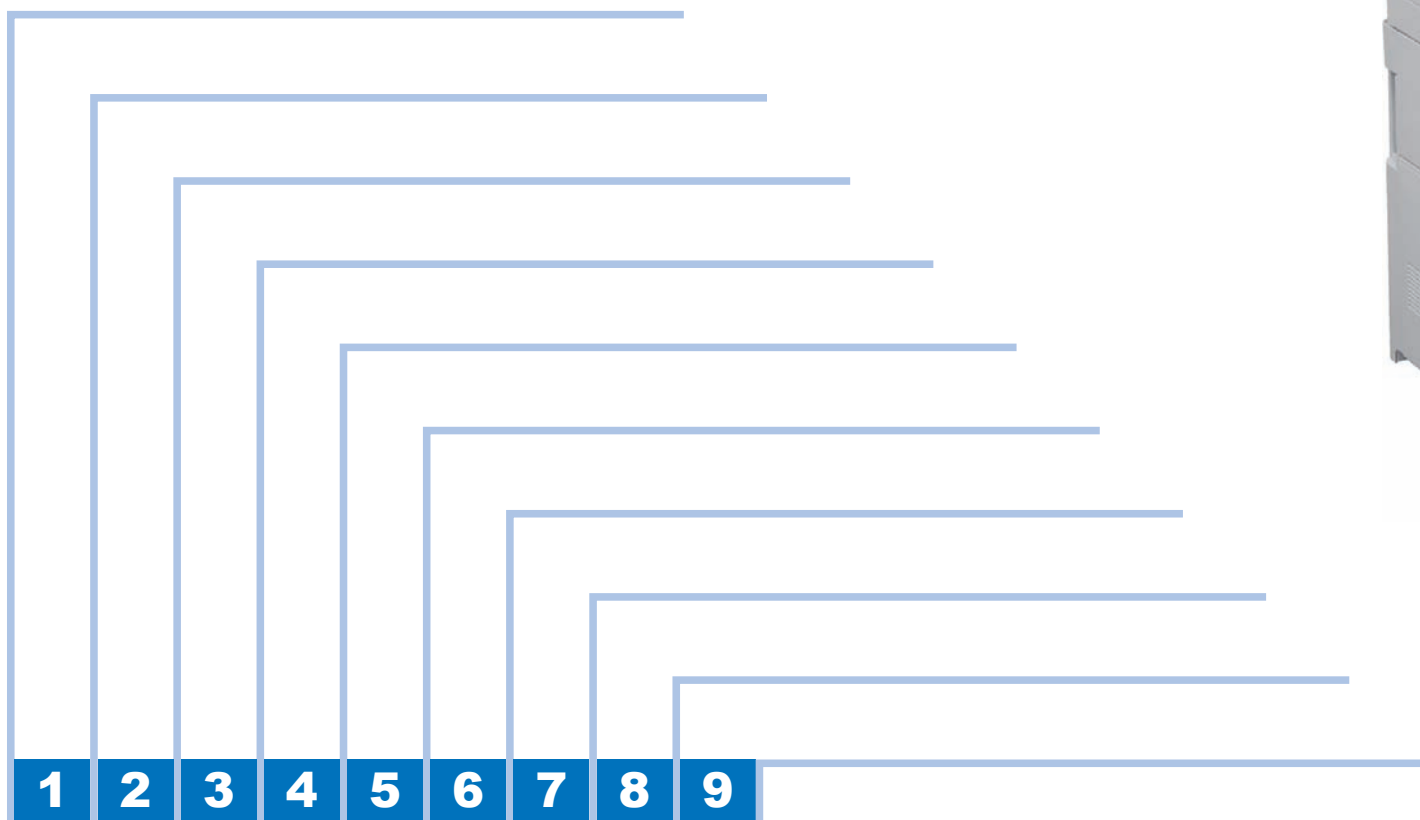


Color imageCLASS MF820Cdn/MF810Cdn

Service Manual



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.

Please Note:

Although images may differ from the actual machine, the process and information is the same.

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

Trademarks

The product names and company names used in this manual are the registered trademarks of the individual companies.

Copyright

This manual is copyrighted with all rights reserved. Under the copyright laws, this manual may not be copied, reproduced or translated into another language, in whole or in part, without the consent of Canon Inc.



















Copyright CANON INC. 2014

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.		Remove the claw.
	Check visually.		Insert the claw.
	Check a sound.		Push the part.
	Disconnect the connector.		Connect the power cable.
	Connect the connector.		Disconnect the power cable.
	Remove the cable/wire from the cable guide or wire saddle.		Turn on the power.
	Install the cable/wire to the cable guide or wire saddle.		Turn off the power.
	Remove the screw.		Loosen the screw.
	Install the screw.		Tighten the screw.

Symbols	Explanation	Symbols	Explanation
	Cleaning is needed.		Measurement is needed.

The following rules apply throughout this Service Manual:

- 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.
- 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.

Contents

0 Safety Precautions

Laser Safety	0-2
Handling of Laser System	0-2
Turn Power Switch ON	0-3
Power Supply	0-3
Safety of Toner	0-4
About Toner	0-4
Toner on Clothing or Skin	0-4
Notes When Handling a Lithium Battery	0-4
Notes Before Servicing	0-4
Points to Note at Cleaning	0-5
Notes On Assembly/Disassembly	0-5
Points to Note when Tightening a Screw	0-6

1 Product Overview

Product Lineup	1-2
Host machine	1-2
Option	1-3
Features	1-5
Product Features	1-5
Specifications	1-6
Specifications	1-6
Weight and Size	1-6
Productivity (Print speed)	1-7
Paper type	1-8
Parts Name	1-11
External View	1-11
Cross Sectional View	1-14
Operation	1-15

2 Technical Explanation

Basic Configuration	2-2
Functional Configuration	2-2
Original Exposure and Feed System	2-3
Construction	2-3
Basic Operation	2-6
Reader Unit controls	2-13
Image Processing	2-14
Control of ADF	2-20
Service Tasks	2-26
Main Controller	2-27
Overview	2-27
Laser Exposure System	2-29
Overview	2-29
Specification	2-31
Various Controls	2-32
Service Tasks	2-37
Image Formation System	2-38
Overview	2-38
Controls	2-41
Service Tasks	2-71
Fixing System	2-72
Overview	2-72
Controls	2-74
Service Tasks	2-87
Pickup / Feed System	2-88
Overview	2-88
Controls	2-91
Service Tasks	2-103
External Auxiliary System	2-104
Controls	2-104

Service Tasks	2-109
---------------------	-------

3 Periodical Service

List of periodically replacement parts, consumable parts and locations for cleaning	3-2
Periodically Replacement Parts	3-2
Consumable parts	3-3

4 Disassembly/Assembly

Preface	4-2
Outline	4-2
Points to Note when Tightening a Screw	4-2
List of Parts	4-3
External / Internal Cover	4-3
List of Main Unit	4-6
Electrical Components	4-9
List of Connectors	4-19
External Cover/Interior System	4-30
Layout Drawing	4-30
Removing the Front Cover	4-33
Removing the Rear Cover 1	4-34
Removing the Left Upper Cover	4-36
Removing the Left Lower Cover	4-36
Removing the Right Front Cover	4-37
Removing the Right Rear Cover/Right Rear Lower Cover	4-38
Removing the Right Upper Cover	4-39
Removing the Right Cover Unit	4-41
Removing the Multi-purpose Tray	4-44
Removing the Delivery Tray	4-45
Removing the Rear Upper Cover	4-45
Removing the Upper Cover	4-46
Removing the Control Panel Unit	4-47
Original Exposure/Feed System	4-50
Layout Drawing	4-50
Removing the ADF Unit	4-51
Removing the ADF Pickup Unit	4-59

Removing the ADF Separation Pad	4-60
Removing the ADF Pickup Feed Unit	4-61
Removing the ADF Feed Drive Unit	4-63
Opening the ADF Unit + Reader Unit	4-65
Removing the ADF Unit + Reader Unit	4-67
Removing the Copyboard Glass Unit	4-69
Removing the CIS Unit	4-73
Removing the Reader Motor	4-78
Controller System	4-79
Layout Drawing	4-79
Removing the Main Controller Unit	4-80
Removing the DC Controller PCB	4-84
Removing the DC Controller PCB Unit	4-86
Removing the Secondary Transfer High-voltage PCB /Developing High-voltage PCB Unit	4-88
Removing the Primary Transfer High-voltage PCB Unit	4-90
Removing the Power Supply Cooling Fan	4-93
Removing the Low-voltage Power Supply PCB Unit	4-93
Removing the Touch Panel/Control Panel CPU PCB Unit /LCD Unit	4-97
Removing the Fax Speaker Unit	4-100
Removing the Fax Unit	4-101
Laser Exposure System	4-102
Layout Drawing	4-102
Removing the Laser Scanner Unit	4-102
Image Formation System	4-106
Layout Drawing	4-106
Removing the Waste Toner Container	4-108
Removing the Toner Container (Y/M/C/Bk)	4-109
Removing the Drum Unit (Y/M/C/Bk)	4-109
Removing the ITB Unit	4-112
Removing the Registration Patch Sensor Unit	4-117
Removing the Secondary Transfer Outer Roller Unit	4-119
Removing the Secondary Transfer Outer Roller Guide Unit	4-120
Removing the Registration Drive Unit	4-123
Removing the Main Drive Unit	4-125

Removing the Hopper Unit (Y/M/C/Bk)-----	4-127
Removing the ITB Pressure Release Switch -----	4-130
Removing the Bottle Drive Unit (Y/M/C/Bk)-----	4-131
Removing the Toner Bottle Mount (Y/M/C/Bk)-----	4-132
Fixing System-----	4-137
Layout Drawing-----	4-137
Removing the Fixing Assembly-----	4-137
Removing the Fixing Drive Unit -----	4-138
Pickup/Feed System -----	4-140
Layout Drawing-----	4-140
Removing the Right Inner Cover Unit-----	4-141
Removing the Cassette Pickup Roller /Cassette Separation Roller/Cassette Feed Roller-----	4-142
Removing the Multi-purpose Tray Pickup Roller/Multi-purpose Tray Separation Roller/Multi-purpose Tray Feed Roller-----	4-146
Reassembling when the Multi-purpose Tray Separation Roller Shaft is detached-----	4-150
Removing the Registration/Pickup Unit -----	4-155
Removing the Delivery/Reverse Unit -----	4-163
Removing the Cassette 1 Lifter Drive Unit -----	4-164
Removing the Cassette 1 Pickup Drive Unit-----	4-167
Cleaning Procedure -----	4-169
Layout Drawing-----	4-169
Cleaning the Copyboard Glass/Reading Glass -----	4-170
Cleaning the Dustproof Glass -----	4-170
Cleaning when installing/removing the ITB Unit -----	4-171
Cleaning the Registration Patch Sensor Unit-----	4-172
Cleaning the Registration Front Guide -----	4-173
Cleaning the Registration Roller/Pre-registration Roller -----	4-174
Cleaning the Secondary Transfer Guide-----	4-175
Cleaning the Fixing Inlet Guide-----	4-177

5 Adjustment

Document Exposure System-----	5-2
Service mode backup-----	5-2

When clearing the Reader-related RAM data of the Main Controller PCB. -----	5-3
Original Exposure and Feed System (Reader)-----	5-4
Main Controller -----	5-15
Main controller PCB-----	5-15
DC controller PCB -----	5-17
Control Panel CPU PCB/Touch Panel-----	5-17
List of parts that require adjustment after disassembly-----	5-18
List of parts that require adjustment after disassembly -----	5-18
Pickup Feed System -----	5-19
Setting method when the size detection patterns are overlapped-----	5-19
Cassette Left Edge Margin Adjustment (1st side; Mechanical Adjustment)-----	5-20
Cassette Left Edge Margin Adjustment (1st side; Software Adjustment)-----	5-22
Cassette Left Edge Margin Adjustment (2nd side; Software Adjustment)-----	5-23
Multi-purpose Tray Left Edge Margin Adjustment (1st side; Software Adjustment)-----	5-23
Multi-purpose Tray Left Edge Margin Adjustment (2nd side; Software Adjustment)-----	5-23
Lead-edge Margin Adjustment (1st side/normal paper)-----	5-24
Lead-edge Margin Adjustment (2nd side) -----	5-24

6 Troubleshooting

Initial Check -----	6-2
Initial check items list -----	6-2
Test Print -----	6-3
Overview -----	6-3
Steps to select the test print PG-TYPE-----	6-3
Troubleshooting Items -----	6-4
List of Troubleshooting Items -----	6-4
Image Failure -----	6-4
Category: Malfunction -----	6-11
Special Management Mode -----	6-12
Overview -----	6-12

Operational Description	6-12
Menu List	6-13
Version Upgrade	6-15
Overview	6-15
Preparation	6-15
Downloading System Software	6-16

7 Error•Jam•Alarm

Overview	7-2
Outline	7-2
Jam code	7-2
Error Code	7-3
Error Code Details	7-3
Jam Code	7-72
Jam Type	7-72
Alarm Code	7-86
Alarm Code	7-86

8 Service Mode

Overview	8-2
Service Mode Menu	8-2
Backing up Service Mode	8-2
Remote UI service mode	8-3
COPIER	8-4
DISPLAY	8-4
I/O	8-20
ADJUST	8-24
FUNCTION	8-74
OPTION	8-84
COUNTER	8-111
FEEDER	8-122
ADJUST	8-122
FUNCTION	8-123
FAX	8-124
List of SSSW	8-124
List of MENU	8-125

List of NUM	8-125
TESTMODE	8-127
PRINT	8-127
FAX	8-130

9 Installation

How to Check this Installation Procedure	9-2
Symbols in the Illustration	9-2
Installation	9-2

Appendix

Service Tools	II
Special Tools	II
Solvents and Oils	III
General Circuit Diagram	IV
List of User Mode	XIV
Network Settings	XIV
Preferences	XV
Time Settings	XV
Common Settings	XV
Copy Settings	XVI
Fax Settings	XVII
Scan Settings	XVII
Memory Media Print Settings	XIX
Printer Settings	XIX
Adjustment/Maintenance	XXII
System Management Settings	XXII
Backup Data	XXIV
Soft counter specifications	XXV
Soft counter specifications	XXV

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



Color imageCLASS
MF820Cdn/MF810Cdn

Laser Safety

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

Therefore this machine is 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.

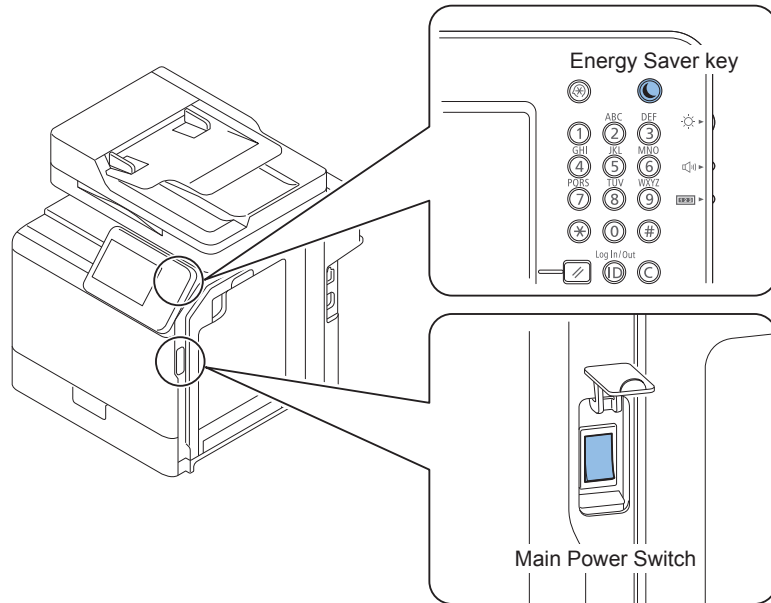


F-0-1

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).



F-0-2

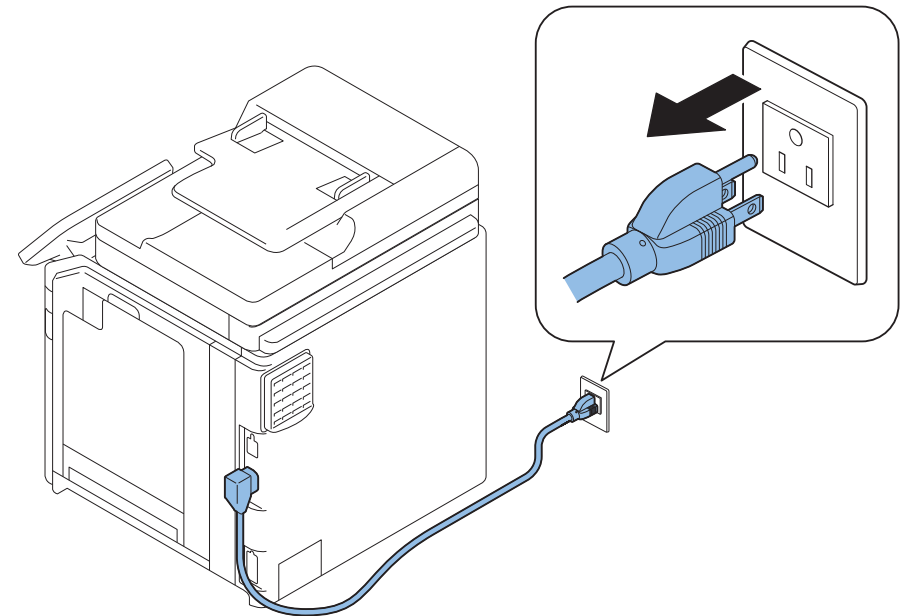
CAUTION:

Do not turn off the main power switch while the progress bar is indicated, during which access 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.



F-0-3

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
請依製造商說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.
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.

CAUTION
DOUBLE POLE/NEUTRAL FUSING

F-0-4

ACHTUNG
Zweipolige bzw. Neutralleiter-Sicherung

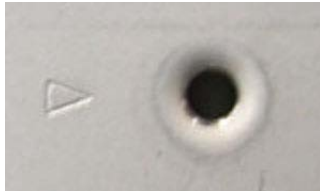
F-0-5

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-0-6

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

		Type of Screws							
		RS tight		W Sams		Binding		TP	
Fastened member		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).

T-0-1

Type of Screws			
RS tight	W Sams	Binding	TP

F-0-7

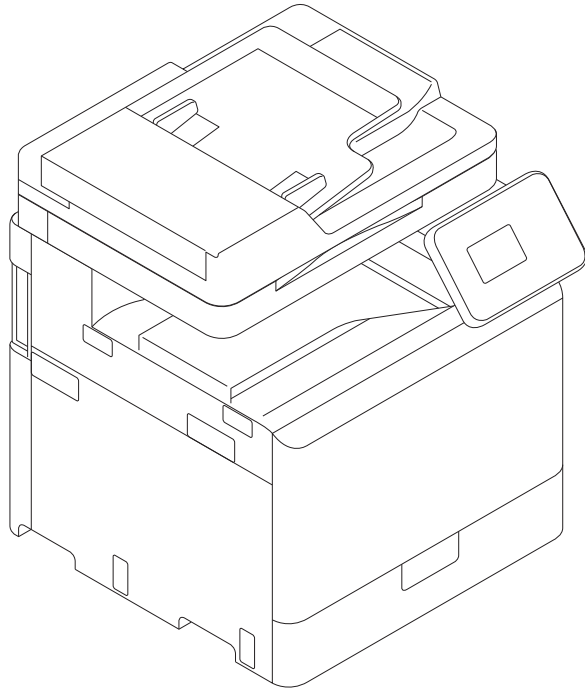


Product Overview

- Product Lineup
- Features
- Specifications
- Parts Name

Product Lineup

Host machine



F-1-1

Host machine configuration

Configuration
Reader+ADF+Printer

T-1-1

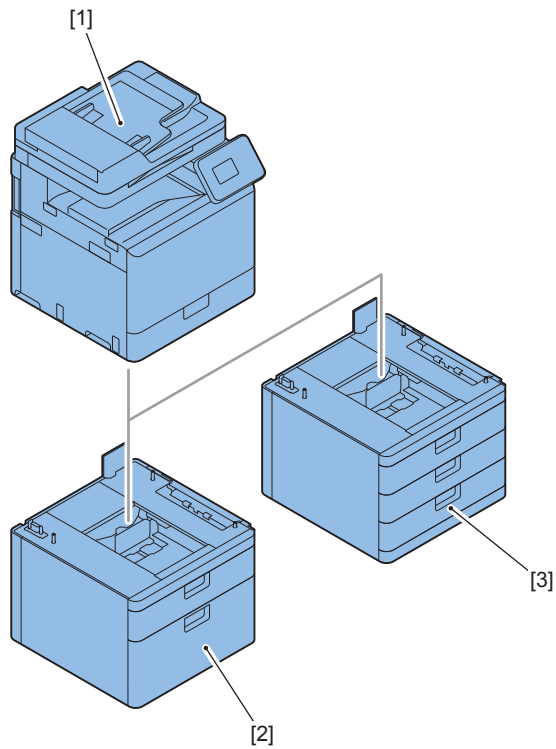
Model type

	MF820 Series	imageRUNNER C1225 MF810 Series
Print Speed	35 ppm	25 ppm

T-1-2

Option

■ Pickup / Delivery / Image Reading System Options

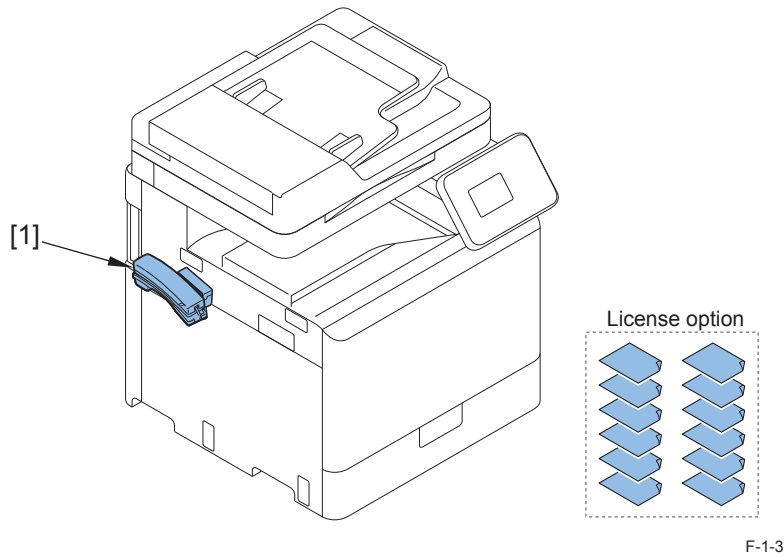


F-1-2

No.	Product name	Remarks and condition
1	MF820/MF810 Series imageRUNNER C1225 Series	
2	Cassette Feeding Unit-AJ1	
3	Cassette Feeding Unit-AK1	

T-1-3

Function expansion system options



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.

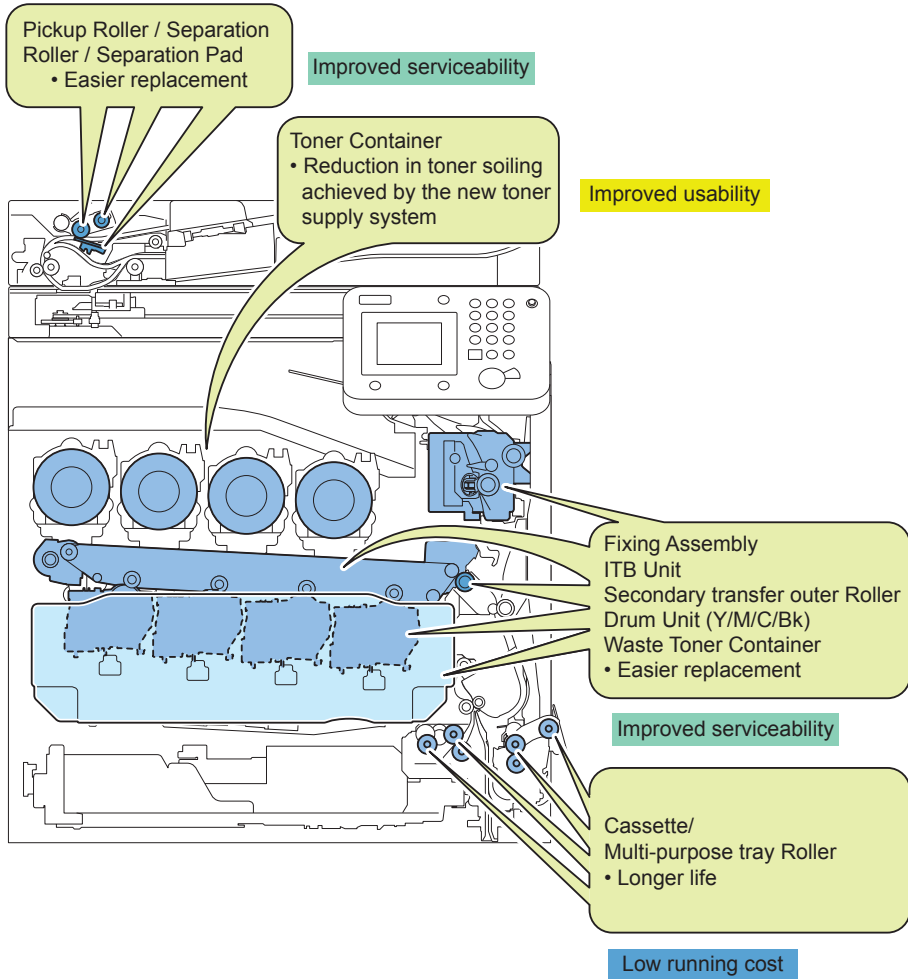
There is no physical installation work at the time of installation.

No.	Product name	Remarks and condition
1	Barcode Printing Kit-D1	
2	PDF Security-E1	
3	Handset-AJ1	

T-1-4

Features

Product Features



F-1-4

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 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	MF820 series CL:10.4 sec. B/W: 8.9 sec. imageRUNNER C1225 / MF810 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) Multi-purpose Tray: 100 sheets (80 g/m ²)

Item	Specifications
Duplexing method	Through-pass duplex
Operation noise	71.5dB or less (during printing)
Ozone volume	Max 0.001ppm or less
Rated power supply	Americas: 120 to 127 V, 60 Hz, 7.5 A Europe/Asia-Oceania/China/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)	MF820 series: 511mm x 564mm x 610mm imageRUNNER C1225 / MF810 series: 511mm x 549mm x 610mm.
Weight	Approx. 43kg

T-1-5

Weight and Size

Product name	Width (mm)	Depth (mm)	Height (mm)	Weight Approx. (kg)
MF820 series	511	564	610	43.0
imageRUNNER C1225 / MF810 series	511	549	610	43.0
Cassette Module-AJ1	511	549	425	14.3
Cassette Module-AK1	511	549	425	18.9

T-1-6

Productivity (Print speed)

Paper type	Size	MF820				MF810 IR C1225IF/C1225			
		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								

T-1-7

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

T-1-8

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 paper ³ (91 to 105 g/m ²) Recycled paper ³ (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 paper ³ (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	

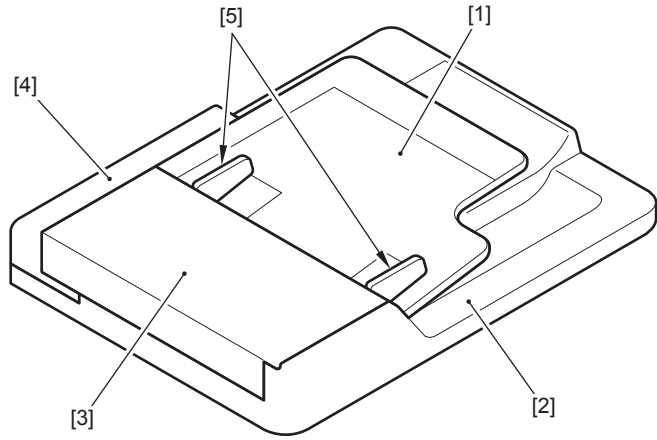
Paper Type	Size	Feeding direction (mm)	Width direction (mm)	Pickup position					Auto Duplex	2-Side Setting
				Multi	CST1	CST2	CST3	CST4		
Transparency	A4R	297.0	210.0	Yes	No	No	No	No	No	No
	LTRR	279.4	215.9	Yes	No	No	No	No	No	No
Postcard	Postcard	148.0	100.0	Yes	No	No	No	No	No	Yes
		200.0	148.0	Yes	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-1-9

Parts Name

External View

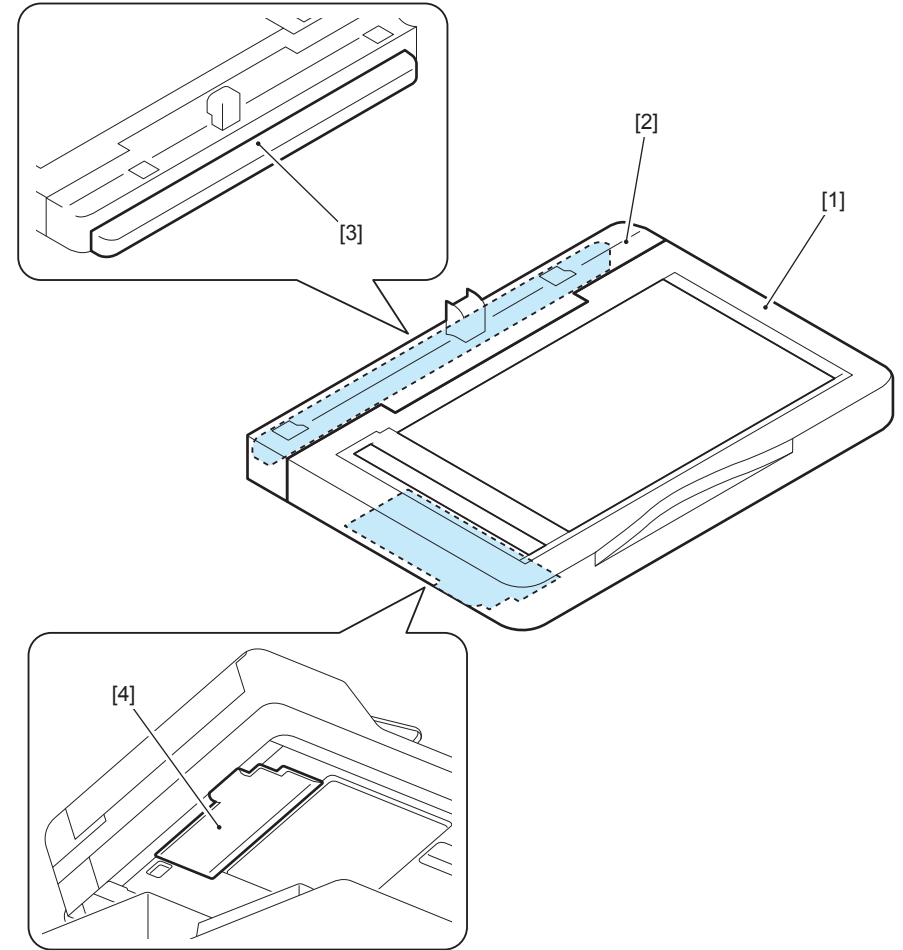
ADF



F-1-5

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

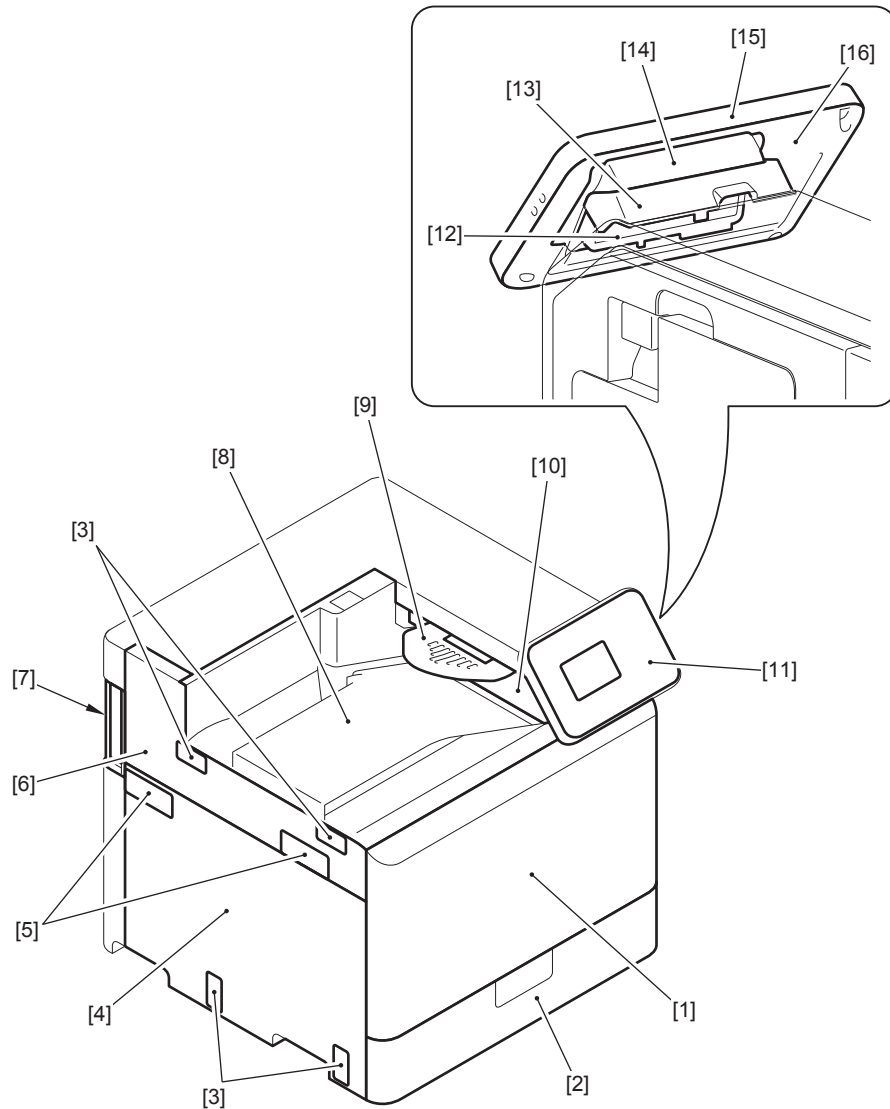
Reader



F-1-6

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

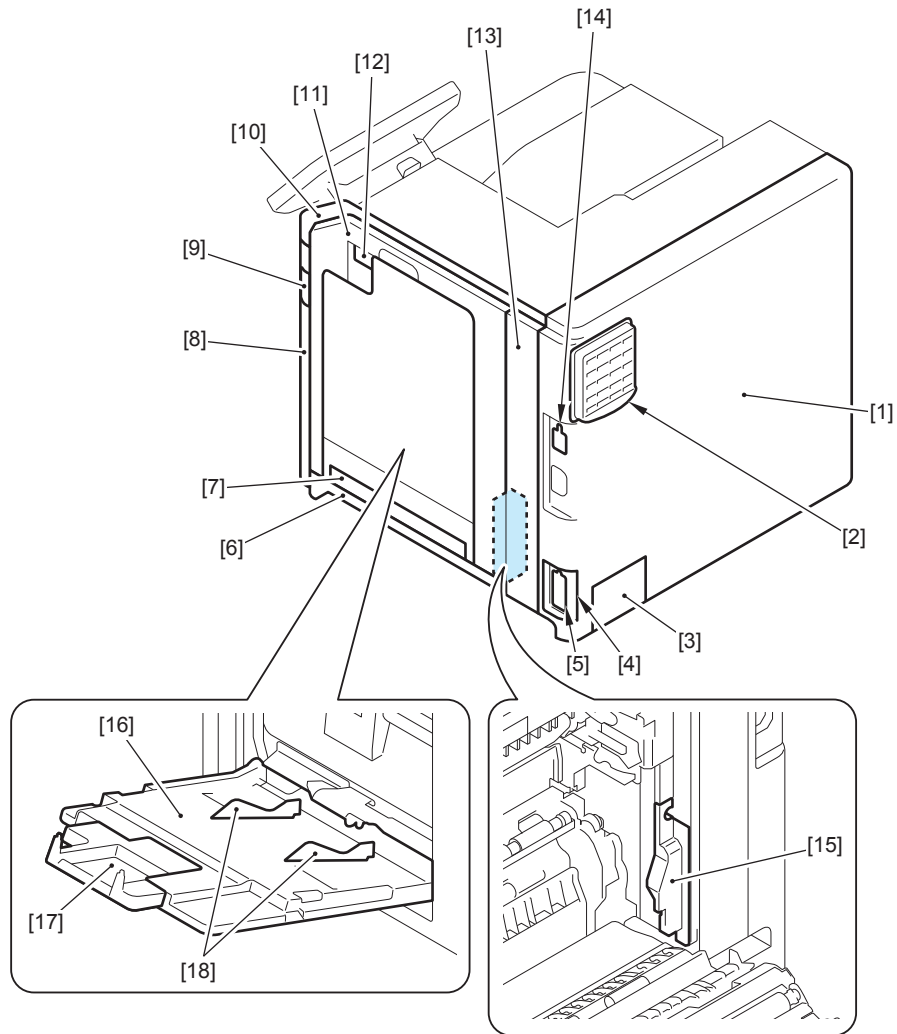
Front view, Left side



- | | |
|-------------------------------------|--------------------------------------|
| [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

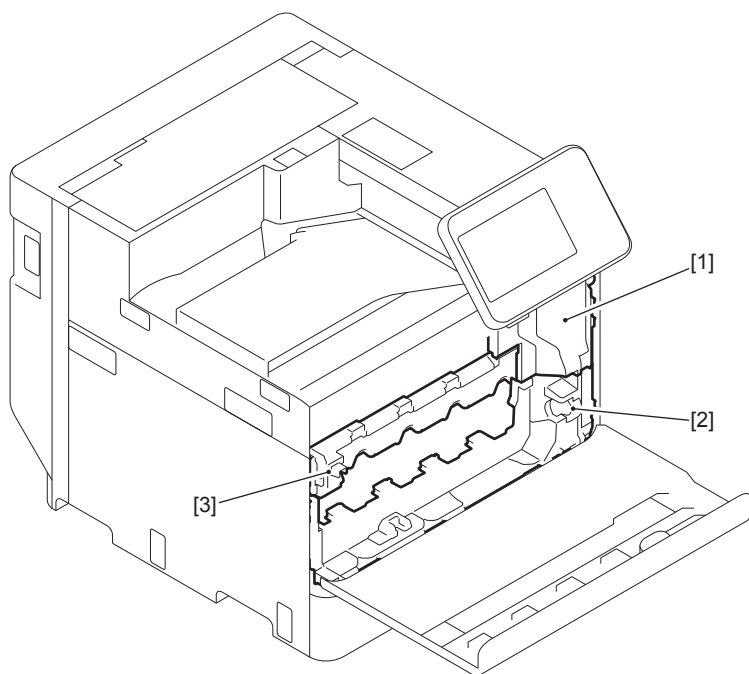
Rear view, Right side



- | | |
|--|--------------------------------------|
| [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

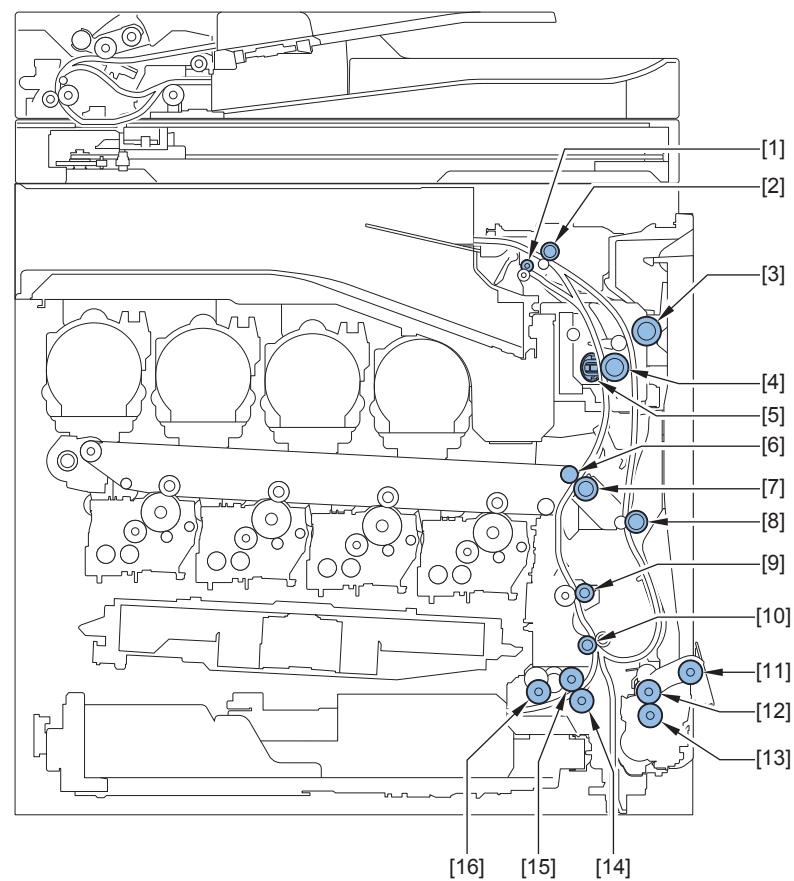
Front Inner



F-1-9

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

Cross Sectional View

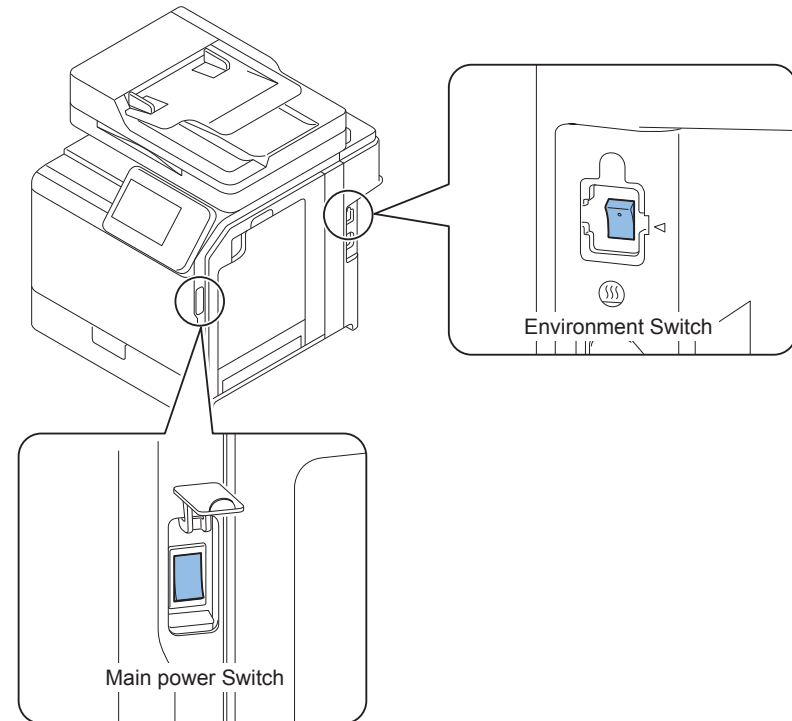


F-1-10

Operation

Power Switch

Types of Power Switches



[1] ADF Unit	[2] Pickup Roller
[3] Separation Roller	[4] Feed Roller
[5] Separation Pad	[6] Delivery Roller
[7] Original Tray	[8] ADF Base
[9] Platen Guide	[10] Reader Unit
[11] Copyboard Glass	[12] ADF Reading Glass
[13] CIS Unit	[14] Delivery/Reverse Unit
[15] Delivery Upper Roller	[16] Reverse Roller
[17] Right Door Unit	[18] Duplex Feed Upper Roller
[19] Duplex Feed Lower Roller	[20] Fixing Assembly
[21] Pressure Roller	[22] Fixing Film
[23] Toner Container (Y)	[24] Toner Container (M)
[25] Toner Container (C)	[26] Toner Container (Bk)
[27] ITB Unit	[28] Primary Transfer Roller
[29] Secondary transfer inner Roller	[30] Secondary transfer outer Roller
[31] ITB Cleaning Unit	[32] Drum Unit (Y)
[33] Drum Unit (M)	[34] Drum Unit (C)
[35] Drum Unit (Bk)	[36] Laser Scanner Unit
[37] Registration Unit	[38] Registration Roller
[39] Pre-registration Roller	[40] Cassette 1 pickup Roller
[41] Cassette 1 feed Roller	[42] Cassette 1 separation Roller
[43] Feed Paper Pickup Unit	[44] Multi-purpose tray pickup Roller
[45] Multi-purpose tray feed Roller	[46] Multi-purpose tray separation Roller

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

F-1-11

[1] Main Power Switch

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

[2] Environment Switch

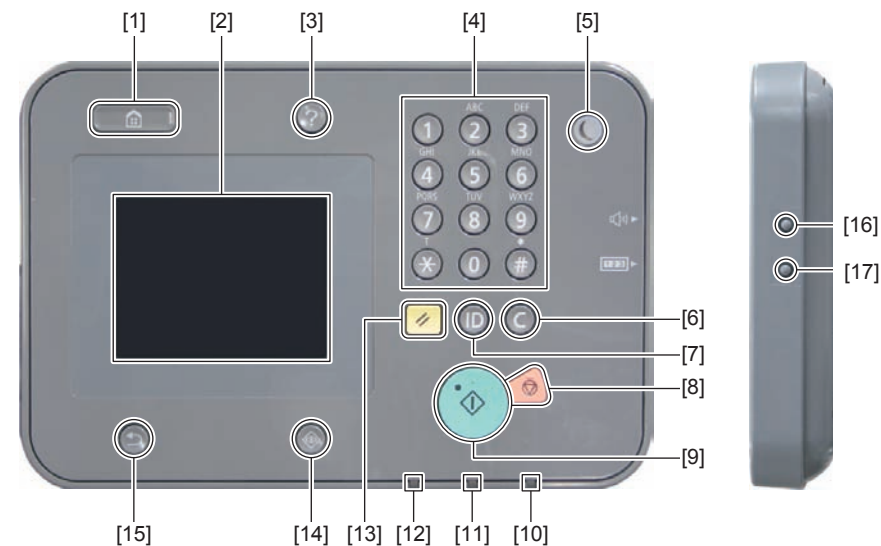
This switch is used to supply or shut power to Cassette Heater.

● 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

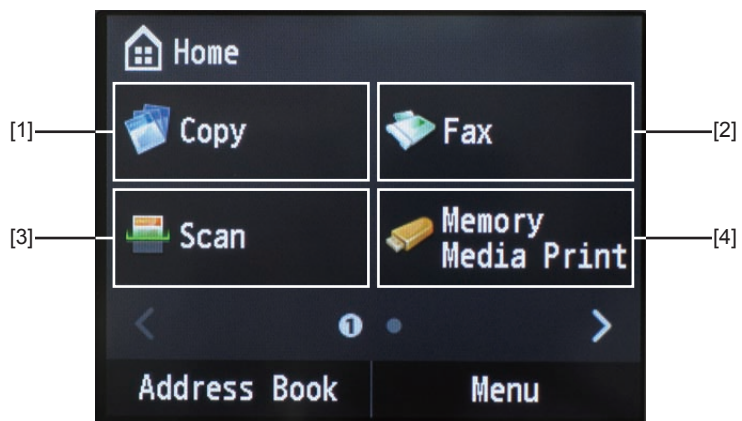
● Control Panel



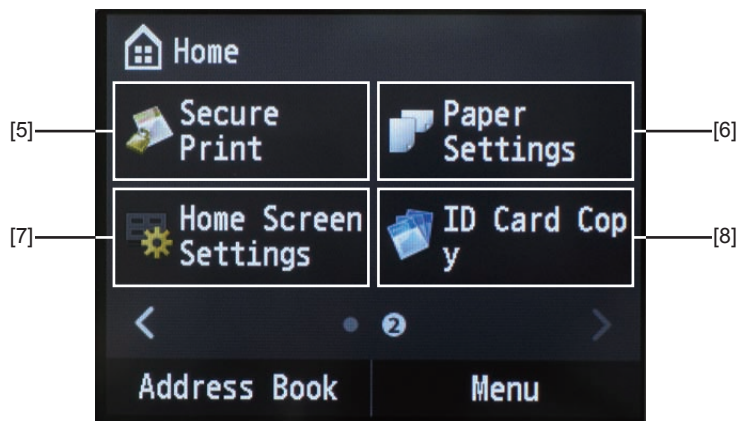
- | | |
|-------------------------|----------------------------------|
| [1] Home key | [10] Main Power Indicator |
| [2] Touch Panel Display | [11] Error Indicator |
| [3] Quick Guide key | [12] Processing / Data Indicator |
| [4] Numeric key | [13] Reset key |
| [5] Energy Saver key | [14] Status Monitor 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 | |

F-1-12

Main Menu



F-1-13

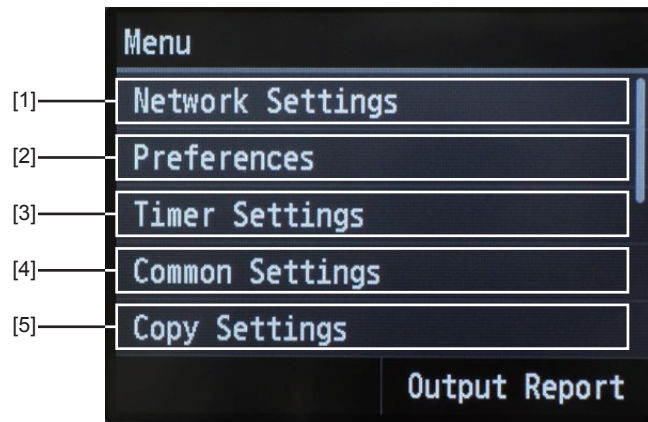


F-1-14

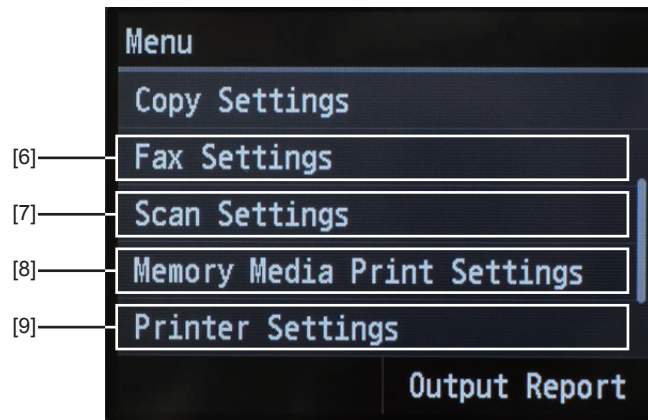
No	Name	Remarks
[1]	Copy	
[2]	Fax	Super G3 FAX Board-AQ1 is required.
[3]	Scan	
[4]	Memory Media Print	
[5]	Secure Print	
[6]	Paper Settings	
[7]	Home Screen Settings	
[8]	ID Card Copy	

T-1-10

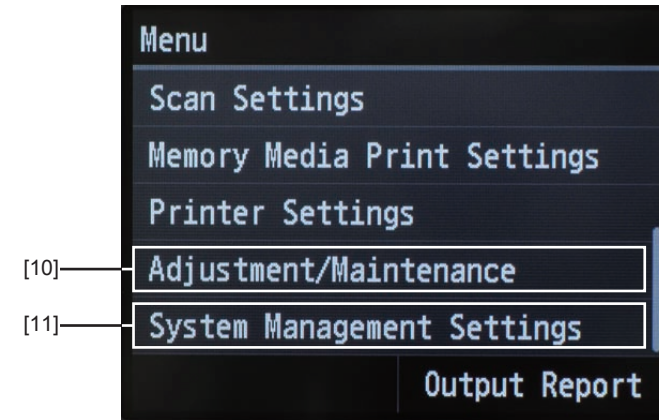
Settings / Registration Menu



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-1-11

2

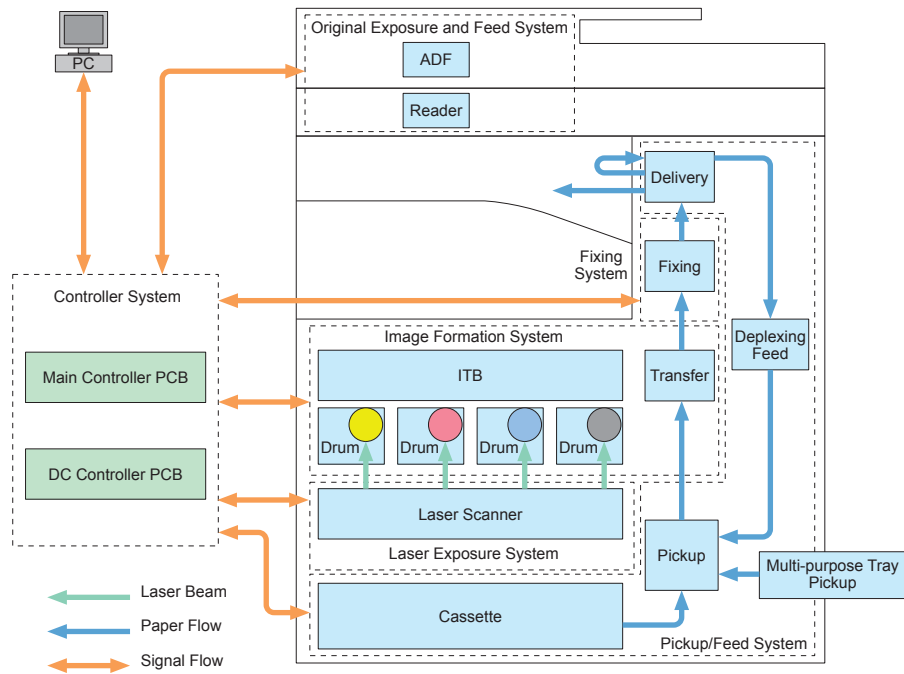
Technical Explanation

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

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

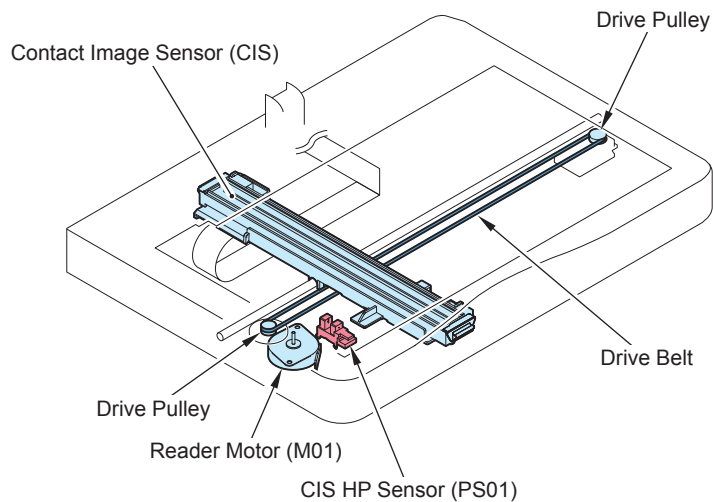
Item		Specification/function
ADF original tray capacity		A4/LTR-R: 50 sheets (80 g/m ²) LGL: 30 sheets (80 g/m ²)
ADF original processing mode		1-sided original processing 2-sided original processing
ADF original size detection function		No
ADF mixed original mode function	Mix of same configuration mode	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

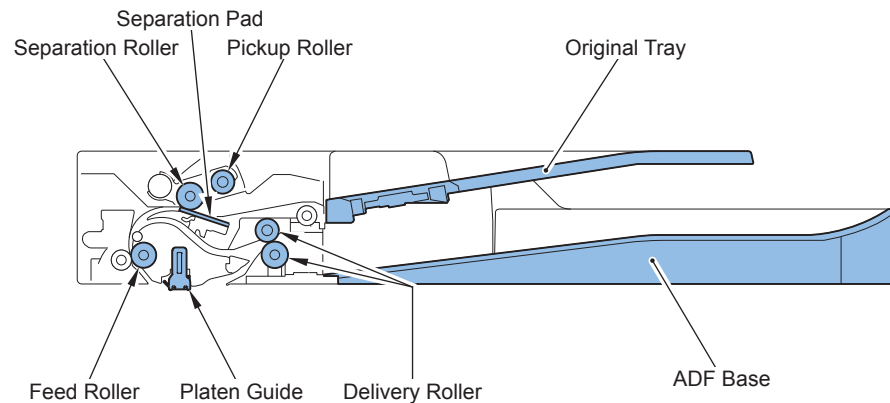
Item	Notation	Specification/function
Reader motor	M01	Pulse Motor: controls the carriage drive.
Drive Pulley, Drive Belt	-	Controls the carriage drive.
CIS HP sensor	PS01	Photo interrupter: detects the home position of CIS unit.
Contact image sensor	CIS	Reads the original. (LED + Light guide + Original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

T-2-2

ADF unit

Following shows major components of ADF unit.

1) Layout Drawing of Major Parts

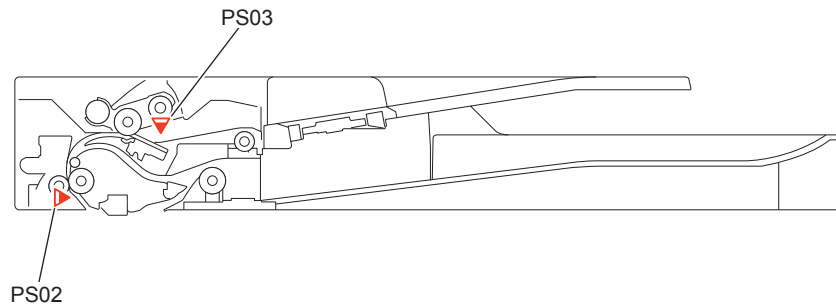


F-2-3

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

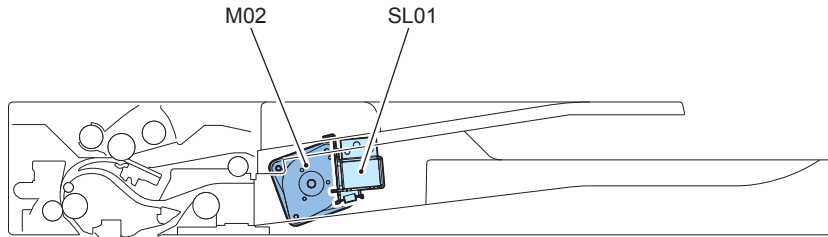


F-2-4

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.

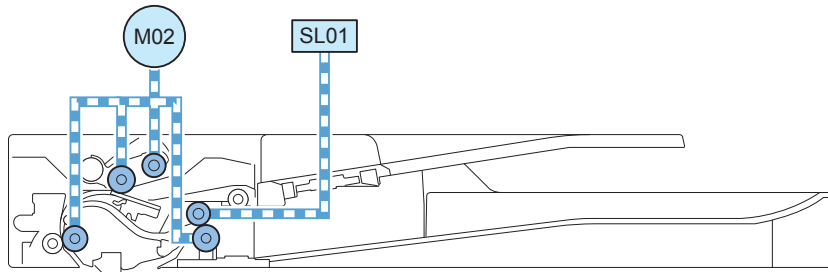
T-2-4

3) Layout Drawing of Motor and Solenoid



F-2-5

4) Drive System Drawing of Motor and Solenoid

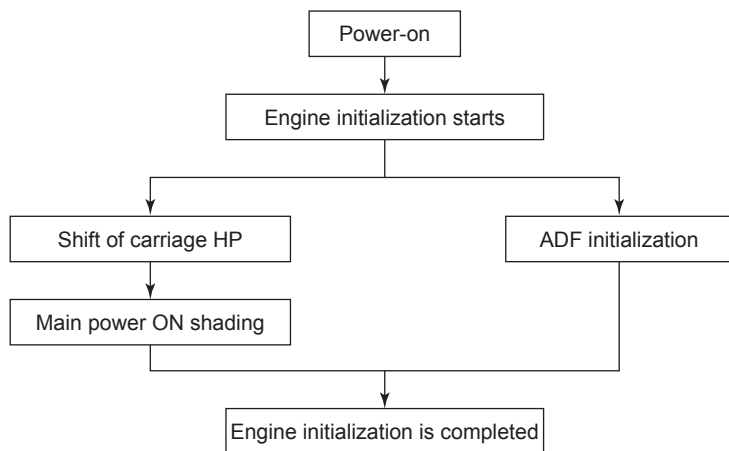


F-2-6

Basic Operation

Basic Sequence

Basic Sequence at Power-On



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)
 - The Reader Motor activates and moves the carriage to the left.
 - 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

- The Reader Motor activates and moves the carriage to the right.
- 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)
 - Step 3 above is executed.

Main power ON shading

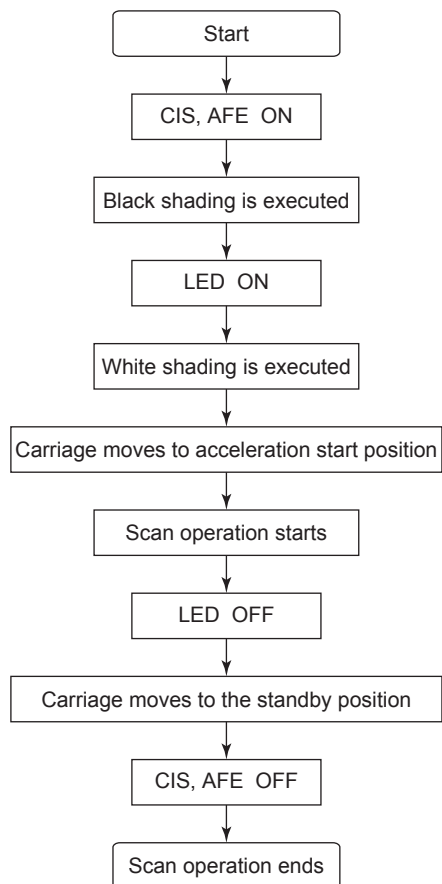
Check operation of the CIS Unit reading function is performed. (Fixed shading is executed)

- The Reader Motor activates and moves the carriage to the left. (around the center of the White Plate)
- The CIS is put in the ON state.
- The White Plate is read with the LED turned off. (Black shading)
- The LED turns ON.
- The White Plate is read with the LED turned on. (White shading)
- 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.
- The CIS is put in the OFF state.
- The Reader Motor activates and moves the carriage to the right. (Standby position)

ADF initialization

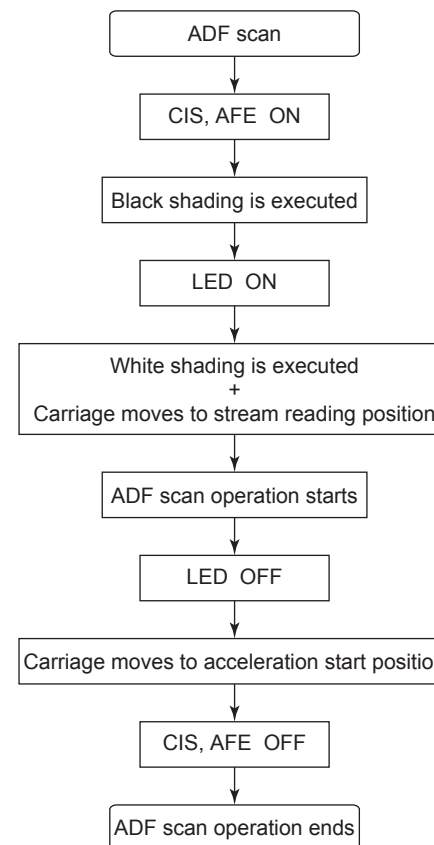
Detection of remaining paper (jam detection), ejection of remaining paper on the downstream side of the Document End Sensor, and the disengagement mechanism of the Delivery Roller are initialized in the ADF.

● Basic Sequence at Start Key ON (Book mode)



F-2-8

● Basic Sequence at Start Key ON (ADF mode)



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:

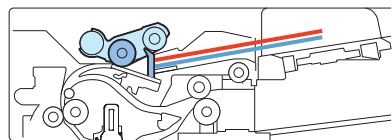
Operation mode name	Outline of operation	Associated print mode
Forward pickup/delivery	Picks up, reads, and then delivers an original.	Single-sided original -> Single-sided print
		Single-sided original -> Double-sided print
Forward pickup/reversal delivery	An original is picked up, and reversed after 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

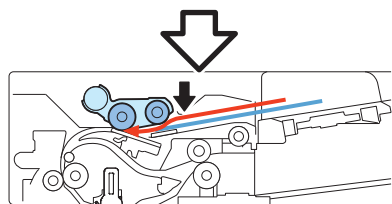
Single-sided original reading

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

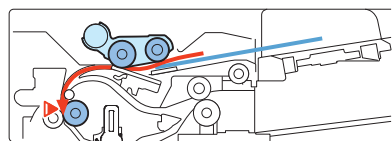
Single-sided reading operation
(when 2 sheet of original is placed) 1/2



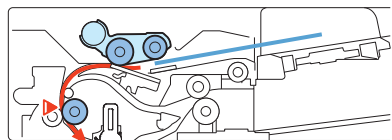
- Setting of original



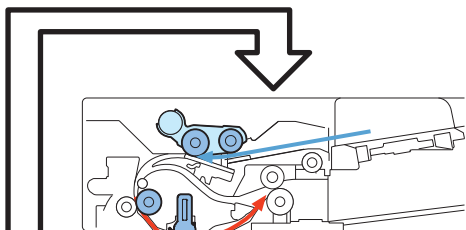
- Pickup of the 1st Sheet & descent of Pickup Roller



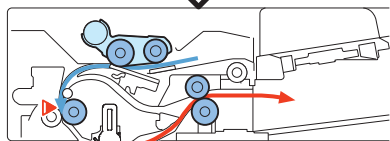
- Feed of the 1st Sheet



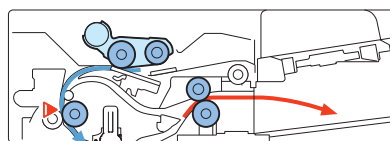
- Waiting for reading of the front side of the 1st Sheet



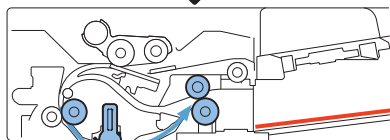
- Start of reading of the front side of the 1st Sheet & Pickup of the 2nd Sheet



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

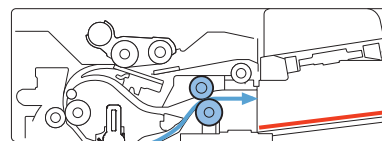


- Waiting for reading of the front side of the 2nd Sheet

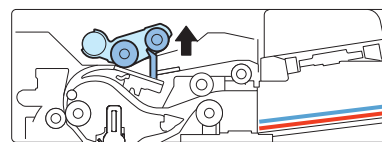


- Start of reading of the front side of the 2nd Sheet & descent of Pickup Roller & Delivery of the 2nd sheet

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



- Passing of the 2nd Sheet reading position



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

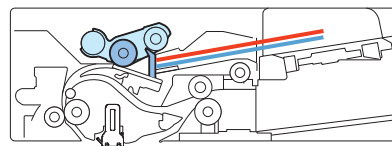
F-2-11

F-2-10

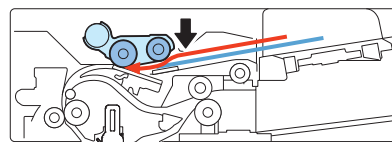
Double-sided original reading

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

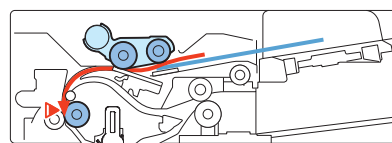
Duplex reading operation
(when 2 sheet of original is placed)
1/5



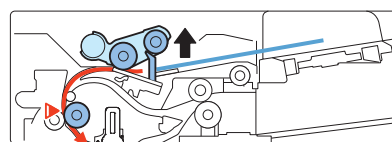
- Setting of original



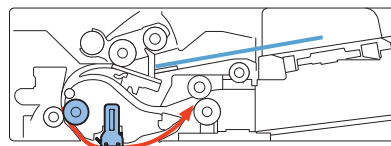
- Pickup of the 1st Sheet
& descent of Pickup Roller



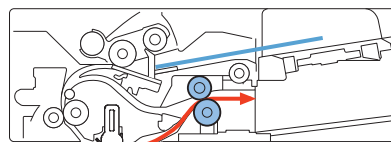
- Feed of the 1st Sheet



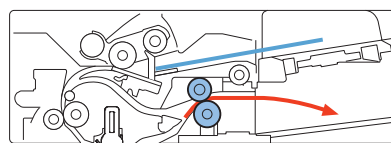
- Waiting for reading of the front side
of the 1st Sheet & ascent of Pickup Roller



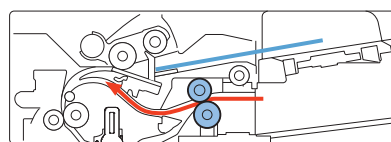
- Start of reading of the front side
of the 1st Sheet



- End of reading of the front side
of the 1st Sheet



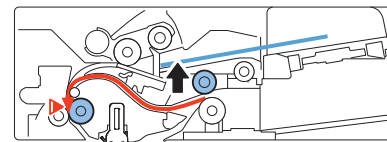
- Feed to the reverse point
of the 1st Sheet



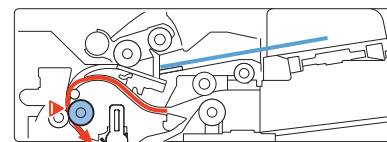
- Re-pickup of the 1st Sheet



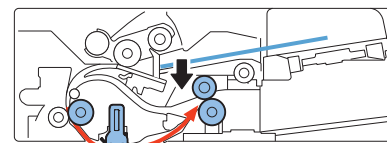
Duplex reading operation
(when 2 sheet of original is placed)
2/5



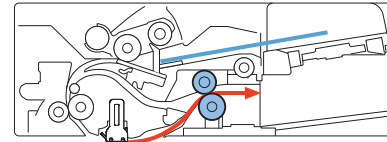
- Feed of the 1st Sheet
& disengagement of Delivery Roller



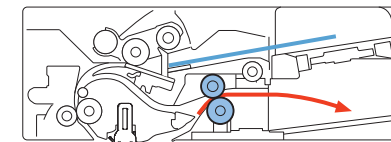
- Waiting for reading of the back side
of the 1st Sheet



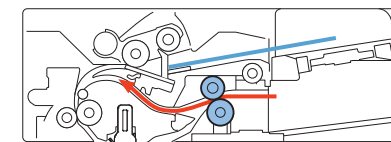
- Waiting for reading of the back side
of the 1st Sheet & engagement of
Delivery Roller



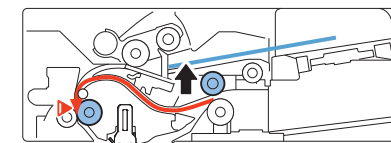
- End of reading of the back side
of the 1st Sheet



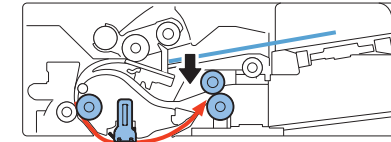
- Feed to the reverse point
of the 1st Sheet



- Re-pickup of the 1st Sheet



- Feed of the 1st Sheet
& disengagement of Delivery Roller



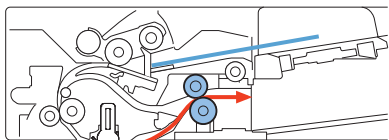
- Idle feed of the 1st Sheet
& engagement of Delivery Roller



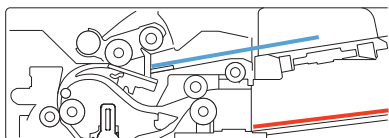
F-2-12

F-2-13

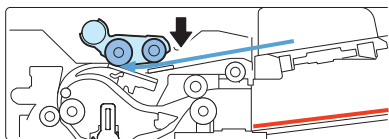
Duplex reading operation
(when 2 sheet of original is placed)
3/5



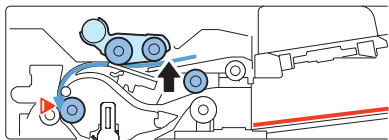
- Delivery of the 1st sheet



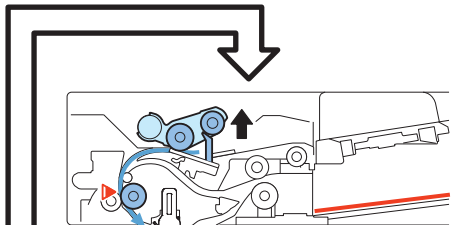
- End of job of the 1st sheet



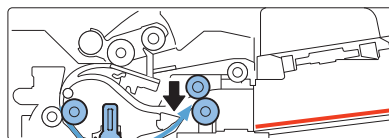
- Pickup of the 2nd Sheet



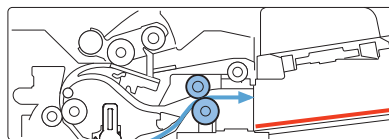
- Feed of the 2nd Sheet & disengagement of Delivery Roller



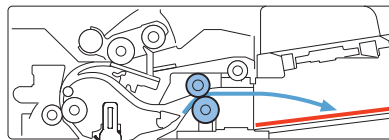
- Waiting for reading of the front side of the 2nd Sheet & ascent of Pickup Roller



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



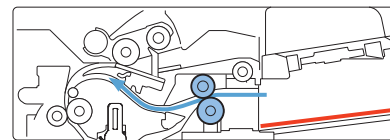
- End of reading of the front side of the 2nd Sheet



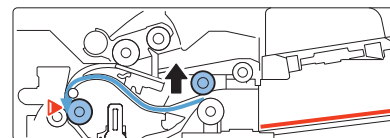
- Feed to the reverse point of the 2nd Sheet



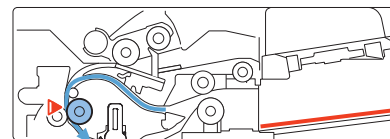
Duplex reading operation
(when 2 sheet of original is placed)
4/5



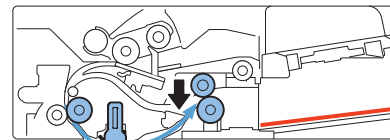
- Re-pickup of the 2nd Sheet



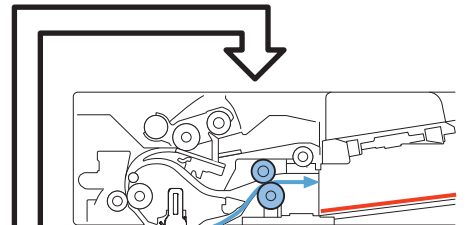
- Feed of the 2nd Sheet & disengagement of Delivery Roller



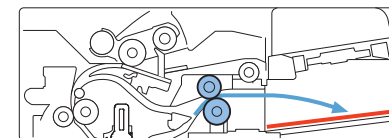
- Waiting for reading of the back side of the 2nd Sheet



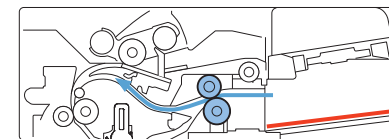
- Start of reading of the back side of the 2nd Sheet & engagement of Delivery Roller



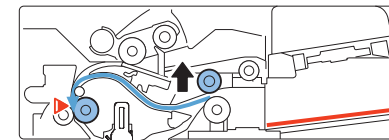
- End of reading of the back side of the 2nd Sheet



- Feed to the reverse point of the 2nd Sheet



- Re-pickup of the 2nd Sheet



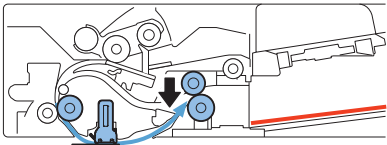
- Feed of the 2nd Sheet & disengagement of Delivery Roller



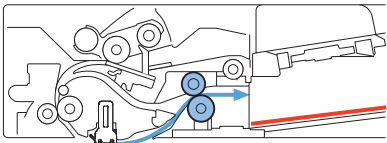
F-2-14

F-2-15

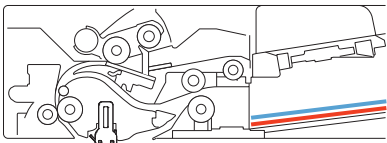
Duplex reading operation
(when 2 sheet of original is placed)
5/5



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



- Passing of the 2nd Sheet reading position



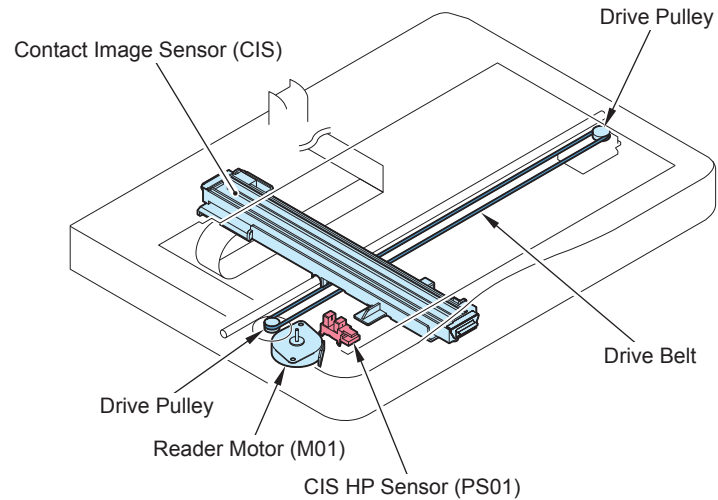
- Delivery of the 2nd sheet & End of job

Reader Unit controls

Scanner Drive Control

Configuration of Drive System

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



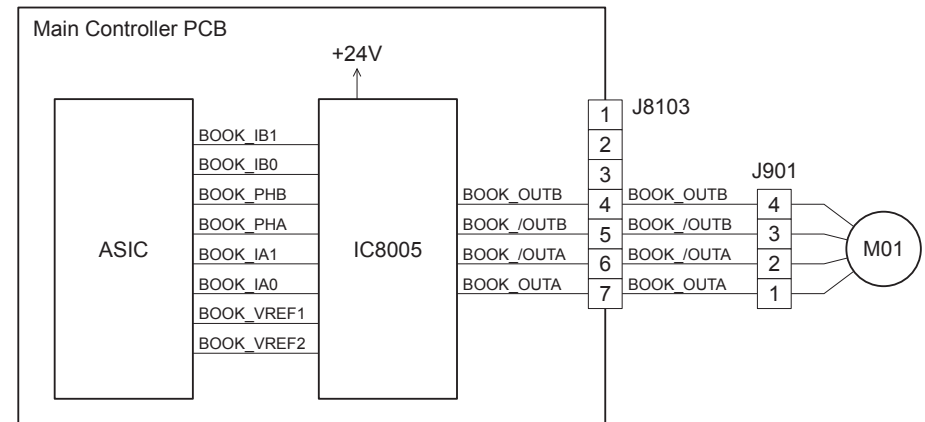
F-2-16

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.

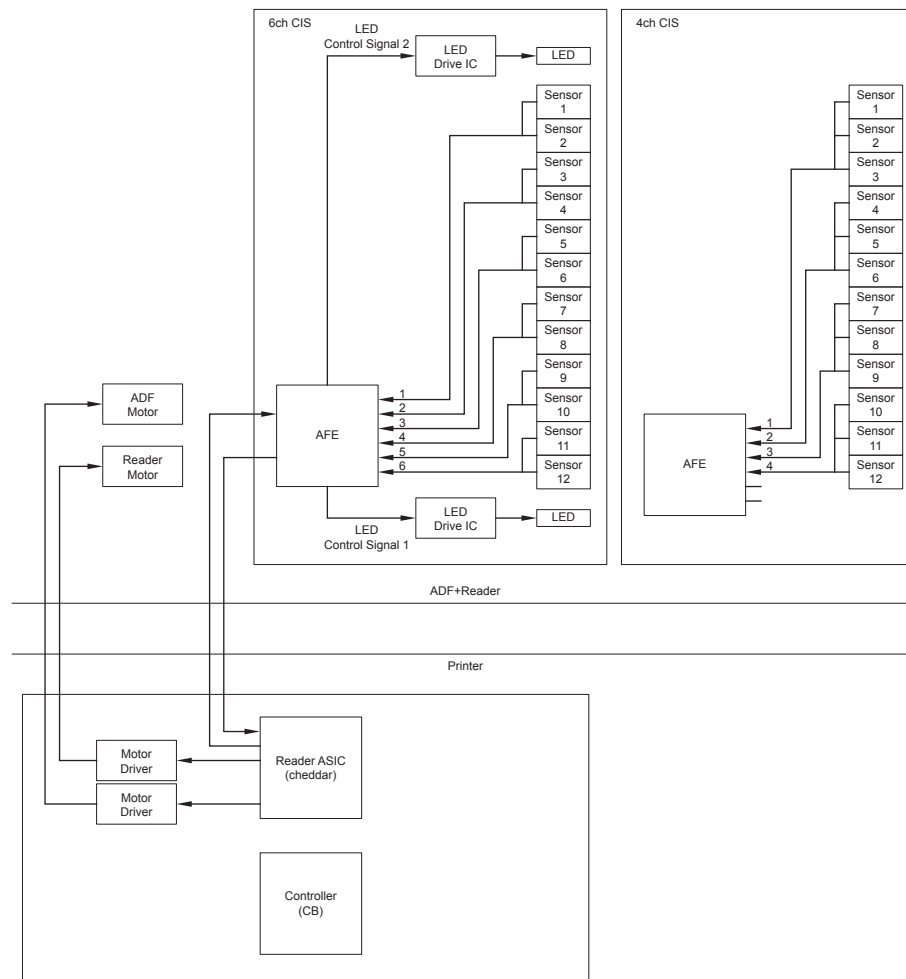
Image Processing

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

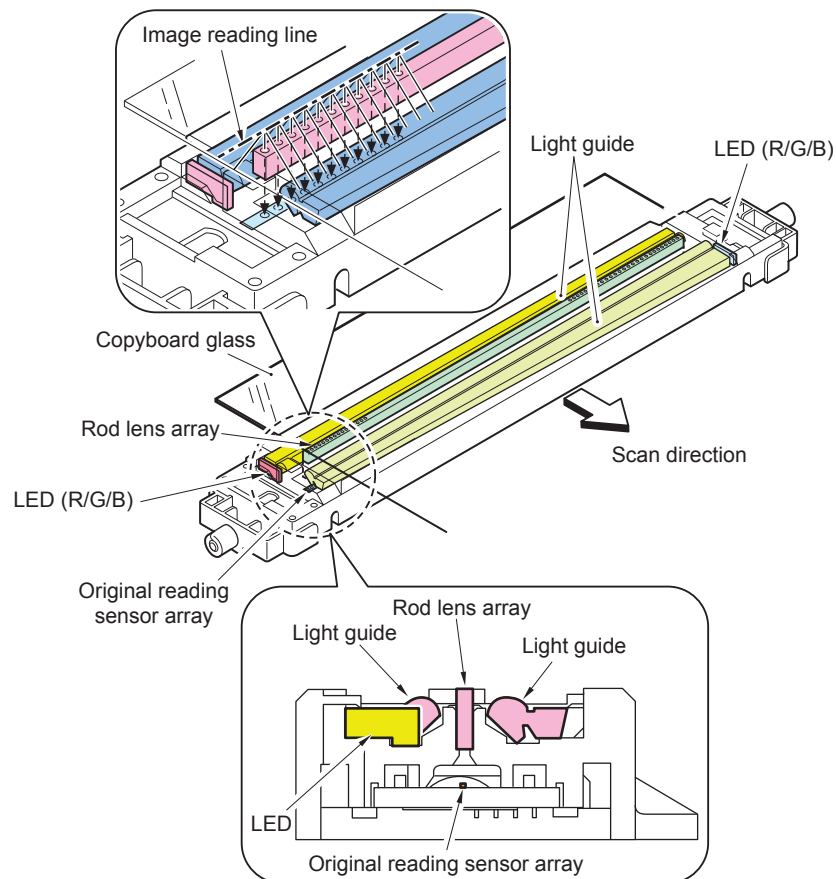
Image Processing by the CIS Unit (AFE)

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)

● 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.

● 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.

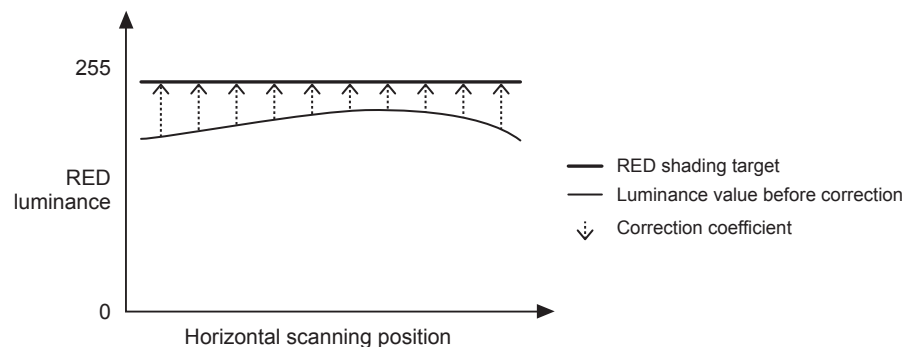
Reading is therefore performed with the LED on and with the LED off to correct the white and black levels for each horizontal scanning position and obtain a uniform reading level.

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.



F-2-20

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

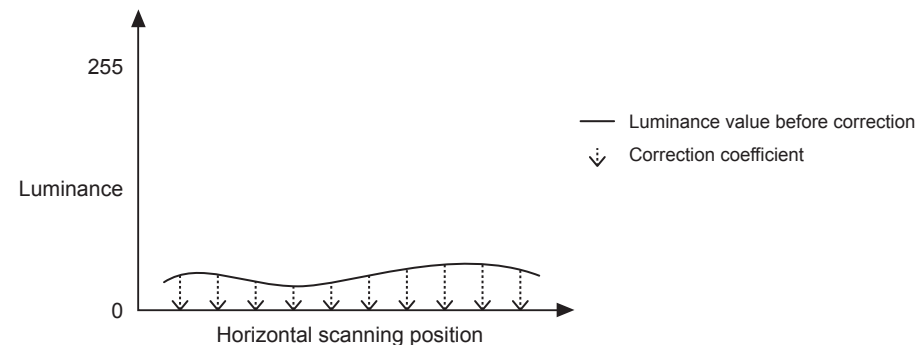
White shading (for stream reading)

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.



F-2-21

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

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

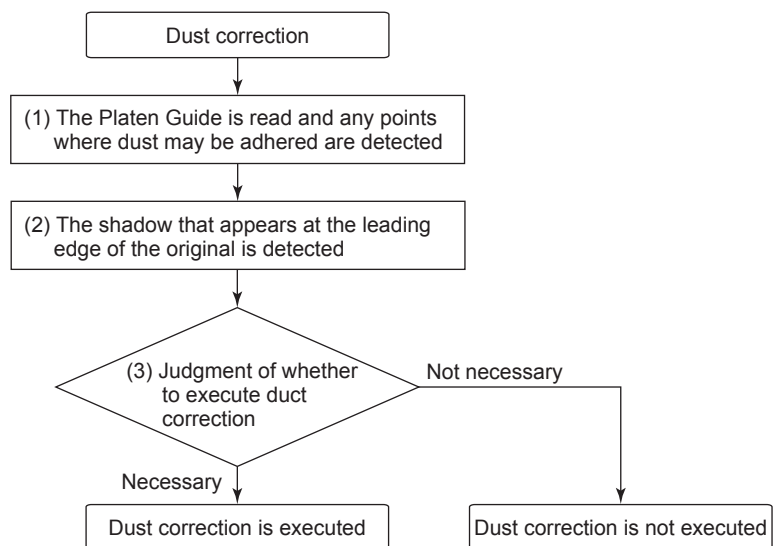
Dust Detection Correction Control

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:



F-2-22

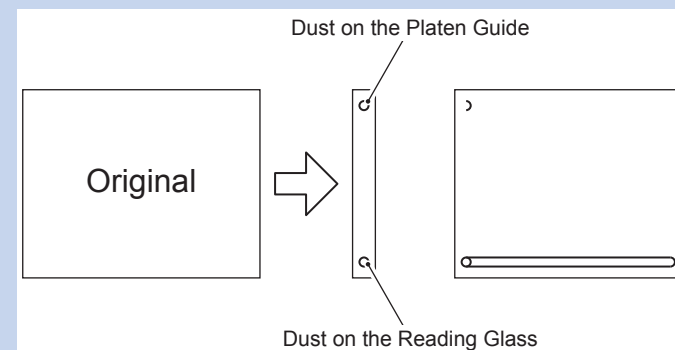
- 1) Before the original is fed, the Platen Guide is read through the Reading Glass to detect points where there is a possibility of dust.
- 2) The shadow that appears at the leading edge of the original is detected to detect the leading edge of the original.
- 3) If no dust is found at the points of 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



F-2-23

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.

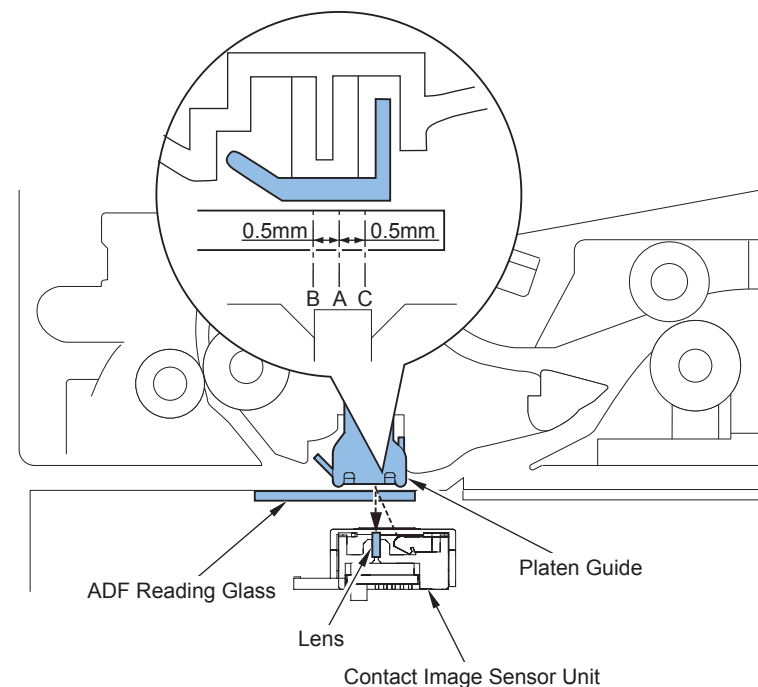
Condition:

- 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)



F-2-24

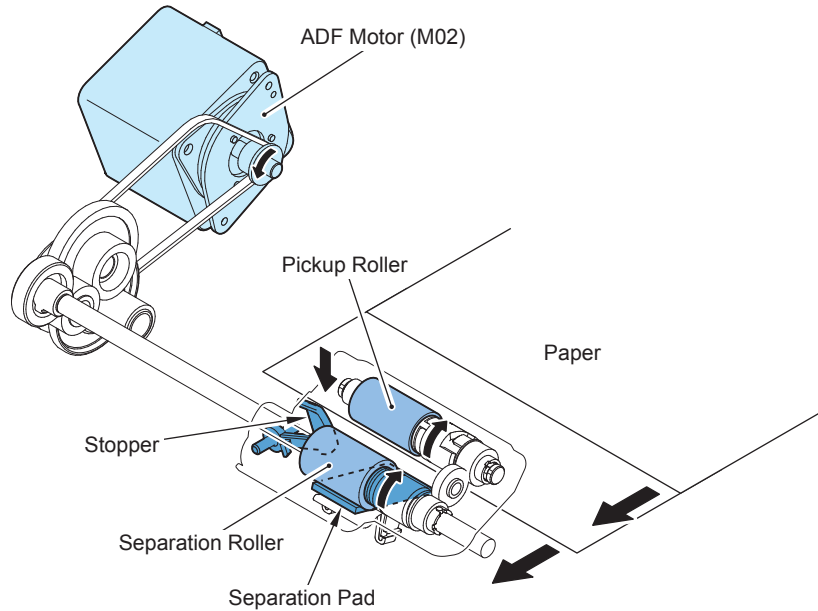
Position	Description
A	Reference position for read
B	About 0.5 mm to the left of the reference position A
C	About 0.5 mm to the right of the reference position A

T-2-9

Control of ADF

Pickup Control

Pickup Mechanism

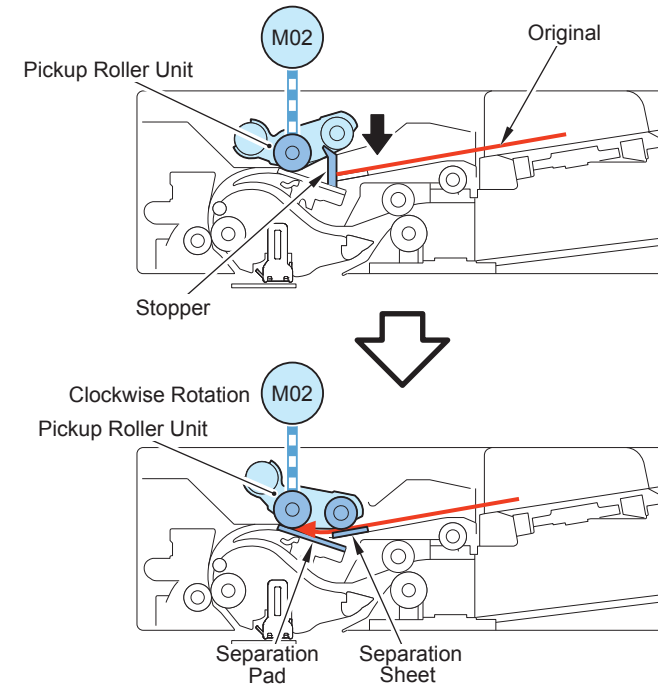


F-2-25

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.

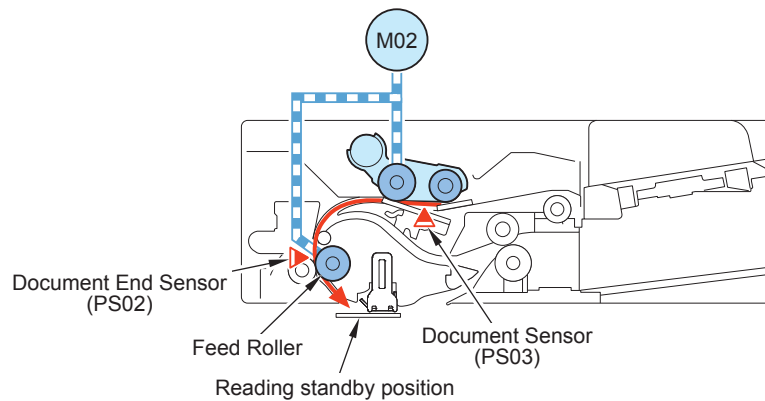


F-2-26

■ Feed Control

● At 1-sided stream reading

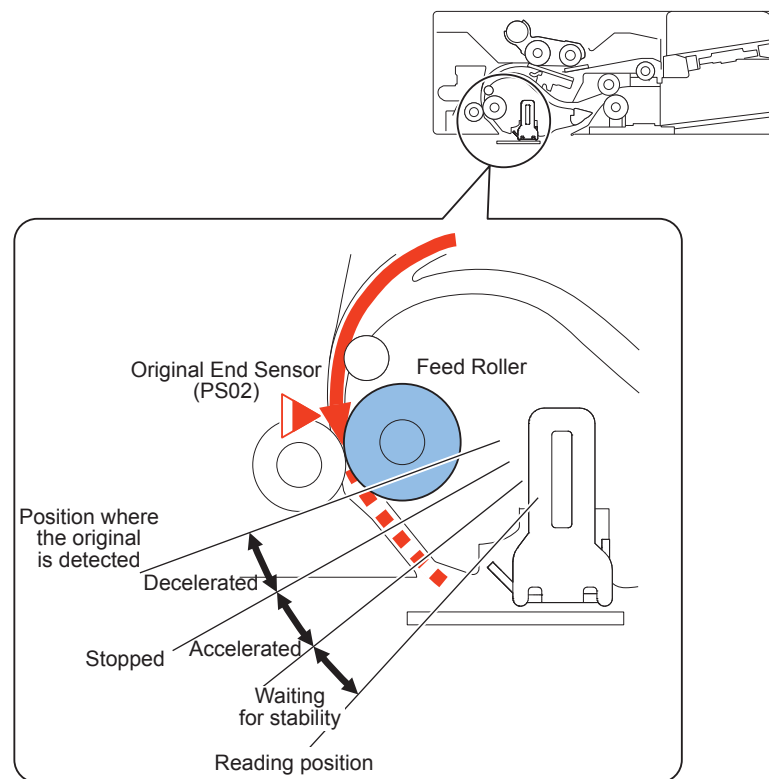
The drive of the ADF Motor (M02) rotates the Feed Roller, and feeds an original to the reading position.



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.

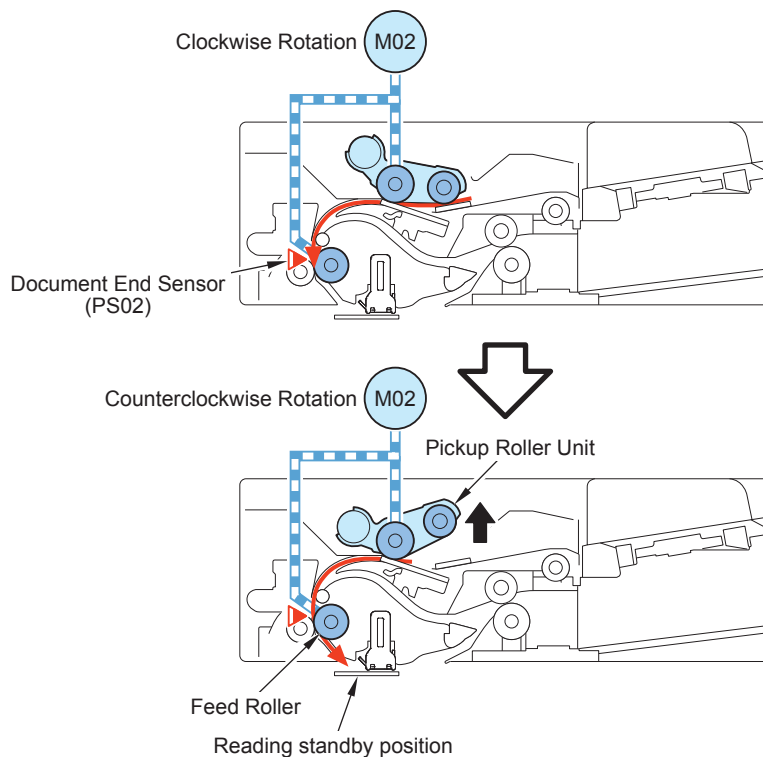


F-2-28

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.

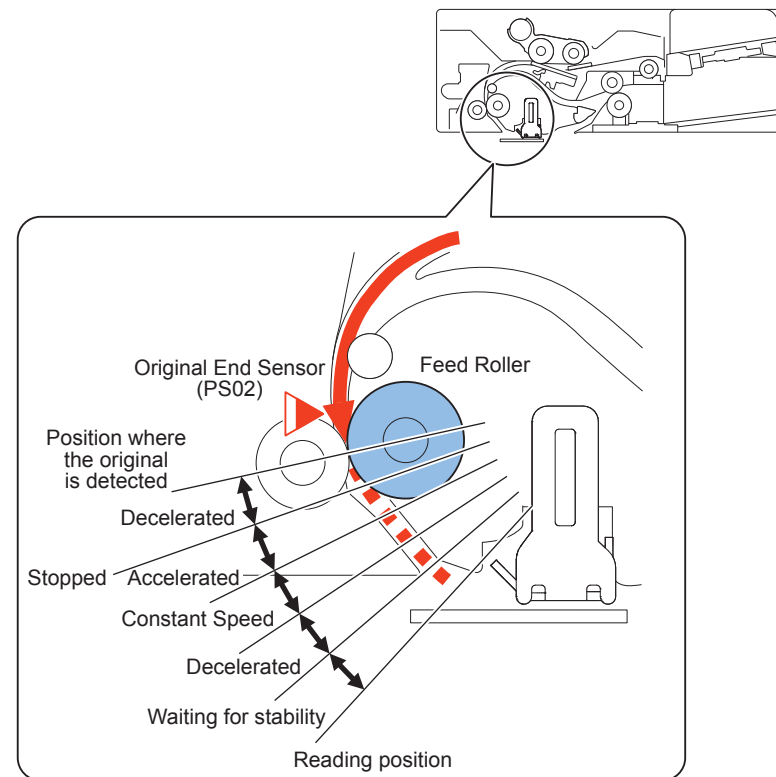
After a specified period of time, the drive (reverse rotation) of the ADF Motor (M02) rotates the Feed Roller, and feeds the original to the reading position. At this time, the Pickup Roller is lifted up.



F-2-29

NOTE:

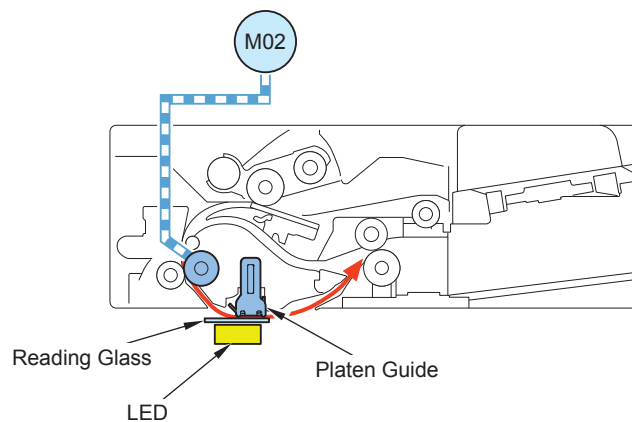
Preparation of the Main Controller may not be completed (the memory may not have been secured) when an original passes the Document End Sensor (PS02). When it is not completed, the original is stopped before the reading position. When the preparation of both the memory allocation and ascend of the Pickup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



F-2-30

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

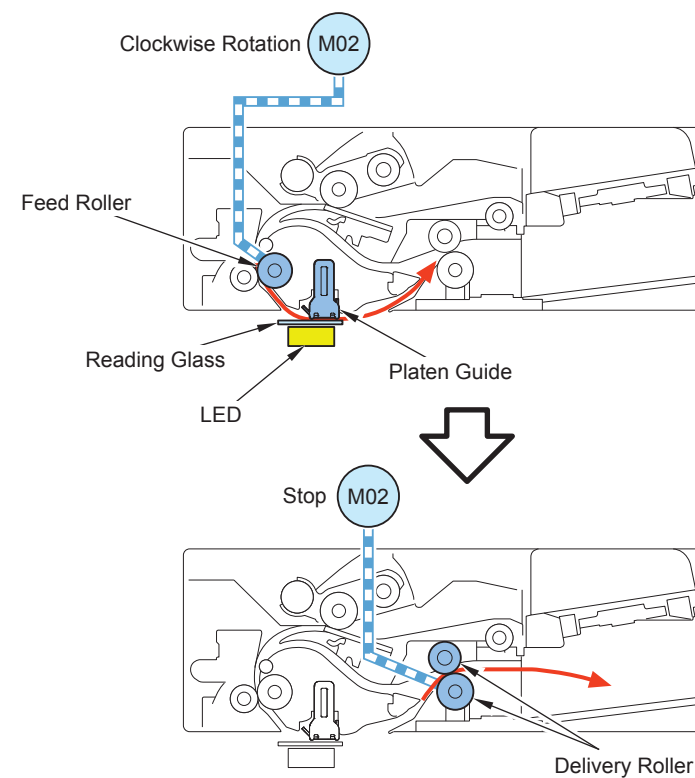
Basic operation

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

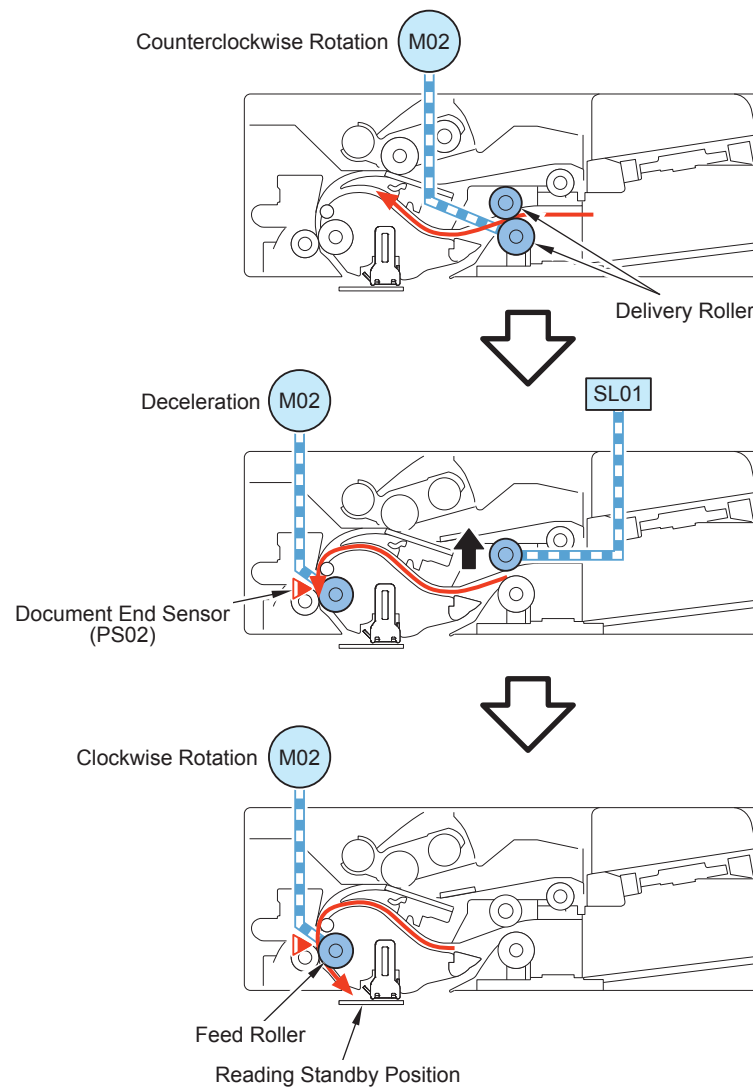
- 1) The drive (clockwise rotation) of the ADF Motor (M02) rotates the Feed Roller, and reads the front side of an original.
- 2) When reading is completed, the Delivery Roller rotates to feed the original to the ejection area.
- 3) When the original has been fed for a certain distance, the ADF Motor (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.

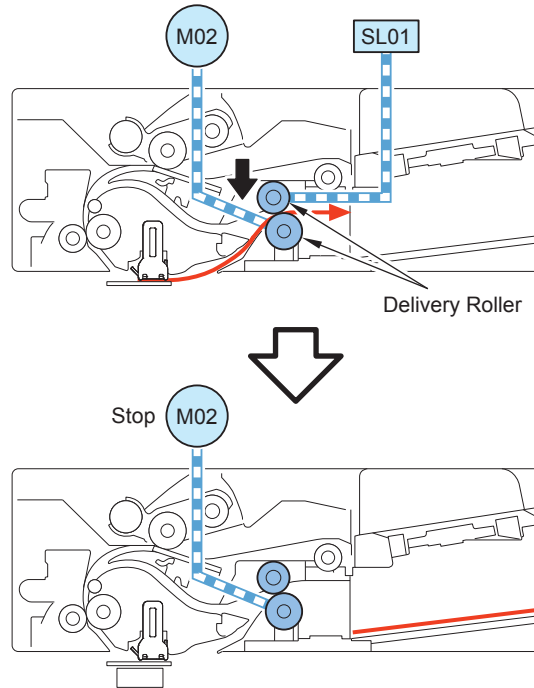


F-2-33

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.



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

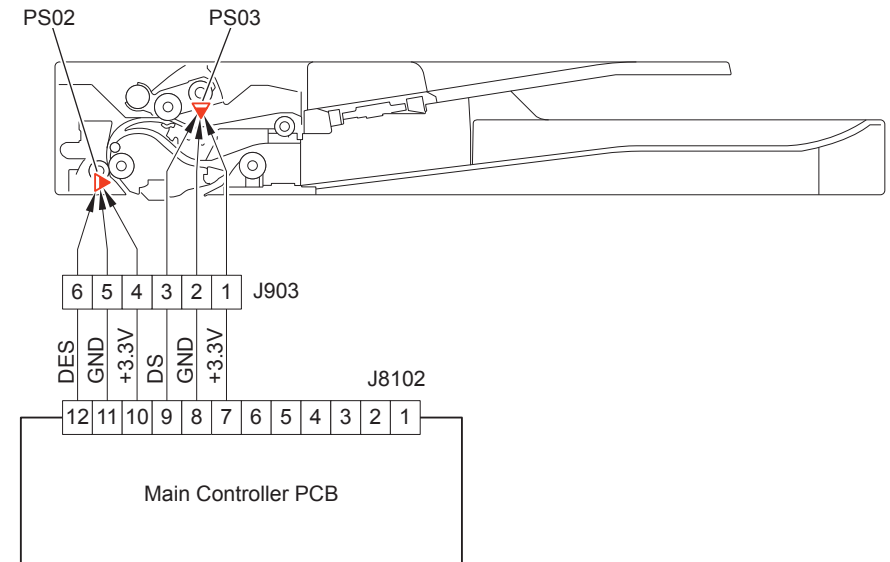
Detection of presence/absence of original

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.



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.

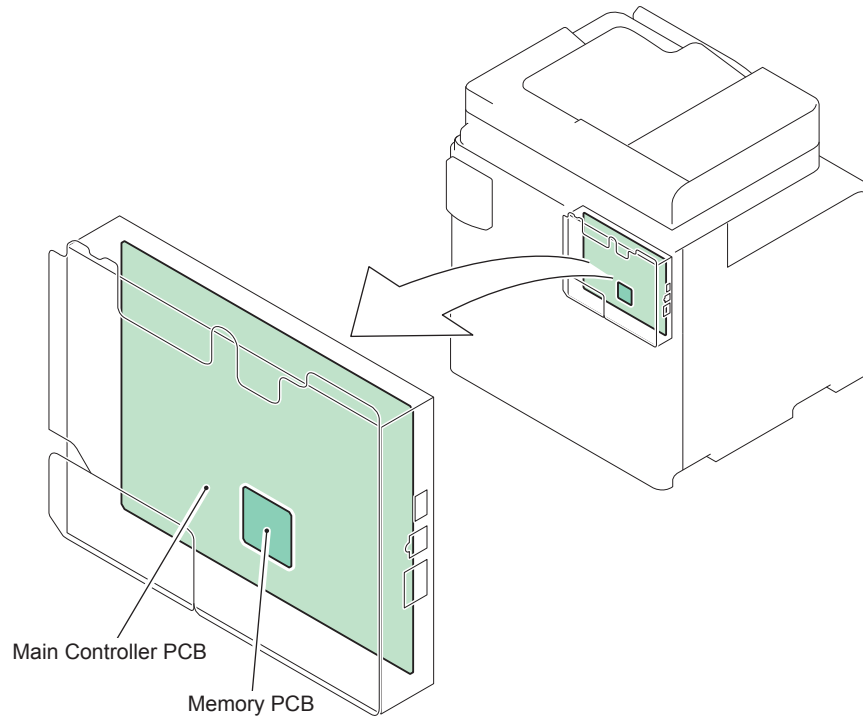
Actions at Parts Replacement

- Actions at Copyboard Glass Unit Replacement
- Actions at Scanner Unit (Reader side CIS) Replacement
- Actions at ADF Unit Replacement

Main Controller

Overview

Configuration / Function

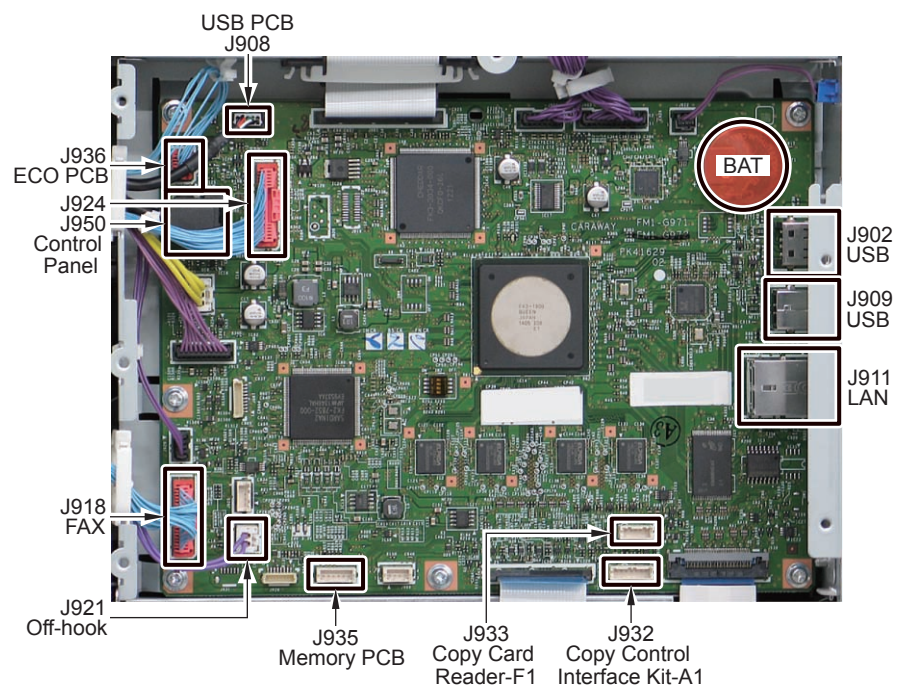


F-2-36

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

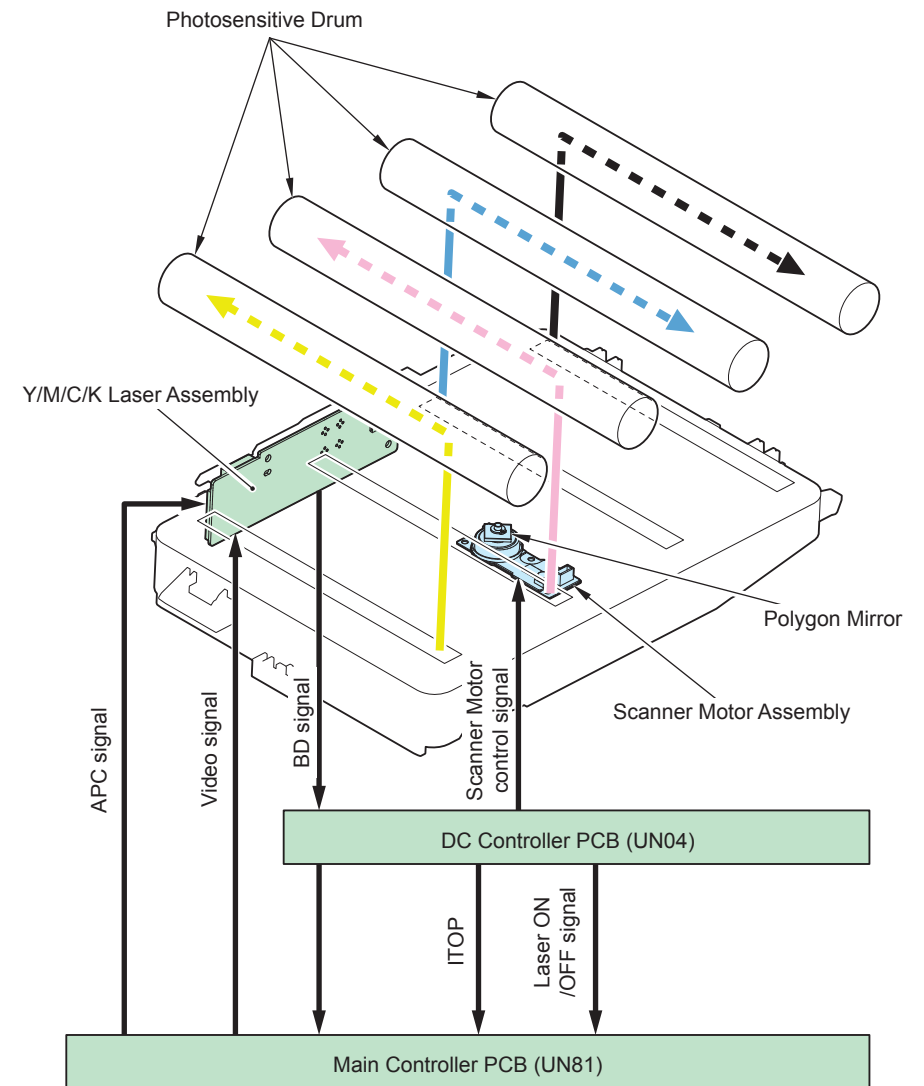
Laser Exposure System

Overview

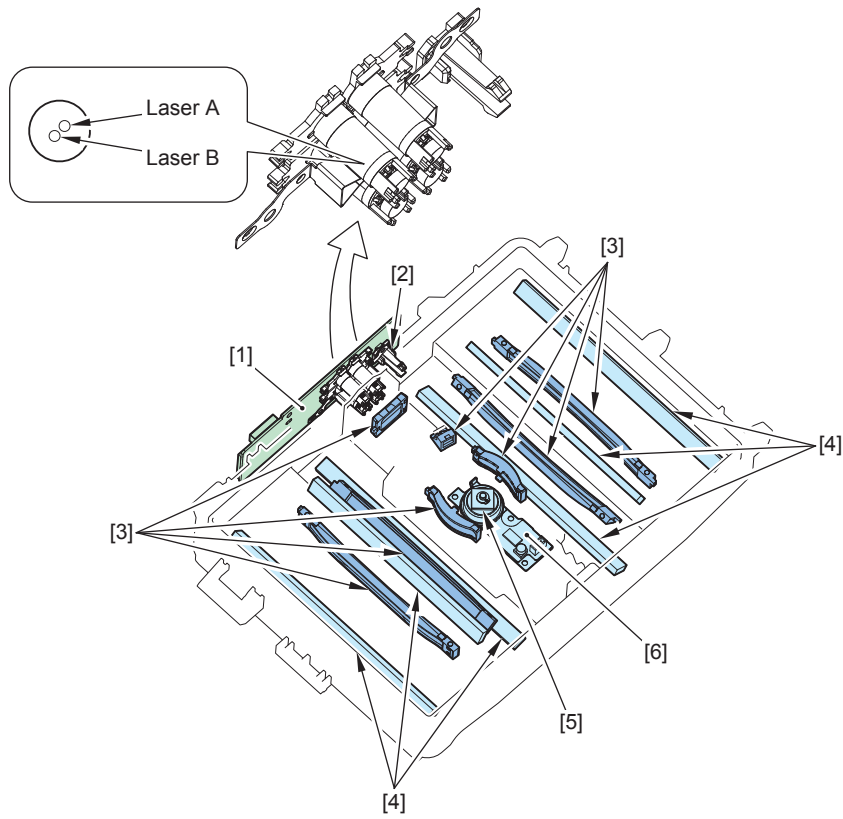
Laser exposure system forms the electrostatic latent image on the photosensitive drum by the laser exposure.

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.



F-2-38



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

F-2-39

Specification

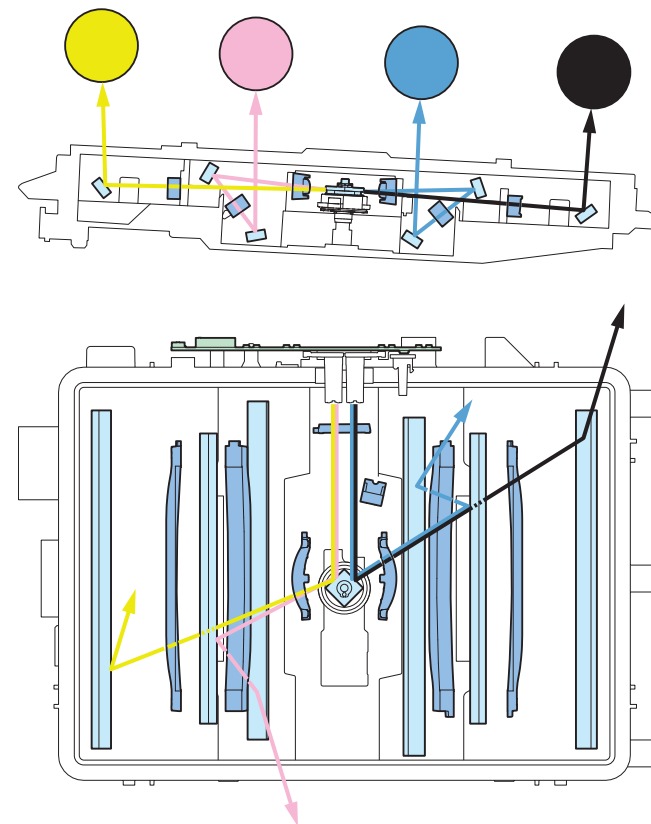
Item	Description
Wavelength	780 to 800nm
Laser type	Red color laser (non-visible light)
Laser output	7mW
Number of laser scanner unit	1
Number of laser light	2 beam for each color
Resolution	600dpi
Motor type	Brushless motor
Number of motor rotation	35 ppm model: Approx.35433 rpm 25 ppm model: Approx.23917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



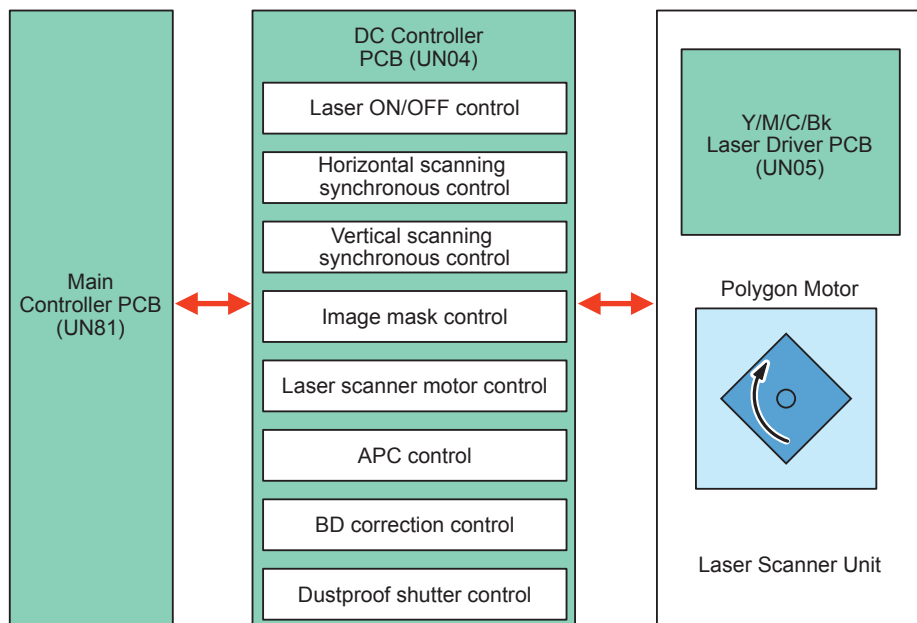
F-2-40

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

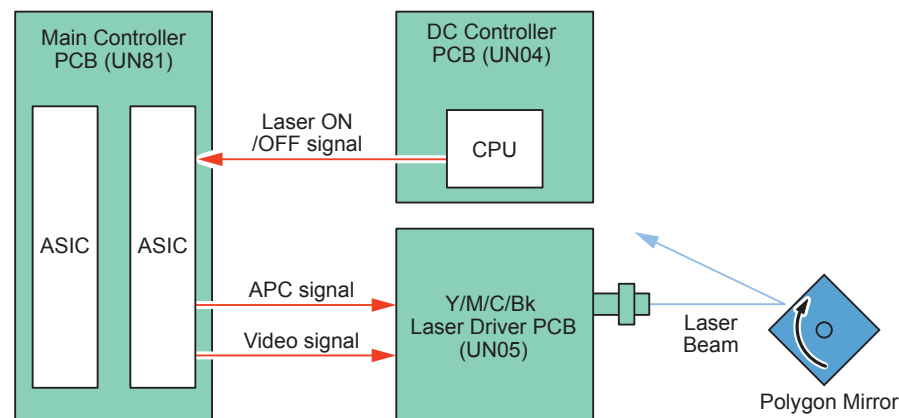
Laser light is turned ON / OFF according to the combination of laser control signal.

Execution timing

After the power ON

Control detail

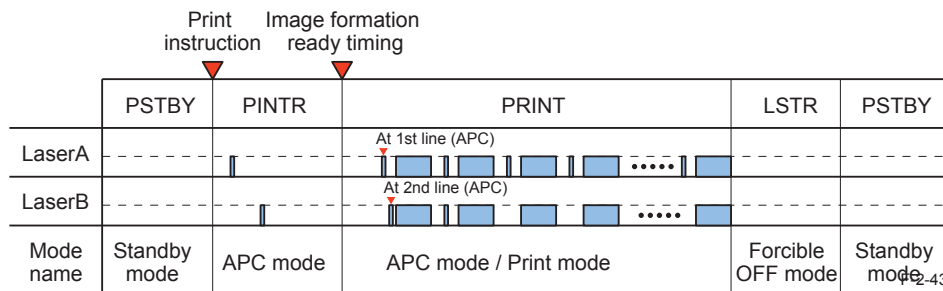
DC Controller switches the 4 modes (forcible OFF mode, APC mode, Print mode and standby mode) according to the laser control signal.



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

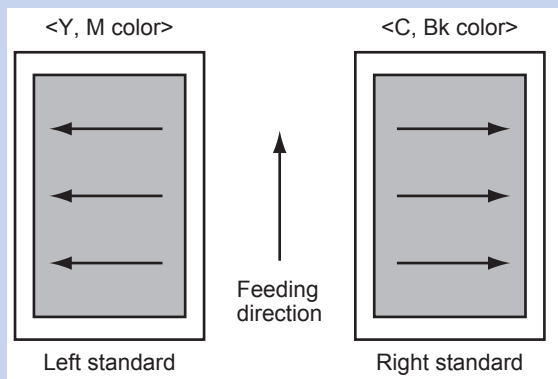
When printing starts (per line)

Control detail

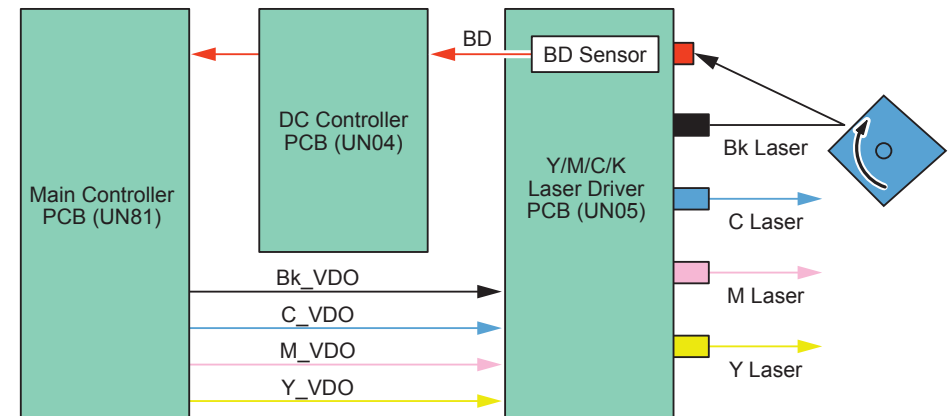
- 1) DC Controller forcibly emits the laser diode on Y/M/C/Bk Laser Driver PCB by setting the laser control signal of Bk -laser to APC mode.
- 2) The BD Circuit is located on the scanning light path of the laser beam of the Laser Bk, and the laser beam is emitted to the BD Circuit.
- 3) The BD Circuit 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.



F-2-44



F-2-45

Vertical Scanning Synchronous Control

Purpose

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

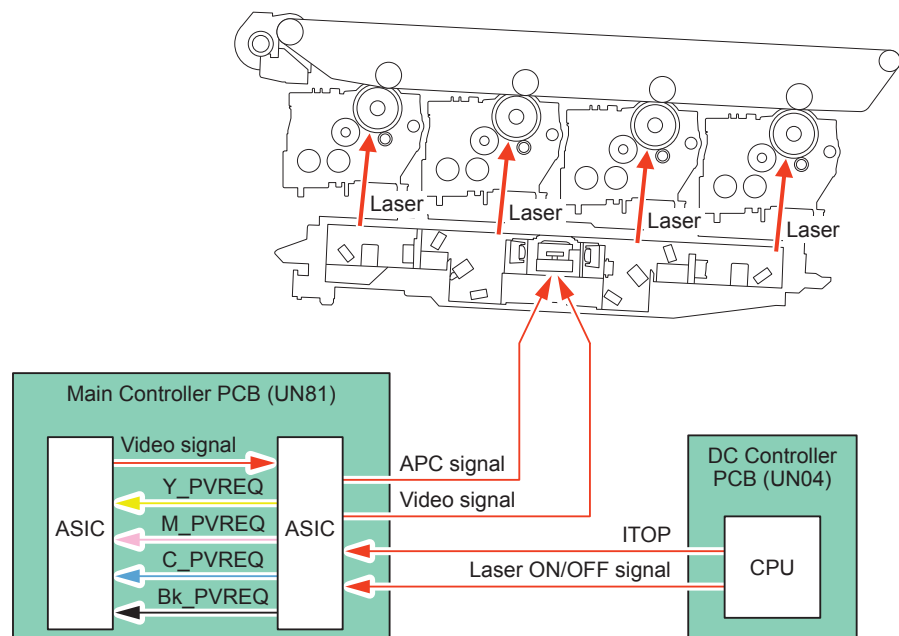
Execution timing

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.

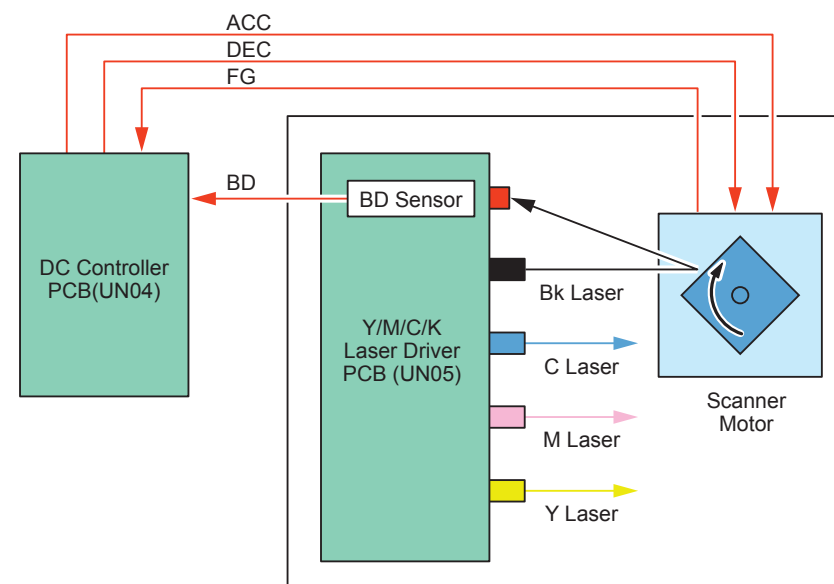
Execution timing

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.



Laser Scanner Unit

F-2-47

APC(Auto Power Control) Control

Purpose

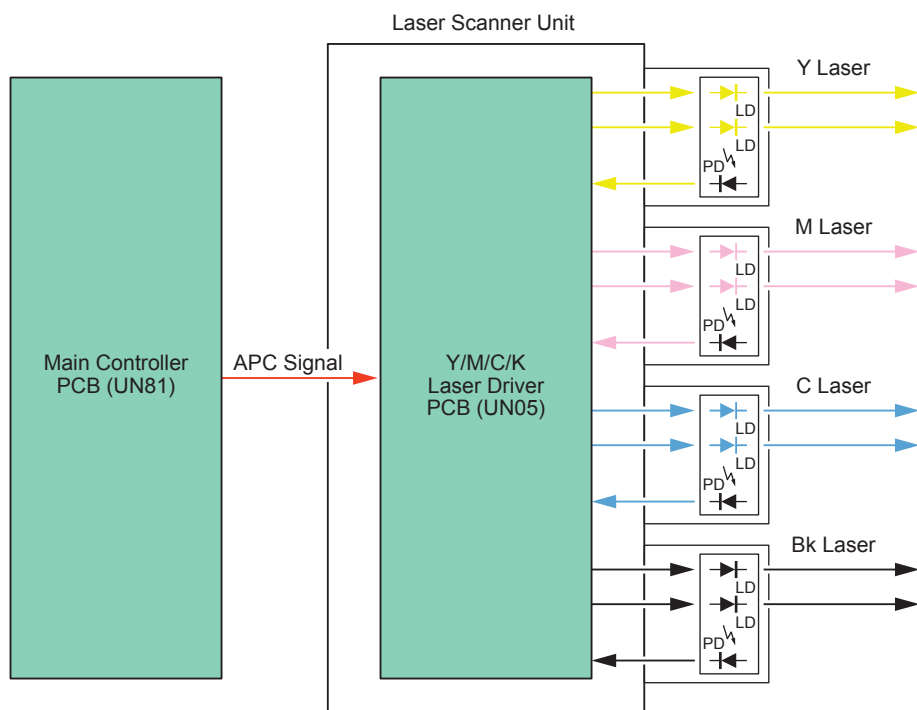
This is to make the laser light for 1 line consistent amount.

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.



F-2-48

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.

BD correction control

Purpose

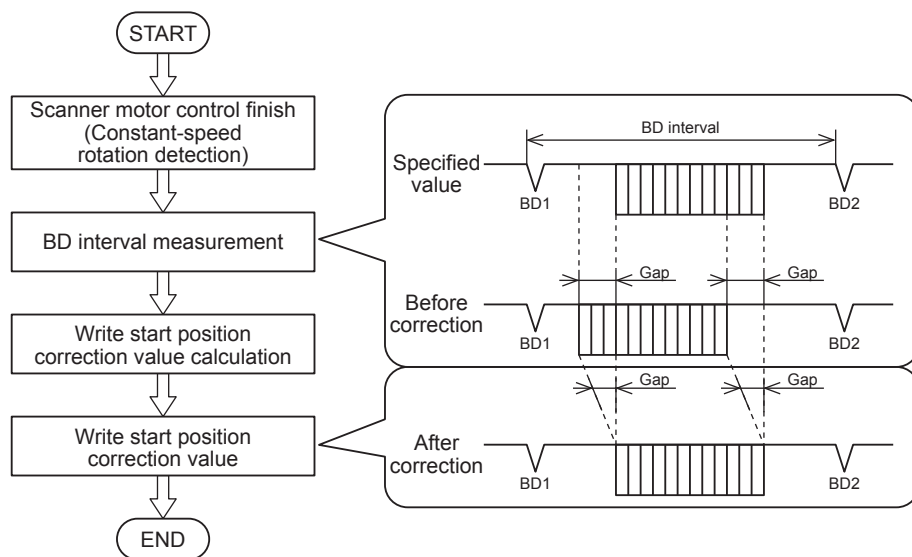
This is to correct the displacement of writing start position of each color laser due to the angle variation of Polygon Mirror facet.

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

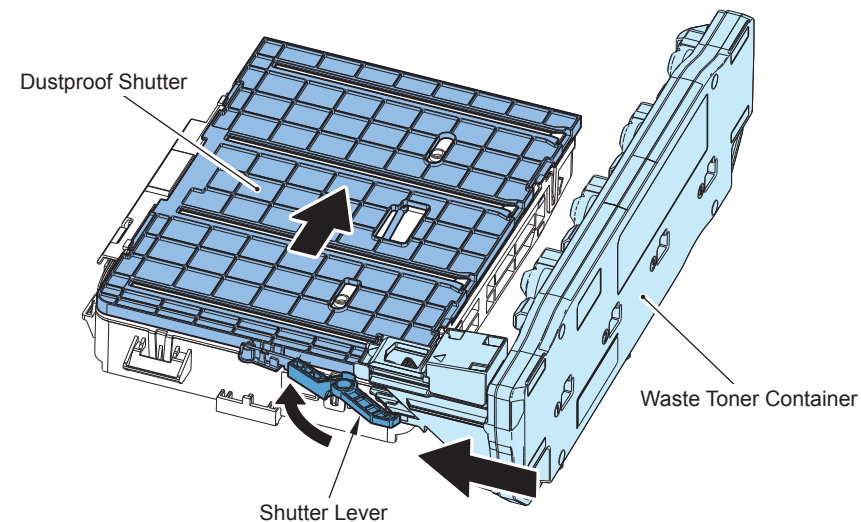
This is to prevent the residue toner from sticking to the dust-prevention glass. Or to prevent the laser light from emitting to the machine inside when the front cover / right cover is opened.

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 Waste 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

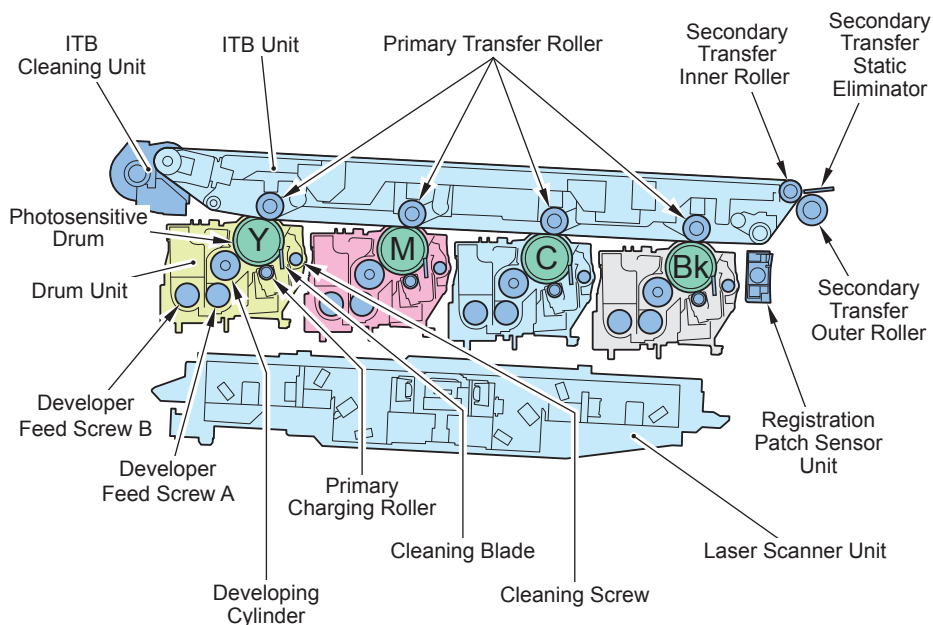
Image Formation System

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

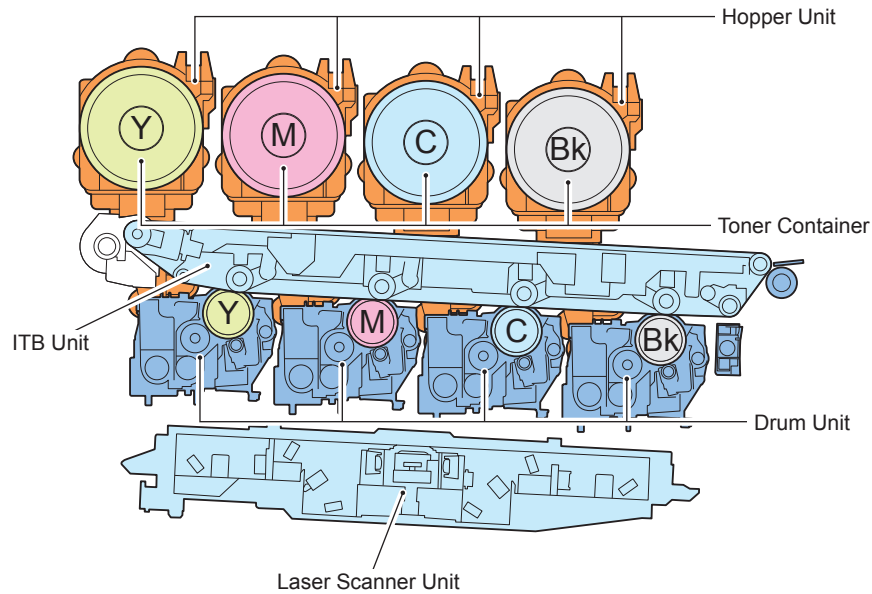
Specifications

Item		Function/Method
Photosensitive Drum	Material	OPC
	Drum diameter	30mm dia
	Cleaning	Cleaning blade
	Process speed	35 ppm model: 200 mm/s 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

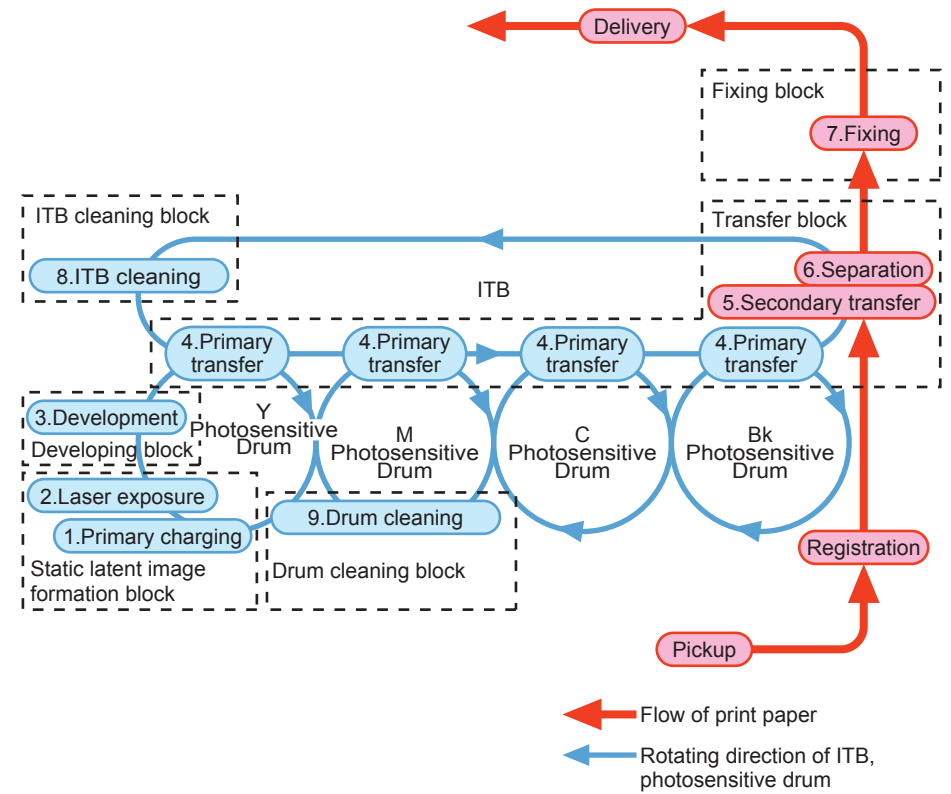
Major Parts



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

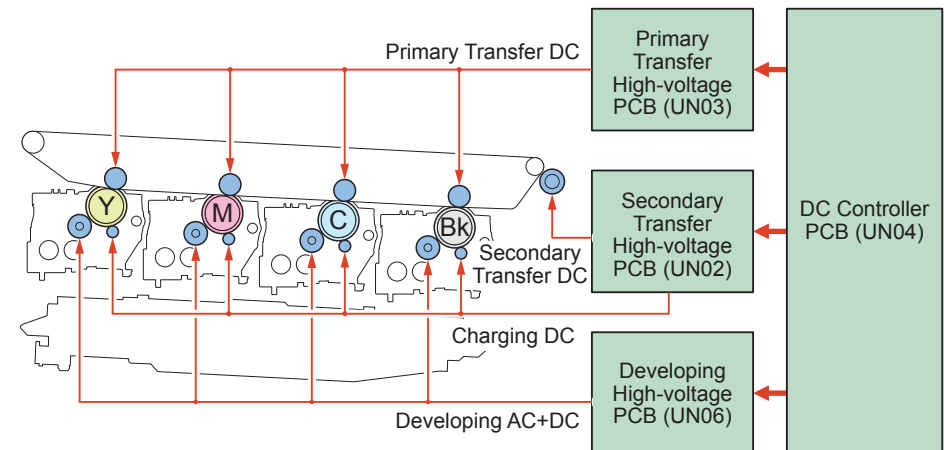
Bias Types

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

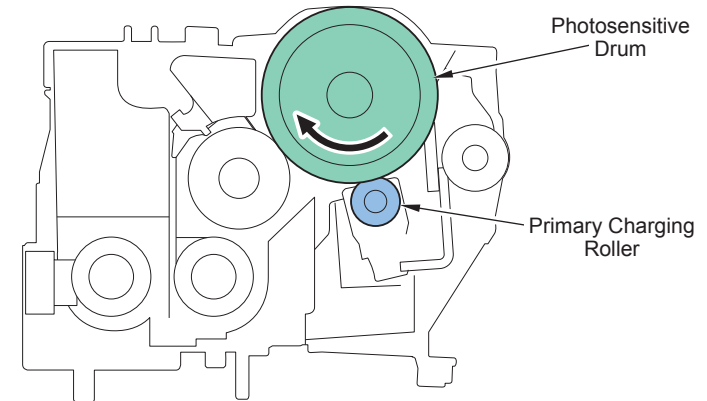
Overview

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.



F-2-55

● Primary Charging Bias Control

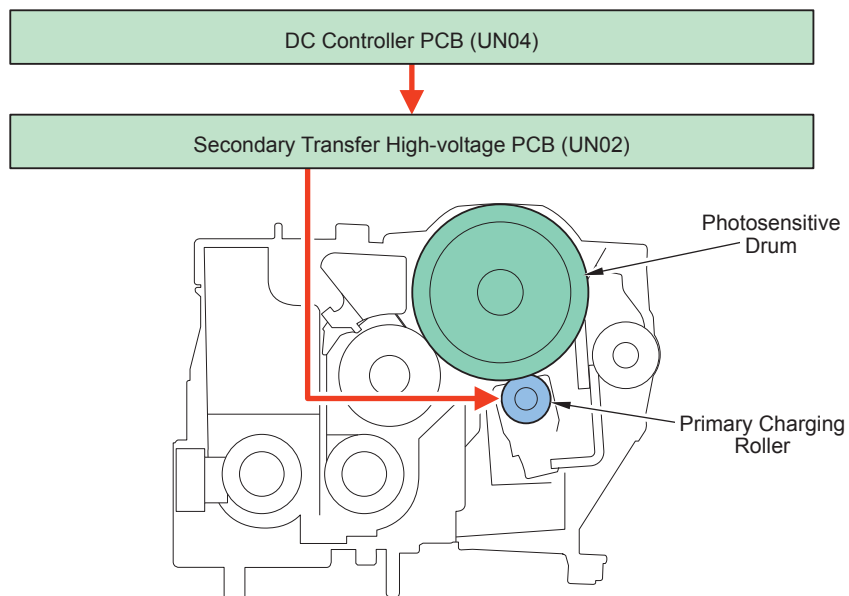
DC charging (no AC charging) is a distinguishing feature of the primary charging of this machine.

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 Drum

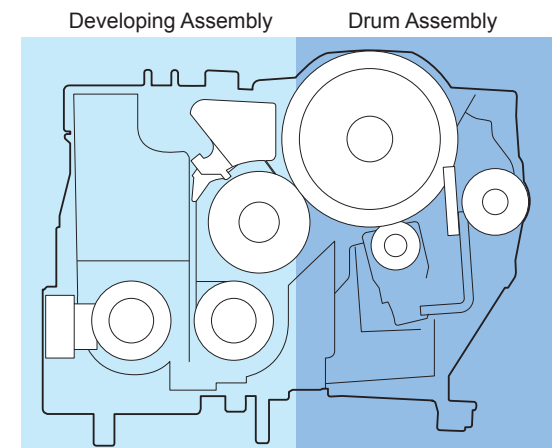


F-2-56

■ Drum Unit (Developing/Drum)

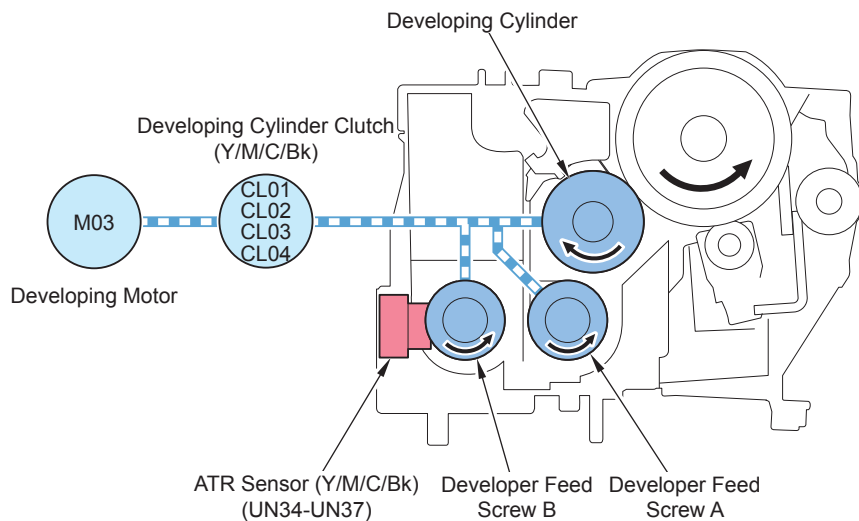
● Drum Unit Overview

The Drum Unit consists of the Developing Assembly and the Drum Assembly.



F-2-57

Developing Overview/ Drive Configuration



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

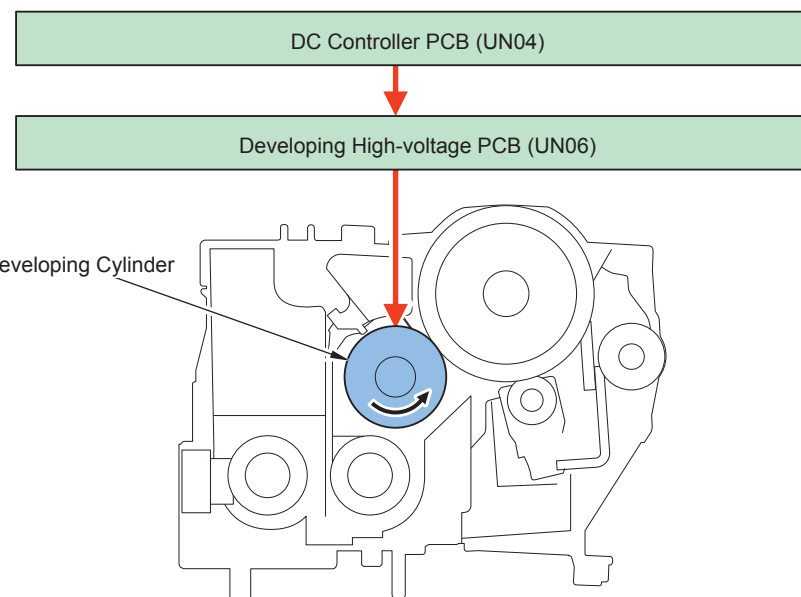
Developing bias control

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

Control description

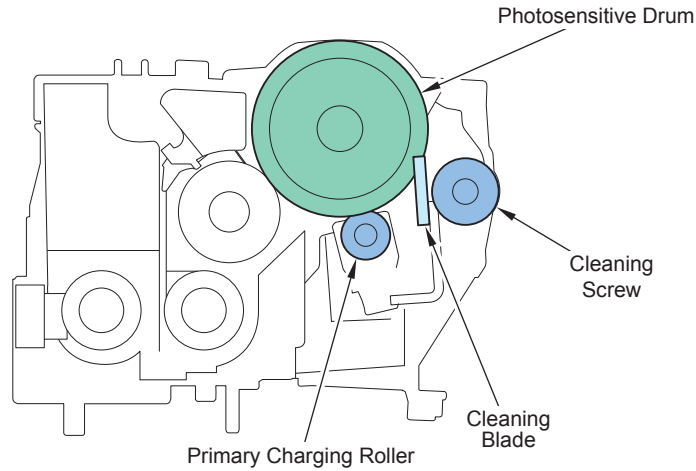
The developing bias (AC, DC negative), which has been generated on the Developing High-voltage PCB (UN06), is applied to the Developing Cylinder.

- 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.



F-2-59

● Drum Overview

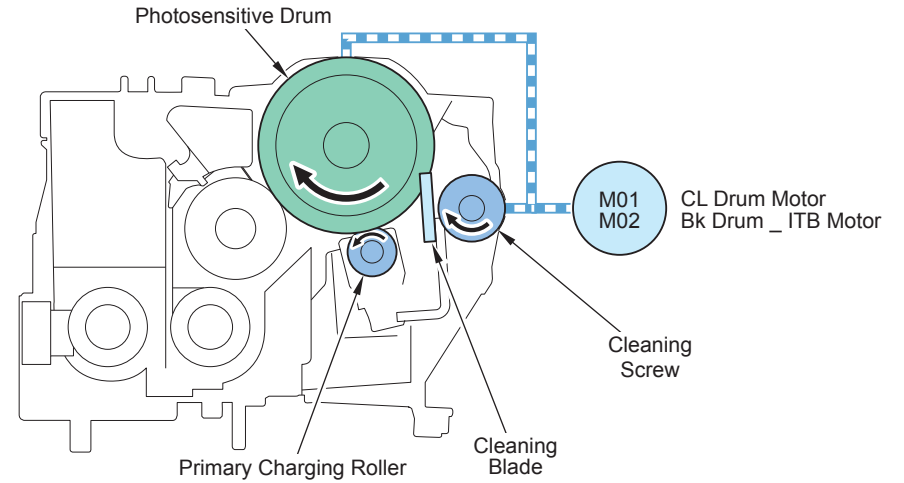


F-2-60

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.

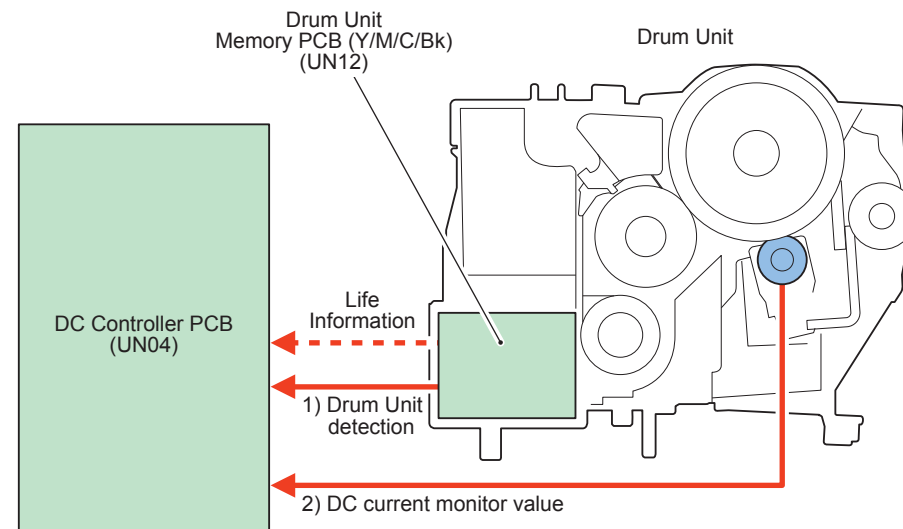
- 1) The Drum Unit Memory PCB of the Drum Unit is detected.
 - If the Drum Unit Memory PCB can be detected, it is judged that the Drum Unit is attached.
 - If the Drum Unit Memory PCB cannot be detected, step 2 is executed.
- 2) It is determined by the DC current monitor value at warm-up rotation.
 - 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)

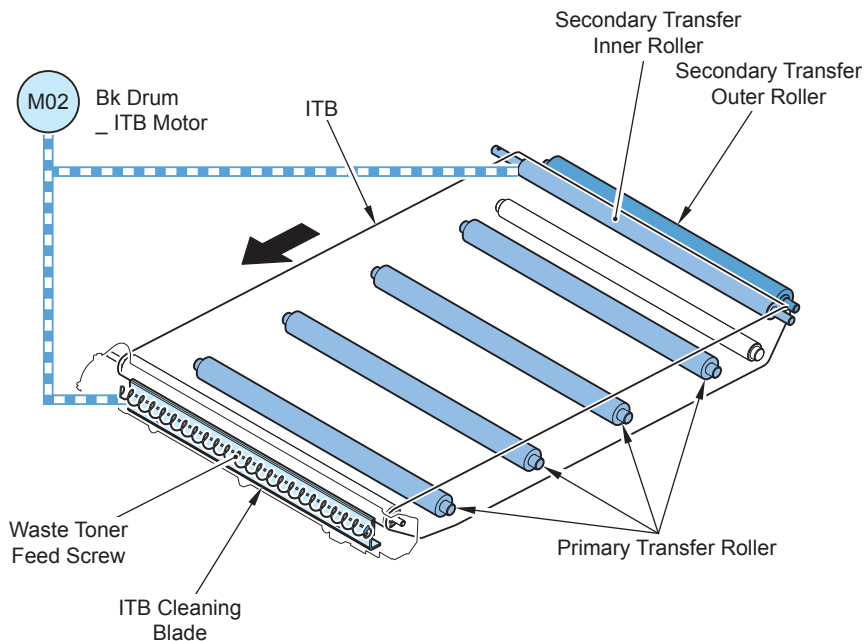
*4: During the period from when a pre-toner low alarm is sent to when a replacement completion alarm is sent, the next pre-toner low alarm is not sent. It is printed in JAM/ERR LOG REPORT (ALARM-2).

*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.

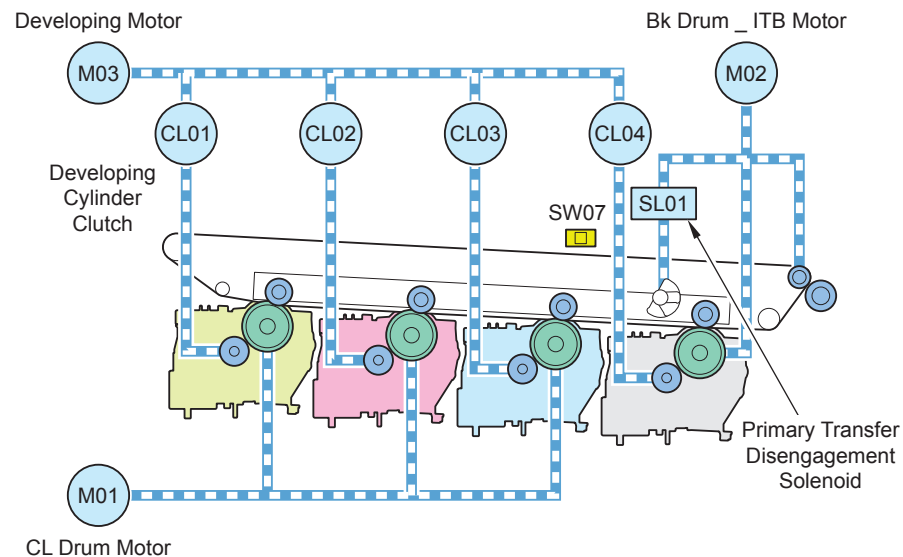


F-2-63

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

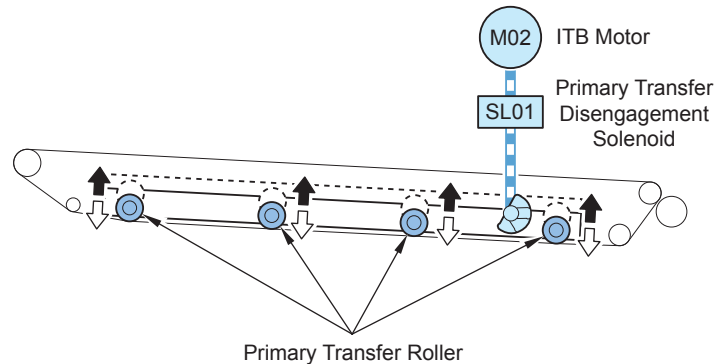
Related service mode:

- 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



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

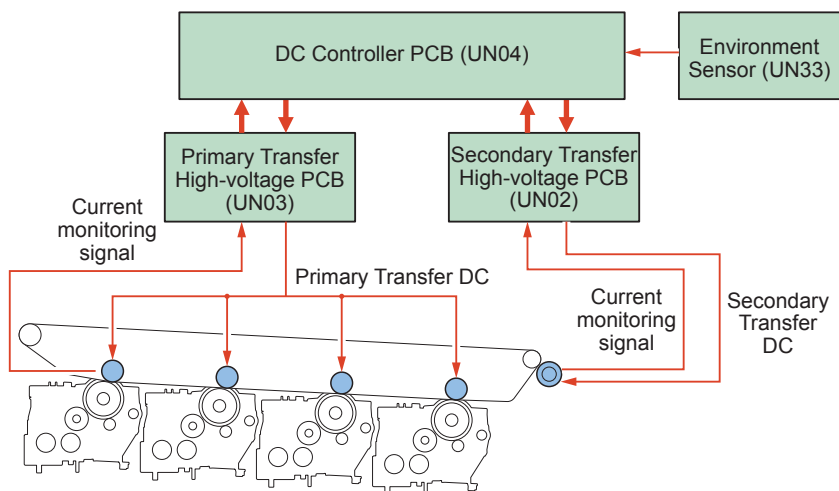
The transfer voltage required to prevent transfer failure due to environmental changes or paper type and to obtain the target transfer current value is set.

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.

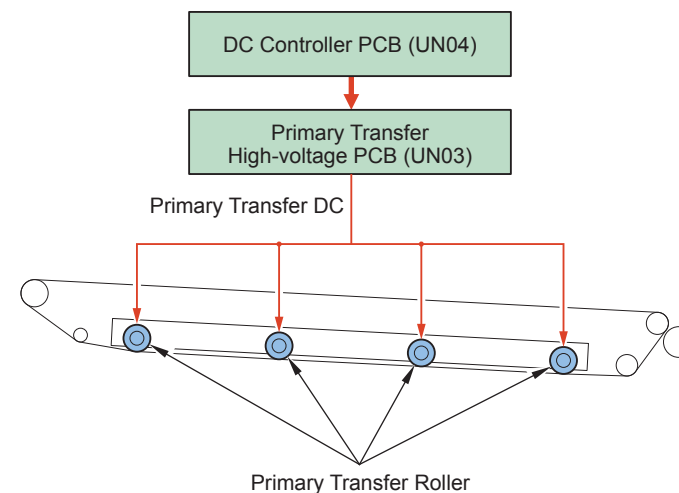


F-2-66

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 through 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

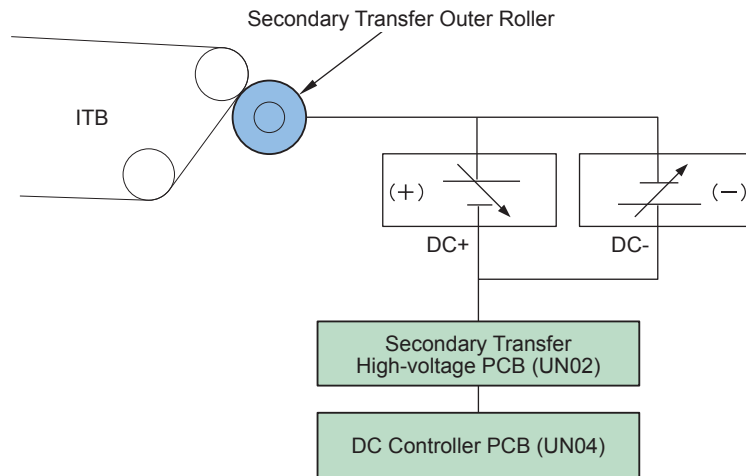
Toner on the ITB is transferred to a paper.

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.



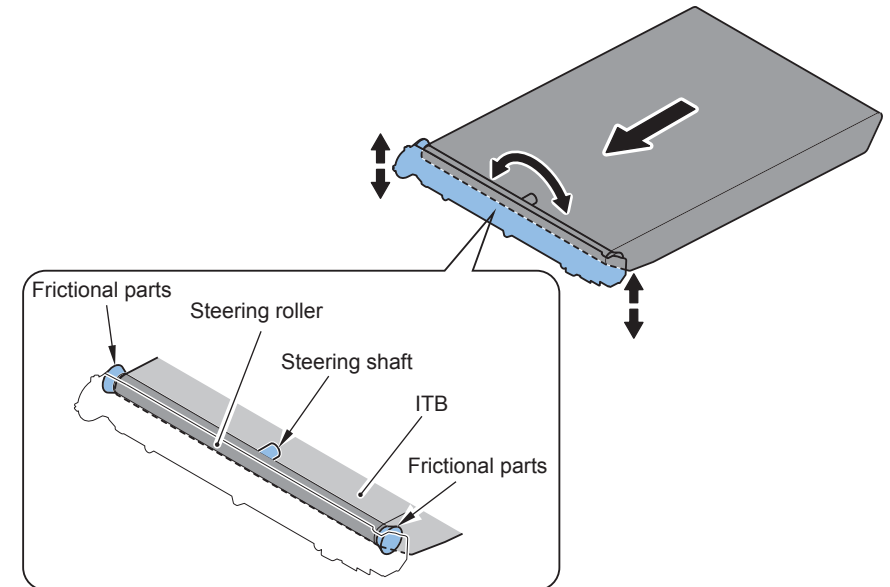
F-2-68

● ITB Displacement Correction

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

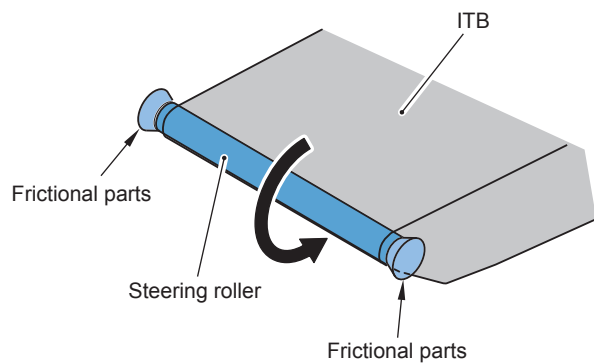
Parts configuration

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

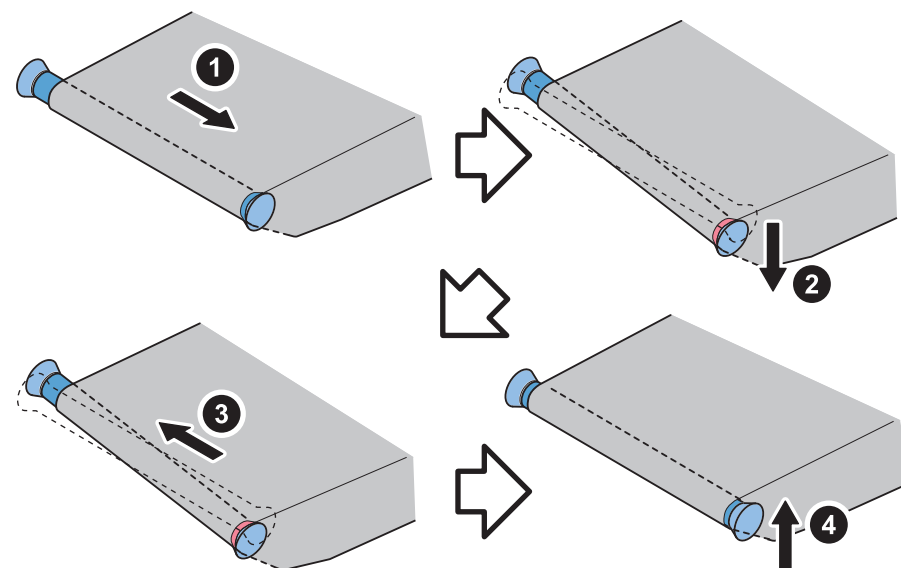
The Steering Roller has a configuration to rotate together with the rotation of the ITB, but the sliding members at both ends do not rotate.



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.



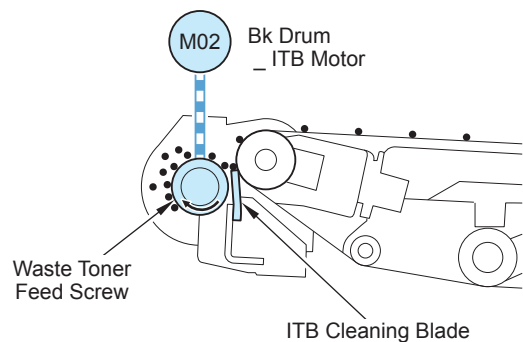
F-2-71

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.



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.

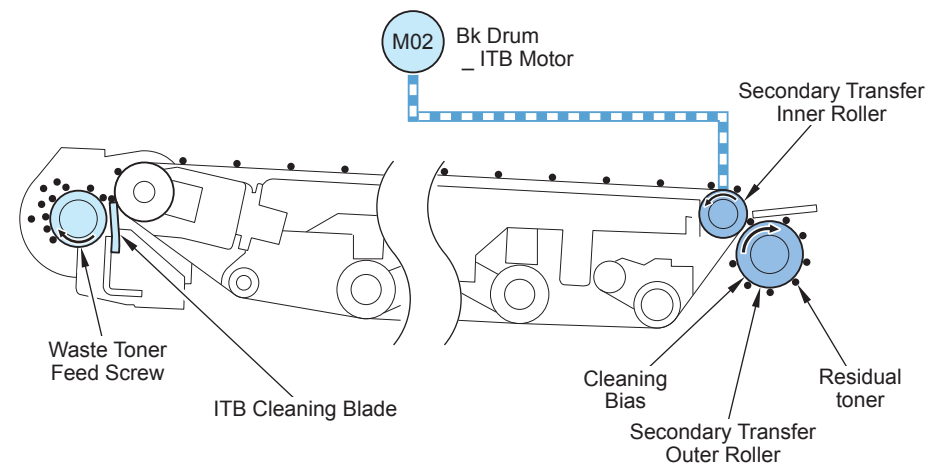
Control timing

- 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.



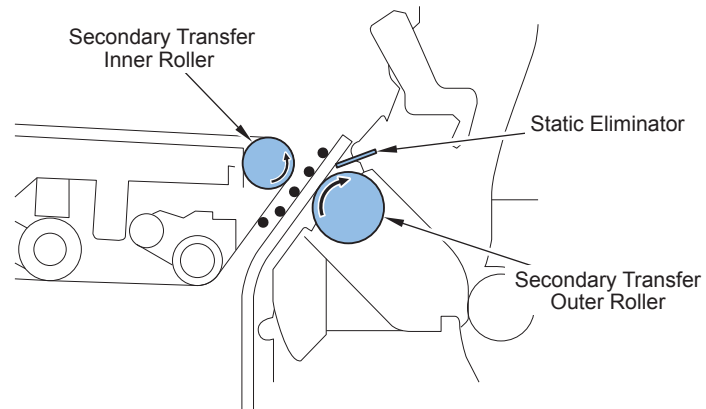
F-2-73

● 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

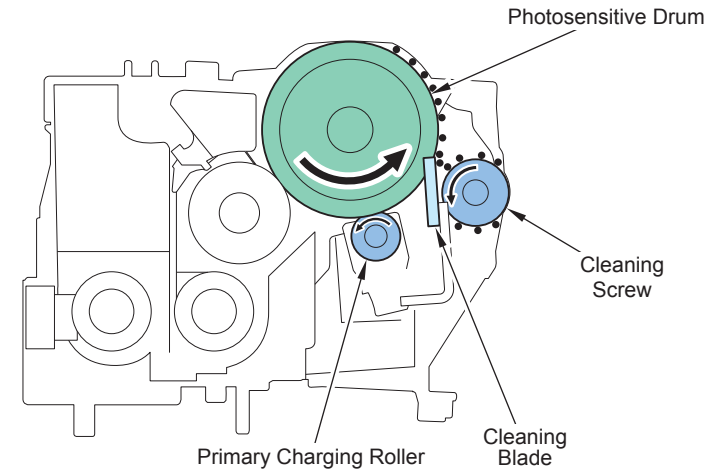
■ Drum Cleaning

● 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.

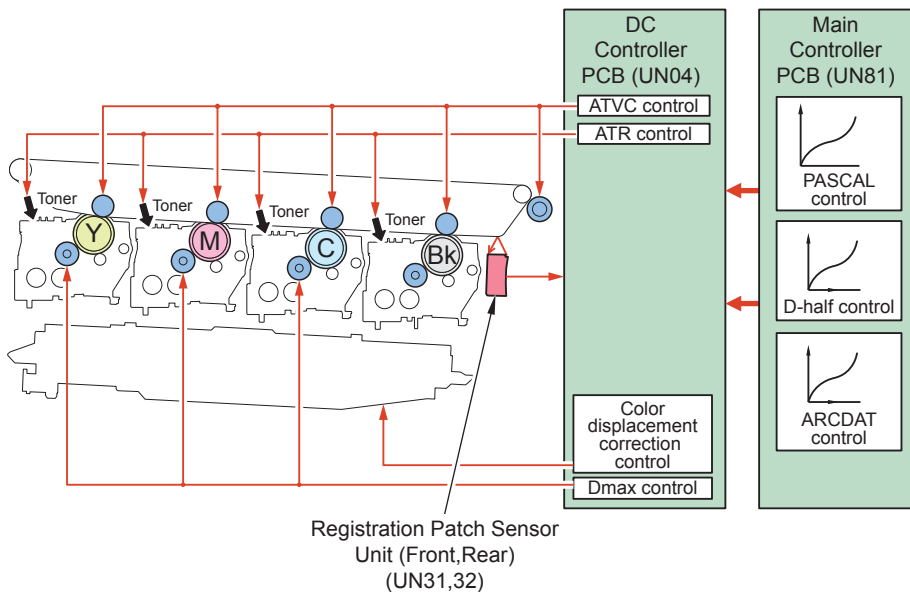


F-2-75

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	Control type				
		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 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 on a specified print basis (200 sheets or more)	○				
	At last rotation on a specified print basis (1000 sheets or more)			○		
	At last rotation after printing when the designated temperature difference or humidity difference from the previous execution has been exceeded	○				
	At last rotation when PASCAL control is executed			○		
	At last rotation of PASCAL control or D-half control				○	
At installation or during parts replacement	When replacing the Drum Unit	○			○	
	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 "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

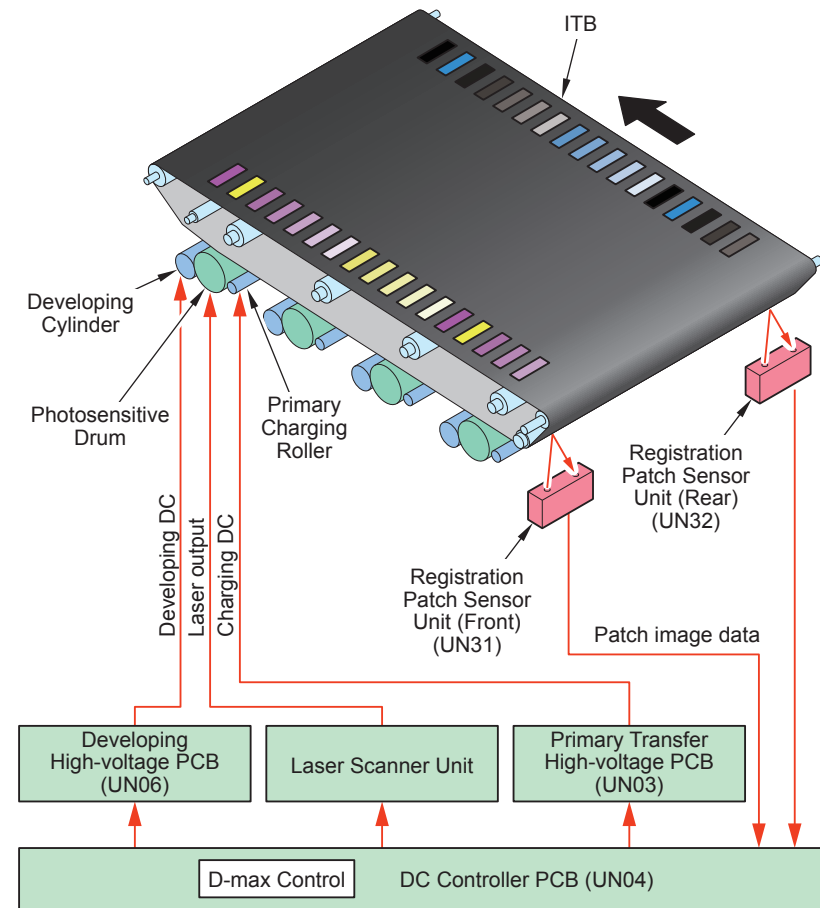
The optimal laser output is determined.

Control timing

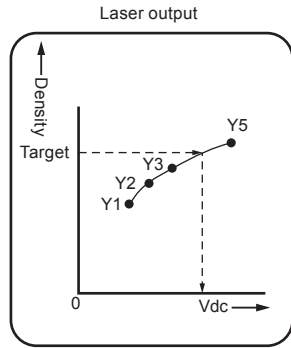
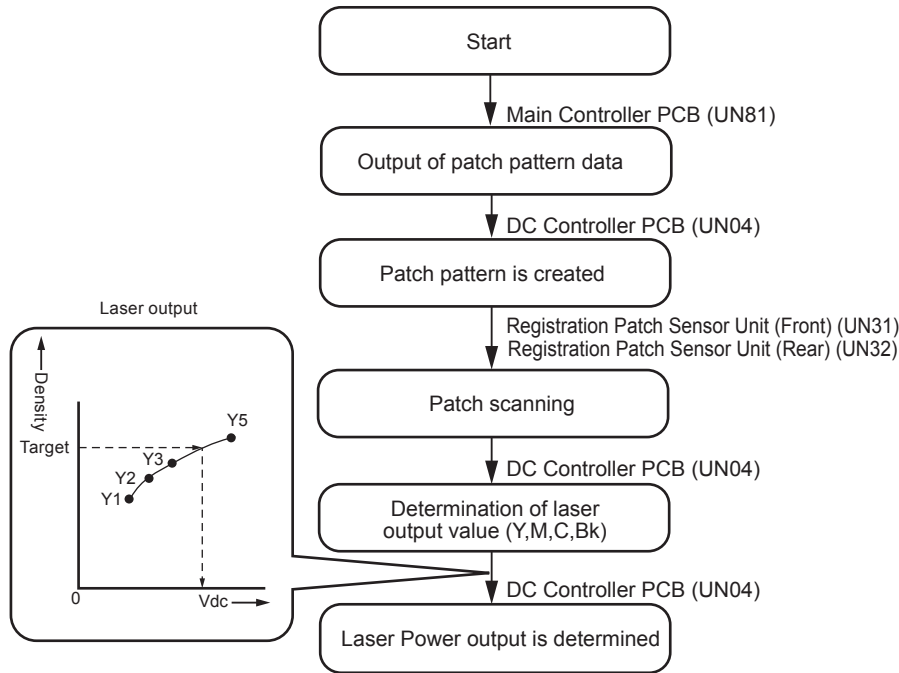
- 1) When replacing the Drum Unit
- 2) At last rotation or paper interval on a specified print basis (200 sheets or more)
- 3) At last rotation after printing when the designated temperature difference or humidity difference from the previous execution has been exceeded
- 4) At initial rotation of PASCAL 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



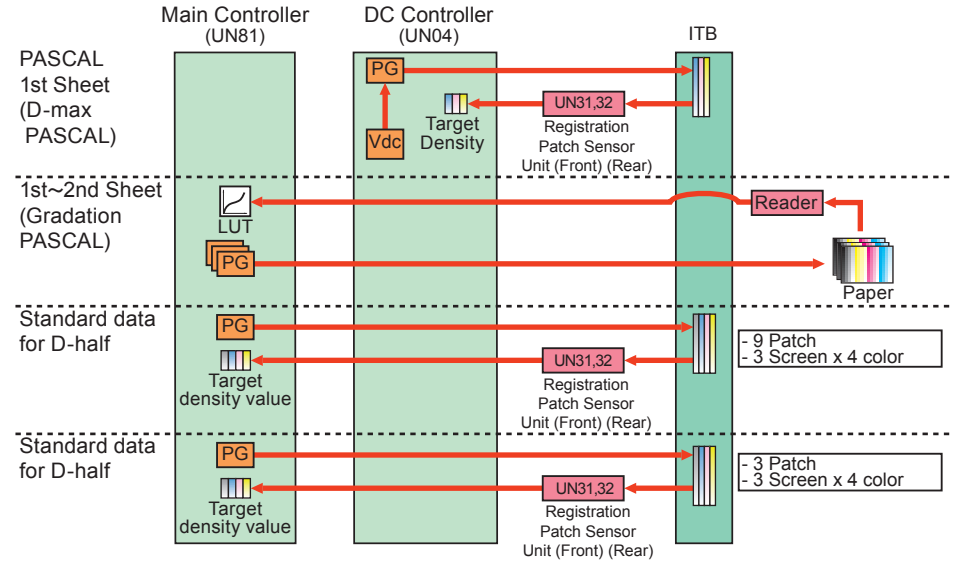
F-2-78

● 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:

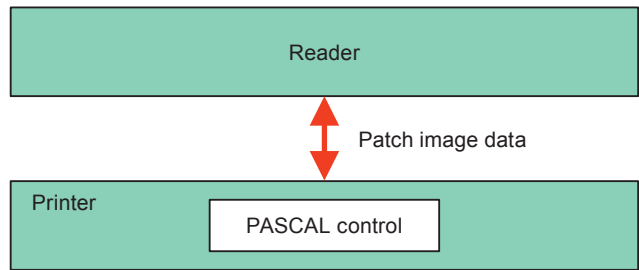
To set whether to display the modes for plain paper 3, recycled paper 3, heavy paper 1/2/3 on the Auto Adjust Gradation screen at the time of full adjustment.

COPIER > OPTION > DSPLY-SW > HPFL-DSP

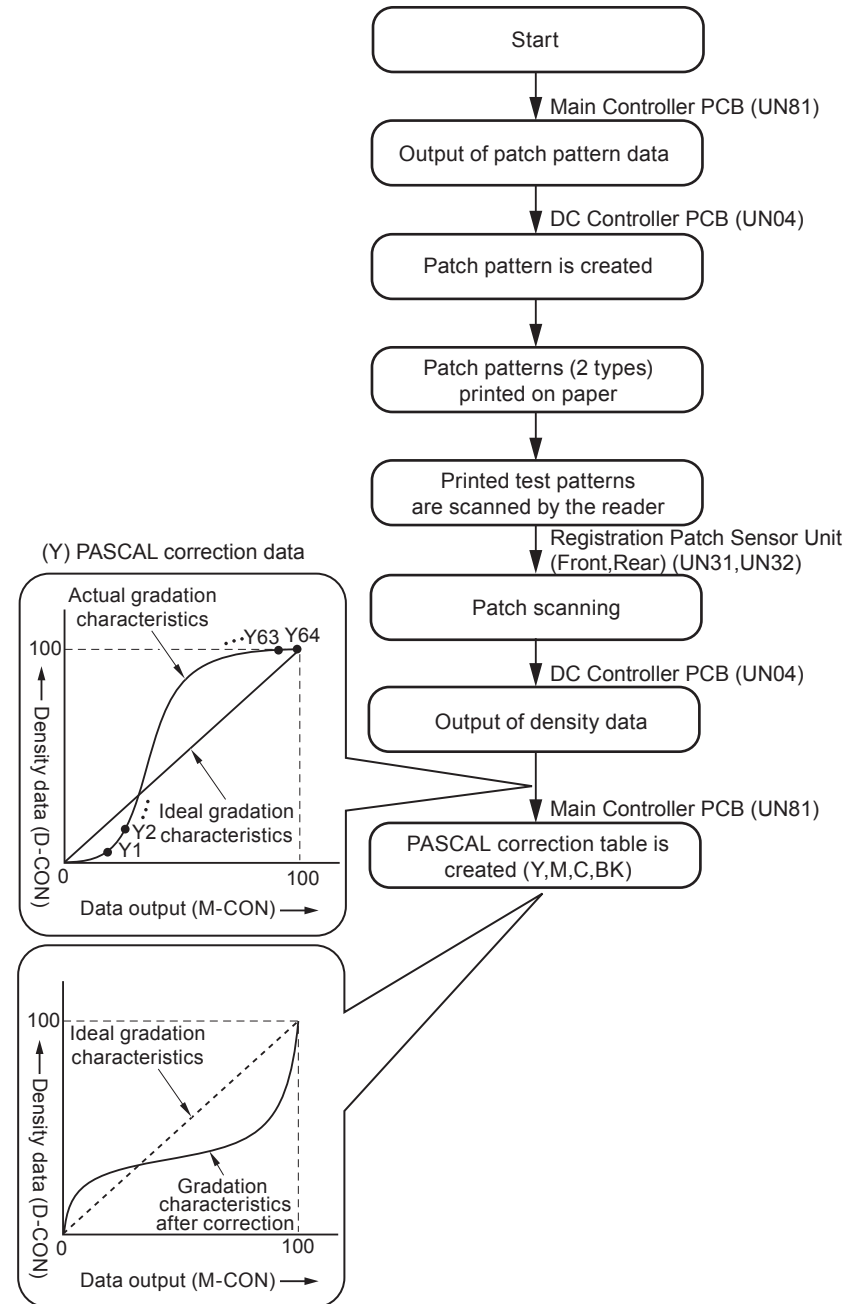
0: OFF

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



F-2-80



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

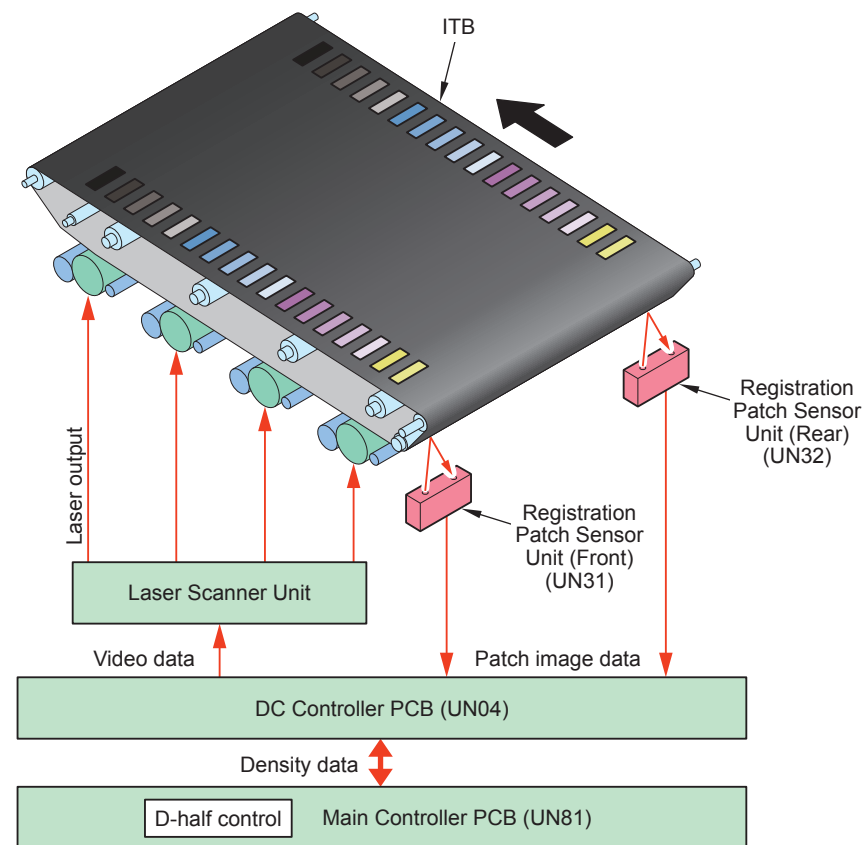
Control description

- 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.

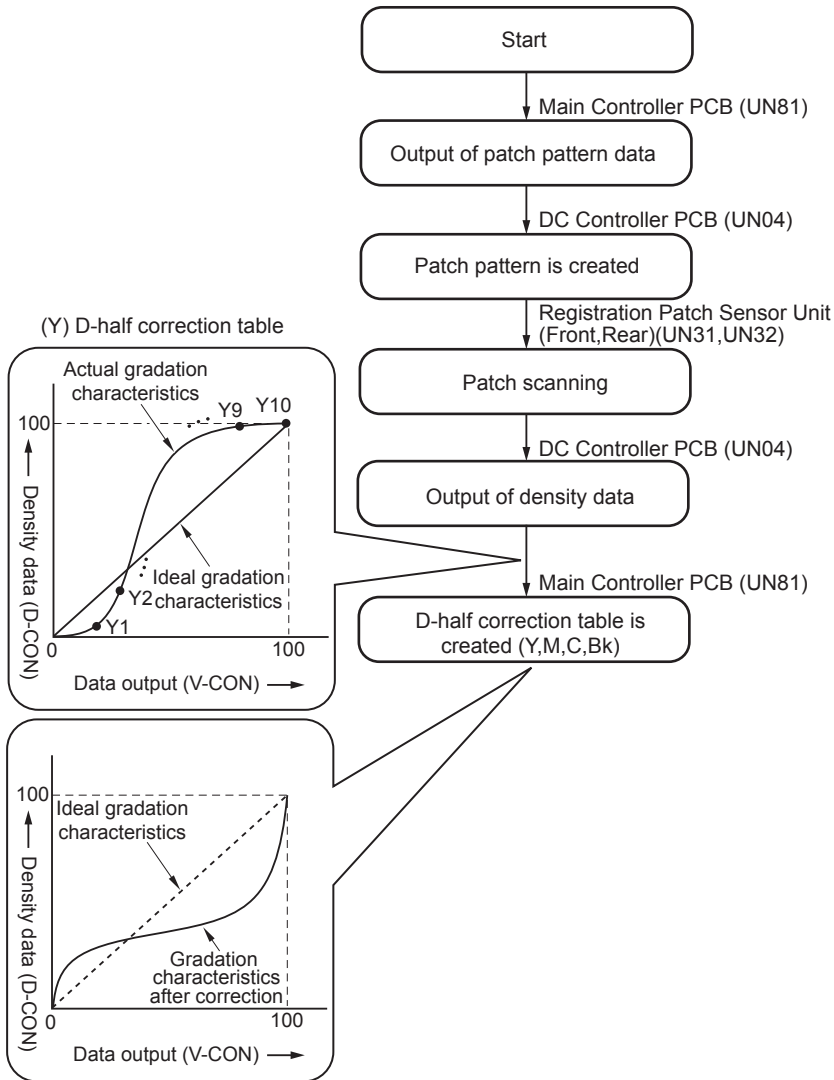
NOTE:

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)

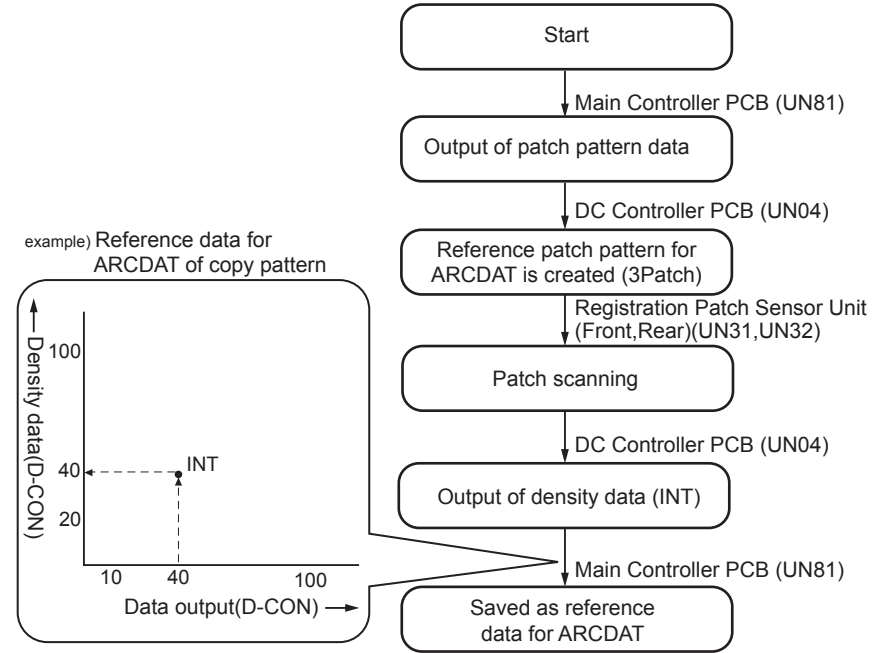


F-2-82



F-2-83

The flow to calculate correction value for ARCDAT control



F-2-84

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

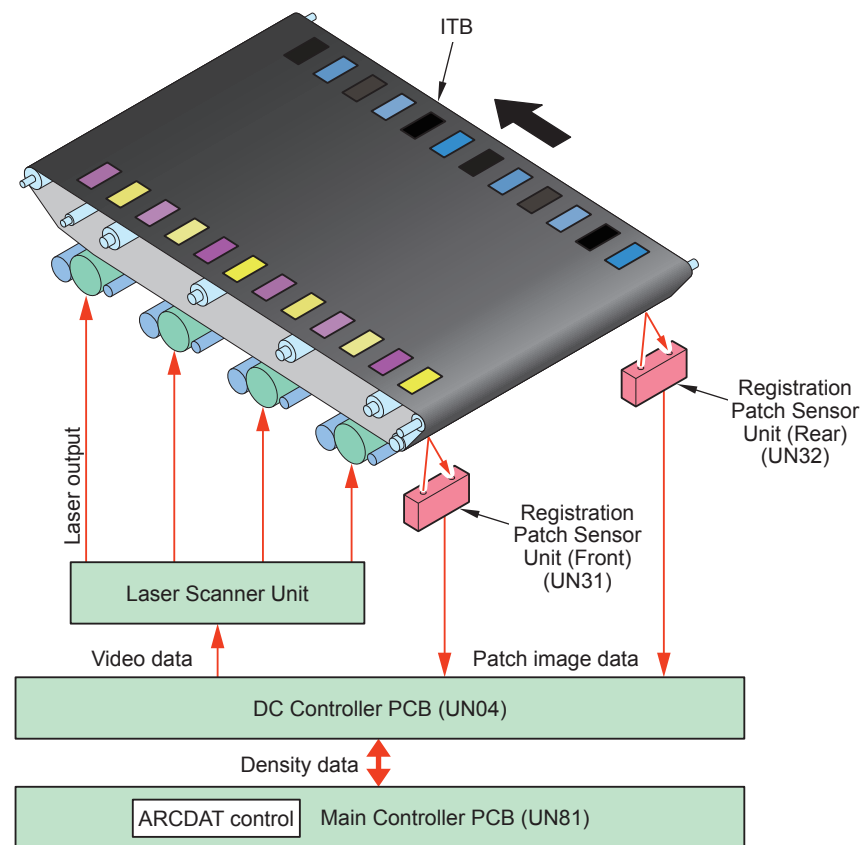
While reducing downtime, the ideal gradation characteristics are realized.

Control timing

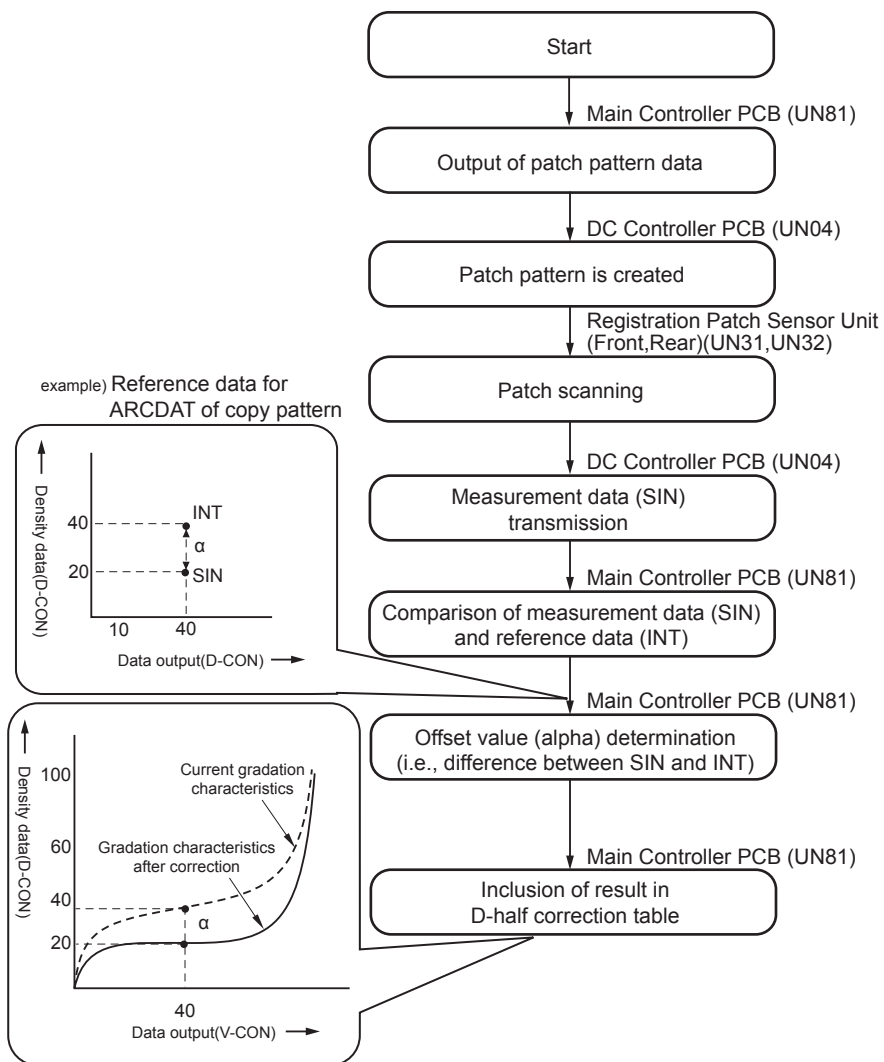
- 1) When replacing the Drum Unit
- 2) At paper interval on a specified print basis (80 sheets or more)
- 3) At last rotation on a specified print basis (30 sheets or more)
- 4) At last rotation of PASCAL control or D-half control

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.



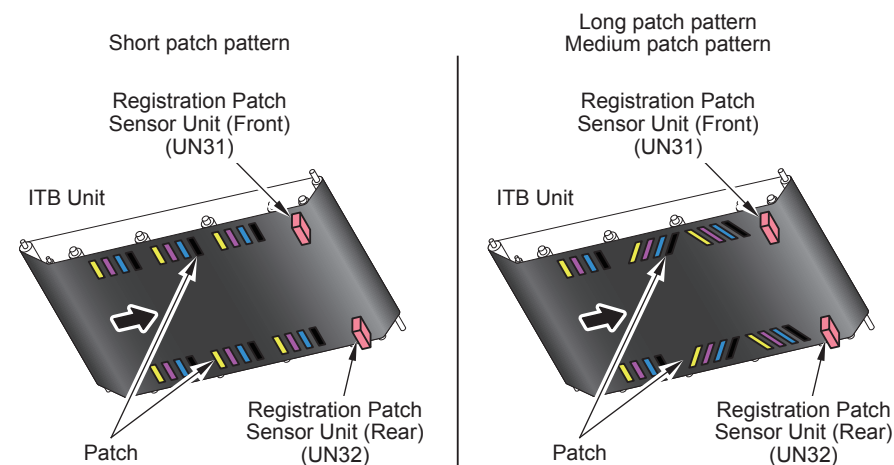
F-2-85



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.



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.

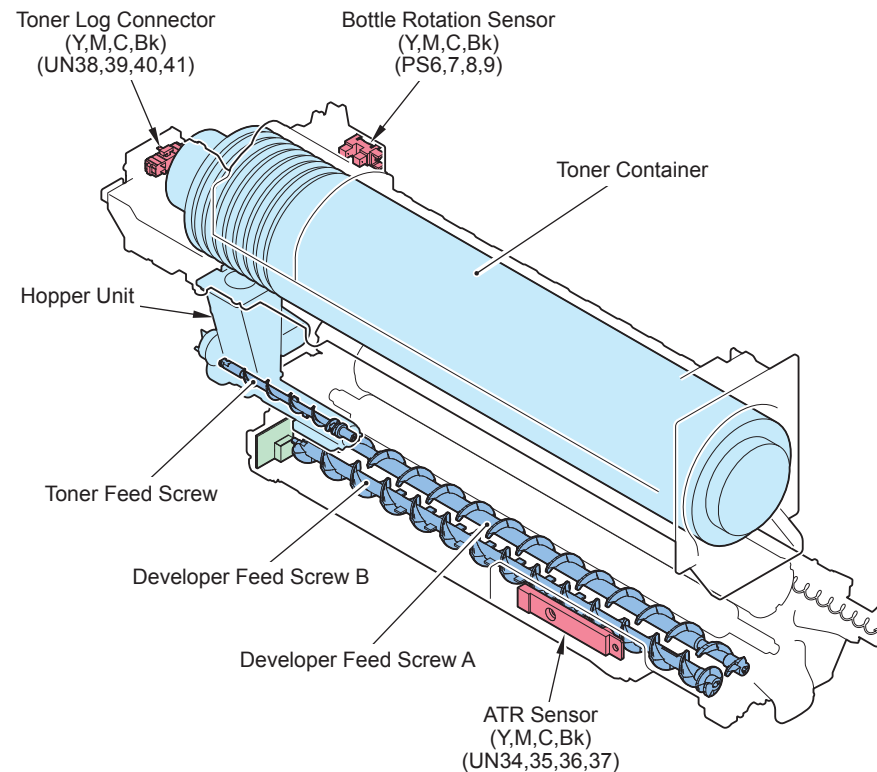
Control type		Correction description
Correction in horizontal scanning direction	Write start correction	Write-start timing in horizontal scanning direction is changed.
	Entire magnification ratio correction	Pixels in horizontal scanning direction is increased/reduced (at the both edges of the image)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

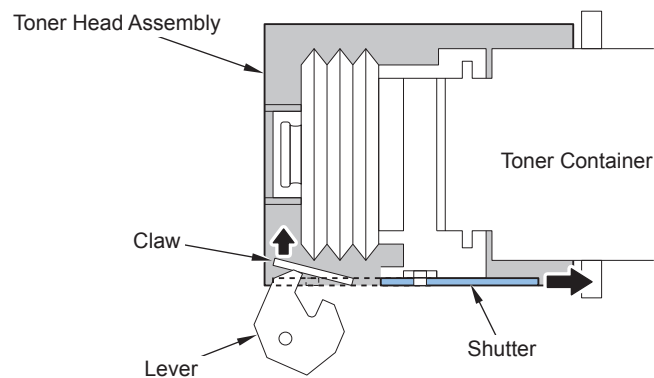
T-2-29

● Toner Head Assembly Opening

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

Control timing

When replacing a toner container

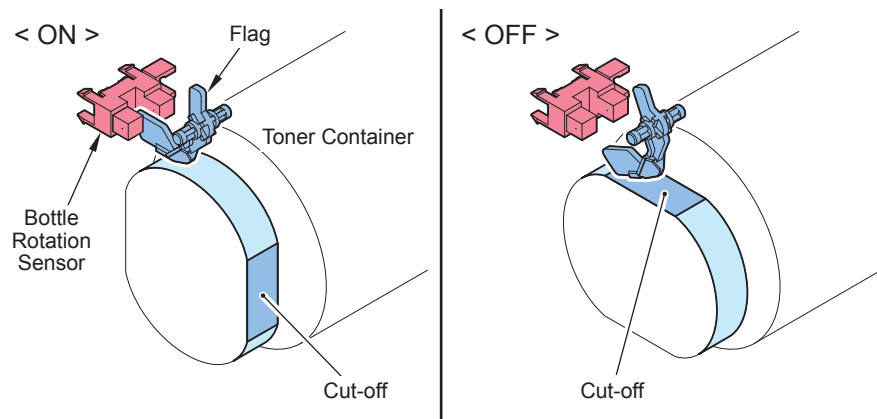


F-2-89

● 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.

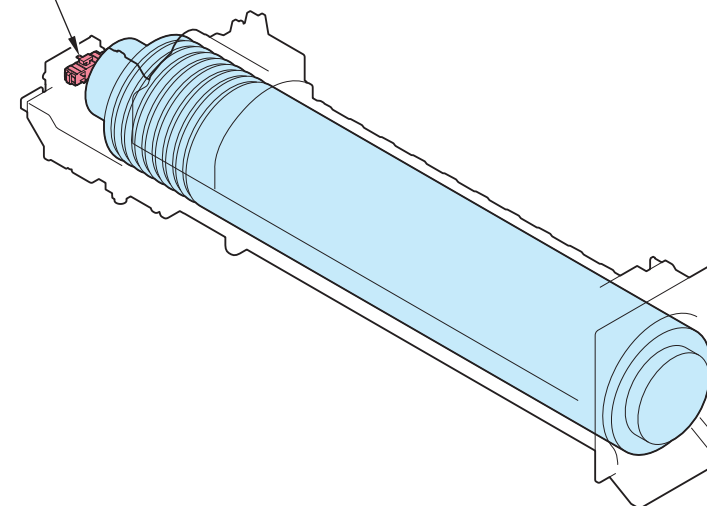
Detection timing

When replacing Toner Container

Detection description

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

Toner Log Connector
(Y,M,C,Bk)
(UN38,39,40,41)



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)

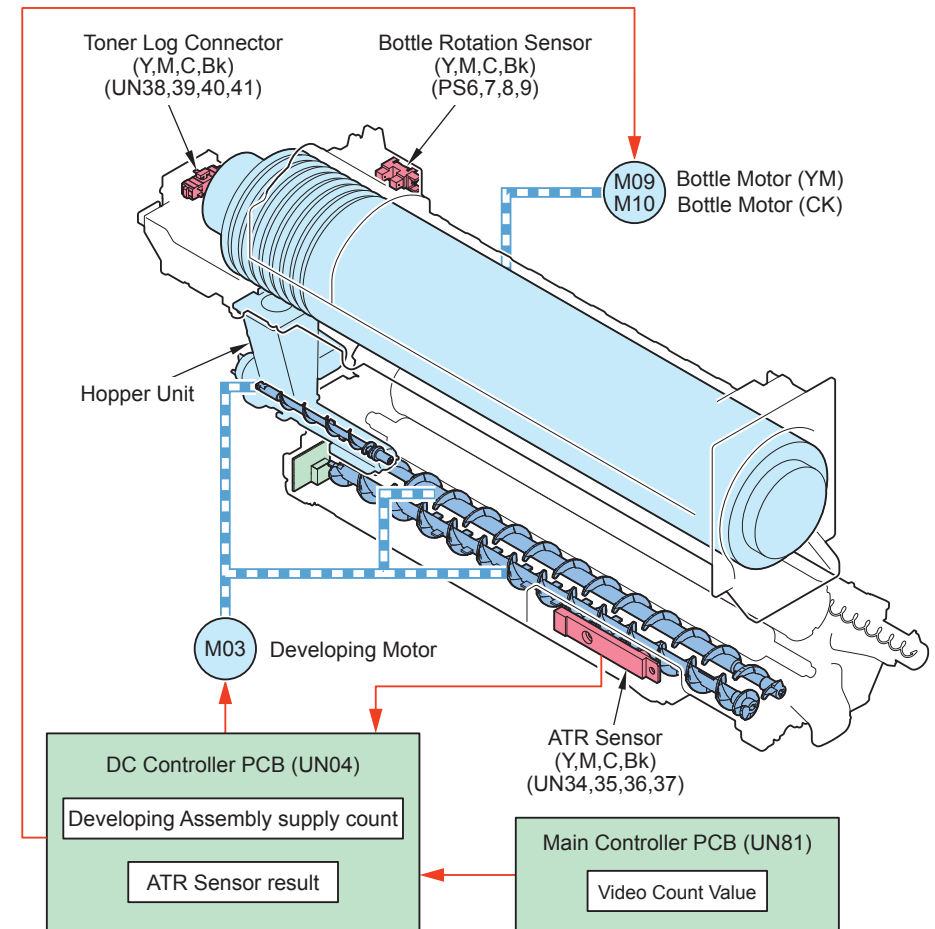
Control description

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)

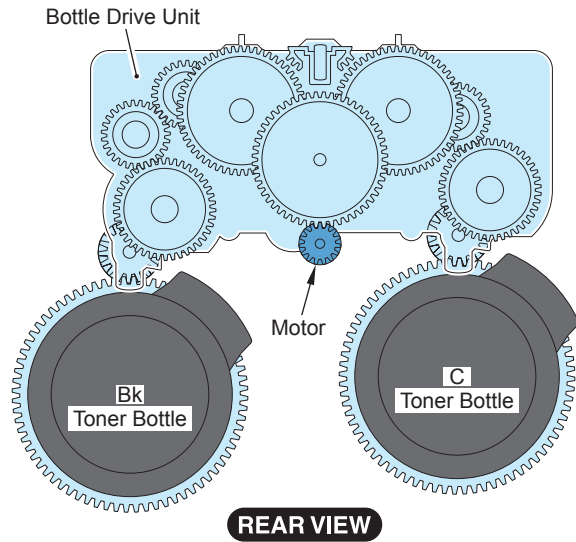
E020-0XC0: Error in take-up of Sealing Member (Y/M/C/Bk)

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.

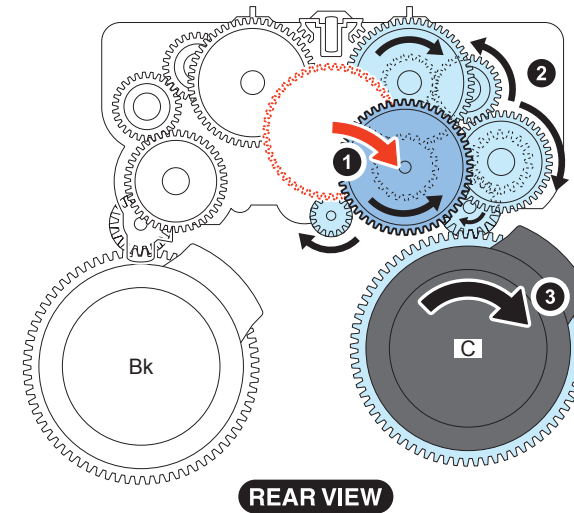
The following shows the image of the Drive Unit viewed from the back side.



F-2-93

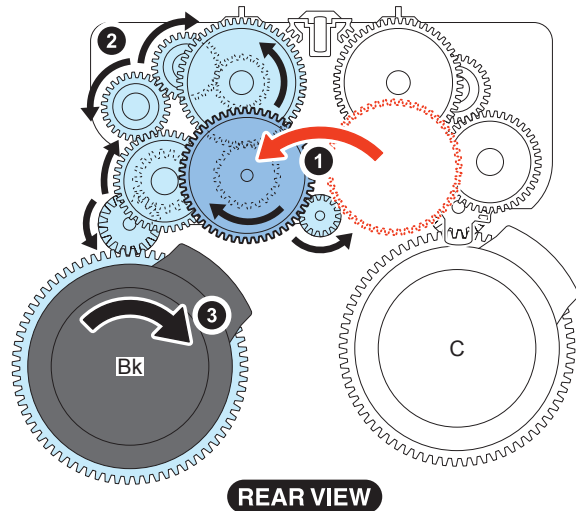
The operation is going to be explained taking Bk and C as an example.

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.



F-2-94

- When the motor rotates in the reverse direction, the gear in the center moves to the opposite direction.
- The driving force is transmitted only to the gears on the side toward which the gear moved, and the Toner Bottle rotates.

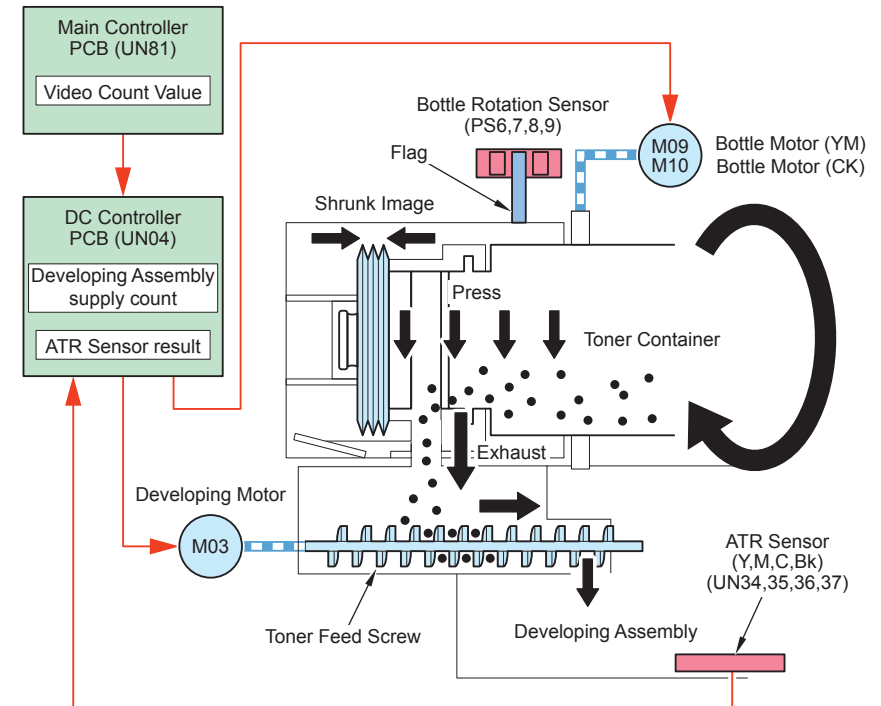


F-2-95

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

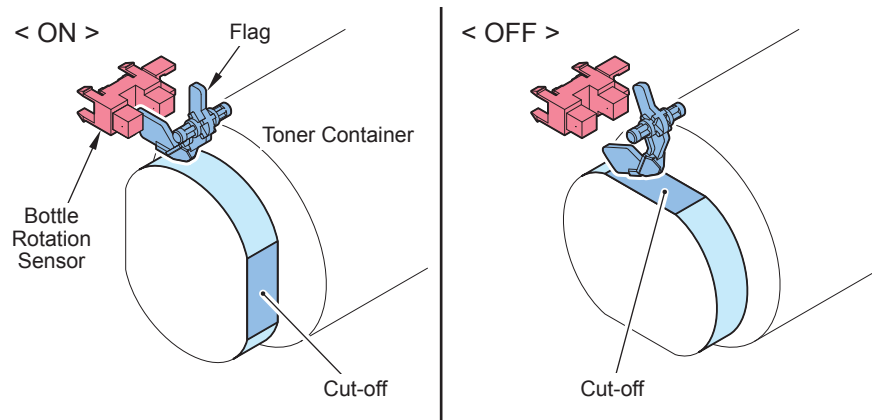
Title	Supply to the Hopper	Supply to the Developing Assembly
Description	Toner is supplied from the Toner Container to the Hopper Unit.	Toner is supplied from the Hopper Unit to the Developing Assembly.
Supply timing	Toner is supplied when supply is determined necessary from the result of ATR control.	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

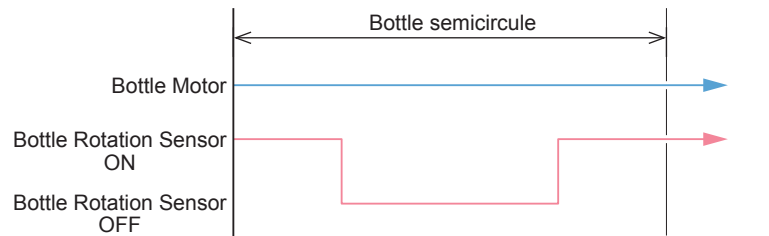
*) The supply amount is determined based on the output value at the time of ATR Sensor output and the time of video count.

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 > DSPPLY-SW > TNR-WARN (Lv.1).

Related error codes:

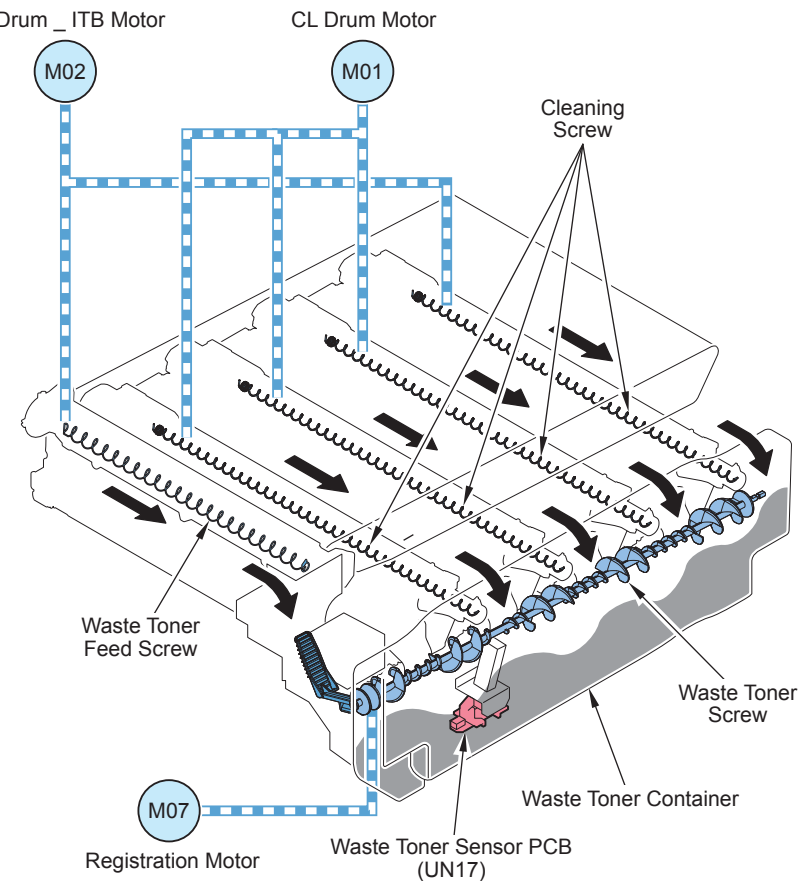
E025-0110 Bottle Motor (YM) lock detection error (Y)
 E025-0210 Bottle Motor (YM) lock detection error (M)
 E025-0310 Bottle Motor (CK) lock detection error (C)
 E025-0410 Bottle Motor (CK) lock detection error (Bk)

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.



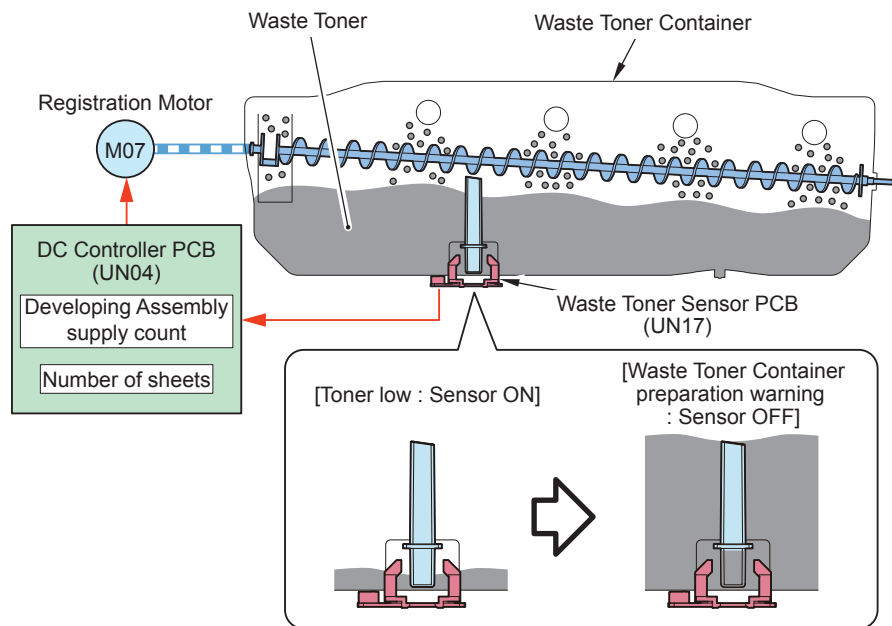
F-2-99

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

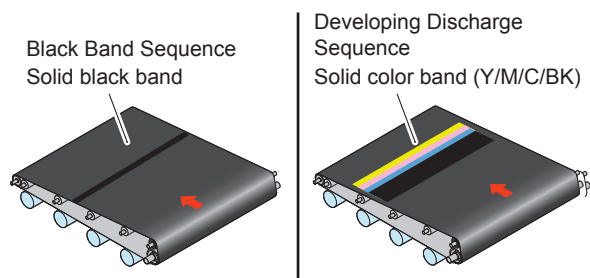
Detection timing	When the Waste Toner Sensor PCB (UN17) is turned ON for 3 seconds after the Front Door is opened/closed while "preparation warning" or "waste toner full level" is detected
Remarks	The parts counter is automatically cleared.

T-2-35

Other Controls

Special Controls

This machine has the following sequences as the special sequence.



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

None.

■ Periodical Servicing

None.

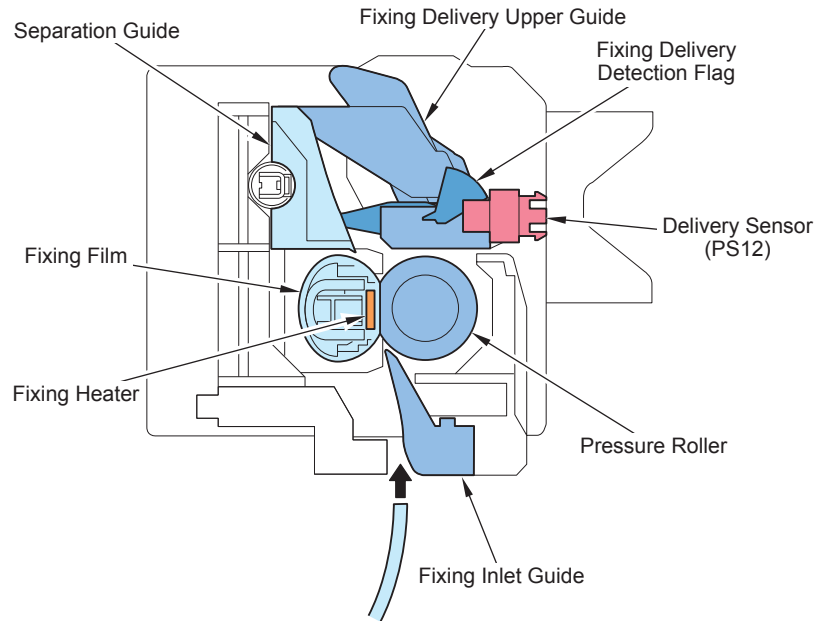
Perform as needed.

Fixing System

Overview

Features

This machine uses the on-demand fixing method.



F-2-102

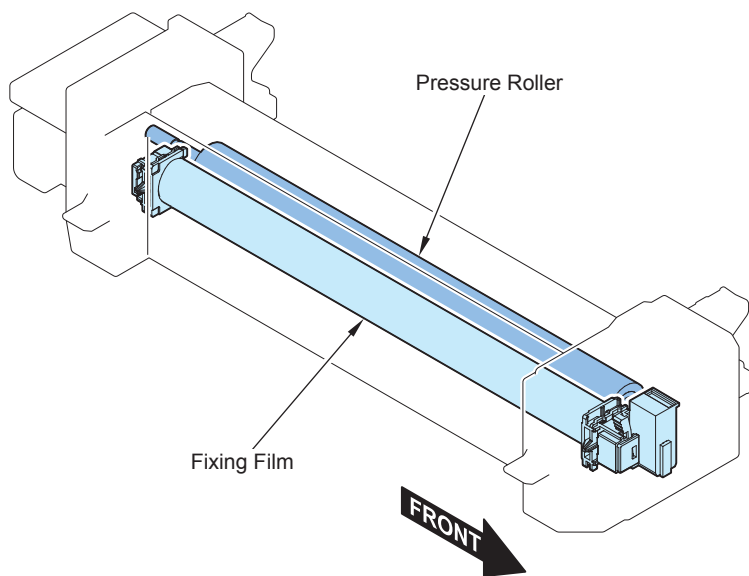
Specifications

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)		

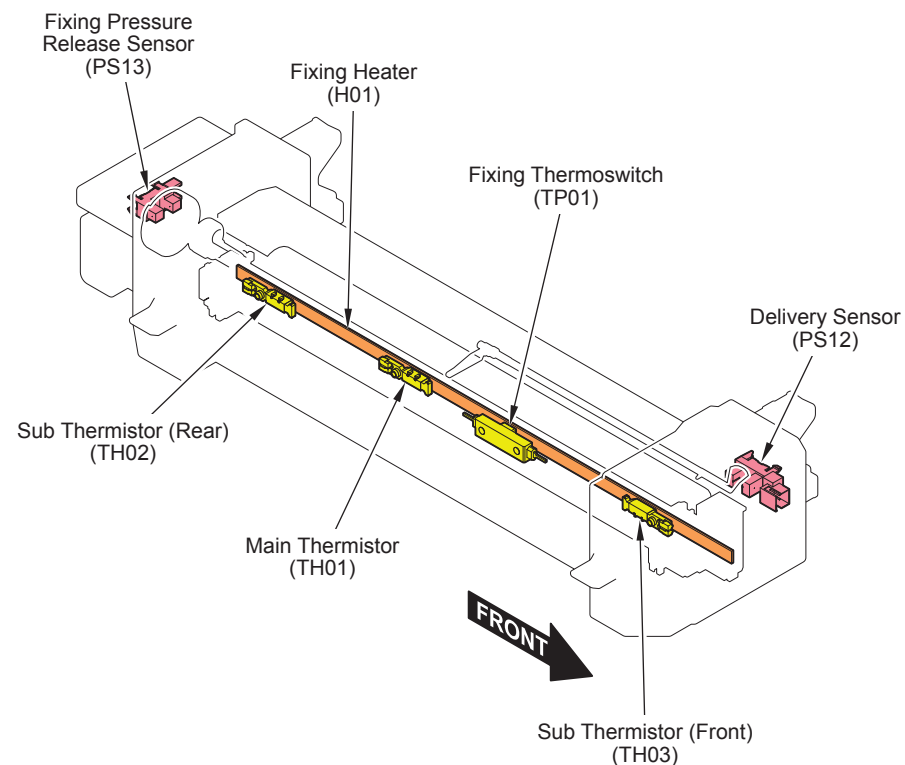
T-2-38

* 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



F-2-103



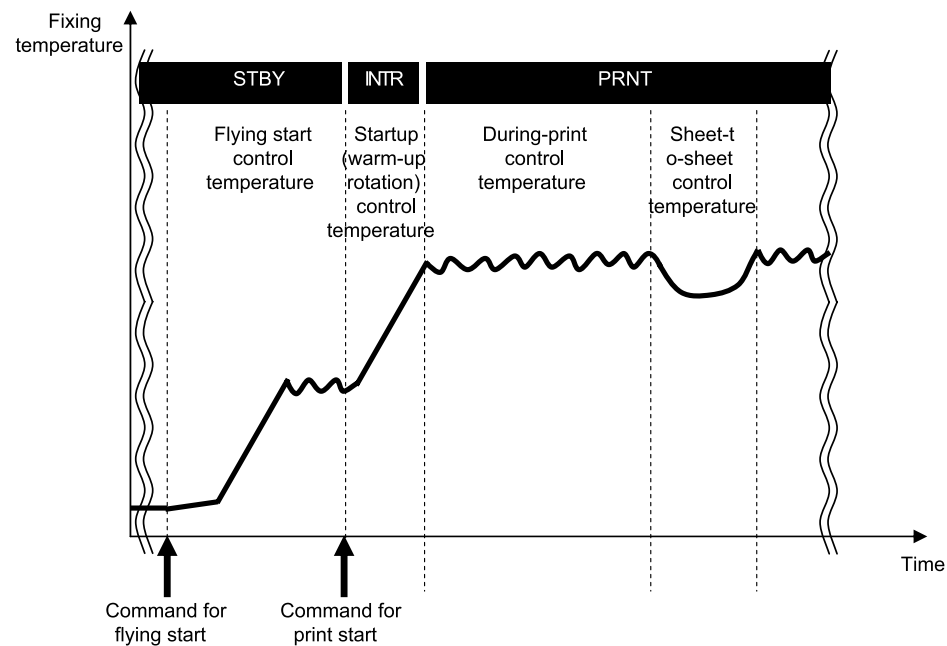
F-2-104

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 Temperature control and abnormal temperature rising detection
TH02	Sub Thermistor (Rear)	Engaged with the heater Temperature control, abnormal temperature rising detection, edge temperature-rising/cooling control
TH03	Sub Thermistor (Front)	
TP01	Thermoswitch	A kind not engaged with the heater. 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-2-39

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.

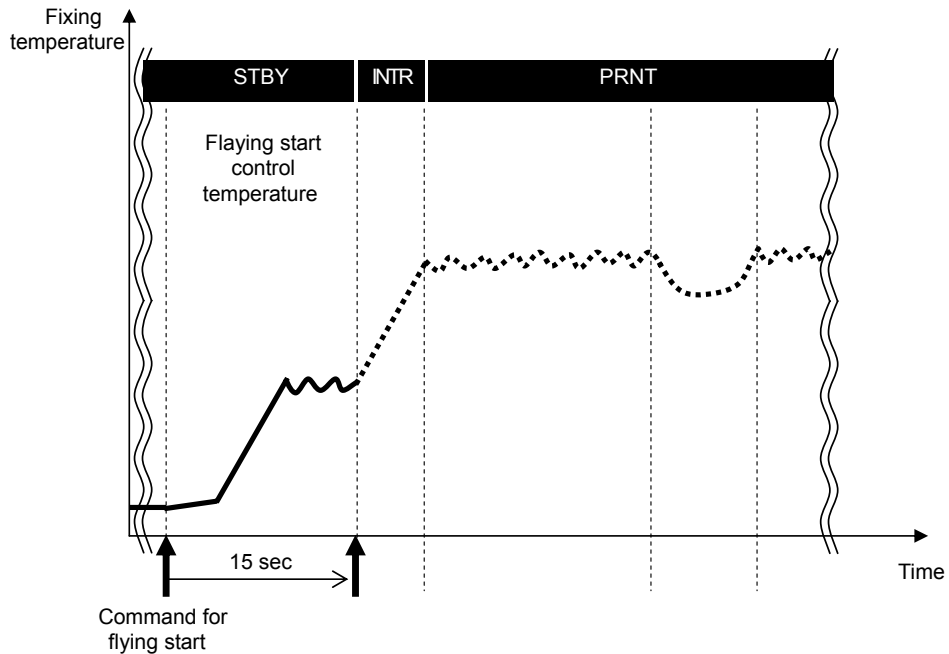
- Startup (initial rotation) temperature control
- Print temperature control
- Paper interval temperature control

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

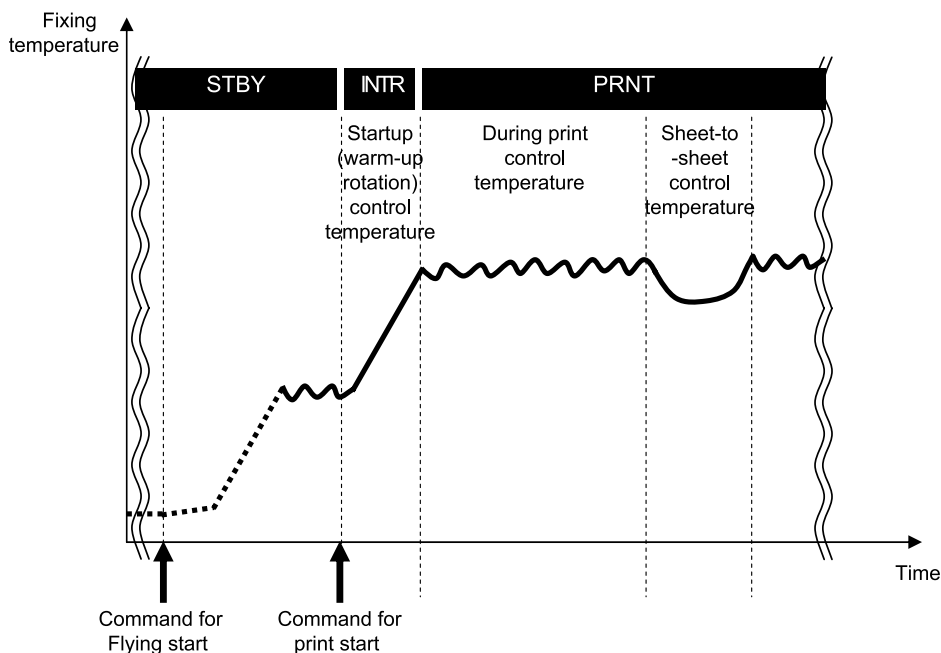
- To set ON/OFF of flying start temperature control.
(Lv.2) COPIER > OPTION > IMG-FIX > FLYING

<Setting value>

0 to 1

0: ON, 1: OFF

Print Temperature Control



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).

$$\text{Paper Interval Temperature} = \text{Target temperature during printing} - (0 \text{ to } 20 \text{ deg C}) * 2$$

*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	<ul style="list-style-type: none"> For B&W, target temperature is -5 deg C If the paper width is A4R or larger, target temperature +10 deg C
	Plain paper 1 (64 to 75 g/m ²)		188 to 224 deg C	
	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)			
	Plain paper 2 (76 to 90 g/m ²)	2/3speed 135 mm/s	198 to 234 deg C	<ul style="list-style-type: none"> For the 2nd side of 2-sided print, target temperature is -3 deg C
	Recycled paper 2 (76 to 90 g/m ²)			
	Plain paper 3(91 to 105 g/m ²)		183 to 221 deg C	
	Recycled paper 3(91 to 105 g/m ²)			
	Heavy paper 1 (106 to 128 g/m ²)	1/2speed 100 mm/s	168 to 201 deg C	<ul style="list-style-type: none"> If the paper width is A4R or larger, target temperature +10 deg C For envelope DL size, target temperature is +10 deg C For the 2nd side of 2-sided print, target temperature is -3 deg C
	Heavy paper 2 (129 to 163 g/m ²)		183 to 216 deg C	
	Label paper (127 to 160 g/m ²)		188 to 221 deg C	
	Heavy paper 3 (164 to 220 g/m ²)			
	Bond paper			
Postcard				
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	<ul style="list-style-type: none"> For B&W, target temperature is -5 deg C If the paper width is A4R or larger, target temperature +10 deg C
	Plain paper 1(64 to 75 g/m ²)		163 to 199 deg C	
	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)			
	Plain paper 2 (76 to 90 g/m ²)	1/2speed 100 mm/s	173 to 209 deg C	<ul style="list-style-type: none"> For the 2nd side of 2-sided print, target temperature is -3 deg C
	Recycled paper 2 (76 to 90 g/m ²)			
	Plain paper 3(91 to 105 g/m ²)		183 to 221 deg C	
	Recycled paper 3(91 to 105 g/m ²)			
	Heavy paper 1 (106 to 128 g/m ²)	1/2speed 100 mm/s	168 to 201 deg C	<ul style="list-style-type: none"> If the paper width is A4R or larger, target temperature +10 deg C For envelope DL size, target temperature is +10 deg C For the 2nd side of 2-sided print, target temperature is -3 deg C
	Heavy paper 2 (129 to 163 g/m ²)		183 to 216 deg C	
	Label paper (127 to 160 g/m ²)		188 to 221 deg C	
	Heavy paper 3 (164 to 220 g/m ²)			
	Bond paper			
Postcard				
Envelope	168 to 201 deg C			
Transparency	180 to 215 deg C			

T-2-40

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

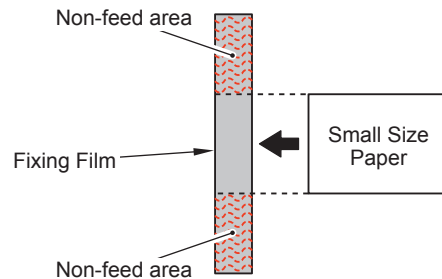
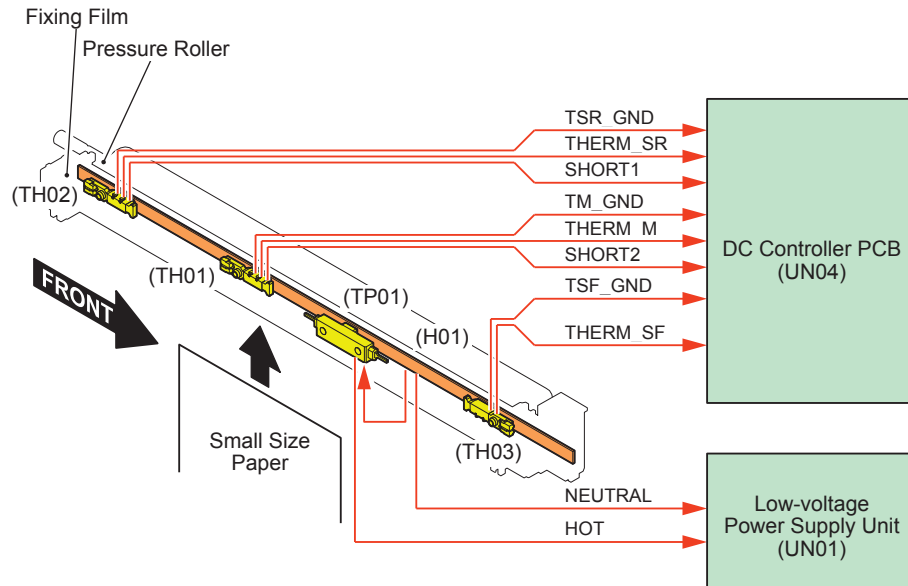
- > TEMP-TBL Plain paper 1
- > TMP-TBL2 Heavy paper 1
- > TMP-TBL3 Heavy paper 2
- > TMP-TBL4 Heavy paper 3
- > TMP-TBL5 Thin paper
- > TMP-TBL6 Envelope
- > TMP-TBL7 Plain paper 2
- > TMP-TBL8 Transparency

<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		
100 (mm/s) 17 (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	
100 (mm/s) 15 (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	
100 (mm/s) 15 (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	
100 (mm/s) 15 (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-2-41

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

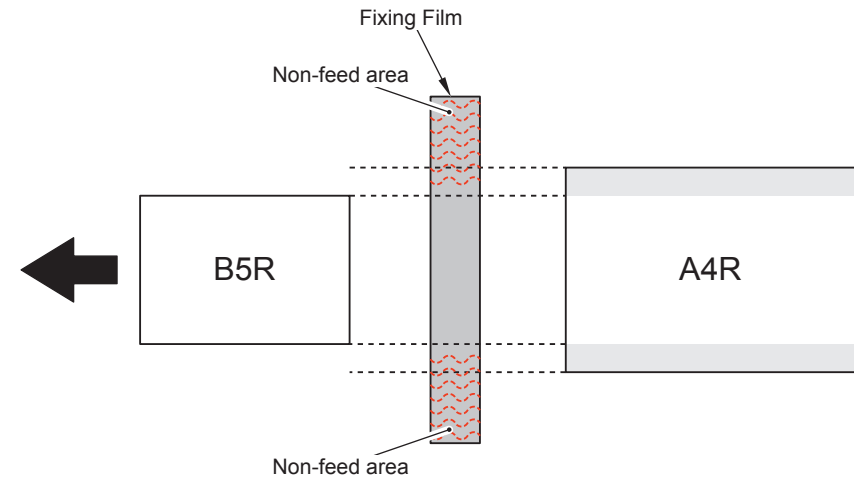
<Setting value>

- 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:

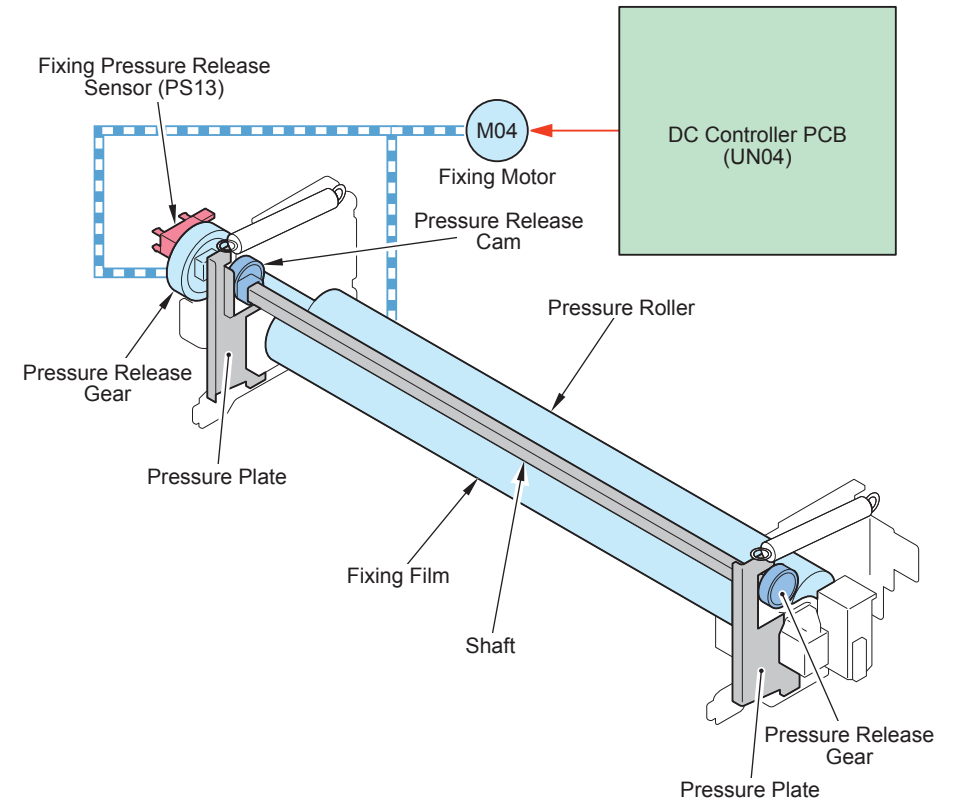
This is a control to stop pickup of the succeeding sheet and power distribution to the Fixing Heater to reduce fixing temperature.

Termination conditions:

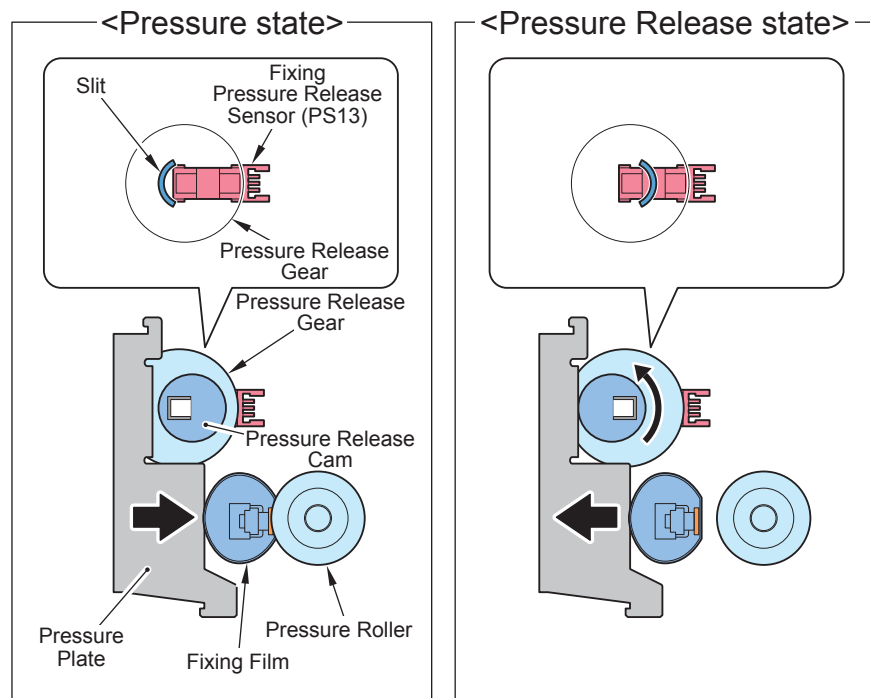
- When the highest of the temperatures detected by the Sub Thermistor (Rear) (TH02) and the Sub Thermistor (Front) (TH03) has become the specified temperature (150 deg C) or less.
- 30 seconds at maximum have elapsed since the preceding sheet passed the Fixing Nip.
- When the difference between the highest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



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

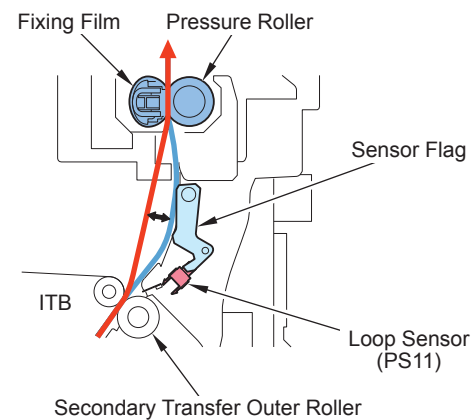
Purpose:

To prevent image failure and feeding failure

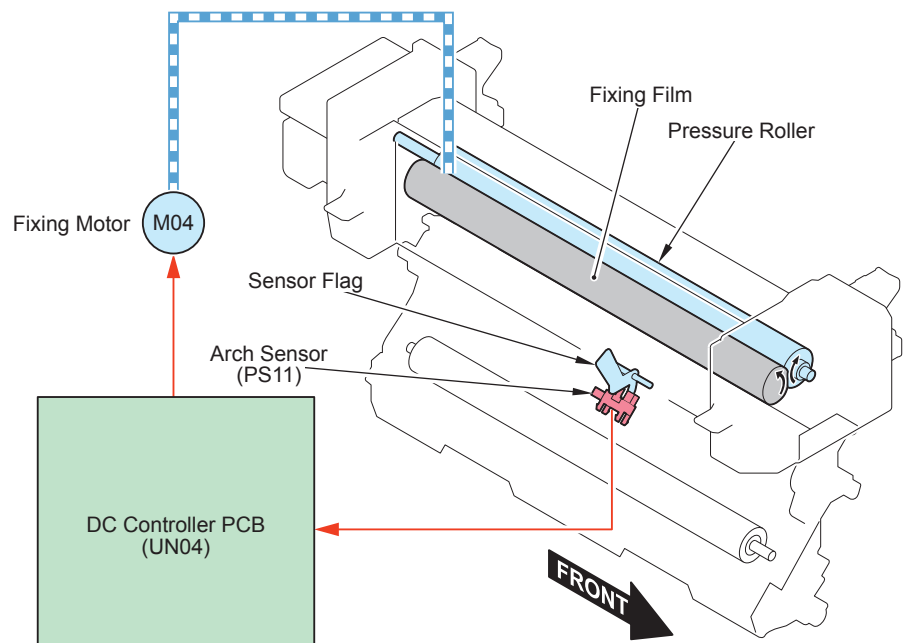
Since the feeding speed of the Pressure Roller and that of the Secondary Transfer Outer Roller are not the same when a sheet is fed to the Fixing Assembly, image failure, paper wrinkle, image stretching, etc. occur. To prevent these symptoms, Arch Sensors located at downstream of the Secondary Transfer 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.



F-2-112



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

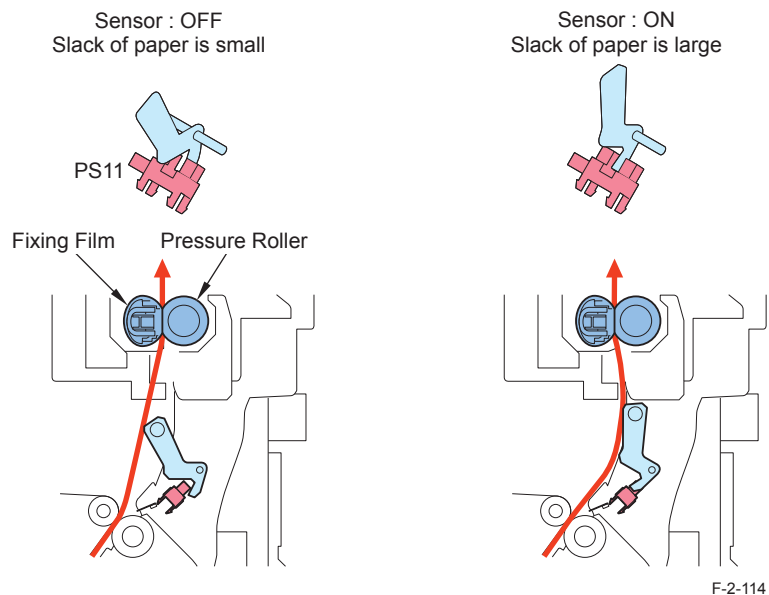
When the process speed is 100 mm/sec (other than envelopes):

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.



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

T-2-42

● 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

None.

■ Periodical Servicing

None.

Perform as needed.

Pickup / Feed System

Overview

Specifications

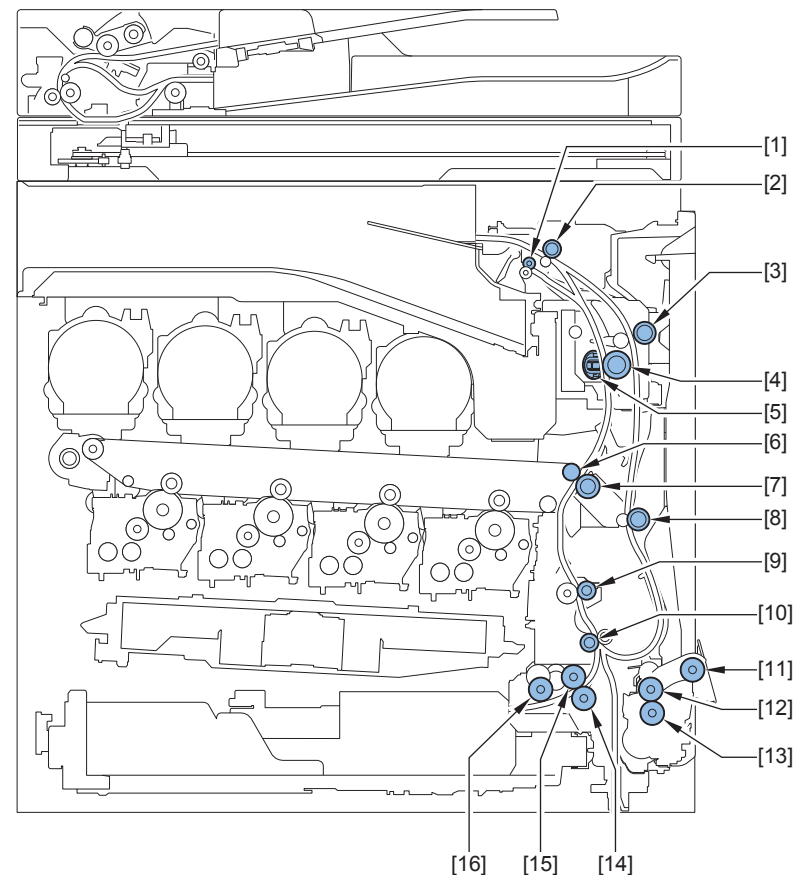
Item	Description	
Paper storage method	Front-loading method	
Pickup method	Cassette	Retard separation
	Multi-purpose Tray	Retard separation
Stacking capacity	Cassette	550 sheets (80 g/m ²)
	Multi-purpose Tray	100 sheets (80 g/m ²)
Paper feed reference	Center reference	
Paper size	Cassette	Width: 98.4 to 216.0 mm Length: 148.0 to 355.6 mm 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 Length: 148.0 to 355.6 mm * A4-R, A5-R, B5-R, LGL, LTR-R, STMT-R, EXEC-R, 16K-R, Envelopes (No.10 (COM10), ISO-C5, Monarch, 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 Length: 148.0 to 355.6 mm
	Multi-purpose Tray	Width: 98.4 to 216.0 mm Length: 148.0 to 355.6 mm
2-sided print method	Through-pass duplex	
Transparency Detection	None	

T-2-43

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

Parts Configuration

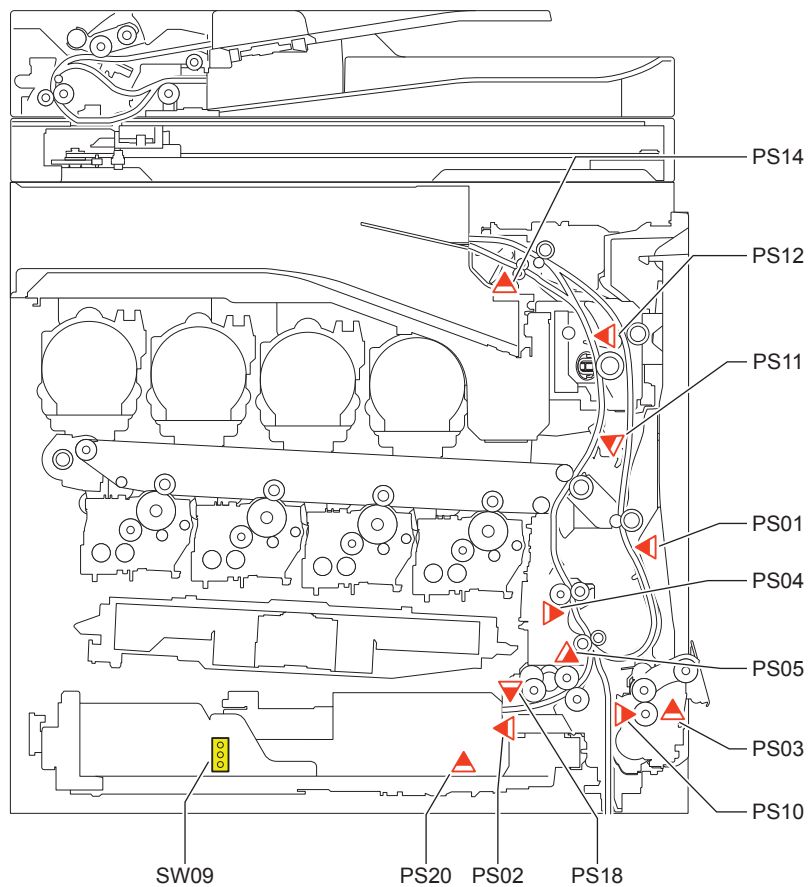
Rollers Layout drawing



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 |

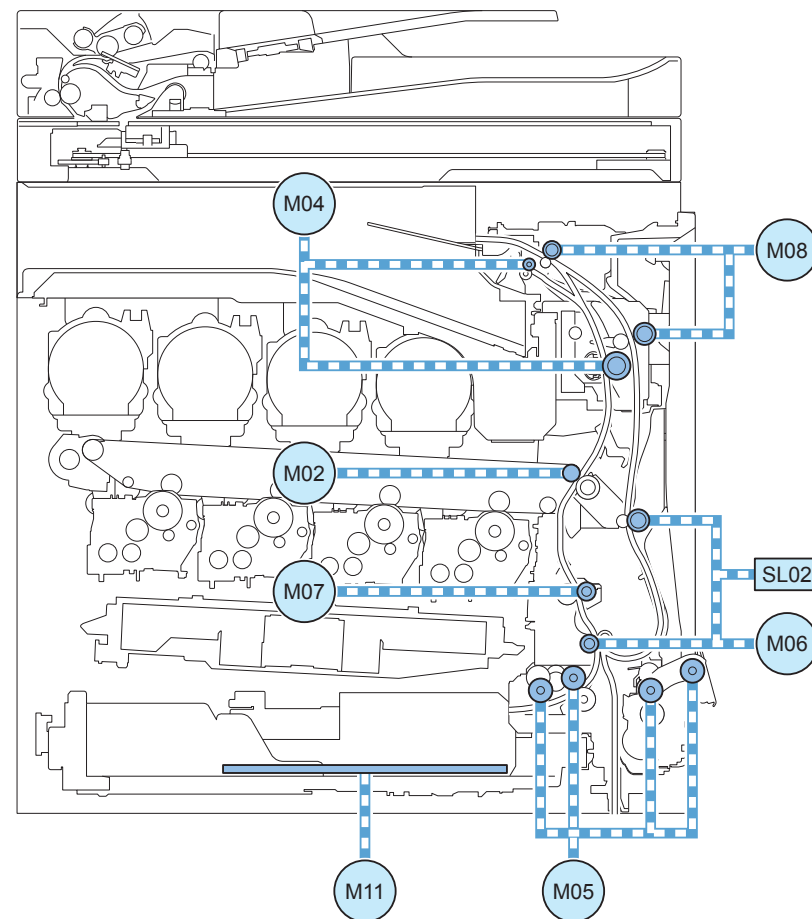
Sensors Layout Drawing



F-2-116

PS01 Duplex Sensor	PS11 Arch Sensor
PS02 Cassette 1 Paper Sensor	PS12 Delivery Sensor
PS03 Multi-purpose Tray Paper Sensor	PS14 Delivery Paper Full Sensor
PS04 Pre-Registration Sensor	PS18 Cassette 1 Paper Surface Sensor
PS05 Cassette 1 Pickup Sensor	PS20 Cassette 1 Paper Level Sensor
PS10 Multi-purpose Tray HP Sensor	SW09 Cassette 1 size switch

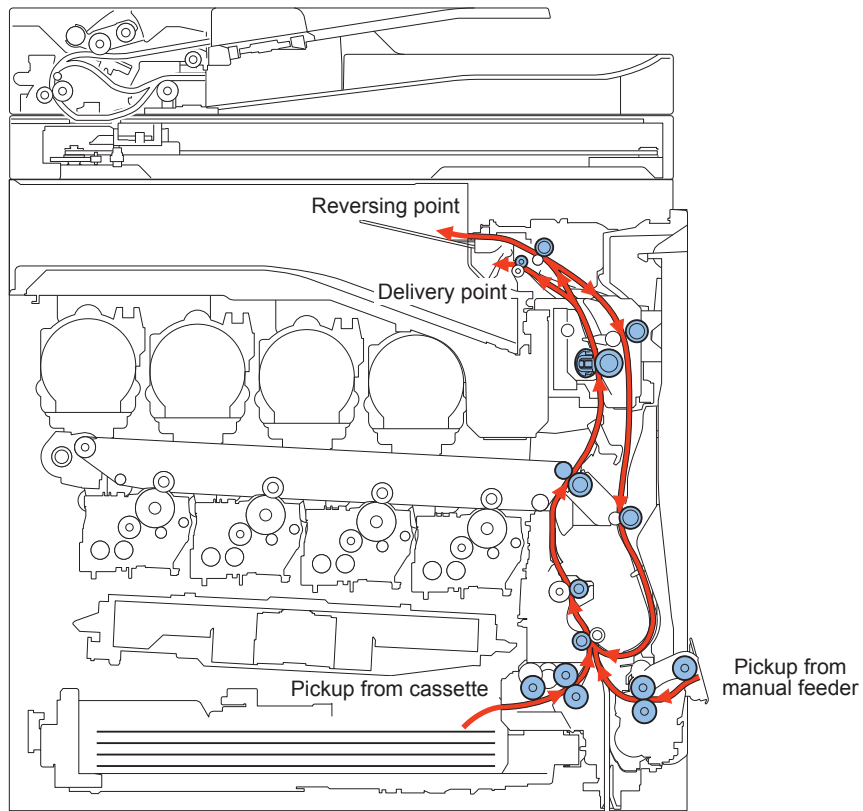
Route of Drive



F-2-117

M02 Bk Drum _ ITB Motor	M07 Registration Motor
M04 Fixing Motor	M08 Reverse Motor
M05 Cassette 1 _ Multi-purpose Tray Pickup Motor	M11 Cassette 1 Lifter Motor
M06 Pre-registration Motor	SL02 Duplex Solenoid

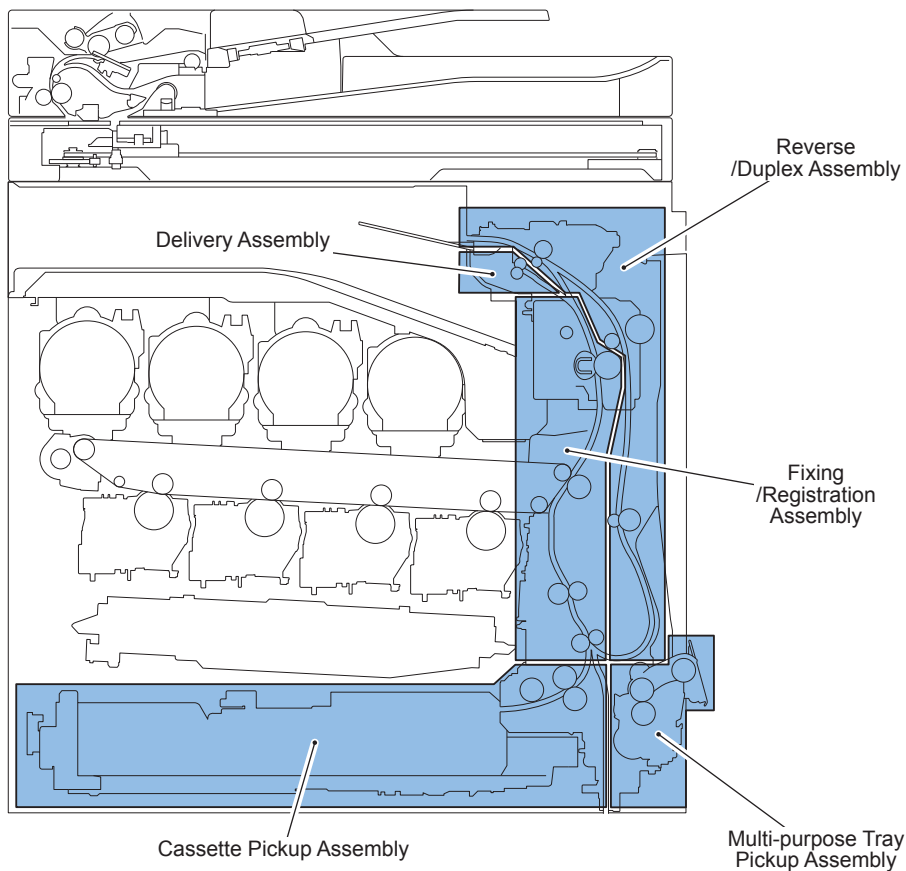
Paper Path



F-2-118

Controls

Overview



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-2-44

■ Cassette Pickup Assembly

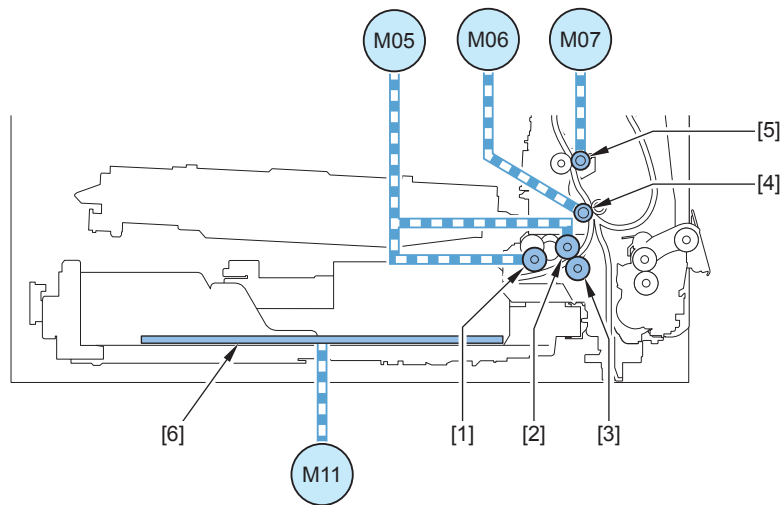
● Overview

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 | [4] Pre-registration Roller |
| [2] Cassette 1 feed Roller | [5] Registration Roller |
| [3] Cassette 1 separation 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.

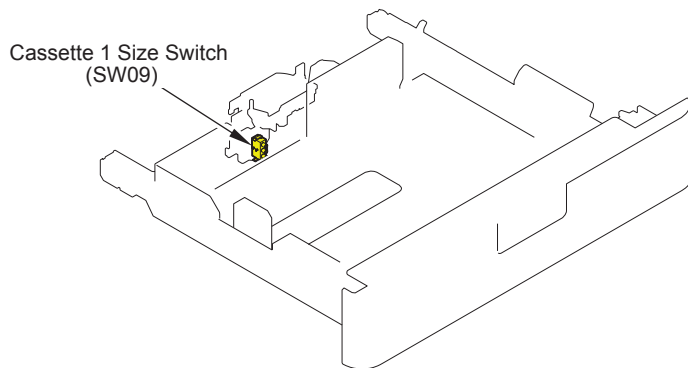
Paper Size Detection Control

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.

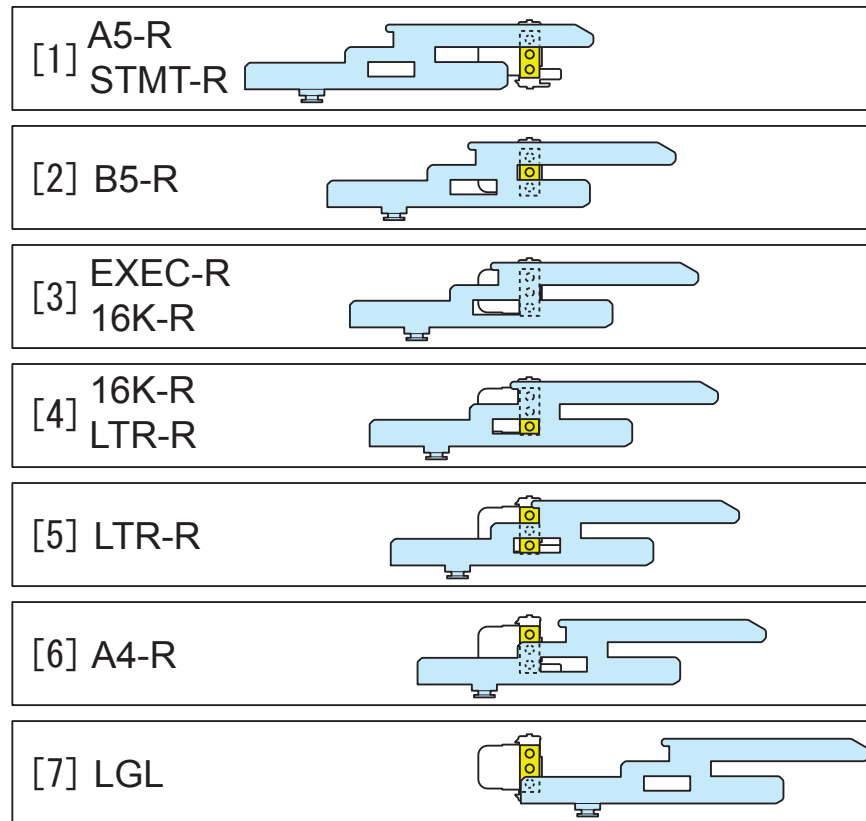
*: Whether to select A5-R or STMT-R can be registered in the UI menu setting.
 Settings/Registration > Preferences > Paper Settings > A5R/STMTR Paper Selection
 Setting value per cassette: A5R. STMTR



F-2-121

Size	Length	Length Detection		
		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

T-2-45



F-2-122

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

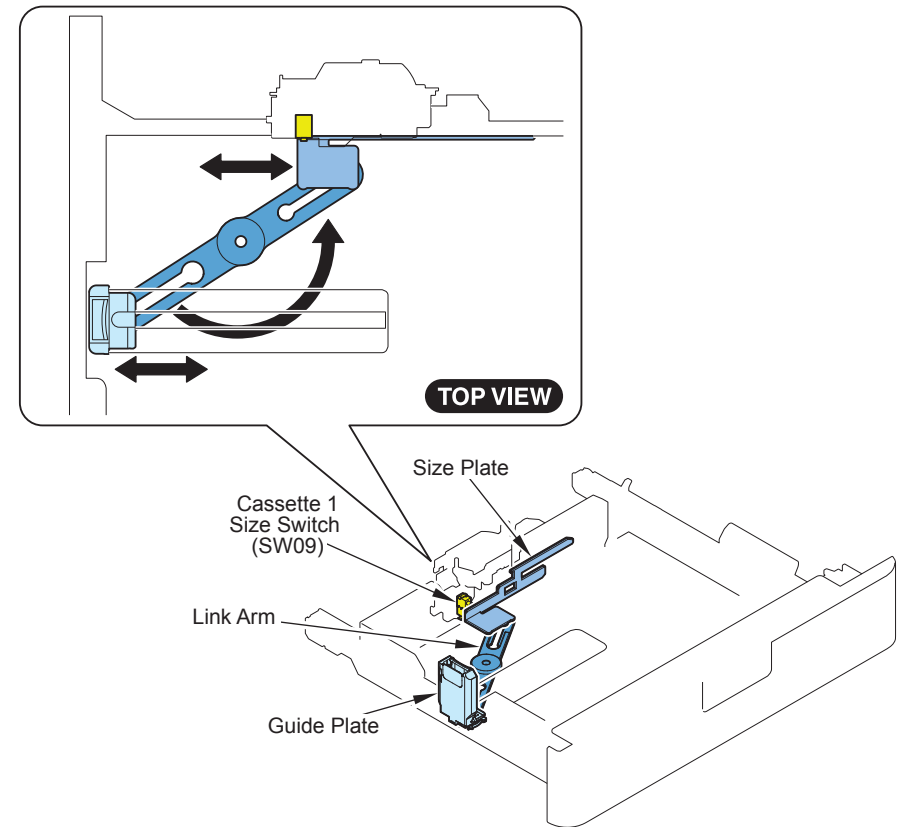
T-2-46

*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.)






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-2-47

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.

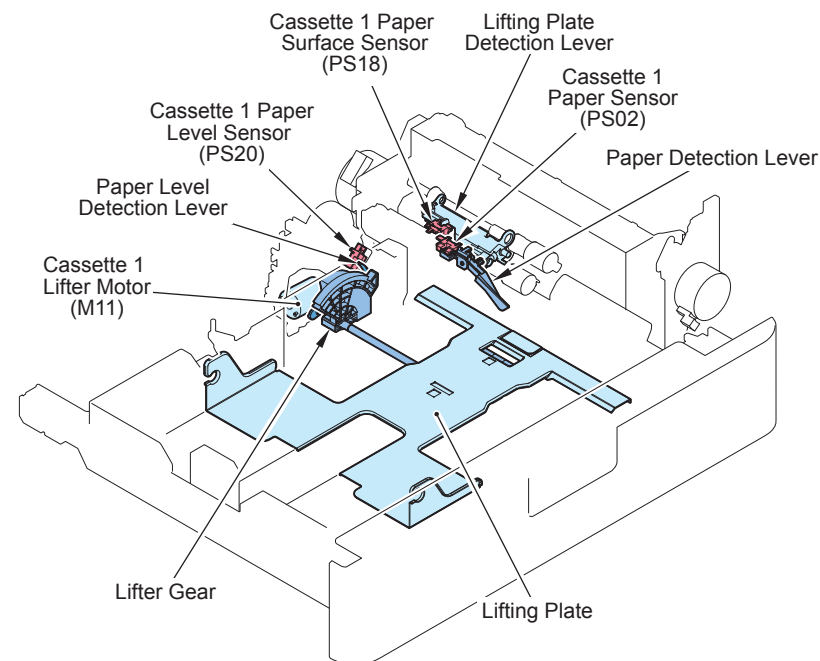
You can adjust the timing of switching the scale from "3" to "2".

Lv.2) COPIER > ADJUST > CST-ADJ > CST-VLMX (Threshold adjustment for detecting the level in the cassette X)

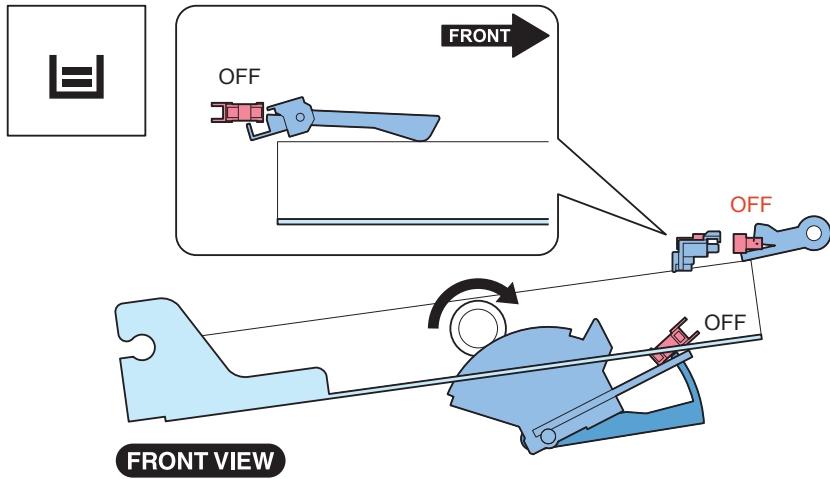
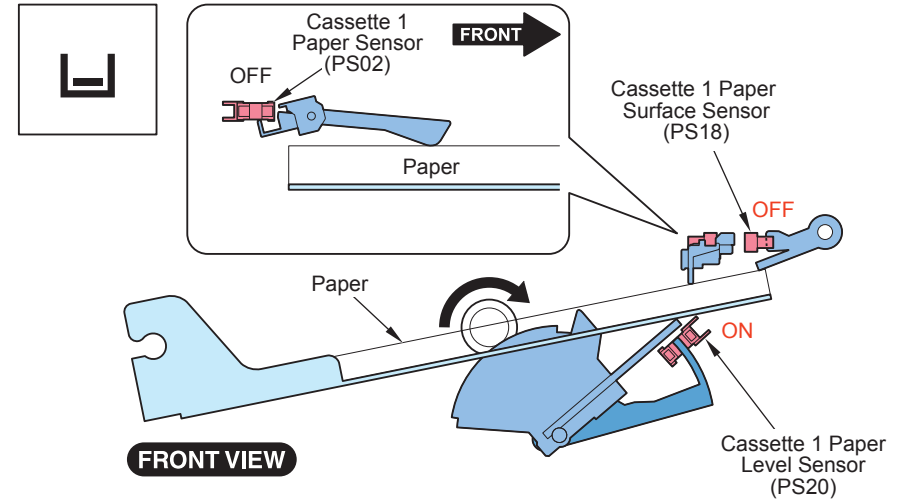
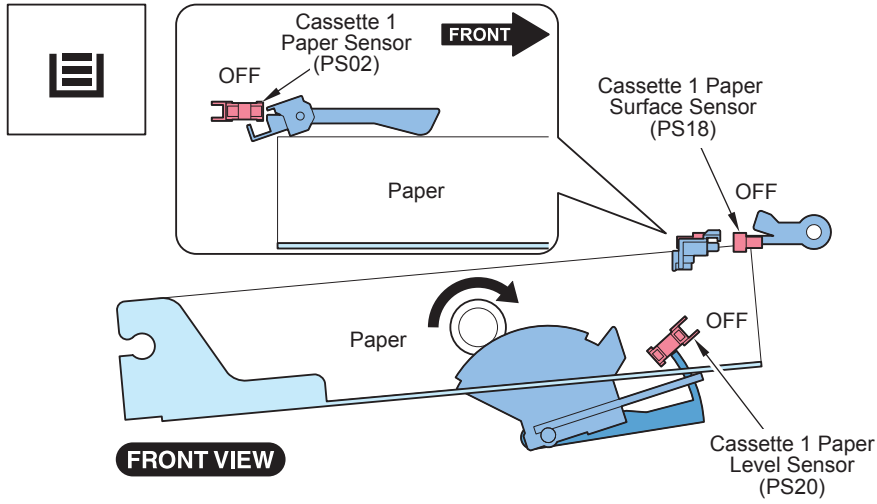
X indicates the cassette number (1 to 4).

- 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



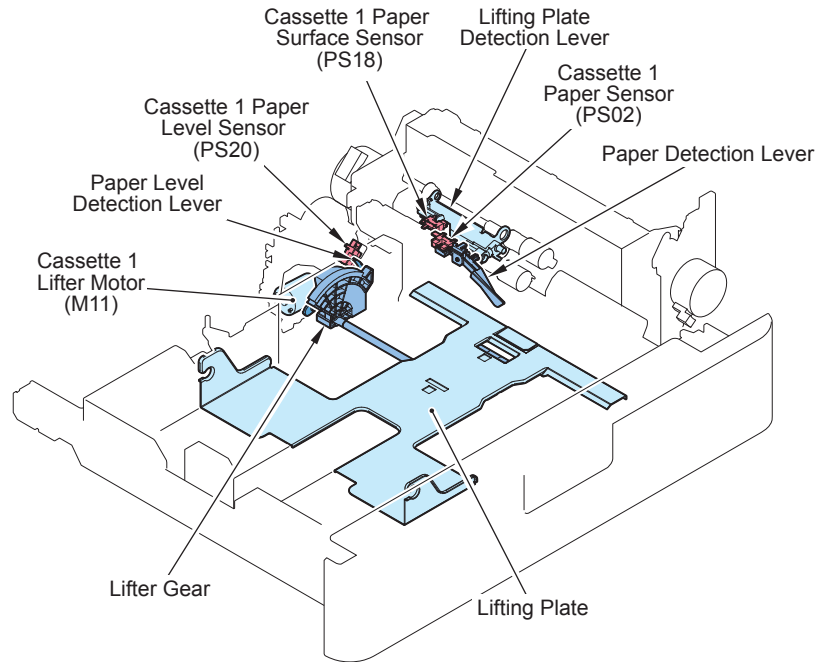
F-2-125

F-2-126

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).



F-2-127

Lifter Control

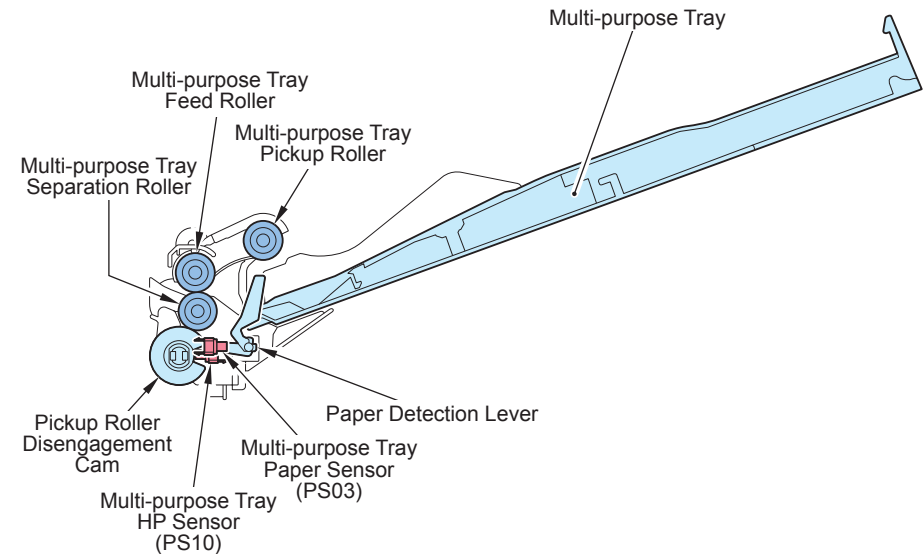
When Cassette is set

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).



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.

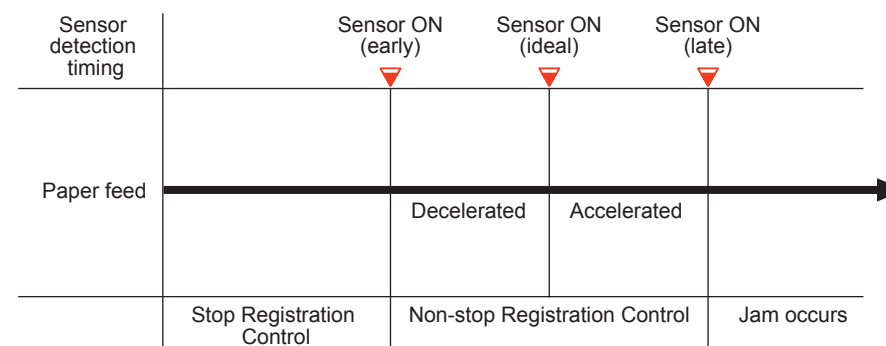
Based on the leading edge detection by the Pre-Registration Sensor (PS04), the following 2 controls are used:

- 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)



F-2-129

● Non-stop Registration Control

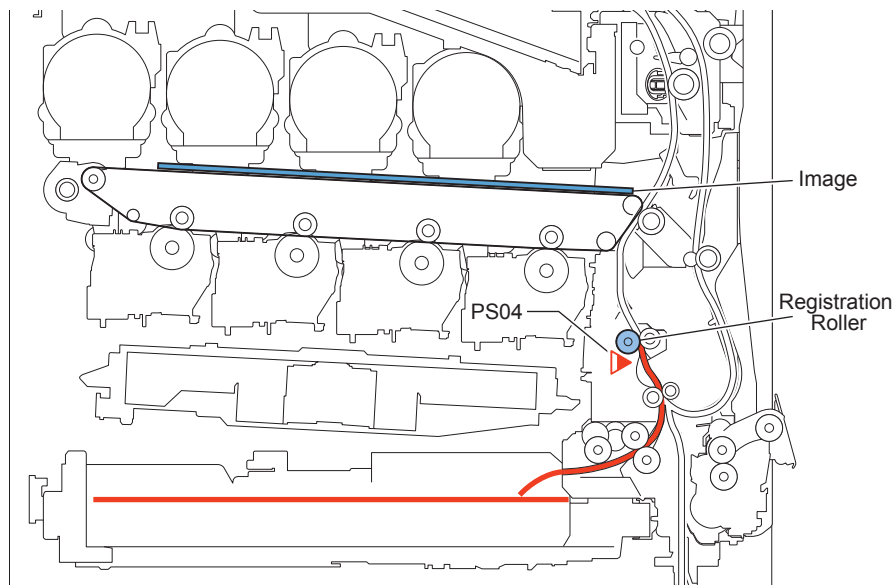
It is a control to align paper and image on the ITB at a specified timing by increasing or decreasing the paper feed speed.

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.



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: OD91)

■ Delivery Assembly

● Delivery Control

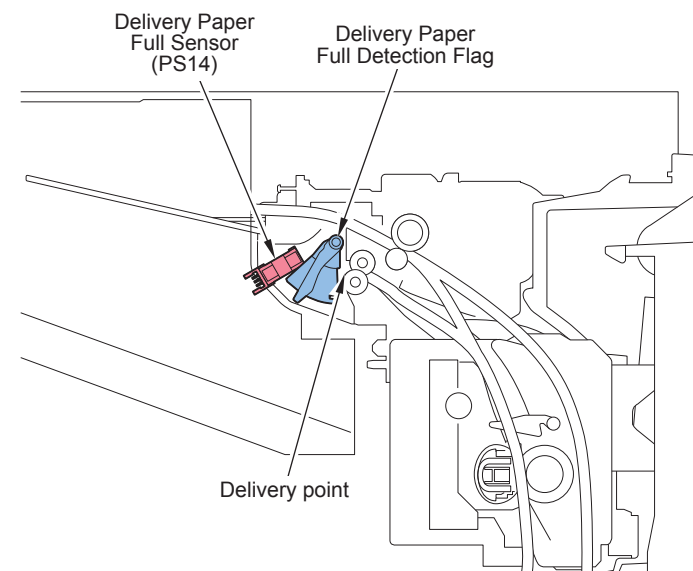
This machine executes face-down delivery (delivers paper to the machine's Delivery Tray with printed surface down).

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.



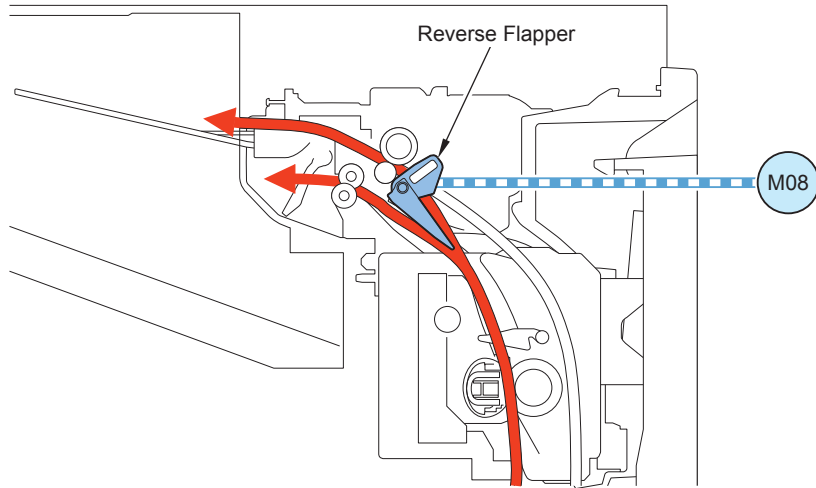
F-2-131

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

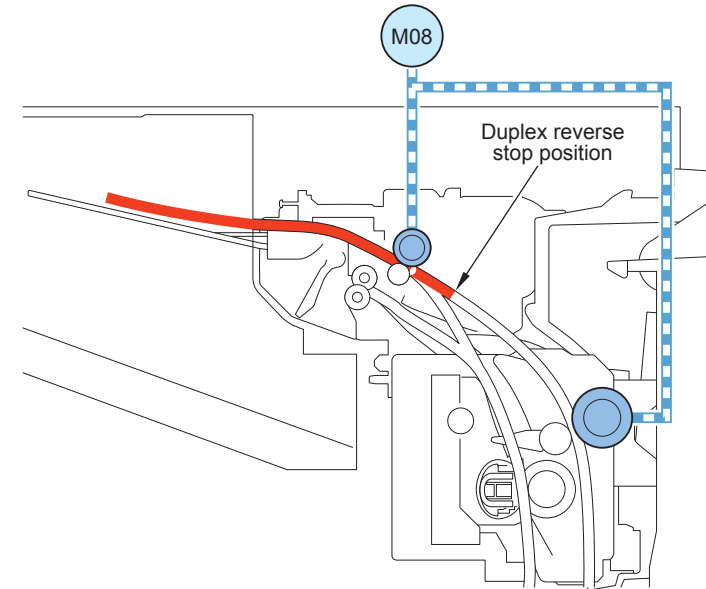


F-2-132

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.

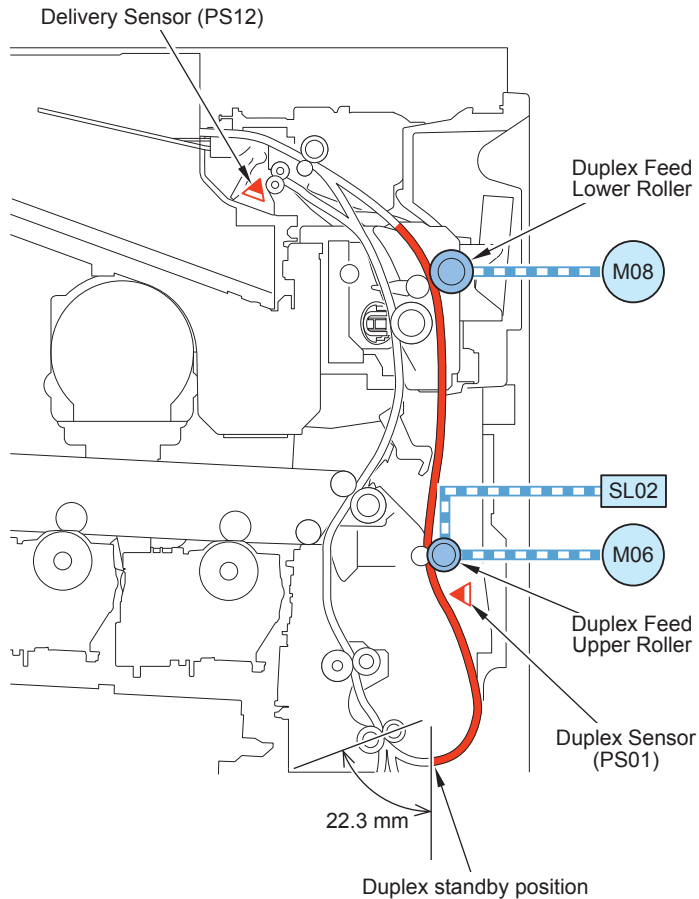


F-2-133

● 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.

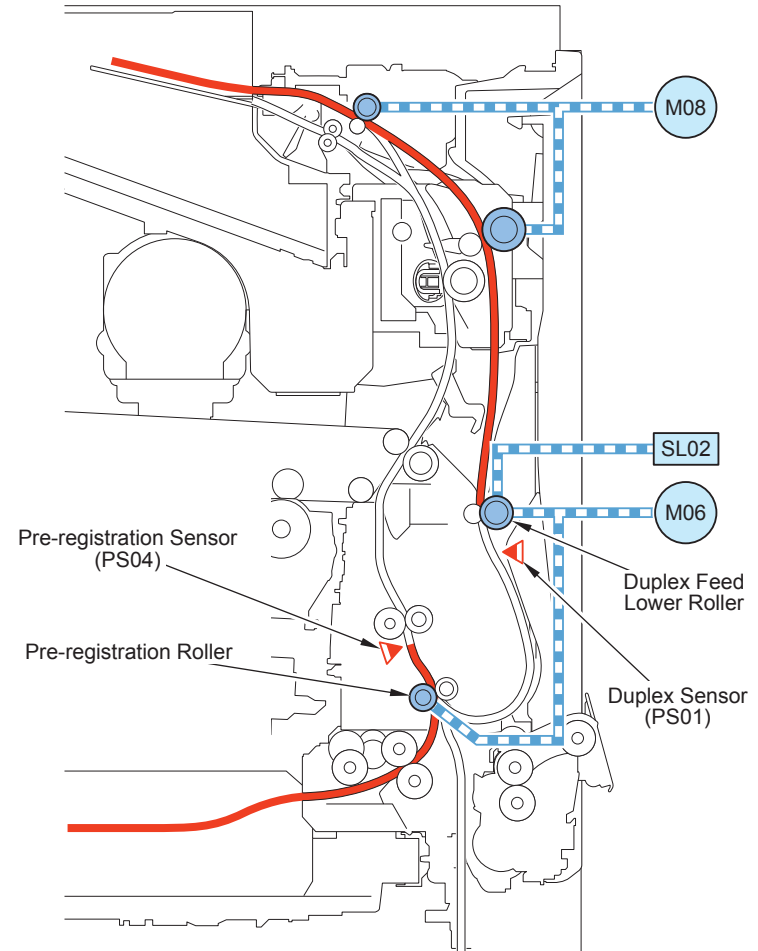


F-2-134

● Duplex Pre-standby control

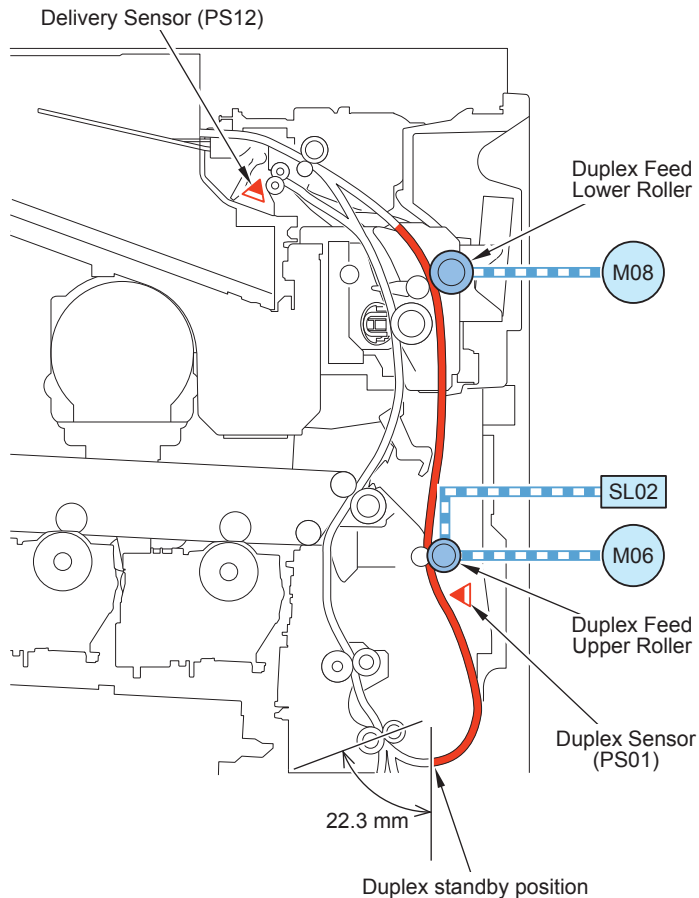
When the succeeding paper has not finished the registration control (non-stop registration control and stop registration control), the paper stops before the nip of the Duplex Feed Lower Roller (15 mm downstream from the Duplex Feed Lower Roller).

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.



F-2-135

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.



F-2-136

● 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

T-2-48

■ 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	-

*:Drum Unit detection may not be executed at times such as at recovery from sleep mode (1 or 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)	

T-2-50

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	

T-2-51

<Explanation of the list>

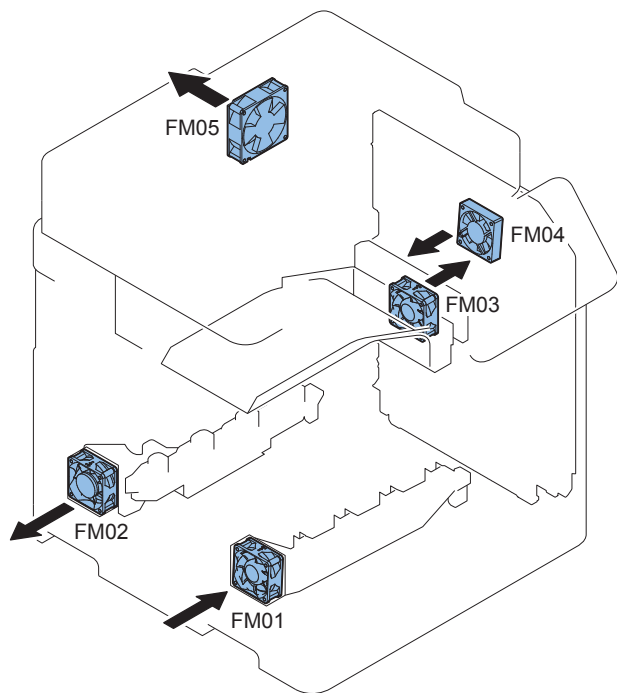
- Large: Large size paper (when paper length exceeds 324 mm in paper feed direction)
 - Small: Small size paper (when paper length is 324 mm or less in paper feed direction)
 - Total: Copy + Print; 1 count up
 - 2-Sided: 1 count up when auto 2-sided copy
 - Country code change of CONFIG is executed from 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

T-2-52

Fan

Location of Fans



F-2-137

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

■ : Full speed
 ■ : Half speed

F-2-138

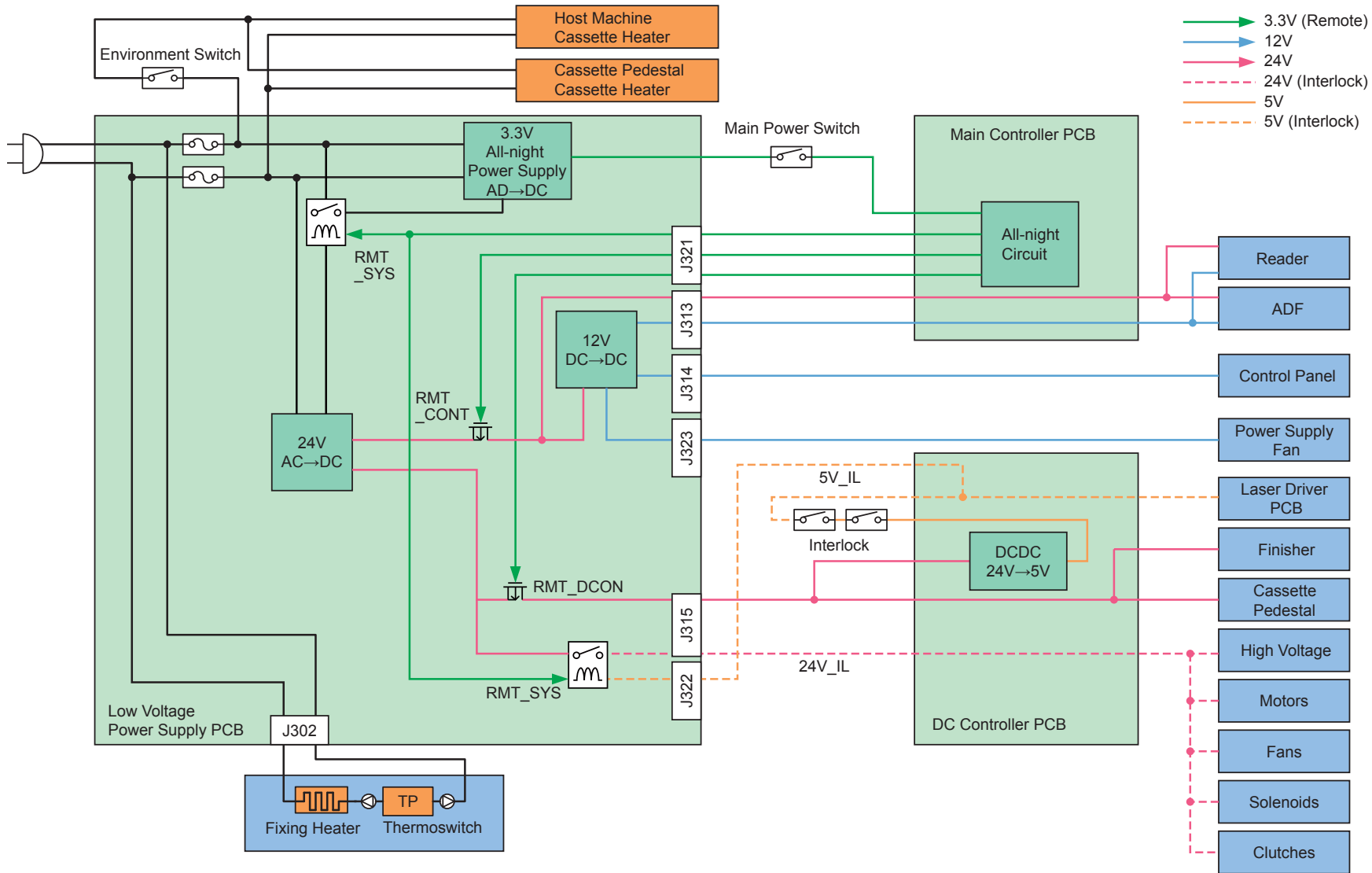
*: Fan drive sequence in an environment with a temperature of 27 deg C or lower

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

T-2-53

■ Power supply

● Internal power supply



F-2-139

Service Tasks

Periodically Replaced Parts

None.

Consumable Parts

None.

Periodical Servicing

None.

Perform as needed.

3

Periodical Service

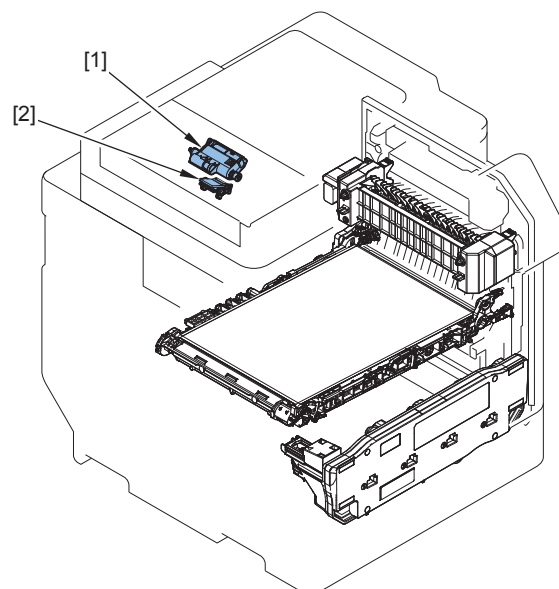
- List of periodically replacement parts, consumable parts and locations for cleaning

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

Periodically Replacement Parts

There are no periodically replacement parts in this machine.

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	Original Exposure and Feed System	ADF Pickup Unit	FM4-9859	1	50,000 sheets		●		DRBL-2	DF-PU-RL
2		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.

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.

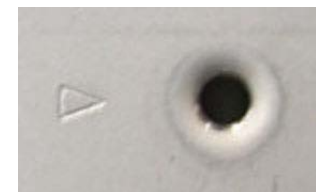
It has been confirmed that this does not affect the work procedure.

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.

		Type of Screws							
		RS tight		W Sams		Binding		TP	
Fastened member		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).

T-4-1

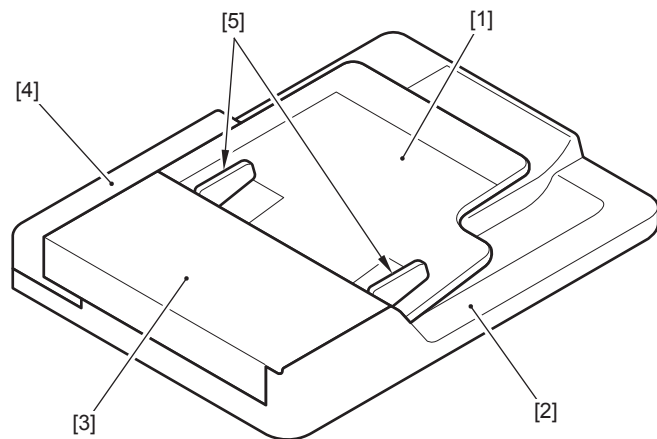
Type of Screws			
RS tight	W Sams	Binding	TP

F-4-2

List of Parts

External / Internal Cover

ADF UNIT

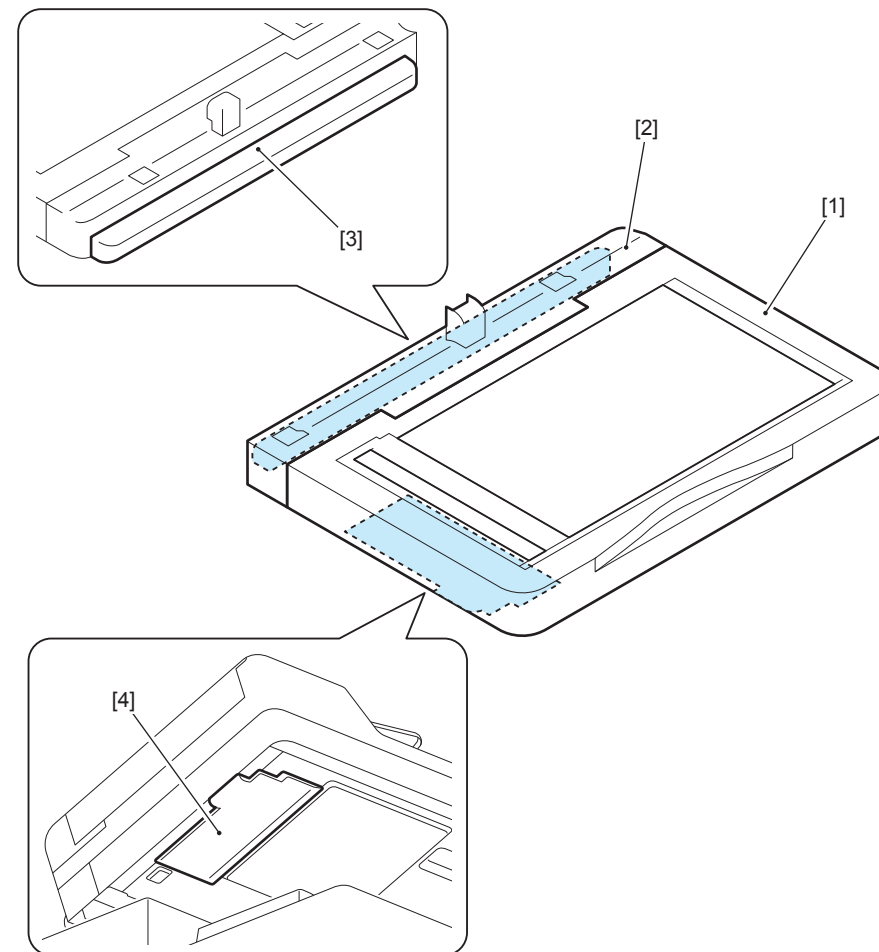


F-4-3

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

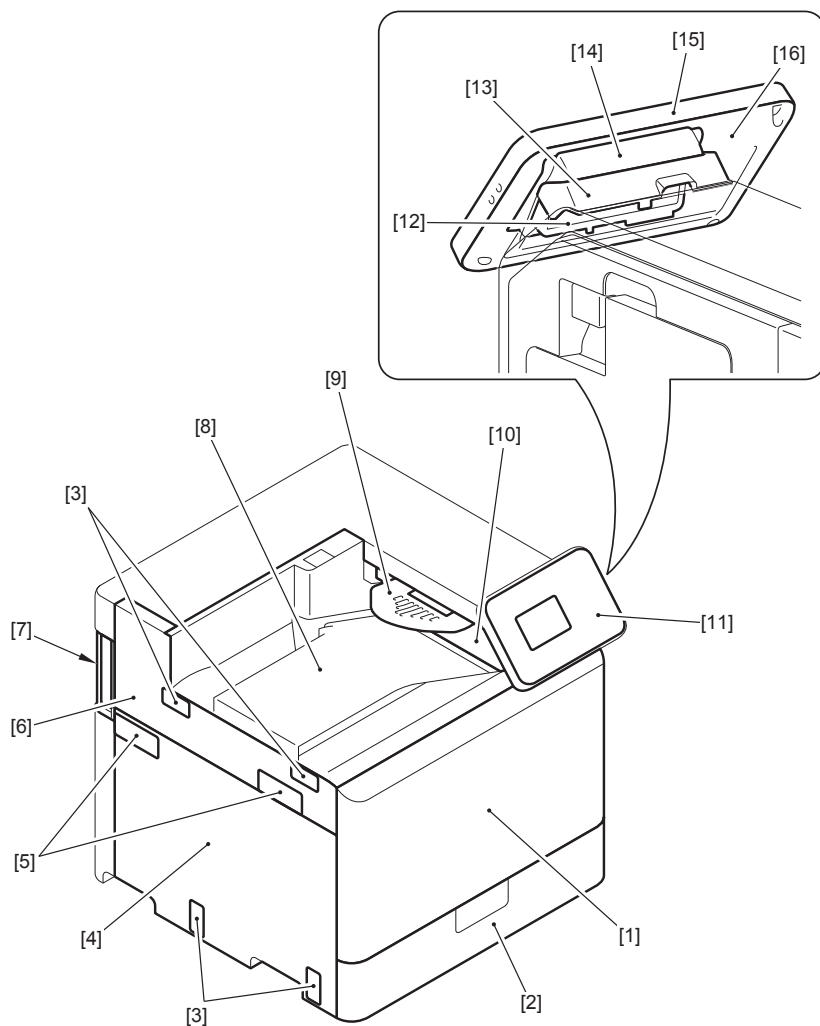


F-4-4

No.	Parts Name	Reference
[1]	Copyboard Glass Unit	(Refer to page 4-71)
[2]	Reader Rear Cover 1	
[3]	Reader Rear Cover 2	
[4]	Reader Motor Cover	

T-4-3

Printer (Front Side)

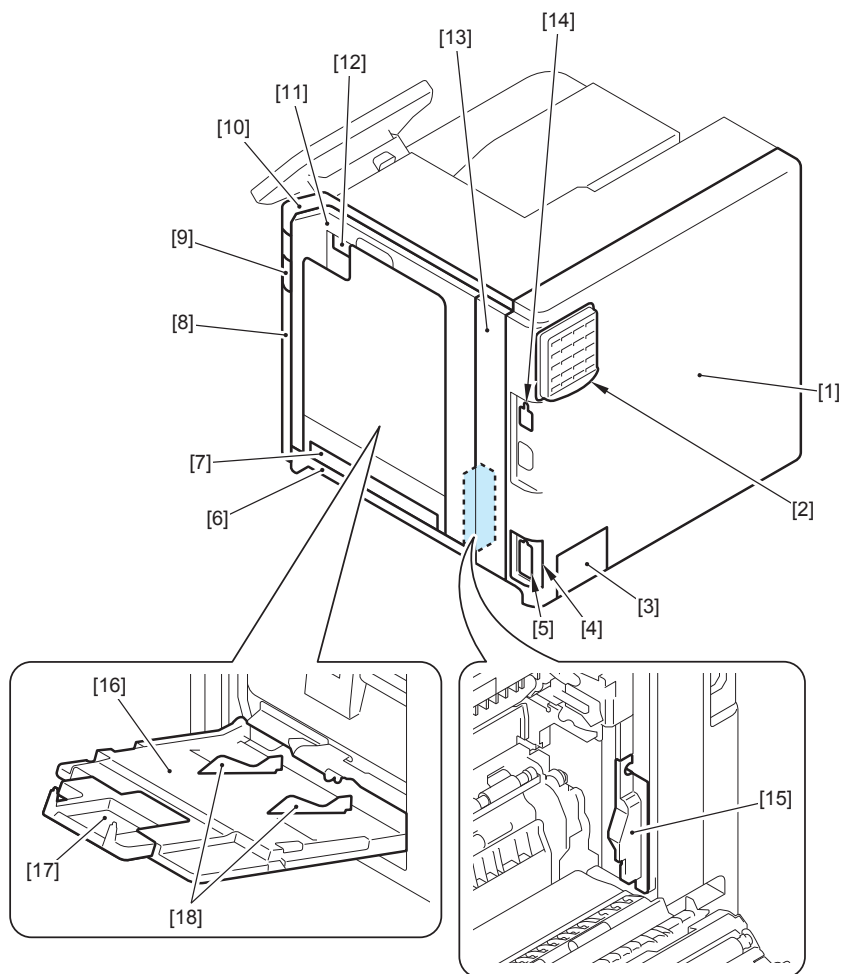


F-4-5

No.	Parts Name	Reference
[1]	Front Cover	(Refer to page 4-34)
[2]	Cassette	
[3]	Face Cover	
[4]	Left Lower Cover	(Refer to page 4-37)
[5]	Face Cover	
[6]	Left Upper Cover	(Refer to page 4-37)
[7]	Rear Sub Cover	
[8]	Delivery Cover	
[9]	Reverse Tray	
[10]	Upper Cover	(Refer to page 4-47)
[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

Printer (Rear Side)

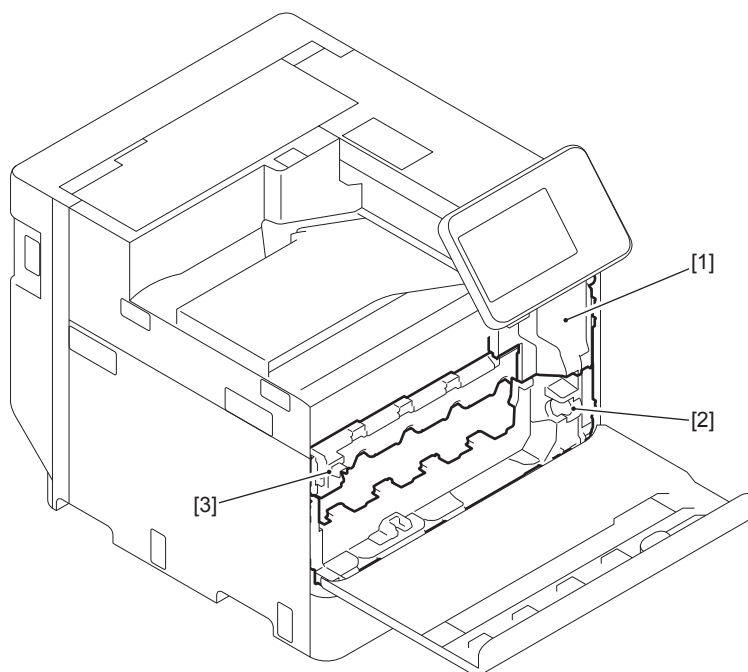


F-4-6

No.	Parts Name	Reference
[1]	Rear Cover	(Refer to page 4-35)
[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 4-38)
[9]	Main Power Switch Cover	
[10]	Right Upper Cover	(Refer to page 4-40)
[11]	Right Cover	(Refer to page 4-42)
[12]	Right Cover Open/Close Lever	
[13]	Right Rear Cover	(Refer to page 4-39)
[14]	Environment Heater Switch Cover	
[15]	Right Rear Lower Cover	(Refer to page 4-39)
[16]	Multi-purpose Tray	(Refer to page 4-45)
[17]	Multi-purpose Extension Tray	
[18]	Multi-purpose Tray Side Guide Plate	

T-4-5

Internal View



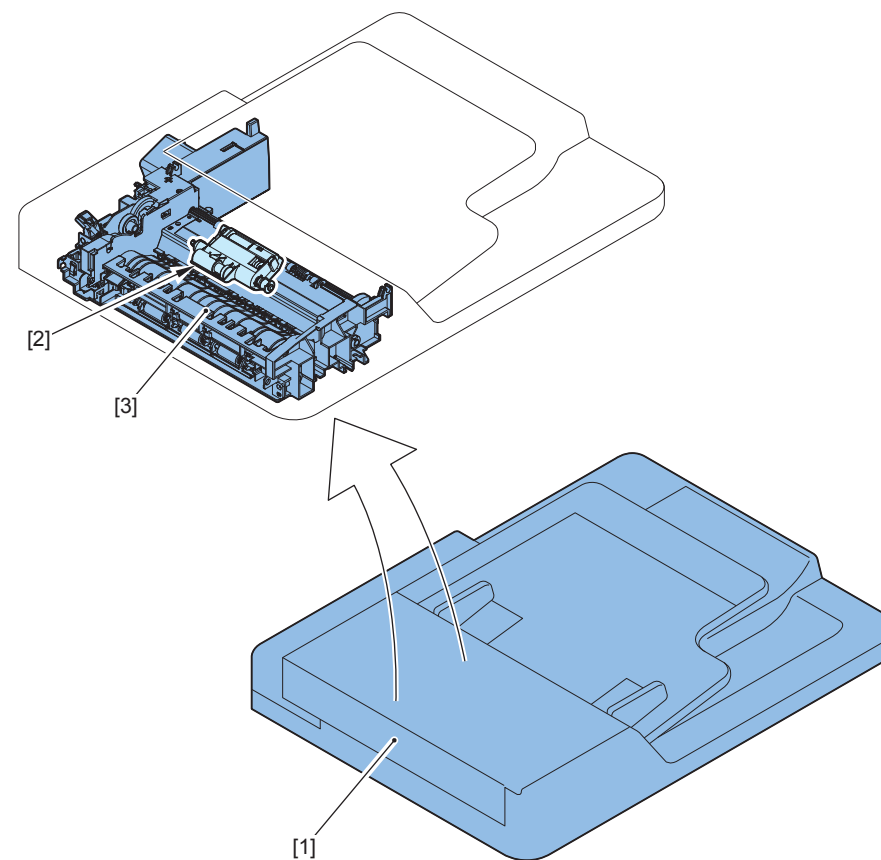
F-4-7

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

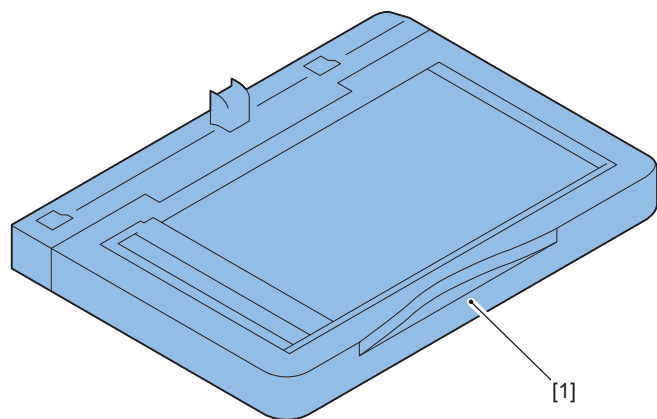


F-4-8

No.	Parts Name	Reference
[1]	ADF Unit	(Refer to page 4-52)
[2]	ADF Pickup Unit	(Refer to page 4-61)
[3]	ADF Pickup Feed Unit	(Refer to page 4-63)

T-4-7

Reader Unit

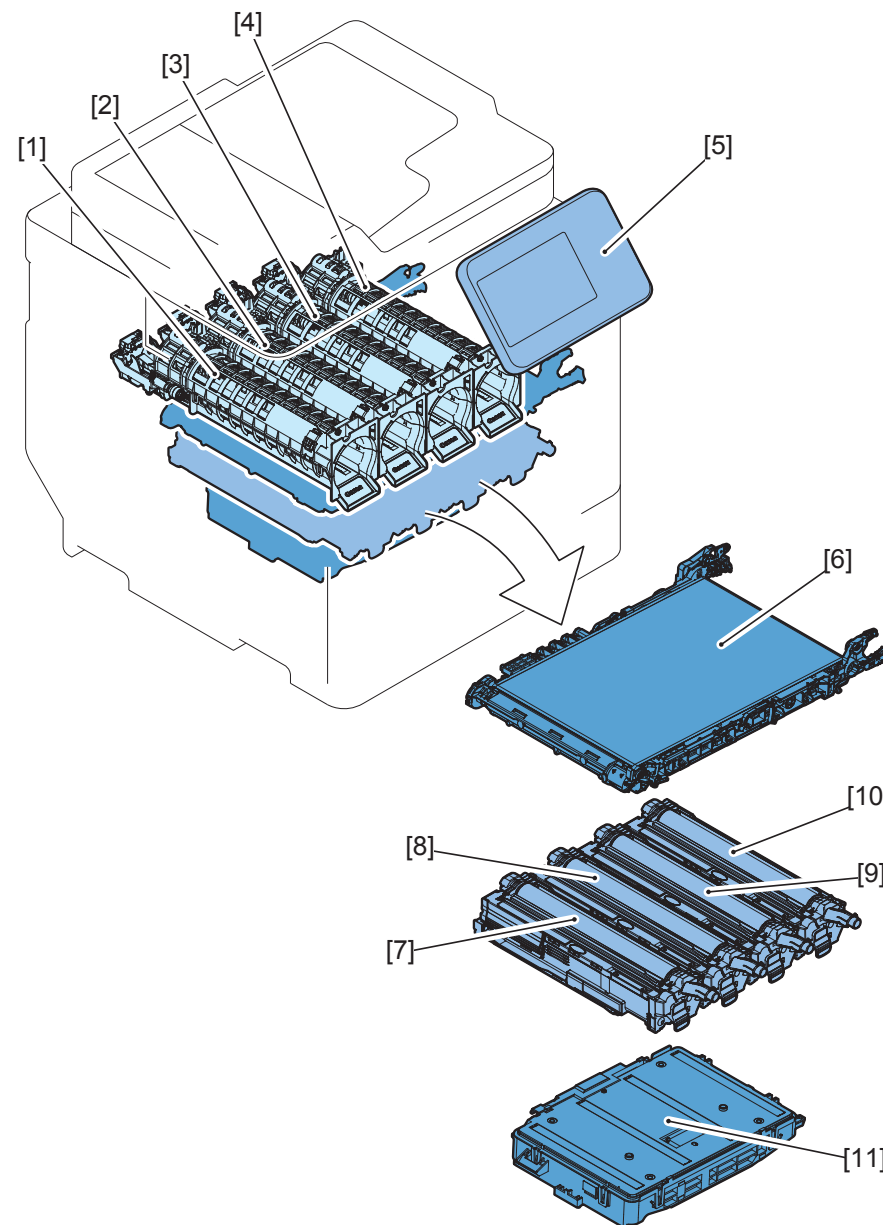


F-4-9

No.	Parts Name	Reference
[1]	Reader Unit	(Refer to page 4-67)

T-4-8

Printer (Front Side) (1/2)

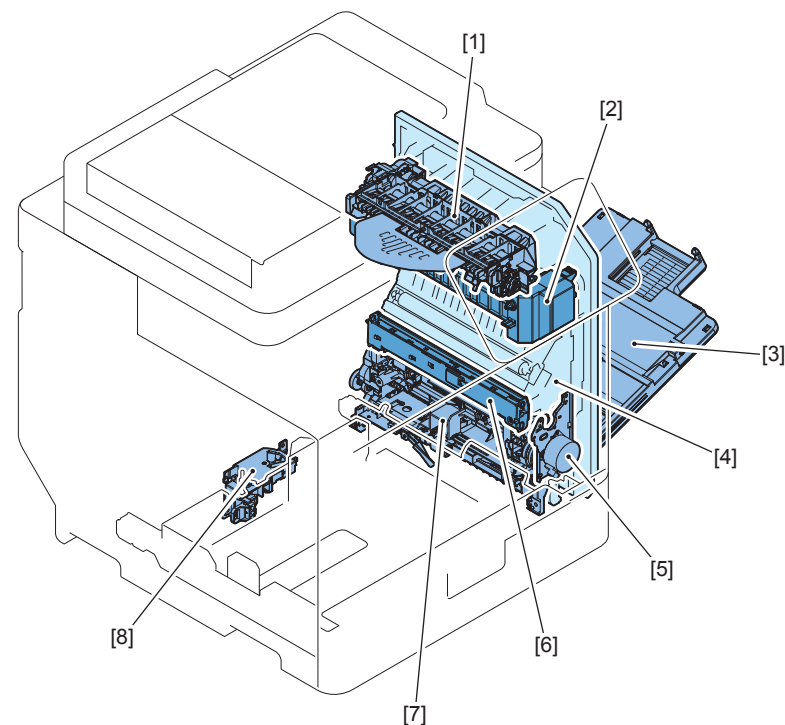


F-4-10

No.	Parts Name	Reference
[1]	Toner Bottle Mount Unit (Y)	(Refer to page 4-133)
[2]	Toner Bottle Mount Unit (M)	(Refer to page 4-133)
[3]	Toner Bottle Mount Unit (C)	(Refer to page 4-133)
[4]	Toner Bottle Mount Unit (Bk)	(Refer to page 4-133)
[5]	Control Panel Unit	(Refer to page 4-48)
[6]	ITB Unit	(Refer to page 4-113)
[7]	Drum Unit (Y)	(Refer to page 4-110)
[8]	Drum Unit (M)	(Refer to page 4-110)
[9]	Drum Unit (C)	(Refer to page 4-110)
[10]	Drum Unit (Bk)	(Refer to page 4-110)
[11]	Laser Scanner Unit	(Refer to page 4-103)

T-4-9

Printer (Front Side) (2/2)

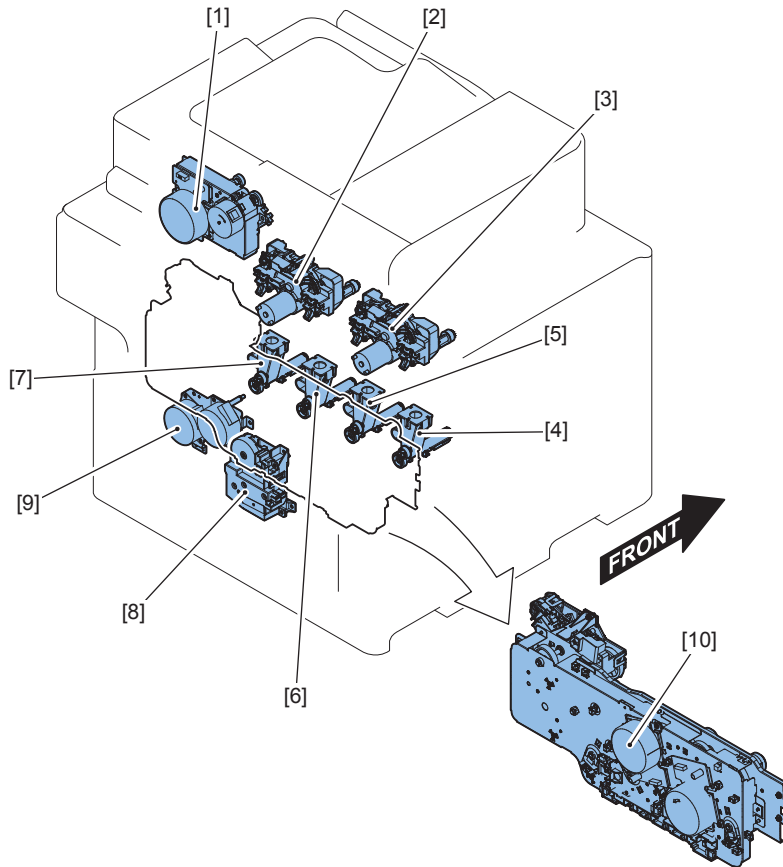


F-4-11

No.	Parts Name	Reference
[1]	Delivery/Reverse Unit	(Refer to page 4-164)
[2]	Fixing Assembly	(Refer to page 4-138)
[3]	Multi-purpose Tray	(Refer to page 4-45)
[4]	Right Cover Unit	(Refer to page 4-42)
[5]	Registration Drive Unit	(Refer to page 4-124)
[6]	Registration Patch Sensor Unit	(Refer to page 4-118)
[7]	Regist/Paper Pickup Unit	(Refer to page 4-156)
[8]	Cassette 1 Auto Close Unit	

T-4-10

■ Printer (Rear Side)



F-4-12

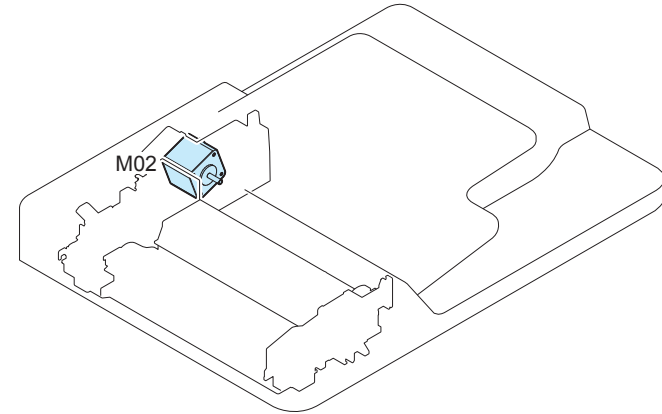
No.	Parts Name	Reference
[1]	Fixing Drive Unit	(Refer to page 4-139)
[2]	Bottle Drive Unit (CK)	(Refer to page 4-132)
[3]	Bottle Drive Unit (YM)	(Refer to page 4-132)
[4]	Hopper Unit (Y)	(Refer to page 4-128)
[5]	Hopper Unit (M)	(Refer to page 4-128)
[6]	Hopper Unit (C)	(Refer to page 4-128)
[7]	Hopper Unit (Bk)	(Refer to page 4-128)
[8]	Cassette 1 Lifter Drive Unit	(Refer to page 4-165)
[9]	Cassette 1 Pickup Drive Unit	(Refer to page 4-168)
[10]	Main Drive Unit	(Refer to page 4-126)

T-4-11

● Electrical Components

■ ADF Unit

● Motor

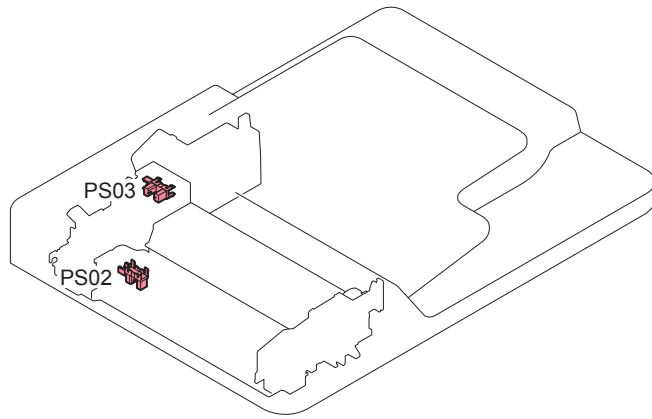


F-4-13

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

T-4-12

● Sensor

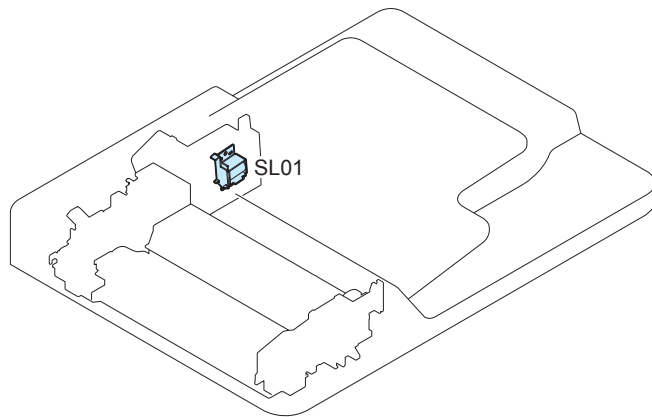


F-4-14

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

T-4-13

● Solenoid



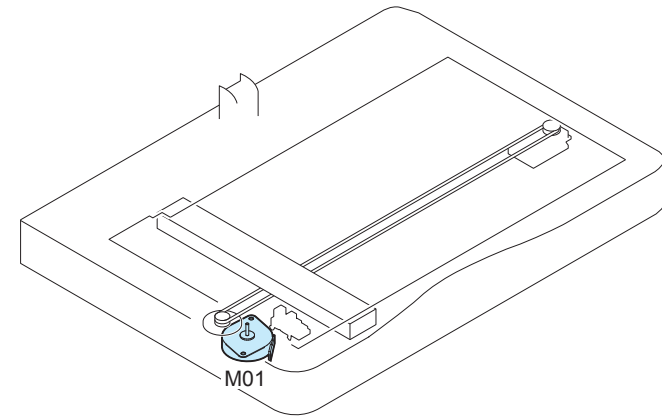
F-4-15

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

T-4-14

■ Reader Unit

● Motor

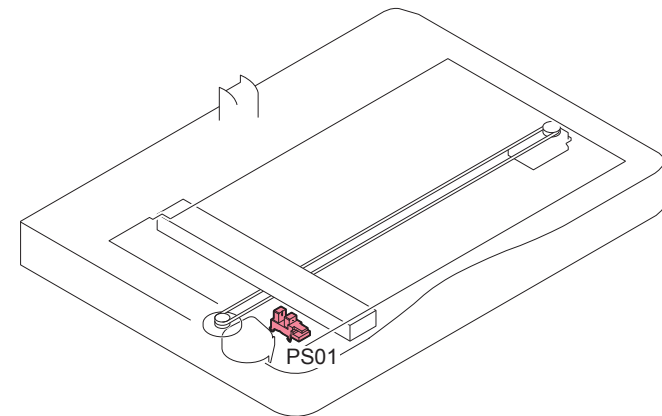


F-4-16

No.	Parts Name	Main Unit	Reference
M01	Reader Motor	Reader Unit	(Refer to page 0-26)

T-4-15

● Sensor



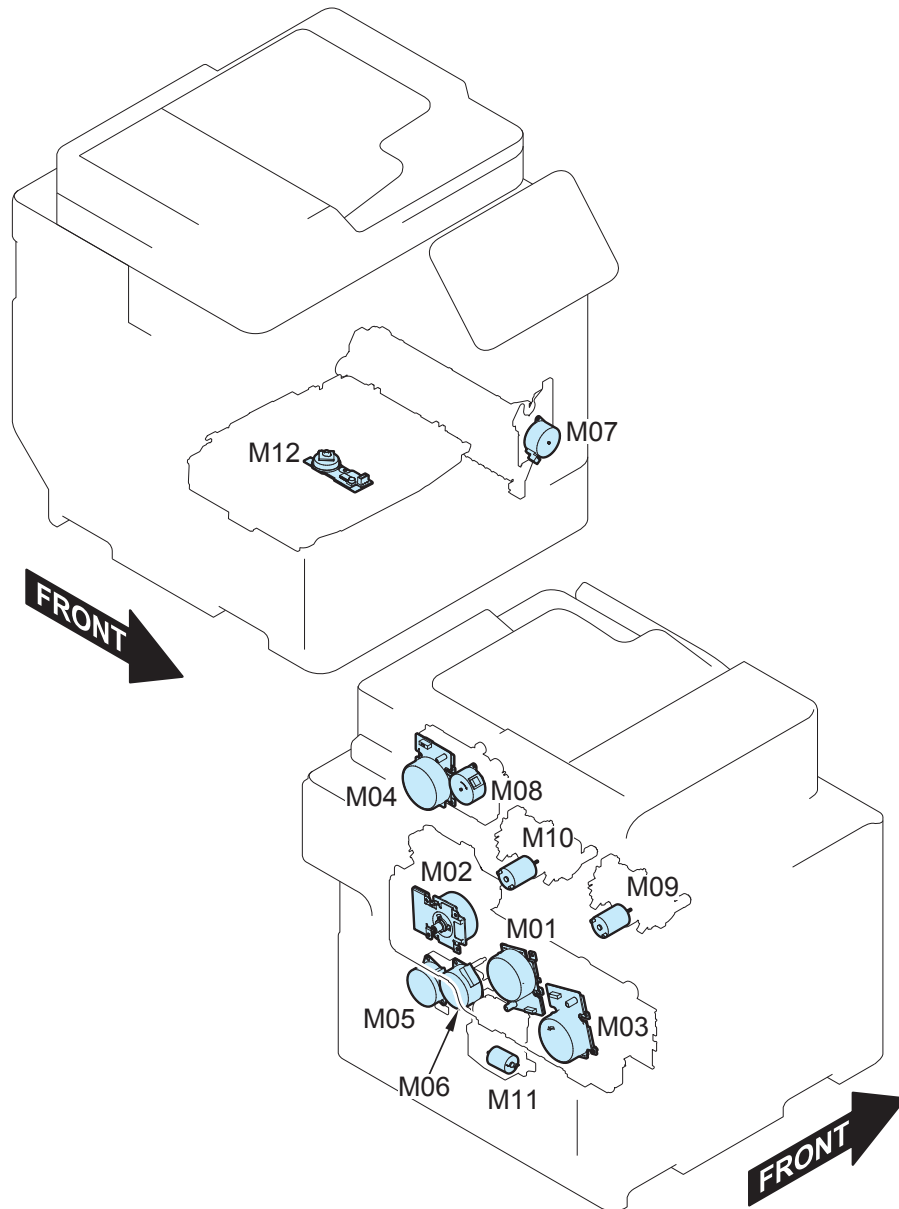
F-4-17

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

T-4-16

■ Printer

● Motor

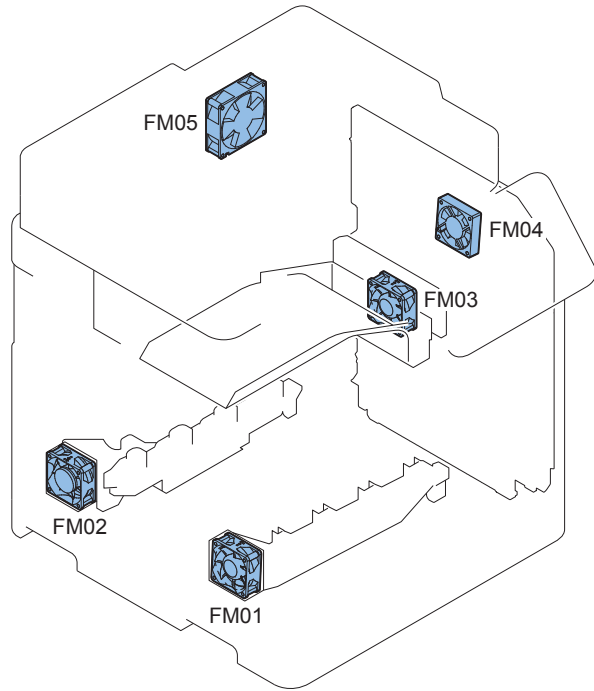


F-4-18

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

Fan

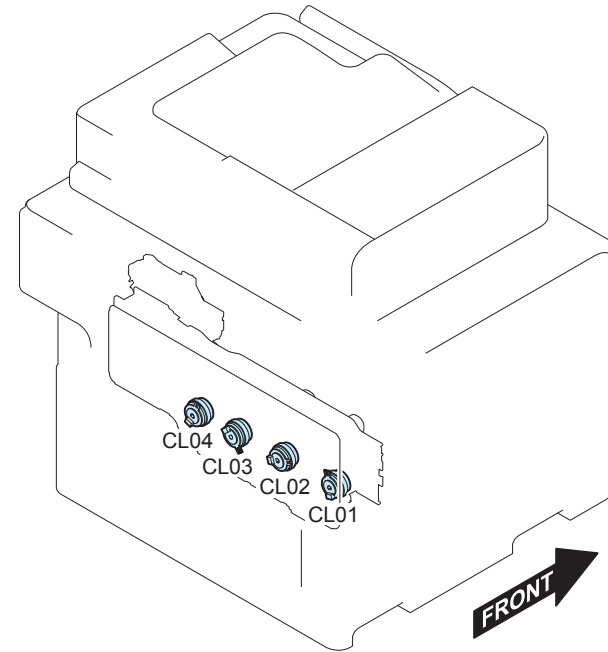


F-4-19

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

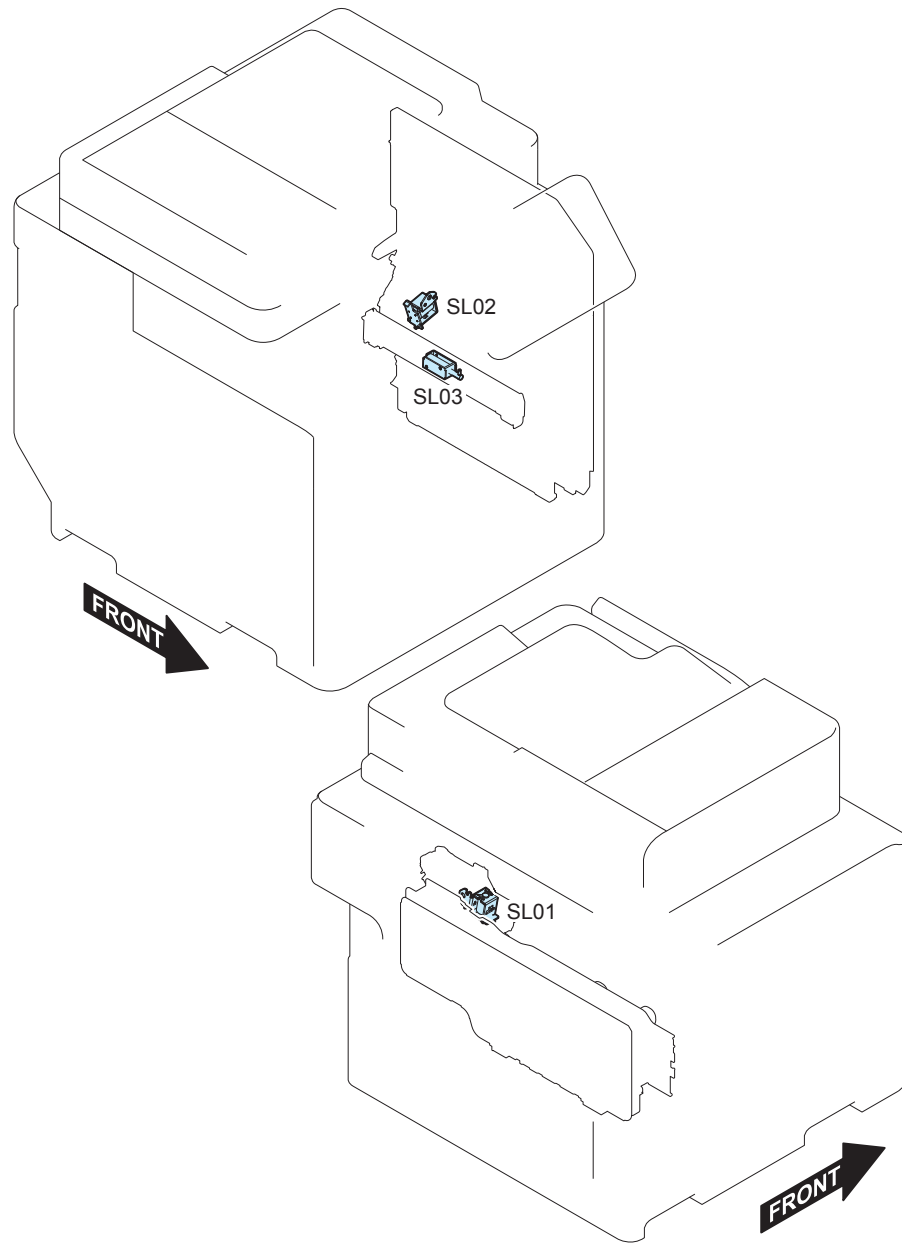


F-4-20

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

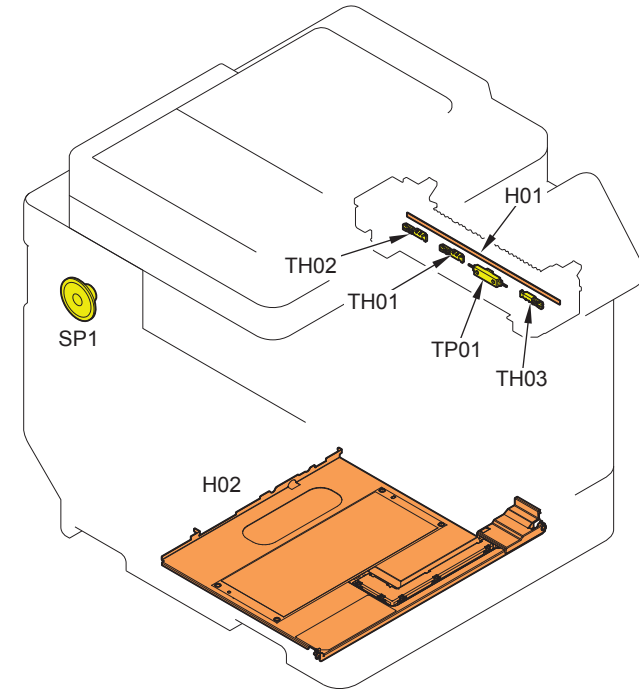


F-4-21

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

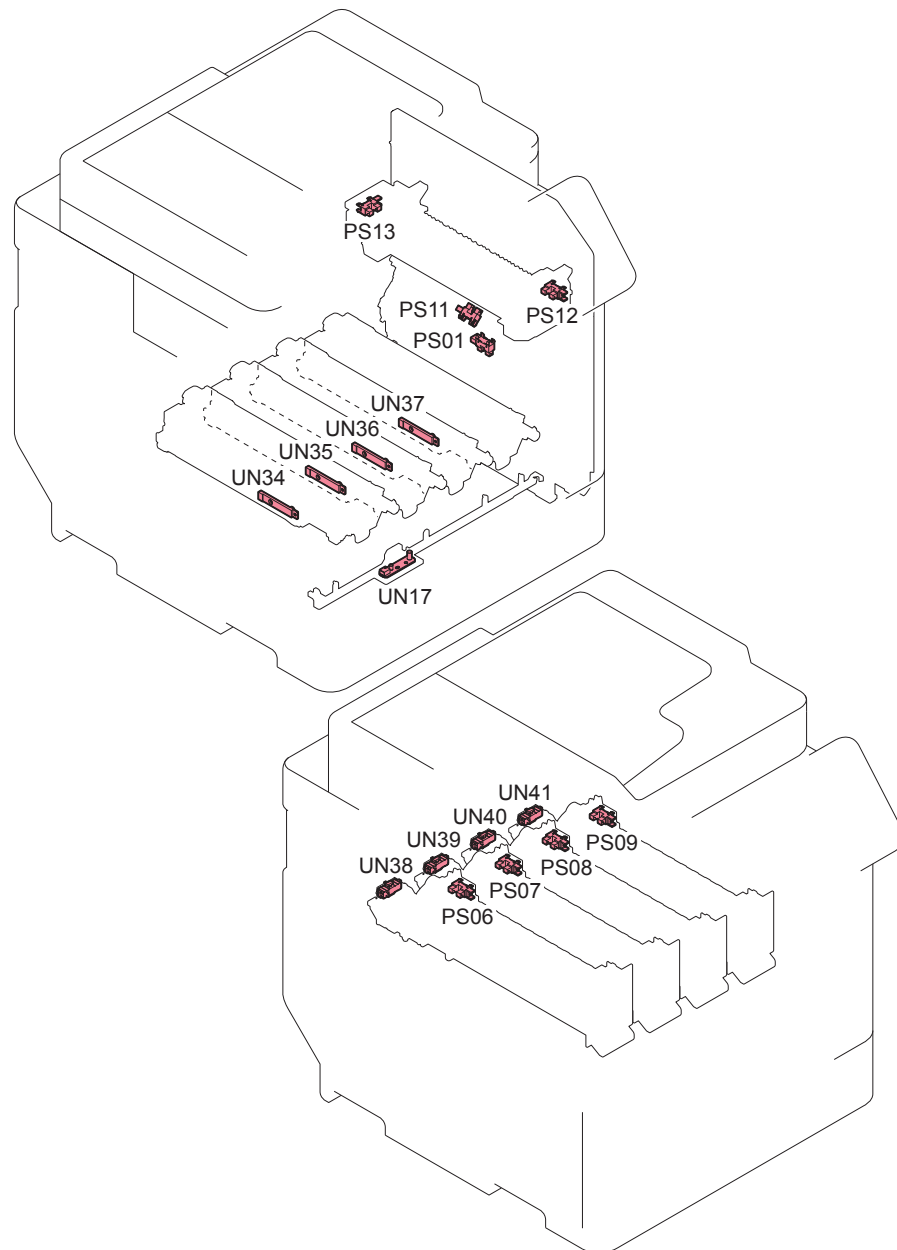


F-4-22

No.	Parts Name	Main Unit	Reference
H01	Fixing Heater	Fixing Assembly	
H02	Cassette Heater	Product Configuration	
SP1	Speaker	Product Configuration	(Refer to page 4-101)
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)

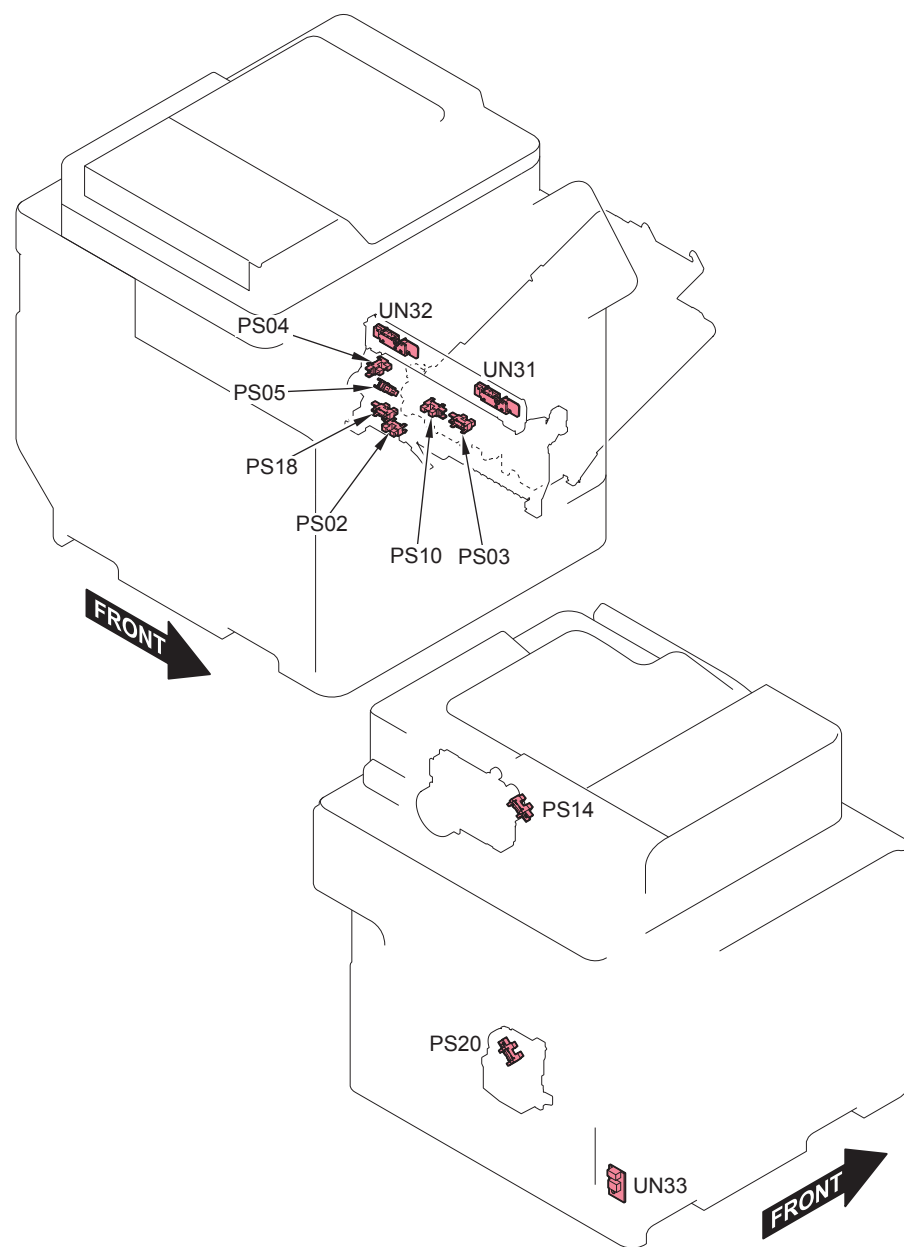


F-4-23

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)

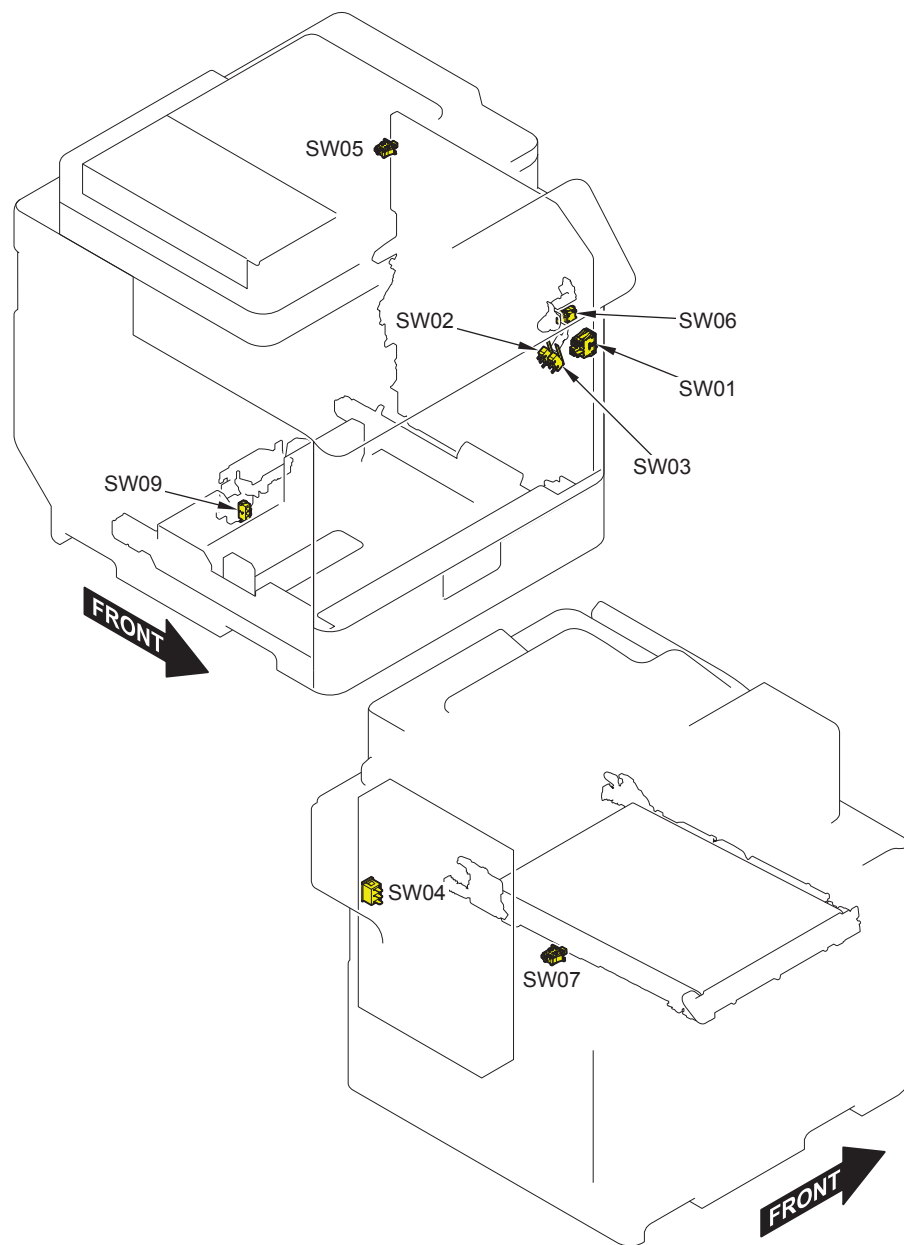


F-4-24

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

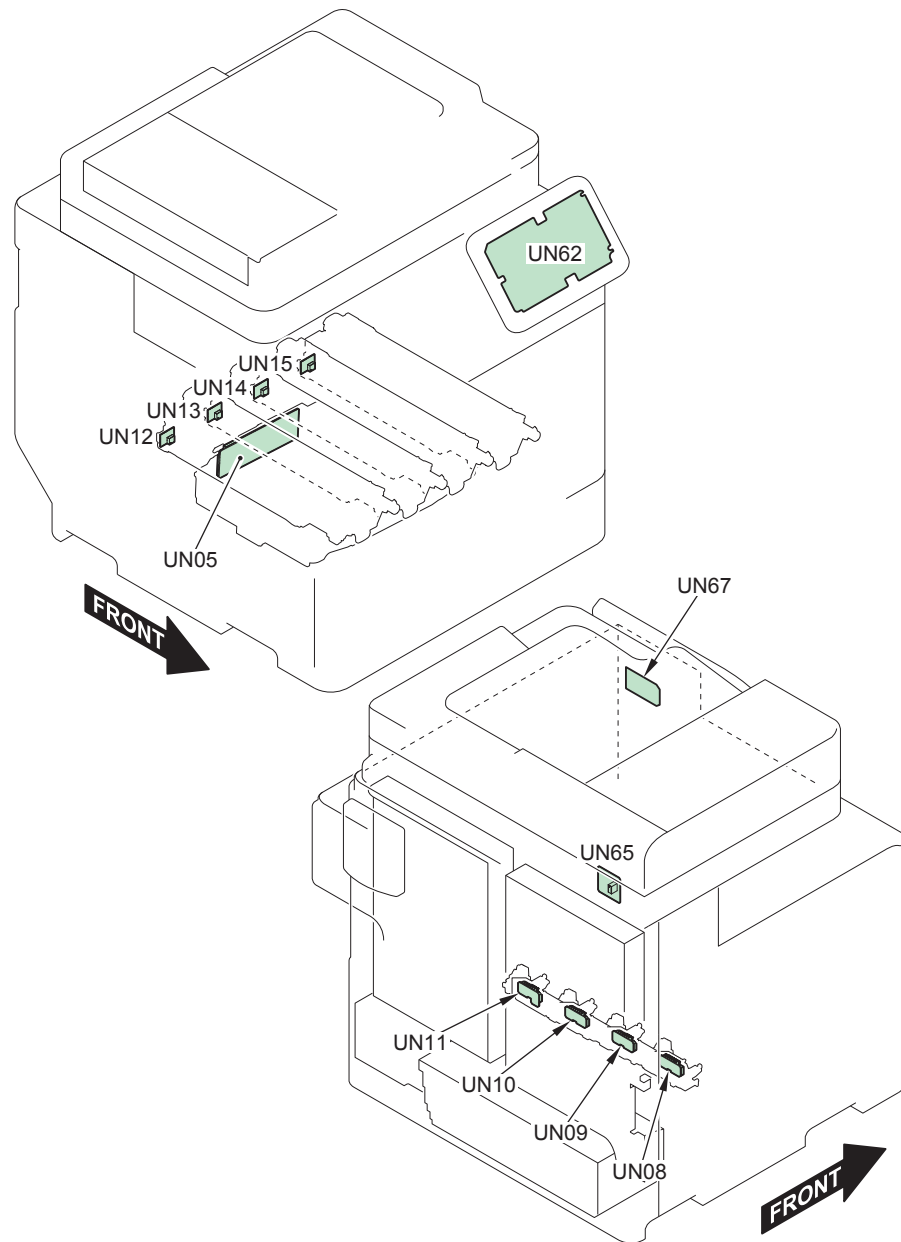


F-4-25

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 4-131)
SW09	Cassette 1 Size Switch	Cassette 1 Auto Close Unit	

T-4-24

● PCB (1/2)

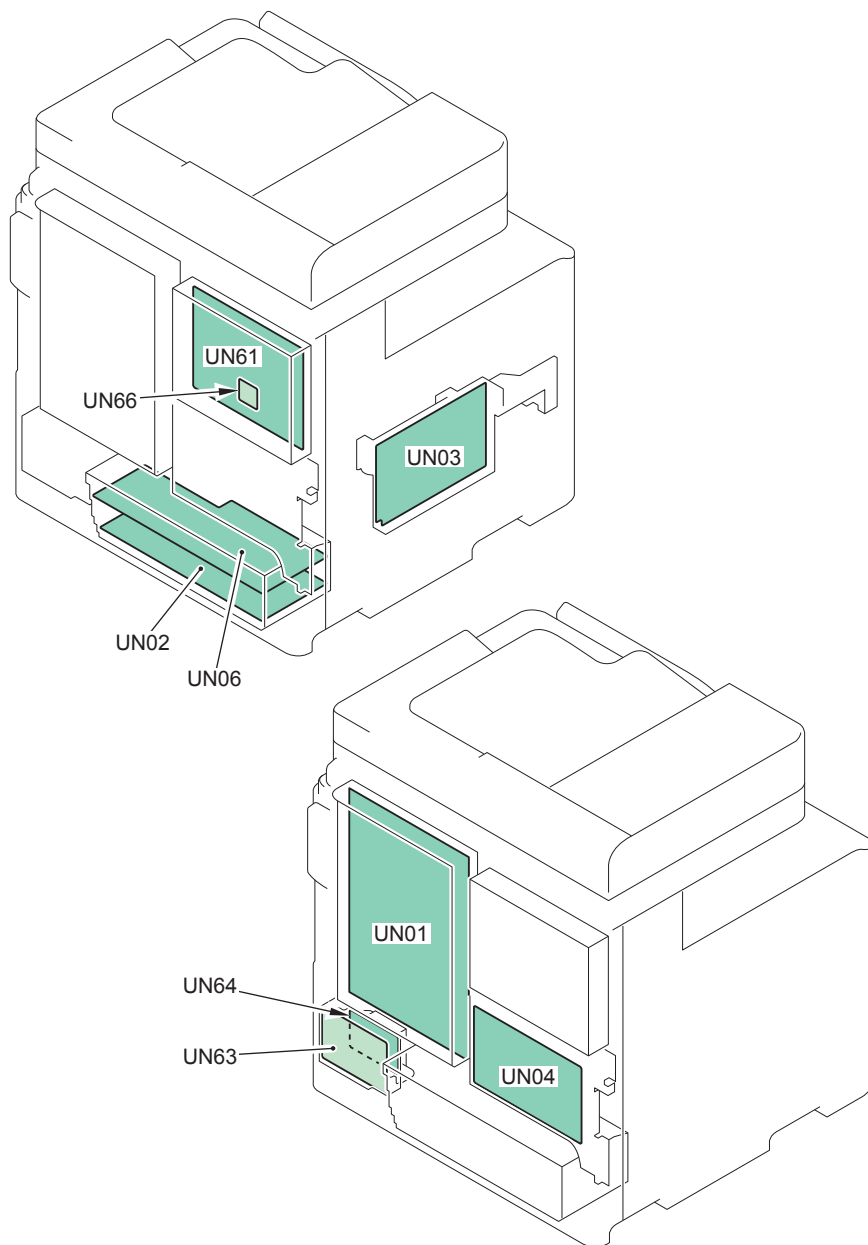


F-4-26

No.	Parts Name	Main Unit	Reference
UN05	Y/M/C/Bk Laser Driver PCB	Laser Scanner Unit	(Refer to page 4-103)
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 4-98)
UN65	ECO PCB	Product Configuration	
UN67	USB PCB	Product Configuration	

T-4-25

● PCB (2/2)

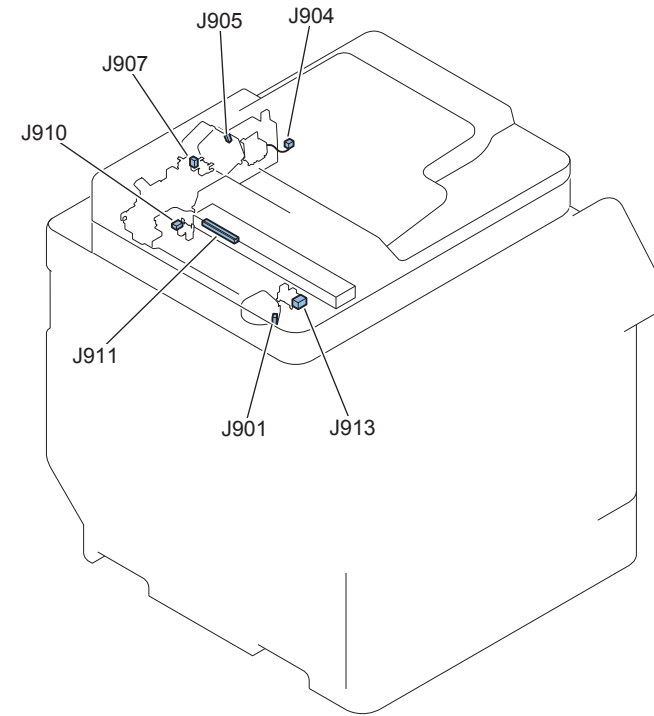
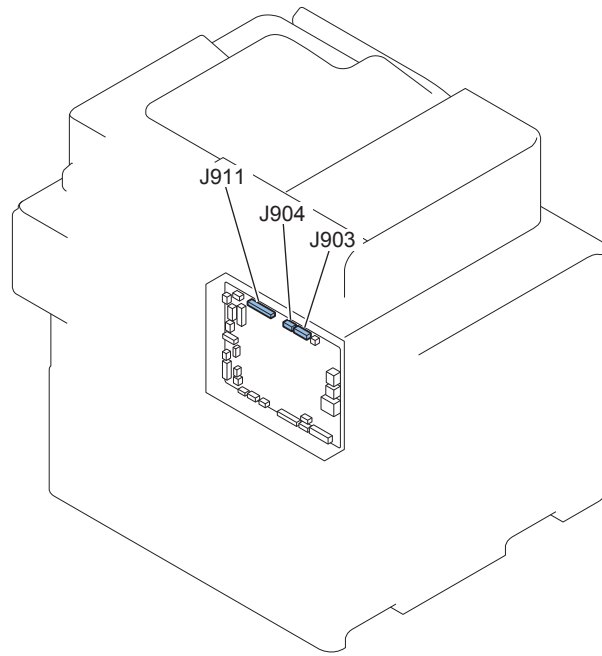


F-4-27

No.	Parts Name	Main Unit	Reference
UN01	Low-voltage Power Supply PCB	Product Configuration	(Refer to page 4-94)
UN02	Secondary Transfer High-voltage PCB	Product Configuration	(Refer to page 4-89)
UN03	Primary Transfer High-voltage PCB	Product Configuration	(Refer to page 4-91)
UN04	DC Controller PCB	Product Configuration	(Refer to page 4-85)
UN06	Developing High-voltage PCB	Product Configuration	(Refer to page 4-89)
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

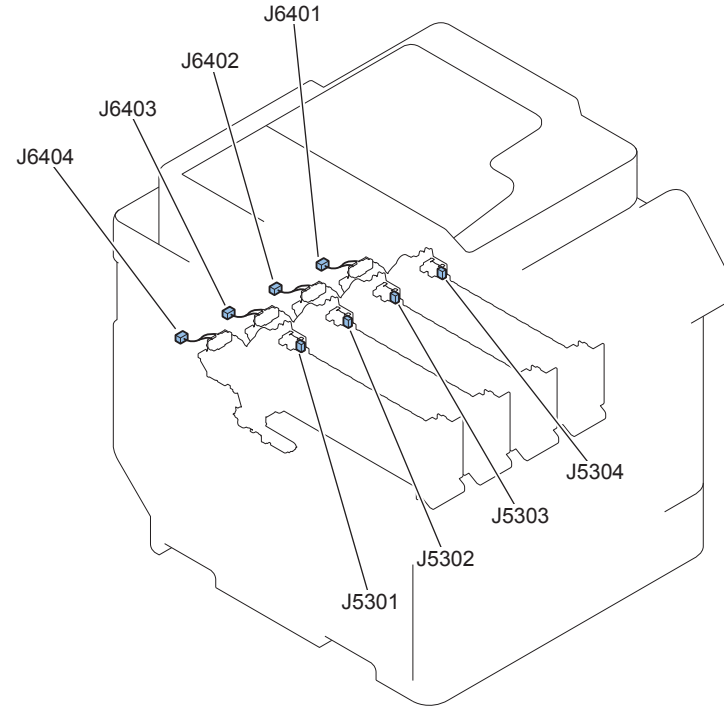
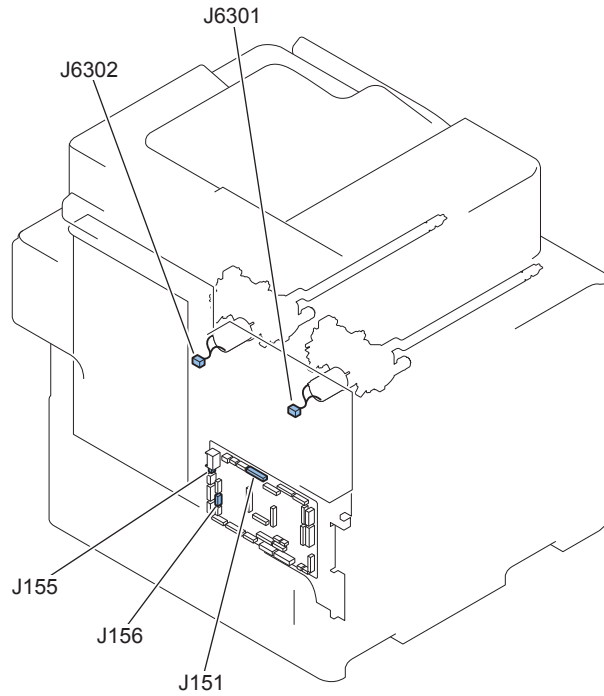
List of Connectors



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
			J903		J905	M02	ADF Motor
			J903	J908	J907	PS03	Document Sensor
J903	UN61	Main Controller PCB	J901		J910	PS02	Document End Sensor
			J902		J901	M01	Reader Motor
				J913	PS01	CIS Unit HP Sensor	

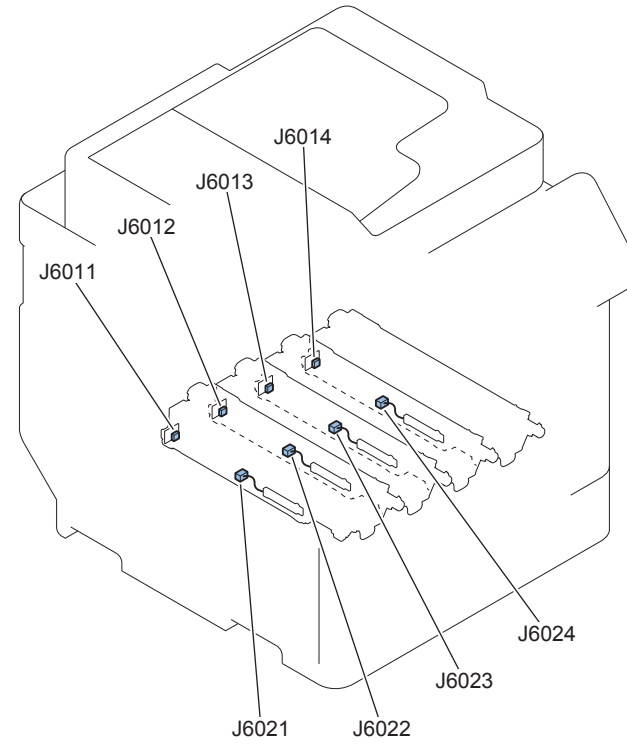
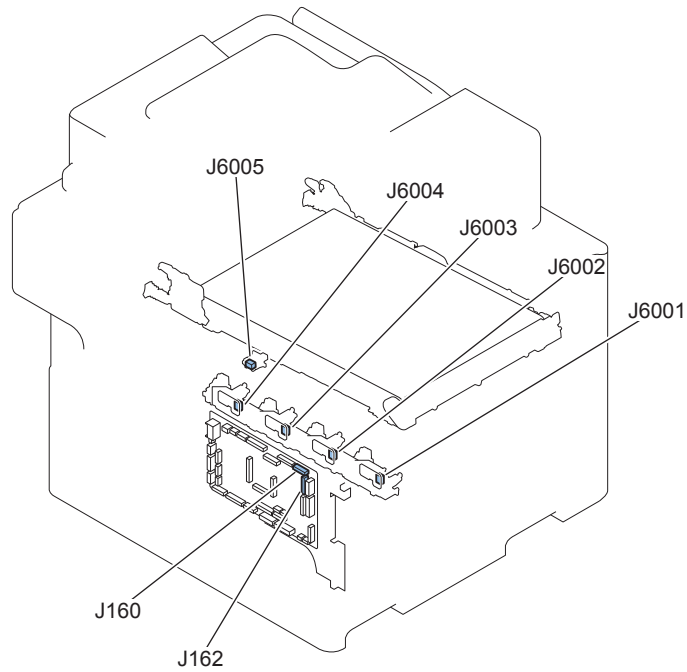
T-4-27



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)	

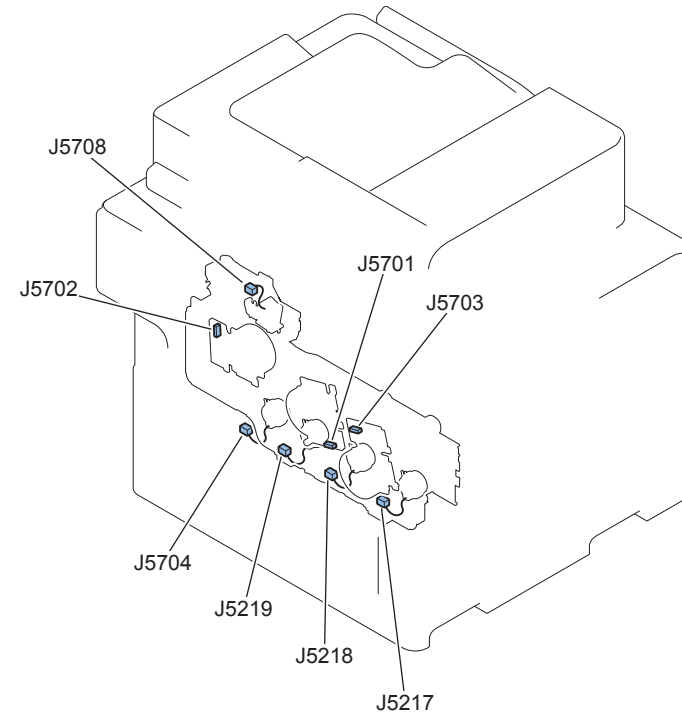
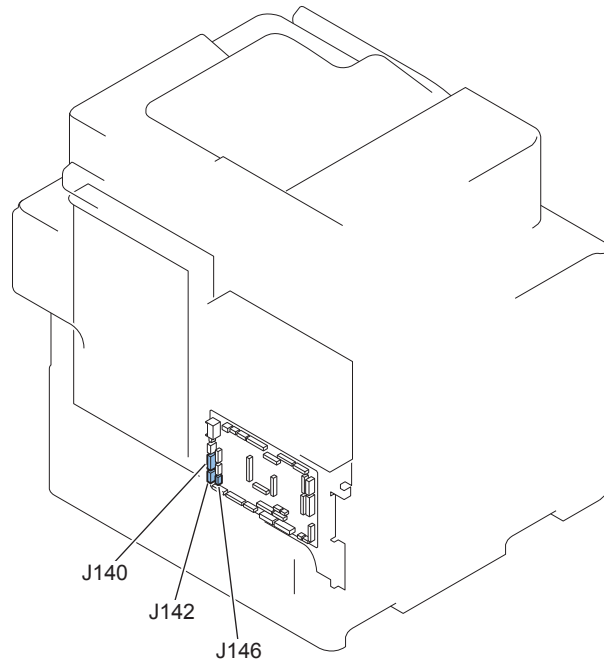
T-4-28



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)	

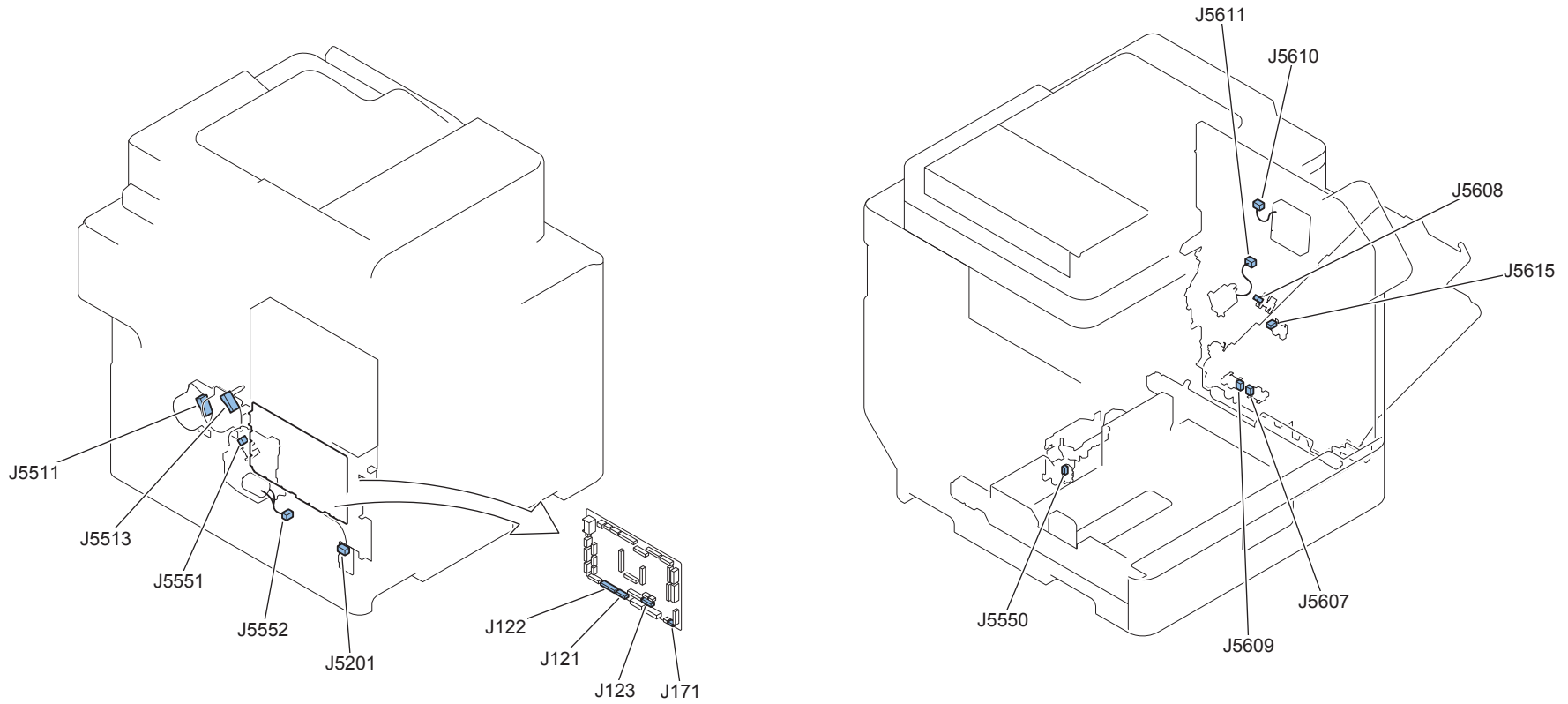
T-4-29



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)	

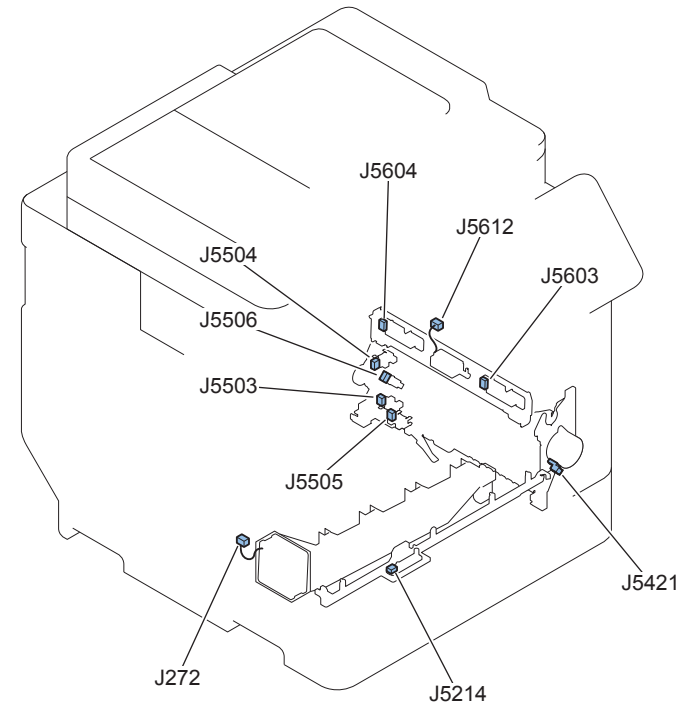
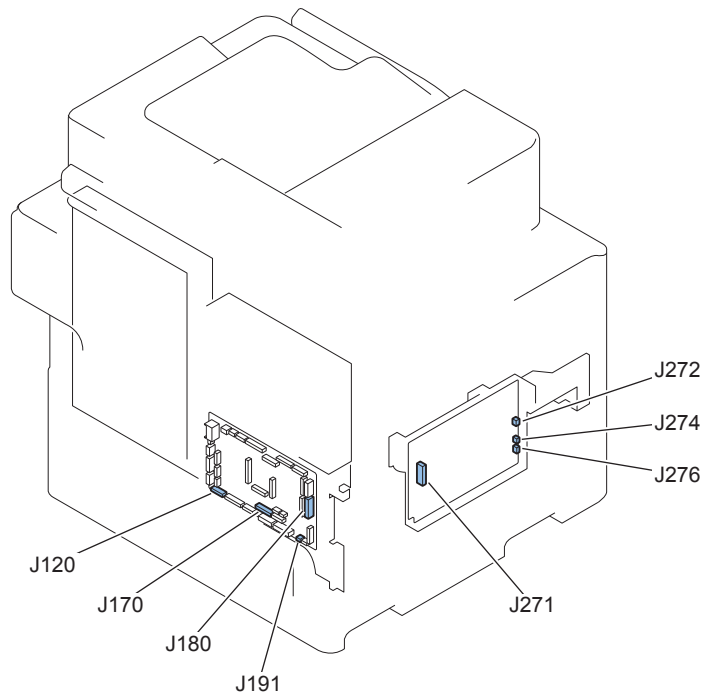
T-4-30



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	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

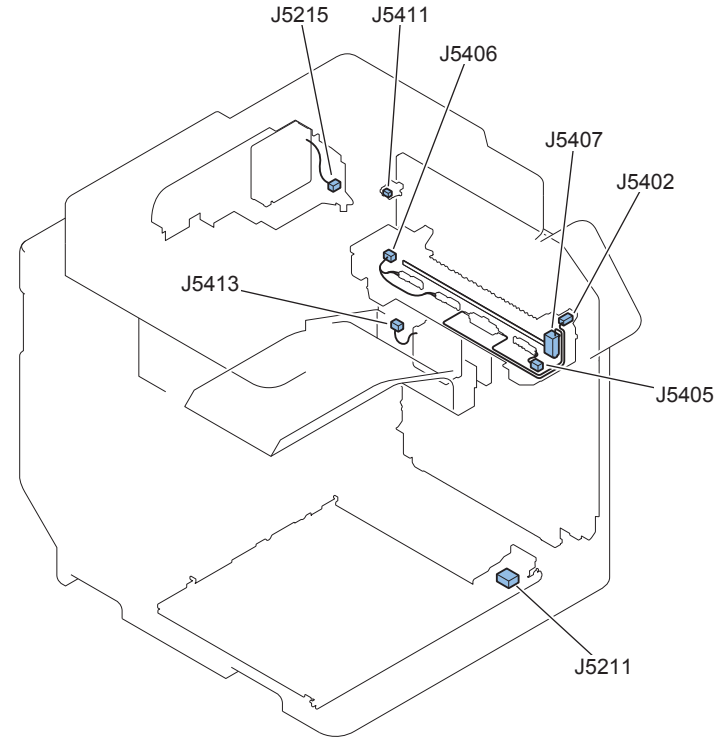
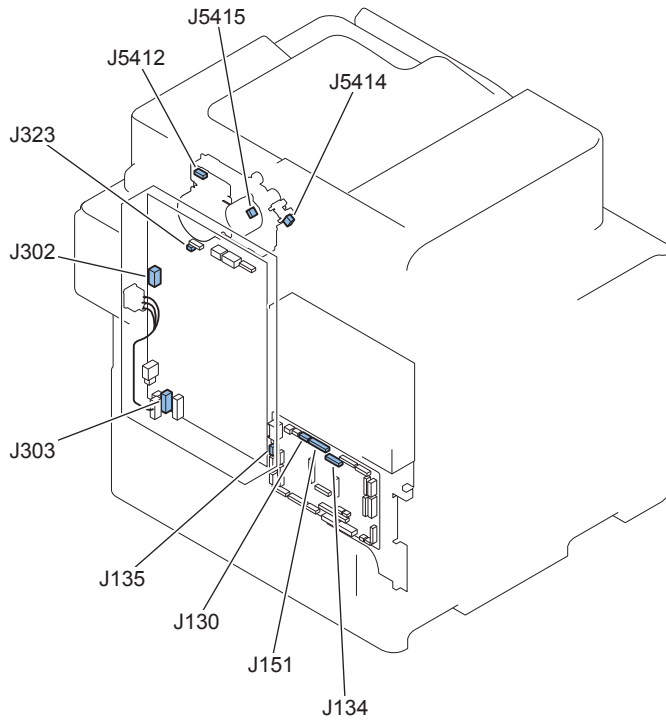
T-4-31



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
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	

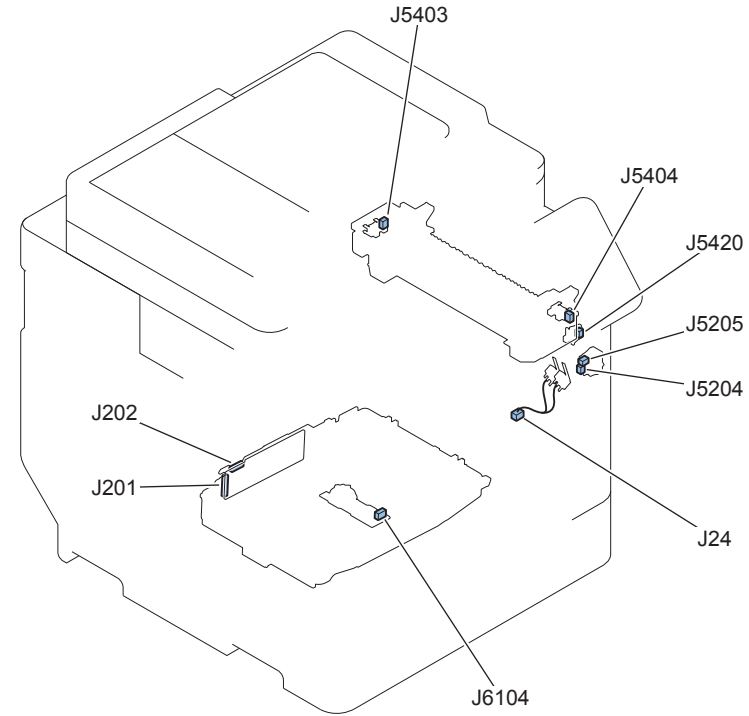
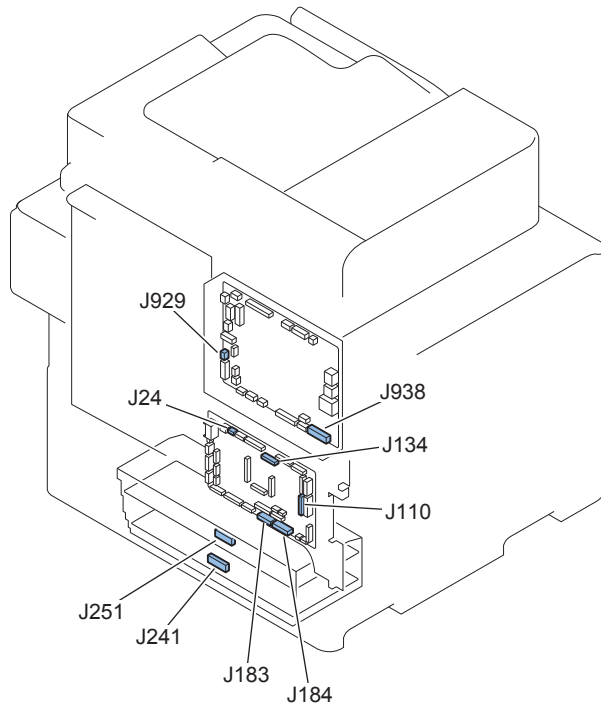
T-4-32



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	
J135	UN04	DC Controller PCB			J5415	M08	Reverse Motor	
J151	UN04	DC Controller PCB	J5413		J5412	M04	Fixing Motor	
J134	UN04	DC Controller PCB	J5401	J5405	J5413	FM03	Delivery Cooling Fan	
			J5401	J5406	J5414	PS14	Delivery Paper Full Sensor	
			J5401	J5406	J5405	TH03	Sub Thermistor (Front)	
J302	UN01	Low-voltage Power Supply PCB	J5401	J5406	J5406	TH01	Main Thermistor	
			J5401	J5402	J5406	TH02	Sub Thermistor (Rear)	
			J5401	J5402	J5402	TP01	Fixing Thermoswitch	
J303	UN01	Low-voltage Power Supply PCB	J5210	J5211	J5407	H01	Fixing Heater	
					J5211	H02	Cassette Heater	
			J5207		J303	SW04	Environment Switch	Only for 120V
J323	UN01	Low-voltage Power Supply PCB	J5215		-	-	Option Cassette Heater	Option
					J5215	FM05	Power Supply Cooling Fan	

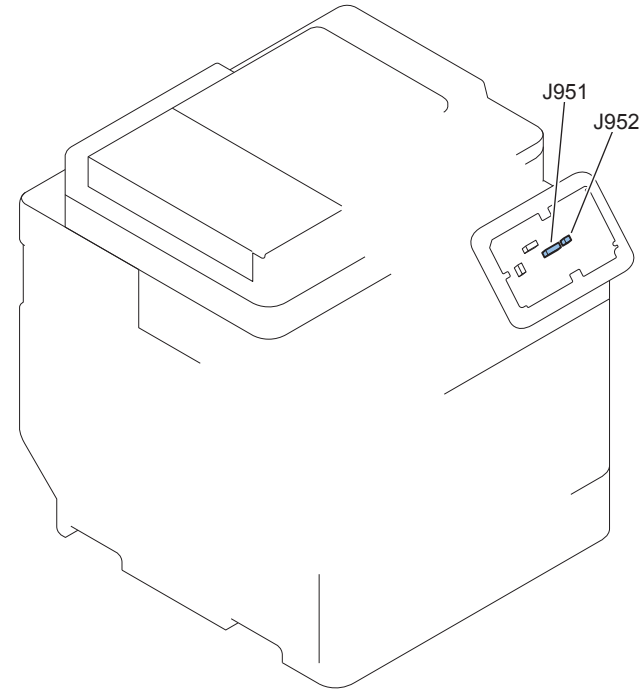
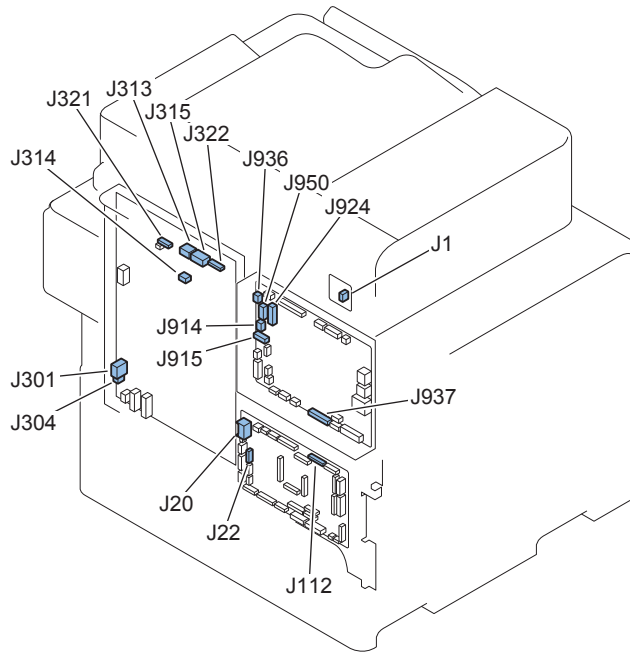
T-4-33



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				
J110	UN04	DC Controller PCB	J6103	J6104	M12	Scanner Motor	
J938	UN61	Main Controller PCB		J201	UN05	Y/M/C/Bk Laser Driver PCB	
			J929				
J24	UN04	DC Controller PCB	J5204	J5205	SW01	Main Power Supply Switch	
			J5205				
J183	UN04	DC Controller PCB		J24	SW03	Interlock Switch 2	
			J184				
J184	UN04	DC Controller PCB		J251	UN02	Secondary Transfer High-voltage PCB	
				J241	UN06	Developing High-voltage PCB	

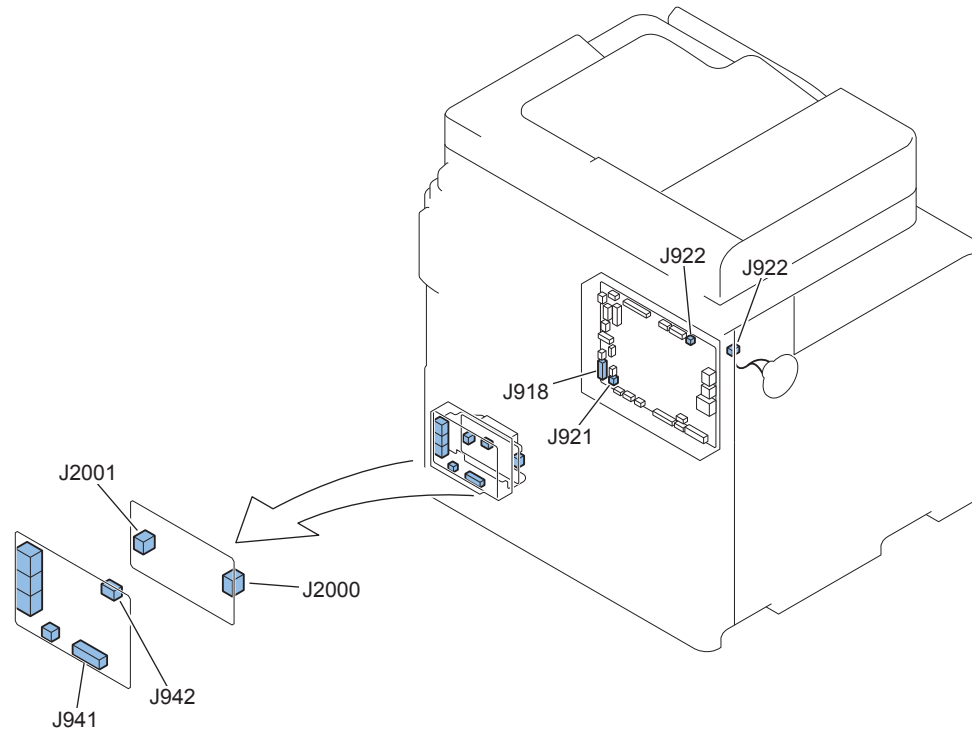
T-4-34



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	

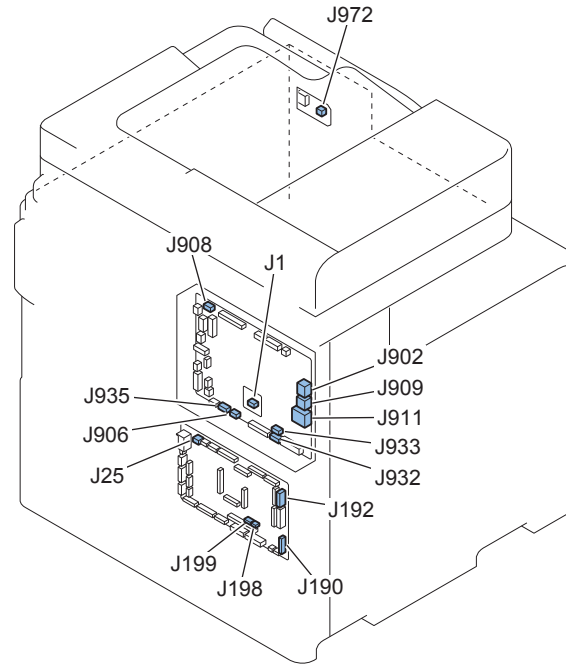
T-4-35



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

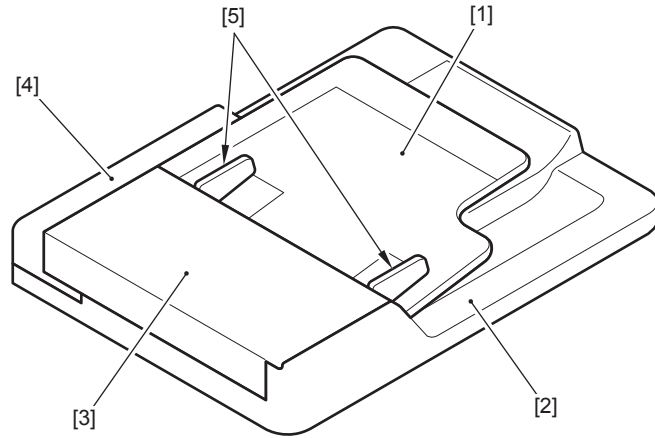
J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J902	UN61	Main Controller PCB					USB
J906	UN61	Main Controller PCB		-	-	RS232C Board	Option
J908	UN61	Main Controller PCB		J972	UN67	USB PCB	
J909	UN61	Main Controller PCB					USB
J911	UN61	Main Controller PCB					LAN
J932	UN61	Main Controller 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

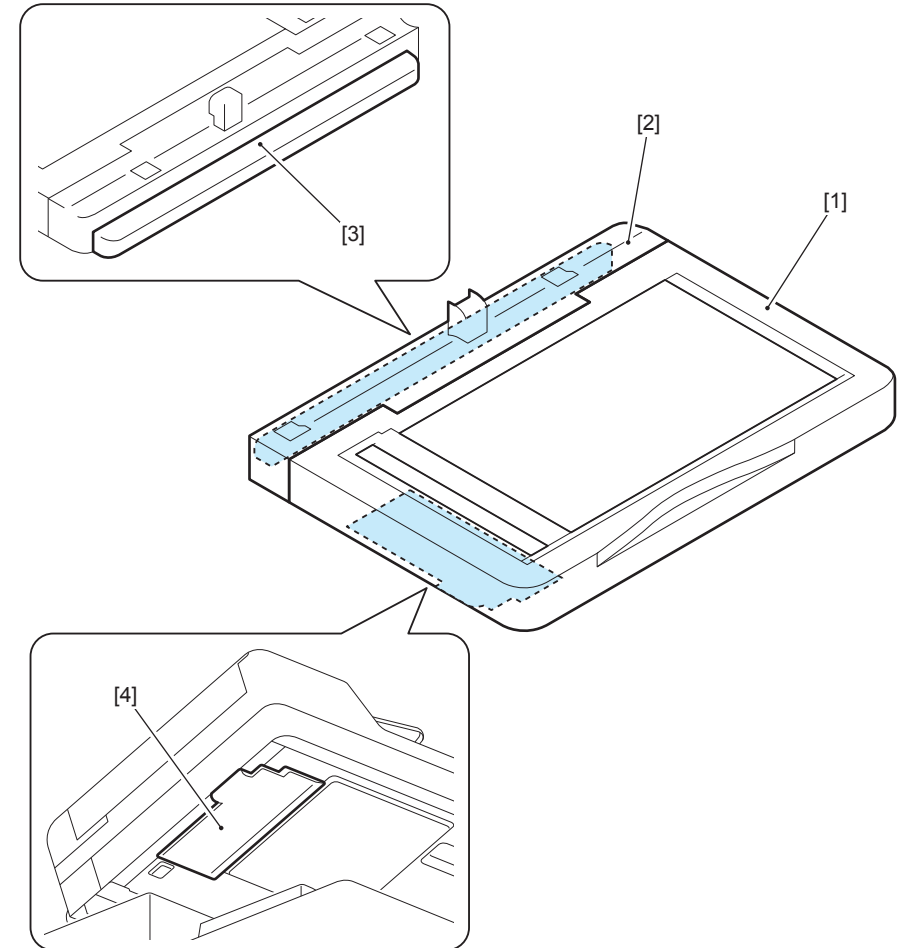


F-4-39

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

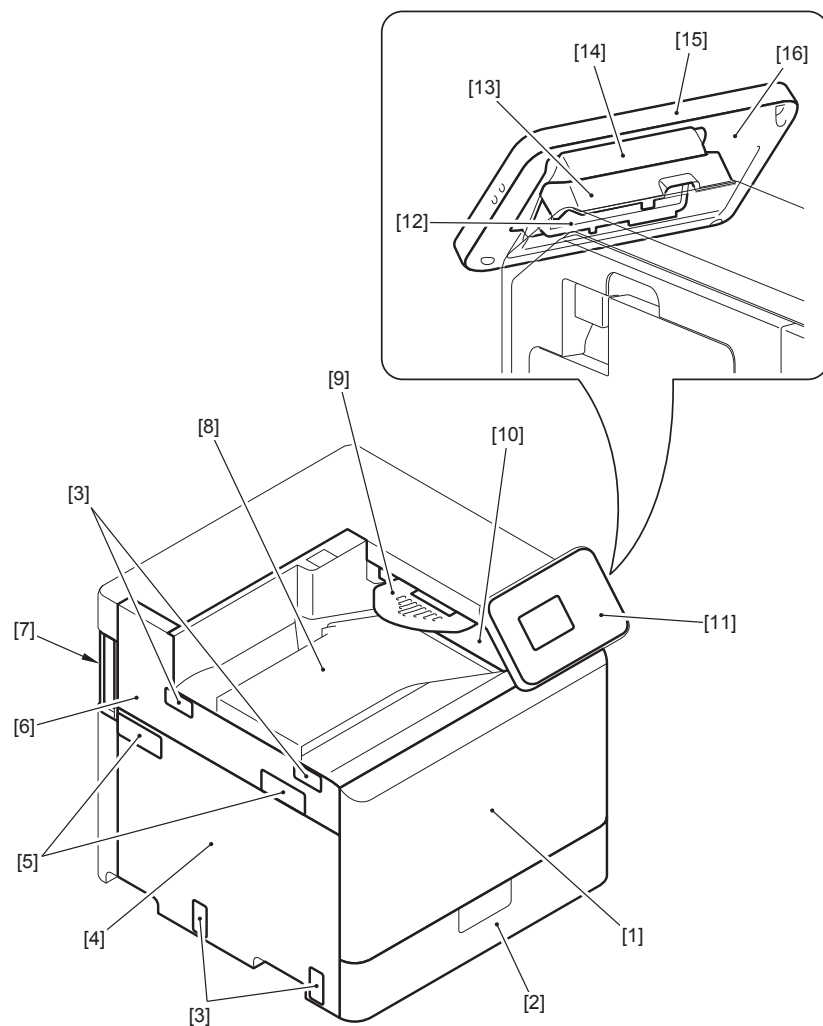


F-4-40

No.	Parts Name	Reference
[1]	Copyboard Glass Unit	(Refer to page 4-71)
[2]	Reader Rear Cover 1	
[3]	Reader Rear Cover 2	
[4]	Reader Motor Cover	

T-4-39

Printer (Front Side)

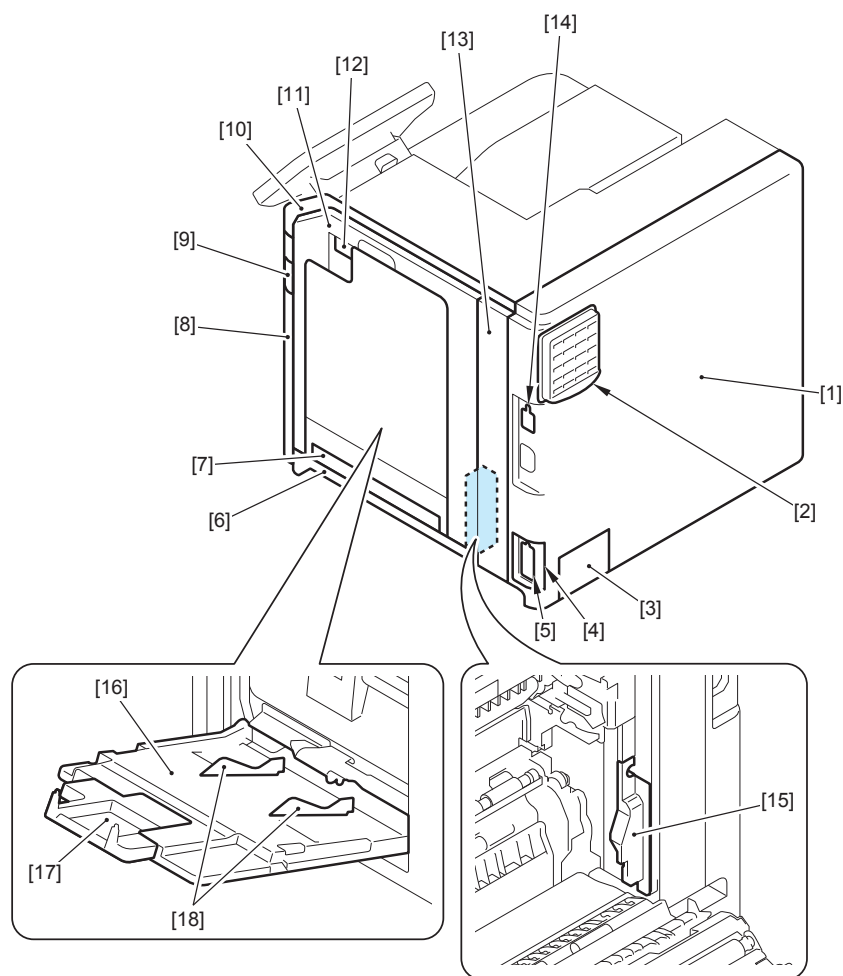


F-4-41

No.	Parts Name	Reference
[1]	Front Cover	(Refer to page 4-34)
[2]	Cassette	
[3]	Face Cover	
[4]	Left Lower Cover	(Refer to page 4-37)
[5]	Device Port Cover	
[6]	Left Upper Cover	(Refer to page 4-37)
[7]	Rear Sub Cover	
[8]	Delivery Tray	
[9]	Reverse Tray	
[10]	Delivery 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-4-40

Printer (Rear Side)

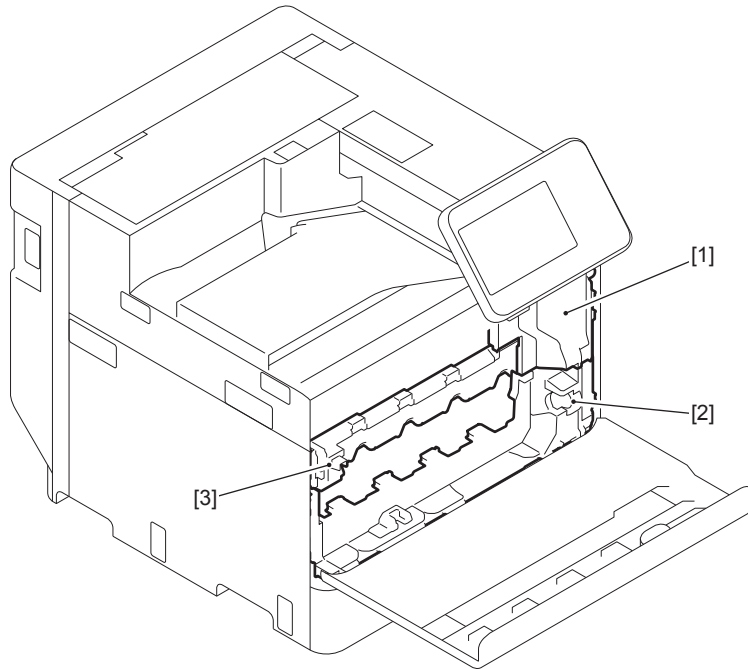


F-4-42

No.	Parts Name	Reference
[1]	Rear Cover	(Refer to page 4-35)
[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 4-38)
[9]	Main Power Switch Cover	
[10]	Right Upper Cover	(Refer to page 4-40)
[11]	Right Cover	(Refer to page 4-42)
[12]	Right Cover Open/Close Lever	
[13]	Right Rear Cover	(Refer to page 4-39)
[14]	Environment Heater Switch Cover	
[15]	Right Rear Lower Cover	(Refer to page 4-39)
[16]	Multi-purpose Tray	(Refer to page 4-45)
[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

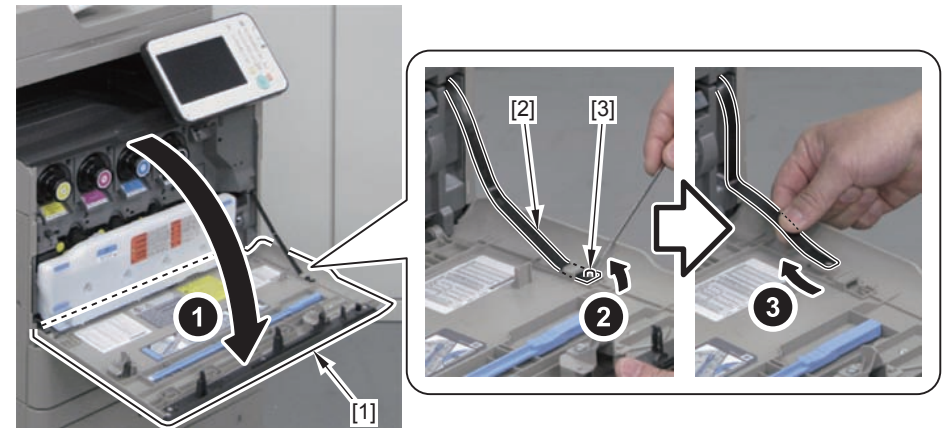
Removing the Front Cover



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

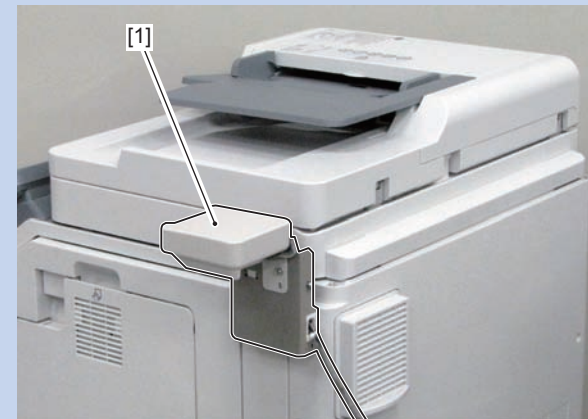


F-4-47

Procedure

NOTE:

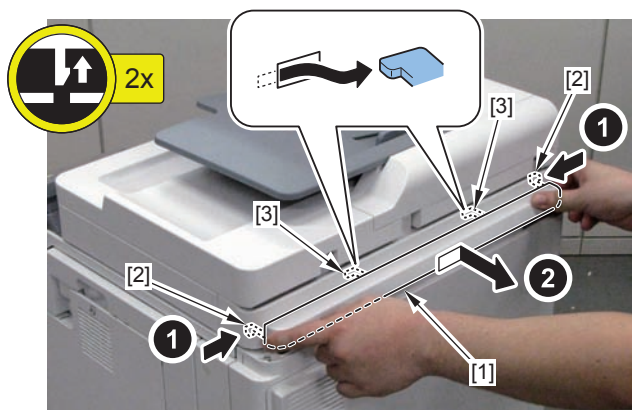
If the optional Copy Card Reader [1] is installed, be sure to remove it first.



F-4-48

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

- 2 Claws [2]
- 2 Hooks [3]

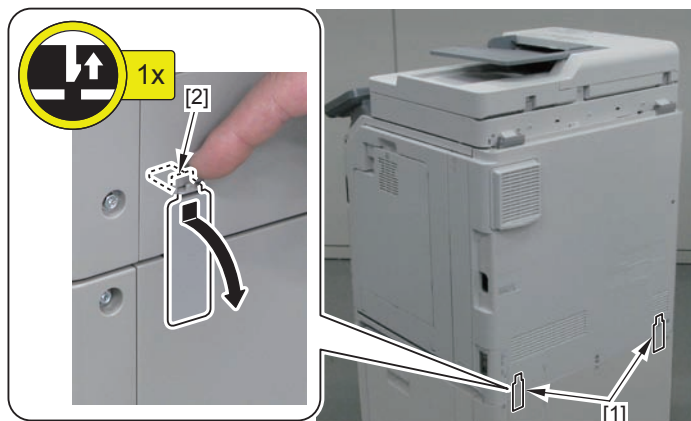


F-4-49

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].

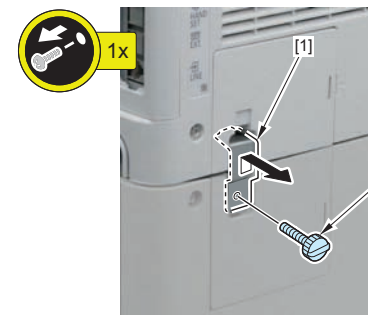
- 1 Claw [2] for each location



F-4-50

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

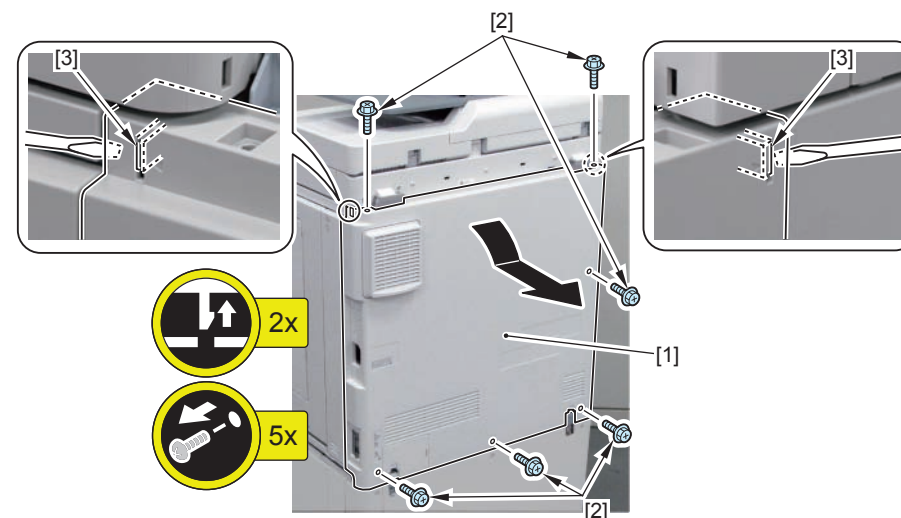
- 1 Knurled Screw [2]



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 4-35).

Procedure

1) Remove the Upper Left Cover [1].

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



F-4-54

Removing the Left Lower Cover



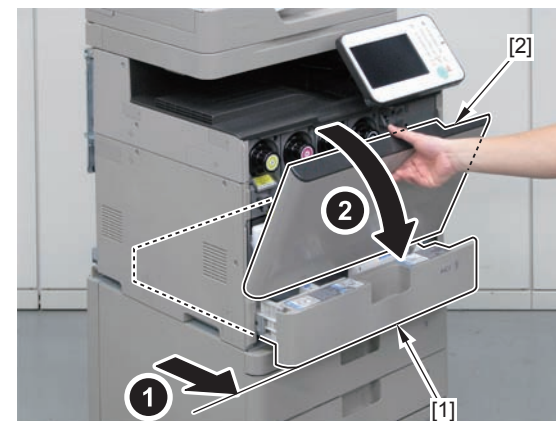
F-4-55

Preparation

1) Remove the Rear Cover 1 (Refer to page 4-35).

Procedure

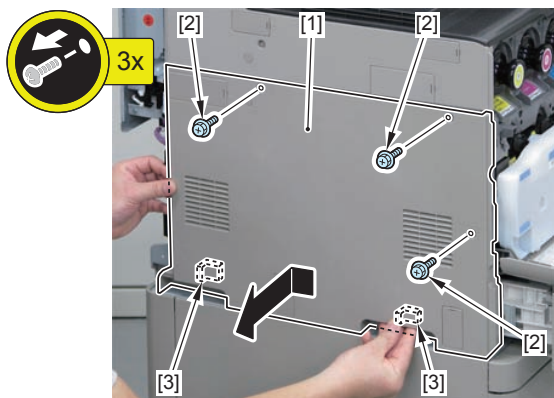
1) Pull out the Cassette [1], and open the Front Cover [2].



F-4-56

2) Remove the Left Lower Cover [1].

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



F-4-57

Removing the Right Front Cover

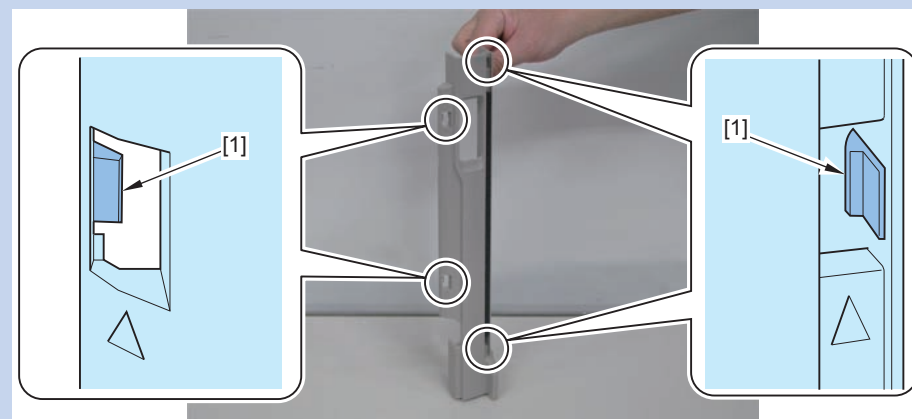


F-4-58

Pre-check items

NOTE:

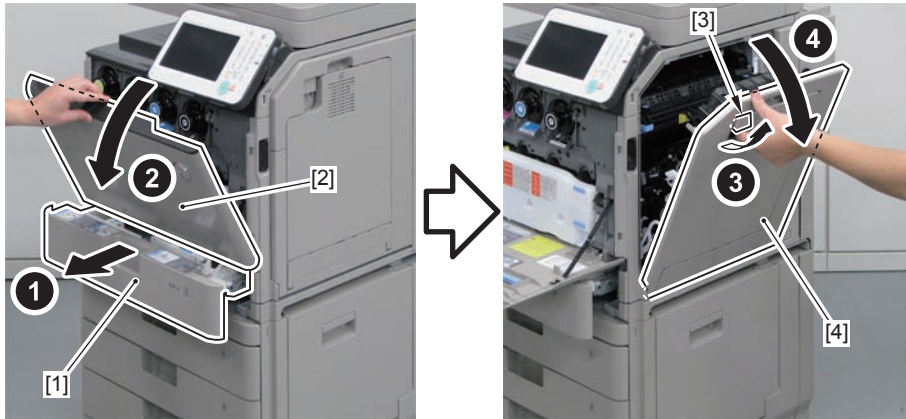
The 4 claws [1] of the Right Front Cover are shown in the figure below.



F-4-59

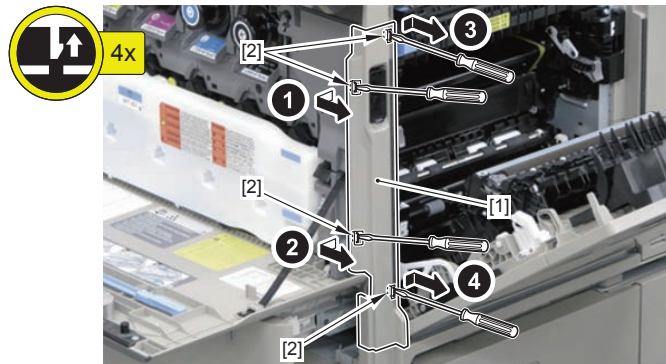
Procedure

- 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].



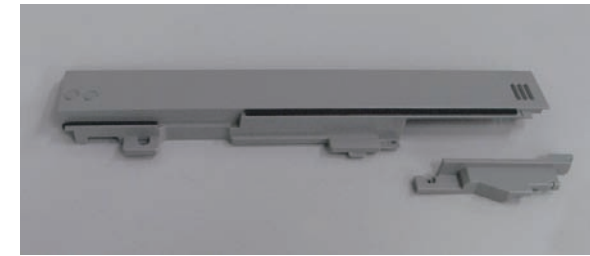
F-4-60

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



F-4-61

Removing the Right Rear Cover/Right Rear Lower Cover



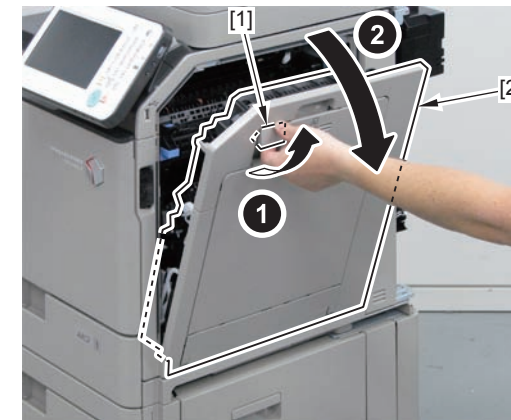
F-4-62

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).

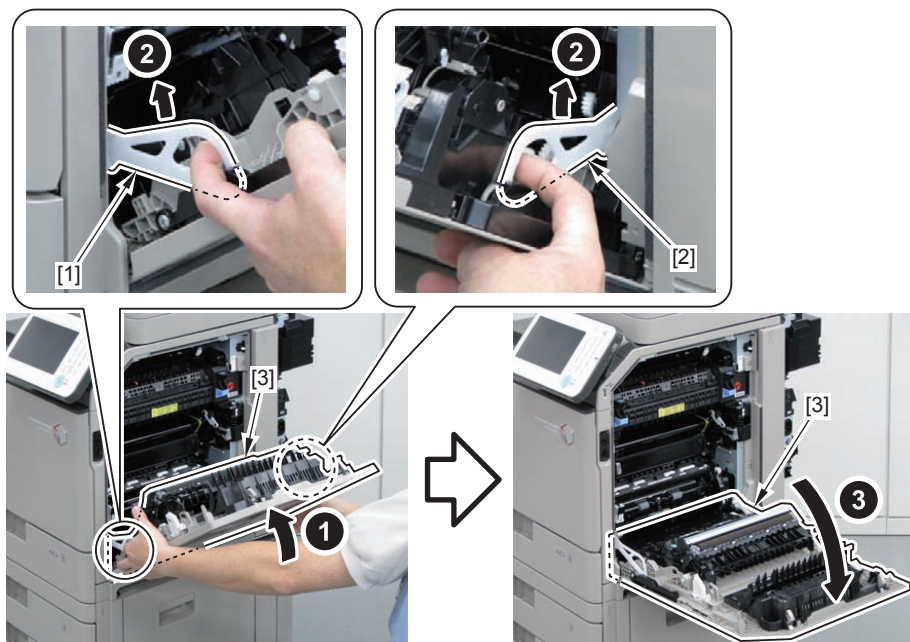
Procedure

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



F-4-63

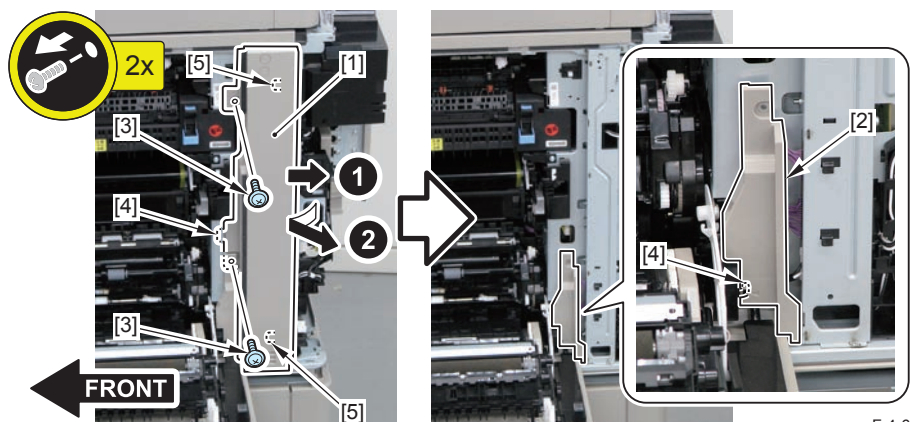
2) Release the lock of the Right Cover Stopper Front [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].



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



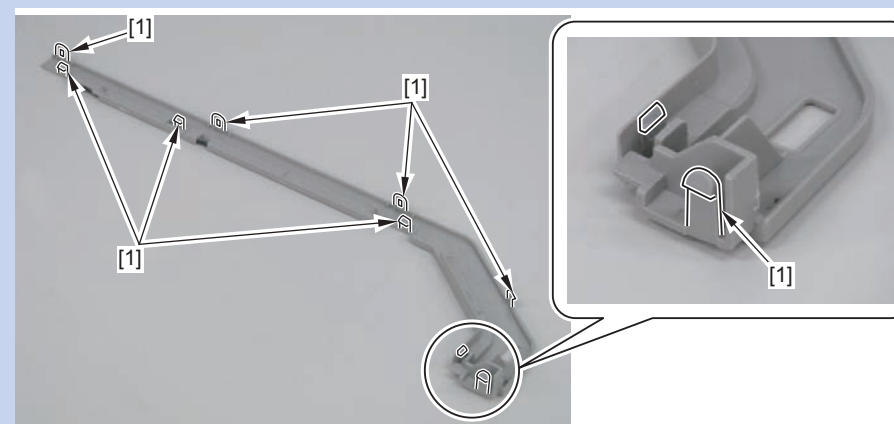
F-4-66

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Right Rear Cover/Right Rear Lower Cover (Refer to page 4-39).

Pre-check items

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



F-4-67

Procedure

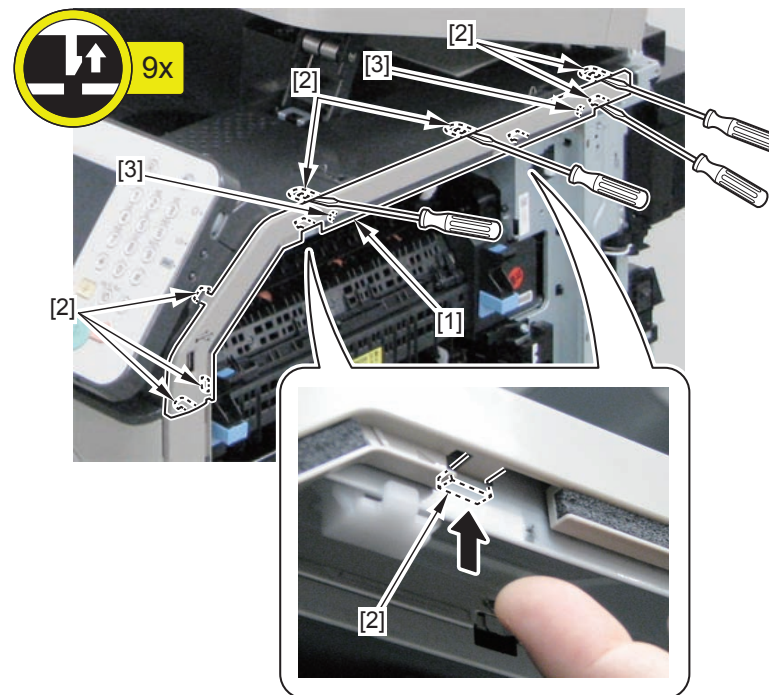
1) Open the ADF Unit + Reader Unit [1].



F-4-68

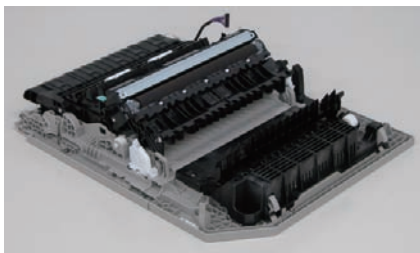
2) Remove the Right Upper Cover [1].

- 9 Claws [2]
- 2 Bosses [3]



F-4-69

Removing the Right Cover Unit



F-4-70

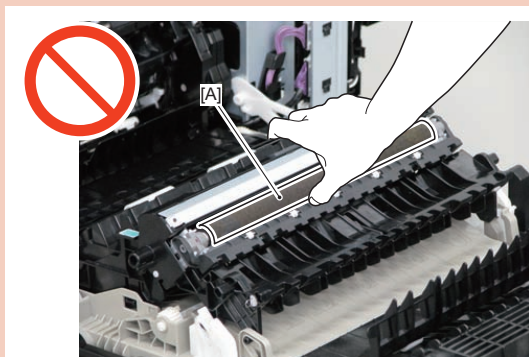
Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Right Rear Cover/Right Rear Lower Cover (Refer to page 4-39).

Procedure

CAUTION:

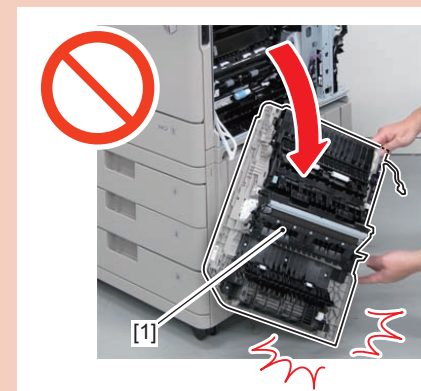
- Be sure not to touch the roller surface [A] of the Secondary Transfer Outer Roller Unit when disassembling/assembling.



F-4-71

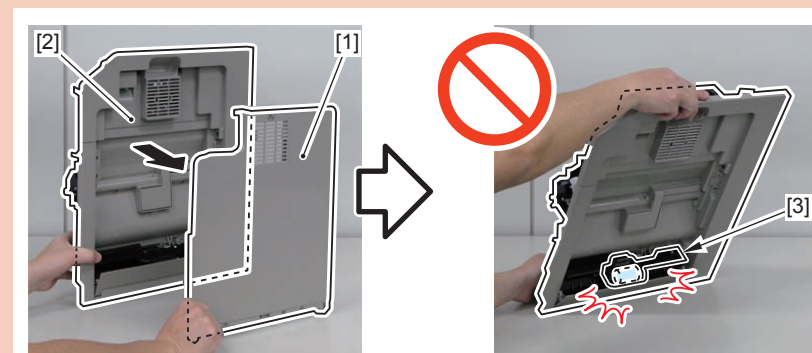
CAUTION:

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



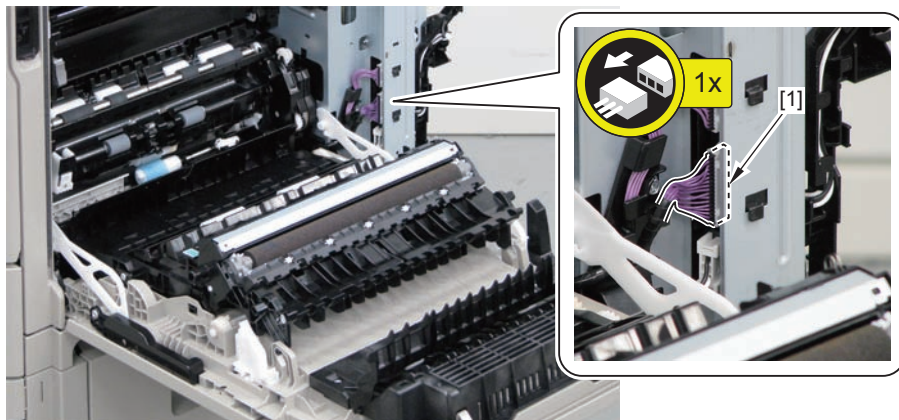
F-4-72

- 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

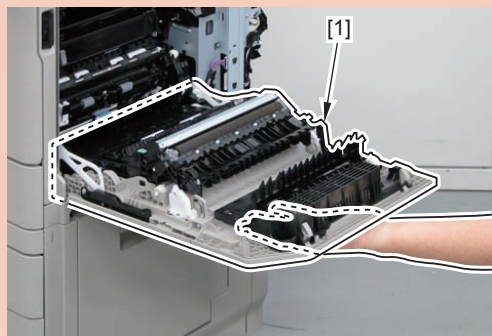
1) Disconnect the Connector [1].



F-4-74

⚠ CAUTION:

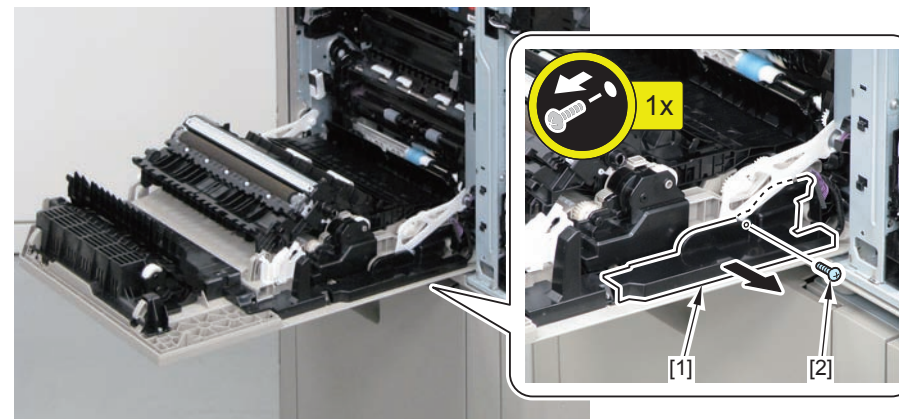
Be sure to disassemble/assemble by holding the Right Cover Unit [1] after step 2.



F-4-75

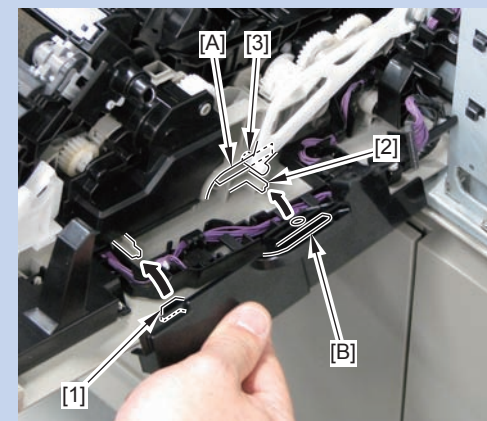
2) Remove the Right Cover Stopper Rear Holder [1].

- 1 Screw [2]



F-4-76

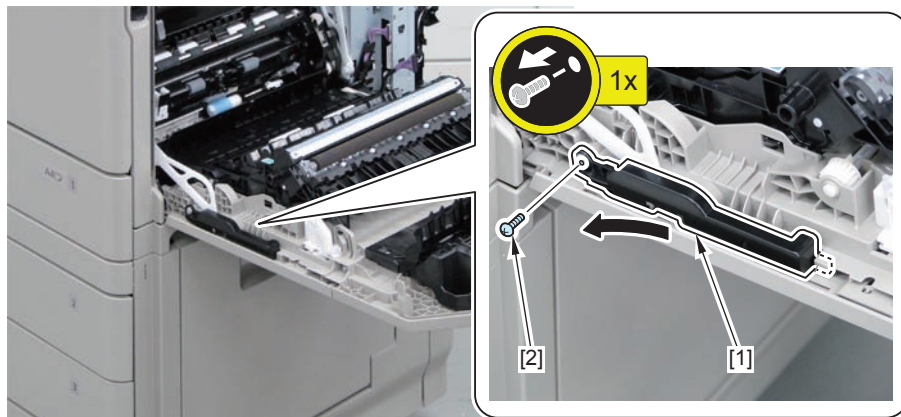
NOTE: How to assemble the Right Cover Stopper Rear Holder
When assembling, be sure to align the hook [1] and the boss [2], and align the shaft [3] of the Right Cover Stopper Rear with the groove [A] of the Right Cover Unit and the groove [B] of the Right Cover Stopper Rear Holder to install the holder.



F-4-77

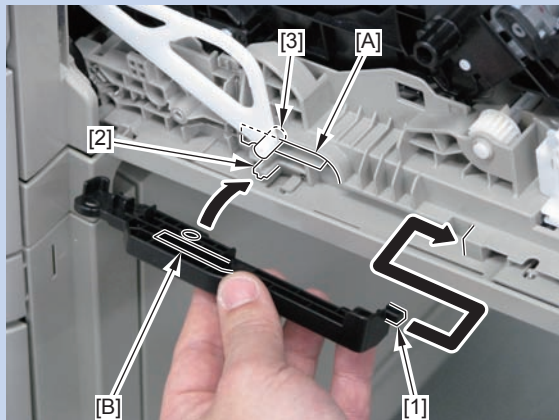
3) Remove the Right Cover Stopper Front Holder [1].

- 1 Screw [2]



F-4-78

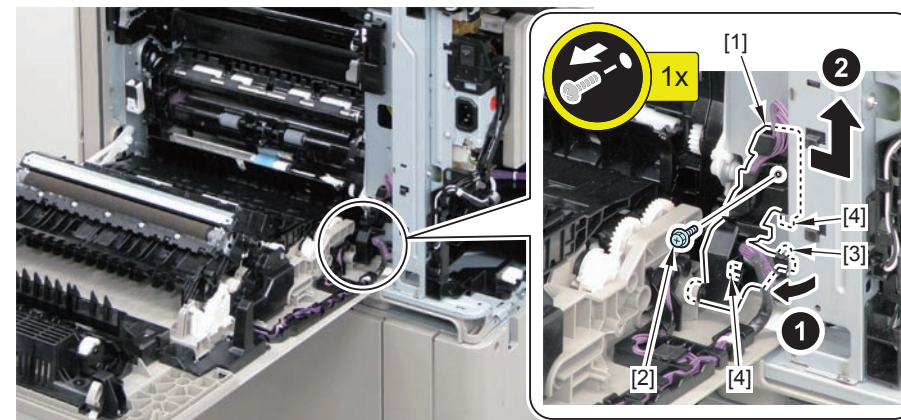
NOTE: How to assemble the Right Cover Stopper Front Holder
When assembling, align the hook [1] and the boss [2], and align the shaft [3] of the Right Cover Stopper Front with the groove [A] of the Right Cover Unit and the groove [B] of the Right Cover Stopper Front Holder.



F-4-79

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

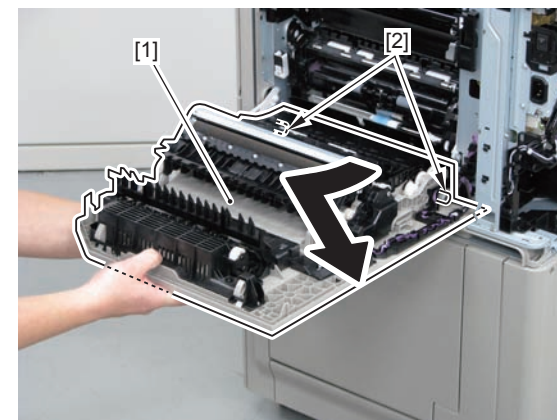
- 1 Screw [2]
- 1 Boss [3]
- 2 Hooks [4]



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

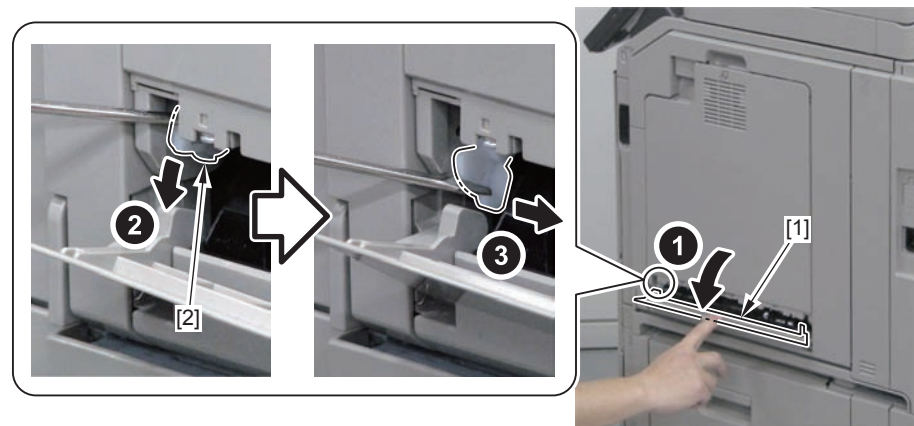
CAUTION:

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



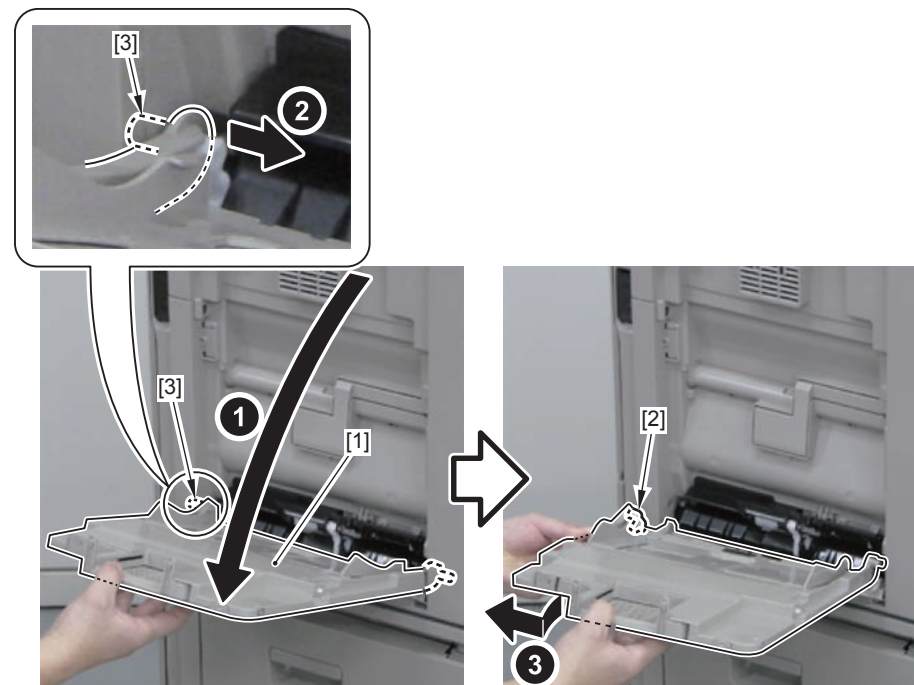
F-4-83

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



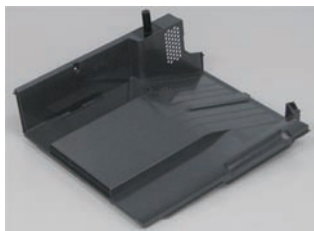
F-4-84

- 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

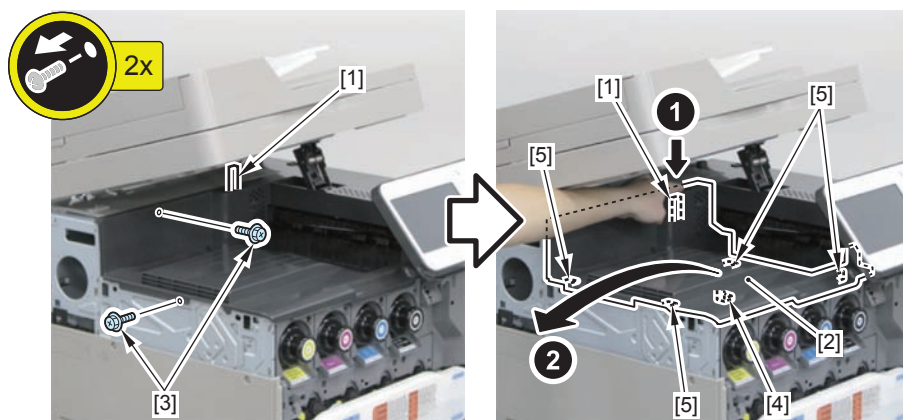
Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Left Upper Cover (Refer to page 4-37).
- 3) Open the ADF Unit + Reader Unit [1] and the Front Cover [2] (Refer to page 4-67)

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

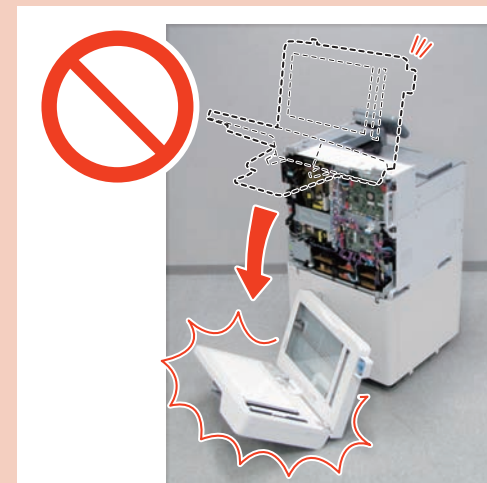
Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Open the ADF Unit + Reader Unit [1] and the Front Cover [2] (Refer to page 4-67)

Procedure

CAUTION:

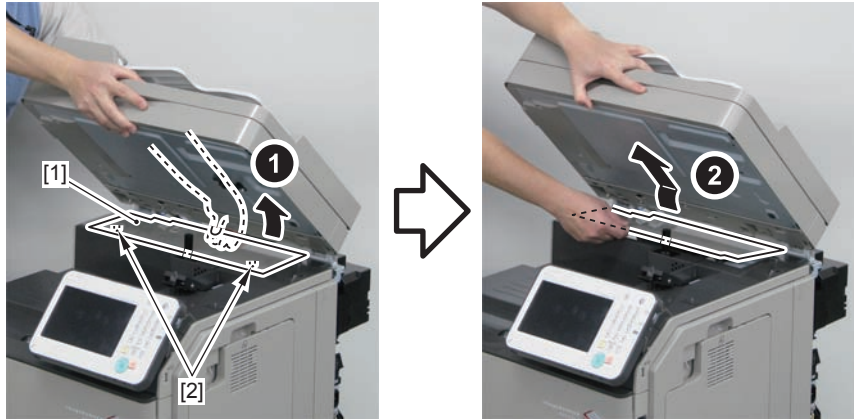
Be careful not to drop the ADF Unit + Reader Unit [1] when disassembling/assembling.



F-4-89

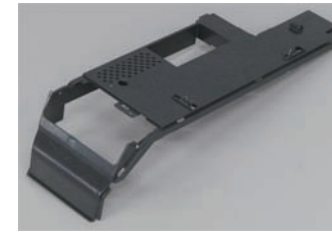
1) Remove the Rear Upper Cover [1].

- 2 Bosses [2]



F-4-90

Removing the Upper Cover



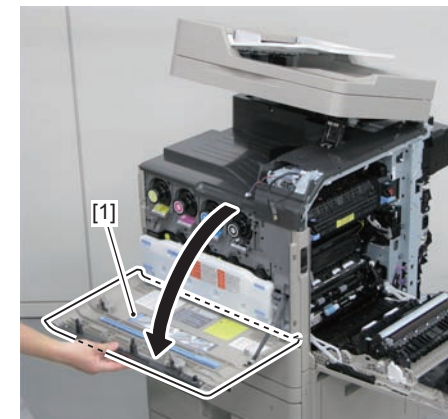
F-4-91

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Right Rear Cover/Right Rear Lower Cover (Refer to page 4-39).
- 3) Remove the Right Upper Cover (Refer to page 4-40).
- 4) Remove the Control Panel Unit (Refer to page 4-48).
- 5) Remove the Rear Upper Cover (Refer to page 4-46).

Procedure

- 1) Open the Front Cover [1].



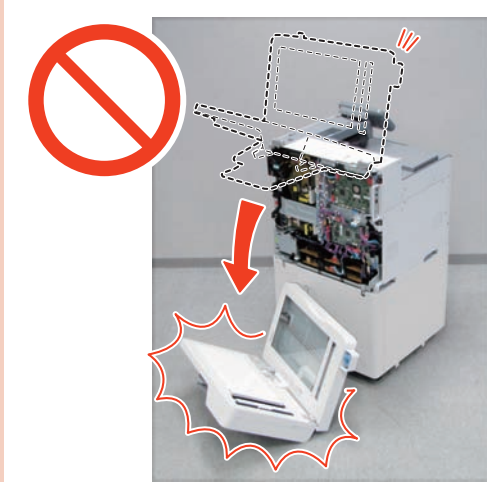
F-4-92

2) Remove the Upper Cover [2] while pressing the ADF Unit + Reader Unit [1].

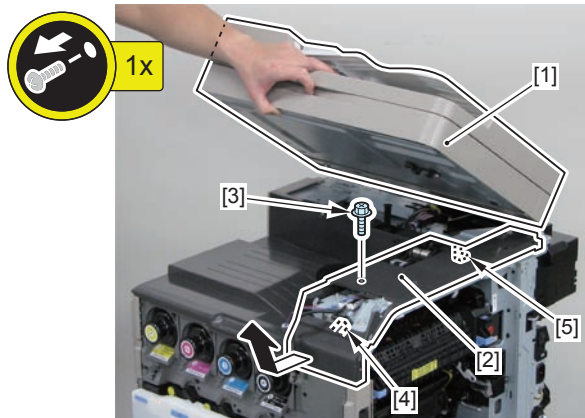
- 1 Screw [3]
- 1 Boss [4]
- 1 Hook [5]

⚠ 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

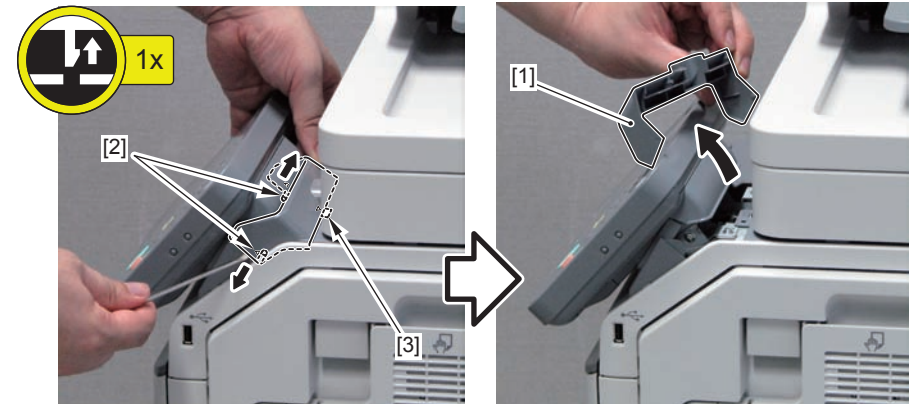


F-4-95

Procedure

1) Remove the Control Panel Rear Hinge Cover [1].

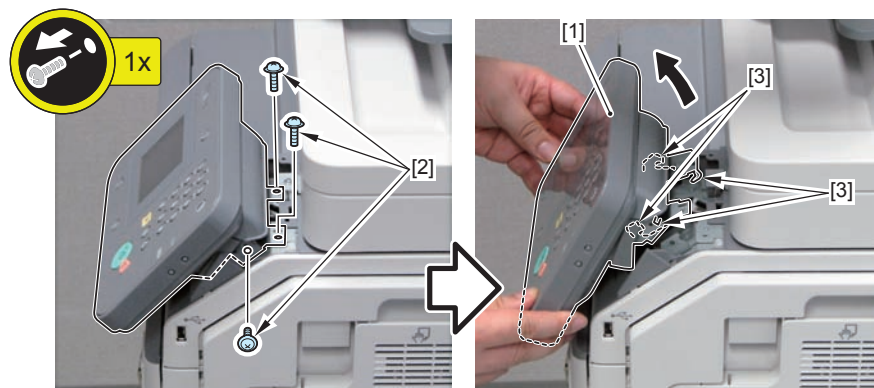
- 2 Bosses [2]
- 1 Claw [3]



F-4-96

2) Remove the Control Panel Unit [1].

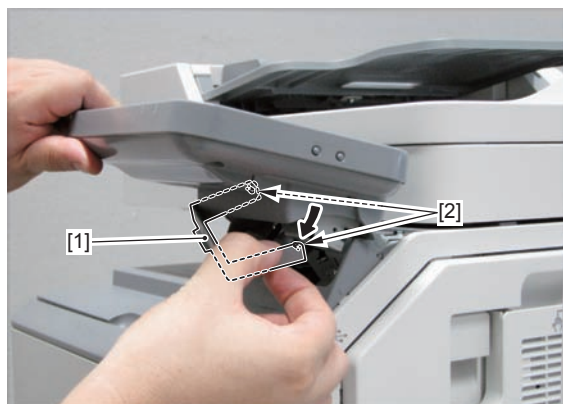
- 3 Screws [2]
- 2 Hooks [3]



F-4-97

3) Remove the Control Panel Lower Hinge Cover [1].

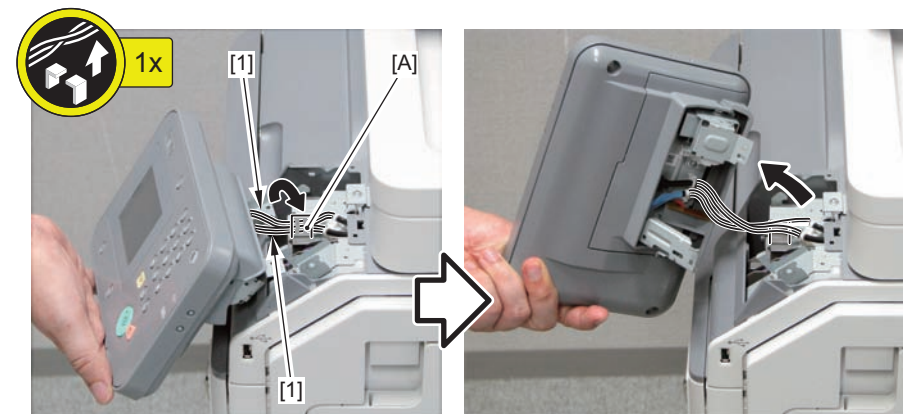
- 2 Bosses [2]



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].

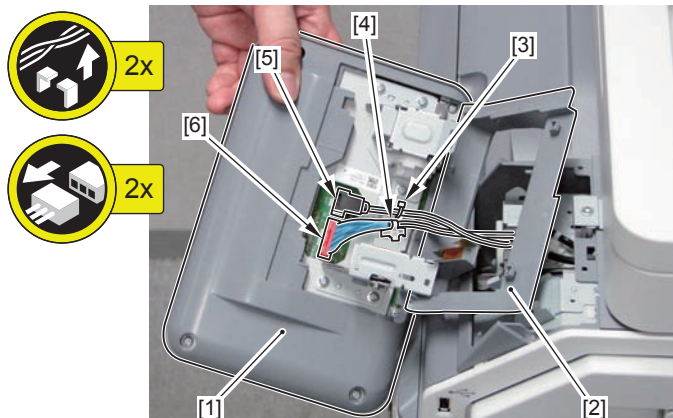
- 2 Bosses [2]
- 2 Hooks [3]



F-4-100

8) Remove the Control Panel Unit [1] and the Control Panel Lower Hinge Cover [2].

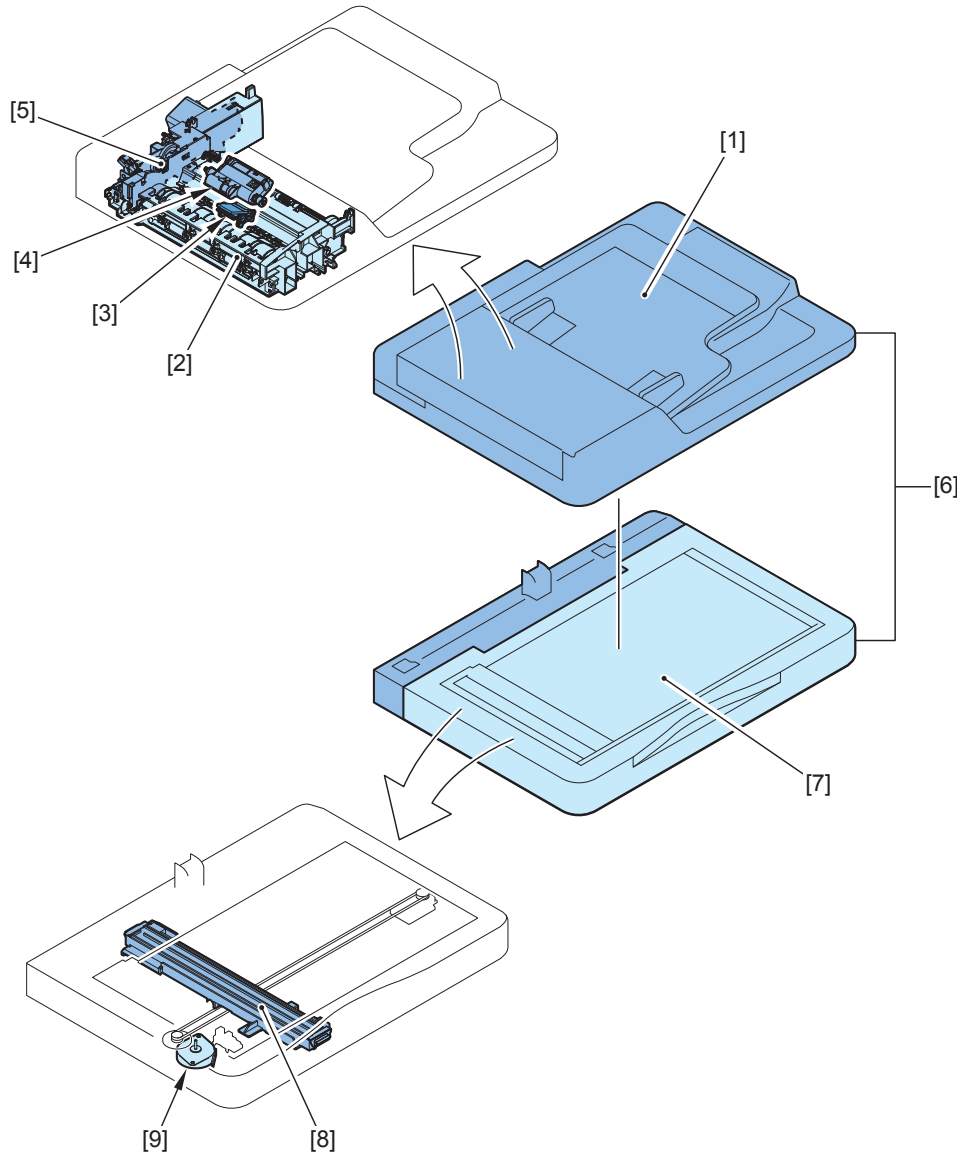
- 1 Wire Saddle [3]
- 1 Reuse Band [4]
- 1 Control Panel Communication Connector [5]
- 1 Connector [6]



F-4-101

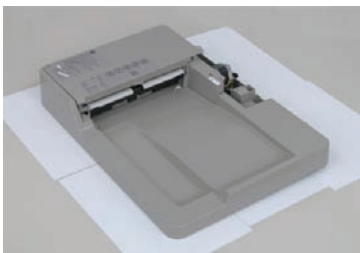
Original Exposure/Feed System

Layout Drawing



No.	Parts Name	Main Unit	Remarks	Reference
[1]	ADF Unit	Product Configuration		(Refer to page 4-52)
[2]	ADF Pickup Feed Unit	ADF Unit		(Refer to page 4-63)
[3]	Separation Pad	ADF Unit		(Refer to page 4-62)
[4]	ADF Pickup Unit	ADF Unit		(Refer to page 4-61)
[5]	ADF Feed Drive Unit	ADF Pickup Feed Unit		(Refer to page 4-65)
[6]	ADF Unit + Reader Unit	Product Configuration		(Refer to page 4-67)
[7]	Copyboard Glass Unit	Reader Unit		(Refer to page 4-71)
[8]	CIS Unit	Reader Unit		(Refer to page 4-76)
[9]	Reader Motor	Reader Unit	M01	(Refer to page 4-78)

Removing the ADF Unit



F-4-103

Procedure

⚠ CAUTION:

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



F-4-104

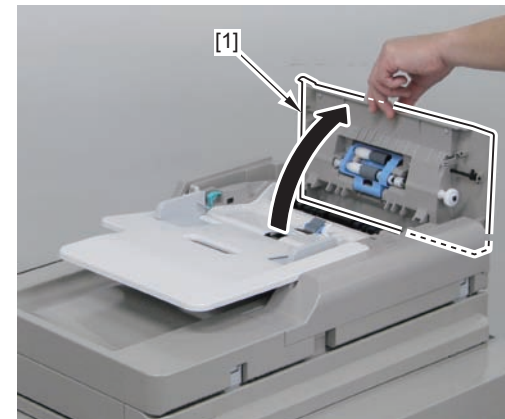
CAUTION:

Be careful not to damage the White Sheet [1] and the White Plate [2] of the ADF Unit when disassembling/assembling.



F-4-105

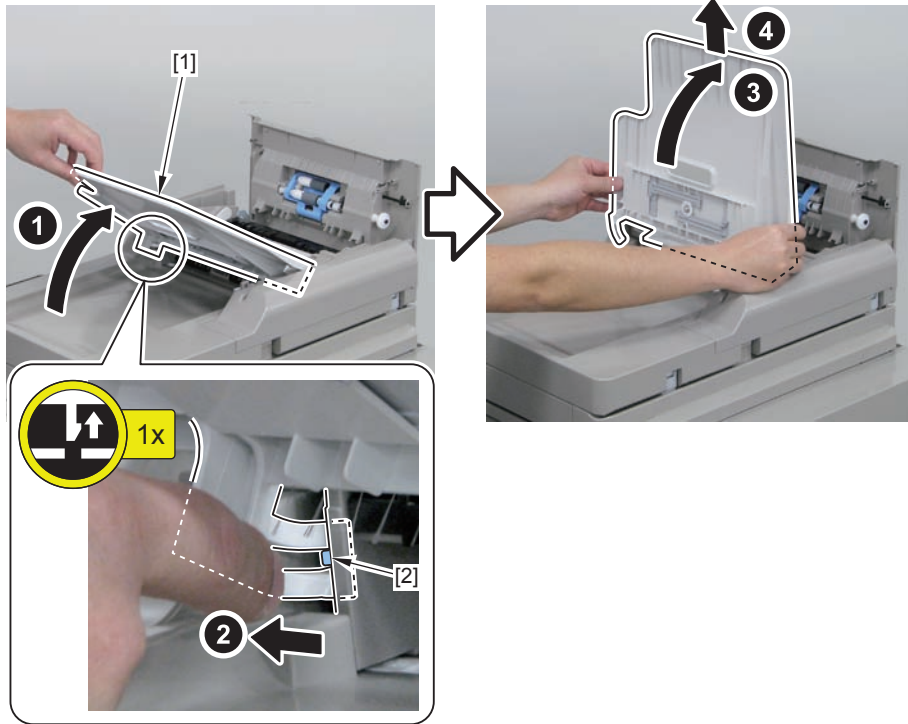
1) Open the Feeder Cover [1].



F-4-106

2) Remove the Original Tray [1].

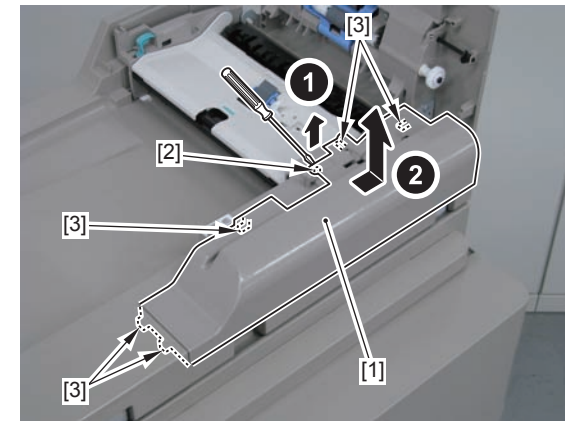
- 1 Claw [2]



F-4-107

3) Remove the ADF Rear Cover [1].

- 1 Boss [2]
- 5 Hooks [3]



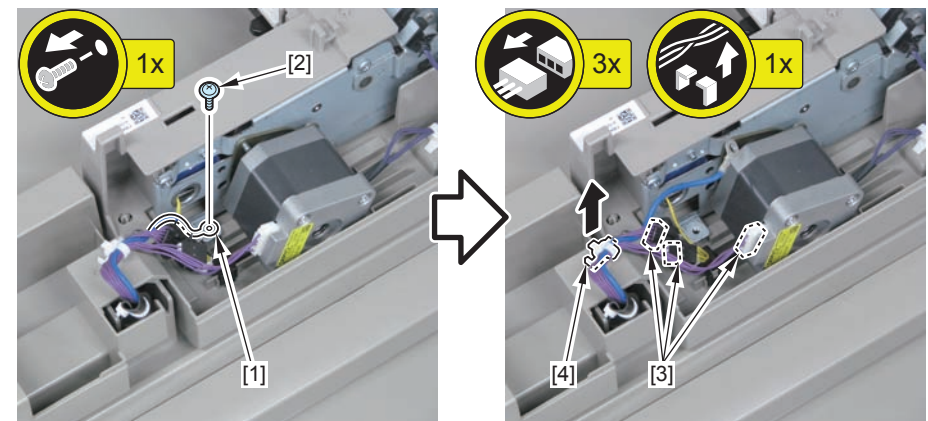
F-4-108

4) Disconnect the terminal [1] of the Grounding Wire.

- 1 Screw [2]

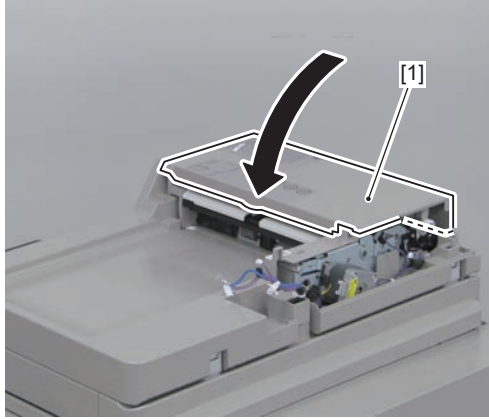
5) Disconnect the 3 connectors [3].

- 1 Reuse Band [4]



F-4-109

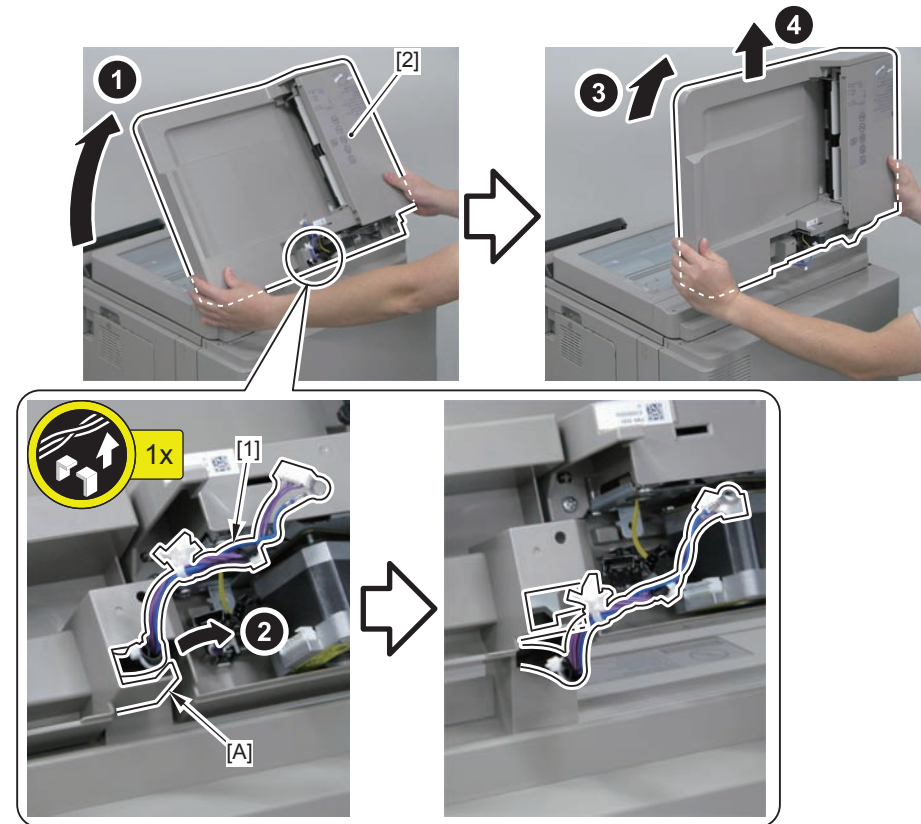
6) Close the Feeder Cover [1].



F-4-110

7) Remove the ADF Unit [2] while freeing the harness [1].

- Harness Guide [A]



F-4-111

ADF Unit

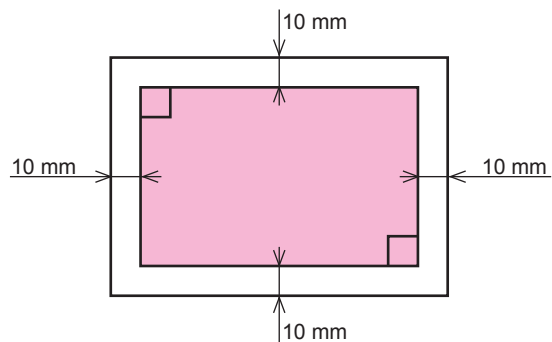
Prepare before Adjustment

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 identified.)



F-4-112

Procedure after Replacement

CAUTION:

When the ADF has been replaced or removed from the reader, the following adjustment is necessary.

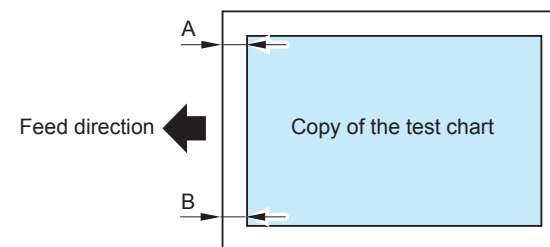
Adjustment of the Degree of a Right Angle

- 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.

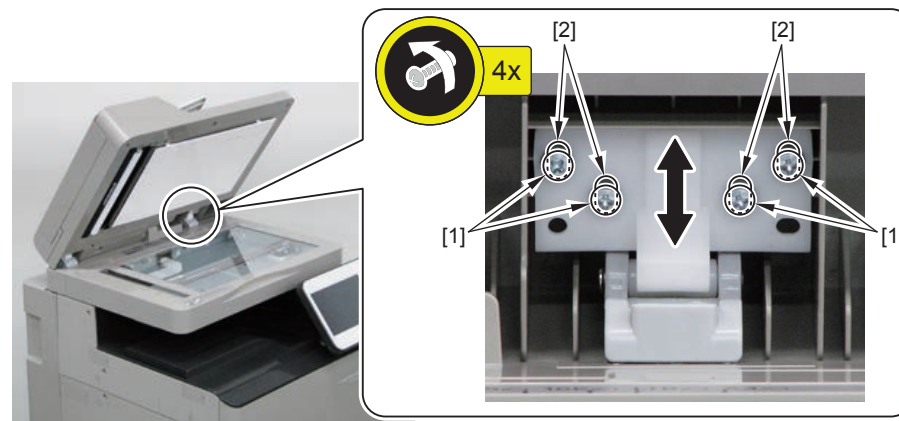
When the amount of skew is not in the following standard, adjust it from the step 3).

- Standard Value: $A - B = 0 \pm 1.5 \text{ mm}$



F-4-113

- 3) Loosen the 4 Fixing Screws of the Right Hinge, and then move the hinge to adjust the squareness.



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 mode 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.

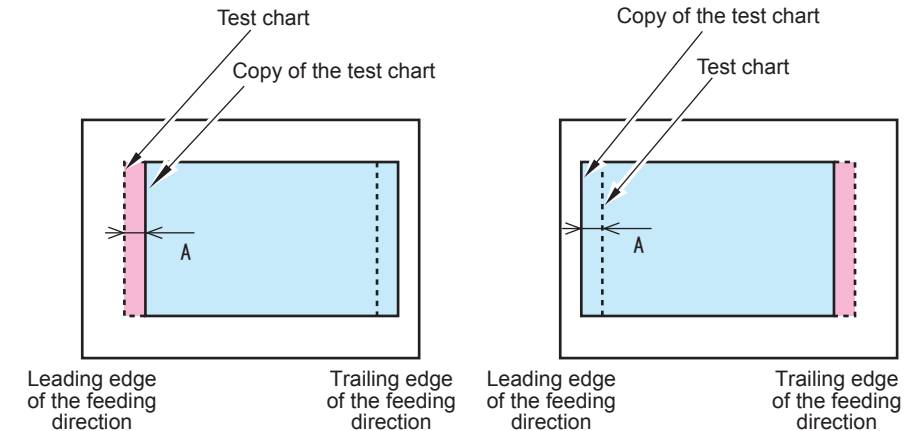
FEEDER > ADJUST >
DOCST

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.

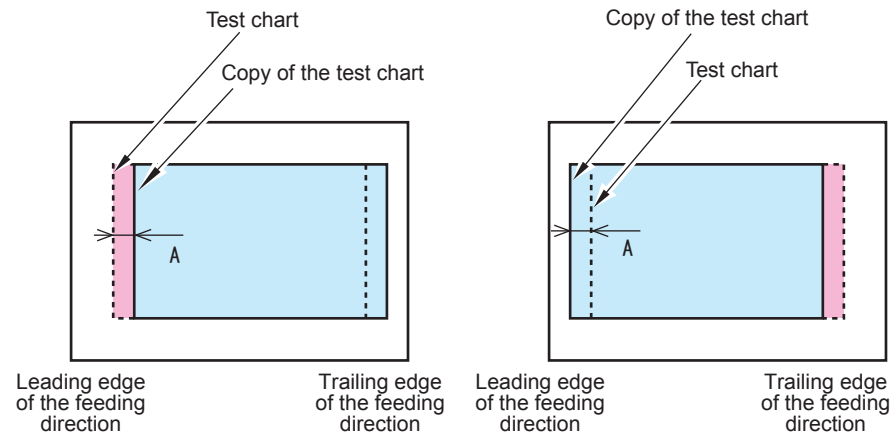


T-4-47

- 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

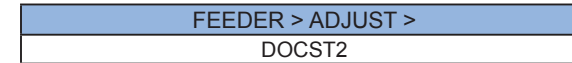
- 5) Write the new changed value in the service label.
- 6) Exit the service mode.

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.

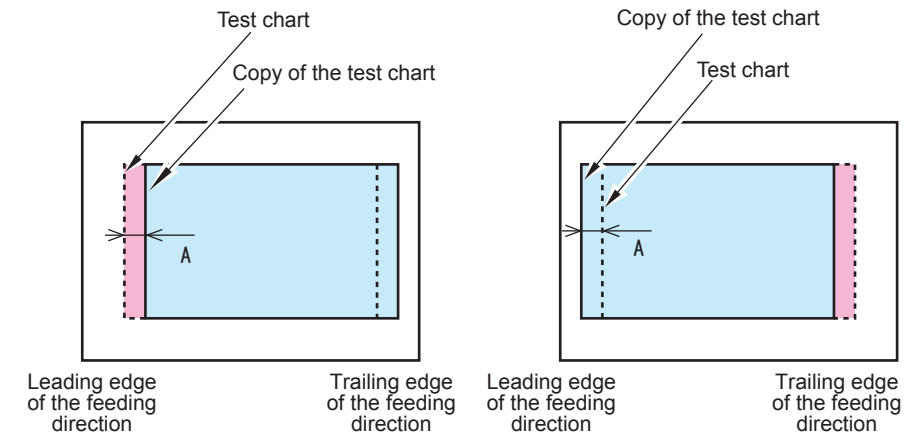


T-4-48

- 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

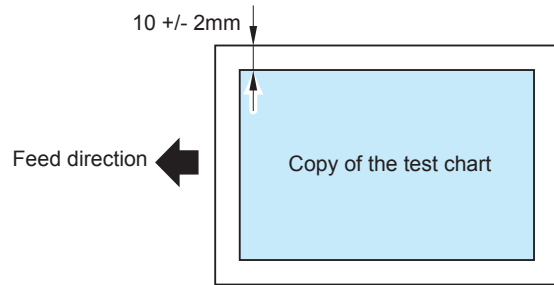
- 5) Write the new changed value in the service label.
- 6) Exit the service mode.

CAUTION:

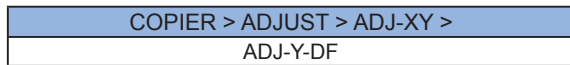
Confirm that the Degree of a Right Angle is correct after you finish this adjustment.
Adjust again from the Adjustment of the Degree of a Right Angle when the Degree of a Right Angle is not correct.

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.



- 3) Select the item in the service mode.



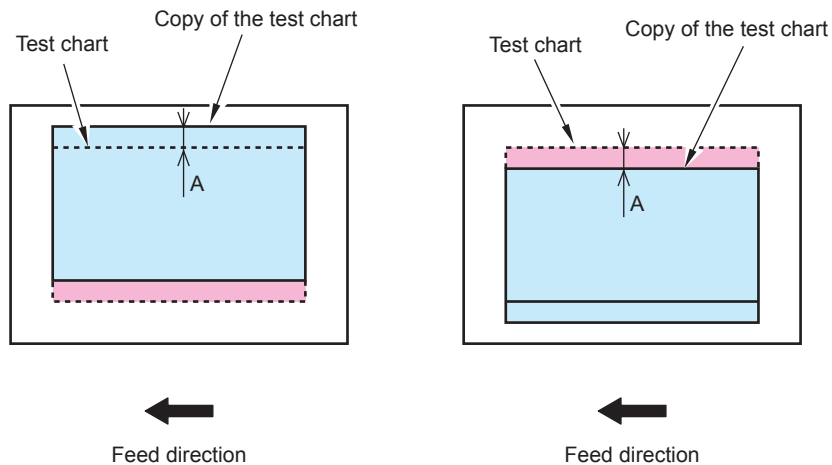
F-4-118

- 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

T-4-49

< When a copied image moves to the rear > < When a copied image moves to the front >



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.



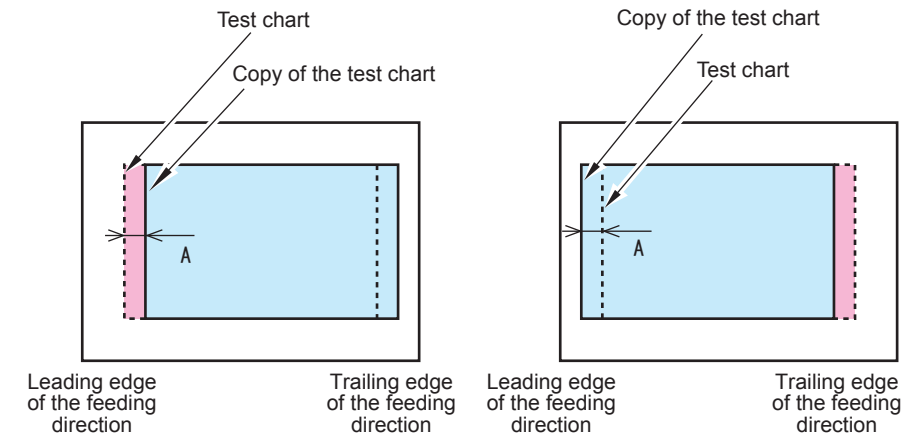
T-4-50

- 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

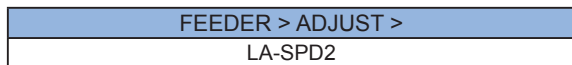
- 5) Write the new changed value in the service label.
- 6) Exit the service mode.

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.



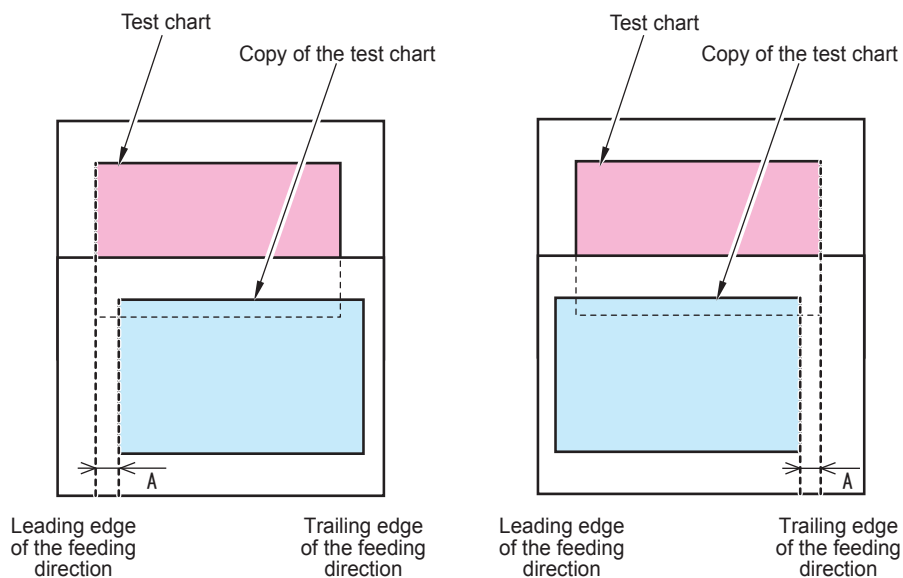
T-4-51

- 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.



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.



White level adj in DADF mode:

T-4-53

NOTE:

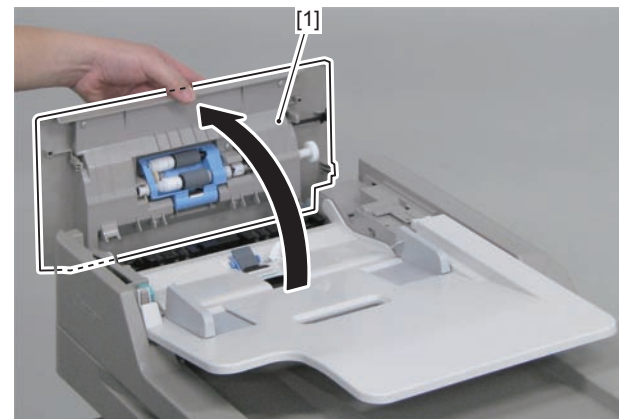
The result of the adjustment is reflected to COPIER> ADJUST> CCD> DFTAR-R/ DFTAR-G/ DFTAR-B / DFTAR2-R/ DFTAR2-G/ DFTAR2-B / DFTAR3-R/ DFTAR3-G/ DFTAR3-B

Removing the ADF Pickup Unit



F-4-122

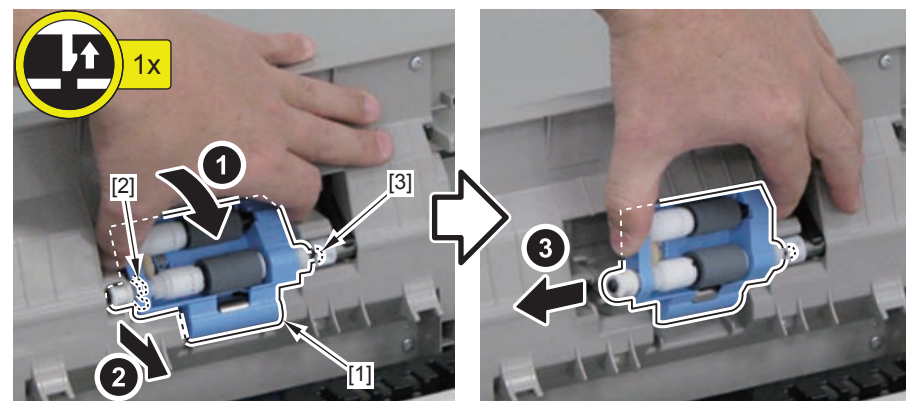
1) Open the Feeder Cover [1].



F-4-124

2) Remove the ADF Pickup Unit [1].

- 1 Claw [2]
- 1 Shaft [3]

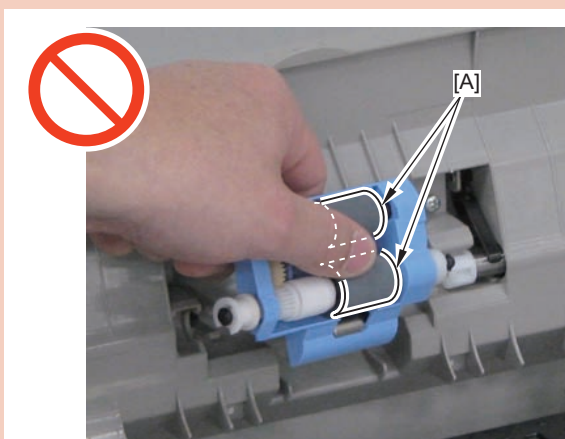


F-4-125

Procedure

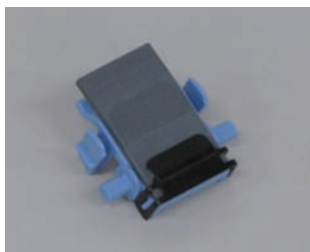
CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.



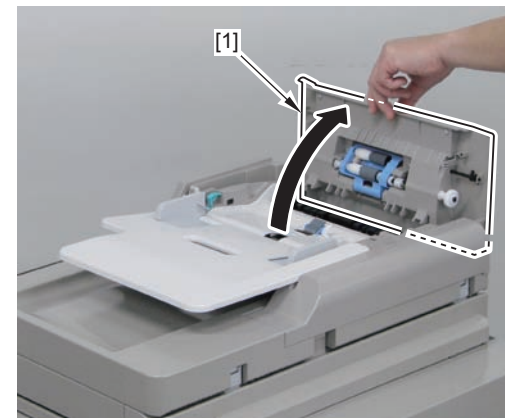
F-4-123

Removing the ADF Separation Pad



F-4-126

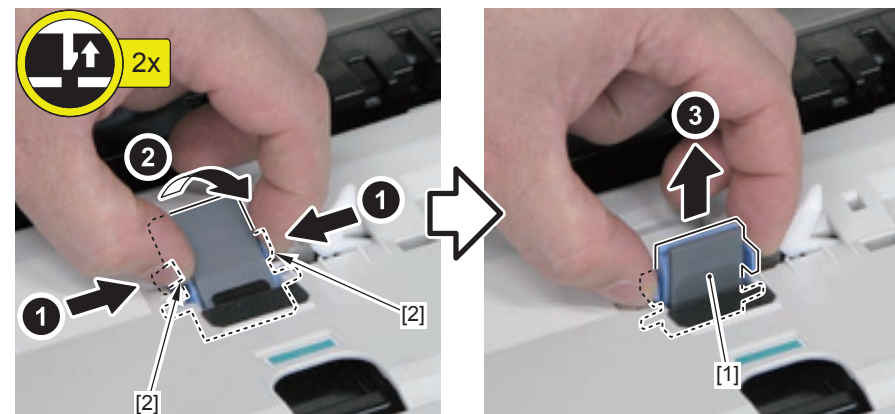
1) Open the Feeder Cover [1].



F-4-128

2) Remove the ADF Separation Pad [1].

- 2 Claws [2]

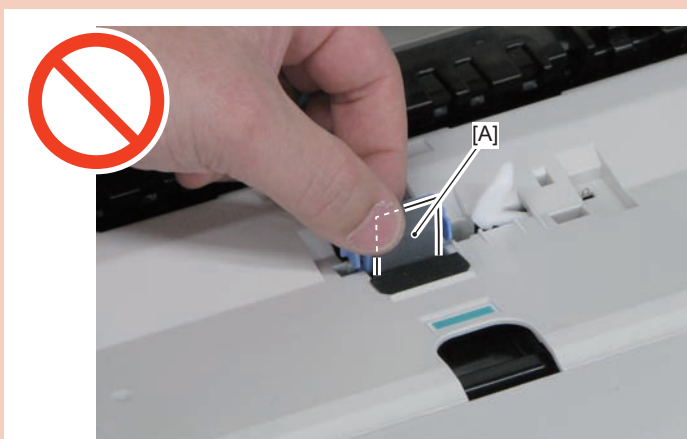


F-4-129

Procedure

CAUTION:

Be sure not to touch the surface [A] of the pad when disassembling/assembling.



F-4-127

Removing the ADF Pickup Feed Unit



F-4-130

Procedure

CAUTION:

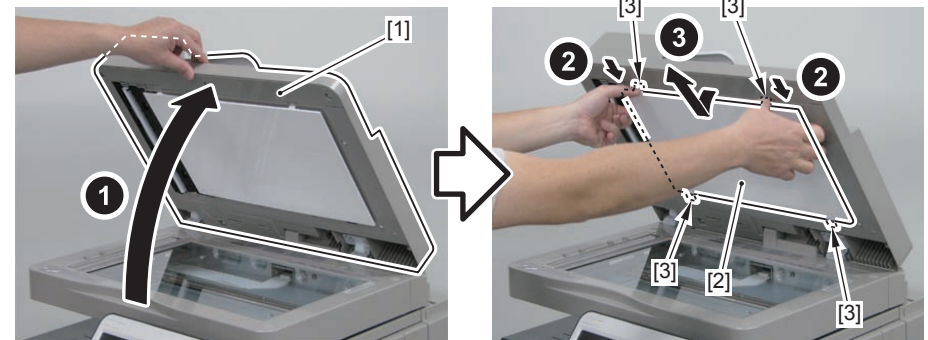
Be careful not to damage the white sheet [1] of the ADF Unit when disassembling/ assembling.



F-4-131

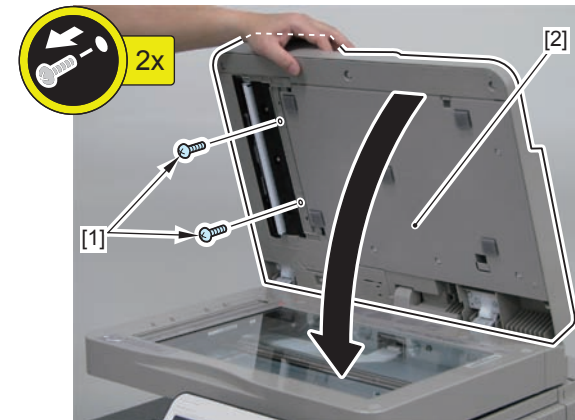
1) Open the ADF Unit [1] to remove the White Plate [2].

- 4 Hooks [3]



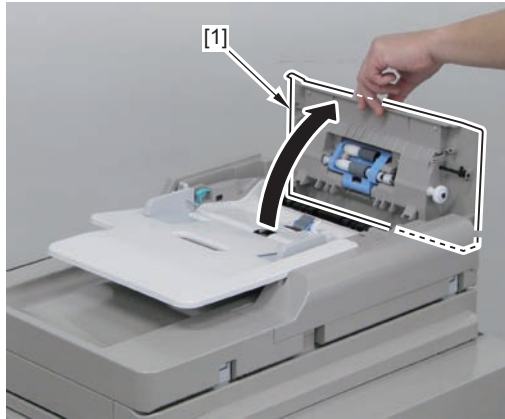
F-4-132

2) Remove the 2 screws [1], and then close the ADF Unit [2].



F-4-133

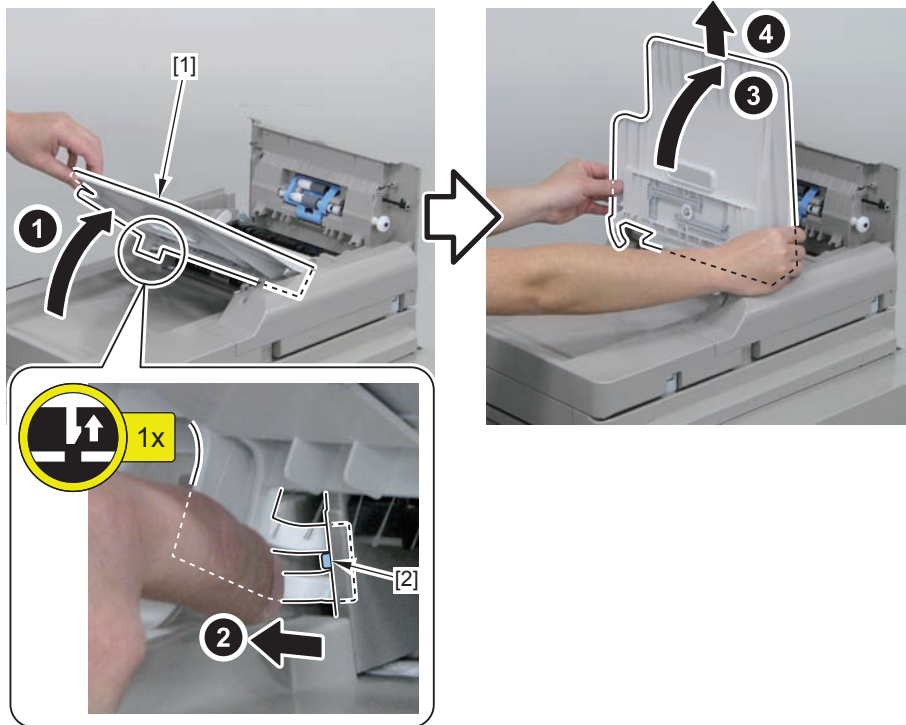
3) Open the Feeder Cover [1].



F-4-134

4) Remove the Original Tray [1].

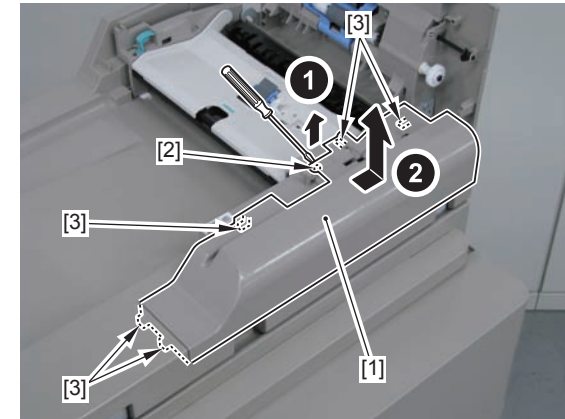
- 1 Claw [2]



F-4-135

5) Remove the ADF Rear Cover [1].

- 1 Boss [2]
- 5 Hooks [3]

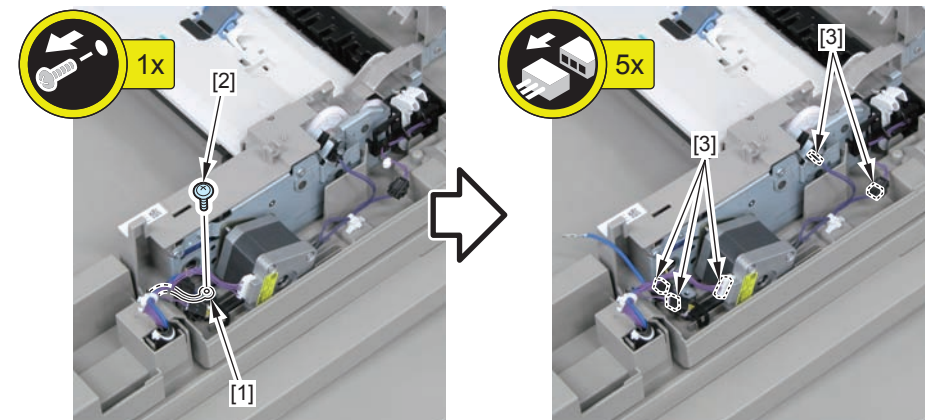


F-4-136

6) Disconnect the terminal [1] of the Grounding Wire.

- 1 Screw [2]

7) Disconnect the 5 connectors [3].



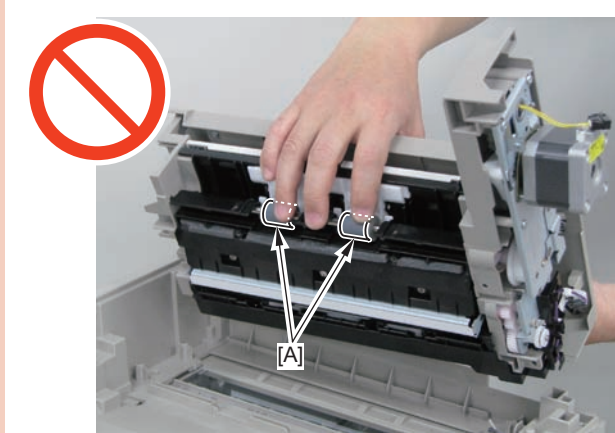
F-4-137

8) Remove the 4 screws [1].

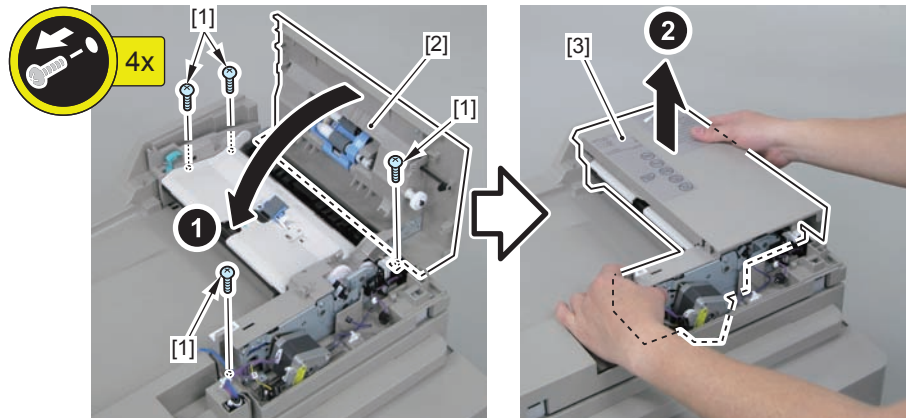
9) Close the Feeder Cover [2], and then remove the ADF Pickup Feed Unit [3].

CAUTION:

Be sure not to touch the surface [A] of the Delivery Roller when disassembling/ assembling.



F-4-138



F-4-139

Removing the ADF Feed Drive Unit



F-4-140

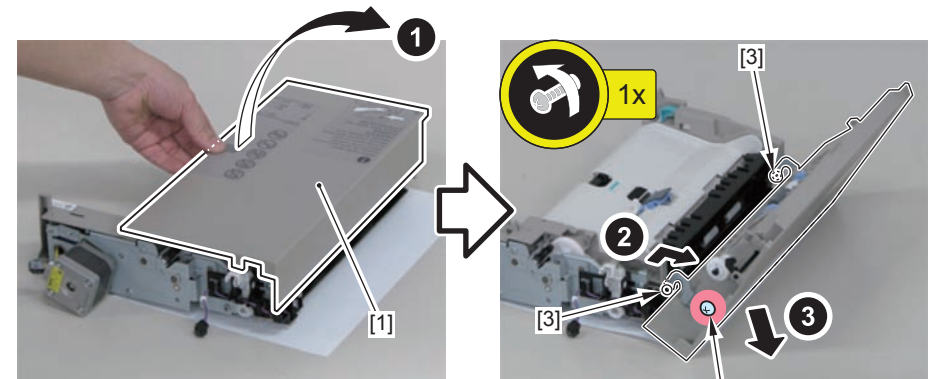
Preparation

1) Remove the ADF Pickup Feed Unit (Refer to page 4-63).

Procedure

1) Remove the Feeder Cover [1].

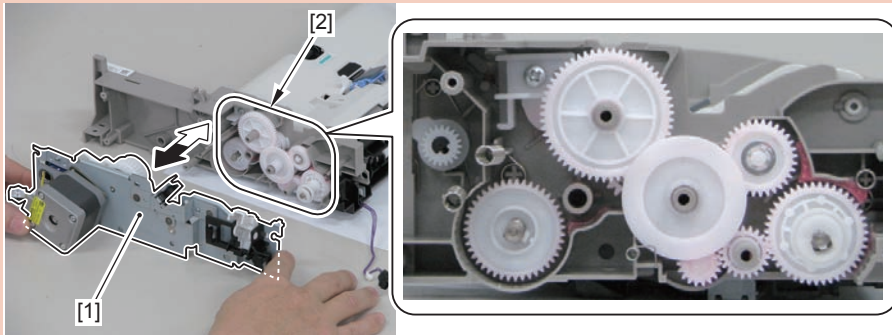
- 1 Screw [2] (to loosen)
- 2 Shafts [3]



F-4-141

CAUTION:

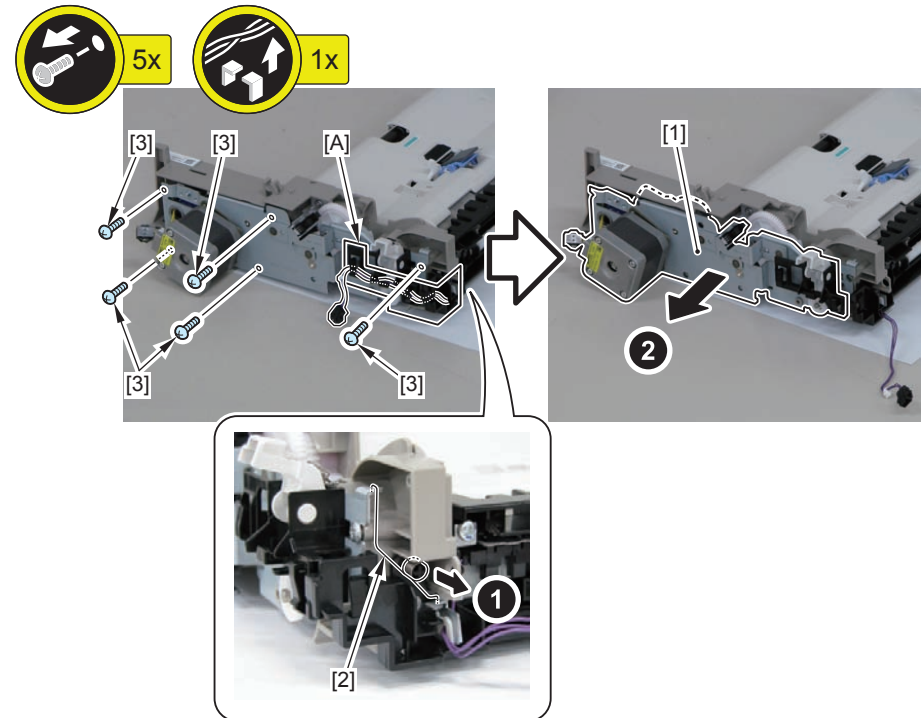
Be sure to perform work carefully so as not to shift the phase of the inner gear [2] on the ADF Feed Drive Unit [1] when disassembling/assembling.



F-4-142

2) Remove the ADF Feed Drive Unit [1].

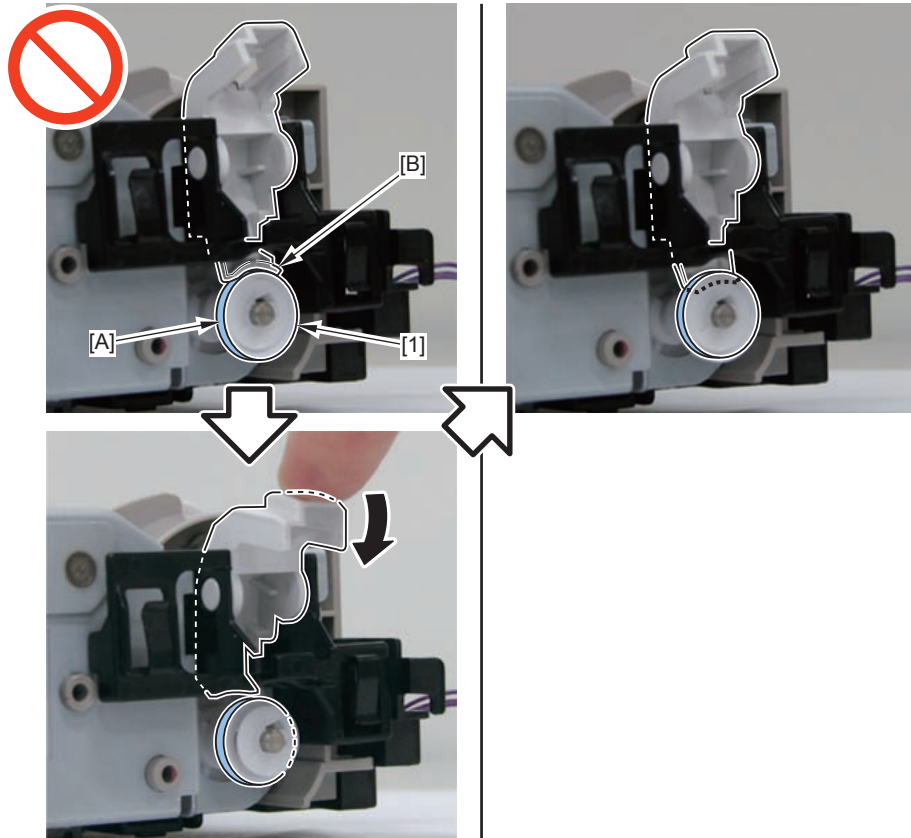
- Harness Guide [A]
- 1 Spring [2]
- 5 Screws [3]



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

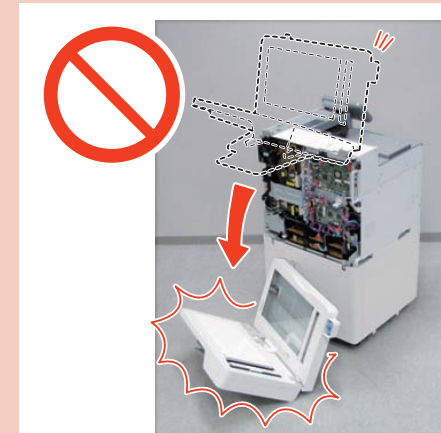


F-4-145

Procedure

CAUTION:

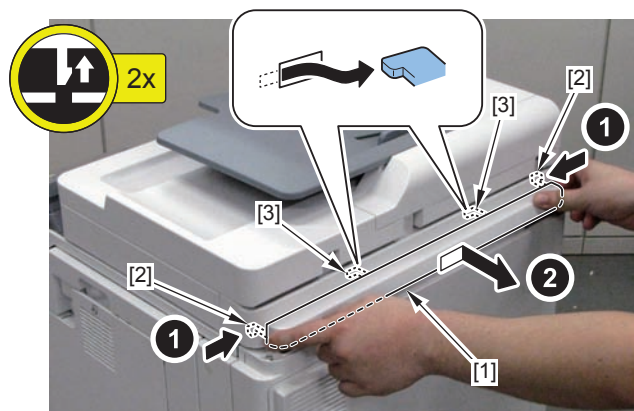
Be careful not to drop the ADF Unit + Reader Unit [1] when disassembling/assembling.



F-4-146

1) Remove the Rear Cover 2 [1]

- 2 Claws [2]
- 2 Hooks [3]



F-4-147

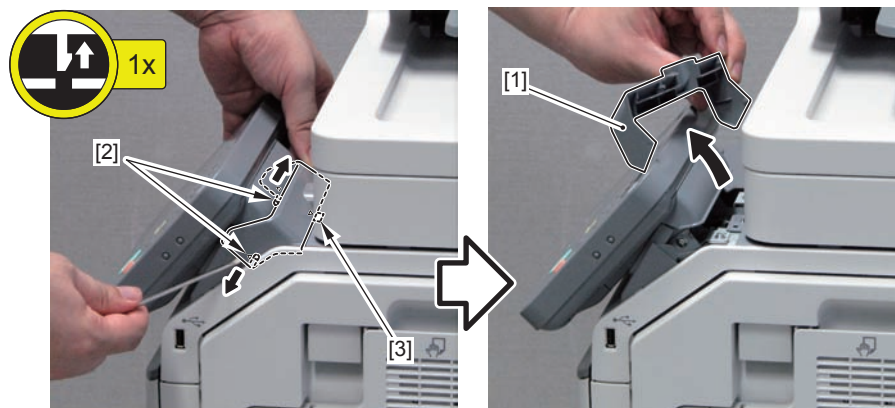
3) Open the ADF Unit + Reader Unit [1]



F-4-149

2) Remove the Control Panel Rear Hinge Cover [1].

- 2 Bosses [2]
- 1 Claw [3]



F-4-148

Removing the ADF Unit + Reader Unit



F-4-150

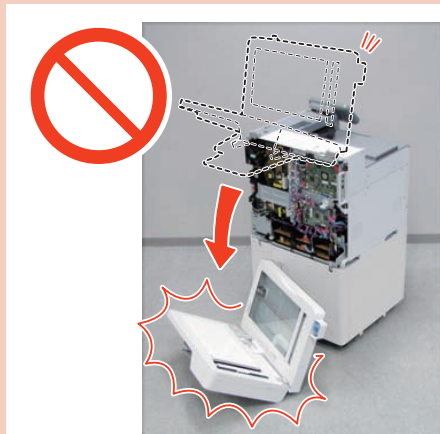
Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Open the ADF Unit + Reader Unit (Refer to page 4-67)

Procedure

CAUTION:

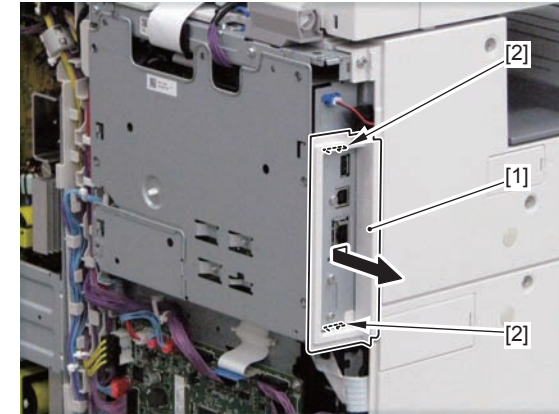
Be careful not to drop the ADF Unit + Reader Unit [1] when disassembling/assembling.



F-4-151

- 1) Remove the Connector Cover [1]

- 2 Hooks [2]

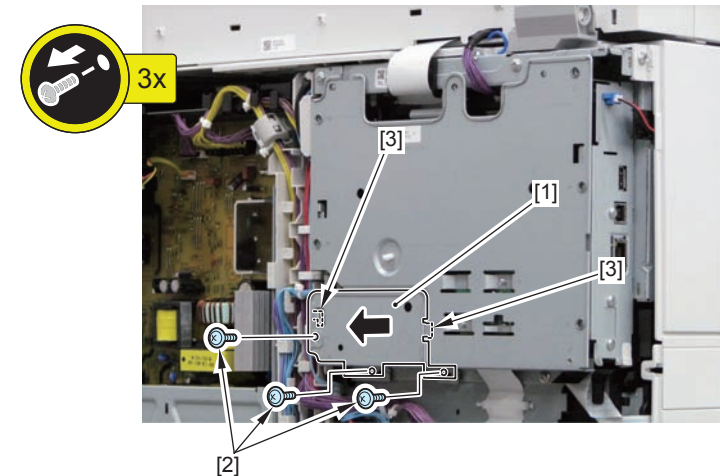


F-4-152

- 2) Remove the Main Controller Sub Cover [1].

- 3 Screw [2]

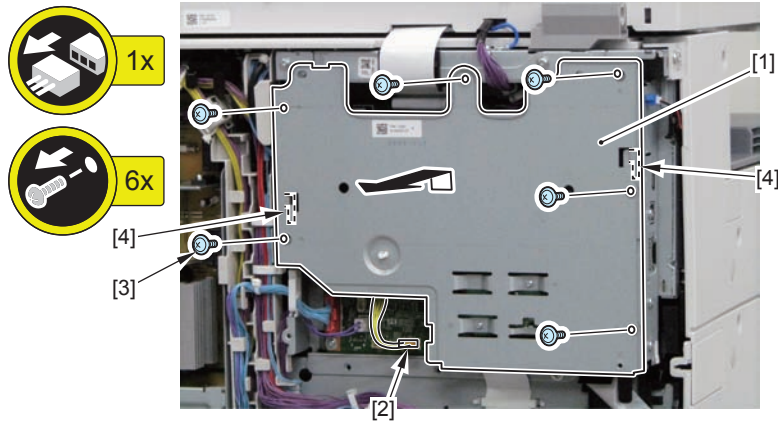
- 2 Hooks [3]



F-4-153

3) Remove the Main Controller Cover [1].

- 1 Connectors [2]
- 6 Screw [3]
- 2 Hooks [4]



F-4-154

4) Disconnect the terminal [1] of the Grounding Wire.

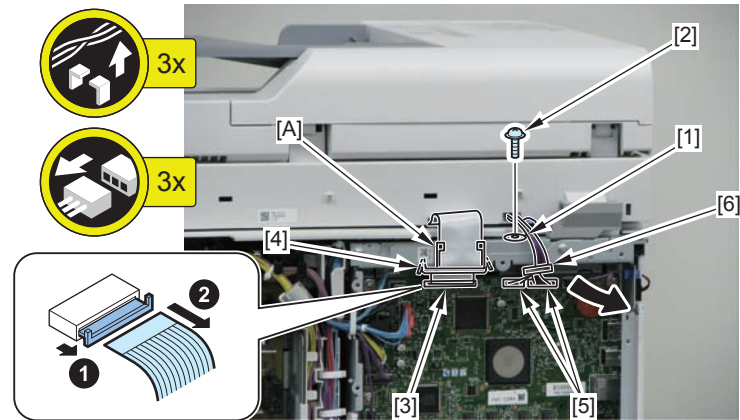
- 1 Screw [2]

5) Remove the Flat Cable [3].

- Harness Guide [A]
- 1 Flat Cable Retainer [4]

6) Disconnect the 2 connectors [5].

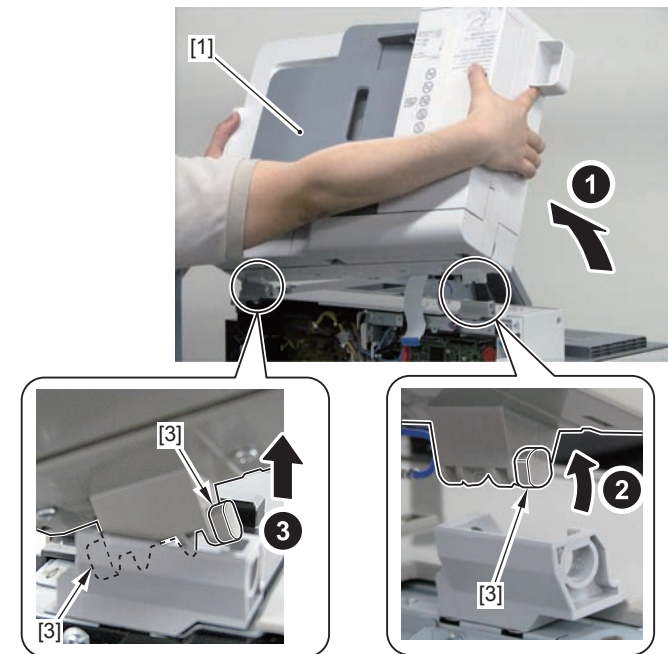
- 1 Wire Saddle [6]



F-4-156

7) Remove the ADF Arm [1], and then remove the ADF Unit + Reader Unit [2].

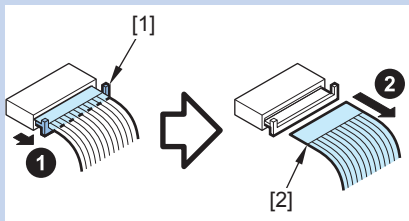
- 2 Shafts [3]



F-4-157

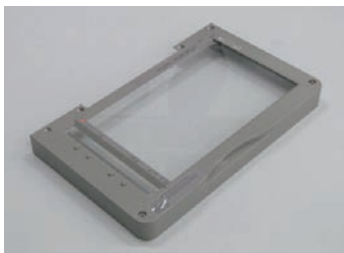
Note: How to remove the Flat Cable

1. Pull out the Fixation Member [1].
2. Pull out the Flat Cable [2].



F-4-155

Removing the Copyboard Glass Unit



F-4-158

Procedure

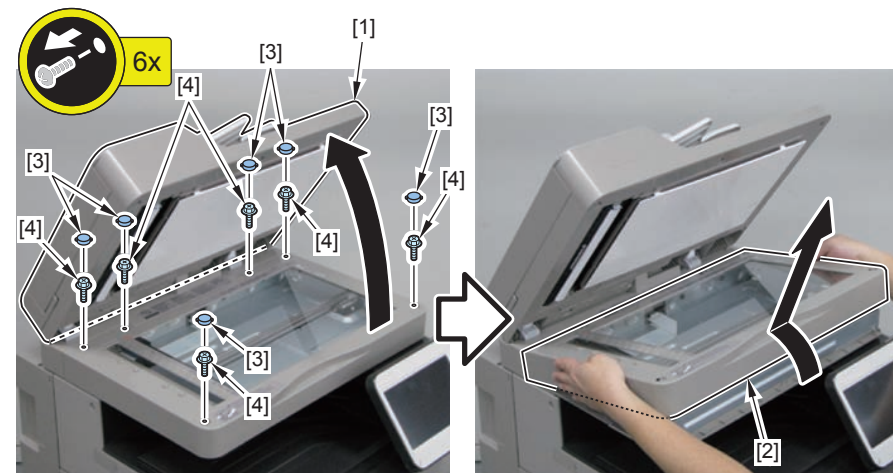
CAUTION:

- 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

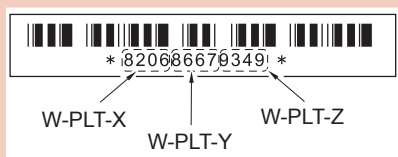
- 1) Enter the value (White level data entry of white plate) indicated on the platen glass as shown in the following service mode:

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 mode 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 mode 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

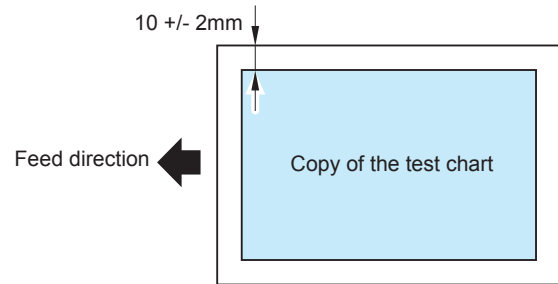
T-4-61

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

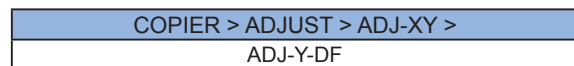
9) Adjust the image position (horizontal scanning direction/front side) at ADF reading.

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.



F-4-162

3. Select the item in the service mode.

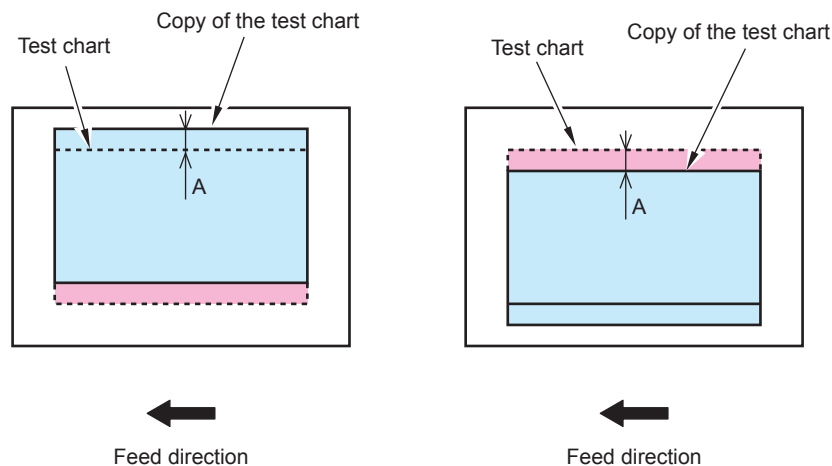


T-4-62

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 >



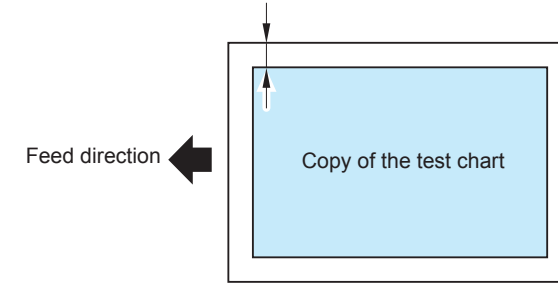
F-4-163

5. Write the new changed value in the service label.

6. Exit the service mode.

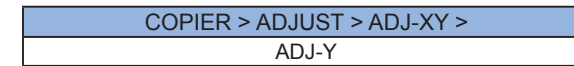
10) Adjust the image position (horizontal scanning direction) at copyboard reading.

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.



F-4-164

3. Select the item in the service mode.

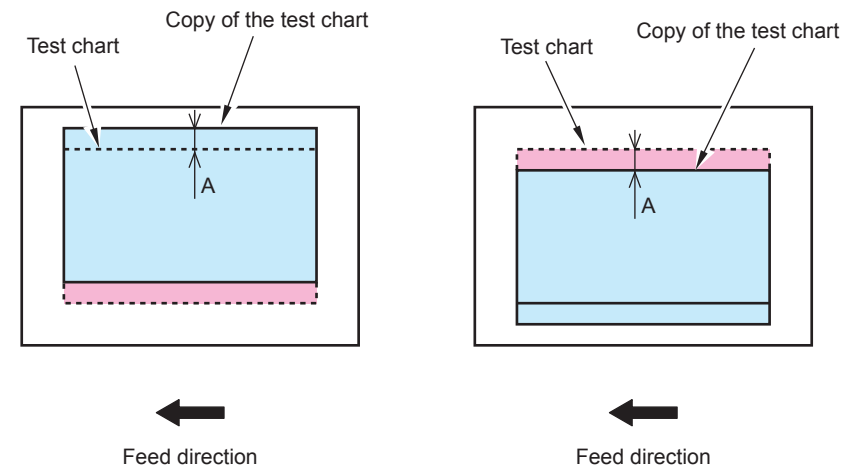


T-4-63

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 >



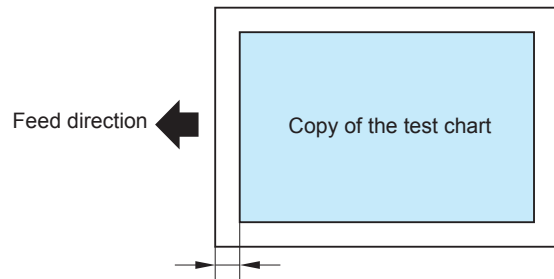
F-4-165

5. Write the new changed value in the service label.

6. Exit the service mode.

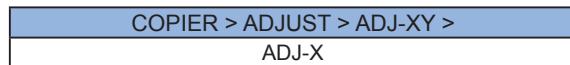
11) Adjust the image position (vertical scanning direction) at copyboard reading.

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.



F-4-166

3. Press ADJ-X from the service mode screen.

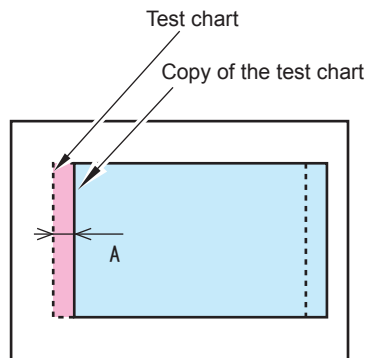


T-4-64

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

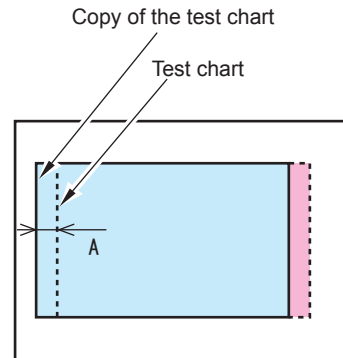
< When a copied image moves to the rear >



Leading edge
of the feeding
direction

Trailing edge
of the feeding
direction

< When a copied image moves to the front >



Leading edge
of the feeding
direction

Trailing edge
of the feeding
direction

F-4-167

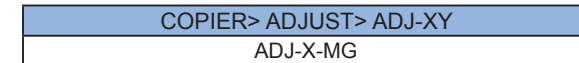
5. Write the new changed value in the service label.
6. Exit the service mode.

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.

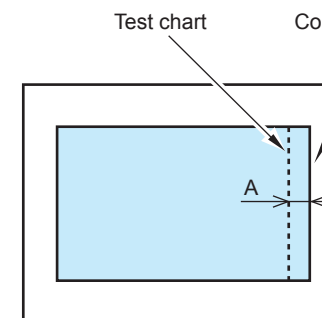


T-4-65

4. Input value, and adjust an image.

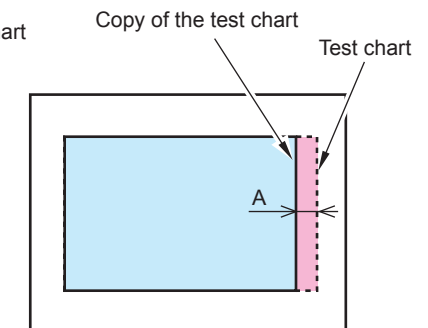
- When a copied image is enlarged: Increase value
- When a copied image is reduced: Decrease value
- Adjustment unit: 0.1 %

< When a copied image is long >



Feed direction

< When a copied image is short >



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 4-72).

Procedure

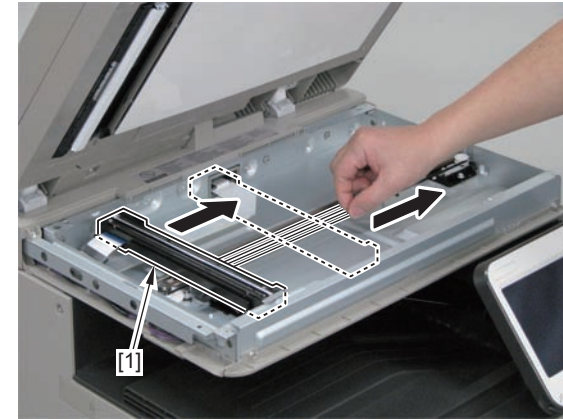
CAUTION:

Do not touch the sensor [A] part of the CIS Unit when disassembling/assembling.



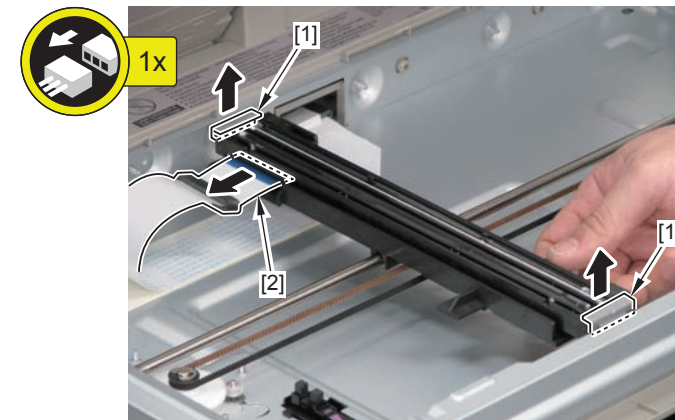
F-4-170

1) Move the CIS Unit [1] to the center.



F-4-171

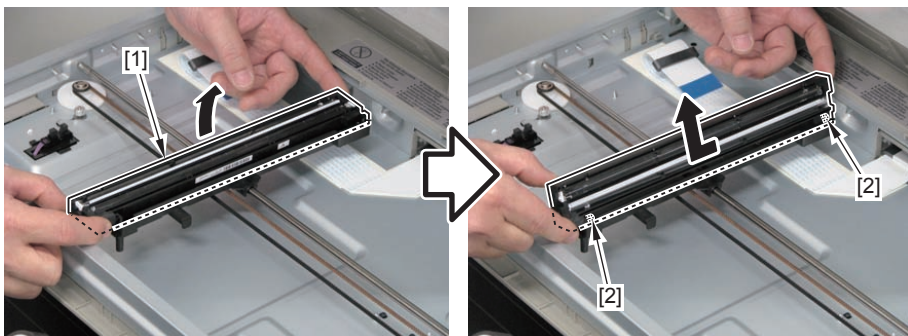
2) Remove the 2 spacers [1] and the Flat Cable [2].



F-4-172

3) Remove the CIS Unit [1].

- 2 Shafts [2]

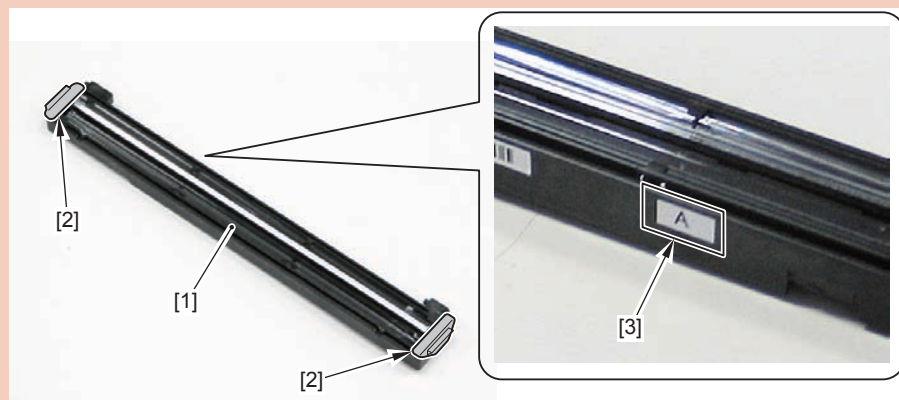


F-4-173

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.



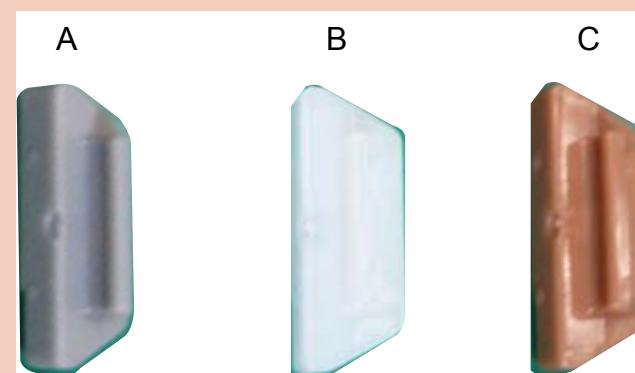
F-4-174

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

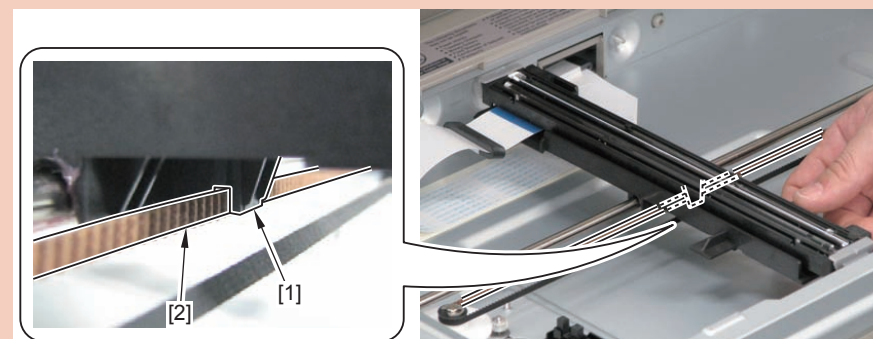
T-4-66



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.

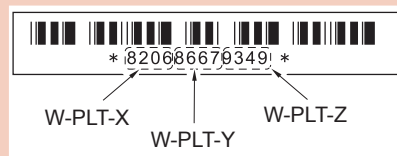
1. Enter the value (White level data entry of white plate) indicated on the platen glass in the following service mode:

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) Turn OFF/ON the main power switch.

5) After executing the shading position adjustment with the following service mode 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 mode 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

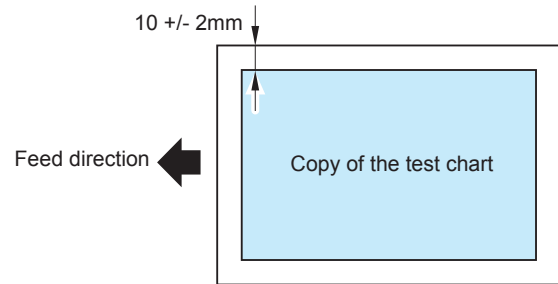
T-4-74

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

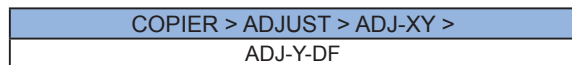
8) Adjust the image position (horizontal scanning direction/front side) at ADF reading.

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.



F-4-178

3. Select the item in the service mode.

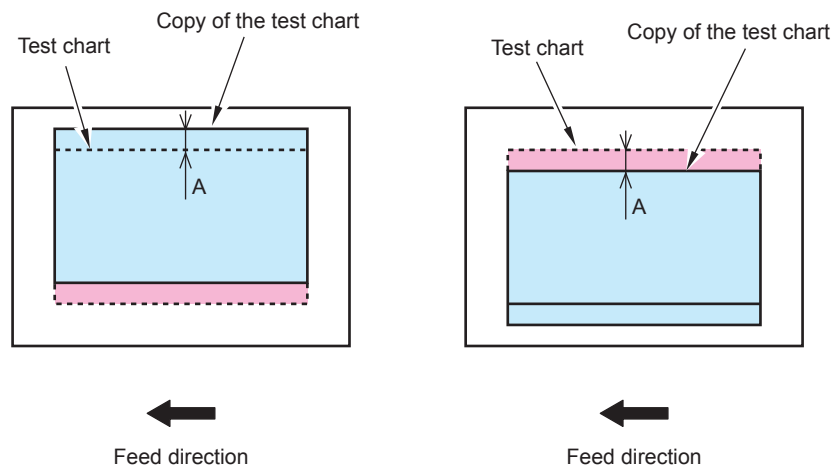


T-4-75

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 >



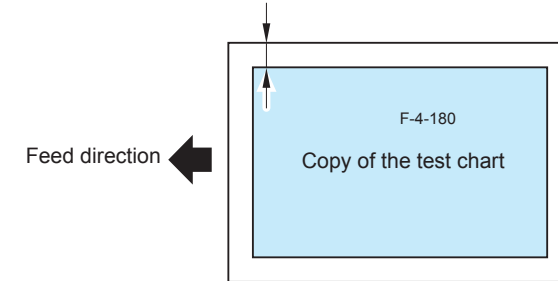
F-4-179

5. Write the new changed value in the service label.

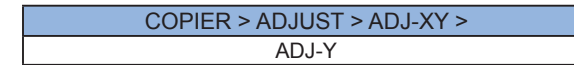
6. Exit the service mode.

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.



3. Select the item in the service mode.

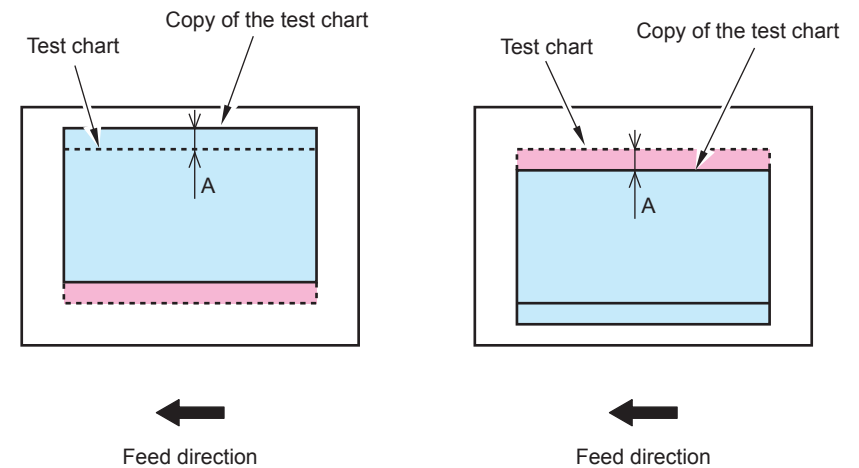


T-4-76

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 >



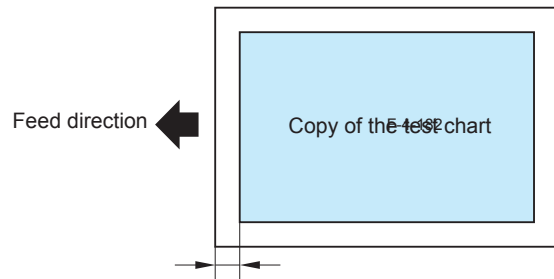
F-4-181

5. Write the new changed value in the service label.

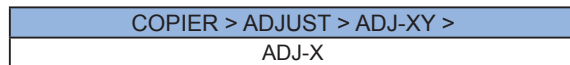
6. Exit the service mode.

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.



3. Press ADJ-X from the service mode screen.



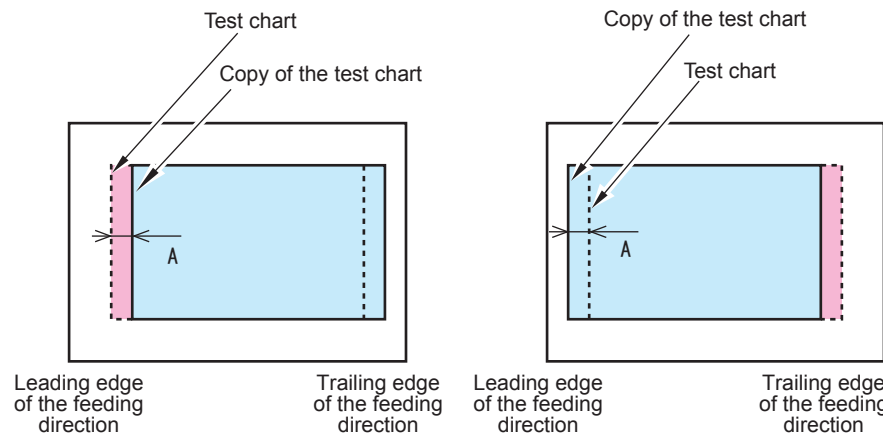
T-4-77

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 >

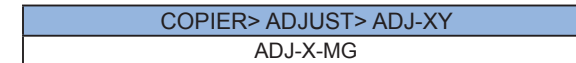


11) Make a fine adjustment of image magnification ratio (vertical scanning direction) at copyboard reading.

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.



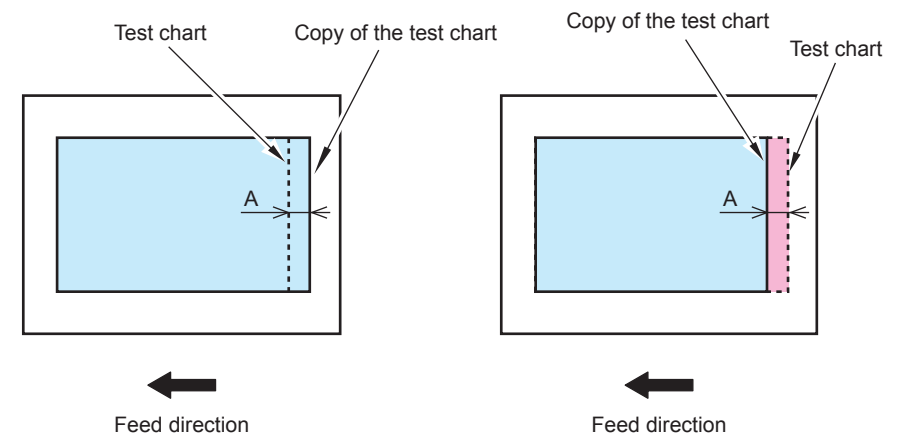
T-4-78

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 >



F-4-183

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.

5. Write the new changed value in the service label.
6. Exit the service mode.

Removing the Reader Motor



3) Remove the Reader Motor [1].

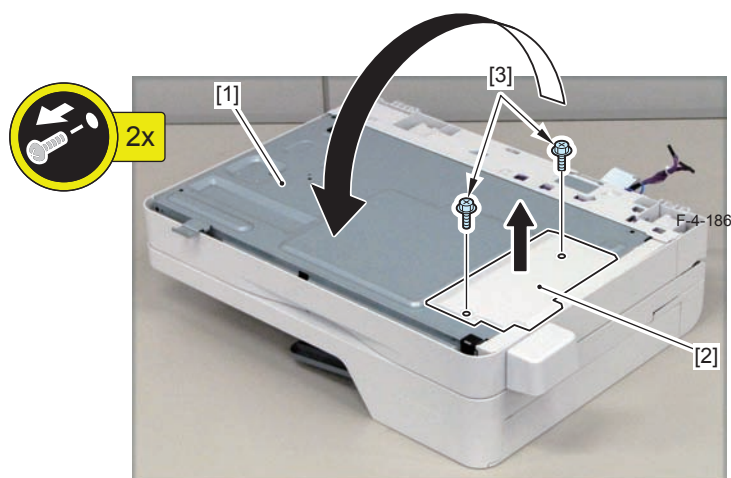
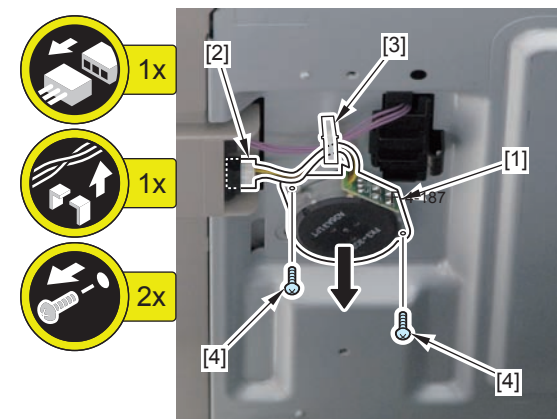
- 1 Connector [2]
- 1 Wire Saddle [3]
- 2 Screws [4]

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Removing the ADF Unit + Reader Unit (Refer to page 4-67)

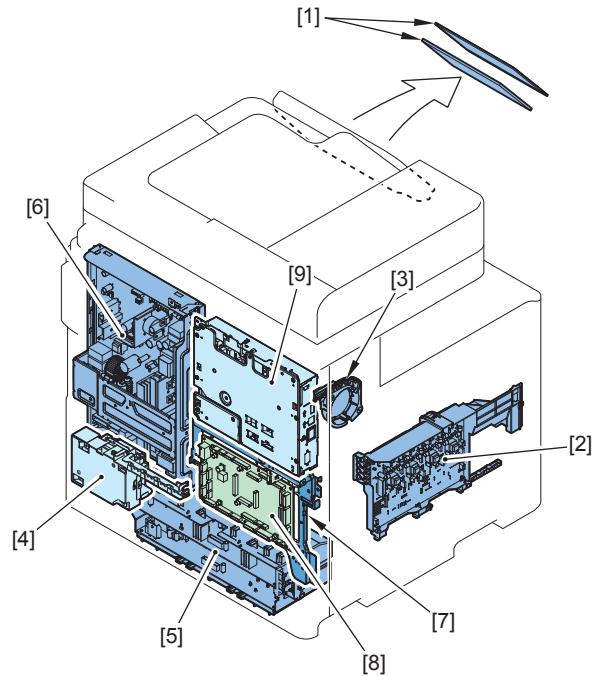
Procedure

- 1) Flip over the ADF Unit + Reader Unit [1].
 - 2) Remove the Reader Motor Cover [2].
- 2 Screws [3]



Controller System

Layout Drawing

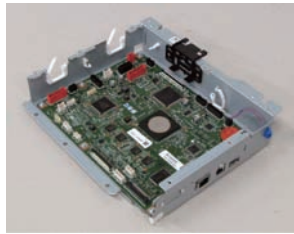


F-4-188

No.	Parts Name	Main Unit	Remarks	Reference
[1]	Touch Panel / LCD	Control Panel Unit		(Refer to page 4-98)
[2]	Primary Transfer High-voltage PCB Unit	Product Configuration	UN03	(Refer to page 4-91)
[3]	Speaker	Product Configuration	SP1	(Refer to page 4-101)
[4]	FAX Unit	Product Configuration	UN86 / UN88,89,90 / UN92	(Refer to page 4-102)
[5]	Secondary Transfer High-voltage PCB / Developing High-voltage PCB Unit	Product Configuration	UN02 / UN06	(Refer to page 4-89)
[6]	Low-voltage Power Supply PCB Unit	Product Configuration	UN01	(Refer to page 4-94)
[7]	DC Controller PCB Unit	Product Configuration		(Refer to page 4-87)
[8]	DC Controller PCB	DC Controller PCB Unit	UN04	(Refer to page 4-85)
[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

Europe, North America, Latin America model

Before Replacing	<ol style="list-style-type: none"> 1) Backup the Settings/Registration data. Use RUI or a USB memory Log in as an administrator (mode). Settings/Registration > Import/Export 2) Service mode backup Use a USB memory COPIER > FUNCTION > SYSTEM > EXPORT 3) If the data cannot be exported, write down the values of the items on the service label. (Enter them after replacement.)
------------------	--

T-4-80

Asia, Oceania, China model

Before Replacing	<ol style="list-style-type: none"> 1) Backup the Settings/Registration data. Use RUI or a USB memory Log in as an administrator (mode). Settings/Registration > Import/Export 2) Service mode backup Use a USB memory COPIER > FUNCTION > SYSTEM > EXPORT 3) If the data cannot be exported, write down the values of the items on the service label. (Enter them after replacement.) 4) Perform the following work to models for Asia, Oceania and China only. Write down the machine's serial number and the data of Settings/Registration > System Settings > Device Information > Location (to input them after replacement).
------------------	--

T-4-81

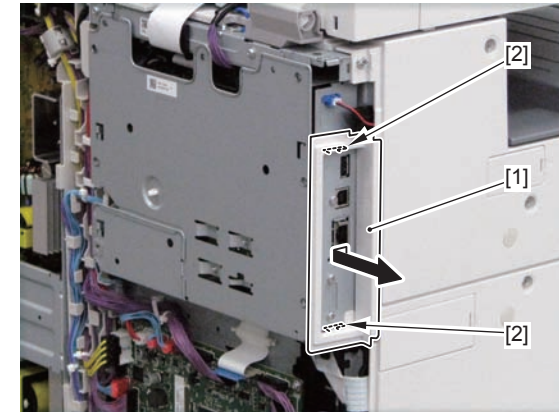
Preparation

1) Remove the Rear Cover 1 (Refer to page 4-35).

Procedure

1) Remove the Connector Cover [1].

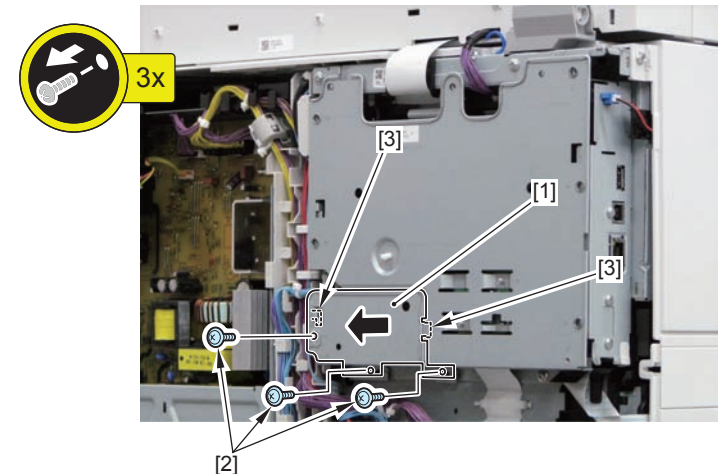
- 2 Hooks [2]



F-4-190

2) Remove the Main Controller Sub Cover [1].

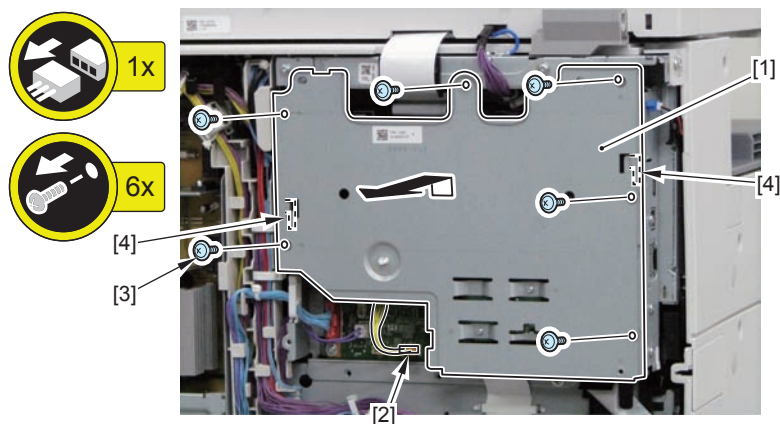
- 3 Screws [2]
- 2 Hooks [3]



F-4-191

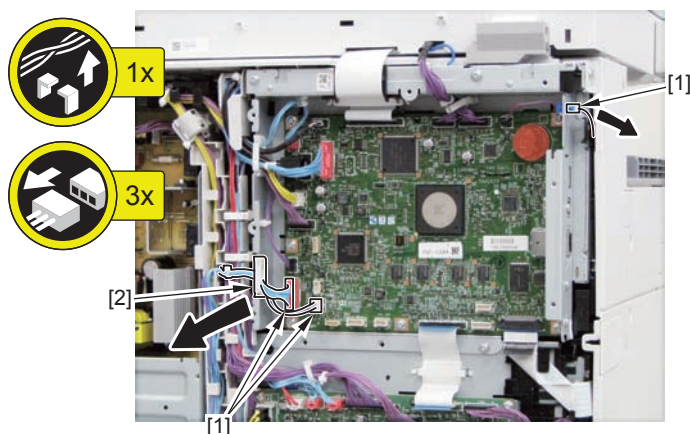
3) Remove the Main Controller Cover [1]. (Only Europe, North America, Latin America model)

- 1 Connector [2]
- 6 Screws [3]
- 2 Hooks [4]



F-4-192

4) If the Fax Unit is installed, remove the Edge Saddle [2] and the 3 connectors [1].



F-4-193

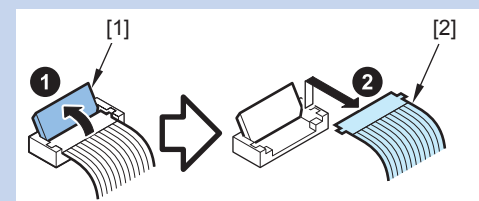
5) Remove the harness connected to the Main Controller Unit [1].

- 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:

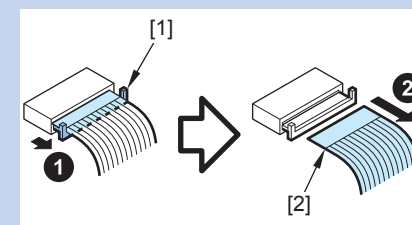
1. Raise the Fixation Member [1].
2. Lift and remove the Flat Cable [2].



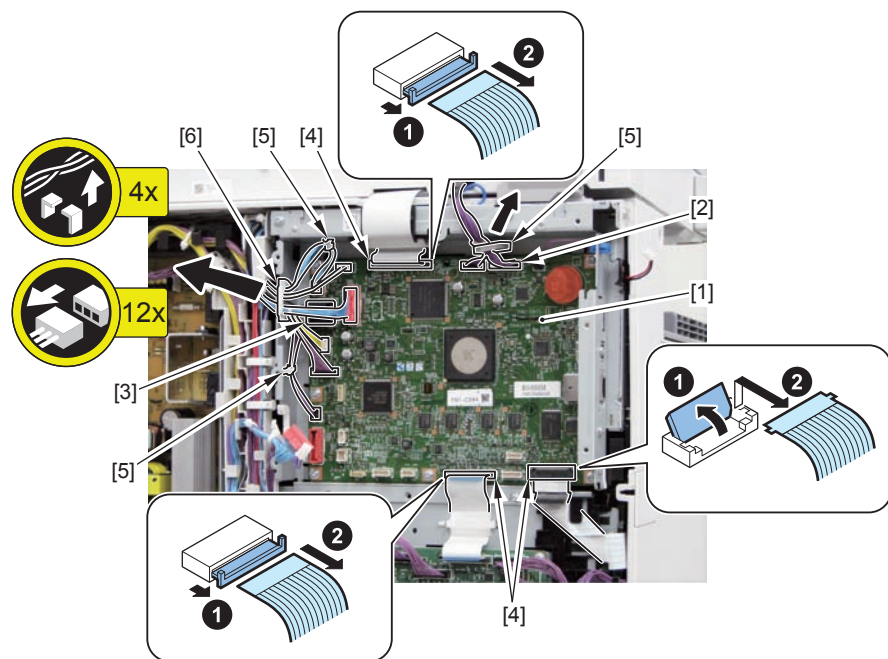
F-4-194

Type 2:

1. Pull out the Fixation Member [1].
2. Pull out the Flat Cable [2].



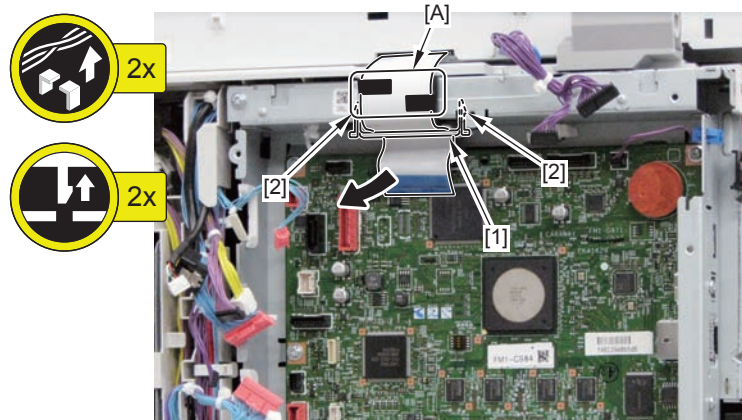
F-4-195



6) Remove the Flat Cable Retainer [1] and the Harness Guide [A].

- 2 Claws [2]

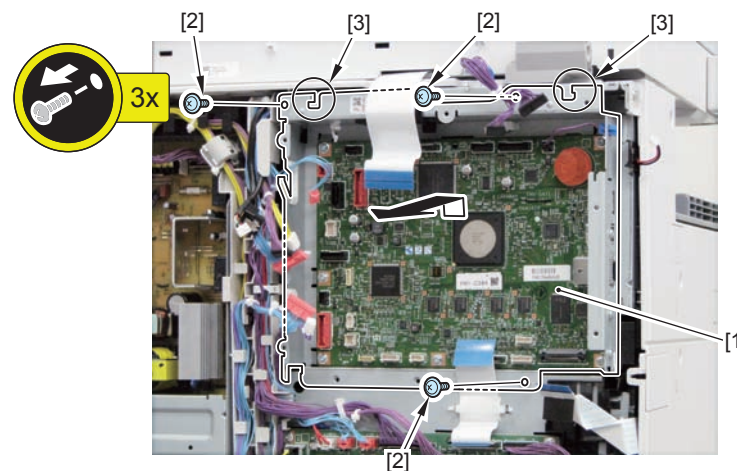
F-4-196



F-4-197

7) Remove the Main Controller Unit [1].

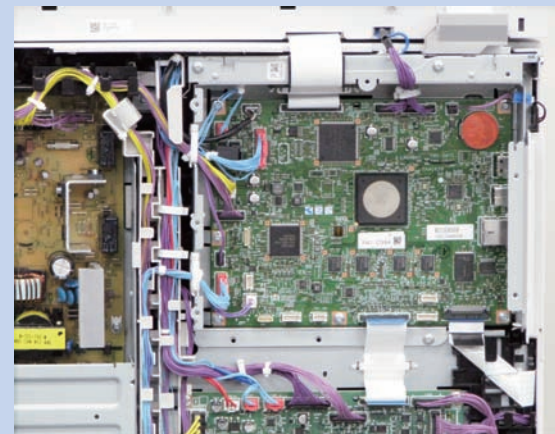
- 3 Screws [2]
- 2 Hooks [3]



F-4-198

NOTE:

The completed assembly of the Main Controller Unit [1] is shown below.



F-4-199

■ Aftter Replacing

● Europe, North America, Latin America model

Aftter Replacing	<p>1) After the parts are assembled, turn ON the power.</p> <p>2) Setting of the paper size group COPIER > OPTION > BODY > SIZE-LC [Setting value] 1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/inch configuration</p> <p>3) Clearing the data COPIER > FUNCTION > CLEAR > ALL (clearing of all data) When executing this item, the following data is cleared according to the value set in step 2 and the serial number. Settings/Registration data (the initial value according to the location is set.) Service mode data (the initial value according to the location is set.) System administrator ID and password (They are changed back to the default values. ID: 0, PWD: 0) Each log data Date data COPIER > FUNCTION > CLEAR > R-CON (clearing of the factory adjustment values related to the Reader and ADF)</p> <p>4) Migrating service mode data Import the service mode data backed up before replacement from the USB memory. COPIER > FUNCTION > SYSTEM > IMPORT If the data could not be backed up, enter the values on the service label to the respective entry fields.</p> <p>5) Turn OFF and then ON the power.</p> <p>6) The initial installation mode will be activated. Operate according to the instruction on the screen. (Setting the date/time, executing the auto gradation adjustment)</p> <p>7) Migrating user data Import the user data backed up using the means (RUI or USB memory) you used before replacement. Log in as an administrator (mode). Settings/Registration > Import/Export</p> <p>8) Uninstalling the drivers Uninstall the drivers on the user's PC. Printer driver Fax driver Scanner driver Network Scan Utility</p> <p>* For the procedure, refer to the Startup Guide.</p> <p>9) Reinstalling the drivers Install the drivers which were uninstalled in step 8.</p> <p>* For the procedure, refer to the Startup Guide.</p> <p>** 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.</p>
------------------	--

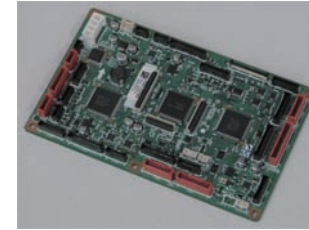
● Asia, Oceania, China model

Aftter Replacing	<p>1) After the parts are assembled, turn ON the power.</p> <p>2) Set the location group and paper size group. 1. COPIER > OPTION > BODY > LOCALE (setting the location group) [Setting value] 1: Japan, 2: North America, 3: Korea, 4: China, 5: Taiwan, 6: Europe, 7: Asia, 8: Oceania, 9: Brazil, 10: Latin America 2. COPIER > OPTION > BODY > SIZE-LC [Setting value] 1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/inch configuration</p> <p>3) Clearing the data COPIER > FUNCTION > CLEAR > ALL (clearing of all data) When executing this item, the following data is cleared according to the value set in step 2 and the serial number. Settings/Registration data (the initial value according to the location is set.) Service mode data (the initial value according to the location is set.) System administrator ID and password (They are changed back to the default values. ID: 0, PWD: 0) Each log data Date data COPIER > FUNCTION > CLEAR > R-CON (clearing of the factory adjustment values related to the Reader and ADF)</p> <p>4) Migrating service mode data Import the service mode data backed up before replacement from the USB memory. COPIER > FUNCTION > SYSTEM > IMPORT If the data could not be backed up, enter the values on the service label to the respective entry fields.</p> <p>5) Turn OFF and then ON the power.</p> <p>6) The initial installation mode will be activated. Operate according to the instruction on the screen. (Setting the date/time, executing the auto gradation adjustment)</p> <p>7) Migrate the serial number. 1. Enter the serial number (8-digit alphanumeric) in Settings/Registration > System Settings > Device Information Settings > Location. 2. Select COPIER > OPTION > SERIAL > SN-MAIN. Then, press the OK key to write the serial number entered in step 1 in the Main Controller PCB. After it has been written, the serial number entered in "Location" in step 1 is deleted. 3. Turn OFF and then ON the main power switch. 4. Execute COPIER > FUNCTION > MISC-P> SPEC to output the spec report to check that the serial number has been registered. (BODY No.) 5. Enter the data of the installation location (which was written down before replacement) in Settings/Registration > System Settings > Device Information Settings > Location.</p>
------------------	---

After Replacing	<p>8) Migrating user data Import the user data backed up using the means (RUI or USB memory) you used before replacement. Log in as an administrator (mode). Settings/Registration > Import/Export</p> <p>9) Uninstalling the drivers Uninstall the drivers on the user's PC. Printer driver Fax driver Scanner driver Network Scan Utility * For the procedure, refer to the Startup Guide.</p> <p>10) Reinstalling the drivers Install the drivers which were uninstalled in step 8. * For the procedure, refer to the Startup Guide. ** 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.</p>
-----------------	---

T-4-83

Removing the DC Controller PCB



F-4-200

Before Replacing

Before Replacing	<p>1) Backup of DCON service mode setting values Execute the following: COPIER > FUNCTION > VIFFNC > STOR-DCN</p> <p>2) Turn OFF the main power when the above work is complete.</p>
------------------	---

T-4-84

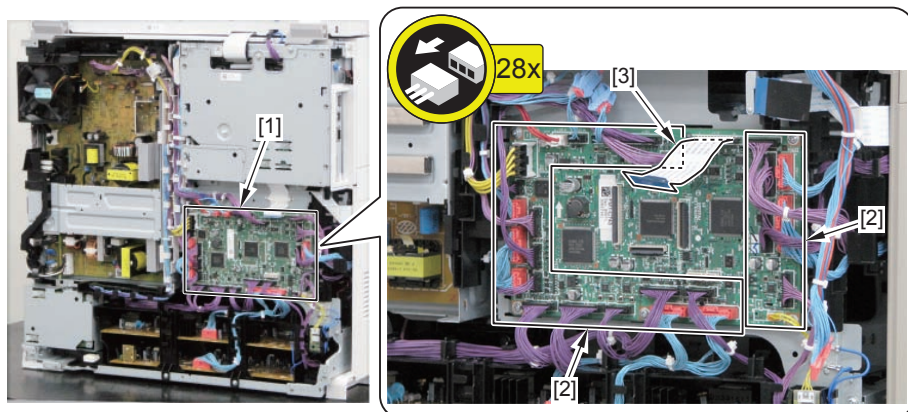
Preparation

- 1) Remove the Rear Cover 1(Refer to page 4-35).

Procedure

1) Disconnect the connector connected to the DC Controller PCB [1].

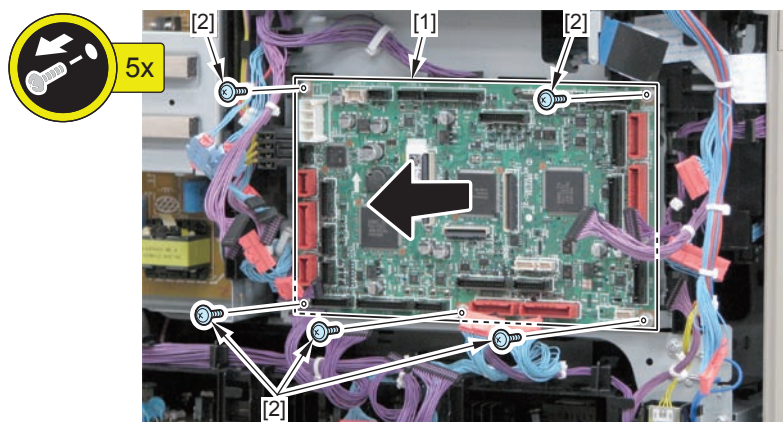
- 28 Connectors [2]
- 1 Flat Cable [3]



F-4-201

2) Remove the DC Controller PCB [1].

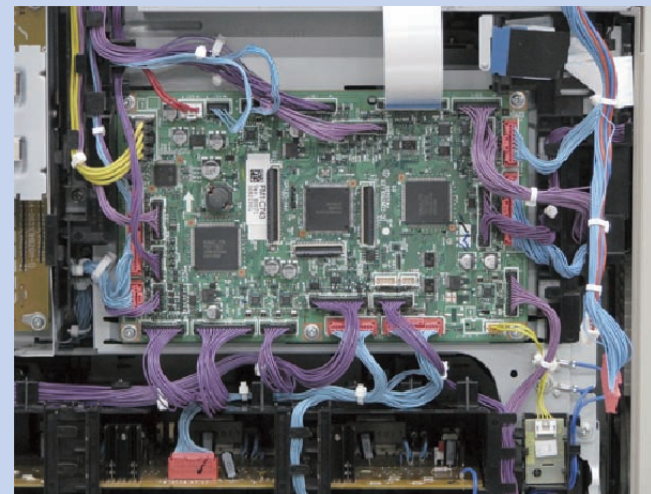
- 5 Screws [2]



F-4-202

NOTE:

The completed assembly of the DC Controller PCB is shown below.



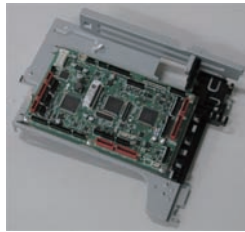
F-4-203

After Replacing

After 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-4-85

Removing the DC Controller PCB Unit



F-4-204

Before Replacing

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.

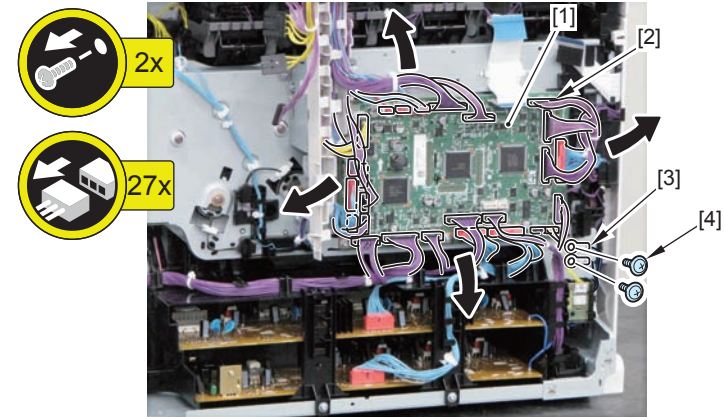
T-4-86

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Fax Unit (to be removed for models equipped with a fax) (Refer to page 4-102).
- 3) Remove the Main Controller Unit (Refer to page 4-81).
- 4) Remove the Low-voltage Power Supply PCB Unit (Refer to page 4-94).

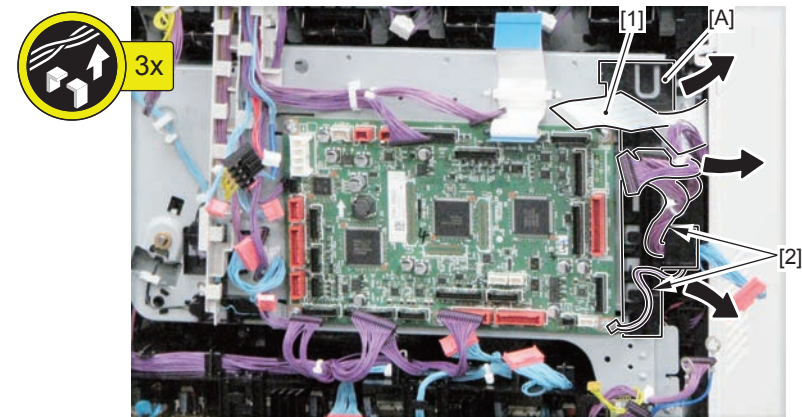
Procedure

- 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

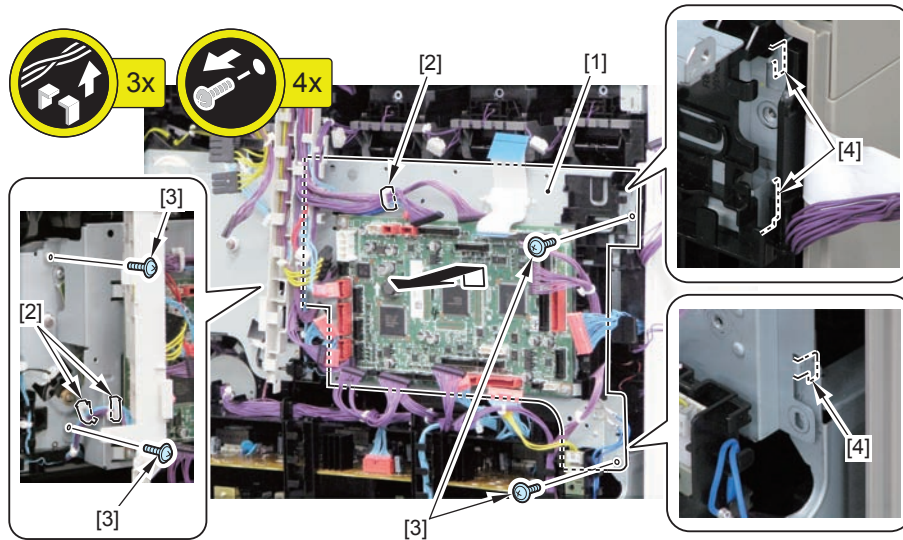
- 3) Remove the Flat Cable [1] and the 2 harnesses [2] from the Harness Guide [A].



F-4-206

4) Remove the DC Controller PCB Unit [1].

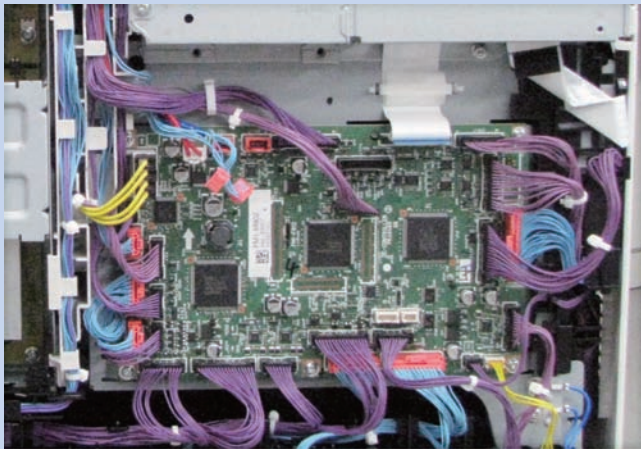
- 3 Wire Saddles [2]
- 4 Screws [3]
- 3 Hooks [4]



F-4-207

NOTE:

The completed assembly of the DC Controller PCB Unit is shown below.



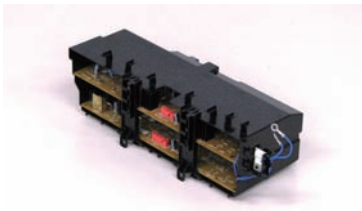
F-4-208

After Replacing

After Replacing	<ol style="list-style-type: none"> 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-4-87

Removing the Secondary Transfer High-voltage PCB/ Developing High-voltage PCB Unit



F-4-209

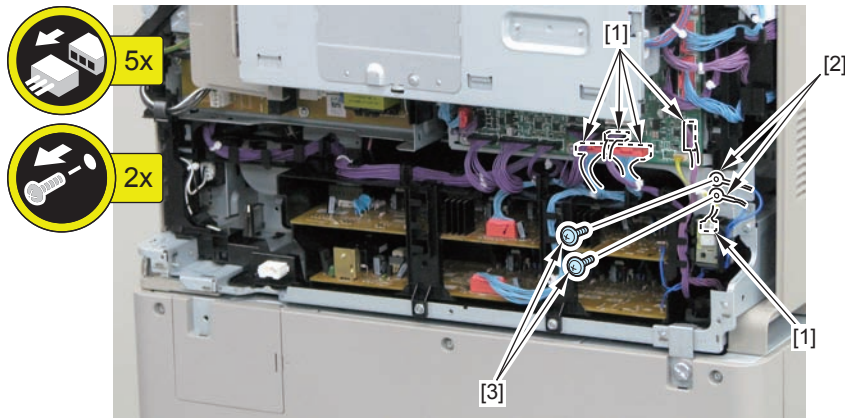
Preparation

1) Remove the Rear Cover 1 (Refer to page 4-35).

Procedure

1) Remove the 5 connectors [1] and the 2 round shape terminals [2].

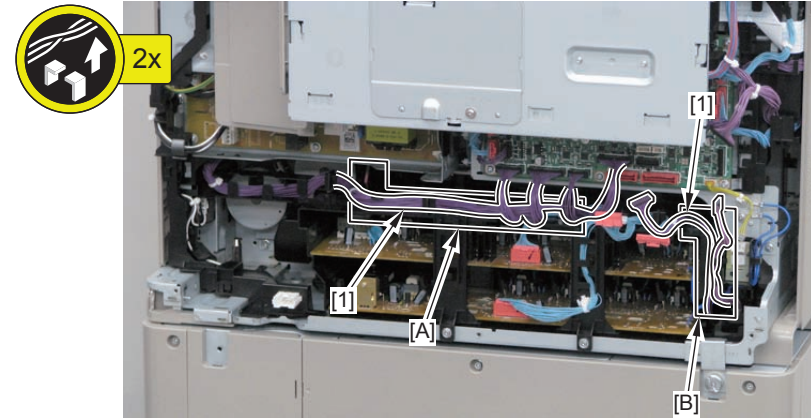
- 2 Screws [3]



F-4-210

2) Free the harness [1] from the Harness Guides [A] and [B].

- 1 Reuse Band [2]



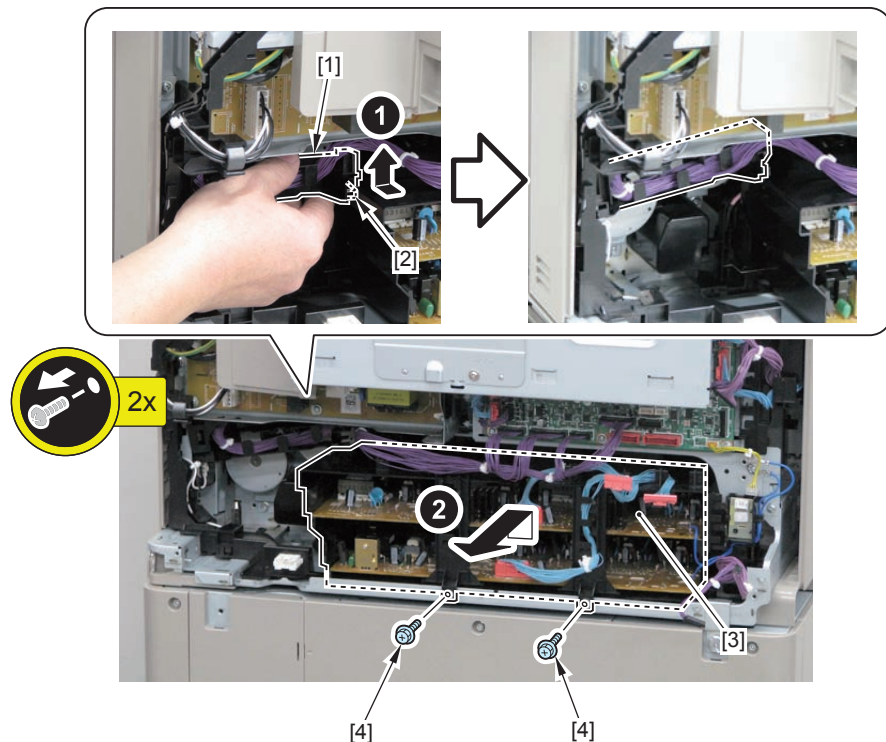
F-4-211

3) Remove the Harness Guide [1].

- 1 Hook [2]

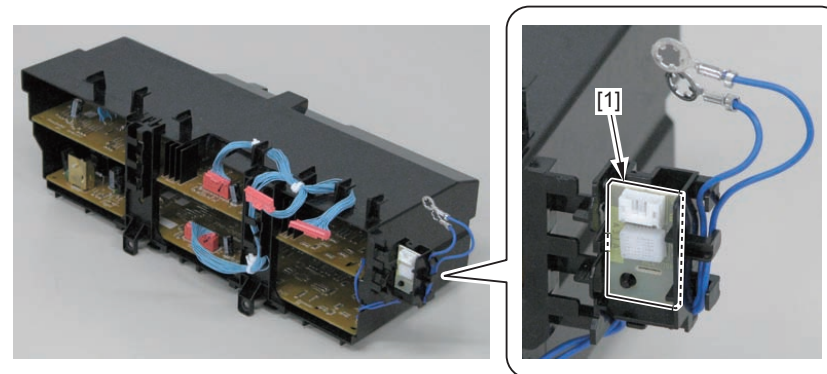
4) Remove the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit [3].

- 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:

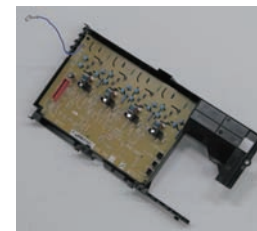
The completed assembly of the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit is shown below.



F-4-214

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



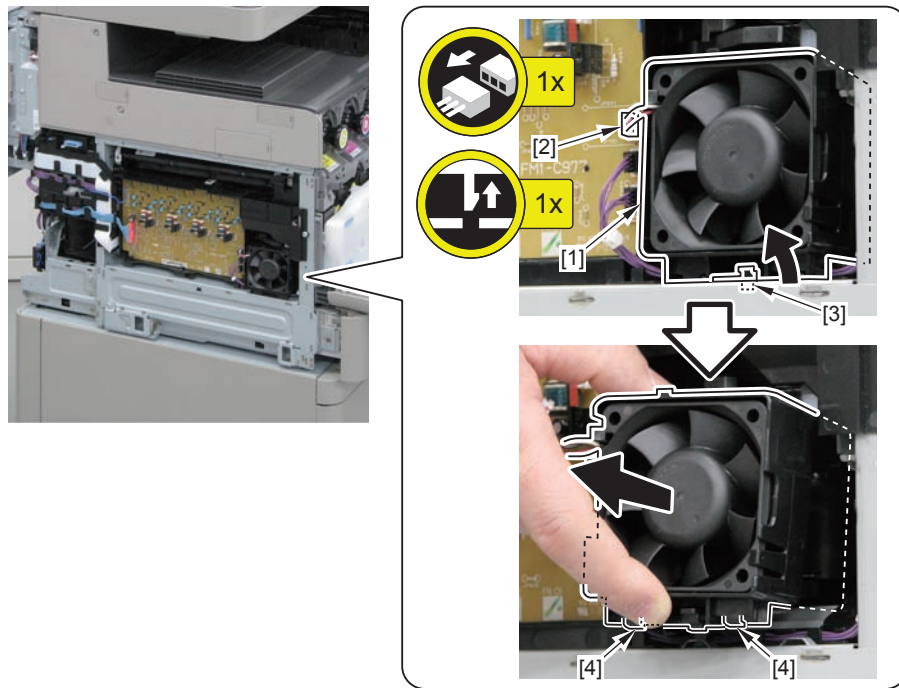
F-4-215

Preparation

- 1) Removing the ITB Unit(Refer to page 4-113).
- 2) Removing the Waste Toner Container(Refer to page 4-109).
- 3) Removing the Drum Unit (Y/M/C/Bk)(Refer to page 4-110).
- 4) Remove the Rear Cover 1(Refer to page 4-35).
- 5) Remove the Left Lower Cover(Refer to page 4-37).

Procedure

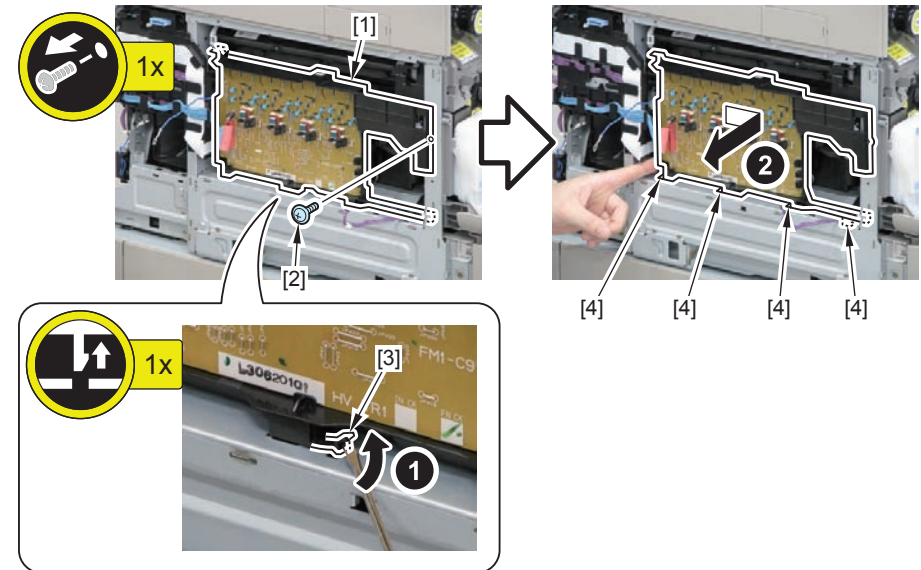
- 1) Remove the Drum Unit Suction Cooling Fan [1].
 - 1 Connector [2]
 - 1 Claw [3]
 - 2 Hooks [4]



F-4-216

4) Remove the Primary Transfer High-voltage PCB Unit [1].

- 1 Screw [2]
- 1 Claw [3]
- 4 Hooks [4]

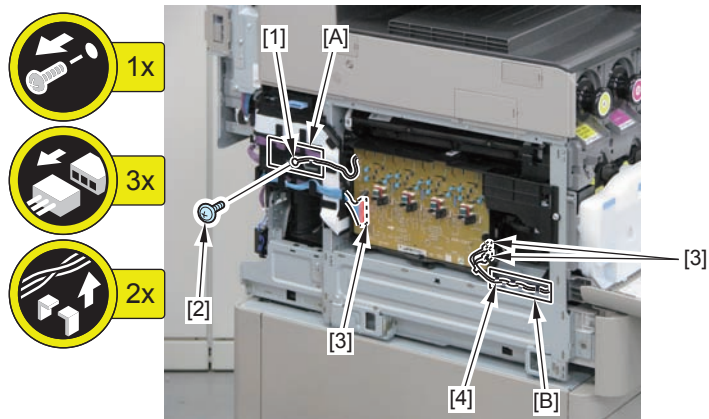


F-4-218

2) Remove the round shape terminal [1].

- 1 Screw [2]
- Harness Guide [A]

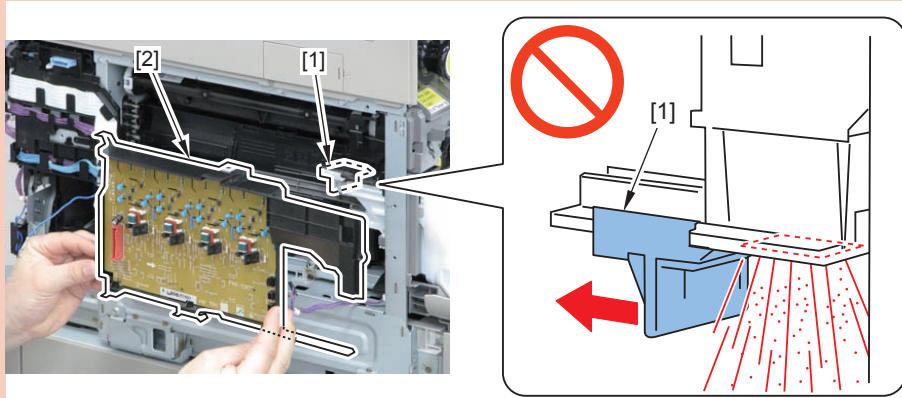
3) Disconnect the 3 connectors [3], and free the harness [4] from the Harness Guide [B].



F-4-217

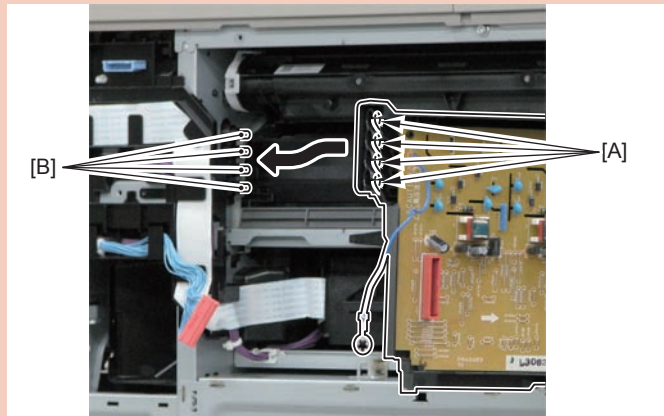
CAUTION:

- 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

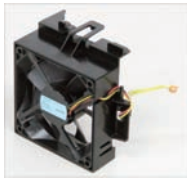
- When assembling, the contact point [A] of the Primary Transfer High-voltage PCB Unit must be contacted with the 4 Contact Springs [B] of the High-voltage Main Guide.



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

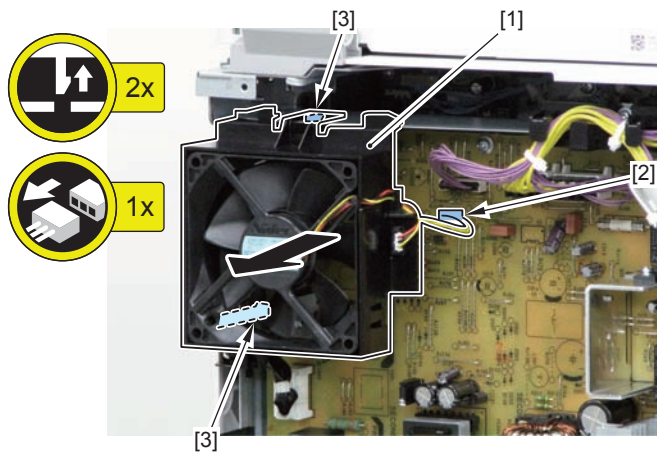
Preparation

1) Remove the Rear Cover 1 (Refer to page 4-35).

Procedure

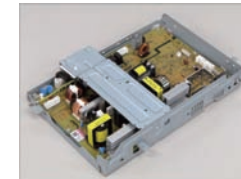
1) Remove the Power Supply Fan [1].

- 1 Connector [2]
- 2 Claws [3]



F-4-222

Removing the Low-voltage Power Supply PCB Unit



F-4-223

Preparation

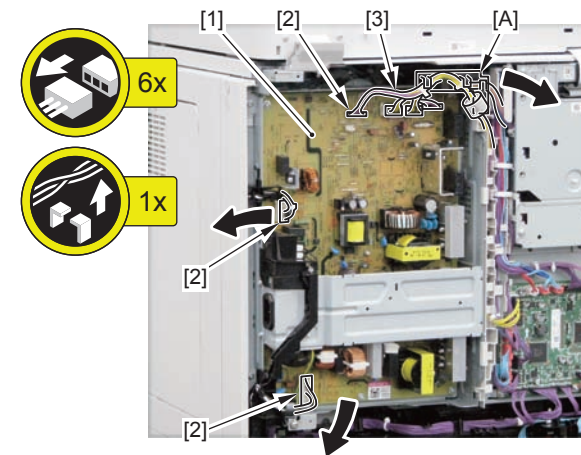
1) Remove the Rear Cover 1 (Refer to page 4-35).

2) Remove the Power Supply Fan (Refer to page 4-94).

Procedure

1) Disconnect the 6 connectors [2] installed in the Low-voltage Power Supply PCB [1].

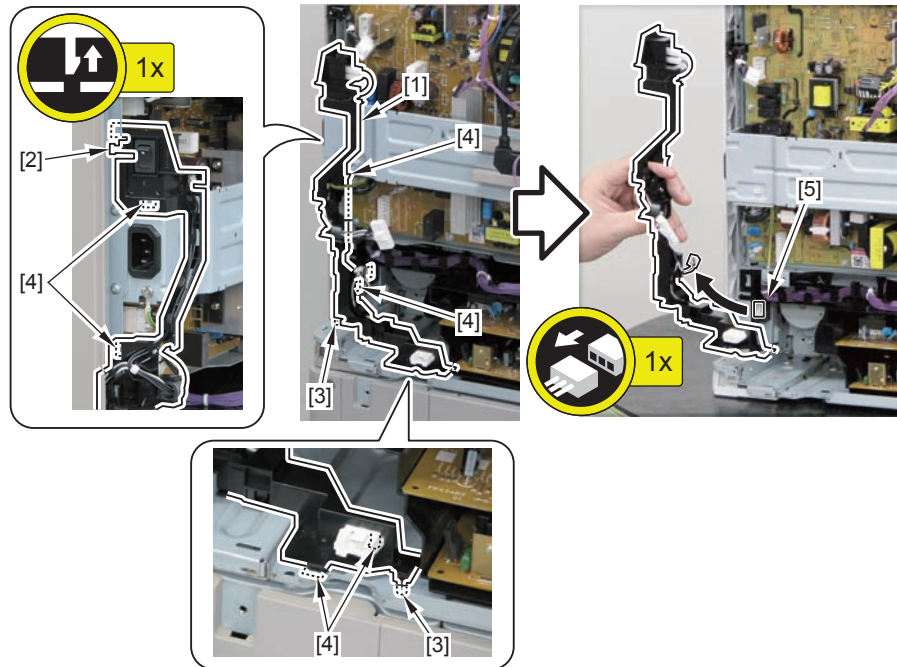
2) Free the harness [3] from the Harness Guide [A].



F-4-224

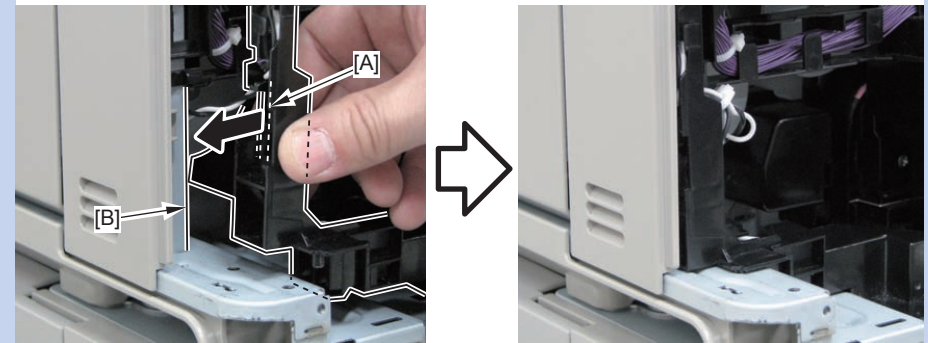
3) Remove the Power Switch Harness Guide [1].

- 1 Claw [2]
- 2 Bosses [3]
- 6 Hooks [4]
- 1 Connector [5]



F-4-225

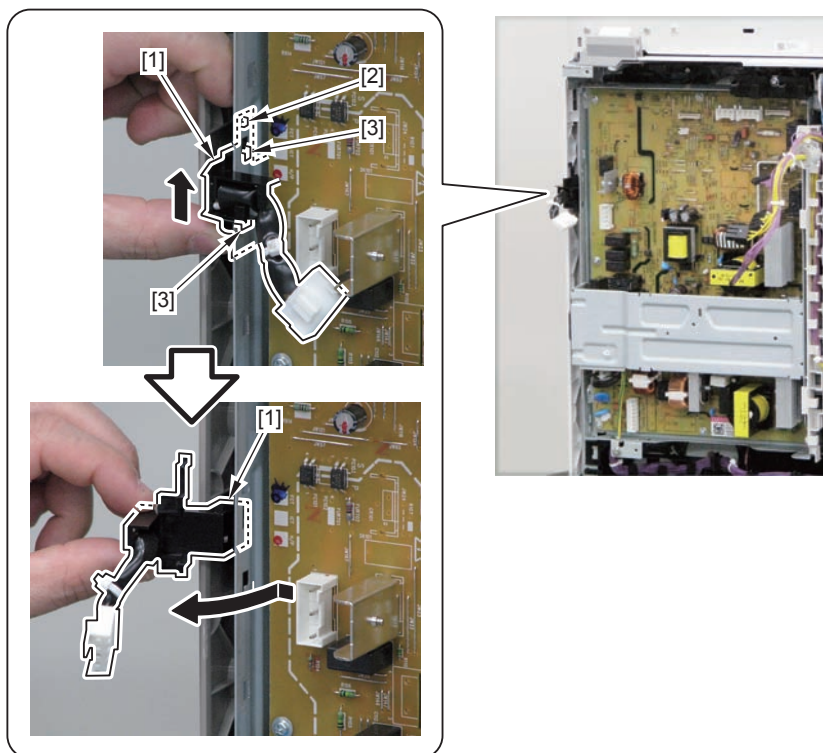
NOTE: How to install the Power Switch Harness Guide
Be sure to align the groove [A] of the Power Switch Harness Guide with the edge [B] of the side plate to install the guide.



F-4-226

4) Remove the Fixing Harness Guide [1].

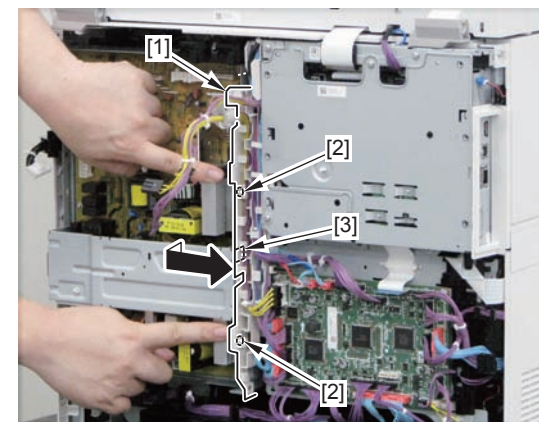
- 1 Boss [2]
- 2 Hooks [3]



F-4-227

5) Remove the Power Supply Harness Guide [1].

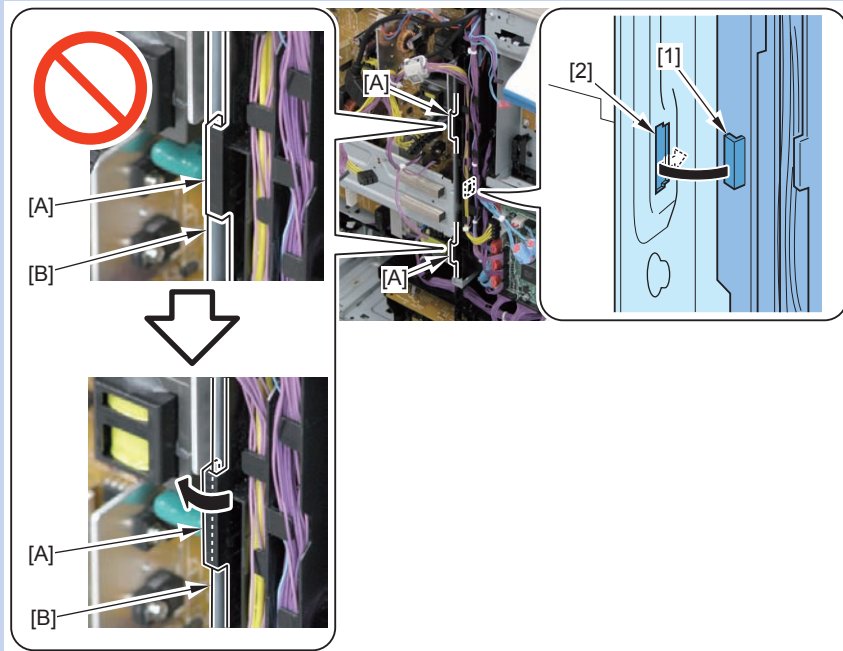
- 2 Bosses [2]
- 1 Hook [3]



F-4-228

NOTE: How to install the Power Supply Harness Guide

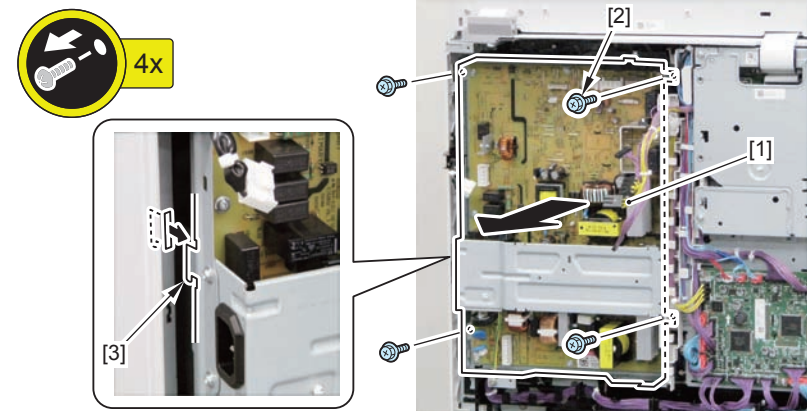
Be sure to align the 2 grooves [A] of the Power Supply Harness Guide with the edge [B] of the side plate, and hook the hook [1] on the hole [2] in the side plate of the Low-voltage Power Supply PCB to install the guide.



F-4-229

6) Remove the Low-voltage Power Supply PCB Unit [1].

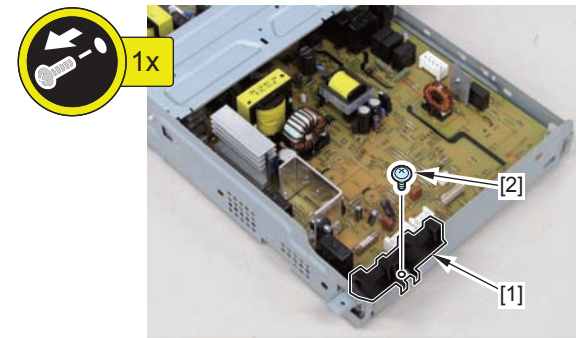
- 4 Screws [2]
- 1 Hook [3]



F-4-230

When replacing the Low-voltage Power Supply Unit**7) Remove the Cable Guide [1].**

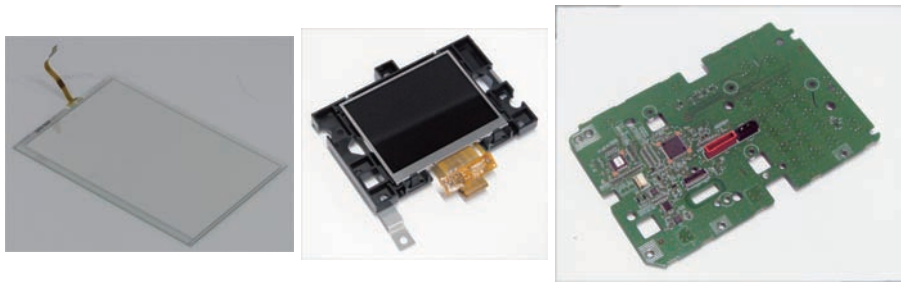
- 1 Screw [2]



F-4-231

NOTE: Actions after assembly
Install the removed Cable Guide to the new Low-voltage Power Supply Unit.

Removing the Touch Panel/Control Panel CPU PCB Unit /LCD Unit



F-4-232

Preparation

1) Remove the Control Panel Unit. (Refer to page 4-48)

Procedure

CAUTION:

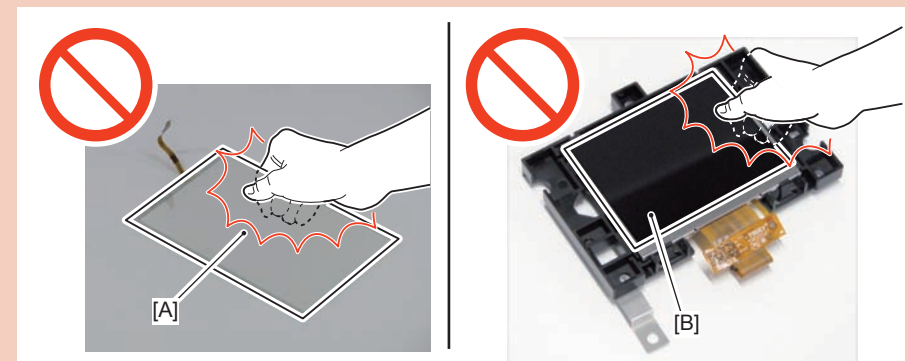
Be careful not to damage the Control Panel during disassembly/assembly.



F-4-233

CAUTION:

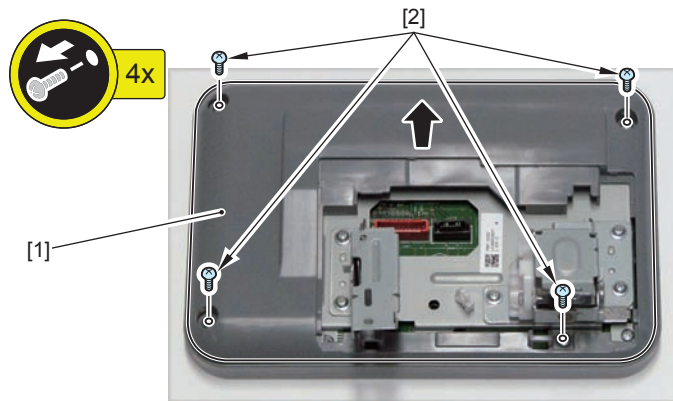
Do not touch the surface [A] of the Touch Panel and the surface [B] of the LCD Unit when disassembling/assembling.



F-4-234

1) Remove the Control Panel Rear Cover [1].

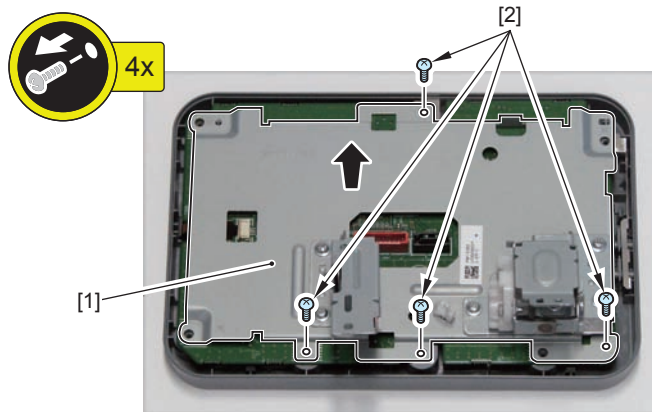
- 4 Screws [2]



F-4-235

2) Remove the Control Panel Support Plate [1].

- 4 Screws [2]



F-4-236

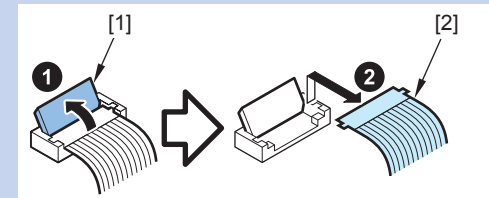
3) Remove the Control Panel CPU PCB Unit [1].

- 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:

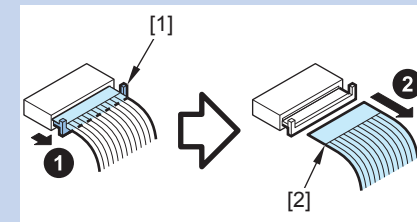
1. Raise the Fixation Member [1].
2. Lift and remove the Flat Cable [2].



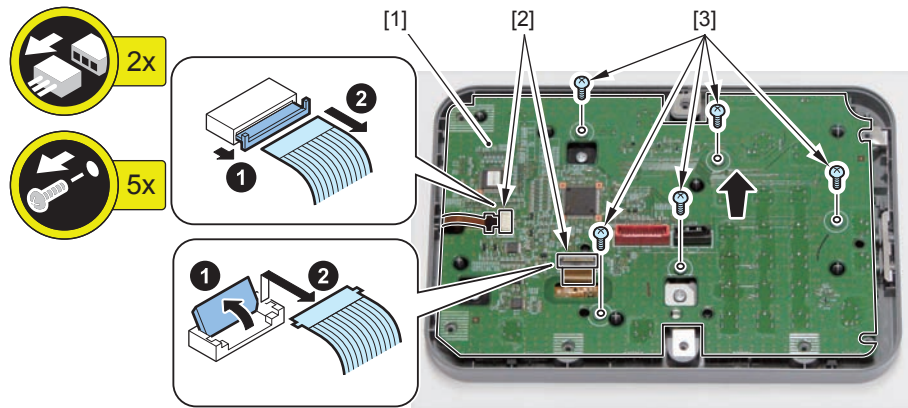
F-4-237

Type 2:

1. Pull out the Fixation Member [1].
2. Pull out the Flat Cable [2].



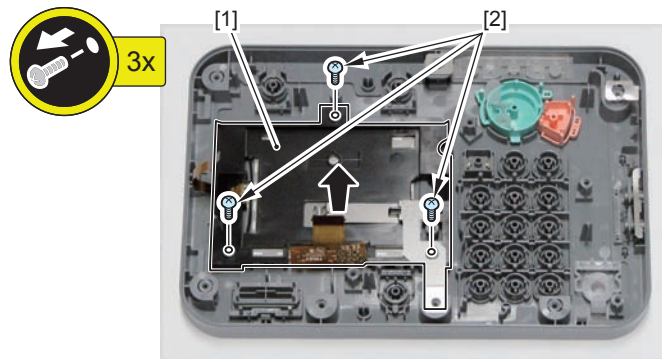
F-4-238



F-4-239

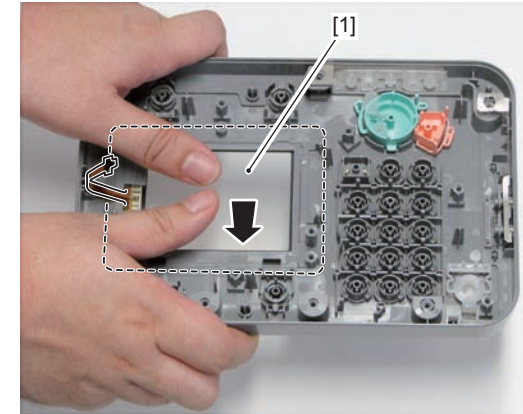
4) Remove the LCD Unit [1].

- 3 Screws [2]



F-4-240

5) Remove the Touch Panel [1] while removing the double-sided tape.

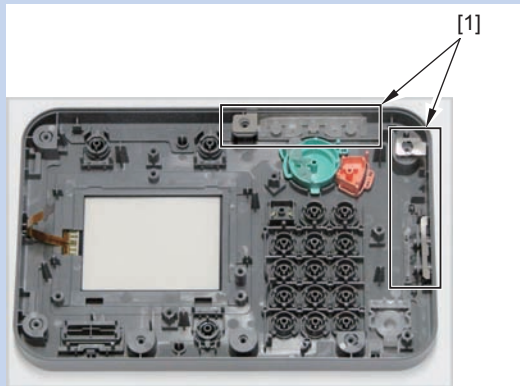


F-4-241

NOTE: Actions after assembly
The removed Touch Panel cannot be used again.
Replace it with a new Touch Panel.

NOTE: How to install the Touch Panel

The following shows the locations of the 2 Control Panel Grounding Plates [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. Execute the following: COPIER > ADJUST > PANEL > TOUCHCHK
-----------------	---

T-4-88

Removing the Fax Speaker Unit



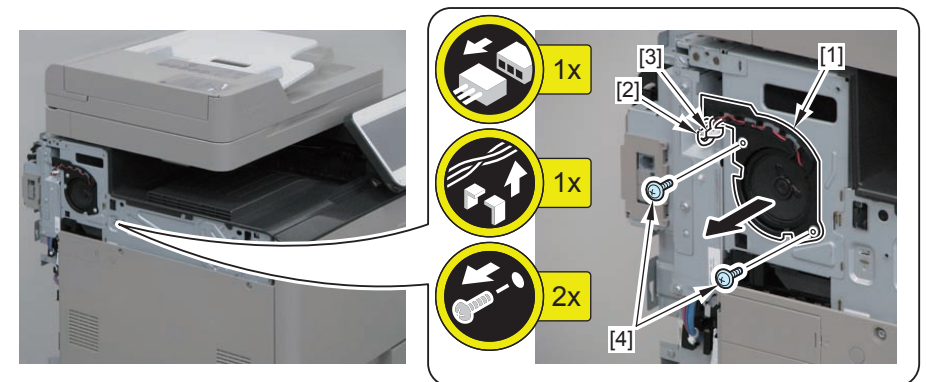
F-4-244

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Left Upper Cover. (Refer to page 4-37)

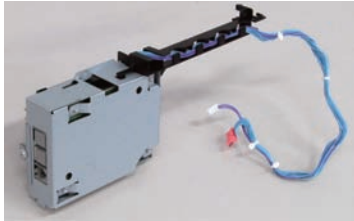
Procedure

- 1) Remove the Fax Speaker Unit [1].
 - 1 Connector [2]
 - 1 Wire Saddle [3]
 - 2 Screws [4]



F-4-245

Removing the Fax Unit



F-4-246

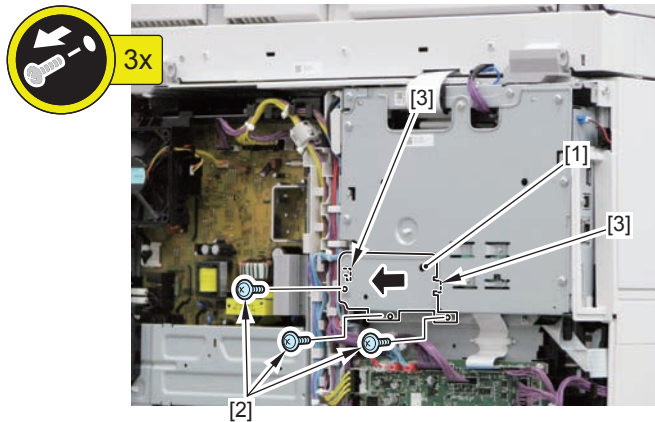
Preparation

1) Remove the Rear Cover 1 (Refer to page 4-35).

Procedure

1) Remove the Main Controller Sub Cover [1].

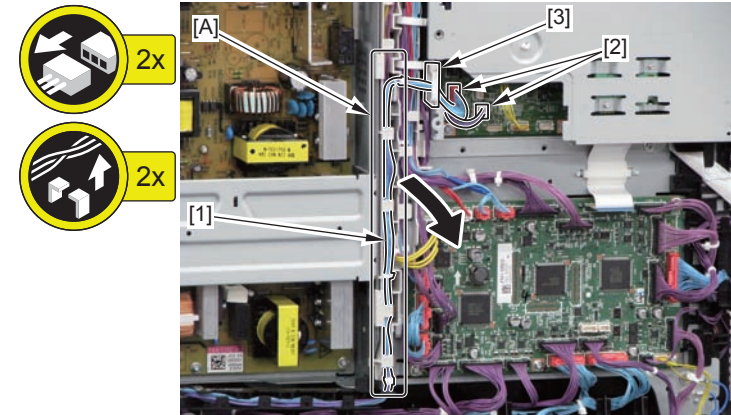
- 3 Screws [2]
- 2 Hooks [3]



F-4-247

2) Free the Fax Cable [1] from the guide [A].

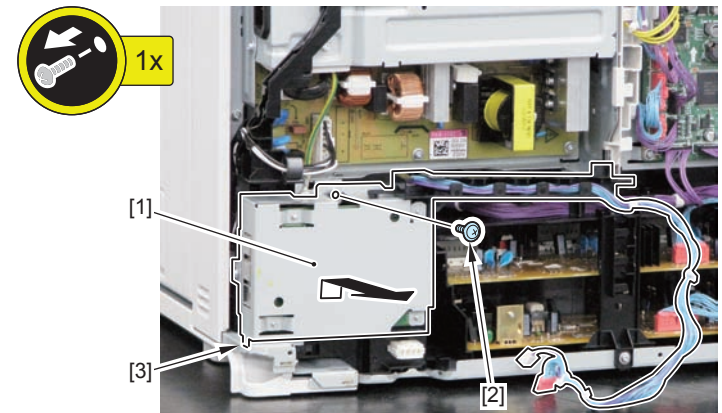
- 2 Connectors [2]
- 1 Edge Saddle [3]



F-4-248

3) Remove the Fax Unit [1].

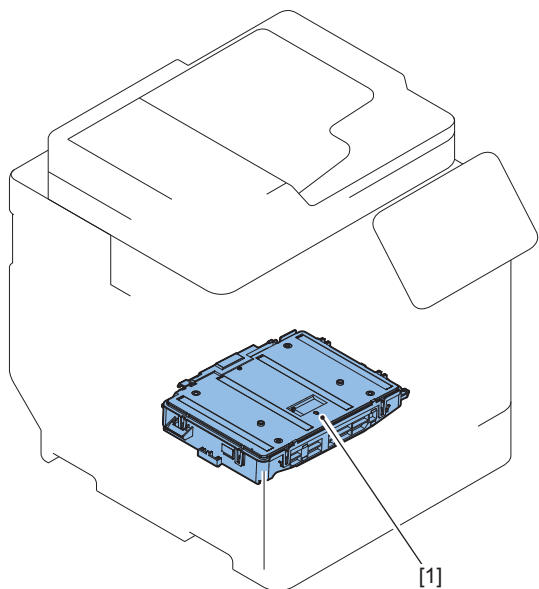
- 1 Screw [2]
- 1 Hook [3]



F-4-249

Laser Exposure System

Layout Drawing



F-4-250

No.	Parts Name	Main Unit	Remarks	Reference
[1]	Laser Scanner Unit	Product Configuration		(Refer to page 4-103)

T-4-89

Removing the Laser Scanner Unit



F-4-251

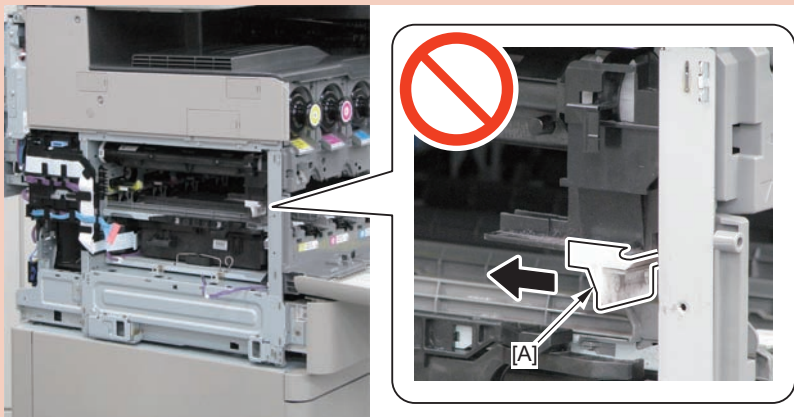
Preparation

- 1) Removing the ITB Unit(Refer to page 4-113).
- 2) Removing the Waste Toner Container(Refer to page 4-109).
- 3) Removing the Drum Unit (Y/M/C/Bk)(Refer to page 4-110).
- 4) Remove the Rear Cover 1(Refer to page 4-35).
- 5) Remove the Left Lower Cover(Refer to page 4-37).
- 6) Remove the Primary Transfer High-voltage PCB Unit(Refer to page 4-91).

Procedure

CAUTION:

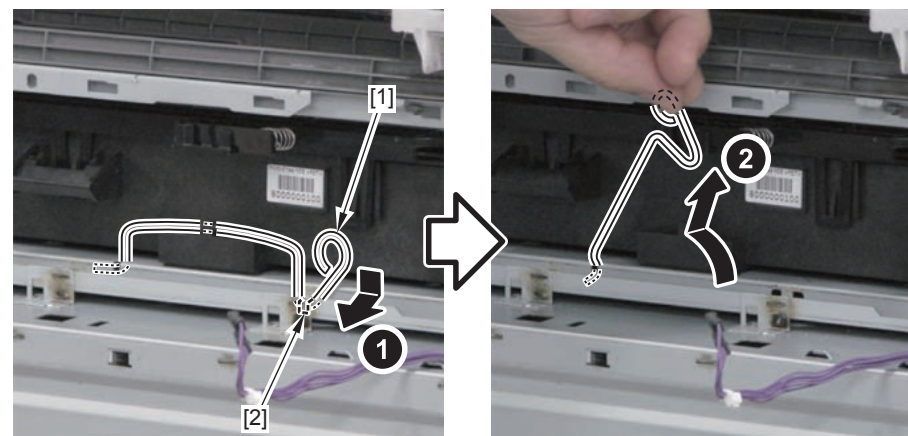
- Be sure not to disassemble the Laser Scanner Unit because adjustment is required.
- Disassembling the unit may cause functional problems.
- Do not touch the toner outlet [A] because the toner may be scattered when disassembling/assembling.



F-4-252

2) Remove the Laser Scanner Fixation Spring [1].

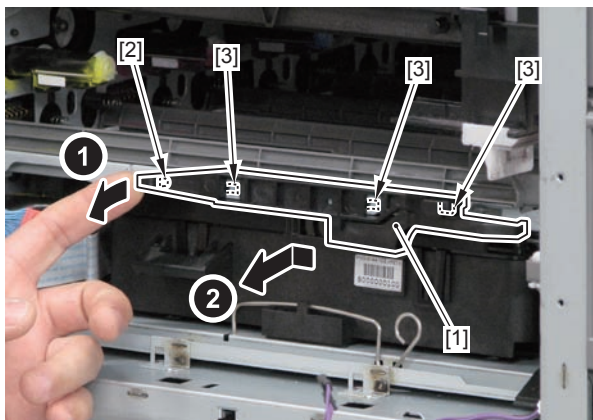
- 1 Hook [2]



F-4-254

1) Remove the Shutter Link Unit [1].

- 1 Boss [2]
- 3 Hooks [3]

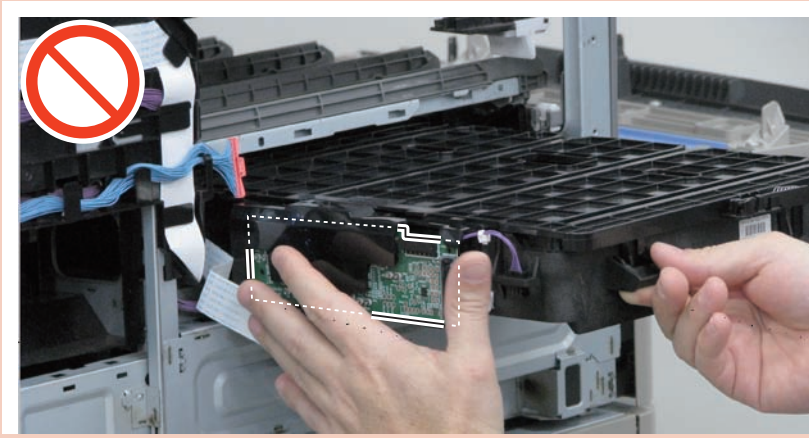


F-4-253

- 3) Pull out the Laser Scanner [1].
 - 1 Edge Saddle [2]

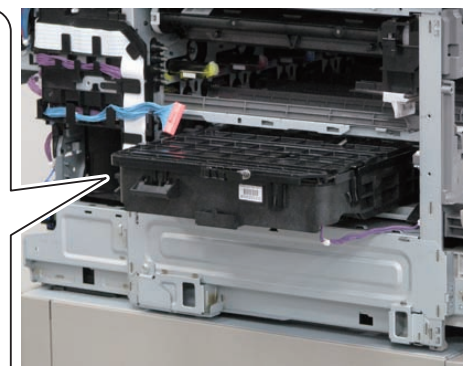
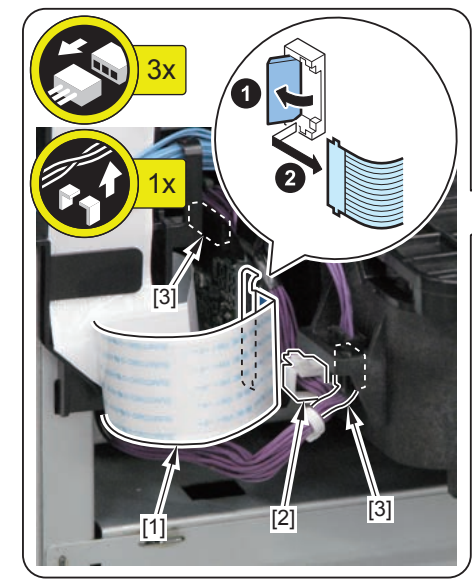
CAUTION:

Do not touch the PCB installed on the Laser Scanner Unit when disassembling/ assembling.



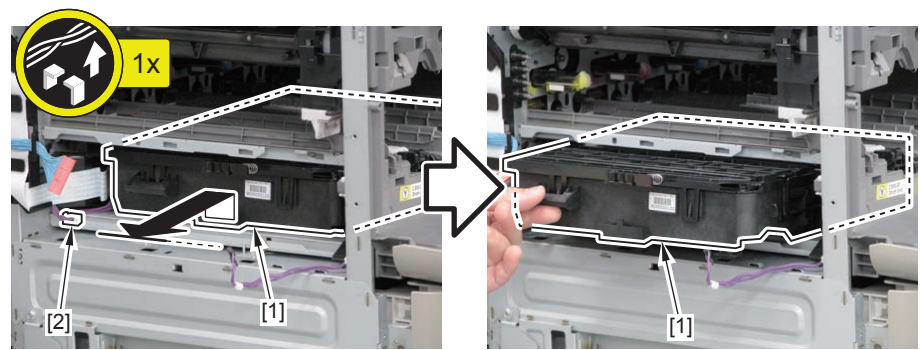
F-4-255

- 4) Free the Flat Cable [1] from the Wire Saddle [2], and disconnect the 2 connectors [3].

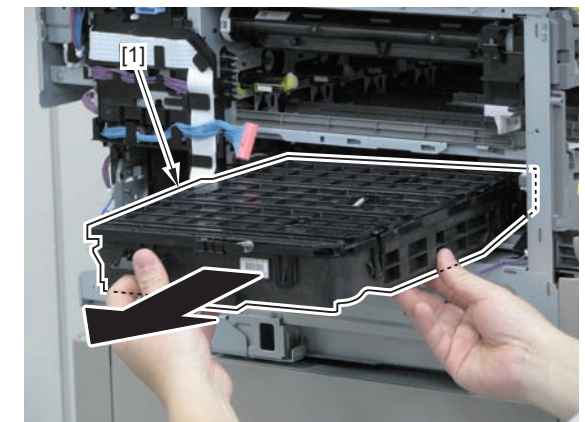


F-4-257

- 5) Remove the Laser Scanner Unit [1].



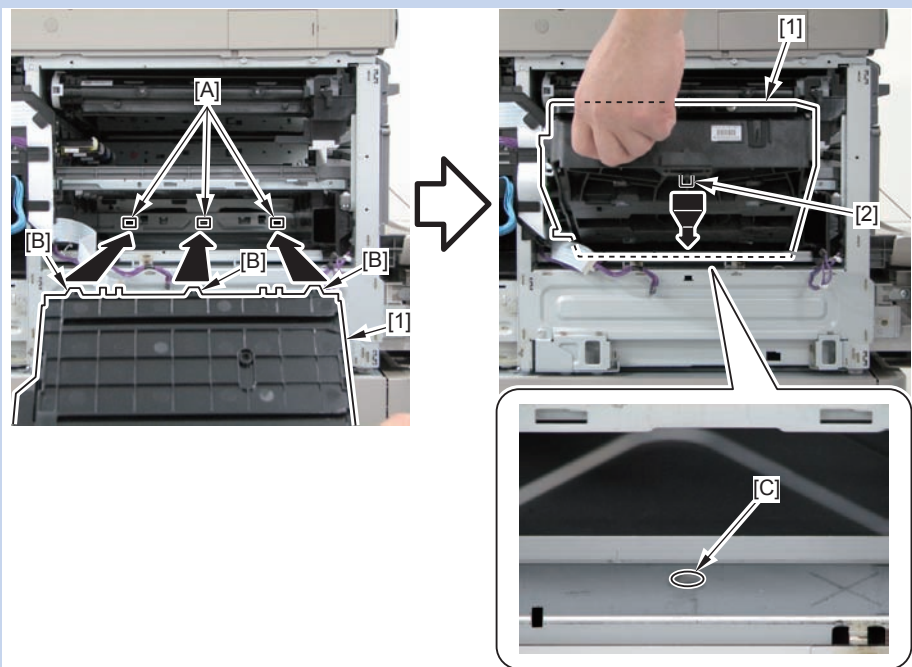
F-4-256



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

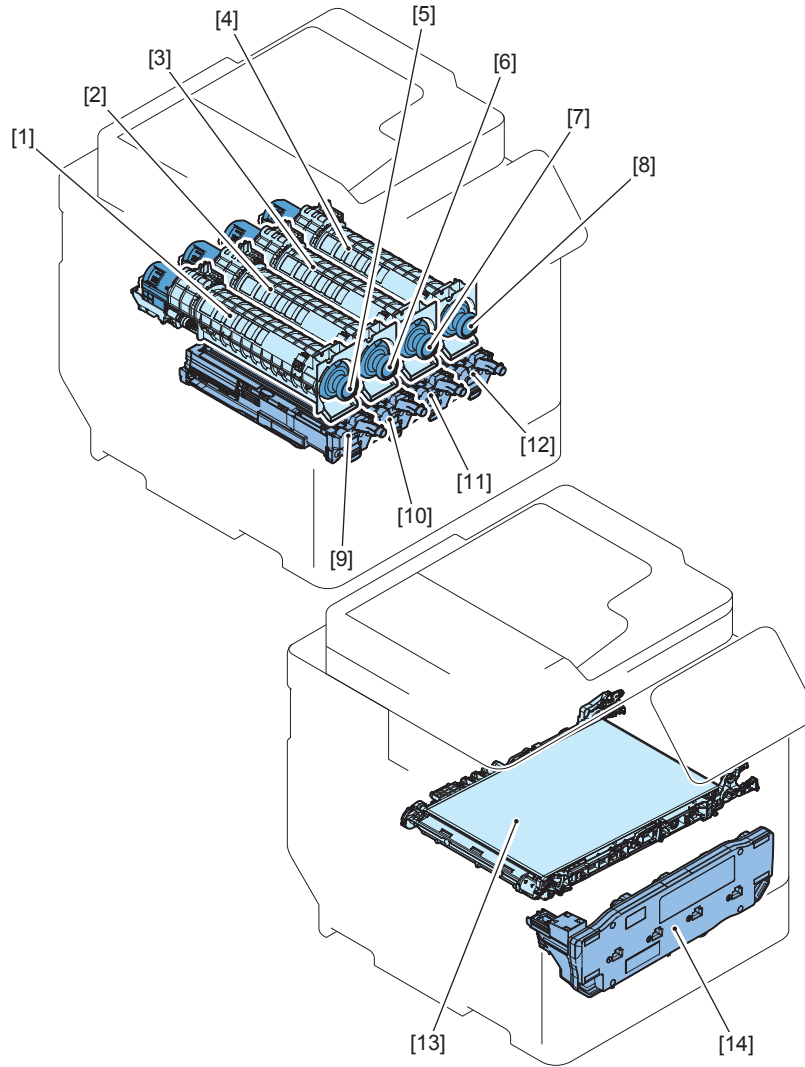
Execute Auto Adjust Gradation and Correct Print Color Mismatch.

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

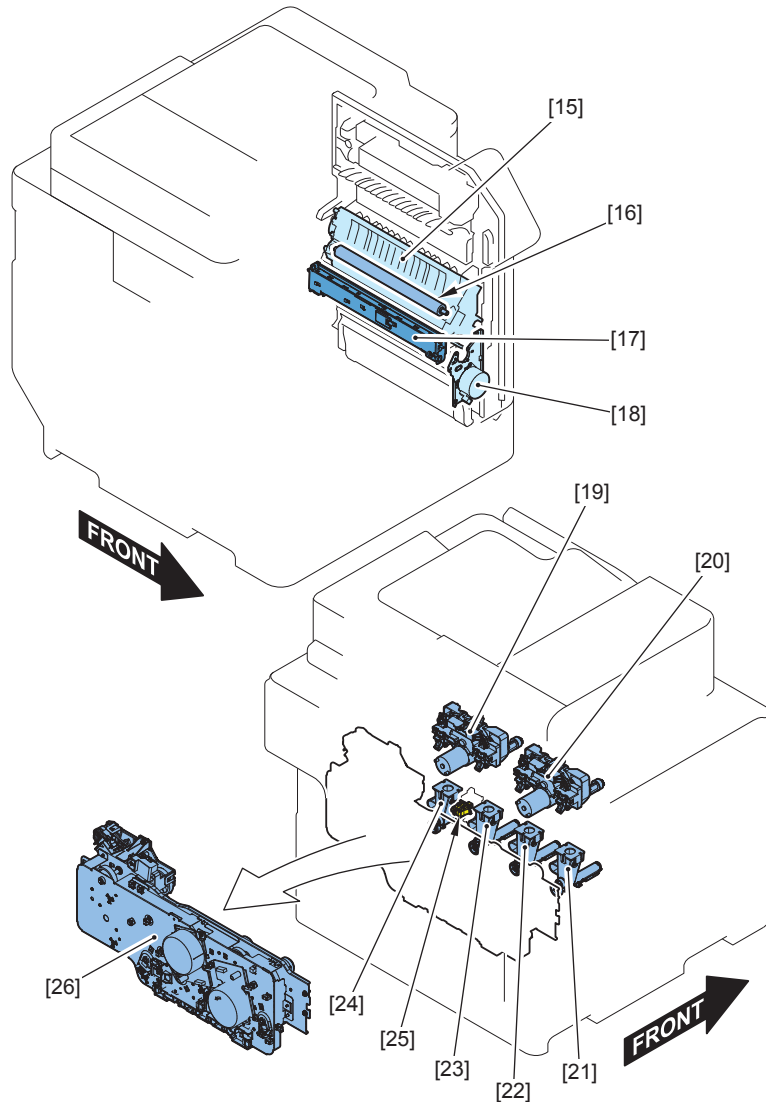
Layout Drawing



F-4-260

No.	Parts Name	Main Unit	Remarks	Reference
[1]	Toner Bottle Mount Unit (Y)	Product Configuration		(Refer to page 4-133)
[2]	Toner Bottle Mount Unit (M)	Product Configuration		(Refer to page 4-133)
[3]	Toner Bottle Mount Unit (C)	Product Configuration		(Refer to page 4-133)
[4]	Toner Bottle Mount Unit (Bk)	Product Configuration		(Refer to page 4-133)
[5]	Toner Cartridge (Y)	Product Configuration		(Refer to page 4-110)
[6]	Toner Cartridge (M)	Product Configuration		(Refer to page 4-110)
[7]	Toner Cartridge (C)	Product Configuration		(Refer to page 4-110)
[8]	Toner Cartridge (K)	Product Configuration		(Refer to page 4-110)
[9]	Drum Unit (Y)	Product Configuration		(Refer to page 4-110)
[10]	Drum Unit (M)	Product Configuration		(Refer to page 4-110)
[11]	Drum Unit (C)	Product Configuration		(Refer to page 4-110)
[12]	Drum Unit (Bk)	Product Configuration		(Refer to page 4-110)
[13]	ITB Unit	Product Configuration		(Refer to page 4-113)
[14]	Container Waste Toner	Product Configuration		(Refer to page 4-109)

T-4-90



F-4-261

No.	Parts Name	Main Unit	Remarks	Reference
[15]	Secondary transfer outer Roller Guide Unit	Right Cover Unit		(Refer to page 4-121)
[16]	Secondary transfer outer Roller Unit	Secondary Transfer Outer Roller Guide Unit		(Refer to page 4-120)
[17]	Registration Patch Sensor Unit	Product Configuration		(Refer to page 4-118)
[18]	Registration Drive Unit	Product Configuration		(Refer to page 4-124)
[19]	Bottle Drive Unit (CK)	Product Configuration		(Refer to page 4-133)
[20]	Bottle Drive Unit (YM)	Product Configuration		(Refer to page 4-133)
[21]	Hopper Unit (Y)	Product Configuration		(Refer to page 4-128)
[22]	Hopper Unit (M)	Product Configuration		(Refer to page 4-128)
[23]	Hopper Unit (C)	Product Configuration		(Refer to page 4-128)
[24]	Hopper Unit (Bk)	Product Configuration		(Refer to page 4-128)
[25]	ITB Pressure Release Switch	Product Configuration	SW07	(Refer to page 4-131)
[26]	Main Drive Unit	Product Configuration		(Refer to page 4-126)

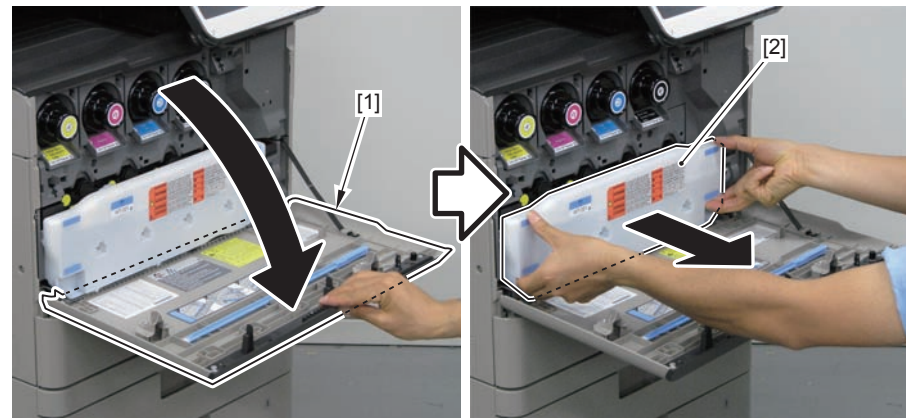
T-4-91

Removing the Waste Toner Container



F-4-262

1) Open the Front Cover [1], and remove the Waste Toner Container [2].



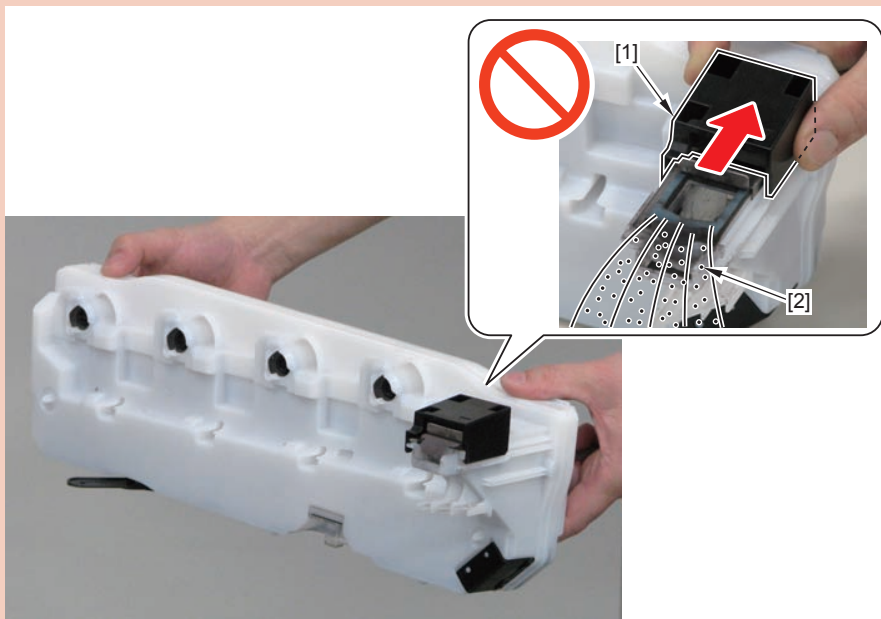
F-4-264

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

Removing the Toner Container (Y/M/C/Bk)



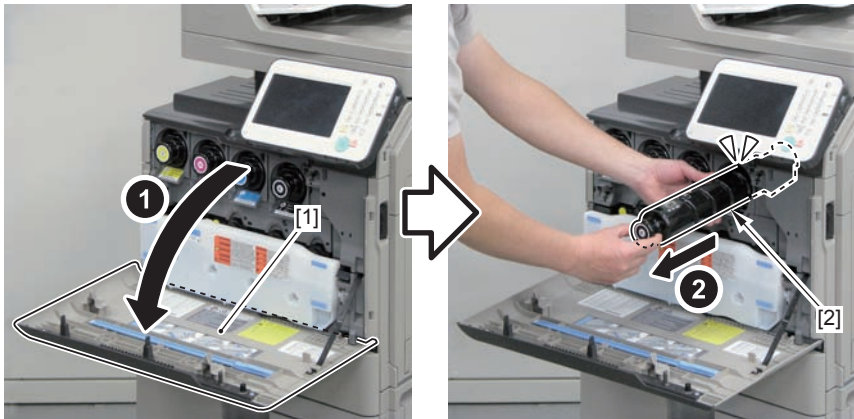
F-4-265

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 4-109).

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.

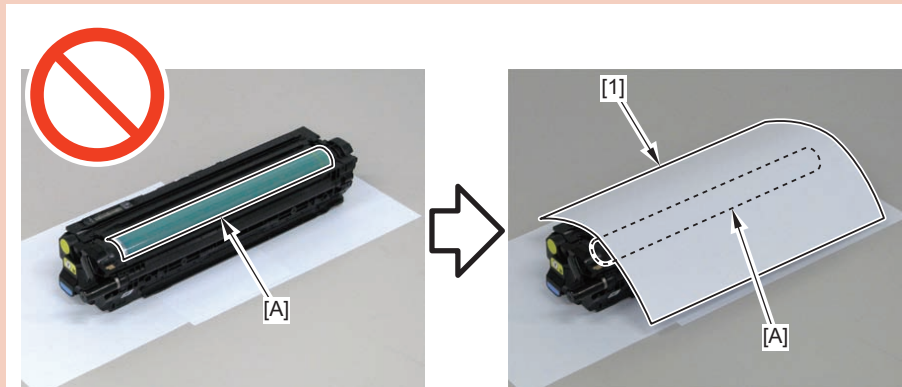
For this reason, be careful not to touch the drum part [A] when handling the Drum Unit.



F-4-268

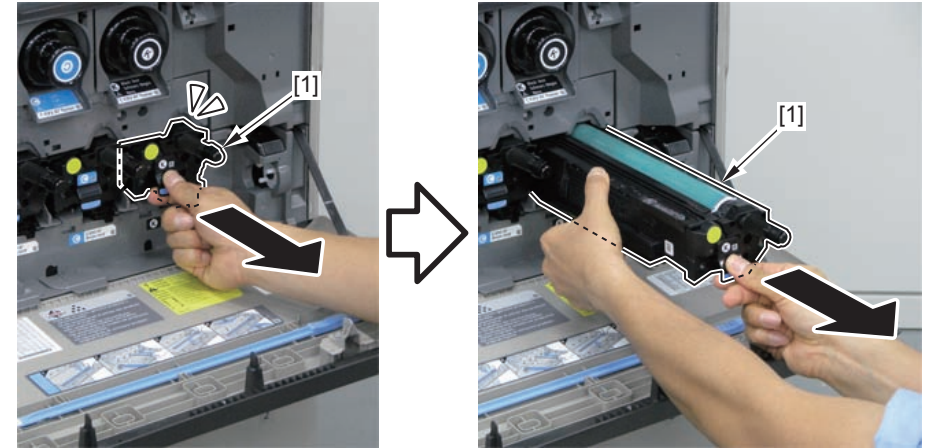
CAUTION:

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].

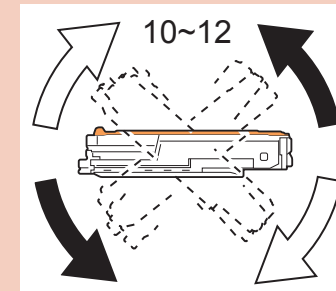


F-4-270

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.

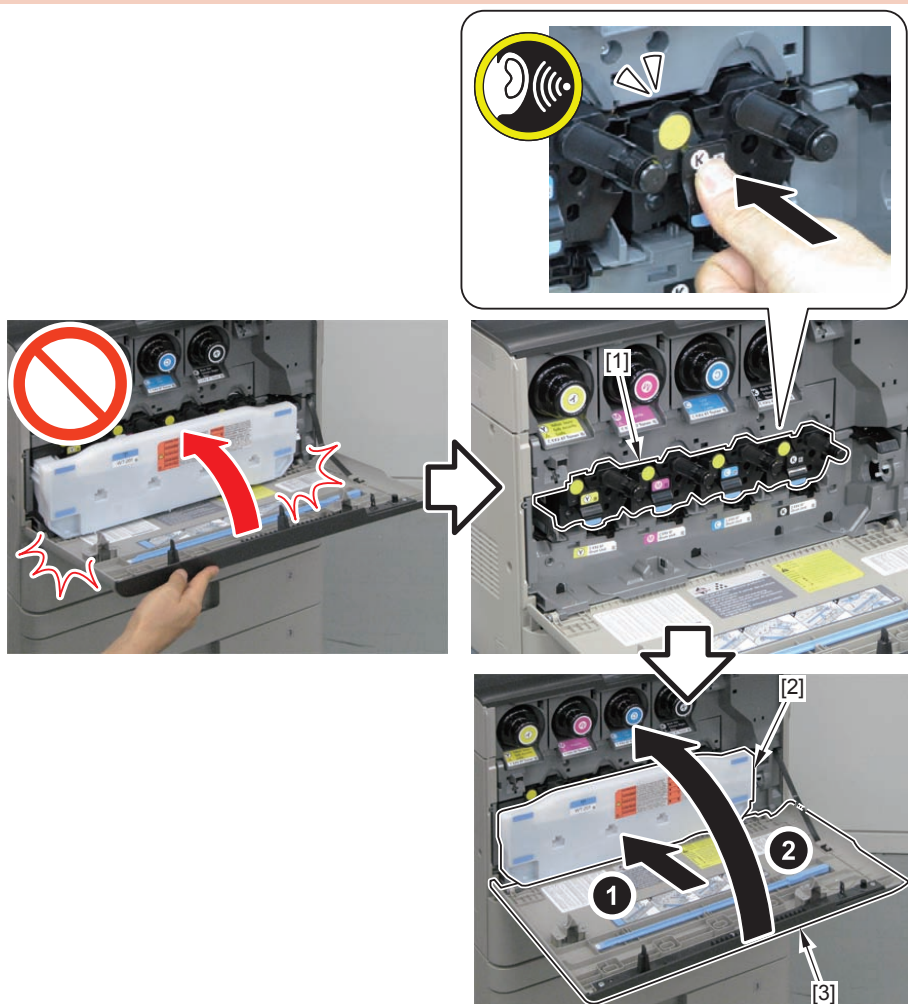


F-4-271

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

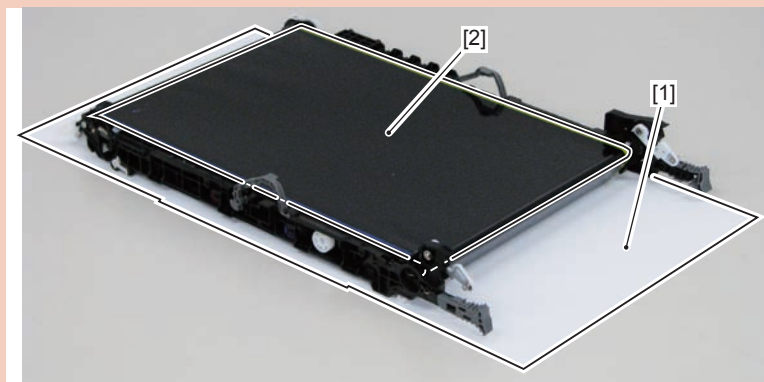
Procedure

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:

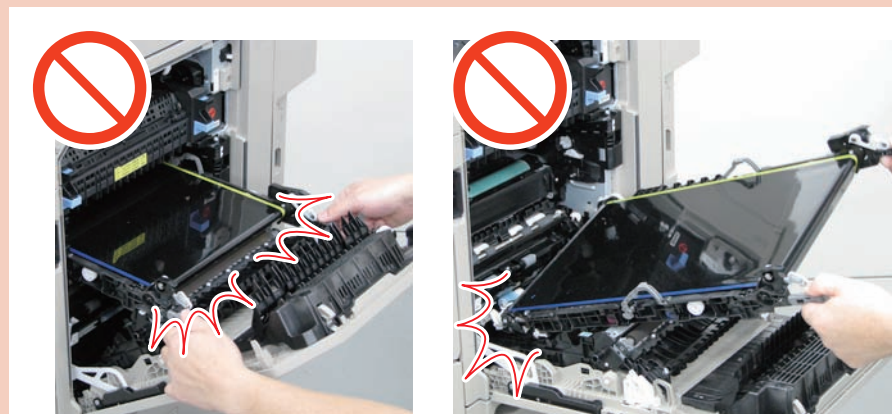
- Place the paper [1] on a level space so as not to damage the ITB [2].



F-4-274

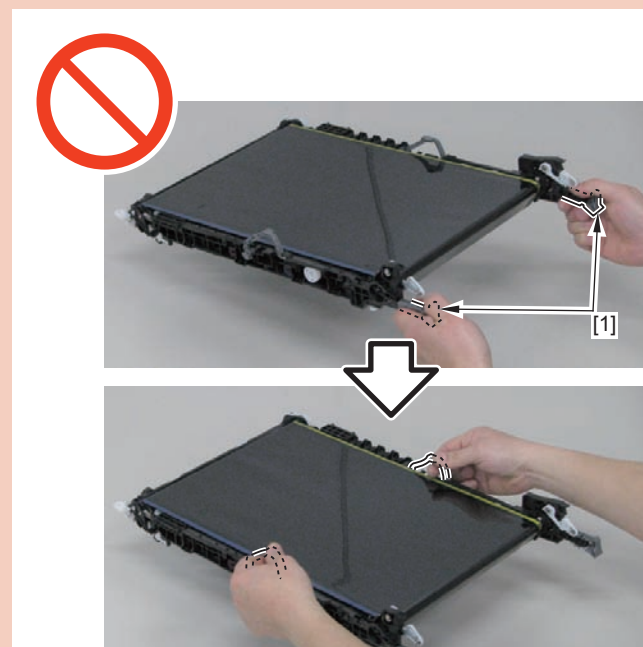
CAUTION:

- Do not damage the ITB [1] when disassembling/assembling.



F-4-275

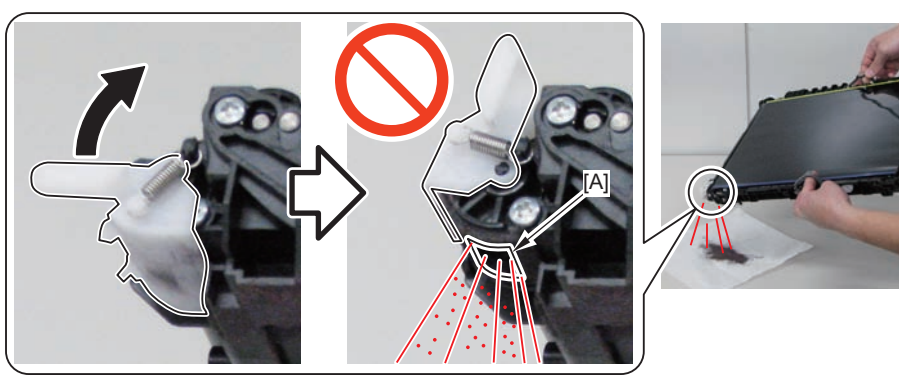
- When removing the ITB Unit, do not hold the 2 Push Levers [1] to hold the unit.



F-4-276

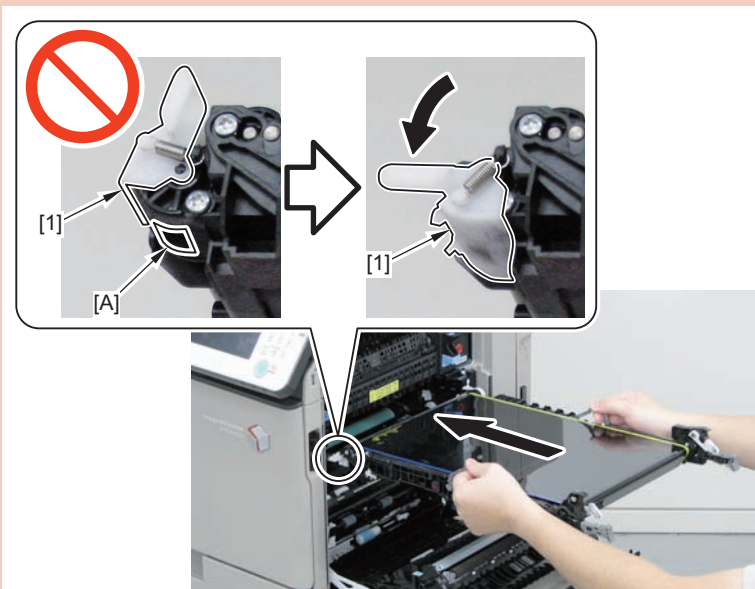
CAUTION:

- Do not open the outlet [A] of the Transfer Cleaning Shutter when disassembling/assembling. Otherwise, toner may scatter.



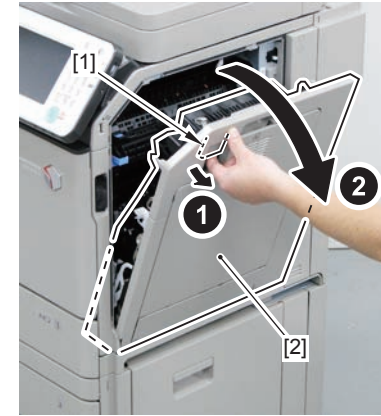
F-4-277

- 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.



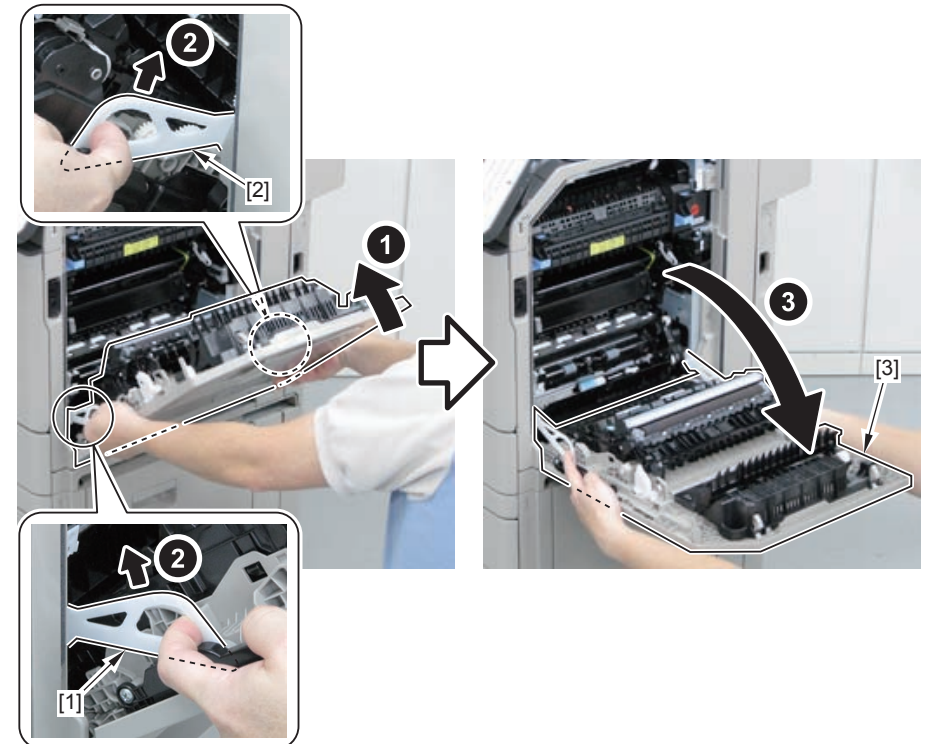
F-4-278

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



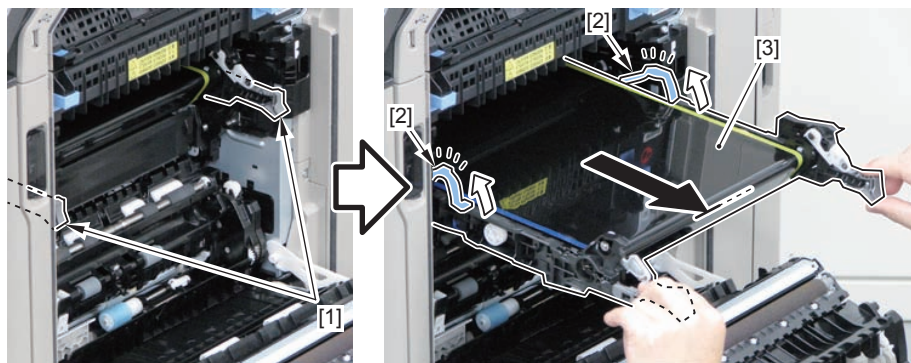
F-4-279

- 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].



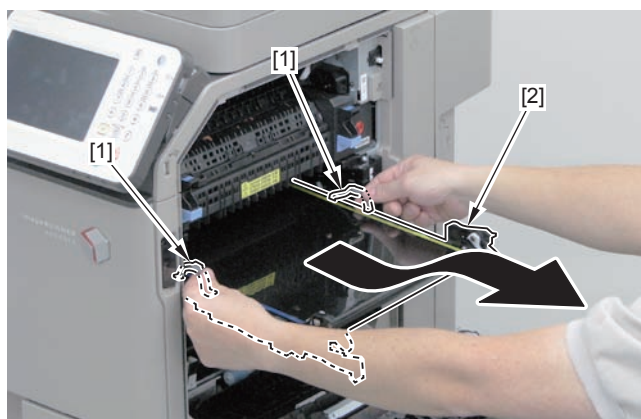
F-4-280

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.

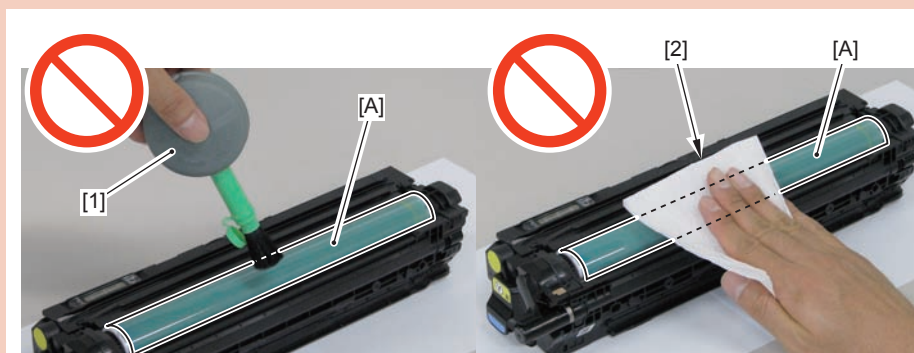
● Preparation

- 1) Remove the Waste Toner Container.
- 2) Remove the Drum Unit (Y/M/C/Bk) (remove the Drum Unit of the Y color).

● Procedure

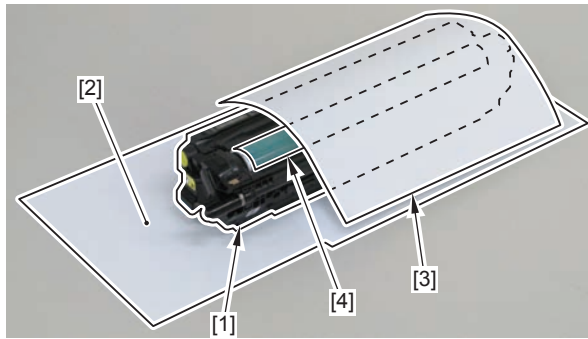
CAUTION:

Do not clean the drum surface [A] with a blower [1] or lint-free paper [2].



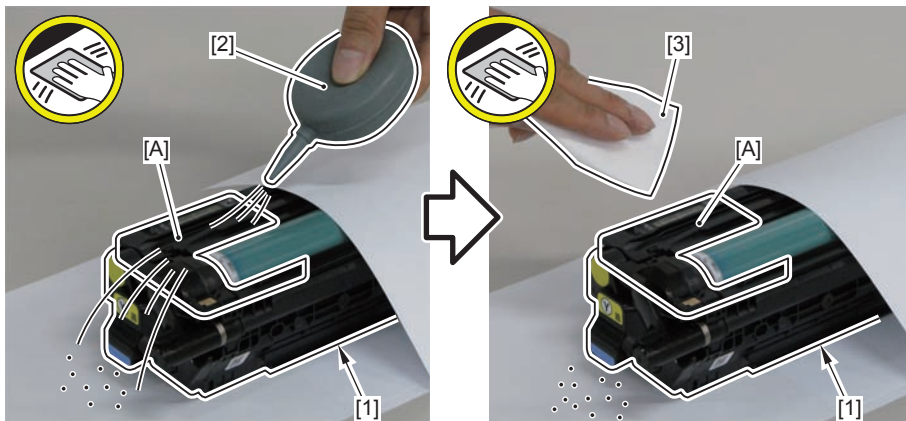
F-4-283

- 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

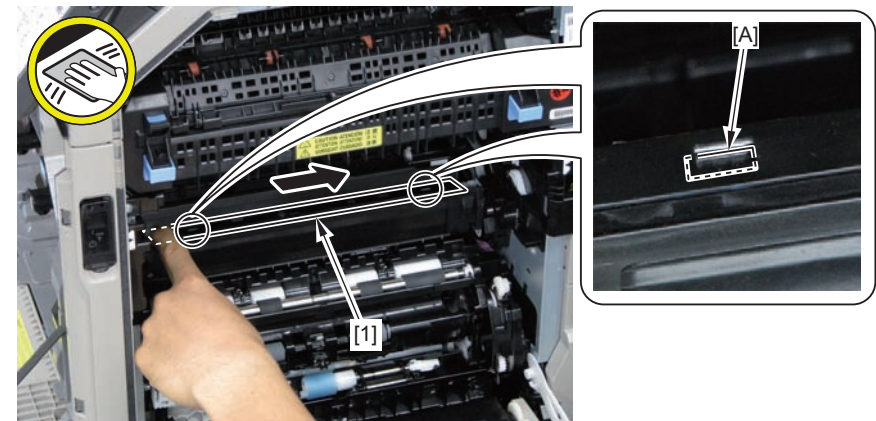
- 1) Remove the Waste Toner Container.
- 2) Remove the Drum Unit (remove Bk color).
- 3) Remove the ITB Unit.

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.

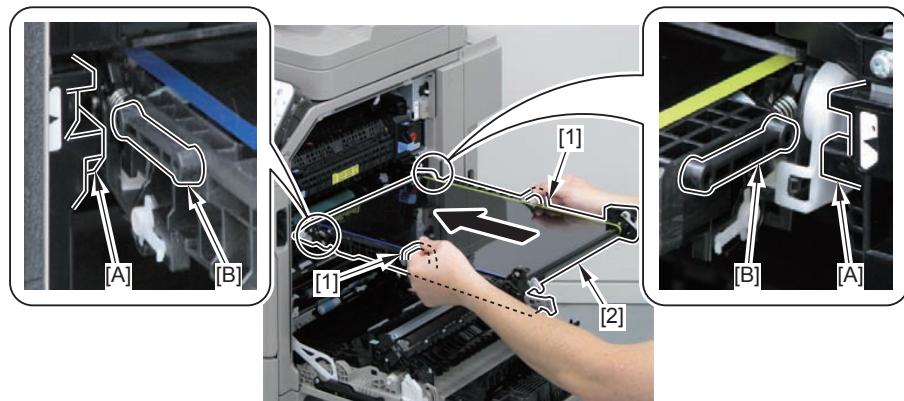


F-4-286

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.

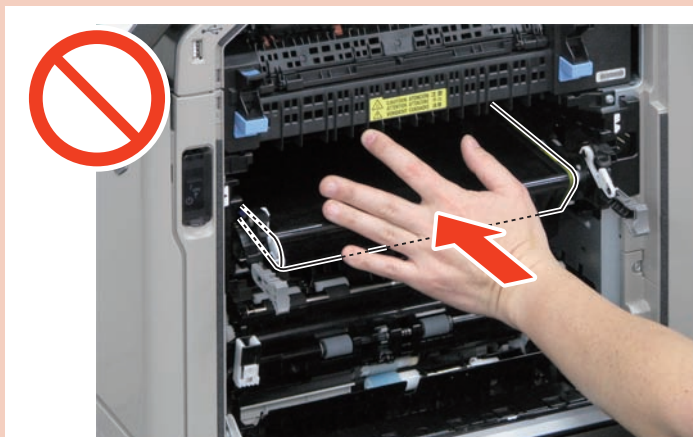


F-4-287

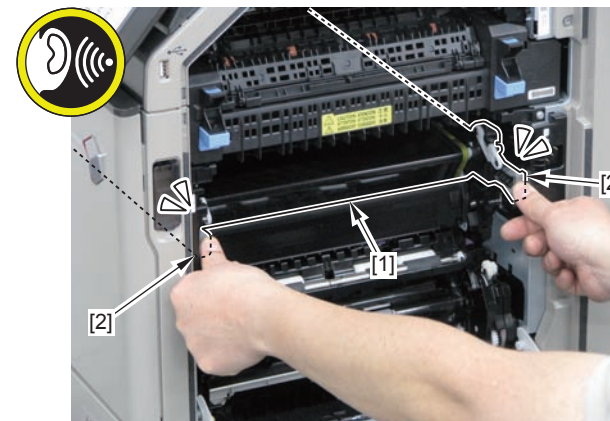
2) Push the 2 Push Levers [2] of the ITB Unit [1] to install the ITB Unit.

CAUTION:

When installing the ITB Unit, do not push it in the machine by pushing the ITB [1].

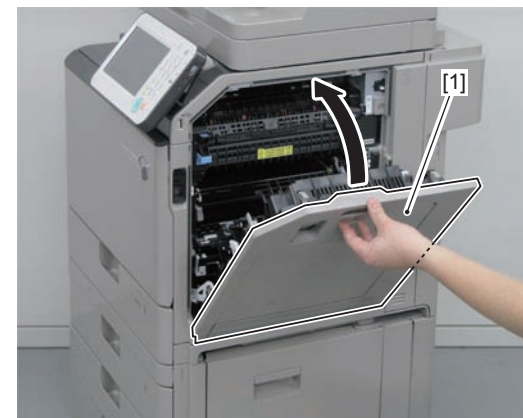


F-4-288



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

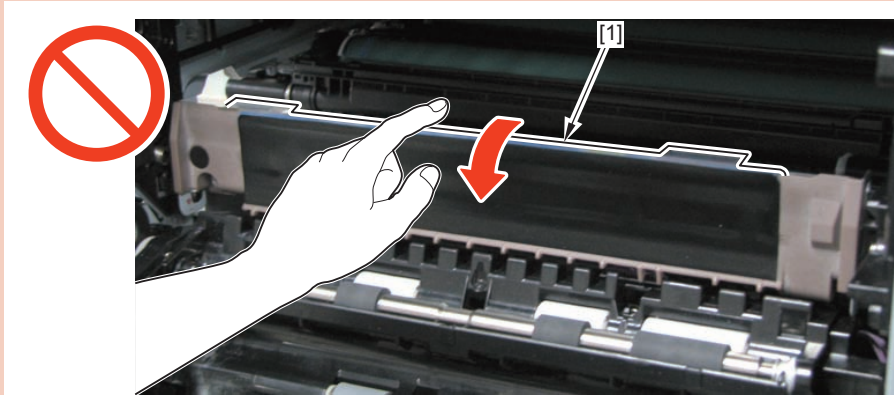
Preparation

- 1) Remove the ITB Unit(Refer to page 4-113).
- 2) Remove the Waste Toner Container(Refer to page 4-109).
- 3) Remove the Drum Unit (remove Bk color)(Refer to page 4-110).

Procedure

CAUTION:

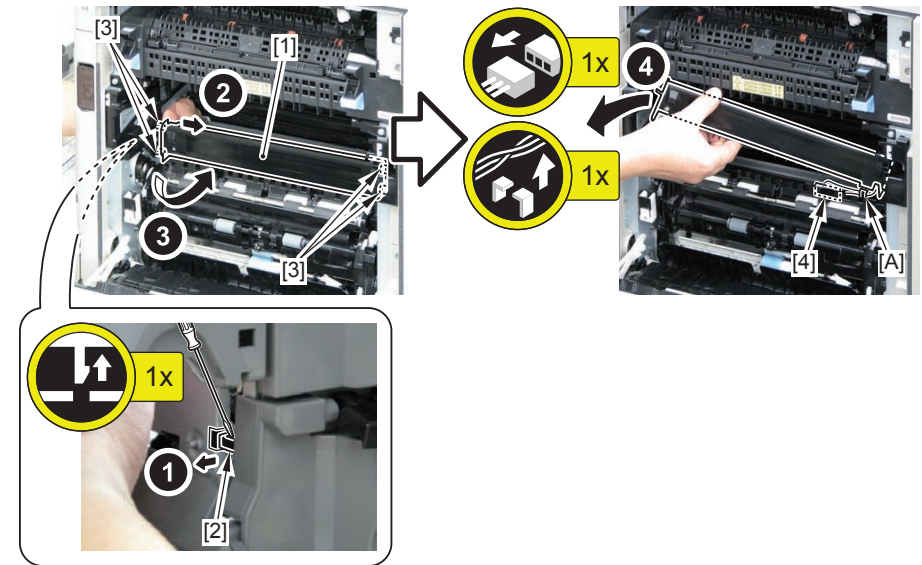
- Do not disassemble the Registration Patch Sensor Unit because it requires adjustment.
- Do not to fold the Plastic Film Sheet [1] when disassembling/assembling.



F-4-292

1) Remove the Registration Patch Sensor Unit [1].

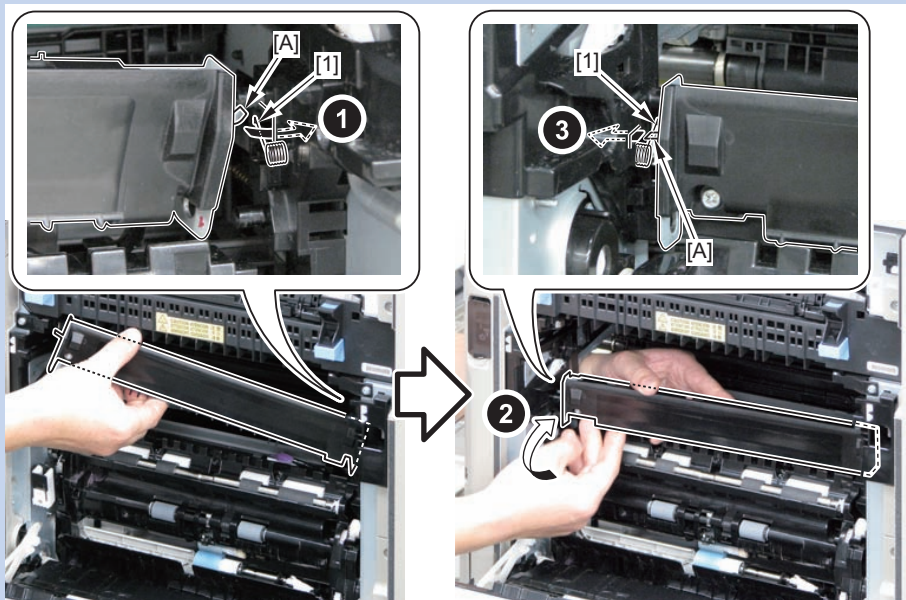
- 1 Claw [2]
- 4 Shafts [3]
- 1 Connector [4]
- Harness Guide [A]



F-4-293

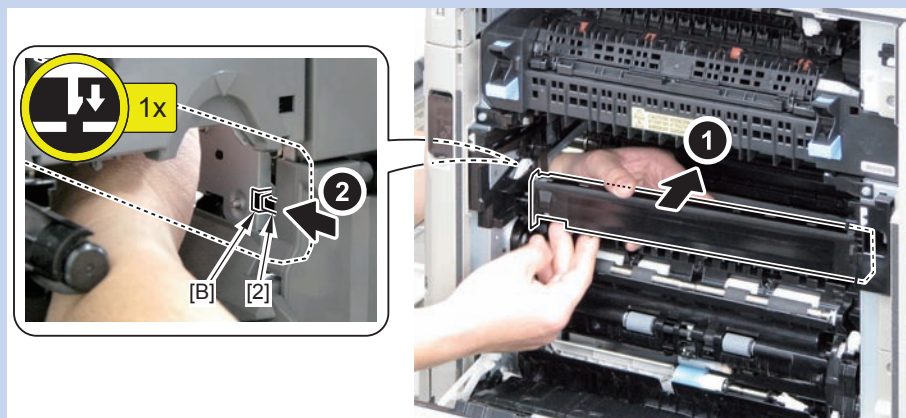
NOTE: How to install the Registration Patch Sensor Unit

- 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

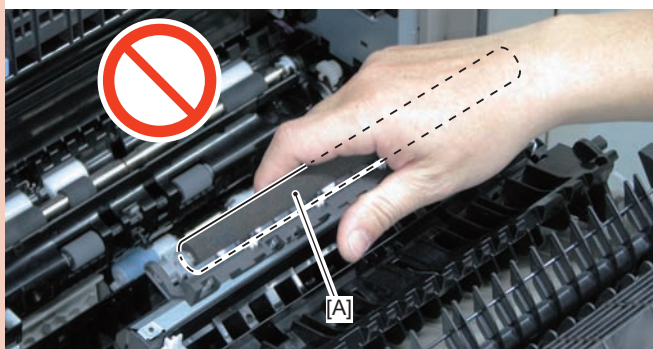
Procedure

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.

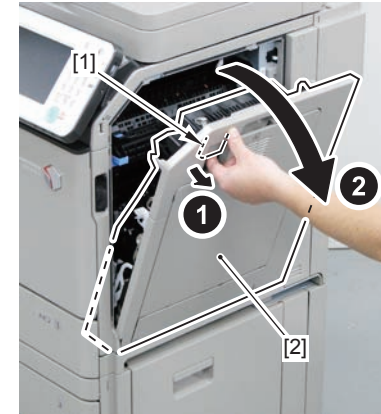
CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.



F-4-297

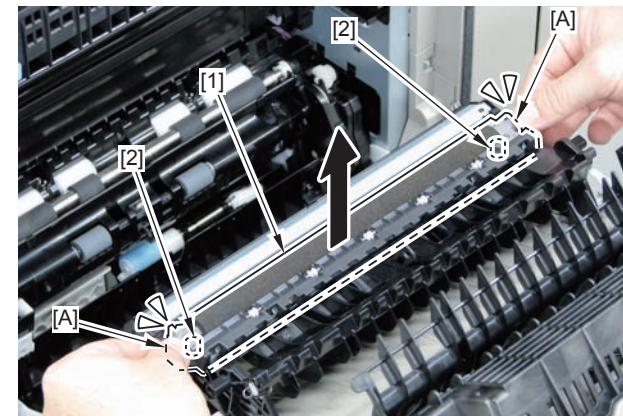
1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].



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

Removing the Secondary Transfer Outer Roller Guide Unit

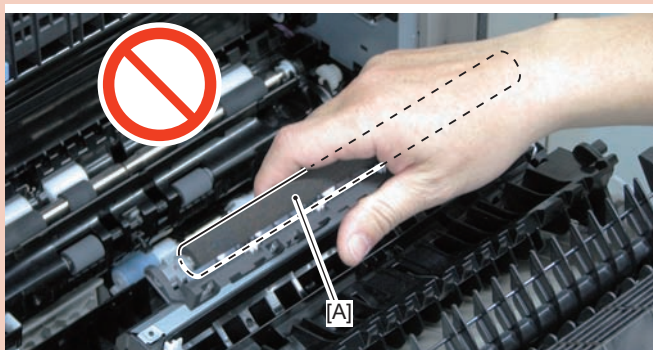


F-4-300

Procedure

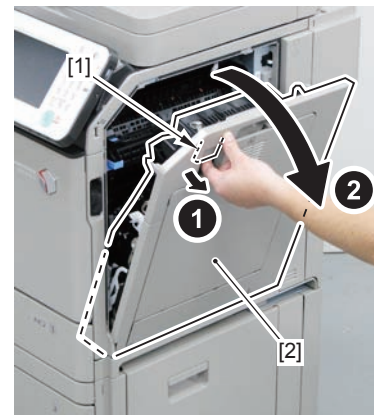
CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.



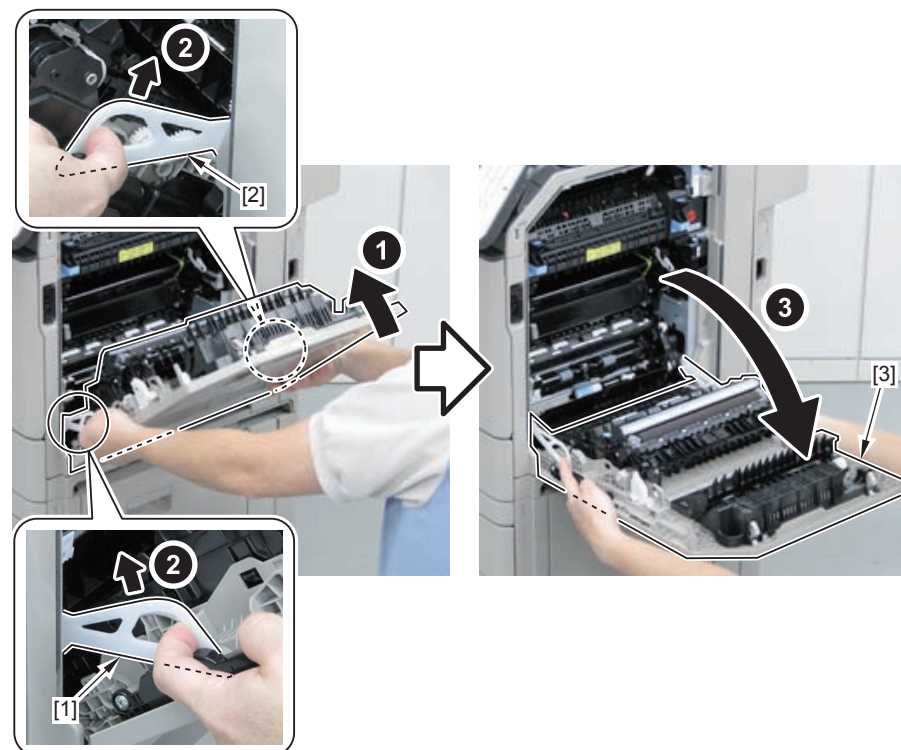
F-4-301

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



F-4-302

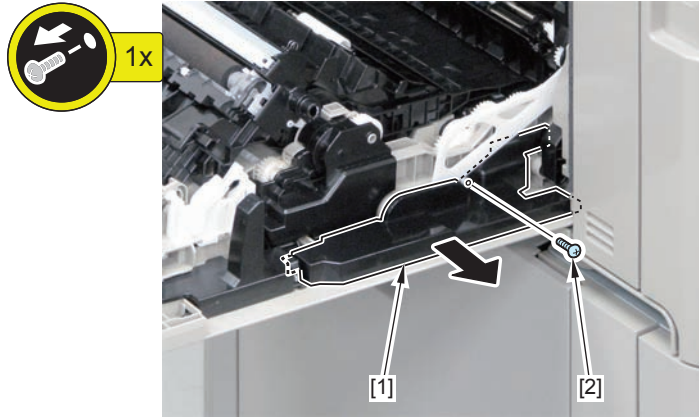
2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].



F-4-303

3) Remove the Right Cover Stopper Rear Holder [1].

- 1 Screw [2]



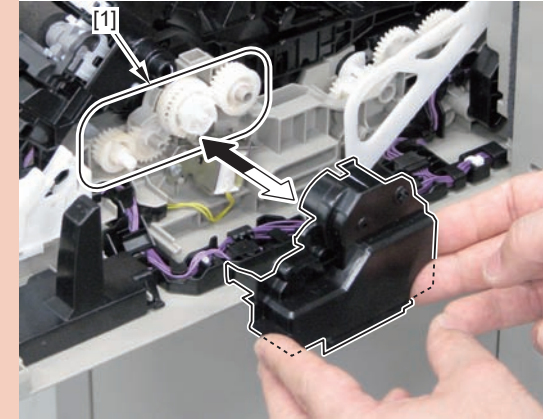
F-4-304

4) Remove the Duplex Gear Holder [1].

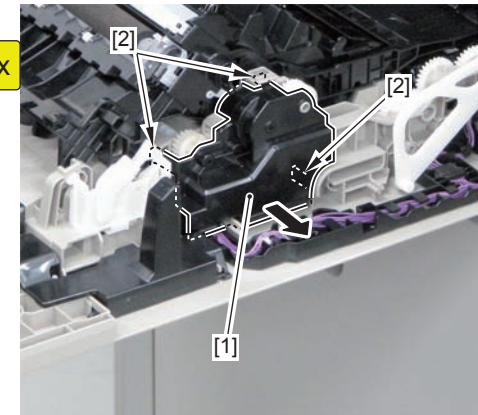
- 3 Claws [2]

CAUTION:

Be sure to perform work carefully so as not to damage the gear [1] when disassembling/ assembling.



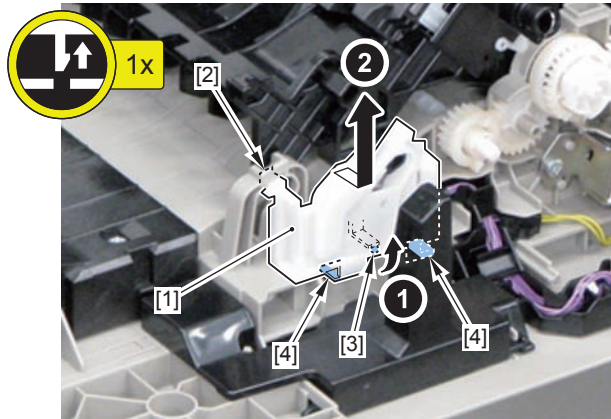
F-4-305



F-4-306

5) Remove the Lock Guide Rear [1].

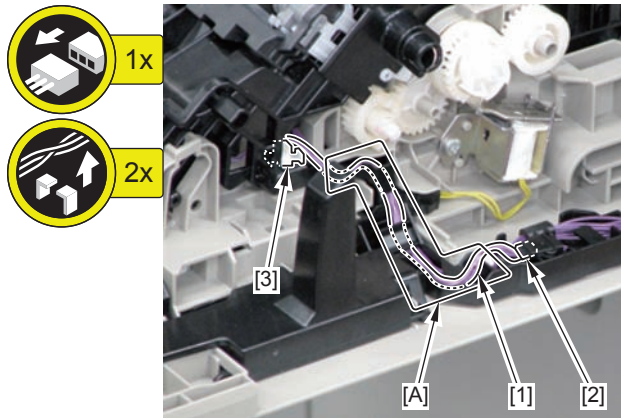
- 1 Claw [2]
- 1 Boss [3]
- 2 Hook [4]



F-4-307

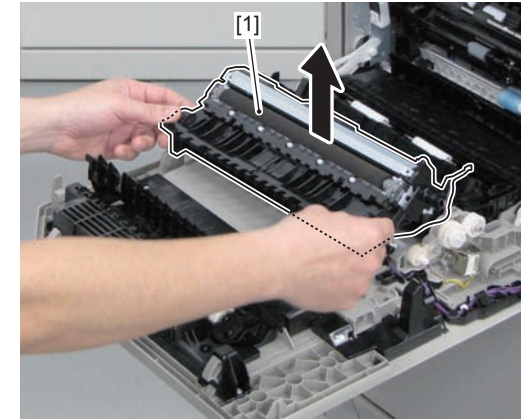
6) Free the Arch Sensor Harness [1].

- 1 Connector [2]
- Harness Guide [A]
- 1 Reuse Band [3]



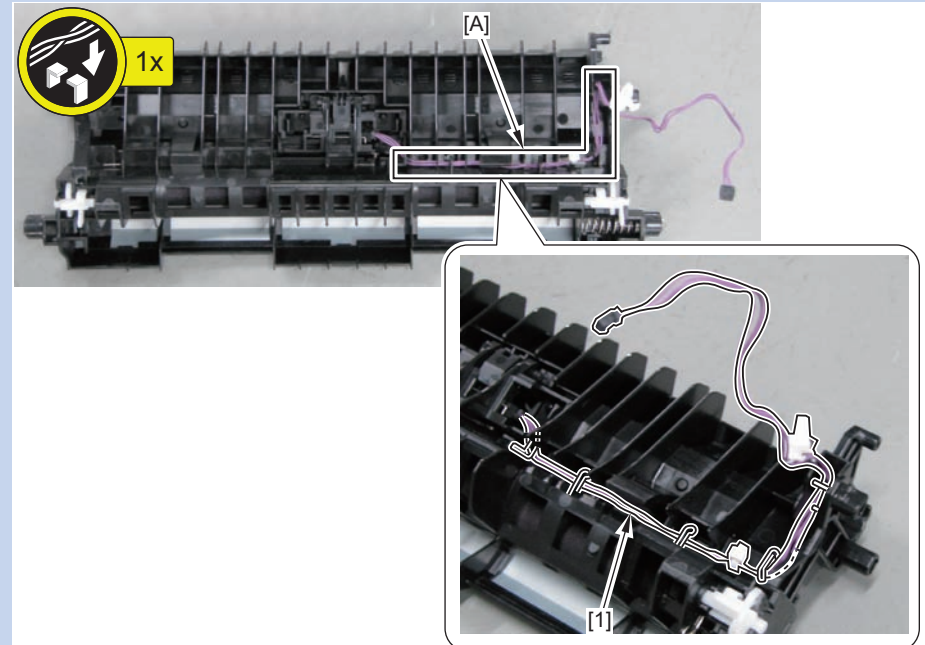
F-4-308

7) Remove the Secondary Transfer Outer Roller Guide Unit [1].



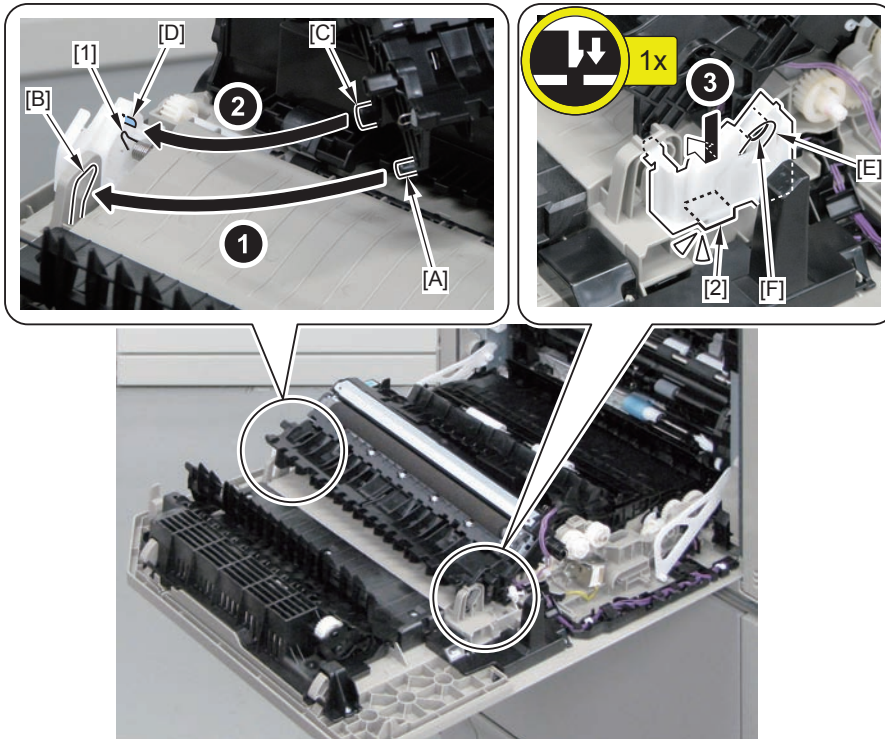
F-4-309

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

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



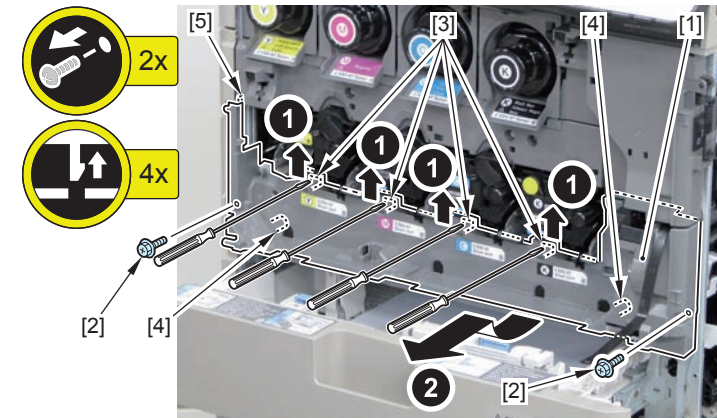
F-4-312

Preparation

- 1) Remove the Front Cover (Refer to page 4-34).
- 2) Remove the Right Front Cover (Refer to page 4-38).
- 3) Remove the Waste Toner Container (Refer to page 4-109).

Procedure

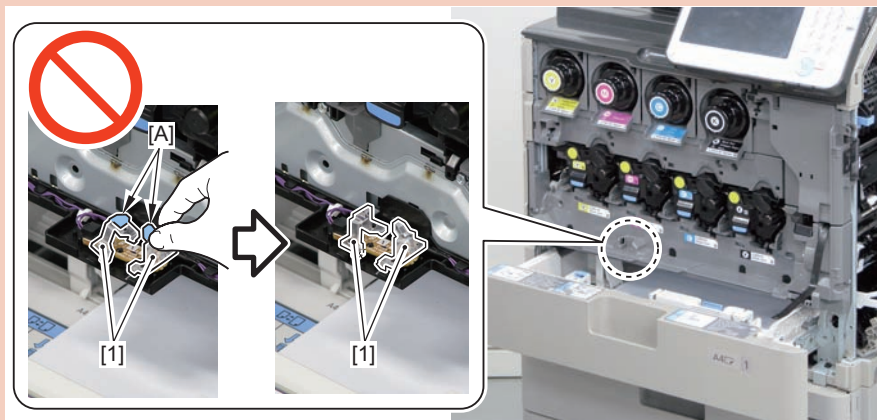
- 1) Remove the Front Inner Lower Cover [1].
 - 2 Screws [2]
 - 4 Claws [3]
 - 2 Bosses [4]
 - 1 Hook [5]



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

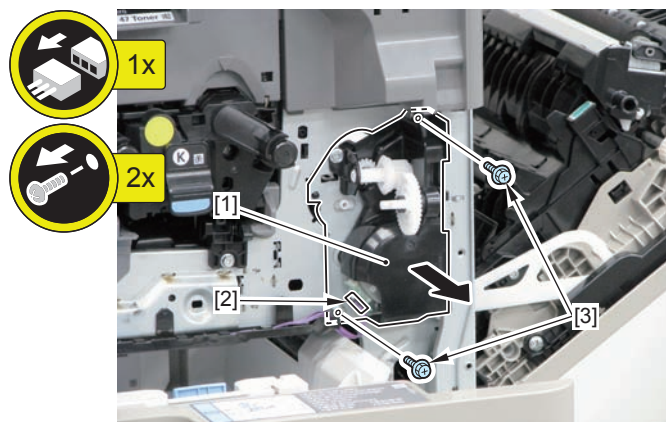
NOTE: Actions after assembly

Execute Correct Print Color Mismatch.

Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

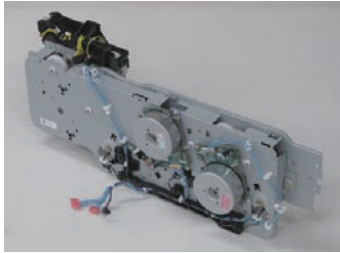
2) Remove the Registration Drive Unit [1].

- 1 Connector [2]
- 2 Screws [3]



F-4-315

Removing the Main Drive Unit



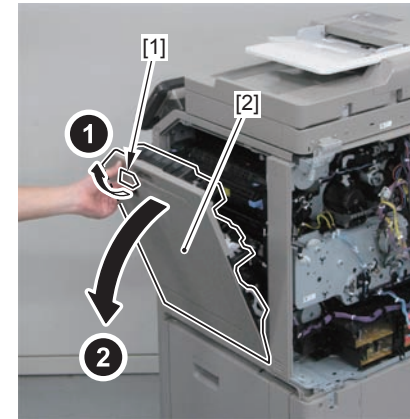
F-4-316

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Fax Unit (to be removed for models equipped with a fax) (Refer to page 4-102).
- 3) Remove the Main Controller Unit (Refer to page 4-81).
- 4) Remove the Low-voltage Power Supply PCB Unit (Refer to page 4-94).
- 5) Remove the DC Controller PCB Unit (Refer to page 4-87).

Procedure

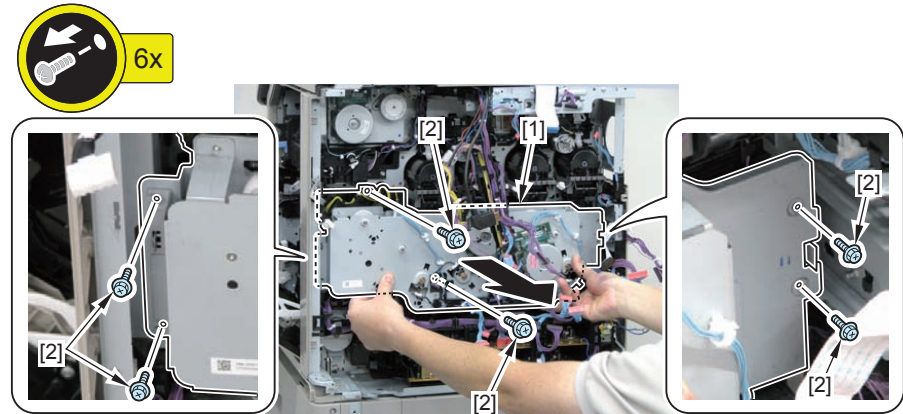
- 1) Pull the Right Cover Open/Close Lever [1], and open the Right Cover Unit [2].



F-4-317

- 2) Remove the Main Drive Unit [1].

- 6 Screws [2]



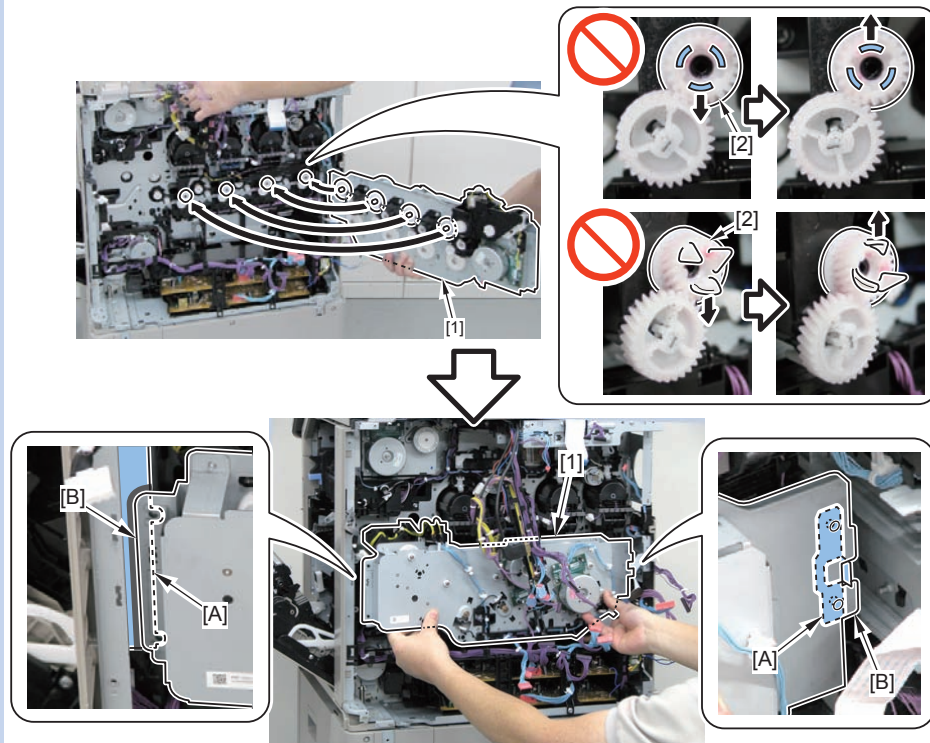
F-4-318

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].

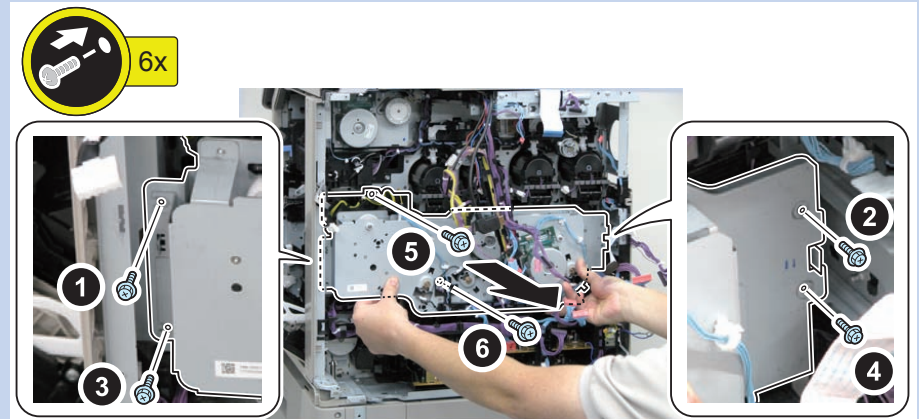
If there is a gap, make sure to align one of 3 protrusions of the cam [2] on machine's side to the top position and then assemble it.



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

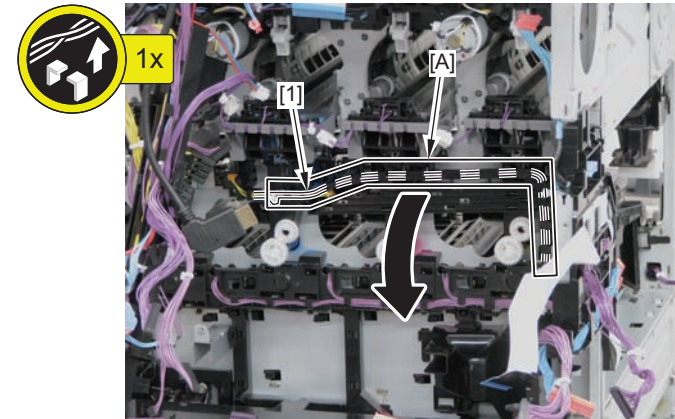
Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

Removing the Hopper Unit (Y/M/C/Bk)



F-4-321

13) Free the harness [1] from the Harness Guide [A] of the High-voltage Contact Unit.



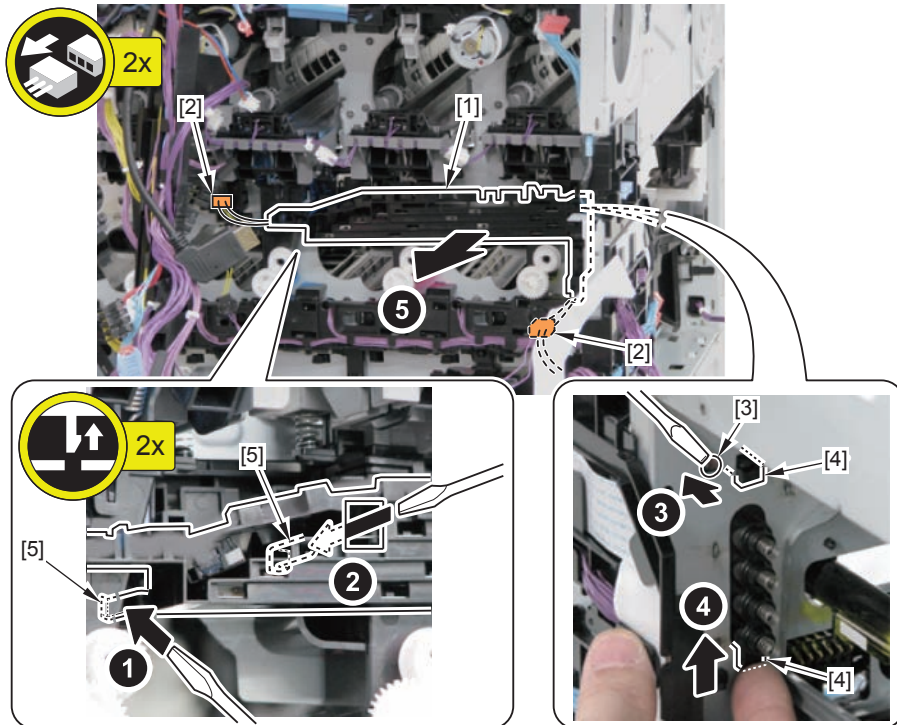
F-4-322

Preparation (for the Hopper Unit (Y/M/C))

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Fax Unit (to be removed for models equipped with a fax) (Refer to page 4-102).
- 3) Remove the Main Controller Unit (Refer to page 4-81).
- 4) Remove the Low-voltage Power Supply PCB Unit (Refer to page 4-94).
- 5) Remove the DC Controller PCB Unit (Refer to page 4-87).
- 6) Remove the Main Drive Unit (Refer to page 4-126).
- 7) Remove the Waste Toner Container (Refer to page 4-109).
- 8) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed) (Refer to page 4-110).
- 9) Remove the Drum Unit (Y/M/C/Bk) (remove the Drum Unit of the color to be removed) (Refer to page 4-110).
- 10) Remove the ITB Unit (Refer to page 4-113).
- 11) Remove the Left Lower Cover (Refer to page 4-37).
- 12) Remove the Primary Transfer High-voltage PCB Unit (Refer to page 4-91).

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 4-35).
- 2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-102).
- 3) Remove the Main Controller Unit(Refer to page 4-81).
- 4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-94).
- 5) Remove the DC Controller PCB Unit(Refer to page 4-87).
- 6) Remove the Main Drive Unit(Refer to page 4-126).
- 7) Remove the Waste Toner Container(Refer to page 4-109).
- 8) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed)(Refer to page 4-110).
- 9) Remove the Drum Unit (Y/M/C/Bk) (remove the Drum Unit of the color to be removed) (Refer to page 4-110).
- 10) Remove the ITB Unit(Refer to page 4-113).

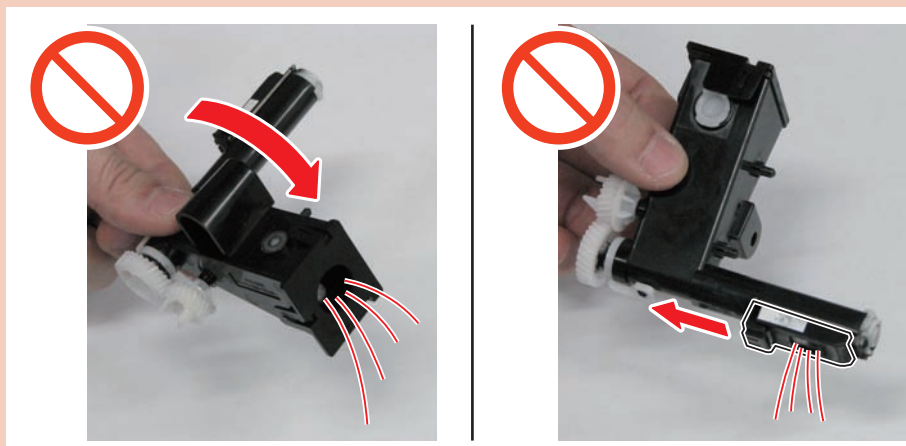
■ Procedure

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

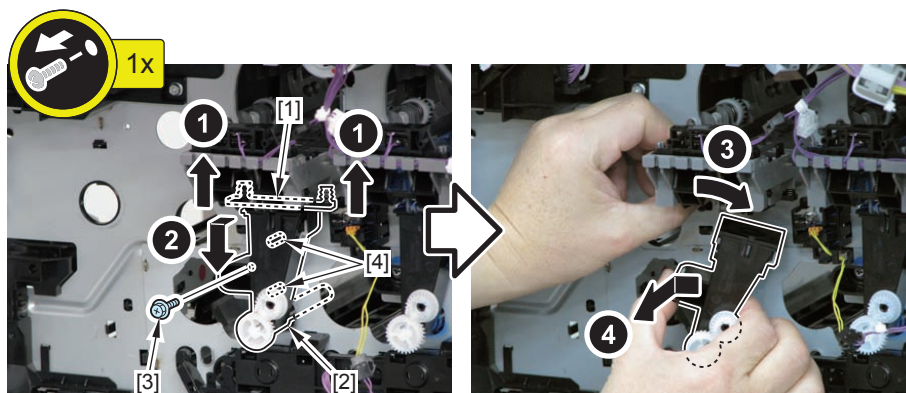
Execute Auto Adjust Gradation and Correct Print Color Mismatch.

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



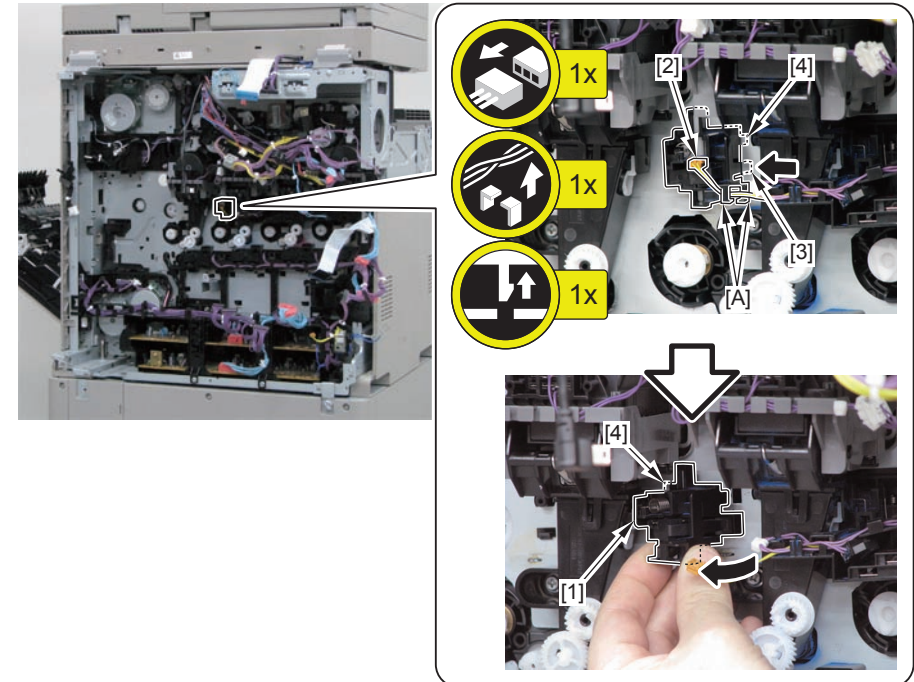
F-4-326

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Fax Unit (to be removed for models equipped with a fax) (Refer to page 4-102).
- 3) Remove the Main Controller Unit (Refer to page 4-81).
- 4) Remove the Low-voltage Power Supply PCB Unit (Refer to page 4-94).
- 5) Remove the DC Controller PCB Unit (Refer to page 4-87).
- 6) Remove the Main Drive Unit (Refer to page 4-126).

Procedure

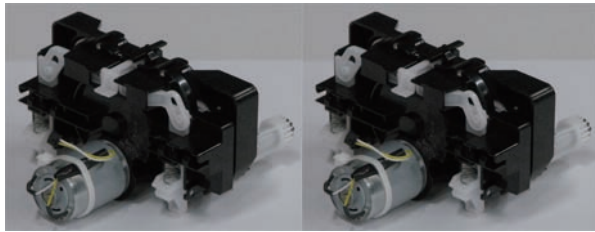
- 1) Remove the ITB Pressure Release Switch [1].
 - 1 Connector [2]
 - Harness Guide [A]
 - 1 Claw [3]
 - 2 Hooks [4]



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 4-35).
- 2) Remove the Fax Unit (to be removed for models equipped with a fax) (Refer to page 4-102).
- 3) Remove the Main Controller Unit (Refer to page 4-81).
- 4) Remove the Low-voltage Power Supply PCB Unit (Refer to page 4-94).
- 5) Remove the DC Controller PCB Unit (Refer to page 4-87).
- 6) Remove the Delivery Tray (Refer to page 4-46).
- 7) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed) (Refer to page 4-110).

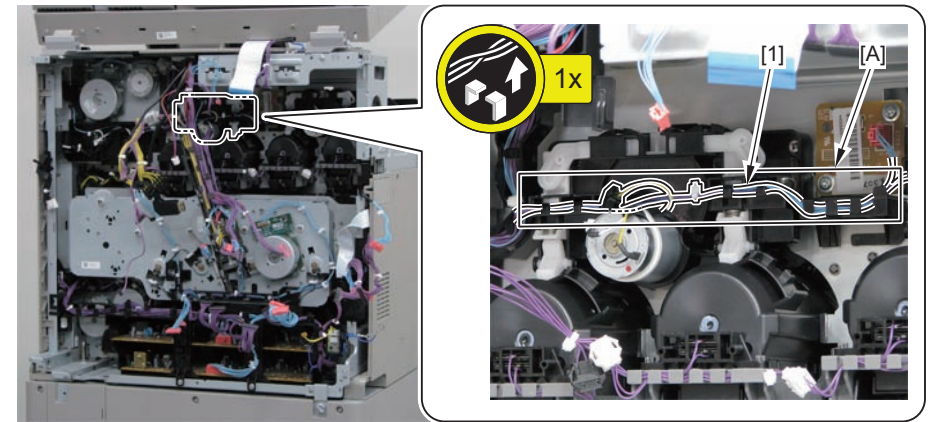
Procedure

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].

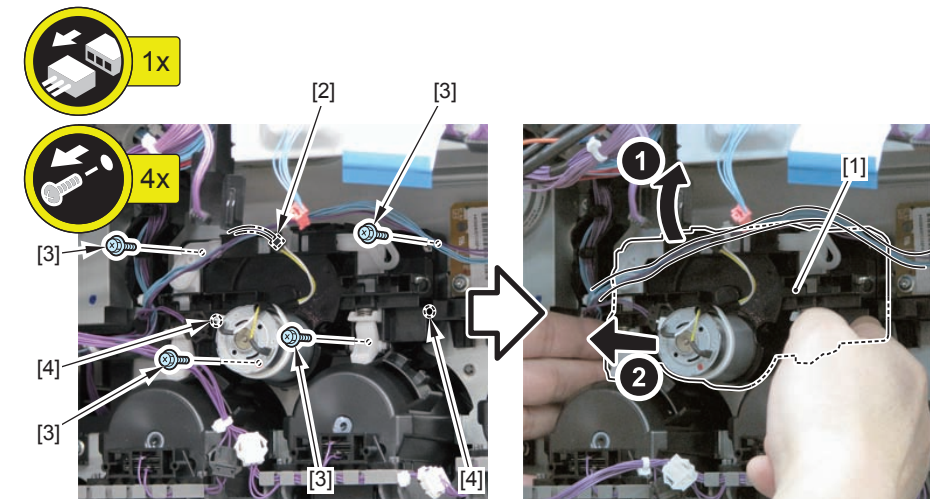
- Harness Guide [A]



F-4-330

- 2) Remove the Bottle Drive Unit (C Bk) [1].

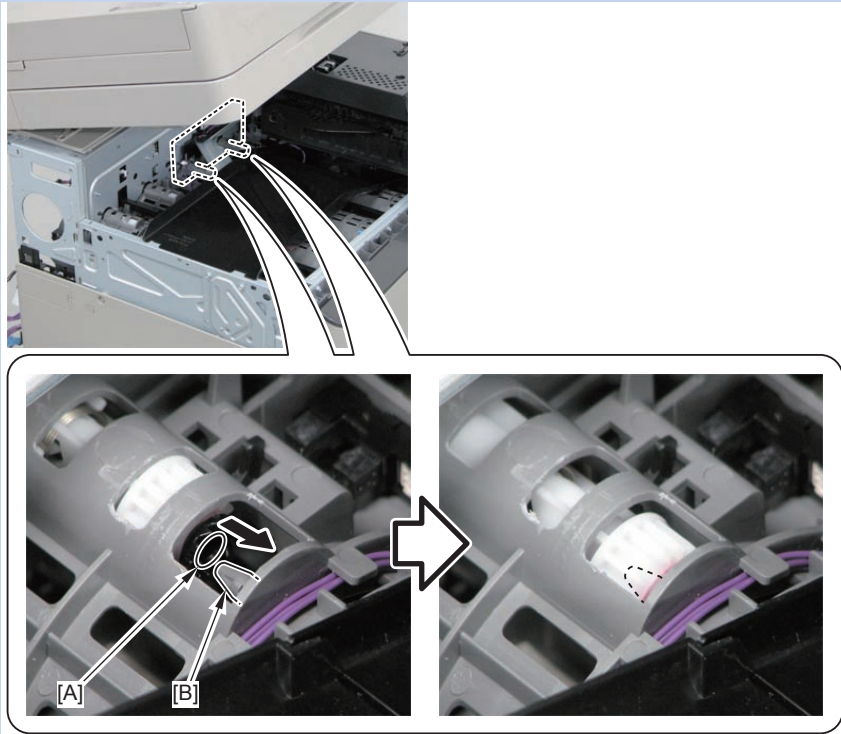
- 1 Connector [2]
- 4 Screws [3]
- 2 Bosses [4]



F-4-331

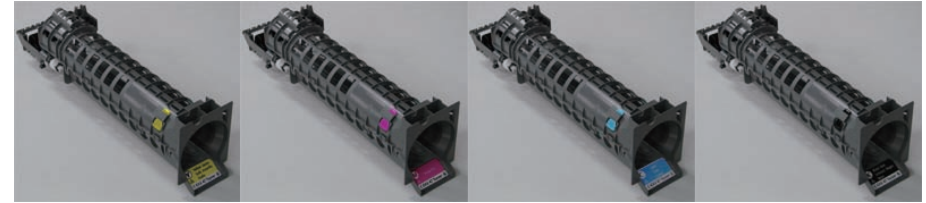
NOTE: How to install the Bottle Drive Unit (C Bk)

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)



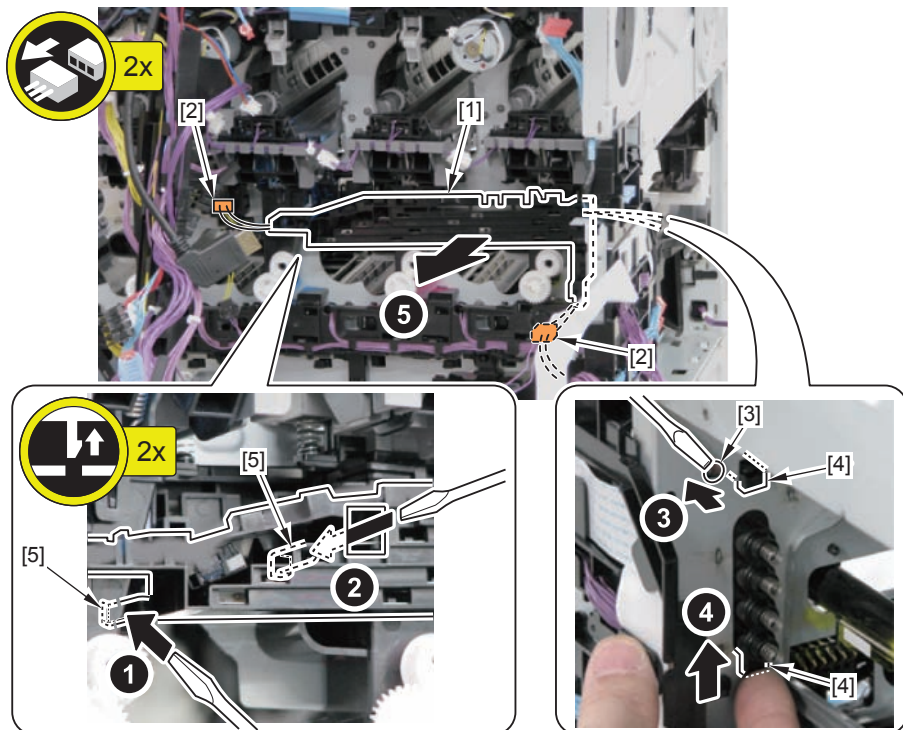
F-4-333

Preparation (for the Toner Bottle Mount (Y/M/C))

- 1) Remove the Rear Cover 1(Refer to page 4-35).
- 2) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-102).
- 3) Remove the Main Controller Unit(Refer to page 4-81).
- 4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-94).
- 5) Remove the DC Controller PCB Unit(Refer to page 4-87).
- 6) Remove the Main Drive Unit(Refer to page 4-126).
- 7) Remove the Waste Toner Container(Refer to page 4-109).
- 8) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed)(Refer to page 4-110).
- 9) Remove the Drum Unit (Y/M/C/Bk) (remove the drum Unit of the color to be removed)(Refer to page 4-110).
- 10) Remove the ITB Unit(Refer to page 4-113).
- 11) Remove the Left Lower Cover(Refer to page 4-37).
- 12) Remove the Primary Transfer High-voltage PCB Unit(Refer to page 4-91).

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 4-128).

15) Remove the Bottle Drive Unit (Y/M/C/Bk) (remove the Bottle Drive Unit of the color to be removed)(Refer to page 4-132).

16) Remove the Delivery Tray(Refer to page 4-46).

■ Preparation (for the Toner Bottle Mount (Bk))

1) Remove the Rear Cover 1(Refer to page 4-35).

2) Remove the Fax Unit (to be removed for models equipped with a fax) (Refer to page 4-102).

3) Remove the Main Controller Unit(Refer to page 4-81).

4) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-94).

5) Remove the DC Controller PCB Unit(Refer to page 4-87).

6) Remove the Main Drive Unit(Refer to page 4-126).

7) Remove the Waste Toner Container(Refer to page 4-109).

8) Remove the Toner Container (Y/M/C/Bk) (remove the toner container of the color to be removed) (Refer to page 4-110).

9) Remove the Drum Unit (Y/M/C/Bk) (remove the drum Unit of the color to be removed) (Refer to page 4-110).

10) Remove the ITB Unit(Refer to page 4-113).

11) Remove the Left Lower Cover(Refer to page 4-37).

12) Remove the Primary Transfer High-voltage PCB Unit(Refer to page 4-91).

13) Remove the Hopper Unit (Y/M/C/Bk) (remove the Hopper Unit of the Bk color) (Refer to page 4-128).

14) Remove the Bottle Drive Unit (Y/M/C/Bk) (remove the Bottle Drive Unit (C Bk)) (Refer to page 4-132).

15) Remove the Delivery Tray(Refer to page 4-46).

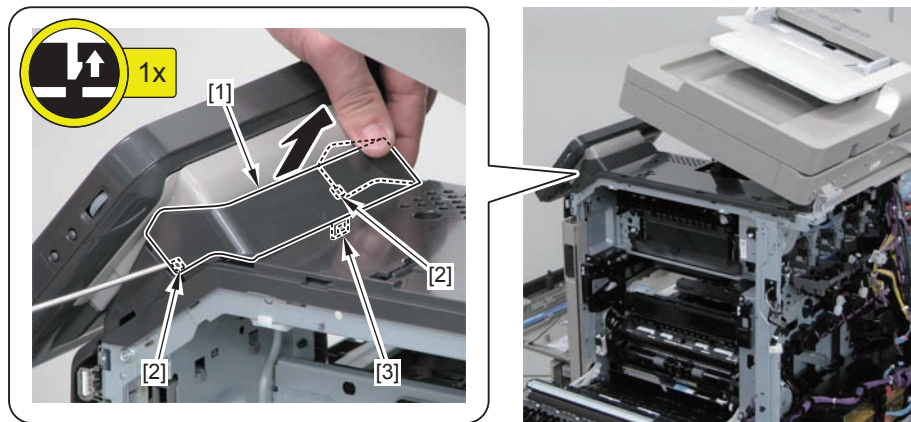
16) Remove the Delivery/Reverse Unit(Refer to page 4-164).

17) Remove the Right Rear Cover/Right Rear Lower Cover(Refer to page 4-39).

18) Remove the Right Upper Cover(Refer to page 4-40).

19) Remove the Control Panel Rear Hinge Cover [1].

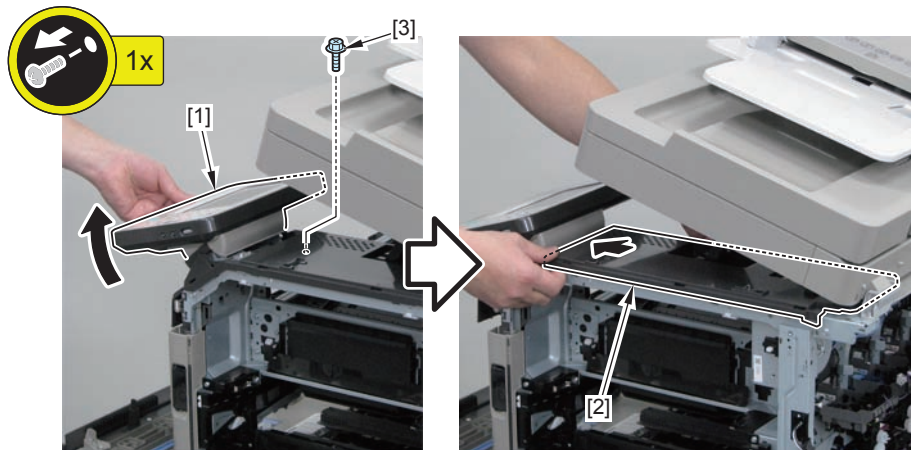
- 2 Bosses [2]
- 1 Claw [3]



F-4-335

20) Lift up the Control Panel Unit [1] to move the Upper Cover [2].

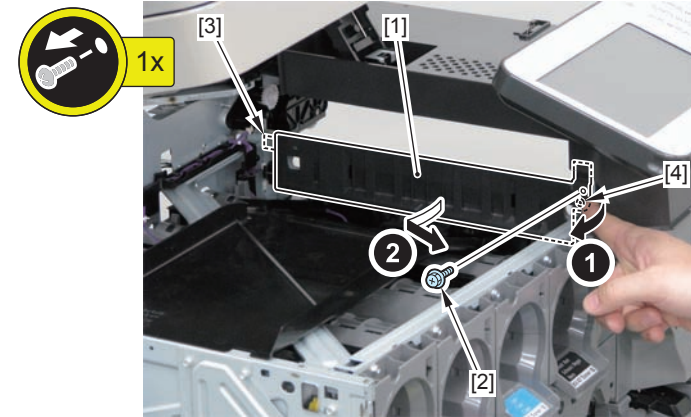
- 1 Screw [3]



F-4-336

21) Remove the Delivery Guide [1].

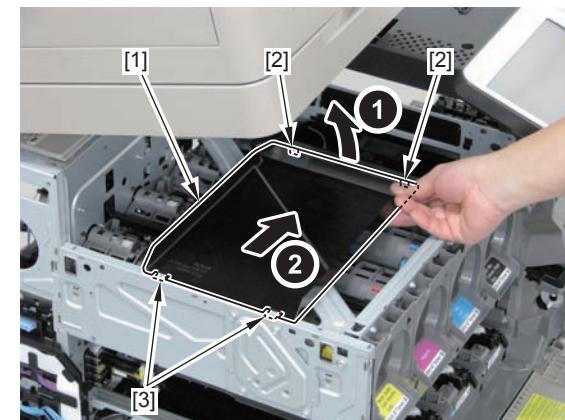
- 1 Screw [2]
- 1 Hook [3]
- 1 Boss [4]



F-4-337

22) Remove the Delivery Tray Air Duct [1].

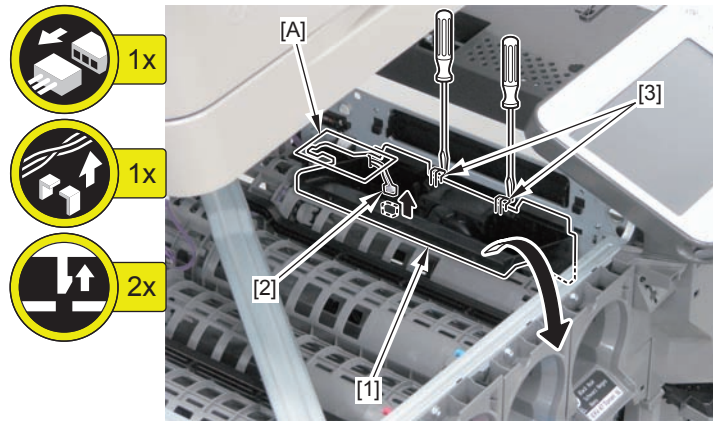
- 2 Bosses [2]
- 2 Hooks [3]



F-4-338

23) Remove the Delivery Cooling Fan Holder [1].

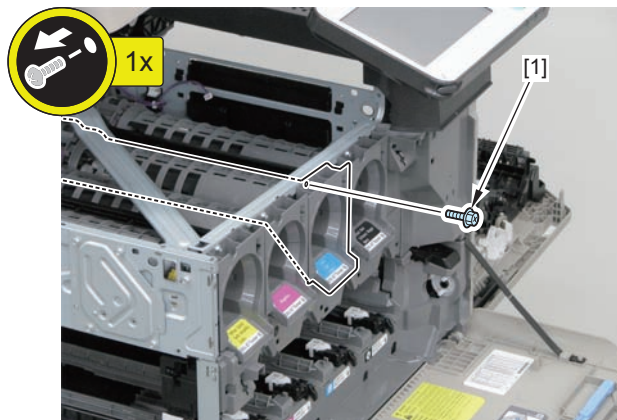
- 1 Connector [2]
- Harness Guide [A]
- 2 Claws [3]



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).)



F-4-340

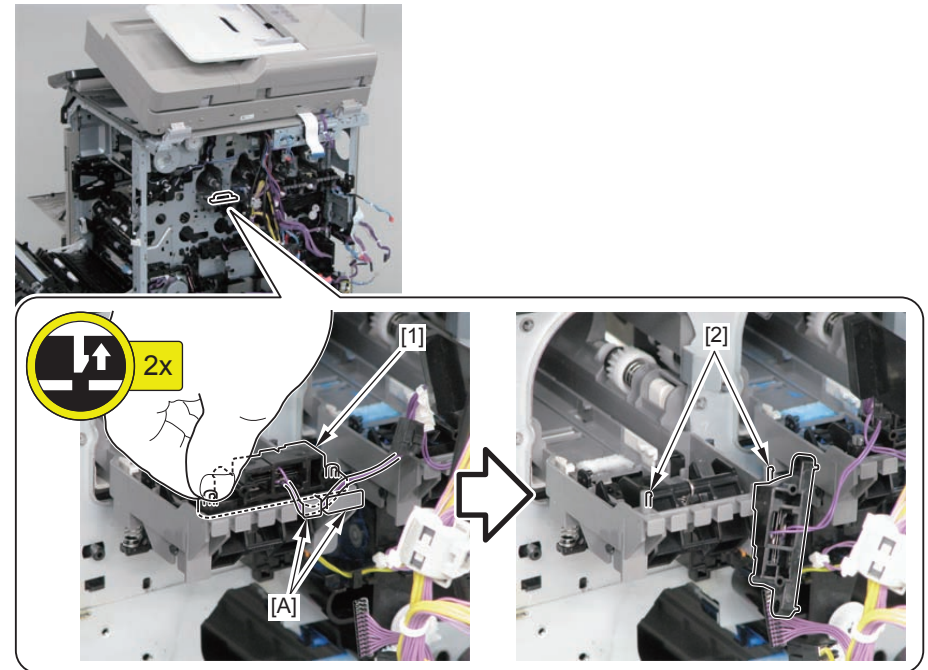
Procedure

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

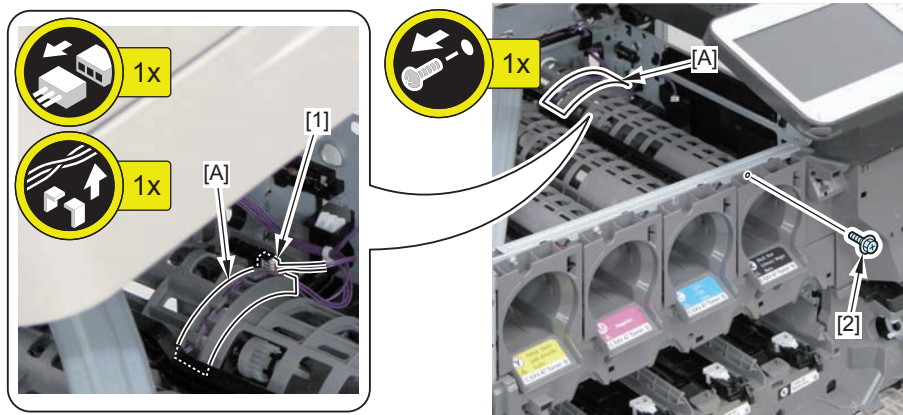
1) Remove the tag [1].

- Harness Guide [A]
- 2 Claws [2]



F-4-341

2) Disconnect the connector [1], and remove the Harness Guide [A] and the screw [2].

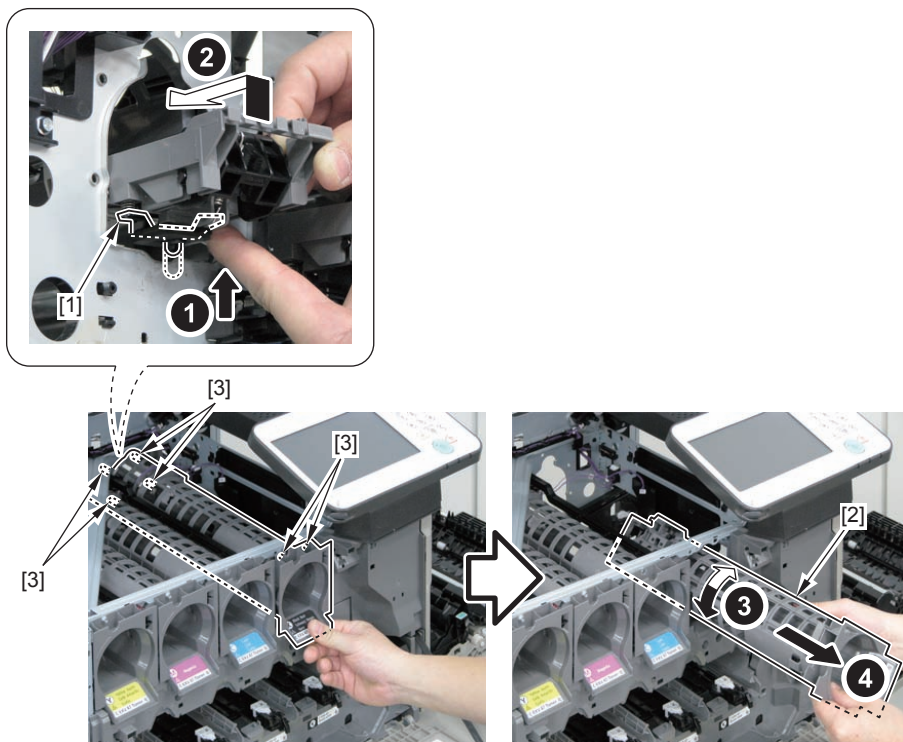


F-4-342

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].

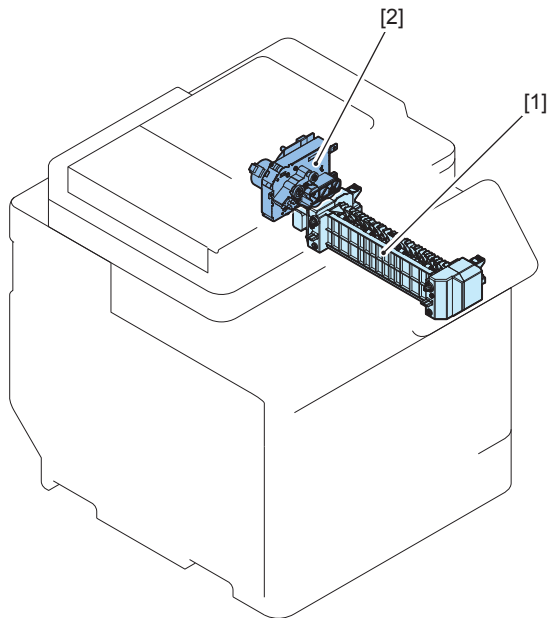
- 6 Bosses [3]



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 4-138)
[2]	Fixing Drive Unit	Product Configuration		(Refer to page 4-139)

T-4-92

Removing the Fixing Assembly



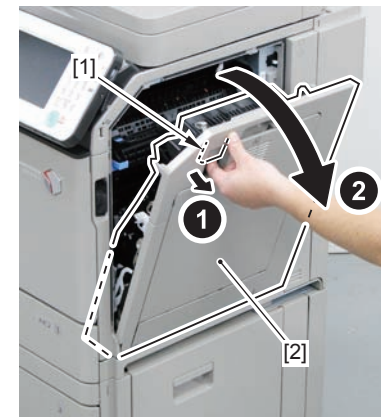
F-4-345

Procedure

⚠ CAUTION:

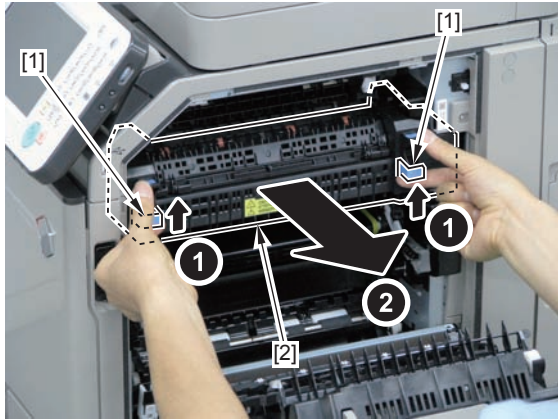
- Be sure to start removing the Fixing Assembly after it is cooled down enough. The Fixing Assembly may cause burn injuries due to the high temperature immediately after printing.

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



F-4-346

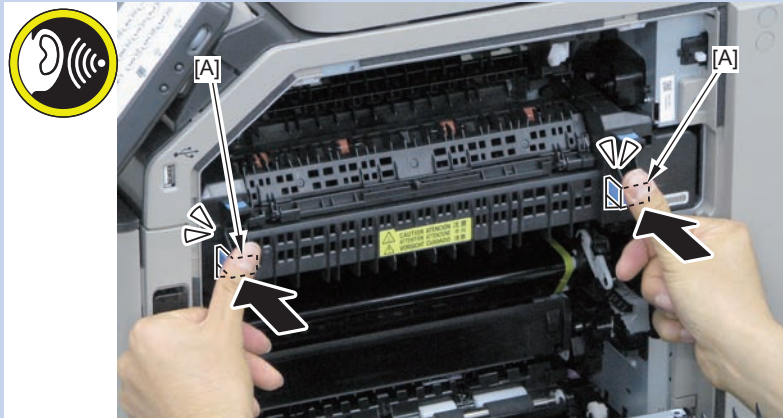
2) Hold the 2 Release Levers [1] of the Fixing Assembly, and remove the Fixing Assembly [2].



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.



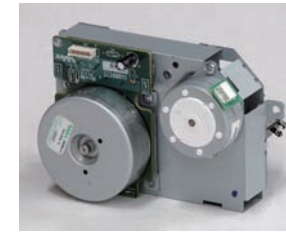
F-4-348

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



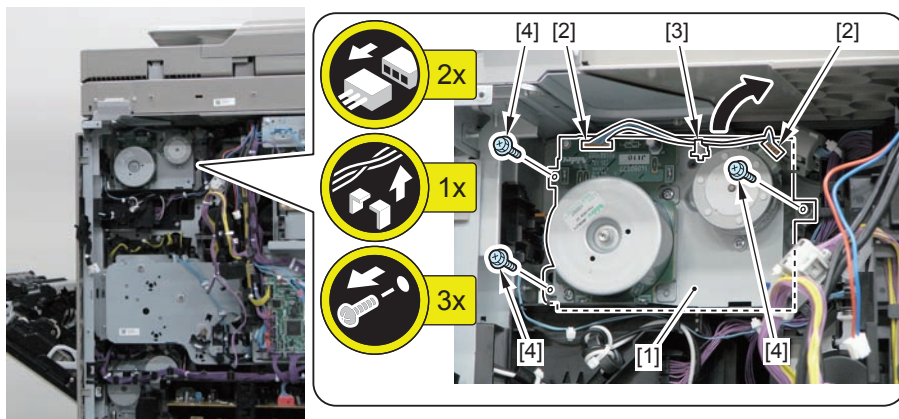
F-4-349

Preparation

- 1) Remove the Rear Cover 1(Refer to page 4-35).
- 2) Remove the Left Upper Cover (to be removed for models equipped with a fax)
(Refer to page 4-37).
- 3) Remove the Fax Speaker Unit (to be removed for models equipped with a fax)
(Refer to page 4-101).
- 4) Remove the Fax Unit (to be removed for models equipped with a fax)
(Refer to page 4-102).
- 5) Remove the Main Controller Unit(Refer to page 4-81).
- 6) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-94).
- 7) Remove the DC Controller PCB Unit(Refer to page 4-85).
- 8) Remove the Fixing Assembly(Refer to page 4-138).
- 9) Remove the Delivery/Reverse Unit (Refer to page 4-164).

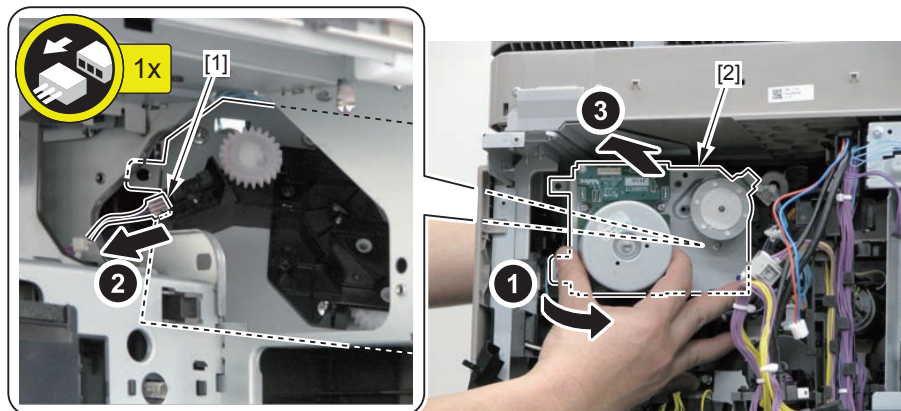
Procedure

- 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].

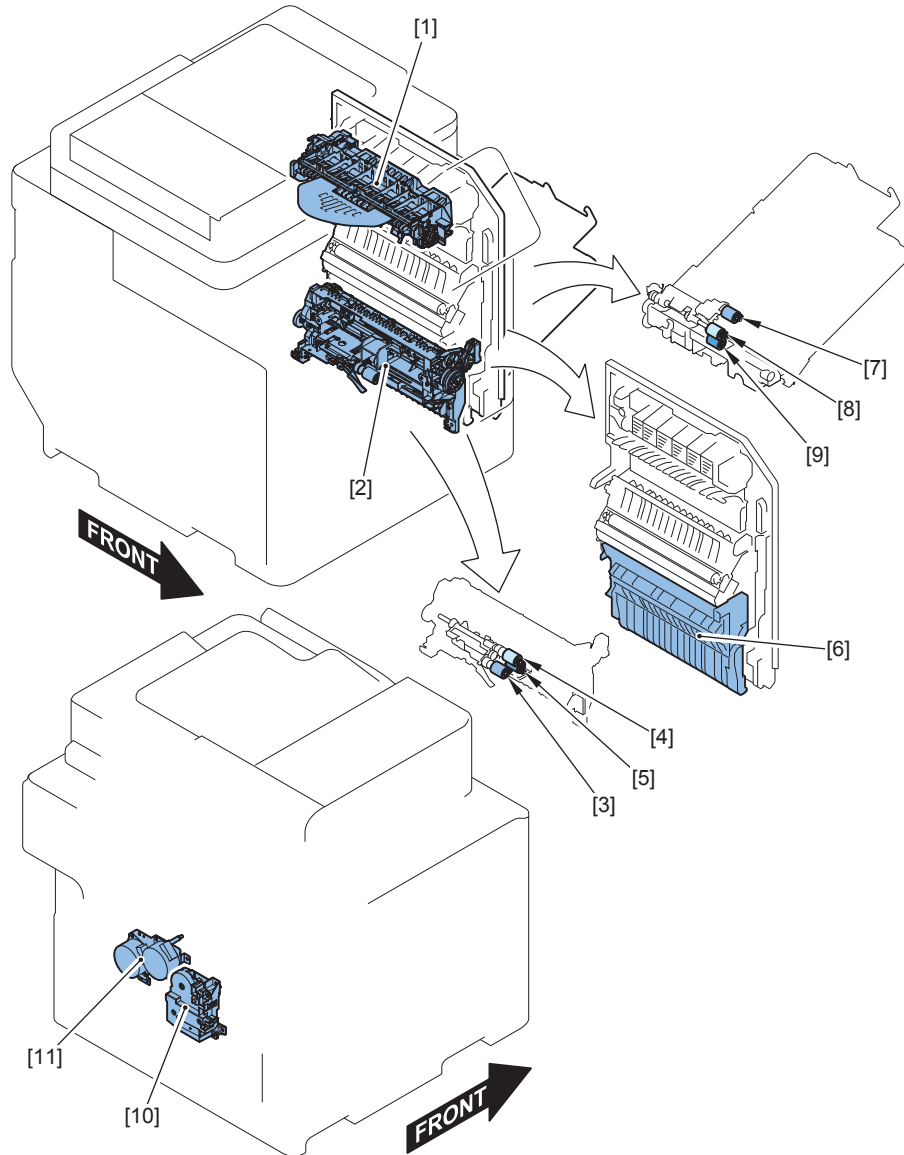


F-4-351

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

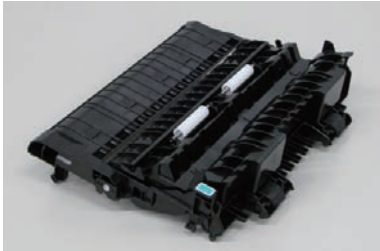


F-4-352

No.	Parts Name	Main Unit	Remarks	Reference
[1]	Delivery/Reverse Unit	Product Configuration		(Refer to page 4-164)
[2]	Regist/Paper Pickup Unit	Product Configuration		(Refer to page 4-156)
[3]	Cassette 1 pickup Roller	Regist/Paper Pickup Unit		(Refer to page 4-143)
[4]	Cassette 1 feed Roller	Regist/Paper Pickup Unit		(Refer to page 4-143)
[5]	Cassette 1 separation Roller	Regist/Paper Pickup Unit		(Refer to page 4-143)
[6]	Right Inner Cover Unit	Right Cover Unit		(Refer to page 4-142)
[7]	Multi-purpose tray pickup Roller	Right Cover Unit		(Refer to page 4-147)
[8]	Multi-purpose tray feed Roller	Right Cover Unit		(Refer to page 4-147)
[9]	Multi-purpose tray separation Roller	Right Cover Unit		(Refer to page 4-147)
[10]	Cassette 1 Lifter Drive Unit	Product Configuration		(Refer to page 4-165)
[11]	Cassette 1 Pickup Drive Unit	Product Configuration		(Refer to page 4-168)

T-4-93

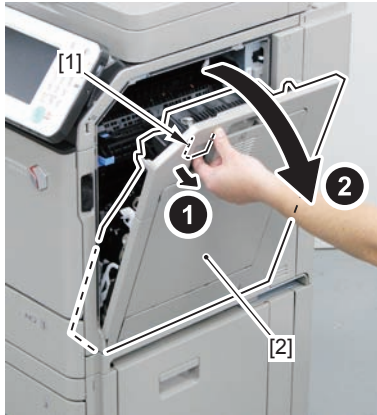
Removing the Right Inner Cover Unit



F-4-353

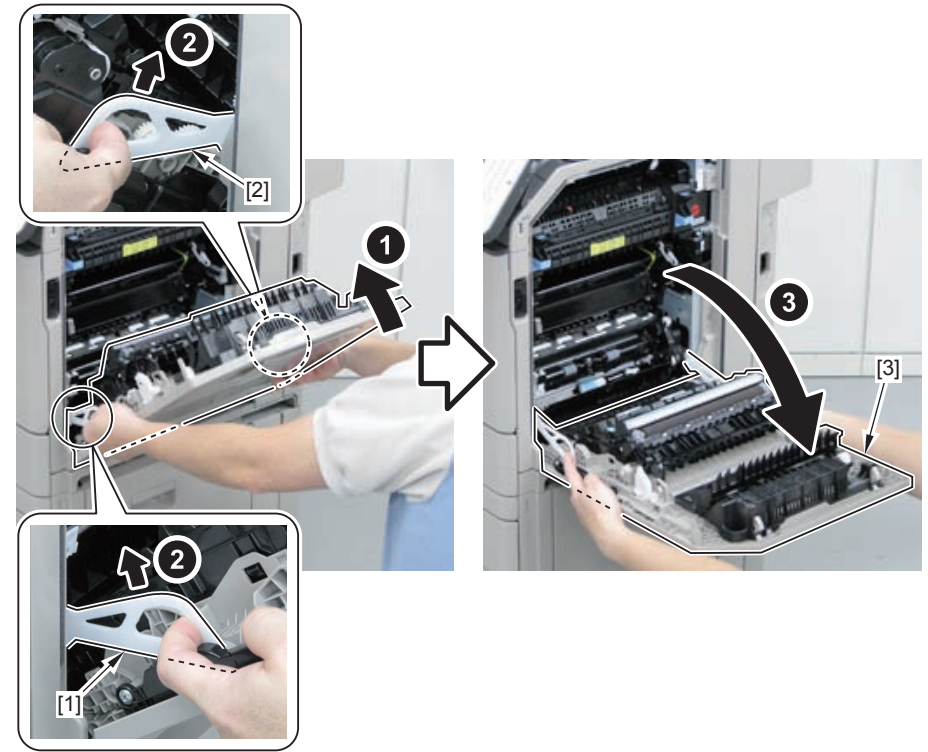
Procedure

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



F-4-354

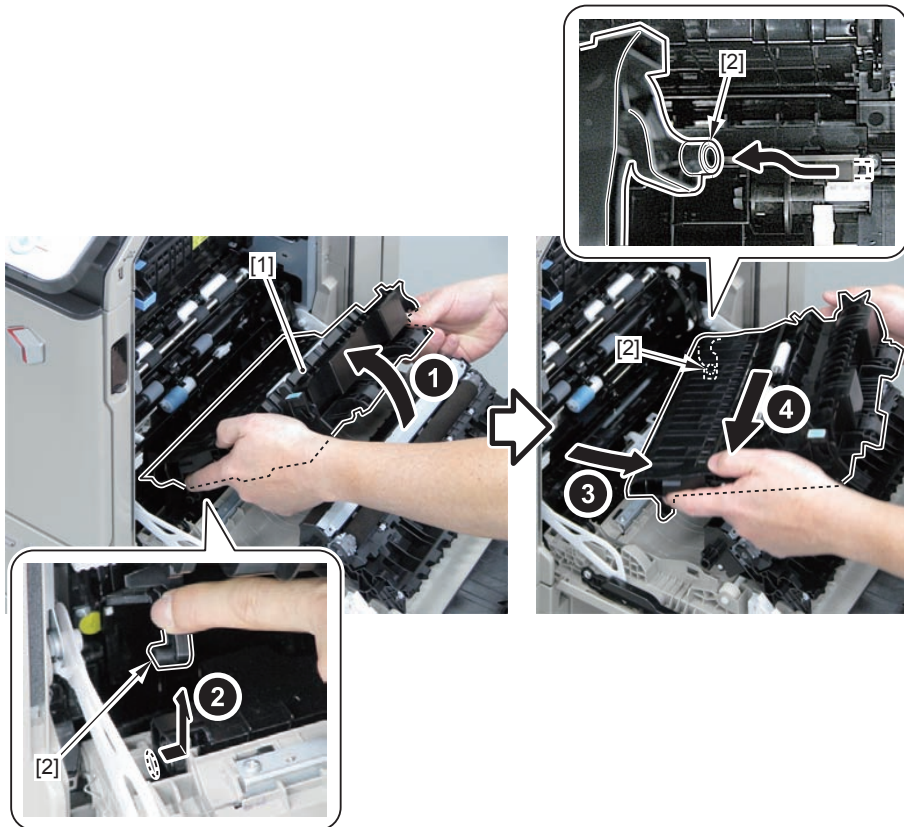
2) Release the lock of the Right Cover Stopper (Front) [1] and the Right Cover Stopper Rear [2], and then further open the Right Cover Unit [3].



F-4-355

3) Remove the Right Inner Cover Unit [1].

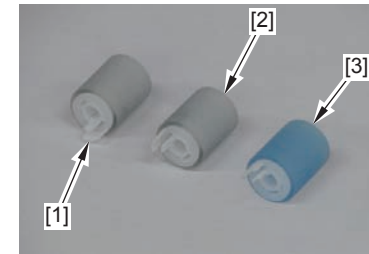
- 2 Shafts [2]



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



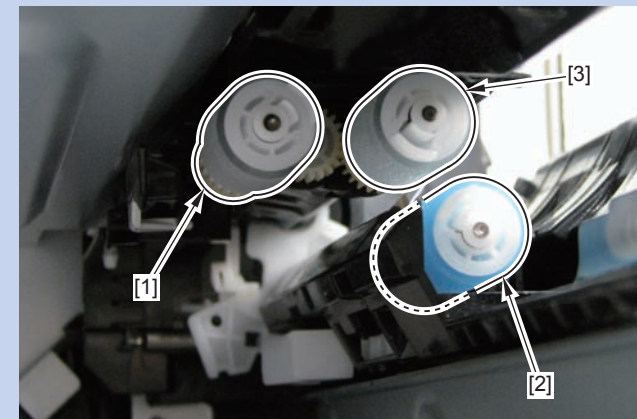
F-4-357

- Cassette Pickup Roller [1]
- Cassette Feed Roller [2]
- Cassette Separation Roller [3]

Procedure

NOTE:

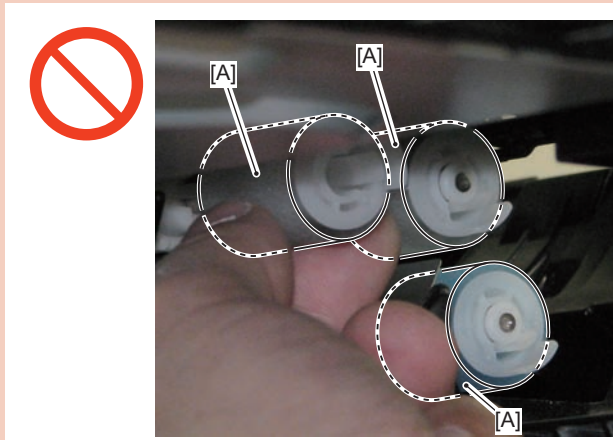
The layout for the Cassette Pickup Roller [1] /Separation Roller [2] /Feed Roller [3] is shown below.



F-4-358

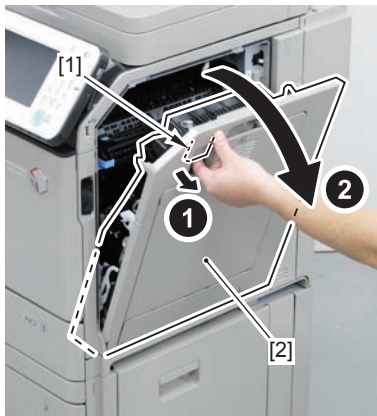
CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.



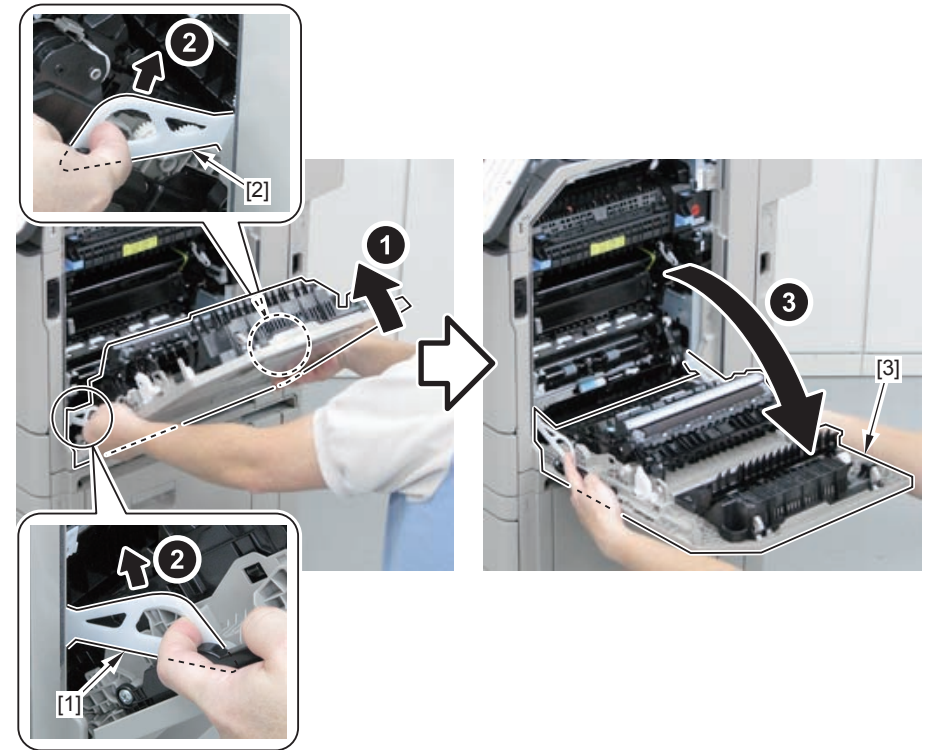
F-4-359

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



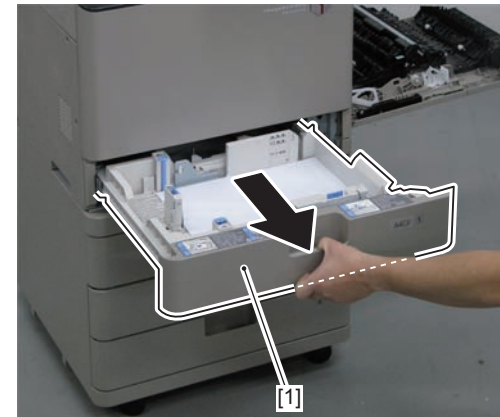
F-4-360

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].



3) Remove the Cassette [1].

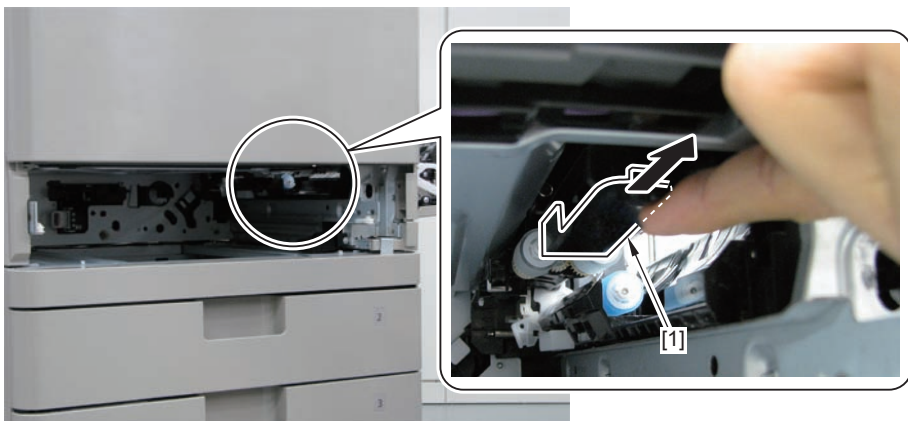
F-4-361



F-4-362

When removing the Cassette Pickup Roller

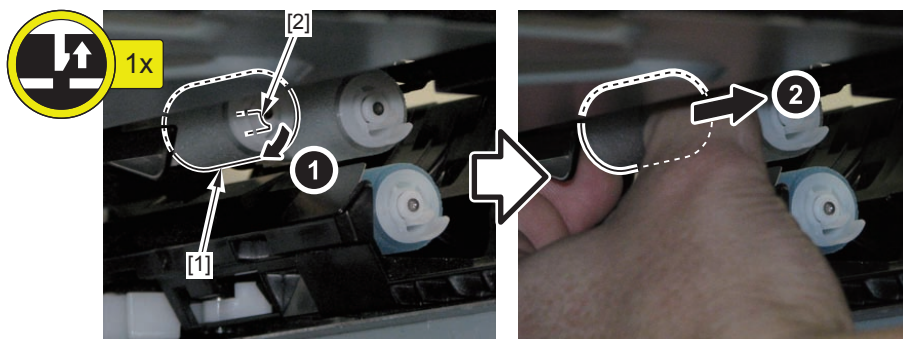
4) Move the Pickup Guide Holder [1].



F-4-363

5) Remove the Cassette Pickup Roller [1].

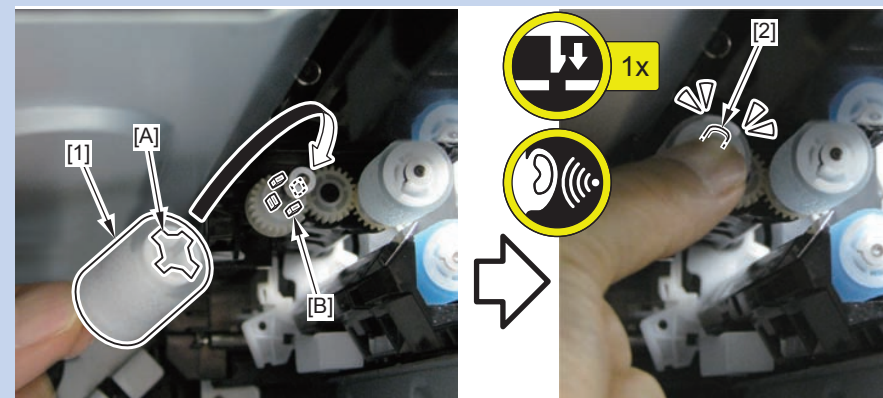
- 1 Claw [2]



F-4-364

NOTE: How to install the Cassette Pickup Roller

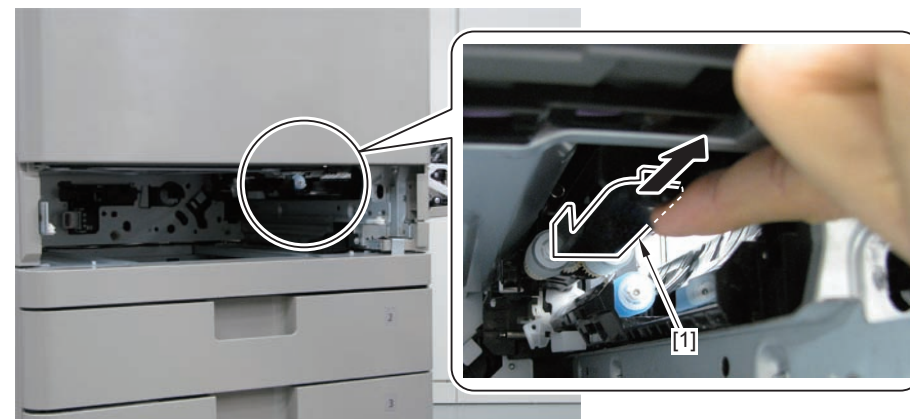
- Be sure to align the groove [A] of the Cassette Pickup Roller [1] with the protrusion [B] of the gear to install the roller.
- Be sure to hook the claw [2].



F-4-365

When removing the Cassette Feed Roller

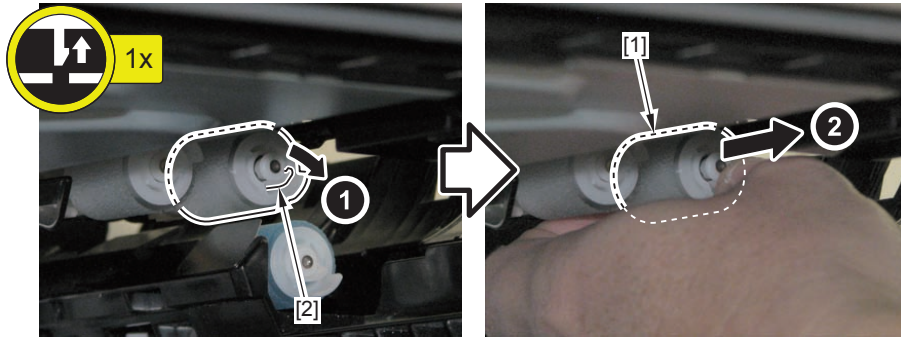
6) Move the Pickup Guide Holder [1].



F-4-366

7) Remove the Cassette Feed Roller [1].

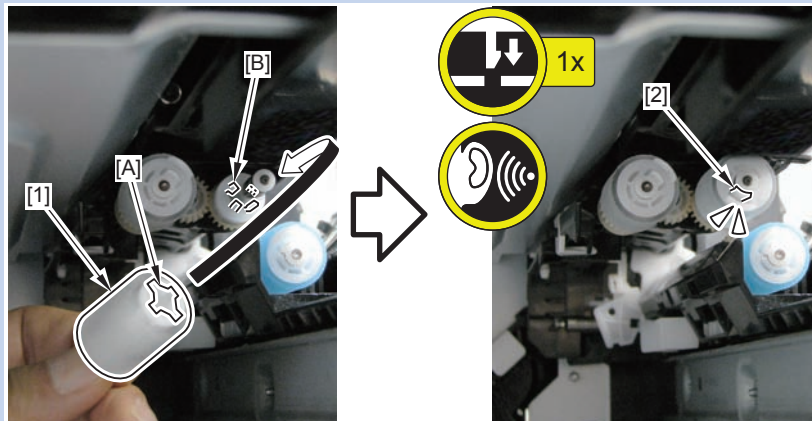
- 1 Claw [2]



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].

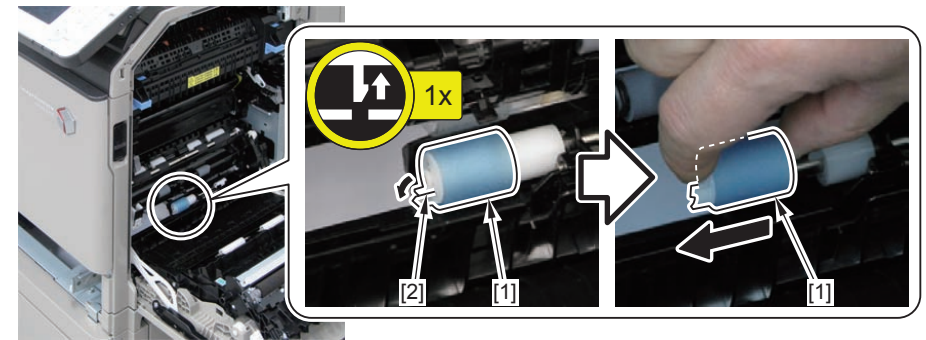


F-4-368

● When removing the Cassette Separation Roller

8) Remove the Cassette Separation Roller [1].

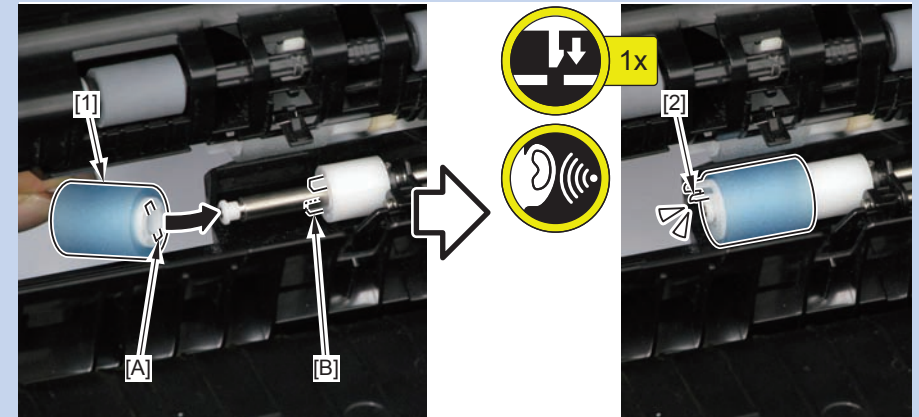
- 1 Claw [2]



F-4-369

NOTE: How to install the Cassette Separation Roller

- Be sure to align the groove [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].



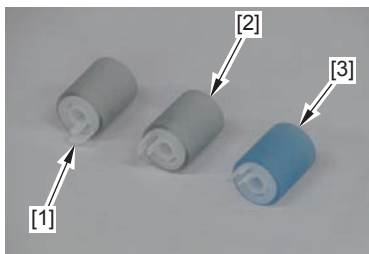
F-4-370

NOTE: Actions after assembly

Execute Correct Print Color Mismatch.

Settings/Registration > Adjustment/Maintenance > Adjust Image Quality > Correct Print Color Mismatch

Removing the Multi-purpose Tray Pickup Roller /Multi-purpose Tray Separation Roller /Multi-purpose Tray Feed Roller



F-4-371

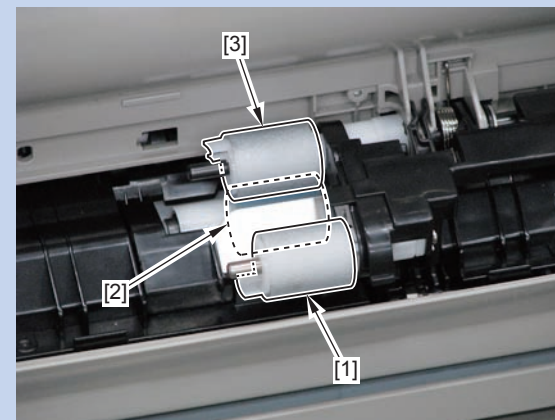
- Multi-purpose Tray Pickup Roller [1]
- Multi-purpose Tray Feed Roller [2]
- Multi-purpose Tray Separation Roller [3]

Preparation

- 1) Remove the Multi-purpose Tray (Refer to page 4-45).
(When the Multi-purpose Tray is removed, it broadens the working space and makes it easier to work.)

Procedure

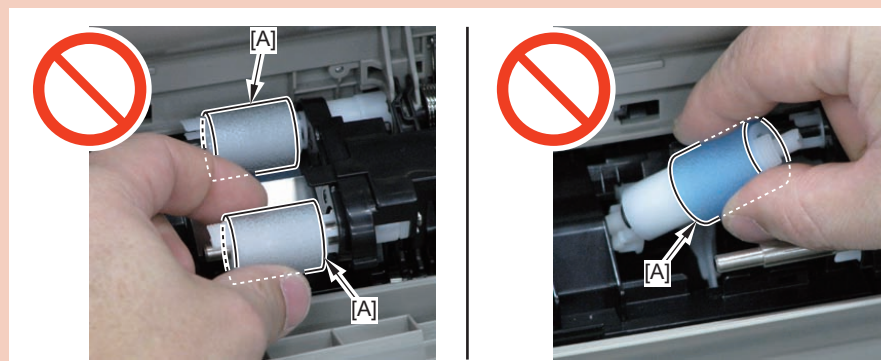
NOTE: The layout for the Cassette Pickup Roller [1] /Separation Roller [2] /Feed Roller [3] is shown below.



F-4-372

CAUTION:

Be sure not to touch the surface [A] of the roller when disassembling/assembling.

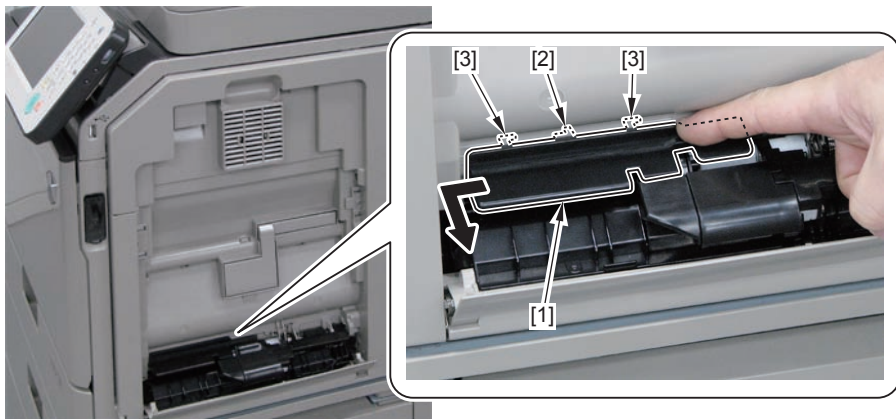


F-4-373

Disassembling Procedure

1) Remove the Multi-purpose Tray Roller Holder 1 [1].

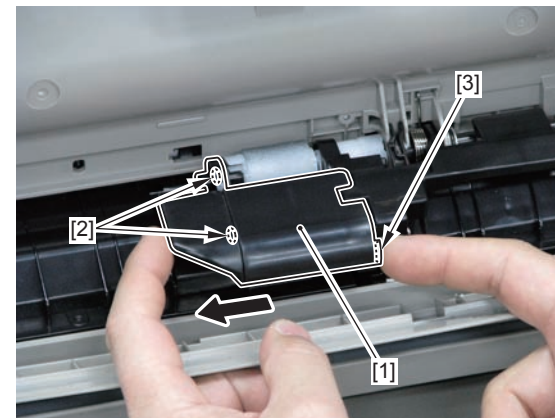
- 1 Boss [2]
- 2 Hooks [3]



F-4-374

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

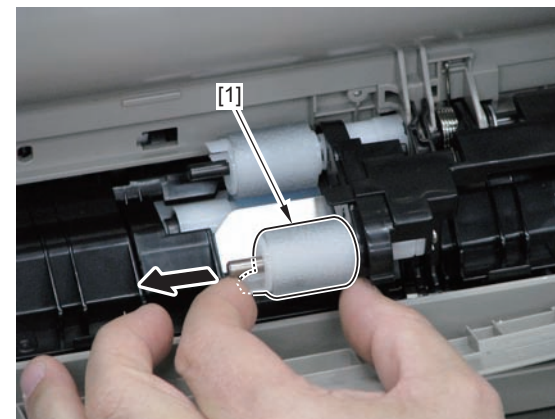
- 2 Shaft Holes [2]
- 1 Hook [3]



F-4-375

When removing the Multi-purpose Tray Pickup Roller

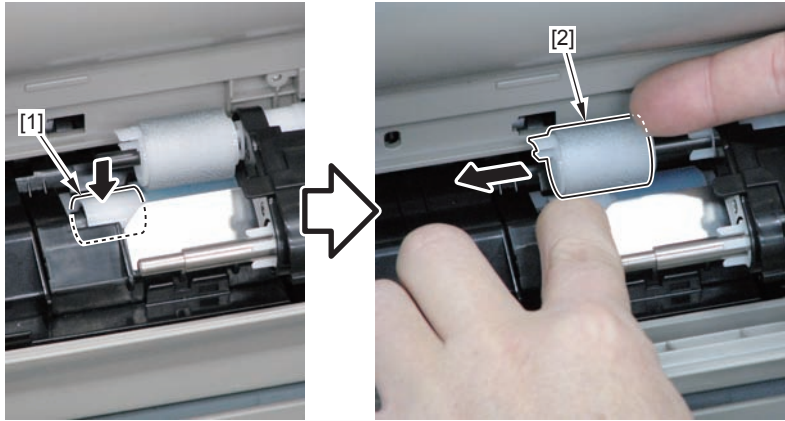
3) Remove the Multi-purpose Tray Pickup Roller [1].



F-4-376

When removing the Multi-purpose Tray Feed Roller

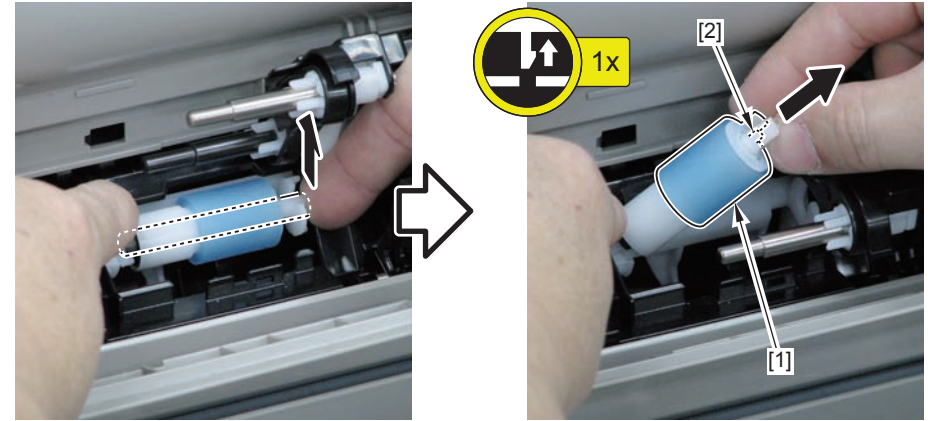
4) Remove the Multi-purpose Tray Feed Roller [2] while pressing the Torque Limiter [1].



F-4-377

6) Remove the Multi-purpose Tray Separation Roller [1].

- 1 Claw [2]

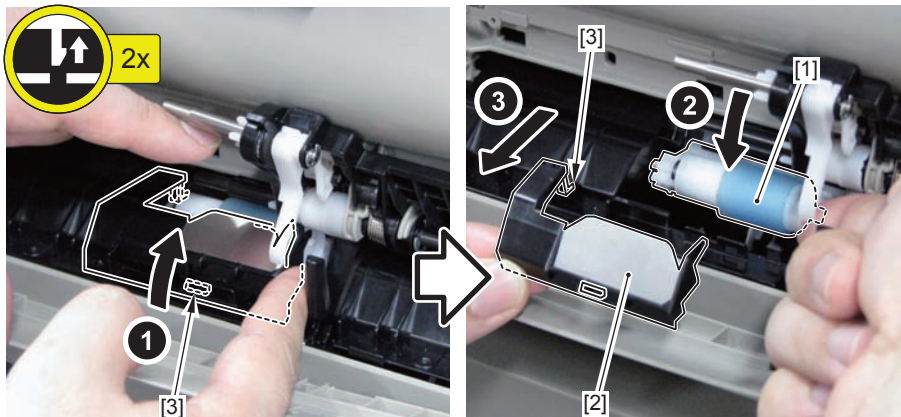


F-4-379

When removing the Multi-purpose Tray Separation Roller

5) Remove the Multi-purpose Tray Feed Guide [2] while pressing the Multi-purpose Tray Separation Roller [1].

- 2 Claws [3]

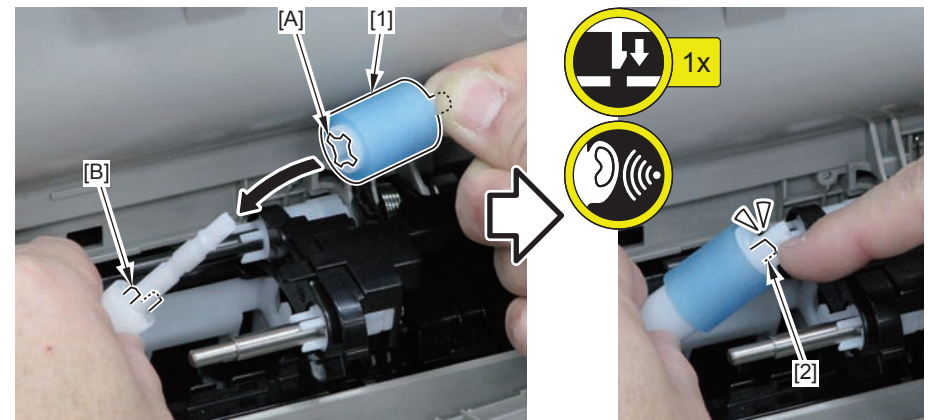


F-4-378

● Assembling Procedure

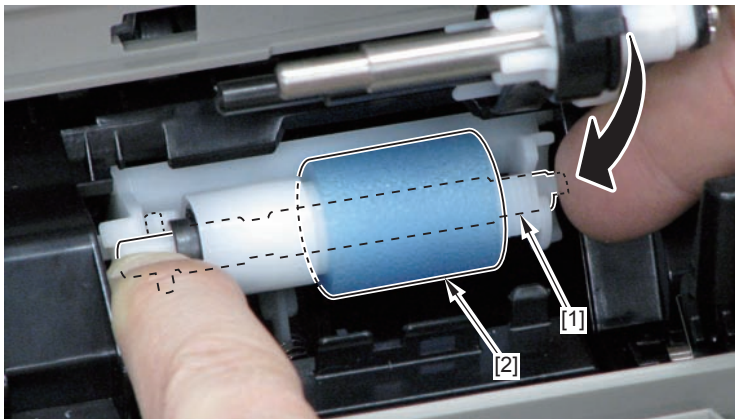
1) Align the groove [A] of the Multi-purpose Tray Separation Roller [1] with the protrusion [B] of the Torque Limiter to install.

- 1 Claw [2]



F-4-380

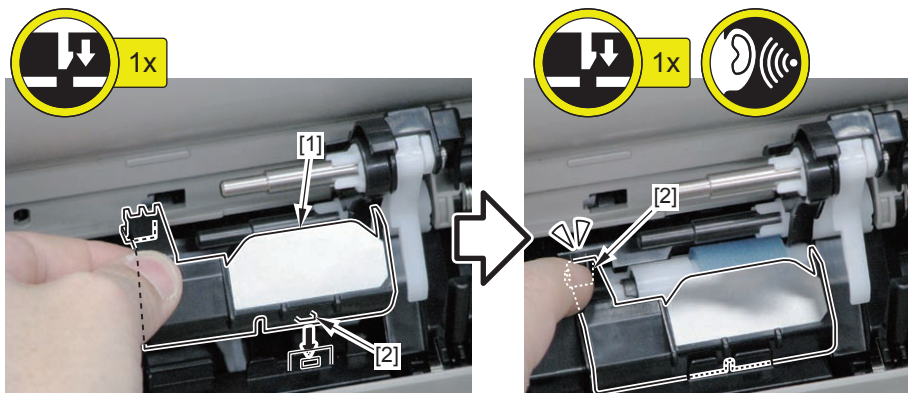
- 2) Store the Multi-purpose Tray Separation Roller [2] while paying attention not to remove its shaft [1].



F-4-381

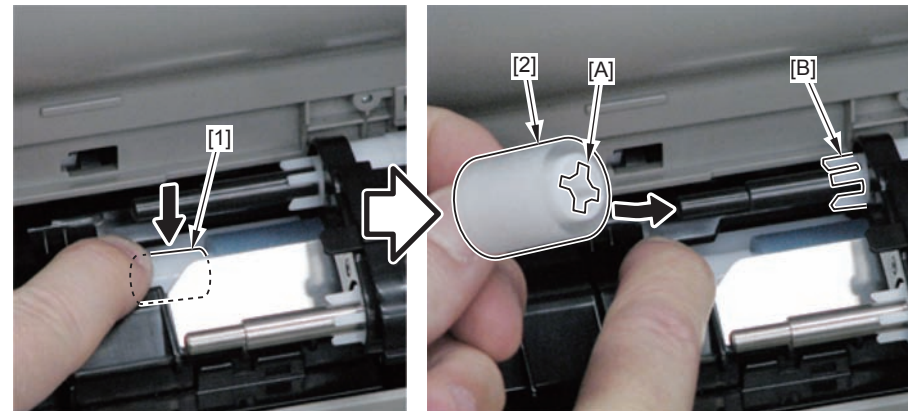
- 3) Install the Multi-purpose Tray Feed Guide [1].

- 2 Claws [2]



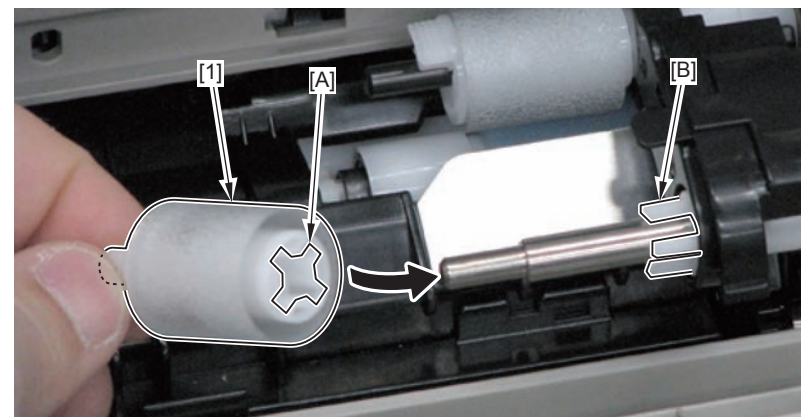
F-4-382

- 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

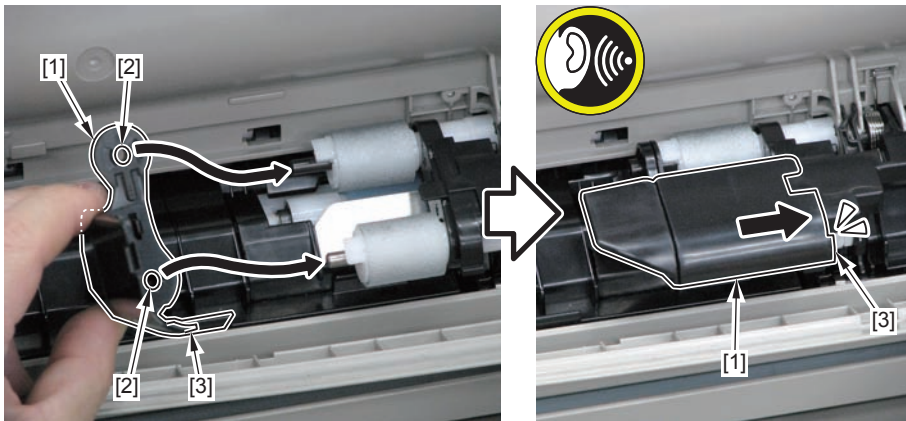
- 5) Align the groove [A] of the Multi-purpose Tray Pickup Roller [1] with the protrusion [B] of the coupling to install.



F-4-384

6) Install the Multi-purpose Tray Roller Holder 2 [1].

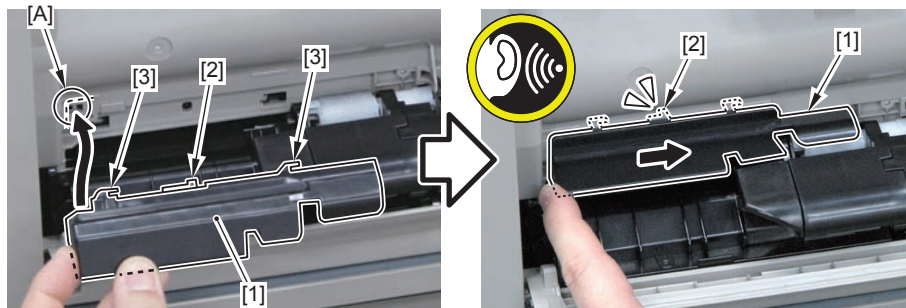
- 2 Shaft Holes [2]
- 1 Hook [3]



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]



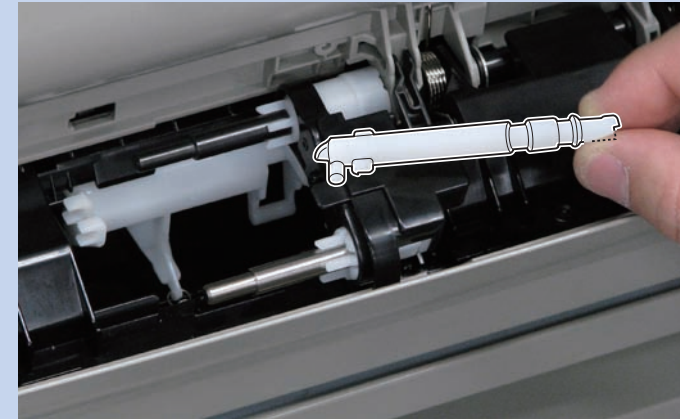
F-4-386

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.



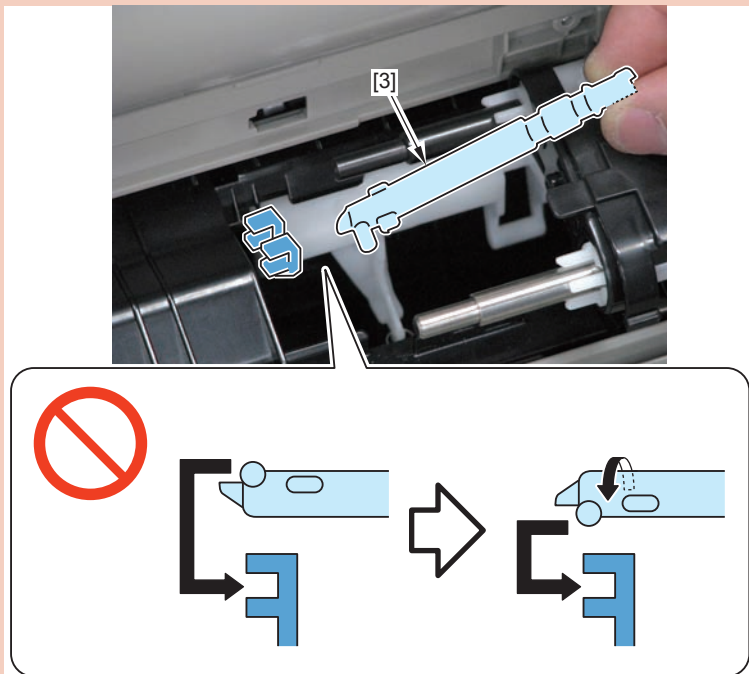
F-4-387

Procedure

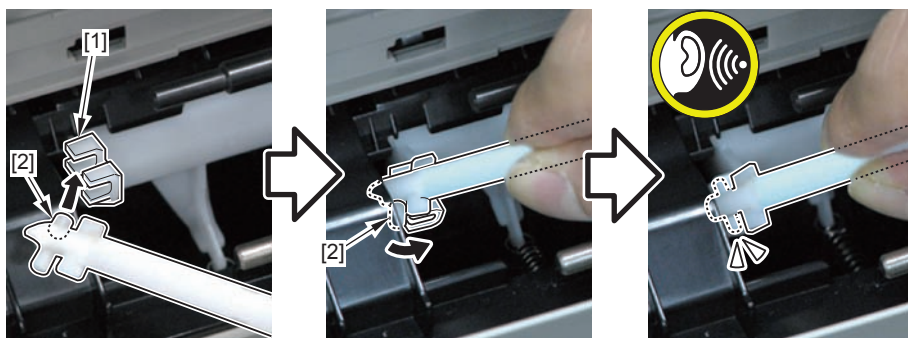
1) Hook the 2 shafts [2] on the 2 hooks [1].

CAUTION:

When assembling the Multi-purpose Tray Separation Roller Shaft [3], pay attention to the direction of installing it.



F-4-388

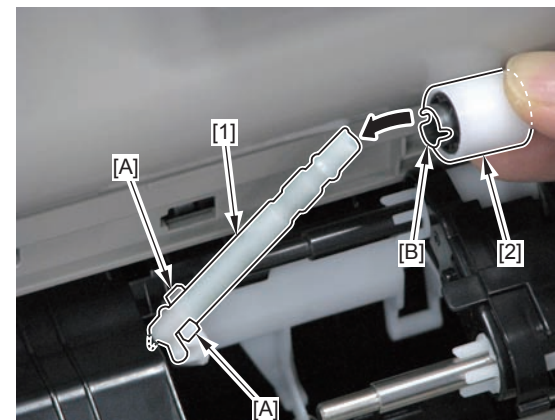


F-4-389

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.



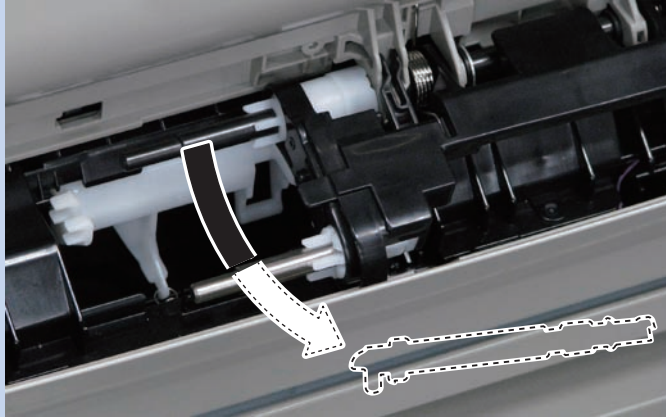
F-4-390

Be sure to reassemble according to steps 7 to 1 by referring to the Assembly Procedure.

■ 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.



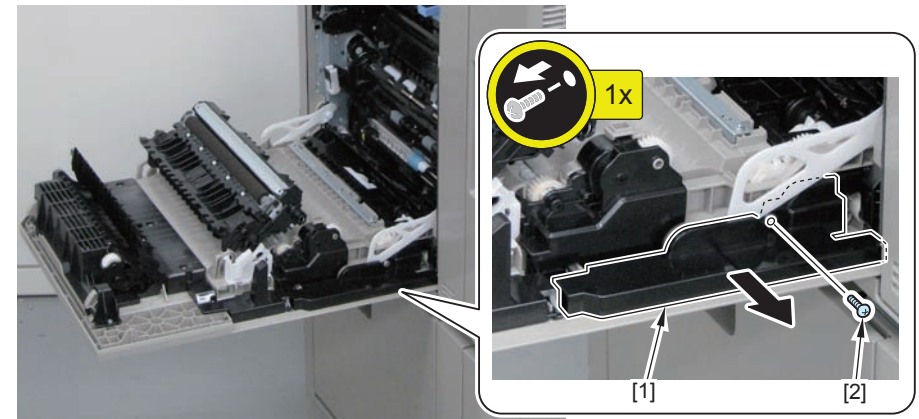
F-4-391

● Preparation

- 1) Remove the Right Inner Door Unit (Refer to page 4-45).

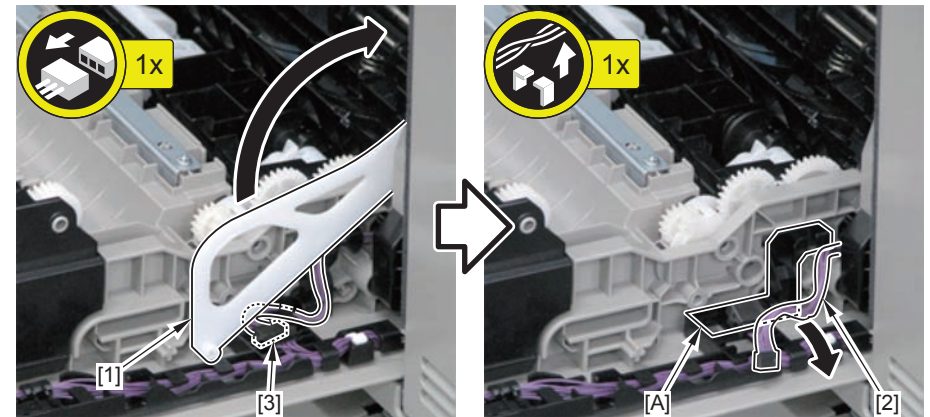
● Procedure

- 1) Remove the Right Cover Stopper Rear Holder [1].
 - 1 Screw [2]



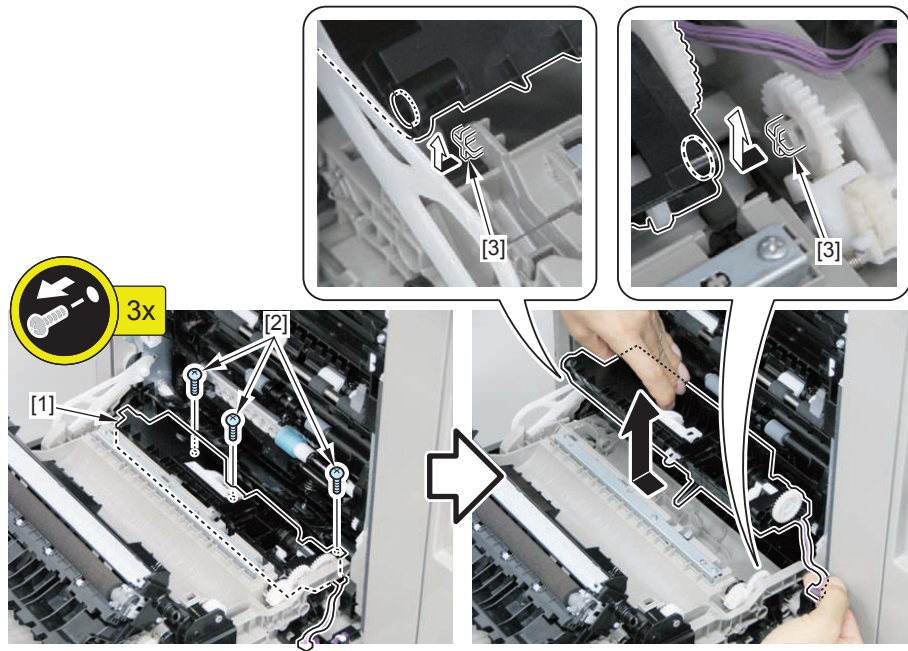
F-4-392

- 2) Lift the Right Cover Stopper Rear [1], and remove the Sensor Harness [2].
 - 1 Connector [3]
 - Harness Guide [A]



F-4-393

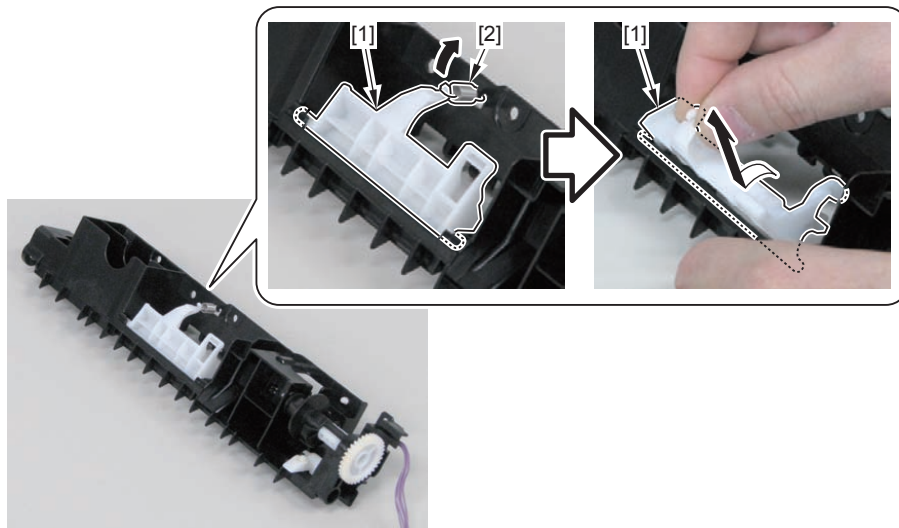
- 3) Remove the Multi-purpose Tray Separation Unit [1].
 - 3 Screws [2]
 - 2 Bosses [3]



F-4-394

4) Remove the Multi-purpose Tray Separation Roller Holder [1].

- 1 Spring [2]

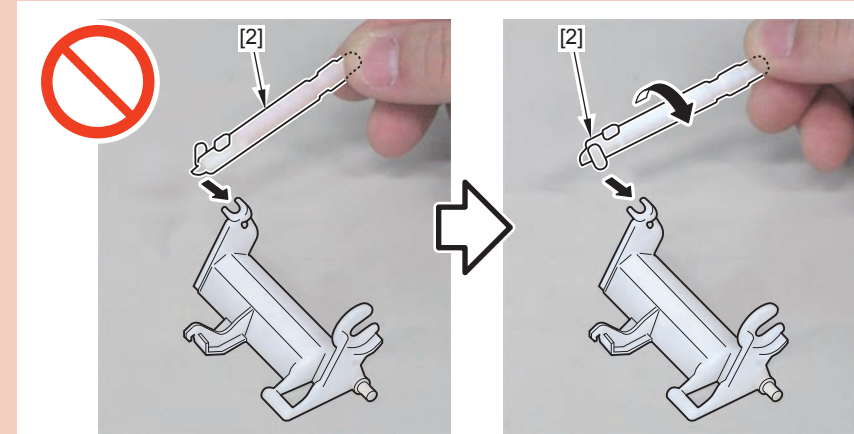


F-4-395

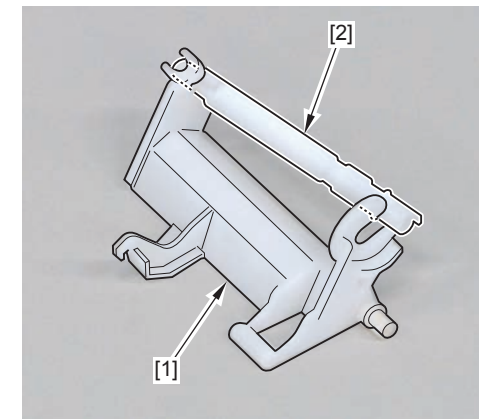
5) Assemble the Multi-purpose Tray Separation Roller Shaft [2] on the Multi-purpose Tray Separation Roller Holder [1].

CAUTION:

When assembling the Multi-purpose Tray Separation Roller Shaft [2], pay attention to the direction of installing it.



F-4-396

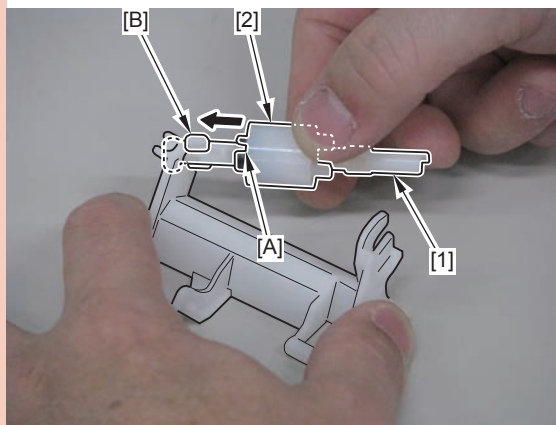


F-4-397

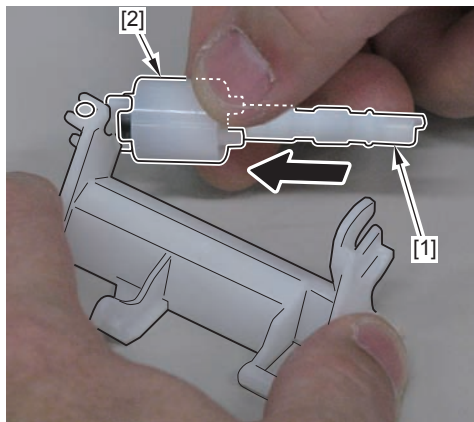
6) Assemble the Torque Limiter [2] on the Multi-purpose Tray Separation Roller Shaft [1].

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



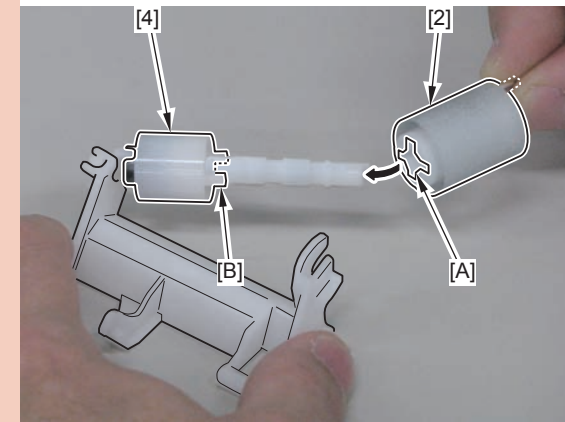
F-4-399

7) Assemble the Separation Roller [2] on the Multi-purpose Tray Separation Roller Shaft [1].

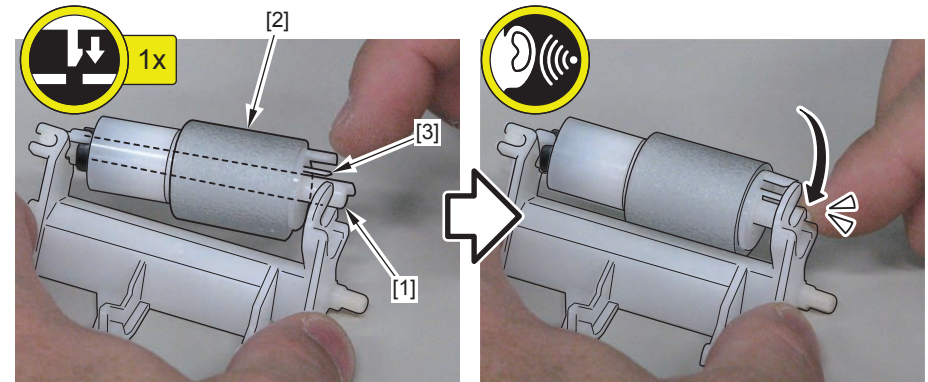
- 1 Claw [3]

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

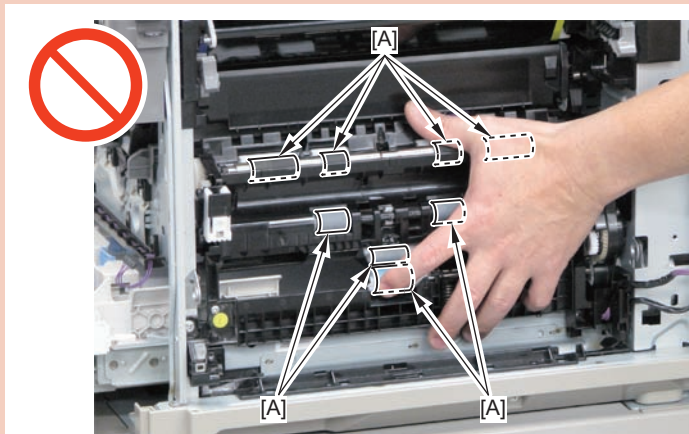
Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Right Rear Cover/Right Rear Lower Cover (Refer to page 4-39).
- 3) Remove the Right Cover Unit (Refer to page 4-42).
- 4) Remove the Front Cover (Refer to page 4-34).
- 5) Remove the Right Front Cover (Refer to page 4-38).
- 6) Remove the Waste Toner Container (Refer to page 4-109).
- 7) Remove the Registration Drive Unit (Refer to page 4-124).

Procedure

CAUTION:

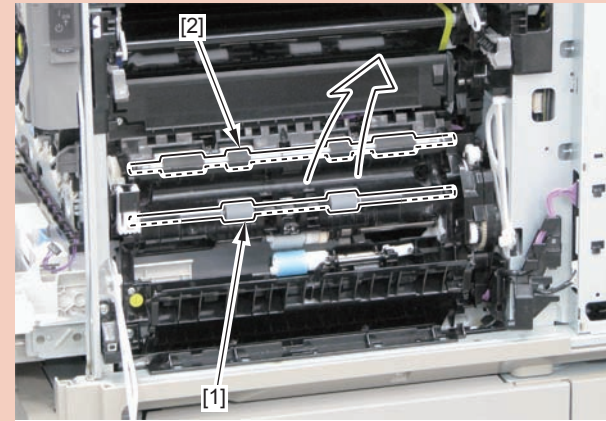
- Be sure not to touch the surface [A] of the roller when disassembling/assembling.



F-4-403

CAUTION:

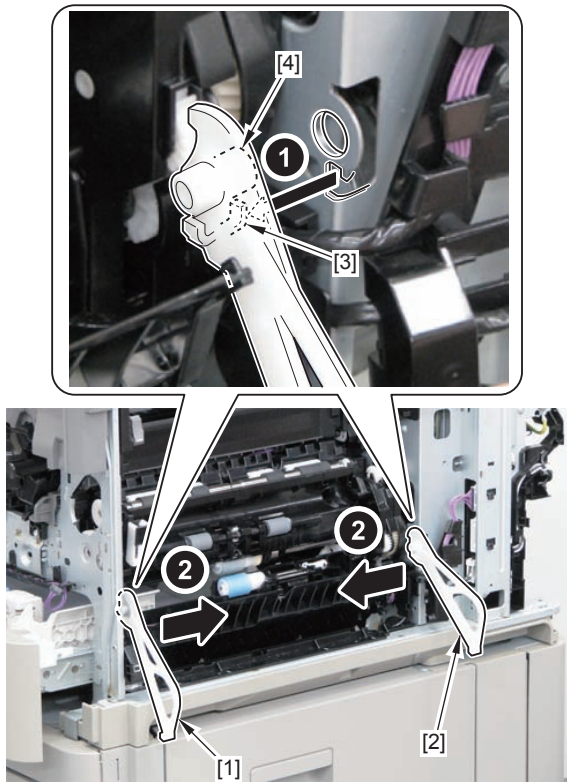
- If the Registration Roller [1] and the Pre-registration Roller [2] are replaced separately, not simultaneously, it may generate a difference in feeding speed and cause feeding problems such as geometrical characteristics and jams.



F-4-404

1) Remove the Right Cover Stopper Front [1] and the Right Cover Stopper Rear [2].

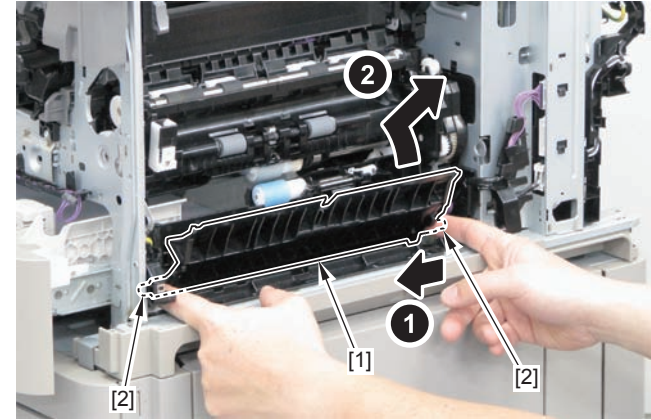
- 2 Hooks [3]
- 2 Shafts [4]



F-4-405

2) Remove the Swing Guide [1].

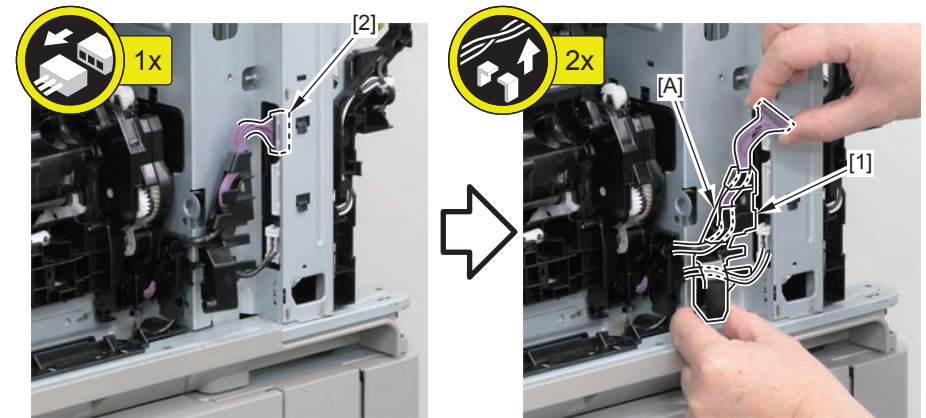
- 2 Shafts [2]



F-4-406

3) Remove the Right Cover Harness Guide [1].

- 1 Connector [2]
- Harness Guide [A]



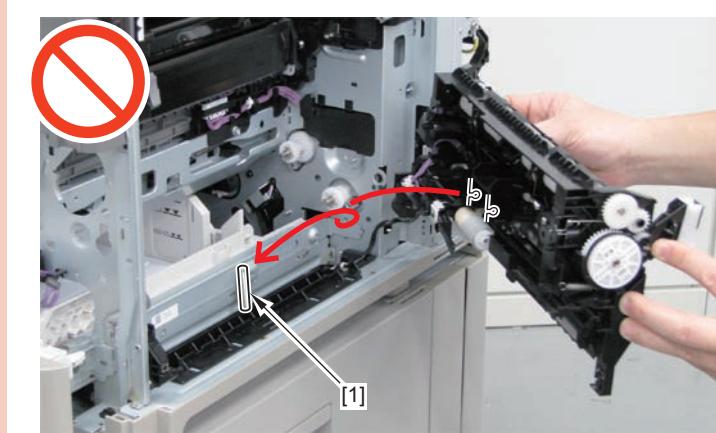
F-4-407

4) Remove the Registration/Pickup Unit [1].

- 5 Screws [2]
- 2 Bosses [3]

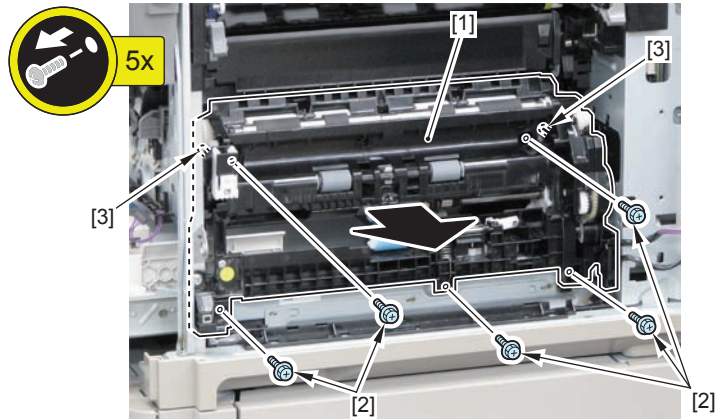
CAUTION:

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

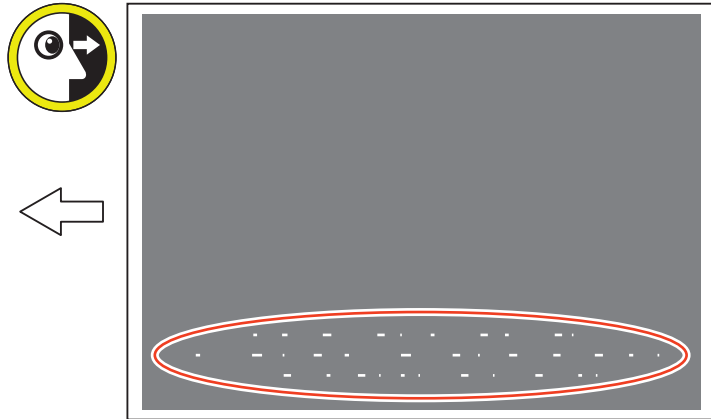


F-4-409

■ Procedure after replacement

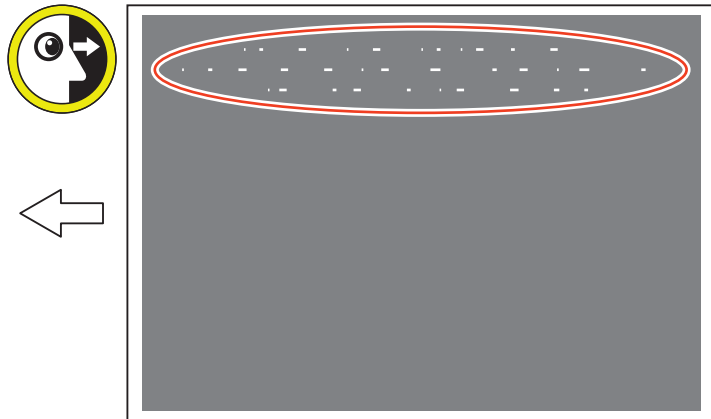
When images with uneven density (white spots) are generated after replacing the Registration Unit

● Image with uneven density (white spots) on the front side



F-4-410

● Image with uneven density (white spots) on the rear side

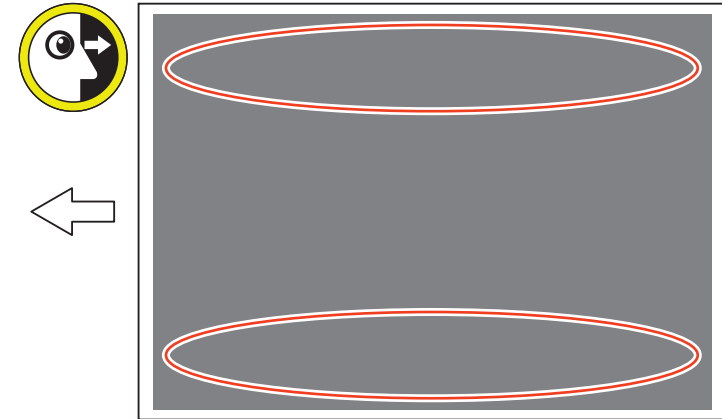


F-4-411

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.

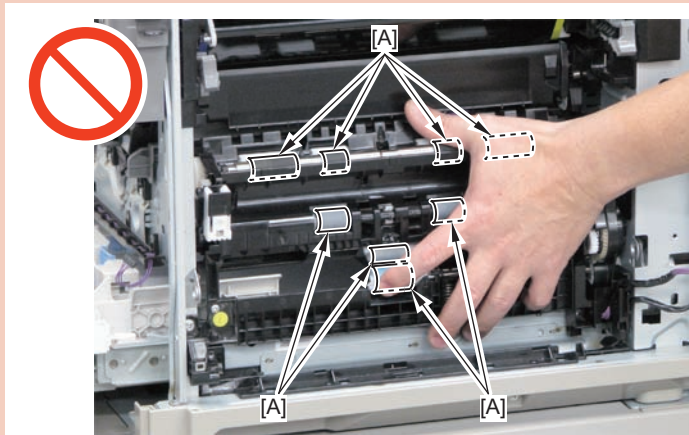
● Adjusting the Registration/Pickup Unit

Preparation

- 1) Remove the Rear Cover 1(Refer to page 4-35).
- 2) Remove the Right Rear Cover/Right Rear Lower Cover(Refer to page 4-39).
- 3) Remove the Right Cover Unit(Refer to page 4-35).
- 4) Remove the Front Cover(Refer to page 4-34).
- 5) Remove the Right Front Cover(Refer to page 4-38).
- 6) Remove the Waste Toner Container(Refer to page 4-109).
- 7) Remove the Registration Drive Unit(Refer to page 4-124).

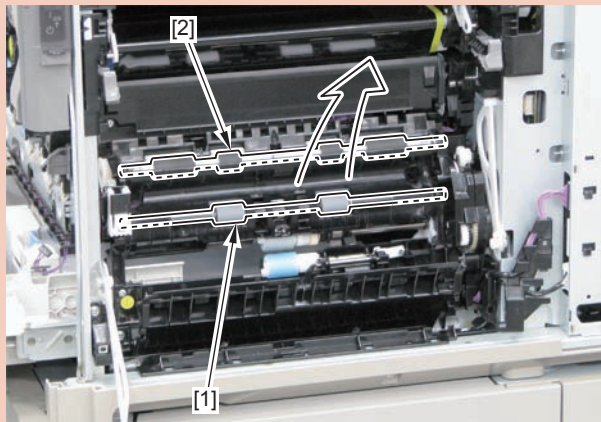
CAUTION:

- Be sure not to touch the surface [A] of the roller when disassembling/assembling.



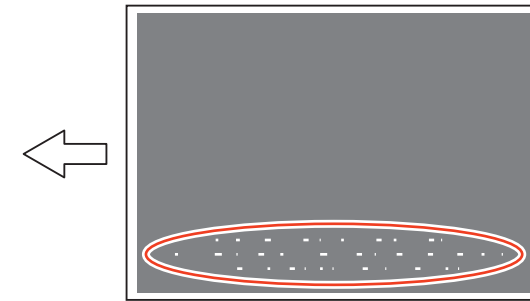
F-4-413

- 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.



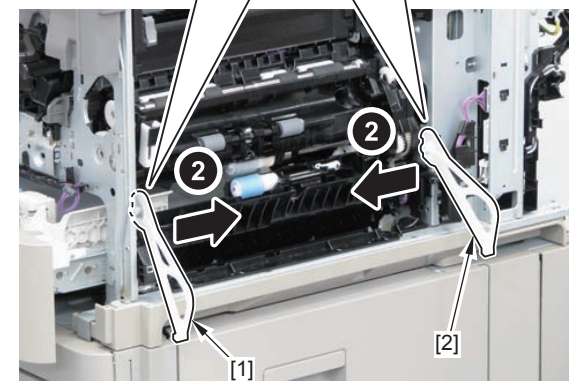
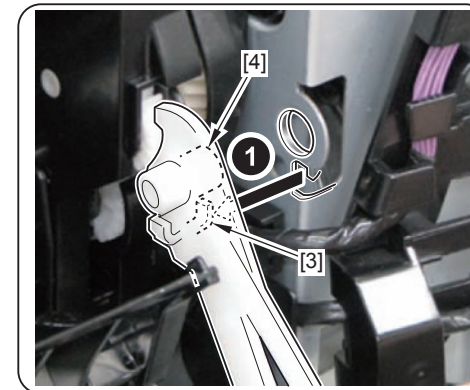
F-4-414

Procedure when images with uneven density (white spots) are generated on the front side



F-4-415

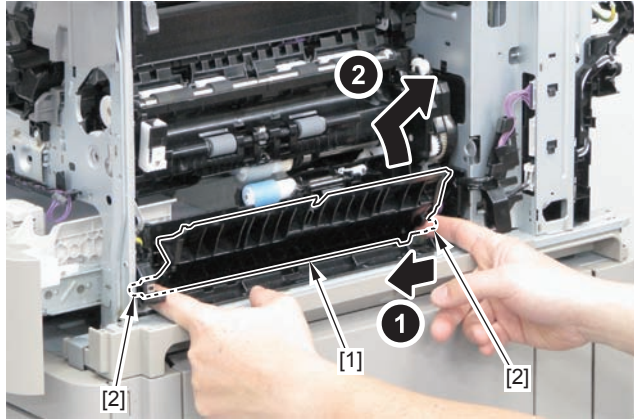
- 1) Remove the Right Cover Stopper Front [1] and the Right Cover Stopper Rear [2].
 - 2 Hooks [3]
 - 2 Shafts [4]



F-4-416

2) Remove the Swing Guide [1].

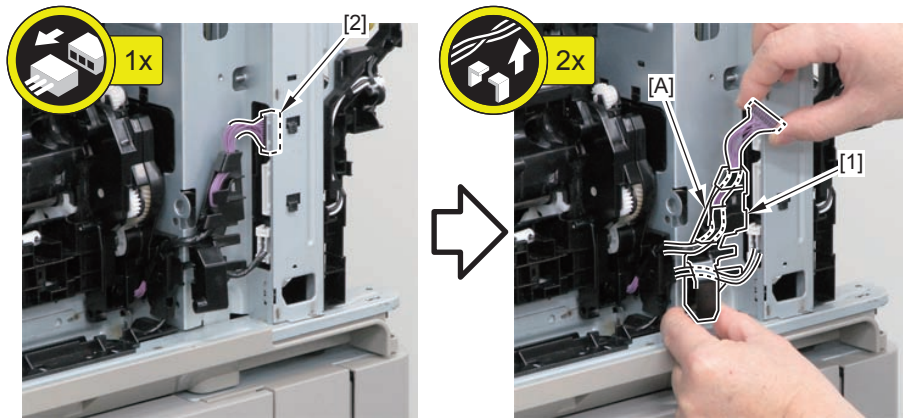
- 2 Shafts [2]



F-4-417

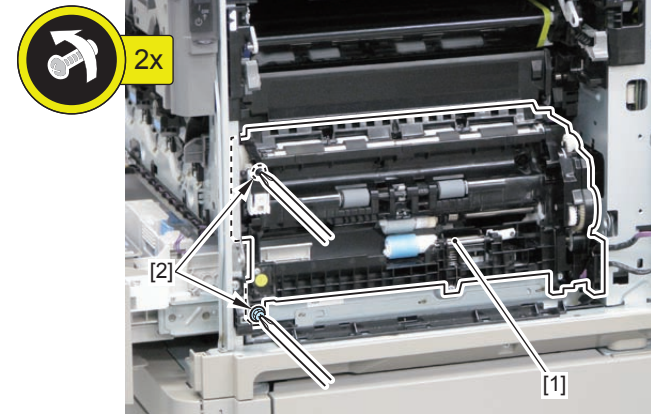
3) Remove the Right Cover Harness Guide [1].

- 1 Connector [2]
- Harness Guide [A]



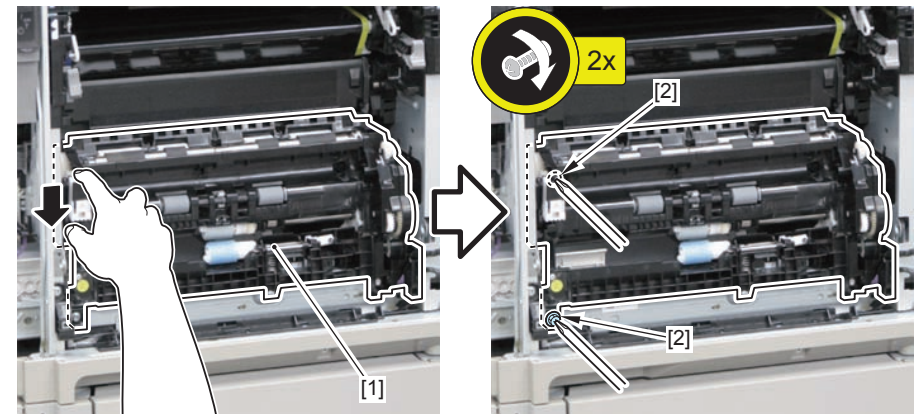
F-4-418

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

6) Assemble the Registration/Pickup Unit, output a test print, and confirm that images with uneven density (white spots) are not generated.

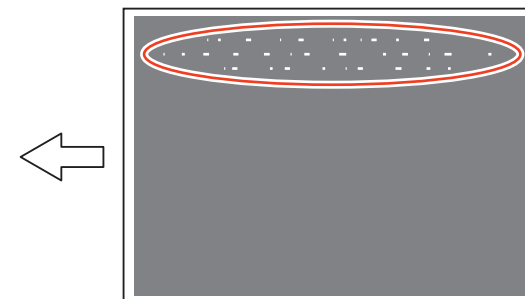


F-4-421

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.

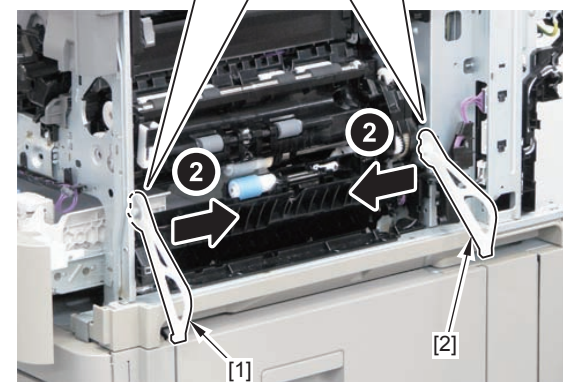
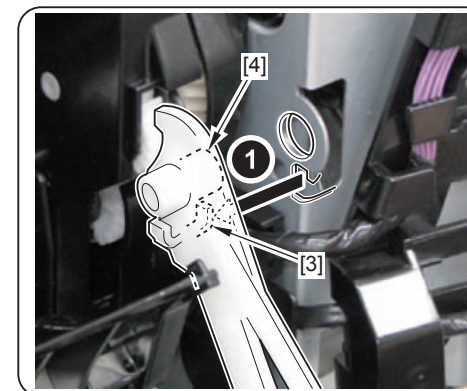
Procedure when images with uneven density (white spots) are generated on the rear side



F-4-422

1) Remove the Right Cover Stopper Front [1] and the Right Cover Stopper Rear [2].

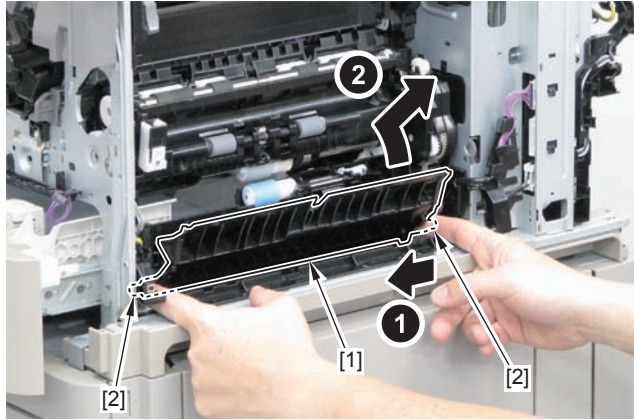
- 2 Hooks [3]
- 2 Shafts [4]



F-4-423

2) Remove the Swing Guide [1].

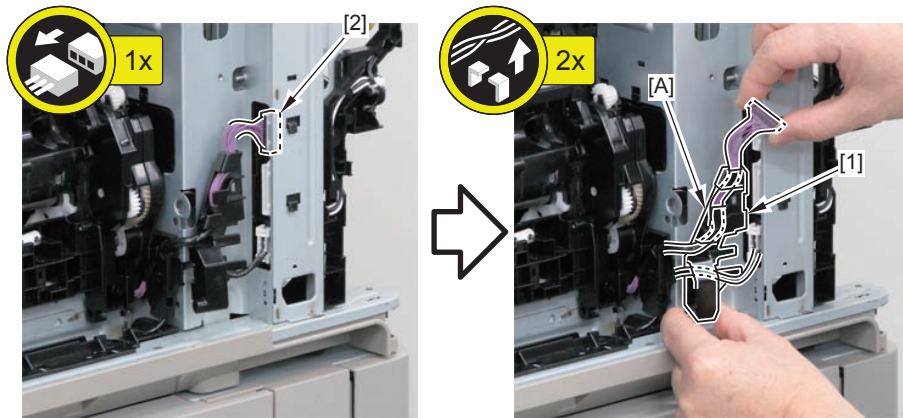
- 2 Shafts [2]



F-4-424

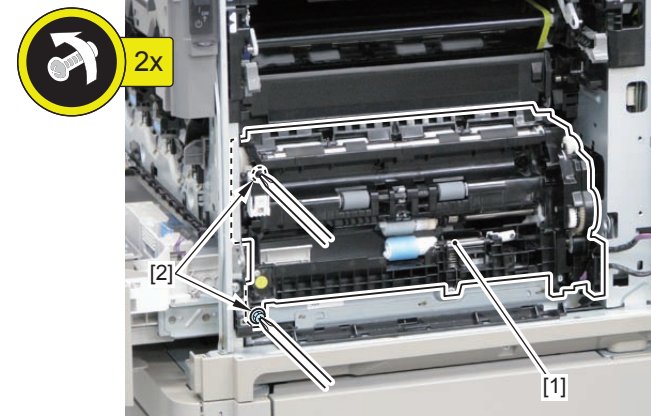
3) Remove the Right Cover Harness Guide [1].

- 1 Connector [2]
- Harness Guide [A]



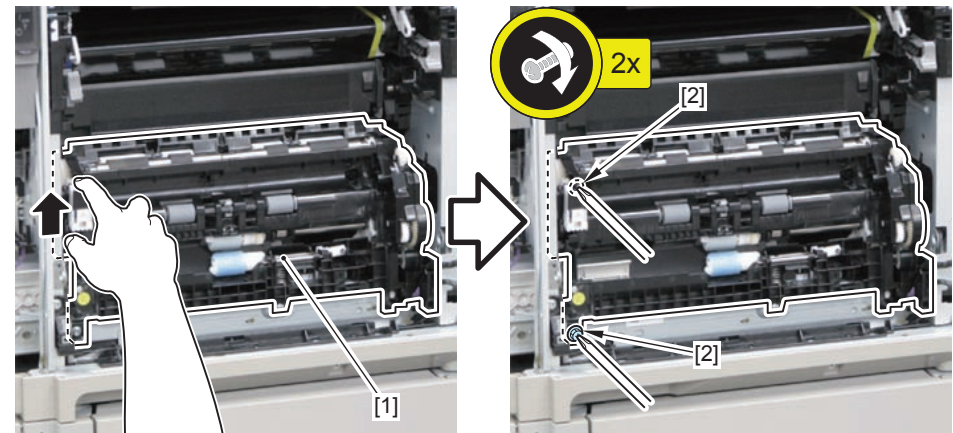
F-4-425

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

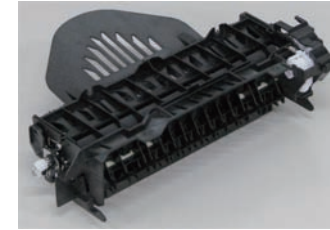
6) Assemble the Registration/Pickup Unit, output a test print, and confirm that images with uneven density (white spots) are not generated.



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



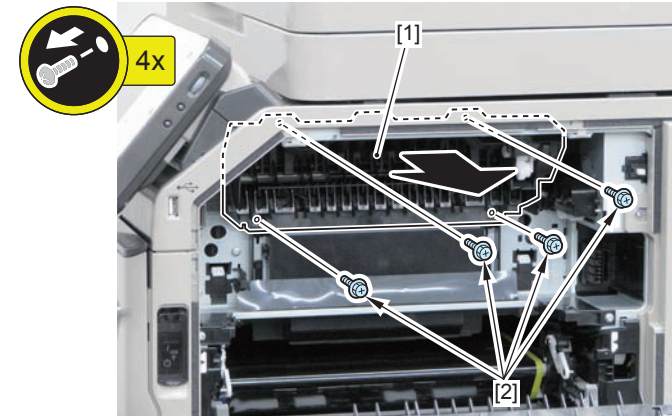
F-4-429

Preparation

1) Remove the Fixing Assembly (Refer to page 4-138).

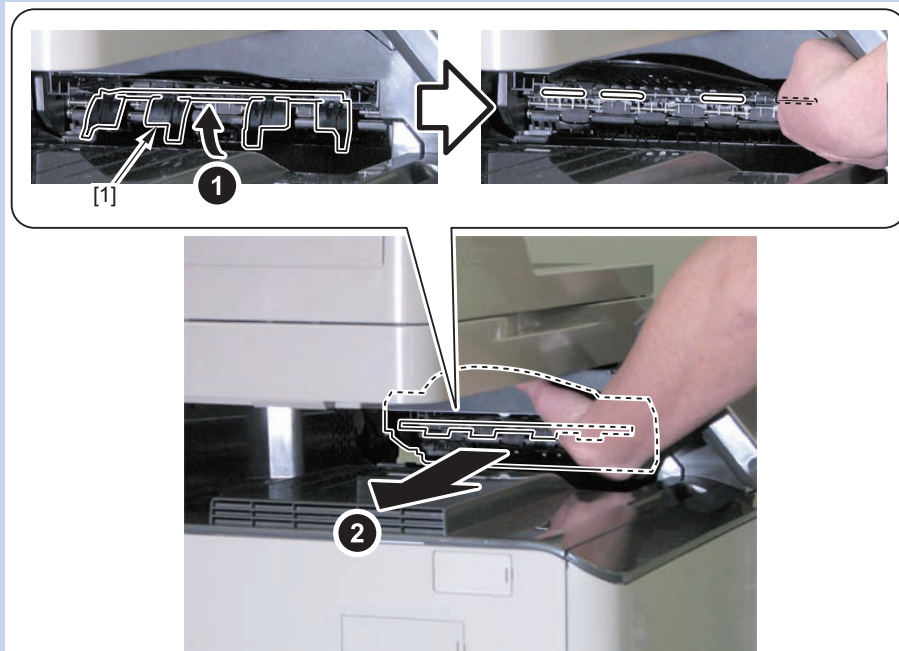
Procedure

1) Remove the Delivery/Reverse Unit [1].
• 4 Screws [2]



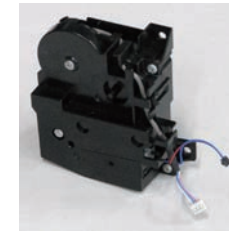
F-4-430

NOTE: How to assemble the Delivery/Reverse Unit
Be sure to lift up the Paper Full Detection Flag [1] to install the unit.



F-4-431

Removing the Cassette 1 Lifter Drive Unit



F-4-432

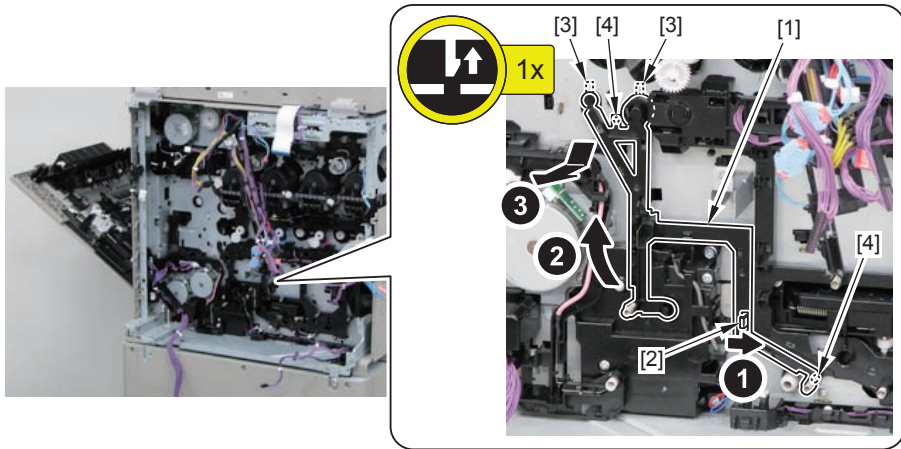
Preparation

- 1) Remove the Rear Cover 1(Refer to page 4-35).
- 2) Remove the Left Upper Cover (to be removed for models equipped with a fax)
(Refer to page 4-37).
- 3) Remove the Fax Speaker Unit (to be removed for models equipped with a fax)
(Refer to page 4-101).
- 4) Remove the Fax Unit (to be removed for models equipped with a fax)(Refer to page 4-102).
- 5) Remove the Main Controller Unit(Refer to page 4-81).
- 6) Remove the Low-voltage Power Supply PCB Unit(Refer to page 4-94).
- 7) Remove the DC Controller PCB Unit(Refer to page 4-87).
- 8) Remove the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit
(Refer to page 4-89).

Procedure

1) Remove the High-voltage Contact Guide 1 [1].

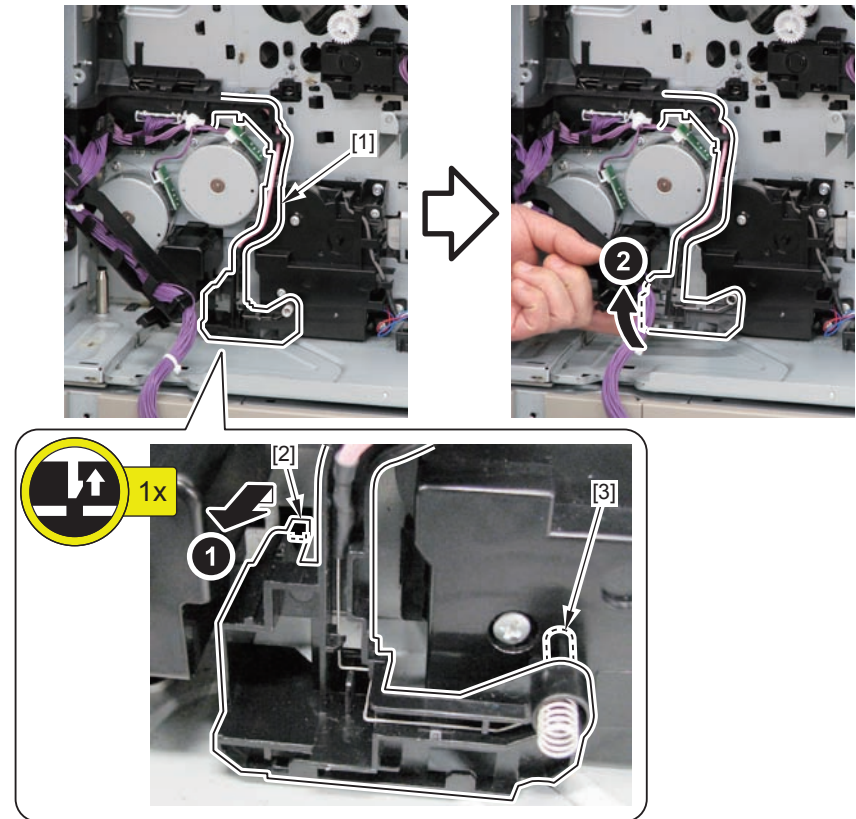
- 1 Claw [2]
- 2 Hooks [3]
- 2 Bosses [4]



F-4-433

2) Move the High-voltage Contact Guide 2 [1].

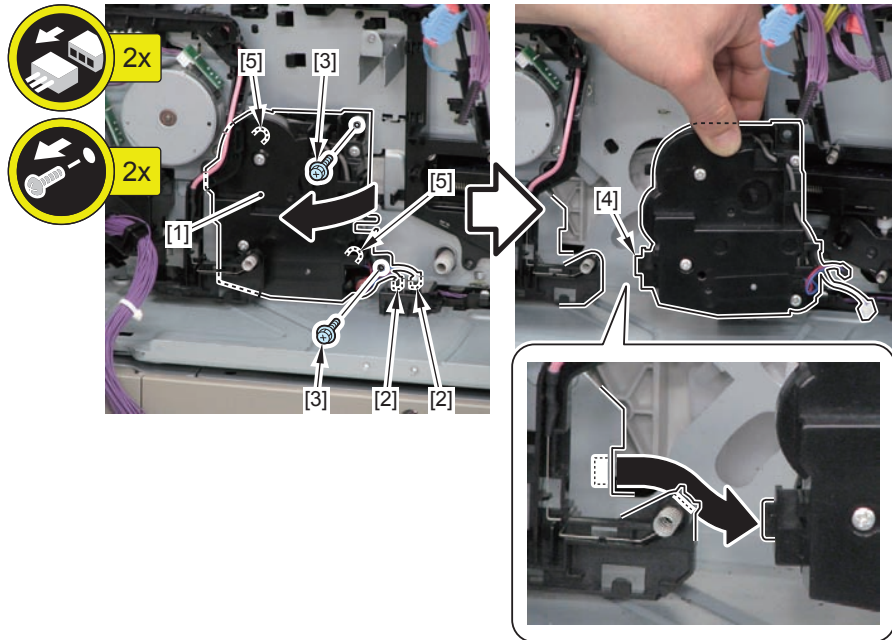
- 1 Claw [2]
- 2 Bosses [3]



F-4-434

3) Remove the Cassette 1 Lifter Drive Unit [1].

- 2 Connectors [2]
- 2 Screws [3]
- 1 Hook [4]
- 2 Bosses [5]

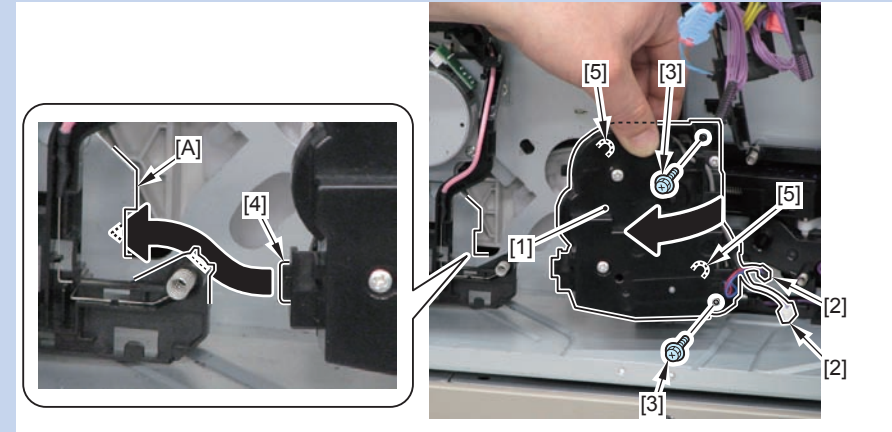


F-4-435

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].

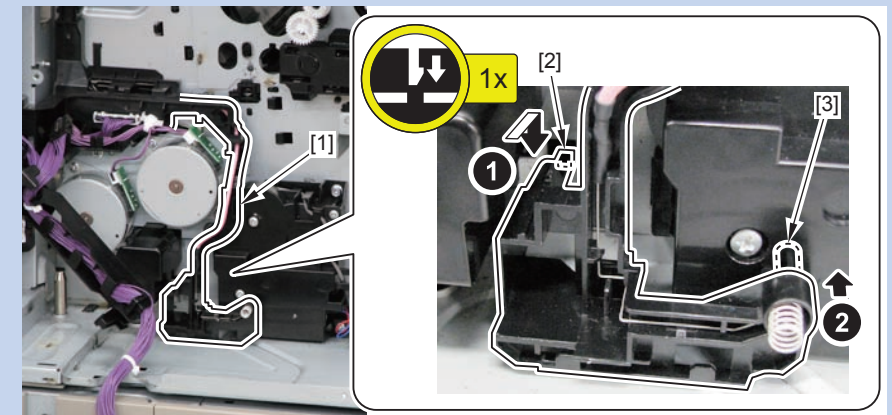
- 2 Bosses [5]
- 2 Connectors [2]



F-4-436

- 2) Install the High-voltage Contact Guide 2 [1].

- 1 Claw [2]
- 2 Bosses [3]

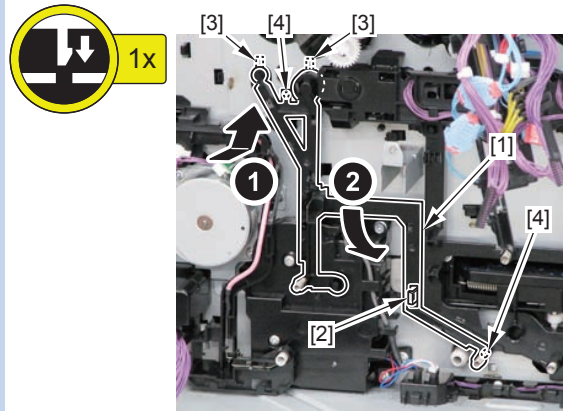


F-4-437

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



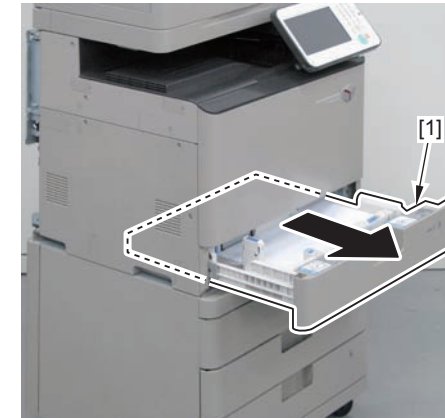
F-4-439

Preparation

- 1) Remove the Rear Cover 1 (Refer to page 4-35).
- 2) Remove the Secondary Transfer High-voltage PCB/Developing High-voltage PCB Unit (Refer to page 4-89).
- 3) Remove the Cassette 1 Lifter Drive Unit (Refer to page 4-165).

Procedure

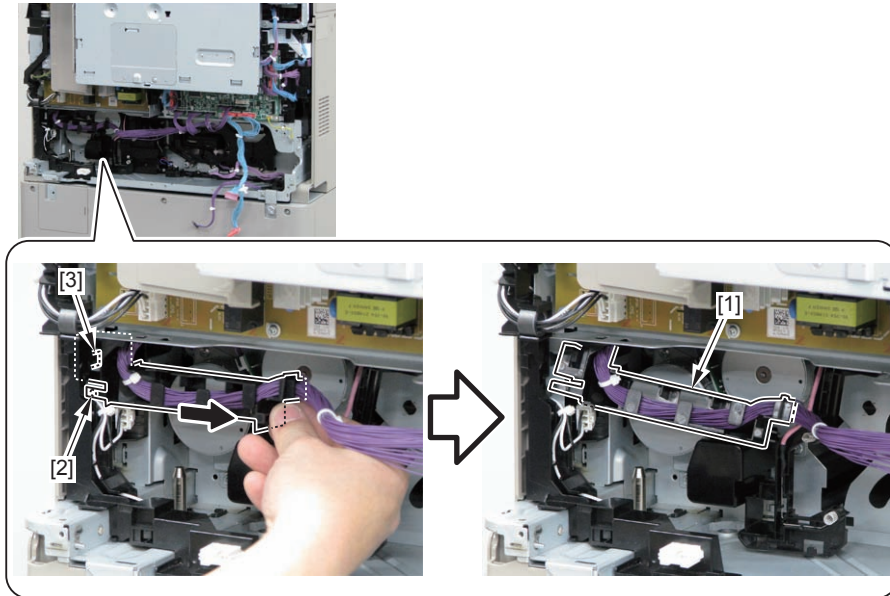
- 1) Pull out the cassette [1].



F-4-440

2) Move the Harness Guide [1].

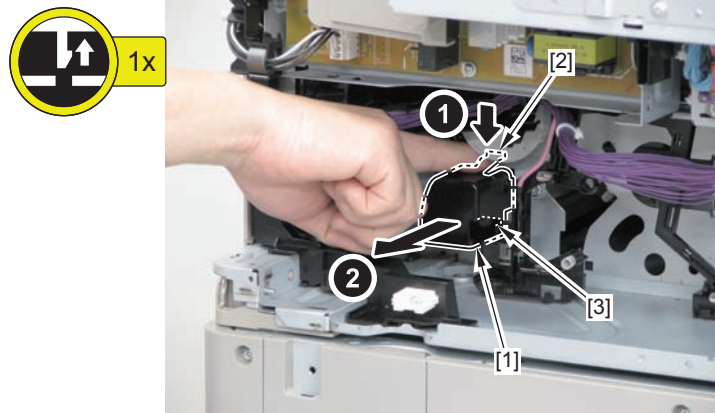
- 1 Boss [2]
- 1 Hook [3]



F-4-441

3) Remove the Rail Cover [1].

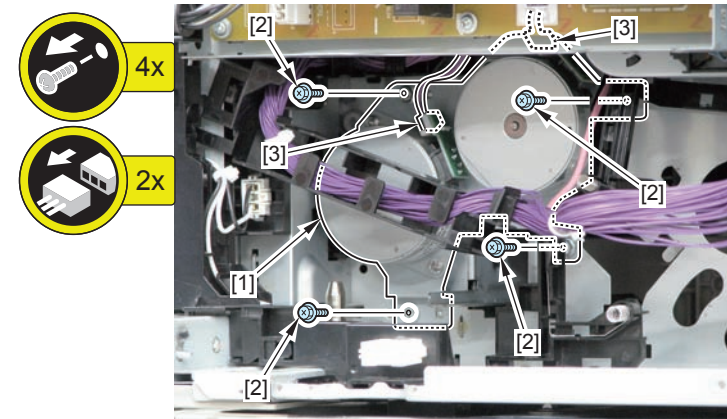
- 2 Claws [2]
- 1 Hook [3]



F-4-442

4) Remove the Cassette 1 Pickup Drive Unit [1].

- 4 Screws [2]
- 2 Connectors [3]

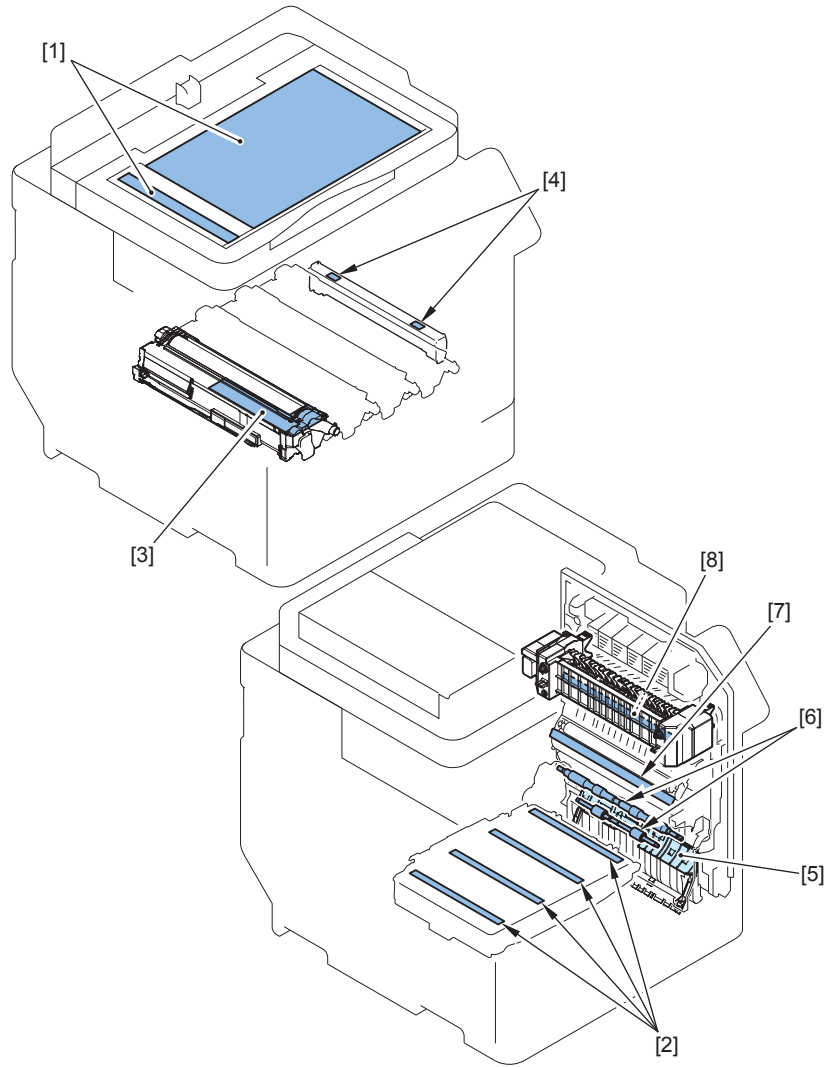


F-4-443

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

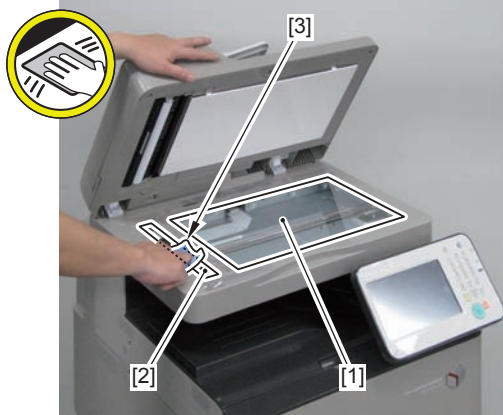
No.	Parts Name	Reference
[1]	Cleaning the Copyboard Glass/Reading Glass	(Refer to page 4-171)
[2]	Cleaning the Dustproof Glass	(Refer to page 4-171)
[3]	Cleaning when installing/removing the ITB Unit	(Refer to page 4-172)
[4]	Cleaning the Registration Patch Sensor Unit	(Refer to page 4-173)
[5]	Cleaning the Registration Front Guide	(Refer to page 4-174)
[6]	Cleaning the Registration Roller/Pre-registration Roller	(Refer to page 4-175)
[7]	Cleaning the Secondary Transfer Guide	(Refer to page 4-176)
[8]	Cleaning the Fixing Inlet Guide	(Refer to page 4-178)

T-4-94

Cleaning the Copyboard Glass/Reading Glass

Procedure

1) Clean the Copyboard Glass [1]/Reading Glass [2] with a glass cleaning sheet [3].

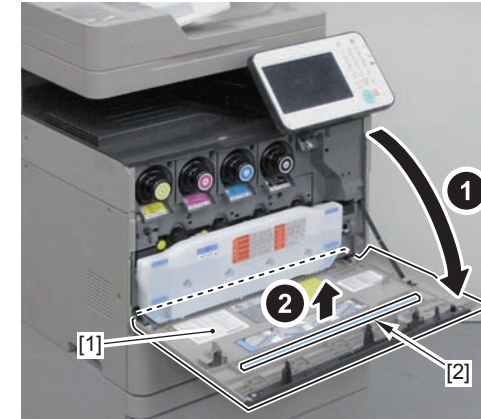


F-4-445

Cleaning the Dustproof Glass

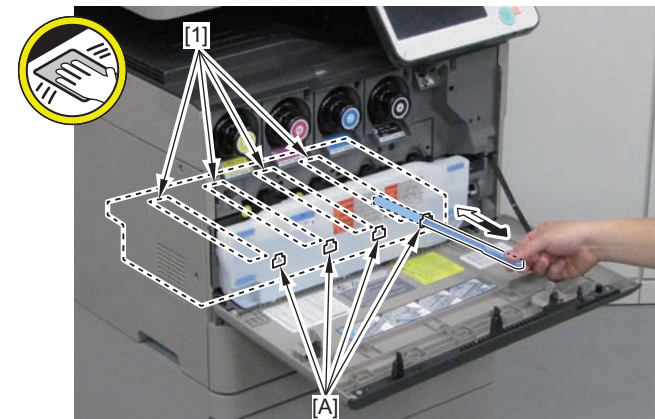
Procedure

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.

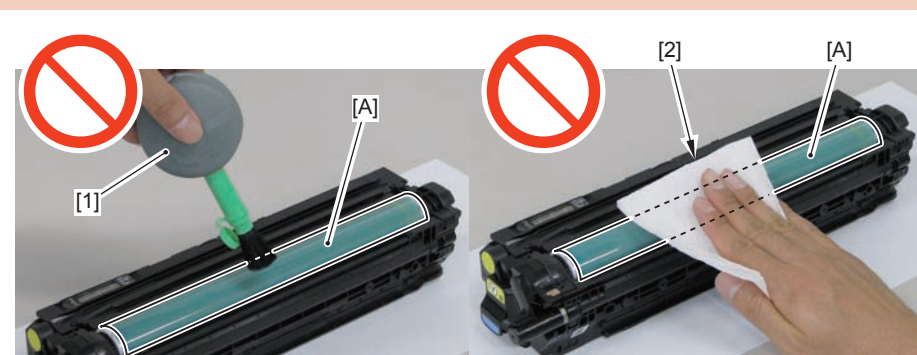
Preparation

- 1) Remove the Waste Toner Container (Refer to page 4-109).
- 2) Remove the Drum Unit (Y/M/C/Bk) (remove the Drum Unit of the Y color) (Refer to page 4-110).

Procedure

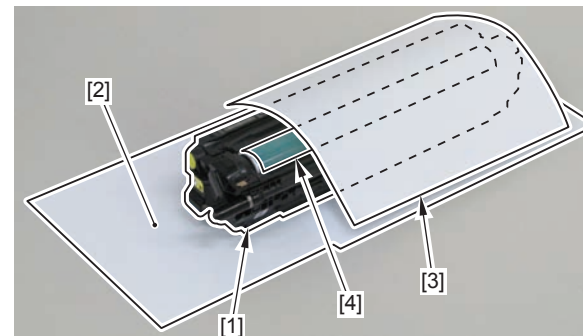
CAUTION:

Do not clean the drum surface [A] with a blower [1] or lint-free paper [2].



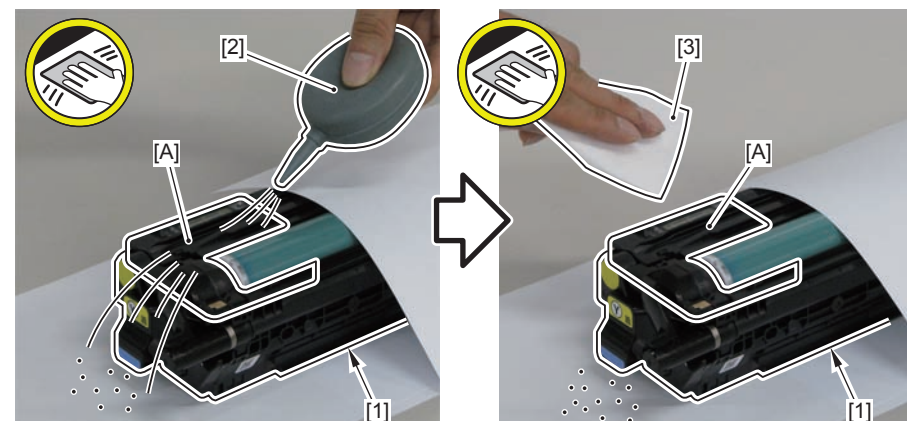
F-4-448

- 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 4-109).
- 2) Remove the Drum Unit (remove Bk color) (Refer to page 4-110).
- 3) Remove the ITB Unit(Refer to page 4-113).

Procedure

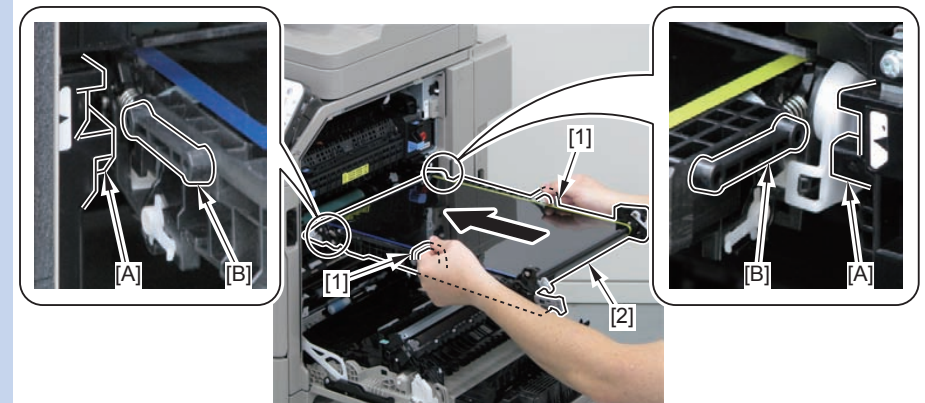
- 1) While opening the RD Sensor Shutter [1], clean the surface [A] of the Patch Sensor with a blower. After cleaning, check that there is no soiling caused by toner on the surface [A] of the sensor.
If the soiling cannot be removed, perform step 2.
- 2) While opening the RD Sensor Shutter [1], clean the surface [A] of the Patch Sensor with tightly-wrung cotton swab moistened with water in a single direction.

CAUTION:

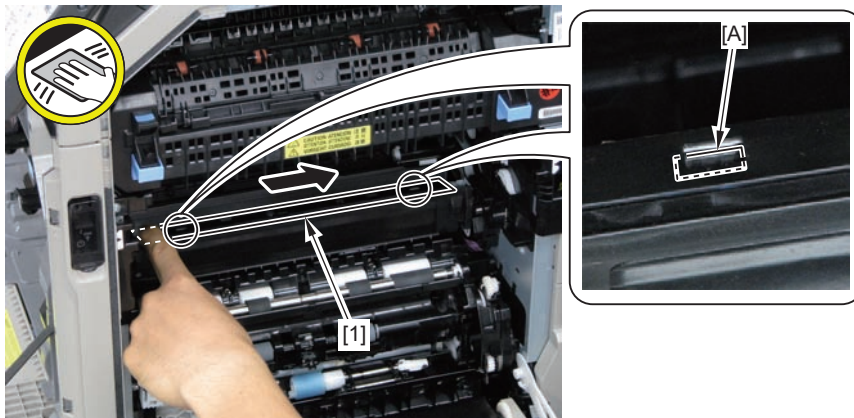
- Do not use alcohol because it causes melting and clouding of the sensor window.
- Do not dry wipe the sensor window because it is charged to attract toner.

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

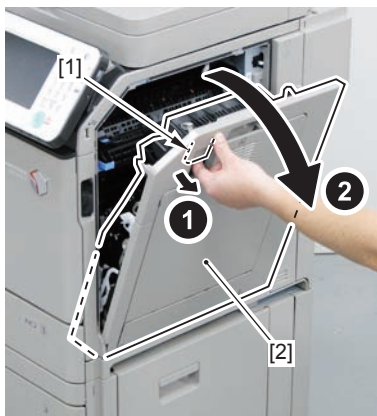


F-4-451

Cleaning the Registration Front Guide

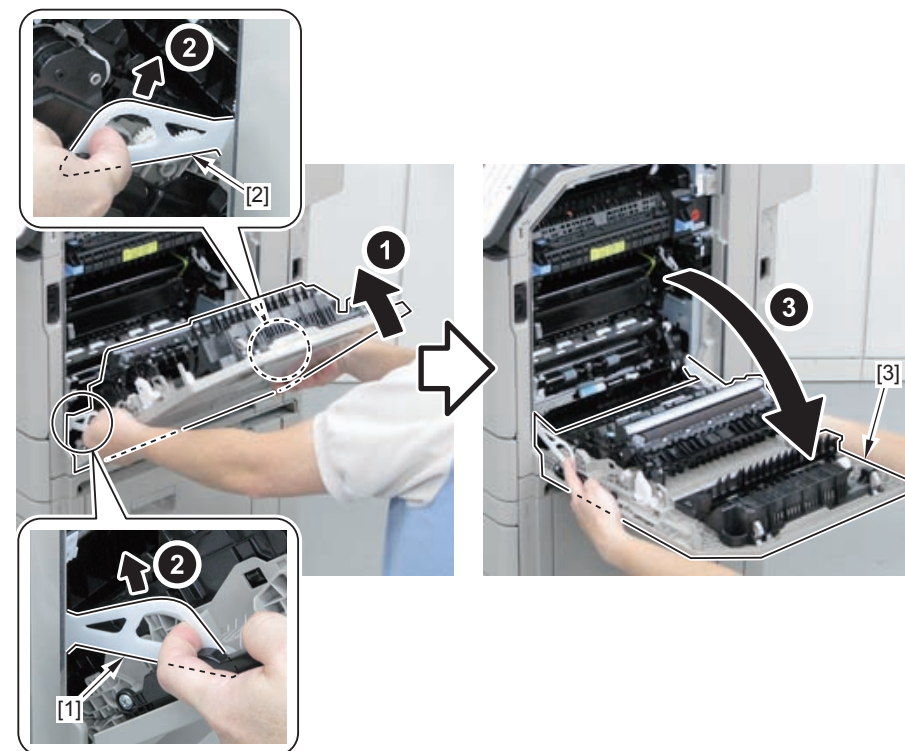
Procedure

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



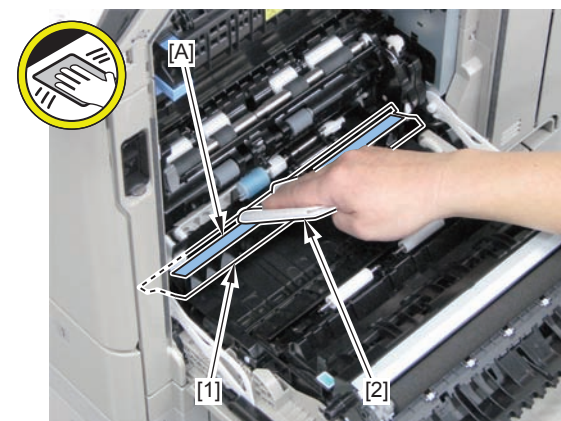
F-4-453

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.

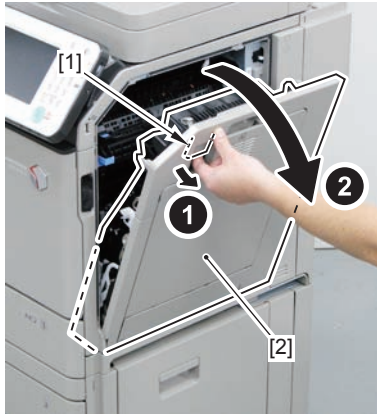


F-4-455

Cleaning the Registration Roller/Pre-registration Roller

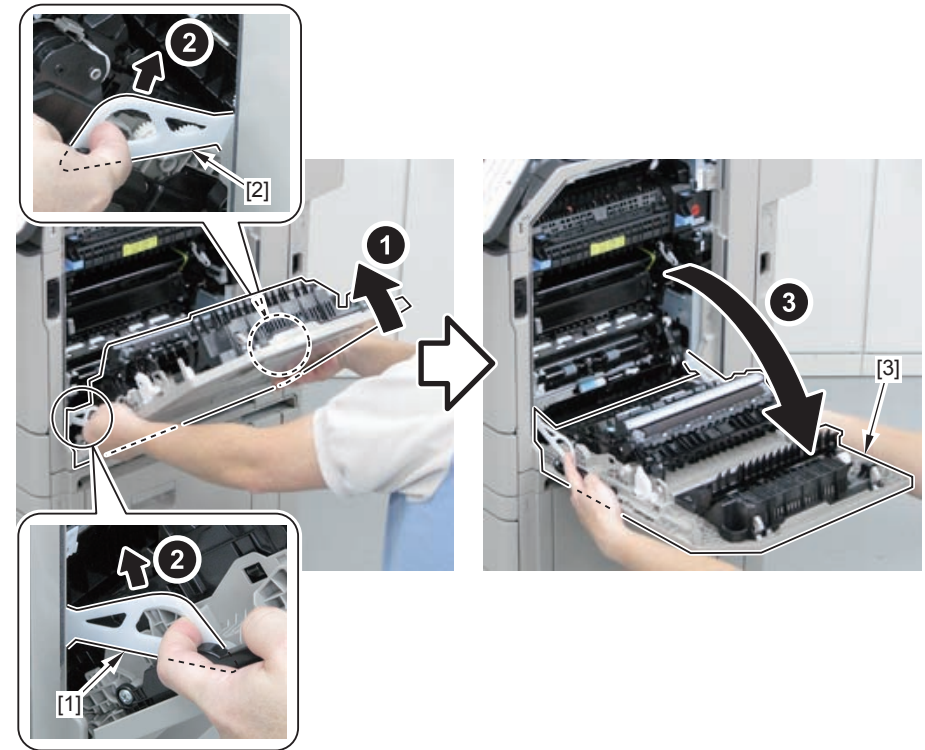
■ Procedure

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



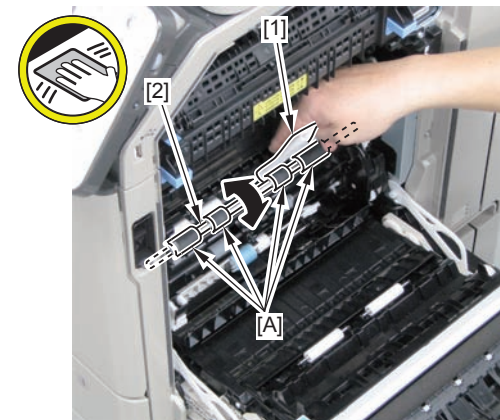
F-4-456

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].



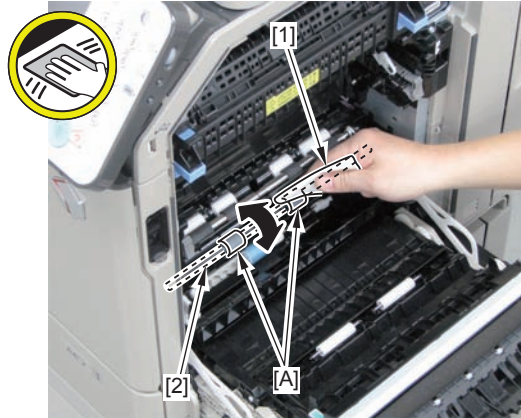
F-4-457

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].

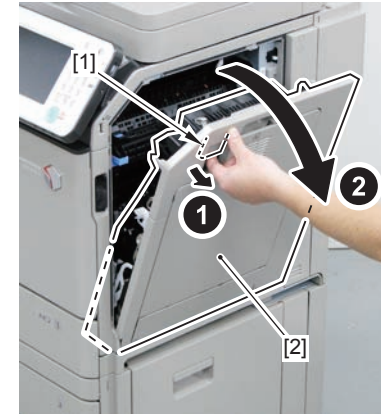


F-4-459

Cleaning the Secondary Transfer Guide

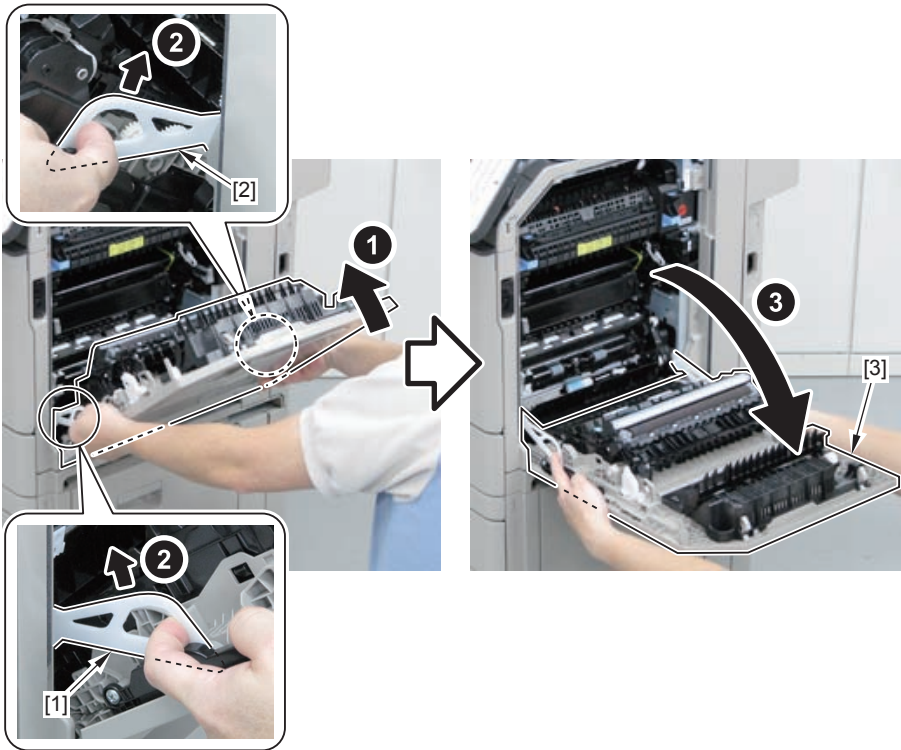
Procedure

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



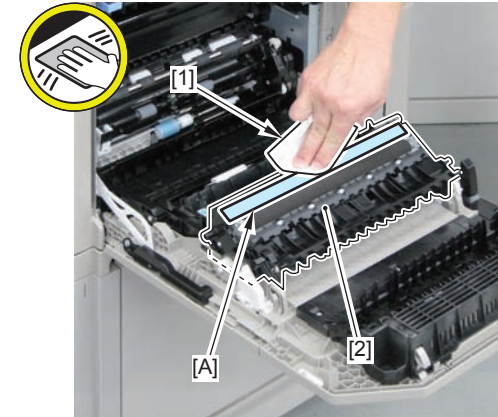
F-4-460

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 4-138).

Procedure

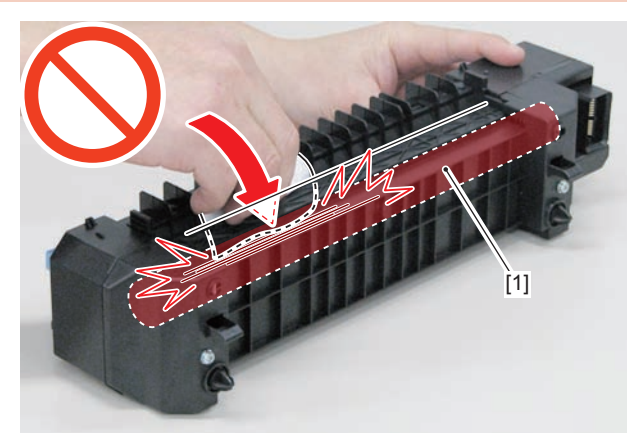
⚠ CAUTION:

Be sure to start removing the Fixing Assembly after it is cooled down enough. The Fixing Assembly right after printing may cause burn injury.

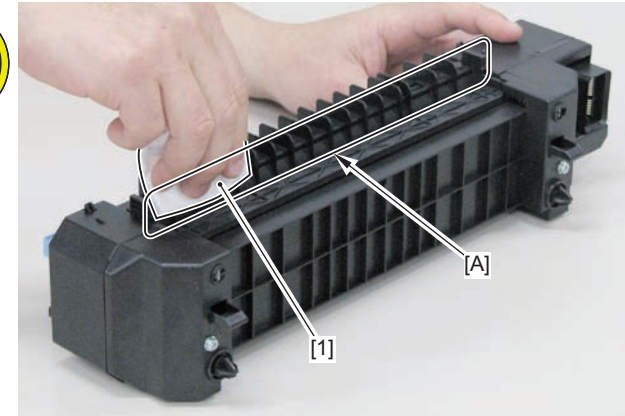
1) Clean the Fixing Inlet Guide [A] with lint-free paper [1] moistened with alcohol.

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



T-5-1

- Restore

Import the service mode data backed up before replacement from the USB memory.



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.

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

Original Exposure and Feed System (Reader)

Copyboard Glass Unit

Procedure of Replacement

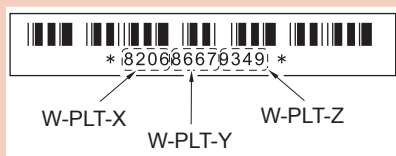
- 1) Enter the value (White level data entry of white plate) indicated on the platen glass in the following service mode:

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.



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 mode 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 mode 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

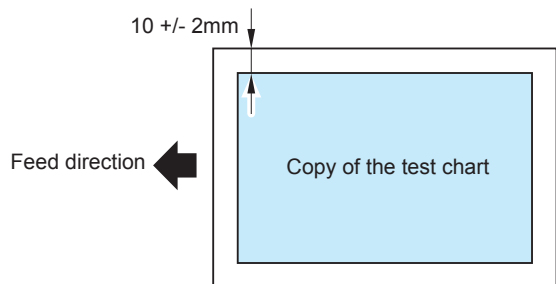
T-5-16

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

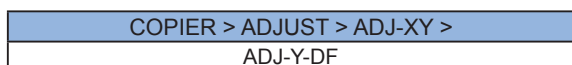
9) Adjust the image position (horizontal scanning direction) at ADF reading.

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.



F-5-2

3. Select the item in the service mode.

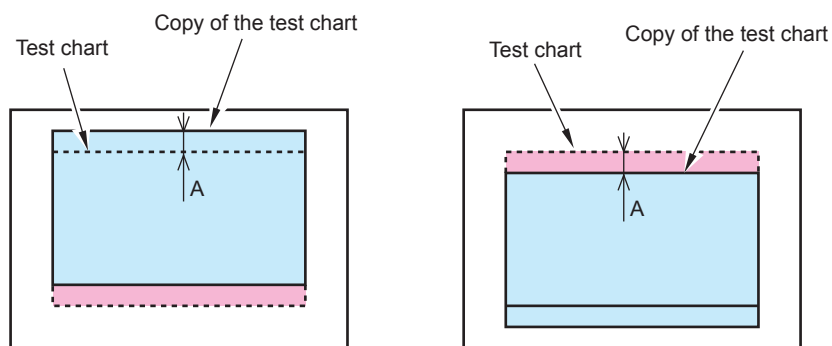


T-5-17

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 >



←
Feed direction

←
Feed direction

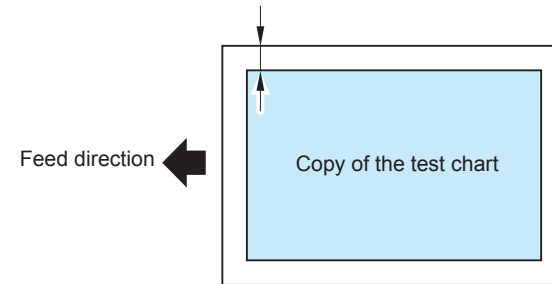
F-5-3

5. Write the new changed value in the service label.

6. Exit the service mode.

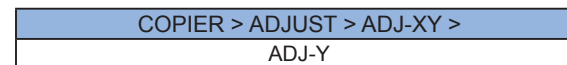
10) Adjust the image position (horizontal scanning direction) at copyboard reading.

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.



F-5-4

3. Select the item in the service mode.

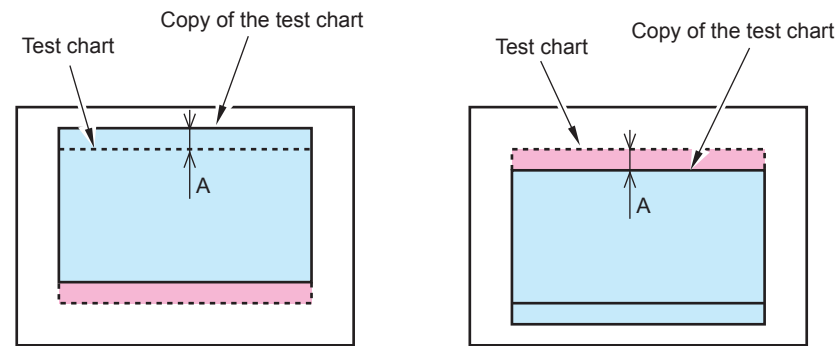


T-5-18

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 >



←
Feed direction

←
Feed direction

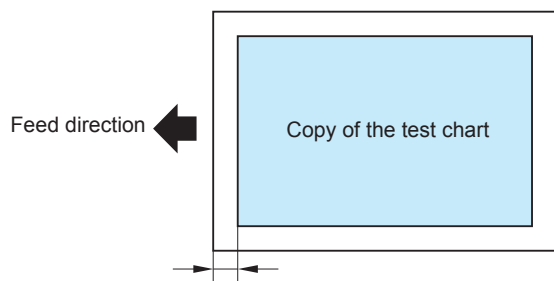
F-5-5

5. Write the new changed value in the service label.

6. Exit the service mode.

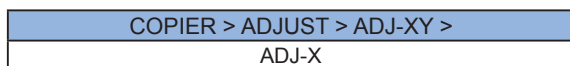
11) Adjust the image position (vertical scanning direction) at copyboard reading.

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.



F-5-6

3. Press ADJ-X from the service mode screen.



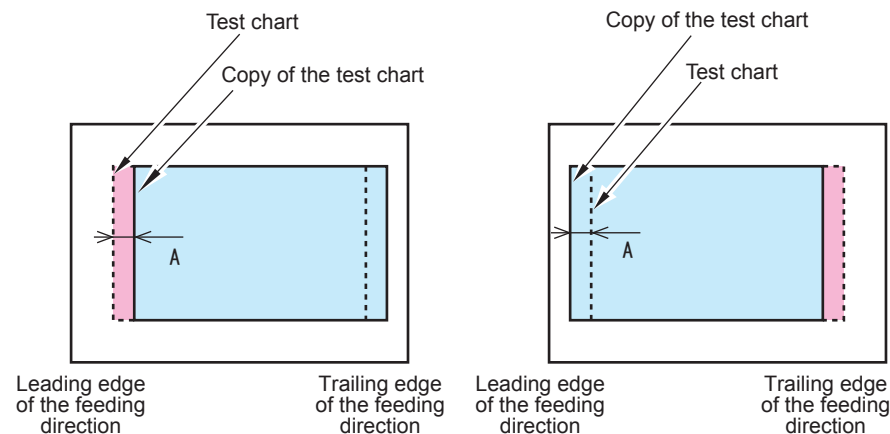
T-5-19

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 >



F-5-7

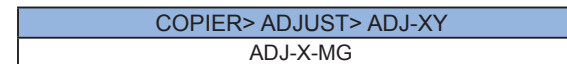
5. Write the new changed value in the service label.
6. Exit the service mode.

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.



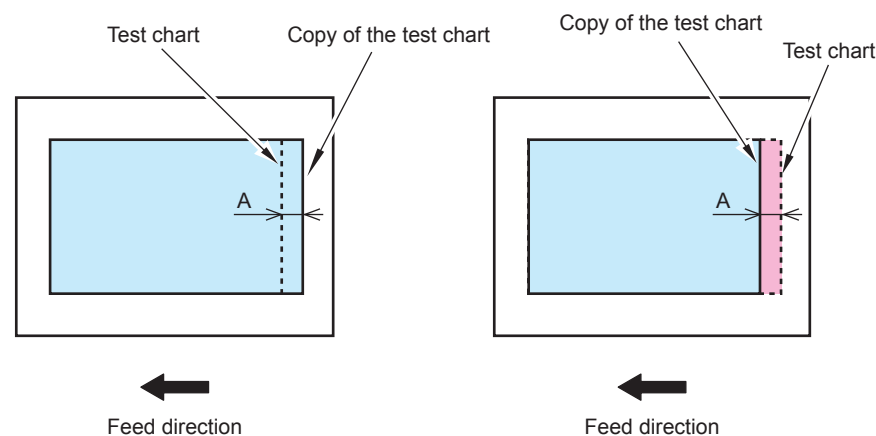
T-5-20

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 >



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.

After Replacing the Scanner Unit (Reader side CIS)

Procedure after Replacement

1) Perform the following steps.

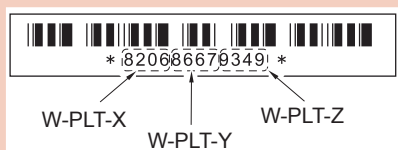
1. Enter the value (White level data entry of white plate) indicated on the platen glass in the following service mode:

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.



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 mode 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 mode 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

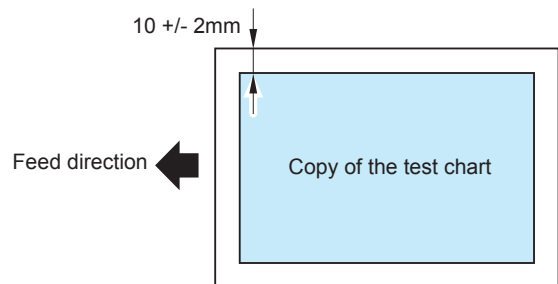
T-5-28

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

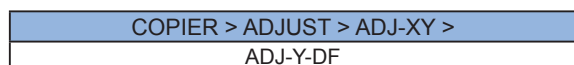
8) Adjust the image position (horizontal scanning direction/front side) at ADF reading.

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.



F-5-10

3. Select the item in the service mode.

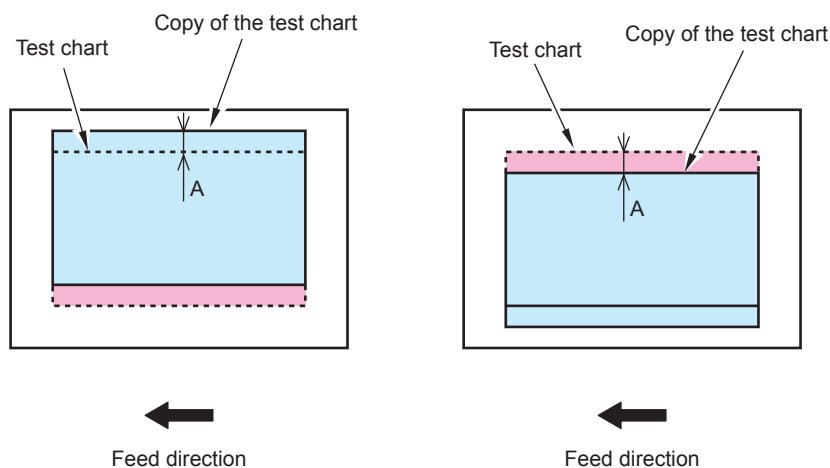


T-5-29

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 >



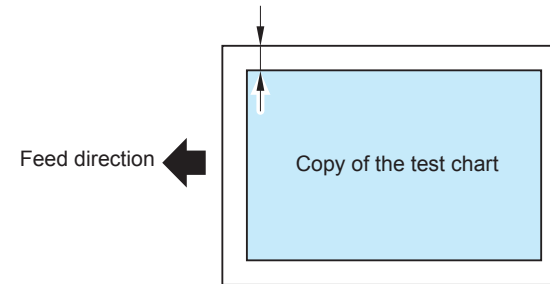
F-5-11

5. Write the new changed value in the service label.

6. Exit the service mode.

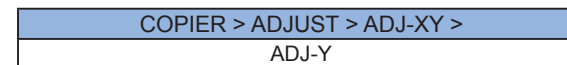
9) Adjust the image position (horizontal scanning direction) at copyboard reading.

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.



F-5-12

3. Select the item in the service mode.

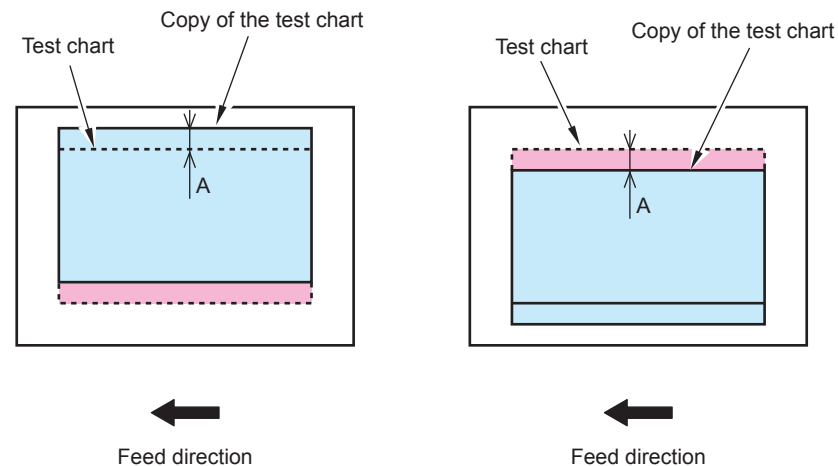


T-5-30

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 >



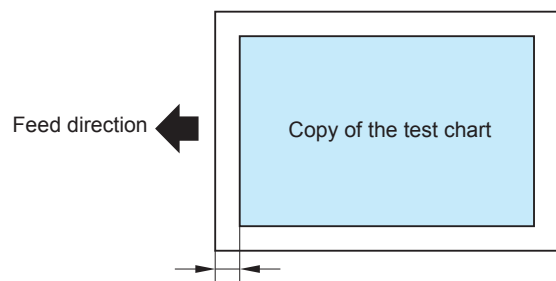
F-5-13

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.



F-5-14

3. Press ADJ-X from the service mode screen.

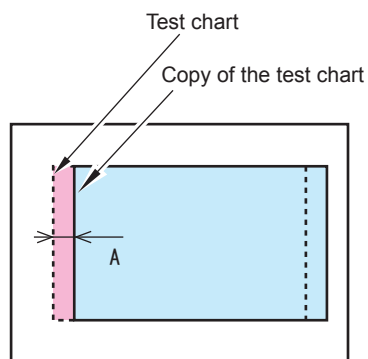


T-5-31

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

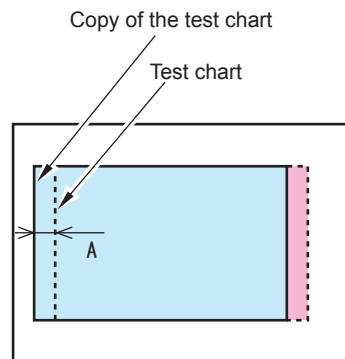
< When a copied image moves to the rear >



Leading edge
of the feeding
direction

Trailing edge
of the feeding
direction

< When a copied image moves to the front >



Leading edge
of the feeding
direction

Trailing edge
of the feeding
direction

F-5-15

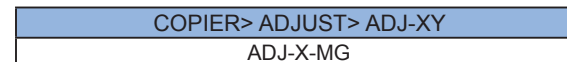
5. Write the new changed value in the service label.
6. Exit the service mode.

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.

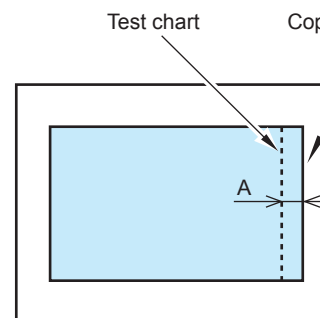


T-5-32

4. Input value, and adjust an image.

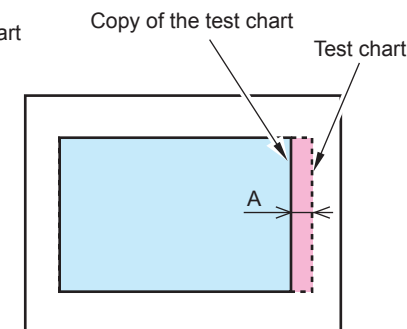
- When a copied image is enlarged: Increase value
- When a copied image is reduced: Decrease value
- Adjustment unit: 0.1 %

< When a copied image is long >



Feed direction

< When a copied image is short >



Feed direction

5. Write the new changed value in the service label.
6. Exit the service mode.

F-5-16

12) Make a copy and check the copied image.

ADF Unit

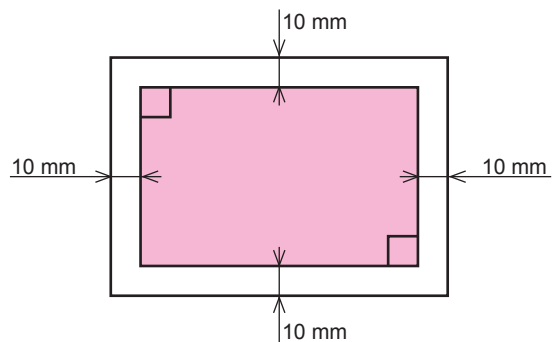
Prepare before Adjustment

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 identified.)



F-5-17

Procedure after Replacement

CAUTION:

When the ADF has been replaced or removed from the reader, the following adjustment is necessary.

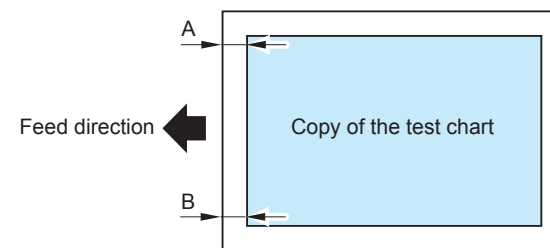
Adjustment of the Degree of a Right Angle

- 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.

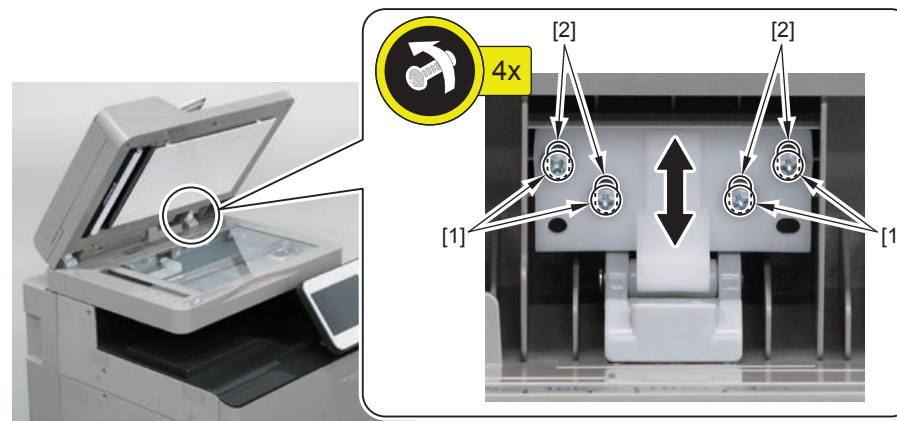
When the amount of skew is not in the following standard, adjust it from the step 3).

- Standard Value: $A - B = 0 \pm 1.5 \text{ mm}$



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 mode 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.

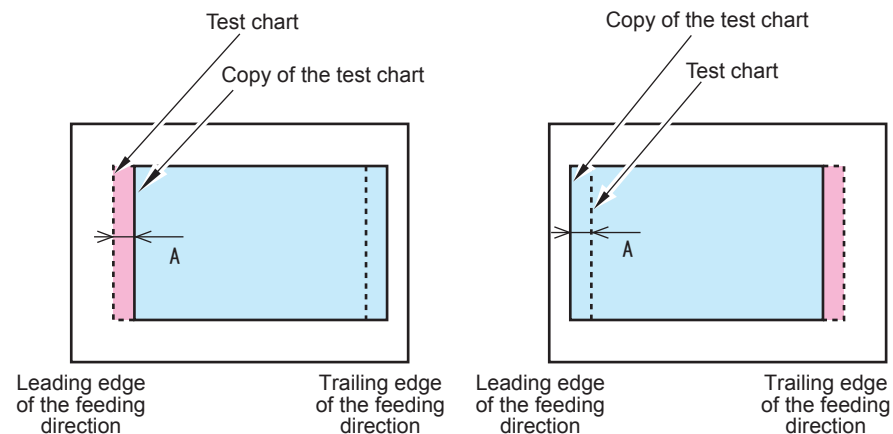
FEEDER > ADJUST >
DOCST

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:

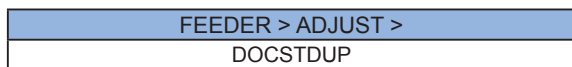
Confirm that the Degree of a Right Angle is correct after you finish this adjustment.
Adjust again from the Adjustment of the Degree of a Right Angle when the Degree of a Right Angle is not correct.

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.



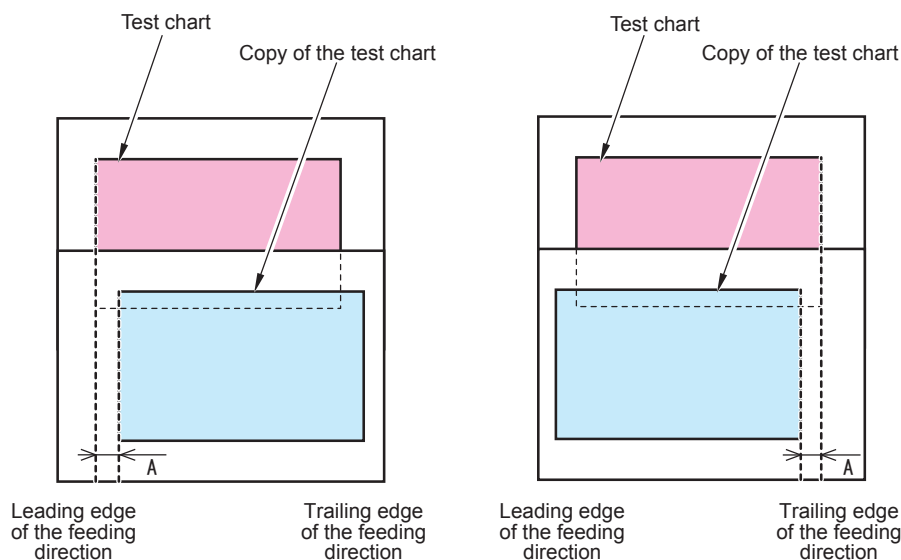
T-5-36

- 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.



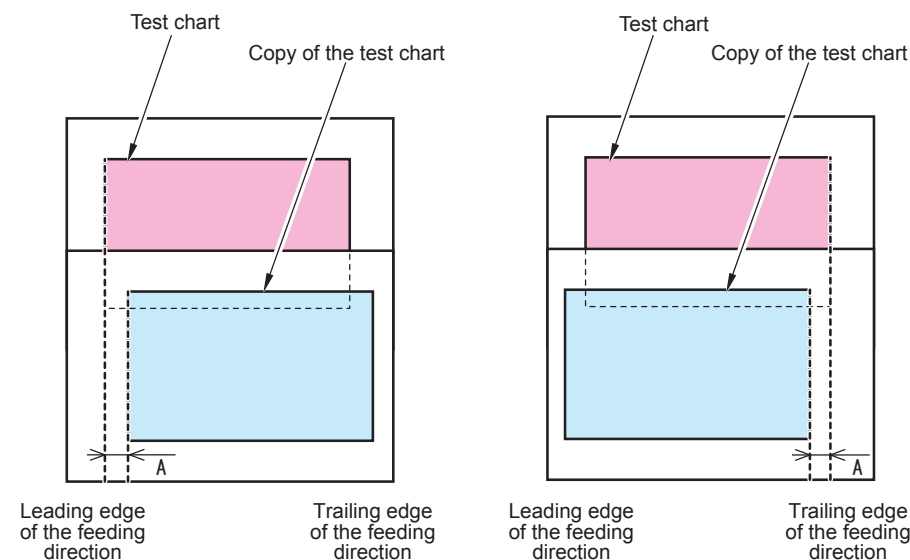
T-5-37

- 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.

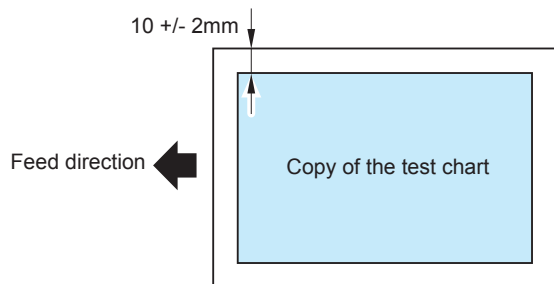
- 6) Exit the service mode.

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.

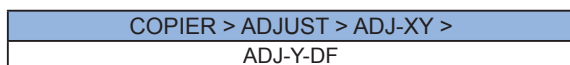
Adjust the image position (horizontal scanning direction/front side) at ADF reading.

- 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.



F-5-23

- 3) Select the item in the service mode.

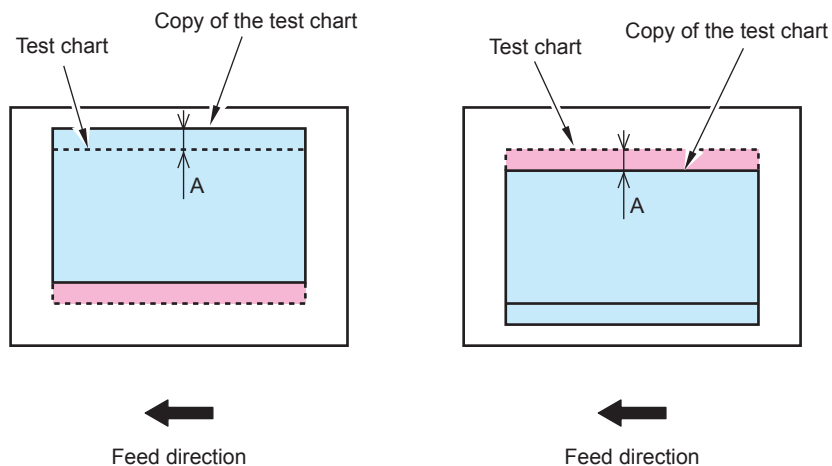


T-5-38

- 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 >



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.



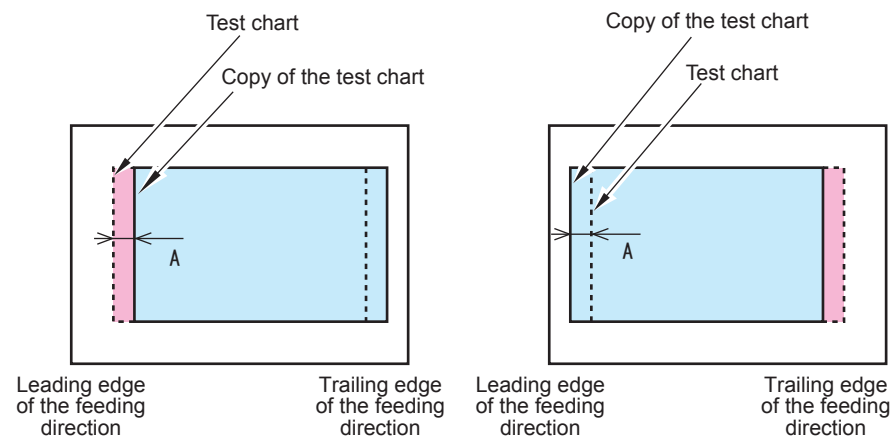
T-5-39

- 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 >



F-5-25

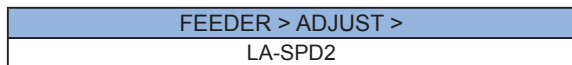
- 5) Write the new changed value in the service label.
- 6) Exit the service mode.

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.



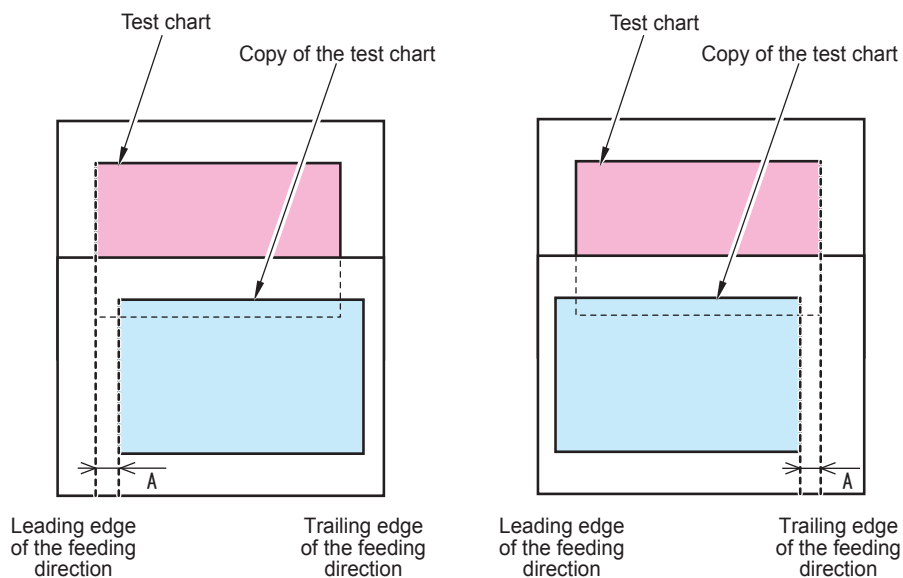
T-5-40

- 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.



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.



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

Europe, North America, Latin America model

Before Replacing	<ol style="list-style-type: none"> 1) Backup the Settings/Registration data. Use RUI or a USB memory Log in as an administrator (mode). Settings/Registration > Import/Export 2) Service mode backup Use a USB memory COPIER > FUNCTION > SYSTEM > EXPORT 3) If the data cannot be exported, write down the values of the items on the service label. (Enter them after replacement.)
Replacement	<p>Transferring the parts from old PCB to new PCB</p> <ul style="list-style-type: none"> • Memory PCB

After Replacing	<ol style="list-style-type: none"> 1) After the parts are assembled, turn ON the power. 2) Setting of the paper size group COPIER > OPTION > BODY > SIZE-LC [Setting value] 1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/inch configuration 3) Clearing the data COPIER > FUNCTION > CLEAR > ALL (clearing of all data) When executing this item, the following data is cleared according to the value set in step 2 and the serial number. Settings/Registration data (the initial value according to the location is set.) Service mode data (the initial value according to the location is set.) System administrator ID and password (They are changed back to the default values. ID: 0, PWD: 0) Each log data Date data COPIER > FUNCTION > CLEAR > R-CON (clearing of the factory adjustment values related to the Reader and ADF) 4) Migrating service mode data Import the service mode data backed up before replacement from the USB memory. COPIER > FUNCTION > SYSTEM > IMPORT If the data could not be backed up, enter the values on the service label to the respective entry fields. 5) Turn OFF and then ON the power. 6) The initial installation mode will be activated. Operate according to the instruction on the screen. (Setting the date/time, executing the auto gradation adjustment) 7) Migrating user data Import the user data backed up using the means (RUI or USB memory) you used before replacement. Log in as an administrator (mode). Settings/Registration > Import/Export 8) Uninstalling the drivers Uninstall the drivers on the user's PC. Printer driver Fax driver Scanner driver Network Scan Utility * For the procedure, refer to the Startup Guide. 9) Reinstalling the drivers Install the drivers which were uninstalled in step 8. * For the procedure, refer to the Startup Guide. ** 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	<p>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.</p> <ul style="list-style-type: none"> • Main Controller PCB • Memory PCB
----------------------	---

T-5-43

■ Asia, Oceania, China model

Before Replacing	<ol style="list-style-type: none"> 1) Backup the Settings/Registration data. Use RUI or a USB memory Log in as an administrator (mode). Settings/Registration > Import/Export 2) Service mode backup Use a USB memory COPIER > FUNCTION > SYSTEM > EXPORT 3) If the data cannot be exported, write down the values of the items on the service label. (Enter them after replacement.) 4) Perform the following work to models for Asia, Oceania and China only. Write down the machine's serial number and the data of Settings/Registration > System Settings > Device Information> Location (to input them after replacement).
------------------	---

After Replacing	<ol style="list-style-type: none"> 1) After the parts are assembled, turn ON the power. 2) Set the location group and paper size group. <ol style="list-style-type: none"> 1. COPIER > OPTION > BODY > LOCALE (setting the location group) [Setting value] 1: Japan, 2: North America, 3: Korea, 4: China, 5: Taiwan, 6: Europe, 7: Asia, 8: Oceania, 9: Brazil, 10: Latin America 2. COPIER > OPTION > BODY > SIZE-LC [Setting value] 1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/inch configuration 3) Clearing the data COPIER > FUNCTION > CLEAR > ALL (clearing of all data) When executing this item, the following data is cleared according to the value set in step 2 and the serial number. Settings/Registration data (the initial value according to the location is set.) Service mode data (the initial value according to the location is set.) System administrator ID and password (They are changed back to the default values. ID: 0, PWD: 0) Each log data Date data COPIER > FUNCTION > CLEAR > R-CON (clearing of the factory adjustment values related to the Reader and ADF) 4) Migrating service mode data Import the service mode data backed up before replacement from the USB memory. COPIER > FUNCTION > SYSTEM > IMPORT If the data could not be backed up, enter the values on the service label to the respective entry fields. 5) Turn OFF and then ON the power. 6) The initial installation mode will be activated. Operate according to the instruction on the screen. (Setting the date/time, executing the auto gradation adjustment) 7) Migrate the serial number. <ol style="list-style-type: none"> 1. Enter the serial number (8-digit alphanumeric) in Settings/Registration > System Settings > Device Information Settings > Location. 2. Select COPIER > OPTION > SERIAL > SN-MAIN. Then, press the OK key to write the serial number entered in step 1 in the Main Controller PCB. After it has been written, the serial number entered in "Location" in step 1 is deleted. 3. Turn OFF and then ON the main power switch. 4. Execute COPIER > FUNCTION > MISC-P> SPEC to output the spec report to check that the serial number has been registered. (BODY No.) 5. Enter the data of the installation location (which was written down before replacement) in Settings/Registration > System Settings > Device Information Settings > Location.
-----------------	---

After Replacing	<p>8) Migrating user data Import the user data backed up using the means (RUI or USB memory) you used before replacement. Log in as an administrator (mode). Settings/Registration > Import/Export</p> <p>9) Uninstalling the drivers Uninstall the drivers on the user's PC. Printer driver Fax driver Scanner driver Network Scan Utility * For the procedure, refer to the Startup Guide.</p> <p>10) Reinstalling the drivers Install the drivers which were uninstalled in step 8. * For the procedure, refer to the Startup Guide. ** 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.</p>
Prohibited Operation	<p>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.</p> <ul style="list-style-type: none"> • Main Controller PCB

T-5-44

DC controller PCB

Before Replacing	<p>1) Backup of DCON service mode setting values Execute the following: COPIER > FUNCTION > VIFFNC > STOR-DCN</p> <p>2) Turn OFF the main power when the above work is complete.</p>
After Replacing	<p>1) Restore the backup data. Execute the following: COPIER > FUNCTION > VIFFNC > RSTR-DCN</p> <p>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.</p> <p>3) Turn OFF and then ON the power. (For accurate reflection of the restored items)</p>

T-5-45

Control Panel CPU PCB/Touch Panel

After Replacing	<p>Adjustment shown below is necessary only when replacing a single part. Execute the following: COPIER > ADJUST > PANEL > TOUCHCHK</p>
-----------------	--

T-5-46

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-5-47

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.

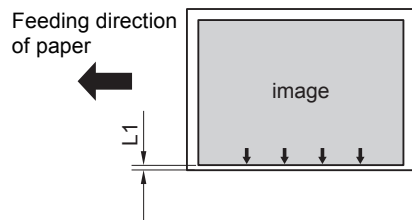
U sizes	Settings
U1	0: A4-R/LTR-R, 1 to 23: Not used, 24: FLSC, 25: A-FLS, 26: Not used, 27: E-OFI, 28 to 29: Not used, 30:A-LTRR, 31 to 32: Not used, 33: A-LGL, 34: G-LGL, 35 Not used, 36: A-OFI, 37:M-OFI, 38 to 41 Not used, 42: FA4, 43 Not used
U2	0: 16K-R, 1 to 22: Not used, 23: K-LGL-R, 24 to 31: Not used, 32: G-LTRR, 33 to 34 Not used

T-5-48

Cassette Left Edge Margin Adjustment (1st side; Mechanical Adjustment)

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).

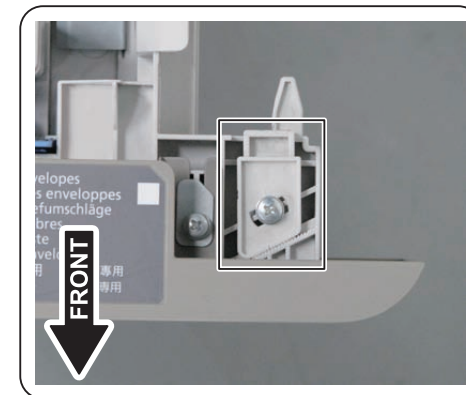


T-5-49

Adjustment procedure

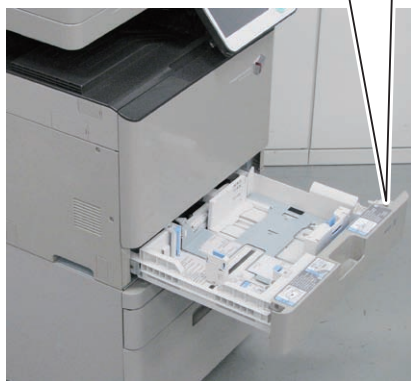
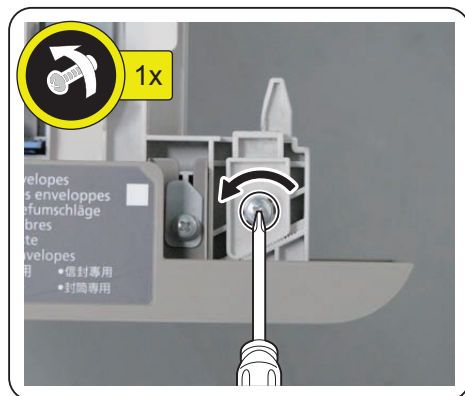
In Case of Nonstandard

- 2) Pull out the cassette.
- 3) Check the scale position on the adjusting plates.



Adjustment
procedure

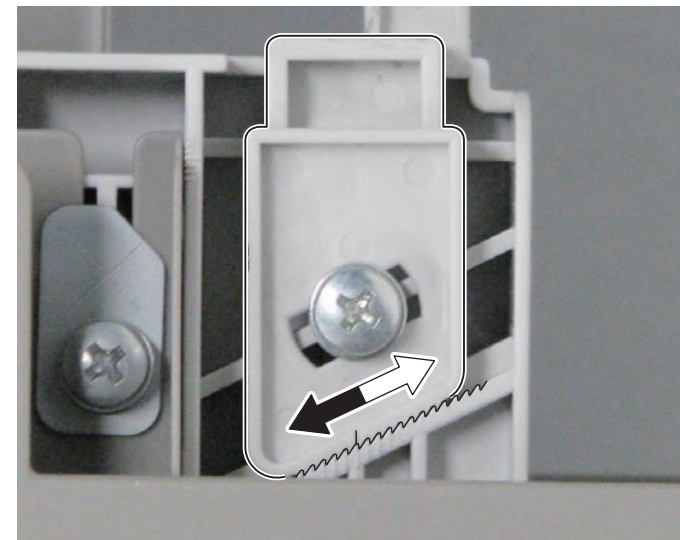
4) Loosen the fixing screw.



T-5-50

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.

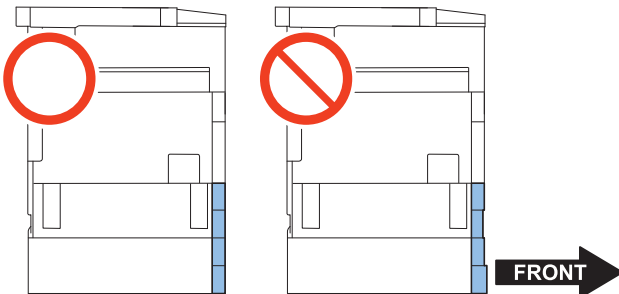

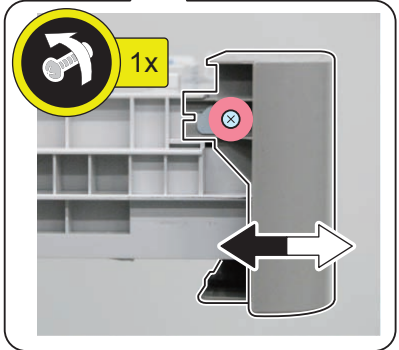


T-5-51

Adjustment procedure

6) Tighten the fixing screw.
7) Return the cassette to its original position.

NOTE:
When the cassette positions are uneven due to the mechanical adjustment, adjust them by loosening the 2 screws.

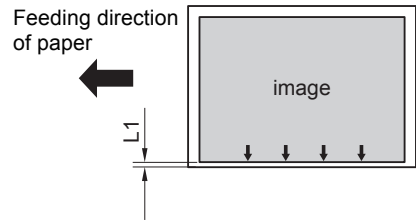
8) Make copies using the Cassette 1, and check that the left edge margin is 2.5 ± 1.5 mm.

T-5-52

Cassette Left Edge Margin Adjustment (1st side; Software Adjustment)

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) .



2) If the left margin is out of the specification, change the adjustment value for the left margin on the 1st side in cassette 1.
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)

3) Make copies using the Cassette 1, and check that the left edge margin is 2.5 ± 1.5 mm.

4) Write down the new adjustment value on the service label.
• ADJ-C1

5) Exit from Service Mode.

T-5-53

Cassette Left Edge Margin Adjustment (2nd side; Software Adjustment)

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).
	<div> </div> <p>2) If the left margin is out of the specification, change the adjustment value for the left margin on the 2nd side in cassette 1. 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)</p> <p>3) Make 2-sided copy using the Cassette 1, and check that the left edge margin is 2.5 ± 2.0 mm.</p> <p>4) Write down the new adjustment value on the service label. • ADJ-C1RE</p> <p>5) Exit from Service Mode.</p>

T-5-54

Multi-purpose Tray Left Edge Margin Adjustment (1st side; Software Adjustment)

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).
	<p>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. 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)</p> <p>3) Write down the new adjustment value on the service label. • ADJ-MF</p>

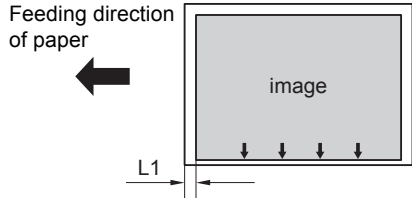
T-5-55

Multi-purpose Tray Left Edge Margin Adjustment (2nd side; Software Adjustment)

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).
	<p>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. 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)</p> <p>3) Write down the new adjustment value on the service label. • ADJ-MFRE</p>

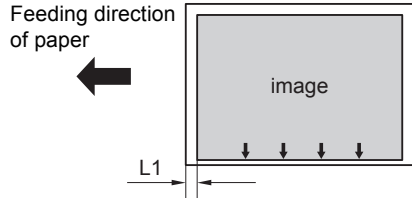
T-5-56

Lead-edge Margin Adjustment (1st side/normal paper)

Adjustment procedure	<p>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.</p> <div style="text-align: center;">  <p>The diagram shows a rectangular area labeled 'image' with four downward-pointing arrows at its bottom edge. To the left of the image, a thick black arrow points left, labeled 'Feeding direction of paper'. Below the image, a horizontal line with arrows at both ends is labeled 'L1', indicating the distance from the right edge of the image to the right edge of the paper.</p> </div> <p>In Case of Nonstandard</p> <p>2) Select the following in Service Mode: COPIER > ADJUST > FEED-ADJ > REGIST.</p> <p>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)</p> <p>4) Write down the new adjustment value on the service label.</p> <ul style="list-style-type: none"> • REGIST
----------------------	--

T-5-57

Lead-edge Margin Adjustment (2nd side)

Adjustment procedure	<p>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.</p> <div style="text-align: center;">  <p>The diagram shows a rectangular area labeled 'image' with four downward-pointing arrows at its bottom edge. To the left of the image, a thick black arrow points left, labeled 'Feeding direction of paper'. Below the image, a horizontal line with arrows at both ends is labeled 'L1', indicating the distance from the right edge of the image to the right edge of the paper.</p> </div> <p>In Case of Nonstandard</p> <p>2) Select the following in Service Mode: COPIER > ADJUST > FEED-ADJ > REG-DUP1.</p> <p>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)</p> <p>4) Write down the new adjustment value on the service label.</p> <ul style="list-style-type: none"> • REG-DUP1
----------------------	--

T-5-58

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 ($\pm 10\%$).	
	2	The site is not a high temperature / humidity environment (near a water faucet, water boiler, humidifier), and it is not in a cold place. The machine is not near a source of fire 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 floor 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 specific 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 characteristics and 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.

Troubleshooting Items

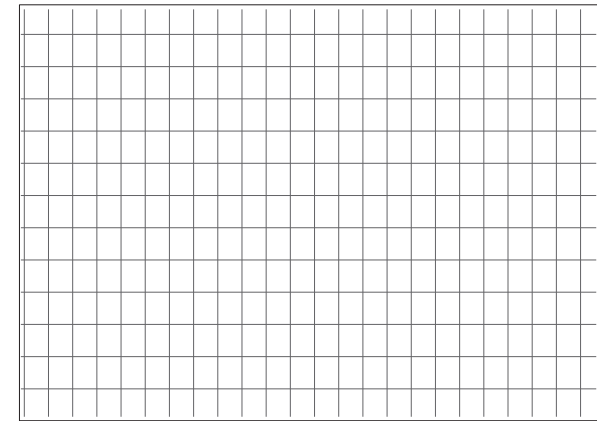
List of Troubleshooting Items

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]

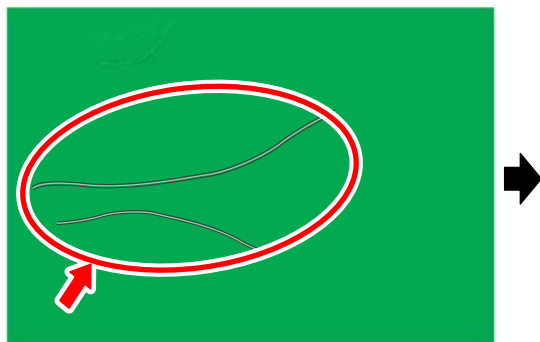
When a failure occurs to the Registration Patch Sensor Unit (Front)/(Rear), color displacement may occur to an output image.

[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.

■ Fixing wrinkle due to foreign matter attached to the Fixing Inlet Guide

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 4-138).

- Procedure

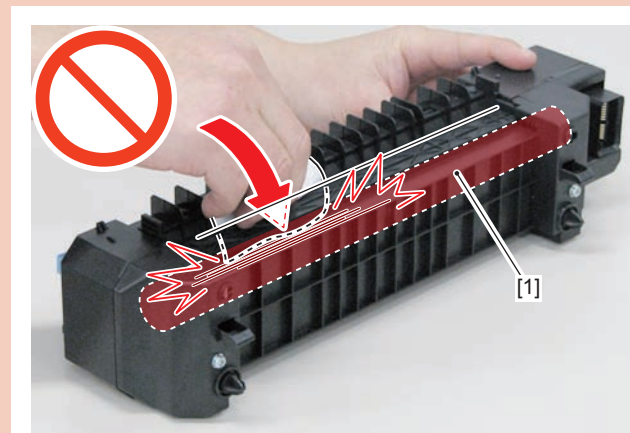
⚠ CAUTION:

Be sure to start removing the Fixing Assembly after it is cooled down enough. The Fixing Assembly right after printing may cause burn injury.

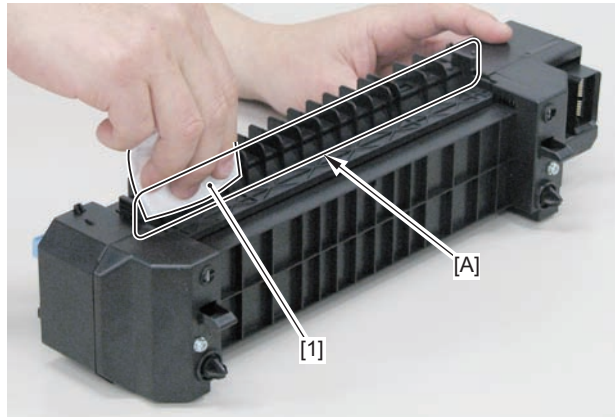
- 1-2 Clean the Fixing Inlet Guide [A] with lint-free paper [1] moistened with alcohol.

CAUTION:

Do not damage the Fixing Film [1] when cleaning.



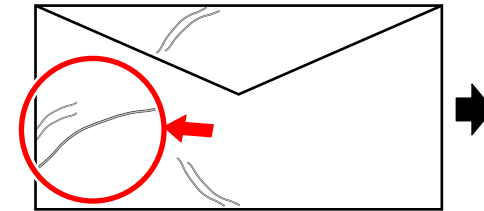
F-6-3



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.

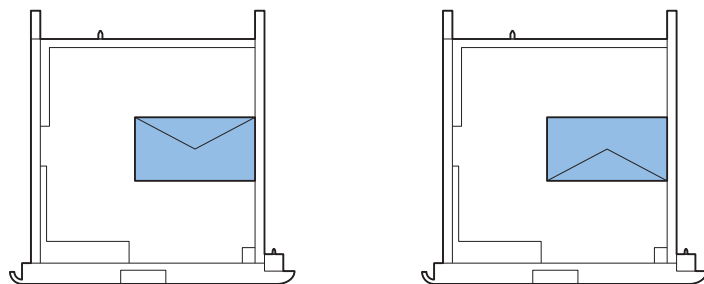
[Condition]

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.

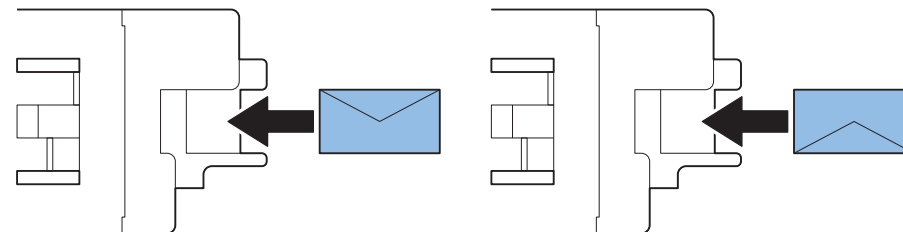


F-6-6

- 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

[Location]

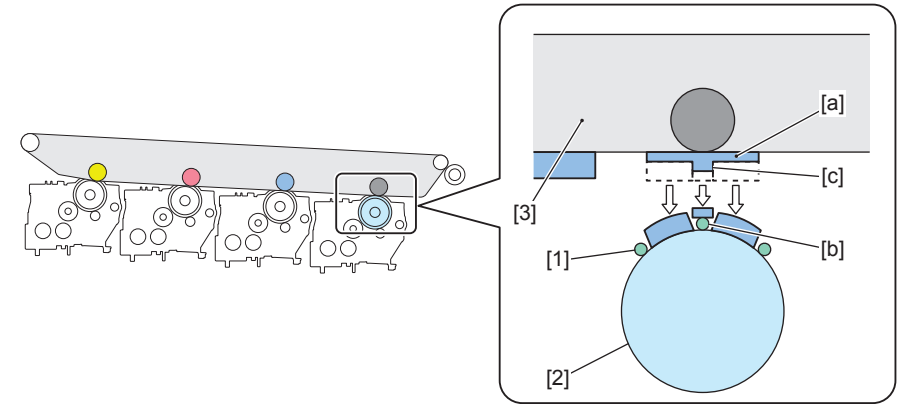
The ITB being in the initial phase (the surface resistance is high), and the drum unit being in the terminal phase of its use (the electric charge of toner is low).

[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.



F-6-9

[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).

[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.

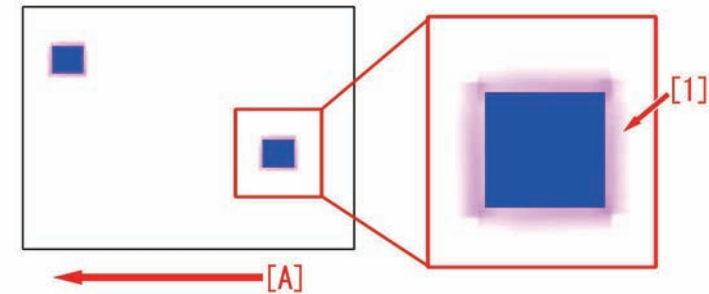
Color with which the symptom occurred		Yellow	Magenta	Cyan
Paper type, Size				
Plain paper 1 (64 to 75 gsm)	Less than A4 (210mm)	1TR_TGM3	1TR_TGC3	1TR_TK43
Plain paper 2 (76 to 90 gsm)		1TR_TGC3	1TR_TK43	
Recycled paper 1 (64 to 75 gsm)	A4 (210mm) or more	1TR_TK43		
Recycled paper 2 (76 to 90 gsm)		1TR_TGM	1TR_TGC	1TR_TGK4
		1TR_TGC	1TR_TGK4	
		1TR_TGK4		
Plain paper 3 (91 to 105 gsm)	ALL	1TR_TGM3	1TR_TGC3	1TR_TK43
Recycled paper 3 (91 to 105 gsm)		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

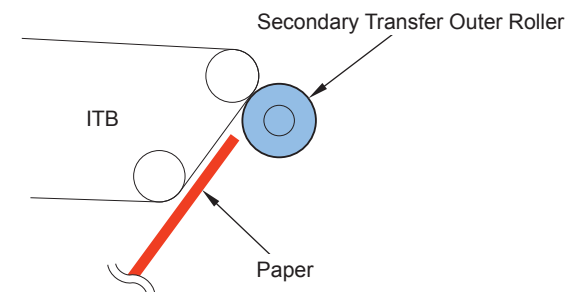
[Cause]

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.



F-6-11

[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.

Category: Malfunction

Not able to remove the ITB Unit due to the Primary Transfer Roller disengagement failure

[Location]
ITB Unit

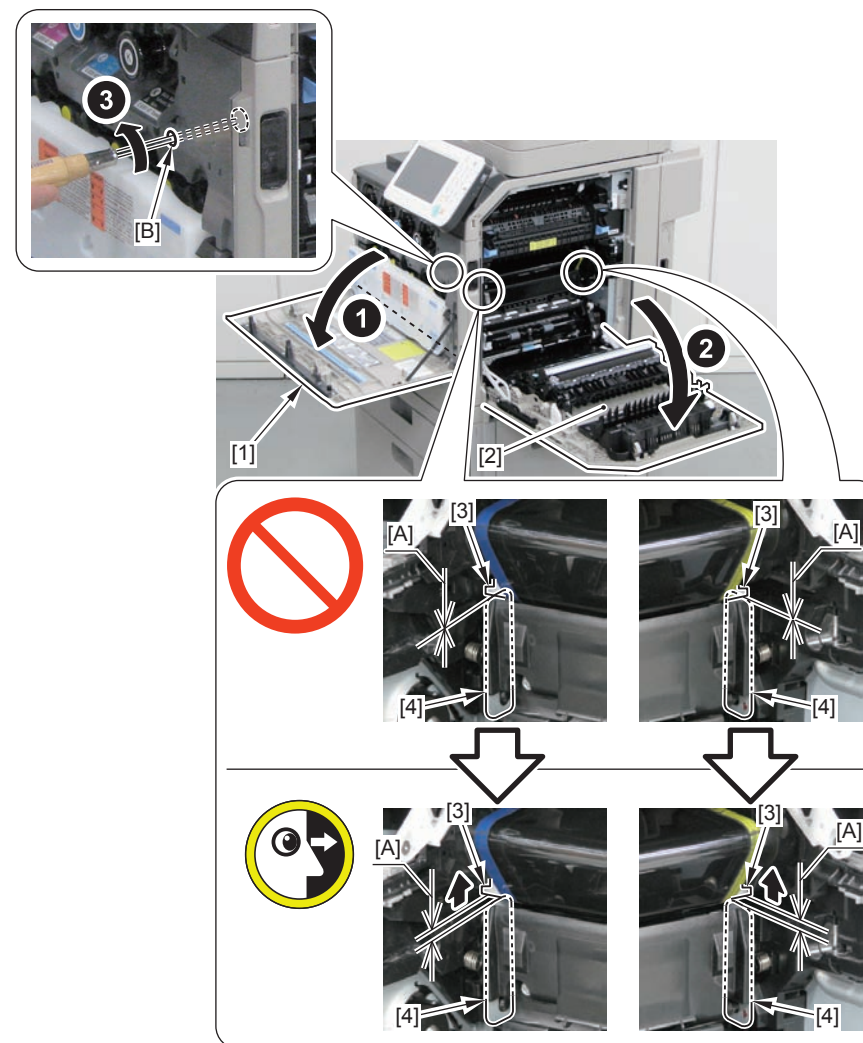
[Cause/Condition]

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

Special Management Mode

Overview

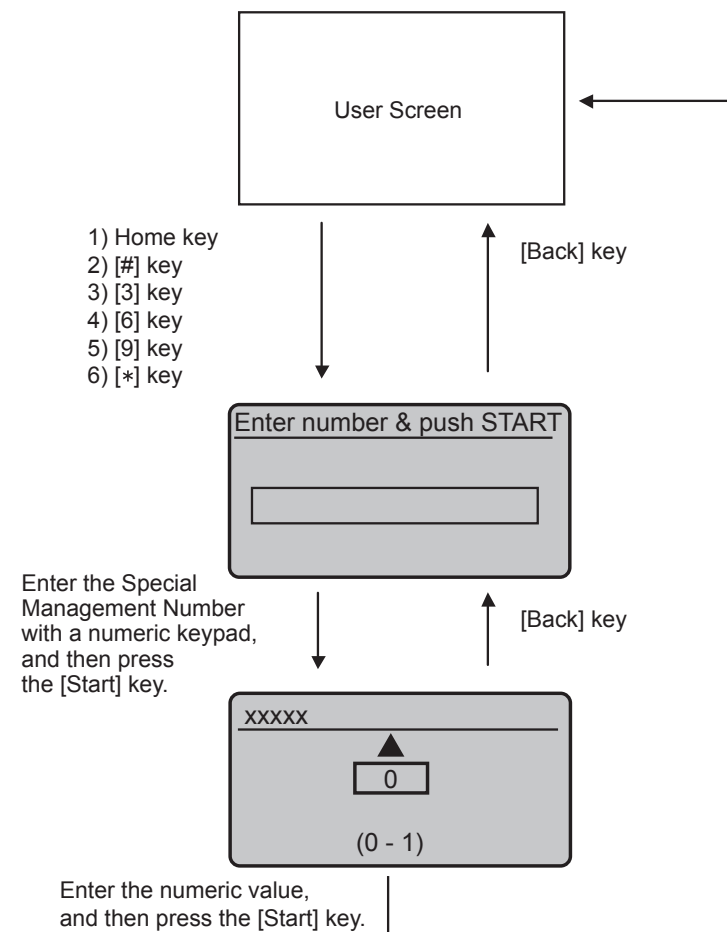
The Special Management Mode is the mode for taking a measure and solving the occurred problem by a user. However, information about this mode is not disclosed to users. Basically, if a problem is not solved when using the target item or when printing with a condition differs from the target item, be 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.



F-6-13

 Menu List

COPIER> FUNCTION> SPLMAN		
SPL14159	Fixing of USB device ID	
<ul style="list-style-type: none"> Details Adj/set/operate method Display/adj/set range Default value 	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.	
	1)Enter the value, and then press Start key. 2)Turn OFF/ON the main power switch.	
	0 to 1 0: OFF, 1: ON	
	0	
	COPIER> FUNCTION> SPLMAN> SPL68676	
SPL65677	Increase of paper leading edge margin	
<ul style="list-style-type: none"> Details Adj/set/operate method Display/adj/set range Unit Default value Related service mode 	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).	
	1)Enter the setting value, and then press Start key. 2)Turn OFF/ON the main power switch.	
	0 to 20	
	0.1 mm	
	0	
	COPIER> FUNCTION> SPLMAN> SPL68676	
SPL68676	Decrease of paper leading edge margin	
<ul style="list-style-type: none"> Details Adj/set/operate method Display/adj/set range Unit Default value Related service mode 	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).	
	1)Enter the setting value, and then press Start key. 2)Turn OFF/ON the main power switch.	
	0 to 20	
	0.1 mm	
	0	
	COPIER> FUNCTION> SPLMAN> SPL65677	
SPL68677	Increase of paper right and left margins	
<ul style="list-style-type: none"> Details Adj/set/operate method Display/adj/set range Unit Default value Related service mode 	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).	
	1)Enter the setting value, and then press Start key. 2)Turn OFF/ON the main power switch.	
	0 to 20	
	0.1 mm	
	0	
	COPIER> FUNCTION> SPLMAN> SPL25607	
	COPIER> FUNCTION> SPLMAN	

COPIER> FUNCTION> SPLMAN		
SPL25607	Decrease of paper right and left margins	
<ul style="list-style-type: none"> Details Adj/set/operate method Display/adj/set range Unit Default value Related service mode 	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).	
	1)Enter the setting value, and then press Start key. 2)Turn OFF/ON the main power switch.	
	0 to 20	
	0.1 mm	
	0	
	COPIER> FUNCTION> SPLMAN> SPL68677	
SPL93822	Setting to avoid clearing of all department ID counts	
<ul style="list-style-type: none"> Display/adj/set range Default value 	0 to 1 0: Allow clearing 1: Prohibit clearing	
	0	
SPL78788	Setting to avoid clearing of department ID counts	
<ul style="list-style-type: none"> Display/adj/set range Default value 	0 to 1 0: Allow clearing 1: Prohibit clearing	
	0	
SPL71100	Setting of the duty of Off-hook PCB	
<ul style="list-style-type: none"> Details Display/adj/set range Default value 	This is the mode to make handsets of particular manufacturers to be rung when fax reception mode is set to "FAX/TEL switching".	
	1 to 99	
	50	
SPL00171	Change of the maximum value of auto sleep shift time	
<ul style="list-style-type: none"> Display/adj/set range Default value 	0 to 10 0: 60 min. 1: Maximum value by model	
	1	
SPL80100	Mask setting at copyboard scanning	
<ul style="list-style-type: none"> Display/adj/set range Default value 	0 to 10 0: Mask value according to the specifications of each job 1: No mask (0 mm)	
	0	
SPL27354	PC-less update, RMDS environment setting	
<ul style="list-style-type: none"> Display/adj/set range Default value 	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	
	0	

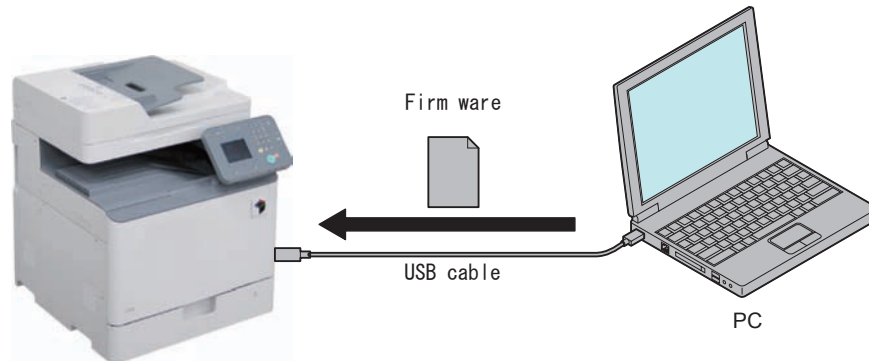
COPIER> FUNCTION> SPLMAN		
SPL84194		Switching ON/OFF of E-RDS function
Display/adj/set range	0 to 10 0: OFF 1: ON	
Default value	0	
SPL32620		Switching to enable/disable PC-less update
Display/adj/set range	0 to 10 0: Disabled 1: Enabled	
Default value	1	
SPL90001		Setting of toner deposit amount
Display/adj/set 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.



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

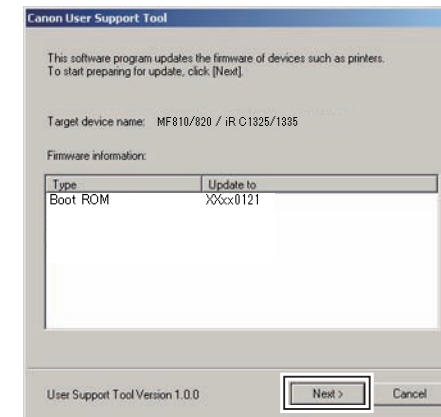
- 1) Open UST.



USTUPD.exe

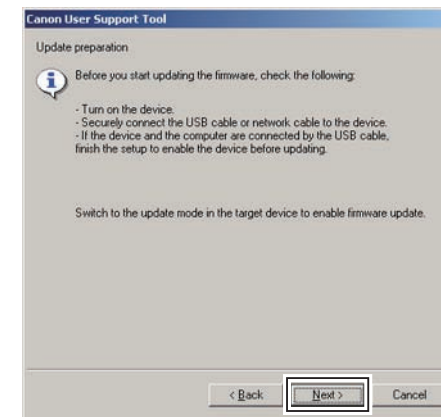
F-6-15

- 2) Take a note of the firmware version to upgrade and click [Next] button.



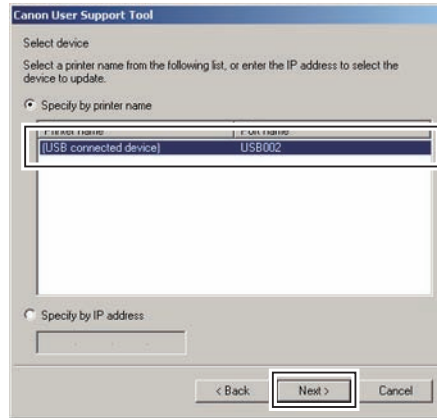
F-6-16

- 3) Click [Next] button.



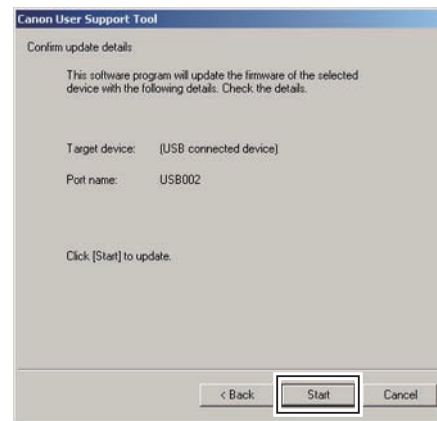
F-6-17

4) Select [USB Device] and click [Next] button.



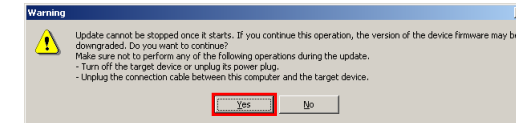
F-6-18

5) Click [Start] button.

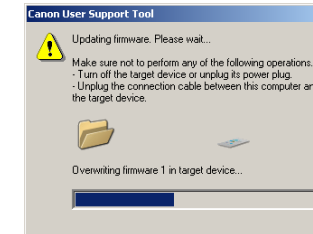


F-6-19

6) Click [Yes] button for the warning message to start download.

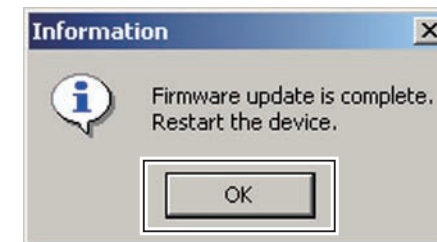


F-6-20



F-6-21

7) Click [OK] button when download is completed.



F-6-22

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              48.00
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
```

F-6-23



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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • Fixing Assembly (Unit of replacement: Fixing Assembly) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • Fixing Assembly (Unit of replacement: Fixing Assembly) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • Fixing Assembly (Unit of replacement: Fixing Assembly) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • Fixing Assembly (Unit of replacement: Fixing Assembly) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) • 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) • Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> Fixing Assembly (Unit of replacement: Fixing Assembly) Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) Harness between the Fixing Drawer (DR01/J5401) and the Low-voltage Power Supply PCB (UN01/J302) (Unit of replacement: INTERLOCK ASSEMBLY) 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) Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Remedy] Replace the Low-voltage Power Supply PCB. (Unit of replacement: POWER SUPPLY ASSEMBLY)</p> <p>[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.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> Fixing Assembly (Unit of replacement: Fixing Assembly) Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> Fixing Assembly (Unit of replacement: Fixing Assembly) Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE) Harness between the Fixing Drawer (DR01/J5401) and the Fixing Pressure Release Sensor (PS13/J5403) (Unit of replacement: CABLE, FIXING ASSEMBLY) Fixing Pressure Release Sensor (PS13) (Unit of replacement: PHOTO INTERRUPTER) Fixing Drive Unit (Unit of replacement: FIXING DRIVE ASSEMBLY) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) 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) Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> Fixing Assembly (Unit of replacement: Fixing Assembly) Harness between the Fixing Drawer (DR01/J5401) and the DC Controller PCB (UN04/J134) (Unit of replacement: INTERLOCK ASSEMBLY) Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE) Harness between the Fixing Drawer (DR01/J5401) and the Fixing Pressure Release Sensor (PS13/J5403) (Unit of replacement: CABLE, FIXING ASSEMBLY) Fixing Pressure Release Sensor (PS13) (Unit of replacement: PHOTO INTERRUPTER) Fixing Drive Unit (Unit of replacement: FIXING DRIVE ASSEMBLY) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) 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) Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • 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) • Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY) • Bk Drum_ITB Motor (M02) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harnesses from the Bk Drum_ITB Motor to the DC Controller PCB. 2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester. <ol style="list-style-type: none"> a. If power is flowing to it (the measurement value is less than 1 ohm), <ol style="list-style-type: none"> 1. Replace the Bk Drum_ITB Motor. 2. Replace the DC Controller PCB. b. If the power is not flowing to it (the measurement value is 1 ohm or higher), replace the Low-voltage Power Supply PCB. <p>[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.</p> <ul style="list-style-type: none"> • Backup: COPIER (LEVEL2)> FUNCTION> SYSTEM> DSRAMBUP • 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • 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) • Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY) • Bk Drum_ITB Motor (M02) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harnesses from the Bk Drum_ITB Motor to the DC Controller PCB. 2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester. <ol style="list-style-type: none"> a. If power is flowing to it (the measurement value is less than 1 ohm), <ol style="list-style-type: none"> 1. Replace the Bk Drum_ITB Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • 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) • Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY) • Bk Drum_ITB Motor (M02) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harnesses from the Bk Drum_ITB Motor to the DC Controller PCB. 2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester. <ol style="list-style-type: none"> a. If power is flowing to it (the measurement value is less than 1 ohm), <ol style="list-style-type: none"> 1. Replace the Bk Drum_ITB Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Harness between the CL Drum Motor (M01/J5701) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY) • Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY) • CL Drum Motor (M01) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harness between the CL Drum Motor and the DC Controller PCB. 2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester. <ol style="list-style-type: none"> a. If power is flowing to it (the measurement value is less than 1 ohm), <ol style="list-style-type: none"> 1. Replace the CL Drum Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Harness between the CL Drum Motor (M01/J5701) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY) • Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY) • CL Drum Motor (M01) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harness between the CL Drum Motor and the DC Controller PCB. 2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester. <ol style="list-style-type: none"> a. If power is flowing to it (the measurement value is less than 1 ohm), <ol style="list-style-type: none"> 1. Replace the CL Drum Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Harness between the CL Drum Motor (M01/J5701) and the DC Controller PCB (UN04/J140) (Unit of replacement: MAIN DRIVE ASSEMBLY) • Fuse in the Low-voltage Power Supply PCB (UN01/FU14) (Unit of replacement: POWER SUPPLY ASSEMBLY) • CL Drum Motor (M01) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harness between the CL Drum Motor and the DC Controller PCB. 2. Measure the both ends of the fuse in the Low-voltage Power Supply PCB using a tester. <ol style="list-style-type: none"> a. If power is flowing to it (the measurement value is less than 1 ohm), <ol style="list-style-type: none"> 1. Replace the CL Drum Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Fixing Assembly (Unit of replacement: Fixing Assembly) • Idler Gear in the Fixing Assembly (Unit of replacement: GEAR, 29T) • Pressure Roller Gear in the Fixing Assembly (Unit of replacement: GEAR, 24T) • Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE) • Fuse in the DC Controller PCB (UN04/FU1) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Fixing Motor (M04) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 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. 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). 3. Replace the Fixing Assembly. 4. Check the harness between the DC Controller PCB and the Fixing Motor. 5. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Fixing Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> Fixing Assembly (Unit of replacement: Fixing Assembly) Idler Gear in the Fixing Assembly (Unit of replacement: GEAR, 29T) Pressure Roller Gear in the Fixing Assembly (Unit of replacement: GEAR, 24T) Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE) Fuse in the DC Controller PCB (UN04/FU1) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) Fixing Motor (M04) (Unit of replacement: MOTOR, DC) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 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. 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). 3. Replace the Fixing Assembly. 4. Check the harness between the DC Controller PCB and the Fixing Motor. 5. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Fixing Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> Fixing Assembly (Unit of replacement: Fixing Assembly) Idler Gear in the Fixing Assembly (Unit of replacement: GEAR, 29T) Pressure Roller Gear in the Fixing Assembly (Unit of replacement: GEAR, 24T) Harness between the DC Controller PCB (UN04/J135) and the Fixing Motor (M04/J5412) (Unit of replacement: CABLE, FIXING DRIVE) Fuse in the DC Controller PCB (UN04/FU1) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) Fixing Motor (M04) (Unit of replacement: MOTOR, DC) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 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. 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). 3. Replace the Fixing Assembly. 4. Check the harness between the DC Controller PCB and the Fixing Motor. 5. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Fixing Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • ATR Sensor (Y) (UN34) (Unit of replacement: DEVE_UNIT_Y) • Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y) • Harness between the ATR Sensor (Y) (UN34/J6021) and the Drum Unit Memory PCB (Y) (UN12/J6011) (Unit of replacement: DEVE_UNIT_Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. • If the Drum Unit Memory PCB (Y) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

Error code	Detail Code	Item	Description
E020	01B8	Title	ATR Sensor (Y) output error
		Detection description	<p>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.</p> <p>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.</p>
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> • ATR Sensor (Y) (UN34) (Unit of replacement: DEVE_UNIT_Y) • Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y) • Harness between the ATR Sensor (Y) (UN34/J6021) and the Drum Unit Memory PCB (Y) (UN12/J6011) (Unit of replacement: DEVE_UNIT_Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. • If the Drum Unit Memory PCB (Y) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (Y) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • ATR Sensor (M) (UN35) (Unit of replacement: DEVE_UNIT_M) • Drum Unit (M) (Unit of replacement: DEVE_UNIT_M) • Harness between the ATR Sensor (M) (UN35/J6022) and the Drum Unit Memory PCB (M) (UN13/J6012) (Unit of replacement: DEVE_UNIT_M) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (M) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

Error code	Detail Code	Item	Description
E020	02B8	Title	ATR Sensor (M) output error
		Detection description	<p>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.</p> <p>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.</p>
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> • ATR Sensor (M) (UN35) (Unit of replacement: DEVE_UNIT_M) • Drum Unit (M) (Unit of replacement: DEVE_UNIT_M) • Harness between the ATR Sensor (M) (UN35/J6022) and the Drum Unit Memory PCB (M) (UN13/J6012) (Unit of replacement: DEVE_UNIT_M) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (M) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • Drum Unit (M) (Unit of replacement: DEVE_UNIT_M) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (M) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • ATR Sensor (C) (UN36) (Unit of replacement: DEVE_UNIT_C) • Drum Unit (C) (Unit of replacement: DEVE_UNIT_C) • Harness between the ATR Sensor (C) (UN36/J6023) and the Drum Unit Memory PCB (C) (UN14/J6013) (Unit of replacement: DEVE_UNIT_C) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (C) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

Error code	Detail Code	Item	Description
E020	03B8	Title	ATR Sensor (C) output error
		Detection description	<ol style="list-style-type: none"> 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. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • ATR Sensor (C) (UN36) (Unit of replacement: DEVE_UNIT_C) • Drum Unit (C) (Unit of replacement: DEVE_UNIT_C) • Harness between the ATR Sensor (C) (UN36/J6023) and the Drum Unit Memory PCB (C) (UN14/J6013) (Unit of replacement: DEVE_UNIT_C) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (C) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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] <ul style="list-style-type: none"> • 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) • Drum Unit (C) (Unit of replacement: DEVE_UNIT_C) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (C) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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] <ul style="list-style-type: none"> • ATR Sensor (Bk) (UN37) (Unit of replacement: P-UNIT_BK) • Drum Unit (Bk) (Unit of replacement: P-UNIT_BK) • Harness between the ATR Sensor (Bk) (UN37/J6024) and the Drum Unit Memory PCB (Bk) (UN15/J6014) (Unit of replacement: P-UNIT_BK) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (Bk) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

Error code	Detail Code	Item	Description
E020	04B8	Title	ATR Sensor (Bk) output error
		Detection description	<p>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.</p> <p>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.</p>
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> • ATR Sensor (Bk) (UN37) (Unit of replacement: P-UNIT_BK) • Drum Unit (Bk) (Unit of replacement: P-UNIT_BK) • Harness between the ATR Sensor (Bk) (UN37/J6024) and the Drum Unit Memory PCB (Bk) (UN15/J6014) (Unit of replacement: P-UNIT_BK) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (Bk) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • Drum Unit (Bk) (Unit of replacement: P-UNIT_BK) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (Bk) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Harness between the Developing Motor (M03) and the DC Controller PCB (UN04/J142) (Unit of replacement: MAIN DRIVE ASSEMBLY) • Fuse in the DC Controller PCB (UN04/FU4) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Developing Motor (M03) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harness between the Developing Motor and the DC Controller PCB. 2. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Developing Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Harness between the Developing Motor (M03) and the DC Controller PCB (UN04/J142) (Unit of replacement: MAIN DRIVE ASSEMBLY) • Fuse in the DC Controller PCB (UN04/FU4) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Developing Motor (M03) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harness between the Developing Motor and the DC Controller PCB. 2. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Developing Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Harness between the Developing Motor (M03) and the DC Controller PCB (UN04/J142) (Unit of replacement: MAIN DRIVE ASSEMBLY) • Fuse in the DC Controller PCB (UN04/FU4) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Developing Motor (M03) (Unit of replacement: MOTOR, DC) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[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.</p> <ol style="list-style-type: none"> 1. Check whether the gears of the Main Drive Unit can be rotated by hand. <ol style="list-style-type: none"> a. If they cannot be rotated, replace the Main Drive Unit. b. If they can be rotated, check the harness between the Developing Motor and the DC Controller PCB. 2. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Developing Motor. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y) • 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) • Drum Unit Relay PCB (Y) (UN08) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • Drum Unit Memory PCB (Y) (UN12) (Unit of replacement: DEVE_UNIT_Y) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <ul style="list-style-type: none"> • If the Drum Unit Memory PCB (Y) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (M) (Unit of replacement: DEVE_UNIT_M) • 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) • Drum Unit Relay PCB (M) (UN09) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • Drum Unit Memory PCB (M) (UN13) (Unit of replacement: DEVE_UNIT_M) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. • If the Drum Unit Memory PCB (M) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (C) (Unit of replacement: DEVE_UNIT_C) • 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) • Drum Unit Relay PCB (C) (UN10) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • Drum Unit Memory PCB (C) (UN14) (Unit of replacement: DEVE_UNIT_C) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. • If the Drum Unit Memory PCB (C) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (Bk) (Unit of replacement: P-UNIT_BK) • 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) • Drum Unit Relay PCB (Bk) (UN11) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • Drum Unit Memory PCB (Bk) (UN15) (Unit of replacement: P-UNIT_BK) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. • If the Drum Unit Memory PCB (Bk) is soiled, clean it with a blower. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Toner Container (Y) • Harness between the DC Controller PCB (UN04/J155) and the Bottle Motor (YM) (M09/J6301) (Unit of replacement: CABLE, MAIN) • Harnesses from the DC Controller PCB to the Bottle Rotation Sensor (Y) <ol style="list-style-type: none"> 1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN) 2. Relay Connector (3P) to Bottle Rotation Sensor (Y) (PS06/J5301) (Unit of replacement: CABLE, BOTTLE SENSOR, Y/C) • Bottle Rotation Sensor (Y) (PS06) (Unit of replacement: PHOTO INTERRUPTER) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Bottle Drive Unit (YM) (Unit of replacement: BOTTLE DRIVE ASSEMBLY) • Hopper Unit (Y) (Unit of replacement: HOPPER ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • Be sure to turn over the Door Lock Lever when removing the Bottle Drive Unit (YM) and rotating the drive section by hand. • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Hopper Unit (Y) (Unit of replacement: HOPPER ASSEMBLY) • Toner Bottle Mount Unit (Y) (Unit of replacement: BOTTLE MOUNT ASSEMBLY) • Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y) • Toner Container (Y) <p>[Remedy] Check/replace the related parts.</p> <p>[Reference] If a user inserts an empty Toner Container (Y) repeatedly, the error may occur.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Toner Container (M) • Harness between the DC Controller PCB (UN04/J155) and the Bottle Motor (YM) (M09/J6301) (Unit of replacement: CABLE, MAIN) • Harnesses from the DC Controller PCB to the Bottle Rotation Sensor (M) <ol style="list-style-type: none"> 1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN) 2. Relay Connector (3P) to Bottle Rotation Sensor (M) (PS07/J5302) (Unit of replacement: CABLE, BOTTLE SENSOR, M/K) • Bottle Rotation Sensor (M) (PS07) (Unit of replacement: PHOTO INTERRUPTER) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Bottle Drive Unit (YM) (Unit of replacement: BOTTLE DRIVE ASSEMBLY) • Hopper Unit (M) (Unit of replacement: HOPPER ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • Be sure to turn over the Door Lock Lever when removing the Bottle Drive Unit (YM) and rotating the drive section by hand. • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Hopper Unit (M) (Unit of replacement: HOPPER ASSEMBLY) • Toner Bottle Mount Unit (M) (Unit of replacement: BOTTLE MOUNT ASSEMBLY) • Drum Unit (M) (Unit of replacement: DEVE_UNIT_M) • Toner Container (M) <p>[Remedy] Check/replace the related parts.</p> <p>[Reference] If a user inserts an empty Toner Container (M) repeatedly, the error may occur.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Toner Container (C) • Harness between the DC Controller PCB (UN04/J155) and the Bottle Motor (CK) (M10/J6302) (Unit of replacement: CABLE, MAIN) • Harnesses from the DC Controller PCB to the Bottle Rotation Sensor (C) <ol style="list-style-type: none"> 1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN) 2. Relay Connector (3P) to Bottle Rotation Sensor (C) (PS08/J5303) (Unit of replacement: CABLE, BOTTLE SENSOR, Y/C) <ul style="list-style-type: none"> • Bottle Rotation Sensor (C) (PS08) (Unit of replacement: PHOTO INTERRUPTER) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Bottle Drive Unit (CK) (Unit of replacement: BOTTLE DRIVE ASSEMBLY) • Hopper Unit (C) (Unit of replacement: HOPPER ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • Be sure to turn over the Door Lock Lever when removing the Bottle Drive Unit (CK) and rotating the drive section by hand. • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Hopper Unit (C) (Unit of replacement: HOPPER ASSEMBLY) • Toner Bottle Mount Unit (C) (Unit of replacement: BOTTLE MOUNT ASSEMBLY) • Drum Unit (C) (Unit of replacement: DEVE_UNIT_C) • Toner Container (C) <p>[Remedy] Check/replace the related parts.</p> <p>[Reference] If a user inserts an empty Toner Container (C) repeatedly, the error may occur.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Toner Container (Bk) • Harness between the DC Controller PCB (UN04/J155) and the Bottle Motor (CK) (M10/J6302) (Unit of replacement: CABLE, MAIN) • Harnesses from the DC Controller PCB to the Bottle Rotation Sensor (Bk) <ul style="list-style-type: none"> 1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN) 2. Relay Connector (3P) to Bottle Rotation Sensor (Bk) (PS09/J5304) (Unit of replacement: CABLE, BOTTLE SENSOR, M/K) • Bottle Rotation Sensor (Bk) (PS09) (Unit of replacement: PHOTO INTERRUPTER) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Bottle Drive Unit (CK) (Unit of replacement: BOTTLE DRIVE ASSEMBLY) • Hopper Unit (Bk) (Unit of replacement: HOPPER ASSEMBLY) <p>[Points to note at work]</p> <ul style="list-style-type: none"> • Be sure to turn over the Door Lock Lever when removing the Bottle Drive Unit (CK) and rotating the drive section by hand. • When checking the harness/cable or connector, perform the following work. <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • Hopper Unit (Bk) (Unit of replacement: HOPPER ASSEMBLY) • Toner Bottle Mount Unit (Bk) (Unit of replacement: BOTTLE MOUNT ASSEMBLY) • Drum Unit (Bk) (Unit of replacement: P-UNIT_BK) • Toner Container (Bk) <p>[Remedy] Check/replace the related parts.</p> <p>[Reference] If a user inserts an empty Toner Container (Bk) repeatedly, the error may occur.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Registration Patch Sensor Unit (Front) (UN31) (Unit of replacement: REGISTRATION SENSOR ASSEMBLY) • Registration Patch Sensor Unit (Front) Shutter (Unit of replacement: SHUTTER, REGISTRATION SENSOR) • Registration Shutter Solenoid (SL03) (Unit of replacement: SOLENOID) • Harness between the Registration Patch Sensor Unit (Front) and the DC Controller PCB <ol style="list-style-type: none"> 1. Registration Patch Sensor Unit (Front) (UN31/J5603) to Relay Connector (16P) (Unit of replacement: CABLE, REG. DETECT) 2. Relay Connector (16P) to Relay Connector (16P) (Unit of replacement: CABLE CONNECTING ASSEMBLY) 3. Relay Connector (16P) to DC Controller PCB (UN04/J170) (Unit of replacement: 2ST TRANS. H.V. CONTACT ASS'Y) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <p>Check the background regular reflection output value (front) in COPIER (level 2)> DISPLAY> DENS> P-B-P-C.</p> <p>a. If the value is less than 10,</p> <ol style="list-style-type: none"> 1. Check if the sensor window of the Registration Patch Sensor Unit (Front) is soiled. If it is soiled, clean it with a blower. 2. Check that the Registration Patch Sensor Unit (Front) Shutter is properly installed and it is not damaged or deformed. If it is deformed or damaged, replace the Registration Patch Sensor Unit (Front). 3. Check the operation of the Registration Shutter Solenoid. <ol style="list-style-type: none"> 3-1. If the Registration Shutter Solenoid moves, <ol style="list-style-type: none"> 3-1-1. Replace the Registration Patch Sensor Unit (Front). 3-1-2. Replace the DC Controller PCB. 3-2. If the solenoid does not move, replace the Registration Shutter Solenoid. <p>b. If the value is above 250,</p> <ol style="list-style-type: none"> 1. Check the harness between the Registration Patch Sensor Unit (Front) and the DC Controller PCB. 2. Replace the harness between the Registration Patch Sensor Unit (Front) and the DC Controller PCB. 3. Replace the Registration Patch Sensor Unit (Front). 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Registration Patch Sensor Unit (Rear) (UN32) (Unit of replacement: REGISTRATION SENSOR ASSEMBLY) • Registration Patch Sensor Unit (Rear) Shutter (Unit of replacement: SHUTTER, REGISTRATION SENSOR) • Registration Shutter Solenoid (SL03) (Unit of replacement: SOLENOID) • Harness between the Registration Patch Sensor Unit (Rear) and the DC Controller PCB <ol style="list-style-type: none"> 1. Registration Patch Sensor Unit (Rear) (UN32/J5604) to Relay Connector (16P) (Unit of replacement: CABLE, REG. DETECT) 2. Relay Connector (16P) to Relay Connector (16P) (Unit of replacement: CABLE CONNECTING ASSEMBLY) 3. Relay Connector (16P) to DC Controller PCB (UN04/J170) (Unit of replacement: 2ST TRANS. H.V. CONTACT ASS'Y) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <p>Check the background regular reflection output value (rear) in COPIER (level 2)> DISPLAY> DENS> P-B-P-Y.</p> <p>a. If the value is less than 10,</p> <ol style="list-style-type: none"> 1. Check if the sensor window of the Registration Patch Sensor Unit (Rear) is soiled. If it is soiled, clean it with a blower. 2. Check that the Registration Patch Sensor Unit (Rear) Shutter is properly installed and it is not damaged or deformed. If it is deformed or damaged, replace the Registration Patch Sensor Unit (Rear). 3. Check the operation of the Registration Shutter Solenoid. <ol style="list-style-type: none"> 3-1. If the Registration Shutter Solenoid moves, <ol style="list-style-type: none"> 3-1-1. Replace the Registration Patch Sensor Unit (Rear). 3-1-2. Replace the DC Controller PCB. 3-2. If the solenoid does not move, replace the Registration Shutter Solenoid. <p>b. If the value is above 250,</p> <ol style="list-style-type: none"> 1. Check the harness between the Registration Patch Sensor Unit (Rear) and the DC Controller PCB. 2. Replace the harness between the Registration Patch Sensor Unit (Rear) and the DC Controller PCB. 3. Replace the Registration Patch Sensor Unit (Rear). 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Front Cover/Right Cover • 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) • Harness between the Low-voltage Power Supply PCB (UN01/J315) and the DC Controller PCB (UN04/J20) (Unit of replacement: CABLE, POWER SUPPLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Check that the Front Cover/Right Cover is closed. 2. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 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). 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 5. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 6. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • ITB Unit (Unit of replacement: INTER. TRANSFER BELT ASS'Y) • Harnesses from the DC Controller PCB to the ITB Pressure Release Switch <ol style="list-style-type: none"> 1. DC Controller PCB (UN04/J162) to Relay Connector (2P) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) 2. Relay Connector (2P) to ITB Pressure Release Switch (SW07/J6005) • Harness between the DC Controller PCB (UN04/J140) and the Primary Transfer Separation Solenoid (SL01/J5708) (Unit of replacement: MAIN DRIVE ASSEMBLY) • Fuse in the DC Controller PCB (UN04/FU07) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • ITB Guide Rail (Unit of replacement: RAIL, I.T.B., FRONT/RAIL, I.T.B., REAR) • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Check that the ITB Unit is installed in the machine. 2. Replace the ITB Unit. 3. Check the harness between the DC Controller PCB and the ITB Pressure Release Switch. 4. Check the harness between the DC Controller PCB and the Primary Transfer Separation Solenoid. 5. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the ITB Guide Rail (Front/Rear). 2. Replace the Main Drive Unit. 3. Replace the DC Controller PCB. b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. <p>[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.</p> <ol style="list-style-type: none"> 1. Replace the harness between the DC Controller PCB and the ITB Pressure Release Switch. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • ITB Unit (Unit of replacement: INTER. TRANSFER BELT ASS'Y) • Harnesses from the DC Controller PCB to the ITB Pressure Release Switch <ol style="list-style-type: none"> 1. DC Controller PCB (UN04/J162) to Relay Connector (2P) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) 2. Relay Connector (2P) to ITB Pressure (Unit of replacement: 1ST TRANS. H.V. CONTACT ASS'Y) • Release Switch (SW07/J6005) • Harness between the DC Controller PCB (UN04/J140) and the Primary Transfer Separation Solenoid (SL01/J5708) (Unit of replacement: MAIN DRIVE ASSEMBLY) • Fuse in the DC Controller PCB (UN04/FU07) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • ITB Guide Rail (Unit of replacement: RAIL, I.T.B., FRONT/RAIL, I.T.B., REAR) • Main Drive Unit (Unit of replacement: MAIN DRIVE ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable..

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Check that the ITB Unit is installed in the machine. 2. Replace the ITB Unit. 3. Check the harness between the DC Controller PCB and the ITB Pressure Release Switch. 4. Check the harness between the DC Controller PCB and the Primary Transfer Separation Solenoid. 5. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the ITB Guide Rail (Front/Rear). 2. Replace the Main Drive Unit. 3. Replace the DC Controller PCB. b. If the measurement value is 1 ohm or higher (non conduction state), replace the DC Controller PCB. <p>[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.</p> <ol style="list-style-type: none"> 1. Replace the harness between the DC Controller PCB and the ITB Pressure Release Switch. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Front Cover/Right Cover • Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) • Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

Error code	Detail Code	Item	Description
E102	0001	Title	EEPROM error
		Detection description	An error has occurred in EEPROM of the Laser Scanner.
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> • Laser Scanner Unit (Unit of replacement: LASER SCANNER ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Interlock Switch 1 and 2 (SW02 and SW03/J24/pin 1 and 2) (Unit of replacement: COVER, INNER, FRONT, RIGHT) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p> <p>[Caution] After replacing the related parts, execute "Settings/Registration> Adjustment/Maintenance> Adjust Image Quality> Auto Correct Color Mismatch".</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Front Cover/Right Cover • Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) • Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Front Cover/Right Cover • Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) • Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Front Cover/Right Cover • Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) • Low Voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Front Cover/Right Cover • Interlock Switch 1 and 2 (SW02 and SW03/J24/1-pin and 2-pin) (Unit of replacement: COVER, INNER, FRONT, RIGHT) • Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
E196	000F	Title	EEPROM communication error
		Detection description	The number of read/write job data to the DCON EEPROM (device information) exceeded 100.
		Remedy	<p>[Remedy] Turn OFF and then ON the main power.</p> <p>[Reference] Data (device information) is reset by turning OFF and then ON the main power.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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. [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] <ul style="list-style-type: none"> • Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (Y) (UN12) (Unit of replacement: DEVE_UNIT_Y) • Drum Unit Relay PCB (Y) (UN08) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (Y), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (Y) (UN12) (Unit of replacement: DEVE_UNIT_Y) • Drum Unit Relay PCB (Y) (UN08) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (Y), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (Y) (Unit of replacement: DEVE_UNIT_Y) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (Y) (UN12) (Unit of replacement: DEVE_UNIT_Y) • Drum Unit Relay PCB (Y) (UN08) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (Y), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Remedy] Turn OFF and then ON the main power.</p> <p>[Reference] Data (device information) is reset by turning OFF and then ON the main power.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (M) (Unit of replacement: DEVE_UNIT_M) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (M) (UN13) (Unit of replacement: DEVE_UNIT_M) • Drum Unit Relay PCB (M) (UN09) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (M), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (M) (Unit of replacement: DEVE_UNIT_M) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (M) (UN13) (Unit of replacement: DEVE_UNIT_M) • Drum Unit Relay PCB (M) (UN09) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (M), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (M) (Unit of replacement: DEVE_UNIT_M) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (M) (UN13) (Unit of replacement: DEVE_UNIT_M) • Drum Unit Relay PCB (M) (UN09) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (M), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Remedy] Turn OFF and then ON the main power.</p> <p>[Reference] Data (device information) is reset by turning OFF and then ON the main power.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (C) (Unit of replacement: DEVE_UNIT_C) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (C) (UN14) (Unit of replacement: DEVE_UNIT_C) • Drum Unit Relay PCB (C) (UN10) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (C), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (C) (Unit of replacement: DEVE_UNIT_C) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (C) (UN14) (Unit of replacement: DEVE_UNIT_C) • Drum Unit Relay PCB (C) (UN10) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (C), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (C) (Unit of replacement: DEVE_UNIT_C) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (C) (UN14) (Unit of replacement: DEVE_UNIT_C) • Drum Unit Relay PCB (C) (UN10) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (C), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Remedy] Turn OFF and then ON the main power.</p> <p>[Reference] Data (device information) is reset by turning OFF and then ON the main power.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (Bk) (Unit of replacement: P-UNIT_BK) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (Bk) (UN15) (Unit of replacement: P-UNIT_BK) • Drum Unit Relay PCB (Bk) (UN11) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (Bk), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (Bk) (Unit of replacement: P-UNIT_BK) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (Bk) (UN15) (Unit of replacement: P-UNIT_BK) • Drum Unit Relay PCB (Bk) (UN11) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (Bk), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Drum Unit (Bk) (Unit of replacement: P-UNIT_BK) • Front Cover/Right Cover • Interlock Switch 1 and 2 (Unit of replacement: COVER, INNER, FRONT, RIGHT) • 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) • Drum Unit Memory PCB (Bk) (UN15) (Unit of replacement: P-UNIT_BK) • Drum Unit Relay PCB (Bk) (UN11) (Unit of replacement: PROCESS CONTROL PCB ASS'Y) • 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) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • 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) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Remove and then install the Drum Unit (Bk), and check whether the error is cleared. <p>[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.</p> <ol style="list-style-type: none"> 2. Check that the Front Cover/Right Cover is closed. 3. Visually check that the Interlock Switch 1 and 2 are turned ON/OFF by opening/closing the Front Cover/Right Cover. 4. Turn OFF and then ON the main power, and check whether the error is cleared. 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). 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. 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. 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. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the DC Controller PCB. 2. Replace the Low-voltage Power Supply PCB. 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. 9. Check the harness between the Low-voltage Power Supply PCB and the DC Controller PCB. 10. Replace the DC Controller PCB. 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	<p>[Remedy] Turn OFF and then ON the main power.</p> <p>[Reference] Data (device information) is reset by turning OFF and then ON the main power.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
E196	060F	Title	EEPROM communication error
		Detection description	The number of read/write job data to the RTC (device information) exceeded 100.
		Remedy	<p>[Remedy] Turn OFF and then ON the main power.</p> <p>[Reference] Data (device information) is reset by turning OFF and then ON the main power.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • 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) • Y/M/C/Bk Laser Driver PCB (UN05) (Unit of replacement: LASER SCANNER ASSEMBLY) • Developing High-voltage PCB (UN06) (Unit of replacement: 2ND TRNSFR. H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
E196	080F	Title	EEPROM communication error
		Detection description	The number of read/write job data to the HVT EEPROM (device information) exceeded 100.
		Remedy	<p>[Remedy] Turn OFF and then ON the main power.</p> <p>[Reference] Data (device information) is reset by turning OFF and then ON the main power.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • Harness between the cassette unit drawer (DR03/J5904) on the host machine side and drawer (DR101/J5950) on the cassette unit side • 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) • Fuse in the DC Controller PCB (UN04/FU19) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Cassette Module Controller PCB (UN101) (Unit of replacement: CST. PEDESTAL CONT. PCB ASS'Y) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Turn OFF and then ON the main power, and check whether the error is cleared. 2. Check the harness between the DC Controller PCB and the cassette unit drawer on the host machine side. 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. 4. Check the harness between the drawer on the cassette unit side and the Cassette Module Controller PCB. 5. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Cassette Module Controller PCB. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • Harness between the cassette unit drawer (DR03/J5904) on the host machine side and drawer (DR101/J5950) on the cassette unit side • 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) • Fuse in the DC Controller PCB (UN04/FU19) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Cassette Module Controller PCB (UN101/J650) (Unit of replacement: CST. PEDESTAL CONT. PCB ASS'Y) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Turn OFF and then ON the main power, and check whether the error is cleared. 2. Check the harness between the DC Controller PCB and the cassette unit drawer on the host machine side. 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. 4. Check the harness between the drawer on the cassette unit side and the Cassette Module Controller PCB. 5. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Cassette Module Controller PCB. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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) • Harness between the cassette unit drawer (DR03/J5904) on the host machine side and drawer (DR101/J5950) on the cassette unit side • 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) • Fuse in the DC Controller PCB (UN04/FU19) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Cassette Module Controller PCB (UN101/J650) (Unit of replacement: CST. PEDESTAL CONT. PCB ASS'Y) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Turn OFF and then ON the main power, and check whether the error is cleared. 2. Check the harness between the DC Controller PCB and the cassette unit drawer on the host machine side. 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. 4. Check the harness between the drawer on the cassette unit side and the Cassette Module Controller PCB. 5. Measure the both ends of the fuse in the DC Controller PCB using a tester. <ol style="list-style-type: none"> a. If the measurement value is less than 1 ohm (conduction state), <ol style="list-style-type: none"> 1. Replace the Cassette Module Controller PCB. 2. Replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Harnesses from the Reader Assembly HP Sensor to the Main Controller PCB <ol style="list-style-type: none"> 1. Reader Assembly HP Sensor (PS01/J913) to Relay Connector (3P) (Unit of replacement: CABLE, HOME POSITION SENSOR) 2. Relay Connector (3P) to Main Controller PCB (UN81/J8103) (Unit of replacement: CABLE, READER MAIN) • Harness between the Reader Motor (M01/J901) and the Main Controller PCB (UN81/J8103) (Unit of replacement: CABLE, READER MAIN) • Reader Motor (M01) (Unit of replacement: MOTOR, STEPPING) • CIS HP Sensor (PS01) (Unit of replacement: PHOTO INTERRUPTER) • BOOK Motor (Unit of replacement: MOTOR, STEPPING) • Pulley Gear 85T/20T (Unit of replacement: GEAR, 85T/20T) • Carriage Timing Belt (Unit of replacement: BELT, TIMING, COGGED) • Idler Pulley (Unit of replacement: PULLEY, IDLER) • Idler Pulley Holder (Unit of replacement: READER ASSEMBLY) • FB Shaft (Unit of replacement: READER ASSEMBLY) • Electrolytic capacitor on the Main Controller PCB (C8002) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) • 24V power supply for driving the Reader on the Main Controller PCB side (J7003/pin 1) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) • Harness between the Main Controller PCB (UN81/J7003) and the Low-voltage Power Supply PCB (UN01/J313) (Unit of replacement: CABLE, POWER SUPPLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Check the harness between the Reader Assembly HP Sensor and the Main Controller PCB. 2. Check the harness between the Reader Motor and the Main Controller PCB. 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. <ol style="list-style-type: none"> a. If it is appropriate, replace the CIS HP Sensor. b. If it is not appropriate (overloaded), replace the following parts. <ul style="list-style-type: none"> - Stepping Motor - Z85_T20 Pulley Gear - Carriage Timing Belt - Idler Pulley - Idler Pulley Holder 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. 5. Measure the electrolytic capacitor on the Main Controller PCB using a tester. If the measurement value is 24V, replace the Main Controller PCB. 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. 7. Check the harness between the Main Controller PCB and the Low-voltage Power Supply PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Harnesses from the Reader Assembly HP Sensor to the Main Controller PCB <ol style="list-style-type: none"> 1. Reader Assembly HP Sensor (PS01/J913) to Relay Connector (3P) (Unit of replacement: CABLE, HOME POSITION SENSOR) 2. Relay Connector (3P) to Main Controller PCB (UN81/J8103) (Unit of replacement: CABLE, READER MAIN) • Harness between the Reader Motor (M01/J901) and the Main Controller PCB (UN81/J8103) (Unit of replacement: CABLE, READER MAIN) • Reader Motor (M01) (Unit of replacement: MOTOR, STEPPING) • CIS HP Sensor (PS01) (Unit of replacement: PHOTO INTERRUPTER) • BOOK Motor (Unit of replacement: MOTOR, STEPPING) • Pulley Gear 85T/20T (Unit of replacement: GEAR, 85T/20T) • Carriage Timing Belt (Unit of replacement: BELT, TIMING, COGGED) • Idler Pulley (Unit of replacement: PULLEY, IDLER) • Idler Pulley Holder (Unit of replacement: READER ASSEMBLY) • FB Shaft (Unit of replacement: READER ASSEMBLY) • Electrolytic capacitor on the Main Controller PCB (C8002) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) • 24V power supply for driving the Reader on the Main Controller PCB side (J7003/pin 1) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) • Harness between the Main Controller PCB (UN81/J7003) and the Low-voltage Power Supply PCB (UN01/J313) (Unit of replacement: CABLE, POWER SUPPLY) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable.

Error code	Detail Code	Item	Description
		Remedy	<p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Check the harness between the Reader Assembly HP Sensor and the Main Controller PCB. 2. Check the harness between the Reader Motor and the Main Controller PCB. 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. <ol style="list-style-type: none"> a. If it is appropriate, replace the CIS HP Sensor. b. If it is not appropriate (overloaded), replace the following parts. <ul style="list-style-type: none"> - Stepping Motor - Z85_T20 Pulley Gear - Carriage Timing Belt - Idler Pulley - Idler Pulley Holder 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. 5. Measure the electrolytic capacitor on the Main Controller PCB using a tester. If the measurement value is 24V, replace the Main Controller PCB. 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. 7. Check the harness between the Main Controller PCB and the Low-voltage Power Supply PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) • Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Check the harness between the DC Controller PCB and the Main Controller PCB. 2. Turn ON the power, and check if the initialization is executed at startup. <ol style="list-style-type: none"> 2-1. If the initialization is not executed, replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. Visually check that the harness is not caught or open circuit. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> Check the harness between the DC Controller PCB and the Main Controller PCB. Turn ON the power, and check if the initialization is executed at startup. <p>2-1. If the initialization is not executed, replace the DC Controller PCB. 2-2. If the initialization is executed, replace the Main Controller PCB.</p>

Error code	Detail Code	Item	Description
E240	0D00	Title	Controller communication error
		Detection description	A sequence error with the controller occurred.
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. Visually check that the harness is not caught or open circuit. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> Check the harness between the DC Controller PCB and the Main Controller PCB. Turn ON the power, and check if the initialization is executed at startup. <p>2-1. If the initialization is not executed, replace the DC Controller PCB. 2-2. If the initialization is executed, replace the Main Controller PCB.</p>
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) [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. 1. After executing "COPIER> FUNCTION> CLEAR> R-CON", turn OFF and then ON the main power, and check whether the error is cleared. 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) [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. 1. After executing "COPIER> FUNCTION> CLEAR> R-CON", turn OFF and then ON the main power, and check whether the error is cleared. 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. 2. A CIS other than that for this machine was connected.
		Remedy	[Related parts] • Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT) • Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY) • Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) [Points to note at work] When checking the harness/cable or connector, perform the following work. 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. [Remedy] Check/replace the related parts.
E301	0001	Title	Reading light intensity error
		Detection description	1. Light intensity at shading was insufficient. 2. Light intensity when no light was emitted from CIS was too much.

Error code	Detail Code	Item	Description
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT) Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

Error code	Detail Code	Item	Description
E301	0002	Title	Reading light intensity error
		Detection description	Image sampling for shading was not completed.
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT) Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
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. 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] <ul style="list-style-type: none"> Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT) Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. Visually check that the harness is not caught or open circuit. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts. After performing the remedy, check that the copy image is output normally.</p>
E732	0010	Title	Scanner communication error
		Detection description	DDI-S communication error (Vsync detection error)
		Remedy	[Related parts] <ul style="list-style-type: none"> Flexible Cable between the Scanner Unit (CIS01, CIS02/J911) and the Main Controller PCB (UN81/J8101) (Unit of replacement: CABLE, FLAT) Scanner Unit (CIS01/CIS02) (Unit of replacement: CONTACT IMAGE SENSOR ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. Visually check that the harness is not caught or open circuit. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts. After performing the remedy, check that the copy image is output normally.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> DC Controller PCB (UN04/J20) and the Harness between the Low-voltage Power Supply PCB (UN01/J315) (Unit of replacement: CABLE, POWER SUPPLY) Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Check the harness between the DC Controller PCB and the Low-voltage Power Supply PCB. 2. Check the harness between the DC Controller PCB and the Main Controller PCB. 3. Turn ON the power, and check if the initialization is executed at startup. <ol style="list-style-type: none"> 3-1. If the initialization is not executed, replace the DC Controller PCB. 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	<ul style="list-style-type: none"> DDI-P communication error DDI-L communication error (parity error)
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> 1. Check the harness between the DC Controller PCB and the Main Controller PCB. 2. Turn ON the power, and check if the initialization is executed at startup. <ol style="list-style-type: none"> 2-1. If the initialization is not executed, replace the DC Controller PCB. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> Flexible Cable between the DC Controller PCB (UN04/J112) and the Main Controller PCB (UN81/J7001) (Unit of replacement: CABLE, FLAT) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. Visually check that the harness is not caught or open circuit. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Perform the following in the order while checking whether the error is cleared.</p> <ol style="list-style-type: none"> Check the harness between the DC Controller PCB and the Main Controller PCB. Turn ON the power, and check if the initialization is executed at startup. <p>2-1. If the initialization is not executed, replace the DC Controller PCB. 2-2. If the initialization is executed, replace the Main Controller PCB.</p>
E733	0F00	Title	Printer communication error
		Detection description	A communication error that can be recovered by reboot. 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. 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. 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 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. 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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Harness between the Low-voltage Power Supply PCB (UN01/J323) and the Power Supply Cooling Fan (FM05/J5215) (Unit of replacement: CABLE, POWER SUPPLY) • Harness between the Low-voltage Power Supply PCB (UN01/J321) and the Main Controller PCB (UN81/J7010) (Unit of replacement: CABLE, POWER SUPPLY) • Power Supply Cooling Fan (FM05) • Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) • Main Controller PCB (UN81) (Unit of replacement: MAIN CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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.) • Harness between the Primary Transfer High-voltage PCB (UN03/J272) and the Drum Unit Suction Cooling Fan (FM01) • Drum Unit Suction Cooling Fan (FM01) • Primary Transfer High-voltage PCB (UN03) (Unit of replacement: 1ST TRANSFER H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • 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.) • Harness between the Primary Transfer High-voltage PCB (UN03/J272) and the Drum Unit Suction Cooling Fan (FM01) • Drum Unit Suction Cooling Fan (FM01) • Primary Transfer High-voltage PCB (UN03) (Unit of replacement: 1ST TRANSFER H.V. PCB ASSEMBLY) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Harness between the DC Controller PCB (UN04/J191) and the Drive Unit Cooling Fan (FM02) • Drive Unit Cooling Fan (FM02) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Harness between the DC Controller PCB (UN04/J191) and the Drive Unit Cooling Fan (FM02) • Drive Unit Cooling Fan (FM02) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Harnesses from the DC Controller PCB to the Delivery Cooling Fan <ol style="list-style-type: none"> 1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN) 2. Relay Connector (3P) to Delivery Cooling Fan (FM03) <ul style="list-style-type: none"> • Delivery Cooling Fan (FM03) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Harnesses from the DC Controller PCB to the Delivery Cooling Fan <ol style="list-style-type: none"> 1. DC Controller PCB (UN04/J151) to Relay Connector (3P) (Unit of replacement: CABLE, MAIN) 2. Relay Connector (3P) to Delivery Cooling Fan (FM03) <ul style="list-style-type: none"> • Delivery Cooling Fan (FM03) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> • Harnesses from the DC Controller PCB to the Duplex Cooling Fan <ol style="list-style-type: none"> 1. DC Controller PCB (UN04/J122) to Relay Connector (17P) (Unit of replacement: 2ST TRANS. H.V. CONTACT ASS'Y) 2. Relay Connector (17P) to Relay Connector (3P) (Unit of replacement: CABLE, DOOR, RIGHT) 3. Relay Connector (3P) to Relay Connector (3P) (Unit of replacement: CABLE, DOOR FAN, RIGHT) 4. Relay Connector (3P) to Duplex Cooling Fan (FM04) <ul style="list-style-type: none"> • Duplex Cooling Fan (FM04) • DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> 1. Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. 2. Visually check that the harness is not caught or open circuit. 3. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Related parts]</p> <ul style="list-style-type: none"> Harnesses from the DC Controller PCB to the Duplex Cooling Fan <ol style="list-style-type: none"> DC Controller PCB (UN04/J122) to Relay Connector (17P) (Unit of replacement: 2ST TRANS. H.V. CONTACT ASS'Y) Relay Connector (17P) to Relay Connector (3P) (Unit of replacement: CABLE, DOOR, RIGHT) Relay Connector (3P) to Relay Connector (3P) (Unit of replacement: CABLE, DOOR FAN, RIGHT) Relay Connector (3P) to Duplex Cooling Fan (FM04) Duplex Cooling Fan (FM04) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. Visually check that the harness is not caught or open circuit. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>
E808	0001	Title	Zero cross signal detection error
		Detection description	An electrical trouble caused by zero cross signal error. Frequency between 43 Hz and 57 Hz could not be detected for 5000 msec or longer.
		Remedy	<p>[Related parts]</p> <ul style="list-style-type: none"> Harness between the Low-voltage Power Supply PCB (UN01/J322) and the DC Controller PCB (UN04/J22) (Unit of replacement: CABLE, POWER SUPPLY) Low-voltage Power Supply PCB (UN01) (Unit of replacement: POWER SUPPLY ASSEMBLY) DC Controller PCB (UN04) (Unit of replacement: DC CONTROLLER PCB ASSEMBLY) <p>[Points to note at work] When checking the harness/cable or connector, perform the following work.</p> <ol style="list-style-type: none"> Disconnect and then connect the connector to check that there is no bent pin and cable disconnection. Visually check that the harness is not caught or open circuit. If there is any error, replace the corresponding harness/cable. <p>[Remedy] Check/replace the related parts.</p>

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	<p>[Remedy] Collect debug log and contact to the sales company.</p> <p>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-R" to "0" (default), it is handled as a jam, instead of an error.</p>
E996	0CA0	Title	Error for collecting sequence jam log (Printer)
		Detection description	Error for collecting jam log (Printer)
		Remedy	<p>[Remedy] Collect debug log and contact to the sales company.</p> <p>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error.</p>
E996	0CA1	Title	Error for collecting sequence jam log (Printer)
		Detection description	Error for collecting jam log (Printer)
		Remedy	<p>[Remedy] Collect debug log and contact to the sales company.</p> <p>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error.</p>
E996	0CA2	Title	Error for collecting sequence jam log (Printer)
		Detection description	Error for collecting jam log (Printer)
		Remedy	<p>[Remedy] Collect debug log and contact to the sales company.</p> <p>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error.</p>
E996	0CA3	Title	Error for collecting sequence jam log (Printer)
		Detection description	Error for collecting jam log (Printer)
		Remedy	<p>[Remedy] Collect debug log and contact to the sales company.</p> <p>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error.</p>
E996	0CA4	Title	Error for collecting sequence jam log (Printer)
		Detection description	Error for collecting jam log (Printer)
		Remedy	<p>[Remedy] Collect debug log and contact to the sales company.</p> <p>[Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" to "0" (default), it is handled as a jam, instead of an error.</p>

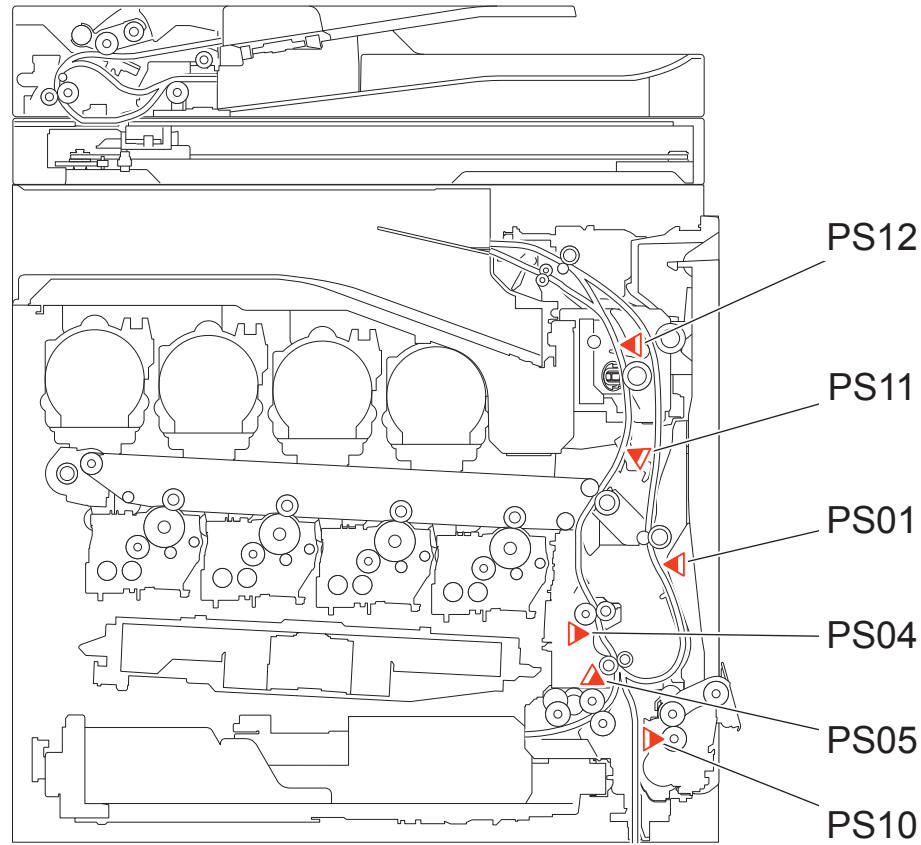
Error code	Detail Code	Item	Description
E996	0CA9	Title	Error for collecting sequence jam log (Printer)
		Detection description	Error for collecting jam log (Printer)
		Remedy	[Remedy] Collect debug log and contact to the sales company. [Reference] By setting "COPIER (LEVEL2)> OPTION> FNC-SW> JM-ERR-D" 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. [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. [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. [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. [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

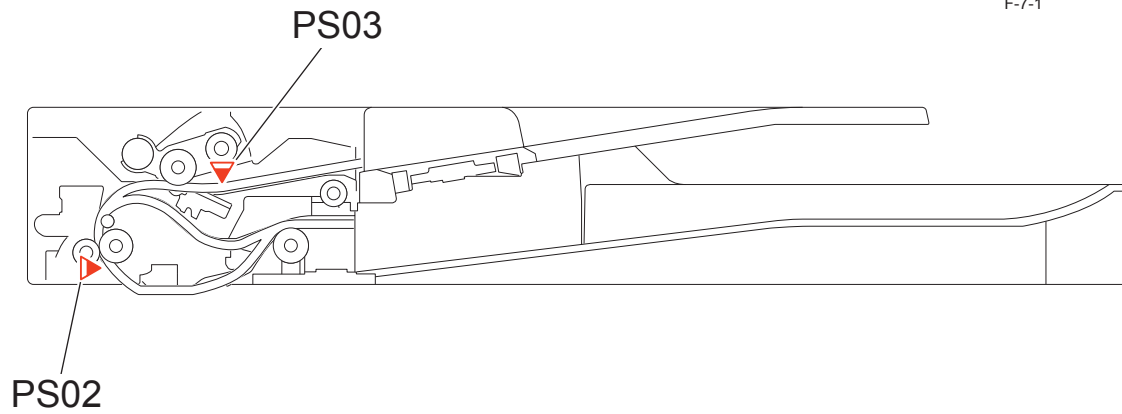
Jam Code

Jam Type

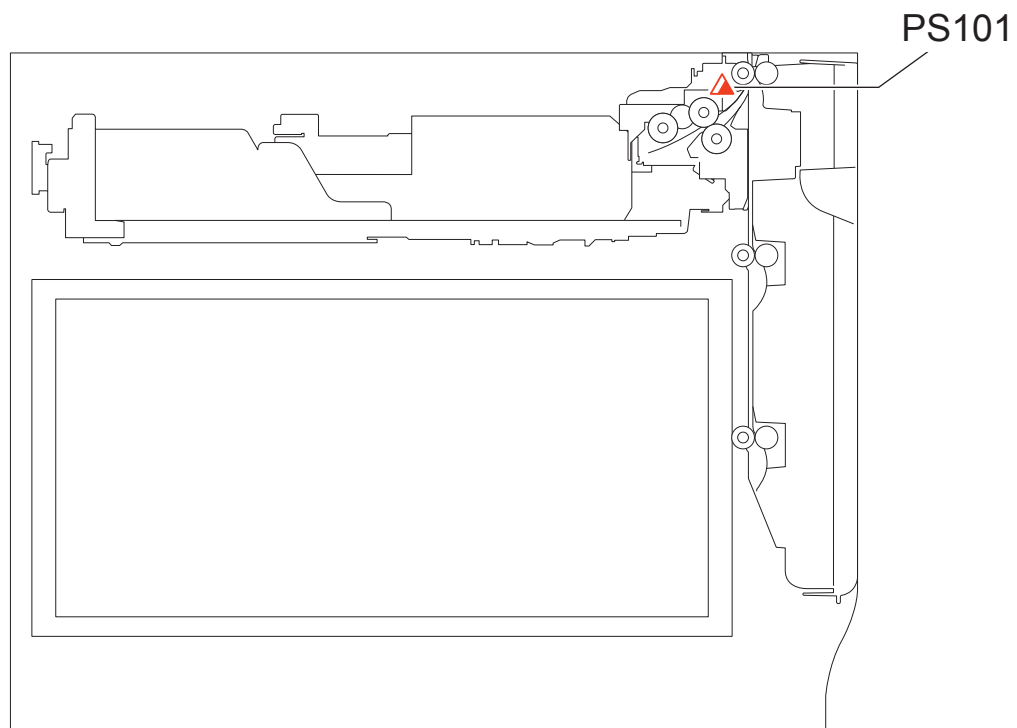
Type	Detection description	Possible symptoms	Cause and remedy
Delay(01xx)	The sensor was not turned ON although a specified period of time had passed.	<ul style="list-style-type: none"> A paper is being caught on paper lint/foreign matters on the feed path. The roller does not rotate due to failure of the Feed Motor/open circuit/poor connection of the connector. 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. <ol style="list-style-type: none"> 1. Check/remove the residual paper lint/foreign matters on the feed path. 2. Check/replace the Feed Motor. 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.	<ul style="list-style-type: none"> A paper is being caught on paper lint/foreign matters on the feed path. The roller does not rotate due to failure of the Feed Motor/open circuit/poor connection of the connector. 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. <ol style="list-style-type: none"> 1. Check/remove the residual paper lint/foreign matters on the feed path. 2. Check/replace the Feed Motor. 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.	<ul style="list-style-type: none"> A cover of the host machine/option was opened due to vibration during operation. 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. <ol style="list-style-type: none"> 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. 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.	<ul style="list-style-type: none"> An error caused by sporadic noise signal to the sensor was detected. An error caused by firmware was detected. 	Perform the following in the order while checking whether the jam is cleared. <ol style="list-style-type: none"> 1. Remove the residual papers by following the jam removal procedure. 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.	<ul style="list-style-type: none"> Power was turned ON without removing residual paper after occurrence of an error/jam. 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. <ol style="list-style-type: none"> 1. Check the error/jam log, and remove the residual papers by following the jam removal procedure. 2. Check/replace the sensor.
Error avoidance	The machine was stopped because an error in the machine other than parts failure was detected.	<ul style="list-style-type: none"> An error caused by sporadic noise signal was detected. Operation failure occurred due to one-time catch on a mechanical part. 	<ul style="list-style-type: none"> Normally, the machine can be used after removing the residual papers by following the jam removal procedure. 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.	<ul style="list-style-type: none"> Different size of paper was loaded without changing position of the Cassette Guide Plate and output was performed. 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. <ol style="list-style-type: none"> 1. Set the position of the Cassette Guide Plate again. 2. Check/replace the mechanical mechanism of the Size Detection Unit/sensor.
Different media	The type of loaded paper differed from the setting.	<ul style="list-style-type: none"> Output was performed with wrong paper settings (although transparency was set as paper type, different type of paper was loaded, and vice versa). 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. <ol style="list-style-type: none"> 1. Make the paper settings correctly/load paper again. 2. Check/replace the Transparency Sensor.



F-7-1



F-7-2





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	-	-	-	-

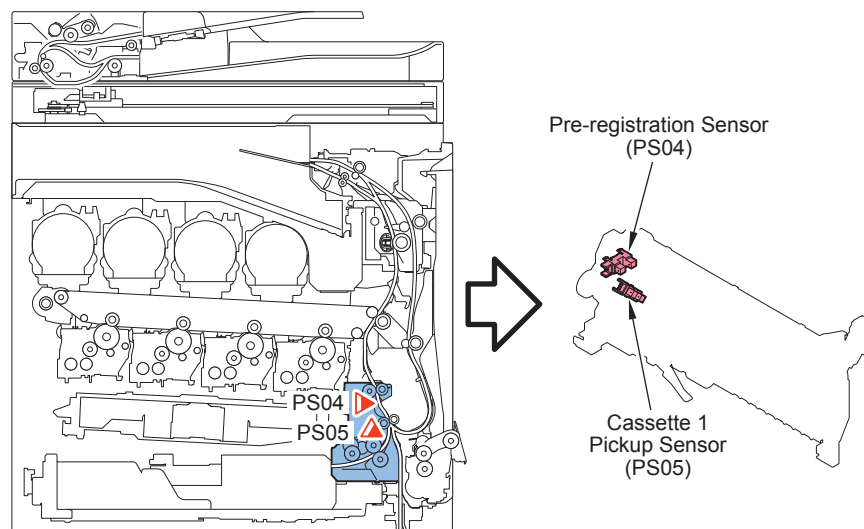
*:Drum Unit detection may not be executed at times such as at recovery from sleep mode (of 4 or more hours).
 "No drum jam" is detected when a print job is executed with no Drum Unit installed in the machine.

T-7-6

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

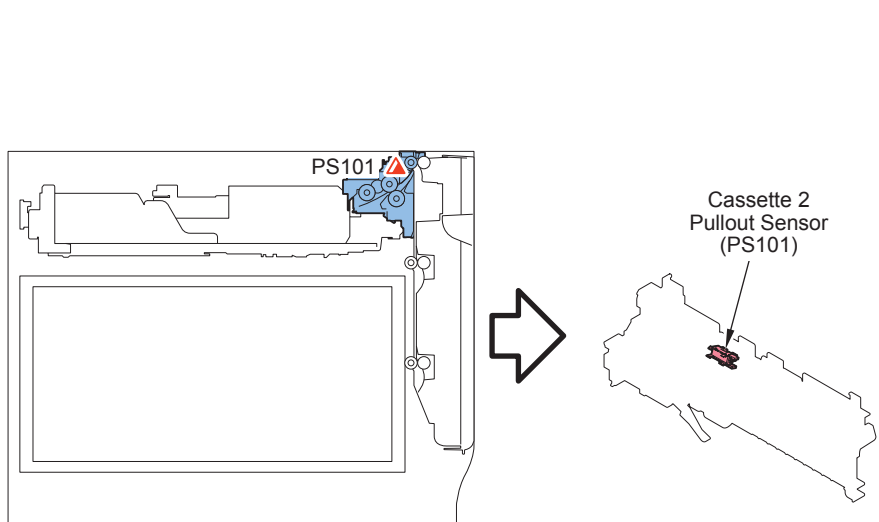
T-7-7



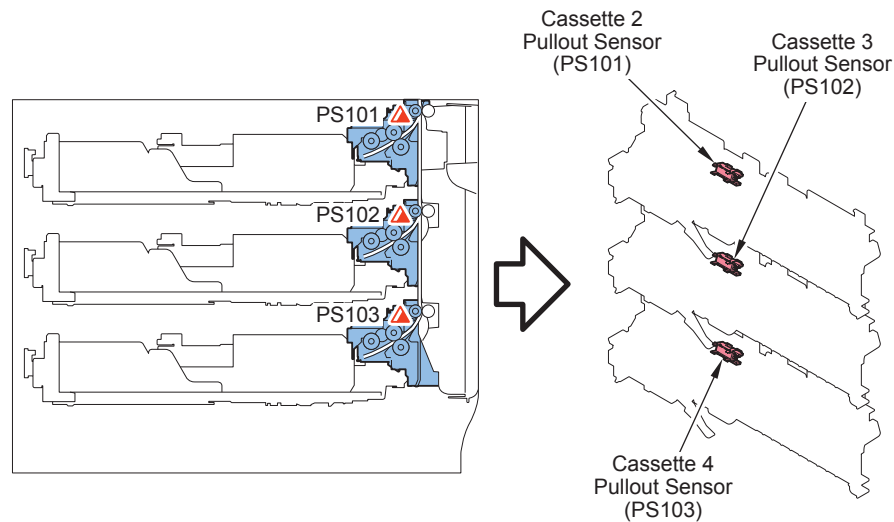
F-7-5

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

T-7-8



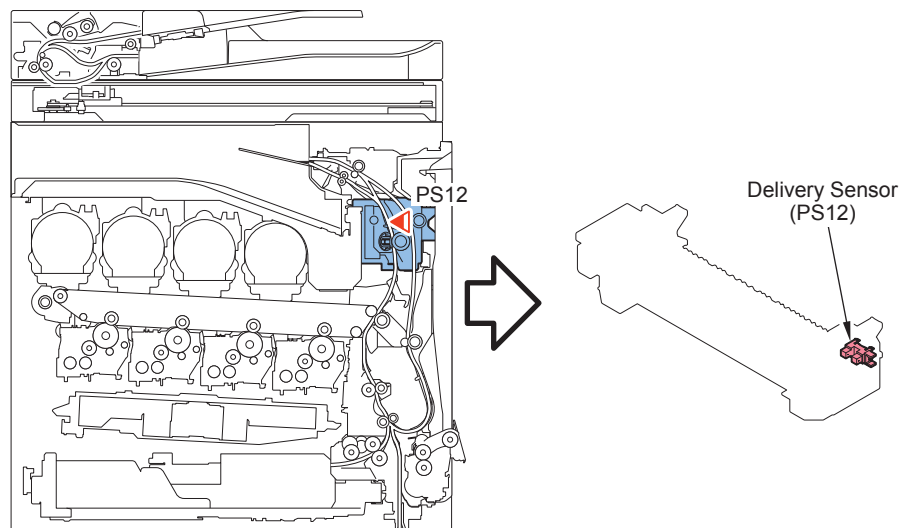
F-7-6



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

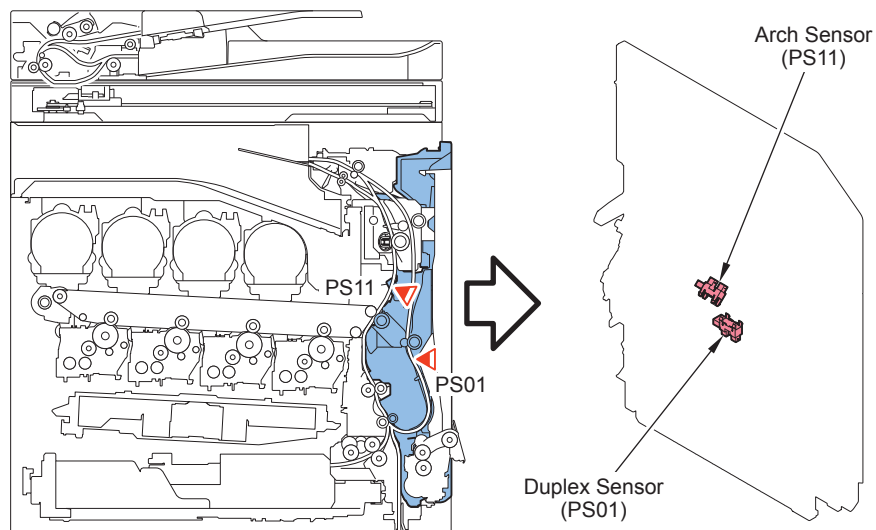
T-7-9



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

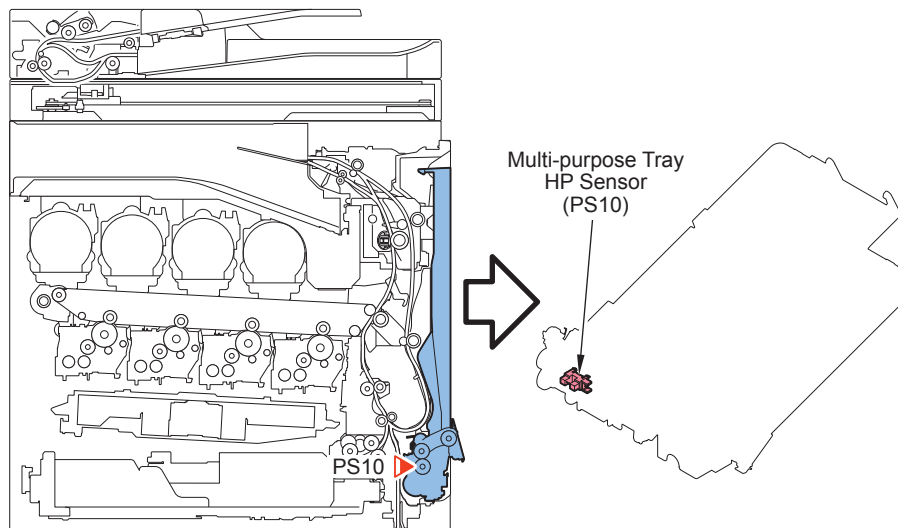
T-7-10



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

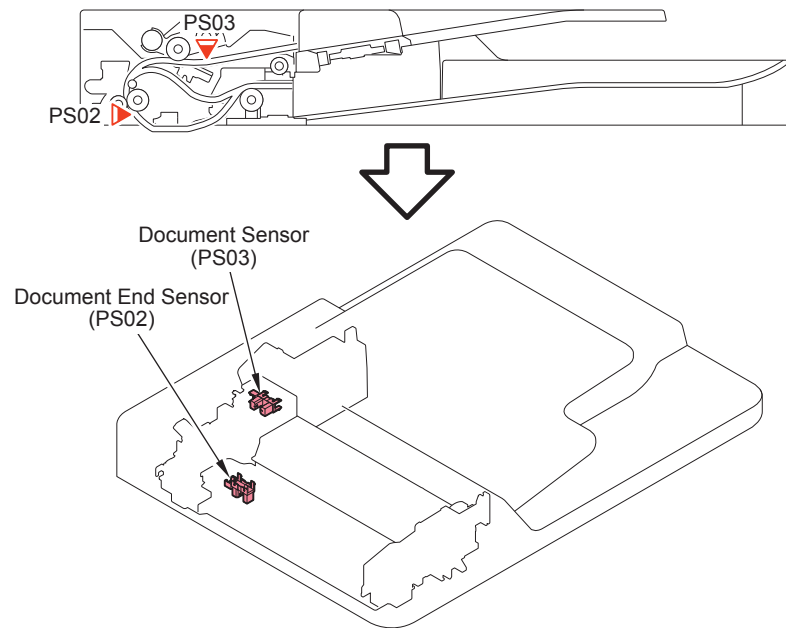
ACCID	Jam Code	Type	Sensor Name	Sensor ID	I/O		
					Address	bit	Remarks
00	0B00	Door open	-	-	-	-	-
00	0B0D	No drum jam	-	-	-	-	-
00	0CA1	Sequence	Software sequence (Feed status cannot be returned)	-	-	-	-
00	0CA2	Sequence	Software sequence (ImageReady cannot be sent)	-	-	-	-
00	0CA3	Sequence	Software 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)	-	-	-	-

T-7-12

■ 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



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. 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. Measures: 1. Clean the Patch Sensor window. 2. Check the connector connection of the Patch Sensor. 3. Check the connector connection of the Patch Sensor Shutter Solenoid. 4. Replace the Patch Sensor Unit.
10	0007	Patch Sensor error 2	Movement: The background correction coefficient value was not updated. 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. Measures: 1. Clean the Patch Sensor window. 2. Check the connector connection of the Patch Sensor. 3. Check the connector connection of the Patch Sensor Shutter Solenoid. 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. Cause: The Waste Toner Counter reaches full. 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.) Cause: Display of Waste Toner Box preparation warning"
35	0006	ITB replacement completion alarm	"Pushed was a replacement completion button of ITB Unit Counter was cleared."
35	0013	Transfer Roller replacement completion alarm	"Pushed was a replacement completion button of Transfer Roller 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 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 Counter was cleared."
35	0078	MP Separation Roller replacement completion alarm	"Pushed was a replacement completion button of MP Separation Roller 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 Counter was cleared."
35	0081	Cassette 1 Separation Roller replacement completion alarm	"Pushed was a replacement completion button of Cassette 1 Separation Roller 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 Counter was cleared."
35	0084	Cassette 2 Separation Roller replacement completion alarm	"Pushed was a replacement completion button of Cassette 2 Separation Roller 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 Counter was cleared."
35	0087	Cassette 3 Separation Roller replacement completion alarm	"Pushed was a replacement completion button of Cassette 3 Separation Roller 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 Counter was cleared."
35	0090	Cassette 4 Separation Roller replacement completion alarm	"Pushed was a replacement completion button of Cassette 4 Separation Roller Counter was cleared."
35	0091	ADF Pickup Roller replacement completion alarm	"Pushed was a replacement completion button of ADF Pickup Roller 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 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	-

T-7-14

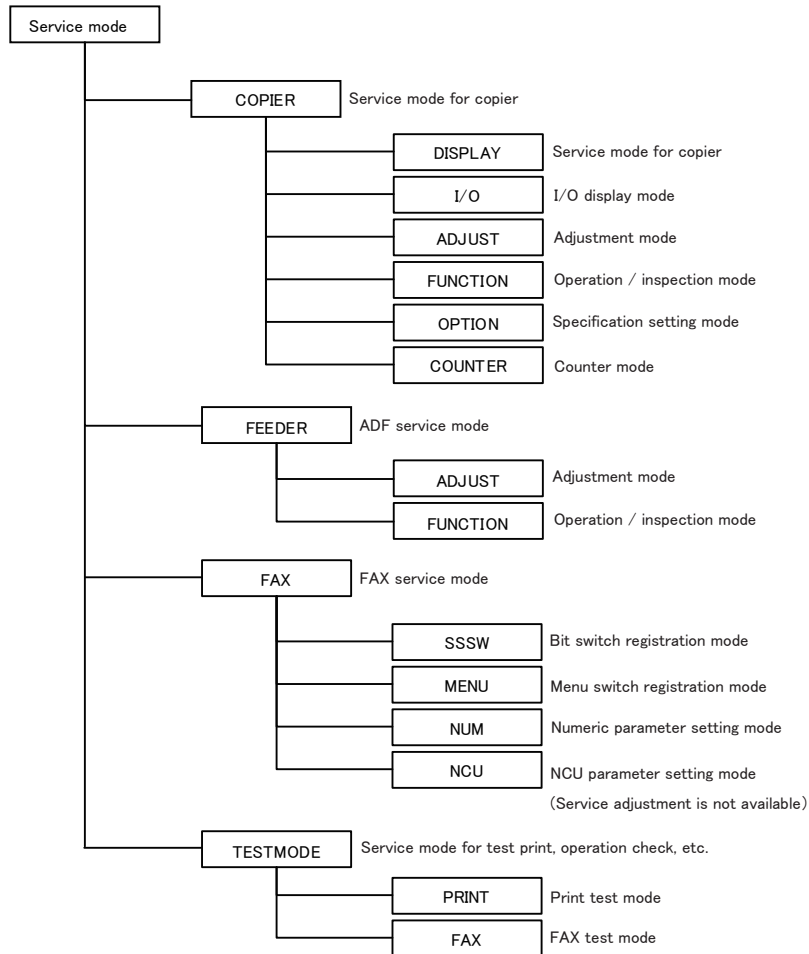


Service Mode

- Overview
- COPIER
- FEEDER
- FAX
- TESTMODE

Overview

Service Mode Menu



F-8-1

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 2. Password of service mode
2	1. Password of RUI service mode 2. User's system administrator ID 3. Password of system administrator 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
LS-ROM-V	Dspl of Laser Scanner Unit EEPROM ver

COPIER> DISPLAY> VERSION	
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

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-8-3

HV-ST5

COPIER> DISPLAY> HV-ST5	
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-ST5	
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-ST5	
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. 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-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. 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-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. 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-ST5	
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. 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-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. 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-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

COPIER> DISPLAY> HV-STS	
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
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

COPIER> DISPLAY> HV-STS	
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-8-4

■ CCD

COPIER> DISPLAY> CCD	
TARGET-B	Shading target value (B)
Details	To display the shading target value of Blue. 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. 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. 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-8-5

■ 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. 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. 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-8-6

■ 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	<ul style="list-style-type: none"> When image failure occurs due to carrier adherence When fogging appears 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	<ul style="list-style-type: none"> When image failure occurs due to carrier adherence When fogging appears 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	<ul style="list-style-type: none"> When image failure occurs due to carrier adherence When fogging appears 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	<ul style="list-style-type: none"> When image failure occurs due to carrier adherence When fogging appears 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 crnt (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 crnt (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-8-7

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-8-8

■ 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. 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. 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. 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. 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. 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-8-9



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	-	
P005H	7	Delivery Paper Full Sensor	PS14	1:full
	6	Delivery Sensor	PS12	1:paper
	5	Not used	-	
	4	Not used	-	
	3	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
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-8-10

■ 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-8-11

■ 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-8-12



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. When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label. When the non-image width is larger than the standard value, set the smaller value. When out of original area is copied, set the larger value. As the value is incremented by 1, the image position moves to the trailing edge side by 0.1 mm.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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. When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label. When the non-image width is larger than the standard value, set the smaller value. When out of original area is copied, set the larger value. As the value is incremented by 1, the image position moves to the rear side by 0.1 mm.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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[Frnt]
Details	To adjust the image reading start position in horizontal scanning direction at DADF reading. When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label. As the value is incremented by 1, the image position moves to the rear side by 0.1 mm.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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. When replacing the Scanner Unit or Main Controller PCB/clearing the Reader-related RAM data, enter the value of service label. As the value is incremented by 1, the image magnification ratio changes by 0.01 %. +: Enlarge -: Reduce
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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. When replacing the CCD Unit/clearing the RAM data of the Reader Unit, enter the value of service label. 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. 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-8-13

■ 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	<ul style="list-style-type: none"> When replacing the Main Controller PCB When clearing the Reader-related RAM data When replacing the Copyboard Glass
Adj/set/operate method	1) Enter the setting value 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	7000 to 9999
Default value	8273
Related service mode	COPIER> ADJUST> CCD> W-PLT-Y/Z 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	<ul style="list-style-type: none"> When replacing the Main Controller PCB When clearing the Reader-related RAM data When replacing the Copyboard Glass
Adj/set/operate method	1) Enter the setting value 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	7000 to 9999
Default value	8737
Related service mode	COPIER> ADJUST> CCD> W-PLT-X/Z 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	<ul style="list-style-type: none"> When replacing the Main Controller PCB When clearing the Reader-related RAM data When replacing the Copyboard Glass
Adj/set/operate method	1) Enter the setting value 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	7000 to 9999
Default value	9427
Related service mode	COPIER> ADJUST> CCD> W-PLT-X/Y 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. 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
DFTAR3-G	Shading tgt VL (G): DADF [3rd read pstn]
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
DFTAR3-B	Shading tgt VL (B): DADF [3rd read pstn]
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	
50-RG	RG clr displace crct: 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. 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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 crct: 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. 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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 crct: 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. 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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 crct: 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. 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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 crct: 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. 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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 crct: 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. 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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 crct: 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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 crct: 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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. 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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. Enter the value of service label on the Reader.
Use case	<ul style="list-style-type: none"> When replacing the Scanner Unit 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.
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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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):cl,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. 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-8-14

■ 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 crct: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 crct: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 crct: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. As the value is changed by 1, Bk-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/C1
LSR-V-K2	For R&D
ITBDRBL1	For R&D
BEND-C	C-color laser distortion crrc:vert scan
Details	To correct distortion of C-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	
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. 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. 2) Turn OFF/ON the main power switch. 3) Execute auto color displacement correction.
Caution	Be sure to perform auto color displacement correction after adjustment. 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-8-15

■ DENS

COPIER> ADJUST> DENS	
HLMT-PTY	Adj ATR Sensor (Y) dens crct 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 crct 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 crct 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 crct 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 crct low 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 crct low 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 crct 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 crct 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-8-16

V-CONT

COPIER> ADJUST> V-CONT	
VCONT-Y	Adj of Y-color contrast potential
Details	To adjust the contrast potential for Y. As the value is incremented by 1, the contrast potential changes by 10V. +: Image becomes darker. -: Image becomes lighter. When the value is too large, paper winds around the Fixing Roller or a transfer failure occurs. In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value. 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. 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 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. As the value is incremented by 1, the contrast potential changes by 10V. +: Image becomes darker. -: Image becomes lighter. When the value is too large, paper winds around the Fixing Roller or a transfer failure occurs. In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value. 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. 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 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. As the value is incremented by 1, the contrast potential changes by 10V. +: Image becomes darker. -: Image becomes lighter. When the value is too large, paper winds around the Fixing Roller or a transfer failure occurs. In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value. 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. 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 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. As the value is incremented by 1, the contrast potential changes by 10V. +: Image becomes darker. -: Image becomes lighter. When the value is too large, paper winds around the Fixing Roller or a transfer failure occurs. In a low humidity environment (e.g. winter in North America or Japan), the output may not be changed by increasing the value. 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. 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 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). As the value is incremented by 1, the fogging removal potential changes by 10 V. +: Fogging is alleviated. -: Coarse image, blanking of image edge, and carrier adherence are alleviated. 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. 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). As the value is incremented by 1, the fogging removal potential changes by 10 V. +: Fogging is alleviated. -: Coarse image, blanking of image edge, and carrier adherence are alleviated. 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. 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). As the value is incremented by 1, the fogging removal potential changes by 10 V. +: Fogging is alleviated. -: Coarse image, blanking of image edge, and carrier adherence are alleviated. 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. 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). As the value is incremented by 1, the fogging removal potential changes by 10 V. +: Fogging is alleviated. -: Coarse image, blanking of image edge, and carrier adherence are alleviated. 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. 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. +: Fogging is alleviated, but white/black spots are increased due to carrier adherence. -: 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. 2) Turn OFF/ON the main power switch. 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 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. +: Fogging is alleviated, but white/black spots are increased due to carrier adherence. -: 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. 2) Turn OFF/ON the main power switch. 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 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. +: Fogging is alleviated, but white/black spots are increased due to carrier adherence. -: 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. 2) Turn OFF/ON the main power switch. 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 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. +: Fogging is alleviated, but white/black spots are increased due to carrier adherence. -: 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. 2) Turn OFF/ON the main power switch. 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 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. +: Fogging is alleviated, but white/black spots are increased due to carrier adherence. -: 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. 2) Turn OFF/ON the main power switch. 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 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. +: Fogging is alleviated, but white/black spots are increased due to carrier adherence. -: 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. 2) Turn OFF/ON the main power switch. 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 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. +: Fogging is alleviated, but white/black spots are increased due to carrier adherence. -: 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. 2) Turn OFF/ON the main power switch. 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 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. +: Fogging is alleviated, but white/black spots are increased due to carrier adherence. -: 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. 2) Turn OFF/ON the main power switch. 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 Adjustment/Maintenance> Adjust Image Quality> Correct Color Cast

T-8-17

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). When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label. 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. 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). When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label. 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. 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). When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label. 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. 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). When replacing the Main Controller PCB/clearing the Reader-related RAM data, enter the value of the service label. 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. 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-8-18

HV-TR

COPIER> ADJUST> HV-TR	
1TR-TGY	Y pry trn ATVC tgt crnt: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 crnt: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 crnt: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 crnt: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 crnt: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 crnt: 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 crnt: 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 crnt: 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 crnt: 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 crnt: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. 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-TGM3	Adj M pry trn ATVC tgt crnt: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. 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-TGC3	Adj C pry trn ATVC tgt crnt: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. 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-TK13	Bk-m pry trn ATVC tgt crnt: 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. 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-TK42	Bk-c pry trns ATVC tgt crnt: 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. 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	2 uA
Default value	0
Related service mode	COPIER> FUNCTION> MISC-P> 1ATVC-EX
1TR-TK43	Bk-c pry trns ATVC tgt crnt: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. As the value is incremented by 1, the offset is increased by 2 micro A. Increase the value if spots (white spots), leopard pattern image occurs. Decrease the value if white spots occur. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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-8-19

■ 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. As the value is incremented by 1, the speed is increased by 0.2%. +: The speed is increased. -: The speed is decreased. 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. 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	-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. As the value is changed by 1, the leading edge margin is changed by 0.1 mm. +: Leading edge margin becomes smaller. (An image moves upward.) -: Leading edge margin becomes larger. (An image moves downward.) When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label.
Use case	<ul style="list-style-type: none"> • When adjusting the leading edge margin • 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. As the value is changed by 1, the leading edge margin is changed by 0.1 mm. +: Leading edge margin becomes smaller. (An image moves upward.) -: Leading edge margin becomes larger. (An image moves downward.) When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label.
Use case	<ul style="list-style-type: none"> • When adjusting the leading edge margin • 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. As the value is changed by 1, the leading edge margin is changed by 0.1 mm. +: Leading edge margin becomes smaller. (An image moves upward.) -: Leading edge margin becomes larger. (An image moves downward.) When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label.
Use case	<ul style="list-style-type: none"> When adjusting the leading edge margin 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. 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 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. As the value is changed by 1, the leading edge margin is changed by 0.1 mm. +: Leading edge margin becomes smaller. (An image moves upward.) -: Leading edge margin becomes larger. (An image moves downward.) When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label.
Use case	<ul style="list-style-type: none"> When adjusting the leading edge margin 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. As the value is changed by 1, the leading edge margin is changed by 0.1 mm. +: Leading edge margin becomes smaller. (An image moves upward.) -: Leading edge margin becomes larger. (An image moves downward.) When replacing the DC Controller PCB/clearing RAM data, either restore the backup data or enter the value of service label.
Use case	<ul style="list-style-type: none"> When adjusting the leading edge margin 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. To specify the position of envelope relative to the position specified by ADJ-C1. As the value is changed by 1, the left margin is changed by 0.1 mm. +: Left margin becomes larger. (An image moves to the right.) -: 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-8-20

■ 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". 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	<ul style="list-style-type: none"> 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.

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". 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	<ul style="list-style-type: none"> 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.

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". 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	<ul style="list-style-type: none"> 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.

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	<ul style="list-style-type: none"> 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-8-21

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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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-8-22

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 widened.
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-8-23

■ 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. 2) Press the 9 "+" in sequence.

T-8-24

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	<ul style="list-style-type: none"> When removing the soiling on the ITB 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	<ul style="list-style-type: none"> When the backside of the paper is soiled by the Secondary Transfer Outer Roller 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-8-25

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 4 1: Developing Cylinder Clutch (Y) (CL01) 2: Developing Cylinder Clutch (M) (CL02) 3: Developing Cylinder Clutch (C) (CL03) 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 1: Drum Unit Suction Cooling Fan (FM01) 2: Duplex Cooling Fan (FM04) 3: Delivery Cooling Fan (FM03) 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 1: CL Drum Motor (M01) 2: Bk Drum_ITB Motor (M02) 3: Developing Motor (M03) 4: Fixing Motor (M04) 5: Cassette 1_Multi-purpose Traty Pickup Motor (M05) 6: Pre-registration Motor (M06) 7: Registration Motor (M07) 8: Reverce Motor (M08) 9: Bottle Motor (YM) (M09) 10: Bottle Motor (CK) (M10) 11: Cassette 1 Lifter Motor (M11) 12: Cassette 2 Pickup Motor (M102) 13: Cassette 2 Pullout Motor (M106) 14: Cassette 2 Lifter Motor (M104) 15: Cassette 3, 4 Pickup Motor (M101) 16: Cassette 3, 4 Pullout Motor (M105) 17: Cassette 3, 4 Lifter Motor (M103) 18: Registration Motor (Waste Toner Container, Negative rotation operation of M07) 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. 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 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 1: Primary Transfer Disengagement Solenoid (SL01) 2: Duplex Solenoid (SL02) 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. 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-8-26

■ 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	<ul style="list-style-type: none"> When replacing the Copyboard Glass When replacing the Scanner Unit When clearing the Reader-related RAM data
Adj/set/operate method	1) Set paper on the Copyboard Glass. 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	<ul style="list-style-type: none"> When replacing the Copyboard Glass When replacing the Scanner Unit When clearing the Reader-related RAM data
Adj/set/operate method	1) Set paper on the DADF. 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 COPIER> ADJUST> CCD> DFTAR-R/G/B COPIER> ADJUST> CCD> DFTAR2-R/G/B 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). To make the adjustment with both resolutions 300 dpi and 600 dpi.
Use case	<ul style="list-style-type: none"> When replacing the Copyboard Glass When replacing the Scanner Unit
Adj/set/operate method	1) Select the item, and then press Start key. 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-8-27

■ 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. 2) Turn OFF/ON the main power switch.
Caution	<ul style="list-style-type: none"> Output the service mode setting values by P-PRINT before execution. After execution, enter necessary setting value. The RAM data is cleared by pressing Start key. 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. The user mode setting values are not cleared. The factory adjustment values of the Reader/ADF are not initialized.
Adj/set/operate method	1) Select the item, and then press Start key. 2) Turn OFF/ON the main power switch.
COUNTER	Clearing service counter
Details	To clear the counter by maintenance/part/mode. The numerator printed on a system dump list becomes 0.
Adj/set/operate method	1) Select the item, and then press Start key. 2) Turn OFF/ON the main power switch.
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. 2) Turn OFF/ON the main power switch.
ALL	Clearing setting information
Details	<ul style="list-style-type: none"> User mode setting values Service mode setting values (excluding the service counter) ID and password of the system administrator Communication management/print/jam/error log E719 error (counter meter-installed models only) The following items are not cleared/initialized. Service counter Factory adjustment values of the Reader/ADF
Use case	At installation
Adj/set/operate method	1) Select the item, and then press Start key. 2) Turn OFF/ON the main power switch.
Related service mode	COPIER> OPTION> BODY> LOCALE, SIZE-LC

COPIER> FUNCTION> CLEAR	
ERDS-DAT	Initialization of E-RDS SRAM data
Details	To initialize the SCM value of the Embedded-RDS stored in the SRAM. 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. 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. 2) Turn OFF/ON the main power switch.
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. 2) Turn OFF/ON the main power switch.
Caution	<ul style="list-style-type: none"> Output the service mode setting values by P-PRINT before execution. After execution, enter necessary setting values. 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.

COPIER> FUNCTION> CLEAR	
OPTION	Clear of service mode setting VL(OPTION)
Details	To return the value specified in service mode (COPIER> OPTION) to the default value (value at the time of RAM clear).
Use case	When clearing setting value of OPTION
Adj/set/operate method	Select the item, and then press Start key.
Caution	<ul style="list-style-type: none"> Before execution of this item, be sure to output the service mode setting values by P-PRINT. After execution, enter necessary setting values. This item is executed for the data on the Main Controller PCB, DC Controller PCB and Reader Controller PCB.
Related service mode	COPIER> FUNCTION> MISC-P> P-PRINT
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. 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	<ul style="list-style-type: none"> When color displacement cannot be corrected by image position correction control 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 Adjustment/Maintenance> Adjust Image Quality> Auto Correct Color Mismatch

T-8-28

■ 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-8-29

■ 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. 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. 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. 2) Select the item, and then press Start key. A paper stops at the Fixing Assembly. 3) Turn OFF the main power switch. 4) Remove the Fixing Assembly, and check the side registration position of the paper. 5) Pull out the paper, and install the Fixing Assembly. 6) Turn ON the main power switch. 7) Enter 0, and then press Start key. 8) Execute mechanical adjustment using the Adjustment Plate in a cassette to adjust the side registration position of paper. 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. 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 1: Cassette 1 2: Cassette 2 3: Cassette 3 4: Cassette 4 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. When 1 is set, noise is alleviated, but productivity is decreased (A4R, 35 ppm -> 32.2 ppm). 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: OFF 1: ON

T-8-30

SYSTEM

COPIER> FUNCTION> SYSTEM	
DOWNLOAD	Shift to download mode
Details	To make the machine enter the download mode and wait for a command. Perform downloading by SST.
Use case	At upgrade
Adj/set/operate method	1) Select the item, and then press Start key. 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. 2) Select the item, and then press Start key. 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. 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. 2) Select the item, and then press Start key.

T-8-31

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. 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-8-32

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. 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
Details	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 0: OFF 1: ON
Default value	0
SPL32620	Switching to enable/disable PC-less update
Display/adj/set range	0 to 10 0: Disabled 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-8-33

■ INSTALL

COPIER> FUNCTION> INSTALL	
STRD-POS	Adj reading position:DADF stream reading
Details	To adjust the reading position at DADF stream reading. 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. 2) Select the item, and then press Start key. 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	<ul style="list-style-type: none"> When replacing the Reading Sensor Unit When replacing the Copyboard Glass 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.
E-RDS	Switching ON/OFF of E-RDS function
Display/adj/set range	0 to 1 0: OFF 1: ON
Default value	0

COPIER> FUNCTION> INSTALL	
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. 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 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, The test terminated normally: "OK" 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 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. 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: OFF (warm-up rotation enabled) 1: ON (warm-up rotation disabled)
Default value	0

T-8-34



COPIER> OPTION> BODY	
DFDST-L1	DADF mode dust dtct level adj: ppr intrvl
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	<ul style="list-style-type: none"> When black/white line occurs due to dust 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.
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 0 to 84 : Weakest 85 to 169 : Weak 170 to 254 : Moderate 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 0: Display as a jam 1: Display as an error
Default value	0
Related service mode	COPIER> OPTION> FNC-SW> JM-ERR-D

COPIER> OPTION> BODY	
LOCALE	Setting of location
Details	To set the location. 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 •When changing the location information
Adj/set/operate method	1) Enter the setting value under LOCALE, and then press Start key. 2) Set the paper size configuration under SIZE-LC. 3) Execute COPIER> FUNCTION> CLEAR> ALL. 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 8 1: Japan 2: North America 3: Korea 4: China 5: Taiwan 6: Europe 7: Asia 8: Oceania
Default value	1
Related service mode	COPIER> FUNCTION> CLEAR> ALLCOPIER> OPTION> BODY> SIZE-LC
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 •Upon user's request
Adj/set/operate method	1) Set the location under LOCALE. 2) Enter the setting value under SIZE-LC, and then press Start key. 3) Execute COPIER> FUNCTION> CLEAR> ALL. 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 1: AB configuration 2: Inch configuration 3: A configuration 4: AB/Inch configuration
Related service mode	COPIER> FUNCTION> CLEAR> ALLCOPIER> OPTION> BODY> LOCALE

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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: SMTP server-dependent 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: SMTP server-dependent 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: SMTP server-dependent 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 0: Normal operation 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 0: Hide 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 0:OFF 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. 2 types are available: one for "service technician" and the other for "system administrator + service technician". 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 2 0: No password 1: Service technician 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. 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. 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 1: CS680 [Nippon Paper Industries] (Except for USA and EU. Mainly for Japan) 2: Hammermill Laser Print [International Paper] (For USA) 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

T-8-35

■ FNC-SW

COPIER> OPTION> FNC-SW	
INTRROT-1	Set ATR ctrl patch density dtct interval
Details	To set execution interval of patch density detection executed at ATR control. By changing the setting value, execution intervals at last rotation and at paper interval are changed. 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. When the value is increased, downtime can be reduced because of decrease of execution frequency, but an image failure might occur.
Use case	<ul style="list-style-type: none"> When E020 error occurs frequently 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 -1: Every 30 sheets at last rotation, every 80 sheets at paper interval 0: Every 50 sheets at last rotation, every 100 sheets at paper interval 1: Every 100 sheets at last rotation, every 150 sheets at paper interval 2: Every 150 sheets at last rotation, every 200 sheets at paper interval 3: Every 200 sheets at last rotation, every 250 sheets at paper interval
Default value	0
INTRROT-2	Set of auto adjustment execute interval
Details	To set the paper interval to execute auto adjustment (D-max control, D-half control). As the value is incremented by 1, the paper interval is increased by 1 sheet. 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. 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	<ul style="list-style-type: none"> When the density variation is not within the requested range at continuous output of a large volume of papers 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 0: Not used 1: At last rotation 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 4 0: Normal 1: Heavy paper 3 2: Heavy paper 2/3 3: Heavy paper 1/2/3 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 3 0: Warning is hidden. 1: Warning is displayed when the life counter reaches the specified value. 2: Warning is displayed when the print counter reaches the specified value. 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. 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Half 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. 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. 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". 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 0: Display as a jam 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. 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	<ul style="list-style-type: none"> When the rotation drive noise is loud 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 rplice
Details	To set whether to execute the new Toner Container check sequence after replacement. 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. 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 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 0: Automatic 1: Half speed 2: Full speed
Default value	0

COPIER> OPTION> FNC-SW	
PWR-FAN	Adj Power Supply Fan airflow amnt: stby
Details	To adjust the airflow amount of the Power Supply Fan at standby. As the value is larger, heat exhaust efficiency is improved, but noise becomes louder.
Use case	<ul style="list-style-type: none"> 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 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 0: Automatic 1: Half speed 2: Full speed
Default value	0
Supplement/memo	The Power Supply Fan also cools the Controller PCB.
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 0: Automatic, 1: Half speed, 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. 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 0: Automatic 1: Half speed 2: Full speed
Default value	0

COPIER> OPTION> FNC-SW	
CRG-FANF	Adj Drum-U Suctn Fan airflow amnt: print
Details	To set the rotation speed of the Drum Unit Suction Fan during printing. 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 0: Automatic 1: Half speed 2: Full speed
Default value	0
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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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). 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. 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	<ul style="list-style-type: none"> When 1 is set in a high temperature and high humidity environment, papers may be stuck together. When the finisher is installed, the setting is disabled (remains at full speed).
Display/adj/set range	0 to 1 0: Full speed 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. 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. 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 0: Disabled 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 plugin 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. When the image is switched from color to black, an image failure may occur on the B&W image. 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	<ul style="list-style-type: none"> 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. Be sure to check that the symptom cannot be improved by PRE-CURL (heavy paper curl alleviation mode) before execution. Productivity may be decreased in the case of color/black mixed original or color/black linked jobs.
Display/adj/set range	0 to 2 0: After switching, the first to fifth sheets are output in color mode, and the mode shifts to black mode from the sixth sheet. 1: Excluding thin paper of 210 mm or more in width (60 to 63 g/m ²), plain paper 1 (64 to 75 g/m ²), plain paper 2 (76 to 90 g/m ²), recycled paper 1 (64 to 75 g/m ²), recycled paper 2 (76 to 90 g/m ²), color paper (64 to 75 g/m ²), pre-punched paper (64 to 75 g/m ²), and carbonless paper (60 g/m ²), the mode shifts to black mode from the second sheet after switching. 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. 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 0: Image quality priority mode 1: Counter priority mode
Default value	1

T-8-36

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

T-8-37

■ 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 0: OFF 1: ON (HH environment only) 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. 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 0: OFF 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). As the value is incremented by 1, Vpp changes by 100 V. 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. 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 0: +/-0 V 1: -100 V 2: -200 V 3: -300 V 4: -400 V 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. 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. 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 0: +/-0 V 1: -100 V 2: -200 V 3: -300 V 4: -400 V 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. 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 -2: -0.2 -1: -0.1 0: 0 1: +0.5 2: +1.0 3: +1.5 4: +2.0 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 -2 : -0.2 -1 : -0.1 0 : 0 1 : +0.5 2 : +1.0 3 : +1.5 4 : +2.0 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 -2 : -0.2 -1 : -0.1 0 : 0 1 : +0.5 2 : +1.0 3 : +1.5 4 : +2.0 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 -2 : -0.2 -1 : -0.1 0 : 0 1 : +0.5 2 : +1.0 3 : +1.5 4 : +2.0 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	<ul style="list-style-type: none"> When the user pointed out that the Toner Container is not recognized as a new one although it is replaced 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 3 : 3 times 4 : 4 times 5 : 5 times 6 : 6 times 7 : 7 times 8 : 8 times 9 : 9 times 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	<ul style="list-style-type: none"> When the user pointed out that the actual toner level is much higher than the estimated toner level 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 1: 1 time 2: 2 times 3: 3 times 4: 4 times 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. 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 0: +/-0 V 3: -300 V 1: -100 V 4: -400 V 2: -200 V 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 0: OFF 1: ON
Default value	0

T-8-38

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	<ul style="list-style-type: none"> • Upon user's request • 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Display 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Hide 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 0: Hide 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 0: Hide 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 0: OFF 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 0: OFF 1: ON
Default value	1
Related UI menu	Adjustment/Maintenance> Maintenance> Initialize After Replacing Parts> Fixing Unit

T-8-39

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. 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. At last rotation of the job with more than specified number of sheets, execute ITB cleaning (not executed when 0 is set). As the value is incremented by 1, the number of sheets for cleaning interval at last rotation is increased by 1 sheet. 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. 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 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. As the value is increased, image failure due to the soiled ITB is alleviated, but downtime and toner consumption are increased. 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 0: Not executed 1 to 3: 50 sheets 4: 30 sheets 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. 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. When 0 is set, toner band is not formed.
Use case	<ul style="list-style-type: none"> When noise comes from the Photosensitive Drum 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 0: OFF 1: 1 mm 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. 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	<ul style="list-style-type: none"> When noise comes from the Photosensitive Drum 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. 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. When 0 is set, toner band is not formed.
Use case	<ul style="list-style-type: none"> When noise comes from the ITB 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 0: OFF 1: 1 mm 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. 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	<ul style="list-style-type: none"> When noise comes from the ITB 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-8-40

■ 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. 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. 2) Turn OFF/ON the main power switch. 3) Execute auto gradation adjustment (full adjustment).
Display/adj/set range	0 to 1 0: Normal 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. 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. 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 3 0: ON for PDL, OFF for copy 1: OFF for PDL, OFF for copy 2: ON for PDL, ON for copy 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. 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: ON for PDL, OFF for copy 1: OFF for PDL, OFF for copy
Default value	1

T-8-41

■ 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. As the value is incremented by 1, the temperature is increased by 2 deg C from the initial setting temperature.
Use case	<ul style="list-style-type: none"> When uneven gloss occurs at paper edge 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 -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
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. This item is to set the temperature to finish the idle rotation. When the value is increased, downtime is increased because of prioritizing image quality. When the value is decreased, downtime is decreased, but uneven gloss occurs.
Use case	<ul style="list-style-type: none"> When uneven gloss occurs at paper edge 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 -2: -10 deg C -1: -5 deg C 0: 0 deg C 1: +5 deg C 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. 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. 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. Decrease the value when any problem (toner adhesion, etc.) occurs.
Use case	<ul style="list-style-type: none"> When changing the temperature to shift to paper interval 25 cpm mode 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-8-42

■ 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 0: OFF 1: ON (at warm-up rotation only) 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/m ²) . 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 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. 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

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/m ²) . 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 heavy 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
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/m ²) . 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 heavy paper 2
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

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/m ²) . 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 heavy paper 3
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
TMP-TBL5	Fixing control temperature: Thin ppr
Details	To set the offset of fixing control temperature for thin paper (60 to 63 g/m ²) . As the value is incremented by 1, the control temperature changes 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 thin paper
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

COPIER> OPTION> IMG-FIX	
TMP-TBL6	Fixing control temperature: Envelope
Details	To set the offset of fixing control temperature for envelope. 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 envelope
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
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/m ²) . 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 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. 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

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/m ²) . 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 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. 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
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/m ²) . 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 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. 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

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/m ²). 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 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. 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
FXS-TMP6	Image leading edge control temp:envelope
Details	To set the offset of image leading edge control temperature for envelope. 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 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. 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

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. 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. 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. 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. 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. 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. 2) Turn OFF/ON the main power switch.
Caution	When "1" is set, FCOT/FPOT is reduced.
Display/adj/set range	0 to 1 0: ON 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) . 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 plain paper 2
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
TMP-TBL8	Fixing control temperature:Transparency
Details	To set the offset of fixing control temperature for transparency. 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 transparency
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

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) . 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 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. 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
FXS-TMP8	Image leading edge control temp: transp
Details	To set the offset of image leading edge control temperature for transparency. 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 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. 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

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. When the value is increased, downtime is increased because of prioritizing image quality. When the value is decreased, downtime is decreased, but uneven gloss might occur.
Use case	<ul style="list-style-type: none"> If the fixing failure occurs in media mixed condition. 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/m ²) . 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 plain paper 3
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

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/m ²) . 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 2
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
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/m ²) . 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 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

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) . 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	<ul style="list-style-type: none"> When a fixing failure occurs on the leading edge of paper 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. 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
PRE-FXRL	Pressure Roller soiling prevention mode
Details	To set ON/OFF of Pressure Roller soiling prevention mode when feeding calcium carbonate paper. 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 0: OFF, 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) . 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 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. 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
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) . 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	<ul style="list-style-type: none"> When a fixing failure occurs on the leading edge of paper 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. 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
FXS-TM14	Image leading edge control temp: rcycl 3

COPIER> OPTION> IMG-FIX	
Details	To set the offset of image leading edge control temperature for recycled paper 3 (91 to 105 g/m ²) . 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	<ul style="list-style-type: none"> When a fixing failure occurs on the leading edge of paper 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. 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
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/m ²) . 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. 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

T-8-43

■ 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 2 0: Single Bk mode 1: Single Bk mode/color mode 2: OFF
Default value	0

T-8-44

USER

COPIER> OPTION> USER	
SCALL-SW	[Not used]
SCALLCMP	[Not used]
PS-MODE	Compatible mode setting at PS usage
Details	To set the image processing at PS print. Although the same line width is set, it may differ depending on the drawing position. 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 65535 0 to 7: No use of Adobe genuine PS (used with compatible PS machine) 8: Set strokeadjust = ON 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. 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. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Hide 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 0: Not shifted 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.

T-8-45

■ ACC

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 0: Normal 1: Error not displayed
Default value	0

T-8-46

■ SERIAL

COPIER> OPTION> SERIAL	
SN-MAIN	Entry of serial number
Details	To write the serial number of this machine in the Main Controller PCB. When this item is executed, the 8-digit alphanumeric entered in System Settings > Device Information > Location in user mode is written in the Main Controller PCB. When replacing the Main Controller PCB, be sure to write the serial number in the new PCB to prepare for trouble since the serial number of the device is not succeeded.
Use case	When replacing the Main Controller PCB
Adj/set/operate method	1) Write down the current data in System Settings > Device Information > Location in user mode. 2) Replace the Main Controller PCB after turning OFF the main power switch. 3) Enter the serial number (8-digit alphanumeric) in "Location" of step 1. 4) Select SN-MAIN, and then press OK key to write in the Main Controller PCB. After writing, the serial number entered in step 3 is deleted. 5) Turn OFF/ON the main power switch. 6) Output the spec report from COPIER> FUNCTION> MISC-P> SPEC to check the serial number (Body No.). 7) Enter the data backed up in step 1 in "Location".
Caution	Since the above "Location" is only temporarily used to store data, back up the data before input and enter it again after writing is completed.
Related service mode	COPIER> FUNCTION> MISC-P> SPEC
Related user mode	System Settings > Device Information> Location

T-8-47

■ LCNS-TR

COPIER> OPTION> LCNS-TR	
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	<ul style="list-style-type: none"> • When replacing the HDD • When replacing the device
Adj/set/operate method	1) Select ST-ERDS. 2) Enter 0, and then press Start key. 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.

T-8-48




COPIER> COUNTER> TOTAL	
SERVICE1	Service-purposed total counter 1
Details	To count up when the paper is delivered outside the machine. 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. 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. 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. 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. 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. 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. 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. 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. Large size: 1, small size: 1
Use case	When checking the counter
Display/adj/set range	0 to 99999999

T-8-49

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
Detail	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

T-8-50

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-8-51

■ 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-8-52

■ 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-8-53

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-8-54

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-8-55

■ 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-8-56

■ 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

T-8-57

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.

T-8-58

■ 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). 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). 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). 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). 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-8-59

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	<ul style="list-style-type: none"> • When installing DADF • When replacing the Scanner Unit • 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	<ul style="list-style-type: none"> • When installing DADF • When replacing the Scanner Unit • 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	<ul style="list-style-type: none"> • When installing DADF • 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	<ul style="list-style-type: none"> • When installing DADF • 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. 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	<ul style="list-style-type: none"> When installing DADF When replacing the Scanner Unit 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-8-60

 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. It is driven for approximately 5 seconds and is automatically stopped. 2) Press Start key. 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. 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 0: 1-sided pickup/delivery, 1: 2-sided pickup/delivery
Related service mode	FEEDER> FUNCTION> FEED-ON

T-8-61

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)
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-8-62

List of MENU

Menu switch registration mode		
No.	Parameter	Selection
01 - 05	Not in use	
06	Telephone line monitor	0 - 3 0: DIAL 1: SERVICEMAN1 2: SERVICEMAN2 3: OFF
07	Transmission level (ATT)	0 - 15
08	Upper limit of V.34 modulation speed	0 - 5 0: 3429 BAUD 1: 3200 BAUD 2: 3000 BAUD 3: 2800 BAUD 4: 2743 BAUD 5: 2400 BAUD
09	Upper limit of V.34 data speed	0-13 0: 33.6 kbps 1: 31.2 kbps 2: 28.8 kbps 3: 26.4 kbps 4: 24.0 kbps 5: 21.6 kbps 6: 19.2 kbps 7: 16.8 kbps 8: 14.4 kbps 9: 12.0 kbps 10: 9.6 kbps 11: 7.2 kbps 12: 4.8 kbps 13: 2.4 kbps
10	OFF Hook signal frequency	0-2 0: 50 Hz 1: 25 Hz 2: 17 Hz
11 - 20	Not in use	

T-8-63

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 (France: 3500, Others: 3000)
12	Maximum incoming lines	0 to 65535 (line) 0: without limitation
13	T.30 EOL timer	500 to 3000 (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 (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-8-64

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 1: Full correction chart 2 2: Color chart 3: Color displacement correction chart 4: Rainbow chart (vertical scanning direction) 5: Rainbow chart (horizontal scanning direction) 6: Grid Bk 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. 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 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. 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 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 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 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). 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 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). 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). 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. The setting is applied to all types. 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 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. The setting is applied to all types. 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 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. The setting is applied to all types. 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 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. The setting is applied to all types. 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 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 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. If this mode is set when there is no Cassette 2 (option Pickup Cassette), output is from Cassette 1 (standard Pickup Cassette). 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 0: Multi-purpose Tray, 1: Cassette 1, 2: Cassette 2
Default value	1

T-8-65



TESTMODE > FAX > MODEM	
RELAY-1	NCU relay test 1
Details	To test ON/OFF of relay and port switch of NCU. 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 0: All OFF 1: CML ON/OFF 2: P ON/OFF 3: S ON/OFF 4: H ON/OFF 5: HD ON/OFF 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. 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 0: All OFF 1: CIST2 ON/OFF 2: C1 ON/OFF 3: NORG ON/OFF 4: DCSEL ON/OFF 5: DCLIM ON/OFF 6: IPSEL1 ON/OFF 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. 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. 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 0: OFF 1: 462 Hz 2: 1100 Hz 3: 1300 Hz 4: 1500 Hz 5: 1650 Hz 6: 1850 Hz 7: 2100 Hz
Default value	0
G3TX	G3 signal transmission test
Details	To test whether the specified 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 by the G3 signal transmission function of the modem. 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 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. 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. 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 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 <ul style="list-style-type: none"> 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

T-8-66

■ 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-8-67



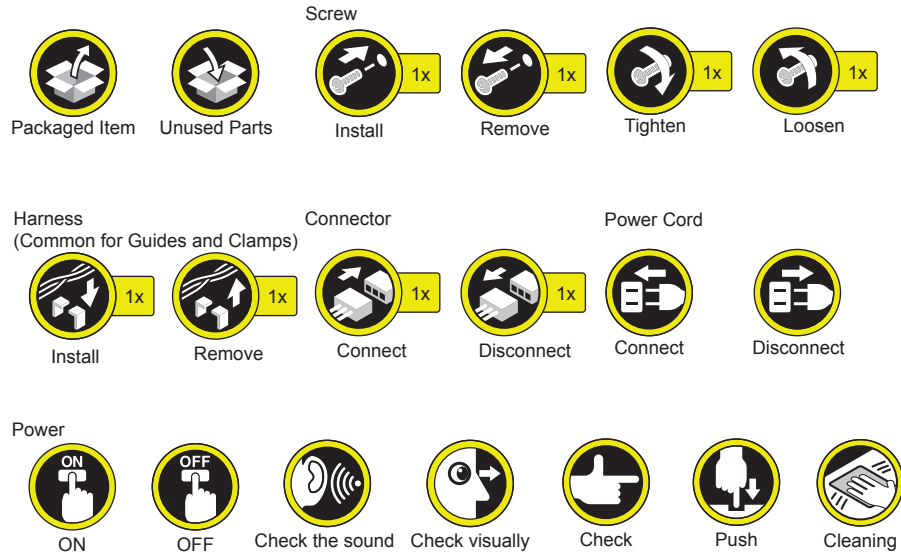
Installation

- How to Check this Installation Procedure
- Installation

How to Check this Installation Procedure

Symbols in the Illustration

The frequently-performed operations are described with symbols in this procedure.



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.

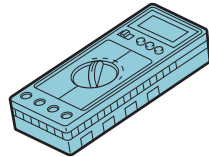
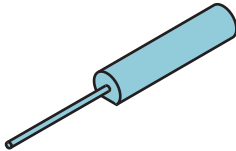
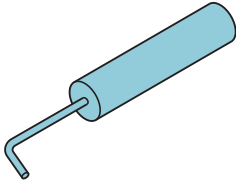

Appendix

- 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.

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

T-10-1



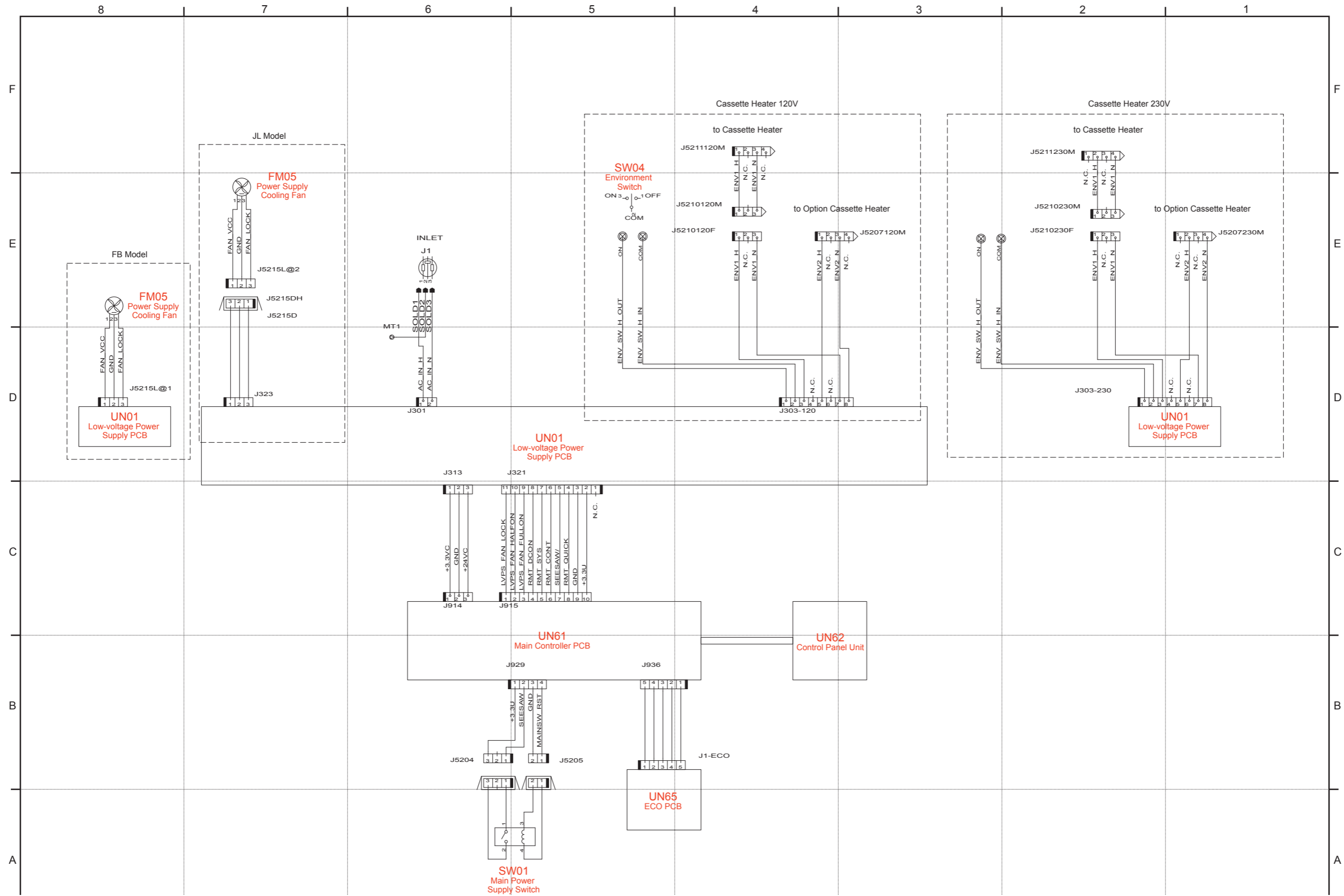
Solvents and Oils

None

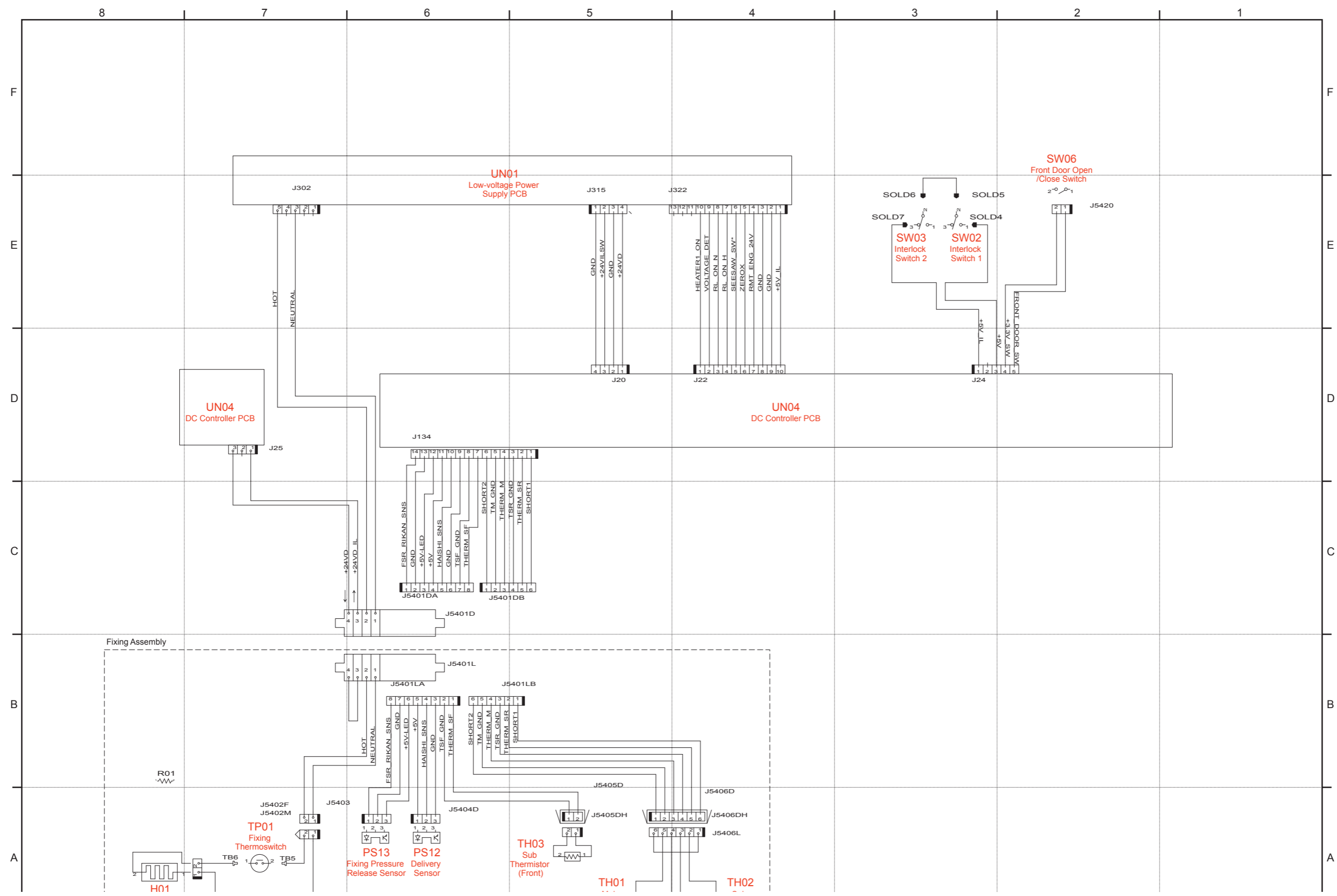


General Circuit Diagram

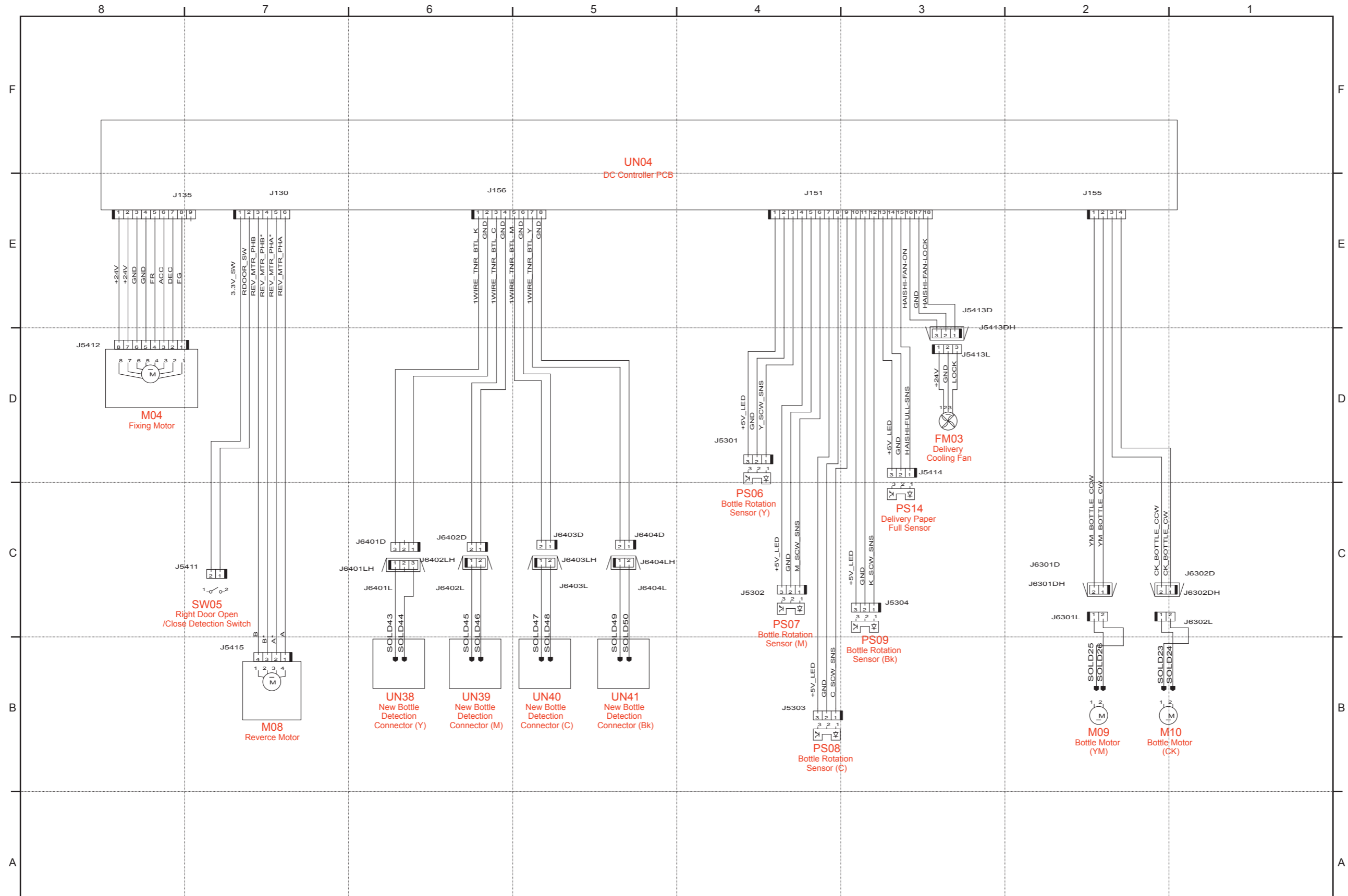
General Circuit Diagram (1/10)



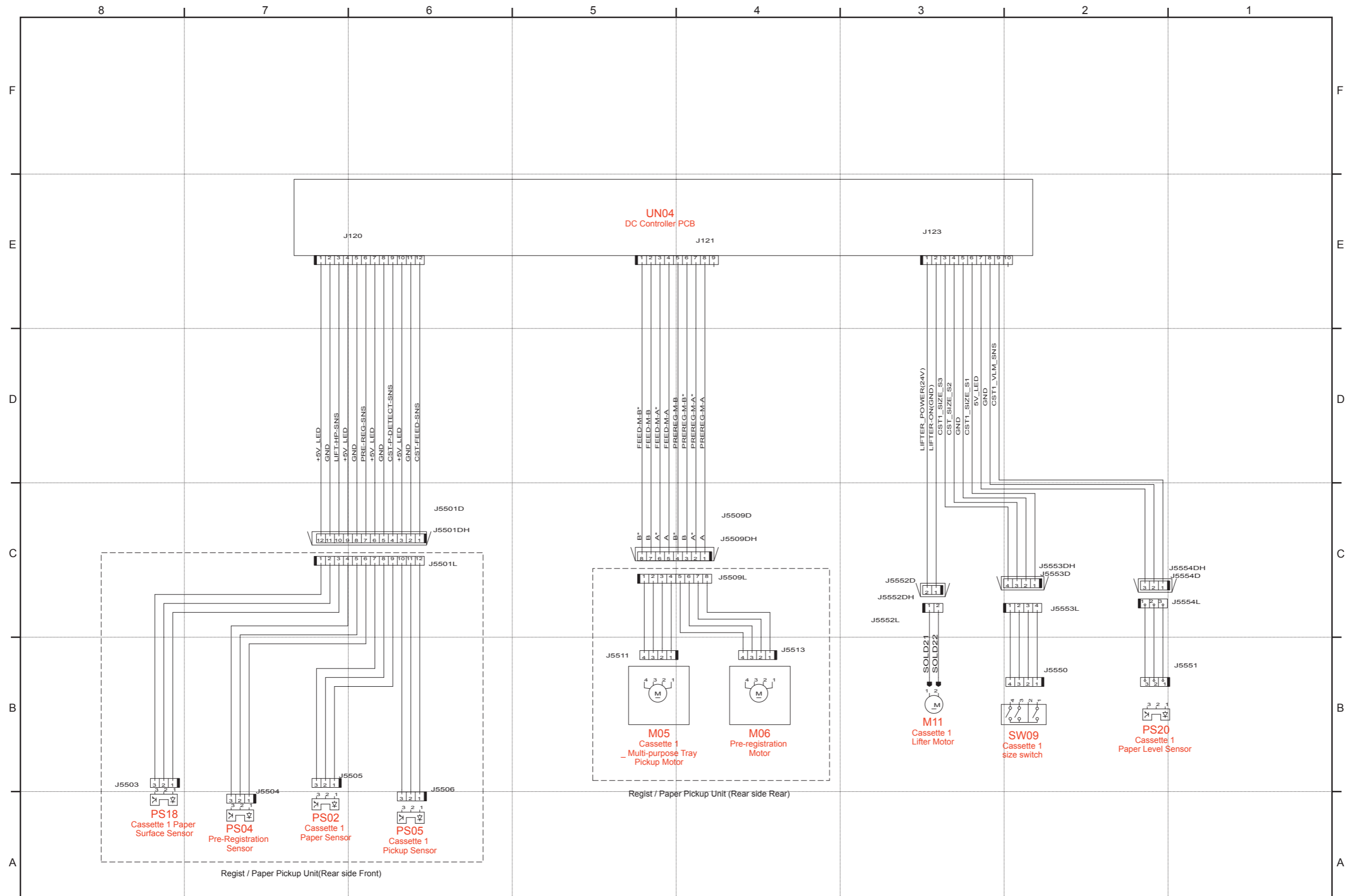
General Circuit Diagram (2/10)



General Circuit Diagram (3/10)



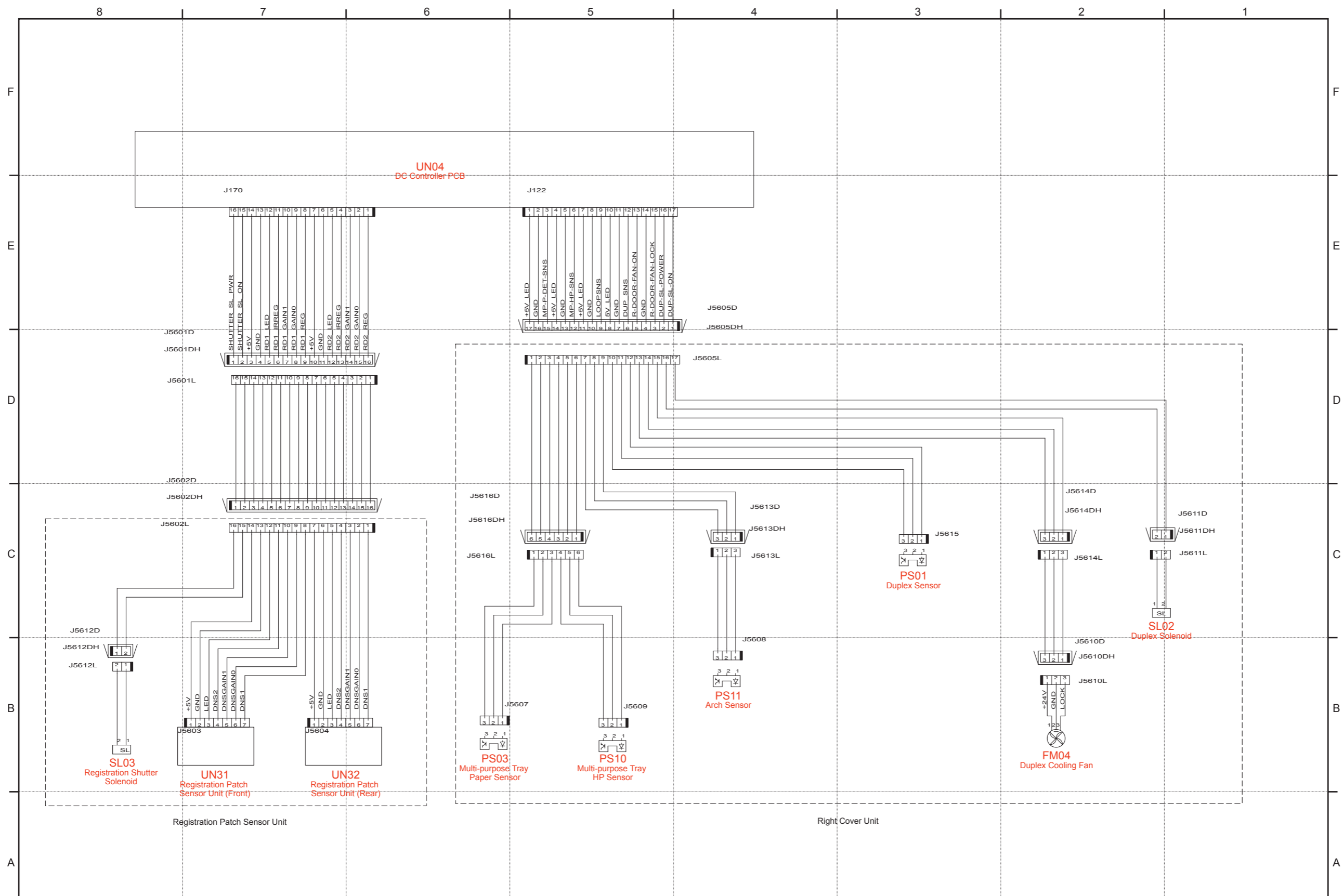
General Circuit Diagram (4/10)



General Circuit Diagram (5/10)

Appendix > General Circuit Diagram

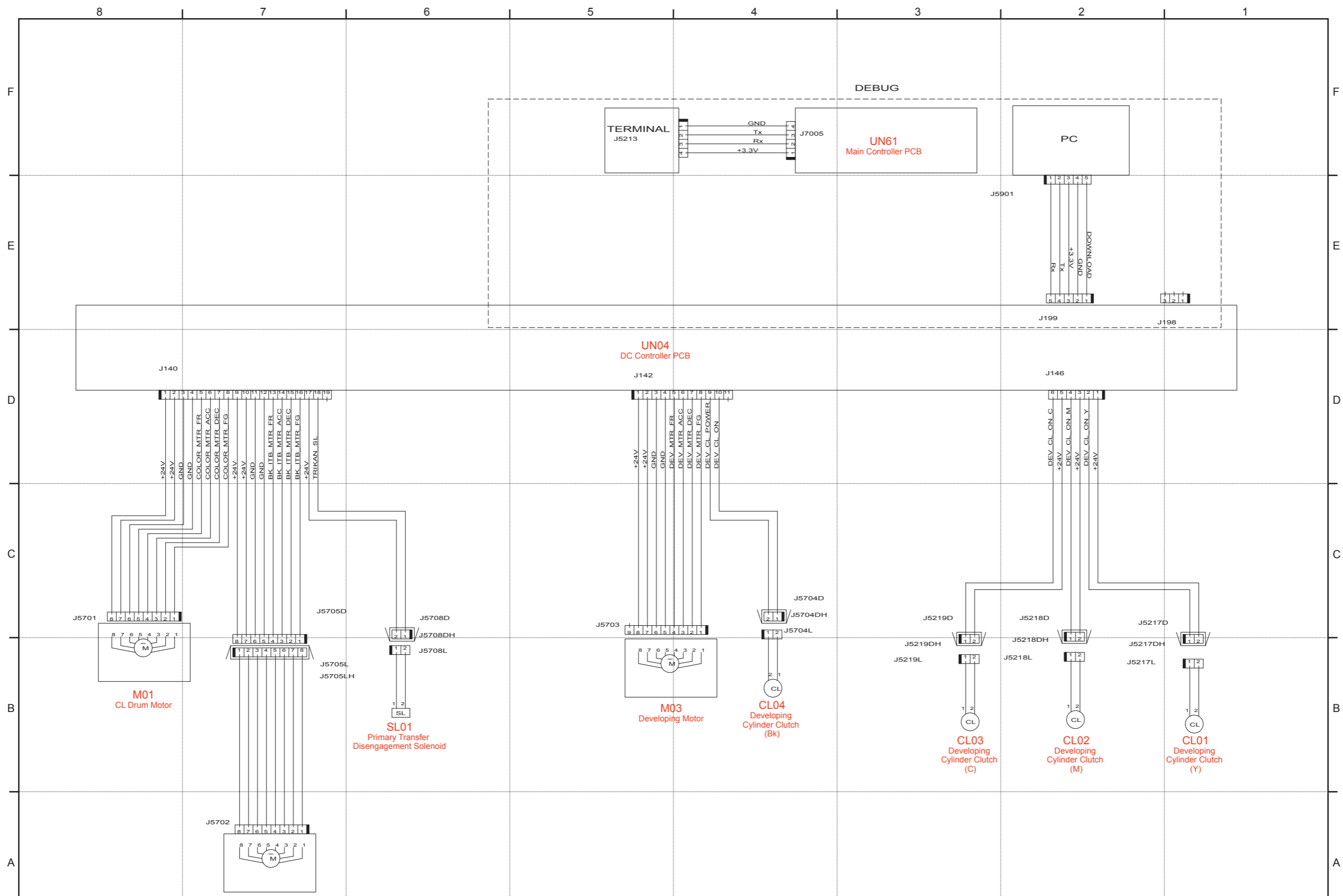
Appendix > General Circuit Diagram



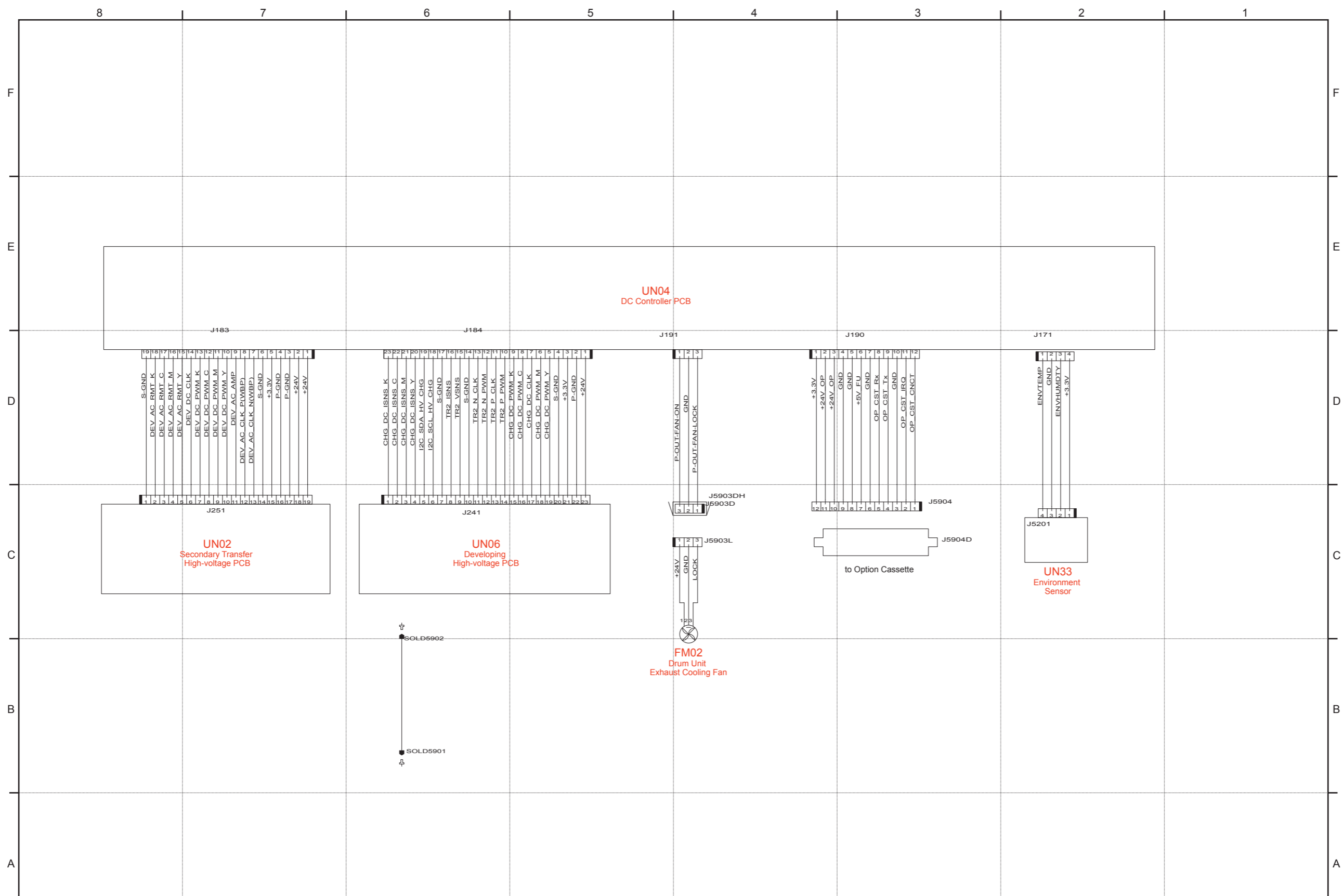
General Circuit Diagram (6/10)

Appendix > General Circuit Diagram

Appendix > General Circuit Diagram



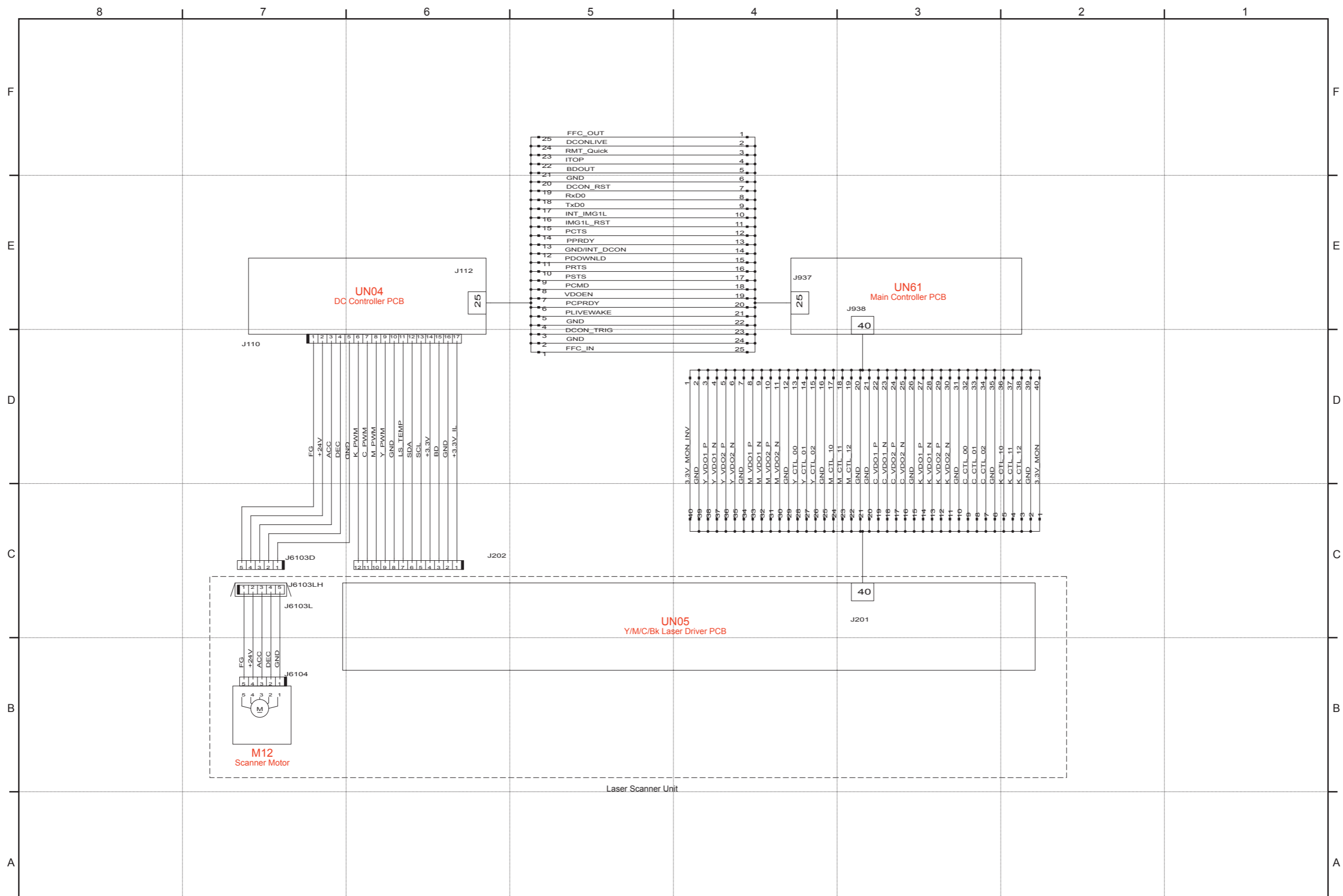
General Circuit Diagram (7/10)



General Circuit Diagram (9/10)

Appendix > General Circuit Diagram

Appendix > General Circuit Diagram



List of User Mode

Network Settings

*: Default Settings

Item		Setting Description	
TCP/IP Settings	IPv4 Settings	IP Address Settings	<ul style="list-style-type: none"> Auto Acquire* <ul style="list-style-type: none"> Select Protocol Off, DHCP* Auto IP Off, On* Manually Acquire <ul style="list-style-type: none"> IP Address: 0.0.0.0 Subnet Mask: 0.0.0.0 Gateway Address: 0.0.0.0 Check Settings <ul style="list-style-type: none"> Auto Acquire IP Address Subnet Mask Gateway Address
		PING Command	
		DNS Settings	<ul style="list-style-type: none"> DNS Server Settings <ul style="list-style-type: none"> Primary DNS Server: 0.0.0.0 Secondary DNS Server: 0.0.0.0 DNS Host Name/Domain Name Settings <ul style="list-style-type: none"> Host Name Domain Name DNS Dynamic Update Settings <ul style="list-style-type: none"> Off*, On(DNS Dynamic Update Interval: 0 to 24* to 48 (hr.))
		mDNS Settings	Off, On* : mDNS Name
	DHCP Option Settings	<ul style="list-style-type: none"> Acquire Host Name Off, On* DNS Dynamic Update Off*, On 	
	IPv6 Settings	Use IPv6	<ul style="list-style-type: none"> Off* On Check Settings Link-Local Address, Prefix Length
		Stateless Address Settings	<ul style="list-style-type: none"> Off On* Check Settings Stateless Address, Prefix Length
		Use DHCPv6	<ul style="list-style-type: none"> Off* On Check Settings Stateful Address, Prefix Length

Item			Setting Description	
TCP/IP Settings	IPv6 Settings	DNS Settings	Use IPv4 Host/Domain	
		DNS Host Name/Domain Name Settings	<ul style="list-style-type: none"> Off Host Name Domain Name On* 	
		DNS Dynamic Update Settings	<ul style="list-style-type: none"> Off* On Register Manual Address Off*, On Register Stateful Address Off*, On Register Stateless Address Off*, On DNS Dynamic Update Interval 0 to 24* to 48 (hr.) 	
		mDNS Settings	<ul style="list-style-type: none"> Off On* Use Same mDNS Name as IPv4 <ul style="list-style-type: none"> Off mDNS Name On* 	
	WINS Settings			<ul style="list-style-type: none"> WINS Resolution Off* On WINS Server Address: 0.0.0.0 Scope ID
		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 Settings	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	HTTP	1 to 80* to 65535	
		Multicast Discovery	1 to 427* to 65535	
		POP3	1 to 110* to 65535	
		SMTTP	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	<ul style="list-style-type: none"> • Off <ul style="list-style-type: none"> • Communication Mode Half Duplex*, Full Duplex • Ethernet Type 10BASE-T*, 100BASE-TX, 1000BASE-T • 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	<ul style="list-style-type: none"> • Select Button to Display Favorite Copy Settings • Favorite Copy Settings • Favorite Scan Settings • Set Display Order • 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

Time Settings

*: Default Settings

1: Settings marked with an asterisk "" cannot be imported or exported via the Remote UI.

2: Settings marked with "" 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	<ul style="list-style-type: none"> • Off* • On <ul style="list-style-type: none"> Start: Month, Day 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 "" are only available when the optional Cassette Feeding Unit is attached.

2: Settings marked with "" 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*
	Printer	Drawer 4*1	Off, On*
		Drawer 1	Off, On*
		Drawer 2*1	Off, On*
		Drawer 3*1	Off, On*
	Fax	Drawer 4*1	Off, On*
		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	<ul style="list-style-type: none"> Nine Levels Background] 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	<ul style="list-style-type: none"> Yellow: 17 Levels Magenta: 17 Levels Cyan: 17 Levels Black: 17 Levels Fine Adjust <ul style="list-style-type: none"> Yellow <ul style="list-style-type: none"> High: 17 Levels, Medium: 17 Levels, Low: 17 Levels Magenta <ul style="list-style-type: none"> High: 17 Levels, Medium: 17 Levels, Low: 17 Levels Cyan <ul style="list-style-type: none"> High: 17 Levels, Medium: 17 Levels, Low: 17 Levels Black <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Off On* <ul style="list-style-type: none"> Number of Times to Redial 1 to 2* to 10 (times) Redial Interval 2* to 99 (min.) Redial When Error Occurs Off, On* 	
	TX Terminal ID	<ul style="list-style-type: none"> Off On* <ul style="list-style-type: none"> Print Position Inside Image Area, Outside Image Area* Mark Number as: TEL/FAX FAX*, TEL 	
	Check Dial Tone Before Sending *1	Off*, On	
Initialize Default Settings			
RX Function Settings	ECM RX	Off, On*	
	Incoming Ring	<ul style="list-style-type: none"> Off On* <ul style="list-style-type: none"> 1 to 2* to 99 (times) 	
	Remote RX	<ul style="list-style-type: none"> Off On* <ul style="list-style-type: none"> 00 to 25* to 99 	
	Switch to Auto RX	<ul style="list-style-type: none"> Off* On <ul style="list-style-type: none"> 1 to 15* to 99 (sec.) 	

Item		Setting Description
RX Print Settings	Print on Both Sides	Off*, On
	Reduce RX Size	<ul style="list-style-type: none"> Off On* <ul style="list-style-type: none"> Reduction Ratio Auto*, 97%, 95%, 90%, 75% Reduction Direction 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	<ul style="list-style-type: none"> PDF (Compact) PDF* PDF (Compact/OCR) PDF (OCR) JPEG TIFF Set PDF Details*1 <ul style="list-style-type: none"> 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 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	

Item		Setting Description	
E-Mail Settings	Change Default Settings	Scan Size	A4, A5, B5, LTR*, LGL, STMT
		Color Mode	Color*, Black & White
		File Format	<ul style="list-style-type: none"> • PDF (Compact) • PDF* • PDF (Compact/OCR) • PDF (OCR) • JPEG • TIFF • Set PDF Details*1 <ul style="list-style-type: none"> • 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 • Digital Signatures
		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	<ul style="list-style-type: none"> • PDF (Compact) • PDF* • PDF (Compact/OCR) • PDF (OCR) • JPEG • TIFF • Set PDF Details*1 <ul style="list-style-type: none"> • 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 • Digital Signatures 		
		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	YCbCr TX Gamma Value	Gamma 1.0, Gamma 1.4, Gamma 1.8*, Gamma 2.2	
		Image Settings	PDF (Compact)	Image Level in Text/Photo Mode or Photo Mode	Data Size Priority, Normal*, Image Quality Priority
			Image Quality Level	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*			

T-10-8

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	
Settings	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	
Set PDF Details	Halftones	Gradation, Error Diffusion*	
	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	
	Apply to Graphics	Off, On*	
	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	

T-10-9

Printer Settings

*: Default Settings

1: Settings marked with "" are only available when the option is installed.

2: Initial settings and display order of setting options differ for settings marked with "" 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	<ul style="list-style-type: none"> • Yellow: 17 Levels • Magenta: 17 Levels • Cyan: 17 Levels • Black: 17 Levels 	
		Density (Fine Adjust)	<ul style="list-style-type: none"> • Yellow High: 17 Levels Medium: 17 Levels Low: 17 Levels • Magenta High: 17 Levels Medium: 17 Levels Low: 17 Levels • Cyan High: 17 Levels Medium: 17 Levels Low: 17 Levels • Black High: 17 Levels Medium: 17 Levels 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	
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	<ul style="list-style-type: none"> • Text Resolution*, Gradation • Graphics Resolution*, Gradation • Image Resolution*, Gradation
		RGB Source Profile	Text
	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
		Resolution/ Gradation	<ul style="list-style-type: none"> Text Resolution*, Gradation Graphics Resolution*, Gradation Image 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	

Item		Setting Description	
PCL	Advanced Smoothing	Advanced Smoothing	Off, Smooth 1*, Smooth 2
		Apply to Graphics	Off*, On
		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
		Resolution/ Gradation	<ul style="list-style-type: none"> Text Resolution*, Gradation Graphics Resolution*, Gradation Image Resolution*, Gradation
	Brightness	85 to 100* to 115 (%)	
	Composite Overprint	Off, On*	
	Advanced Smoothing	Advanced Smoothing	Off, Smooth 1*, Smooth 2
		Apply to Graphics	Off*, On
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	Envelope Cling Prevention
	Processing Settings	Envelope Fixing Speed
		Adjust Toner Volume Used for Color Printing
	Heavy Paper Curl Reduction Mode	
	Fill Area Image Adjustment Mode	
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

T-10-11

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 System Manager PIN	
	System Manager Name		
Device Information Settings		Device Name 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	<ul style="list-style-type: none"> • Off* • On <ul style="list-style-type: none"> • Memory Lock PIN • Report Print Off, On* • Memory Lock Time 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		<ul style="list-style-type: none"> • Off • On* Secure Print Deletion Time, 10 to 30* to 240 (min.)
PDL Selection (Plug and Play)	Network	Fax, UFR II*, UFR II LT (XPS)
	USB	UFR II*, UFR II 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

T-10-12

Backup Data

Data	Location	Replace		Delete																	Backup by User			Backup by Service										
				Menu > System Management Settings													Service function																	
				Initialize Menu									Other				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
				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																			
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	-	-	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	-	-	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									

T-10-13

- *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)

T-10-16