB (UN81/J7002) and the Y/M/C/Bk Laser Driver PCB (UN05/J201) (Unit of replacement: CABLE, FLAT)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br>• Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E110 | 0003 | Title | Scanner Motor error |
| | | Detection description | The phase was not locked by BD control within 5.5 sec after startup of Scanner Motor. |
| | | Remedy | [Related parts]<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Flexible Cable between the Main Controller PCB (UN81/J7002) and the Y/M/C/Bk Laser Driver PCB (UN05/J201) (Unit of replacement: CABLE, FLAT)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br>• Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E193 | 0001 | Title | Image ASIC communication error |
| | | Detection description | Communication between the DC Controller PCB (CPU) and IMG1L (ASIC) in the Main Controller PCB was not available. |
| | | Remedy | [Related parts]<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0000 | Title | EEPROM communication error |
| | | Detection description | The NACK (a negative reply sent by the reception side to the sending side) was received for 3 times in communication from the DC Controller PCB (CPU) to the DCON EEPROM on the DC Controller PCB. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0001 | Title | EEPROM communication error |
| | | Detection description | Although access to the DCON EEPROM from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0002 | Title | EEPROM communication error |
| | | Detection description | Although write polling to the DCON EEPROM from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0003 | Title | EEPROM communication error |
| | | Detection description | EEPROM data in DCON could not be read at startup. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E196 | 000F | Title | EEPROM communication error |
| | | Detection description | The number of read/write job data to the DCON EEPROM (device information) exceeded 100. |
| | | Remedy | [Remedy] Turn OFF and then ON the main power.<br><br>[Reference] Data (device information) is reset by turning OFF and then ON the main power. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0100 | Title | EEPROM communication error |
| | | Detection description | The NACK (a negative reply sent by the reception side to the sending side) was received for 3 times in communication from the DC Controller PCB (CPU) to the SCNR EEPROM. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0101 | Title | EEPROM communication error |
| | | Detection description | Although access to the SCNR EEPROM from the DC Controller PCB (CPU) was executed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0102 | Title | EEPROM communication error |
| | | Detection description | Although write polling to the SCNR EEPROM from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 010F | Title | EEPROM communication error |
| | | Detection description | The number of read/write job data to the SCNR EEPROM (device information) exceeded 100. |
| | | Remedy | [Remedy] Turn OFF and then ON the main power.<br><br>[Reference] Data (device information) is reset by turning OFF and then ON the main power. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0200 | Title | EEPROM communication error |
| | | Detection description | The NACK (a negative reply sent by the reception side to the sending side) was received for 3 times in communication from the DC Controller PCB (CPU) to the PCRG_Y EEPROM. |
| | | Remedy | [Related parts]<br>• Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (Y) (UN12) (Unit of replacement: DEVE_ UNIT_Y)<br>• Drum Unit Relay PCB (Y) (UN08) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (Y) (UN08/J6001) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (Y), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (Y) and the Drum Unit Relay PCB (Y) are damaged or deformed, and replace the Drum Unit (Y) if necessary.<br>7. Check if the Drum Unit Memory PCB (Y) and the Drum Unit Relay PCB (Y) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0201 | Title | EEPROM communication error |
| | | Detection description | Although access to the PCRG_Y EEPROM from the DC Controller PCB (CPU) was executed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (Y) (UN12) (Unit of replacement: DEVE_UNIT_Y)<br>• Drum Unit Relay PCB (Y) (UN08) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (Y) (UN08/J6001) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (Y), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (Y) and the Drum Unit Relay PCB (Y) are damaged or deformed, and replace the Drum Unit (Y) if necessary.<br>7. Check if the Drum Unit Memory PCB (Y) and the Drum Unit Relay PCB (Y) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0202 | Title | EEPROM communication error |
| | | Detection description | Although write polling to the PCRG_Y EEPROM from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (Y) (UN12) (Unit of replacement: DEVE_UNIT_Y)<br>• Drum Unit Relay PCB (Y) (UN08) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (Y) (UN08/J6001) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (Y), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (Y) and the Drum Unit Relay PCB (Y) are damaged or deformed, and replace the Drum Unit (Y) if necessary.<br>7. Check if the Drum Unit Memory PCB (Y) and the Drum Unit Relay PCB (Y) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 020F | Title | EEPROM communication error |
| | | Detection description | The number of read/write job data to the PCRG_Y EEPROM (device information) exceeded 100. |
| | | Remedy | [Remedy] Turn OFF and then ON the main power.<br><br>[Reference] Data (device information) is reset by turning OFF and then ON the main power. |
| E196 | 0300 | Title | EEPROM communication error |
| | | Detection description | The NACK (a negative reply sent by the reception side to the sending side) was received for 3 times in communication from the DC Controller PCB (CPU) to the PCRG_M EEPROM. |
| | | Remedy | [Related parts]<br>• Drum Unit (M) (Unit of replacement: DEVE_UNIT_M)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (M) (UN13) (Unit of replacement: DEVE_UNIT_M)<br>• Drum Unit Relay PCB (M) (UN09) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (M) (UN09/J6002) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (M), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (M) and the Drum Unit Relay PCB (M) are damaged or deformed, and replace the Drum Unit (M) if necessary.<br>7. Check if the Drum Unit Memory PCB (M) and the Drum Unit Relay PCB (M) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0301 | Title | EEPROM communication error |
| | | Detection description | Although access to the PCRG_M EEPROM from the DC Controller PCB (CPU) was executed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Drum Unit (M) (Unit of replacement: DEVE_UNIT_M)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (M) (UN13) (Unit of replacement: DEVE_UNIT_M)<br>• Drum Unit Relay PCB (M) (UN09) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (M) (UN09/J6002) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (M), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (M) and the Drum Unit Relay PCB (M) are damaged or deformed, and replace the Drum Unit (M) if necessary.<br>7. Check if the Drum Unit Memory PCB (M) and the Drum Unit Relay PCB (M) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0302 | Title | EEPROM communication error |
| | | Detection description | Although write polling to the PCRG_M EEPROM from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Drum Unit (M) (Unit of replacement: DEVE_UNIT_M)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (M) (UN13) (Unit of replacement: DEVE_UNIT_M)<br>• Drum Unit Relay PCB (M) (UN09) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (M) (UN09/J6002) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (M), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (M) and the Drum Unit Relay PCB (M) are damaged or deformed, and replace the Drum Unit (M) if necessary.<br>7. Check if the Drum Unit Memory PCB (M) and the Drum Unit Relay PCB (M) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 030F | Title | EEPROM communication error |
| | | Detection description | The number of read/write job data to the PCRG_M EEPROM (device information) exceeded 100. |
| | | Remedy | [Remedy] Turn OFF and then ON the main power.<br><br>[Reference] Data (device information) is reset by turning OFF and then ON the main power. |
| E196 | 0400 | Title | EEPROM communication error |
| | | Detection description | The NACK (a negative reply sent by the reception side to the sending side) was received for 3 times in communication from the DC Controller PCB (CPU) to the PCRG_C EEPROM. |
| | | Remedy | [Related parts]<br>• Drum Unit (C) (Unit of replacement: DEVE_UNIT_C)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (C) (UN14) (Unit of replacement: DEVE_UNIT_C)<br>• Drum Unit Relay PCB (C) (UN10) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (C) (UN10/J6003) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (C), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (C) and the Drum Unit Relay PCB (C) are damaged or deformed, and replace the Drum Unit (C) if necessary.<br>7. Check if the Drum Unit Memory PCB (C) and the Drum Unit Relay PCB (C) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0401 | Title | EEPROM communication error |
| | | Detection description | Although access to the PCRG_C EEPROM from the DC Controller PCB (CPU) was executed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Drum Unit (C) (Unit of replacement: DEVE_UNIT_C)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (C) (UN14) (Unit of replacement: DEVE_ UNIT_C)<br>• Drum Unit Relay PCB (C) (UN10) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (C) (UN10/J6003) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (C), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (C) and the Drum Unit Relay PCB (C) are damaged or deformed, and replace the Drum Unit (C) if necessary.<br>7. Check if the Drum Unit Memory PCB (C) and the Drum Unit Relay PCB (C) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0402 | Title | EEPROM communication error |
| | | Detection description | Although write polling to the PCRG_C EEPROM from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Drum Unit (C) (Unit of replacement: DEVE_UNIT_C)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (C) (UN14) (Unit of replacement: DEVE_UNIT_C)<br>• Drum Unit Relay PCB (C) (UN10) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J160) and the Drum Unit Relay PCB (C) (UN10/J6003) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (C), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (C) and the Drum Unit Relay PCB (C) are damaged or deformed, and replace the Drum Unit (C) if necessary.<br>7. Check if the Drum Unit Memory PCB (C) and the Drum Unit Relay PCB (C) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 040F | Title | EEPROM communication error |
| | | Detection description | The number of read/write job data to the PCRG_C EEPROM (device information) exceeded 100. |
| | | Remedy | [Remedy] Turn OFF and then ON the main power.<br><br>[Reference] Data (device information) is reset by turning OFF and then ON the main power. |
| E196 | 0500 | Title | EEPROM communication error |
| | | Detection description | The NACK (a negative reply sent by the reception side to the sending side) was received for 3 times in communication from the DC Controller PCB (CPU) to the PCRG_Bk EEPROM. |
| | | Remedy | [Related parts]<br>• Drum Unit (Bk) (Unit of replacement: P-UNIT_BK)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (Bk) (UN15) (Unit of replacement: P-UNIT_BK)<br>• Drum Unit Relay PCB (Bk) (UN11) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (Bk) (UN11/J6004) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (Bk), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (Bk) and the Drum Unit Relay PCB (Bk) are damaged or deformed, and replace the Drum Unit (Bk) if necessary.<br>7. Check if the Drum Unit Memory PCB (Bk) and the Drum Unit Relay PCB (Bk) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0501 | Title | EEPROM communication error |
| | | Detection description | Although access to the PCRG_Bk EEPROM from the DC Controller PCB (CPU) was executed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Drum Unit (Bk) (Unit of replacement: P-UNIT_BK)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (Bk) (UN15) (Unit of replacement: P-UNIT_BK)<br>• Drum Unit Relay PCB (Bk) (UN11) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (Bk) (UN11/J6004) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (Bk), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (Bk) and the Drum Unit Relay PCB (Bk) are damaged or deformed, and replace the Drum Unit (Bk) if necessary.<br>7. Check if the Drum Unit Memory PCB (Bk) and the Drum Unit Relay PCB (Bk) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0502 | Title | EEPROM communication error |
| | | Detection description | Although write polling to the PCRG_Bk EEPROM from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Drum Unit (Bk) (Unit of replacement: P-UNIT_BK)<br>• Front Cover/Right Cover<br>• Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Harness between the Interlock Switch 1 and 2 (SW02 and SW03) and the DC Controller PCB (UN04/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT)<br>• Drum Unit Memory PCB (Bk) (UN15) (Unit of replacement: P-UNIT_BK)<br>• Drum Unit Relay PCB (Bk) (UN11) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• Harness between the DC Controller PCB (UN04/J162) and the Drum Unit Relay PCB (Bk) (UN11/J6004) (Unit of replacement: PROCESS CONTROL PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J315 and J322) and the DC Controller PCB (UN04/J20 and J22) (Unit of replacement: CABLE, PANEL POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Remove and then install the Drum Unit (Bk), and check whether the error is cleared.<br>[Reference] EEPROMs on the Drum Units of all colors are connected each other with signal cables. Therefore, even if the error is not cleared with step 1, it may be cleared by removing and then installing the Drum Units of all colors.<br>2. Check that the Front Cover/Right Cover is closed.<br>3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover.<br>4. Turn OFF and then ON the main power, and check whether the error is cleared.<br>5. Check that the harness between the Interlock Switch 1 and 2 and the DC Controller PCB is not short-circuited (the harness does not come in contact with the plate while the cable sheath is peeled).<br>6. Check if the Drum Unit Memory PCB (Bk) and the Drum Unit Relay PCB (Bk) are damaged or deformed, and replace the Drum Unit (Bk) if necessary.<br>7. Check if the Drum Unit Memory PCB (Bk) and the Drum Unit Relay PCB (Bk) are soiled. If it is soiled, clean it with a blower.<br>8. Disconnect the connector (J24) of the DC Controller while the Front Cover and the Right Cover are closed, and measure the resistance value between the connectors J24/1-pin and the J24/2-pin on the J24 harness side using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the DC Controller PCB.<br>2. Replace the Low-voltage Power Supply PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the harness between the Interlock Switch 1 and 2 and the DC Controller PCB.<br>9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB.<br>10. Replace the DC Controller PCB.<br>11. Replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 050F | Title | EEPROM communication error |
| | | Detection description | The number of read/write job data to the PCRG_Bk EEPROM (device information) exceeded 100. |
| | | Remedy | [Remedy] Turn OFF and then ON the main power.<br><br>[Reference] Data (device information) is reset by turning OFF and then ON the main power. |
| E196 | 0600 | Title | EEPROM communication error |
| | | Detection description | The NACK (a negative reply sent by the reception side to the sending side) was received for 3 times in communication from the DC Controller PCB (CPU) to the RTC. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0601 | Title | EEPROM communication error |
| | | Detection description | Although access to the RTC from the DC Controller PCB (CPU) was executed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0602 | Title | EEPROM communication error |
| | | Detection description | Although write polling to the RTC from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E196 | 060F | Title | EEPROM communication error |
| | | Detection description | The number of read/write job data to the RTC (device information) exceeded 100. |
| | | Remedy | [Remedy] Turn OFF and then ON the main power.<br><br>[Reference] Data (device information) is reset by turning OFF and then ON the main power. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0800 | Title | EEPROM communication error |
| | | Detection description | The NACK (a negative reply sent by the reception side to the sending side) was received for 3 times in communication from the DC Controller PCB (CPU) to the HVT EEPROM. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0801 | Title | EEPROM communication error |
| | | Detection description | Although access to the HVT EEPROM from the DC Controller PCB (CPU) was executed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E196 | 0802 | Title | EEPROM communication error |
| | | Detection description | Although write polling to the HVT EEPROM from the DC Controller PCB (CPU) was performed for 3 times, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J110) and the Y/M/C/Bk Laser Driver PCB (UN05/J202) (Unit of replacement: CABLE, LASER SCANNER)<br>• Harness between the DC Controller PCB (UN04/J184) and the Developing High-voltage PCB (UN06/J241) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY)<br>• Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E196 | 080F | Title | EEPROM communication error |
| | | Detection description | The number of read/write job data to the HVT EEPROM (device information) exceeded 100. |
| | | Remedy | [Remedy] Turn OFF and then ON the main power.<br><br>[Reference] Data (device information) is reset by turning OFF and then ON the main power. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E197 | 0000 | Title | Communication error |
| | | Detection description | Although access to KONA1 (ASIC) in the DC Controller PCB from the DC Controller PCB (CPU) was performed, the NACK (a negative reply sent by the reception side to the sending side) was received for 3 times. |
| | | Remedy | [Remedy] Replace the DC Controller PCB (UN04). (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) |
| E197 | 0F00 | Title | Communication error |
| | | Detection description | Although access to KONA1 (ASIC) in the DC Controller PCB from the DC Controller PCB (CPU) was performed, no response was received and timeout occurred. |
| | | Remedy | [Remedy] Replace the DC Controller PCB (UN04). (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) |
| E197 | 1000 | Title | Communication error |
| | | Detection description | Although access to KONA2 (ASIC) in the DC Controller PCB from the DC Controller PCB (CPU) was performed, the NACK (a negative reply sent by the reception side to the sending side) was received for 3 times. |
| | | Remedy | [Remedy] Replace the DC Controller PCB (UN04). (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) |
| E197 | 1F00 | Title | Communication error |
| | | Detection description | Although access to KONA2 (ASIC) in the DC Controller PCB from the DC Controller PCB (CPU) was performed, no response was received and timeout occurred. |
| | | Remedy | [Remedy] Replace the DC Controller PCB (UN04). (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E197 | 2000 | Title | Communication error |
| | | Detection description | Although access to KONA3 (ASIC) in the Cassette Module Controller PCB from the DC Controller PCB (CPU) was performed, the NACK (a negative reply sent by the reception side to the sending side) was received for 3 times. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J190) and the cassette unit drawer (DR03/J5904) on the host machine side (Unit of replacement: OPTION CST. DRAWER ASSEMBLY)<br>• Harness between the cassette unit drawer (DR03/J5904) on the host machine side and drawer (DR101/J5950) on the cassette unit side<br>• Harness between the drawer (DR101/J5950) on the cassette unit side and the Cassette Module Controller PCB (UN101/650) (Unit of replacement: DRAWER CABLE ASSEMBLY)<br>• Fuse in the DC Controller PCB (UN04/FU19) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Cassette Module Controller PCB (UN101) (Unit of replacement: CST. PEDESTAL CONT. PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Turn OFF and then ON the main power, and check whether the error is cleared.<br>2. Check the harness between the DC Controller PCB and the cassette unit drawer on the host machine side.<br>3. Visually check if the cassette unit drawer on the host machine side and the drawer on the cassette unit side are damaged or if there is any bent pin. If so, replace the drawer.<br>4. Check the harness between the drawer on the cassette unit side and the Cassette Module Controller PCB.<br>5. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the Cassette Module Controller PCB.<br>2. Replace the DC Controller PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E197 | 2101 | Title | Communication error |
| | | Detection description | Although access to KONA3 (ASIC) in the Cassette Module Controller PCB from the DC Controller PCB (CPU) was performed, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J190) and the cassette unit drawer (DR03/J5904) on the host machine side (Unit of replacement: OPTION CST. DRAWER ASSEMBLY)<br>• Harness between the cassette unit drawer (DR03/J5904) on the host machine side and drawer (DR101/J5950) on the cassette unit side<br>• Harness between the drawer (DR101/J5950) on the cassette unit side and the Cassette Module Controller PCB (UN101/J650) (Unit of replacement: DRAWER CABLE ASSEMBLY)<br>• Fuse in the DC Controller PCB (UN04/FU19) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Cassette Module Controller PCB (UN101/J650) (Unit of replacement: CST. PEDESTAL CONT. PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Turn OFF and then ON the main power, and check whether the error is cleared.<br>2. Check the harness between the DC Controller PCB and the cassette unit drawer on the host machine side.<br>3. Visually check if the cassette unit drawer on the host machine side and the drawer on the cassette unit side are damaged or if there is any bent pin. If so, replace the drawer.<br>4. Check the harness between the drawer on the cassette unit side and the Cassette Module Controller PCB.<br>5. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the Cassette Module Controller PCB.<br>2. Replace the DC Controller PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E197 | 2F00 | Title | Communication error |
| | | Detection description | Although access to KONA3 (ASIC) in the Cassette Module Controller PCB from the DC Controller PCB (CPU) was performed, no response was received and timeout occurred. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J190) and the cassette unit drawer (DR03/J5904) on the host machine side (Unit of replacement: OPTION CST. DRAWER ASSEMBLY)<br>• Harness between the cassette unit drawer (DR03/J5904) on the host machine side and drawer (DR101/J5950) on the cassette unit side<br>• Harness between the drawer (DR101/J5950) on the cassette unit side and the Cassette Module Controller PCB (UN101/J650) (Unit of replacement: DRAWER CABLE ASSEMBLY)<br>• Fuse in the DC Controller PCB (UN04/FU19) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Cassette Module Controller PCB (UN101/J650) (Unit of replacement: CST. PEDESTAL CONT. PCB ASS'Y)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Turn OFF and then ON the main power, and check whether the error is cleared.<br>2. Check the harness between the DC Controller PCB and the cassette unit drawer on the host machine side.<br>3. Visually check if the cassette unit drawer on the host machine side and the drawer on the cassette unit side are damaged or if there is any bent pin. If so, replace the drawer.<br>4. Check the harness between the drawer on the cassette unit side and the Cassette Module Controller PCB.<br>5. Measure the both ends of the fuse in the DC Controller PCB using a tester.<br>a. If the measurement value is less than 1 ohm (conduction state),<br>1. Replace the Cassette Module Controller PCB.<br>2. Replace the DC Controller PCB.<br>b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E202 | 0001 | Title | Scanner Unit HP error |
| | | Detection description | The HP of the Scanner Unit could not be detected when starting scanning operation. |
| | | Remedy | [Related parts]<br>• Harnesses from the Reader Assembly HP Sensor to the Main Controller PCB<br>    1. Reader Assembly HP Sensor (PS01/J913) to Relay Connector (3P) (Unit of replacement: CABLE, HOME POSITION SENSOR)<br>    2. Relay Connector (3P) to Main Controller PCB (UN81/J8103) (Unit of replacement: CABLE, READER MAIN)<br>• Harness between the Reader Motor (M01/J901) and the Main Controller PCB (UN81/J8103) (Unit of replacement: CABLE, READER MAIN)<br>• Reader Motor (M01) (Unit of replacement: MOTOR, STEPPING)<br>• CIS HP Sensor (PS01) (Unit of replacement: PHOTO INTERRUPTER)<br>• BOOK Motor (Unit of replacement: MOTOR, STEPPING)<br>• Pulley Gear 85T/20T (Unit of replacement: GEAR, 85T/20T)<br>• Carriage Timing Belt (Unit of replacement: BELT, TIMING, COGGED)<br>• Idler Pulley (Unit of replacement: PULLEY, IDLER)<br>• Idler Pulley Holder (Unit of replacement: READER ASSEMBLY)<br>• FB Shaft (Unit of replacement: READER ASSEMBLY)<br>• Electrolytic capacitor on the Main Controller PCB (C8002) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br>• 24V power supply for driving the Reader on the Main Controller PCB side (J7003/pin 1) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br>• Harness between the Main Controller PCB (UN81/J7003) and the Low-voltage Power Supply PCB (UN01/J313) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check the harness between the Reader Assembly HP Sensor and the Main Controller PCB.<br>2. Check the harness between the Reader Motor and the Main Controller PCB.<br>3. At initial operation of the Reader startup after the main power is turned ON, check if the Reader Motor operates (whether the Scanner Unit moves or operation sound is heard). If it operates, move the Carriage Timing Belt by hand and check if load is appropriate.<br>a. If it is appropriate, replace the CIS HP Sensor.<br>b. If it is not appropriate (overloaded), replace the following parts.<br>- Stepping Motor<br>- Z85_T20 Pulley Gear<br>- Carriage Timing Belt<br>- Idler Pulley<br>- Idler Pulley Holder<br>4. Check for soiling or scar on the surface of the FB Shaft on which the Scanner Unit is installed. If there is soiling or scar, replace the FB Shaft.<br>5. Measure the electrolytic capacitor on the Main Controller PCB using a tester. If the measurement value is 24V, replace the Main Controller PCB.<br>6. Measure the 24V power supply for driving the Reader on the Main Controller PCB side using a tester. If the measurement value is 24 V, replace the Main Controller PCB.<br>7. Check the harness between the Main Controller PCB and the Low-voltage Power Supply PCB.<br>8. Perform step 6 again. If the measurement value is 24 V, replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E202 | 0002 | Title | Scanner Unit HP error |
| | | Detection description | The HP of the Scanner Unit could not be detected when completing scanning operation. |
| | | Remedy | [Related parts]<br>• Harnesses from the Reader Assembly HP Sensor to the Main Controller PCB<br>    1. Reader Assembly HP Sensor (PS01/J913) to Relay Connector (3P) (Unit of replacement: CABLE, HOME POSITION SENSOR)<br>    2. Relay Connector (3P) to Main Controller PCB (UN81/J8103) (Unit of replacement: CABLE, READER MAIN)<br>• Harness between the Reader Motor (M01/J901) and the Main Controller PCB (UN81/J8103) (Unit of replacement: CABLE, READER MAIN)<br>• Reader Motor (M01) (Unit of replacement: MOTOR, STEPPING)<br>• CIS HP Sensor (PS01) (Unit of replacement: PHOTO INTERRUPTER)<br>• BOOK Motor (Unit of replacement: MOTOR, STEPPING)<br>• Pulley Gear 85T/20T (Unit of replacement: GEAR, 85T/20T)<br>• Carriage Timing Belt (Unit of replacement: BELT, TIMING, COGGED)<br>• Idler Pulley (Unit of replacement: PULLEY, IDLER)<br>• Idler Pulley Holder (Unit of replacement: READER ASSEMBLY)<br>• FB Shaft (Unit of replacement: READER ASSEMBLY)<br>• Electrolytic capacitor on the Main Controller PCB (C8002) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br>• 24V power supply for driving the Reader on the Main Controller PCB side (J7003/pin 1) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br>• Harness between the Main Controller PCB (UN81/J7003) and the Low-voltage Power Supply PCB (UN01/J313) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check the harness between the Reader Assembly HP Sensor and the Main Controller PCB.<br>2. Check the harness between the Reader Motor and the Main Controller PCB.<br>3. At initial operation of the Reader startup after the main power is turned ON, check if the Reader Motor operates (whether the Scanner Unit moves or operation sound is heard). If it operates, move the Carriage Timing Belt by hand and check if load is appropriate.<br>a. If it is appropriate, replace the CIS HP Sensor.<br>b. If it is not appropriate (overloaded), replace the following parts.<br>- Stepping Motor<br>- Z85_T20 Pulley Gear<br>- Carriage Timing Belt<br>- Idler Pulley<br>- Idler Pulley Holder<br>4. Check for soiling or scar on the surface of the FB Shaft on which the Scanner Unit is installed. If there is soiling or scar, replace the FB Shaft.<br>5. Measure the electrolytic capacitor on the Main Controller PCB using a tester. If the measurement value is 24V, replace the Main Controller PCB.<br>6. Measure the 24V power supply for driving the Reader on the Main Controller PCB side using a tester. If the measurement value is 24 V, replace the Main Controller PCB.<br>7. Check the harness between the Main Controller PCB and the Low-voltage Power Supply PCB.<br>8. Perform step 6 again. If the measurement value is 24 V, replace the Low-voltage Power Supply PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E240 | 0000 | Title | Controller communication error |
| | | Detection description | A sequence error with the controller occurred. |
| | | Remedy | [Related parts]<br>• Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check the harness between the DC Controller PCB and the Main Controller PCB.<br>2. Turn ON the power, and check if the initialization is executed at startup.<br>2-1. If the initialization is not executed, replace the DC Controller PCB.<br>2-2. If the initialization is executed, replace the Main Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E240 | 0005 | Title | Controller communication error |
| | | Detection description | A sequence error with the controller occurred. |
| | | Remedy | [Related parts]<br>• Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check the harness between the DC Controller PCB and the Main Controller PCB.<br>2. Turn ON the power, and check if the initialization is executed at startup.<br>2-1. If the initialization is not executed, replace the DC Controller PCB.<br>2-2. If the initialization is executed, replace the Main Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E240 | 0D00 | Title | Controller communication error |
| | | Detection description | A sequence error with the controller occurred. |
| | | Remedy | [Related parts]<br>• Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check the harness between the DC Controller PCB and the Main Controller PCB.<br>2. Turn ON the power, and check if the initialization is executed at startup.<br>2-1. If the initialization is not executed, replace the DC Controller PCB.<br>2-2. If the initialization is executed, replace the Main Controller PCB. |
| E246 | 0001 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E246 | 0002 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E246 | 0003 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E246 | 0005 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E247 | 0001 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E247 | 0002 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E247 | 0003 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E247 | 0004 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E248 | 0001 | Title | Reader backup error |
| | | Detection description | Reading error was detected when the Controller IC of the Main Controller PCB read the Reader backup value in the Flash PCB. |
| | | Remedy | [Related parts] Flash PCB (UN96)<br><br>[Remedy] Perform the following in the order while checking whether the error is cleared. After performing the remedy, enter the value of the service label again.<br>1. After executing "COPIER> FUNCTION> CLEAR> R-CON", turn OFF and then ON the main power, and check whether the error is cleared.<br>2. After replacing the Flash PCB, reinstall the system software using SST or a USB memory. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E248 | 0002 | Title | Reader backup error |
| | | Detection description | The Controller IC of the Main Controller PCB failed to rewrite the Reader backup value in the Flash PCB. |
| | | Remedy | [Related parts] Flash PCB (UN96)<br><br>[Remedy] Perform the following in the order while checking whether the error is cleared. After performing the remedy, enter the value of the service label again.<br>1. After executing "COPIER> FUNCTION> CLEAR> R-CON", turn OFF and then ON the main power, and check whether the error is cleared.<br>2. After replacing the Flash PCB, reinstall the system software using SST or a USB memory. |
| E280 | 0004 | Title | Scanner Unit communication error |
| | | Detection description | 1. The CIS was not connected.<br>2. A CIS other than that for this machine was connected. |
| | | Remedy | [Related parts]<br>• Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT)<br>• Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E301 | 0001 | Title | Reading light intensity error |
| | | Detection description | 1. Light intensity at shading was insufficient.<br>2. Light intensity when no light was emitted from CIS was too much. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| | | Remedy | [Related parts]<br>• Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT)<br>• Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E301 | 0002 | Title | Reading light intensity error |
| | | Detection description | Image sampling for shading was not completed. |
| | | Remedy | [Related parts]<br>• Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT)<br>• Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E350 | 0000 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E350 | 0001 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E350 | 0002 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E350 | 0003 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E350 | 3000 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E351 | 0000 | Title | Main Controller PCB communication error |
| | | Detection description | Communication function of the Main Controller PCB did not work properly. |
| | | Remedy | [Remedy] Replace the Main Controller PCB (UN81). (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) |
| E354 | 0001 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E354 | 0002 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E355 | 0001 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E355 | 0002 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E355 | 0003 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E355 | 0004 | Title | System error |
| | | Detection description | System error |
| | | Remedy | Contact to the sales company. |
| E719 | 0000 | Title | Card Reader communication error (serial communication) |
| | | Description | Communication with the Card Reader could not be started at startup. |
| | | Remedy | 1. Check the connection of the Card Reader-F1, and turn OFF and then ON the main power switch.<br>2. Remove the Card Reader-F1. NOTE: After performing the remedy work above, go through the following to clear the error: COPIER> FUNCTION> CLEAR> E719-CLR. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E732 | 0001 | Title | Scanner communication error |
| | | Detection description | DDI-S communication error. |
| | | Remedy | [Related parts]<br>• Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT)<br>• Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. After performing the remedy, check that the copy image is output normally. |
| E732 | 0010 | Title | Scanner communication error |
| | | Detection description | DDI-S communication error (Vsync detection error) |
| | | Remedy | [Related parts]<br>• Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT)<br>• Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. After performing the remedy, check that the copy image is output normally. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E733 | 0000 | Title | Printer communication error |
| | | Detection description | Communication between the DC Controller PCB and the Main Controller PCB was not available at startup. |
| | | Remedy | [Related parts]<br>• DC Controller PCB (UN04/J20) and the Harness between the Low-voltage Power Supply PCB (UN01/J315) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check the harness between the DC Controller PCB and the Low-voltage Power Supply PCB.<br>2. Check the harness between the DC Controller PCB and the Main Controller PCB.<br>3. Turn ON the power, and check if the initialization is executed at startup.<br>3-1. If the initialization is not executed, replace the DC Controller PCB.<br>3-2. If the initialization is executed, replace the Main Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E733 | 0001 | Title | Printer communication error |
| | | Detection description | • DDI-P communication error<br>• DDI-L communication error (parity error) |
| | | Remedy | [Related parts]<br>• Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check the harness between the DC Controller PCB and the Main Controller PCB.<br>2. Turn ON the power, and check if the initialization is executed at startup.<br>2-1. If the initialization is not executed, replace the DC Controller PCB.<br>2-2. If the initialization is executed, replace the Main Controller PCB. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E733 | 0002 | Title | Printer communication error |
| | | Detection description | DDI-P communication error (invalid packet) |
| | | Remedy | [Related parts]<br>• Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Perform the following in the order while checking whether the error is cleared.<br>1. Check the harness between the DC Controller PCB and the Main Controller PCB.<br>2. Turn ON the power, and check if the initialization is executed at startup.<br>2-1. If the initialization is not executed, replace the DC Controller PCB.<br>2-2. If the initialization is executed, replace the Main Controller PCB. |
| E733 | 0F00 | Title | Printer communication error |
| | | Detection description | A communication error that can be recovered by reboot.<br>If it is detected again after reboot, E733-0000 is generated. |
| | | Remedy | [Remedy] It is not necessary to perform a remedy because the machine is automatically rebooted after log collection. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E733 | 0F01 | Title | Printer communication error |
| | | Detection description | A communication error that can be recovered by reboot.<br>If it is detected again after reboot, E733-0001 is generated. |
| | | Remedy | [Remedy] It is not necessary to perform a remedy because the machine is automatically rebooted after log collection. |
| E733 | 0F02 | Title | Printer communication error |
| | | Detection description | A communication error that can be recovered by reboot.<br>If it is detected again after reboot, E733-0002 is generated. |
| | | Remedy | [Remedy] It is not necessary to perform a remedy because the machine is automatically rebooted after log collection. |
| E733 | F001 | Title | Printer communication error |
| | | Detection description | Disconnection of the Flexible Cable between the Main Controller PCB and the DC Controller PCB was detected. |
| | | Remedy | [Remedy] Check/replace the Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (unit of replacement: CABLE, FLAT). |
| E733 | F002 | Title | Printer communication error |
| | | Detection description | Disconnection of the Flexible Cable between the Main Controller PCB and the Y/M/C/Bk Laser Driver PCB was detected. |
| | | Remedy | [Remedy] Check/replace the Flexible Cable between the Y/M/C/Bk Laser Driver PCB (UN05/J201) and the Main Controller PCB (UN81/J7002). (Unit of replacement: CABLE, FLAT) |
| E736 | 0000 | Title | Error in CCU communication |
| | | Description | Error in CCU-modem communication |
| | | Remedy | 1.Update the set of main controller firmware<br>2.Replace FAX-NCU PCBs3.Replace main controller PCBs |
| E736 | 0001 | Title | Error in ROM for backing up fax data |
| | | Description | An error occurred in ROM for backing up fax data |
| | | Remedy | 1. Install the set of the controller firmware.<br>2. Replace the Main Controller PCB. |
| E743 | 0000 | Title | DDI communication error |
| | | Detection description | Software sequence error |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company. |
| E744 | 0001 | Title | Error in language file/BootRom/USB memory |
| | | Description | Error in language file versionThe version of language file does not match to Bootable |
| | | Remedy | Update the set of main controller firmware |
| E744 | 0002 | Title | Error in language file/BootRom/USB memory |
| | | Description | |
| | | Remedy | |
| E744 | 1001 | Title | Error in language file/BootRom/USB memory |
| | | Description | |
| | | Remedy | |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E744 | 4000 | Title | Error in language file/BootRom/USB memory |
| | | Description | Error in engine IDDetected illegal engine connection |
| | | Remedy | 1.Check DC controller2.Update DC controller firmware3.Update the set of main controller firmware |
| E744 | 5000 | Title | Error in language file/BootRom/USB memory |
| | | Description | Error in panel microcomputer |
| | | Remedy | 1.Check panel microcomputer to upgrade the version2.Update the set of main controller firmware3.Replace main controller PCBs |
| E744 | 6000 | Title | Communication error with the Wireless LAN PCB |
| | | Description | Unable to communicate with the Wireless LAN. |
| | | Remedy | 1. Turn OFF and then ON the main power. 2. Check the connection of the Wireless LAN. 3. Install the set of the controller firmware. 4. Replace the Main Controller PCB. |
| | | | |
| E744 | 7000 | Title | Main Controller PCB error |
| | | Description | An error in the microcomputer which retains fax job information of the Main Controller PCB. |
| | | Remedy | 1. Install the firmware of BKUP. 2. Install the set of the controller firmware. 3. Replace the Main Controller PCB. |
| E746 | 0000 | Title | Error in main controller PCBs |
| | | Description | Communication error occurred in main controller PCB (other than scanner-related) |
| | | Remedy | Replace main controller PCBs |
| E766 | xxxx*1 | Title | Error in firmware |
| | | Description | Error in connection occurred due to main controller software*: xxxxTask number related to Exception is shown in decimal |
| | | Remedy | 1.Power off/on2.Update firmware |
| E766 | 8000 | Title | Error in firmware |
| | | Description | Incorrect digital registration 3 point information |
| | | Remedy | 1.Power off/on2.Update firmware |
| E766 | 9000 | Title | Error in firmware |
| | | Description | Error in laser scanner unit power supply |
| | | Remedy | 1.Power off/on2.Update firmware |
| | | | |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E804 | 0000 | Title | Power Supply Cooling Fan error |
| | | Detection description | It was detected that the Power Supply Cooling Fan was locked. |
| | | Remedy | [Related parts]<br>• Harness between the Low-voltage Power Supply PCB (UN01/J323) and the Power Supply Cooling Fan (FM05/J5215) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Harness between the Low-voltage Power Supply PCB (UN01/J321) and the Main Controller PCB (UN81/J7010) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Power Supply Cooling Fan (FM05)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E806 | 0100 | Title | Drum Unit Suction Cooling Fan error |
| | | Detection description | The Drum Unit Suction Cooling Fan did not rotate for the specified period of time since the start of drive. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J180) and the Primary Transfer High-voltage PCB (UN03/J271) (Unit of replacement: CABLE, PRIMARY TRANSFER H.V.)<br>• Harness between the Primary Transfer High-voltage PCB (UN03/J272) and the Drum Unit Suction Cooling Fan (FM01)<br>• Drum Unit Suction Cooling Fan (FM01)<br>• Primary Transfer High-voltage PCB (UN03) (Unit of replacement: 1ST TRANSFER H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E806 | 0101 | Title | Drum Unit Suction Cooling Fan error |
| | | Detection description | The Drum Unit Suction Cooling Fan rotated for more than the specified period of time after the stop of drive. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J180) and the Primary Transfer High-voltage PCB (UN03/J271) (Unit of replacement: CABLE, PRIMARY TRANSFER H.V.)<br>• Harness between the Primary Transfer High-voltage PCB (UN03/J272) and the Drum Unit Suction Cooling Fan (FM01)<br>• Drum Unit Suction Cooling Fan (FM01)<br>• Primary Transfer High-voltage PCB (UN03) (Unit of replacement: 1ST TRANSFER H.V. PCB ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E806 | 0200 | Title | Drive Unit Cooling Fan error |
| | | Detection description | The Drive Unit Cooling Fan did not rotate for the specified period of time since the start of drive. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J191) and the Drive Unit Cooling Fan (FM02)<br>• Drive Unit Cooling Fan (FM02)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E806 | 0201 | Title | Drive Unit Cooling Fan error |
| | | Detection description | The Drive Unit Cooling Fan rotated for more than the specified period of time after the stop of drive. |
| | | Remedy | [Related parts]<br>• Harness between the DC Controller PCB (UN04/J191) and the Drive Unit Cooling Fan (FM02)<br>• Drive Unit Cooling Fan (FM02)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E806 | 0300 | Title | Delivery Cooling Fan error |
| | | Detection description | The Delivery Cooling Fan did not rotate for the specified period of time since the start of drive. |
| | | Remedy | [Related parts]<br>• Harnesses from the DC Controller PCB to the Delivery Cooling Fan<br>1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN)<br>2. Relay Connector (3P) to Delivery Cooling Fan (FM03)<br>• Delivery Cooling Fan (FM03)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E806 | 0301 | Title | Delivery Cooling Fan error |
| | | Detection description | The Delivery Cooling Fan rotated for more than the specified period of time after the stop of drive. |
| | | Remedy | [Related parts]<br>• Harnesses from the DC Controller PCB to the Delivery Cooling Fan<br>1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN)<br>2. Relay Connector (3P) to Delivery Cooling Fan (FM03)<br>• Delivery Cooling Fan (FM03)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E806 | 0400 | Title | Duplex Cooling Fan error |
| | | Detection description | The Duplex Cooling Fan in the Right Cover did not rotate for the specified period of time since the start of drive. |
| | | Remedy | [Related parts]<br>• Harnesses from the DC Controller PCB to the Duplex Cooling Fan<br>1. DC Controller PCB (UN04/J122) to Relay Connector (17P) (Unit of replacement: 2ST TRANS. H.V. CONTACT ASS'Y)<br>2. Relay Connector (17P) to Relay Connector (3P) (Unit of replacement: CABLE, DOOR, RIGHT)<br>3. Relay Connector (3P) to Relay Connector (3P) (Unit of replacement: CABLE, DOOR FAN, RIGHT)<br>4. Relay Connector (3P) to Duplex Cooling Fan (FM04)<br>• Duplex Cooling Fan (FM04)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E806 | 0401 | Title | Duplex Cooling Fan error |
| | | Detection description | The Duplex Cooling Fan in the Right Cover rotated for more than the specified period of time after the stop of drive. |
| | | Remedy | [Related parts]<br>• Harnesses from the DC Controller PCB to the Duplex Cooling Fan<br>    1. DC Controller PCB (UN04/J122) to Relay Connector (17P) (Unit of replacement: 2ST TRANS. H.V. CONTACT ASS'Y)<br>    2. Relay Connector (17P) to Relay Connector (3P) (Unit of replacement: CABLE, DOOR, RIGHT)<br>    3. Relay Connector (3P) to Relay Connector (3P) (Unit of replacement: CABLE, DOOR FAN, RIGHT)<br>    4. Relay Connector (3P) to Duplex Cooling Fan (FM04)<br>• Duplex Cooling Fan (FM04)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |
| E808 | 0001 | Title | Zero cross signal detection error |
| | | Detection description | An electrical trouble caused by zero cross signal error.<br>Frequency between 43 Hz and 57 Hz could not be detected for 5000 msec or longer. |
| | | Remedy | [Related parts]<br>• Harness between the Low-voltage Power Supply PCB (UN01/J322) and the DC Controller PCB (UN04/J22) (Unit of replacement: CABLE, POWER SUPPLY)<br>• Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY)<br>• DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY)<br><br>[Points to note at work] When checking the harness/cable or connector, perform the following work.<br>1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection.<br>2. Visually check that the harness is not caught or open circuit.<br>3. If there is any error, replace the corresponding harness/cable.<br><br>[Remedy] Check/replace the related parts. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E996 | 0071 | Title | Error for collecting sequence jam log (ADF) |
| | | Detection description | Error for collecting sequence jam log (ADF) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-R" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CA0 | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CA1 | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CA2 | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CA3 | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CA4 | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |

| Error code | Detail Code | Item | Description |
|---|---|---|---|
| E996 | 0CA9 | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CAB | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CAD | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CAE | Title | Error for collecting sequence jam log (Printer) |
| | | Detection description | Error for collecting jam log (Printer) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |
| E996 | 0CAF | Title | Error for collecting sequence jam log (Finisher) |
| | | Detection description | Error for collecting jam log (Finisher) |
| | | Remedy | [Remedy] Collect debug log and contact to the sales company.<br><br>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error. |

T-7-4

## Jam Code

### Jam Type

| Type | Detection description | Possible symptoms | Cause and remedy |
|---|---|---|---|
| Delay(01xx) | The sensor was not turned ON although a specified period of time had passed. | • A paper is being caught on paper lint/foreign matters on the feed path.<br>• The roller does not rotate due to failure of the Feed Motor/open circuit/poor connection of the connector.<br>• The status does not change (it is not turned ON) although a paper passed through due to open circuit in the sensor/poor connection of the connector. | Perform the following in the order while checking whether the jam is cleared.<br>1. Check/remove the residual paper lint/foreign matters on the feed path.<br>2. Check/replace the Feed Motor.<br>3. Check/replace the sensor. |
| Stationary(02xx) | The sensor was not turned OFF although a specified period of time had passed since it was turned ON. | • A paper is being caught on paper lint/foreign matters on the feed path.<br>• The roller does not rotate due to failure of the Feed Motor/open circuit/poor connection of the connector.<br>• The status does not change (it is not turned OFF) although a paper passed through due to open circuit in the sensor/poor connection of the connector. | Perform the following in the order while checking whether the jam is cleared.<br>1. Check/remove the residual paper lint/foreign matters on the feed path.<br>2. Check/replace the Feed Motor.<br>3. Check/replace the sensor. |
| Door open | The machine stopped as emergency stop because a cover of the host machine/option was opened during printing. | • A cover of the host machine/option was opened due to vibration during operation.<br>• The status of a cover was detected incorrectly as opened due to open circuit of the Cover Sensor/poor connection of the connector. | Perform the following in the order while checking whether the jam is cleared.<br>1. Check whether the corresponding cover is closed properly by checking detection signal of the Cover Sensor in the host machine/option using service mode.<br>2. Check/replace the Cover Sensor. |
| Sequence | An error caused by sporadic noise of the sensor detection signal or firmware of an equipment was detected. | • An error caused by sporadic noise signal to the sensor was detected.<br>• An error caused by firmware was detected. | Perform the following in the order while checking whether the jam is cleared.<br>1. Remove the residual papers by following the jam removal procedure.<br>2. Check the latest version of the firmware, and upgrade it if necessary. |
| Power-on(0Axx) | Paper remained on the feed path at power-on. | • Power was turned ON without removing residual paper after occurrence of an error/jam.<br>• It was detected incorrectly that there was residual paper at power-on due to open circuit of the sensor/poor connection of the connector. | Perform the following in the order while checking whether the jam is cleared.<br>1. Check the error/jam log, and remove the residual papers by following the jam removal procedure.<br>2.Check/replace the sensor. |
| Error avoidance | The machine was stopped because an error in the machine other than parts failure was detected. | • An error caused by sporadic noise signal was detected.<br>• Operation failure occurred due to one-time catch on a mechanical part. | • Normally, the machine can be used after removing the residual papers by following the jam removal procedure.<br>• In the case of parts failure, an error occurs at retry operation. In such a case, perform remedy according to the displayed error code. |
| Size error | Position of the Cassette Guide Plate was not appropriate for the size of paper being loaded. | • Different size of paper was loaded without changing position of the Cassette Guide Plate and output was performed.<br>• Paper size was detected incorrectly due to mechanical error of the Size Detection Unit, open circuit in the sensor/poor connection of the connector. | Perform the following in the order while checking whether the jam is cleared.<br>1. Set the position of the Cassette Guide Plate again.<br>2. Check/replace the mechanical mechanism of the Size Detection Unit/sensor. |
| Different media | The type of loaded paper differed from the setting. | • Output was performed with wrong paper settings (although transparency was set as paper type, different type of paper was loaded, and vice versa).<br>• Transparency could not be detected due to failure of the Transparency Sensor/open circuit/poor connection of the connector. | Perform the following in the order while checking whether the jam is cleared.<br>1. Make the paper settings correctly/load paper again.<br>2. Check/replace the Transparency Sensor. |

T-7-5

PS12

PS11

PS01

PS04

PS05

PS10

F-7-1

PS03

PS02

F-7-2

PS101

F-7-3



PS101

PS102

PS103
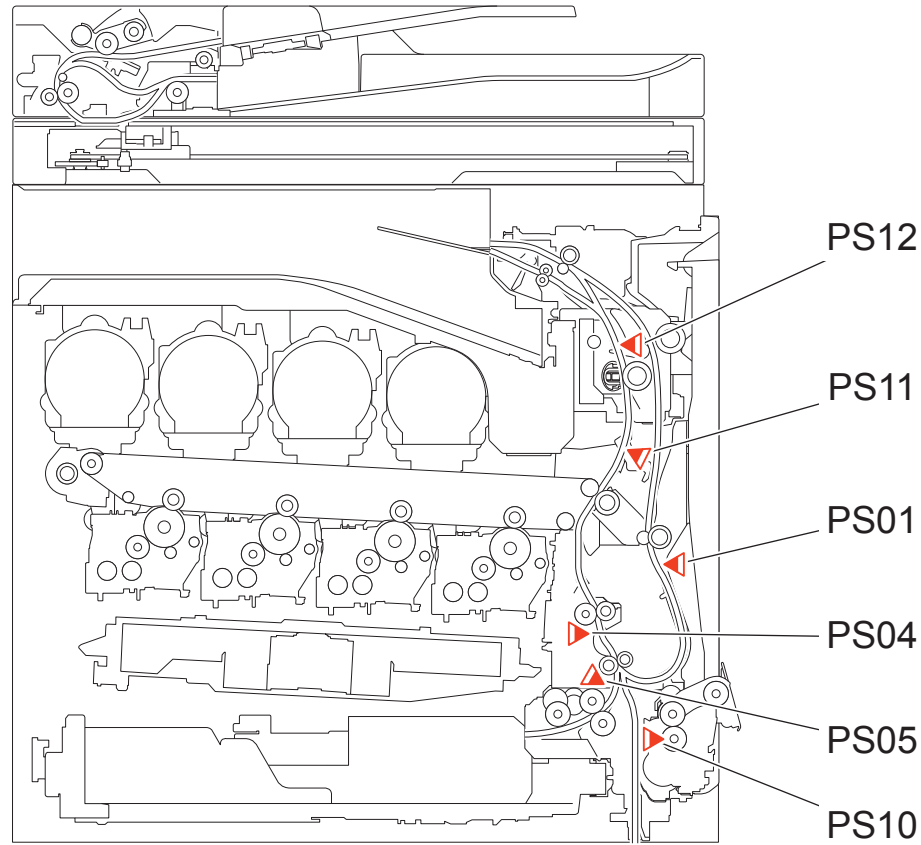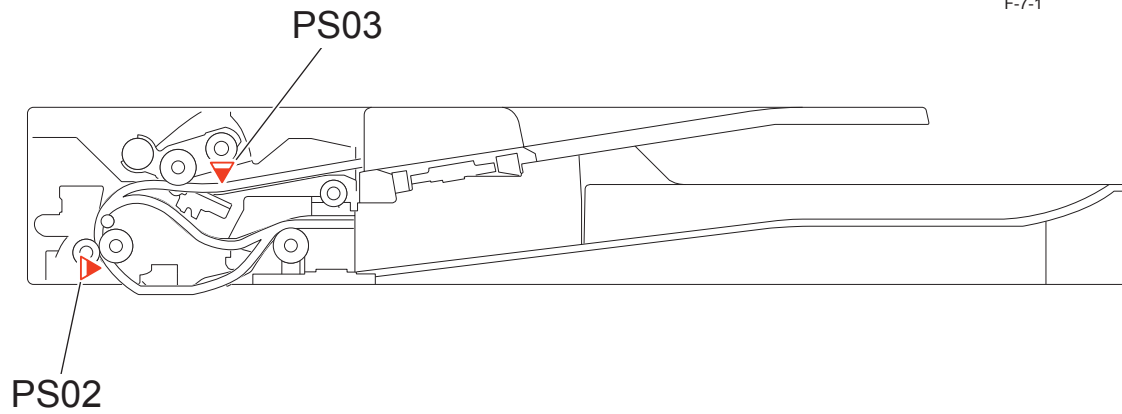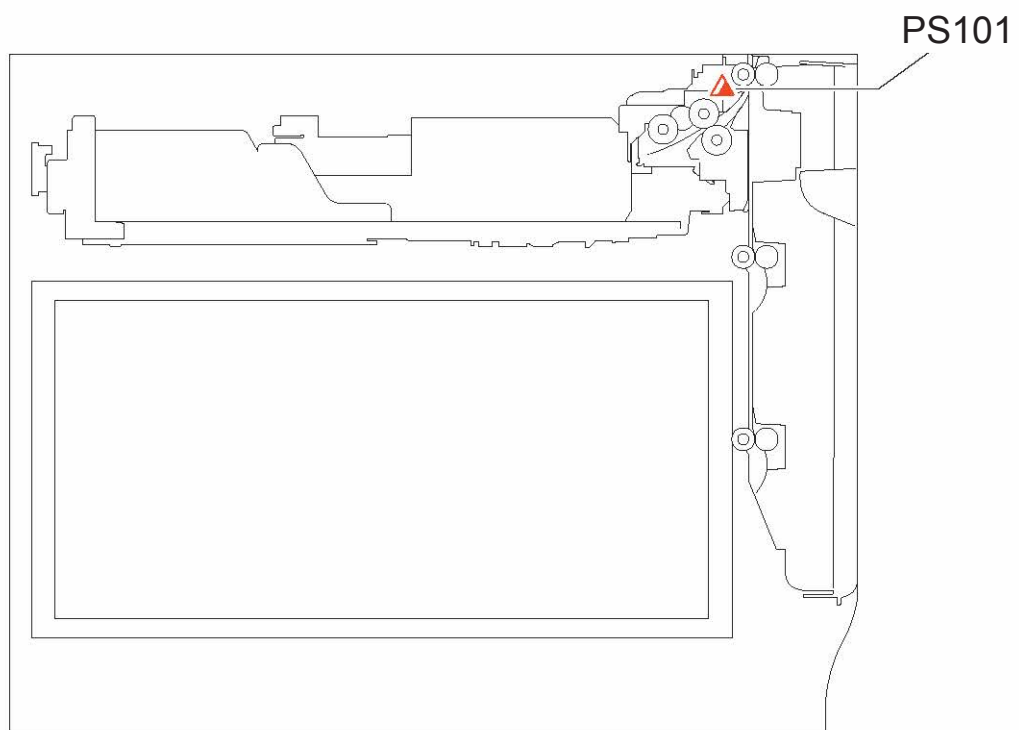
F-7-4

■ Jam Code

| ACCID | Jam Code | Type | Sensor Name | Sensor ID | I/O | | |
|---|---|---|---|---|---|---|---|
| | | | | | Address | bit | Remarks |
| 00 | 0101 | Delay | Cassette 1 Pickup Sensor | PS05 | P005 | 14 | 1:paper |
| 00 | 0102 | Delay | Cassette 2 Pullout Sensor | PS101 | P022 | 2 | 1:paper |
| 00 | 0103 | Delay | Cassette 3 Pullout Sensor | PS102 | P024 | 13 | 1:paper |
| 00 | 0104 | Delay | Cassette 4 Pullout Sensor | PS103 | P024 | 8 | 1:paper |
| 00 | 0105 | Delay | Pre-Registration Sensor | PS04 | P010 | 3 | 1:paper |
| 00 | 0106 | Delay | Delivery Sensor | PS12 | P005 | 14 | 1:paper |
| 00 | 0107 | Delay | Duplex Sensor | PS01 | P011 | 12 | 1:paper |
| 00 | 0202 | Stationary | Cassette 2 Pullout Sensor | PS101 | P022 | 2 | 1:paper |
| 00 | 0203 | Stationary | Cassette 3 Pullout Sensor | PS102 | P024 | 13 | 1:paper |
| 00 | 0204 | Stationary | Cassette 4 Pullout Sensor | PS103 | P024 | 8 | 1:paper |
| 00 | 0205 | Stationary | Pre-Registration Sensor | PS04 | P010 | 3 | 1:paper |
| 00 | 0206 | Stationary | Delivery Sensor | PS12 | P005 | 14 | 1:paper |
| 00 | 0706 | Fixing paper wrapping | Fixing paper wrapping jam | - | - | - | - |
| 00 | 0709 | Fixing paper wrapping | Fixing paper wrapping jam | - | - | - | - |
| 00 | 0A01 | Power ON | Cassette 1 Pickup Sensor | PS05 | P010 | 5 | 1:paper |
| 00 | 0A02 | Power ON | Cassette 2 Pullout Sensor | PS101 | P022 | 2 | 1:paper |
| 00 | 0A03 | Power ON | Cassette 3 Pullout Sensor | PS102 | P024 | 13 | 1:paper |
| 00 | 0A04 | Power ON | Cassette 4 Pullout Sensor | PS103 | P024 | 8 | 1:paper |
| 00 | 0A06 | Power ON | Delivery Sensor | PS12 | P005 | 14 | 1:paper |
| 00 | 0A07 | Power ON | Duplex Sensor | PS01 | P011 | 12 | 1:paper |
| 00 | 0A08 | Power ON | Arch Sensor | PS11 | P006 | 7 | 1:deep roop /0:shallow roop |
| 00 | 0190 | Delay | Pre-Registration Sensor | PS04 | P010 | 3 | 1:paper |
| 00 | 0191 | Delay | Multi-purpose Tray HP Sensor | PS10 | - | - | - |
| 00 | 0A92 | Power ON | Multi-purpose Tray HP Sensor | PS10 | - | - | - |
| 00 | 0B00 | Door Open | - | - | - | - | - |
| 00 | 0B0D | No drum jam* | - | - | - | - | - |
| 00 | 0CA1 | Sequence | Software sequence (Feed status cannot be returned) | - | - | - | - |
| 00 | 0CA2 | Sequence | Software sequence (ImageReady cannot be sent) | - | - | - | - |
| 00 | 0CA3 | Sequence | Software sequence (Stop due to jam is not possible) | - | - | - | - |
| 00 | 0CA4 | Sequence | Software sequence (Finisher-related) | - | - | - | - |
| 00 | 0CA9 | Sequence | Software sequence error (Automatic adjustment-related) | - | - | - | - |
| 00 | 0CAF | Sequence | Finisher sequence jam | - | - | - | - |
| 00 | 0CC1 | Sequence | Software sequence error (Automatic adjustment: Transfer-related) | - | - | - | - |
| 00 | 0CC2 | Sequence | Software sequence error (Automatic adjustment: Image formation-related) | - | - | - | - |

| ACCID | Jam Code | Type | Sensor Name | Sensor ID | I/O | | |
|---|---|---|---|---|---|---|---|
| | | | | | Address | bit | Remarks |
| 00 | 0CC3 | Sequence | Software sequence error (Automatic adjustment: Last rotation-related) | - | - | - | - |
| 00 | 0CC5 | Sequence | Software sequence error (Transfer-related) | - | - | - | - |
| 00 | 0CC6 | Sequence | Software sequence error (Prevention of ITB displacement) | - | - | - | - |
| 00 | 0CF1 | Sequence | Error avoidance jam | - | - | - | - |
| 00 | 0CF2 | Sequence | Software sequence error (Vsync error) | - | - | - | - |
| 00 | 0D91 | Size error | Wrong size (small) | - | - | - | - |
| 00 | 1CF1 | Error avoidance | Finisher error avoidance jam | - | - | - | - |
| 01 | 0001 | Delay | Document End Sensor | PS02 | P001 | 0 | 1:paper |
| 01 | 0002 | Stationary | Document End Sensor | PS02 | P001 | 0 | 1:paper |
| 01 | 0004 | Delay (at the time of reversing) | Document End Sensor | PS02 | P001 | 0 | 1:paper |
| 01 | 0005 | Stationary (at the time of reversing) | Document End Sensor | PS02 | P001 | 0 | 1:paper |
| 01 | 0021 | Timing | Document End Sensor | PS02 | P001 | 0 | 1:paper |
| 01 | 0071 | Timing Error | Timing Error Jam | - | - | - | - |
| 01 | 0094 | Power ON | Document End Sensor | PS02 | P001 | 0 | 1:paper |
| | | | Document Sensor | PS03 | P001 | 1 | 1:paper |
| 01 | 0096 | Limited function mode | DF Job Error Jam | - | - | - | - |

\*:Drum Unit detection may not be executed at times such as at recovery from sleep mode (of 4 or more hours). T-7-6
"No drum jam" is detected when a print job is executed with no Drum Unit installed in the machine.

## ■ Detailed Jam Codes

| ACCID | Jam Code | Type | Sensor Name | Sensor ID | I/O | | |
|---|---|---|---|---|---|---|---|
| | | | | | Address | bit | Remarks |
| 00 | 0105 | Delay | Pre-Registration Sensor | PS04 | P010 | 3 | 1:paper |
| 00 | 0205 | Stationary | Pre-Registration Sensor | PS04 | P010 | 3 | 1:paper |
| 00 | 0190 | Delay | Pre-Registration Sensor | PS04 | P010 | 3 | 1:paper |
| 00 | 0101 | Delay | Cassette 1 Pickup Sensor | PS05 | P005 | 14 | 1:paper |
| 00 | 0A01 | Power ON | Cassette 1 Pickup Sensor | PS05 | P010 | 5 | 1:paper |

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Pre-registration Sensor
(PS04)

PS04
PS05

Cassette 1
Pickup Sensor
(PS05)
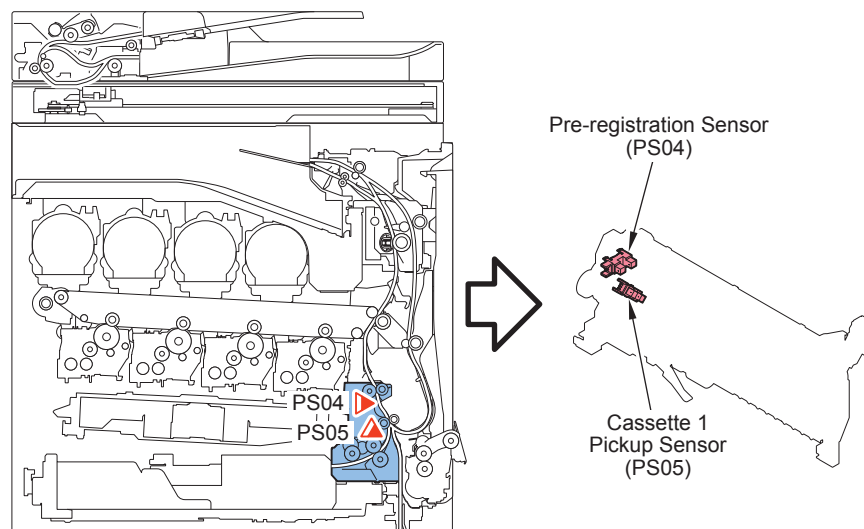
F-7-5

| ACCID | Jam Code | Type | Sensor Name | Sensor ID | I/O | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | Address | bit | Remarks |
| 00 | 0102 | Delay | Cassette 2 Pullout Sensor | PS101 | P022 | 2 | 1:paper |
| 00 | 0202 | Stationary | Cassette 2 Pullout Sensor | PS101 | P022 | 2 | 1:paper |
| 00 | 0A02 | Power ON | Cassette 2 Pullout Sensor | PS101 | P022 | 2 | 1:paper |
| 00 | 0103 | Delay | Cassette 3 Pullout Sensor | PS102 | P024 | 13 | 1:paper |
| 00 | 0203 | Stationary | Cassette 3 Pullout Sensor | PS102 | P024 | 13 | 1:paper |
| 00 | 0A03 | Power ON | Cassette 3 Pullout Sensor | PS102 | P024 | 13 | 1:paper |
| 00 | 0104 | Delay | Cassette 4 Pullout Sensor | PS103 | P024 | 8 | 1:paper |
| 00 | 0204 | Stationary | Cassette 4 Pullout Sensor | PS103 | P024 | 8 | 1:paper |
| 00 | 0A04 | Power ON | Cassette 4 Pullout Sensor | PS103 | P024 | 8 | 1:paper |

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PS101

Cassette 2
Pullout Sensor
(PS101)

F-7-6



PS101

PS102

PS103

Cassette 2
Pullout Sensor
(PS101)

Cassette 3
Pullout Sensor
(PS102)

Cassette 4
Pullout Sensor
(PS103)

F-7-7
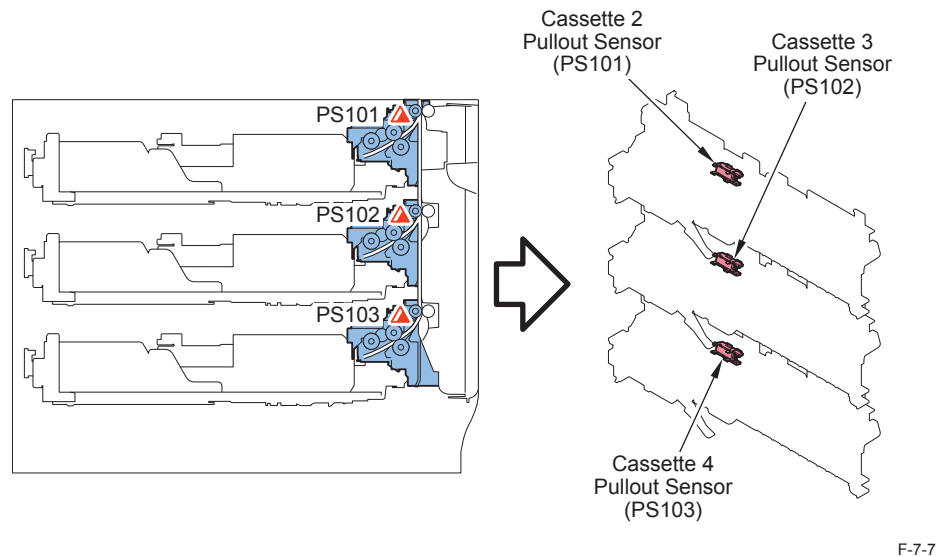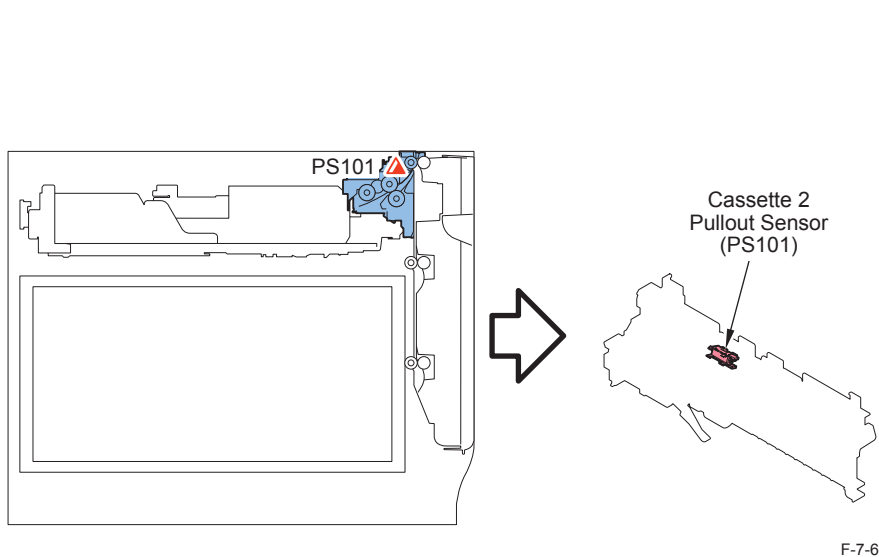
| ACCID | Jam Code | Type | Sensor Name | Sensor ID | I/O | | |
|---|---|---|---|---|---|---|---|
| | | | | | Address | bit | Remarks |
| 00 | 0106 | Delay | Delivery Sensor | PS12 | P005 | 14 | 1:paper |
| 00 | 0206 | Stationary | Delivery Sensor | PS12 | P005 | 14 | 1:paper |
| 00 | 0A06 | Power ON | Delivery Sensor | PS12 | P005 | 14 | 1:paper |

T-7-9
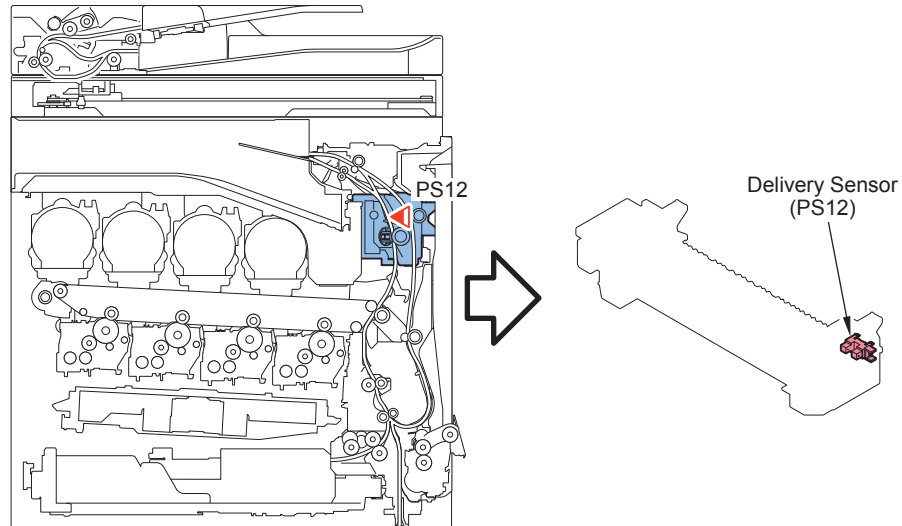


F-7-8

| ACCID | Jam Code | Type | Sensor Name | Sensor ID | I/O | | |
|---|---|---|---|---|---|---|---|
| | | | | | Address | bit | Remarks |
| 00 | 0107 | Delay | Duplex Sensor | PS01 | P011 | 12 | 1:paper |
| 00 | 0A07 | Power ON | Duplex Sensor | PS01 | P011 | 12 | 1:paper |
| 00 | 0706 | Fixing paper wrapping | Fixing paper wrapping jam | - | - | - | - |
| 00 | 0709 | Fixing paper wrapping | Fixing paper wrapping jam | - | - | - | - |
| 00 | 0A08 | Power ON | Arch Sensor | PS11 | P006 | 7 | 1:deep roop /0:shallow roop |

T-7-10
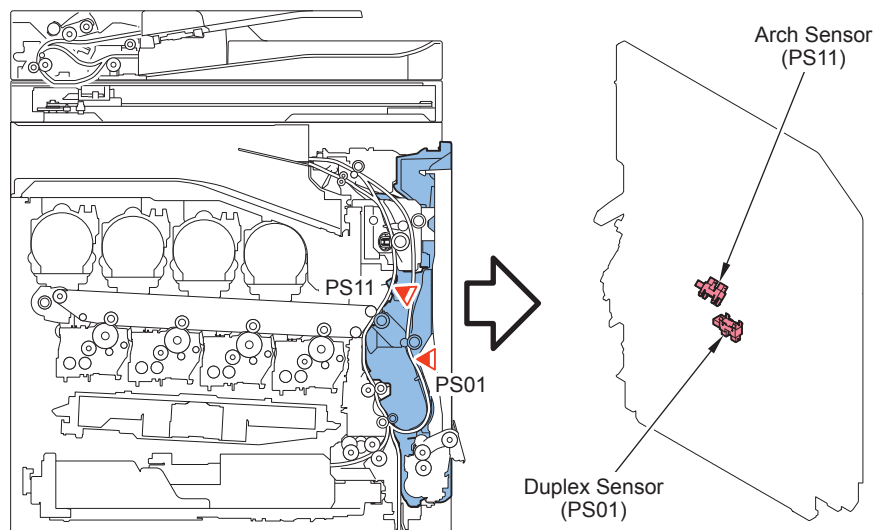


F-7-9

| ACCID | Jam Code | Type | Sensor Name | Sensor ID | I/O | | |
|-------|----------|------|-------------|-----------|---------|-----|---------|
| | | | | | Address | bit | Remarks |
| 00 | 0191 | Delay | Multi-purpose Tray HP Sensor | PS10 | - | - | - |
| 00 | 0A92 | Power ON | Multi-purpose Tray HP Sensor | PS10 | - | - | - |

T-7-11
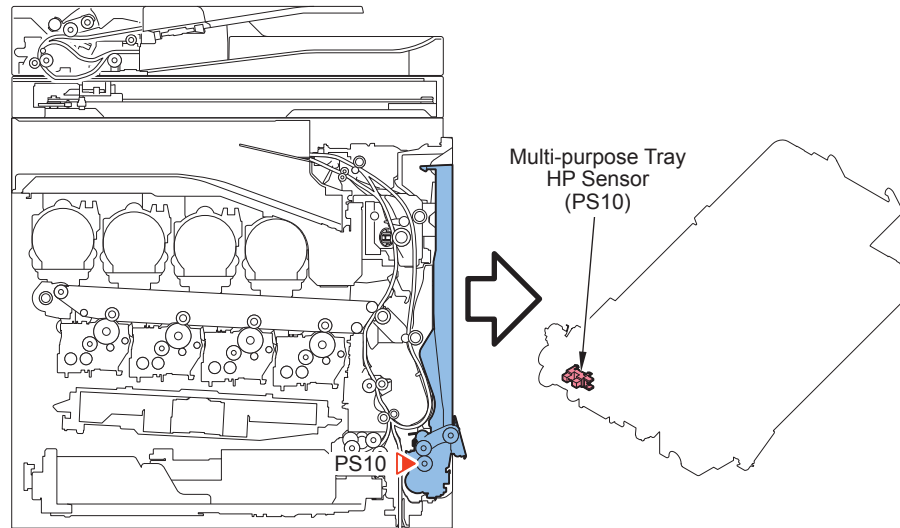


F-7-10

| ACCID | Jam Code | Type | Sensor Name | Sensor ID | I/O | | |
| | | | | | Address | bit | Remarks |
|---|---|---|---|---|---|---|---|
| 00 | 0B00 | Door open | - | - | - | - | - |
| 00 | 0B0D | No drum jam | - | - | - | - | - |
| 00 | 0CA1 | Sequence | Software sequence (Feed status cannot be returned) | - | - | - | - |
| 00 | 0CA2 | Sequence | Software sequence (ImageReady cannot be sent) | - | - | - | - |
| 00 | 0CA3 | Sequence | Software sequence (Stop due to jam is not possible) | - | - | - | - |
| 00 | 0CA4 | Sequence | Software sequence (Finisher-related) | - | - | - | - |
| 00 | 0CA9 | Sequence | Software sequence error (Automatic adjustment-related) | - | - | - | - |
| 00 | 0CAF | Sequence | Finisher sequence jam | - | - | - | - |
| 00 | 0CC1 | Sequence | Software sequence error (Automatic adjustment: Transfer-related) | - | - | - | - |
| 00 | 0CC2 | Sequence | Software sequence error (Automatic adjustment: Image formation-related) | - | - | - | - |
| 00 | 0CC3 | Sequence | Software sequence error (Automatic adjustment: Last rotation-related) | - | - | - | - |
| 00 | 0CC5 | Sequence | Software sequence error (Transfer-related) | - | - | - | - |
| 00 | 0CC6 | Sequence | Software sequence error (Prevention of ITB displacement) | - | - | - | - |
| 00 | 0CF1 | Sequence | Error avoidance jam | - | - | - | - |
| 00 | 0CF2 | Sequence | Error avoidance jam | - | - | - | - |
| 00 | 0D91 | Size error | Wrong size (small) | - | - | - | - |

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## ■ Detailed Jam Codes(ADF)

| ACCID | Jam Code | Type | Sensor Name | Sensor ID | Jam description | | I/O | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Address | bit | Remarks |
| 01 | 0001 | Delay | Document End Sensor | PS02 | Description | When the Document End Sensor (PS02) does not detect the paper although a specified period of time has passed since the Document Sensor (PS03) detected the paper. | P001 | 0 | 1:paper |
| | 0002 | Stationary | Document End Sensor | PS02 | Description | When the Feed Path Sensor (S2) is not turned OFF although a specified period of time has passed since the Document End Sensor (PS02) detected the paper. | P001 | 0 | 1:paper |
| | 0004 | Delay (at the time of reversing) | Document End Sensor | PS02 | Description | When the Document End Sensor (PS02) does not detect the paper although a specified period of time has passed since the Document Sensor (PS03) detected the paper after reversing. | P001 | 0 | 1:paper |
| | 0005 | Stationary (at the time of reversing) | Document End Sensor | PS02 | Description | When the Feed Path Sensor (S2) is not turned OFF although a specified period of time has passed since the Document End Sensor (PS02) detected the paper after reversing. | P001 | 0 | 1:paper |
| | 0021 | Timing | Document End Sensor | PS02 | Description | At 1-sided or 2-sided printing, the leading edge of the paper failed to be detected because it arrived the Document End Sensor (PS02) before the specified period of time passes. | P001 | 0 | 1:paper |
| | 0071 | Timing Error | Timing Error Jam | - | Description | An error occurred in the software sequence for some reasons. The error may be cleared by placing the paper on the Original Tray. | - | - | - |
| | 0094 | Power-on | Document End Sensor | PS02 | Description | When the Document End Sensor (PS02) detects the paper at power-on. | P001 | 0 | 1:paper |
| | | | Document Sensor | PS03 | Description | When the Document Sensor (PS03) detects the paper at power-on. | P001 | 1 | 1:paper |
| | 0096 | Limited function mode | DF Job Error Jam | - | Description | If an error occurs for some reasons, a jam message is displayed to prompt the user to perform jam removal. After that, an error is displayed, and the device enters limited functions mode. The machine recovers when the cause of the error is solved. | - | - | - |

T-7-13

PS03

PS02

Document Sensor
(PS03)

Document End Sensor
(PS02)
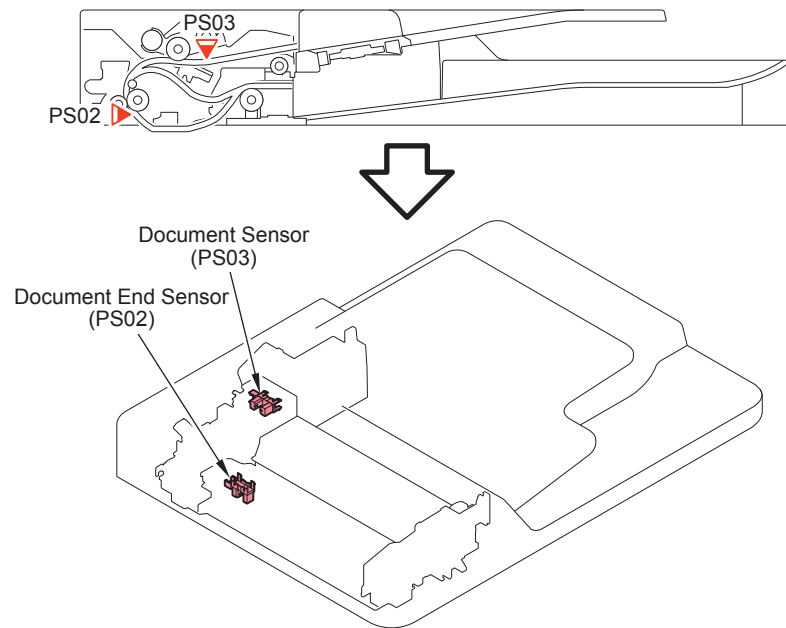
F-7-11

# Alarm Code

## Alarm Code

| Location Code | Alarm Code | Description | Details |
|---|---|---|---|
| 10 | 0006 | Patch Sensor error 1 | Movement: The background correction coefficient value was not updated.<br>Cause: Each sampling value of the background reflection output of the Front Sensor did not fall within the range from 10 or higher to 250 or less for 2 consecutive times during printing.<br>Measures:<br>1. Clean the Patch Sensor window.<br>2. Check the connector connection of the Patch Sensor.<br>3. Check the connector connection of the Patch Sensor Shutter Solenoid.<br>4. Replace the Patch Sensor Unit. |
| 10 | 0007 | Patch Sensor error 2 | Movement: The background correction coefficient value was not updated.<br>Cause: Each sampling value of the background reflection output of the Front Sensor did not fall within the range from 10 or higher to 250 or less for 2 consecutive times during printing.<br>Measures:<br>1. Clean the Patch Sensor window.<br>2. Check the connector connection of the Patch Sensor.<br>3. Check the connector connection of the Patch Sensor Shutter Solenoid.<br>4. Replace the Patch Sensor Unit. |
| 10 | 0017 | Toner (Y) prior delivery alarm | An alarm for requesting a prior delivery is sent to UGW as the value of Toner level detect value has reached the value set in COPIER > OPTION > FNC-SW > T-DLV-CL. |
| 10 | 0018 | Toner (M) prior delivery alarm | An alarm for requesting a prior delivery is sent to UGW as the value of Toner level detect value has reached the value set in COPIER > OPTION > FNC-SW > T-DLV-CL. |
| 10 | 0019 | Toner (C) prior delivery alarm | An alarm for requesting a prior delivery is sent to UGW as the value of Toner level detect value has reached the value set in COPIER > OPTION > FNC-SW > T-DLV-CL. |

| Location Code | Alarm Code | Description | Details |
|---|---|---|---|
| 10 | 0020 | Toner (Bk) prior delivery alarm | An alarm for requesting a prior delivery is sent to UGW as the value of Toner level detect value has reached the value set in COPIER > OPTION > FNC-SW > T-DLV-BK. |
| 10 | 0022 | Patch detection light intensity abnormal change alarm | |
| 10 | 0100 | Toner bottle replacement completion alarm | The replacement of the Toner Container was detected. |
| 10 | 0201 | Toner Container (Y) level detection error | - |
| 10 | 0202 | Toner Container (M) level detection error | - |
| 10 | 0203 | Toner Container (C) level detection error | - |
| 10 | 0204 | Toner Container (Bk) level detection error | - |
| 11 | 0001 | Waste Toner Container full level | "Movement: A message ""The waste toner container is full."" is displayed on the Control Panel, and the machine is stopped.<br>Cause: The Waste Toner Counter reaches full.<br>Measures: Replace the Waste Toner Container." |
| 11 | 0010 | Display of Waste Toner Container preparation warning | "Movement: A message is displayed on the Control Panel. (Continuous printing is enabled.)<br>Cause: Display of Waste Toner Box preparation warning" |
| 35 | 0006 | ITB replacement completion alarm | "Pushed was a replacement completion button of ITB Unit<br>Counter was cleared." |
| 35 | 0013 | Transfer Roller replacement completion alarm | "Pushed was a replacement completion button of Transfer Roller<br>Counter was cleared." |
| 35 | 0070 | Drum Unit (Y) replacement completion alarm | The replacement of the Drum Unit was detected. |
| 35 | 0071 | Drum Unit (M) replacement completion alarm | The replacement of the Drum Unit was detected. |
| 35 | 0072 | Drum Unit (C) replacement completion alarm | The replacement of the Drum Unit was detected. |
| 35 | 0073 | Drum Unit (Bk) replacement completion alarm | The replacement of the Drum Unit was detected. |
| 35 | 0076 | Fixing Assembly replacement completion alarm | "Pushed was a replacement completion button of Fixing Assembly<br>Counter was cleared." |

| Location Code | Alarm Code | Description | Details |
|---|---|---|---|
| 35 | 0077 | MP Pickup Roller replacement completion alarm | "Pushed was a replacement completion button of MP Pickup Roller<br>Counter was cleared." |
| 35 | 0078 | MP Separation Roller replacement completion alarm | "Pushed was a replacement completion button of MP Separation Roller<br>Counter was cleared." |
| 35 | 0079 | Cassette 1 Pickup Roller replacement completion alarm | Counter was cleared. |
| 35 | 0080 | Cassette 1 Feed Roller replacement completion alarm | "Pushed was a replacement completion button of Cassette 1 Feed Roller<br>Counter was cleared." |
| 35 | 0081 | Cassette 1 Separation Roller replacement completion alarm | "Pushed was a replacement completion button of Cassette 1 Separation Roller<br>Counter was cleared." |
| 35 | 0082 | Cassette 2 Pickup Roller replacement completion alarm | Counter was cleared. |
| 35 | 0083 | Cassette 2 Feed Roller replacement completion alarm | "Pushed was a replacement completion button of Cassette 2 Feed Roller<br>Counter was cleared." |
| 35 | 0084 | Cassette 2 Separation Roller replacement completion alarm | "Pushed was a replacement completion button of Cassette 2 Separation Roller<br>Counter was cleared." |
| 35 | 0085 | Cassette 3 Pickup Roller replacement completion alarm | Counter was cleared. |
| 35 | 0086 | Cassette 3 Feed Roller replacement completion alarm | "Pushed was a replacement completion button of Cassette 3 Feed Roller<br>Counter was cleared." |
| 35 | 0087 | Cassette 3 Separation Roller replacement completion alarm | "Pushed was a replacement completion button of Cassette 3 Separation Roller<br>Counter was cleared." |
| 35 | 0088 | Cassette 4 Pickup Roller replacement completion alarm | Counter was cleared. |
| 35 | 0089 | Cassette 4 Feed Roller replacement completion alarm | "Pushed was a replacement completion button of Cassette 4 Feed Roller<br>Counter was cleared." |
| 35 | 0090 | Cassette 4 Separation Roller replacement completion alarm | "Pushed was a replacement completion button of Cassette 4 Separation Roller<br>Counter was cleared." |
| 35 | 0091 | ADF Pickup Roller replacement completion alarm | "Pushed was a replacement completion button of ADF Pickup Roller<br>Counter was cleared." |

| Location Code | Alarm Code | Description | Details |
|---|---|---|---|
| 35 | 0092 | ADF Separation Pad replacement completion alarm | "Pushed was a replacement completion button of ADF Separation Pad<br>Counter was cleared." |
| 35 | 0093 | MP Feed Roller replacement completion alarm | Counter was cleared. |
| 40 | 0070 | Drum Unit (Y) prior delivery alarm | An alarm for requesting a prior delivery is sent to UGW as the value of COPIER > COUNTER > LF > Y-DRM-LF has reached the value set in COPIER > OPTION > FNC-SW > D-DLV-CL. |
| 40 | 0071 | Drum Unit (M) prior delivery alarm | An alarm for requesting a prior delivery is sent to UGW as the value of COPIER > COUNTER > LF > M-DRM-LF has reached the value set in COPIER > OPTION > FNC-SW > D-DLV-CL. |
| 40 | 0072 | Drum Unit (C) prior delivery alarm | An alarm for requesting a prior delivery is sent to UGW as the value of COPIER > COUNTER > LF > C-DRM-LF has reached the value set in COPIER > OPTION > FNC-SW > D-DLV-CL. |
| 40 | 0073 | Drum Unit (Bk) prior delivery alarm | An alarm for requesting a prior delivery is sent to UGW as the value of COPIER > COUNTER > LF > K-DRM-LF has reached the value set in COPIER > OPTION > FNC-SW > D-DLV-BK. |
| 85 | 0001 | A notice of stat | - |
| 85 | 0002 | A notice of stat | - |
| 85 | 0003 | A notice of stat | - |
| 85 | 0004 | A notice of stat | - |
| 85 | 0005 | A notice of stat | - |

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# 8 Service Mode

- Overview
- COPIER
- FEEDER
- FAX
- TESTMODE

# Overview

## Service Mode Menu

```
┌─────────────┐
│ Service mode │
└─────────────┘
        │
        ├──────┌─────────┐  Service mode for copier
        │      │ COPIER  │
        │      └─────────┘
        │            │
        │            ├────┌──────────┐  Service mode for copier
        │            │    │ DISPLAY  │
        │            │    └──────────┘
        │            ├────┌──────────┐  I/O display mode
        │            │    │   I/O    │
        │            │    └──────────┘
        │            ├────┌──────────┐  Adjustment mode
        │            │    │ ADJUST   │
        │            │    └──────────┘
        │            ├────┌──────────┐  Operation / inspection mode
        │            │    │ FUNCTION │
        │            │    └──────────┘
        │            ├────┌──────────┐  Specification setting mode
        │            │    │ OPTION   │
        │            │    └──────────┘
        │            └────┌──────────┐  Counter mode
        │                 │ COUNTER  │
        │                 └──────────┘
        │
        ├──────┌─────────┐  ADF service mode
        │      │ FEEDER  │
        │      └─────────┘
        │            │
        │            ├────┌──────────┐  Adjustment mode
        │            │    │ ADJUST   │
        │            │    └──────────┘
        │            └────┌──────────┐  Operation / inspection mode
        │                 │ FUNCTION │
        │                 └──────────┘
        │
        ├──────┌─────────┐  FAX service mode
        │      │  FAX    │
        │      └─────────┘
        │            │
        │            ├────┌──────────┐  Bit switch registration mode
        │            │    │  SSSW    │
        │            │    └──────────┘
        │            ├────┌──────────┐  Menu switch registration mode
        │            │    │  MENU    │
        │            │    └──────────┘
        │            ├────┌──────────┐  Numeric parameter setting mode
        │            │    │  NUM     │
        │            │    └──────────┘
        │            └────┌──────────┐  NCU parameter setting mode
        │                 │  NCU     │  (Service adjustment is not available)
        │                 └──────────┘
        │
        └──────┌─────────┐  Service mode for test print, operation check, etc.
               │TESTMODE │
               └─────────┘
                     │
                     ├────┌──────────┐  Print test mode
                     │    │  PRINT   │
                     │    └──────────┘
                     └────┌──────────┐  FAX test mode
                          │  FAX     │
                          └──────────┘
```

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## Backing up Service Mode

Each device is tuned at the time of shipment and the tuned values are written on the service label.

However, when replacing the main controller PCBs / DC controller PCBs or clearing RAM, tuned ADJUST and OPTION values are reset to defaults. Each service technician should adjust these values in field and ensure to write values after changes in the service label. If the corresponding item is not found on the service label, enter the value in the blank space.

## Remote UI service mode

### ■ Function Overview

Remote UI can be used to display, set and implement various service mode in addition to rebooting the machine. In this case, machine's UI displays "Remote service mode".

### ■ Operating condition

Operation of service mode using remote UI becomes possible in the following cases:
- Service mode is not used on LUI.
- There is no user who has been logged in to the remote UI service mode (this function).
- Remote UI is enabled in the setting of LUI.
  Setting Menu > System Management Settings > Remote UI On/Off
- "RMT-SW" is enabled in service mode (Enabled when the setting value is "1".)
  COPIER > OPTION > BODY > RMT-SW (remote UI service mode function)
  0: OFF, 1: ON (default)

### ■ Usage method

1. Activate the Web browser.
2. Enter the following URL in the address input field.
   http://<IP address of the machine or host name>/servicemode.html
3. Enter the password and click "Log In".
   * Password required for authentication differs depending on the service mode setting.
   COPIER > OPTION > BODY > PSWD-SW

| PSWD-SW | Password required for authentication |
|---|---|
| 0 | 1. Password of RUI service mode |
| 1 | 1. Password of RUI service mode<br>2. Password of service mode |
| 2 | 1. Password of RUI service mode<br>2. User's system administrator ID<br>3. Password of system administrator<br>4. Password of service mode |

\* Password of service mode can be changed in COPIER > OPTION > BODY > SM-PSWD.

### ● Authentication screen

1) PSWD-SW: 0

F-8-2

2) PSWD-SW: 1

F-8-3

3) PSWD-SW: 2

F-8-4

4) Click "Logout" to end the operation.

NOTE :
After login, if you close the browser without "logout", it is recognized that you have been "logged in". Therefore, in order to log in to service mode again, you must wait for a certain period of time (3 minutes) from the last access to make the system timeout or turn OFF/ON the power.

# COPIER

## DISPLAY

### ■ VERSION

| COPIER> DISPLAY> VERSION | |
|---|---|
| MAIN | Display of MAIN (main program) version |
| Details | To display the firmware version of Main Controller PCB. |
| Use case | When upgrading the firmware |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00.01 to 99.99 |
| BOOT | Boot ROM version |
| Details | To display the version of Boot ROM (BOOT program). |
| Use case | When upgrading the firmware |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00.01 to 99.99 |
| LANG | Language pack version |
| Details | To display the version of language pack. |
| Use case | When upgrading the firmware |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00.00 to 99.99 |
| DEMODATA | Demo print data version |
| Details | To display the version of demo print data. Since this machine does not have demo print function, "FF.FF" is displayed. |
| Use case | When upgrading the firmware |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00.01 to 99.99 |
| ECONT | ECONT version |
| Details | To display the version of Engine Controller PCB. |
| Use case | When upgrading the firmware |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00.01 to 99.99 |
| PANEL | Dspl of Control Panel CPU PCB ROM ver |
| Details | To display the ROM version of Control Panel CPU PCB. |
| Use case | When upgrading the firmware |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00.01 to 99.99 |
| ECO | Display of ECO PCB ROM version |
| Details | To display the ROM version of ECO PCB |
| Use case | When upgrading the firmware |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00.01 to 99.99 |

| COPIER> DISPLAY> VERSION | |
|---|---|
| LS-ROM-V | Dspl of Laser Scanner Unit EEPROM ver |
| Details | To display the EEPROM version written in EEPROM of Laser Scanner Unit. |
| Use case | When checking the EEPROM version written in EEPROM of Laser Scanner Unit |
| Adj/set/operate method | N/A (display only) |
| Display/adj/set range | 00.01 to 99.99 |
| LS-UNT-V | Dspl of Laser Scanner Unit version |
| Details | To display the version written in EEPROM of Laser Scanner Unit. |
| Use case | When checking the version written in EEPROM of Laser Scanner Unit |
| Adj/set/operate method | N/A (display only) |
| Display/adj/set range | 00.01 to 99.99 |
| LS-SRL | Dspl of serial No. of Laser Scanner Unit |
| Details | To display the serial number written in EEPROM of Laser Scanner Unit. |
| Use case | When checking the serial number written in EEPROM of Laser Scanner Unit |
| Adj/set/operate method | N/A (display only) |
| Display/adj/set range | 00000001 to 99999999 |

T-8-2

### ■ USER

| COPIER> DISPLAY>USER | |
|---|---|
| SPDTYPE | Display of engine speed type |
| Details | To display the engine speed type of this machine. |
| Use case | When checking the engine speed type |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 25 to 35 |

T-8-3

## ■ ANALOG

| COPIER> DISPLAY> ANALOG | | |
|---|---|---|
| TEMP | Display of outside temperature | |
| | Details | To display the temperature outside the machine. This is measured by the Environment Sensor 2 that detects the outside air. |
| | Use case | When checking the temperature outside the machine |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 60 |
| | Unit | 1 deg C |
| | Appropriate target value | 20 - 27 |
| HUM | Display of outside humidity | |
| | Details | To display the humidity outside the machine. This is measured by the Environment Sensor 2 that detects the outside air. |
| | Use case | When checking the humidity outside the machine |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 5 to 90 |
| | Unit | 1 % |
| | Appropriate target value | 30 - 70 |
| ABS-HUM | Display of outside moisture amount | |
| | Details | To display the absolute moisture amount outside the machine. This is measured by the Environment Sensor 2 that detects the outside air. |
| | Use case | When checking the moisture amount outside the machine |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 100 |
| | Unit | 1 g |
| | Appropriate target value | 0 - 22 |
| FIX-E | Dspl of Fixing Main Heater temperature | |
| | Details | To display the temperature of the Fixing Main Heater detected by the Main Thermistor 1. |
| | Use case | When checking the temperature of Fixing Main Heater |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 300 |
| | Unit | 1 deg C |
| FIX-E2 | Dspl Fixing Sub Heater front edge temp | |
| | Details | To display the front edge temperature of the Fixing Sub Heater detected by the Sub Thermistor 1. |
| | Use case | When checking the edge temperature of the Fixing Sub Heater |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 300 |
| | Unit | 1 deg C |

| COPIER> DISPLAY> ANALOG | | |
|---|---|---|
| TEMP2 | Display of inside temperature | |
| | Details | To display the estimated temperature inside the machine that is calculated from the outside temperature and elapsed time. |
| | Use case | When checking the estimated temperature inside the machine |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 100 |
| | Unit | 1 deg C |
| | Appropriate target value | Room temperature - Room temperature+15 deg C |
| | Related service mode | COPIER> DISPLAY> ANALOG> TEMP |
| FIX-E3 | Dspl of Fixing Sub Heater rear edge temp | |
| | Details | To display the rear edge temperature of the Fixing Sub Heater detected by the Sub Thermistor 2. |
| | Use case | When checking the edge temperature of the Fixing Sub Heater |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 300 |
| | Unit | 1 deg C |

T-8-4

## ■ HV-STS

| COPIER> DISPLAY> HV-STS | |
|---|---|
| 1ATVC-Y | Dspl of primary transfer current (Y) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (Y) by the primary transfer ATVC control. When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR). If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |
| 1ATVC-Y2 | Dspl of primary transfer current (Y) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (Y) by the primary transfer ATVC control. When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR). If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |
| 1ATVC-Y3 | Dspl of primary transfer current (Y) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (Y) by the primary transfer ATVC control. When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR). If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |

| COPIER> DISPLAY> HV-STS | |
|---|---|
| 1ATVC-M | Dspl of primary transfer current (M) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (M) by the primary transfer ATVC control. When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR). If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |
| 1ATVC-M2 | Dspl of primary transfer current (M) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (M) by the primary transfer ATVC control. When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR). If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |
| 1ATVC-M3 | Dspl of primary transfer current (M) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (M) by the primary transfer ATVC control. When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR). If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |

| COPIER> DISPLAY> HV-STS | |
|---|---|
| 1ATVC-C | Dspl of primary transfer current (C) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (C) by the primary transfer ATVC control.<br>When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR).<br>If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |
| 1ATVC-C2 | Dspl of primary transfer current (C) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (C) by the primary transfer ATVC control.<br>When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR).<br>If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |
| 1ATVC-C3 | Dspl of primary transfer current (C) |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (C) by the primary transfer ATVC control.<br>When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR).<br>If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |

| COPIER> DISPLAY> HV-STS | |
|---|---|
| 1ATVC-K4 | Dspl prmry trns current(Bk):full clr mod |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (Bk) by the primary transfer ATVC control in full color mode.<br>When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR).<br>If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |
| 1ATVC-K42 | Dspl prmry trns current(Bk):full clr mod |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (Bk) by the primary transfer ATVC control in full color mode.<br>When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR).<br>If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |

| COPIER> DISPLAY> HV-STS | |
|---|---|
| 1ATVC-K43 | Dspl prmry trns current(Bk):full clr mod |
| Details | To display the decuple value of the current flown to the Primary Transfer Roller (Bk) by the primary transfer ATVC control in full color mode. When the two values are out of the target value range (50 to 700), clear the log information for the appropriate control (COPIER> FUNCTION> CLEAR> 1TR-CLR). If the two values are both small, the Primary Transfer Roller may have reached the end of life. |
| Use case | When estimating the life of Primary Transfer Roller based on the displayed value |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 900 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 1TR-CLR |
| 2ATVC | Dspl secondary transfer ATVC tgt current |
| Details | To display the decuple value of the voltage flown to the Secondary Transfer Outer Roller derived from the secondary transfer ATVC control. If there is no problem in the result of the control, 3 values are displayed in ascending order. As the usage of the Secondary Transfer Outer Roller is extended, the value decreases. |
| Use case | When identifying the cause at the occurrence of an image failure |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 65535 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 2TR-CLR |
| 2ATVC2 | Dspl secondary transfer ATVC tgt current |
| Details | To display the decuple value of the voltage flown to the Secondary Transfer Outer Roller derived from the secondary transfer ATVC control. If there is no problem in the result of the control, 3 values are displayed in ascending order. As the usage of the Secondary Transfer Outer Roller is extended, the value decreases. |
| Use case | When identifying the cause at the occurrence of an image failure |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 65535 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 2TR-CLR |

| COPIER> DISPLAY> HV-STS | |
|---|---|
| 2ATVC3 | Dspl secondary transfer ATVC tgt current |
| Details | To display the decuple value of the voltage flown to the Secondary Transfer Outer Roller derived from the secondary transfer ATVC control. If there is no problem in the result of the control, 3 values are displayed in ascending order. As the usage of the Secondary Transfer Outer Roller is extended, the value decreases. |
| Use case | When identifying the cause at the occurrence of an image failure |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 65535 |
| Unit | 1 uA |
| Appropriate target value | 50 - 700 |
| Related service mode | COPIER> FUNCTION> CLEAR> 2TR-CLR |
| 2ATVCENV | Dspl sec trns ATVC abslt moistr cntnt |
| Details | To display the absolute moisture content at execution of the secondary transfer ATVC. |
| Use case | At trouble analysis |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 9999 |
| Unit | 0.01 g/m3 |
| Appropriate target value | 0 - 4000 |

T-8-5

## ■ CCD

| COPIER> DISPLAY> CCD | | |
|---|---|---|
| TARGET-B | Shading target value (B) | |
| | Details | To display the shading target value of Blue.<br>Continuous display of 0 (minimum) or 2048 (maximum) is considered a failure of the White Plate data. |
| | Use case | When the scanned image failure occurs |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 2048 |
| | Appropriate target value | 512 - 2047 |
| TARGET-G | Shading target value (G) | |
| | Details | To display the target value of Green.<br>Continuous display of 0 (minimum) or 2048 (maximum) is considered a failure of the White Plate data. |
| | Use case | When the scanned image failure occurs |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 2048 |
| | Appropriate target value | 512 - 2047 |
| TARGET-R | Shading target value (R) | |
| | Details | To display the shading target value of Red.<br>Continuous display of 0 (minimum) or 2048 (maximum) is considered a failure of the White Plate data. |
| | Use case | When the scanned image failure occurs |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 2048 |
| | Appropriate target value | 512 - 2047 |

T-8-6

## ■ DPOT

| COPIER> DISPLAY> DPOT | | |
|---|---|---|
| 2TR-PPR | Dspl of sec trns ATVC ppr allotted voltg | |
| | Details | To display the paper allotted voltage set by the latest secondary transfer ATVC control.<br>The appropriate range may be exceeded due to wrong media setting. |
| | Use case | When transfer failure occurs on certain media |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 5000 |
| | Unit | 1 V |
| 2TR-BASE | Dspl of sec transfer ATVC base voltage | |
| | Details | To display the base voltage set by the latest secondary transfer ATVC control.<br>The appropriate range may be exceeded due to wrong media setting. |
| | Use case | When transfer failure occurs on certain media |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 6000 |
| | Unit | 1 V |
| | Appropriate target value | 500 - 5000 |
| 1TR-DC-Y | Dspl of primary transfer voltage (Y) | |
| | Details | To display the voltage lastly applied to the Primary Transfer Roller (Y). |
| | Use case | When transfer failure occurs due to the primary transfer |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 5000 |
| | Unit | 1 V |
| | Appropriate target value | 50 - 2000 |
| 1TR-DC-M | Dspl of primary transfer voltage (M) | |
| | Details | To display the voltage lastly applied to the Primary Transfer Roller (M). |
| | Use case | When transfer failure occurs due to the primary transfer |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 5000 |
| | Unit | 1 V |
| | Appropriate target value | 50 - 2000 |
| 1TR-DC-C | Dspl of primary transfer voltage (C) | |
| | Details | To display the voltage lastly applied to the Primary Transfer Roller (C). |
| | Use case | When transfer failure occurs due to the primary transfer |
| | Adj/set/operate method | N/A (Display only) |
| | Display/adj/set range | 0 to 5000 |
| | Unit | 1 V |
| | Appropriate target value | 50 - 2000 |

| COPIER> DISPLAY> DPOT | |
|---|---|
| 1TR-DC-K | Dspl of primary transfer voltage (Bk) |
| Details | To display the voltage lastly applied to the Primary Transfer Roller (Bk). |
| Use case | When transfer failure occurs due to the primary transfer |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 5000 |
| Unit | 1 V |
| Appropriate target value | 50 - 2000 |
| LPWR-Y | Display of laser power (Y) |
| Details | To display Y laser power determined by D-max control. FF display with low image density is considered that the Photosensitive Drum may be nearly the end of life. |
| Use case | When the image density is low |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00 - FF (hexadecimal) |
| Appropriate target value | 60 - FF |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |
| LPWR-M | Display of laser power (M) |
| Details | To display M laser power determined by D-max control. FF display with low image density is considered that the Photosensitive Drum may be nearly the end of life. |
| Use case | When the image density is low |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00 - FF (hexadecimal) |
| Appropriate target value | 60 - FF |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |
| LPWR-C | Display of laser power (C) |
| Details | To display C laser power determined by D-max control. FF display with low image density is considered that the Photosensitive Drum may be nearly the end of life. |
| Use case | When the image density is low |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00 - FF (hexadecimal) |
| Appropriate target value | 60 - FF |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |

| COPIER> DISPLAY> DPOT | |
|---|---|
| LPWR-K | Display of laser power (Bk) |
| Details | To display Bk laser power determined by potential control. FF display with low image density is considered that the Photosensitive Drum may be nearly the end of life. |
| Use case | When the image density is low |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 00 - FF (hexadecimal) |
| Appropriate target value | 60 - FF |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |

T-8-7

## ■ DENS

| COPIER> DISPLAY> DENS | |
|---|---|
| DENS-Y | Display of Y developer density TD ratio |
| Details | To display TD ratio of Y-color developer density in % (percentage). |
| Use case | When analyzing the cause of image failure (density failure, fogging) and occurrence of E020 |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -7 to 7 |
| Unit | 1 % |
| Appropriate target value | -4.5 - 3.5 |
| Related service mode | COPIER> DISPLAY> DENS> SGNL-Y |
| DENS-M | Display of M developer density TD ratio |
| Details | To display TD ratio of M-color developer density in % (percentage). |
| Use case | When analyzing the cause of image failure (density failure, fogging) and occurrence of E020 |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -7 to 7 |
| Unit | 1 % |
| Appropriate target value | -4.5 - 3.5 |
| Related service mode | COPIER> DISPLAY> DENS> SGNL-M |
| DENS-C | Display of C developer density TD ratio |
| Details | To display TD ratio of C-color developer density in % (percentage). |
| Use case | When analyzing the cause of image failure (density failure, fogging) and occurrence of E020 |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -7 to 7 |
| Unit | 1 % |
| Appropriate target value | -4.5 - 3.5 |
| Related service mode | COPIER> DISPLAY> DENS> SGNL-C |
| DENS-K | Display of Bk developer density TD ratio |
| Details | To display TD ratio of Bk-color developer density in % (percentage). |
| Use case | When analyzing the cause of image failure (density failure, fogging) and occurrence of E020 |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -7 to 7 |
| Unit | 1 % |
| Appropriate target value | -4.5 - 3.5 |
| Related service mode | COPIER> DISPLAY> DENS> SGNL-K |
| DENS-S-Y | Dspl differ from Y patch density tgt VL |
| Details | To display difference between the Y-color target patch density at ATR control and the patch density detected by the Patch Sensor. |
| Use case | When analyzing the cause of image failure (fogging, carrier adherence, low density, etc.) |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| Appropriate target value | -350 - 200 |

| COPIER> DISPLAY> DENS | |
|---|---|
| DENS-S-M | Dspl differ from M patch density tgt VL |
| Details | To display difference between the M-color target patch density at ATR control and the patch density detected by the Patch Sensor. |
| Use case | When analyzing the cause of image failure (fogging, carrier adherence, low density, etc.) |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| Appropriate target value | -350 - 200 |
| DENS-S-C | Dspl differ from C patch density tgt VL |
| Details | To display difference between the C-color target patch density at ATR control and the patch density detected by the Patch Sensor. |
| Use case | When analyzing the cause of image failure (fogging, carrier adherence, low density, etc.) |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| Appropriate target value | -350 - 200 |
| DENS-S-K | Dspl differ from Bk patch density tgt VL |
| Details | To display difference between the Bk-color target patch density at ATR control and the patch density detected by the Patch Sensor. |
| Use case | When analyzing the cause of image failure (fogging, carrier adherence, low density, etc.) |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| Appropriate target value | -350 - 200 |
| D-Y-TRGT | Dspl of ATR ctrl Y patch target density |
| Details | To display the target density for Y patch image created by ATR control. |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 65535 |
| Appropriate target value | 450 - 640 |
| D-M-TRGT | Dspl of ATR ctrl M patch target density |
| Details | To display the target density for M patch image created by ATR control. |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 65535 |
| Appropriate target value | 450 - 640 |
| D-C-TRGT | Dspl of ATR ctrl C patch target density |
| Details | To display the target density for C patch image created by ATR control. |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 65535 |
| Appropriate target value | 450 - 640 |

| COPIER> DISPLAY> DENS | |
|---|---|
| REF-Y | Dspl of Y developer density target value |
| Details | To display the developer density target value for the ATR Sensor (Y). |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| Appropriate target value | 50 - 200 |
| REF-M | Dspl of M developer density target value |
| Details | To display the developer density target value for the ATR Sensor (M). |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| Appropriate target value | 50 - 200 |
| REF-C | Dspl of C developer density target value |
| Details | To display the developer density target value for the ATR Sensor (C). |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| Appropriate target value | 50 - 200 |
| REF-K | Dspl Bk developer density target value |
| Details | To display the developer density target value for the ATR Sensor (Bk). |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| Appropriate target value | 50 - 200 |
| DEV-DC-Y | Dspl of developing DC voltage (Y) |
| Details | To display the latest Y developing DC voltage Vdc. |
| Use case | • When image failure occurs due to carrier adherence<br>• When fogging appears<br>• When fogging is deteriorated |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1000 to 0 |
| Unit | 1 V |
| Appropriate target value | -570 - -450 |
| DEV-DC-M | Dspl of developing DC voltage (M) |
| Details | To display the latest M developing DC voltage Vdc. |
| Use case | • When image failure occurs due to carrier adherence<br>• When fogging appears<br>• When fogging is deteriorated |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1000 to 0 |
| Unit | 1 V |
| Appropriate target value | -570 - -450 |

| COPIER> DISPLAY> DENS | |
|---|---|
| DEV-DC-C | Dspl of developing DC voltage (C) |
| Details | To display the latest C developing DC voltage Vdc. |
| Use case | • When image failure occurs due to carrier adherence<br>• When fogging appears<br>• When fogging is deteriorated |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1000 to 0 |
| Unit | 1 V |
| Appropriate target value | -570 - -450 |
| DEV-DC-K | Dspl of developing DC voltage (Bk) |
| Details | To display the latest Bk developing DC voltage Vdc. |
| Use case | • When image failure occurs due to carrier adherence<br>• When fogging appears<br>• When fogging is deteriorated |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1000 to 0 |
| Unit | 1 V |
| Appropriate target value | -570 - -450 |
| CHG-DC-Y | Dspl of primary charging DC voltage (Y) |
| Details | To display the latest primary charging DC voltage of Y-color. |
| Use case | When low density or fogging occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1500 to 0 |
| Unit | 1 V |
| Appropriate target value | -1400 - -1200 |
| CHG-DC-M | Dspl of primary charging DC voltage (M) |
| Details | To display the latest primary charging DC voltage of M-color. |
| Use case | When low density or fogging occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1500 to 0 |
| Unit | 1 V |
| Appropriate target value | -1400 - -1200 |
| CHG-DC-C | Dspl of primary charging DC voltage (C) |
| Details | To display the latest primary charging DC voltage of C-color. |
| Use case | When low density or fogging occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1500 to 0 |
| Unit | 1 V |
| Appropriate target value | -1400 - -1200 |

| COPIER> DISPLAY> DENS | |
|---|---|
| CHG-DC-K | Dspl Pry charge DC voltg (Bk)& gain VL |
| Details | To display the latest output value of primary charging DC voltage (Bk). |
| Use case | When low density or fogging occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1500 to 0 |
| Unit | 1 V |
| Appropriate target value | -1400 - -1200 |
| D-K-TRGT | Dspl of ATR ctrl Bk patch target density |
| Details | To display the Bk patch image target density created by ATR control. |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 65535 |
| Appropriate target value | 450 - 640 |
| P-D-P-Y | Dspl Y/M (R) drk crrnt (Pwave):ATR ctrl |
| Details | To display the Y/M color dark current (P-wave) detected by the Registration Patch Sensor Unit (Rear) at ATR control. At low density or fogging deterioration, use this mode to check whether there is a problem in the Patch Sensor. |
| Use case | At low density or fogging deterioration |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 50 - 150 |
| P-D-P-C | Dspl C/Bk (F) drk crrnt (Pwave):ATR ctrl |
| Details | To display the C/Bk color dark current (P-wave) detected by the Registration Patch Sensor Unit (Front) at ATR control. At low density or fogging deterioration, use this mode to check whether there is a problem in the Patch Sensor. |
| Use case | At low density or fogging deterioration |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 50 - 150 |
| P-B-P-Y | ITB rear base intensity (Pwave):ATR ctrl |
| Details | To display the ITB background light intensity (P-wave) detected by the Registration Patch Sensor Unit (Rear) at ATR control. At low density or fogging deterioration, use this mode to check whether there is a problem in the Patch Sensor. |
| Use case | At low density or fogging deterioration |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 300 - 650 |

| COPIER> DISPLAY> DENS | |
|---|---|
| P-B-P-C | ITB frt base intensity (Pwave):ATR ctrl |
| Details | To display the ITB background light intensity (P-wave) detected by the Registration Patch Sensor Unit (Front) at ATR control. At low density or fogging deterioration, use this mode to check whether there is a problem in the Patch Sensor. |
| Use case | At low density or fogging deterioration |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 300 - 650 |
| P-B-S-Y | ITB rear base intensity (Swave):ATR ctrl |
| Details | To display the ITB background light intensity (S-wave) detected by the Registration Patch Sensor Unit (Rear) at ATR control. At low density or fogging deterioration, use this mode to check whether there is a problem in the Patch Sensor. |
| Use case | At low density or fogging deterioration |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| Appropriate target value | 0 - 239 |
| P-B-S-C | ITB frt base intensity (Swave):ATR ctrl |
| Details | To display the ITB background light intensity (S-wave) detected by the Registration Patch Sensor Unit (Front) at ATR control. At low density or fogging deterioration, use this mode to check whether there is a problem in the Patch Sensor. |
| Use case | At low density or fogging deterioration |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| P-D-S-Y | Dspl of ATR ctrl Y dark current (S-wave) |
| Details | To display the Y/M color dark current (S-wave) detected by the Patch Sensor (Rear) at ATR control. At low density or fogging deterioration, use this mode to check whether there is a problem in the Patch Sensor. |
| Use case | At low density or fogging deterioration |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 100 - 200 |
| P-D-S-C | Dspl of ATR ctrl C dark current (S-wave) |
| Details | To display the C/Bk color dark current (S-wave) detected by the Patch Sensor (Front) at ATR control. At low density or fogging deterioration, use this mode to check whether there is a problem in the Patch Sensor. |
| Use case | At low density or fogging deterioration |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 100 - 200 |

| COPIER> DISPLAY> DENS | |
|---|---|
| CONT-M | Dspl ATR Sensor (M) control voltage |
|     Details | To display the density detection control voltage of the ATR Sensor (M). |
|     Use case | When checking before clearing RAM data |
|     Adj/set/operate method | N/A (Display only) |
|     Display/adj/set range | 0 to 255 |
|     Unit | 1 V |
|     Appropriate target value | 6 - 85 |
|     Related service mode | COPIER> ADJUST> DENS> CONT-M |
| CONT-Y | Dspl ATR Sensor (Y) control voltage |
|     Details | To display the density detection control voltage of the ATR Sensor (Y). |
|     Use case | When checking before clearing RAM data |
|     Adj/set/operate method | N/A (Display only) |
|     Display/adj/set range | 0 to 255 |
|     Unit | 1 V |
|     Appropriate target value | 6 - 85 |
|     Related service mode | COPIER> ADJUST> DENS> CONT-Y |
| CONT-C | Dspl ATR Sensor (C) control voltage |
|     Details | To display the density detection control voltage of the ATR Sensor (C). |
|     Use case | When checking before clearing RAM data |
|     Adj/set/operate method | N/A (Display only) |
|     Display/adj/set range | 0 to 255 |
|     Unit | 1 V |
|     Appropriate target value | 6 - 85 |
|     Related service mode | COPIER> ADJUST> DENS> CONT-C |
| CONT-K | Dspl ATR Sensor (Bk) control voltage |
|     Details | To display the density detection control voltage of the ATR Sensor (Bk). |
|     Use case | When checking before clearing RAM data |
|     Adj/set/operate method | N/A (Display only) |
|     Display/adj/set range | 0 to 255 |
|     Unit | 1 V |
|     Appropriate target value | 6 - 85 |
|     Related service mode | COPIER> ADJUST> DENS> CONT-K |
| D-Y-LVL | Display of ATR patch form level (Y) |
|     Details | To display the ATR patch form level of Y-color. |
|     Use case | When judging whether there is an error in the ATR patch form level at E020 occurrence |
|     Adj/set/operate method | N/A (Display only) |
|     Display/adj/set range | -30 to 30 |
|     Related service mode | COPIER> DISPLAY> DENS> D-Y-TRGT |

| COPIER> DISPLAY> DENS | |
|---|---|
| D-M-LVL | Display of ATR patch form level (M) |
|     Details | To display the ATR patch form level of M-color. |
|     Use case | When judging whether there is an error in the ATR patch form level at E020 occurrence |
|     Adj/set/operate method | N/A (Display only) |
|     Display/adj/set range | -30 to 30 |
|     Related service mode | COPIER> DISPLAY> DENS> D-M-TRGT |
| D-C-LVL | Display of ATR patch form level (C) |
|     Details | To display the ATR patch form level of C-color. |
|     Use case | When judging whether there is an error in the ATR patch form level at E020 occurrence |
|     Adj/set/operate method | N/A (Display only) |
|     Display/adj/set range | -30 to 30 |
|     Related service mode | COPIER> DISPLAY> DENS> D-C-TRGT |
| D-K-LVL | Display of ATR patch form level (Bk) |
|     Details | To display the ATR patch form level of Bk-color. |
|     Use case | When judging whether there is an error in the ATR patch form level at E020 occurrence |
|     Adj/set/operate method | N/A (Display only) |
|     Display/adj/set range | -30 to 30 |
|     Related service mode | COPIER> DISPLAY> DENS> D-K-TRGT |

T-8-8

## ■ MISC

| COPIER> DISPLAY> MISC | |
|---|---|
| **LPOWER-Y** | Display of laser power (Y) |
| Details | To display the Y laser power at the latest output. |
| Use case | When analyzing the cause of image failure (low density, ghost, etc.) |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |
| **LPOWER-M** | Display of laser power (M) |
| Details | To display the M laser power at the latest output. |
| Use case | When analyzing the cause of image failure (low density, ghost, etc.) |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |
| **LPOWER-C** | Display of laser power (C) |
| Details | To display the C laser power at the latest output. |
| Use case | When analyzing the cause of image failure (low density, ghost, etc.) |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |
| **LPOWER-K** | Display of laser power (Bk) |
| Details | To display the Bk laser power at the latest output. |
| Use case | When analyzing the cause of image failure (low density, ghost, etc.) |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 255 |
| **ENV-1TR** | Dspl of prmry trns ATVC ctrl environment |
| Details | To display the environment (relative humidity) at execution of the primary transfer ATVC control. |
| Use case | When checking the environment where the primary transfer ATVC control is executed |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 6 |
| **TNRB-IDY** | Display of Y-color Toner Container ID |
| Details | To display the ID of Y-color Toner Container that is installed to the machine |
| Use case | When checking whether the barcode ID on the Toner Container is read correctly |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 12-digit decimal number |

| COPIER> DISPLAY> MISC | |
|---|---|
| **TNRB-IDM** | Display of M-color Toner Container ID |
| Details | To display the ID of M-color Toner Container that is installed to the machine |
| Use case | When checking whether the barcode ID on the Toner Container is read correctly |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 12-digit decimal number |
| **TNRB-IDC** | Display of C-color Toner Container ID |
| Details | To display the ID of C-color Toner Container that is installed to the machine |
| Use case | When checking whether the barcode ID on the Toner Container is read correctly |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 12-digit decimal number |
| **TNRB-IDK** | Display of Bk-color Toner Container ID |
| Details | To display the ID of Bk-color Toner Container that is installed to the machine |
| Use case | When checking whether the barcode ID on the Toner Container is read correctly |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 12-digit decimal number |

T-8-9

## ■ HT-C

| COPIER> DISPLAY> HT-C | |
|---|---|
| TGT-A-Y | Dspl ARCDAT screen A Y-color target VL |
| Details | To display the Y-patch target value of screen A in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-A-M | Dspl ARCDAT screen A M-color target VL |
| Details | To display the M-patch target value of screen A in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-A-C | Dspl ARCDAT screen A C-color target VL |
| Details | To display the C-patch target value of screen A in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-A-K | Dspl of ARCDAT screen A Bk-clr target VL |
| Details | To display the Bk-patch target value of screen A in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |

| COPIER> DISPLAY> HT-C | |
|---|---|
| TGT-B-Y | Dspl ARCDAT screen B Y-color target VL |
| Details | To display the Y-patch target value of screen B in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-B-M | Dspl ARCDAT screen B M-color target VL |
| Details | To display the M-patch target value of screen B in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-B-C | Dspl ARCDAT screen B C-color target VL |
| Details | To display the C-patch target value of screen B in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-B-K | Dspl of ARCDAT screen B Bk-clr target VL |
| Details | To display the Bk-patch target value of screen B in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-C-Y | Dspl ARCDAT screen C Y-color target VL |
| Details | To display the Y-patch target value of screen C in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |

| COPIER> DISPLAY> HT-C | |
|---|---|
| TGT-C-M | Dspl ARCDAT screen C M-color target VL |
| Details | To display the M-patch target value of screen C in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-C-C | Dspl ARCDAT screen C C-color target VL |
| Details | To display the C-patch target value of screen C in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| TGT-C-K | Dspl of ARCDAT screen C Bk-clr target VL |
| Details | To display the Bk-patch target value of screen C in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset the target value). Check the Patch Sensor if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| Appropriate target value | 0 - 700 |
| SUM-A-Y | Dspl ARCDAT screen A Y-color ctrl differ |
| Details | To display Y-patch control difference of screen A in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-A-M | Dspl ARCDAT screen A M-color ctrl differ |
| Details | To display M-patch control difference of screen A in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |

| COPIER> DISPLAY> HT-C | |
|---|---|
| SUM-A-C | Dspl ARCDAT screen A C-color ctrl differ |
| Details | To display C-patch control difference of screen A in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-A-K | Dspl ARCDAT screen A Bk-clr ctrl differ |
| Details | To display Bk-patch control difference of screen A in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-B-Y | Dspl ARCDAT screen B Y-color ctrl differ |
| Details | To display Y-patch control difference of screen B in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-B-M | Dspl ARCDAT screen B M-color ctrl differ |
| Details | To display M-patch control difference of screen B in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-B-C | Dspl ARCDAT screen B C-color ctrl differ |
| Details | To display C-patch control difference of screen B in ARCDAT control. When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |

| COPIER> DISPLAY> HT-C | |
|---|---|
| SUM-B-K | Dspl ARCDAT screen B Bk-clr ctrl differ |
| Details | To display Bk-patch control difference of screen B in ARCDAT control.<br>When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-C-Y | Dspl ARCDAT screen C Y-color ctrl differ |
| Details | To display Y-patch control difference of screen C in ARCDAT control.<br>When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-C-M | Dspl ARCDAT screen C M-color ctrl differ |
| Details | To display M-patch control difference of screen C in ARCDAT control.<br>When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-C-C | Dspl ARCDAT screen C C-color ctrl differ |
| Details | To display C-patch control difference of screen C in ARCDAT control.<br>When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |
| SUM-C-K | Dspl ARCDAT screen C Bk-clr ctrl differ |
| Details | To display Bk-patch control difference of screen C in ARCDAT control.<br>When hue variation occurs and the displayed value is not in the tolerable range, execute the auto gradation adjustment (reset target value). Check the Patch Sensor or replace the developer if not corrected. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | -1023 to 1023 |

| COPIER> DISPLAY> HT-C | |
|---|---|
| SGNL-A-Y | Dspl ARCDAT screen A Y-patch current VL |
| Details | To display the current Y-patch value of screen A in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-A-M | Dspl ARCDAT screen A M-patch current VL |
| Details | To display the current M-patch value of screen A in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-A-C | Dspl ARCDAT screen A C-patch current VL |
| Details | To display the current C-patch value of screen A in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-A-K | Dspl ARCDAT screen A Bk-patch current VL |
| Details | To display the current Bk-patch value of screen A in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-B-Y | Dspl ARCDAT screen B Y-patch current VL |
| Details | To display the current Y-patch value of screen B in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-B-M | Dspl ARCDAT screen B M-patch current VL |
| Details | To display the current M-patch value of screen B in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |

| COPIER> DISPLAY> HT-C | |
|---|---|
| SGNL-B-C | Dspl ARCDAT screen B C-patch current VL |
| Details | To display the current C-patch value of screen B in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-B-K | Dspl ARCDAT screen B Bk-patch current VL |
| Details | To display the current Bk-patch value of screen B in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-C-Y | Dspl ARCDAT screen C Y-patch current VL |
| Details | To display the current Y-patch value of screen C in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-C-M | Dspl ARCDAT screen C M-patch current VL |
| Details | To display the current M-patch value of screen C in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-C-K | Dspl ARCDAT screen C Bk-patch current VL |
| Details | To display the current Bk-patch value of screen C in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |
| SGNL-C-C | Dspl ARCDAT screen C C-patch current VL |
| Details | To display the current C-patch value of screen C in ARCDAT control. When hue variation occurs or the value shown is not in the tolerable range, check the Patch Sensor or replace the developer. |
| Use case | When hue variation occurs |
| Adj/set/operate method | N/A (Display only) |
| Display/adj/set range | 0 to 1023 |

T-8-10

## 🔵 I/O

### ■ Main Body_DC Controller (DC-CON> P001 to P026)

Main Body
Cassette Feeding Unit-AJ1 / Cassette Feeding Unit-AK1

| Address | bit | Name | Symbol | Remarks |
|---------|-----|------|--------|---------|
| P001H | 7-0 | Not used | - | |
| P001L | 7-0 | Not used | - | |
| P002H | 7-0 | Not used | - | |
| P002L | 7-0 | Not used | - | |
| P003H | 7-0 | Not used | - | |
| P003L | 7-0 | Not used | - | |
| P004H | 7 | Not used | - | |
| | 6 | Fixing Pressure Release Sensor | PS13 | 0:engage |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Cassette PCB Connector Detection | - | 1:conect |
| | 2 | Finisher Detection | - | 0:conect |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P004L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Multi-purpose Tray Paper Sensor | PS3 | 0:paper |
| | 2 | Not used | - | |
| | 1 | Front Door Open/Close Switch | SW6 | 1:close/0:open |
| | 0 | Not used | - | |
| P005H | 7 | Delivery Paper Full Sensor | PS14 | 1:full |
| | 6 | Delivery Sensor | PS12 | 1:paper |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P005L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |

| Address | bit | Name | Symbol | Remarks |
|---------|-----|------|--------|---------|
| P006H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Cassette 1 Paper Sensor | PS2 | 0:paper |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P006L | 7 | Arch Sensor | PS11 | 1:deep roop /0:shallow roop |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Cassette 1 Paper Surface Sensor | PS18 | 0:full 1:mid |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Right Door Open/Close Detection Switch | SW5 | 1:close/0:open |
| P007H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P007L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Cassette 1 Lifter Motor | M11 | 1:ON |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P008H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |

| Address | bit | Name | Symbol | Remarks |
|---|---|---|---|---|
| P008L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Waste Toner Sensor PCB | UN17 | 0:full |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P009H | 7-0 | Not used | - | |
| P009L | 7-0 | Not used | - | |
| P010H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P010L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Cassette 1 Pickup Sensor | PS5 | 1:paper |
| | 4 | Not used | - | |
| | 3 | Pre-Registration Sensor | PS4 | 1:paper |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P011H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | ITB Pressure Release Switch | SW7 | 1:closes/0:open |
| | 4 | Duplex Sensor | PS1 | 1:paper |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P011L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Multi-purpose Tray HP Sensor | PS10 | 1:HP |
| | 0 | Not used | - | |
| P012H | 7-0 | Not used | - | |
| P012L | 7-0 | Not used | - | |
| P013H | 7-0 | Not used | - | |

| Address | bit | Name | Symbol | Remarks |
|---|---|---|---|---|
| P013L | 7-0 | Not used | - | |
| P014H | 7-0 | Not used | - | |
| P014L | 7-0 | Not used | - | |
| P015H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P015L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P016H | 7-0 | Not used | - | |
| P016L | 7-0 | Not used | - | |
| P017H | 7-0 | Not used | - | |
| P017L | 7-0 | Not used | - | |
| P018H | 7-0 | Not used | - | |
| P018L | 7-0 | Not used | - | |
| P019H | 7-0 | Not used | - | |
| P019L | 7-0 | Not used | - | |
| P020H | 7-0 | Not used | - | |
| P020L | 7-0 | Not used | - | |
| P021H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P021L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |

| Address | bit | Name | Symbol | Remarks |
|---|---|---|---|---|
| P022H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P022L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Cassette 2 Paper Level Sensor | PS110 | 0:full 1:mid |
| | 3 | Cassette 2 Paper Sensor | PS104 | 0:paper |
| | 2 | Cassette 2 Pullout Sensor | PS101 | 1:paper |
| | 1 | Cassette 2 Paper Surface Sensor | PS107 | 0:full 1:mid |
| | 0 | Not used | - | |
| P023H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| P023L | 0 | Not used | - | |
| | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Cassette 4 Paper Level Sensor | PS112 | 0:full 1:mid |
| | 3 | Cassette 3 Paper Level Sensor | PS111 | 0:full 1:mid |
| | 2 | Cassette Right Door Open/Close Detection Switch | SW104 | 1:close/0:open |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P024H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Cassette 3 Pullout Sensor | PS102 | 1:paper |
| | 4 | Cassette 3 Paper Surface Sensor | PS108 | 0:full 1:mid |
| | 3 | Cassette 3 Paper Sensor | PS105 | 0:paper |
| | 2 | Cassette 4 Paper Sensor | PS106 | 0:paper |
| | 1 | Cassette 4 Paper Surface Sensor | PS109 | 0:full 1:mid |
| | 0 | Cassette 4 Pullout Sensor | PS103 | 1:paper |

| Address | bit | Name | Symbol | Remarks |
|---|---|---|---|---|
| P024L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P025H | 7-0 | Not used | - | |
| P025L | 7-0 | Not used | - | |
| P026H | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Cassette 2 Lifter Motor | M104 | 1:ON |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |
| P026L | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | Not used | - | |
| | 0 | Not used | - | |

T-8-11

## ■ Reader (R-CON> P001)

| Address | bit | Name | Symbol | Remarks |
|---|---|---|---|---|
| P001 | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | CIS HP Sensor | PS1 | 0:HP |
| | 1 | Not used | - | |
| | 0 | Not used | - | |

T-8-12

## ■ ADF (R-CON> P001)

| Address | bit | Name | Symbol | Remarks |
|---|---|---|---|---|
| P001 | 7 | Not used | - | |
| | 6 | Not used | - | |
| | 5 | Not used | - | |
| | 4 | Not used | - | |
| | 3 | Not used | - | |
| | 2 | Not used | - | |
| | 1 | DS | PS3 | 1:paper |
| | 0 | DES | PS2 | 1:paper |

T-8-13

## ADJUST

### ■ADJ-XY

| COPIER> ADJUST> ADJ-XY | |
|---|---|
| ADJ-X | Adj of img pstn in book mode: vert scan |
| Details | To adjust the image reading start position (image leading edge position) in vertical scanning direction.<br>When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label.<br>When the non-image width is larger than the standard value, set the smaller value.<br>When out of original area is copied, set the larger value.<br>As the value is incremented by 1, the image position moves to the trailing edge side by 0.1 mm. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -30 to 30 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-Y | Adj of img pstn in book mode: horz scan |
| Details | To adjust the image reading start position in horizontal scanning direction.<br>When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label.<br>When the non-image width is larger than the standard value, set the smaller value.<br>When out of original area is copied, set the larger value.<br>As the value is incremented by 1, the image position moves to the rear side by 0.1 mm. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -15 to 15 |
| Unit | 0.1 mm |
| Default value | 0 |

| COPIER> ADJUST> ADJ-XY | |
|---|---|
| ADJ-Y-DF | Adj img pstn in DADF mode:horz scan[Frt] |
| Details | To adjust the image reading start position in horizontal scanning direction at DADF reading.<br>When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label.<br>As the value is incremented by 1, the image position moves to the rear side by 0.1 mm. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -15 to 15 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-X-MG | Fine adj img ratio: book mode, vert scan |
| Details | To make a fine adjustment of image magnification ratio in vertical scanning direction at copyboard reading.<br>When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label.<br>As the value is incremented by 1, the image magnification ratio changes by 0.01 %.<br>  +: Enlarge<br>  -: Reduce |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -200 to 200 |
| Unit | 0.01 % |
| Default value | 0 |

| COPIER> ADJUST> ADJ-XY | |
|---|---|
| STRD-POS | Adj read pstn in DADF mode: front side |
| Details | To adjust the reading position at DADF reading (front side). When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -30 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> INSTALL> STRD-POS |
| ADJ-S | Adj image read start position: horz scan |
| Details | To adjust the image reading start position in horizontal scanning direction when black line/white line occurs.<br>When replacing the CCD Unit/clearing the RAM data of the Reader Unit, enter the value of service label.<br>As the value is incremented by 1, the image position moves to the trailing edge side by 0.1 mm. |
| Use case | When clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When COPIER> FUNCTION> INSTALL> RDSHDPOS is executed, the value of this item may change. If the value is changed, write the value in the service label. |
| Display/adj/set range | -20 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> INSTALL> RDSHDPOS |
| Supplement/memo | The shading position can be adjusted automatically by COPIER> FUNCTION> INSTALL> RDSHDPOS. |

T-8-14

■ CCD

| COPIER> ADJUST> CCD | |
|---|---|
| W-PLT-X | White level data(X) entry of White Plate |
| Details | When replacing the Reader Controller PCB/clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass, enter the value of barcode label which is affixed on the glass. |
| Use case | • When replacing the Main Controller PCB<br>• When clearing the Reader-related RAM data<br>• When replacing the Copyboard Glass |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Output the service mode setting values by P-PRINT beforehand. |
| Display/adj/set range | 7000 to 9999 |
| Default value | 8273 |
| Related service mode | COPIER> ADJUST> CCD> W-PLT-Y/Z<br>COPIER> FUNCTION> MISC-P> P-PRINT |
| W-PLT-Y | White level data(Y) entry of White Plate |
| Details | When replacing the Reader Controller PCB/clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass, enter the value of barcode label which is affixed on the glass. |
| Use case | • When replacing the Main Controller PCB<br>• When clearing the Reader-related RAM data<br>• When replacing the Copyboard Glass |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Output the service mode setting values by P-PRINT beforehand. |
| Display/adj/set range | 7000 to 9999 |
| Default value | 8737 |
| Related service mode | COPIER> ADJUST> CCD> W-PLT-X/Z<br>COPIER> FUNCTION> MISC-P> P-PRINT |
| W-PLT-Z | White level data(Z) entry of White Plate |
| Details | When replacing the Reader Controller PCB/clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass, enter the value of barcode label which is affixed on the glass. |
| Use case | • When replacing the Main Controller PCB<br>• When clearing the Reader-related RAM data<br>• When replacing the Copyboard Glass |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Output the service mode setting values by P-PRINT beforehand. |
| Display/adj/set range | 7000 to 9999 |
| Default value | 9427 |
| Related service mode | COPIER> ADJUST> CCD> W-PLT-X/Y<br>COPIER> FUNCTION> MISC-P> P-PRINT |

| COPIER> ADJUST> CCD | |
| --- | --- |
| DFTAR-R | Shading tgt VL(R) [1st reading position] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1105 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2 COPIER> FUNCTION> MISC-P> P-PRINT |
| DFTAR-G | Shading tgt VL(G) [1st reading position] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1129 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2 COPIER> FUNCTION> MISC-P> P-PRINT |
| DFTAR-B | Shading tgt VL(B) [1st reading position] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1151 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2 COPIER> FUNCTION> MISC-P> P-PRINT |

| COPIER> ADJUST> CCD | |
| --- | --- |
| DFTAR2-R | Shading tgt VL(R) [2nd reading position] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1105 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2 COPIER> FUNCTION> MISC-P> P-PRINT |
| DFTAR2-G | Shading tgt VL(G) [2nd reading position] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1129 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2 COPIER> FUNCTION> MISC-P> P-PRINT |
| DFTAR2-B | Shading tgt VL(B) [2nd reading position] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT. When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1151 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2 COPIER> FUNCTION> MISC-P> P-PRINT |

| COPIER> ADJUST> CCD | |
|---|---|
| DFTAR3-R | Shading tgt VL (R): DADF [3rd read pstn] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT.<br>When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1105 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2<br>COPIER> FUNCTION> MISC-P> P-PRINT |
| DFTAR3-G | Shading tgt VL (G): DADF [3rd read pstn] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT.<br>When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1129 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2<br>COPIER> FUNCTION> MISC-P> P-PRINT |
| DFTAR3-B | Shading tgt VL (B): DADF [3rd read pstn] |
| Details | When clearing the Reader-related RAM data, enter the value of P-PRINT.<br>When replacing the Copyboard Glass/Scanner Unit, execute COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1151 |
| Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2<br>COPIER> FUNCTION> MISC-P> P-PRINT |

| COPIER> ADJUST> CCD | |
|---|---|
| 50-RG | RG clr displace crrct: 300dpi book mode |
| Details | To correct the color displacement (R and G lines) in vertical scanning direction due to the Scanner Unit (paper front) occurs at copyboard reading with 300 dpi.<br>When replacing the Scanner Unit, enter the value of service label on the unit.<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label on the reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -512 to 512 |
| Unit | 0.001 line |
| Default value | -333 |
| 50-GB | GB clr displace crrct: 300dpi book mode |
| Details | To correct the color displacement (G and B lines) in vertical scanning direction due to the Scanner Unit (paper front) occurs at copyboard reading with 300 dpi.<br>When replacing the Scanner Unit, enter the value of service label on the unit.<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label on the reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -512 to 512 |
| Unit | 0.001 line |
| Default value | 333 |

| COPIER> ADJUST> CCD | |
|---|---|
| 100-RG | RG clr displace crrct: 600dpi book mode |
| Details | To correct the color displacement (R and G lines) in vertical scanning direction due to the Scanner Unit (paper front) occurs at copyboard reading with 600 dpi.<br>When replacing the Scanner Unit, enter the value of service label on the unit.<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label on the reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -512 to 512 |
| Unit | 0.001 line |
| Default value | -333 |
| 100-GB | GB clr displace crrct: 600dpi book mode |
| Details | To correct the color displacement (G and B lines) in vertical scanning direction due to the Scanner Unit (paper front) occurs at copyboard reading with 600 dpi.<br>When replacing the Scanner Unit, enter the value of service label on the unit.<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label on the reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -512 to 512 |
| Unit | 0.001 line |
| Default value | 333 |

| COPIER> ADJUST> CCD | |
|---|---|
| 50DF-RG | RG clr displace crrct: 300dpi DADF mode |
| Details | To correct the color displacement (R and G lines) in vertical scanning direction due to the Scanner Unit (paper front) occurs at DADF reading with 300 dpi.<br>When replacing the Scanner Unit, enter the value of service label on the unit.<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label on the reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -512 to 512 |
| Unit | 0.001 line |
| Default value | -333 |
| 50DF-GB | GB clr displace crrct: 300dpi DADF mode |
| Details | To correct the color displacement (G and B lines) in vertical scanning direction due to the Scanner Unit (paper front) occurs at DADF reading with 300 dpi.<br>When replacing the Scanner Unit, enter the value of service label on the unit.<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label on the reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -512 to 512 |
| Unit | 0.001 line |
| Default value | 333 |

| COPIER> ADJUST> CCD | |
|---|---|
| 100DF-RG | RG clr displace crrct: 600dpi DADF mode |
| Details | To correct the color displacement (R and G lines) in vertical scanning direction due to the Scanner Unit (paper front) occurs at DADF reading with 600 dpi. When replacing the Scanner Unit, enter the value of service label on the unit. When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label on the reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -512 to 512 |
| Unit | 0.001 line |
| Default value | -333 |
| 100DF-GB | GB clr displace crrct: 600dpi DADF mode |
| Details | To correct the color displacement (G and B lines) in vertical scanning direction due to the Scanner Unit (paper front) occurs at DADF reading with 600 dpi. When replacing the Scanner Unit, enter the value of service label on the unit. When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label on the reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -512 to 512 |
| Unit | 0.001 line |
| Default value | 333 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF2-M1 | MTF value 1 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-M2 | MTF value 2 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-M3 | MTF value 3 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF2-M4 | MTF value 4 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-M5 | MTF value 5 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-M6 | MTF value 6 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF2-M7 | MTF value 7 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-M8 | MTF value 8 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-M9 | MTF value 9 setting: horz scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF2-S1 | MTF value 1 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-S2 | MTF value 2 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-S3 | MTF value 3 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF2-S4 | MTF value 4 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-S5 | MTF value 5 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-S6 | MTF value 6 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation. Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF2-S7 | MTF value 7 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-S8 | MTF value 8 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF2-S9 | MTF value 9 setting: vert scan [Cpybrd] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF-M1 | MTF value 1 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-M2 | MTF value 2 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-M3 | MTF value 3 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF-M4 | MTF value 4 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-M5 | MTF value 5 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-M6 | MTF value 6 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF-M7 | MTF value 7 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-M8 | MTF value 8 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-M9 | MTF value 9 setting: horz scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF-S1 | MTF value 1 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-S2 | MTF value 2 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-S3 | MTF value 3 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF-S4 | MTF value 4 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-S5 | MTF value 5 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-S6 | MTF value 6 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| MTF-S7 | MTF value 7 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-S8 | MTF value 8 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |
| MTF-S9 | MTF value 9 setting: vert scan [DADF] |
| Details | Setting value for MTF filter coefficient calculation.<br>Enter the value of service label on the Reader. |
| Use case | • When replacing the Scanner Unit<br>• When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | 0 to 100 |
| Unit | 1 % |
| Default value | 100 |

| COPIER> ADJUST> CCD | |
|---|---|
| OFST-CL0 | Adj CIS-ch0 offset: color mode, 300 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 0 in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST-CL1 | Adj CIS-ch1 offset: color mode, 300 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 1 in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST-CL2 | Adj CIS-ch2 offset: color mode, 300 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 2 in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST-CL3 | Adj CIS-ch3 offset: color mode, 300 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 3 in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |

| COPIER> ADJUST> CCD | |
|---|---|
| OFST-CL4 | Adj CIS-ch4 offset: color mode, 300 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 4 in color mode with 300 dpi.<br>This setting is not available for a 25-ppm machine. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST-CL5 | Adj CIS-ch5 offset: color mode, 300 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 5 in color mode with 300 dpi.<br>This setting is not available for a 25-ppm machine. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST2CL0 | Adj CIS-ch0 offset: color mode, 600 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 0 in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST2CL1 | Adj CIS-ch1 offset: color mode, 600 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 1 in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |

| COPIER> ADJUST> CCD | |
|---|---|
| OFST2CL2 | Adj CIS-ch2 offset: color mode, 600 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 2 in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST2CL3 | Adj CIS-ch3 offset: color mode, 600 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 3 in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST2CL4 | Adj CIS-ch4 offset: color mode, 600 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 4 in color mode with 600 dpi.<br>This setting is not available for a 25-ppm machine. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| OFST2CL5 | Adj CIS-ch5 offset: color mode, 600 dpi |
| Details | To adjust the offset (black level) of the Scanner Unit on channel 5 in color mode with 600 dpi.<br>This setting is not available for a 25-ppm machine. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 216 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |

| COPIER> ADJUST> CCD | |
|---|---|
| GAIN-CL0 | Adj CIS gain level: color mode, 300 dpi |
| Details | To adjust the gain (amplification of detection level) of the Scanner Unit in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| GAIN2CL0 | Adj CIS gain level: color mode, 600 dpi |
| Details | To adjust the gain (amplification of detection level) of the Scanner Unit in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 255 |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| LED-CL-R | Adj LEDSTOP VL (R): color mode, 300 dpi |
| Details | To adjust the lighting time of the red color LED which is a primary light source of the Scanner Unit in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 544 (25ppm machine)/408 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| LED-CL-G | Adj LEDSTOP VL (G): color mode, 300 dpi |
| Details | To adjust the lighting time of the green color LED which is a primary light source of the Scanner Unit in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 720 (25ppm machine)/650 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |

| COPIER> ADJUST> CCD | |
|---|---|
| LED-CL-B | Adj LEDSTOP VL (B): color mode, 300 dpi |
| Details | To adjust the lighting time of the blue color LED which is a primary light source of the Scanner Unit in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 496 (25ppm machine)/454 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| LED-CLR2 | Adj sec lgt src LEDSTOP VL(R):clr,300dpi |
| Details | To adjust the lighting time of the red color LED which is a secondary light source of the Scanner Unit in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When replacing the Scanner Unit, execute COPIER> FUNCTION> CCD> CL-AGC and write the value of this item in the service label. |
| Display/adj/set range | 0 to 2048 |
| Default value | 544 (25ppm machine)/408 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. The secondary light source exposes light to the light guide at the right side of CIS (at trailing edge side of original at copyboard reading). |
| LED-CLG2 | Adj sec lgt src LEDSTOP VL(G):clr,300dpi |
| Details | To adjust the lighting time of the green color LED which is a secondary light source of the Scanner Unit in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When replacing the Scanner Unit, execute COPIER> FUNCTION> CCD> CL-AGC and write the value of this item in the service label. |
| Display/adj/set range | 0 to 2048 |
| Default value | 720 (25ppm machine)/650 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. The secondary light source exposes light to the light guide at the right side of CIS (at trailing edge side of original at copyboard reading). |

| COPIER> ADJUST> CCD | |
|---|---|
| LED-CLB2 | Adj sec lgt src LEDSTOP VL(B):clr,300dpi |
| Details | To adjust the lighting time of the blue color LED which is a secondary light source of the Scanner Unit in color mode with 300 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When replacing the Scanner Unit, execute COPIER> FUNCTION> CCD> CL-AGC and write the value of this item in the service label. |
| Display/adj/set range | 0 to 2048 |
| Default value | 496 (25ppm machine)/454 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. The secondary light source exposes light to the light guide at the right side of CIS (at trailing edge side of original at copyboard reading). |
| LED2CL-R | Adj LEDSTOP VL (R): color mode, 600 dpi |
| Details | To adjust the lighting time of the red color LED which is a primary light source of the Scanner Unit in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1192 (25ppm machine)/678 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| LED2CL-G | Adj LEDSTOP VL (G): color mode, 600 dpi |
| Details | To adjust the lighting time of the green color LED which is a primary light source of the Scanner Unit in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1469 (25ppm machine)/1020 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |

| COPIER> ADJUST> CCD | |
|---|---|
| LED2CL-B | Adj LEDSTOP VL (B): color mode, 600 dpi |
| Details | To adjust the lighting time of the blue color LED which is a primary light source of the Scanner Unit in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1016 (25ppm machine)/714 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. |
| LED2CLR2 | Adj sec lgt src LEDSTOP VL(R):clr,600dpi |
| Details | To adjust the lighting time of the red color LED which is a secondary light source of the Scanner Unit in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When replacing the Scanner Unit, execute COPIER> FUNCTION> CCD> CL-AGC and write the value of this item in the service label. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1192 (25ppm machine)/678 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. The secondary light source exposes light to the light guide at the right side of CIS (at trailing edge side of original at copyboard reading). |
| LED2CLG2 | Adj sec lgt src LEDSTOP VL(G):clr,600dpi |
| Details | To adjust the lighting time of the green color LED which is a secondary light source of the Scanner Unit in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When replacing the Scanner Unit, execute COPIER> FUNCTION> CCD> CL-AGC and write the value of this item in the service label. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1469 (25ppm machine)/1020 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. The secondary light source exposes light to the light guide at the right side of CIS (at trailing edge side of original at copyboard reading). |

| COPIER> ADJUST> CCD | |
|---|---|
| LED2CLB2 | Adj sec lgt src LEDSTOP VL(B):clr,600dpi |
| Details | To adjust the lighting time of the blue color LED which is a secondary light source of the Scanner Unit in color mode with 600 dpi. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When replacing the Scanner Unit, execute COPIER> FUNCTION> CCD> CL-AGC and write the value of this item in the service label. |
| Display/adj/set range | 0 to 2048 |
| Default value | 1016 (25ppm machine)/714 (35ppm machine) |
| Related service mode | COPIER> FUNCTION> CCD> CL-AGC |
| Supplement/memo | It is updated automatically when the value of CL-AGC is changed. The secondary light source exposes light to the light guide at the right side of CIS (at trailing edge side of original at copyboard reading). |

T-8-15

■ **IMG-REG**

| COPIER> ADJUST> IMG-REG | |
|---|---|
| REG-H-Y | Adj Y-color write start pstn: horz scan |
| Details | To adjust the write start position of yellow color image in the horizontal scanning direction in increments of 1 pixel. |
| Use case | When yellow color displacement in the horizontal scanning direction occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1 pixel |
| Default value | 0 |
| REG-H-C | Adj C-color write start pstn: horz scan |
| Details | To adjust the write start position of cyan color image in the horizontal scanning direction in increments of 1 pixel. |
| Use case | When cyan color displacement in the horizontal scanning direction occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1 pixel |
| Default value | 0 |
| REG-H-K | Adj Bk-color write start pstn: horz scan |
| Details | To adjust the write start position of black color image in the horizontal scanning direction in increments of 1 pixel. |
| Use case | When black color displacement in the horizontal scanning direction occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1 pixel |
| Default value | 0 |
| REG-HS-Y | Adj Y-color write start pstn: horz scan |
| Details | To adjust the write start position of yellow color image in the horizontal scanning direction in smaller increments than 1 pixel. |
| Use case | When yellow color displacement in the horizontal scanning direction occurs (smaller than 1 pixel) |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1/32 pixel |
| Default value | 0 |

| COPIER> ADJUST> IMG-REG | |
|---|---|
| REG-HS-C | Adj C-color write start pstn: horz scan |
| Details | To adjust the write start position of cyan color image in the horizontal scanning direction in smaller increments than 1 pixel. |
| Use case | When cyan color displacement in the horizontal scanning direction occurs (smaller than 1 pixel) |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1/32 pixel |
| Default value | 0 |
| REG-HS-K | Adj Bk-color write start pstn: horz scan |
| Details | To adjust the write start position of black color image in the horizontal scanning direction in smaller increments than 1 pixel. |
| Use case | When black color displacement in the horizontal scanning direction occurs (smaller than 1 pixel) |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1/32 pixel |
| Default value | 0 |
| REG-V-Y | Adj Y-color write start pstn: vert scan |
| Details | To adjust the write start position of yellow color image in the vertical scanning direction in increments of 1 pixel. |
| Use case | When yellow color displacement in the vertical scanning direction occurs |
| Adj/set/operate method | Enter the setting value and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | 0 to 127 |
| Unit | 1 line |
| Default value | 0 |
| REG-V-C | Adj C-color write start pstn: vert scan |
| Details | To adjust the write start position of cyan color image in the vertical scanning direction in increments of 1 pixel. |
| Use case | When cyan color displacement in the vertical scanning direction occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1 line |
| Default value | 0 |

| COPIER> ADJUST> IMG-REG | |
|---|---|
| REG-V-K | Adj Bk-color write start pstn: vert scan |
| Details | To adjust the write start position of black color image in the vertical scanning direction in increments of 1 pixel. |
| Use case | When black color displacement in the vertical scanning direction occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1 line |
| Default value | 0 |
| REG-H-M | Adj M-color write start pstn: horz scan |
| Details | To adjust the write start position of magenta color image in the horizontal scanning direction in increments of 1 pixel. |
| Use case | When magenta color displacement in the horizontal scanning direction occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1 pixel |
| Default value | 0 |
| REG-V-M | Adj M-color write start pstn: vert scan |
| Details | To adjust the write start position of magenta color image in the vertical scanning direction in increments of 1 pixel. |
| Use case | When magenta color displacement in the vertical scanning direction occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1 line |
| Default value | 0 |
| REG-HS-M | Fine adj M write start pstn: horz scan |
| Details | To adjust the write start position of magenta color image in the horizontal scanning direction in smaller increments than 1 pixel. |
| Use case | When magenta color displacement in the horizontal scanning direction occurs (smaller than 1 pixel) |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -128 to 127 |
| Unit | 1/32 pixel |
| Default value | 0 |

| COPIER> ADJUST> IMG-REG | |
|---|---|
| BEND-Y | Y-color laser distortion crrct:vert scan |
| Details | To correct distortion of Y-color laser in vertical scanning direction. (Digital registration) As the value is incremented by 1, degree of distortion is changed by 1 micro m. Y-color is the reference for M/C/Bk-color. |
| Use case | When distortion occurs in vertical scanning direction |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Output a test print in COPIER> TEST> PG> TYPE> 6 (Grid). 3) Perform visual check, and repeat the procedures as needed. |
| Caution | In principle, do not change the setting because Y-color is the reference. |
| Display/adj/set range | -100 to 100 |
| Unit | 1 um |
| Default value | 0 |
| BEND-M | M-color laser distortion crrct:vert scan |
| Details | To correct distortion of M-color laser in vertical scanning direction. (Digital registration) As the value is incremented by 1, degree of distortion is changed by 1 micro m with reference to Y-color. |
| Use case | When distortion occurs in vertical scanning direction |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Output a test print in COPIER> TEST> PG> TYPE> 6 (Grid). 3) Perform visual check, and repeat the procedures as needed. |
| Display/adj/set range | -100 to 100 |
| Unit | 1 um |
| Default value | 0 |
| BEND-K | Bk-clr laser distortion crrct:vert scan |
| Details | To correct distortion of Bk-color laser in vertical scanning direction. (Digital registration) As the value is incremented by 1, degree of distortion is changed by 1 micro m with reference to Y-color. |
| Use case | When distortion occurs in vertical scanning direction |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Output a test print in COPIER> TEST> PG> TYPE> 6 (Grid). 3) Perform visual check, and repeat the procedures as needed. |
| Display/adj/set range | -100 to 100 |
| Unit | 1 um |
| Default value | 0 |

| COPIER> ADJUST> IMG-REG | |
|---|---|
| LSR-V-M1 | Adj M wrt start pstn:vert scan, 1st sht |
| Details | To adjust the write start position of M-color image in vertical scanning direction when color displacement occurs only with the image on the 1st sheet. As the value is changed by 1, M-color image moves by 1 pixel. +: Move in the trailing edge direction -: Move in the leading edge direction Since image formation is performed based on Y-color, adjust the position of M/C/Bk-color even if it seems that color displacement occurs only with Y-color. |
| Use case | When color displacement occurs only on the 1st sheet |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Use this mode only when color displacement occurs on the 1st sheet. |
| Display/adj/set range | -5 to 5 |
| Unit | 1 pixel |
| Appropriate target value | 0 |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> IMG-REG> LSR-V-C1/K1 |
| LSR-V-M2 | For R&D |
| LSR-V-C1 | Adj C wrt start pstn:vert scan, 1st sht |
| Details | To adjust the write start position of C-color image in vertical scanning direction when color displacement occurs only with the image on the 1st sheet. As the value is changed by 1, C-color image moves by 1 pixel. +: Move in the trailing edge direction -: Move in the leading edge direction Since image formation is performed based on Y-color, adjust the position of M/C/Bk-color even if it seems that color displacement occurs only with Y-color. |
| Use case | When color displacement occurs only on the 1st sheet |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Use this mode only when color displacement occurs on the 1st sheet. |
| Display/adj/set range | -5 to 5 |
| Unit | 1 pixel |
| Appropriate target value | 0 |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> IMG-REG> LSR-V-M1/K1 |
| LSR-V-C2 | For R&D |

| COPIER> ADJUST> IMG-REG | |
|---|---|
| LSR-V-K1 | Adj Bk wrt start pstn:vert scan, 1st sht |
| Details | To adjust the write start position of Bk-color image in vertical scanning direction when color displacement occurs only with the image on the 1st sheet.<br>As the value is changed by 1, Bk-color image moves by 1 pixel.<br>  +: Move in the trailing edge direction<br>  -: Move in the leading edge direction<br>Since image formation is performed based on Y-color, adjust the position of M/C/Bk-color even if it seems that color displacement occurs only with Y-color. |
| Use case | When color displacement occurs only on the 1st sheet |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Use this mode only when color displacement occurs on the 1st sheet. |
| Display/adj/set range | -5 to 5 |
| Unit | 1 pixel |
| Appropriate target value | 0 |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> IMG-REG> LSR-V-M1/C1 |
| LSR-V-K2 | For R&D |
| ITBDRBL1 | For R&D |
| BEND-C | C-color laser distortion crrct:vert scan |
| Details | To correct distortion of C-color laser in vertical scanning direction. (Digital registration)<br>As the value is incremented by 1, degree of distortion is changed by 1 micro m with reference to Y-color. |
| Use case | When distortion occurs in vertical scanning direction |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Output a test print in COPIER> TEST> PG> TYPE> 6 (Grid).<br>3) Perform visual check, and repeat the procedures as needed. |
| Display/adj/set range | -100 to 100 |
| Unit | 1 um |
| Default value | 0 |

| COPIER> ADJUST> IMG-REG | |
|---|---|
| SLOP-Y | Adjustment of image squareness |
| Details | To adjust skew of image (squareness) in vertical scanning direction by adjusting skew of Y-color laser in vertical scanning direction digitally.<br>By performing auto color displacement correction after this adjustment, adjustment is made for other colors in accordance with adjustment for Y-color. |
| Use case | When corners of an image are not square |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute auto color displacement correction. |
| Caution | Be sure to perform auto color displacement correction after adjustment.<br>If the setting value is changed dramatically, be sure to perform auto color displacement correction twice. |
| Display/adj/set range | -84 to 84 |
| Unit | 1 um |
| Default value | 0 |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Correct Color Mismatch |

T-8-16

## ■ DENS

| COPIER> ADJUST> DENS | |
|---|---|
| HLMT-PTY | Adj ATR Sensor (Y) dens crrct upr limit |
| Details | To adjust the upper limit of the target density correction (lower limit of TD ratio) of the ATR Sensor (Y). When the value is increased (TD ratio is decreased), fogging/scattering is alleviated. |
| Use case | When an image failure (density failure, fogging, carrier adherence, and scattering, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Take necessary action in accordance with the instructions from the Quality Support Division. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.5 % |
| Default value | 0 |
| HLMT-PTM | Adj ATR Sensor (M) dens crrct upr limit |
| Details | To adjust the upper limit of the target density correction (lower limit of TD ratio) of the ATR Sensor (M). As the value is incremented by 1, the lower limit of TD ratio is decreased by 0.5 %. When the value is increased, fogging/scattering is alleviated. |
| Use case | When an image failure (density failure, fogging, carrier adherence, and scattering, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Take necessary action in accordance with the instructions from the Quality Support Division. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.5 % |
| Default value | 0 |

| COPIER> ADJUST> DENS | |
|---|---|
| HLMT-PTC | Adj ATR Sensor (C) dens crrct upr limit |
| Details | To adjust the upper limit of the target density correction (lower limit of TD ratio) of the ATR Sensor (C). As the value is incremented by 1, the lower limit of TD ratio is decreased by 0.5 %. When the value is increased, fogging/scattering is alleviated. |
| Use case | When an image failure (density failure, fogging, carrier adherence, and scattering, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Take necessary action in accordance with the instructions from the Quality Support Division. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.5 % |
| Default value | 0 |
| LLMT-PTY | Adj ATR Sensor (Y)dens crrct lowr limit |
| Details | To adjust the lower limit of the target density correction (upper limit of TD ratio) of the ATR Sensor (Y). As the value is decremented by 1, the lower limit of TD ratio is increased by 0.5 %. When the value is decreased, density is increased, but fogging/scattering occurs. |
| Use case | When an image failure (density failure, fogging, carrier adherence, and scattering, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Take necessary action in accordance with the instructions from the Quality Support Division. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.5 % |
| Default value | 0 |

| COPIER> ADJUST> DENS | |
|---|---|
| LLMT-PTM | Adj ATR Sensor (M)dens crrct lowr limit |
| Details | To adjust the lower limit of the target density correction (upper limit of TD ratio) of the ATR Sensor (M). As the value is decremented by 1, the lower limit of TD ratio is increased by 0.5 %. When the value is decreased, density is increased, but fogging/scattering occurs. |
| Use case | When an image failure (density failure, fogging, carrier adherence, and scattering, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Take necessary action in accordance with the instructions from the Quality Support Division. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.5 % |
| Default value | 0 |
| LLMT-PTC | Adj ATR Sensor (C)dens crrct lowr limit |
| Details | To adjust the lower limit of the target density correction (upper limit of TD ratio) of the ATR Sensor (C). As the value is decremented by 1, the lower limit of TD ratio is increased by 0.5 %. When the value is decreased, density is increased, but fogging/scattering occurs. |
| Use case | When an image failure (density failure, fogging, carrier adherence, and scattering, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Take necessary action in accordance with the instructions from the Quality Support Division. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.5 % |
| Default value | 0 |
| T-SPLY-Y | Adj toner supply amount for all colors |
| Details | To adjust the offset value of toner supply amount for all colors. When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When a symptom that toner supply amount is decreased at an NTD high latitude occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | -3 to 3 |
| Unit | 10 % |
| Default value | 0 |

| COPIER> ADJUST> DENS | |
|---|---|
| T-SPLY-M | Adjustment of M toner supply amount |
| Details | To adjust the offset value of M toner supply amount. When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When E020 occurs frequently |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | -3 to 3 |
| Unit | 10 % |
| Default value | 0 |
| T-SPLY-C | Adjustment of C toner supply amount |
| Details | To adjust the offset value of C toner supply amount. When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When E020 occurs frequently |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | -3 to 3 |
| Unit | 10 % |
| Default value | 0 |
| T-SPLY-K | Adjustment of Bk toner supply amount |
| Details | To adjust the offset value of Bk toner supply amount. When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When E020 occurs frequently |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | -3 to 3 |
| Unit | 10 % |
| Default value | 0 |
| DMAX-Y | Adj D-max ctrl Y-color dens target VL |
| Details | An image failure might occur because the density target value of the D-max control becomes out of the setting table due to environment change. Adjust the offset of the yellow density target value of D-max control. |
| Use case | When any image failure occurs due to environment change |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -8 to 8 |
| Default value | 0 |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |

| COPIER> ADJUST> DENS | |
|---|---|
| DMAX-M | Adj D-max ctrl M-color dens target VL |
|    Details | An image failure might occur because the density target value of the D-max control becomes out of the setting table due to environment change. Adjust the offset of the magenta density target value of D-max control. |
|    Use case | When any image failure occurs due to environment change |
|    Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
|    Caution | Do not use this at the normal service. |
|    Display/adj/set range | -8 to 8 |
|    Default value | 0 |
|    Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |
| DMAX-C | Adj D-max ctrl C-color dens target VL |
|    Details | An image failure might occur because the density target value of the D-max control becomes out of the setting table due to environment change. Adjust the offset of the cyan density target value of D-max control. |
|    Use case | When any image failure occurs due to environment change |
|    Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
|    Caution | Do not use this at the normal service. |
|    Display/adj/set range | -8 to 8 |
|    Default value | 0 |
|    Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |
| P-TG-Y | Adj of ATR control Y-color target value |
|    Details | To adjust the offset of the ATR patch target value for Y. When the target value determined upon initialization is changed, density and the TD ratio are also changed. Density is increased when the value is increased, and fogging/scattering is alleviated when the value is decreased. |
|    Use case | When density failures, fogging, etc. occur |
|    Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Make 10 prints of approx. 10% image ratio (ex. COPIER> TEST> PG> TYPE: 16) 20 times. 3) Execute Auto Adjust Gradation> Full Adjust. |
|    Caution | Execute the Auto Adjust Gradation first to increase the density. If you adjust the offset of the target value, fogging might get worse. |
|    Display/adj/set range | -4 to 4 |
|    Default value | 0 |
|    Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |

| COPIER> ADJUST> DENS | |
|---|---|
| P-TG-M | Adj of ATR control M-color target value |
|    Details | To adjust the offset of the ATR patch target value for M. When the target value determined upon initialization is changed, density and the TD ratio are also changed. Density is increased when the value is increased, and fogging/scattering is alleviated when the value is decreased. |
|    Use case | When density failures, fogging, etc. occur |
|    Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Make 10 prints of approx. 10% image ratio (ex. COPIER> TEST> PG> TYPE: 16) 20 times. 3) Execute Auto Adjust Gradation> Full Adjust. |
|    Caution | Execute the Auto Adjust Gradation first to increase the density. If you adjust the offset of the target value, fogging might get worse. |
|    Display/adj/set range | -4 to 4 |
|    Default value | 0 |
|    Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |
| P-TG-C | Adj of ATR control C-color target value |
|    Details | To adjust the offset of the ATR patch target value for C. When the target value determined upon initialization is changed, density and the TD ratio are also changed. Density is increased when the value is increased, and fogging/scattering is alleviated when the value is decreased. |
|    Use case | When density failures, fogging, etc. occur |
|    Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Make 10 prints of approx. 10% image ratio (ex. COPIER> TEST> PG> TYPE: 16) 20 times. 3) Execute Auto Adjust Gradation> Full Adjust. |
|    Caution | Execute the Auto Adjust Gradation first to increase the density. If you adjust the offset of the target value, fogging might get worse. |
|    Display/adj/set range | -4 to 4 |
|    Default value | 0 |
|    Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |

| COPIER> ADJUST> DENS | |
|---|---|
| P-TG-K | Adj of ATR control Bk-color target value |
| Details | To adjust the offset of the ATR patch target value for Bk. When the target value determined upon initialization is changed, density and the TD ratio are also changed. Density is increased when the value is increased, and fogging/scattering is alleviated when the value is decreased. |
| Use case | When density failures, fogging, etc. occur |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Make 10 prints of approx. 10% image ratio (ex. COPIER> TEST> PG> TYPE: 16) 20 times. 3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Execute the Auto Adjust Gradation first to increase the density. If you adjust the offset of the target value, fogging might get worse. |
| Display/adj/set range | -4 to 4 |
| Default value | 0 |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |
| DMAX-K | Adj D-max ctrl Bk-color dens target VL |
| Details | An image failure might occur because the density target value of the D-max control becomes out of the setting table due to environment change. Adjust the offset of the black density target value of D-max control. |
| Use case | When any image failure occurs due to environment change |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this at the normal service. |
| Display/adj/set range | -8 to 8 |
| Default value | 0 |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust, Quick Adjust |
| HLMT-PTK | Adj ATR Sensor (Bk) dens crrct upr limit |
| Details | To adjust the upper limit of the target density correction (lower limit of TD ratio) of the ATR Sensor (Bk). As the value is incremented by 1, the lower limit of TD ratio is decreased by 0.5 %. When the value is increased, fogging/scattering is alleviated. |
| Use case | When an image failure (density failure, fogging, carrier adherence, and scattering, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Take necessary action in accordance with the instructions from the Quality Support Division. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.5 % |
| Default value | 0 |

| COPIER> ADJUST> DENS | |
|---|---|
| LLMT-PTK | Adj ATR Sensor (Bk) dens crrct low limit |
| Details | To adjust the lower limit of the target density correction (upper limit of TD ratio) of the ATR Sensor (Bk). As the value is decremented by 1, the lower limit of TD ratio is increased by 0.5 %. When the value is decreased, density is increased, but fogging/scattering occurs. |
| Use case | When an image failure (density failure, fogging, carrier adherence, and scattering, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Take necessary action in accordance with the instructions from the Quality Support Division. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.5 % |
| Default value | 0 |

T-8-17

## ■ V-CONT

| COPIER> ADJUST> V-CONT | |
|---|---|
| VCONT-Y | Adj of Y-color contrast potential |
| Details | To adjust the contrast potential for Y.<br>As the value is incremented by 1, the contrast potential changes by 10V.<br>　+: Image becomes darker.<br>　-: Image becomes lighter.<br>When the value is too large, paper winds around the Fixing Roller or a transfer failure occurs.<br>In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value.<br>In principle, the adjustment of the density should be performed in Adjustment/Maintenance> Adjust Image Quality> Density Adjustment Mode. |
| Use case | When adjusting the density of D-max control in the case that an image density failure occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 10 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VCONT-M/C/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Density Adjustment Mode |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VCONT-M | Adj of M-color contrast potential |
| Details | To adjust the contrast potential for M.<br>As the value is incremented by 1, the contrast potential changes by 10V.<br>　+: Image becomes darker.<br>　-: Image becomes lighter.<br>When the value is too large, paper winds around the Fixing Roller or a transfer failure occurs.<br>In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value.<br>In principle, the adjustment of the density should be performed in Adjustment/Maintenance> Adjust Image Quality> Density Adjustment Mode. |
| Use case | When adjusting the density of D-max control in the case that an image density failure occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 10 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VCONT-Y/C/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Density Adjustment Mode |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VCONT-C | Adj of C-color contrast potential |
| Details | To adjust the contrast potential for C.<br>As the value is incremented by 1, the contrast potential changes by 10V.<br>　+: Image becomes darker.<br>　-: Image becomes lighter.<br>When the value is too large, paper winds around the Fixing Roller or a transfer failure occurs.<br>In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value.<br>In principle, the adjustment of the density should be performed in Adjustment/Maintenance> Adjust Image Quality> Density Adjustment Mode. |
| Use case | When adjusting the density of D-max control in the case that an image density failure occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 10 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VCONT-Y/M/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Density Adjustment Mode |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VCONT-K | Adj of Bk-color contrast potential |
| Details | To adjust the contrast potential for Bk.<br>As the value is incremented by 1, the contrast potential changes by 10V.<br>　+: Image becomes darker.<br>　-: Image becomes lighter.<br>When the value is too large, paper winds around the Fixing Roller or a transfer failure occurs.<br>In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value.<br>In principle, the adjustment of the density should be performed in Adjustment/Maintenance> Adjust Image Quality> Density Adjustment Mode. |
| Use case | When adjusting the density of D-max control in the case that an image density failure occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 10 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VCONT-Y/M/C |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Density Adjustment Mode |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VBACK-Y | Adj Y-clr fog remov potntl:pln/rcycl 1,2 |
| Details | To adjust the offset of the fogging removal potential Vback for Y-color when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger).<br>As the value is incremented by 1, the fogging removal potential changes by 10 V.<br>　+: Fogging is alleviated.<br>　-: Coarse image, blanking of image edge, and carrier adherence are alleviated.<br>In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value. |
| Use case | At the occurrence of Y fogging |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK-M/C/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |
| VBACK-M | Adj M-clr fog remov potntl:pln/rcycl 1,2 |
| Details | To adjust the offset of the fogging removal potential Vback for M-color when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger).<br>As the value is incremented by 1, the fogging removal potential changes by 10 V.<br>　+: Fogging is alleviated.<br>　-: Coarse image, blanking of image edge, and carrier adherence are alleviated.<br>In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value. |
| Use case | At the occurrence of M fogging |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK-Y/C/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VBACK-C | Adj C-clr fog remov potntl:pln/rcycl 1,2 |
| Details | To adjust the offset of the fogging removal potential Vback for C-color when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger).<br>As the value is incremented by 1, the fogging removal potential changes by 10 V.<br>　+: Fogging is alleviated.<br>　-: Coarse image, blanking of image edge, and carrier adherence are alleviated.<br>In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value. |
| Use case | At the occurrence of C fogging |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK-Y/M/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |
| VBACK-K | Adj Bk-clr fog remov potntl:pln/rcycl1,2 |
| Details | To adjust the offset of the fogging removal potential Vback for Bk-color when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger).<br>As the value is incremented by 1, the fogging removal potential changes by 10 V.<br>　+: Fogging is alleviated.<br>　-: Coarse image, blanking of image edge, and carrier adherence are alleviated.<br>In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value. |
| Use case | At the occurrence of Bk fogging |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK-Y/M/C |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VBACK2-Y | Adj Y fog remov potntl: pln/rcycl 3, etc |
| Details | To adjust the offset of the fogging removal potential Vback for Y-color when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>　+: Fogging is alleviated, but white/black spots are increased due to carrier adherence.<br>　-: White/black spots are alleviated, but fogging is increased. |
| Use case | When any image failure occurs in case of printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3 or recycled paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK2-M/C/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast |
| VBACK2-M | Adj M fog remov potntl: pln/rcycl 3, etc |
| Details | To adjust the offset of the fogging removal potential Vback for M-color when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>　+: Fogging is alleviated, but white/black spots are increased due to carrier adherence.<br>　-: White/black spots are alleviated, but fogging is increased. |
| Use case | When any image failure occurs in case of printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3 or recycled paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK2-Y/C/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VBACK2-C | Adj C fog remov potntl: pln/rcycl 3, etc |
| Details | To adjust the offset of the fogging removal potential Vback for C-color when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>　+: Fogging is alleviated, but white/black spots are increased due to carrier adherence.<br>　-: White/black spots are alleviated, but fogging is increased. |
| Use case | When any image failure occurs in case of printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3 or recycled paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK2-Y/M/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast |
| VBACK2-K | Adj Bk fog remov potntl:pln/rcycl 3, etc |
| Details | To adjust the offset of the fogging removal potential Vback for Bk-color when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>　+: Fogging is alleviated, but white/black spots are increased due to carrier adherence.<br>　-: White/black spots are alleviated, but fogging is increased. |
| Use case | When any image failure occurs in case of printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3 or recycled paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK2-Y/M/C |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VBACK3-Y | Adj Y fog remov potntl:excpt pln, rcycl |
| Details | To adjust the offset of the fogging removal potential Vback for Y-color when printing paper other than plain paper 1, 2, 3/recycled paper 1, 2, 3.<br>   +: Fogging is alleviated, but white/black spots are increased due to carrier adherence.<br>   -: White/black spots are alleviated, but fogging is increased. |
| Use case | When any image failure occurs in case of printing paper other than plain paper 1, 2, 3/recycled paper 1, 2, 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK3-M/C/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast |
| VBACK3-M | Adj M fog remov potntl:excpt pln, rcycl |
| Details | To adjust the offset of the fogging removal potential Vback for M-color when printing paper other than plain paper 1, 2, 3/recycled paper 1, 2, 3.<br>   +: Fogging is alleviated, but white/black spots are increased due to carrier adherence.<br>   -: White/black spots are alleviated, but fogging is increased. |
| Use case | When any image failure occurs in case of printing paper other than plain paper 1, 2, 3/recycled paper 1, 2, 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK3-Y/C/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast |

| COPIER> ADJUST> V-CONT | |
|---|---|
| VBACK3-C | Adj C fog remov potntl:excpt pln, rcycl |
| Details | To adjust the offset of the fogging removal potential Vback for C-color when printing paper other than plain paper 1, 2, 3/recycled paper 1, 2, 3.<br>   +: Fogging is alleviated, but white/black spots are increased due to carrier adherence.<br>   -: White/black spots are alleviated, but fogging is increased. |
| Use case | When any image failure occurs in case of printing paper other than plain paper 1, 2, 3/recycled paper 1, 2, 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK3-Y/M/K |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast |
| VBACK3-K | Adj Bk fog remov potntl:excpt pln, rcycl |
| Details | To adjust the offset of the fogging removal potential Vback for Bk-color when printing paper other than plain paper 1, 2, 3/recycled paper 1, 2, 3.<br>   +: Fogging is alleviated, but white/black spots are increased due to carrier adherence.<br>   -: White/black spots are alleviated, but fogging is increased. |
| Use case | When any image failure occurs in case of printing paper other than plain paper 1, 2, 3/recycled paper 1, 2, 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -5 to 5 |
| Unit | 5 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> V-CONT> VBACK3-Y/M/C |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast |

T-8-18

## ■ PASCAL

| COPIER> ADJUST> PASCAL | |
|---|---|
| OFST-P-Y | Y density adj at test print reading |
| Details | To adjust the offset of Y-color test print reading signal at auto gradation adjustment (full adjustment).<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label.<br>As the value is larger, the image after adjustment gets darker. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -128 to 128 |
| Default value | 0 |
| OFST-P-M | M density adj at test print reading |
| Details | To adjust the offset of M-color test print reading signal at auto gradation adjustment (full adjustment).<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label.<br>As the value is larger, the image after adjustment gets darker. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -128 to 128 |
| Default value | 0 |
| OFST-P-C | C density adj at test print reading |
| Details | To adjust the offset of C-color test print reading signal at auto gradation adjustment (full adjustment).<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label.<br>As the value is larger, the image after adjustment gets darker. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -128 to 128 |
| Default value | 0 |

| COPIER> ADJUST> PASCAL | |
|---|---|
| OFST-P-K | Bk density adj at test print reading |
| Details | To adjust the offset of Bk-color test print reading signal at auto gradation adjustment (full adjustment).<br>When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label.<br>As the value is larger, the image after adjustment gets darker. |
| Use case | When replacing the Main Controller PCB/clearing the Reader-related RAM data |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | After the setting value is changed, write the changed value in the service label. |
| Display/adj/set range | -128 to 128 |
| Default value | 0 |

T-8-19

## ■ HV-TR

| COPIER> ADJUST> HV-TR | |
|---|---|
| 1TR-TGY | Y pry trn ATVC tgt crrnt:pln/rcycl1,2 |
| Details | To adjust the offset of the target current value for Y-color upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger). Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| 1TR-TGM | M pry trn ATVC tgt crrnt:pln/rcycl1,2 |
| Details | To adjust the offset of the target current value for M-color upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger). Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| 1TR-TGC | C pry trn ATVC tgt crrnt:pln/rcycl1,2 |
| Details | To adjust the offset of the target current value for C-color upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger). Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 1TR-TGK1 | Bk-m pry trn ATVC tgt crrnt:pln/rcycl1,2 |
| Details | To adjust the offset of the target current value for single Bk-color upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger). Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| 1TR-TGK4 | Bk-c pry trn ATVC tgt crrnt:pln/rcycl1,2 |
| Details | To adjust the offset of the target current value for Bk-color (color) upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger). Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| 2TR-OFF | Uniform adj sec trn ATVC ppr allot voltg |
| Details | To uniformly adjust paper allotted voltage in secondary transfer ATVC control regardless of paper type, 1st/2nd side or environment. When transfer failure occurs on an image, increase/decrease the value in the -30 to 30 (-900 to 900 V) range in increments of 10 (30 V). When white dots occur on an image, increase/decrease the value in the -100 to -10 (-3000 to -300 V) range in increments of 10 (30 V). When the value is decreased too much, transfer failure occurs. |
| Use case | When similar image failures occur regardless of the conditions |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | The setting is applied to all paper types and both sides of paper. When limiting the condition, be sure to make settings individually. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| Related service mode | COPIER> ADJUST> HV-TR> 2TR-Nx-1/2, 2TR-Rx-1/2, 2TR-Hx-1/2, 2TR-Cx-1/2, 2TR-P-1/2, 2TR-O-1/2, 2TR-PA-1/2, 2TR-B-1/2, 2TR-LA-1/2, 2TR-CP-1/2 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 1TR-TGY2 | Adj Y pry trns ATVC tgt crrnt: other ppr |
| Details | To adjust the offset of the target current value for Y-color upon primary transfer ATVC control for other types of papers. Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |
| 1TR-TGM2 | Adj M pry trns ATVC tgt crrnt: other ppr |
| Details | To adjust the offset of the target current value for M-color upon primary transfer ATVC control for other types of papers. Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 1TR-TGC2 | Adj C pry trns ATVC tgt crrnt: other ppr |
| Details | To adjust the offset of the target current value for C-color upon primary transfer ATVC control for other types of papers. Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |
| 1TR-TK12 | Bk-m pry trns ATVC tgt crrnt: other ppr |
| Details | To adjust the offset of the target current value for single Bk-color upon primary transfer ATVC control for other types of papers. Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs. Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 1TR-TGY3 | Adj Y pry trn ATVC tgt crrnt:pln/rcycl 3 |
| Details | To adjust the offset of the target current value for Y-color upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs.<br>Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |
| 1TR-TGM3 | Adj M pry trn ATVC tgt crrnt:pln/rcycl 3 |
| Details | To adjust the offset of the target current value for M-color upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs.<br>Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 1TR-TGC3 | Adj C pry trn ATVC tgt crrnt:pln/rcycl 3 |
| Details | To adjust the offset of the target current value for C-color upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs.<br>Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |
| 1TR-TK13 | Bk-m pry trn ATVC tgt crrnt: pln/rcycl 3 |
| Details | To adjust the offset of the target current value for single Bk-color upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs.<br>Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 1 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 1TR-TK42 | Bk-c pry trns ATVC tgt crrnt: other ppr |
| Details | To adjust the offset of the target current value for Bk-color (in full color mode) upon primary transfer ATVC control for other types of papers.<br>Increase the value when spots, mottled image, or image failure due to insufficient transfer current occurs.<br>Decrease the value when image fogging due to transfer memory or drum memory due to strong transfer current occurs. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 2 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |
| 1TR-TK43 | Bk-c pry trns ATVC tgt crrnt:pln/rcycl 3 |
| Details | To adjust the offset of the target current value for Bk-color (in full color mode) upon primary transfer ATVC control for plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than A4), plain paper 3, or recycled paper 3.<br>As the value is incremented by 1, the offset is increased by 2 micro A.<br>Increase the value if spots (white spots), leopard pattern image occurs.<br>Decrease the value if white spots occur.<br>Decrease the value if mottled image due to paper surface nature occurs when paper type is heavy paper 1/2. |
| Use case | When an image failure due to the primary transfer occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | To reflect the setting immediately, execute primary ATVC control. |
| Display/adj/set range | -50 to 50 |
| Unit | 2 uA |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> MISC-P> 1ATVC-EX |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-N1-1 | Sec trn ATVC ctrl ppr allot V: pln1 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of plain paper 1 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-N1-2 | Sec trn ATVC ctrl ppr allot V: pln1 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of plain paper 1 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-N2-1 | Sec trn ATVC ctrl ppr allot V: pln2 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of plain paper 2 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
| --- | --- |
| 2TR-N2-2 | Sec trn ATVC ctrl ppr allot V: pln2 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of plain paper 2 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-N3-1 | Sec trn ATVC ctrl ppr allot V: pln3 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of plain paper 3 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-N3-2 | Sec trn ATVC ctrl ppr allot V: pln3 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of plain paper 3 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
| --- | --- |
| 2TR-R1-1 | Sec trn ATVC ctrl ppr allot V:rcycl1 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of recycled paper 1 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-R1-2 | Sec trn ATVC ctrl ppr allot V:rcycl1 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of recycled paper 1 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-R2-1 | Sec trn ATVC ctrl ppr allot V:rcycl2 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of recycled paper 2 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-R2-2 | Sec trn ATVC ctrl ppr allot V:rcycl2 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of recycled paper 2 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-R3-1 | Sec trn ATVC ctrl ppr allot V:rcycl3 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of recycled paper 3 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-R3-2 | Sec trn ATVC ctrl ppr allot V:rcycl3 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of recycled paper 3 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-H1-1 | Sec trn ATVC ctrl ppr allot V: hvy1 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of heavy paper 1 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-H1-2 | Sec trn ATVC ctrl ppr allot V: hvy1 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of heavy paper 1 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-H2-1 | Sec trn ATVC ctrl ppr allot V: hvy2 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of heavy paper 2 at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-H2-2 | Sec trn ATVC ctrl ppr allot V: hvy2 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of heavy paper 2 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-H3-1 | Sec trn ATVC ctrl ppr allot V: hvy3 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of heavy paper 3 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-H3-2 | Sec trn ATVC ctrl ppr allot V: hvy3 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of heavy paper 3 at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-CP-1 | Sec trn ATVC ctrl ppr allot V: color 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of color paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-CP-2 | Sec trn ATVC ctrl ppr allot V: color 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of color paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-O-1 | Sec trn ATVC ctrl ppr allot V:transp 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of transparency at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-LA-1 | Sec trn ATVC ctrl ppr allot V: label 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of label paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-LA-2 | Sec trn ATVC ctrl ppr allot V: label 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of label paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-NC-1 | Sec trn ATVC ctrl ppr allotV:no-crbn 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of non-carbon paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-NC-2 | Sec trn ATVC ctrl ppr allotV:no-crbn 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of non-carbon paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-B-1 | Sec trn ATVC ctrl ppr allot V: bond 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of bond paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-B-2 | Sec trn ATVC ctrl ppr allot V: bond 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of bond paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-PA-1 | Sec trn ATVC ctrl ppr allot V: punch 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of pre-punched paper at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-PA-2 | Sec trn ATVC ctrl ppr allot V: punch 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of pre-punched paper at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-EN-1 | Sec trn ATVC ctrl ppr allot V: envlp 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of envelope at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-EN-2 | Sec trn ATVC ctrl ppr allot V: envlp 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of envelope at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-P-1 | Sec trn ATVC ctrl ppr allot V: crd 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of postcard at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| 2TR-P-2 | Sec trn ATVC ctrl ppr allot V: crd 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of postcard at secondary transfer ATVC control.<br>When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| T2TR-N1 | Adj of lead edge weak bias: pln ppr 1 |
| Details | To adjust the offset of the leading edge weak bias for plain paper 1. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| T2TR-N2 | Adj of lead edge weak bias: pln ppr 2 |
| Details | To adjust the offset of the leading edge weak bias for plain paper 2. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| T2TR-N3 | Adj of lead edge weak bias: pln ppr 3 |
| Details | To adjust the offset of the leading edge weak bias for plain paper 3. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| T2TR-R1 | Adj of lead edge weak bias: rcycl ppr 1 |
| Details | To adjust the offset of the leading edge weak bias for recycled paper 1. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| T2TR-R2 | Adj of lead edge weak bias: rcycl ppr 2 |
| Details | To adjust the offset of the leading edge weak bias for recycled paper 2. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| T2TR-R3 | Adj of lead edge weak bias: rcycl ppr 3 |
| Details | To adjust the offset of the leading edge weak bias for recycled paper 3. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| T2TR-H1 | Adj of lead edge weak bias: heavy ppr 1 |
| Details | To adjust the offset of the leading edge weak bias for heavy paper 1. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| T2TR-H2 | Adj of lead edge weak bias: heavy ppr 2 |
| Details | To adjust the offset of the leading edge weak bias for heavy paper 2. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| T2TR-H3 | Adj of lead edge weak bias: heavy ppr 3 |
| Details | To adjust the offset of the leading edge weak bias for heavy paper 3. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| T2TR-P | Adj of leading edge weak bias: postcard |
| Details | To adjust the offset of the leading edge weak bias for postcard. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| T2TR-LNG | Adj of lead edge weak bias apply length |
| Details | To adjust the length (distance from the leading edge of paper) to apply leading edge weak bias. Increase the value when white spots occur in a broad area of the leading edge of paper. |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | 0 |
| 2TR-TH-1 | Sec trn ATVC ctrl ppr allot V: thin 1st |
| Details | To adjust the paper allotted voltage applied to the 1st side of thin paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

| COPIER> ADJUST> HV-TR | |
|---|---|
| 2TR-TH-2 | Sec trn ATVC ctrl ppr allot V: thin 2nd |
| Details | To adjust the paper allotted voltage applied to the 2nd side of thin paper at secondary transfer ATVC control. When mottled image occurs, increase the value if it is due to insufficient secondary transfer current and decrease the value if it is due to overcurrent. |
| Use case | When adjusting the secondary transfer bias individually according to paper type and 1st/2nd side |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |
| T2TR-TH | Adj of leading edge weak bias:thin paper |
| Details | To adjust the offset of the leading edge weak bias for thin paper. Decrease the value if white spots occur. Increase the value if density on the leading edge of paper is low (transfer is weak). |
| Use case | When an image failure (white spots at the leading edge) occurs |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Use this item only when an image failure occurs. |
| Display/adj/set range | -128 to 127 |
| Unit | 30 V |
| Default value | 0 |

T-8-20

## ■ FEED-ADJ

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| REGIST | Registration start timing adj: 1/1 speed |
| Details | To adjust the timing to turn ON the Registration Motor at 1/1 speed. As the value is incremented by 1, the margin on the leading edge of paper is increased by 0.1 mm.   +: Top margin becomes larger. (An image moves downward.)   -: Top margin becomes smaller. (An image moves upward.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-C1 | Cassette1 write start pstn in horz scan |
| Details | To adjust the image write start position in the horizontal scanning direction when feeding paper from the Cassette 1. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm.   +: Left margin becomes larger (An image moves to the right.)   -: Left margin becomes smaller (An image moves to the left.) When replacing the Reader Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-C2 | Cassette2 write start pstn in horz scan |
| Details | To adjust the image write start position in the horizontal scanning direction when feeding paper from the Cassette 2. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm.   +: Left margin becomes larger (An image moves to the right.)   -: Left margin becomes smaller (An image moves to the left.) When replacing the Reader Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| ADJ-C3 | Cassette 3 write start pstn in horz scan |
| Details | To adjust the image write start position in the horizontal scanning direction when feeding paper from the Cassette 3. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-C4 | Cassette 4 write start pstn in horz scan |
| Details | To adjust the image write start position in the horizontal scanning direction when feeding paper from the Cassette 4. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-MF | Write start pstn in horz scan: MP tray |
| Details | To adjust the image write start position in the horizontal scanning direction when feeding paper from the Multi-purpose Tray. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| ADJ-C1RE | Write start pstn in horz scan:Cst1 2nd |
| Details | To adjust the image write start position in the horizontal scanning direction for 2nd side when feeding paper from the Cassette 1. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm. +: Left margin becomes larger (An image moves to the right.) -: Left margin becomes smaller (An image moves to the left.) When replacing the Reader Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the Reader Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-C2RE | Write start pstn in horz scan:Cst2 2nd |
| Details | To adjust the image write start position in the horizontal scanning direction for 2nd side when feeding paper from the Cassette 2. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm. +: Left margin becomes larger (An image moves to the right.) -: Left margin becomes smaller (An image moves to the left.) When replacing the Reader Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the Reader Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-C3RE | Write start pstn in horz scan:Cst3 2nd |
| Details | To adjust the image write start position in the horizontal scanning direction for 2nd side when feeding paper from the Cassette 3. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm. +: Left margin becomes larger (An image moves to the right.) -: Left margin becomes smaller (An image moves to the left.) When replacing the Reader Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the Reader Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| ADJ-C4RE | Write start pstn in horz scan:Cst4 2nd |
| Details | To adjust the image write start position in the horizontal scanning direction for 2nd side when feeding paper from the Cassette 4. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm.   +: Left margin becomes larger (An image moves to the right.)   -: Left margin becomes smaller (An image moves to the left.) When replacing the Reader Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the Reader Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |
| ADJ-MFRE | Write start pstn in horz scan:MPTray 2nd |
| Details | To adjust the image write start position in the horizontal scanning direction for 2nd side when feeding paper from the Multi-purpose Tray. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm.   +: Left margin becomes larger. (An image moves to the right.)   -: Left margin becomes smaller. (An image moves to the left.) When replacing the Reader Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the Reader Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -100 to 100 |
| Unit | 0.1 mm |
| Default value | 0 |
| REG-THCK | Register start timing adj: 1/2 speed |
| Details | To adjust the top margin by changing the timing to turn ON the Registration Motor at 1/2 speed. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm.   +: Top margin becomes larger. (An image moves downward.)   -: Top margin becomes smaller. (An image moves upward.) |
| Use case | When adjusting the leading edge margin |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | 0 |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| REG-DUP1 | Rgst start timing adj: Plain, 2nd side |
| Details | To adjust the top margin by changing the timing to turn ON the Registration Motor when feeding the second side of plain paper. As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm.   +: Top margin becomes larger. (An image moves downward.)   -: Top margin becomes smaller. (An image moves upward.) |
| Use case | When adjusting the leading edge margin |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | 0 |
| LP-FEED1 | Adj of per-rest arch amount: 1/1 speed |
| Details | To adjust the arch amount before registration at 1/1 speed. The setting is applied in case of pickup from a cassette/Multi-purpose Tray and 1-sided/2-sided printing. As the value is incremented by 1, the arch amount changes by 0.1 mm.   +: Increase   -: Decrease |
| Use case | When adjusting the arch amount before registration at 1/1 speed |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -20 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| LP-FEED2 | Adj of pre-rgst arch amount: 1/2 speed |
| Details | To adjust the arch amount before registration at 1/2 speed. The setting is applied in case of pickup from a cassette/Multi-purpose Tray and 1-sided/2-sided printing. As the value is incremented by 1, the arch amount changes by 0.1 mm.   +: Increase   -: Decrease |
| Use case | When adjusting the arch amount before registration at 1/2 speed |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -20 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| REG-SPD | Speed adjustment of Registration Motor |
| Details | To adjust the 1/1 speed of the Registration Motor.<br>As the value is incremented by 1, the speed is increased by 0.2%.<br>  +: The speed is increased.<br>  -: The speed is decreased.<br>As the value is reduced, blur image around 40 to 45mm of the trailing edge is alleviated. |
| Use case | When color displacement in vertical scanning direction occurs since the part is close to the end of life |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -5 to 5 |
| Unit | 0.2 % |
| Default value | 0 |
| REG-LEFT | Adj of img write start pstn in horz scan |
| Details | To adjust the image write start position in the horizontal scanning direction.<br>As the value is incremented by 1, the margin on the left edge of paper is increased by 0.1 mm.<br>  +: Left margin becomes larger (An image moves to the right.)<br>  -: Left margin becomes smaller (An image moves to the left.)<br>When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | 0 |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| REG-MF | Adj lead edg margin: plain,rcycl,thn,MP |
| Details | To adjust the leading edge margin by changing the timing to turn ON the Registration Motor when feeding plain paper 1/2/3, recycled paper 1/2/3 and thin paper from the Multi-purpose Tray.<br>As the value is changed by 1, the leading edge margin is changed by 0.1 mm.<br>  +: Leading edge margin becomes smaller. (An image moves upward.)<br>  -: Leading edge margin becomes larger. (An image moves downward.)<br>When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label. |
| Use case | • When adjusting the leading edge margin<br>• When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | If data is not backed up before replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | The value differs according to the product configuration. |
| REG-MFH1 | Adj ppr lead edge margin: heavy 1/2, MP |
| Details | To adjust the leading edge margin by changing the timing to turn ON the Registration Motor when feeding heavy paper 1/2 from the Multi-purpose Tray.<br>As the value is changed by 1, the leading edge margin is changed by 0.1 mm.<br>  +: Leading edge margin becomes smaller. (An image moves upward.)<br>  -: Leading edge margin becomes larger. (An image moves downward.)<br>When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label. |
| Use case | • When adjusting the leading edge margin<br>• When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | If data is not backed up before replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | The value differs according to the product configuration. |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| REG-MFH2 | Adj ppr lead edge margin: heavy 3, MP |
| Details | To adjust the leading edge margin by changing the timing to turn ON the Registration Motor when feeding heavy paper 3 from the Multi-purpose Tray.<br>As the value is changed by 1, the leading edge margin is changed by 0.1 mm.<br>　+: Leading edge margin becomes smaller. (An image moves upward.)<br>　-: Leading edge margin becomes larger. (An image moves downward.)<br>When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label. |
| Use case | • When adjusting the leading edge margin<br>• When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | If data is not backed up before replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | The value differs according to the product configuration. |
| LP-FEED3 | Adj of per-rest arch amount: 2/3 speed |
| Details | To adjust the arch amount before registration at 2/3 speed.<br>The setting is applied in case of pickup from a cassette/Multi-purpose Tray and 1-sided/2-sided printing.<br>As the value is incremented by 1, the arch amount changes by 0.1 mm.<br>　+: Increase<br>　-: Decrease |
| Use case | When adjusting the arch amount before registration at 2/3 speed |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -20 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| REG-MENV | Adj ppr lead edge margin: envelope, MP |
| Details | To adjust the leading edge margin by changing the timing to turn ON the Registration Motor when feeding envelope from the Multi-purpose Tray.<br>As the value is changed by 1, the leading edge margin is changed by 0.1 mm.<br>　+: Leading edge margin becomes smaller. (An image moves upward.)<br>　-: Leading edge margin becomes larger. (An image moves downward.)<br>When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label. |
| Use case | • When adjusting the leading edge margin<br>• When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | If data is not backed up before replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | The value differs according to the product configuration. |
| REG-ENV | Adj ppr lead edge margin: envelope, cst |
| Details | To adjust the leading edge margin by changing the timing to turn ON the Registration Motor when feeding envelope from a cassette.<br>As the value is changed by 1, the leading edge margin is changed by 0.1 mm.<br>　+: Leading edge margin becomes smaller. (An image moves upward.)<br>　-: Leading edge margin becomes larger. (An image moves downward.)<br>When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label. |
| Use case | • When adjusting the leading edge margin<br>• When replacing the DC Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | If data is not backed up before replacing the DC Controller PCB/clearing RAM data, enter the value of service label. |
| Display/adj/set range | -50 to 50 |
| Unit | 0.1 mm |
| Default value | The value differs according to the product configuration. |

| COPIER> ADJUST> FEED-ADJ | |
|---|---|
| ADJ-ENV | Cst1 write start pstn in horz scan:envlp |
| Details | To adjust the image write start position in the horizontal scanning direction when feeding envelope from the Cassette 1.<br>To specify the position of envelope relative to the position specified by ADJ-C1.<br>As the value is changed by 1, the left margin is changed by 0.1 mm.<br>  +: Left margin becomes larger. (An image moves to the right.)<br>  -: Left margin becomes smaller. (An image moves to the left.) |
| Use case | Upon user's request |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | In principle, the image write start position of envelope needs to be set with printer driver by the user. If the user points out that it is bothersome to make a setting whenever making an output, set this item. |
| Display/adj/set range | -23 to 15 |
| Unit | 0.1 mm |
| Appropriate target value | -8 |
| Default value | -8 |
| Related service mode | COPIER> ADJUST> FEED-ADJ> ADJ-C1 |

T-8-21

## ■ CST-ADJ

| COPIER> ADJUST> CST-ADJ | |
|---|---|
| CST-VLM1 | Adj Cassette 1 level detect threshold VL |
| Details | To adjust the timing to switch the scale indicating paper level in the Cassette 1 from "3" to "2".<br>As the value is larger, switching of the level display becomes earlier. For example, if you prefer to switch the scale when paper level reaches 25 mm instead of 15 mm, place a stack of papers which height is approx. 25 mm in the cassette and then increase the setting value by 1 at a time until the scale becomes "2".<br>If the scale is switched although paper level is 40 mm, place a stack of papers which height is approx. 35 mm in the cassette and then decrease the setting value by 1 at a time until the scale becomes "3". If the value that satisfy both of the above conditions is set, the scale is switched when paper level is in the range of 25 to 35 mm. |
| Use case | Upon user's request (to individually adjust the timing to switch the paper level display) |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Pull out and then insert the cassette. |
| Caution | • The setting is reflected after removing and then installing the cassette.<br>• When the value is increased/decreased greatly, the actual timing may be deviated from the target. Therefore, change the value by 1 at a time while checking the scale. |
| Display/adj/set range | -4 to 4 |
| Appropriate target value | 0 |
| Default value | 0 |
| Supplement/memo | The timing to switch the scale of paper level from "3" to "2" varies (9 to 40 mm) due to individual difference of the motor. With this item, the variation is corrected.<br>Since paper levels corresponding to the other scales can be detected almost correctly, there is no need to adjust the timing of switching. |

| COPIER> ADJUST> CST-ADJ | |
|---|---|
| CST-VLM2 | Adj Cassette 2 level detect threshold VL |
| Details | To adjust the timing to switch the scale indicating paper level in the Cassette 2 from "3" to "2".<br>As the value is larger, switching of the level display becomes earlier. For example, if you prefer to switch the scale when paper level reaches 25 mm instead of 15 mm, place a stack of papers which height is approx. 25 mm in the cassette and then increase the setting value by 1 at a time until the scale becomes "2".<br>If the scale is switched although paper level is 40 mm, place a stack of papers which height is approx. 35 mm in the cassette and then decrease the setting value by 1 at a time until the scale becomes "3".<br>If the value that satisfy both of the above conditions is set, the scale is switched when paper level is in the range of 25 to 35 mm. |
| Use case | Upon user's request (to individually adjust the timing to switch the paper level display) |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Pull out and then insert the cassette. |
| Caution | • The setting is reflected after removing and then installing the cassette.<br>• When the value is increased/decreased greatly, the actual timing may be deviated from the target. Therefore, change the value by 1 at a time while checking the scale. |
| Display/adj/set range | -4 to 4 |
| Appropriate target value | 0 |
| Default value | 0 |
| Supplement/memo | The timing to switch the scale of paper level from "3" to "2" varies (9 to 40 mm) due to individual difference of the motor. With this item, the variation is corrected.<br>Since paper levels corresponding to the other scales can be detected almost correctly, there is no need to adjust the timing of switching. |

| COPIER> ADJUST> CST-ADJ | |
|---|---|
| CST-VLM3 | Adj Cassette 3 level detect threshold VL |
| Details | To adjust the timing to switch the scale indicating paper level in the Cassette 3 from "3" to "2".<br>As the value is larger, switching of the level display becomes earlier. For example, if you prefer to switch the scale when paper level reaches 25 mm instead of 15 mm, place a stack of papers which height is approx. 25 mm in the cassette and then increase the setting value by 1 at a time until the scale becomes "2".<br>If the scale is switched although paper level is 40 mm, place a stack of papers which height is approx. 35 mm in the cassette and then decrease the setting value by 1 at a time until the scale becomes "3".<br>If the value that satisfy both of the above conditions is set, the scale is switched when paper level is in the range of 25 to 35 mm. |
| Use case | Upon user's request (to individually adjust the timing to switch the paper level display) |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Pull out and then insert the cassette. |
| Caution | • The setting is reflected after removing and then installing the cassette.<br>• When the value is increased/decreased greatly, the actual timing may be deviated from the target. Therefore, change the value by 1 at a time while checking the scale. |
| Display/adj/set range | -4 to 4 |
| Appropriate target value | 0 |
| Default value | 0 |
| Supplement/memo | The timing to switch the scale of paper level from "3" to "2" varies (9 to 40 mm) due to individual difference of the motor. With this item, the variation is corrected.<br>Since paper levels corresponding to the other scales can be detected almost correctly, there is no need to adjust the timing of switching. |

| COPIER> ADJUST> CST-ADJ | |
|---|---|
| CST-VLM4 | Adj Cassette 4 level detect threshold VL |
| Details | To adjust the timing to switch the scale indicating paper level in the Cassette 4 from "3" to "2". As the value is larger, switching of the level display becomes earlier. For example, if you prefer to switch the scale when paper level reaches 25 mm instead of 15 mm, place a stack of papers which height is approx. 25 mm in the cassette and then increase the setting value by 1 at a time until the scale becomes "2". If the scale is switched although paper level is 40 mm, place a stack of papers which height is approx. 35 mm in the cassette and then decrease the setting value by 1 at a time until the scale becomes "3". If the value that satisfy both of the above conditions is set, the scale is switched when paper level is in the range of 25 to 35 mm. |
| Use case | Upon user's request (to individually adjust the timing to switch the paper level display) |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Pull out and then insert the cassette. |
| Caution | • The setting is reflected after removing and then installing the cassette. • When the value is increased/decreased greatly, the actual timing may be deviated from the target. Therefore, change the value by 1 at a time while checking the scale. |
| Display/adj/set range | -4 to 4 |
| Appropriate target value | 0 |
| Default value | 0 |
| Supplement/memo | The timing to switch the scale of paper level from "3" to "2" varies (9 to 40 mm) due to individual difference of the motor. With this item, the variation is corrected. Since paper levels corresponding to the other scales can be detected almost correctly, there is no need to adjust the timing of switching. |

T-8-22

## ■ BLANK

| COPIER> ADJUST> BLANK | |
|---|---|
| BLANK-T | Adjustment of leading edge margin |
| Details | To adjust the margin on the leading edge of paper. As the value is incremented by 1, the margin is increased toward the center of the paper by 1 pixel (0.0423mm). |
| Use case | • When reducing the margin upon user's request • When enlarging the margin for transfer separation/fixing separation |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Do not use this at the normal service. Output the service mode setting values by P-PRINT beforehand. |
| Display/adj/set range | 0 to 1000 |
| Unit | 1 pixel |
| Default value | 94 |
| BLANK-B | Adjustment of trailing edge margin |
| Details | To adjust the margin on the trailing edge of paper. As the value is incremented by 1, the margin is increased toward the center of the paper by 1 pixel (0.0423 mm). |
| Use case | • When reducing the margin upon user's request • When enlarging the margin for transfer separation/fixing separation |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1000 |
| Unit | 1 pixel |
| Default value | 59 |
| BLANK-L | Adjustment of left edge margin |
| Details | To adjust the margin on the left edge of paper. As the value is incremented by 1, the margin is increased toward the center of the paper by 1 pixel (0.0423 mm). |
| Use case | • When reducing the margin upon user's request • When enlarging the margin for transfer separation/fixing separation |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1000 |
| Unit | 1 pixel |
| Default value | 59 |
| BLANK-R | Adjustment of right edge margin |
| Details | To adjust the margin on the right edge of paper. As the value is incremented by 1, the margin is increased toward the center of the paper by 1 pixel (0.0423 mm). |
| Use case | • When reducing the margin upon user's request • When enlarging the margin for transfer separation/fixing separation |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1000 |
| Unit | 1 pixel |
| Default value | 59 |

T-8-23

## ■ MISC

| COPIER> ADJUST> MISC | |
|---|---|
| ACS-ADJ | Set criteria for B&W/color in ACS:front |
| Details | To set the judgment level of B&W/color original in ACS mode. As the value is increased, the original tends to be detected as a B&W document, and as the value is decreased, the original tends to be detected as a color document. |
| Use case | When adjusting the color detection level in ACS mode |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | -3 to 3 |
| Default value | 0 |
| ACS-EN | Set judgment area in ACS mode:front |
| Details | To set the judgment area in ACS mode. As the greater value is set, the judgment area is widened. |
| Use case | When adjusting the judgment area in ACS mode |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | -2 to 2 |
| Default value | 1 |
| ACS-CNT | Set jdgmt pixel count area in ACS:front |
| Details | To set the area which counts the pixel to judge the color presence in ACS mode. As the greater value is set, the judgment area is widened. |
| Use case | When adjusting the area which counts the pixel to judge the color presence in ACS mode |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | -2 to 2 |
| Default value | 0 |
| ACS-EN2 | Set ACS mode jdgmt area in DADF mode |
| Details | To set the judgment area in ACS mode at DADF reading. As the greater value is set, the judgment area is widened. |
| Use case | When adjusting the judgment area in ACS mode at DADF reading |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Output the service mode setting values by P-PRINT beforehand. |
| Display/adj/set range | -2 to 2 |
| Default value | 1 |

| COPIER> ADJUST> MISC | |
|---|---|
| ACS-CNT2 | Set ACS jdgmt pixel count area in DADF |
| Details | To set the area which counts the pixel to judge the color presence in ACS mode at DADF reading. As the greater value is set, the judgment area is widen. |
| Use case | When adjusting the area which counts the pixel to judge the color presence in ACS mode at DADF reading |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | -2 to 2 |
| Default value | 0 |

T-8-24

## ■ PANEL

| COPIER> ADJUST> PANEL | |
|---|---|
| TOUCHCHK | Adj of coordinate pstn of Touch Pan |
|   Details | To adjust the coordinate position on the Touch Panel of the Control Panel. |
|   Use case | When replacing the LCD Panel |
|   Adj/set/operate method | 1) Select the item, and then press OK key.<br>2) Press the 9 "+" in sequence. |

<div align="right">T-8-25</div>

## FUNCTION

### ■ CLEANING

| COPIER> FUNCTION> CLEANING | | |
|---|---|---|
| TBLT-CLN | | Toner ejection and ITB cleaning |
| | Details | To form a halftone band on the ITB and execute ITB cleaning. Deteriorated toner can be ejected, and soiling on the ITB can be removed. The same processing is performed by selecting the following: Settings/Registration> Adjustment/Maintenance> Maintenance> Clean Inside Main Unit. |
| | Use case | • When removing the soiling on the ITB<br>• When ejecting the deteriorated toner |
| | Adj/set/operate method | Select the item, and then press Start key. |
| | Display/adj/set range | During operation: ACTIVE, When the operation finished normally: OK! |
| | Related UI menu | Adjustment/Maintenance> Maintenance> Clean Inside Main Unit |
| 2TR-CLN | | Clean of Secondary Transfer Outer Roller |
| | Details | To clean soiling adhered on the Secondary Transfer Outer Roller. Transfer toner to the Secondary Transfer Outer Roller once and then execute bias cleaning to remove soiling. |
| | Use case | • When the backside of the paper is soiled by the Secondary Transfer Outer Roller<br>• When contacting with the Secondary Transfer Outer Roller at the time of jam processing, etc. |
| | Adj/set/operate method | Select the item, and then press Start key. |
| | Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
| TNR-COAT | | Exe toner application to Sec Trns Roller |
| | Details | When the Secondary Transfer Outer Roller is replaced with a new one, substances leaking from the new roller may adhere to the ITB. By executing this item after replacement, Y-color toner is applied onto the surface of the roller, so adhesion of substances leaking from the roller can be prevented. |
| | Use case | When replacing the Secondary Transfer Outer Roller |
| | Adj/set/operate method | Select the item, and then press Start key. |
| | Caution | Be sure to execute this item to the roller which surface is not soiled. |
| | Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |

T-8-26

### ■ PART-CHK

| COPIER> FUNCTION> PART-CHK | | |
|---|---|---|
| CL | | Specification of operation Clutch |
| | Details | To specify the Clutch to operate. |
| | Use case | When replacing the Clutch/checking the operation |
| | Adj/set/operate method | Enter the value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>  1: Developing Cylinder Clutch (Y) (CL01)<br>  2: Developing Cylinder Clutch (M) (CL02)<br>  3: Developing Cylinder Clutch (C) (CL03)<br>  4: Developing Cylinder Clutch (Bk) (CL04) |
| | Related service mode | COPIER> FUNCTION> PART-CHK> CL-ON |
| CL-ON | | Operation check of Clutch |
| | Details | To start operation check of the clutch specified by CL. The specified clutch is turned ON 1 second from the Developing Motor (M03) is turned ON, and then both the motor and the clutch are turned OFF 5 seconds later. |
| | Use case | When replacing the Clutch/checking the operation |
| | Adj/set/operate method | Select the item, and then press Start key. |
| | Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
| | Related service mode | COPIER> FUNCTION> PART-CHK> CL |
| FAN | | Specification of operation Fan |
| | Details | To specify the Fan to operate. |
| | Use case | When replacing the Fan/checking the operation |
| | Adj/set/operate method | Enter the value, and then press Start key. |
| | Display/adj/set range | 1 to 10<br>  1: Drum Unit Suction Cooling Fan (FM01)<br>  2: Duplex Cooling Fan (FM04)<br>  3: Delivery Cooling Fan (FM03)<br>  4 to 10: Not used |
| | Default value | 1 |
| | Related service mode | COPIER> FUNCTION> PART-CHK> FAN-ON |
| FAN-ON | | Operation check of Fan |
| | Details | To start operation check of the Fan specified by FAN. |
| | Use case | When replacing the Fan/checking the operation |
| | Adj/set/operate method | Select the item, and then press Start key. |
| | Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
| | Related service mode | COPIER> FUNCTION> PART-CHK> FAN |

| COPIER> FUNCTION> PART-CHK | |
|---|---|
| MTR | Specification of operation Motor |
|     Details | To specify the Motor to operate. |
|     Use case | When replacing the Motor/checking the operation |
|     Adj/set/operate method | Enter the value, and then press Start key. |
|     Display/adj/set range | 1 to 23<br>    1: CL Drum Motor (M01)<br>    2: Bk Drum_ITB Motor (M02)<br>    3: Developing Motor (M03)<br>    4: Fixing Motor (M04)<br>    5: Cassette 1_Multi-purpose Traty Pickup Motor (M05)<br>    6: Pre-registration Motor (M06)<br>    7: Registration Motor (M07)<br>    8: Reverce Motor (M08)<br>    9: Bottle Motor (YM) (M09)<br>    10: Bottle Motor (CK) (M10)<br>    11: Cassette 1 Lifter Motor (M11)<br>    12: Cassette 2 Pickup Motor (M102)<br>    13: Cassette 2 Pullout Motor (M106)<br>    14: Cassette 2 Lifter Motor (M104)<br>    15: Cassette 3, 4 Pickup Motor (M101)<br>    16: Cassette 3, 4 Pullout Motor (M105)<br>    17: Cassette 3, 4 Lifter Motor (M103)<br>    18: Registration Motor (Waste Toner Container, Negative<br>       rotation operation of M07)<br>    19 to 23: Not used |
|     Default value | 1 |
|     Related service mode | COPIER> FUNCTION> PART-CHK> MTR-ON |
| MTR-ON | Operation check of Motor |
|     Details | To start operation check of the Motor specified by MTR.<br>The operation automatically stops after operation of 5 seconds. |
|     Use case | When replacing the Motor/checking the operation |
|     Adj/set/operate method | Select the item, and then press Start key. |
|     Caution | While the Bottle Motor is active, be sure to remove the Toner<br>Container. Otherwise, toner leakage may occur in the machine. |
|     Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
|     Related service mode | COPIER> FUNCTION> PART-CHK> MTR |
| SL | Specification of operation Solenoid |
|     Details | To specify the Solenoid to operate. |
|     Use case | When replacing the Solenoid/checking the operation |
|     Adj/set/operate method | Enter the value, and then press Start key. |
|     Display/adj/set range | 1 to 3<br>    1: Primary Transfer Disengagement Solenoid (SL01)<br>    2: Duplex Solenoid (SL02)<br>    3: Registration Shutter Solenoid (SL03) |
|     Default value | 1 |
|     Related service mode | COPIER> FUNCTION> PART-CHK> SL-ON |

| COPIER> FUNCTION> PART-CHK | |
|---|---|
| SL-ON | Operation check of Solenoid |
|     Details | To start operation check for the Solenoid specified by SL.<br>The operation stops after "ON for 0.5 sec" => "OFF for 10 sec" => "ON for 0.5 sec" => "OFF for 10 sec" => "ON for 0.5 sec". |
|     Use case | When replacing the Solenoid/checking the operation |
|     Adj/set/operate method | Select the item, and then press Start key. |
|     Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
|     Related service mode | COPIER> FUNCTION> PART-CHK> SL |

T-8-27

## ■ CCD

| COPIER> FUNCTION> CCD | |
|---|---|
| DF-WLVL1 | White level adj in book mode: color |
|   Details | To adjust the white level for copyboard scanning automatically by setting the paper which is usually used by the user on the Copyboard Glass. |
|   Use case | • When replacing the Copyboard Glass<br>• When replacing the Scanner Unit<br>• When clearing the Reader-related RAM data |
|   Adj/set/operate method | 1) Set paper on the Copyboard Glass.<br>2) Select the item, and then press Start key. |
|   Caution | Be sure to execute DF-WLVL2 in a row. |
|   Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
|   Related service mode | COPIER> FUNCTION> CCD> DF-WLVL2 |
| DF-WLVL2 | White level adj in DADF mode: color |
|   Details | To adjust the white level for DADF scanning automatically by setting the paper which is usually used by the user on the DADF. |
|   Use case | • When replacing the Copyboard Glass<br>• When replacing the Scanner Unit<br>• When clearing the Reader-related RAM data |
|   Adj/set/operate method | 1) Set paper on the DADF.<br>2) Select the item, and then press Start key. |
|   Caution | Be sure to execute this item after DF-WLVL1. |
|   Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
|   Related service mode | COPIER> FUNCTION> CCD> DF-WLVL1<br>COPIER> ADJUST> CCD> DFTAR-R/G/B<br>COPIER> ADJUST> CCD> DFTAR2-R/G/B<br>COPIER> ADJUST> CCD> DFTAR3-R/G/B |
| CL-AGC | Adj Scan Unit white/black ref level: AGC |
|   Details | To adjust the black/white reference level of the Scanner Unit automatically (automatic gain control).<br>To make the adjustment with both resolutions 300 dpi and 600 dpi. |
|   Use case | • When replacing the Copyboard Glass<br>• When replacing the Scanner Unit |
|   Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) After "OK!" is displayed, turn OFF/ON the main power switch. |
|   Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
|   Related service mode | COPIER> ADJUST> CCD> OFST-CL0 - OFST-CL5, OFST2CL0 - OFST2CL5, GAIN-CL0, GAIN2CL0, LED-CL-R/G/B, LED2CL-R/G/B, LED-CLR2, LED-CLG2, LED-CLB2, LED2CLR2, LED2CLG2, LED2CLB2 |

T-8-28

## ■ CLEAR

| COPIER> FUNCTION> CLEAR | |
|---|---|
| R-CON | Clear of Reader-related RAM data |
|   Details | To clear the Reader-related RAM data of the Main Controller PCB. |
|   Use case | When clearing the Reader-related RAM data |
|   Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
|   Caution | • Output the service mode setting values by P-PRINT before execution. After execution, enter necessary setting value.<br>• The RAM data is cleared by pressing Start key.<br>• Data is stored in the Main Controller PCB. |
|   Related service mode | COPIER> FUNCTION> MISC-P> P-PRINT |
| SRVC-DAT | Clearing service mode setting value |
|   Details | To clear the service mode setting values.<br>The user mode setting values are not cleared.<br>The factory adjustment values of the Reader/ADF are not initialized. |
|   Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| COUNTER | Not used |
| HIST | Clear of logs |
|   Details | To clear the communication management/print/jam/error log. |
|   Use case | When clearing logs |
|   Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| CARD | Clear of card ID-related data |
|   Details | To clear the data related to the card ID (department). |
|   Use case | When clearing the data related to the card ID |
|   Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
|   Caution | The value is cleared after the main power switch is turned OFF/ON. |
| E355-CLR | For R&D |
| E719-CLR | For R&D |

| COPIER> FUNCTION> CLEAR | | |
|---|---|---|
| ALL | | Clearing setting information |
| | Details | • User mode setting values<br>• Service mode setting values (excluding the service counter)<br>• ID and password of the system administrator<br>• Communication management/print/jam/error log<br>• E719 error (counter meter-installed models only)<br>• The following items are not cleared/initialized.<br>• Service counter<br>• Factory adjustment values of the Reader/ADF |
| | Use case | At installation |
| | Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| | Related service mode | COPIER> OPTION> BODY> LOCALE, SIZE-LC |
| ERDS-DAT | | Initialization of E-RDS SRAM data |
| | Details | To initialize the SCM value of the Embedded-RDS stored in the SRAM.<br>SCM values are ON/OFF of E-RDS, server's port number, server's SOAP URL, and communication schedule with the server (how often the data is acquired), etc.<br>The value set by COPIER> FUNCTION> INSTALL> E-RDS, RGW-PORT, RGW-ADR, COM-LOG is cleared. |
| | Use case | When upgrading the Bootable in the E-RDS environment |
| | Adj/set/operate method | Select the item, and then press Start key. |
| | Caution | The method of using the SRAM in E-RDS differs depending on the Bootable version. Therefore, unless the SRAM data is cleared at the time of version upgrade, data inconsistency occurs. |
| | Display/adj/set range | At normal termination: OK, At abnormal termination: NG |
| | Related service mode | COPIER> FUNCTION> INSTALL> E-RDS, RGW-PORT, RGW-ADR, COM-LOG |
| ERR | | Clear of error code |
| | Details | To clear error codes (E000, E001, E002, E003, E717, E719). |
| | Use case | At error occurrence |
| | Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Turn OFF/ON the main power switch. |

| COPIER> FUNCTION> CLEAR | | |
|---|---|---|
| DC-CON | | RAM clear of DC Controller PCB |
| | Details | To clear the RAM data of the DC Controller PCB. |
| | Use case | When clearing the RAM data of the DC Controller PCB |
| | Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| | Caution | • Output the service mode setting values by P-PRINT before execution. After execution, enter necessary setting values.<br>• The RAM data is cleared After the main power switch is turned OFF/ON. |
| | Related service mode | COPIER> FUNCTION> MISC-P> P-PRINT |
| CNT-DCON | | Clear of DC Controller service counter |
| | Details | To clear the service counter counted by the DC Controller PCB. |
| | Use case | When clearing the service counter counted by the DC Controller PCB |
| | Adj/set/operate method | Select the item, and then press Start key. |
| OPTION | | Not used |
| REG-CLR | | Clear of image position correction value |
| | Details | To clear the value when the correction value that is adjusted by image position correction control becomes a faulty value due to some reasons.<br>When color displacement cannot be corrected by image position correction control, clear the correction value and turn OFF/ON the machine or execute "Quick Adjust" and "Auto Correct Color Mismatch" in Settings/Registration so that image position correction is executed again. |
| | Use case | • When color displacement cannot be corrected by image position correction control<br>• When a failure occurs in correction in an oblique direction |
| | Adj/set/operate method | Select the item, and then press Start key. |
| | Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Quick Adjust<br>Adjustment/Maintenance> Adjust Image Quality> Auto Correct Color Mismatch |

T-8-29

## ■ MISC-R

| COPIER> FUNCTION> MISC-R | |
|---|---|
| SCANLAMP | Light-up check of Scanning Lamp/LED |
| Details | To light up the Scanning Lamp/LED for 3 seconds. |
| Use case | When replacing the Scanning Lamp/LED |
| Adj/set/operate method | Select the item, and then press Start key. |
| Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
| Required time | 3 sec |
| SCAN-ON | Execution of copyboard reading operation |
| Details | To execute the reading operation with the Copyboard. |
| Use case | When checking the operation of the motor of the Reader |
| Adj/set/operate method | Select the item, and then press Start key. |
| Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |

T-8-30

## ■ MISC-P

| COPIER> FUNCTION> MISC-P | |
|---|---|
| SRVC-DAT | Output of system data list/system dump list |
| Details | To execute report output of the system data list and the system dump list. System data list: The service software switches and parameters used in FAX function System dump list: The number of sends/receives, the number of pages sent/received, the number of sheets printed/read, the number of errors, etc. |
| Adj/set/operate method | Select the item, and then press Start key. |
| SYS-DAT | Output of system data list |
| Details | To execute report output of the system data list.The service software switches and parameters used in FAX function are output. |
| Adj/set/operate method | Select the item, and then press Start key. |
| SYS-DMP | Output of system dump list |
| Details | To execute report output of the system dump list.The number of sends/receives, the number of pages sent/received, the number of sheets printed/read, the number of errors, etc. are output. |
| Adj/set/operate method | Select the item, and then press Start key. |
| CNTR | Output of counter report |
| Details | To output the counter report.The usage of functions (reading, recording, communication and copy) is output. |
| Adj/set/operate method | Select the item, and then press Start key. |
| ERR-LOG | Output of error log report |
| Details | To output the error log report. |
| Adj/set/operate method | Select the item, and then press Start key. |
| SPEC | Output of spec report |
| Details | To output the spec report.The current device specifications such as the location, model information, and ROM version are output. |
| Adj/set/operate method | Select the item, and then press Start key. |
| ERDS-LOG | Output of ERDS log report |
| Details | To output the ERDS log report. |
| Adj/set/operate method | Select the item, and then press Start key. |
| TNRB-PRT | Output of Toner Container ID report |
| Details | To output the Toner Container ID report. |
| Use case | When checking the ID of the Toner Container |
| Adj/set/operate method | Select the item, and then press Start key. |
| Display/adj/set range | ASCII character string (12 digits) |

| COPIER> FUNCTION> MISC-P | |
|---|---|
| 1ATVC-EX | Execute of primary transfer ATVC control |
| Details | To execute the primary transfer ATVC control. |
| Use case | When reflecting the changed target current of primary transfer ATVC control |
| Adj/set/operate method | Select the item, and then press Start key. |
| Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
| Related service mode | COPIER> ADJUST> HV-TR> 1TR-TGY/2/3, 1TR-TGM/2/3, 1TR-TGC/2/3, 1TR-TGK1, 1TR-TK12/13, 1TR-TGK4, 1TR-TK42/43 |
| FX-RG-H | Exe of ppr side rgst displace check mode |
| Details | To execute the mode to check side registration displacement of paper based on the position at the Fixing Assembly.<br>By executing this item, a paper is picked up from the paper source specified by FX-RGPOS and it stops at the position where a specified length of it comes out from the Fixing Assembly.<br>Adjust the paper position at pickup side (inside a cassette) based on the side registration position at that time. |
| Use case | When feeding speed of A4 size paper is decreased |
| Adj/set/operate method | 1) Specify a paper source by FX-RGPOS.<br>2) Select the item, and then press Start key.<br>A paper stops at the Fixing Assembly.<br>3) Turn OFF the main power switch.<br>4) Remove the Fixing Assembly, and check the side registration position of the paper.<br>5) Pull out the paper, and install the Fixing Assembly.<br>6) Turn ON the main power switch.<br>7) Enter 0, and then press Start key.<br>8) Execute mechanical adjustment using the Adjustment Plate in a cassette to adjust the side registration position of paper.<br>9) Repeat the above procedure as needed. |
| Caution | Be sure to set A4 paper on the paper source (Cassette 2 to 4, Multi-purpose Tray) specified by FX-RGPOS. |
| Related service mode | COPIER> FUNCTION> MISC-P> FX-RGPOS |
| FX-RGPOS | Spec ppr src at side reg displc ppr chck |
| Details | To specify the paper source that is used for checking side registration displacement of paper.<br>After setting A4R paper on the specified paper source, execute COPIER> FUNCTION> MISC-P> FX-RG-H. |
| Use case | When feeding speed of A4 size paper is decreased |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set A4 paper on the specified paper source. |
| Display/adj/set range | 1 to 5<br>    1: Cassette 1<br>    2: Cassette 2<br>    3: Cassette 3<br>    4: Cassette 4<br>    5: Multi-purpose Tray |
| Related service mode | COPIER> FUNCTION> MISC-P> FX-RG-H |

| COPIER> FUNCTION> MISC-P | |
|---|---|
| OPF-DSEQ | Set of DADF pickup noise reduction |
| Details | To set whether to control drive noise that is generated when picking up paper (plain paper, thin paper, etc.) from DADF at 1/1 speed.<br>When 1 is set, noise is alleviated, but productivity is decreased (A4R, 35 ppm -> 32.2 ppm).<br>The setting is not applied to pickup at 1/2 speed (heavy paper). |
| Use case | Upon user's request (to alleviate noise) |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>    0: OFF<br>    1: ON |

T-8-31

## ■ SYSTEM

| COPIER> FUNCTION> SYSTEM | |
|---|---|
| DOWNLOAD | Shift to download mode |
| Details | To make the machine enter the download mode and wait for a command.<br>Perform downloading by SST. |
| Use case | At upgrade |
| Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Perform downloading by SST/USB. |
| Caution | Do not turn OFF the power before HOLD is displayed. |
| Display/adj/set range | When waiting for a command: STAND-BY/STNDBY, In communication: CONNECTED, Communication terminated: HOLD |
| Supplement/memo | SST: Service Support Tool |
| PANEL-UP | Not use |
| LOGWRITE | Not use |
| IMPORT | Reading of service mode setting value from USB memory |
| Details | To write the service mode setting values (excluding those related to Reader/ADF) to the USB memory. |
| Use case | When replacing the Main Controller PCB as a measure against failures |
| Adj/set/operate method | 1) Install the USB memory.<br>2) Select the item, and then press Start key.<br>3) Turn OFF/ON the main power switch. |
| Caution | Do not turn OFF/ON the power before "Executing..." disappears. |
| EXPORT | Writing service mode setting value to USB memory |
| Details | To write the service mode setting values (excluding those related to Reader/ADF) to the USB memory. |
| Use case | When replacing the Main Controller PCB as a measure against failures |
| Adj/set/operate method | 1) Install the USB memory.<br>2) Select the item, and then press Start key. |
| Caution | "Executing..." disappears when writing is completed. |
| DCONLOG | Writing DCONLOG to USB memory |
| Details | To write the DCONLOG to the USB memory. |
| Adj/set/operate method | 1) Install the USB memory.<br>2) Select the item, and then press Start key. |

T-8-32

## ■ VIFFNC

| COPIER> FUNCTION> VIFFNC | |
|---|---|
| STOR-DCN | Backup of Engine Controller PCB NVRAM |
| Details | To back up the setting data in NVRAM of the Engine Controller PCB to NVRAM of the Main Controller PCB. |
| Use case | Before replacing the Engine Controller PCB |
| Adj/set/operate method | Select the item, and then press Start key. |
| Caution | During operation, the setting data changes by manual or automatic adjustment. When backup data which has been left for a long period of time is restored, it is overwritten with new setting data and the old data is deleted. |
| Related service mode | COPIER> FUNCTION> SYSTEM> RSTR-DCN |
| RSTR-DCN | Restoration of Engine Controller PCB NVRAM |
| Details | To restore backup information of the Engine Controller PCB NVRAM stored in the Main Controller PCB NVRAM to the Engine Controller PCB NVRAM. |
| Use case | After replacing the Engine Controller PCB |
| Adj/set/operate method | 1) Select the item, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | During operation, the setting data changes by manual or automatic adjustment. When backup data which has been left for a long period of time is restored, it is overwritten with new setting data and the old data is deleted. |
| Related service mode | COPIER> FUNCTION> SYSTEM> STOR-DCN |

T-8-33

## ■ SPLMAN

| COPIER> FUNCTION> SPLMAN | |
|---|---|
| SPL14159 | Fixing of USB device ID |
| Details | To fix the USB device ID to "000000000000".Driver for each machine is installed to a PC. However, by fixing the serial number, the PC considers that any connected machine to be the same machine; thus, there will be no need to install the drivers many times. |
| Adj/set/operate method | 1) Enter the value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>　　0: OFF<br>　　1: ON |
| Default value | 0 |
| SPL65677 | Increase of paper leading edge margin |
| Details | To increase the margin on the leading edge of paper.<br>As the value is incremented by 1, the margin is increased by 0.1 mm.<br>If the setting is incompatible with SPL68676 (decrease of margin), the setting is disabled (the margin will be standard). |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> SPLMAN> SPL68676 |
| SPL68676 | Decrease of paper leading edge margin |
| Details | To decrease the margin on the leading edge of paper.<br>As the value is incremented by 1, the margin is decreased by 0.1 mm.<br>If the setting is incompatible with SPL65677(increase of margin), the setting is disabled (the margin will be standard). |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> SPLMAN> SPL65677 |
| SPL68677 | Increase of paper right and left margins |
| Details | To increase the margins on the right and left edges of paper.<br>As the value is incremented by 1, the margin is increased by 0.1 mm.<br>If the setting is incompatible with SPL25607 (decrease of margins), the setting is disabled (the margins will be standard). |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> SPLMAN> SPL25607 |

| COPIER> FUNCTION> SPLMAN | |
|---|---|
| SPL25607 | Decrease of paper right and left margins |
| Details | To decrease the margins on the right and left edges of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm.If the setting is incompatible with SPL68677 (increase of margins), the setting is disabled (the margins will be standard). |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 20 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | COPIER> FUNCTION> SPLMAN> SPL68677 |
| SPL93822 | Setting to avoid clearing of all department ID counts |
| Display/adj/set range | 0 to 1<br>　　0: Allow clearing<br>　　1: Prohibit clearing |
| Default value | 0 |
| SPL78788 | Setting to avoid clearing of department ID counts |
| Display/adj/set range | 0 to 1<br>　　0: Allow clearing<br>　　1: Prohibit clearing |
| Default value | 0 |
| SPL71100 | Setting of the duty of Off-hook PCB |
| Details | This is the mode to make handsets of particular manufacturers to be rung when fax reception mode is set to "FAX/TEL switching". |
| Display/adj/set range | 1 to 99 |
| Default value | 50 |
| SPL00171 | Change of the maximum value of auto sleep shift time |
| Display/adj/set range | 0 to 1<br>　　0: 60 min.<br>　　1: Maximum value by model |
| Default value | 1 |
| SPL80100 | Mask setting at copyboard scanning |
| Display/adj/set range | 0 to 1<br>　　0: Mask value according to the specifications of each job<br>　　1: No mask (0 mm) |
| Default value | 0 |
| SPL27354 | PC-less update, RMDS environment setting |
| Display/adj/set range | 0 to 5<br>　　0: Production environment/Release environment<br>　　1: Production environment/Staging environment<br>　　2: Maintenance environment 1/Release environment<br>　　3: Maintenance environment 1/Staging environment<br>　　4: Maintenance environment 2/Release environment<br>　　5: Maintenance environment 2/Staging environment |
| Default value | 0 |

| COPIER> FUNCTION> SPLMAN | |
|---|---|
| SPL84194 | Switching ON/OFF of E-RDS function |
| Display/adj/set range | 0 to 10<br>0: OFF<br>1: ON |
| Default value | 0 |
| SPL32620 | Switching to enable/disable PC-less update |
| Display/adj/set range | 0 to 10<br>0: Disabled<br>1: Enabled |
| Default value | 1 |
| SPL90001 | Setting of toner deposit amount |
| Display/adj/set range | 0 to 5 |
| Default value | 0 |
| SPL90002 | Setting of low screen ruling dither |
| Display/adj/set range | 0 to 1 |
| Default value | 0 |

T-8-34

## ■ INSTALL

| COPIER> FUNCTION> INSTALL | |
|---|---|
| STRD-POS | Adj reading position:DADF stream reading |
| Details | To adjust the reading position at DADF stream reading.<br>After the adjustment, write the value displayed by COPIER> ADJUST> ADJ-XY> STRD-POS in the service label. |
| Use case | At DADF installation/uninstallation |
| Adj/set/operate method | 1) Close the DADF.<br>2) Select the item, and then press Start key.<br>It stops automatically. |
| Caution | Write the adjusted value in the service label. |
| Display/adj/set range | At normal termination: OK, At abnormal termination: NG |
| Related service mode | COPIER> ADJUST> ADJ-XY> STRD-POS |
| RDSHDPOS | Auto adj of Reader shading position |
| Details | To adjust the shading position automatically based on the result of reading of the Standard White Plate. |
| Use case | • When replacing the Reading Sensor Unit<br>• When replacing the Copyboard Glass<br>• When clearing the Reader-related RAM data |
| Adj/set/operate method | Select the item, and then press Start key. |
| Caution | When this item is executed, the value set by COPIER> ADJUST> ADJ-XY> ADJ-S may change. After the execution, write the value of ADJ-S in the service label. |
| Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
| Required time | 10 sec |
| Related service mode | COPIER> ADJUST> ADJ-XY> ADJ-S |
| Supplement/memo | The shading position can be adjusted manually by COPIER> ADJUST> ADJ-XY> ADJ-S. |
| CARD-NUM | Setting of the first number of the card to be used |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 1 to 2,701 |
| Default value | 1 |
| CARD | Card number setting |
| Details | To set the card number to be used for Card Reader.<br>A series of numbers from the entered number to the number of cards specified by CARD-RNG can be used. |
| Use case | • At installation of the Card Reader<br>• After replacement of the HDD |
| Adj/set/operate method | 1) Enter the number, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | The card management information (department ID and password) is initialized. |
| Display/adj/set range | 0 to 2001 |
| Default value | 0 |
| Related service mode | COPIER> OPTION> FNC-SW> CARD-RNG |

| COPIER> FUNCTION> INSTALL | |
|---|---|
| E-RDS | Switching ON/OFF of E-RDS function |
|     Display/adj/set range | 0 to 1<br>    0: OFF<br>    1: ON |
|     Default value | 0 |
| RGW-PORT | Set port number of Sales Co's server |
|     Details | To set the port number of the sales company's server to be used for Embedded-RDS. |
|     Use case | When using Embedded-RDS |
|     Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
|     Caution | Be sure to use E-RDS, RGW-PORT, COM-TEST, COM-LOG and RGW-ADR as a set. |
|     Display/adj/set range | 1 to 65535 |
|     Default value | 443 |
|     Related service mode | COPIER> FUNCTION> INSTALL> E-RDS, COM-TEST, COM-LOG, RGW-ADR<br>COPIER> FUNCTION> CLEAR>ERDS-DAT |
|     Supplement/memo | Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to the sales company's server via SOAP protocol |
| COM-TEST | Dspl connect result w/ Sales Co's server |
|     Details | To display the result of the connection test with the sales company's server. |
|     Use case | When using Embedded-RDS |
|     Adj/set/operate method | Select the item, and then press Start key. |
|     Caution | Be sure to use E-RDS, RGW-PORT, COM-TEST, COM-LOG and RGW-ADR as a set. |
|     Display/adj/set range | During operation: ACTIVE, When connection is completed: OK, When connection is failed: NG |
|     Related service mode | COPIER> FUNCTION> INSTALL> E-RDS, RGW-PORT, COM-LOG, RGW-ADR |
|     Supplement/memo | Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to the sales company's server via SOAP protocol |
| COM-RSLT | Display of E-RDS communication test result |
|     Details | To display the COM-TEST result. |
|     Display/adj/set range | The test is not yet implemented: Unknown,<br>The test terminated normally: "OK"<br>The test terminated abnormally: "NG" |
|     Related service mode | COPIER> FUNCTION> INSTALL> STRD-POS |

| COPIER> FUNCTION> INSTALL | |
|---|---|
| COM-LOG | Dspl connect error w/ Sales Co's server |
|     Details | To display error information when the connection with the sales company's server failed. |
|     Use case | When using Embedded-RDS |
|     Adj/set/operate method | N/A (Display only) |
|     Caution | Be sure to use E-RDS, RGW-PORT, COM-TEST, COM-LOG and RGW-ADR as a set. |
|     Display/adj/set range | Year, date, time, error code, error detail information (maximum 128 characters) |
|     Related service mode | COPIER> FUNCTION> INSTALL> E-RDS, RGW-PORT, COM-TEST, RGW-ADR<br>COPIER> FUNCTION> CLEAR>ERDS-DAT |
|     Supplement/memo | Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to the sales company's server via SOAP protocol |
| AINR-OFF | ON/OFF warm-up rotn deact:dor open/close |
|     Details | To set whether to disable the warm-up rotation when opening and closing the door.<br>By selecting 1, printing can be executed without auto adjustment at warm-up rotation when analyzing the cause of a problem. |
|     Use case | When printing and checking without auto adjustment at warm-up rotation when analyzing the cause of a problem |
|     Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
|     Display/adj/set range | 0 to 1<br>    0: OFF (warm-up rotation enabled)<br>    1: ON (warm-up rotation disabled) |
|     Default value | 0 |

T-8-35

# OPTION

## ■ BODY

| COPIER> OPTION> BODY | |
|---|---|
| DFDST-L1 | DADF mode dust dtct level adj: ppr intvl |
| Details | To adjust dust detection level with dust detection correction control that is executed at paper interval in DADF mode. Reduce the value in the case of frequent display of cleaning instruction at the time of dust detection. As the value is smaller, the dust is less detected. Increase the value when black/white lines appear. As the value is larger, the small dust is more likely detected. |
| Use case | • When black/white line occurs due to dust<br>• Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When increasing the value too much, the cleaning instruction screen may appear too often since even small dust that will not be appeared on the image can be detected. When decreasing the value too much, lines may appear on the image. |
| Display/adj/set range | 0 to 255<br>    0 to 84     : Weakest<br>    85 to 169   : Weak<br>    170 to 254  : Moderate<br>    255         : Strong |
| Default value | 200 |
| Supplement/memo | Lines may appear on the image if there is dust. With dust detection correction control, the image is corrected to prevent lines once dust is detected. To turn OFF the control, make the following selection: Settings/ Registration> Function Settings> Common> Scan Settings> Removal of Soiled Lines, and set the item to "OFF". |
| JM-ERR-R | Set of error display of 0071 jam (RCON) |
| Details | To set whether to display "0071" jam as the error "E996-0071". In the case of a jam, the target log will be lost, so that it may not be able to be checked. When 1 is set, it is handled as an error so that the log which has been backed up can be obtained. |
| Use case | When checking the occurrence of 0071 jam |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>    0: Display as a jam<br>    1: Display as an error |
| Default value | 0 |
| Related service mode | COPIER> OPTION> FNC-SW> JM-ERR-D |

| COPIER> OPTION> BODY | |
|---|---|
| SIZE-LC | Setting of paper size configuration |
| Details | To set the paper size configuration. At installation in areas other than Japan, perform the following procedure to match the setting information with that of the location. |
| Use case | • At installation<br>• Upon user's request |
| Adj/set/operate method | 1) Set the location under LOCALE.<br>2) Enter the setting value under SIZE-LC, and then press Start key.<br>3) Execute COPIER> FUNCTION> CLEAR> ALL.<br>4) Turn OFF/ON the main power switch. |
| Caution | Since COPIER> FUNCTION> CLEAR> ALL is executed when changing the location, the setting information of user mode, service mode, etc. is initialized. The setting information of this item is not initialized. |
| Display/adj/set range | 1 to 4<br>    1: AB configuration    3: A configuration<br>    2: Inch configuration   4: AB/Inch configuration |
| Related service mode | COPIER> FUNCTION> CLEAR> ALLCOPIER> OPTION> BODY> LOCALE |
| MIBCOUNT | Scope range set of Charge Counter MIB |
| Details | To set the range of counter information that can be obtained as MIB (Management Information Base). |
| Use case | For customization |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2<br>    0: All charge counters are obtained<br>    1: Only displayed counter* is obtained<br>    2: All charge counters are not obtained<br>* : Counter specified by the following: COPIER> OPTION> USER> COUNTER 1 to 6 |
| Default value | 0 |
| Related service mode | COPIER> OPTION> USER> COUNTER1- 6 |

| COPIER> OPTION> BODY | |
|---|---|
| NS-CMD5 | Limit CRAM-MD5 auth method at SMTP auth |
| Details | To restrict use of CRAM-MD5 authentication method at the time of SMTP authentication. |
| Use case | Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>0: SMTP server-dependent<br>1: Not used |
| Default value | 0 |
| Supplement/memo | SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated. |
| NS-PLNWS | Limit PLAIN/LOGIN auth: SMTP auth encry |
| Details | To restrict use of PLAIN/LOGIN authentication, which is clear text, at the time of SMTP authentication under the environment where the communication packet is encrypted. |
| Use case | Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>0: SMTP server-dependent<br>1: Not used |
| Default value | 0 |
| Supplement/memo | SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated. |
| NS-LGN | Limit LOGIN authentication at SMTP auth |
| Details | To restrict use of LOGIN authentication at the time of SMTP authentication. |
| Use case | Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>0: SMTP server-dependent<br>1: Not used |
| Default value | 0 |
| Supplement/memo | SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated. |

| COPIER> OPTION> BODY | |
|---|---|
| SLPMODE | Restriction of shift to sleep mode 1 or sleep mode 3 |
| Display/adj/set range | 0 to 1<br>0: Normal operation<br>1: The machine does not shift to sleep mode 1 or sleep mode 3. |
| Default value | 0 |
| SDTM-DSP | Display/hide of auto shutdown shift time |
| Details | To set whether to display or hide "Auto Shutdown Time" in Settings/Registration. |
| Use case | When switching to display or hide auto shutdown time |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set 0 for the model with fax for Europe. If 1 is set, fax reception cannot be performed normally. |
| Display/adj/set range | 0 to 1<br>0: Hide<br>1: Display |
| Default value | JP:0, USA:0, EUR:1, AU:0, CN:0, KR:0, TW:0, ASIA:0 |
| Related UI menu | Preferences> Time/Energy Settings> AutoShutdown Time |
| RMT-SW | ON/OFF of RUI service mode function |
| Display/adj/set range | 0 to 1<br>0:OFF<br>1:ON |
| Default value | 1 |
| PSWD-SW | Password type set to enter service mode |
| Details | To set the type of password that is required to enter when getting into service mode.<br>2 types are available: one for "service technician" and the other for "system administrator + service technician".<br>When selecting the type for "system administrator + service technician", enter the password for service technician after the password entry by the user's system administrator. |
| Use case | Upon request from the user who concerns security |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2<br>0: No password<br>1: Service technician<br>2: System administrator + service technician |
| Default value | 0 |

| COPIER> OPTION> BODY | |
|---|---|
| SM-PSWD | Password setting for service technician |
| Details | To set password for service technician that is used when getting into service mode. |
| Use case | When password is required to get into service mode |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to select 1 or 2 with PSWD-SW in advance. |
| Display/adj/set range | 1 to 99999999 |
| Default value | 11111111 |
| Related service mode | COPIER> OPTION> FNC-SW> PSWD-SW |
| PASCL-TY | Set of paper type for auto gradation adj |
| Details | Auto gradation adjustment is normally executed with the recommended paper specified for each location. However, if you want to change the paper type, use this setting to change the paper type. |
| Use case | When executing the auto gradation adjustment using a paper other than the recommended paper type |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Do not change the setting in the normal operation. |
| Display/adj/set range | 1 to 3<br>1: CS680 [Nippon Paper Industries] (Except for USA and EU. Mainly for Japan)<br>2: Hammermill Laser Print [International Paper] (For USA)<br>3: Canon Office 80 [Mondi Business Paper] (For EU) |
| Default value | JP:1, USA:2, EUR:3, AU:1, CN:1, KR:1, TW:1, ASIA:1 |
| Related UI menu | Adjustment/Maintenance> Adjust Image Quality> Auto Adjust Gradation> Full Adjust |

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## ■ FNC-SW

| COPIER> OPTION> FNC-SW | |
|---|---|
| INTROT-1 | Set ATR ctrl patch density dtct interval |
| Details | To set execution interval of patch density detection executed at ATR control.<br>By changing the setting value, execution intervals at last rotation and at paper interval are changed.<br>Decrease the value if E020 error occurs frequently. As the execution frequency is increased, correction accuracy for density variation is increased. Since patch density detection is linked with low duty toner ejection, lowering of density can be prevented by increasing the frequency.<br>When the value is increased, downtime can be reduced because of decrease of execution frequency, but an image failure might occur. |
| Use case | • When E020 error occurs frequently<br>• Upon user's request (decrease downtime) |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -1 to 3<br>-1: Every 30 sheets at last rotation, every 80 sheets at paper interval<br>0: Every 50 sheets at last rotation, every 100 sheets at paper interval<br>1: Every 100 sheets at last rotation, every 150 sheets at paper interval<br>2: Every 150 sheets at last rotation, every 200 sheets at paper interval<br>3: Every 200 sheets at last rotation, every 250 sheets at paper interval |
| Default value | 0 |
| INTROT-2 | Set of auto adjustment execute interval |
| Details | To set the paper interval to execute auto adjustment (D-max control, D-half control).<br>As the value is incremented by 1, the paper interval is increased by 1 sheet.<br>If a new Drum Unit whose number of fed sheets is 1000 or less is installed, the interval is 250 sheets at a maximum. |
| Use case | When matching the use environment of the user. |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Increasing the number of sheets (widening the interval) causes higher frequency of image failure. |
| Display/adj/set range | -20 to 2000 |
| Default value | 0 |

| COPIER> OPTION> FNC-SW | |
|---|---|
| DMAX-SW | Setting of D-max control timing |
| Details | To set the D-max control execution timing. When the density variation is not within the requested range at continuous output of a large volume of papers (long job length), set 2. When keeping the productivity even though there are some density variations, set 1. |
| Use case | • When the density variation is not within the requested range at continuous output of a large volume of papers<br>• When keeping the productivity even though there are some density variations |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 2<br>0: Not used, 1: At last rotation<br>2: At paper interval with 1/1 speed and last rotation |
| Default value | 2 |
| BK-4CSW | Set simple full clr mode: hvy ppr, Bk-m |
| Details | To set the conditions to switch single Bk-color mode to simple full color mode according to the type of heavy paper. In single Bk-color mode, shock image at 75/122 mm from the leading edge is likely to occur due to impact triggered by paper entering the secondary transfer section. By switching to simple full color mode where black is made by using small amount of Y, M and C toners, shock image is alleviated. When 0 (normal) is set, the mode is switched to simple full color mode with heavy paper 3 after printing the specified number of sheets since the replacement of the Drum Unit (Bk). When 1, 2, or 3 is set, simple full color mode is always applied to heavy paper 1/2/3. When 4 is set, it is not switched to simple full color mode. |
| Use case | When shock image occurs with heavy paper at single Bk-color mode |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 4<br>0: Normal<br>1: Heavy paper 3<br>2: Heavy paper 2/3<br>3: Heavy paper 1/2/3<br>4: OFF |
| Default value | 0 |

| COPIER> OPTION> FNC-SW | | |
|---|---|---|
| FXWRNLVL | | Set Fix Film life display threshold VL |
| | Details | To set the threshold value to display the life of Fixing Film. This item is enabled when the value at the following is set to "1" (default: 0): COPIER> OPTION> DSPLY-SW> FXMSG-SW (ON/OFF of Fixing Assembly replacement message) The life judgment counter is stored in the DC Controller. It is not possible to change or check the counter value. |
| | Use case | When preventing the occurrence of fixing failure caused by the continuous use of the Fixing Film beyond its life |
| | Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| | Display/adj/set range | 0 to 3<br>0: Warning is hidden.<br>1: Warning is displayed when the life counter reaches the specified value.<br>2. Warning is displayed when the print counter reaches the specified value.<br>3: Warning is displayed when either the life counter or the print counter reaches the specified value. |
| | Default value | 0 |
| | Related service mode | COPIER> OPTION> DSPLY-SW> FXMSG-SW |
| CNTR-SW | | Init parts counter estimated life value |
| | Details | To return the estimated life value of parts counter to the initial value. |
| | Use case | Upon user's request |
| | Adj/set/operate method | 1) Enter 0, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| | Display/adj/set range | 0: Returned to the initial value |
| | Default value | 0 |
| DMAX-DAY | | Set D-max control execution frequency |
| | Details | To set the frequency of D-max control that is executed after a specified number of sheets is fed. When 0 is set, the execution frequency of D-max control is decreased by half. |
| | Use case | When density varies at the time of making a large number of outputs |
| | Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| | Display/adj/set range | 0 to 1<br>0: Half<br>1: Normal |
| | Default value | 1 |

| COPIER> OPTION> FNC-SW | |
|---|---|
| T-DLV-BK | Set Bk pre-toner low alarm notice timing |
| Details | To set the timing to notify the pre-toner low alarm for Bk-color (toner level). |
| Use case | When changing the timing to notify the end of life according to the usage status |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Since toner level is calculated based on the developing supply count, some errors may occur. |
| Display/adj/set range | 0 to 40 |
| Unit | 1 % |
| Default value | It differs according to the location. |
| Related service mode | COPIER> OPTION> FNC-SW> T-DLV-CL |
| T-DLV-CL | Set YMC pre-toner low alarm notice tmg |
| Details | To set the timing to notify the pre-toner low alarm for Y/M/C-color (toner level). |
| Use case | When changing the timing to notify the end of life according to the usage status |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Since toner level is calculated based on the developing supply count, some errors may occur. |
| Display/adj/set range | 0 to 40 |
| Unit | 1 % |
| Default value | It differs according to the location. |
| Related service mode | COPIER> OPTION> FNC-SW> T-DLV-BK |
| D-DLV-BK | Set Bk Drum auto delvry alarm notice tmg |
| Details | To set the timing to notify the auto delivery alarm for the Drum Unit (Bk). |
| Use case | When changing the timing to notify the end of life according to the usage status |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Since the drum is integrated with the Developing Assembly, some errors may occur depending on the usage conditions. |
| Display/adj/set range | 50 to 200 |
| Unit | 1 % |
| Default value | 100 |
| Related service mode | COPIER> COUNTER> LF> K-DRM-LF |

| COPIER> OPTION> FNC-SW | |
|---|---|
| D-DLV-CL | Set YMC Drum auto dvry alarm notice tmg |
| Details | To set the timing to notify the auto delivery alarm for the Drum Unit (Y/M/C). |
| Use case | When changing the timing to notify the end of life according to the usage status |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Since the drum is integrated with the Developing Assembly, some errors may occur depending on the usage conditions. |
| Display/adj/set range | 50 to 200 |
| Unit | 1 % |
| Default value | 100 |
| Related service mode | COPIER> COUNTER> LF> Y/M/C-DRM-LF |
| JM-ERR-D | Set of error display of 0CAx jam (DCON) |
| Details | To set whether to display "0CAF" jam as the error "E996-0CAF".<br>In the case of a jam, log cannot be obtained depending on the timing. By selecting 1 when the jam "0CAF" occurs, it is displayed as the error "E996-0CAF" so that the log can be obtained. |
| Use case | When obtaining a log at the occurrence of 0CAF jam |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>　0: Display as a jam<br>　1: Display as an error |
| Default value | 0 |
| TNR-RS | Set of Toner Container rotation speed |
| Details | To set the rotation speed of Toner Container.<br>As the value is larger, the Toner Container rotates faster so enough amount of toner is supplied for high duty (high image ratio) image, but noise becomes louder. |
| Use case | • When the rotation drive noise is loud<br>• When not enough amount of toner is supplied for high duty image |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | -3 to 3 |
| Unit | 1 |
| Default value | 0 |

| COPIER> OPTION> FNC-SW | |
|---|---|
| TNNEWQCK | Set new Tonr Cntner chck seq aftr rplce |
| Details | To set whether to execute the new Toner Container check sequence after replacement.<br>In case of processing a large job immediately after replacement of the Toner Container when 0 is set, downtime due to the new Toner Container check sequence occurs during the processing.<br>When 1 is set, control to print the specified number of sheets is turned OFF and the new Toner Container check sequence is executed immediately after the replacement. |
| Use case | When downtime occurs due to the new Toner Container check sequence during the processing of a large job |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | 0 to 1<br>0: OFF, 1: ON |
| Default value | 0 |
| R-DR-FAN | Adj Right Door Unit Fan airflow amount |
| Details | To set the rotation speed of the Right Door Unit Fan during printing. When 2 is set, the heat exhaust efficiency is improved so it can alleviate papers to be stuck together at the time of delivery. However, the machine is more likely to shift to temperature rising prevention mode. |
| Use case | When delivered papers stick together frequently |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | When 2 is set, the machine is more likely to shift to temperature rising prevention mode. |
| Display/adj/set range | 0 to 2<br>    0: Automatic<br>    1: Half speed<br>    2: Full speed |
| Default value | 0 |
| PWR-FAN | Adj Power Supply Fan airflow amnt: stby |
| Details | To adjust the airflow amount of the Power Supply Fan at standby.<br>As the value is larger, heat exhaust efficiency is improved, but noise becomes louder. |
| Use case | • When the machine is installed in a high temperature environment in which damage of component parts of the Power Unit or HDD damage is likely to occur<br>• When HDD damage occurs frequently |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Noise becomes louder. |
| Display/adj/set range | 0 to 2<br>    0: Automatic<br>    1: Half speed<br>    2: Full speed |
| Default value | 0 |
| Supplement/memo | The Power Supply Fan also cools the Controller PCB. |

| COPIER> OPTION> FNC-SW | |
|---|---|
| DLVY-FAN | Adj Delivery Cooling Fan airflow amount |
| Details | To set the rotation speed of the Delivery Cooling Fan during printing. When 2 is set, the heat exhaust efficiency is improved so it can alleviate papers to be stuck together at the time of delivery. However stacking performance decreases. |
| Use case | When delivered papers stick together frequently |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | When 2 is set, stacking performance at the time of delivery decreases. |
| Display/adj/set range | 0 to 2<br>    0: Automatic<br>    1: Half speed<br>    2: Full speed |
| Default value | 0 |
| CRG-FANR | Adj Drum-U Exhst Fan airflow amnt: print |
| Details | To set the rotation speed of the Drum Unit Exhaust Fan during printing.<br>When 2 is set, the heat exhaust efficiency is improved so temperature rising can be controlled. However, noise becomes louder. |
| Use case | When the machine shifts to temperature rising prevention mode frequently in case of continuous output for a long time |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Noise becomes louder. |
| Display/adj/set range | 0 to 2<br>    0: Automatic<br>    1: Half speed<br>    2: Full speed |
| Default value | 0 |
| CRG-FANF | Adj Drum-U Suctn Fan airflow amnt: print |
| Details | To set the rotation speed of the Drum Unit Suction Fan during printing.<br>When 2 is set, the heat exhaust efficiency is improved so temperature rising can be controlled. However, noise becomes louder. |
| Use case | When the machine shifts to temperature rising prevention mode frequently in case of continuous output for a long time |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Noise becomes louder. |
| Display/adj/set range | 0 to 2<br>    0: Automatic<br>    1: Half speed<br>    2: Full speed |
| Default value | 0 |

| COPIER> OPTION> FNC-SW | |
| --- | --- |
| ECO-TMP | Setting of eco mode shift temperature |
| Details | To set the offset value of temperature to shift to eco mode. When the Environment Sensor detects that the temperature drops to the specified temperature, the machine enters eco mode and the fan stops. Decrease the value when any problem (sticking of delivered papers together, toner adhesion, etc.) occurs in eco mode. (The machine is more likely to be recovered from eco mode.) To reduce the drive noise from the fan, increase the value. (The machine is more likely to enter eco mode.) |
| Use case | • When changing the temperature to shift to eco mode • When any problem (sticking of delivered papers together, toner adhesion, etc.) occurs in eco mode • Upon user's request (to reduce fan drive noise) |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -10 to 10 |
| Unit | 1 deg C |
| Default value | 0 |
| STP-TMP | Temp rise prev mod stop seq temp thrshld |
| Details | To set the threshold value of the temperature of the Developing Assembly to execute temperature rising prevention mode stop sequence. Decrease the value when any problem (toner adhesion, etc.) occurs. |
| Use case | • When changing the temperature to execute temperature rising prevention mode stop sequence • When any problem (toner adhesion, etc.) occurs |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 50 |
| Default value | 48 |

| COPIER> OPTION> FNC-SW | |
| --- | --- |
| WT-FL-LM | No. of fed sht after wst tonr full dtct |
| Details | Since the Waste Toner Full Sensor detects toner full optically, timing to display the waste toner near full notice may vary depending on the concentration of toner. Usually, when approx. 1000 sheets (calculated with full color, 5% image ratio) are fed after the near full notice, it is judged as full level, but in some cases, it is not actually reached to the full level. According to the usage status of the machine, set the number of sheets to be fed after the near full notice until toner full (the machine stops). As the value is changed by 1, the number of sheets is changed by 250 sheets (calculated with full color, 5% image ratio) |
| Use case | • When the user points out that full waste toner is detected earlier than the actual timing • When replacement of the Waste Toner Container cannot be done in time at normal timing because of large volume output |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | • When image ratio is high, toner full may be detected before reaching the specified number of sheets. • Toner leak may occur when changing the value drastically. |
| Display/adj/set range | 0 to 8 0: 0 sheet (toner full immediately after near full) 1: 250 sheets 2: 500 sheets 3: 750 sheets 4: 1000 sheets, ... 8: 2000 sheets |
| Unit | 250 time |
| Default value | 4 |
| Related service mode | COPIER> OPTION> DSPLY-SW> WT-WARN |

| COPIER> OPTION> FNC-SW | |
|---|---|
| DFAN-SPD | Set paper protrusion prevention:delivery |
| Details | When making 2-sided printing using thin paper/plain paper 1/recycled paper 1, papers may protrude from the Delivery Tray on which approx. 100 sheets are stacked. It is likely to occur with Vietnamese paper (Bayband 70g).<br>When 1 is set, the Delivery Cooling Fan rotates at half speed. It can alleviate protrusion of papers, but delivered papers may be stuck together.<br>When the finisher is installed, the fan rotates at full speed although 1 is set. |
| Use case | When papers on the Delivery Tray protrude from the tray at the time of 2-sided printing using thin paper/plain paper 1/ recycled paper 1 |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | • When 1 is set in a high temperature and high humidity environment, papers may be stuck together.<br>• When the finisher is installed, the setting is disabled (remains at full speed). |
| Display/adj/set range | 0 to 1<br>　0: Full speed<br>　1: Half speed only for 2-sided printing with thin paper/plain paper 1/recycled paper 1; Full speed for others |
| Default value | 0 |
| LCDSFLG | Enabling of local CDS server |
| Details | To set whether to use the local CDS server.<br>When CDSFIRM is 1, this setting is enabled. When this setting is enabled, the [Setting] screen is displayed Settings/Registration> Management Settings> License/Other> Register/Update Software> Software Management Setting. |
| Use case | When using the local CDS server |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | This mode is enabled only when 1 is selected in COPIER> OPTION> FNC-SW> CDS-FIRM. |
| Display/adj/set range | 0 to 1<br>　0: Disabled<br>　1: Enabled |
| Default value | 0 |
| Related service mode | COPIER> OPTION> FNC-SW> CDS-FIRM |
| Related UI menu | Management Settings> License/Other> Register/Update Software> Software Management Setting> Setting |
| Supplement/memo | When local CDS is used, iW EMC/MC device firmware update plug-in is required. |

| COPIER> OPTION> FNC-SW | |
|---|---|
| T1CL-UP | Set of mod shift tmg at clr/black switch |
| Details | To set the timing to shift from color mode to black mode when switching between color and black.<br>When the image is switched from color to black, an image failure may occur on the B&W image.<br>Set 1 if the image failure occurs only on special paper (plain paper 3, heavy paper, etc.), or set 2 if it occurs on plain paper. |
| Use case | When taking a temporary measure until the ITB is replaced in the case of occurrence of an image failure |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | • Be sure to replace the ITB as soon as possible because this is a temporary measure in the case that there is no spare ITB on hand.<br>• Be sure to check that the symptom cannot be improved by PRE-CURL (heavy paper curl alleviation mode) before execution.<br>• Productivity may be decreased in the case of color/black mixed original or color/black linked jobs. |
| Display/adj/set range | 0 to 2<br>0: After switching, the first to fifth sheets are output in color mode, and the mode shifts to black mode from the sixth sheet.<br>1: Excluding thin paper of 210 mm or more in width (60 to 63 g/m2) , plain paper 1 (64 to 75 g/m2) , plain paper 2 (76 to 90 g/m2) , recycled paper 1 (64 to 75 g/m2) , recycled paper 2 (76 to 90 g/m2) , color paper (64 to 75 g/m2) , pre-punched paper (64 to 75 g/m2) , and carbonless paper (60 g/m2) , the mode shifts to black mode from the second sheet after switching.<br>2: At all speeds, the mode shifts to black mode from the second sheet after switching. |
| Default value | 0 |
| Related service mode | COPIER> OPTION> FNC-SW> PRE-CURL |
| Supplement/memo | An image failure that occurs when the image is switched from color to black is likely to occur on strongly curled paper. |
| IMGCNTPR | Setting of image quality mode |
| Details | To set the image quality mode.<br>The counter priority mode is applied when 1 is set, and the image quality priority mode is applied when 0 is set. |
| Use case | Upon user's request |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>　0: Image quality priority mode<br>　1: Counter priority mode |
| Default value | 1 |

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## ■ CUSTOM

| COPIER> OPTION> CUSTOM | |
|---|---|
| TEMP-TBL | Fixing control temperature:Plain paper 1 |
| Details | To set the offset of fixing control temperature for plain paper 1 (60 to 75 g/m2) . As the value is incremented by 1, the control temperature is increased by 5 deg C. Increase the value when a fixing failure occurs. Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on plain paper 1 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2     -2: -10 deg C     -1: -5 deg C      0: 0 deg C      1: +5 deg C      2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| FAN-ROT | Setting of fan control at condensation |
| Details | To set fan control when condensation occurs. When 1 is set, fan control is switched according to the temperature. |
| Use case | When condensation occurs |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 2     0: Normal     1: Condensation prevention mode     2: Not used |
| Default value | 0 |
| DEV-SP1 | For R&D |
| DEV-SP2 | For R&D |
| DEV-SP3 | For R&D |
| DEV-SP4 | For R&D |
| DEV-SP5 | For R&D |
| DEV-SP6 | For R&D |
| DEV-SP7 | For R&D |
| DEV-SP8 | For R&D |

| COPIER> OPTION> CUSTOM | |
|---|---|
| FAN-POST | Dup Cool Fan oprtn time:aftr 1-sided fd |
| Details | To set the operation time of the Duplex Cooling Fan after performing 1-sided feeding. As the value is larger, water droplets occurred on the Feed Path during 1-sided printing can be removed, but downtime is increased. |
| Use case | When an image failure (droplet mark) occurs due to condensation after feeding moistened paper |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Downtime occurs. |
| Display/adj/set range | 0 to 3     0: OFF     1: 15 seconds     2: 30 seconds     3: 60 seconds |
| Default value | 0 |

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## ■ IMG-DEV

| COPIER> OPTION> IMG-DEV | |
|---|---|
| AUTO-DH | ON/OFF of proc auto adj at warm-up rotn |
| Details | To set ON/OFF of process auto adjustment (D-max/D-half control) at warm-up rotation. |
| Use case | When density varies at the time of making a large number of outputs |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 2<br>　0: OFF<br>　1: ON (HH environment only)<br>　2: ON (all environments) |
| Default value | 1 |
| DV-RT-LG | ON/OFF of Drum Unit first idle rotation |
| Details | To set ON/OFF of idle rotation of the Drum Unit to be performed first time for the day.<br>Although idle rotation is not performed in the normal operation to extend the life of Drum Unit, execute it for 60 seconds when any problem (image failure, etc.) occurs. |
| Use case | When an image failure occurs |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>　0: OFF<br>　1: ON (60 seconds) |
| Default value | 0 |
| ADJ-VPP | Adj of dev AC bias Vpp: plain/rcycl 1/2 |
| Details | To adjust Vpp of the developing AC bias when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is A4 or larger).<br>As the value is incremented by 1, Vpp changes by 100 V.<br>Decrease the value when fogging/bias leak/high density occurs. |
| Use case | When an image failure (carrier adherence, ring marks, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Execute Auto Adjust Gradation > Full Adjust. |
| Caution | If the value is too small, the contrast becomes weak. |
| Display/adj/set range | 0 to 5<br>　0: +/-0 V<br>　1: -100 V<br>　2: -200 V<br>　3: -300 V<br>　4: -400 V<br>　5: -500 V |
| Unit | 100 V |
| Appropriate target value | 0 |
| Default value | 0 |
| Related service mode | COPIER> OPTION> IMG-DEV> ADJ-VPPN, ADJ-VPP3 |

| COPIER> OPTION> IMG-DEV | |
|---|---|
| ADJ-VPPN | Adj of dev AC bias Vpp: plain/rcycl3,etc |
| Details | To adjust the Vpp of the developing AC bias when printing plain paper 1, 2/recycled paper 1, 2 (which paper width is smaller than that of A4) , plain paper 3, or recycled paper 3.<br>As the value is incremented by 1, Vpp changes by 0.5 kV.<br>Decrease the value when fogging/bias leak/high density occurs. |
| Use case | When an image failure (carrier adherence, ring marks, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Execute Auto Adjust Gradation> Full Adjust. |
| Caution | If the value is too small, the contrast becomes weak. |
| Display/adj/set range | 0 to 5<br>　0: +/-0 V<br>　1: -100 V<br>　2: -200 V<br>　3: -300 V<br>　4: -400 V<br>　5: -500 V |
| Unit | 100 V |
| Appropriate target value | 0 |
| Default value | 0 |
| Related service mode | COPIER> OPTION> IMG-DEV> ADJ-VPP, ADJ-VPP3 |
| DEVL-THY | Set toner ejectn img duty threshold (Y) |
| Details | To set the threshold value for average image ratio where Y-toner ejection is executed.<br>As the value is larger, coarseness is decreased, but productivity is lowered and toner consumption is increased.<br>As the value is smaller, productivity and toner consumption are improved, but coarseness is worsened. |
| Use case | While printing low duty (low image ratio) images,- When graininess (coarseness) or decrease in density occurs- When low productivity or high toner consumption is pointed out by the user |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -2 to 5<br>　-2: -0.2<br>　-1: -0.1<br>　0: 0<br>　1: +0.5<br>　2: +1.0<br>　3: +1.5<br>　4: +2.0<br>　5: +3.0 |
| Default value | 0 |

| COPIER> OPTION> IMG-DEV | |
|---|---|
| DEVL-THM | Set toner ejectn img duty threshold (M) |
| Details | To set the threshold value for average image ratio where M-toner ejection is executed. As the value is larger, coarseness is decreased, but productivity is lowered and toner consumption is increased. As the value is smaller, productivity and toner consumption are improved, but coarseness is worsened. |
| Use case | While printing low duty (low image ratio) images,- When graininess (coarseness) or decrease in density occurs- When low productivity or high toner consumption is pointed out by the user |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -2 to 5<br>-2: -0.2<br>-1: -0.1<br>0: 0<br>1: +0.5<br>2: +1.0<br>3: +1.5<br>4: +2.0<br>5: +3.0 |
| Default value | 0 |
| DEVL-THC | Set toner ejectn img duty threshold (C) |
| Details | To set the threshold value for average image ratio where C-toner ejection is executed. As the value is larger, coarseness is decreased, but productivity is lowered and toner consumption is increased. As the value is smaller, productivity and toner consumption are improved, but coarseness is worsened. |
| Use case | While printing low duty (low image ratio) images,- When graininess (coarseness) or decrease in density occurs- When low productivity or high toner consumption is pointed out by the user |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -2 to 5<br>-2: -0.2<br>-1: -0.1<br>0: 0<br>1: +0.5<br>2: +1.0<br>3: +1.5<br>4: +2.0<br>5: +3.0 |
| Default value | 0 |

| COPIER> OPTION> IMG-DEV | |
|---|---|
| DEVL-THK | Set toner ejectn img duty threshold (Bk) |
| Details | To set the threshold value for average image ratio where Bk-toner ejection is executed. As the value is larger, coarseness is decreased, but productivity is lowered and toner consumption is increased. As the value is smaller, productivity and toner consumption are improved, but coarseness is worsened. |
| Use case | While printing low duty (low image ratio) images,- When graininess (coarseness) or decrease in density occurs- When low productivity or high toner consumption is pointed out by the user |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -2 to 5<br>-2: -0.2<br>-1: -0.1<br>0: 0<br>1: +0.5<br>2: +1.0<br>3: +1.5<br>4: +2.0<br>5: +3.0 |
| Default value | 0 |
| TNNEWCNT | Set of new Toner Container check times |
| Details | To set the number of times to execute the new Toner Container check sequence. As the value is larger, whether the Toner Container is a new one can be checked accurately regardless of the period of time the container is being left, but downtime is increased. |
| Use case | • When the user pointed out that the Toner Container is not recognized as a new one although it is replaced<br>• When the amount of downtime is pointed out by the user |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | 3 to 10<br>3: 3 times<br>4: 4 times<br>5: 5 times<br>6: 6 times<br>7: 7 times<br>8: 8 times<br>9: 9 times<br>10: 10 times |
| Unit | 1 time |
| Default value | 7 |

| COPIER> OPTION> IMG-DEV | |
|---|---|
| TNENDCNT | Setting of number of toner level check |
| Details | To set the number of times to execute the toner level check sequence. As the value is larger, the accuracy in toner level detection is increased because the toner level is checked more frequently, but downtime is increased. |
| Use case | • When the user pointed out that the actual toner level is much higher than the estimated toner level<br>• When the amount of downtime is pointed out by the user |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | 1 to 5<br> 1: 1 time<br> 2: 2 times<br> 3: 3 times<br> 4: 4 times<br> 5: 5 times |
| Unit | 1 time |
| Default value | 2 |
| D-PTN | Set of 47/96mm horizontal line prev mode |
| Details | To form dot patterns to control the occurrence of horizontal lines when they appear at 47/96 mm intervals. |
| Use case | When horizontal lines appear at 47/96 mm intervals |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | 0 to 2 |
| Default value | 1 |
| ADJ-VPP3 | Adj of developing AC bias Vpp: other ppr |
| Details | To adjust Vpp of the developing AC bias at the time of printing with other types of papers. As the value is incremented by 1, Vpp changes by 0.5 kV. Decrease the value when fogging/bias leak/high density occurs. |
| Use case | When an image failure (carrier adherence, ring marks, etc.) occurs |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Execute Auto Adjust Gradation (Full Adjust). |
| Caution | If the value is too small, the contrast becomes weak. |
| Display/adj/set range | 0 to 5<br> 0: +/-0 V<br> 1: -100 V<br> 2: -200 V<br> 3: -300 V<br> 4: -400 V<br> 5: -500 V |
| Unit | 100 V |
| Appropriate target value | 0 |
| Default value | 0 |
| Related service mode | COPIER> OPTION> IMG-DEV> ADJ-VPPN, ADJ-VPPN |

| COPIER> OPTION> IMG-DEV | |
|---|---|
| DV-RT-KP | ON/OFF fog prevention: clr/B&W mix job |
| Details | To set ON/OFF of fogging prevention mode when fogging occurs on the single Bk image at a mixed job including color printing and B&W printing. When fogging occurs, set 1. Fogging is reduced by making the Developing Assemblies of Y, M, C colors driven in single Bk mode to apply the developing AC high voltage. |
| Use case | When fogging occurs on the single Bk image at a mixed job including color printing and B&W printing |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | When 1 is set, the life of Developing Assemblies of Y, M and C becomes slightly shorter. |
| Display/adj/set range | 0 to 1<br> 0: OFF<br> 1: ON |
| Default value | 0 |

T-8-39

## ■ DSPLY-SW

| COPIER> OPTION> DSPLY-SW | | |
|---|---|---|
| T-LW-LVL | | Dspl timing of toner level warning mssg |
| | Details | To set the threshold value of residual toner in the toner bottle. When the residual toner level becomes lower than the threshold, a warning message of "Toner is low. Replacement not yet needed." is displayed on the Control Panel. |
| | Use case | • Upon user's request<br>• At the timing that the service engineer visits to the user, etc. |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Caution | When setting a value smaller than the initial value, absence of toner may be displayed before toner level warning message. |
| | Display/adj/set range | 5 to 100 |
| | Unit | 1 % |
| | Default value | It differs according to the location. |
| | Related service mode | COPIER> OPTION> DSPLY-SW> TNR-WARN |
| TNR-WARN | | ON/OFF of toner level warning message |
| | Details | To set ON/OFF of toner warning display. When 1 is set, toner warning is not displayed until the toner runs out. |
| | Use case | When preferring not to display warning until the toner runs out |
| | Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| | Display/adj/set range | 0 to 1<br>  0: Display<br>  1: Hide |
| | Default value | JP:0, USA:1, EUR:0, AU:0, CN:0, KR:0, TW:0, ASIA:0 |
| | Related service mode | COPIER> OPTION> DSPLY-SW> T-LW-LVL |
| | Related UI menu | Preferences> Display Settings> Display Remaining Toner Error Message |
| | Supplement/memo | Display of the warning screen can be switched by Settings/ Registration> Preferences> Display Settings> Display Remaining Toner Error Message. |
| WT-WARN | | Dspl/hide of Wst Tonr Cntner prep mssg |
| | Details | To set whether to display the preparation warning message of the Waste Toner Container on the status area of LUI. |
| | Use case | When there is no need to notify the preparation timing of the Waste Toner Container to the user |
| | Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| | Display/adj/set range | 0 to 1<br>  0: Hide<br>  1: Display |
| | Default value | 1 |
| | Related service mode | COPIER> OPTION> CUSTUM> EXT-TBOX |

| COPIER> OPTION> DSPLY-SW | | |
|---|---|---|
| DF-DSP | | Dspl/hide DADF Roll counter initial scrn |
| | Details | To set whether to display the DADF Roller on the counter initialization screen in Settings/Registration. |
| | Use case | When the user does not replace the parts |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>  0: Hide<br>  1: Display |
| | Default value | 1 |
| 2TR-DSP | | Dspl/hide Sec Trn Out Rol cntr init scrn |
| | Details | To set whether to display the Secondary Transfer Outer Roller on the counter initialization screen in Settings/Registration. |
| | Use case | When the user does not replace the parts |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>  0: Hide<br>  1: Display |
| | Default value | 0 |
| ITB-DSP | | ON/OFF of init after ITB rplce: Set/Reg |
| | Details | To set whether to display "ITB" on Initialization screen after replacing parts in Settings/Registration. When allowing the user to replace the ITB, set 1. |
| | Use case | When allowing the user to replace the ITB |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>  0: OFF<br>  1: ON |
| | Default value | 0 |
| | Related UI menu | Adjustment/Maintenance> Maintenance> Initialize After Replacing Parts> ITB |
| FXU-DSP | | ON/OFF init after Fx Ass'y rplce:Set/Reg |
| | Details | To set whether to display "Fixing Unit" on Initialization screen after replacing parts in Settings/Registration. When allowing the user to replace the Fixing Assembly, set 1. |
| | Use case | When allowing the user to replace the Fixing Assembly |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>  0: OFF<br>  1: ON |
| | Default value | 1 |
| | Related UI menu | Adjustment/Maintenance> Maintenance> Initialize After Replacing Parts> Fixing Unit |

T-8-40

## ■ CLEANING

| COPIER> OPTION> CLEANING | | |
|---|---|---|
| OHP-PTH | | Set of ITB clean transp threshold value |
| | Details | To set the number of sheets for ITB cleaning interval to be executed when feeding transparency.<br>When a large number of transparencies is fed, surface active agent adheres to the ITB, and the blade bounds in small motions. As a result, an image failure occurs.<br>At last rotation of the job with more than specified number of sheets, execute ITB cleaning (not executed when 0 is set).<br>As the value is incremented by 1, the number of sheets for cleaning interval at last rotation is increased by 1 sheet.<br>When using the transparency that tends to cause the adherence of surface active agent, decrease the value so that the image failure can be alleviated.<br>When the value is increased, the downtime and the toner consumption can be reduced; however, image failure may occur. |
| | Use case | When an image failure occurs due to lowering of the transfer efficiency |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 10<br>    0: No ITB cleaning |
| | Unit | 1 sheet |
| | Default value | 5 |
| | Related service mode | COPIER> FUNCTION> CLEANING> TBLT-CLN |
| ITBB-TMG | | Setting of ITB cleaning sheet interval |
| | Details | To set the paper interval to execute the ITB cleaning.<br>As the value is increased, image failure due to the soiled ITB is alleviated, but downtime and toner consumption are increased.<br>Toner band width that is formed at ITB cleaning differs depending on the setting value (1<2<3=4=5). |
| | Use case | When setting the interval to execute ITB cleaning |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 5<br>    0: Not executed<br>    1 to 3: 50 sheets<br>    4: 30 sheets<br>    5: 10 sheets |
| | Default value | 0 |

| COPIER> OPTION> CLEANING | | |
|---|---|---|
| DR-CL-L | | Set toner band length: Drum Clean Blade |
| | Details | To set the length of toner band for preventing flipping of the Drum Cleaning Blade.<br>Increase the value when noise comes from the Photosensitive Drum due to the flipping. If the length of toner band gets longer, flipping can be prevented, but toner consumption is increased.<br>When 0 is set, toner band is not formed. |
| | Use case | • When noise comes from the Photosensitive Drum<br>• When low productivity or high toner consumption is pointed out by the user |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Caution | Do not use this when the machine is operating correctly. |
| | Display/adj/set range | 0 to 100<br>    0: OFF<br>    1: 1 mm<br>    2: 2 mm, ..., 100: 100 mm |
| | Unit | 1 mm |
| | Default value | 10 |
| DR-CL-T | | Set toner band form intvl:Drum Cln Blade |
| | Details | To set the interval to form toner band for preventing flipping of the Drum Cleaning Blade.<br>Decrease the value when noise comes from the Photosensitive Drum due to the flipping. If the interval to form toner band is decreased, flipping can be prevented, but toner consumption is increased. |
| | Use case | • When noise comes from the Photosensitive Drum<br>• When low productivity or high toner consumption is pointed out by the user |
| | Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| | Caution | Do not use this when the machine is operating correctly. |
| | Display/adj/set range | -3 to 5 |
| | Unit | 10000 mm |
| | Default value | 0 |

| COPIER> OPTION> CLEANING | |
|---|---|
| ITB-CL-L | Set toner band length: ITB Clean Blade |
| Details | To set the length of toner band for preventing flipping of the ITB Cleaning Blade.<br>Increase the value when noise comes from the ITB due to the flipping. If the length of toner band gets longer, flipping can be prevented, but toner consumption is increased.<br>When 0 is set, toner band is not formed. |
| Use case | • When noise comes from the ITB<br>• When low productivity or high toner consumption is pointed out by the user |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | 0 to 100<br>    0: OFF<br>    1: 1 mm<br>    2: 2 mm, ..., 100: 100 mm |
| Unit | 1 mm |
| Default value | 10 |
| ITB-CL-T | Set toner band form intvl: ITB Cln Blade |
| Details | To set the interval to form toner band for preventing flipping of the ITB Cleaning Blade.<br>Decrease the value when noise comes from the ITB due to the flipping. If the interval to form toner band is decreased, flipping can be prevented, but toner consumption is increased. |
| Use case | • When noise comes from the ITB<br>• When low productivity or high toner consumption is pointed out by the user |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Do not use this when the machine is operating correctly. |
| Display/adj/set range | -3 to 5 |
| Unit | 10000 mm |
| Default value | 0 |

T-8-41

## ■IMG-MCON

| COPIER> OPTION> IMG-MCON | |
|---|---|
| PSCL-TBL | Setting of Bk-color density increase |
| Details | To set whether to increase the density of Bk-color only without changing the density of Y/M/C-color.<br>When 1 is set, the parameters of auto gradation adjustment (full adjustment) are adjusted so that only the density of Bk-color is increased. |
| Use case | Upon user's request (to increase the density of Bk-color) |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch.<br>3) Execute auto gradation adjustment (full adjustment). |
| Display/adj/set range | 0 to 1<br>    0: Normal<br>    1: Only the density of Bk-color is high |
| Default value | 0 |
| BGE-OFS | Fine adj of background adjustment level |
| Details | To make a fine adjustment of the background adjustment (background removal) level which can be set manually.<br>Break up the adjustment values into smaller ones when user does not satisfy with the default adjustment values. |
| Use case | When color fogging occurs on the output image when copying yellowed blank paper as an original |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Since the background color is set to be washed out with this mode, not only the background of yellowed blank paper, but also other light colors (light blue, etc.) are washed out. |
| Display/adj/set range | -15 to 15 |
| Default value | 0 |
| Related UI menu | Copy> Options> Density> Background Density |
| TMIC-BK | ON/OFF of TMIC Bk_LUT end edge correct |
| Details | To set ON/OFF of the trailing edge adjustment of Bk_LUT for PDL and for copy which are used by TMIC.<br>When the trailing edge adjustment is set to ON, the density of the high density area becomes high, and consequently text and thin lines become clear. While an image becomes clear, the hue of the gradation area of photos, etc. is changed. |
| Use case | When thin lines are partly missing or characters are faded |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 3<br>    0: ON for PDL, OFF for copy<br>    1: OFF for PDL, OFF for copy<br>    2: ON for PDL, ON for copy<br>    3: OFF for PDL, ON for copy |
| Default value | 0 |

| COPIER> OPTION> IMG-MCON | |
|---|---|
| TMIC-CMY | ON/OFF of TMIC CMY_LUT end edge correct |
|   Details | To set ON/OFF of the trailing edge adjustment of CMY_LUT for PDL and for copy which are used by TMIC.<br>When the trailing edge adjustment is set to ON, the density of the high density area becomes high, and consequently text and thin lines become clear. While an image becomes clear, the hue of the gradation area of photos, etc. is changed. |
|   Use case | When thin lines are partly missing or characters are faded |
|   Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
|   Display/adj/set range | 0 to 1<br>    0: ON for PDL, OFF for copy<br>    1: OFF for PDL, OFF for copy |
|   Default value | 1 |

T-8-42

## ■ IMG-SPD

| COPIER> OPTION> IMG-SPD | |
|---|---|
| FX-D-TMP | Set small ppr down sequence start temp |
|   Details | To set temperature to start the down sequence control to small size paper.<br>As the value is incremented by 1, the temperature is increased by 2 deg C from the initial setting temperature. |
|   Use case | • When uneven gloss occurs at paper edge<br>• When improving productivity |
|   Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
|   Display/adj/set range | -4 to 4<br>    -4: -8 deg C<br>    -3: -6 deg C<br>    -2: -4 deg C<br>    -1: -2 deg C<br>    0: 0 deg C<br>    1: 2 deg C<br>    2: 4 deg C<br>    3: 6 deg C<br>    4: 8 deg C |
|   Unit | 2 deg C |
|   Default value | 0 |
| FIX-ROT | Idle rotn end temp after small ppr feed |
|   Details | When feeding the small size paper following the large size paper on the Fixing Assembly, the temperature at both edges of Fixing Film is higher than the center. To prevent the fixing offset or paper wrinkle, it idles until the temperature becomes the specified value after the small size paper is fed.<br>This item is to set the temperature to finish the idle rotation.<br>When the value is increased, downtime is increased because of prioritizing image quality.<br>When the value is decreased, downtime is decreased, but uneven gloss occurs. |
|   Use case | • When uneven gloss occurs at paper edge<br>• When improving productivity |
|   Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
|   Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
|   Default value | 0 |

| COPIER> OPTION> IMG-SPD | |
|---|---|
| ARC-INT2 | Set ARCDAT exe interval: last rotation |
| Details | To set the number of sheets which ARCDAT control is not executed, from the start of a job.<br>ARCDAT control which is supposed to be executed during the specified number of sheets is executed at last rotation of the previous job. Since the number of interruptions during a job is reduced, the productivity is enhanced.<br>However, the number of times of ARCDAT control executed at last rotation might be increased depending on the print conditions. |
| Use case | Upon user's request |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Do not set a larger value than ARC-INT1. |
| Display/adj/set range | 10 to 500 |
| Unit | 1 sheet |
| Default value | 30 |
| Related service mode | COPIER> OPTION> IMG-SPD> ARC-INT1 |
| DWN-TMP3 | Set ppr intvl 25cpm mode temp threshold |
| Details | To set the threshold value of the temperature of the Developing Assembly to shift to paper interval 25 cpm mode.<br>Decrease the value when any problem (toner adhesion, etc.) occurs. |
| Use case | • When changing the temperature to shift to paper interval 25 cpm mode<br>• When any problem (toner adhesion, etc.) occurs |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 50 |
| Default value | 35 |

T-8-43

## ■ IMG-FIX

| COPIER> OPTION> IMG-FIX | |
|---|---|
| NEGA-GST | ON/OFF of pre-exposure operation |
| Details | To set whether to execute pre-exposure operation at warm-up rotation/paper interval when ghost due to negatively charged drum occurs. |
| Use case | When ghost due to negatively charged drum occurs |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to get approval from the user in advance by telling that productivity decreases. |
| Display/adj/set range | 0 to 2<br>0: OFF<br>1: ON (at warm-up rotation only)<br>2: Not used |
| Default value | 0 |
| FX-S-TMP | Image leading edge control temp: pln 1 |
| Details | To set the offset of image leading edge control temperature for plain paper 1 (60 to 75 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of plain paper 1 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>-2: -10 deg C<br>-1: -5 deg C<br>0: 0 deg C<br>1: +5 deg C<br>2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| TMP-TBL2 | Fixing control temperature:Heavy paper 1 |
| Details | To set the offset of fixing control temperature for heavy paper 1 (106 to 128 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on heavy paper 1 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>-2: -10 deg C<br>-1: -5 deg C<br>0: 0 deg C<br>1: +5 deg C<br>2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| TMP-TBL3 | Fixing control temperature:Heavy paper 2 |
| Details | To set the offset of fixing control temperature for heavy paper 2 (129 to 163 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on heavy paper 2 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>-2: -10 deg C<br>-1: -5 deg C<br>0: 0 deg C<br>1: +5 deg C<br>2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| TMP-TBL4 | Fixing control temperature:Heavy paper 3 |
| Details | To set the offset of fixing control temperature for heavy paper 3 (164 to 220 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on heavy paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>-2: -10 deg C<br>-1: -5 deg C<br>0: 0 deg C<br>1: +5 deg C<br>2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| TMP-TBL5 | Fixing control temperature: Thin ppr |
| Details | To set the offset of fixing control temperature for thin paper (60 to 63 g/m2) .<br>As the value is incremented by 1, the control temperature changes by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on thin paper |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>-2: -10 deg C<br>-1: -5 deg C<br>0: 0 deg C<br>1: +5 deg C<br>2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| TMP-TBL6 | Fixing control temperature: Envelope |
| Details | To set the offset of fixing control temperature for envelope.<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on envelope |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| FXS-TMP2 | Image leading edge control temp: heavy 1 |
| Details | To set the offset of image leading edge control temperature for heavy paper 1 (106 to 128 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of heavy paper 1 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| FXS-TMP3 | Image leading edge control temp: heavy 2 |
| Details | To set the offset of image leading edge control temperature for heavy paper 2 (129 to 163 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of heavy paper 2 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| FXS-TMP4 | Image leading edge control temp: heavy 3 |
| Details | To set the offset of image leading edge control temperature for heavy paper 3 (164 to 220 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of heavy paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| FXS-TMP5 | Image leading edge control temp: thin |
| Details | To set the offset of image leading edge control temperature for thin paper (60 to 63 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of thin paper |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>     0: 0 deg C<br>     1: +5 deg C<br>     2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| FXS-TMP6 | Image leading edge control temp:envelope |
| Details | To set the offset of image leading edge control temperature for envelope.<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of envelope |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>     0: 0 deg C<br>     1: +5 deg C<br>     2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| FXST2-N2 | Set of ITOP wait time:Plain ppr in LL Ev |
| Details | To set initial rotation time when plain paper 1/2/3 is fed with a temperature lower than 10 deg C.<br>Increase the value when a fixing failure occurs. |
| Use case | When a fixing failure occurs in an environment where temperature is lower than 10 deg C |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | As the value is increased, (as the initial rotation time becomes longer), FCOT is increased. |
| Display/adj/set range | 0 to 20 |
| Unit | 1 second |
| Default value | 0 |
| FXST2-UH | Set of ITOP wait time:Heavy ppr in LL Ev |
| Details | To set initial rotation time when heavy paper 1/2/3 is fed with a temperature lower than 10 deg C.<br>Increase the value when a fixing failure occurs. |
| Use case | When a fixing failure occurs in an environment where temperature is lower than 10 deg C |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | As the value is increased, (as the initial rotation time becomes longer), FCOT is increased. |
| Display/adj/set range | 0 to 30 |
| Unit | 1 second |
| Default value | 0 |
| FLYING | ON/OFF of flying start temperature ctrl |
| Details | To set ON/OFF of flying start temperature control.<br>When "1" is set, the flying start temperature control is not executed. This is more life-conscious for Fixing Assembly compared to "0". |
| Use case | When preferring to extend the life of Fixing Assembly. However, setting of "1" does not mean that the life of Fixing Assembly is always extended. |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | When "1" is set, FCOT/FPOT is reduced. |
| Display/adj/set range | 0 to 1<br>     0: ON<br>     1: OFF |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| TMP-TBL7 | Fixing control temperature:Plain paper 2 |
| Details | To set the offset of fixing control temperature for plain paper 2 (76 to 90 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on plain paper 2 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| TMP-TBL8 | Fixing control temperature:Transparency |
| Details | To set the offset of fixing control temperature for transparency.<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on transparency |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| FXS-TMP7 | Image leading edge control temp: pln 2 |
| Details | To set the offset of image leading edge control temperature for plain paper 2 (76 to 90 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of plain paper 2 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| FXS-TMP8 | Image leading edge control temp: transp |
| Details | To set the offset of image leading edge control temperature for transparency.<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of transparency |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| FIXMIXBD | Setting of media mixed mode |
| Details | To set whether image quality or productivity to be prioritized when media are mixed.<br>When the value is increased, downtime is increased because of prioritizing image quality.<br>When the value is decreased, downtime is decreased, but uneven gloss might occur. |
| Use case | • If the fixing failure occurs in media mixed condition.<br>• When decreasing downtime in media mixed situation |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -2 to 2 |
| Default value | 0 |
| TMP-TB12 | Fixing control temperature:Plain paper 3 |
| Details | To set the offset of fixing control temperature for plain paper 3 (91 to 105 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on plain paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>　　-2: -10 deg C<br>　　-1: -5 deg C<br>　　 0: 0 deg C<br>　　 1: +5 deg C<br>　　 2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| TMP-TB13 | Fixing control temperature: Rcycl ppr 2 |
| Details | To set the offset of fixing control temperature for recycled paper 2 (76 to 90 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on recycled paper 2 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>　　-2: -10 deg C<br>　　-1: -5 deg C<br>　　 0: 0 deg C<br>　　 1: +5 deg C<br>　　 2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| TMP-TB11 | Fixing control temperature: Rcycl ppr 1 |
| Details | To set the offset of fixing control temperature for recycled paper 1(64 to 75 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs.<br>Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on recycled paper 1 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>　　-2: -10 deg C<br>　　-1: -5 deg C<br>　　 0: 0 deg C<br>　　 1: +5 deg C<br>　　 2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| FXS-TM11 | Image leading edge control temp: rcycl 1 |
| Details | To set the offset of image leading edge control temperature for recycled paper 1 (64 to 75 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | • When a fixing failure occurs on the leading edge of paper<br>• When uneven gloss occurs on the leading edge (56.5 mm) |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| PRE-FXRL | Pressure Roller soiling prevention mode |
| Details | To set ON/OFF of Pressure Roller soiling prevention mode when feeding calcium carbonate paper.<br>When 1 is set, the paper intervals become wider and temperature of the Pressure Roller is increased. As a result, soiling on the Pressure Roller is reduced, but productivity decreases. |
| Use case | Upon user's request (prevention of soiled Pressure Roller) |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to get approval from the user by telling that productivity decreases. |
| Display/adj/set range | 0 to 1<br>    0: OFF<br>    1: ON |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| FXS-TM12 | Image leading edge control temp: pln 3 |
| Details | To set the offset of image leading edge control temperature for plain paper 3 (91 to 105 g/m2) .<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | When uneven gloss occurs on the leading edge (56.5 mm) of plain paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| FXS-TM13 | Image leading edge control temp: rcycl 2 |
| Details | To set the offset of image leading edge control temperature for recycled paper 2 (76 to 90 g/m2).<br>As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value.<br>Increase the value when a fixing failure occurs on the leading edge of paper.<br>Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | • When a fixing failure occurs on the leading edge of paper<br>• When uneven gloss occurs on the leading edge (56.5 mm) |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key.<br>2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2<br>    -2: -10 deg C<br>    -1: -5 deg C<br>    0: 0 deg C<br>    1: +5 deg C<br>    2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

| COPIER> OPTION> IMG-FIX | |
|---|---|
| FXS-TM14 | Image leading edge control temp: rcycl 3 |
| Details | To set the offset of image leading edge control temperature for recycled paper 3 (91 to 105 g/m2) . As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value. Increase the value when a fixing failure occurs on the leading edge of paper. Decrease the value when uneven gloss occurs on the leading edge (56.5 mm). |
| Use case | • When a fixing failure occurs on the leading edge of paper <br> • When uneven gloss occurs on the leading edge (56.5 mm) |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. <br> 2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2 <br>     -2: -10 deg C <br>     -1: -5 deg C <br>      0: 0 deg C <br>      1: +5 deg C <br>      2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |
| TMP-TB17 | Fixing control temperature: Rcycl ppr 3 |
| Details | To set the offset of fixing control temperature for recycled paper 3 (91 to 105 g/m2) . As the value is incremented by 1, the control temperature is increased by 5 deg C from the specified value. Increase the value when a fixing failure occurs. Decrease the value when fixing offset occurs. |
| Use case | When offset/fixing failure occurs on recycled paper 3 |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. <br> 2) Turn OFF/ON the main power switch. |
| Caution | Be sure to change the value a little at a time. Otherwise, offset/image failure occurs when setting an extreme value. |
| Display/adj/set range | -2 to 2 <br>     -2: -10 deg C <br>     -1: -5 deg C <br>      0: 0 deg C <br>      1: +5 deg C <br>      2: +10 deg C |
| Unit | 5 deg C |
| Default value | 0 |

T-8-44

## ■ IMG-TR

| COPIER > OPTION> IMG-TR | |
|---|---|
| 2TR-RVON | Setting of trailing edge weak bias |
| Details | To set the conditions to apply weak bias on the trailing edge of paper. When 0 is set, weak bias is applied to the trailing edge of paper in single Bk mode. When 1 is set, the bias is applied in single Bk mode/color mode. When 2 is set, the bias is not applied. |
| Use case | When an image failure (white spots on the trailing edge) occurs |
| Adj/set/operate method | 1) Enter the setting value (switch negative/positive by -/+ key) and press Start key. <br> 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 2 <br> 0: Single Bk mode, 1: Single Bk mode/color mode, 2: OFF |
| Default value | 0 |

T-8-45

## ■ USER

| COPIER> OPTION> USER | |
|---|---|
| COUNTER1 | Display of software counter 1 |
| Details | To display counter type for software counter 1 on the Counter Check screen. |
| Use case | Upon user/dealer's request |
| Adj/set/operate method | N/A (Display only) |
| Caution | Display only. No change is available. |
| Display/adj/set range | 0 to 999<br>0: Not registered |
| Default value | Refer to the specification of counter display because it differs according to the model or the location. |
| COUNTER2 | Setting of software counter 2 |
| Details | To set counter type for software counter 2 on the Counter Check screen. |
| Use case | Upon user/dealer's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 999<br>0: Not registered |
| Default value | Refer to the specification of counter display because it differs according to the model or the location. |
| COUNTER3 | Setting of software counter 3 |
| Details | To set counter type for software counter 3 on the Counter Check screen. |
| Use case | Upon user/dealer's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 999<br>0: Not registered |
| Default value | Refer to the specification of counter display because it differs according to the model or the location. |
| COUNTER4 | Setting of software counter 4 |
| Details | To set counter type for software counter 4 on the Counter Check screen. |
| Use case | Upon user/dealer's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 999<br>0: Not registered |
| Default value | Refer to the specification of counter display because it differs according to the model or the location. |

| COPIER> OPTION> USER | |
|---|---|
| COUNTER5 | Setting of software counter 5 |
| Details | To set counter type for software counter 5 on the Counter Check screen. |
| Use case | Upon user/dealer's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 999<br>0: Not registered |
| Default value | 0 |
| COUNTER6 | Setting of software counter 6 |
| Details | To set counter type for software counter 6 on the Counter Check screen. |
| Use case | Upon user/dealer's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 999<br>0: Not registered |
| Default value | 0 |
| CNT-SW | Set default dspl items on charge counter |
| Details | To set default display items of the charge counter on the Counter Check screen. |
| Use case | Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>0:<br>   Counter 1 - Total 1: 101<br>   Counter 2 - Total (Black 1) : 108<br>   Counter 3 - Copy (Full Color + Single Color/1) : 232<br>   Counter 4 - Print (Full Color + Single Color/1) : 324<br>1:<br>   Counter 1 - Total 2: 102<br>   Counter 2 - Copy (Full Color + Single Color/2) : 231<br>   Counter 3 - Total A (Full Color + Single Color/2) : 148<br>   Counter 4 - Copy (Black 2) : 222<br>   Counter 5 - Total A (Black 2) : 133 |
| Default value | 0 |
| Related service mode | COPIER> OPTION> FNC-SW> CONFIG |

| COPIER> OPTION> USER | |
| --- | --- |
| CONTROL | Charge setting of PDL job |
| Details | To set charge count transmission of PDL job to the connecting charging management device (coin manager or non-Canon-made control card). |
| Use case | Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>    0: No charge<br>    1: Charge |
| Default value | 0 |
| Related service mode | COPIER > OPTION > ACC > COIN |
| CTCHKDSP | Display/hide of Print List |
| Details | To set whether to display or hide "Print List" on the Counter Check screen.<br>Model name, model number information, counter check date and counter information can be output as a total count management report. |
| Use case | Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>    0: Hide<br>    1: Display |
| Default value | 1 |
| TNRB-SW | Setting of Toner Cntner counter display |
| Details | To set whether to display or hide the Toner Container counter on the Counter Check screen. |
| Use case | To support billing to customers who use a lot of toner. |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 3<br>    0: Hide<br>    1: Display (Toner Container counter only)<br>    2: Not used<br>    3: Display (Toner Container counter 07x and 18x) |
| Default value | 0 |
| SCALL-SW | [Not used] |
| SCALLCMP | [Not used] |

| COPIER> OPTION> USER | |
| --- | --- |
| PS-MODE | Compatible mode setting at PS usage |
| Details | To set the image processing at PS print.<br>Although the same line width is set, it may differ depending on the drawing position.<br>When 8 is set, line width can be uniformed (strokeadjust = ON). |
| Use case | Upon a request from user using PS function |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 65535<br>    0 to 7: No use of Adobe genuine PS (used with compatible PS machine)<br>    8: Set strokeadjust = ON<br>    9 to 65535: Spare |
| Default value | 0 |
| SMD-EXPT | Setting of export target data: remote UI |
| Details | To set whether to export "service mode data" from remote UI.<br>When 1 is set, "service mode data" is displayed as the target data of export on remote UI. When installing more than 1 machine at the same time, the same service mode data can be registered. |
| Use case | When installing more than 1 machine at the same time |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key.<br>2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1<br>    0: Hide<br>    1: Display |
| Default value | 0 |
| Supplement/memo | If selecting "service mode data" as the target data of export on remote UI after setting SMD-EXPT to 1, service mode data can be exported. |
| ACC-SLP | Switching to restrict the shift to sleep mode 3 when the Copy Card Reader is connected |
| Display/adj/set range | 0 to 1<br>    0: Not shifted<br>    1: Shifted |
| Default value | 1 |

| COPIER> OPTION> USER | |
|---|---|
| P-CRG-LF | ON/OFF of Drum Unit life warning display |
| Details | To set whether to display a warning message when the Drum Unit reaches its life. By selecting 1, a warning message is displayed on the status line of LUI when the COPIER> COUNTER> LF> Y/M/C/K-DRM-LF value reaches 95. |
| Use case | Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1 0: OFF 1: ON |
| Default value | 0 |
| Related service mode | COPIER> COUNTER> LF> Y/M/C/K-DRM-LF COPIER> OPTION> FNC-SW> D-DLV-BK/CL |
| Supplement/memo | Display timing can be adjusted by COPIER> OPTION> FNC-SW> D-DLV-BK/CL. |

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## ■ ACC

| COPIER> OPTION> ACC | |
|---|---|
| CARD-SW | Screen set when Coin Manager connected |
| Details | To set coin or card that the user is urged to insert on the Control Panel when the Coin Manager is connected. |
| Use case | Upon user's request |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 3 0: Coin, 1: Card, 2: Coin and card 3: Card (for customization) |
| Default value | 0 |
| CC-SPSW | Support setting of control card I/F |
| Details | To set support level for control card (CCIV/CCV) interface. To keep processing performance of printer engine, select "1: Priority on speed". To correctly stop the output by the upper limit number of sheets, select "2: Priority on upper limit number of sheets". |
| Use case | Upon user's request (when connecting to the external counter management system using the control card interface) |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key. 2) Turn OFF/ON the main power switch. |
| Caution | With priority on speed, output cannot be correctly stopped by the upper limit number of sheets. With priority on the upper limit number of sheets, processing performance of the printer engine is decreased depending on pickup location. |
| Display/adj/set range | 0 to 2 0: No support 1: Priority on speed 2: Priority on upper limit number of sheets |
| Default value | 0 |
| UNIF-OF | Switching to forcibly turn OFF uniFLOW function |
| Details | If setting this switch to 1, and turning OFF and then ON the device power while the uniFLOW function is in active state, the uniFLOW function is forcibly deactivated. In addition, when this switch is set to 1, Activate/Deactivate request from the server is ignored. |
| Use case | |
| Adj/set/operate method | 1) Enter the setting value, and then press Start key. 2) Turn OFF/ON the main power switch. |
| Display/adj/set range | 0 to 1 0: Disabled 1 Enabled |
| Default value | 0 |

| COPIER> OPTION> ACC | |
|---|---|
| OPCST-BA | Set Cst Pedestal not connect error stop |
| Details | To set whether to stop the error that occurs when the Cassette Pedestal has not yet been connected. When 1 is set, the error does not occur even though operation check is performed only for the host machine. |
| Use case | When performing operation check for the host machine with no option cassette connected at the time of installation |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to return the value to 0 before the machine is used by the user. |
| Display/adj/set range | 0 to 1<br>0: Normal,<br>1: Error not displayed |
| Default value | 0 |

T-8-47

## ■ LCNS-TR

| COPIER> OPTION> LCNS-TR | |
|---|---|
| ST-BRDIM | Install state dspl of BarDIMM function |
| Details | To display installation state of BarDIMM when disabling the function with license transfer. |
| Use case | When checking whether BarDIMM is installed |
| Adj/set/operate method | 1) Select ST-BRDIM.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-BRDIM. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| TR-BRDIM | Trns lcns key dspl of BarDIMM function |
| Details | To display transfer license key to use BarDIMM when the function is disabled with license transfer. |
| Use case | • When replacing the HDD<br>• When replacing the device |
| Adj/set/operate method | 1) Select ST-BRDIM.<br>2) Enter 0, and then press Start key.<br>The transfer license key is displayed under TR-BRDIM. |
| Display/adj/set range | 24 digits |
| ST-PCL | Install state display of PCL function |
| Details | To display installation state of PCL function when disabling the function with license transfer. |
| Use case | When checking whether PCL function is installed |
| Adj/set/operate method | 1) Select ST-PCL.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-PCL. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | 0 |
| TR-PCL | Transfer license key dspl: PCL function |
| Details | To display transfer license key to use PCL function when the function is disabled with license transfer. |
| Use case | • When replacing the HDD<br>• When replacing the device |
| Adj/set/operate method | 1) Select ST-PCL.<br>2) Enter 0, and then press Start key.<br>The transfer license key is displayed under TR-PCL. |
| Display/adj/set range | 24 digits |

| COPIER> OPTION> LCNS-TR | |
|---|---|
| ST-PS | Install state display of PS function |
| Details | To display installation state of PS function when disabling the function with license transfer. |
| Use case | When checking whether PS function is installed |
| Adj/set/operate method | 1) Select ST-PS.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-PS. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| TR-PS | Transfer license key dspl of PS function |
| Details | To display transfer license key to use PS function when the function is disabled with license transfer. |
| Use case | • When replacing the HDD<br>• When replacing the device |
| Adj/set/operate method | 1) Select ST-PS.<br>2) Enter 0, and then press Start key.<br>The transfer license key is displayed under TR-PS. |
| Display/adj/set range | 24 digits |
| ST-MPPDF | Install state display of Media Print PDF |
| Details | To display installation state of Media Print PDF transmission function when disabling the function with license transfer. |
| Use case | When checking whether Media Print PDF transmission function is installed |
| Adj/set/operate method | 1) Select ST-MPPDF.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-MPPDF. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| TR-MPPDF | Trns license key dspl of Media Print PDF |
| Details | To display transfer license key to use Media Print PDF transmission function when the function is disabled with license transfer. |
| Use case | • When replacing the HDD<br>• When replacing the device |
| Adj/set/operate method | 1) Select ST-MPPDF.<br>2) Enter 0, and then press Start key.<br>The transfer license key is displayed under TR-MPPDF. |
| Caution | This mode is enabled when SEND function is installed. |
| Display/adj/set range | 24 digits |

| COPIER> OPTION> LCNS-TR | |
|---|---|
| ST-ENPDF | Install state display of encrypted PDF |
| Details | To display installation state of encrypted PDF transmission function when disabling the function with license transfer. |
| Use case | When checking whether encrypted PDF transmission function is installed |
| Adj/set/operate method | 1) Select ST-ENPDF.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-ENPDF. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| TR-ENPDF | Trns license key dspl of encrypted PDF |
| Details | To display transfer license key to use encrypted PDF transmission function when the function is disabled with license transfer. |
| Use case | • When replacing the HDD<br>• When replacing the device |
| Adj/set/operate method | 1) Select ST-ENPDF.<br>2) Enter 0, and then press Start key.<br>The transfer license key is displayed under TR-ENPDF. |
| Caution | This mode is enabled when SEND function is installed. |
| Display/adj/set range | 24 digits |
| ST-DVPDF | Install state dspl of device sign PDF |
| Details | To display installation state of device signature PDF transmission function when disabling the function with license transfer. |
| Use case | When checking whether device signature PDF transmission function is installed |
| Adj/set/operate method | 1) Select ST-DVPDF.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-DVPDF. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| TR-DVPDF | Trns lcns key dspl of device sign PDF |
| Details | To display transfer license key to use device signature PDF transmission function when the function is disabled with license transfer. |
| Use case | • When replacing the HDD<br>• When replacing the device |
| Adj/set/operate method | 1) Select ST-DVPDF.<br>2) Enter 0, and then press Start key.<br>The transfer license key is displayed under TR-DVPDF. |
| Caution | This mode is enabled when SEND function is installed. |
| Display/adj/set range | 24 digits |

| COPIER> OPTION> LCNS-TR | |
|---|---|
| ST-U-RDS | Install state dspl: E-RDS 3rd pty expnsn |
| Details | To display installation state of E-RDS 3rd party expansion function when disabling the function with license transfer. |
| Use case | When checking whether E-RDS 3rd party expansion function is installed |
| Adj/set/operate method | 1) Select ST-ERDS.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-U-RDS. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| Supplement/memo | E-RDS 3rd Party Expansion: A function to send charge counter to the third party's charge server. |
| TR-U-RDS | Trns lcns key dspl: E-RDS 3rd pty expnsn |
| Details | To display transfer license key to use E-RDS 3rd party expansion function when the function is disabled with license transfer. |
| Use case | • When replacing the HDD<br>• When replacing the device |
| Adj/set/operate method | 1) Select ST-ERDS.<br>2) Enter 0, and then press Start key.<br>The transfer license key is displayed under TR-U-RDS. |
| Display/adj/set range | 24 digits |
| Supplement/memo | E-RDS 3rd Party Expansion: A function to send charge counter to the third party's charge server. |

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## ■ LCNS-OF

| COPIER> OPTION> LCNS-OF | |
|---|---|
| ST-BRDIM | Install state dspl of BarDIMM function |
| Details | To display installation state of BarDIMM when disabling the function with license transfer. |
| Use case | When checking whether BarDIMM is installed |
| Adj/set/operate method | 1) Select ST-BRDIM.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-BRDIM. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| ST-PCL | Install state display of PCL function |
| Details | To display installation state of PCL function when disabling the function with license transfer. |
| Use case | When checking whether PCL function is installed |
| Adj/set/operate method | 1) Select ST-PCL.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-PCL. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | 0 |
| ST-PS | Install state display of PS function |
| Details | To display installation state of PS function when disabling the function with license transfer. |
| Use case | When checking whether PS function is installed |
| Adj/set/operate method | 1) Select ST-PS.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-PS. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| ST-MPPDF | Install state display of Media Print PDF |
| Details | To display installation state of Media Print PDF transmission function when disabling the function with license transfer. |
| Use case | When checking whether Media Print PDF transmission function is installed |
| Adj/set/operate method | 1) Select ST-MPPDF.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-MPPDF. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |

| COPIER> OPTION> LCNS-OF | |
|---|---|
| ST-ENPDF | Install state display of encrypted PDF |
| Details | To display installation state of encrypted PDF transmission function when disabling the function with license transfer. |
| Use case | When checking whether encrypted PDF transmission function is installed |
| Adj/set/operate method | 1) Select ST-ENPDF.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-ENPDF. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| ST-DVPDF | Install state dspl of device sign PDF |
| Details | To display installation state of device signature PDF transmission function when disabling the function with license transfer. |
| Use case | When checking whether device signature PDF transmission function is installed |
| Adj/set/operate method | 1) Select ST-DVPDF.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-DVPDF. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| ST-U-RDS | Install state dspl: E-RDS 3rd pty expnsn |
| Details | To display installation state of E-RDS 3rd party expansion function when disabling the function with license transfer. |
| Use case | When checking whether E-RDS 3rd party expansion function is installed |
| Adj/set/operate method | 1) Select ST-ERDS.<br>2) Enter 0, and then press Start key.<br>When installation has been completed, the transfer license key is displayed under TR-U-RDS. |
| Display/adj/set range | When operation finished normally: OK! |
| Default value | According to the setting at shipment |
| Supplement/memo | E-RDS 3rd Party Expansion: A function to send charge counter to the third party's charge server. |

T-8-49

# ● COUNTER

## ■ TOTAL

| COPIER> COUNTER> TOTAL | | |
|---|---|---|
| SERVICE1 | Service-purposed total counter 1 | |
| | Details | To count up when the paper is delivered outside the machine.<br>Large size: 1, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |
| SERVICE2 | Service-purposed total counter 2 | |
| | Details | To count up when the paper is delivered outside the machine.<br>Large size: 2, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |
| TTL | Total counter | |
| | Details | To display the total of counters of copy, PDL print, FAX, report print and media print.(Total of COPY, PDL-PRT, FAX-PRT, RPT-PRT and MD-PRT in service mode described below) |
| | Display/adj/set range | 0 to 99999999 |
| | Unit | Number of sheets |
| | Default value | 0 |
| | Related service mode | COPIER> COUNTER> TOTAL> COPY, PDL-PRT, FAX-PRT, RPT-PRT, MD-PRT |
| COPY | Total copy counter | |
| | Details | To count up when the paper is delivered outside the machine.<br>Large size: 1, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |
| PDL-PRT | PDL print counter | |
| | Details | To count up when the paper is delivered outside the machine according to the charge counter at PDL print.<br>Large size: 1, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |
| FAX-PRT | FAX reception print counter | |
| | Details | To count up when the paper is delivered outside the machine according to the charge counter at FAX reception.<br>Large size: 1, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |
| RPT-PRT | Report print counter | |
| | Details | To count up when the paper is delivered outside the machine according to the charge counter at report print.<br>Large size: 1, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |

| COPIER> COUNTER> TOTAL | | |
|---|---|---|
| MD-PRT | Media print counter | |
| | Details | To count up when the paper is delivered outside the machine according to the charge counter at report print.<br>Large size: 1, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |
| 2-SIDE | 2-sided copy/print counter | |
| | Details | To count up when the paper is delivered outside the machine according to the charge counter at 2-sided copy/print.<br>Large size: 1, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |
| SCAN | Scan counter | |
| | Details | To count the number of scan operations according to the charge counter when the scanning operation is complete.<br>Large size: 1, small size: 1 |
| | Use case | When checking the counter |
| | Display/adj/set range | 0 to 99999999 |

T-8-50

## ■ PICK-UP

| COPIER> COUNTER> PICKUP | | |
|---|---|---|
| C1 | | Cassette 1 pickup total counter |
| | Details | To count up the number of sheets picked up from the Cassette 1 (standard Pickup Cassette). The counter is advanced regardless of the original size. The counter is advanced by printout in service mode. |
| | Display/adj/set range | 0 to 99999999 |
| | Unit | Number of sheets |
| | Default value | 0 |
| C2 | | Cassette 2 pickup total counter |
| | Details | To count up the number of sheets picked up from the Cassette 2 (option Pickup Cassette). The counter is advanced regardless of the original size. The counter is advanced by printout in service mode. |
| | Display/adj/set range | 0 to 99999999 |
| | Unit | Number of sheets |
| | Default value | 0 |
| C3 | | Cassette 3 pickup total counter |
| | Details | To count up the number of sheets picked up from the Cassette 3 (standard Pickup Cassette). The counter is advanced regardless of the original size. The counter is advanced by printout in service mode. |
| | Display/adj/set range | 0 to 99999999 |
| | Unit | Number of sheets |
| | Default value | 0 |
| C4 | | Cassette 4 pickup total counter |
| | Details | To count up the number of sheets picked up from the Cassette 4 (option Pickup Cassette). The counter is advanced regardless of the original size. The counter is advanced by printout in service mode. |
| | Display/adj/set range | 0 to 99999999 |
| | Unit | Number of sheets |
| | Default value | 0 |
| MF | | Multi-purpose Tray pickup total counter |
| | Details | To count up the number of sheets picked up from the Multi-purpose Tray Pickup Unit. The counter is advanced regardless of the original size. The counter is advanced by printout in service mode. |
| | Display/adj/set range | 0 to 99999999 |
| | Unit | Number of sheets |
| | Default value | 0 |
| 2-SIDE | | 2-sided pickup total counter |
| | Details | To count up the number of sheets picked up in duplex mode. The counter is advanced regardless of the original size. The counter is advanced by printout in service mode. |
| | Display/adj/set range | 0 to 99999999 |
| | Unit | Number of sheets |
| | Default value | 0 |

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## ■ FEEDER

| COPIER> COUNTER> FEEDER | | |
|---|---|---|
| FEED | | DADF original pickup total counter |
| | Details | DADF original pickup total counter |
| | Use case | When checking the total counter of original pickup by DADF |
| | Display/adj/set range | 0 to 99999999 |
| | Unit | 1 sheet |

T-8-52

## ■ JAM

| COPIER> COUNTER> JAM | |
|---|---|
| TOTAL | Printer total jam counter |
| Details | Checking the total jam counter of printer |
| Use case | When checking the total jam counter of printer |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 time |
| FEEDER | Feeder total jam counter |
| Details | Checking the total jam counter of feeder |
| Use case | When checking the total jam counter of feeder |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 time |
| 2-SIDE | Duplex Unit jam counter |
| Details | Checking the jam counter of Duplex Unit |
| Use case | When checking the jam counter of Duplex Unit |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 time |
| MF | Multi-purpose Tray jam counter |
| Details | Checking the jam counter of Multi-purpose Tray |
| Use case | When checking the jam counter of Multi-purpose Tray |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 time |
| C1 | Cassette 1 pickup jam counter |
| Details | Checking the jam counter of machine's Cassette 1 |
| Use case | When checking the jam counter of machine's Cassette 1 |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 time |
| C2 | Cassette 2 pickup jam counter |
| Details | Checking the jam counter of machine's Cassette 2 |
| Use case | When checking the jam counter of machine's Cassette 2 |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 time |
| C3 | Cassette 3 pickup jam counter |
| Details | Checking the jam counter of machine's Cassette 3 |
| Use case | When checking the jam counter of machine's Cassette 3 |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 time |
| C4 | Cassette 4 pickup jam counter |
| Details | Checking the jam counter of machine's Cassette 4 |
| Use case | When checking the jam counter of machine's Cassette 4 |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 time |

T-8-53

## ■ MISC

| COPIER> COUNTER> MISC | |
|---|---|
| T-SPLY-Y | Y toner supply counter |
| Details | Number of Y-color toner supply blocks. Counted for every one rotation of Toner Stirring Screw. |
| Use case | When checking the usage status of toner |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 block |
| Default value | 0 |
| T-SPLY-M | M toner supply counter |
| Details | Number of M-color toner supply blocks. Counted for every one rotation of Toner Stirring Screw. |
| Use case | When checking the usage status of toner |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 block |
| Default value | 0 |
| T-SPLY-C | C toner supply counter |
| Details | Number of C color toner supply blocks. Counted for every one rotation of Toner Stirring Screw. |
| Use case | When checking the usage status of toner |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 block |
| Default value | 0 |
| T-SPLY-K | Bk toner supply counter |
| Details | Number of Bk color toner supply blocks. Counted for every one rotation of Toner Stirring Screw. |
| Use case | When checking the usage status of toner |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 block |
| Default value | 0 |
| SUC-A-Y | For R&D |
| SUC-A-M | For R&D |
| SUC-A-C | For R&D |
| SUC-A-K | For R&D |

T-8-54

## ■ JOB

| COPIER> COUNTER> JOB | |
|---|---|
| DVPAPLEN | Average paper length of job |
| Details | Average paper length in the period from when the printer engine starts printing operation to when it stops the operation. Since the printer engine considers small jobs that are executed continuously as a large job, the average paper length affects calculation of the life. |
| Use case | When checking the average paper length of job. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 mm |
| DVRUNLEN | Average distance of job |
| Details | Average running distance in the period from when the printer engine starts printing operation to when it stops the operation. Since the printer engine considers small jobs that are executed continuously as a large job, the average running distance affects calculation of the life. |
| Use case | When checking the average distance of job. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 mm |

T-8-55

## ■ DRBL1SET

| COPIER> COUNTER> DRBL1SET | |
|---|---|
| LSR-DRV | Laser Scanner Unit parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| TR-BLT | ITB parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| 2TR-ROLL | Sec Transfer Outer Roller parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| PT-DRM | Drum Unit (Bk) parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| C1-PU-RL | Cassette 1 Pickup Roller parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| C1-SP-RL | Cassette1 Separation Roller prts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| C1-FD-RL | Cassette 1 Feed Roller parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |

| COPIER> COUNTER> DRBL1SET | |
|---|---|
| M-PU-RL | Multi-purpose Tray Pickup Roll prts cntr |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| M-SP-RL | Multi-purpose Tray Sprtn Roll prts cntr |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| M-FD-RL | Multi-purpose Tray Feed Roll prts cntr |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| FX-UNIT | Fixing Assembly parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| MN-DR-U | Main Drive Unit parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| TNB-DRV1 | Bottle Drive Unit 1 parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| TNB-DRV2 | Bottle Drive Unit 2 parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |

| COPIER> COUNTER> DRBL1SET | |
|---|---|
| HOPPER-K | Hopper (Bk) parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| HOPPER-Y | Hopper (Y) parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| HOPPER-M | Hopper (M) parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| HOPPER-C | Hopper (C) parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| REG-U | Regist/Paper Pickup Unit parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| EXIT-U | Inner Delivery Unit parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| RDOOR-U | Right Inner Door Unit parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |

| COPIER> COUNTER> DRBL1SET | |
|---|---|
| WST-TNR | Waste Toner Container parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| PT-DR-Y | Drum Unit (Y) parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| PT-DR-M | Drum Unit (M) parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |
| PT-DR-C | Drum Unit (C) parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Display/adj/set range | 0 to 99999999 |

T-8-56

## ■ DRBL2SET

| COPIER> COUNTER> DRBL2SET | |
|---|---|
| C3-PU-RL | Cassette 3 Pickup Roller parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| C3-SP-RL | Cassette3 Separation Roller prts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| C3-FD-RL | Cassette3 Feed Roller parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| C4-PU-RL | Cassette 4 Pickup Roller parts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| C4-SP-RL | Cassette4 Separation Roller prts counter |
| Details | Estimated life |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |

| COPIER> COUNTER> DRBL2SET | |
|---|---|
| C4-FD-RL | Cassette4 Feed Roller parts counter |
|   Details | Estimated life |
|   Use case | When checking the consumption level of parts/replacing the parts |
|   Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
|   Caution | Clear the counter value after replacement. |
|   Display/adj/set range | 0 to 99999999 |
|   Default value | 0 |
| C2-PU-RL | Cassette 2 Pickup Roller parts counter |
|   Details | Estimated life |
|   Use case | When checking the consumption level of parts/replacing the parts |
|   Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
|   Caution | Clear the counter value after replacement. |
|   Display/adj/set range | 0 to 99999999 |
|   Default value | 0 |
| C2-SP-RL | Cassette2 Separation Roller prts counter |
|   Details | Estimated life |
|   Use case | When checking the consumption level of parts/replacing the parts |
|   Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
|   Caution | Clear the counter value after replacement. |
|   Display/adj/set range | 0 to 99999999 |
|   Unit | 1 sheet |
|   Default value | 0 |
| C2-FD-RL | Cassette2 Feeding Roller prts counter |
|   Details | Estimated life |
|   Use case | When checking the consumption level of parts/replacing the parts |
|   Adj/set/operate method | To change the estimated life: Select the item, enter the value, and then press Start key. |
|   Caution | Clear the counter value after replacement. |
|   Display/adj/set range | 0 to 99999999 |
|   Unit | 1 sheet |
|   Default value | 0 |

T-8-57

## ■ DRBL-1

| COPIER> COUNTER> DRBL-1 | |
|---|---|
| LSR-DRV | Laser Scanner Unit parts counter |
|   Details | Total counter value from the previous replacement |
|   Use case | When checking the consumption level of parts/replacing the parts |
|   Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|   Caution | Clear the counter value after replacement. |
|   Display/adj/set range | 0 to 99999999 |
|   Default value | 0 |
| TR-BLT | ITB parts counter |
|   Details | Total counter value from the previous replacement |
|   Use case | When checking the consumption level of parts/replacing the parts |
|   Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|   Caution | Clear the counter value after replacement. |
|   Display/adj/set range | 0 to 99999999 |
|   Default value | 0 |
| 2TR-ROLL | Sec Transfer Outer Roller parts counter |
|   Details | Total counter value from the previous replacement |
|   Use case | When checking the consumption level of parts/replacing the parts |
|   Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|   Caution | Clear the counter value after replacement. |
|   Display/adj/set range | 0 to 99999999 |
|   Default value | 0 |
|   Supplement/memo | This is commonly used as operator maintenance parts counter. |
| PT-DRM | Drum Unit (Bk) parts counter |
|   Details | Total counter value from the previous replacement |
|   Use case | When checking the consumption level of parts |
|   Caution | When replacing the drum unit, clear the counter value automatically. |
|   Display/adj/set range | 0 to 99999999 |
|   Default value | 0 |
| C1-PU-RL | Cassette 1 Pickup Roller parts counter |
|   Details | Total counter value from the previous replacement |
|   Use case | When checking the consumption level of parts/replacing the parts |
|   Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|   Caution | Clear the counter value after replacement. |
|   Display/adj/set range | 0 to 99999999 |
|   Default value | 0 |

| COPIER> COUNTER> DRBL-1 | |
|---|---|
| C1-SP-RL | Cassette1 Separation Roller prts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| C1-FD-RL | Cassette 1 Feed Roller parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| M-PU-RL | Multi-purpose Tray Pickup Roll prts cntr |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| M-SP-RL | Multi-purpose Tray Sprtn Roll prts cntr |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| M-FD-RL | Multi-purpose Tray Feed Roll prts cntr |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |

| COPIER> COUNTER> DRBL-1 | |
|---|---|
| FX-UNIT | Fixing Assembly parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| MN-DR-U | Main Drive Unit parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| TNB-DRV1 | Bottle Drive Unit 1 parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| TNB-DRV2 | Bottle Drive Unit 2 parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| HOPPER-K | Hopper (Bk) parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |

| COPIER> COUNTER> DRBL-1 | |
|---|---|
| HOPPER-Y | Hopper (Y) parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Caution | Clear the counter value after replacement. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |
| HOPPER-M | Hopper (M) parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Caution | Clear the counter value after replacement. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |
| HOPPER-C | Hopper (C) parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Caution | Clear the counter value after replacement. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |
| REG-U | Regist/Paper Pickup Unit parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Caution | Clear the counter value after replacement. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |
| EXIT-U | Inner Delivery Unit parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Caution | Clear the counter value after replacement. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |

| COPIER> COUNTER> DRBL-1 | |
|---|---|
| RDOOR-U | Right Inner Door Unit parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Caution | Clear the counter value after replacement. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |
| WST-TNR | Waste Toner Container parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Caution | Clear the counter value after replacement. |
|    Display/adj/set range | 0 to 99999999 |
|    Unit | 1 sheet |
|    Default value | 0 |
| PT-DR-Y | Drum Unit (Y) parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |
| PT-DR-M | Drum Unit (M) parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |
| PT-DR-C | Drum Unit (C) parts counter |
|    Details | Total counter value from the previous replacement |
|    Use case | When checking the consumption level of parts/replacing the parts |
|    Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
|    Display/adj/set range | 0 to 99999999 |
|    Default value | 0 |

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## ■ DRBL-2

| COPIER> COUNTER> DRBL-2 | |
| --- | --- |
| C3-PU-RL | Cassette 3 Pickup Roller parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| C3-SP-RL | Cassette3 Separation Roller prts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| C3-FD-RL | Cassette3 Feed Roller parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| C4-PU-RL | Cassette 4 Pickup Roller parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| C4-SP-RL | Cassette4 Separation Roller prts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |

| COPIER> COUNTER> DRBL-2 | |
| --- | --- |
| C4-FD-RL | Cassette4 Feed Roller parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| C2-PU-RL | Cassette 2 Pickup Roller parts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Default value | 0 |
| C2-SP-RL | Cassette2 Separation Roller prts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| C2-FD-RL | Cassette2 Feeding Roller prts counter |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| DF-SP-PD | Separation Pad parts counter: DADF |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| Supplement/memo | Regardless of the read mode (1-sided/2-sided), the counter is advanced every time a sheet is fed. |

| COPIER> COUNTER> DRBL-2 | |
|---|---|
| DF-PU-RL | Pickup Roller Unit prts cntr: DADF |
| Details | Total counter value from the previous replacement |
| Use case | When checking the consumption level of parts/replacing the parts |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |
| Caution | Clear the counter value after replacement. |
| Display/adj/set range | 0 to 99999999 |
| Unit | 1 sheet |
| Default value | 0 |
| Adj/set/operate method | To clear the counter value: Select the item, and then enter "0" and press Start key. |

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## ■ LF

| COPIER> COUNTER> LF | |
|---|---|
| Y-DRM-LF | Display of Drum Unit (Y) life |
| Details | To display how much the Drum Unit (Y) is close to the end of life in % (percentage).<br>When a new part is set, the value becomes 0%. |
| Use case | When checking the life of Drum Unit |
| Display/adj/set range | 0 to 999 |
| Unit | 1 % |
| M-DRM-LF | Display of Drum Unit (M) life |
| Details | To display how much the Drum Unit (M) is close to the end of life in % (percentage).<br>When a new part is set, the value becomes 0%. |
| Use case | When checking the life of Drum Unit |
| Display/adj/set range | 0 to 999 |
| Unit | 1 % |
| C-DRM-LF | Display of Drum Unit (C) life |
| Details | To display how much the Drum Unit (C) is close to the end of life in % (percentage).<br>When a new part is set, the value becomes 0%. |
| Use case | When checking the life of Drum Unit |
| Display/adj/set range | 0 to 999 |
| Unit | 1 % |
| K-DRM-LF | Display of Drum Unit (Bk) life |
| Details | To display how much the Drum Unit (Bk) is close to the end of life in % (percentage).<br>When a new part is set, the value becomes 0%. |
| Use case | When checking the life of Drum Unit |
| Display/adj/set range | 0 to 999 |
| Unit | 1 % |

T-8-60

## ■ V-CNTR

| COPIER> COUNTER> V-CNTR | | |
|---|---|---|
| TTL-HIGH | | Video count total counter |
| | Details | To display the total of video count values (YELLOW + MAGENTA + CYAN + BLACK). |
| | Use case | When checking distribution of video count |
| | Adj/set/operate method | N/A (Display only) |
| | Supplement/memo | Video count: The number of sheets for each image ratio classification (HIGH) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet"(7% or higher). |
| TTL-MID | | Video count total counter |
| | Details | To display the total of video count values (YELLOW + MAGENTA + CYAN + BLACK). |
| | Use case | When checking distribution of video count |
| | Adj/set/operate method | N/A (Display only) |
| | Supplement/memo | Video count: The number of sheets for each image ratio classification (MID) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet"(3% or higher and less than 7%). |
| TTL-LOW | | Video count total counter |
| | Details | To display the total of video count values (YELLOW + MAGENTA + CYAN + BLACK). |
| | Use case | When checking distribution of video count |
| | Adj/set/operate method | N/A (Display only) |
| | Supplement/memo | Video count: The number of sheets for each image ratio classification (LOW) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet"(less than 3%). |
| Y-HIGH | | Video count Y counter |
| | Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of Y-color image ratio (7% or higher). |
| | Use case | When checking distribution of video count |
| | Adj/set/operate method | N/A (Display only) |
| | Supplement/memo | Video count: The number of sheets for each image ratio classification (HIGH) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |

| COPIER> COUNTER> V-CNTR | | |
|---|---|---|
| Y-MID | | Video count Y counter |
| | Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of Y-color image ratio (3% or higher and less than 7%). |
| | Use case | When checking distribution of video count |
| | Adj/set/operate method | N/A (Display only) |
| | Supplement/memo | Video count: The number of sheets for each image ratio classification (MID) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |
| Y-LOW | | Video count Y counter |
| | Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of Y-color image ratio (less than 3%). |
| | Use case | When checking distribution of video count |
| | Adj/set/operate method | N/A (Display only) |
| | Supplement/memo | Video count: The number of sheets for each image ratio classification (LOW) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |
| M-HIGH | | Video count M counter |
| | Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of M-color image ratio (7% or higher). |
| | Use case | When checking distribution of video count |
| | Adj/set/operate method | N/A (Display only) |
| | Supplement/memo | Video count: The number of sheets for each image ratio classification (HIGH) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |
| M-MID | | Video count M counter |
| | Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of M-color image ratio (3% or higher and less than 7%). |
| | Use case | When checking distribution of video count |
| | Adj/set/operate method | N/A (Display only) |
| | Supplement/memo | Video count: The number of sheets for each image ratio classification (MID) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |

| COPIER> COUNTER> V-CNTR | |
|---|---|
| M-LOW | Video count M counter |
| Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of M-color image ratio (less than 3%). |
| Use case | When checking distribution of video count |
| Adj/set/operate method | N/A (Display only) |
| Supplement/memo | Video count: The number of sheets for each image ratio classification (LOW) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |
| C-HIGH | Video count C counter |
| Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of C-color image ratio (7% or higher). |
| Use case | When checking distribution of video count |
| Adj/set/operate method | N/A (Display only) |
| Supplement/memo | Video count: The number of sheets for each image ratio classification (HIGH) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |
| C-MID | Video count C counter |
| Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of C-color image ratio (3% or higher and less than 7%). |
| Use case | When checking distribution of video count |
| Adj/set/operate method | N/A (Display only) |
| Supplement/memo | Video count: The number of sheets for each image ratio classification (MID) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |
| C-LOW | Video count C counter |
| Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of C-color image ratio (less than 3%). |
| Use case | When checking distribution of video count |
| Adj/set/operate method | N/A (Display only) |
| Supplement/memo | Video count: The number of sheets for each image ratio classification (LOW) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |

| COPIER> COUNTER> V-CNTR | |
|---|---|
| K-HIGH | Video count Bk counter |
| Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of Bk-color image ratio (7% or higher). |
| Use case | When checking distribution of video count |
| Adj/set/operate method | N/A (Display only) |
| Supplement/memo | Video count: The number of sheets for each image ratio classification (HIGH) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |
| K-MID | Video count Bk counter |
| Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of Bk-color image ratio (3% or higher and less than 7%). |
| Use case | When checking distribution of video count |
| Adj/set/operate method | N/A (Display only) |
| Supplement/memo | Video count: The number of sheets for each image ratio classification (MID) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |
| K-LOW | Video count Bk counter |
| Details | To display the number of sheets (small size: 1, large size: 1) as the distribution of Bk-color image ratio (less than 3%). |
| Use case | When checking distribution of video count |
| Adj/set/operate method | N/A (Display only) |
| Supplement/memo | Video count: The number of sheets for each image ratio classification (LOW) for each color on a A4 size conversion basis which is stored in the controller<br>A sheet of large size paper with 5% image ratio is counted as "small size with 10% image ratio x 1 sheet". |

T-8-61

# FEEDER

## ADJUST

| FEEDER> ADJUST | |
|---|---|
| DOCST | Adj of DADF img lead edge margin:1-sided |
| Details | To adjust the margin at the leading edge of the image at DADF 1-sided reading. As the value is incremented by 1, the margin at the leading edge of the image is decreased by 0.1 mm. (The image moves in the direction of the leading edge of the sheet.) Execute this item when the output image after DADF installation is displaced. When replacing the Scanner Unit or Controller PCB/clearing the Reader-related RAM data, enter the value of service label. |
| Use case | • When installing DADF<br>• When replacing the Scanner Unit<br>• When clearing the Reader-related RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Be sure to use DOCSTDUP for the front side at the time of 2-sided reading. |
| Display/adj/set range | -30 to 30 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | FEEDER> ADJUST> DOCSTDUP |
| Supplement/memo | Since the front side reading operation differs between 1-sided and 2-sided reading, separate service modes have been prepared to improve the accuracy. |
| LA-SPEED | Fine adj of DADF image magnifictn: front |
| Details | To make a fine adjustment of the image magnification ratio in vertical scanning direction at DADF reading. As the value is incremented by 1, the image is reduced by 0.01% in vertical scanning direction. (The feeding speed increases, and the image is reduced.) When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label. |
| Use case | • When installing DADF<br>• When replacing the Scanner Unit<br>• When clearing the Reader-related RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -200 to 200 |
| Unit | 0.01 % |
| Default value | 0 |

| FEEDER> ADJUST | |
|---|---|
| DOCST2 | DADF img lead edge margin: back, 2-sided |
| Details | To adjust the margin at the leading edge of the image on the back side at DADF 2-sided reading. As the value is incremented by 1, the margin at the leading edge of the image is decreased by 0.1mm. (The image moves in the direction of the leading edge of the sheet.) Execute this item when the output image after DADF installation is displaced. When replacing the Scanner Unit or Controller PCB/clearing the Reader-related RAM data, enter the value of service label. |
| Use case | • When installing DADF<br>• When replacing the Main Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -30 to 30 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | FEEDER> ADJUST> DOCSTDUP |
| LA-SPD2 | Fine adj of DADF image magnifictn: back |
| Details | To make a fine adjustment of the image magnification ratio in vertical scanning direction at DADF reading. As the value is incremented by 1, the image is reduced by 0.01% in vertical scanning direction. (The feeding speed increases, and the image is reduced.) When replacing the Main Controller PCB/clearing RAM data, enter the value of service label. |
| Use case | • When installing DADF<br>• When replacing the Main Controller PCB/clearing RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Display/adj/set range | -200 to 200 |
| Unit | 0.01 % |
| Default value | 0 |

| FEEDER> ADJUST | |
|---|---|
| DOCSTDUP | DADF img lead edge margin:front, 2-sided |
| Details | To adjust the margin at the leading edge of the image on the front side at DADF 2-sided reading.<br>As the value is incremented by 1, the margin at the leading edge of the image is decreased by 0.1mm. (The image moves in the direction of the leading edge of the sheet.)<br>Execute this item when the output image after DADF installation is displaced.<br>When replacing the Scanner Unit or Controller PCB/clearing the Reader-related RAM data, enter the value of service label. |
| Use case | • When installing DADF<br>• When replacing the Scanner Unit<br>• When clearing the Reader-related RAM data |
| Adj/set/operate method | Enter the setting value (switch negative/positive by -/+ key) and press Start key. |
| Caution | Be sure to use DOCST at the time of 1-sided reading. |
| Display/adj/set range | -30 to 30 |
| Unit | 0.1 mm |
| Default value | 0 |
| Related service mode | FEEDER> ADJUST> DOCST, DOCST2 |
| Supplement/memo | Since the front side reading operation differs between 1-sided and 2-sided reading, separate service modes have been prepared to improve the accuracy. |

T-8-62

## ⬤ FUNCTION

| FEEDER> FUNCTION | |
|---|---|
| MTR-ON | Operation check of DADF Motor |
| Details | To drive the DADF Motor for approximately 5 seconds. |
| Use case | When checking the operation of the DADF Motor |
| Adj/set/operate method | 1) Select the item, and then press Start key.<br>  It is driven for approximately 5 seconds and is automatically stopped.<br>2) Press Start key.<br>  The operation check is completed. |
| Caution | Be sure to press the Start key again after execution. The operation automatically stops after approximately 5 seconds, but is not completed unless the Start key is pressed (STOP is not displayed). |
| Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
| FEED-ON | Operation check of DADF individual feed |
| Details | To start operation check of the feed mode specified by FEED-CHK. |
| Use case | When checking the operation of the DADF Motor |
| Adj/set/operate method | Select the item, and then press Start key. |
| Display/adj/set range | During operation: ACTIVE, When operation finished normally: OK! |
| Related service mode | FEEDER> FUNCTION> FEED-CHK |
| FEED-CHK | Specify DADF individual feed mode |
| Details | To specify the feed mode for DADF.<br>Feed operation is activated by FEED-ON. |
| Use case | When checking the operation of the DADF Motor |
| Adj/set/operate method | Enter the setting value and press Start key. |
| Display/adj/set range | 0 to 1<br>0: 1-sided pickup/delivery, 1: 2-sided pickup/delivery |
| Related service mode | FEEDER> FUNCTION> FEED-ON |

T-8-63

# FAX

## List of SSSW

| FAX > SSSW | | |
|---|---|---|
| SSSW No. | Bit No. | Function |
| SW 01 | | (Switch relating to error and copy) |
| | Bit 0 | Output of error code for service technician |
| | Bit 1 | Error memory dump |
| SW 02 | | (Switch relating to settings for network connection condition) |
| | Bit 7 | Connect the terminal as F network type 2 |
| SW 03 | | (Switch relating to echo prevention) |
| | Bit 0 | TCF EQM check |
| | Bit 7 | Output 1080Hz before CED |
| SW 04 | | (Switch relating to prevention of communication problems) |
| | Bit 1 | Frequency check of CI signal |
| | Bit 3 | Prohibit T.30 node F kept by both parties |
| | Bit 4 | T.30 node F echo timer |
| | Bit 5 | Frequency check of CI signal at PBX settings |
| | Bit 6 | No CNG transmission at the time of manual transmission |
| | Bit 7 | No CED transmission at the time of manual transmission |
| SW 05 | | (Switch relating to standard functions and DIS signal settings) |
| | Bit 2 | mm/inch conversion (text/photo mode / photo mode) |
| | Bit 3 | Prohibition of bit transmission after DIS bit 33 |
| | Bit 4 | Declaration of cut paper |
| SW 06 | | (Switch relating to settings for reading condition) |
| | Bit 4 | Scan width  0: A4, 1: LTR |
| SW 07 - SW 11 | Not in use | |
| SW 12 | | (Switch relating to settings for page timer) |
| | Bit 0 | Timeout period for 1 page (transmission) |
| | Bit 1 | Timeout period for 1 page (transmission) |
| | Bit 2 | Timeout period for 1 page (Halftone transmission) |
| | Bit 3 | Timeout period for 1 page (Halftone transmission) |
| | Bit 4 | Timeout period for 1 page (Reception) |
| | Bit 5 | Timeout period for 1 page (Reception) |
| | Bit 7 | Timeout period for 1 page |
| SW 13 | | |
| | Bit 2 | Execution of mm/inch conversion when sending the received image |
| SW 14 | | |
| | Bit 2 | Setting whether to execute inch to mm conversion in horizontal and vertical scanning directions or in vertical scanning direction only |
| | Bit 4 | Declaration of inch-configuration resolution |
| SW 15 - SW 17 | Not in use | |

| FAX > SSSW | | |
|---|---|---|
| SSSW No. | Bit No. | Function |
| SW 18 | | |
| | Bit 0 | Detection of carrier disconnection between DCS and TCF |
| | Bit 1 | Time to wait for carrier disconnection between DCS and TCF |
| | Bit 2 | Prohibition of communication control for IP network |
| SW 19 - SW 21 | Not in use | |
| SW 22 | | |
| | Bit 3 | Prohibition of manual polling operation |
| SW 23 - SW 24 | Not in use | |
| SW 25 | | (Setting for report display function) |
| | Bit 0 | Prioritize the received abbreviated name to the dialed abbreviated name |
| SW 26 - SW 27 | Not in use | |
| SW 28 | | |
| | Bit 0 | Prohibit calling party for V8 procedure |
| | Bit 1 | Prohibit called party from V8 procedure |
| | Bit 2 | Prohibit calling party from V8 late-start |
| | Bit 3 | Prohibit called party from V8 late-start |
| | Bit 4 | Prohibit V.34 called party from starting fallback |
| | Bit 5 | Prohibit V.34 calling party from starting fallback |
| SW 29 - SW 32 | Not in use | |

T-8-64

## List of MENU

| Menu switch registration mode | | |
|---|---|---|
| No. | Parameter | Selection |
| 01 - 05 | Not in use | |
| 06 | Telephone line monitor | 0 - 3<br>0: DIAL<br>1: SERVICEMAN1<br>2: SERVICEMAN2<br>3: OFF |
| 07 | Transmission level (ATT) | 0 - 15 |
| 08 | Upper limit of V.34 modulation speed | 0 - 5<br>0: 3429 BAUD<br>1: 3200 BAUD<br>2: 3000 BAUD<br>3: 2800 BAUD<br>4: 2743 BAUD<br>5: 2400 BAUD |
| 09 | Upper limit of V.34 data speed | 0-13<br>0: 33.6 kbps<br>1: 31.2 kbps<br>2: 28.8 kbps<br>3: 26.4 kbps<br>4: 24.0 kbps<br>5: 21.6 kbps<br>6: 19.2 kbps<br>7: 16.8 kbps<br>8: 14.4 kbps<br>9: 12.0 kbps<br>10: 9.6 kbps<br>11: 7.2 kbps<br>12: 4.8 kbps<br>13: 2.4 kbps |
| 10 | OFF Hook signal frequency | 0-2<br>0: 50 Hz<br>1: 25 Hz<br>2: 17 Hz |
| 11 - 20 | Not in use | |

T-8-65

## List of NUM

| Numeric parameter setting mode | | |
|---|---|---|
| No. | Parameter | Allowable setting range |
| 01 | Not in use | |
| 02 | RTN transmission criteria X | 1 to 99 % |
| 03 | RTN transmission criteria n | 2 to 99 times |
| 04 | RTN transmission criteria m | 1 to 99 lines |
| 05 | NCC pause (before ID code) | 1 to 60 sec |
| 06 | NCC pause (after ID code) | 1 to 60 sec |
| 07 | Not in use | |
| 08 | STORED_DIAL_MODE wait timer | 0 to 65 sec |
| 09 | Not in use | |
| 10 | T.30 T0 timer | 55 sec principally |
| 11 | T.30 T1 timer (for incoming transmission) | 0 to 9999<br>(France: 3500, Others: 3000) |
| 12 | Maximum incoming lines | 0 to 65535 (line)<br>0: without limitation |
| 13 | T.30 EOL timer | 500 to 3000<br>(set to 55 sec by default) |
| 14 | Not in use | |
| 15 | Threshold between hokking nad on-hook | 0 to 999 |
| 16 | Lead time to the first response when switching between FAX and TEL | 0 to 9 |
| 17 | Duration to activate pseudo-RBT cadence | 0 to 999 |
| 18 | Duration to deactivate pseudo-RBT cadence (short) | 0 to 999 |
| 19 | Duration to deactivate pseudo-RBT cadence (long) | 0 to 999 |
| 20 | Duration to activate pseudo-ring cadence | 0 to 999 |
| 21 | Duration to deactivate OFF Hook cadence (short) | 0 to 999 |
| 22 | Duration to deactivate OFF Hook cadence (long) | 0 to 7 |
| 23 | Not in use | |
| 24 | Not in use | |
| 25 | CNG monitor duration while the answering device is activated | 0 to 999 |
| 26 | Not in use | |
| 27 | Not in use | |
| 28 | Not in use | |
| 29 | Off-hook PCB duty settings<br>(For NAC, setting can be made with SPL71100 in special management mode.) | 20 (*10ms) |
| 30 - 48 | Not in use | |
| 49 | NSX MODEL ID | 0 to 4095 |
| 50 | Not in use | |
| 51 | Threshold to detect hook | 10 to 9999 |
| 52 | Not in use | |
| 53 | Set DTMF calling counts when receiving FAX remotely | 10 to 9999 (default 25) |

| Numeric parameter setting mode | | |
|---|---|---|
| No. | Parameter | Allowable setting range |
| 54 | Set Busy Tone outgoing duration when using handset | |
| 55 - 80 | Not in use | |

T-8-66

# TESTMODE

## PRINT

| TESTMODE > PRINT | | |
|---|---|---|
| START | | Output of test print |
| | Details | To output a test print with the PG pattern set in PG-TYPE, MODE, etc. |
| | Use case | At trouble analysis |
| | Adj/set/operate method | Press Start key. |
| PG-TYPE | | Setting of PG number |
| | Details | To set the PG number of the test print. |
| | Use case | At trouble analysis |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0: Full correction chart 1<br>1: Full correction chart 2<br>2: Color chart<br>3: Color displacement correction chart<br>4: Rainbow chart (vertical scanning direction)<br>5: Rainbow chart (horizontal scanning direction)<br>6: Grid Bk<br>12: Full half-tone |
| | Default value | 0 |
| COUNT | | Setting of PG output quantity |
| | Details | To set the number of sheets for PG output. |
| | Use case | At trouble analysis |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 1 to 99 |
| | Unit | 1 sheet |
| | Default value | 1 |
| PHASE | | Setting of PG 2-sided mode |
| | Details | To set 1-sided/2-sided print for PG output.<br>Even if 2-sided print is set for a machine that only supports 1-sided print, the setting is disabled. |
| | Use case | At trouble analysis |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>0: 1-sided, 1: 2-sided |
| | Default value | 0 |

| TESTMODE > PRINT | | |
|---|---|---|
| MODE | | Setting of test print image formation method |
| | Details | To set the image formation method for the test print.<br>If PG-TYPE is 0/1, this setting is disabled because a specific image formation method is applied. |
| | Use case | At trouble analysis |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 3<br>0: T-MIC (T-MIC), 1: High screen ruling (SCA), 2: Low screen ruling (SCB), 3: TBIC |
| | Default value | 0 |
| THRU | | Setting of image correction table at test print |
| | Details | It is possible to check the density characteristics due to the density correction process when normal gamma LUT is used, and the density characteristics of the engine when the linear gamma LUT is used. |
| | Use case | At trouble analysis |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>0: Normal gamma LUT, 1: Through (linear) gamma LUT |
| | Default value | 0 |
| | Supplement/memo | Gamma LUT: Density gradation characteristic table |
| NRKE | | ON/OFF of laser scanning transfer process of test print |
| | Details | To perform line transfer process for skew correction of test print engine's laser scanning. |
| | Use case | At trouble analysis |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>0: OFF, 1: ON |
| | Default value | 0 |
| | Supplement/memo | Transfer process: A process to correct skew of laser scanning in vertical scanning direction |
| BLND | | ON/OFF of interpolation process at test print |
| | Details | To set ON/OFF of interpolation process at test print (linked with NSC).<br>When 1 is set, interpolation process is performed (no phase shift). |
| | Use case | At trouble analysis |
| | Adj/set/operate method | Enter the setting value, and then press Start key. |
| | Display/adj/set range | 0 to 1<br>0: OFF, 1: ON |
| | Default value | 0 |
| | Supplement/memo | Interpolation process: A process to predict, for pixels holding no color information, color based on the surrounding pixels, and then set up the color information. |

| TESTMODE > PRINT | |
|---|---|
| DENS-Y | Adj of Y-color density at test print |
| Details | To adjust Y-color density when performing test print (TYPE=5). |
| | As the value is increased, the density becomes higher. |
| Use case | At test print (TYPE=5) |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 255 |
| Default value | 128 |
| DENS-M | Adj of M-color density at test print |
| Details | To adjust M-color density when performing test print (TYPE=5). |
| | As the value is increased, the density becomes higher. |
| Use case | At test print (TYPE=5) |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 255 |
| Default value | 128 |
| DENS-C | Adj of C-color density at test print |
| Details | To adjust C-color density when performing test print (TYPE=5).<br>As the value is increased, the density becomes higher. |
| Use case | At test print (TYPE=5) |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 255 |
| Default value | 128 |
| DENS-K | Adj of Bk-color density at test print |
| Details | To adjust Bk-color density when performing test print (TYPE=5).<br>As the value is increased, the density becomes higher. |
| Use case | At test print (TYPE=5) |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 255 |
| Default value | 128 |
| SW-Y | Y-color output setting at test print |
| Details | To make a setting of Y-color output for test print.<br>The setting is applied to all types.<br>When setting "SW-Y" to 1 and other items to "0", a single Y-color is output. |
| Use case | At test print |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>0: Not output, 1: Output |
| Default value | 1 |

| TESTMODE > PRINT | |
|---|---|
| SW-M | M-color output setting at test print |
| Details | To make a setting of M-color output for test print.<br>The setting is applied to all types.<br>When setting "SW-M" to 1 and other items to "0", a single M-color is output. |
| Use case | At test print |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>0: Not output, 1: Output |
| Default value | 1 |
| SW-C | C-color output setting at test print |
| Details | To make a setting of C-color output for test print.<br>The setting is applied to all types.<br>When setting "SW-C" to 1 and other items to "0", a single C-color is output. |
| Use case | At test print |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>0: Not output, 1: Output |
| Default value | 1 |
| SW-K | Bk-color output setting at test print |
| Details | To make a setting of Bk-color output for test print.<br>The setting is applied to all types.<br>When setting "SW-K" to 1 and other items to "0", a single Bk-color is output. |
| Use case | At test print |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>0: Not output, 1: Output |
| Default value | 1 |
| MONOMODE | Setting of PG full color/single color |
| Details | To set for the output in full color/monochrome color with PG. |
| Use case | When separating (identifying) the cause whether it's due to color or monochrome. |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 1<br>0: Full color, 1: Single color |
| Default value | 0 |

| TESTMODE > PRINT | |
|---|---|
| FEED | Setting of paper source at test print |
| Details | To set the paper sources at the time of test print output.<br>If this mode is set when there is no Cassette 2 (option Pickup Cassette), output is from Cassette 1 (standard Pickup Cassette).<br>If color paper is loaded in the specified paper source, there is no output because the setting is disabled. |
| Use case | When outputting a test print |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Display/adj/set range | 0 to 2<br>0: Multi-purpose Tray, 1: Cassette 1, 2: Cassette 2 |
| Default value | 1 |

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## ● FAX

### ■ MODEM

| TESTMODE > FAX > MODEM | |
|---|---|
| RELAY-1 | NCU relay test 1 |
| Details | To test ON/OFF of relay and port switch of NCU.<br>This mode is disabled for an NCU with no relay and port switch. |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 6<br>　0: All OFF<br>　1: CML ON/OFF<br>　2: P ON/OFF<br>　3: S ON/OFF<br>　4: H ON/OFF<br>　5: HD ON/OFF<br>　6: R ON/OFF |
| Default value | 0 |
| Related service mode | TESTMODE> FAX> MODEM> RELAY-2 |
| RELAY-2 | NCU relay test 2 |
| Details | To test ON/OFF of relay and port switch of NCU.<br>This mode is disabled for an NCU with no relay and port switch. |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 7<br>　0: All OFF<br>　1: CIST2 ON/OFF<br>　2: C1 ON/OFF<br>　3: NORG ON/OFF<br>　4: DCSEL ON/OFF<br>　5: DCLIM ON/OFF<br>　6: IPSEL1 ON/OFF<br>　7: IPSEL2 ON/OFF |
| Default value | 0 |
| Related service mode | TESTMODE> FAX> MODEM> RELAY-1 |

| TESTMODE > FAX > MODEM | |
|---|---|
| FREQ | Frequency test |
| Details | To test whether the specified frequency is oscillated.<br>By closing or opening the DC circuit in accordance with the setting value, the specified frequency is oscillated by the tone transmission function of the modem.<br>Check this with the speaker. |
| Use case | When analyzing the cause of a problem |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 7<br>0: OFF<br>1: 462 Hz<br>2: 1100 Hz<br>3: 1300 Hz<br>4: 1500 Hz<br>5: 1650 Hz<br>6: 1850 Hz<br>7: 2100 Hz |
| Default value | 0 |
| G3TX | G3 signal transmission test |
| Details | To test whether the specified G3 signal is transmitted.<br>By closing or opening the DC circuit in accordance with the setting value, the specific G3 signal pattern is transmitted at the specified transmission speed by the G3 signal transmission function of the modem.<br>Check this with the speaker. |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 9<br>0: OFF, 1: 300 bps, 2: 2400 bps, 3: 4800 bps, 4: 7200 bps, 5: 9600 bps, 6: TC7200 bps, 7: TC9600 bps, 8: 12000 bps, 9: 14400 bps |
| Default value | 0 |
| DTMFTX | DTMF transmission test |
| Details | To test whether the specified DTMF signal is transmitted.<br>By closing or opening the DC circuit in accordance with the setting value, the specified DTMF signal is transmitted by the DTMF transmission function of the modem.<br>Check this with the speaker. |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 12<br>0: OFF, 1: 1, 2: 2, 3: 3, 4: 4, 5: 5, 6: 6, 7: 7, 8: 8, 9: 9, 10: 0, 11: *, 12: # |
| Default value | 0 |
| Supplement/memo | DTMF (Dual Tone Multi Frequency): Signal method combining two specific frequencies like a push-tone phone. |

| TESTMODE > FAX > MODEM | |
|---|---|
| V34G3TX | V.34 G3 signal transmission test |
| Details | To test whether the specified V.34 G3 signal is transmitted. By closing or opening the DC circuit in accordance with the setting value, the specific G3 signal pattern is transmitted at the specified transmission speed and modulation speed by the G3 signal transmission function (V.34) of the modem. Check this with the speaker. A setting value other than 0 is indicated as a 3-digit integer (1st digit: modulation speed, last 2 digits: transmission speed). A value other than the specified numerical value is invalid. |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 614 0: OFF • First digit (Modulation speed/baud rate) 1: 2400 baud, 2: 2743 baud, 3: 2800 baud, 4: 3000 baud, 5: 3200 baud, 6: 3429 baud • Last 2 digits (Transmission speed) 01: 2400 bps, 02: 4800 bps, 03: 7200 bps, 04: 9600 bps, 05: 12000 bps, 06: 14400 bps, 07: 16800 bps, 08: 19200 bps, 09: 21600 bps, 10: 24000 bps, 11: 26400 bps, 12: 28800 bps, 13: 31200 bps, 14: 33600 bps |
| Default value | 0 |

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# ■ FACULTY

| TESTMODE > PRINT | |
|---|---|
| G34800TX | G3 4800 bps signal transmission test |
| Details | To test whether the G3 signal is transmitted at 4800 bps. By closing or opening the DC circuit, the specific G3 signal pattern is transmitted at 4800 bps by the G3 signal transmission function. Check this with the speaker. |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 1 0: OFF, 1: ON |
| Default value | 0 |
| DETECT1 | Ring detection |
| Details | To check the ON/OFF state of CI, FC, and hook from the line. The detection results are displayed on the console (UART). |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 1 0: OFF, 1: ON |
| Default value | 0 |
| Supplement/memo | CI (Calling Identification): Ring signal UART (Universal Asynchronous Receiver Transmitter): Console |
| DETECT2 | Calling tone detection test 1 |
| Details | To check calling tone signal and FED. Set the CML relay to ON and detect the calling tone. The detection results are displayed on the console (UART). |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 1 0: OFF, 1: ON |
| Default value | 0 |
| Supplement/memo | CML (Connect Modem to Line) relay: Relay installed at the NCU (Network Control Unit) Board to switch between the telephone and fax. |
| DETECT3 | Calling tone detection test 2 |
| Details | To check calling tone signal and FED. Set the CML relay to OFF and detect the calling tone. The detection results are displayed on the console (UART). |
| Adj/set/operate method | Enter the setting value, and then press Start key. |
| Caution | Be sure to set the value back to 0 after the test. |
| Display/adj/set range | 0 to 1 0: OFF, 1: ON |
| Default value | 0 |
| Supplement/memo | CML (Connect Modem to Line) relay: Relay installed at the NCU (Network Control Unit) Board to switch between the telephone and fax. |

T-8-69

# 9

# Installation

■How to Check this Installation Procedure

■Installation

■Copy Control Interface Kit-C1

■MiCARD Attachment Kit-A1

■Copy Card Reader-F1

# How to Check this Installation Procedure

## Symbols in the Illustration

The frequently-performed operations are described with symbols in this procedure.

Packaged Item    Unused Parts

Screw

Install (1x)    Remove (1x)    Tighten (1x)    Loosen (1x)

Harness (Common for Guides and Clamps)    Connector    Power Cord

Install (1x)    Remove (1x)    Connect (1x)    Disconnect (1x)    Connect    Disconnect

Power

ON    OFF    Check the sound    Check visually    Check    Push    Cleaning
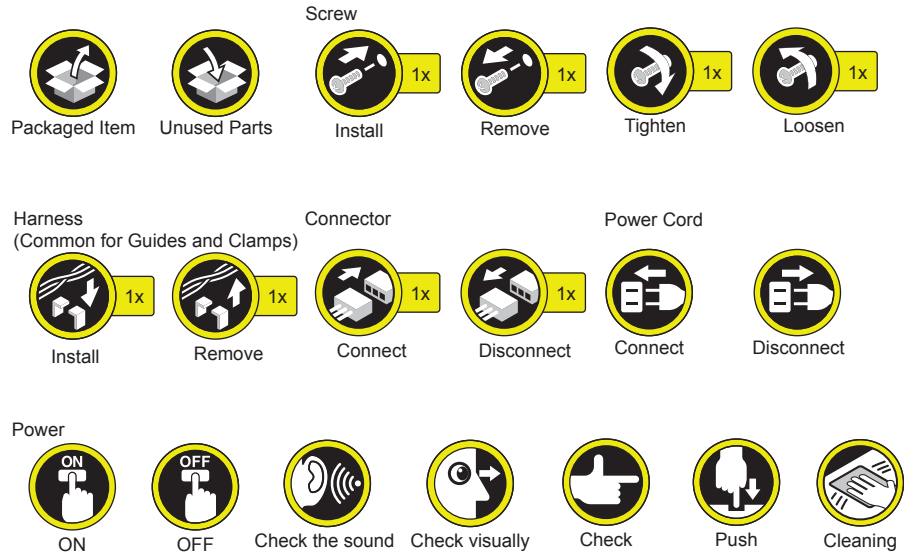
F-9-1
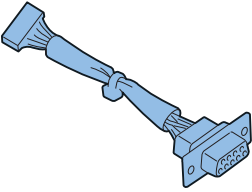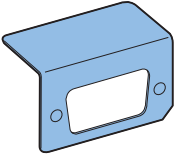
# Installation

This machine is able to be installed by the user.

For details of installation procedure, refer to the User's Manual.

# Copy Control Interface Kit-C1

## Points to Note at Installation

The Copy Control Interface Kit and the Copy Card Reader cannot be used at the same time.

## Checking the Contents

| [1] CC-VI Cable X1 | [2] D-SUB Support Plate X1 | [3] Washer (Large) X2 |
|---|---|---|
| [4] Hexagonal Screw ( Washer (Small),Nut ) X2 **Do not use a Nut** | | |

F-9-2

## Check Items when Turning OFF the Main Power

Check that the main power switch is OFF.
1) Turn OFF the main power switch of the host machine.
2) Check that the display in the Control Panel and the lamp of the main power are turned off, then disconnect the power plug.

## Installation Outline Drawing
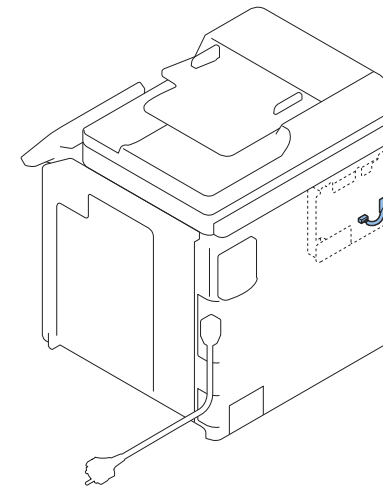
F-9-3

## Installation Procedure

☐
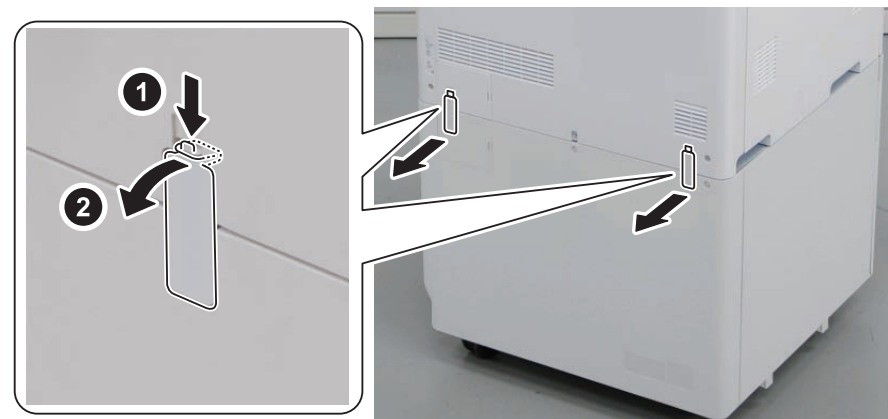1) Remove the Reader Rear Cover.

- 2 Claws
- 2 Hooks
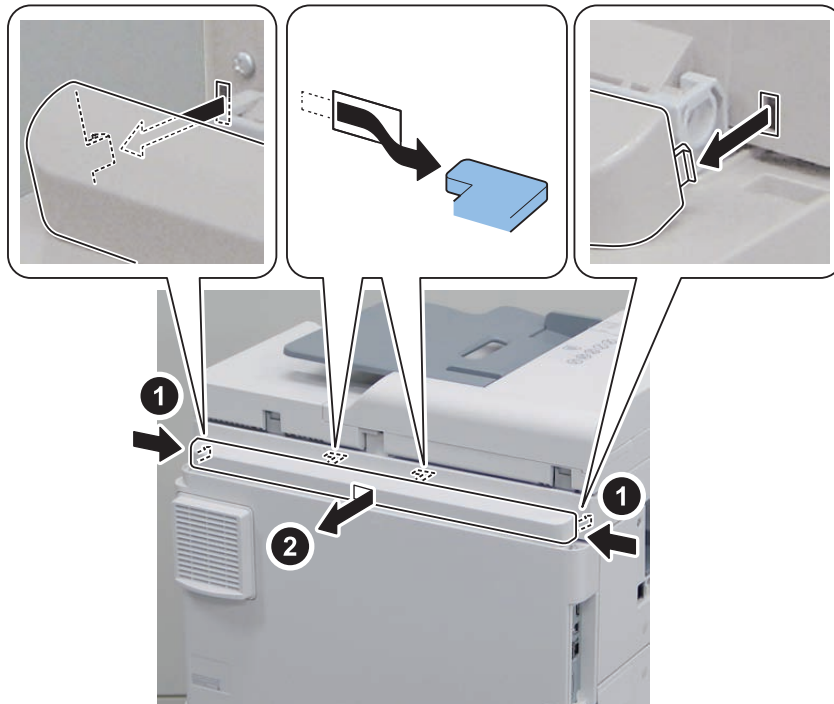


F-9-4

NOTE :
For following steps, proceed to step 2 in the case of the machine with the installed Cassette Feeding Unit and proceed to step 4 in the case of the machine without the installed Cassette Feeding Unit.

<With Cassette Feeding Unit installed and Cassette Heater not installed>

☐
2) Remove the 2 Face Covers.

- 1 Claw each
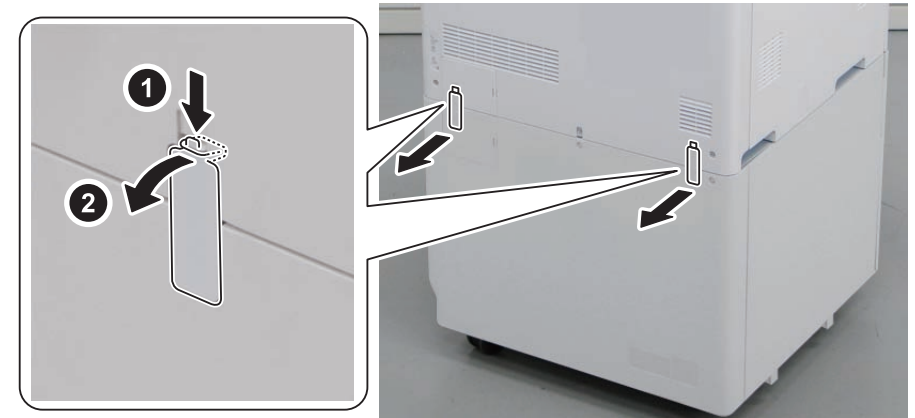


F-9-5

☐
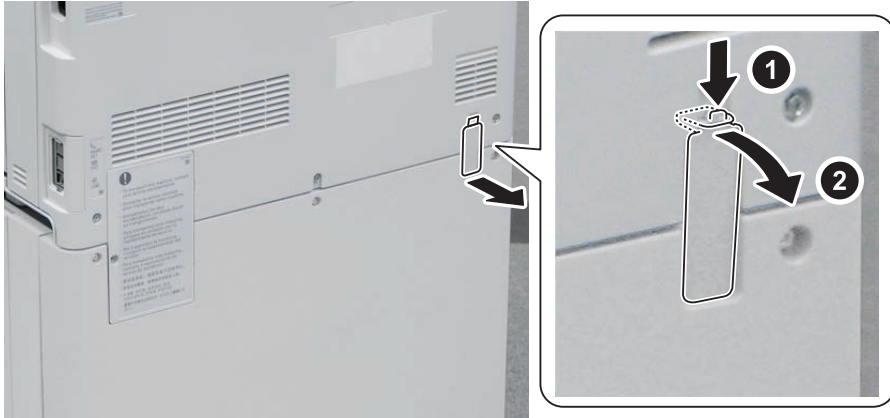3) Remove the Connecting Plate.

- 1 Knurled Screw
- 1 Hook
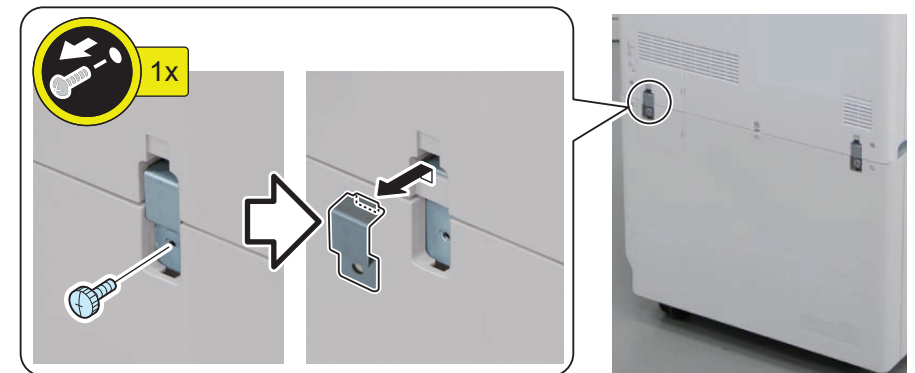


F-9-6

<With Cassette Feeding Unit and Cassette Heater installed>

□

2) Remove the Face Cover.

• 1 Claw



□
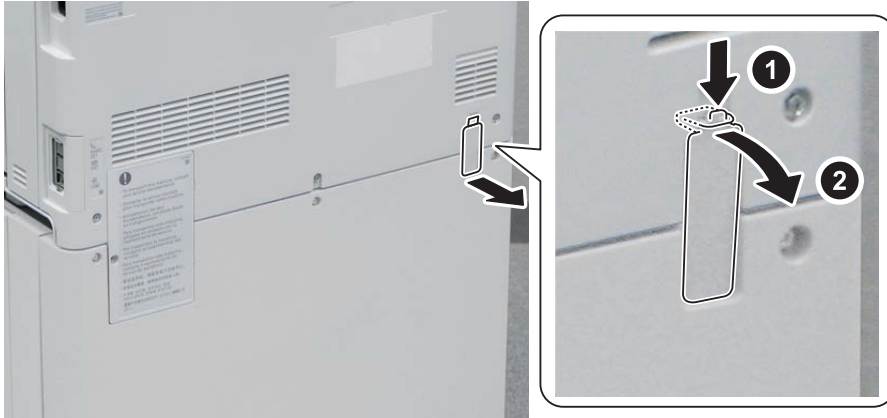
3) Remove the Connector Cover.
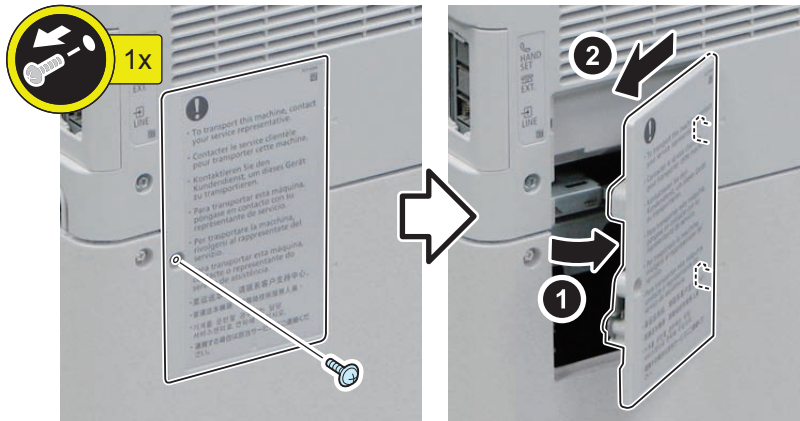
• 1 Screw
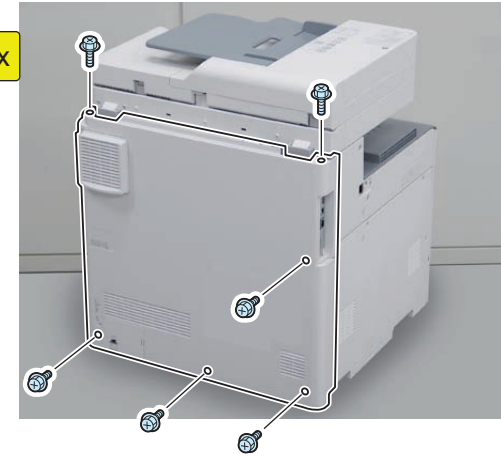
• 2 Hooks



F-9-7

<Without Cassette Feeding Unit>

□

4) Remove the 6 screws of the Rear Cover.
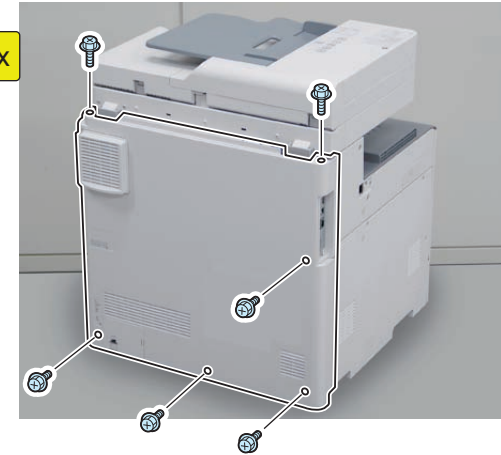


F-9-8

□

5) Remove the Rear Cover of the using the flat-blade screwdriver, etc.

• 2 Protrusions



F-9-9

☐
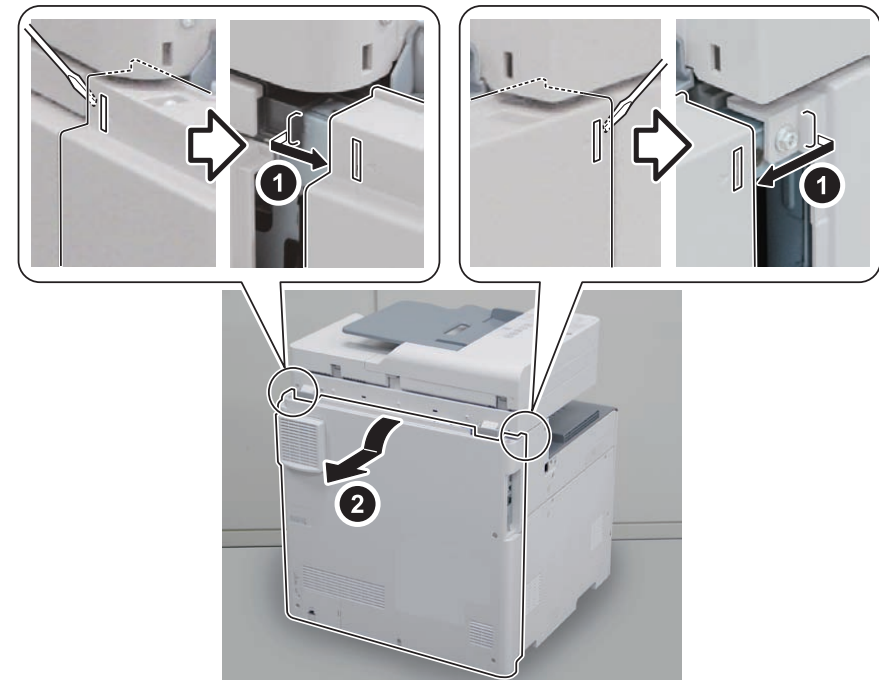
6) Remove the Sub Cover of the Controller Box Cover.
- 3 Screws
- 2 Hooks
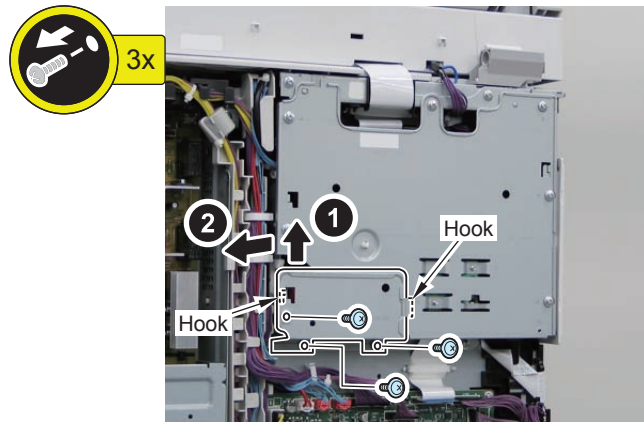


F-9-10

☐

7) Disconnect the connector, and remove the Controller Box Cover.
- 6 Screws
- 2 Hooks
- 2 Bosses
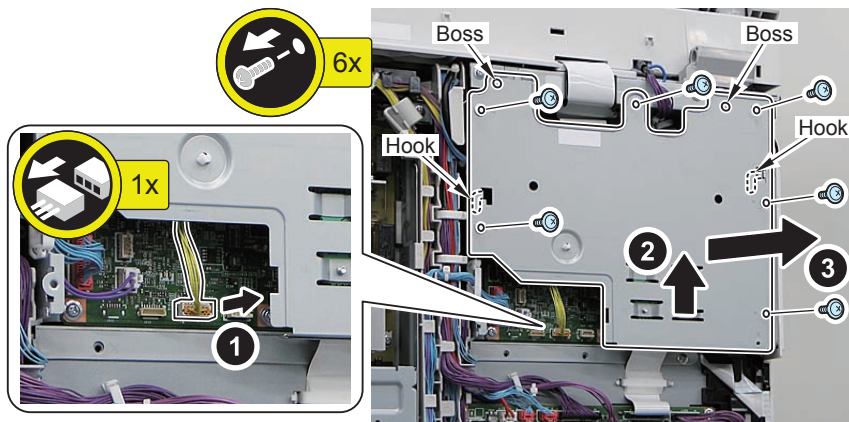


F-9-11

☐

8) Remove the Face Plate. (Removed Face Plate will not be used.)
- 2 Screws (Removed screws will be not be used.)
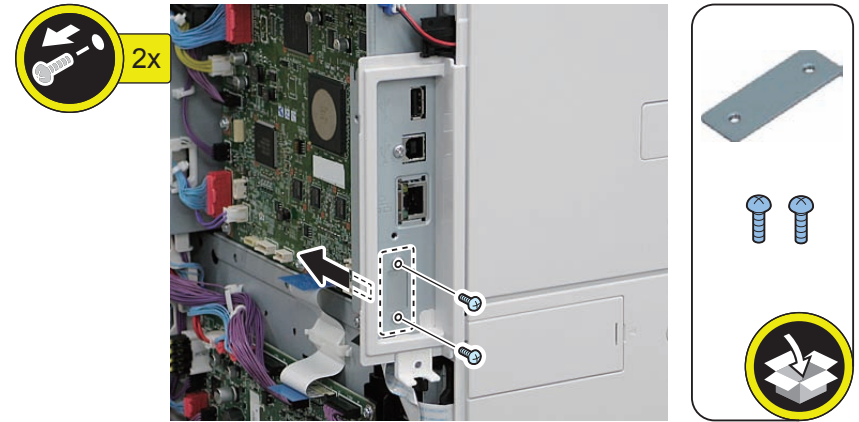


F-9-12

☐

9) Pass the connector of the CC-VI Cable through the D-SUB Support Plate.

CAUTION:

Install the D-SUB Support Plate as shown in the figure.
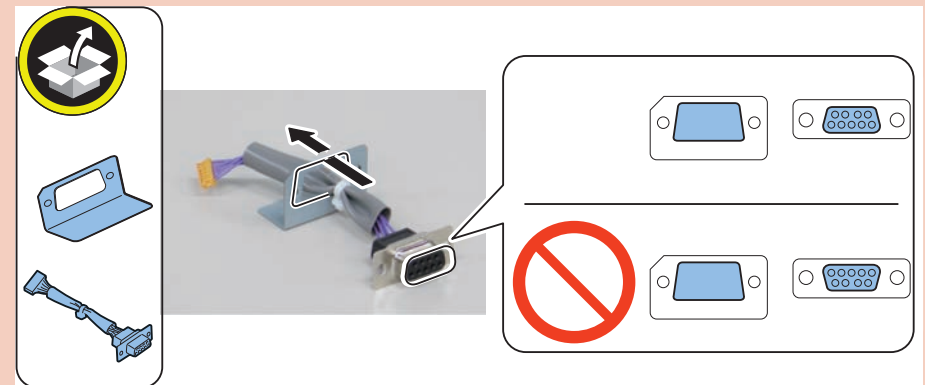


F-9-13

☐

10)　　Connect the CC-VI Cable to the Main Controller PCB.

• 1 Connector

• 2 Hexagon Screws

• 2 Washers (Small)

• 2 Washers (Large)

> **CAUTION:**
>
> Install the CC-VI Cable in the direction shown in the figure.
>
> F-9-14
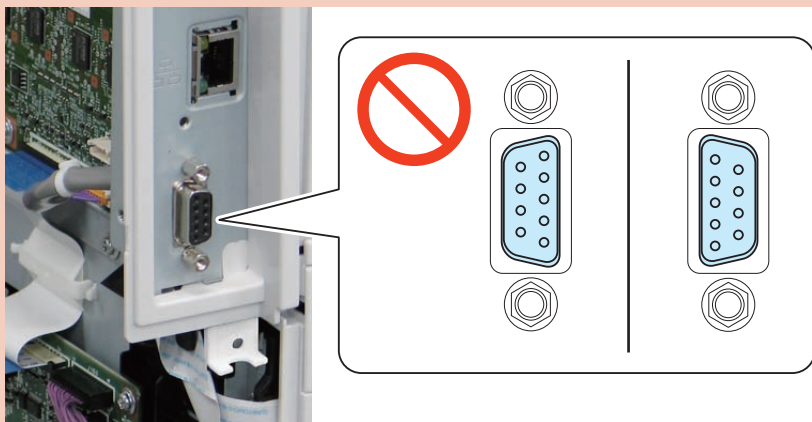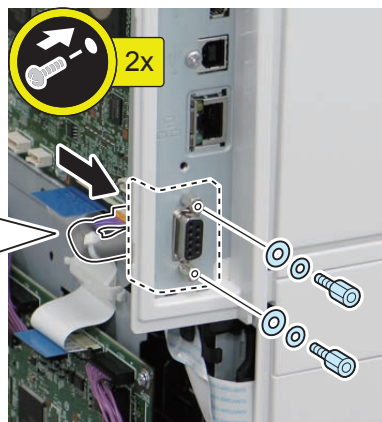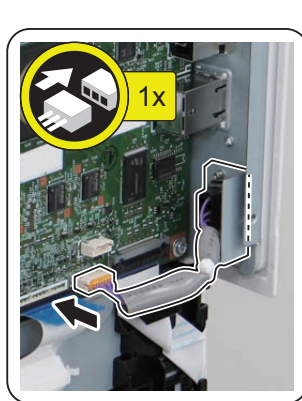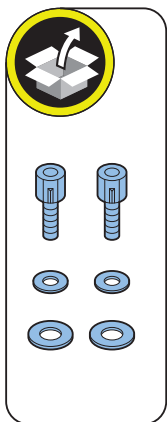
F-9-15

☐

11)　　Return the covers to their original positions.

<Without Cassette Feeding Unit>

• Controller Box Cover (6 Screws, 1 Connector)

• Sub Cover of the Controller Box (3 Screws)

• Rear Cover (6 Screws)
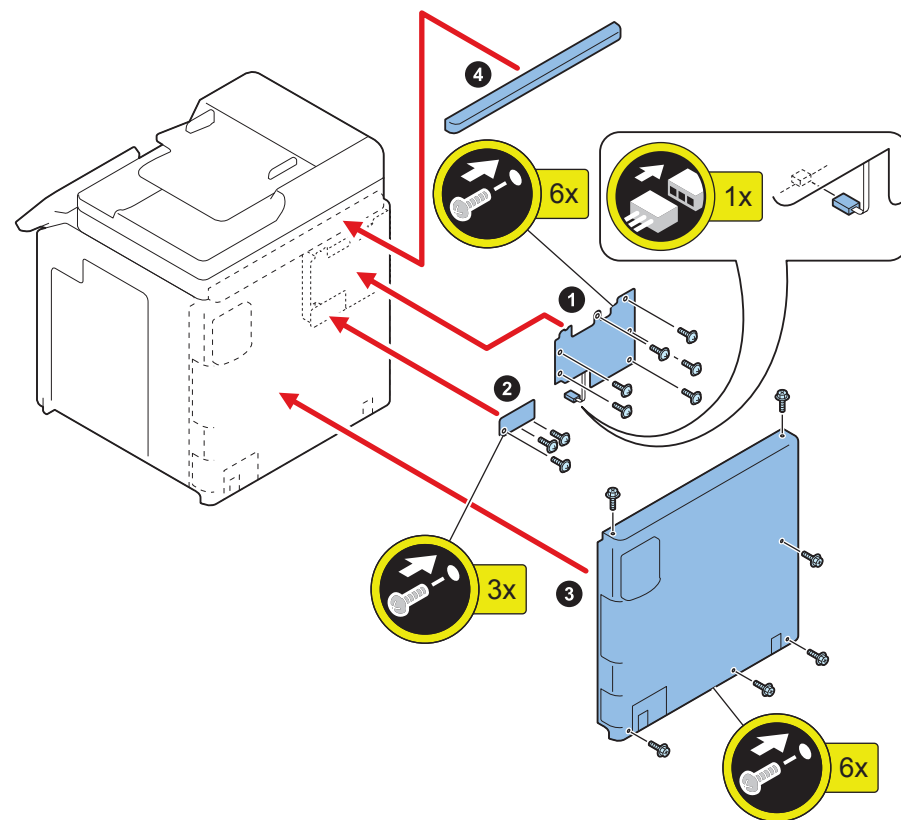
• Reader Rear Cover

F-9-16

**\<With Cassette Feeding Unit installed and Cassette Heater not installed\>**

- Controller Box Cover (6 Screws, 1 Connector)
- Sub Cover of the Controller Box (3 Screws)
- Rear Cover (6 Screws)
- Connecting Plate (1 Knurled Screw)
- 2 Face Covers
- Reader Rear Cover
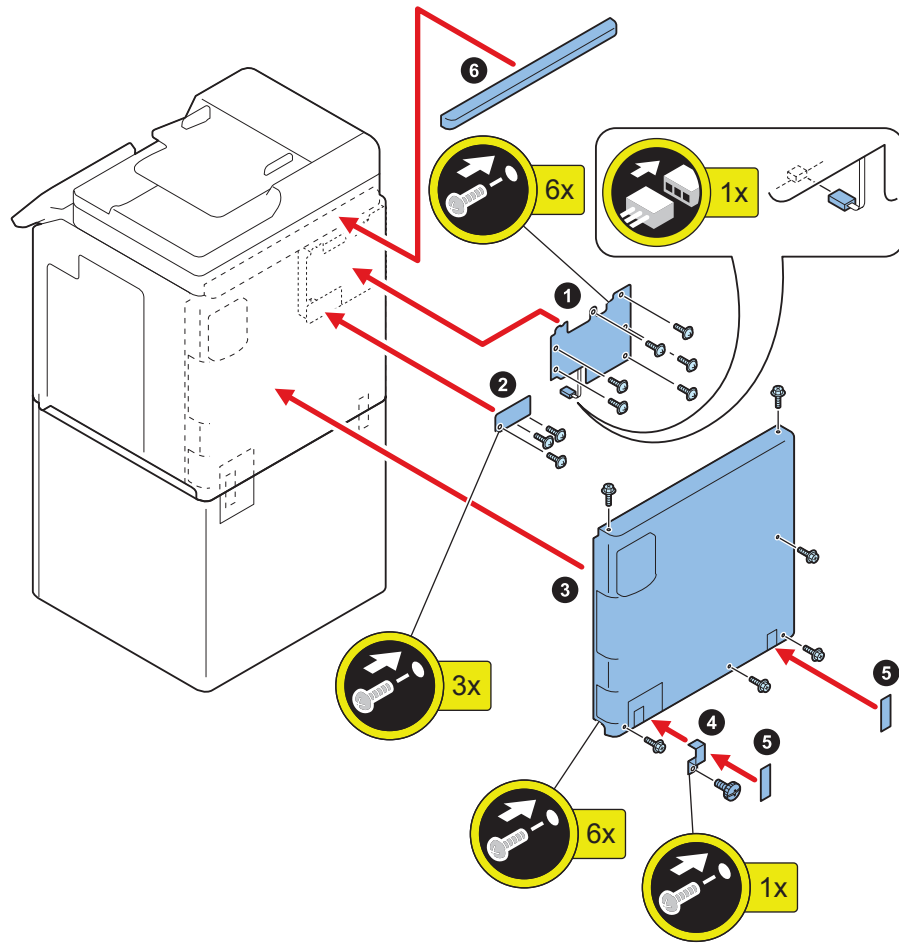
F-9-17

**\<With Cassette Feeding Unit and Cassette Heater installed\>**

- Controller Box Cover (6 Screws, 1 Connector)
- Sub Cover of the Controller Box (3 Screws)
- Rear Cover (6 Screws)
- Connector Cover (1 Screw)
- 1 Face Cover
- Reader Rear Cover
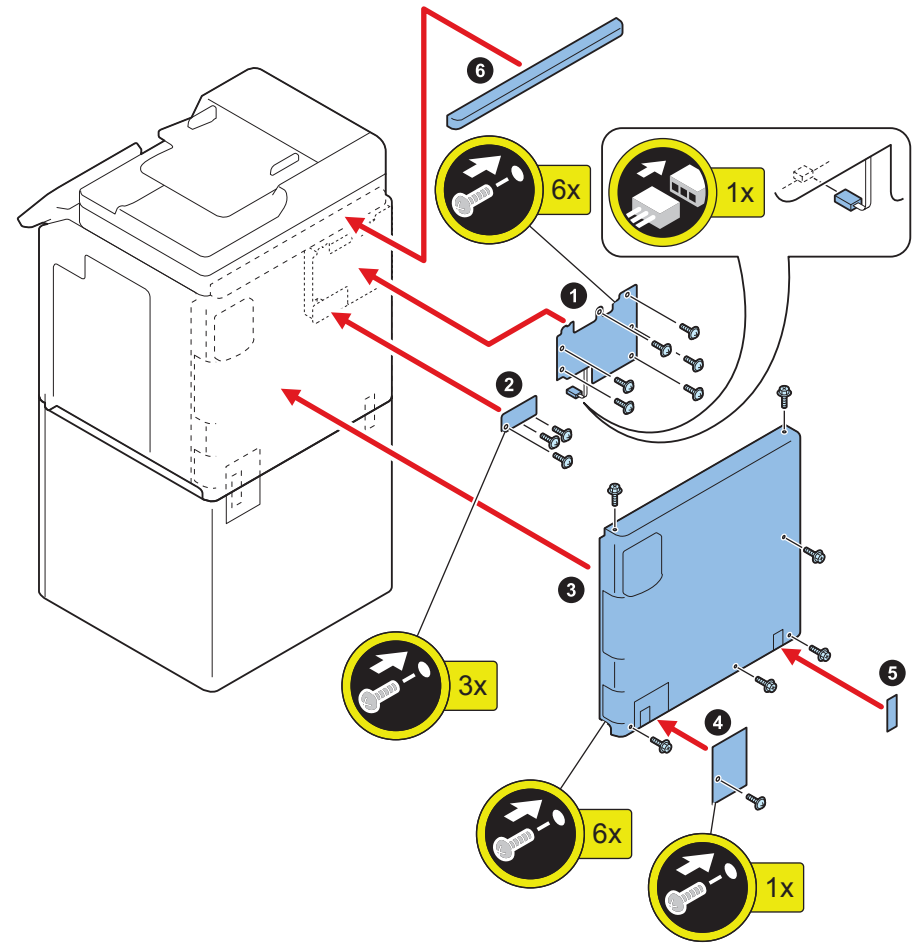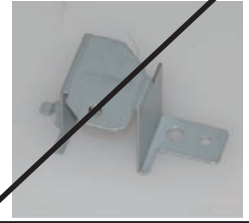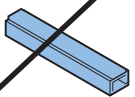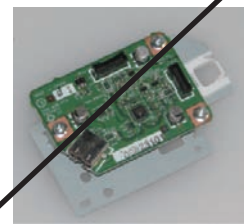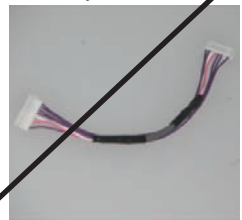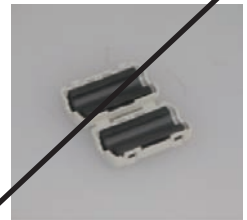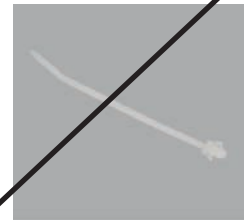
F-9-18

☐
12) Connect the power plug to the outlet.
13) Turn ON the main power switch.

# MiCARD Attachment Kit-A1

## Checking the Contents

| | | |
|---|---|---|
| ☐ [1] IC-Card Reader Base X 1 | ☐ [2] Screw (TP; M4x16) X 1 | ☐ [3] Wire Saddle (Large) X 2 |
| ☐ [4] Wire Saddle (Medium) X 1 | ☐ [5] Wire Saddle (Small) X 2 | ☐ [6] Right Cover Support Plate X 1 |
| ☐ [7] Cord Guide X 1 | ☐ [8] Cord Clamp X 4 | ☐ [9] USB Hub Unit X 1 |
| ☐ [10] USB Hub Relay Harness X 1 | ☐ [11] Ring Core X 1 | ☐ [12] Reuse Band X 1 |

F-9-19

| | |
|---|---|
| ☐ [11] Screw (TP; M3x6) X 1 | ☐ [12] Screw (TP; M4x8) X 1 |
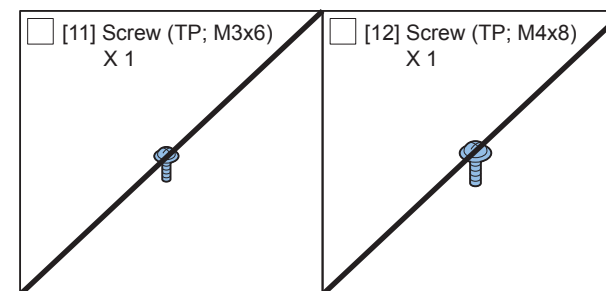
F-9-20

## Points to Note at Installation

The MiCARD Attachment Kit-A1/ Card Reader (sales company's option) and the Copy Card Reader-F1 cannot be used at the same time.

## Check Items when Turning OFF the Main Power

Check that the main power switch is OFF.
1) Turn OFF the main power switch.
2) Check that the display in the Control Panel and the lamp of the main power are turned off, then disconnect the power plug.

## Installation Outline Drawing
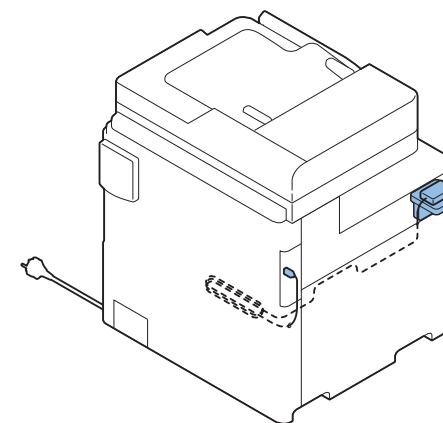
F-9-21

## Installation Procedure

☐
1) Remove the Reader Rear Cover.

• 2 Claws

• 2 Hooks
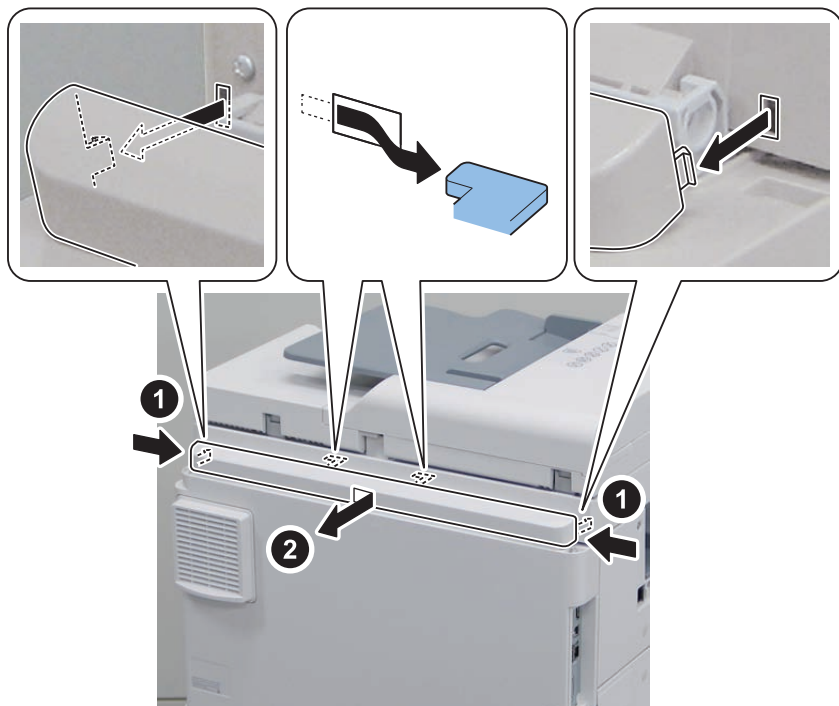


F-9-22

NOTE :
For following steps, proceed to step 2 in the case of the machine with the installed Cassette Feeding Unit and proceed to step 4 in the case of the machine without the installed Cassette Feeding Unit.

<With Cassette Feeding Unit installed and Cassette Heater not installed>

☐
2) Remove the 2 Face Covers.

• 1 Claw each



F-9-23

☐
3) Remove the Connecting Plate.

• 1 Knurled Screw

• 1 Hook
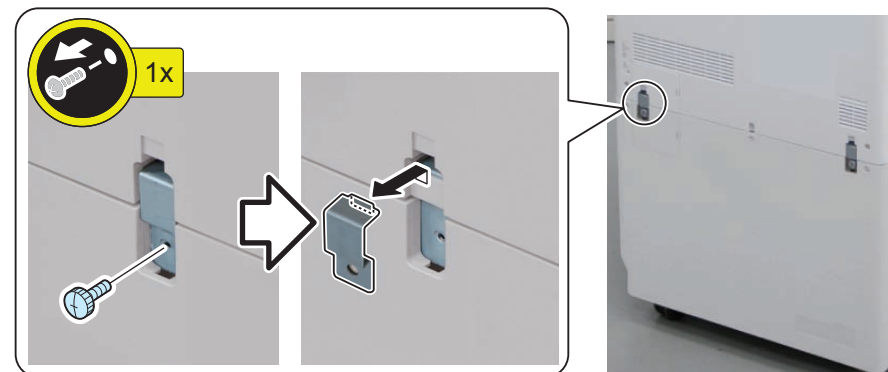


F-9-24

<With Cassette Feeding Unit and Cassette Heater installed>

☐

2) Remove the Face Cover.

• 1 Claw



☐

3) Remove the Connector Cover.

• 1 Screw

• 2 Hooks
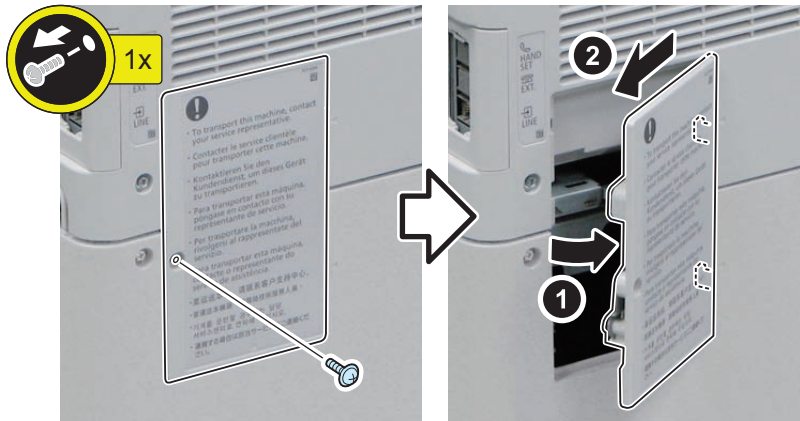


F-9-25

<Without Cassette Feeding Unit>

☐

4) Remove the 6 screws of the Rear Cover.



F-9-26

☐

5) Remove the Rear Cover of the using the flat-blade screwdriver, etc.

• 2 Protrusions



-11

F-9-27
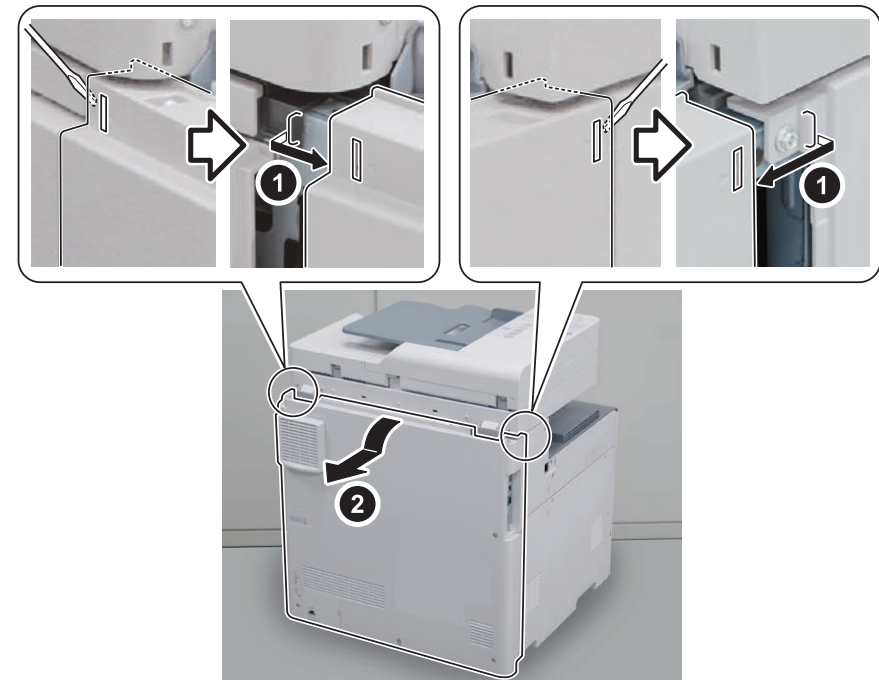
6) Cut off the area of the Rear Cover shown in the figure with nippers.

> **CAUTION:**
>
> Make sure that there is no burr.
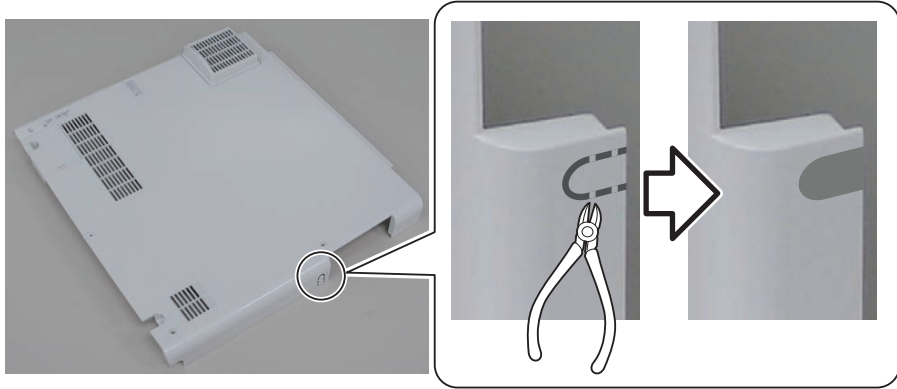


F-9-28

7) Remove the Rear Sub Cover.
• 2 Hooks



Hook
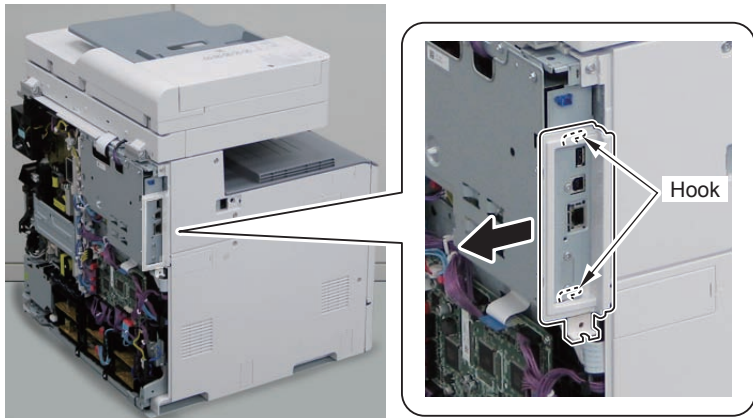
F-9-29

8) Install the 2 Wire Saddles (Large) to the host machine as shown in the figure.



Wire Saddle
Large
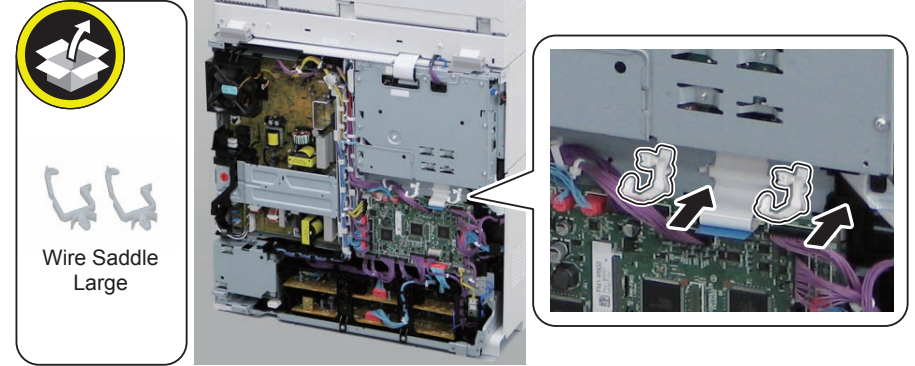
F-9-30

9) Remove the Face Seal on the Small Cover of the Left Upper Cover. (The removed Face Seal will not be used.)
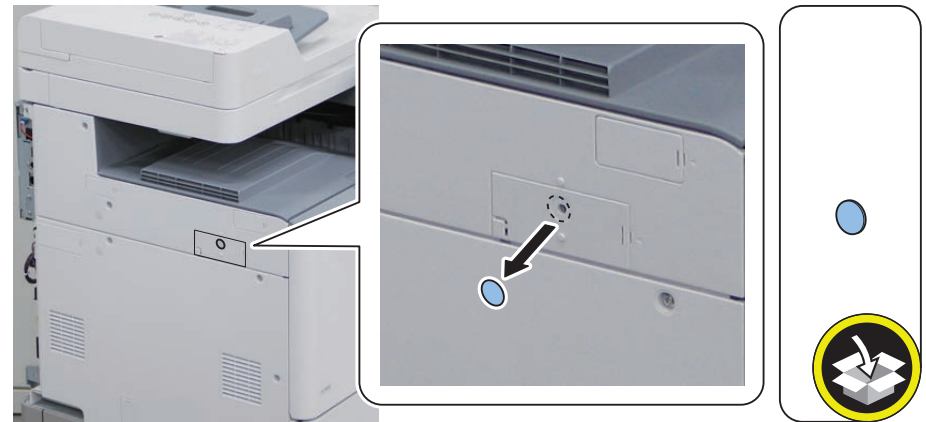


F-9-31

☐
10)     Remove the Face Cover of the Left Upper Cover.
• 1 Claw
• 1 Hook

CAUTION:

When removing the Face Cover, do not insert a screwdriver in the oval hole.
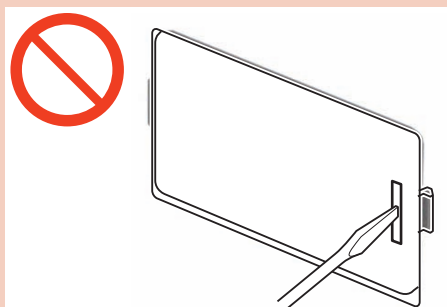
F-9-32
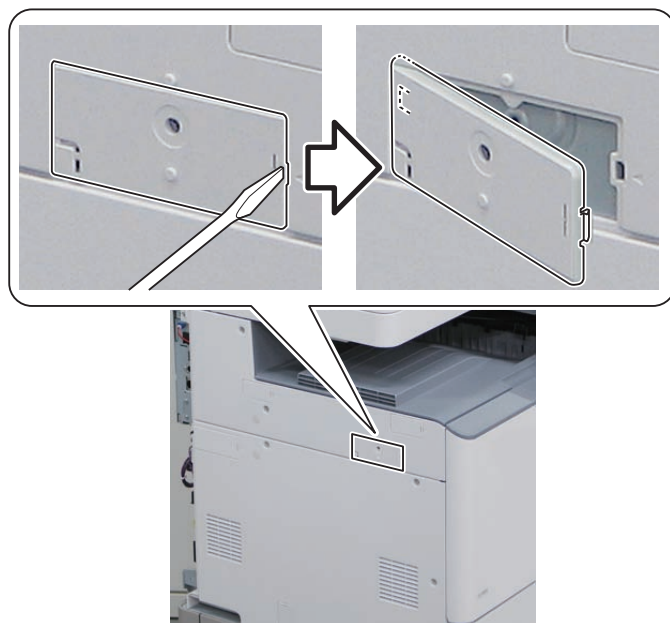
F-9-33

☐
11)     Cut off the area of the Face Cover shown in the figure with nippers.
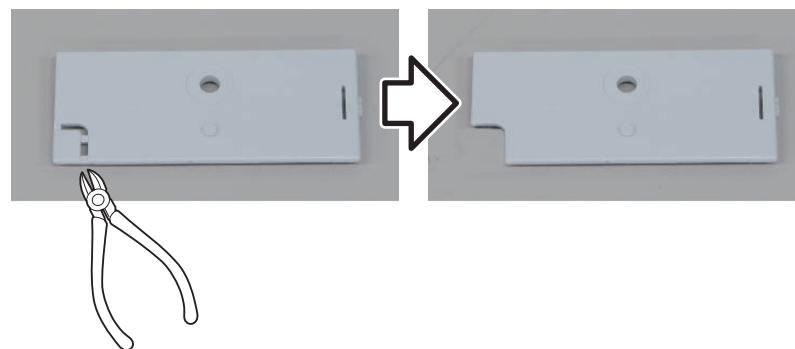
F-9-34

☐
12)     Return the Face Cover of the Left Upper Cover to its original position.
• 1 Hook
• 1 Claw
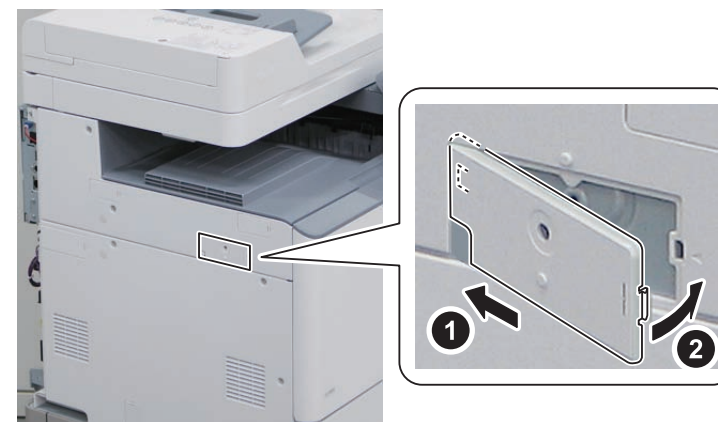
F-9-35

☐

13)  Install the IC-Card Reader Base.

• 2 Bosses
• 1 Screw (TP; M4x16)



TP
M4x16

Boss

1x

F-9-36

☐

14)  Remove the release paper of the double-sided tape on the IC-Card Reader Base.



F-9-37

☐
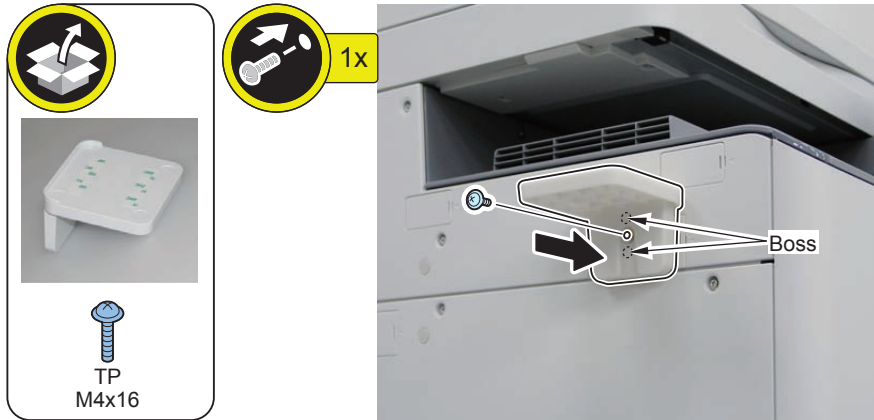
15)  Open the Front Cover, and remove the Left Lower Cover.

• 3 Screws
• 2 Hooks



3x

F-9-38

☐

16)  Install the 2 Wire Saddles (Small) to the host machine as shown in the figure.
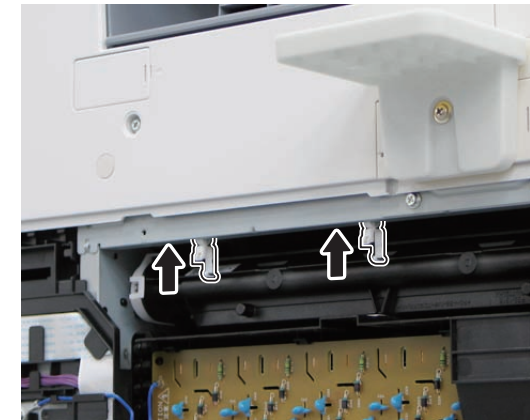


Wire Saddle
Small

F-9-39

☐

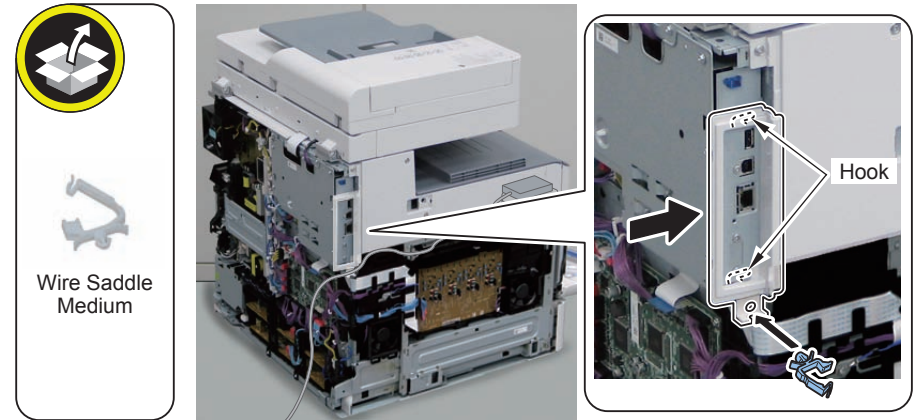17)    Secure the Card Reader (sales company's option) to the IC-Card Reader Base.
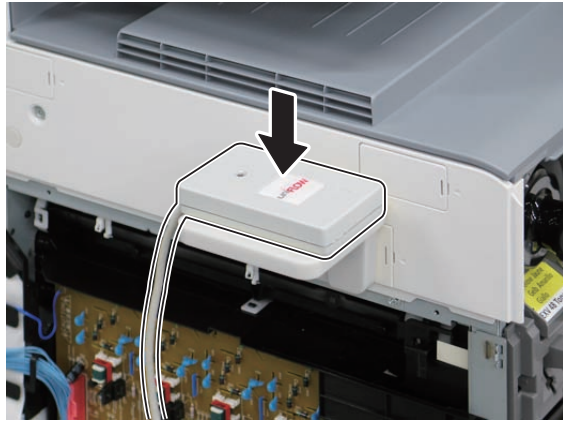
F-9-40

☐

18)    Secure the cable of the Card Reader (sales company's option).

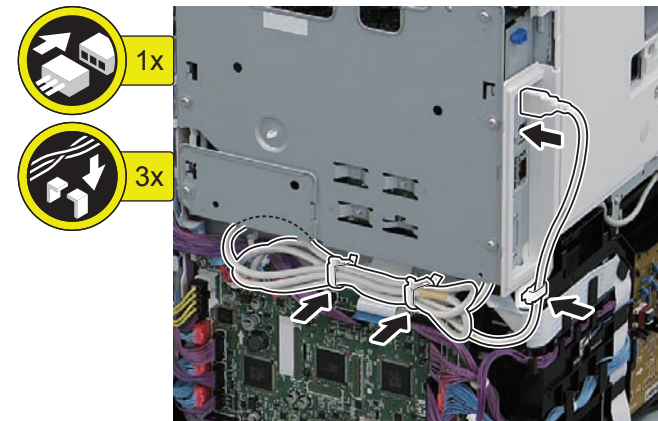•  Cable Guide

•  2 Wire Saddles (Small)

4x
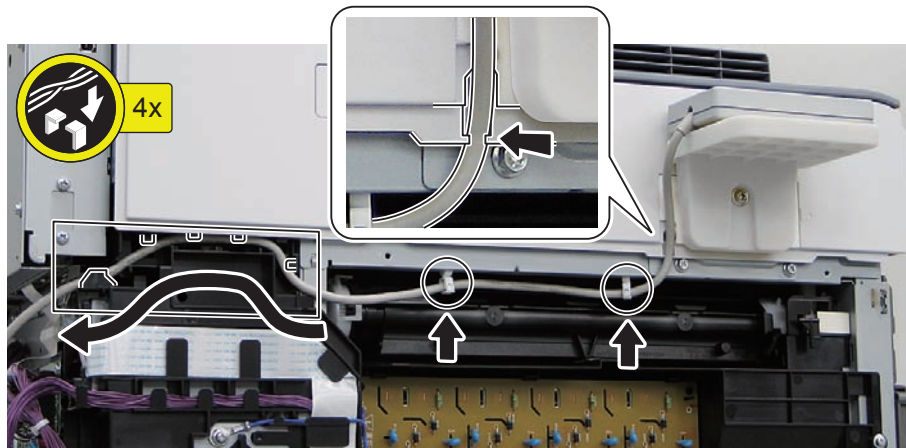
F-9-41

☐

19)    Return the Rear Sub Cover Frame to its original position.

•  2 Hooks

20)    Install the Wire Saddle (Medium) to the Rear Sub Cover.

Wire Saddle Medium

Hook

F-9-42

☐

21)    Connect the USB, and secure the Card Reader Cable (sales company's option).
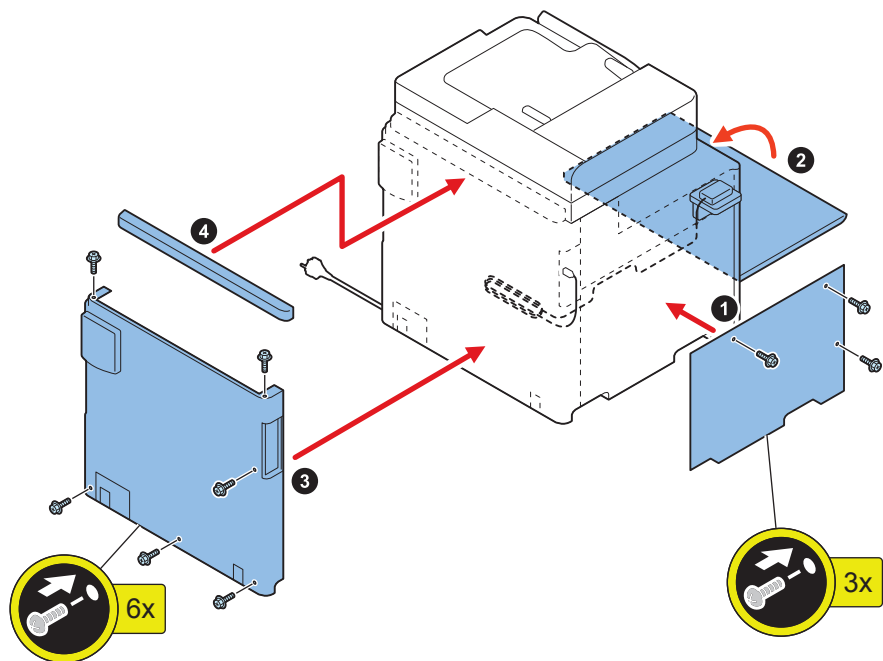
•  2 Wire Saddles (Large)

•  1 Wire Saddle (Medium)

1x

3x

F-9-43

22) Return the covers to their original positions.

&lt;Without Cassette Feeding Unit&gt;

• Left Lower Cover (3 screws)
• Front Cover (to be closed)
• Rear Cover (6 screws)
• Reader Rear Cover

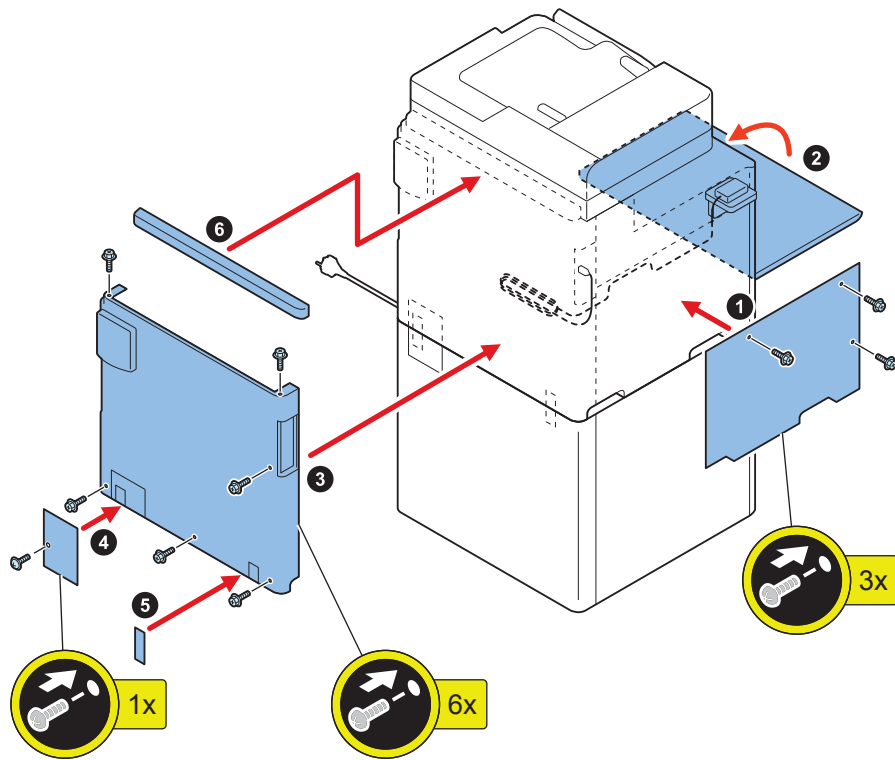&lt;With Cassette Feeding Unit installed and Cassette Heater not installed&gt;

• Left Lower Cover (3 screws)
• Front Cover (to be closed)
• Rear Cover (6 screws)
• Connecting Plate (1 knurled screw)
• 2 Face Covers
• Reader Rear Cover



F-9-44
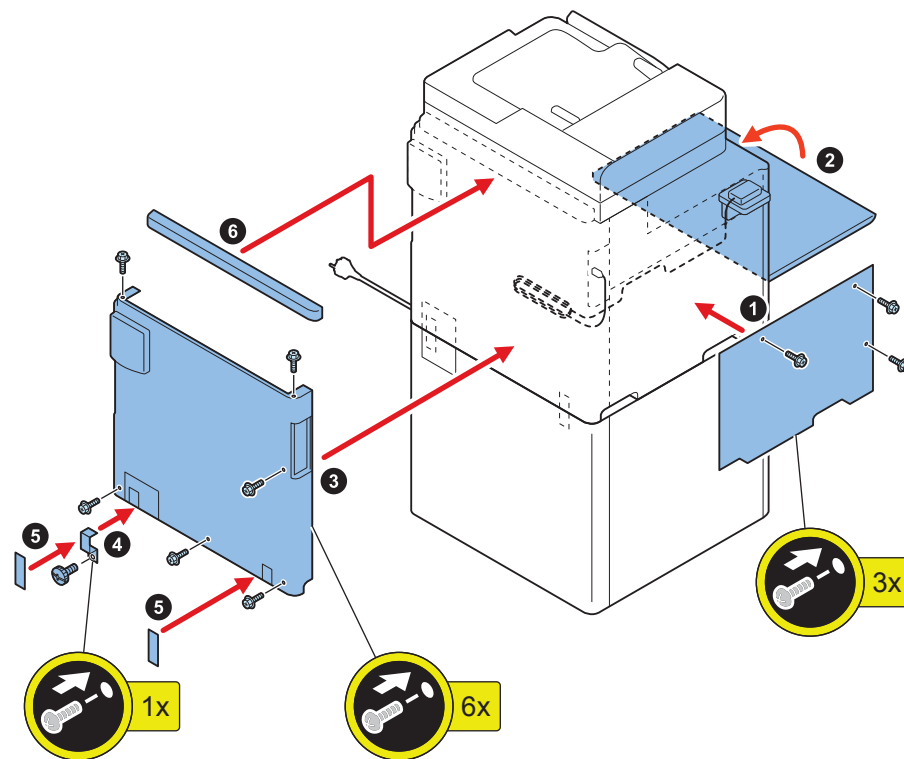


F-9-45

<With Cassette Feeding Unit and Cassette Heater installed>

• Left Lower Cover (3 screws)
• Front Cover (to be closed)
• Rear Cover (6 screws)
• Connector Cover (1 screw)
• 1 Face Covers
• Reader Rear Cover



F-9-46

□

23)    Connect the power plug to the outlet.

24)    Turn ON the main power switch.

# Copy Card Reader-F1
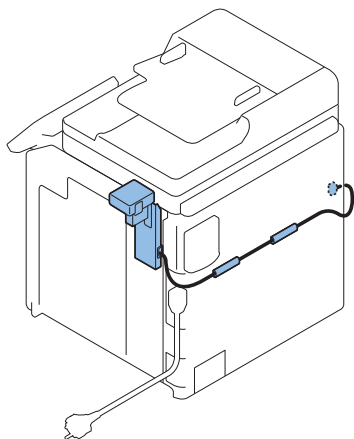
## Points to Note at Installation

CAUTION:
- The Card Reader (sales company's option) and the Copy Control Interface Kit cannot be used at the same time.
- Do not disconnect the short connector.

## Check Items when Turning OFF the Main Power

Check that the main power switch is OFF.
1) Turn OFF the main power switch of the host machine.
2) Check that the display in the Control Panel and the lamp of the main power are turned off, then disconnect the power plug.
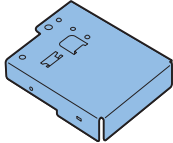
## Installation Outline Drawing

F-9-47
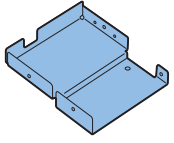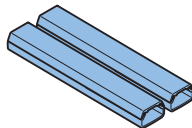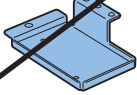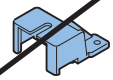
## Checking the Contents

### ■ Copy Card Reader-F1

| [1] Card Reader Unit X 1 | [2] Screw (RS tight; M4x10) X 1 | [3] Toothed washer X 1 |
|---|---|---|

F-9-48

## ■ Copy Card Reader Attachment-H1

| [1] Card Reader Mounting Plate (front) Unit X 1 | [2] Card Reader Mounting Plate (rear) Unit X 1 | [3] Card reader External Relay Harness X 1 |
|---|---|---|
| [4] Card Reader Relay Unit X 1 | [5] Connector Cover X 1 | [6] Cord Guide X 2 |
| [7] Screw (W Sams; M3x14) X 2 | [8] Screw (TP; M3x6) X 5 | [9] Card Reader Mounting Plate (lower) Unit X |
| [10] Connector Cover X 1 | [11] Wire Saddle X 1 | [12] PCB Spacer X 1 |
| [13] Screw (TP; M4x12) X 2 | [14] Screw (TP; M3x12) X 2 | [15] Screw (Binding; M4x6) X 4 |

F-9-49

## Installation Procedure

CAUTION:

After installing the Copy Card Reader, enter the card number to be used in the following service mode : COPIER > FUNCTION > INSTALL > CARD.

Otherwise, the card will not be recognized even inserting it.

☐

1) Remove the Reader Rear Cover.
- 2 Claws
- 2 Hooks
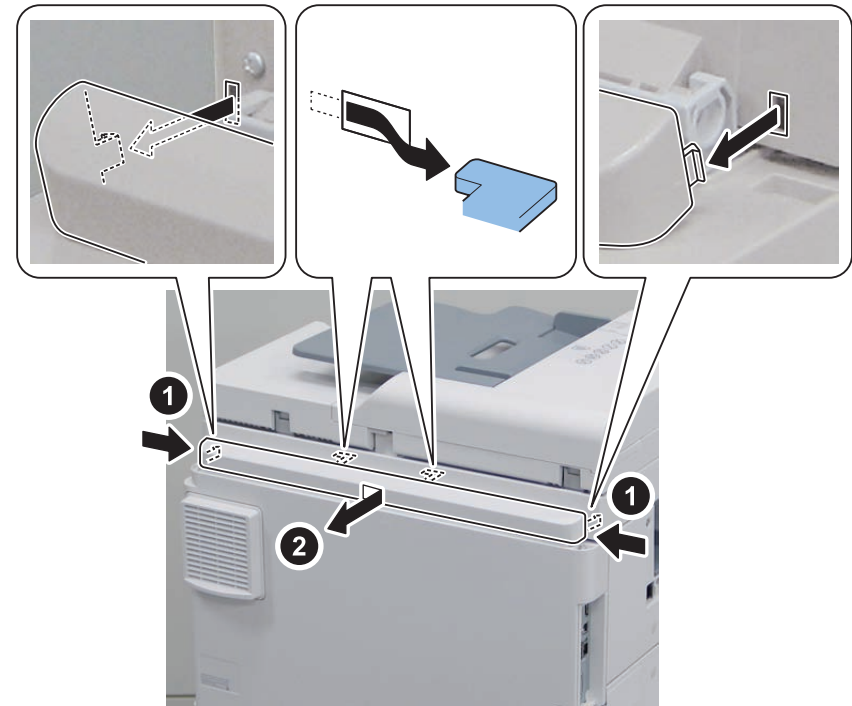


F-9-50

NOTE :
For following steps, proceed to step 2 in the case of the machine with the installed Cassette Feeding Unit and proceed to step 4 in the case of the machine without the installed Cassette Feeding Unit.

<With Cassette Feeding Unit installed and Cassette Heater not installed>

☐

2) Remove the 2 Face Covers.

• 1 Claw each
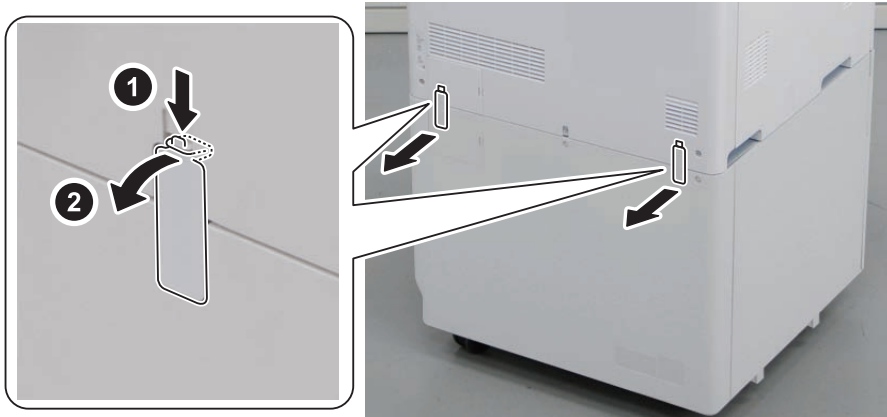


F-9-51

☐

3) Remove the 1 Connecting Plate.

• 1 Knurled Screw

• 1 Hook
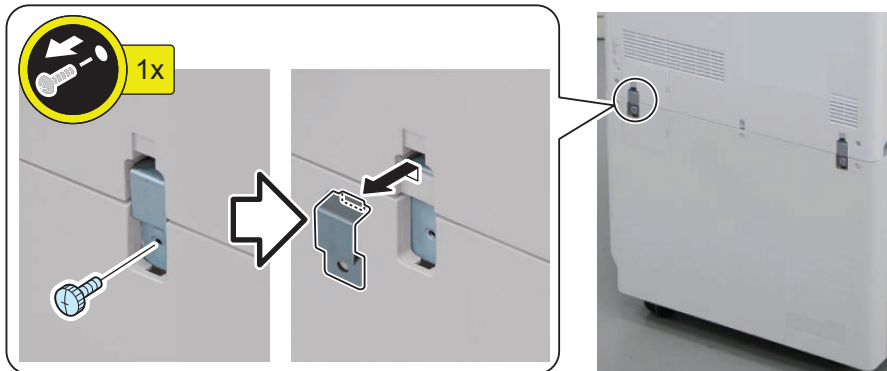


F-9-52

<With Cassette Feeding Unit and Cassette Heater installed>

☐

2) Remove the 1 Face Cover.

• 1 Claw



☐
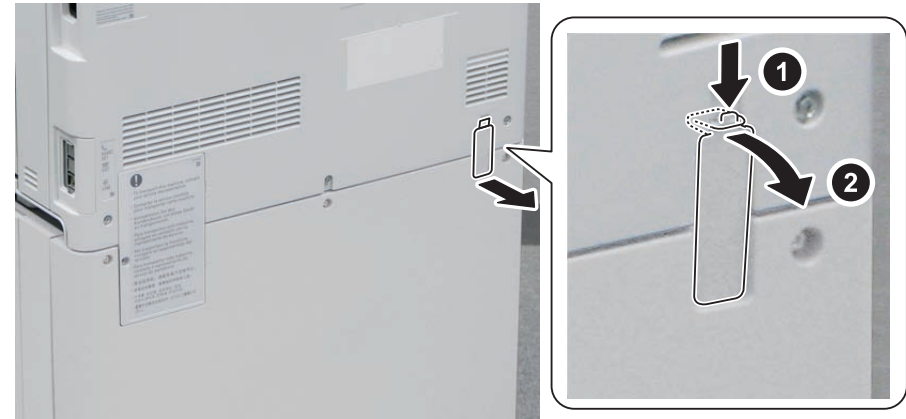
3) Remove the Connector Cover.
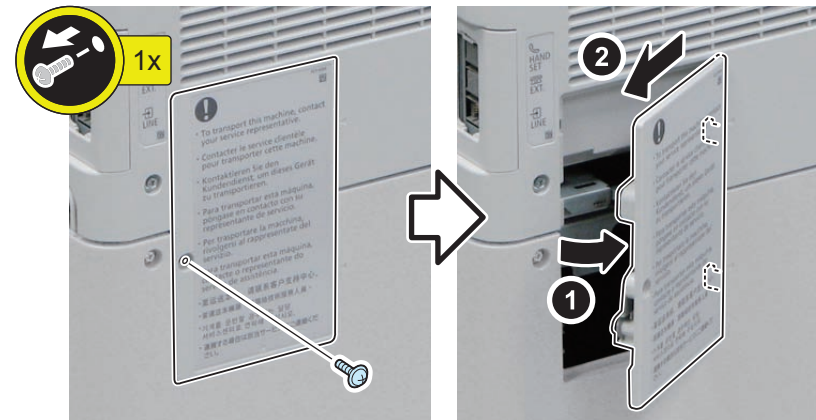
• 1 Screw

• 2 Hooks



F-9-53

<Without Cassette Feeding Unit>

☐

4) Remove the 6 screws of the Rear Cover.
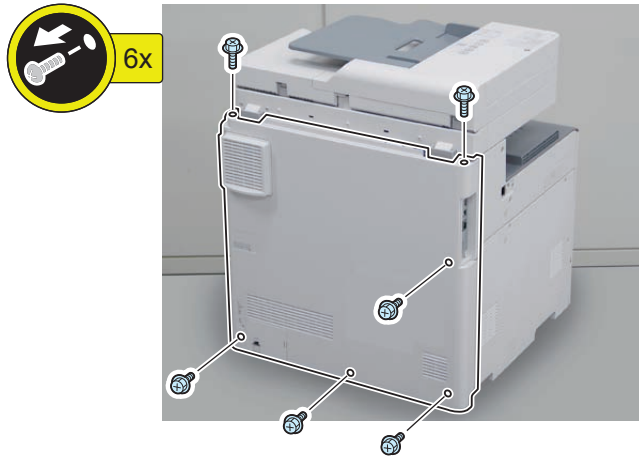


F-9-54

☐

5) Remove the Rear Cover of the using the flat-blade screwdriver, etc.

• 2 Protrusions
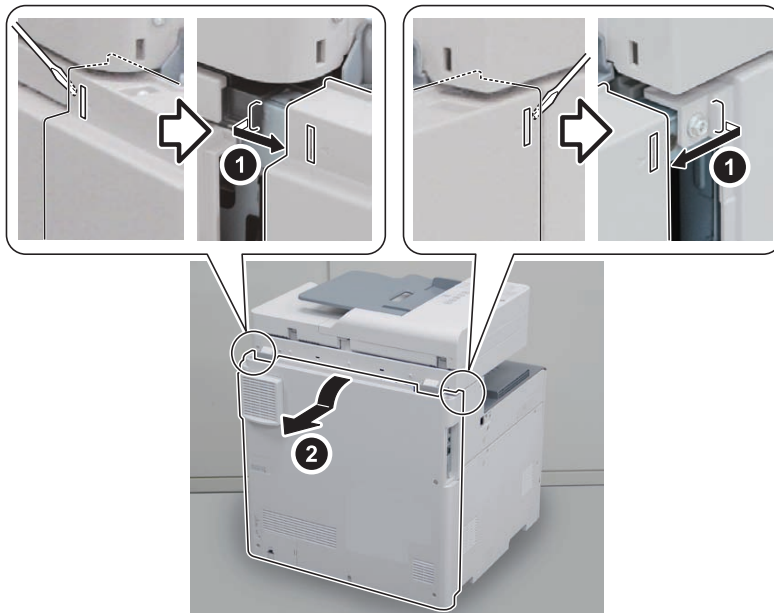


F-9-55

☐

6) Remove the Sub Cover of the Controller Box Cover.
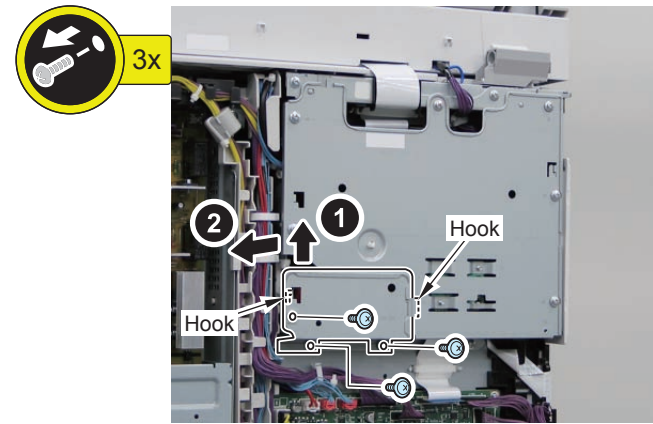
• 3 Screws
• 2 Hooks



F-9-56

☐

7) Disconnect the connector, and remove the Controller Box Cover.

• 6 Screws
• 2 Hooks
• 2 Bosses
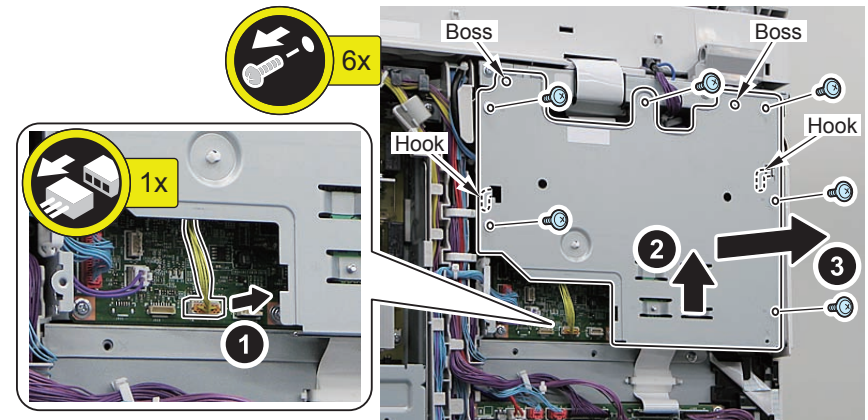


F-9-57

8) Remove the Face Plate. (The removed Face Plate will not be used.)

• 2 Screws (The removed screws will be used in a later step)
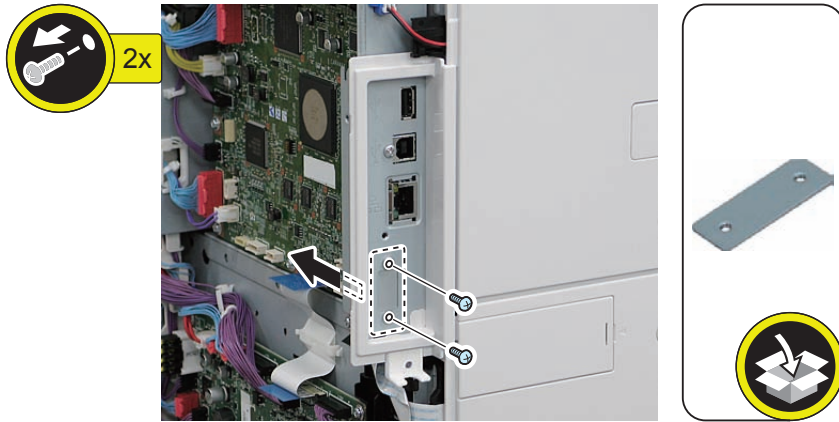


F-9-58

9) Install the Card Reader Relay Unit.

• 2 Screws (Use the screws removed in the previous step)
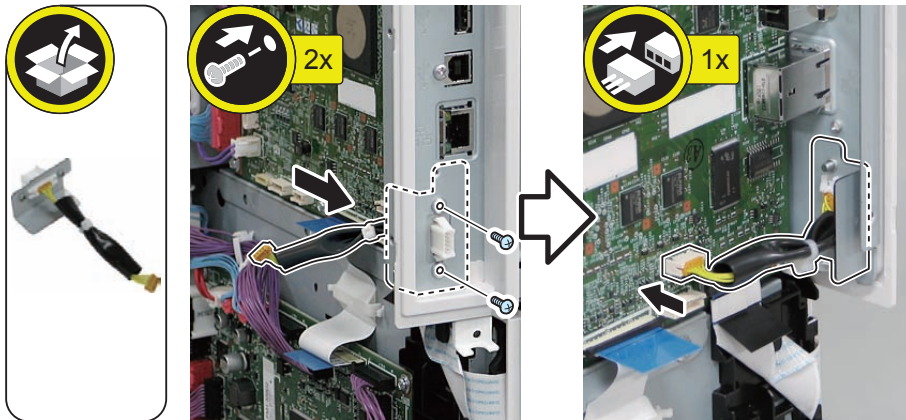


F-9-59

10) Return the covers to their original positions.

<Without Cassette Feeding Unit>

• Controller Box Cover (6 Screws, 1 Connector)
• Sub Cover of the Controller Box (3 Screws)
• Rear Cover (6 screws)
• Reader Rear Cover
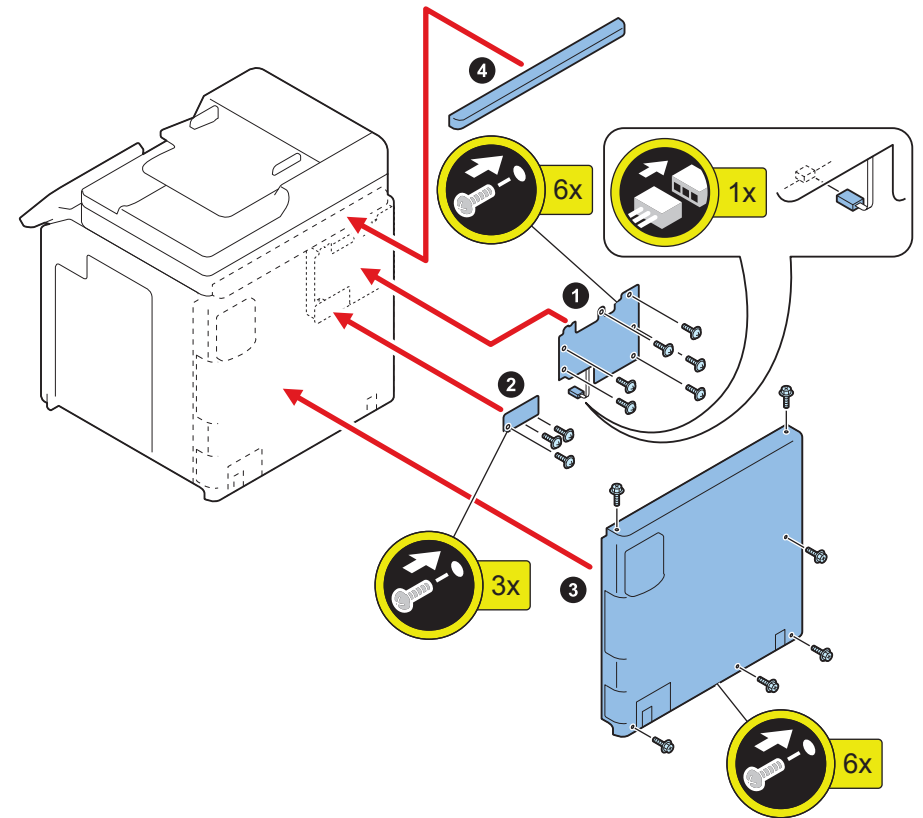


F-9-60

**<With Cassette Feeding Unit installed and Cassette Heater not installed>**

- Controller Box Cover (6 Screws, 1 Connector)
- Sub Cover of the Controller Box (3 Screws)
- Rear Cover (6 Screws)
- Connecting Plate (1 Knurled Screw)
- 2 Face Covers
- Reader Rear Cover
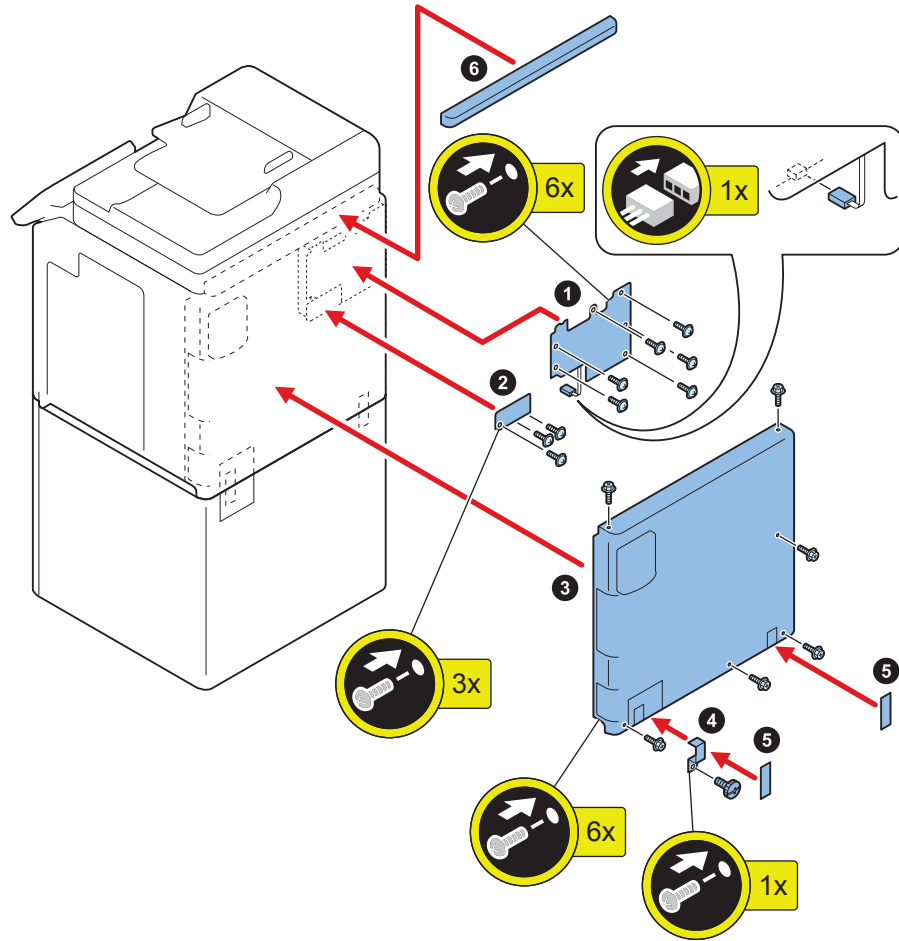


F-9-61

**<With Cassette Feeding Unit and Cassette Heater installed>**

- Controller Box Cover (6 Screws, 1 Connector)
- Sub Cover of the Controller Box (3 Screws)
- Rear Cover (6 Screws)
- Connector Cover (1 Screw)
- 1 Face Cover
- Reader Rear Cover
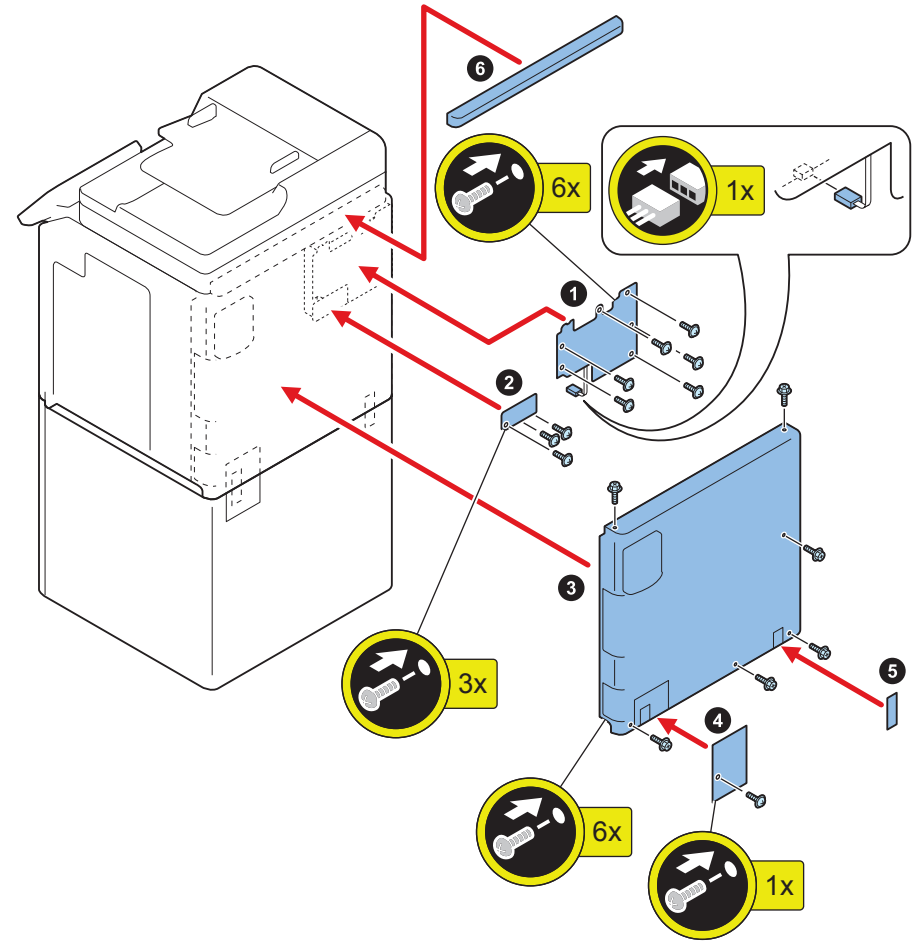


F-9-62

11) Remove the Lower Cover of the Card Reader Unit, and change the position of the cable.
• 1 Screw (Removed screw will be used in a later step)
12) Install the Lower Cover of the Card Reader Unit.
• 1 Screw (Use the screw removed in the previous step)
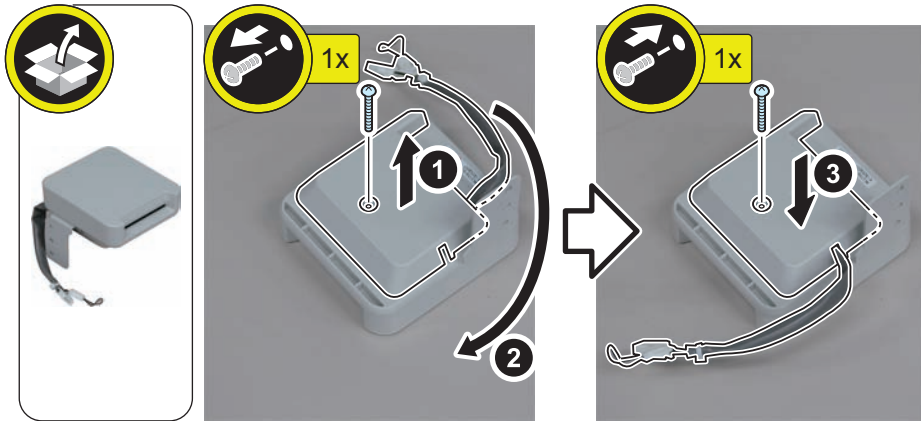


F-9-63

13) Install the Card Reader Unit to the Card Reader Mounting Plate (front) Unit.
• 2 Bosses
• 1 Toothed Washer
• 1 Screw(RS Tightening; M4x10)
• 1 Wire Saddle



RS tight M4x10

Boss
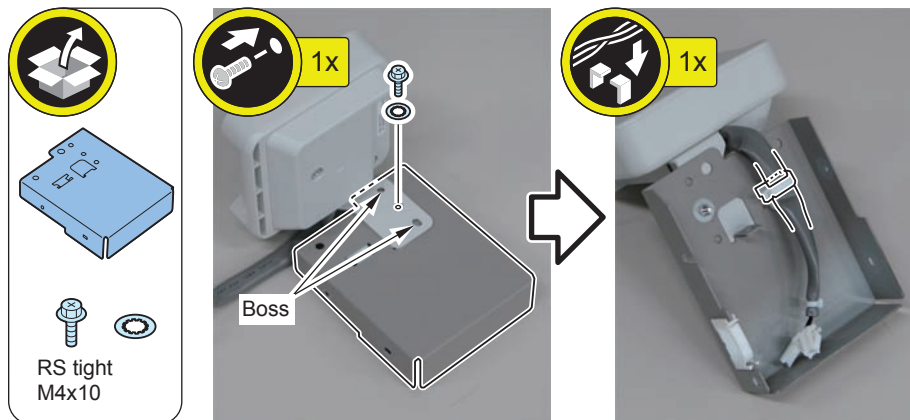
F-9-64

14) Connect the Card Reader External Relay Harness to the connector of the Card Reader Unit.
• 1 Connector
• 1 Edge Saddle

CAUTION:

Be sure that the core is inside the Edge Saddle.
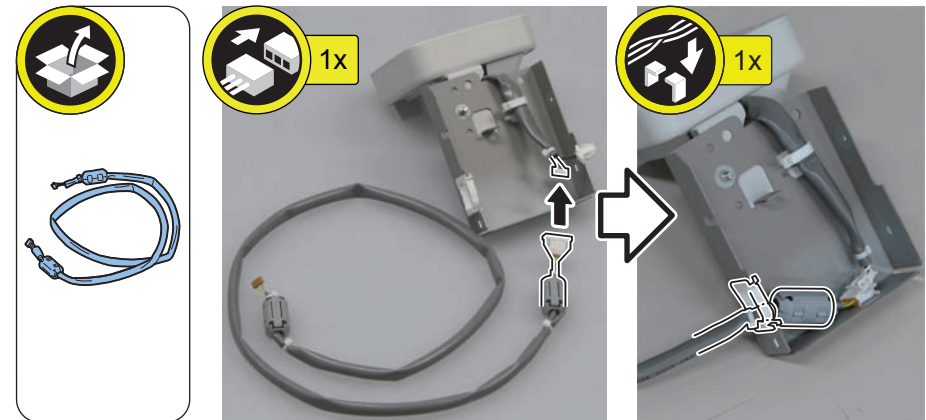


F-9-65

15) Remove the 2 Face Seals from the right side of the host machine. (The removed Face Seals will not be used.)



F-9-66

16) Install the Card Reader Mounting Plate (rear) Unit to the host machine.

• 2 Screws (W Sems; M3x14)

2x

W Sams
M3x14
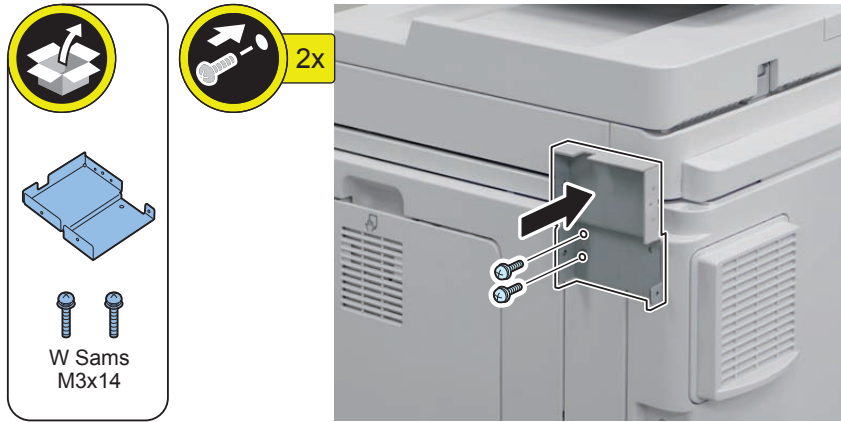
F-9-67

17) Install the Card Reader Mounting Plate (front) Unit to the Card Reader (rear) Unit.

• 4 Screws (TP; M3x6)

4x

TP
M3x6
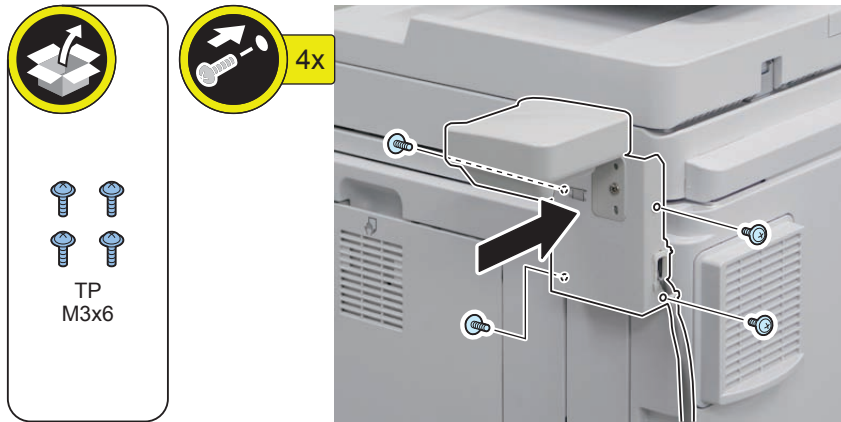
F-9-68

18) Connect the connector of the Card Reader External Relay Harness to the host machine, and install the Connector Cover.

• 1 Screw (TP: M3x6)

NOTE :
To ensure that the connector does not become disconnected, be sure to place the tie-wrap of the Card Reader External Relay Harness on the inside of the Connector Cover.

F-9-69

1x    1x    4

TP
M3x6

1

2    3
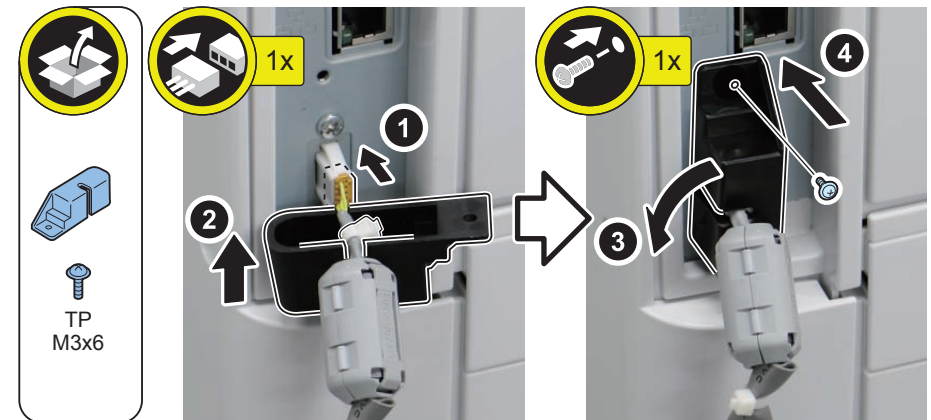
F-9-70

19)    Remove the covers of the 2 Cord Guides.
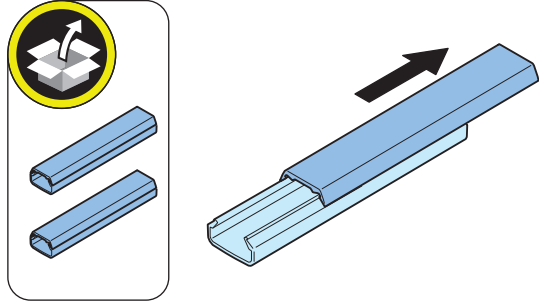


F-9-71

20)    Remove the release paper from the Cord Guides, and affix the guides to the areas indicated in the figure.
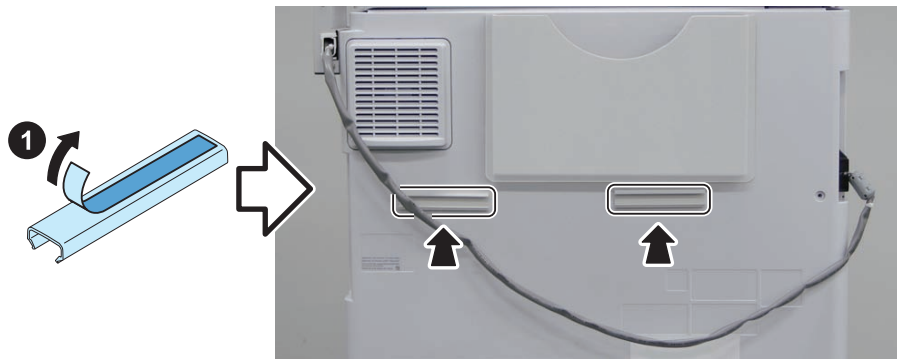


F-9-72

21)    Put the Card Reader External Relay Harness through the Cord Guides, and install the covers of the Cord Guides.
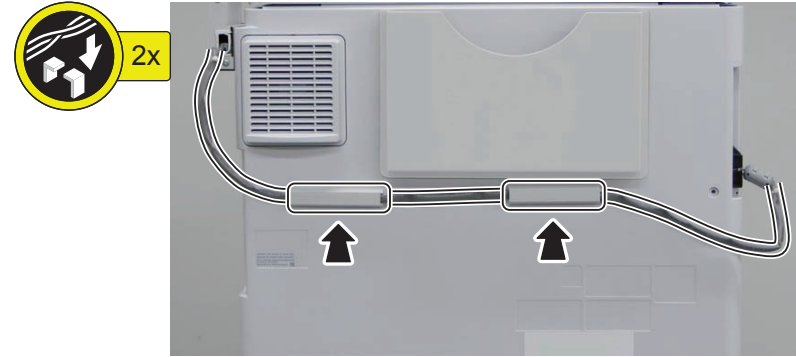


F-9-73

22)    Connect the power plug to the outlet.

23)    Turn ON the main power switch.

## ⬤ Setting After Installation

☐

1) COPIER > FUNCTION > INSTALL > CARD-NUM, and enter the first number of the card to be used.

Enter the smallest card number to be used by the user.

• Service Mode > COPIER > FUNCTION > INSTALL > CARD-NUM

☐

2) Sequence numbers beginning with the number specified in COPIER > FUNCTION > INSTALL > CARD are automatically registered.

From the entered card number, 300 cards can be used.

☐

3) Select ON for the Dept ID control.

• Menu > System Settings > Dept.ID manegement On/Off > ON > OK

☐

4) Turn OFF and then ON the main power switch to enable the setting values.

5) Check that a message [You must insert a control card.] appears.

> NOTE:
> Perform the following operations to change the number of cards (departments) after it has been set. In such a case, counter information for each department is reset.
> • Select OFF for the Dept ID Management.
> • Service mode : COPIER > FUNCTION > CLEAR > CARD
> • Clear E719.
>   Service Mode > COPIER > FUNCTION > CLEAR > E719-CLR
> • Turn OFF and then ON the main power switch to enable the setting values.
> • After that, perform the setup procedure again from step 1.
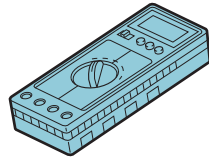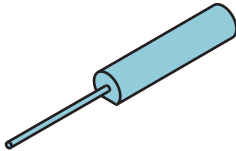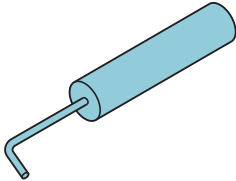
# Appendix

- Service Tools
- General Circuit Diagram
- List of User Mode
- Backup Data
- Soft counter specifications

# Service Tools

## Special Tools

In addition to the standard tools set, the following special tools are required when servicing the machine:

| Tool name | Tool No. | Ctgr | Appearance | Remarks |
|---|---|---|---|---|
| Digital multimeter | FY9-2002 | A | | Used as a probe extension when making electrical checks. |
| Tester extension pin | FY9-3038 | A | | |
| Tester extension pin (L-shaped) | FY9-3039 | A | | Use for electrical checks. |
| CA-7 test Sheet | FY9-9323 | A | | Used for adjusting/checking images. |

T-10-1

Reference: Category

A: Must be kept by each service engineer.

B: Must be kept by each group of about five engineers.

C: Must be kept by each workshop

# Solvents and Oils

None

# General Circuit Diagram
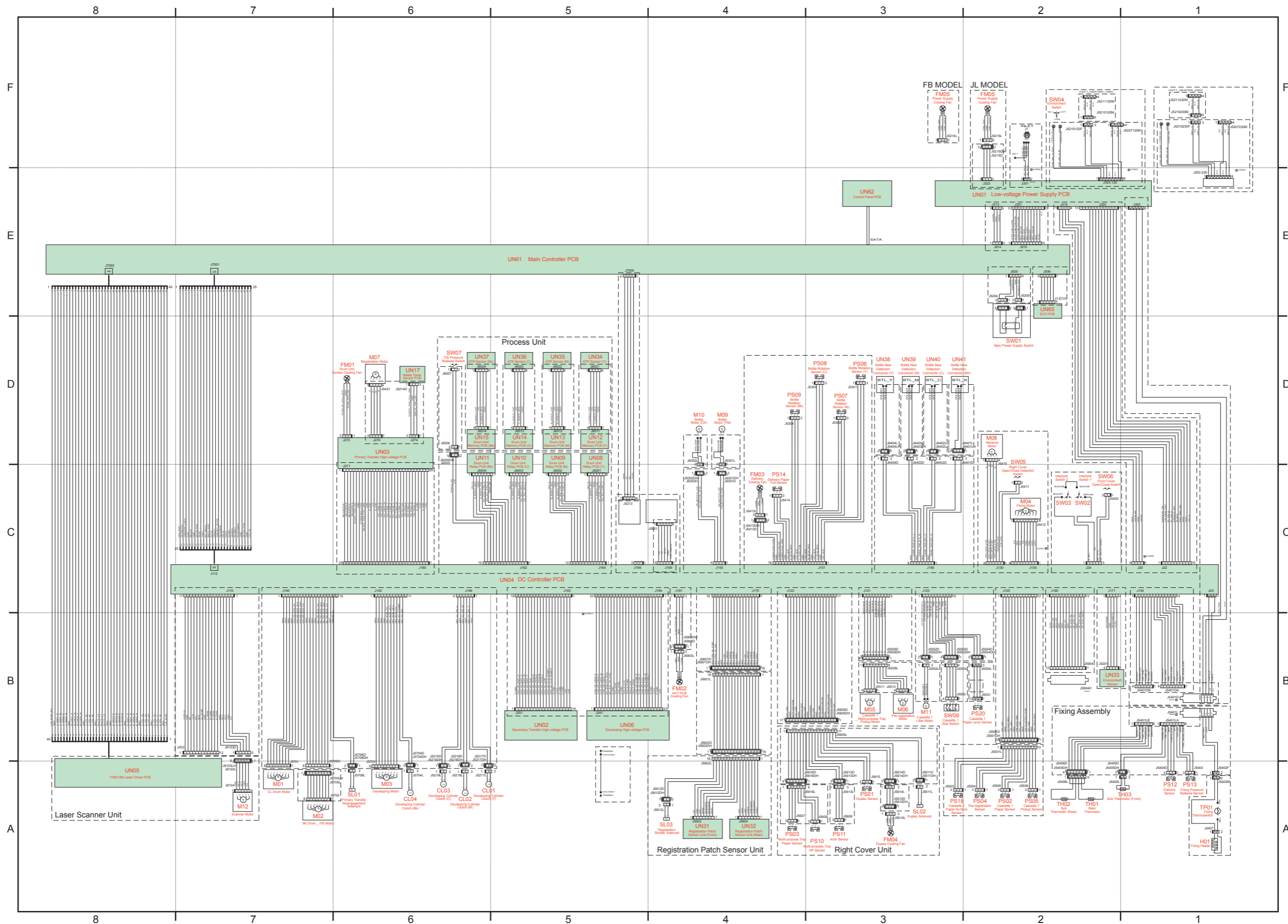
# List of User Mode

## ⬤ Network Settings

*: Default Settings

| Item | | | Setting Description |
|---|---|---|---|
| TCP/IP Settings | IPv4 Settings | IP Address Settings | • Auto Acquire*<br>  • Select Protocol<br>    Off, DHCP*<br>  • Auto IP<br>    Off, On*<br>• Manually Acquire<br>  • IP Address: 0.0.0.0<br>  • Subnet Mask: 0.0.0.0<br>  • Gateway Address: 0.0.0.0<br>• Check Settings<br>  • Auto Acquire<br>  • IP Address<br>  • Subnet Mask<br>  • Gateway Address |
| | | PING Command | |
| | | DNS Settings | • DNS Server Settings<br>  • Primary DNS Server: 0.0.0.0<br>  • Secondary DNS Server: 0.0.0.0<br>• DNS Host Name/Domain Name Settings<br>  • Host Name<br>  • Domain Name<br>• DNS Dynamic Update Settings<br>    Off*, On(DNS Dynamic Update Interval:<br>    0 to 24* to 48 (hr.)) |
| | | mDNS Settings | Off, On* : mDNS Name |
| | | DHCP Option Settings | • Acquire Host Name<br>  Off, On*<br>• DNS Dynamic Update<br>  Off*, On |
| | IPv6 Settings | Use IPv6 | • Off*<br>• On<br>• Check Settings<br>  Link-Local Address, Prefix Length |
| | | Stateless Address Settings | • Off<br>• On*<br>• Check Settings<br>  Stateless Address, Prefix Length |
| | | Use DHCPv6 | • Off*<br>• On<br>• Check Settings<br>  Stateful Address, Prefix Length |

| Item | | | | Setting Description |
|---|---|---|---|---|
| TCP/IP Settings | IPv6 Settings | DNS Settings | DNS Host Name/ Domain Name Settings | Use IPv4 Host/Domain<br>• Off<br>  Host Name<br>  Domain Name<br>• On* |
| | | | DNS Dynamic Update Settings | • Off*<br>• On<br>  • Register Manual Address<br>    Off*, On<br>  • Register Stateful Address<br>    Off*, On<br>  • Register Stateless Address<br>    Off*, On<br>  • DNS Dynamic Update Interval<br>    0 to 24* to 48 (hr.) |
| | | mDNS Settings | | • Off<br>• On*<br>  Use Same mDNS Name as IPv4<br>  • Off<br>    mDNS Name<br>  • On* |
| | WINS Settings | | | • WINS Resolution<br>  Off*<br>  On<br>    WINS Server Address: 0.0.0.0<br>• Scope ID |
| | WSD Settings | LPD Settings | LPD Print Settings | Off, On* |
| | | | RX Timeout | 1 to 5* to 60(min.) |
| | | RAW Settings | RAW Print Settings | Off, On* |
| | | | RX Timeout | 1 to 5* to 60(min.) |
| | | WSD Print Settings | Use WSD Print | Off, On* |
| | | | Use WSD Browsing | Off, On* |
| | | WSD Scan Settings | Use WSD Scan | Off*, On |
| | | | Use Computer Scan | Off*, On |
| | | Use Multicast Discovery | | Off, On* |
| | Use FTP PASV Mode | | | Off*, On |
| | Use HTTP | | | Off, On* |
| | Port Number Settings | LPD | | 1 to 515* to 65535 |
| | | RAW | | 1 to 9100* to 65535 |
| | | WSD Multicast Discovery | | 1 to 3702* to 65535 |
| | | HTTP | | 1 to 80* to 65535 |
| | | Multicast Discovery | | 1 to 427* to 65535 |
| | | POP3 | | 1 to 110* to 65535 |
| | | SMTP | | 1 to 25* to 65535 |
| | | FTP | | 1 to 21* to 65535 |
| | | SNMP | | 1 to 161* to 65535 |
| | MTU Size | | | 1300, 1400, 1500* |

| Item | | Setting Description |
|---|---|---|
| SNMP Settings | SNMPv1 Settings | Off, On* |
| | SNMPv3 Settings | Off*, On |
| | Acquire Printer Management Information from Host | Off*, On |
| Dedicated Port Settings | | Off, On* |
| Waiting Time for Connection | | 0* to 300 (sec.) |
| Ethernet Driver Settings | Auto Detect | • Off<br>  • Communication Mode<br>    Half Duplex*, Full Duplex<br>  • Ethernet Type<br>    10BASE-T*, 100BASE-TX,<br>    1000BASE-T<br>• On* |
| | MAC Address | |
| IEEE 802.1X Settings | | Off*, On |
| Device Settings Management On/Off | | Off, On* |
| Initialize Network Settings | | |

T-10-2

## Preferences

*: Default Settings

*1: Settings marked with (*1) have different defaults depending on the country or region of purchase.

| Item | | Setting Description |
|---|---|---|
| Display Settings | Default Screen after Startup/Restoration | Home*, Copy, Fax, Scan, Memory Media Print |
| | Home Screen Button Display Settings | • Select Button to Display<br>  Favorite Copy Settings<br>  Favorite Copy Settings<br>  Favorite Scan Settings<br>• Set Display Order<br>• Insert and Delete Blank |
| | Brightness | Five Levels |
| | Invert Screen Colors | Off*, On |
| | Millimeter/Inch Entry Switch*1 | Millimeter, Inch* |
| | Gram/Pound Switch | Gram, Pound* |
| | Notify to Clean Original Scanning Area | Off, On* |
| | Message Display Time | 1 to 2* to 5 (sec.) |
| | Scrolling Speed | Slow, Standard*, Fast |
| | Cursor Movement | Auto*, Manual |
| | Language*1 | English*, French, Spanish, Portuguese |
| | Remote UI Language*1 | English*, French, Spanish, Portuguese |
| English Keyboard Layout* | | USA Layout*, UK Layout |

T-10-3

## Timer Settings

*: Default Settings

*1: Settings marked with an asterisk "*1" cannot be imported or exported via the Remote UI.

*2: Settings marked with "*2" have different defaults depending on the country or region of purchase.

| Item | | Setting Description |
|---|---|---|
| Date/Time Settings | Date Format *2 | YYYY MM/DD, MM/DD/YYYY*, DD/MM YYYY |
| | Time Format | 12 Hour (AM/PM)*, 24 Hour |
| | Current Date/Time Settings *1 | |
| | Time Zone *2 | UTC-12:00 to UTC-5:00* to UTC+12:00 |
| | Daylight Saving Time Settings *2 | • Off*<br>• On<br>  Start: Month, Day<br>  End: Month, Day |
| Auto Reset Time | | 0 (Auto Reset is disabled.), 1 to 2* to 9 (min.) |
| Function After Auto Reset | | Default Function*, Selected Function |
| Auto Sleep Time | | 1* to 240 (min.) |
| Auto Offline Time | | 0 (The machine remains online.), 1 to 5* to 60 (min.) |

T-10-4

## Common Settings

*: Default Settings

*1: Settings marked with "*1" are only available when the optional Cassette Feeding Unit is attached.

*2: Settings marked with "*2" may be unavailable or have different defaults depending on the country or region of purchase.

| Item | | | Setting Description |
|---|---|---|---|
| Drawer Auto Selection On/Off | Copy | Multi-Purpose Tray | Off*, On |
| | | Drawer 1 | Off, On* |
| | | Drawer 2*1 | Off, On* |
| | | Drawer 3*1 | Off, On* |
| | | Drawer 4*1 | Off, On* |
| | Printer | Drawer 1 | Off, On* |
| | | Drawer 2*1 | Off, On* |
| | | Drawer 3*1 | Off, On* |
| | | Drawer 4*1 | Off, On* |
| | Fax | Multi-Purpose Tray | Off*, On |
| | | Drawer 1 | Off, On* |
| | | Drawer 2*1 | Off, On* |
| | | Drawer 3*1 | Off, On* |
| | | Drawer 4*1 | Off, On* |

| Item | | | Setting Description |
|---|---|---|---|
| Drawer Auto Selection On/Off | Other | Multi-Purpose Tray | Off*, On |
| | | Drawer 1 | Off, On* |
| | | Drawer 2*1 | Off, On* |
| | | Drawer 3*1 | Off, On* |
| | | Drawer 4*1 | Off, On* |
| Paper Series Settings for Auto Recognition in Drawer*2 | | | All Sizes, A/B Size, Inch Size*, A/K Size |
| A5/STMT Paper Selection*2 | Drawer 1 | | A5, STMT* |
| | Drawer 2*1 | | A5, STMT* |
| | Drawer 3*1 | | A5, STMT* |
| | Drawer 4*1 | | A5, STMT* |
| Switch Paper Feed Method | Multi-Purpose Tray | | Speed Priority*, Print Side Priority |
| | Drawer 1 | | Speed Priority*, Print Side Priority |
| | Drawer 2*1 | | Speed Priority*, Print Side Priority |
| | Drawer 3*1 | | Speed Priority*, Print Side Priority |
| | Drawer 4*1 | | Speed Priority*, Print Side Priority |
| Paper Size List 1 for Recognition | Drawer 1 | | LGL*, FOOLSCAP, AUS-FOOLSCAP, OFICIO, Brazil-OFICIO, Government-LGL, Mexico-OFICIO, F4A |
| | Drawer 2*1 | | LGL*, FOOLSCAP, AUS-FOOLSCAP, OFICIO, Brazil-OFICIO, Government-LGL, Mexico-OFICIO, F4A |
| | Drawer 3*1 | | LGL*, FOOLSCAP, AUS-FOOLSCAP, OFICIO, Brazil-OFICIO, Government-LGL, Mexico-OFICIO, F4A |
| | Drawer 4*1 | | LGL*, FOOLSCAP, AUS-FOOLSCAP, OFICIO, Brazil-OFICIO, Government-LGL, Mexico-OFICIO, F4A |
| Paper Size List 2 for Recognition | Drawer 1 | | Korean-LGL, Government-LTR, 16K, EXEC* |
| | Drawer 2*1 | | Korean-LGL, Government-LTR, 16K, EXEC* |
| | Drawer 3*1 | | Korean-LGL, Government-LTR, 16K, EXEC* |
| | Drawer 4*1 | | Korean-LGL, Government-LTR, 16K, EXEC* |

T-10-5

## Copy Settings

*: Default Settings

*1: Settings marked with "*1" are only available when the optional Cassette Feeding Unit is attached.

*2: Settings marked with "*2" may be unavailable or have different defaults depending on the country or region of purchase.

| Item | | Setting Description |
|---|---|---|
| Change Default Settings | Number of Copies | 1* to 999 |
| | Color Mode | Auto Select Color*, Full Color, Black & White |
| | Density | • Nine Levels<br>• Background]<br>  Auto, Adjust (Manual)* |
| | Original Type | Text/Photo/Map*, Text/Photo/Map (Quality), Printed Image, Text |
| | 2-Sided | Off*, $$$$$$ 1-Sided->2-Sided, $$$$$$ 2-Sided->2-Sided, $$$$$$ 2-Sided->1-Sided |
| | Copy Ratio*2 | Custom Ratio, 100% (Direct)*, 400% (Max), 200%, 129% STMT->LTR, 78% LGL->LTR, 64% LTR->STMT, 50%,.25% (Min) |
| | Paper: ****** Drawer 1 | ****** Multi-Purpose Tray, ****** Drawer 1*, ****** Drawer 2*1, ****** Drawer 3*1, ****** Drawer 4*1 |
| | N on 1 | Off*, $$$$$$ 2 on 1, $$$$$$ 4 on 1, $$$$$$ ID Card Copy, Select Layout |
| | Collate | Off*, On |
| | Erase Frame | Off*, On |
| | Sharpness | Seven Levels |
| | Color Balance | • Yellow: 17 Levels<br>• Magenta: 17 Levels<br>• Cyan: 17 Levels<br>• Black: 17 Levels<br>• Fine Adjust<br>    • Yellow<br>      High: 17 Levels, Medium: 17 Levels, Low: 17 Levels<br>    • Magenta<br>      High: 17 Levels, Medium: 17 Levels, Low: 17 Levels<br>    • Cyan<br>      High: 17 Levels, Medium: 17 Levels, Low: 17 Levels<br>    • Black<br>      High: 17 Levels, Medium: 17 Levels, Low: 17 Levels |
| Initialize Default Settings | | |

T-10-6

## ◉ Fax Settings

*: Default Settings

*1: Settings marked with "*1" may be unavailable or have different defaults depending on the country or region of purchase.

*2: Settings marked with "*2" cannot be imported or exported via the Remote UI.

| Item | | | Setting Description |
|---|---|---|---|
| Basic Settings | Register Unit Telephone Number | | |
| | Select Line Type (Manual) | | Pulse, Tone* |
| | Off-Hook Alarm | | Three Levels |
| TX Function Settings | Change Default Settings | Resolution | 200 x 100 dpi (Normal)*, 200 x 200 dpi (Fine), 200 x 200 dpi (Photo), 200 x 400 dpi (Superfine), 400 x 400 dpi (Ultrafine) |
| | | Density | Nine Levels |
| | | 2-Sided Original | Off*, $$$$$$ Book Type, $$$$$$ Calendar Type |
| | | Sharpness | Seven Levels |
| | Register Unit Name (Fax) | | |
| | ECM TX | | Off, On* |
| | Set Pause Time | | 1 to 2* to 15 (sec.) |
| | Auto Redial | | • Off<br>• On*<br>  • Number of Times to Redial<br>    1 to 2* to 10 (times)<br>  • Redial Interval<br>    2* to 99 (min.)<br>  • Redial When Error Occurs<br>    Off, On* |
| | TX Terminal ID | | • Off<br>• On*<br>  • Print Position<br>    Inside Image Area, Outside Image Area*<br>  • Mark Number as: TEL/FAX<br>    FAX*, TEL |
| | Check Dial Tone Before Sending *1 | | Off*, On |
| | Initialize Default Settings | | |
| RX Function Settings | ECM RX | | Off, On* |
| | Incoming Ring | | • Off<br>• On*<br>  1 to 2* to 99 (times) |
| | Remote RX | | • Off<br>• On*<br>  00 to 25* to 99 |
| | Switch to Auto RX | | • Off*<br>• On<br>  1 to 15* to 99 (sec.) |

| Item | | Setting Description |
|---|---|---|
| RX Print Settings | Print on Both Sides | Off*, On |
| | Reduce RX Size | • Off<br>• On*<br>  • Reduction Ratio<br>    Auto*, 97%, 95%, 90%, 75%<br>  • Reduction Direction<br>    Vertical/Horizontal, Vertical Only* |
| | RX Page Footer | Off*, On |
| Fax Setup Guide *2 | | |

T-10-7

## ◉ Scan Settings

*: Default Settings

*1: Settings marked with an asterisk (*1) are enabled only when an optional Universal Send Security Feature Set is registered.

| Item | | | Setting Description |
|---|---|---|---|
| USB Memory Settings | Change Default Settings | Scan Size | A4, A5, B5, LTR*, LGL, STMT |
| | | Color Mode | Color*, Black & White |
| | | File Format | • PDF (Compact)<br>• PDF*<br>• PDF (Compact/OCR)<br>• PDF (OCR)<br>• JPEG<br>• TIFF<br>• Set PDF Details*1<br>  • Encryption<br>    None*, Acrobat 7.0 or Later/128-bit AES,<br>    Acrobat 9.0 or Equivalent/256-bit AES,<br>    Acrobat 10.0 or Equivalent/256-bit AES<br>  • Digital Signatures<br>    None*, Top Left |
| | | Density | Nine Levels |
| | | Original Orientation | $$$$$$ Portrait, $$$$$$ Landscape |
| | | Original Type | Text, Text/Photo*, Photo |
| | | 2-Sided Original | Off*, $$$$$$ Book Type, $$$$$$ Calendar Type |
| | | Sharpness | Seven Levels |
| | | Data Size | Small: Memory Priority, Standard, Large: Image Quality Priority |
| | Initialize Default Settings | | |

| Item | | | Setting Description |
|---|---|---|---|
| E-Mail Settings | Change Default Settings | Scan Size | A4, A5, B5, LTR*, LGL, STMT |
| | | Color Mode | Color*, Black & White |
| | | File Format | • PDF (Compact)<br>• PDF*<br>• PDF (Compact/OCR)<br>• PDF (OCR)<br>• JPEG<br>• TIFF<br>• Set PDF Details*1<br>  • Encryption<br>  • None*, Acrobat 7.0 or Later/128-bit AES, Acrobat 9.0 or Equivalent/256-bit AES, Acrobat 10.0 or Equivalent/256-bit AES<br>  • Digital Signatures None*, Top Left |
| | | Density | Nine Levels |
| | | Original Orientation | $$$$$$ Portrait, $$$$$$ Landscape |
| | | Original Type | Text, Text/Photo*, Photo |
| | | 2-Sided Original | Off*, $$$$$$ Book Type, $$$$$$ Calendar Type |
| | | Sharpness | Seven Levels |
| | | Data Size | Small: Memory Priority, Standard*, Large: Image Quality Priority |
| | | Subject/Message | Subject: @, Message: @ |
| | | Reply To | None*, Specify from Address Book |
| | | Priority | Low, Standard*, High |
| | Register Unit Name (E-Mail) | | |
| | Initialize Default Settings | | |

| Item | | | Setting Description |
|---|---|---|---|
| File Settings | Change Default Settings | Scan Size | A4, A5, B5, LTR*, LGL, STMT |
| | | Color Mode | Color*, Black & White |
| | | File Format | • PDF (Compact)<br>• PDF*<br>• PDF (Compact/OCR)<br>• PDF (OCR)<br>• JPEG<br>• TIFF<br>• Set PDF Details*1<br>  • Encryption None*, Acrobat 7.0 or Later/128-bit AES, Acrobat 9.0 or Equivalent/256-bit AES, Acrobat 10.0 or Equivalent/256-bit AES<br>  • Digital Signatures None*, Top Left |
| | | Density | Nine Levels |
| | | Original Orientation | $$$$$$ Portrait, $$$$$$ Landscape |
| | | Original Type | Text, Text/Photo*, Photo |
| | | 2-Sided Original | Off*, $$$$$$ Book Type, $$$$$$ Calendar Type |
| | | Sharpness | Seven Levels |
| | | Data Size | Small: Memory Priority, Standard*, Large: Image Quality Priority |
| | Initialize Default Settings | | |
| Output File Image Settings | YCbCr TX Gamma Value | | Gamma 1.0, Gamma 1.4, Gamma 1.8*, Gamma 2.2 |
| | PDF (Compact) Image Quality Level | Image Level in Text/Photo Mode or Photo Mode | Data Size Priority, Normal*, Image Quality Priority |
| | | Image Level in Text Mode | Data Size Priority, Normal*, Image Quality Priority |
| OCR (Text Searchable) Settings | Smart Scan | | Off, On* |
| 256-bit AES Settings for Encrypted PDF*1 | | | Acrobat 9.0 or Equivalent, Acrobat 10.0 or Equivalent* |

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## Memory Media Print Settings

*: Default Settings

*1: Settings marked with (*1) are only available when the optional Cassette Feeding Unit is attached.

| Item | | | Setting Description |
|---|---|---|---|
| Change Default Settings | Number of Copies | | 1* to 99 |
| | Color Mode | | Color*, Black & White |
| | Paper: ****** Drawer 1 | | ****** Multi-Purpose Tray, ****** Drawer 1*, ****** Drawer 2*1, ****** Drawer 3*1, ****** Drawer 4*1 |
| | N on 1 | | Off*, $$$$$$ 2 on 1, $$$$$$ 4 on 1 |
| | 2-Sided | | Off*, $$$$$$ Book Type, $$$$$$ Calendar Type |
| | Set JPEG/TIFF Details | Print Date | Off*, On |
| | | Print File Name | Off*, On |
| | | Original Type | Photo Priority*, Text Priority |
| | | Brightness | Five Levels |
| | | Halftones | Gradation, Error Diffusion* |
| | Set PDF Details | Brightness | Seven Levels |
| | | Enlarge/Reduce to Fit Ppr. Size | Off*, On |
| | | Enlarge Print Area | Off*, On |
| | | Print Comments | Off, Auto* |
| | | Password to Open Document | |
| | | Other Halftones | Error Diffusion: Off*/On |
| | | Pure Black Text | Off, On* |
| | | Black Overprint | Off, On* |
| | | RGB Source Profile | sRGB*, Gamma 1.5, Gamma 1.8, Gamma 2.4, None |
| | | CMYK Simulation Profile | JapanColor(Canon), U.S. Web Coated v1.00(Canon), Euro Standard v1.00(Canon), None* |
| | | Use Grayscale Profile | Off*, On |
| | | Output Profile | Normal, Photo, TR Normal*, TR Photo |
| | | Matching Method | Perceptual*, Saturation, Colorimetric |
| | | RGB Pure Black Process | Off, On* |
| | | CMYK Pure Black Process | Off, On* |
| | | Composite Overprint | Off*, On |
| | | Advanced Smoothing — Advanced Smoothing | Off, Smooth 1*, Smooth 2 |
| | | Advanced Smoothing — Apply to Graphics | Off, On* |
| | | Advanced Smoothing — Apply to Text | Off, On* |
| | | Grayscale Conversion | sRGB, NTSC*, Uniform RGB |
| | | Print Quality | |
| Default Display Settings | | | Details*, Images |

| Item | Setting Description |
|---|---|
| File Sort Default Settings | Name (Ascending)*, Name (Descending), Date/Time (Ascending), Date/Time (Descending) |
| File Name Display Format | Short File Name, Long File Name* |
| Initialize Default Settings | |

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## Printer Settings

*: Default Settings

*1: Settings marked with "*1" are only available when the option is installed.

*2: Initial settings and display order of setting options differ for settings marked with "*2" depending on the country or region of purchase.

| Item | | Setting Description |
|---|---|---|
| Copies | | 1* to 99 (Copies) |
| 2-Sided Printing | | Off*, On |
| Default Paper | Default Paper Size *2 | LTR*, LGL, STMT, EXEC, FOOLSCAP, OFICIO, No. 10 (COM10), Monarch, DL, ISO-C5, Government-LTR, Government-LGL, AUS-FOOLSCAP, Brazil-OFICIO, Mexico-OFICIO, Korean-LGL, F4A, A4, A5, B5, Nagagata 3, Yougatanaga 3, Postcard, Reply Postcard, 4 on 1 Postcard, Custom |
| | Default Paper Type *2 | Plain 1 (18 lb Bond-20 lb Bond)/(64-75 g/m2)*, Plain 2 (21 lb Bond-24 lb Bond)/(76-90 g/m2), Plain 3 (25 lb Bond-27 lb Bond)/(91-105 g/m2), Recycled 1 (18 lb Bond-20 lb Bond)/(64-75 g/m2), Recycled 2 (21 lb Bond-24 lb Bond)/(76-90 g/m2), Recycled 3 (25 lb Bond-27 lb Bond)/(91-105 g/m2), Color, Heavy 1 (29 lb Bond-34 lb Bond)/(106-128 g/m2), Heavy 2 (35 lb Bond-60 lb Cover)/(129-163 g/m2), Heavy 3 (61 lb Cover-81 lb Cover)/(164-220 g/m2), Postcard, Envelope, Thin (16 lb Bond)/(60-63 g/m2), Transparency, Labels, Bond (23 lb Bond)/(90 g/m2) |
| Paper Size Override | | Off*, On |

| Item | | | Setting Description |
|---|---|---|---|
| Print Quality | Density | | • Yellow: 17 Levels<br>• Magenta: 17 Levels<br>• Cyan: 17 Levels<br>• Black: 17 Levels |
| | | Density (Fine Adjust) | • Yellow<br>  High: 17 Levels<br>  Medium: 17 Levels<br>  Low: 17 Levels<br>• Magenta<br>  High: 17 Levels<br>  Medium: 17 Levels<br>  Low: 17 Levels<br>• Cyan<br>  High: 17 Levels<br>  Medium: 17 Levels<br>  Low: 17 Levels<br>• Black<br>  High: 17 Levels<br>  Medium: 17 Levels<br>  Low: 17 Levels |
| | Toner Save | | Off*, On |
| | Gradation | | High 1*, High 2 |
| | Special Smoothing Mode | | Mode 1*, Mode 2, Mode 3, Mode 4, Mode 5, Mode 6 |
| | Toner Volume Correction | | Normal*, Gradation Priority, Text Priority |
| | Line Control | | Resolution Priority*, Gradation Priority |
| Layout | Binding Location | | Long Edge*, Short Edge |
| | Gutter | | -1.90 to ±0* to +1.90 (inches) or -50.0 to ±0* to +50.0 (mm) |
| | Offset Short Edge (Front) | | -2.00 to ±0* to +2.00 (inches) or -50.0 to ±0* to +50.0 (mm) |
| | Offset Long Edge (Front) | | -2.00 to ±0* to +2.00 (inches) or -50.0 to ±0* to +50.0 (mm) |
| | Offset Short Edge (Back) | | -2.00 to ±0* to +2.00 (inches) or -50.0 to ±0* to +50.0 (mm) |
| | Offset Long Edge (Back) | | -2.00 to ±0* to +2.00 (inches) or -50.0 to ±0* to +50.0 (mm) |
| Auto Error Skip | | | Off*, On |
| Timeout | | | 5 to 15* to 300 (sec.) |
| Personality | | | Auto*, PS, PCL |
| Color Mode | | | Auto (Color/B&W)*, Color, Black and White |
| Gradation Settings | Gradation | | Off*, Smooth 1, Smooth 2 |
| | Apply to Graphics | | Off, On* |
| | Apply to Images | | Off, On* |
| Compressed Image Output | | | Output*, Display Error |

| Item | | | Setting Description |
|---|---|---|---|
| UFR II | Halftones | Error Diffusion | Off*, On |
| | | Resolution/ Gradation | • Text<br>  Resolution*, Gradation<br>• Graphics<br>  Resolution*, Gradation<br>• Image<br>  Resolution*, Gradation |
| | RGB Source Profile | Text | sRGB*, Gamma 1.5, Gamma 1.8, Gamma 2.4 |
| | | Graphics | sRGB*, Gamma 1.5, Gamma 1.8, Gamma 2.4 |
| | | Image | sRGB*, Gamma 1.5, Gamma 1.8, Gamma 2.4 |
| | Output Profile | Text | Normal, Photo* |
| | | Graphics | Normal, Photo* |
| | | Image | Normal, Photo* |
| | Matching Method | Text | Perceptual*, Saturation, Colorimetric |
| | | Graphics | Perceptual*, Saturation, Colorimetric |
| | | Image | Perceptual*, Saturation, Colorimetric |
| | Gray Compensation | Text | Off, On* |
| | | Graphics | Off, On* |
| | | Image | Off, On* |
| | CMS (Matching) Selection | | Printer*, Host |
| | CMS (Matching)/ Gamma | Text | Gamma*, CMS |
| | | Graphics | Gamma*, CMS |
| | | Image | Gamma*, CMS |
| | Gamma Correction | Text | 1.0, 1.4*, 1.8, 2.2 |
| | | Graphics | 1.0, 1.4*, 1.8, 2.2 |
| | | Image | 1.0, 1.4*, 1.8, 2.2 |
| | Paper Save | | Off, On* |
| | Advanced Smoothing | Advanced Smoothing | Off, Smooth 1*, Smooth 2 |
| | | Apply to Graphics | Off*, On |
| | | Apply to Text | Off, On* |

| Item | | Setting Description |
|---|---|---|
| PCL | Paper Save | Off*, On |
| | Orientation | Portrait*, Landscape |
| | Font Number | 0* to 104 |
| | Point Size | 4.00 to 12.00* to 999.75 (point) |
| | Pitch | 0.44 to 10.00* to 99.99 (cpi) |
| | Form Lines *2 | 5 to 60* to 128 (lines) |
| | Character Code | ARABIC8, DESKTOP, GREEK8, HEBREW7, HEBREW8, ISO4, ISO6, ISO11, ISO15, ISO17, ISO21, ISO60, ISO69, ISOCYR, ISOGRK, ISOHEB, ISOL1, ISOL2, ISOL5, ISOL6, LEGAL, MATH8, MCTEXT, MSPUBL, PC775, PC8, PC850, PC852, PC862, PC864, PC866, PC8DN, PC8GRK, PC8TK, PC1004, PIFONT, PSMATH, PSTEXT, ROMAN8, VNINTL, VNMATH, VNUS, WIN30, WINARB, WINBALT, WINCYR, WINGRK, WINL1, WINL2, WINL5 |
| | Custom Paper | Off*, On |
| | Unit of Measure *2 | Millimeters, Inches* |
| | X dimension | 3 15/16 to 8 1/2* (inches) or 99 to 216* (mm) |
| | Y dimension | 5 7/8 to 13 15/16* (inches) or 148 to 355* (mm) |
| | Append CR to LF | Yes, No* |
| | Enlarge A4 Print Width | Off*, On |
| | Halftones — Error Diffusion | Off*, On |
| | Halftones — Resolution/Gradation | • Text Resolution*, Gradation • Graphics Resolution*, Gradation • Image Resolution*, Gradation |
| | RGB Source Profile — Text | sRGB*, Gamma 1.5, Gamma 1.8, Gamma 2.4 |
| | RGB Source Profile — Graphics | sRGB*, Gamma 1.5, Gamma 1.8, Gamma 2.4 |
| | RGB Source Profile — Image | sRGB*, Gamma 1.5, Gamma 1.8, Gamma 2.4 |
| | Output Profile — Text | Normal, Photo* |
| | Output Profile — Graphics | Normal, Photo* |
| | Output Profile — Image | Normal, Photo* |
| | Matching Method — Text | Perceptual*, Saturation, Colorimetric |
| | Matching Method — Graphics | Perceptual*, Saturation, Colorimetric |
| | Matching Method — Image | Perceptual*, Saturation, Colorimetric |
| | Gray Compensation — Text | Off, On* |
| | Gray Compensation — Graphics | Off, On* |
| | Gray Compensation — Image | Off, On* |
| | CMS (Matching) Selection | Printer*, Host |
| | CMS (Matching)/Gamma — Text | Gamma*, CMS |
| | CMS (Matching)/Gamma — Graphics | Gamma*, CMS |
| | CMS (Matching)/Gamma — Image | Gamma*, CMS |
| | Gamma Correction — Text | 1.0, 1.4*, 1.8, 2.2 |
| | Gamma Correction — Graphics | 1.0, 1.4*, 1.8, 2.2 |
| | Gamma Correction — Image | 1.0, 1.4*, 1.8, 2.2 |

| Item | | Setting Description |
|---|---|---|
| PCL | Advanced Smoothing — Advanced Smoothing | Off, Smooth 1*, Smooth 2 |
| | Advanced Smoothing — Apply to Graphics | Off*, On |
| | Advanced Smoothing — Apply to Text | Off, On* |
| | BarDIMM *1 | Enable, Disable* |
| PS | Job Timeout | 0* to 3600 (sec.) |
| | Print PS Errors | Off*, On |
| | Pure Black Text | Off, On* |
| | Black Overprint | Off, On* |
| | RGB Source Profile | sRGB*, Gamma 1.5, Gamma 1.8, Gamma 2.4, None |
| | CMYK Simulation Profile | JapanColor(Canon), U.S. Web Coated v1.00(Canon), Euro Standard v1.00(Canon), None* |
| | Use Grayscale Profile | Off*, On |
| | Output Profile | Normal, Photo, TR Normal, TR Photo* |
| | Matching Method | Perceptual*, Saturation, Colorimetric |
| | RGB Pure Black Process | Off, On* |
| | CMYK Pure Black Process | Off, On* |
| | Halftones — Error Diffusion | Off*, On |
| | Halftones — Resolution/Gradation | • Text Resolution*, Gradation • Graphics Resolution*, Gradation • Image Resolution*, Gradation |
| | Brightnes | 85 to 100* to 115 (%) |
| | Composite Overprint | Off, On* |
| | Advanced Smoothing — Advanced Smoothing | Off, Smooth 1*, Smooth 2 |
| | Advanced Smoothing — Apply to Graphics | Off*, On |
| | Advanced Smoothing — Apply to Text | Off, On* |
| | Grayscale Conversion | sRGB, NTSC*, Uniform RGB |

T-10-10

## ● Adjustment/Maintenance

*: Default Settings

| Item | | | Setting Description |
|---|---|---|---|
| Auto Adjust Gradation | | | Full Adjust (Plain Paper 1/2), Full Adjust (Plain Paper 3), Full Adjust (Heavy Paper), Quick Adjust, Adjust Copy Image |
| Auto Correction Settings | Auto Adjust Image Regularly | | Off*, On |
| Correct Print Color Mismatch | | | |
| Correct Print Color Mismatch | Feeder | | Seven Levels |
| | Platen Glass | | Seven Levels |
| Special Processing | Special Paper Processing | Envelope Cling Prevention | Off*, On |
| | | Envelope Fixing Speed Settings | -20 to 20 |
| | Adjust Toner Volume Used for Color Printing | | Off*, Level 1, Level 2 |
| | Heavy Paper Curl Reduction Mode | | Off*, On |
| | Fill Area Image Adjustment Mode | | Mode 1, Mode 2, Mode 3* |
| Clean Fixing Assembly | | | |
| Clean Device | | | |
| Special Cleaning | Adjust Level | | Level 1*, Level 2, Level 3 |
| | Start | | |
| Clean Feeder | | | |
| Remove Streaks from Original Scanning Area | | | Off, On* |
| Initialize After Replacing Parts | | | Secondary Transfer Outer Roller, Fixing Assembly, ADF Pickup Roller and ADF Separation Pad, ITB |

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## ● System Management Settings

*: Default Settings

*1: Settings marked with "*1" may be unavailable or have different defaults depending on the country or region of purchase.

*2: Settings marked with "*2" cannot be imported or exported via the Remote UI.

| Item | | | Setting Description |
|---|---|---|---|
| Network Settings | | | |
| System Manager Information Settings | System Manager ID and PIN | | System Manager ID<br>System Manager PIN |
| | System Manager Name | | |
| Device Information Settings | | | Device Name<br>Location |
| Department ID Management On/Off | | | Off*, On |
| Security Settings | Use SSL | | Off*, On |
| | Use IPSec | | Off*, On |
| | IPv4 Address Filter | Outbound Filter | Off*, On |
| | | Inbound Filter | Off*, On |
| | IPv6 Address Filter | Outbound Filter | Off*, On |
| | | Inbound Filter | Off*, On |
| | MAC Address Filter | Outbound Filter | Off*, On |
| | | Inbound Filter | Off*, On |
| Communication Management Settings | Fax Settings | TX Start Speed | 33600 bps*, 14400 bps, 9600 bps, 7200 bps, 4800 bps, 2400 bps |
| | | RX Start Speed | 33600 bps*, 14400 bps, 9600 bps, 7200 bps, 4800 bps, 2400 bps |
| | | Archive TX Document | Off*, On |
| | Memory Lock Settings | | • Off*<br>• On<br>  • Memory Lock PIN<br>  • Report Print<br>    Off, On*<br>  • Memory Lock Time<br>    Off*, On(Memory Lock Start Time, Memory Lock End Time) |
| Select Country/Region *1*2 | | | United States (US)*, Canada (CA), Brazil (BR), Mexico (MX), Other |
| Forwarding Settings *2 | | | Off*, On |
| Store/Print When Forwarding | Print Images | | Off, On*, Only When Error Occurs |
| | Store Images in Memory | | Off*, Only When Error Occurs |
| Remote UI Settings *2 | Use Remote UI | | Off, On* |

| Item | | Setting Description |
|---|---|---|
| Restrict TX Function | Address Book PIN | |
| | Restrict New Destinations | Off*, On |
| | Allow Fax Driver TX | Off, On* |
| | Restrict Resending from Log | Off*, On |
| | Confirm Entered Fax Number | Off*, On |
| | Coded Dial TX Confirmation | Off*, On |
| | Restrict Sequential Broadcast | Off*, Confirm Sequential Broadcast, Reject Sequential Broadcast |
| Display Job Log | | Off, On* |
| USB Device On/Off | | Off, On* |
| Store to USB Memory | | Off*, On |
| Memory Media Print On/Off | | Off*, On |
| Enable Product Extended Survey Program | | Off, On* |
| Enable Canon Mobile Scanning | | Off, On* |
| Import/Export of Settings | | Import, Export |
| Secure Print Settings | | • Off<br>• On*<br>  Secure Print Deletion Time, 10 to 30* to 240 (min.) |
| PDL Selection (Plug and Play) | Network | Fax, UFR II*, UFRII LT (XPS) |
| | USB | UFR II*, UFRII LT (XPS) |
| Register License | | |
| Update Firmware *2 | | Via PC*, Via Internet |
| Initialize Key and Certificate *2 | | |
| Initialize Address Book *2 | | |
| Initialize Menu | | Preferences, Timer Settings, Common Settings, Copy Settings, Fax Settings, Scan Settings, Memory Media Print Settings, Printer Settings, System Management Settings, Initialize All |
| | System Management Settings *2 | Network Settings, System Manager Information Settings, Device Information Settings, Department ID Management On/Off, Security Settings, Communication Management Settings, Forwarding Settings, Store/Print When Forwarding, Use Remote UI, Restrict TX Function, Register LDAP Server, Authentication Settings for Send Function, Display Job Log, USB Device On/Off, Store to USB Memory, Memory Media Print On/Off, Enable Product Extended Survey Program, Enable Canon Mobile Scanning, Secure Print Settings, PDL Selection (Plug and Play), Initialize All |

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# Backup Data

| Data | | Location | Replace | | Delete — Menu > System Management Settings — Initialize Menu | | | | | | | | | Delete — Other | | | Service function | | | | | | Backup by User | | | Backup by Service | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | DC Controller PCB | Main Controller PCB *1 | Preferences | Timer Settings | Common Settings | Copy Settings | Fax Settings | Scan Settings | Memory Media Print Settings | Printer Settings | Initialize All | Initializing Address Book | Initializing Key and Certificate | Initializing System Management Settings | R-CON *2 | SRVC-DAT *3 | HIST *4 | ALL *5 | DC-CON *6 | CNT-DCON *7 | Yes/No | Method | Location to be stored | Yes/No | Method | Location to be stored |
| Address Book | | Flash ROM | - | Clear | - | - | - | - | - | - | - | - | - | Clear | - | - | - | - | - | Clear | - | - | Yes | Remote UI | PC | No | - | - |
| Menu | Preferences | Flash ROM | - | Clear | Clear | - | - | - | - | - | - | - | Clear | - | - | - | - | - | - | Clear | - | - | Yes | Remote UI | PC | No | - | - |
| | Timer Settings | Flash ROM | - | Clear | - | Clear | - | - | - | - | - | - | Clear | - | - | - | - | - | - | Clear | - | - | Yes | Remote UI | PC | No | - | - |
| | Common Settings | Flash ROM | - | Clear | - | - | Clear | - | - | - | - | - | Clear | - | - | - | - | - | - | Clear | - | - | Yes | Remote UI | PC | No | - | - |
| | Copy Settings | Flash ROM | - | Clear | - | - | - | Clear | - | - | - | - | Clear | - | - | - | - | - | - | Clear | - | - | Yes | Remote UI | PC | No | - | - |
| | Fax Settings | Flash ROM | - | Clear | - | - | - | - | Clear | - | - | - | Clear | - | - | - | - | - | - | Clear | - | - | Yes *8 | Remote UI | PC | No | - | - |
| | Scan Settings | Flash ROM | - | Clear | - | - | - | - | - | Clear | - | - | Clear | - | - | - | - | - | - | Clear | - | - | Yes | Remote UI | PC | No | - | - |
| | Memory Media Print Settings | Flash ROM | - | Clear | - | - | - | - | - | - | Clear | - | Clear | - | - | - | - | - | - | Clear | - | - | Yes | Remote UI | PC | No | - | - |
| | Printer Settings | Flash ROM | - | Clear | - | - | - | - | - | - | - | Clear | Clear | - | - | - | - | - | - | Clear | - | - | Yes | Remote UI | PC | No | - | - |
| Key and Certificate | | Flash ROM | - | Clear | - | - | - | - | - | - | - | - | - | - | Clear *10 | - | - | - | - | Clear | - | - | No | - | - | No | - | - |
| System Management Settings | | Flash ROM | - | Clear | - | - | - | - | - | - | - | - | - | - | - | Clear | - | - | - | Clear *12 | - | - | Yes *13 | Remote UI | PC | No | - | - |
| Serial Number | | Flash ROM | - | Clear *11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | No | - | - |
| Job History | | Flash ROM | - | Clear | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Clear | Clear | - | - | No | - | - | No | - | - |
| Service mode | Service mode setting values (R-CON) | RCON | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Clear | - | - | - | - | - | No | - | - | No | - | - |
| | Service mode setting values (MN-CON) | Flash ROM | - | Clear | - | - | - | - | - | - | - | - | - | - | - | - | - | Clear | - | Clear | - | - | No | - | - | Yes | Service mode *8 | USB memory |
| | Service mode setting values (DC-CON: Except for COUNTER) | Flash ROM | Clear | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Clear | - | No | - | - | Yes | Service mode *9 | Flash ROM |
| | Service mode setting values (DC-CON: Only COUNTER) | Flash ROM | Clear | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Clear | Clear | No | - | - | Yes | Service mode *9 | Flash ROM |

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| | |
|---|---|
| *1 | Log data such as Mac address, USB serial number, printer-related setting values, scanner-related setting values, user data, and logs are initialized. |
| *2 | The factory adjustment values of the Reader and ADF are initialized. |
| *3 | Service data is cleared. User data is not cleared. The factory adjustment values of the Reader and ADF are not initialized. |
| *4 | The logs (communication management, print, jam, error, and alarm) are cleared. |
| *5 | The user data, service data, logs, and system administrator are initialized. (The system manager ID and password are changed back to the default values.) The factory adjustment values of the Reader and ADF are not initialized. |
| *6 | DC Controller PCB (RAM) is cleared. |
| *7 | DC Controller (service counter) is cleared. |
| *8 | Excluding Fax Setup Guide |
| *9 | When the key and certificate are initialized, TLS authentication of IEEE802.1X and the SSL setting are changed to "OFF". |
| *10 | The system administrator ID and the password are changed back to the default values. <Counter meter-installed model> ID: 7654321 / PWD: 7654321 <Model without counter meter> ID: 0 / PWD: 0 |
| *11 | Excluding [Forwarding Settings], [Remote UI On/Off], [Update Firmware], [Initialize Key and Certificate], [Initialize Address Book], and [Initialize System Management Settings] |
| *12 | Only devices without counter meter are supported. After replacement of the PCB, resetting is required. OPTION > SERIAL > SN-MAIN |
| *13 | FUNCTION > SYSTEM > IMPORT / FUNCTION > SYSTEM > EXPORT |
| *14 | FUNCTION > VIFFNC > STOR-DCN / FUNCTION > VIFFNC > RSTR-DCN |

T-10-14

# Soft counter specifications

## Soft counter specifications

The numbers entered for software counters are classified as follows:

| No. | Counter Details |
|---|---|
| 000 to 099 | Remote copy |
| 100 to 199 | Total |
| 200 to 299 | Copy |
| 300 to 399 | Print |
| 400 to 499 | Copy and print |
| 500 to 599 | Scan |
| 600 to 699 | Box |
| 700 to 799 | Reception print |
| 800 to 899 | Report print |
| 900 to 999 | Transmission |

T-10-15

Meanings of symbols in tables
- L: Large size (larger than B4 size)
- S: Small size (smaller than B4 size)
- Copy: Local copy
- Copy A: Local copy
- Print: PDL print + report print
- Print A: PDL print + report print
- Scan: Black and white scan + color scan

| No. | Counter Details |
|---|---|
| 071 | Toner bottle black |
| 072 | Toner bottle yellow |
| 073 | Toner bottle magenta |
| 074 | Toner bottle cyan |
| 091 | 1/10 Toner bottle black |
| 092 | 1/10 Toner bottle yellow |
| 093 | 1/10 Toner bottle magenta |
| 094 | 1/10 Toner bottle cyan |
| 101 | Total 1 |
| 102 | Total 2 |
| 103 | Total(large) |
| 104 | Total (small) |
| 105 | Total (full color2) |
| 106 | Total (full color2) |
| 108 | Total (black and white 1) |
| 109 | Total (black and white 2) |
| 110 | Total (mono color /large) |
| 111 | Total (mono color /small) |
| 112 | Total (black and white /large) |
| 113 | Total (black and white /small) |
| 114 | Total 1(double sided) |
| 115 | Total 2(double sided) |
| 116 | large (double sided) |
| 117 | small (double sided) |
| 118 | Total (mono color 1) |
| 119 | Total (mono color 2) |
| 120 | Total (full color /large ) |
| 121 | Total (full color /small) |
| 122 | Total (full color +mono color /large ) |
| 123 | Total (full color +mono color /small) |
| 124 | Total (full color +mono color 2) |
| 125 | Total (full color +mono color 1) |
| 126 | Total A1 |
| 127 | Total A2 |
| 128 | Total A (large) |
| 129 | Total A (small) |
| 130 | Total A (full color 1) |
| 131 | Total A (full color 2) |
| 132 | Total A (black and white 1) |
| 133 | Total A (black and white 2) |
| 134 | Total A (mono color /large) |
| 135 | Total A (mono color /small) |
| 136 | Total A (black and white /large) |
| 137 | Total A (black and white /small) |
| 138 | Total A 1(double sided) |

| No. | Counter Details |
|---|---|
| 139 | Total A 2(double sided) |
| 140 | large A (double sided) |
| 141 | small A (double sided) |
| 142 | Total A  (mono color 1) |
| 143 | Total A  (mono color 2) |
| 144 | Total A  (full color /large ) |
| 145 | Total A  (full color /small) |
| 146 | Total A  (full color +mono color /large ) |
| 147 | Total A  (full color +mono color /small) |
| 148 | Total A  (full color +mono color 2) |
| 149 | Total A  (full color +mono color 1) |
| 150 | Total B1 |
| 151 | Total B2 |
| 152 | Total B (large) |
| 153 | Total B (small) |
| 154 | Total B (full color 1) |
| 155 | Total B (full color 2) |
| 156 | Total B (black and white 1) |
| 157 | Total B (black and white 2) |
| 158 | Total B (mono color /large) |
| 159 | Total B (mono color /small) |
| 160 | Total B (black and white /large) |
| 161 | Total B (black and white /small) |
| 162 | Total B1 (double sided) |
| 163 | Total B2 (double sided) |
| 164 | largeB (double sided) |
| 165 | smallB (double sided) |
| 166 | Total B (mono color 1) |
| 167 | Total B (mono color 2) |
| 168 | Total B (full color /large ) |
| 169 | Total B (full color /small) |
| 170 | Total B (full color +mono color /large ) |
| 171 | Total B (full color +mono color /small) |
| 172 | Total B (full color +mono color 2) |
| 173 | Total B (full color +mono color 1) |
| 201 | Copy (Total 1) |
| 202 | Copy (Total 2) |
| 203 | Copy (large) |
| 204 | Copy (small) |
| 205 | Copy A  (Total 1) |
| 206 | Copy A  (Total 2) |
| 207 | Copy A  (large) |
| 208 | Copy A (small) |
| 209 | Local copy (Total 1) |
| 210 | Local copy (Total 2) |

| No. | Counter Details |
|---|---|
| 211 | Local copy (large) |
| 212 | Local copy (small) |
| 217 | Copy (full color 1) |
| 218 | Copy (full color 2) |
| 219 | Copy (mono color 1) |
| 220 | Copy (mono color 2) |
| 221 | Copy (black and white 1) |
| 222 | Copy (black and white 2) |
| 223 | Copy (full color /large) |
| 224 | Copy (full color /small) |
| 225 | Copy (mono color /large) |
| 226 | Copy (mono color /small) |
| 227 | Copy (black and white /large) |
| 228 | Copy (black and white /small) |
| 229 | Copy (full color +mono color /large) |
| 230 | Copy (full color +mono color /small) |
| 231 | Copy (full color +mono color /2) |
| 232 | Copy (full color +mono color /1) |
| 233 | Copy (full color /large/double sided ) |
| 234 | Copy (full color /small/double sided ) |
| 235 | Copy (mono color /large/double sided ) |
| 236 | Copy (mono color /small/double sided ) |
| 237 | Copy (black and white /large/double sided ) |
| 238 | Copy (black and white /small/double sided ) |
| 245 | Copy A (full color 1) |
| 246 | Copy A (full color 2) |
| 247 | Copy A (mono color 1) |
| 248 | Copy A (mono color 2) |
| 249 | Copy A (black and white 1) |
| 250 | Copy A (black and white 2) |
| 251 | Copy A (full color /large) |
| 252 | Copy A (full color /small) |
| 253 | Copy A (mono color /large) |
| 254 | Copy A (mono color /small) |
| 255 | Copy A (black and white /large) |
| 256 | Copy A (black and white /small) |
| 257 | Copy A (full color +mono color /large) |
| 258 | Copy A (full color +mono color /small) |
| 259 | Copy A (full color +mono color 2) |
| 260 | Copy A (full color +mono color 1) |
| 261 | Copy A (full color /large/double sided ) |
| 262 | Copy A (full color /small/double sided ) |
| 263 | Copy A (mono color /large/double sided ) |
| 264 | Copy A (mono color /small/double sided ) |
| 265 | Copy A (black and white /large/double sided ) |

| No. | Counter Details |
|---|---|
| 266 | Copy A (black and white /small/double sided ) |
| 273 | Local copy (full color 1) |
| 274 | Local copy (full color 2) |
| 275 | Local copy (mono color 1) |
| 276 | Local copy (mono color 2) |
| 277 | Local copy (black and white 1) |
| 278 | Local copy (black and white 2) |
| 279 | Local copy (full color /large) |
| 280 | Local copy (full color /small) |
| 281 | Local copy (mono color /large) |
| 282 | Local copy (mono color /small) |
| 283 | Local copy (black and white /large) |
| 284 | Local copy (black and white /small) |
| 285 | Local copy (full color +mono color /large) |
| 286 | Local copy (full color +mono color /small) |
| 287 | Local copy (full color +mono color 2) |
| 288 | Local copy (full color +mono color 1) |
| 289 | Local copy (full color /large/double sided ) |
| 290 | Local copy (full color /small/double sided ) |
| 291 | Local copy (mono color /large/double sided ) |
| 292 | Local copy (mono color /small/double sided ) |
| 293 | Local copy (black and white /large/double sided ) |
| 294 | Local copy (black and white /small/double sided ) |
| 301 | Print (Total 1) |
| 302 | Print (Total 2) |
| 303 | Print (large ) |
| 304 | Print (small) |
| 305 | Print A(Total 1) |
| 306 | Print A(Total 2) |
| 307 | Print A(large ) |
| 308 | Print A(small) |
| 309 | Print (full color 1) |
| 310 | Print (full color 2) |
| 311 | Print (mono color 1) |
| 312 | Print (mono color 2) |
| 313 | Print (black and white 1) |
| 314 | Print (black and white 2) |
| 315 | Print (full color /large ) |
| 316 | Print (full color /small) |
| 317 | Print (mono color /large ) |
| 318 | Print (mono color /small) |
| 319 | Print (black and white /large ) |
| 320 | Print (black and white /small) |
| 321 | Print (full color +mono color /large ) |
| 322 | Print (full color +mono color /small) |

| No. | Counter Details |
|---|---|
| 323 | Print (full color +mono color /2) |
| 324 | Print (full color +mono color /1) |
| 325 | Print (full color /large /double sided) |
| 326 | Print (full color /small/double sided) |
| 327 | Print (mono color /large /double sided) |
| 328 | Print (mono color /small/double sided) |
| 329 | Print (black and white /large /double sided) |
| 330 | Print (black and white /small/double sided) |
| 331 | PDLPrint (Total 1) |
| 332 | PDLPrint (Total 2) |
| 333 | PDLPrint (large ) |
| 334 | PDLPrint (small) |
| 335 | PDLPrint (full color 1) |
| 336 | PDLPrint (full color 2) |
| 337 | PDLPrint (mono color 1) |
| 338 | PDLPrint (mono color 2) |
| 339 | PDLPrint (black and white 1) |
| 340 | PDLPrint (black and white 2) |
| 341 | PDLPrint (full color /large ) |
| 342 | PDLPrint (full color /small) |
| 343 | PDLPrint (mono color /large) |
| 344 | PDLPrint (mono color /small) |
| 345 | PDLPrint (black and white /large ) |
| 346 | PDLPrint (black and white /small) |
| 351 | PDLPrint (full color /large /double sided) |
| 352 | PDLPrint (full color /small/double sided) |
| 353 | PDLPrint (mono color /large /double sided) |
| 354 | PDLPrint (mono color /small/double sided) |
| 355 | PDLPrint (black and white /large /double sided) |
| 356 | PDLPrint (black and white /small/double sided) |
| 401 | Copy + print (full color /large) |
| 402 | Copy + print (full color /small) |
| 403 | Copy + print (black and white/large) |
| 404 | Copy + print (black and white/small) |
| 405 | Copy + print (black and white2) |
| 406 | Copy + print (black and white1) |
| 407 | Copy + print (full color +mono color /large) |
| 408 | Copy + print (full color +mono color /small) |
| 409 | Copy + print (full color +mono color /2) |
| 410 | Copy + print (full color +mono color /1) |
| 411 | Copy + print (large) |
| 412 | Copy + print (small) |
| 413 | Copy + print (2) |
| 414 | Copy + print (1) |
| 415 | Copy + print (mono color /large) |

| No. | Counter Details |
|---|---|
| 416 | Copy + print (mono color /small) |
| 417 | Copy + print (full color /large/double sided) |
| 418 | Copy + print (full color /small/double sided) |
| 419 | Copy + print (mono color /large/double sided) |
| 420 | Copy + print (mono color /small/double sided) |
| 421 | Copy + print (black and white/large/double sided) |
| 422 | Copy + print (black and white/small/double sided |
| 501 | Scan (Total 1) |
| 502 | Scan (Total 2) |
| 503 | Scan (large) |
| 504 | Scan (small ) |
| 505 | Black and white Scan (Total 1) |
| 506 | Black and white Scan (Total 2) |
| 507 | Black and white Scan (large) |
| 508 | Black and white Scan (small) |
| 509 | Color scan  (Total 1) |
| 510 | Color scan  (Total 2) |
| 511 | Color scan  (large) |
| 512 | Color scan  (small ) |
| 631 | Memory media pint (Total 1) |
| 632 | Memory media pint (Total 2) |
| 633 | Memory media pint (large) |
| 634 | Memory media pint (small) |
| 635 | Memory media pint (full color 1) |
| 636 | Memory media pint (full color 2) |
| 639 | Memory media pint (black and white 1) |
| 640 | Memory media pint (black and white 2) |
| 641 | Memory media pint (full color /large) |
| 642 | Memory media pint (full color /small) |
| 645 | Memory media pint (black and white /large) |
| 646 | Memory media pint (black and white /small) |
| 651 | Memory media pint (full color /large/double sided) |
| 652 | Memory media pint (full color /small/double sided) |
| 655 | Memory media pint (black and white /large/double sided) |
| 656 | Memory media pint (black and white /small/double sided) |
| 701 | Reception print (Total 1) |
| 702 | Reception print (Total 2) |
| 703 | Reception print (large) |
| 704 | Reception print (small) |
| 705 | Reception print (full color 1) |
| 706 | Reception print (full color 2) |
| 709 | Reception print (black and white 1) |
| 710 | Reception print (black and white 2) |
| 711 | Reception print (full color /large) |
| 712 | Reception print (full color /small) |

| No. | Counter Details |
|---|---|
| 715 | Reception print (black and white /large) |
| 716 | Reception print (black and white /small) |
| 721 | Reception print (full color /large/double sided) |
| 722 | Reception print (full color /small/double sided) |
| 725 | Reception print (black and white /large/double sided) |
| 726 | Reception print (black and white /small/double sided) |
| 743 | Network Print(Total 1) |
| 744 | Network Print(Total 2) |
| 745 | Network Print(large) |
| 746 | Network Print(small) |
| 747 | Network Print(full color 1) |
| 748 | Network Print(full color 2) |
| 749 | Network Print(black and white 1) |
| 750 | Network Print(black and white 2) |
| 751 | Network Print(full color/large) |
| 752 | Network Print(full color/small) |
| 753 | Network Print(mono color /large) |
| 754 | Network Print(black and white/small) |
| 755 | Network Print(full color /large/double sided) |
| 756 | Network Print(full color /small/double sided) |
| 757 | Network Print(black and white /large/double sided) |
| 758 | Network Print(black and white /small/double sided) |
| 801 | Report print (Total 1) |
| 802 | Report print (Total 2) |
| 803 | Report print (large ) |
| 804 | Report print (small ) |
| 805 | Report print (full color 1) |
| 806 | Report print (full color 2) |
| 809 | Report print (black and white 1) |
| 810 | Report print (black and white 2) |
| 811 | Report print (full color /large ) |
| 812 | Report print (full color /small ) |
| 815 | Report print (black and white /large ) |
| 816 | Report print (black and white /small ) |
| 821 | Report print (full color /large /double sided ) |
| 822 | Report print (full color /small /double sided ) |
| 825 | Report print (black and white /large /double sided ) |
| 826 | Report print (black and white /small /double sided ) |
| 915 | Transmission scan total 2(color ) |
| 916 | Transmission scan total 2(black and white) |
| 917 | Transmission scan total 3(color ) |
| 918 | Transmission scan total 3(black and white) |
| 921 | Transmission scan total 5(color ) |
| 922 | Transmission scan total 5(black and white) |
| 929 | Transmission scan total 6(color ) |

| No. | Counter Details |
|-----|-----------------|
| 930 | Transmission scan total 6(black and white) |
| 937 | Box scan (color ) |
| 938 | Box scan (black and white) |
| 939 | Remote scan (color ) |
| 940 | Remote scan (black and white) |
| 945 | Transmission scan / E-mail (color ) |
| 946 | Transmission scan / E-mail (black and white) |
| 959 | Media Scan (color ) |
| 960 | Media Scan (black and white) |
| 961 | Application Scan(Total 1) |
| 962 | Application Black and white Scan(Total 1) |
| 963 | Application Color Scan(Total 1) |
| 964 | Super box local Scan (color ) |
| 965 | Super box local Scan (black and white) |

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