Model: BRG-MF1 BT
Machine Code: J032-13, -23

Field Service Manual

October, 2013

Safety Instructions, Conventions

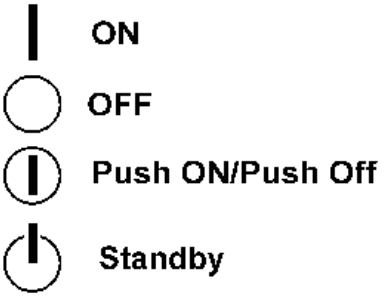
For your safety, please read this manual carefully before you service the machine. Always keep this manual handy for future reference.

Safety Information

Always obey these safety precautions when using this product.

Switches and Symbols

Where symbols are used on or near switches on machines for Europe and other areas, the meaning of each symbol conforms with IEC60417.



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Responsibilities of the Customer Engineer

Maintenance

Maintenance shall be done only by trained customer engineers who have completed service training for the machine and all optional devices designed for use with the machine.

Installation

The main machine and options can be installed by either the customer or customer engineer. The customer or customer engineer must follow the installation instructions described in the operating instructions.

Reference Material for Maintenance

Maintenance shall be done with the special tools and the procedures prescribed for maintenance of the machine described in the reference materials (service manuals, technical bulletins, operating instructions, and safety guidelines for customer engineers).

Important

- **Use only consumable supplies and replacement parts designed for use with the machine.**

Before Installation, Maintenance

Shipping and Moving the Machine

⚠CAUTION

- Work carefully when lifting or moving the machine. If the machine is heavy, two or more customer engineers may be required to move the machine without causing injury (muscle strains, spinal injuries, etc.) or damage to the machine if it is dropped or tipped over.
- Personnel working around the machine should always wear proper clothing and footwear. Never wear loose fitting clothing or accessories (neckties, loose sweaters, bracelets, etc.) or casual footwear (slippers, sandals, etc.) when lifting or moving the machine.
- Always unplug the power cord from the power source before you move the machine. Before you move the machine, arrange the power cord so it will not fall under the machine.

Power

⚠WARNING

- Always turn the machine off and disconnect the power plug before doing any maintenance procedure.
- After turning the machine off, power is still supplied to the main machine and other devices. To prevent electrical shock, switch the machine off, wait for a few seconds, then unplug the machine from the power source.
- Before you do any checks or adjustments after turning the machine off, work carefully to avoid injury.
- After removing covers or opening the machine to do checks or adjustments, avoid touching electrical components or moving parts (gears, timing belts, etc.).
- After turning the machine on with any cover removed, keep your hands away from electrical components and moving parts.
- Never touch the cover of the fusing unit, gears, timing belts, etc.

Installation, Disassembly, and Adjustments

⚠CAUTION

- After installation, maintenance, or adjustment, always check the operation of the machine to make sure that it is operating normally. This ensures that all shipping materials, protective materials, wires and tags, metal brackets, etc., (attached to protect the machine during shipping), have been removed and that no tools remain inside the machine.

- Never use your fingers to check moving parts that are causing spurious noise. Never use your fingers to lubricate moving parts while the machine is operating.

Special Tools

⚠CAUTION

- Use only standard tools approved for machine maintenance.
- For special adjustments, use only the special tools and lubricants described in the service manual. Using tools incorrectly, or using tools that could damage parts, could damage the machine or cause injuries.

During Maintenance

General

⚠CAUTION

- Before you begin a maintenance procedure always switch the machine off.
- Disconnect the power plug from the power source.
- Allow the machine to cool for at least 10 minutes.
- Avoid touching the components inside the machine that are labeled as hot surfaces.

Safety Devices

⚠WARNING

- Never remove any safety device (a fuse, thermistor, etc.) unless it requires replacement. Always replace a safety device immediately.
- Never do any procedure that defeats the function of any safety device. Modification or removal of a safety device (fuse, thermistor, etc.) could cause a fire and personal injury. After removal and replacement of any safety device, always test the operation of the machine to ensure that it is operating normally and safely.
- For replacement parts use only the correct fuses, thermistors, circuit breakers, etc. rated for use with the machine. Using replacement devices not designed for use with the machine could cause a fire and personal injuries.

Organic Cleaners

⚠CAUTION

- During cleaning never use any organic cleaners (alcohol, etc.) other than those described in the service manual.
- Make sure the room is well ventilated before using any organic cleaner. Always use organic solvents in small amounts to avoid breathing the fumes and becoming nauseous.
- Switch the machine off, unplug it, and allow it to cool before doing preventive maintenance.
- To avoid fire or explosion, never use an organic cleaner near any component that generates heat.
- Wash your hands thoroughly after cleaning parts with an organic cleaner to avoid contamination of food, drinks, etc.

Power Plug and Power Cord

⚠CAUTION

- Before servicing the machine (especially when responding to a service call), always make sure that the power plug has been inserted completely into the power source. A partially inserted plug could generate heat (due to a power surge caused by high resistance) and cause a fire or other problems.
- Always check the power plug and make sure that it is free of dust and lint. Clean it if necessary. A dirty plug can generate heat and cause a fire.
- Inspect the entire length of the power cord for cuts or other damage. Replace the power cord if necessary. A frayed or otherwise damaged power cord can cause a short circuit which could lead to a fire or personal injury from electrical shock.
- Check the length of the power cord between the machine and power supply. Make sure the power cord is not coiled or wrapped around any object such as a table leg. Coiling the power cord can cause excessive heat to build up and could cause a fire.
- Make sure that the area around the power source is free of obstacles so the power cord can be removed quickly in case of an emergency.
- Make sure that the power cord is grounded (earthed) at the power source with the ground wire on the plug.
- Connect the power cord directly into the power source. Never use an extension cord.
- When you disconnect the power plug from the power source, always pull the plug, not the cable.

After Installation Servicing

Disposal of Used Items

⚠WARNING

- Ink is flammable. Never attempt to incinerate empty ink cartridges.

⚠CAUTION

- Always dispose of used items in accordance with the local laws and regulations regarding the disposal of such items.
- To protect the environment, never dispose of this product or any kind of waste from consumables at a household waste collection point. Dispose of these items at one of our dealers or at an authorized collection site.

Points to Confirm with Operators

At the end of installation or a service call, instruct the user about use of the machine. Emphasize the following points.

- Show operators how to remove jammed paper and troubleshoot other minor problems by following the procedures described in the operating instructions.
- Point out the parts inside the machine that they should never touch or attempt to remove.
- Confirm that operators know how to store and dispose of consumables such as ink cartridges, ammonia water, paper, etc.
- Make sure that all operators have access to an operating instruction manual for the machine.
- Confirm that operators have read and understand all the safety instructions described in the operating instructions.
- Demonstrate how to turn off the power and disconnect the power plug (by pulling the plug, not the cord) if any of the following events occur:
  1. Something has spilled into the product.
  2. Service or repair of the product is necessary.
  3. The product cover has been damaged.
- Caution operators about removing paper fasteners around the machine. They should never allow paper clips, staples, or any other small metallic objects to fall into the product.

Safety Instructions for Ink Cartridges

Accidental Exposure To Ink

⚠CAUTION

- If ink gets on the skin, wash the affected area immediately with soap and cold running water.
- If ink gets into the eyes, immediately flush the eyes with cold running water. If there are signs of irritation or other problems, seek medical attention.
- If ink is swallowed, drink a strong solution of cold water and table salt to induce vomiting. Seek medical attention immediately.
- Ink is difficult to remove from fabric. Work carefully to avoid staining clothing when performing routine maintenance or replacing cartridges.

Handling and Storing Ink Cartridges

⚠WARNING

- Ink is flammable. Never store ink cartridges in a location where they will be exposed to high temperature or an open flame.

⚠CAUTION

- Always store ink cartridges out of the reach of children.
- Always store ink cartridges in a cool, dry location that is not exposed to direct sunlight.

Ink Cartridge Disposal

⚠CAUTION

- Attach the caps to empty ink containers for temporary storage to avoid accidental spillage.
- Return empty ink cartridges to a local dealer who can accept such items for collection and recycling or disposal.
- If the customer decides to dispose of empty ink cartridges, make sure that they are disposed of in accordance with local laws and regulations.

Safety Instructions for Batteries

⚠CAUTION

- Always replace a lithium battery on a PCB with the same type of battery prescribed for use on that board.

- Replacing a lithium battery with any type other than the one prescribed for use on the board could lead to an explosion or damage to the PCB.
- Never discard used batteries by mixing them with other trash.
- Remove used batteries from the work site and dispose of them in accordance with local laws and regulations regarding the disposal of such items.

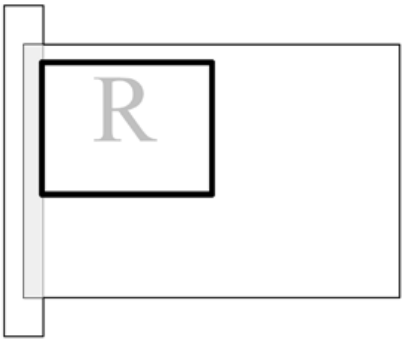
Conventions Used in this Manual

Symbols and Abbreviations

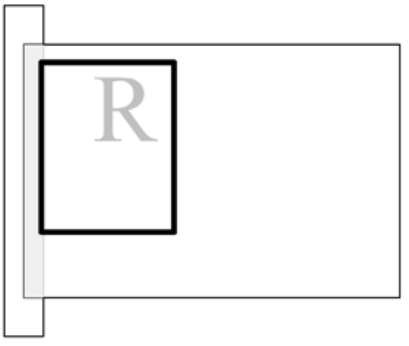
This manual uses several symbols.

Symbol	What It Means
	Clamp
	Clip ring
	Connector
	E-ring
	FFC (Flat Film Connector)
	Hook
	Pointer (cross-reference to another manual section)
	Screw
	Spring
	Standoff
	Timing Belt

This manual uses the following abbreviations.



SEF



LEF

Throughout this service manual, "SEF" denotes "Short Edge Feed" and "LEF" denotes "Long Edge Feed".

Machine Names

Printer Name	Model No.
BRG-MF1c BT	J032-13, -23

- The J032-13, -23 are equipped with the FIGO controller. The NIC is incorporated not in the FIGO controller but in the MF unit.
- The J032-13, -23 supports PCL.

Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

⚠ WARNING

- A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

⚠ CAUTION

- A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

Important

- **Obey these guidelines to avoid problems such as mis-feeds, damage to originals, loss of valuable data and to prevent damage to the machine**

Note

- This information provides tips and advice about how to best service the machine.

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1. Product Information

Specifications

See "Appendices" for the following information:

- Printer Engine
- Supported Paper Sizes
- Control Boards

Overview

1

Before You Begin...

What This Manual Contains

J032-13, -23

This model is PCL compatible.

This model is equipped with PictBridge and Fax Unit.

This table below shows the typical specifications in this Service Manual.

	J032-13, -23
Main Components	
Print Heads	x2
Maint. Unit	Common
Ink Supply Unit	Common
Ink Collector Unit	Common
Ink Cartridges	S size, M size
Horizontal Encoder Film	Common
Duplex	Std
Wireless LAN	Std
ADF	Std
PictBridge	Std
Fax Unit	Std
PCBs	
CTL Board	FIGO

	J032-13, -23
PSU	Common This depends on the territory in which it will be used. North America and Asia: 100V board Europe : 200V board
Supply Unit Board	Common
Carriage Unit Board	Common
Operation Panel	Black
Covers	
Right Front Door	Product Name Printed on Each
Color	
Exterior parts	Common The canopy cover, right front cover, front cover, back cover, and duplex unit are white. Other parts are black.
Options	
Multi Bypass	Yes
PFU	Yes

Mainframe and Options

No.	Name	Ricoh Name
J032-13, -23	BRG-MF1c BT	SG 3120B SFNw
J312	Paper Feed Unit	Paper Feed Unit TK1160
J313	Multi Bypass Tray	Multi Bypass Tray BY1040
J343	Battery	Rechargeable Battery P5

- The Paper Feed Unit TK1160 (J312) is an optional paper tray that holds 250 sheets. Up to two paper feed units can be attached (comprising three drawers together with the standard Tray 1).

Print Cartridges

The following print cartridges can be used with the J032-13, -23.

Name	Comments
Starter Ink Cartridge (K)*1	These are the starter cartridges shipped with the machine. These are used to initialize ink supply when the machine is installed and then discarded.
Starter Ink Cartridge (C) *1	
Starter Ink Cartridge (M) *1	
Starter Ink Cartridge (Y) *1	
Print Cartridge GC 41K	These are medium-size cartridges.
Print Cartridge GC 41C	
Print Cartridge GC 41M	
Print Cartridge GC 41Y	
Print Cartridge GC 41KL*2	These are small-size cartridges.
Print Cartridge GC 41CL*2	
Print Cartridge GC 41ML*2	
Print Cartridge GC 41YL*2	

*1: Always use the starter cartridges shipped with the machine to initialize ink supply at installation. Never install used ink cartridges to initialize ink supply at installation.

*2: L = Low

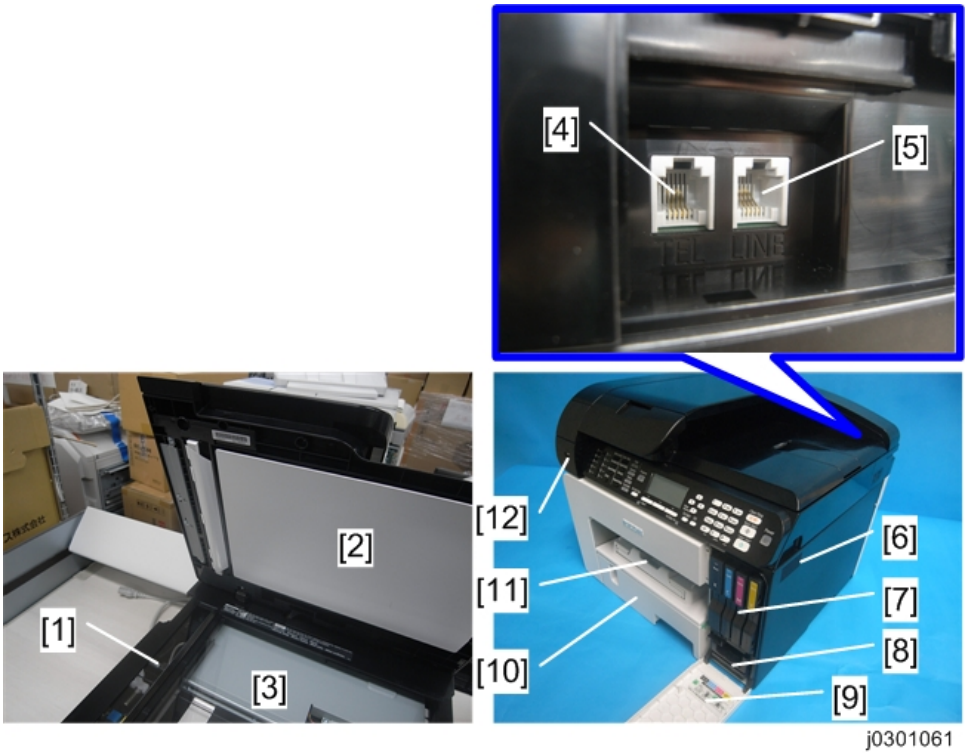
Ink Collector Unit

The ink collector unit is installed on the right side of the machine behind the right front door below the ink supply unit.

Collector	Comment
Ink Collector Unit IC 41	Ink Collector Unit for all models.

Main Machine

Front View



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1. **Scanning glass**

   Originals that are loaded in the ARDF are scanned here.

2. **Cover for the exposure glass**

   Open this cover to place originals on the exposure glass.

3. **Exposure glass**

   Place originals face down here for copying, scanning, or faxing.

4. **External telephone connector**

   Connect an external telephone.

5. **G3 (Analog) line interface connector**

   Connect a telephone line.

6. **Vent**

Air is vented here to prevent the inside of the machine from getting too warm. Do not lean anything against the vent or block it in any way. If the inside of the machine gets too warm, a breakdown could occur.

7. **Ink cartridges (K), (C), (M), (Y)**

   Supply ink to the print heads.

8. **Ink collector unit**

   Pull out the ink collector unit when it needs to be replaced, or before servicing the printer.

9. **Right front cover**

   Covers the ink cartridges and the ink collector. Open only when installing or replacing Ink cartridges, or when pulling out the ink collector unit. Otherwise, this door should remain closed. A small switch detects when this cover is open and closed. The door must be closed for the printer to operate.

10. **Paper cassette (Standard Tray 1)**

    This is the standard tray that holds paper fed to the machine.

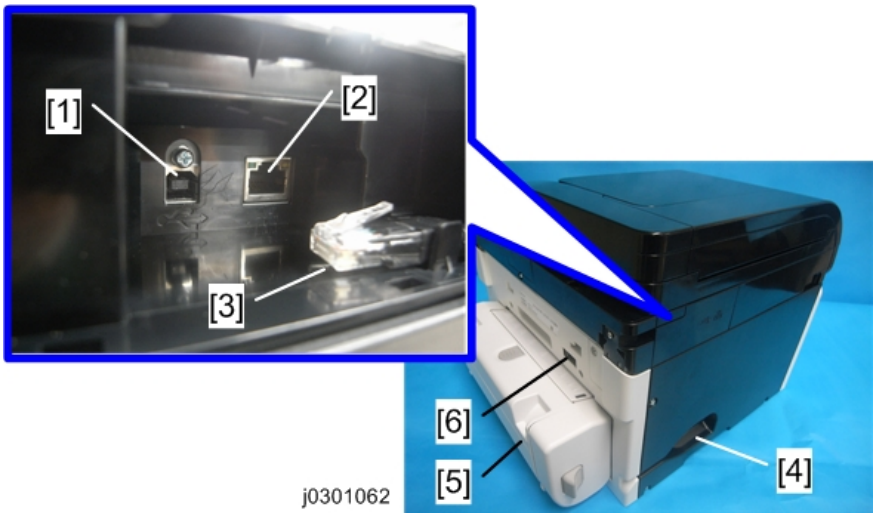
11. **Paper output tray and extension**

    Holds paper that has exited the printer. Pull out the output tray extension when printing on paper longer than A4 or LTR.

12. **USB flash drive port**

    Insert a USB flash drive for using the Scan to USB function or connect a digital camera using a USB cable for PictBridge printing.

Rear View



1. **USB port**

Port for connecting the USB2.0 interface cable.

2. **Ethernet port**

   Port for connecting the 100BASE-TX or 10BASE-T cable.

3. **Wireless LAN cable**

   Connect this to the Ethernet port if you are accessing the machine via wireless LAN.

4. **AC socket**

   The connection point for the AC adapter: Use only the AC adapter provided with the machine.

5. **Duplex unit**

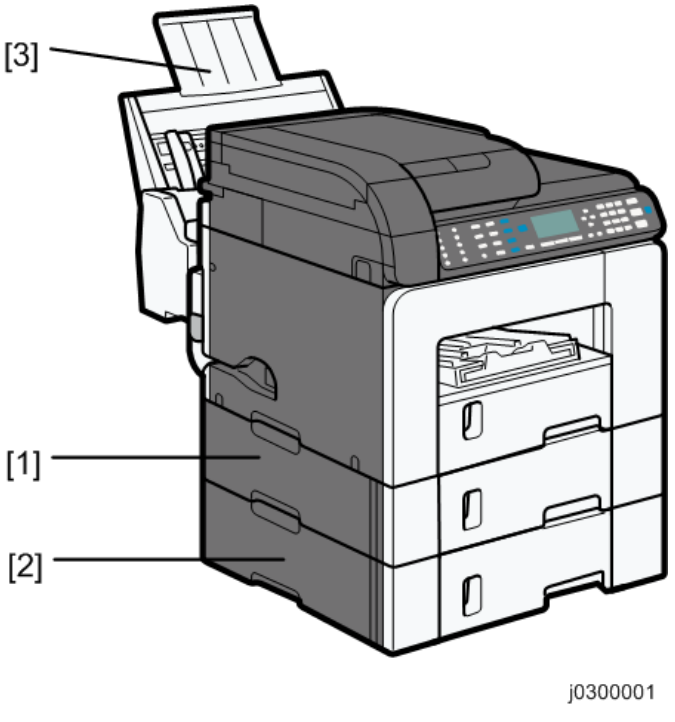
   The duplex is standard for the J032 (it is not an option). It is easily detached and re-attached. A small switch detects the presence or absence of the duplex unit.

6. **Bypass tray connection point**

   This is the connection point for an optional multi bypass tray.

Options

External Options: J032-13, -23



The Paper Feed Unit TK1160 (J312)

One [1] or two [2] paper feed units can be installed.

The Multi Bypass Tray BY1040 (J313) [3]

What's New?

Exteriors

The battery and LED indicator have been newly added to the J032-13, -23 models. The front parts are different from those of the J030/J032-17, -22, -27 models.

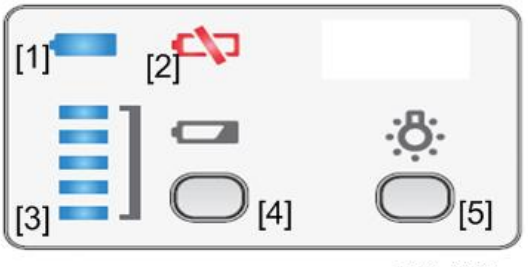
J030/J032-17, -22, -27

J032-13, -23

j031z0026

	J030/J032-17, -22, -27	J032-13, -23
[1]	Front cover	Front cover
[2]	-	LED battery status indicator
[3]	-	Battery cover
[4]	-	Left front cover

LED Battery Status Indicator



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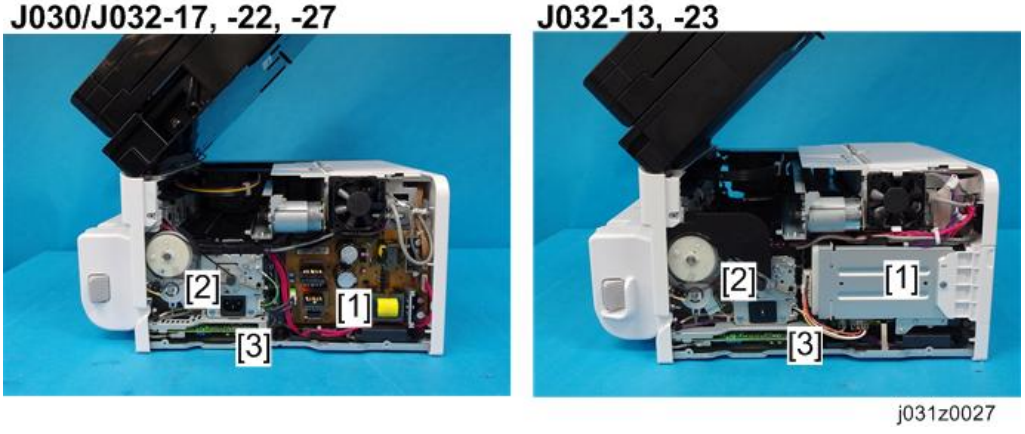
	Name	Descriptions
[1]	LED Battery Status Indicator	This displays the battery's operating status. • Lit continuously: The machine is operating under battery power. • Flashing: The battery is being charged. • Unlit: The machine is operating under AC power.
[2]	Battery Alert LED	This lights if the battery is not installed or has failed.
[3]	LED Battery Level Indicator	This displays how much charge is left in the battery in six levels according to the number of lamps lit. • 5: 81-100% • 4: 61-80% • 3: 41-60% • 2: 21-40% • 1: 1-20% • 0: 0%
[4]	Battery Level Check Button	Press this to check the charge level.
[5]	Light Button	Press this to provide light for checking printed documents.

Inner Parts

Power Supply System

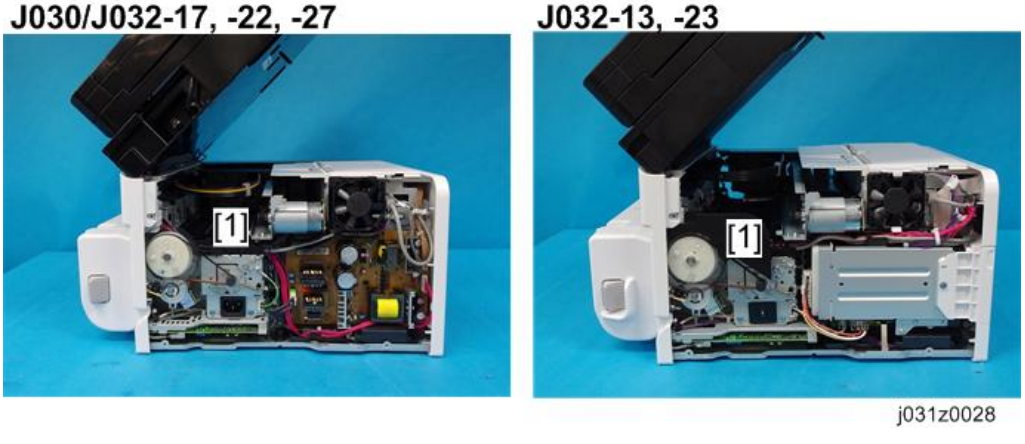
The J032-13, -23 models have a battery and AC adapter to supply power to the machine's electrical components. The previous models have a PSU to supply power to the machine's electrical components.



	J030/J032-17, -22, -27	J032-13, -23
[1]	PSU	Battery and ACB board (The ACB board is located behind the battery socket.)
[2]	DC socket	AC socket
[3]	HVPS	New HVPS

- The ACB board controls selecting the power sources (AC adapter or battery), and charging the battery, detects the remaining battery voltage and makes 5V and 37V power supply.
- The new HVPS for J032-13, -23 is standardized for LCC (Limited Current Circuit).

Harness Guide

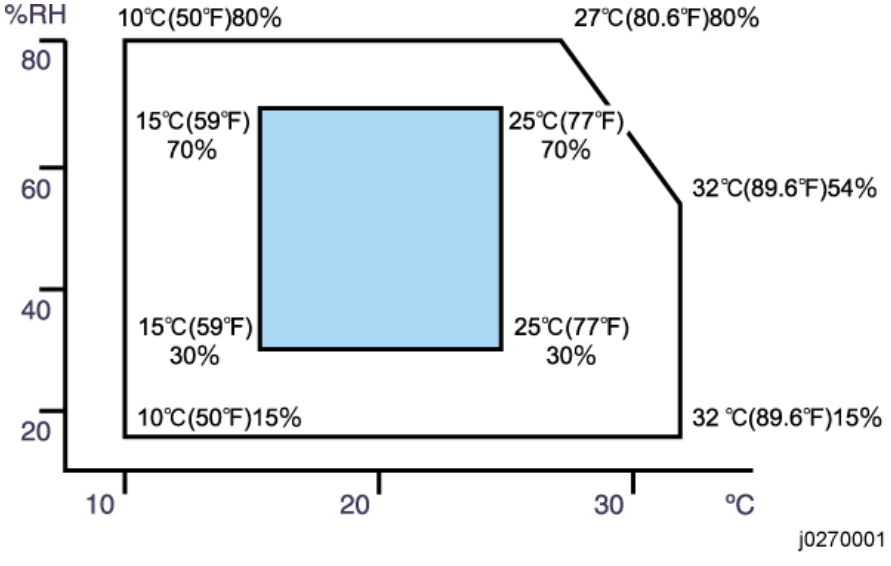


	J030/J032-17, -22, -27	J032-13, -23
[1]	Harness guide	Harness guide with a protector for the vertical encoder

2. Installation

Preparation

Environment



- White area: Permissible Range
- Blue area: Recommended Range

Set up the machine in a location that meets these minimum requirements:

Temperature Range:	10°C to 32°C (50°F to 89.6°F)
Humidity Range:	15% to 80% RH
Ambient Illumination:	Less than 2,000 Lux (never expose to direct sunlight).

Choosing a Location

1. Always install the machine:
    - On a sturdy, level surface.
    - Where it will not become damp.
2. Make sure the machine is never exposed to:

- Extreme changes from low to high temperature or high to low temperature.
- Cold or cool air directly from an air conditioner.
- Heat from a space heater.

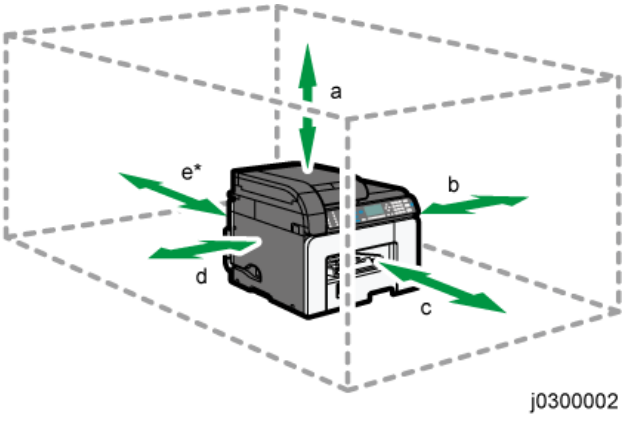
3. Never install the machine in areas near:
   - Dust, lint, or corrosive fumes.
   - Strong vibration.
4. Do not use the machine at any location higher than 2,500 m (8,200 ft) above sea level.
5. Set up and use the machine on a sturdy, level surface.
   - Place a carpenter's level on the machine front-to-back, and side-to-side and confirm that it is level.
   - Variations between the front/back and left/right level readings should be less than 2 degrees.

Required Software Environment

Software	• Microsoft Windows XP/Vista/Windows 7 • Microsoft Windows Server 2003/2003 R2/2008/2008 R2 • Mac OS X 10.5 Leopard and later versions*1
Hardware	• PC/AT-compatible computer with USB or network interface • Macintoshes that are PowerPC G3 or higher with USB port or network port • Macintoshes that are Intel Core Duo or higher with USB port or network port • 80-100 MB of HDD space available

*1: Mac driver included on CD-ROM (The supported languages are English, French, German and Japanese.).

Minimum Space Requirements



a.	At least 59 cm (23.3 inches)
b.	At least 10 cm (4.0 inches)
c.	At least 45 cm (17.8 inches)
d.	At least 3 cm (1.2 inches)
e*[1].	At least 13 cm (5.2 inches)

*1 A clearance of 30 cm (11.9 inches) is necessary if the multi bypass tray is attached.

Power Source

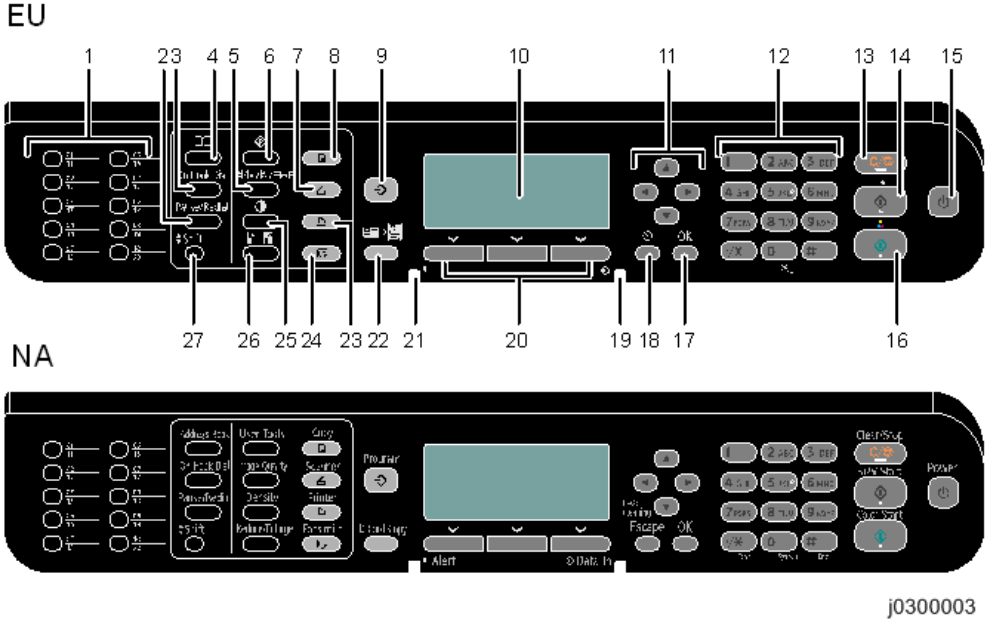
100-240 V: 50/60 Hz 1.5 A (when equipped with all options)

Using the Operation Panel

Here is a brief description of how to use the keys on the printer operation panel. This information is provided as a quick summary of important information described in the Operating Instructions.

Note

- The control panels shown in the illustrations is J032.



Key Summary Table

	Key/Indicator	What It Does
1	Quick Dial	Press to select a scan or fax destination using entries registered as Quick Dial in the address book.
2	Pause/Redial	• Pause Press to insert a pause in a fax number. The pause is indicated by "-". • Redial Press to display the most recent destinations specified for scan or fax.

	Key/Indicator	What It Does
3	On Hook Dial	Press to use on-hook dialing to check the destination's status when sending a fax.
4	Address Book	Press to select a scan or fax destination from the address book.
5	Image Quality	Press to select scan quality for the current job. • Copier mode: You can set "Original Type" to "Text", "Photo", or "Text/Photo". You can set "Print Quality" to "High Speed", "Standard", or "High Quality". You can set "Temporally Envelope Mode". • Scanner mode: select the resolution. • Fax mode: select from Standard, Detail, Fine, or Photo.
6	User Tools	Press to display the menu for configuring the machine's system settings.
7	Scanner	Press to switch to scanner mode. The key stays lit while the machine is in scanner mode.
8	Copy	Press to switch to copier mode. The key stays lit while the machine is in copier mode.
9	Program	Press to switch to Program mode. The key stays lit while the machine is in Program mode. The program executed by this function is registered from Device Setting Utility or Web Image Monitor.
10	Screen	Displays the current machine status and messages.
11	Scroll keys	Press to move the cursor in the directions indicated by each scroll key. When the machine is in standby mode, press and hold down the [ ] key for more than 3 seconds to perform head cleaning for all colors.
12	Number keys	Use to enter numerical values when specifying settings such as fax numbers and copy quantities, or enter letters when specifying names.
13	Clear/Stop	• While the machine is processing a job: Press to cancel the current job. • While configuring the machine: Press to cancel the current setting. • While in standby mode: Press to cancel temporary settings such as image density or resolution.
14	B&W Start	Press to scan or copy in black and white, or start sending a fax.

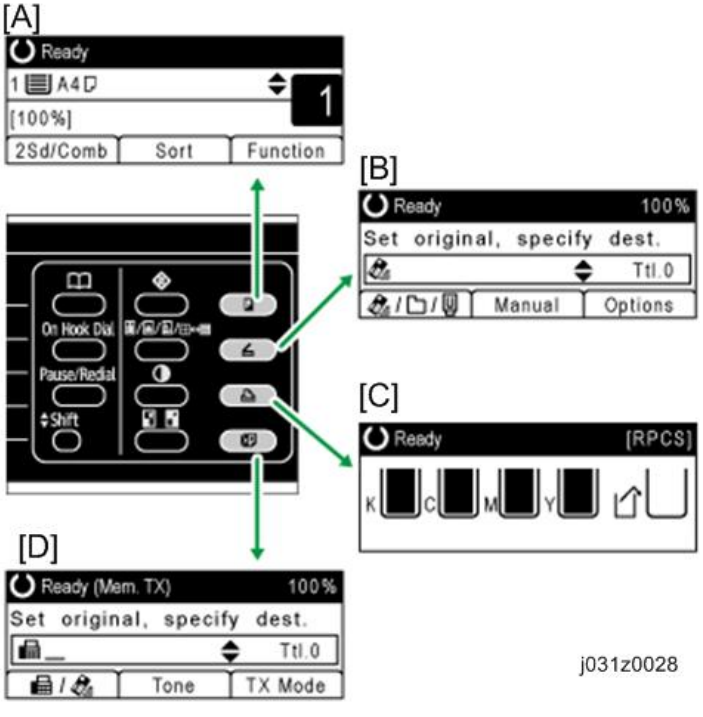
	Key/Indicator	What It Does
15	Power	Press to turn the power on. The key's indicator remains lit. To turn the power off, press again.
16	Color Start	Press to scan or copy in color.
17	OK	Press to confirm settings or enter the next level of the menu tree.
18	Escape	Press to cancel the last operation or exit to the previous level of the menu tree.
19	Data In Indicator	This indicator flashes when the machine receives a print job and remains lit during printing.
20	Selection keys	Press the key that corresponds to an item shown on the bottom line of the screen to select it.
21	Alert Indicator	This indicator remains lit in red for any of the following conditions: • Ink running out • Paper jam • Cover open • SC error • Application error The machine beeps if the indicator is lit. The audio alert can be switched on and off. The default setting is Off.
22	ID Card Copy	Press to jump to the ID card copy setting menu. When copying is complete, the initial screen in default mode will appear.
23	Printer	Press to switch to printer mode. The key stays lit while the machine is in printer mode.
24	Facsimile	Press to switch to fax mode. The key stays lit while the machine is in fax mode.
25	Density	Press to adjust image density for the current job. Select from 5 levels of density.
26	Reduce/Enlarge	Press to change the copy enlargement/reduction ratio in steps of 1% or fixed zoom ratio.

	Key/Indicator	What It Does
27	Shift	Press to switch between Quick Dial numbers 1 to 10 and 11 to 20 when specifying a scan or fax destination using the Quick Dial keys.

Printer Display Summary

Operation Panel: Changing Modes

You can switch between copier, scanner, and fax modes by pressing the corresponding keys. When you do this, the key you pressed lights. On the control panel, the initial screen of the selected mode appears.



- [A]: Copy, [B]: Scanner, [C]: Print, [D]: Fax

Operation Panel: If a Screen Requesting a Password Appears

If User Restriction is set to "On", enter the specified password when:

- The machine is turned on

- The Escape key is pressed
- The machine recovers from "Energy Saver mode"
- The machine is reset by "System Auto Reset Timer"

Note

- "Authentication failed." appears if the password is wrong. Check the password.

Operation Panel: Entering a password

When "User Restriction" is set to "On", the following message appears:

"Enter login password then press OK key."

1. **Enter a password (four to eight digits), and then press the OK key.**

Operation Panel: Icons Displayed on the Screen

Display area of current status or messages

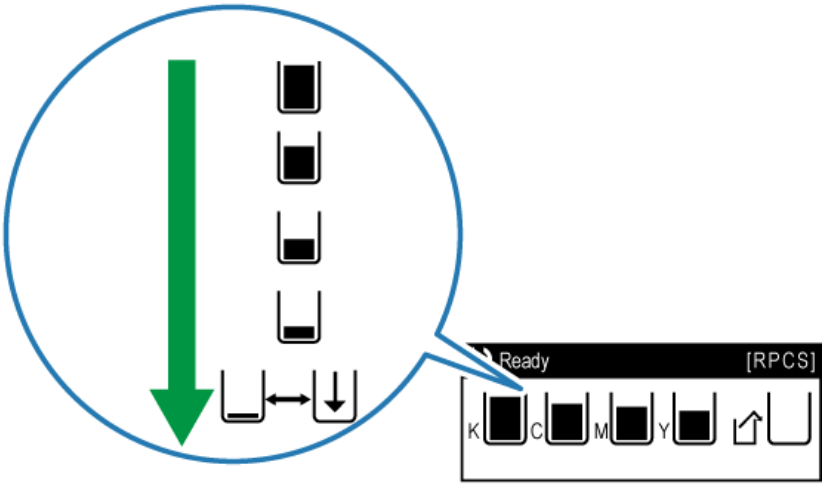
Icon	Description
	The machine is waiting to process jobs or is processing them.
	The machine cannot to receive jobs because it is performing maintenance or processing other jobs.
	The machine is sending a scan file by Scan to E-mail or Scan to Folder.
	The selected paper tray is empty.
(Nothing appears.)	The machine is being logged into with administrator privileges.

Display area of other items

Icon	Description
	A hierarchy of settings is provided for the displayed item. Multiple pages are provided for the configuration screen.
	Trays 1, 2, and 3 have sufficient paper.
	Tray 1, 2, or 3 is empty.

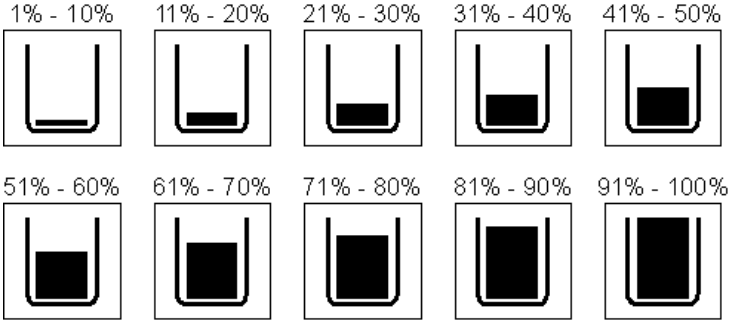
Icon	Description
	The bypass tray has sufficient paper.
	The bypass tray is empty.
	The amount of remaining ink is indicated in black. The icon without any alphabetic characters on its lower left indicates the amount of waste ink in the ink collector unit.
⇔ (These two icons appear alternately.)	A non-genuine print cartridge was installed.
⇔ (These two icons appear alternately.)	The print cartridge is almost empty.
	In scanner mode, you can enter an e-mail address. In Internet fax mode, you can enter a destination.
	You can enter a fax number.
/	You can switch between the fax and Internet fax modes.
	Select this to enter the Scan to Folder destination.
	Scan to USB mode is enabled if a USB flash drive is inserted.
/	You can switch between Scan to E-mail and Scan to Folder modes.
/ /	You can switch between Scan to E-mail and Scan to USB modes. This icon is displayed if a USB flash drive is inserted.
	Select this to display the destination groups registered in the address book.
[▼] [▲] [◀][▶]	Press the corresponding scroll key.

Operation Panel: Cartridge replacement indicator



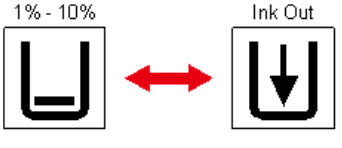
j0300004

The printer shows a multi-level dynamic display that keeps the operator informed about the status of the ink levels in the tanks. The example below for Black (K) shows the progression in the display from full on the left to completely empty on the right.



j0300008

A software count determines when the ink cartridge is has less than 10% ink remaining. The 0% and Ink Out display begin flashing alternately at 3 sec. intervals. This is the near-end alert.

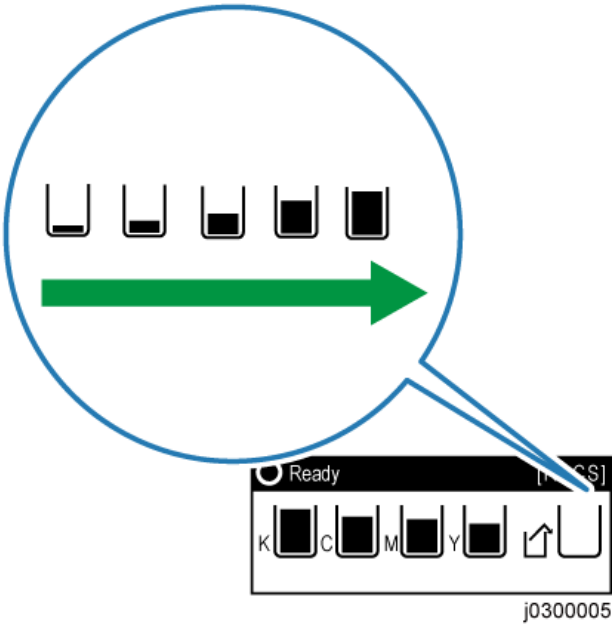


j0300009

When the cartridge is empty the machine issues the ink-end alert and printing stops.

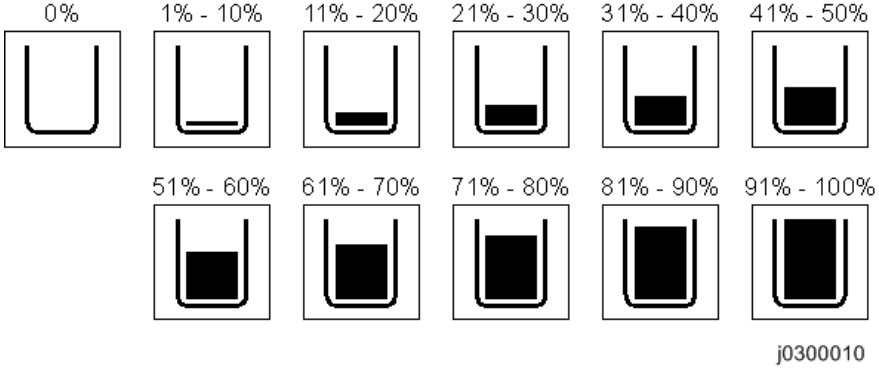
The operator can continue printing. The printer will continue to print until the print head ink tank is empty. However, in this operation mode the machine cannot perform print head maintenance.

Operation Panel: Waste Ink Full Indicator



The amount of waste ink in the ink collector unit is indicated on a 11-step scale. It is reset to 0% if a new ink collector unit is installed. If it reaches 100%, printing cannot be done. A message prompting the user to replace the unit appears on the panel display. A message prompting the user to replace the ink collector unit appears also if it is not mounted.

The amount of waste ink can be displayed also on the Status Monitor and Web Image Monitor.



On the other hand, "Ink Collector Unit" in the machine's menu on the control panel displays the available storage space left in the ink collector unit. (It is reset to 100% if a new ink collector unit is installed.)

Display Menu Summary

Here is a summary of the function menus. Items needed for printer maintenance or troubleshooting are marked in the left column with an asterisk (*).

User Menu Mode

Counter

Menu Item	Function
	Displays the counters on the LCD ("Full Color Total", "B&W Total", "Total Prints", and "Economy Color") **Note:** Changing Bit SW 5 modifies the display: • Setting Bit SW 5-6 to "0" switches the Economy Color display off. • The default setting for Bit SW 5-6 is "1". Mono and Economy Color are both displayed.
Print	Prints the "Page Counter" report that lists: the machine serial number, Total Full Color, Total Black, Total Economy Color, Total Black +Economy Color, Total Duplex. It also lists Coverage information for full color, black, and economy color.

Maintenance

Menu Item	Function
Nozzle Check Pattern (*)	Prints the cross-hatch test pattern so you can visually confirm whether inks are ejecting correctly from the print head.
Clean Print-heads (*)	Cleans the print head. Clean the print head when certain colors are missing or printing faintly. Head cleaning consumes ink.
Flush Print-heads (*)	Cleans the print head more thoroughly than "Head-cleaning". Flushing consumes more ink. Use this function only after "Head-cleaning" fails to solve the problem.
Head Position Adjust (*)	Adjusts the alignment of the print head if the Nozzle Check test pattern shows broken vertical lines, or if printed images are blurred.
Registration (*)	Adjusts the print starting point for each paper tray. Use the Nozzle Check test pattern as reference.

Menu Item	Function
Adjust Paper Feed (*)	Adjusts the paper feed setting if the Nozzle Check test pattern shows horizontal misalignment, or if printed images appear uneven.
Dry-delay (1sd)	To prevent spoiling of printed copies, select a print delivery interval to allow them to dry. The interval must be long enough to allow a sheet to dry. You can specify an interval between 1 and 20 seconds.
Dry-delay (2Sd)	To prevent spoiling of duplex-printed copies, select a print delivery interval to allow them to dry. The interval must be long enough to allow a sheet to dry. You can specify an interval between 1 and 20 seconds.
Paper Feed Test (*)	Feeds and ejects 1 blank sheet of paper to remove moisture inside the machine.
De-condensation (*)	Feeds and ejects 3 blank sheets of paper to remove moisture inside the machine.
Ink Collector Unit	You can check the remaining capacity of the ink collector unit.
Restore Defaults (*)	Returns the user-adjusted values in the following settings to their factory defaults. • Head Position Adjust • Registration • Adjust Paper Feed

System Settings

Menu Item	Function
General Features	
Prog/Change/Del User Text	You can register text phrases you often use when specifying settings, such as ".com" and "Regards".
Panel Key Sound	The beeper (key tone) sounds when a key is pressed.
Warm-up Beeper	You can have the beeper sound when the machine becomes ready to copy after leaving Energy Saver mode, or when the power is turned on.

Menu Item	Function
Function Priority	Specify the setting to be displayed immediately after the machine is turned on, or when System Reset mode is turned on.
Display Cntrst.	You can adjust the brightness of the display.
Key Repeat	You can enable or disable repetition of an operation if a key on the control panel is pressed continuously.
Measurement Unit	You can switch the measurement between "mm" and "inch".
Tray Paper Setting	
Paper Size:Tray1	Sets the size of the paper loaded in the paper tray (Tray1-3, Bypass tray). Note: The setting of Bit SW6-7 determines whether hidden functions (hidden paper sizes A5 SEF, B6 SEF) are displayed: • 0: No A5 SEF, B6 SEF display (default) • 1: A5 SEF, B6 SEF displayed
Paper Size:Tray2-3	
Paper Size:Bypass	
Paper Type:Tray1	Sets the display so you can see what type of paper is loaded in the paper tray (Tray1-3, Bypass tray).
Paper Type:Tray2-3	
Paper Type:Bypass	
Ppr Tray Priority: Copier	Specify the tray to supply paper for output. (Copier function)
Ppr Tray Priority: Printer	Specify the tray to supply paper for output. (Printer function)
Auto Tray Select: Tray 1	If you set this to [On], Auto Tray Select is applied to the specified paper tray. Auto Tray Select allows the machine to automatically select the paper tray according to the paper size and type specified in the printer driver.
Auto Tray Select: Tray 2-3	
Auto Tray Select: Bypass	
Timer Settings	
Auto Power Off Timer	After a specified period has passed, following job completion, the machine automatically turns off, in order to conserve energy. This function is called "Auto Off".
Energy Saver Timer	Set the amount of time the machine waits before switching to lower-power mode after copying has finished or the last operation is performed.

Menu Item	Function
System Auto Reset Timer	The System Reset setting automatically switches the screen to the function set in [Function Priority] when no operations are in progress. This setting is used to specify a system reset interval.
Copier Auto Reset Timer	Specifies the time to elapse before copier modes reset.
Facsimile Auto Reset Timer	Specify the time to elapse before the facsimile mode resets.
Printer Auto Reset Timer	Specify the time to elapse before the printer function resets.
Scanner Auto Reset Timer	Specify the time to elapse before the scanner function resets.
Set Date	Set the date for the machine's internal clock using the number keys.
Set Time	Set the time for the machine's internal clock using the number keys.
Auto Logout Timer	Specify whether or not to automatically log out a user when the user does not operate the machine for a specified period of time after logging in.
Interface Settings	
Print I/F Settings List	The configuration page shows the current network settings and network information.
Network	
Machine IPv4 Address	Specify the machine's IPv4 network address.
IPv4 Gateway Address	Specify the gateway address for the router or host computer used as a gateway.
Machine IPv6 Address	Displays the machine's IPv6 network address.
IPv6 Gateway Address	Displays the machine's IPv6 gateway address.
IPv6 Stateless Setting	Specify IPv6 Stateless Address Autoconfiguration.
DNS Configuration	Make settings for the DNS server.
DDNS Configuration	Specify the DDNS settings.
Domain Name	Specify the domain name.
Effct. Protocol	Select the protocol to use in the network.
SMB Work Group	Specify the SMB work group.

Menu Item	Function
Ethernet Speed	Set the access speed for networks.
LAN Type	Select the method of connection.
Permit SNMPv3 Communictn.	Set the encrypted communication of SNMPv3.
Permit SSL/TLS Comm.	Set the encrypted communication of SSL/TLS.
Auto Email Notify(*)	You can specify whether or not to send notification that a printer error has occurred to a particular e-mail address.
Host Name	Specify the host name.
Machine Name	Specify the machine name.
Restore Network Defaults	Resets the network settings to their factory defaults.
IEEE 802.11b/g/n	

Menu Item	Function
Det. Settings	• SSID Enter the SSID (name of the wireless network) to identify the network. • Encryption Configure the wireless LAN encryption. • WPA Select the WPA cipher suite. • Pre-Shared Key Format Select [Passphrase] or [Hex]. • Pre-Shared Key Enter the pre-shared key in the format selected in [Pre-Shared Key Format]. • Key Length Select 64 bit or 128 bit. This is required for specifying the encryption key setting. • Key Format Select ASCII or Hex. This is required for specifying the encryption key setting. • Encryption Key Configure the WEP encryption key. • EAP Type Select the EAP type. • EAP User ID Enter the user ID to be used for EAP. • RADIUS User Name Enter the user name for accessing the RADIUS server. • RADIUS User Password Enter the password for accessing the RADIUS server. • User Password Enter the password for PEAP authentication.

Menu Item	Function
WPS	• PBC Method WPS can be performed by push-button configuration (PBC). • PIN Method WPS can be performed using the personal identification number (PIN).
Status	You can check the following items: MAC Address, Version, SSID, Channel Number, BSSID, Current status, Sent Packets, Received Packets, WPS Status, Signal Strength, TX Status
File Transfer	
SMTP Server	Specify the SMTP server name.
SMTP Authentication	Specify SMTP authentication (PLAIN, LOGIN, CRAMMD5).
POP before SMTP	Specify POP authentication (POP before SMTP).
POP3 Settings	Specify the POP3 server name for receiving e-mail.
Admin. Email Address (*)	Specify the administrator's e-mail address.
Email Recept. Interval	Specify, in minutes, the time interval for receiving Internet faxes via POP3 server.
Email Storage in Server	Specify whether or not to store received Internet fax e-mails on the POP3 server.
Default User Name/ PW(Send)	Specify the user name and password required when sending scan files directly to a shared folder on a computer running Windows, or to an FTP server.
Default Subject	Specify the default subject.
Auto Specify Sender Name	Set whether or not to specify the name of the sender when sending e-mail.
Fax Email Account	Specify e-mail address, user name and password for receiving Internet faxes.
Administrator Tools	
Display/Print Counter	Allows you to view and print the number of prints.

Menu Item	Function
Address Book:Print List	You can print the destination list registered in the address book.
Address Book Management	You can add, change, or delete information registered in the address book.
Prgrm./Change/Delete Group	Names registered in the address book can be added into a group. You can then easily manage the names registered in each group.
Prog/Chnge/Del LDAP Server	Registering the LDAP server allows you to search e-mail addresses registered in the LDAP server. This function can be used when sending scanned files by e-mail using the scanner or fax function.
LDAP Search	Specify whether or not to use the LDAP server for searching.
Firmware Ver.	You can check the version of the firmware installed in this machine.
Auto Power Off	Specify whether or not to use [Auto Power Off].
Fixed USB Port	Specify whether or not to install the printer driver using the USB port.
USB Speed	You can specify the settings related to communication when the computer and machine are connected via USB. Usually, you do not need to change these settings.
Set Time Zone	You can set the machine's time zone.
Set Summer Time	You can specify whether or not to apply daylight savings time (summer time).
User Restriction	You can apply restrictions according to users.
Change Login PW	Change the password using up to 8 digits.
Auto Continue	You can specify how the machine handles a print job if it does not have a paper tray containing paper of the size and type specified in the printer driver.

Printer Features

Menu Item	Function
List/Test Print	You can print lists of configurations on machine or the paper printings.

Menu Item	Function
I/O Timeout	Specify how long the printer waits for the currently-connected interface to respond.
PCL Menu	Orientation, Form Lines, Font Source, Font Number, Point Size, Font Pitch, Symbol Set, Courier Font, Ext. A4 Width, Append CR to LF, Resolution, , Copies, Duplex, Blank Page Print, Auto Tray Switch, Prt. Err Report, Image Density, Page Size, Memory Usage, Paper Type, Preprinted Ppr, Color Mode
Printer Size Error Display	This function enables the printer to notify users if the paper in the tray does not match the paper size specified in the [Tray Paper Setting] menu.

Copier Features

Menu Item	Function
Auto Image Dens. Priority	You can specify whether auto image density is set to "On" or "Off" when the machine is turned on or the current mode setting is cleared.
Original Type	You can specify which type of the original is available when the power is turned on or the current mode setting is cleared.
Auto Tray Switching	If you load same size paper in two or more trays, the machine automatically shifts to the other tray using image rotation when the first tray runs out of paper (if [On] is selected.) This setting specifies whether to use auto tray switching or not.
Job End Call	You can select whether or not to sound a buzzer when a copy is completed.
Reproduction Ratio	You can specify the enlargement and reduction ratios that appear if [R/E] is pressed on the copier screen.
Preset R/E Priority	You can set the ratio with priority when [R/E] is selected.
ADS Background	Specify the density level of auto image density.

Scanner Features

Menu Item	Function
Scan Settings	

Menu Item	Function
Next Orig.:Exposure Glass	If you want to divide your originals and scan them separately using the exposure glass and then send them together as a single job, select [Continuous Wait], [Off], or [Set Wait Time] as the waiting status.
Auto Image Dens. Priority	You can set whether auto density is "On" or "Off" when the machine is turned on, reset, or modes are cleared.
ADS Background	Characteristics due to the type of paper such as nonwhiteness like newspaper or transparent originals can be reduced by correcting the scanning density.
Destination List Priority	
Destination List Priority	Specify which of the following address books is used as the machine's default address book.
Send Settings	
TWAIN Standby	When the machine is being used to send e-mail or a file, a scanning request to use the machine a TWAIN scanner will switch the machine to the network TWAIN scanner function. This setting determines the delay until the machine switches to the network TWAIN scanner function.
Compression (B&W)	Select whether or not to compress black and white scan files.
Compress.(Grey/Full Clr)	Specify whether or not to compress multi-level (grayscale / full color) scan files.
Print&Del. Scanner Journal	Up to 60 transmission results can be checked on this machine. If the stored transmission results reach 60, select whether to print the transmission journal.
Print Scanner Journal	The scanner journal is printed and deleted.
Delete Scanner Journal	The scanner journal is deleted without being printed.
Max. Email Size	Specify whether or not to set an e-mail size limit when an image is attached.
Divide&Send Email	Specify whether or not an image whose size exceeds the limit specified in [Max. Email Size] is divided and sent by multiple e-mails.
Insert Addit. Email Info	Specify whether to display e-mail information such as title, document name, and sender's name.

Fax Features

Menu Item	Function
General Settings/Adjust	
Adjust Sound Volume	Adjust the machine's volume levels if on hook mode is enabled or during immediate transmission.
Program Fax Information	Program information to be shown on the display of the other machine and printed as a report.
On Hook Release	Specify a time to cancel on hook mode after you transmit using on hook dialing.
Reception Settings	
Switch Reception Mode	Specify the method for receiving fax documents.
Authorized Reception	Specify whether or not unwanted fax messages are screened out.
Print Reception Time	Specify whether or not the received date, time, and file number are printed at the bottom of received fax documents.
Reception File Setting	Specify whether received faxes are first stored in the machine's memory and then printed after all the pages have been received, or printed immediately page by page without being stored.
Timer for Prohibit. Print.	Specify time periods during which the machine can print files it receives.
Smoothing	Specify whether or not to smoothly print low-resolution documents that are received.
Paper Tray	Specify the tray to supply paper for output.
Email settings	
Internet Fax Settings	Specify whether or not to allow the use of the Internet Fax function.
Maximum Email Size	When the other party has a limit on the size of e-mail messages that can be received, or sending data heavy e-mail causes problems, you can make settings to limit the size of sent e-mail.
Administrator Tools	
Print Journal	Prints a Journal. Up to 60 of the latest results of transmission/reception results can be checked on this machine.

Menu Item	Function
Print TX Standby File List	Prints the transmission standby file list.
Commun. Page Count	Check the total number of transmitted and received pages.
Memory Lock	When you switch Memory Lock on, received documents are stored in memory and not printed automatically.
Forwarding	Specify whether or not received fax messages are to be forwarded to a programmed receiver.
Parameter Setting	Parameter setting allows you to customize various settings to suit your needs. To change function settings, set the parameter switches.
Program Memory Lock ID	Program a Memory Lock ID to be entered before printing documents when the Memory Lock function is activated.
Select Dial/Push Phone	Use this function to select a line type when the machine is connected to a G3 analog line.
G3 Analog Line	You need to make the following settings for the G3 analog line before you connect the machine to a standard G3 analog line. • Extension/Outside When your machine is connected through a PABX, set to [Extension]. If it is connected directly to the telephone network, set to [Outside]. • Outside Access No. Use this setting if your machine is connected to a PABX that requires you to dial a certain number such as "0" followed by a pause to connect to the outside line. By programming "0" as the PSTN Access Number, a pause will be inserted automatically after the "0" when dialing.
Memory File Transfer	If the printer has stopped functioning or run out of ink or paper, you can transfer a file stored in facsimile memory to another machine for printing.
Fax Resend Interval	Specify the interval between resend attempts after memory transmission fails.
Fax Resend Setting	Specify the maximum number of resends to be attempted after memory transmission fails.
Country Setting	

Menu Item	Function
Country Setting	Selects the country in which the machine is used.

Language

Menu Item	Function
Language	You can select which language the menu is displayed in. The "Language" menu will be displayed in English. • NA model English, French, German, Italian, Spanish, Dutch, Norwegian, Danish, Swedish, Portuguese, Finnish (Default: English) • EU/Asia model Same as above plus: Czech, Polish, Hungarian

Access to menus during an error

This model allows access to user menus by pressing the [User Tools] key.

However, functions that require printing, such as the printing of the counter, cannot be executed during an error.

example:

- Counter. The counts can be displayed but not printed.
- List/Test Print. No selections are available.

Even without computers, you can specify settings, such as the time and date, on the machine's control panel.

Note

- Menus could not be accessed while the printer is busy.

Installation

These machines and all peripherals are installed by the customer.

The installation procedures are described in the operating instruction manuals issued to the customer with purchase of the main machine or peripheral unit.

Important Information

Make sure that the customers understand the following points about moving, storing, and using the printer.

Checklist Before Moving the Machine

1. Turn the printer off. Disconnect the power cord.

   Important

   - **Never disconnect the power cord without first turning off the machine.**
2. To lift the machine, grip it at the center of each side by the hand recesses provided.
3. Never grip the duplex unit on the back of the printer.
4. Make sure the covers and trays are closed. Secure them with tape. Attach the tape at the same area you removed at the time of installation.
5. Disconnect the power cord. Tape the power cord to the back of the printer.
6. Remove all paper in the feed trays.
7. Do a test print to confirm that the printer operates correctly after you move it to another location. Do the cleaning procedures with the printer driver, if necessary.
8. The ink cartridges should remain in the printer. It is not necessary to remove the before transporting the printer. However, ink must be purged from the print head tanks before the printer is transported. (See procedure below.)

   Important

   - **To avoid ink spillage, always hold the printer level when you move it.**
   - **Work carefully to avoid dropping it or colliding with other objects in the work area.**

If the Machine Is Not Used Frequently...

1. Turn the power off, disconnect the USB cable, and unplug the power cord.
2. To prevent the print nozzles from drying out, periodically print something.
3. Turn the printer on for a few minutes once a month.
4. After storage or a long period of disuse, use the printer driver to print a nozzle check text pattern and clean the print head nozzles if necessary.

3. Preventive Maintenance

PM Table

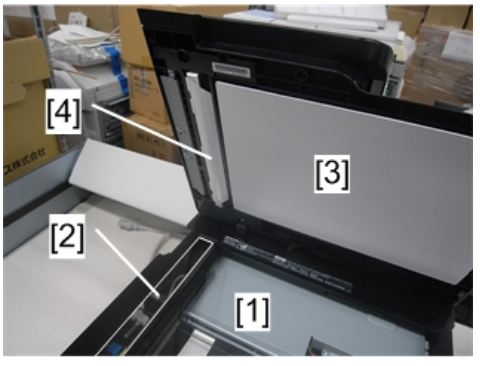
There are no PM Parts in this machine.

Service Call Procedures

The procedures listed below should be done by the service technician. For more details about how to do these procedures, please refer to "Cleaning Procedures".

Description	At Service Call, or As Required
External Covers	Damp cloth.
Connecting Rollers, Paper Feed Roller	Damp cloth. Rotate the roller freely as you clean it.
Friction Pad	Damp cloth. This is the cork friction pad on the front edge of the standard paper cassette.
Maintenance Unit	Damp cloth. Always use a tightly wrapped damp cloth to remove the ink that has hardened around the suction cap and wiper blade when you replace the ink collector unit.
Printer Operation, Print Quality	Print a Nozzle Check Pattern and check the results. Clean the print heads if necessary. For more, see "Print Head Cleaning and Adjustment" in section "4. Replacement and Adjustment".
Transport Belt	Slightly damp cloth. Then dry cloth. **Important**: To protect the surface of the transport belt, never use alcohol or any other type of organic solvent.
Horizontal Encoder Strip	Clean linen cloth, dampened with alcohol. Do not use cotton, tissue paper, any material that could shred and leave fibers.
Vertical Encoder Wheel	Clean linen cloth, dampened with alcohol. Do not use cotton, tissue paper, any material that could shred and leave fibers.

Regular Cleaning



j0301063

The following items should be cleaned regularly:

1. Exposure glass
2. Scanning glass
3. Platen background plate
4. White plate

4. Replacement and Adjustment

Before Replacing Parts

⚠CAUTION

- If there are printer jobs in the machine, print out all jobs in the printer buffer.
- Turn off the main power switch, unplug the machine and take out the battery from the machine before you do the procedures in this section.

Removal Table

The swap-and-repair system is used for this printer. The table below lists the level of difficulty for replacement of each item.

Level 1: No Tools Required

	Component	Comments
1	Duplex Unit	Standard. Back of machine
2	End Fence	Inside paper cassette
3	Ink Cartridge	Front
4	Ink Collector Unit	Front
5	Paper Cassette	Standard
6	Paper Output Tray	On top of paper cassette
7	Right Front Cover	Front
8	Port Cover	Left side
9	Cable Cover	Right side
10	Battery	Inside battery cover
11	Battery Cover	Left front

Level 2: Replaced by Service Technician

	Component	Difficulty: Low, Medium, High
1	Canopy Cover	Low
2	Rear Cover	Low
3	Right Cover	Low
4	Left Cover	Low
5	Front Cover	Low
6	Left Front Cover	Low
7	Connecting Rollers	Low
8	High Voltage Power Supply (HVPS)	Low
9	Maintenance Unit	Low
10	OPU (Operation Panel Unit)	Low
11	Battery Socket	Low
12	ACB Board	Low
13	Vertical Encoder Sensor	Low
14	Vertical Encoder Wheel	Low
15	Vertical Motor	Low
16	Controller Board	Medium
17	Cooling Fan	Low
18	Right Ink Sump	Medium
19	2nd Registration Sensor	High
20	Carriage Unit	High
21	Friction Pad	High
22	Horizontal Motor	High
23	Transport Belt	High
24	Air Purge Detection Switch	Low
25	Drive Switching Position Sensor	High

	Component	Difficulty: Low, Medium, High
26	Maintenance Unit Control Sensor	High
27	Drive Switching Motor	High
28	Drive Motor (DC Motor)	High
29	Temperature/Humidity Sensor	High
30	Paper End Sensor	High
31	Paper Feed Roller	High
32	Charge Roller	Medium
33	ADF Unit	Medium
34	ADF Friction Pad	Medium
35	Original Feed Motor	Medium
36	Original Feed Roller	Medium
37	Original Connecting Rollers	Medium
38	Original Sensor Board	Medium
39	Scanner Unit	Medium
40	CIS Module Unit	Medium
41	Scanner Motor	Medium
42	Scanner CTL Board	Medium
43	Fax Board	Medium
44	Speaker	Medium
45	USB Flash Drive Port	Medium

Level 3: Require precision adjustment at factory (Not Replaced in this Field)

	Component	Comments
---	None	---

Required Tools

This is a list of tools needed to service the machines. These tools are used to keep the print heads from drying out during long periods of storage following machine repair. (The ink is purged and fresh cleaning liquid is supplied.)

Item	Description	Qty	Unique or Common
1	Ink Cartridge K Cleaning Assy	1	U
2	Ink Cartridge C Cleaning Assy	1	U
3	Ink Cartridge M Cleaning Assy	1	U
4	Ink Cartridge Y Cleaning Assy	1	U
5	Special Cloth 10 pcs/bag	1	C (PG-C1)

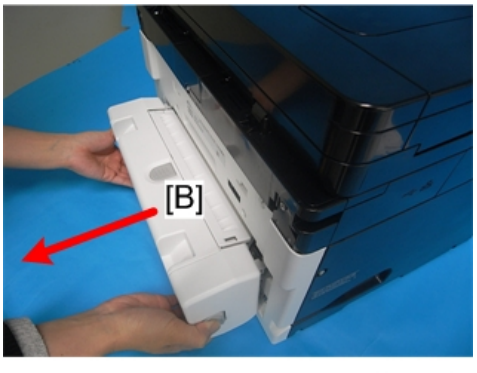
Note

- Parts 1 to 4 are used at the Repair Center.

Common Procedures

Easy Removals

Duplex Unit



j0301065

1. Raise the left and right release tabs [A] together to unlock the duplex unit [B].
2. Pull the duplex unit out of the machine.

Reinstallation

- The duplex unit must be installed in the machine at all times. The machine will not operate without the duplex unit installed.
- The locks on either end of the duplex unit lock automatically when the unit is attached to the back of the printer.

Ink Collector Unit

Before you begin:

Never remove the ink collector unit unless it requires replacement. A message will appear and tell you that the ink collector unit needs to be replaced.

- You will need a self-sealing plastic bag to hold the ink collector unit.
- When you dispose of the used ink collector unit always obey the local laws and regulations regarding the disposal of such items.

At any time you can determine if the ink collector unit needs to be replaced.

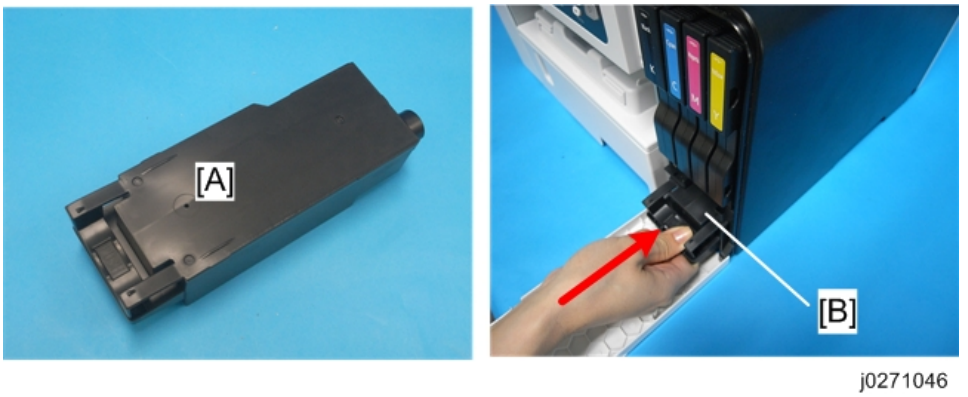
⚠CAUTION

- Never attempt to clean and re-use an ink collector unit.

To remove the ink collector unit:

j0301066

1. Gently touch the right front cover to release and open it.
2. Pull the ink collector unit [A] out.



j0271046

3. The ink collector [A] is completely enclosed to prevent leakage.
4. If you are replacing the ink collector unit, insert the new one.

5. Push in the ink collector [B] until you hear it snap and lock in place.
6. Close the right front cover.

Note

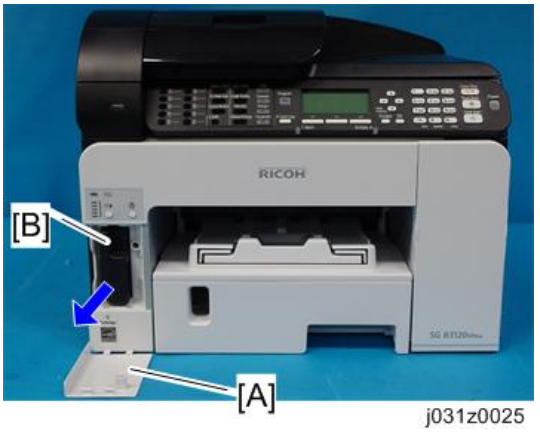
- The ink collector unit has an internal ID chip that automatically resets the counter for the ink collector unit. No SP adjustment is required.

7. Discard the used ink collector unit.

Important

- **Obey the local laws and regulations regarding disposal of items like the full ink collector unit.**
- **Never attempt to open and clean a full ink collector unit and use it again.**

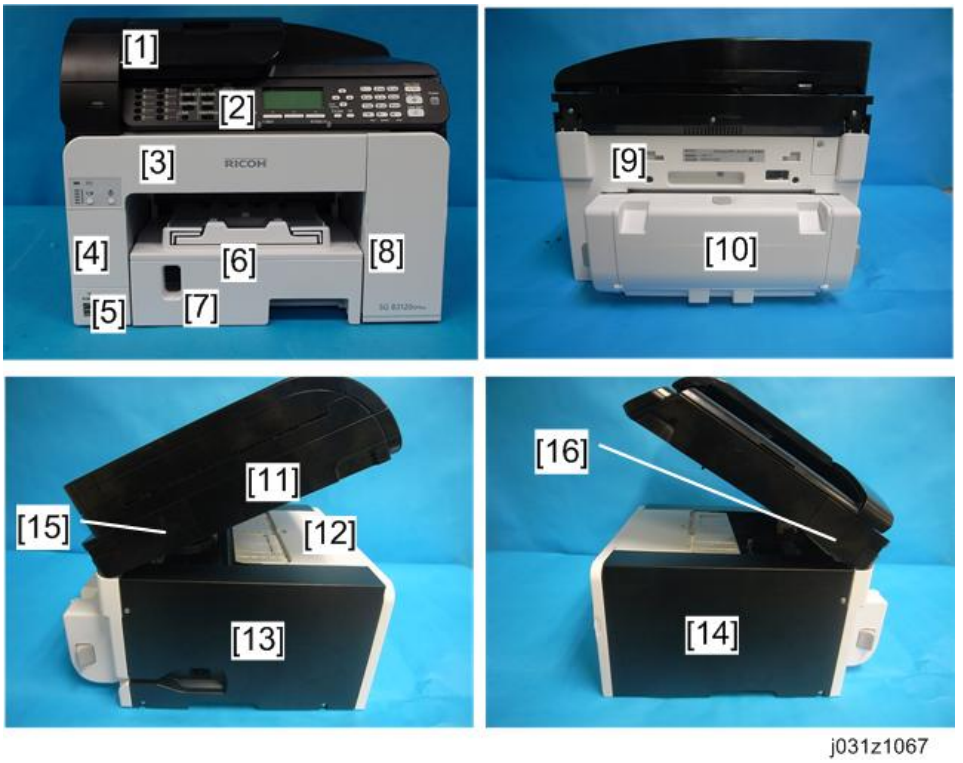
Battery



1. Open the battery cover [A].
2. Pull out the battery [B].

Covers

Cover Names



j031z1067

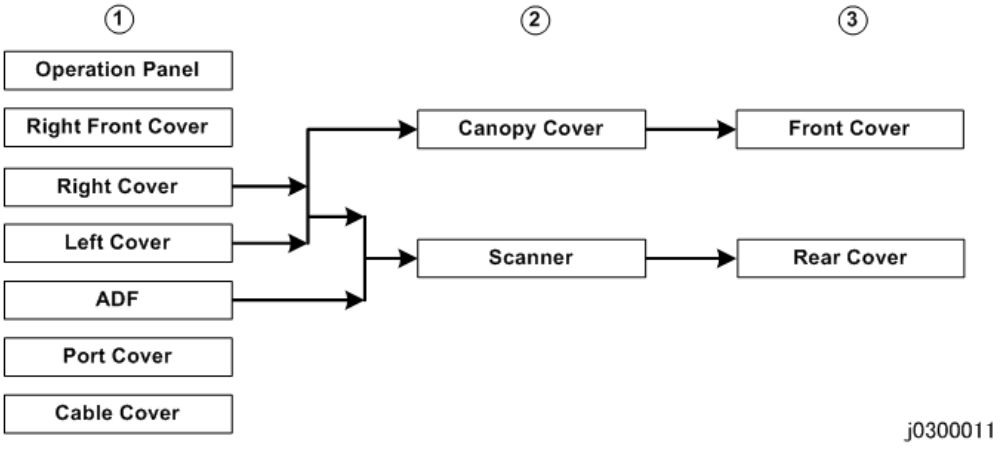
[1]	ADF Unit	
[2]	Operation Panel	
[3]	Front Cover	Brand Logo attached
[4]	Battery Cover	No screws, tabs only.
[5]	Left Front Cover	
[6]	Output Tray	
[7]	Paper Cassette	
[8]	Right Front Cover	Product Logo attached
[9]	Rear Cover	

[10]	Duplex Unit	
[11]	Scanner Unit	
[12]	Canopy Cover	
[13]	Left Cover	
[14]	Right Cover	
[15]	Port Cover	No screws, tabs only.
[16]	Cable Cover	No screws, tabs only.

Cover Order of Removal

It is very important that you understand how to remove and reinstall the covers before doing replacement procedures. Here is a general summary of the order of removal.

Order Of Cover Removal



ADF Unit

Refer to "ADF" (☛page 83).

Scanner Unit

Refer to "Scanner" (☛page 96).

Operation Panel

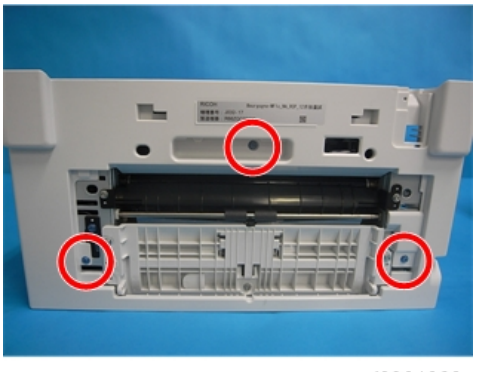
Refer to "Operation Panel Board" (☛page 104).

Rear Cover

Preparation

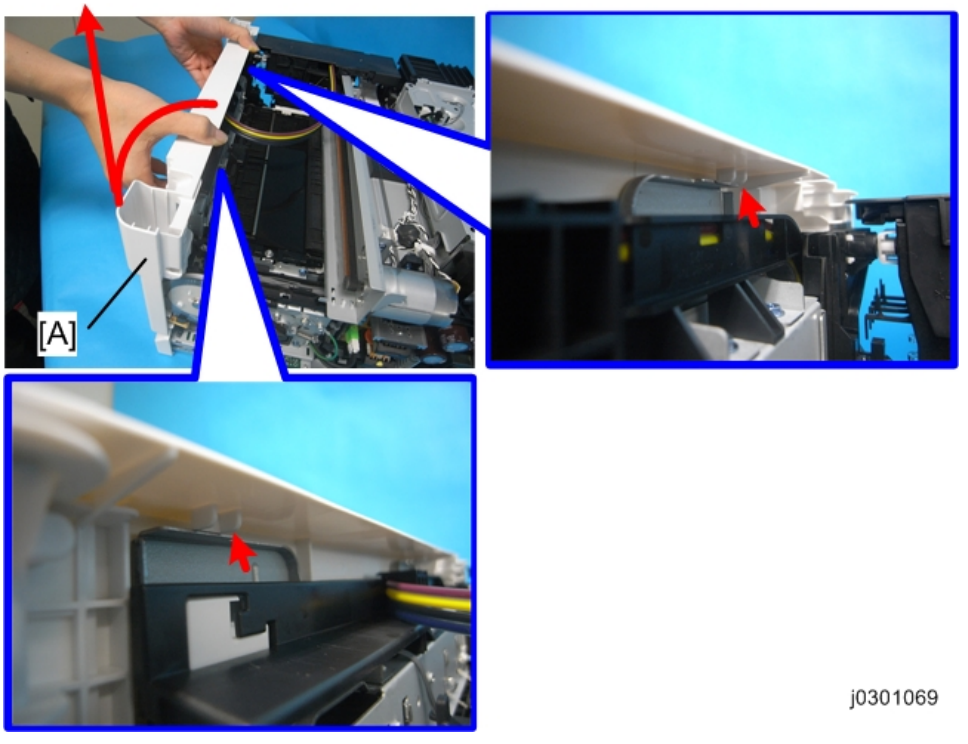
- If you are servicing the J032 with one or two paper feed units attached, remove the mainframe from the top of the paper feed unit. The rear cover cannot be removed with the mainframe mounted on a PFU.

1. **Remove:**
   - Battery (☛page 65)
   - Duplex unit (☛page 63)
   - ADF unit (☛page 83)
   - Scanner unit (☛page 96)



j0301068

2. Remove the screws (x3).

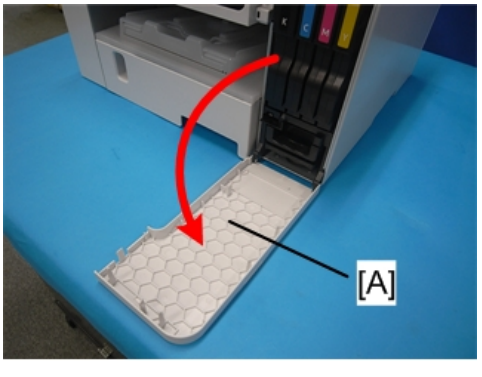


j0301069

3. Remove the rear cover [A] (x2).

Right Front Cover

1. Battery (page 65)



j0271017

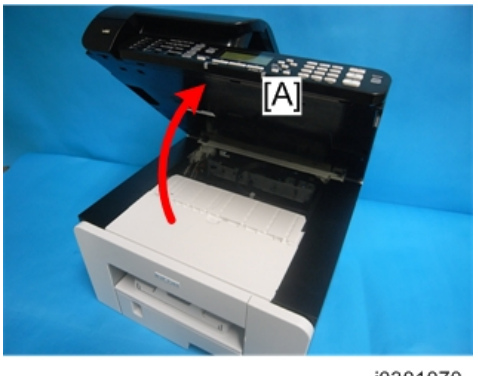
2. **Open the right front cover [A].**

j0271018

3. **Disengage the latch.**
4. **Remove the right front cover.**

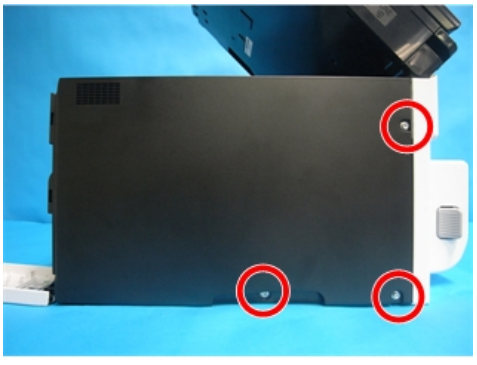
Right Cover

1. **Battery (☛page 65)**
2. **Remove:**
   - Right front cover



j0301070

3. **Open the scanner unit [A].**

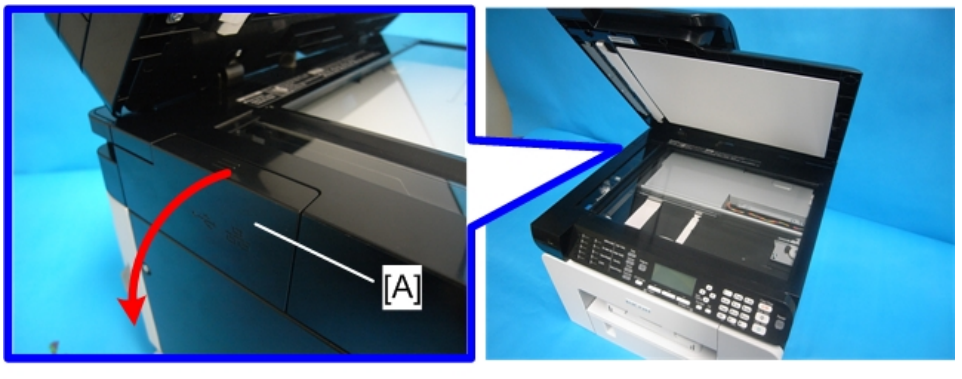


j0301071

4. **Remove the right cover (x3).**

Port Cover

1. **Battery (page 65)**
2. **Open the ADF.**



j0301073

3. **Detach the port cover [A].**

   When you detach the scanner unit, detach the port cover in advance.

Cable Cover

1. **Battery (page 65)**

2. **Open the ADF.**

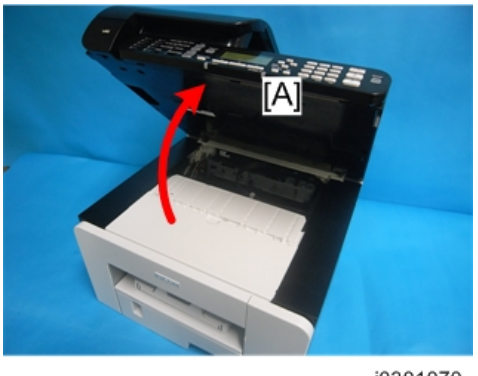
j0301072

3. **Detach the cable cover [A].**

   When you detach the scanner unit, detach the port cover in advance.

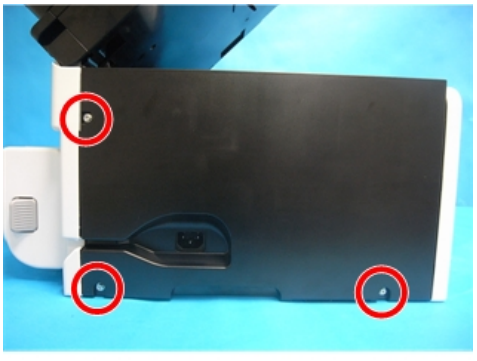
Left Cover

1. **Battery (page 65)**



j0301070

2. Open the scanner unit [A].

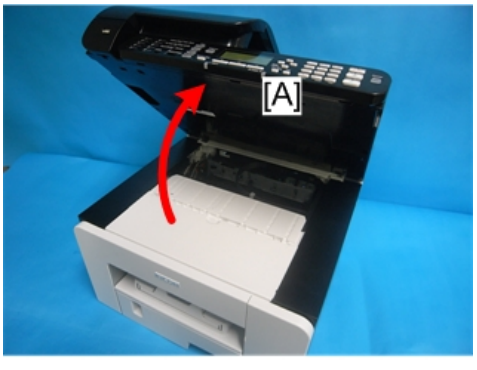


j0301074

3. Remove the left cover (x 3).

Canopy Cover

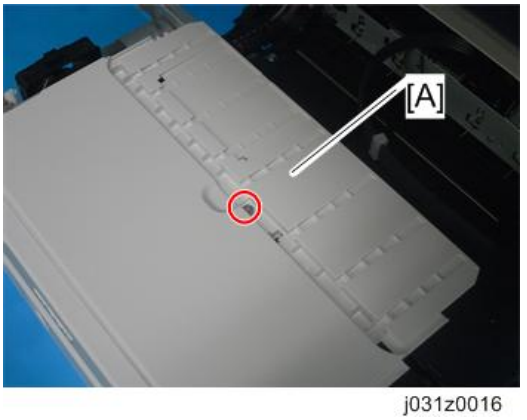
1. Battery (page 65)



j0301070

2. Open the scanner unit [A].
3. Right cover (page 70)

4. **Left cover (☛page 72)**

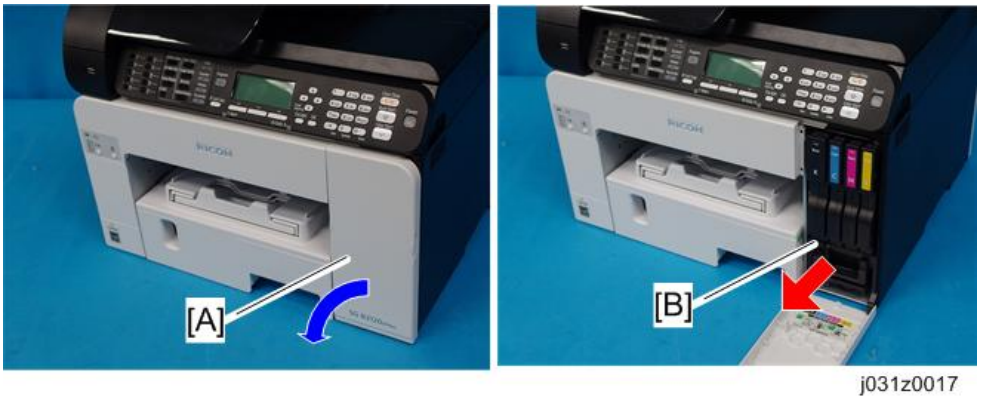


j031z0016

5. **Canopy cover [A] (x1)**

Front Cover

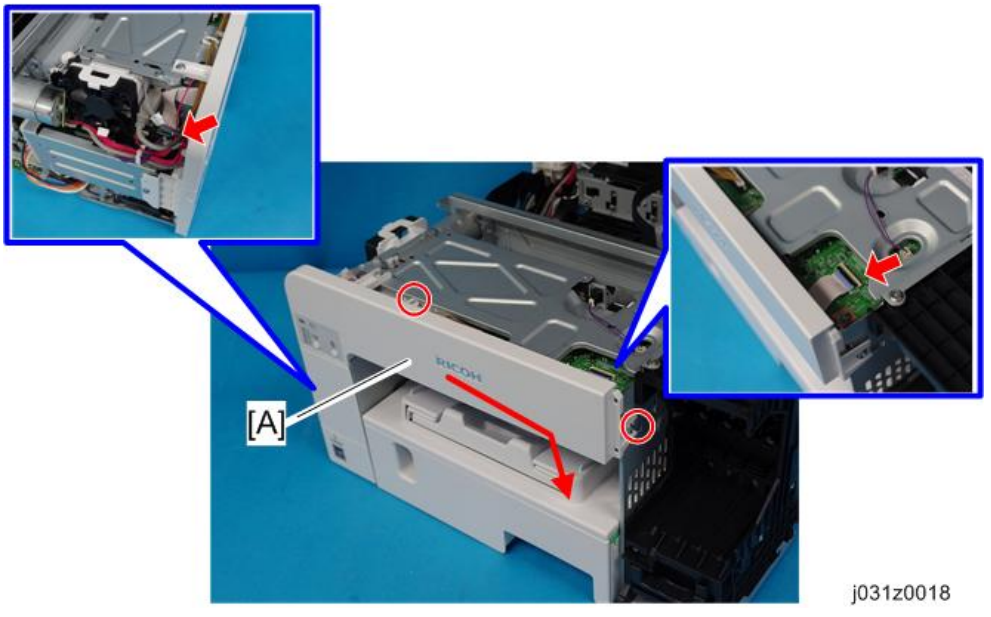
1. **Remove:**
   - Battery (☛page 65)
   - Right cover (☛page 70)
   - Left cover (☛page 72)
   - Canopy cover (☛page 73)



j031z0017

2. **Open the right front cover [A].**

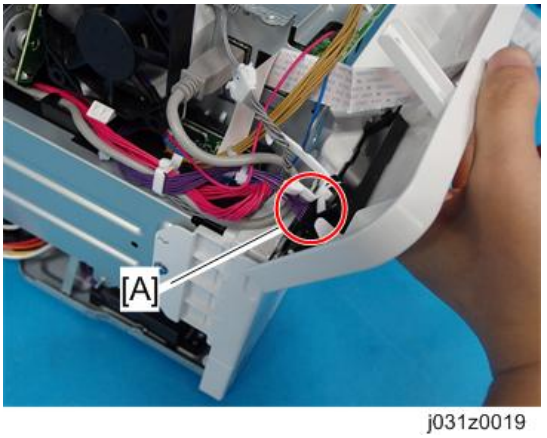
3. **Remove the ink cartridges [B].**



4. **Remove the screws (x2) and flat cables (x2).**
5. **Slide the front cover [A] to the right to detach it.**

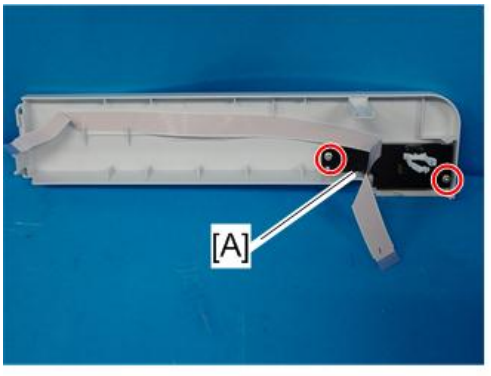
Note

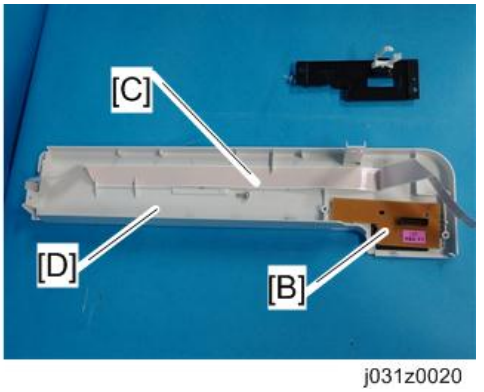
- One harness from the ACB board is still connected to the LED board inside the front cover at this point. Do not pull the front cover strongly until the harness is disconnected.



j031z0019

6. **Disconnect the harness [A] to remove the front cover.**



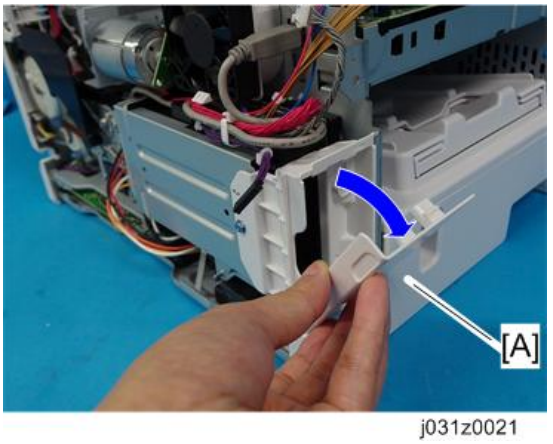


j031z0020

7. **LED board cover [A] (x2)**
8. **LED board [B] and Flat cable [C]**
9. **Front cover [D]**

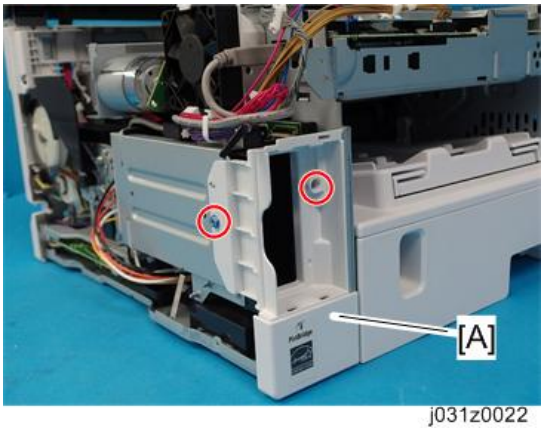
Left Front Cover

1. **Remove:**
   - Battery (page 65)
   - Right cover (page 70)
   - Left cover (page 72)
   - Canopy cover (page 73)
   - Front cover (page 74)



j031z0021

2. **Open and remove the battery cover [A].**



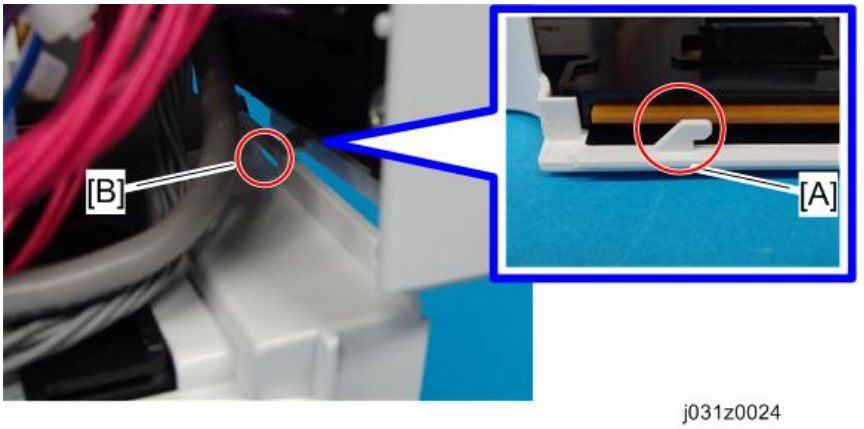
j031z0022

3. **Left front cover [A] (x2)**

Re-assembly

Here are some points you should always check before re-attaching the covers.

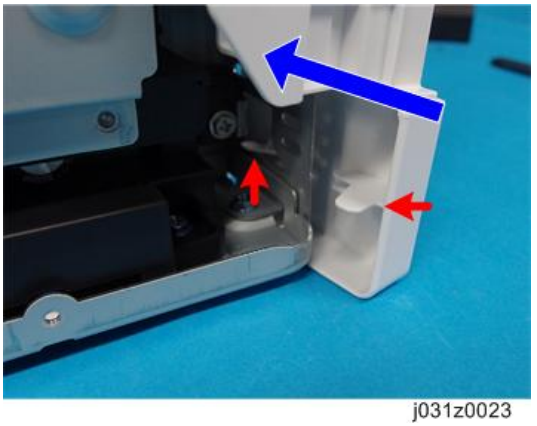
Front Cover



j031z0024

1. **Insert the tab [A] on the front cover into the cutout [B] in the left front cover.**
   - The tab [A] is located under the LED board inside the front cover.
2. **Slide the front cover to the left side to attach it.**

Left Front Cover

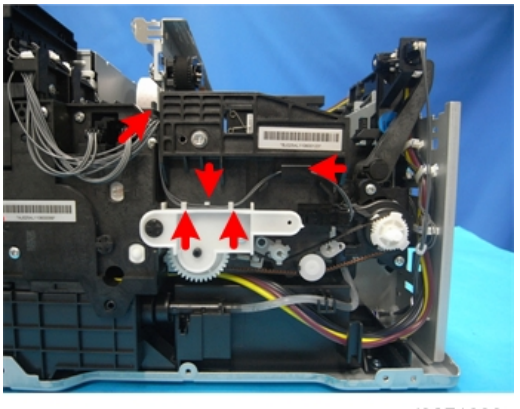


j031z0023

1. **Align the tabs (two points) on the left bottom of the left front cover with the machine's frame and slide the cover to attach it.**

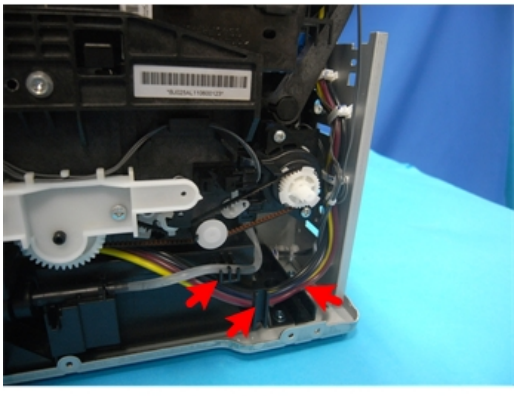
Right Cover

1. **Check that the harness and ink tube are secured.**



j0271033

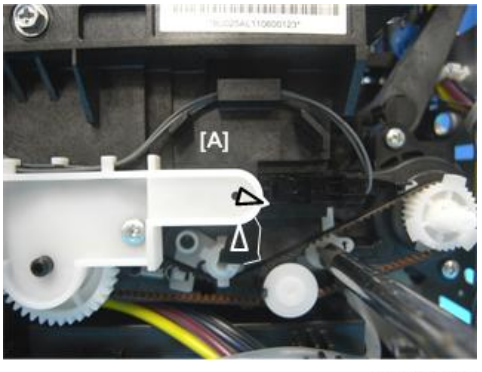
- Be sure to secure the harness with the tabs (at five points).



j0271034

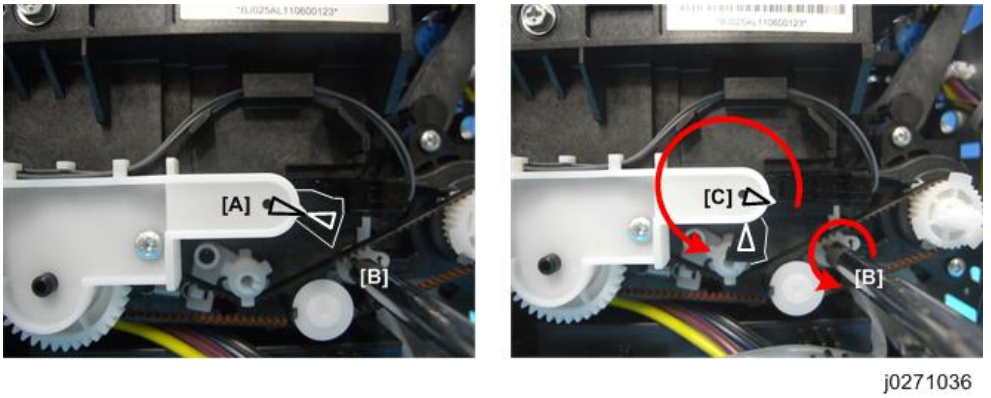
- Be sure to secure the ink tube with the tabs (at three points).

2. **Check the maintenance unit [A].**



j0271035

- If the triangles are not aligned as shown above, this means the print head is locked and ready for operation. You can re-attach the right cover.

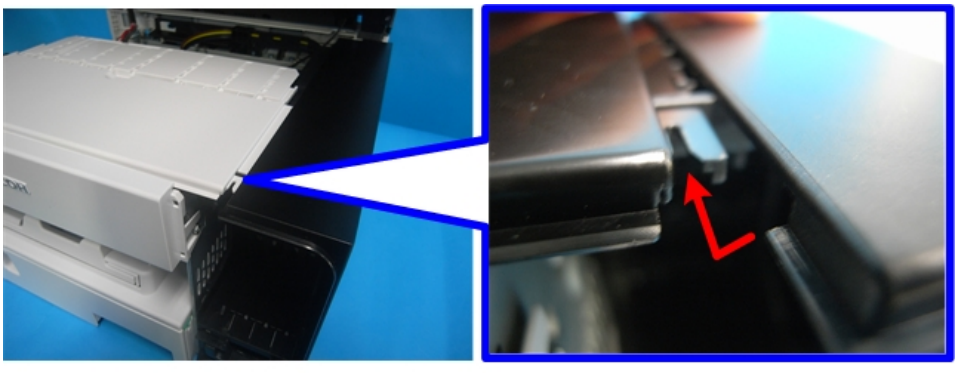


j0271036

- If the triangles are aligned tip-to-tip as shown at [A], this means the carrier is unlocked (not ready for operation) and can be moved manually.

- Insert a screwdriver at [B], turn it counter-clockwise to rotate the lower triangle around until it is at [C]. This locks the carrier for normal operation.

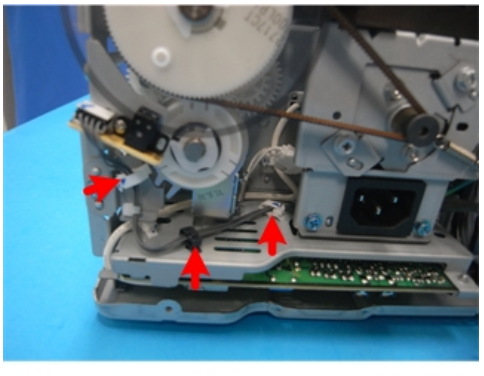
3. **Check the connection with the front cover.**



j0301090

- As shown above, slide the right cover along the guide rail on the front cover to attach it.

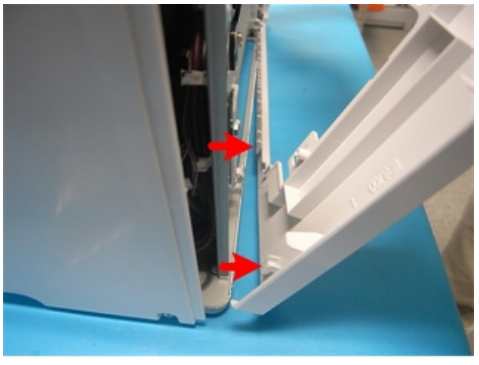
Left Cover



j0271039

1. **Check that the harness is secured with the clamps (at three points).**

Rear Cover

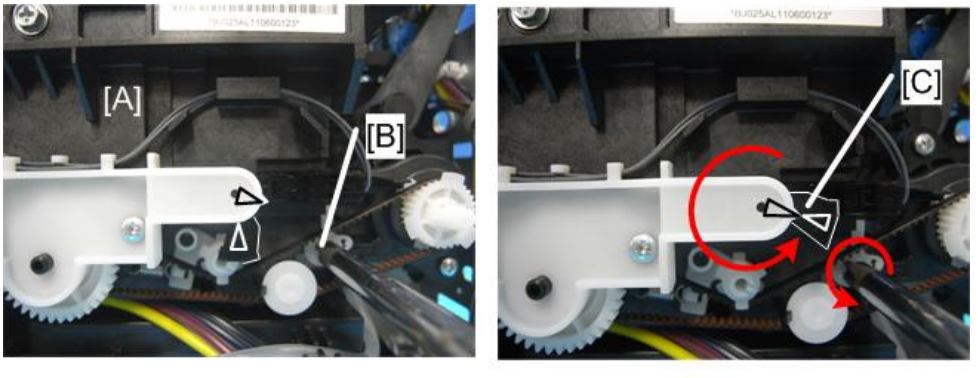


j0271040

1. **Engage the tabs on the rear cover in the brim of the machine's frame and attach the rear cover.**

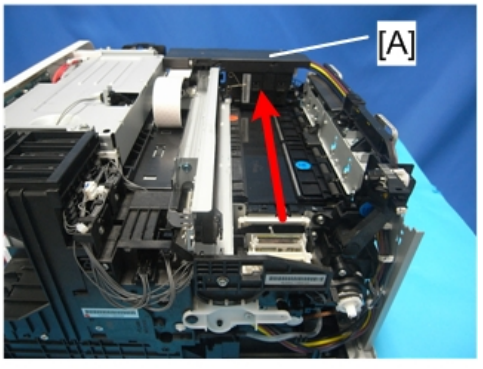
Unlocking, Moving the Carriage

Many maintenance and some cleaning procedures require that you unlock the carriage and push it completely to the left side or center of the printer. Follow this procedure whenever you are instructed to unlock the carriage.



j0271042

1. Remove the right cover.
2. Look at the maintenance unit [A] and locate the two triangles.
3. Insert the tip of a screwdriver into the hole [B] and turn it counter-clockwise to rotate the lower triangle up to the other triangle [C] until they are aligned.
4. When the triangles are aligned, the carriage is unlocked.

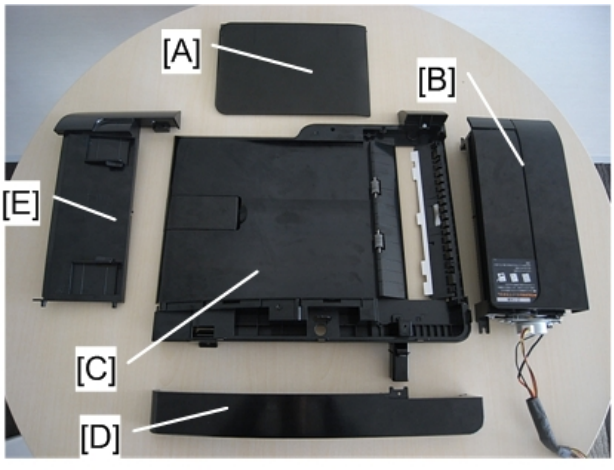


j0271048

5. Push the carriage [A] completely to the left.
6. After completing the procedure:
    - You must lock the carriage unit again.
    - Insert the screwdriver into the side of the maintenance unit, rotate it counter-clockwise to move the lower triangle down until it is below the upper triangle.
    - When the triangles are not aligned, the carriage is locked.
    - Always make sure that the carriage is locked before you re-attach the right cover.

ADF

The ADF is composed of the following parts:



j0301011

[A] ADF top cover

[B] Drive unit (The drive unit is equipped with a motor, sensor, and roller.)

[C] ADF frame

[D] Harness cover

[E] Document loader

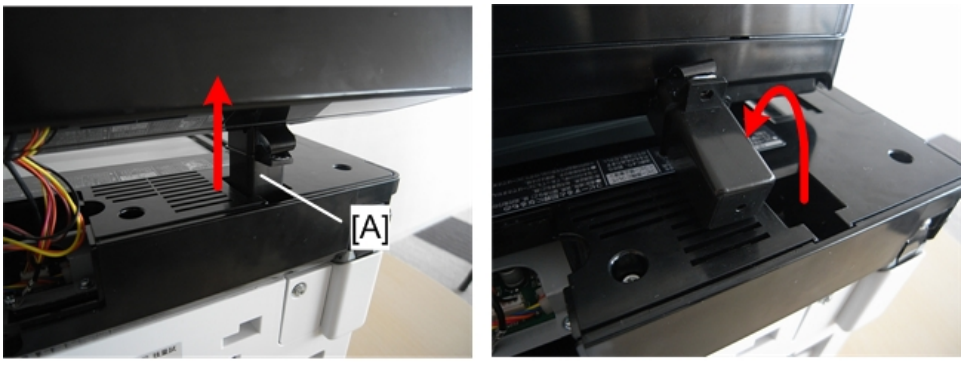
ADF Unit

j0301004

1. Remove the screws on the back of the machine.(x2)

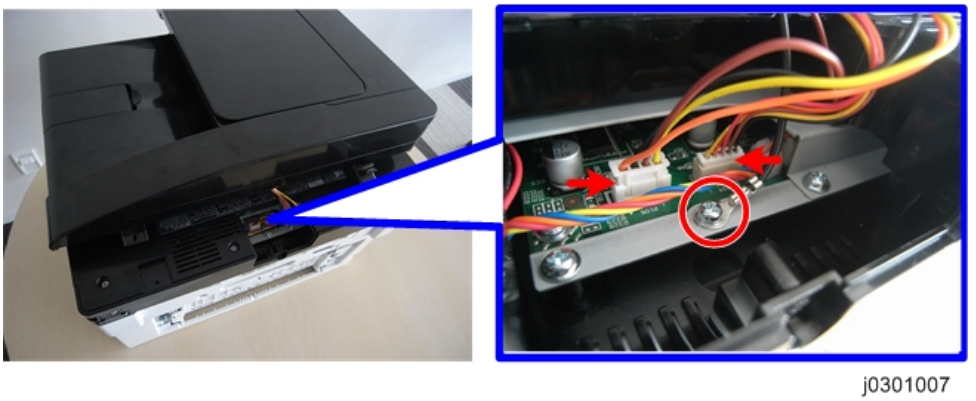
j0301005

2. Remove the cover [A] (x1).



j0301006

3. Pull the ADF hinge [A] out. Because the ADF is connected to the machine by the harness, place the ADF on the machine after pulling the hinge out.



j0301007

j0301008

4. Remove the ADF (x2, x1).

j0301009

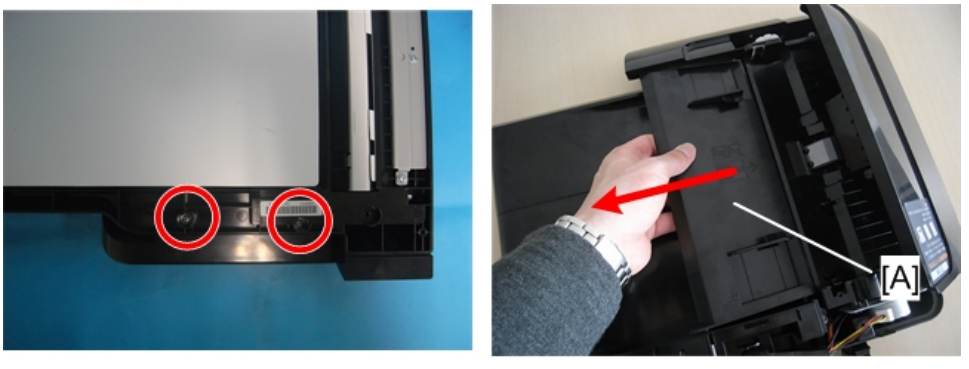
5. Remove the ADF top cover.

j0301010

6. Remove the harness cover [A] (x1, x1).

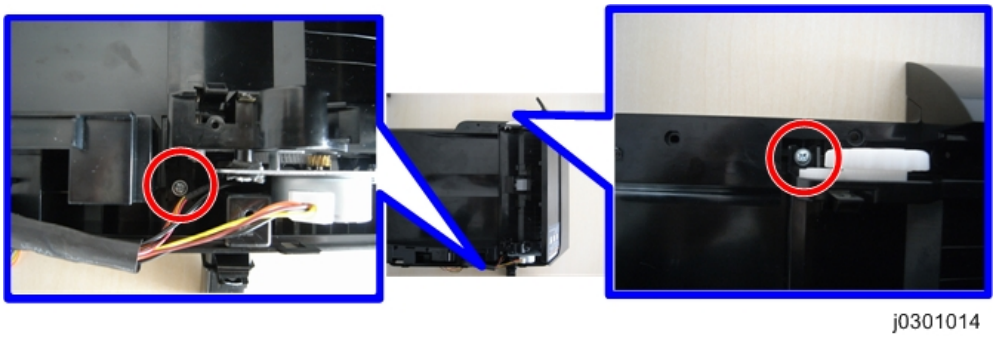
j0301012

The hook is located on the back of the ADF.



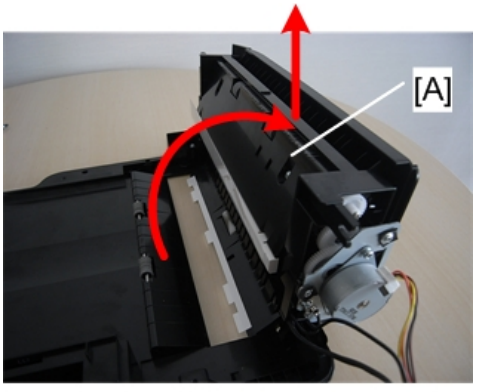
j0301013

7. Remove the screws on the back, and then remove the document loader [A] (x2).



j0301014

8. Remove the screws (x2).



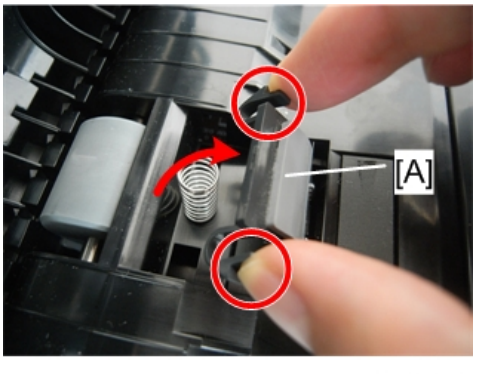
j0301015

9. Remove the drive unit [A].

ADF Friction Pad

j0301001

1. Open the ADF covers.



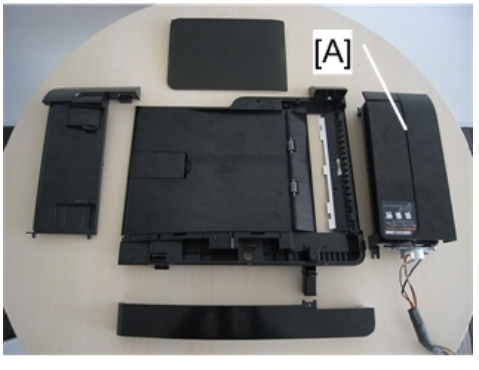
j0301002

2. While pressing the tabs inward, remove the friction pad [A].

j0301003

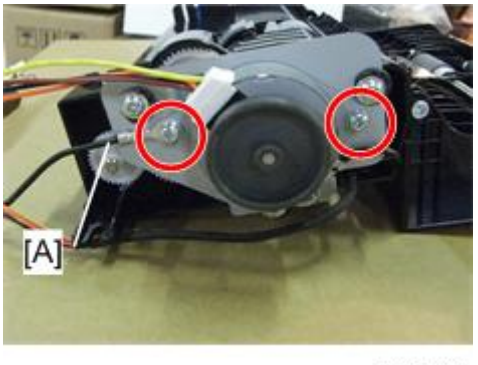
Original Feed Motor

Preparation



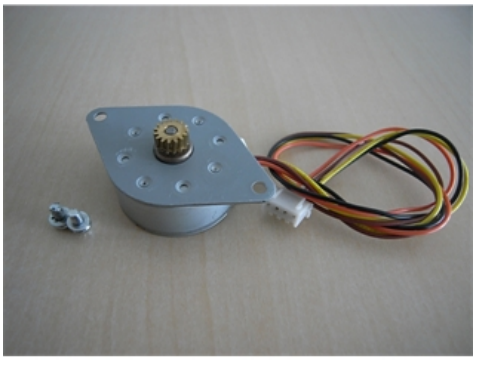
j0301018

- Remove the drive unit [A] in advance.



j0301016

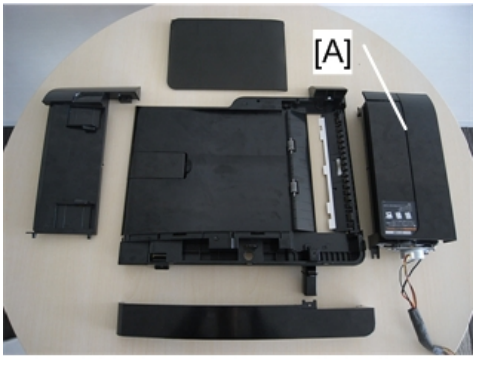
1. Remove the motor (x2, harness [A] x1).



j0301017

Original Feed Roller, Connecting Rollers

Preparation

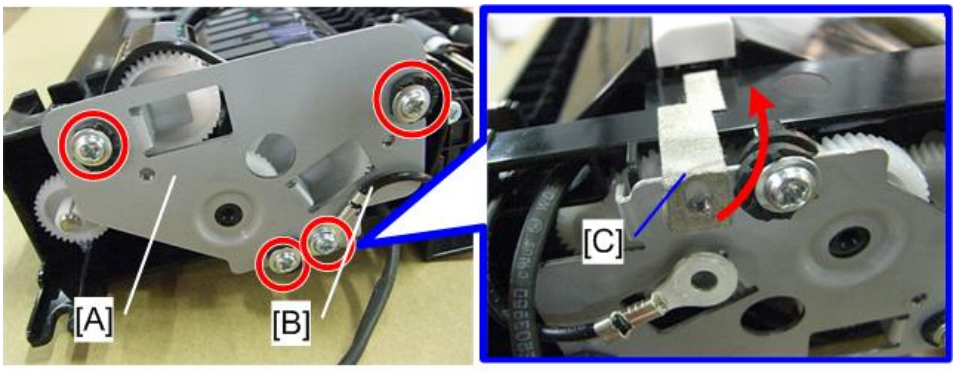


j0301018

- Remove the drive unit [A] in advance.

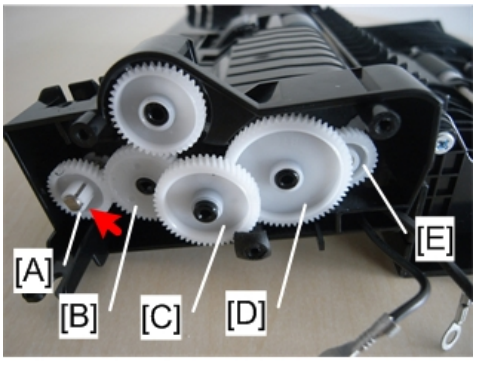
Remove

- Original feed motor (☛page 88)



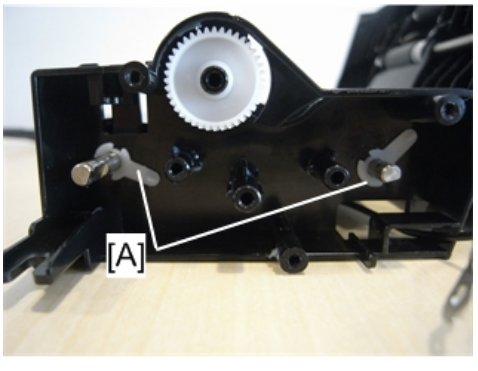
j0301019

1. Remove the metal frame [A] (x4, harness [B] x1, shielded tape [C] x1).



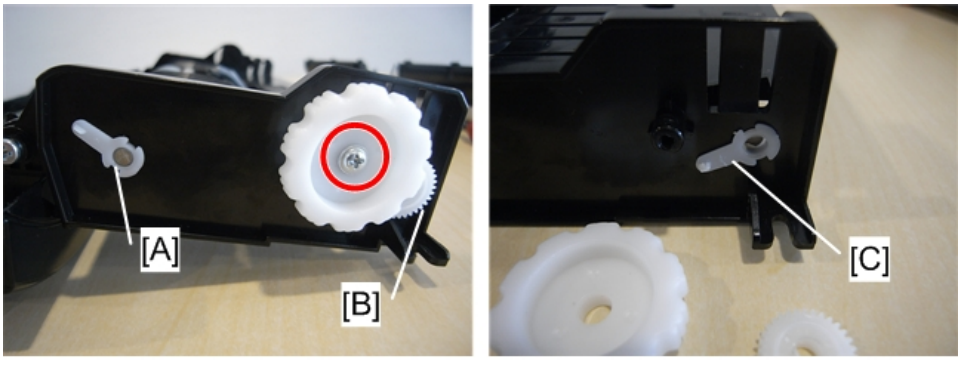
j0301020

2. Remove the gears [A] to [E]. The gear [A] has a hook on it (x1).



j0301021

3. Remove the rod's stay [A].

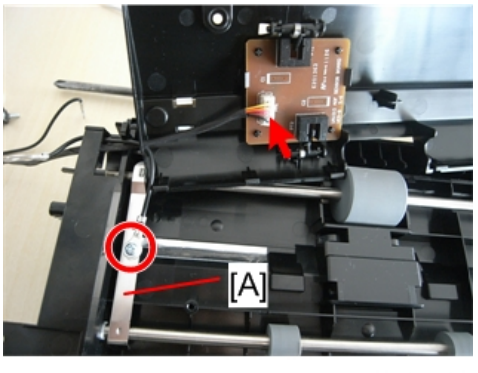


j0301022

4. Remove the stay [A] and gear [B] on the other side, and then remove the stay [C] located behind the gear [B] (x1).

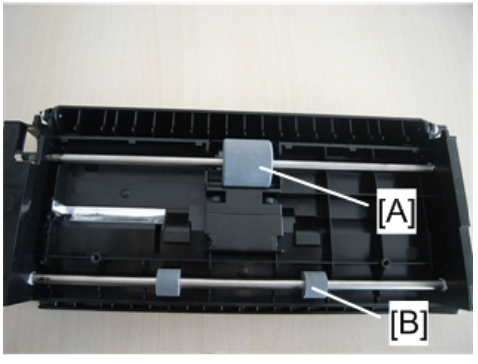
j0301023

5. Remove the screws (x2).



j0301024

6. Remove the metal plate [A] and harness (x1, x1).

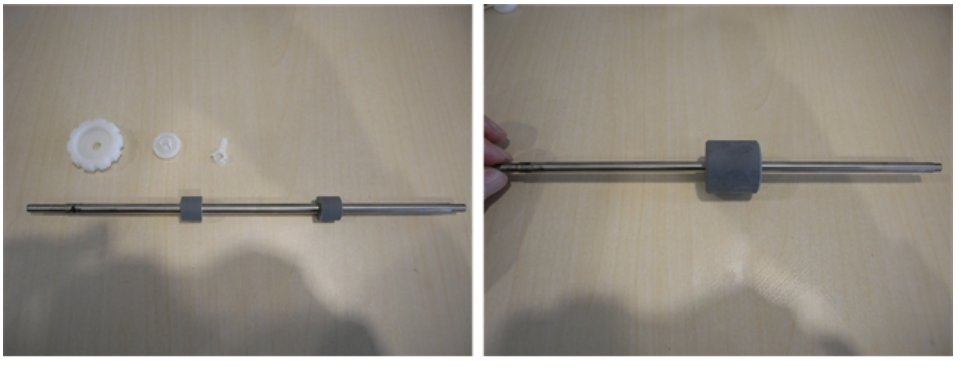


j0301025

[A] Paper feed roller

[B] Connecting rollers

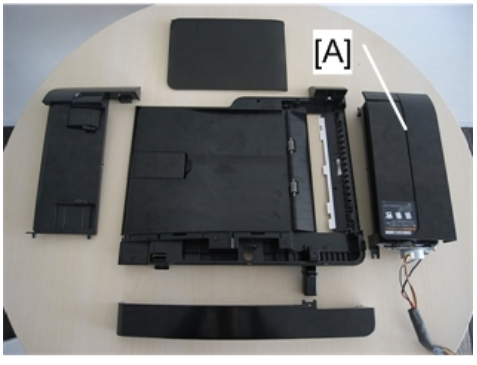
7. Remove the rollers.



j0301026

Original Sensor Board

Preparation

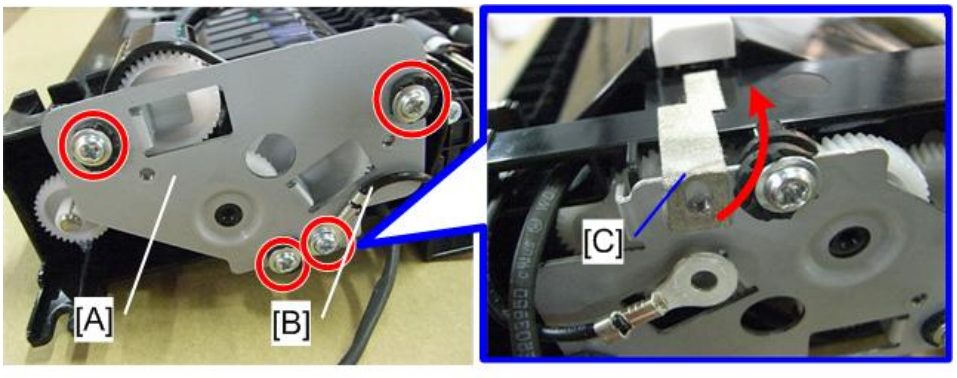


j0301018

- Remove the drive unit [A] in advance.

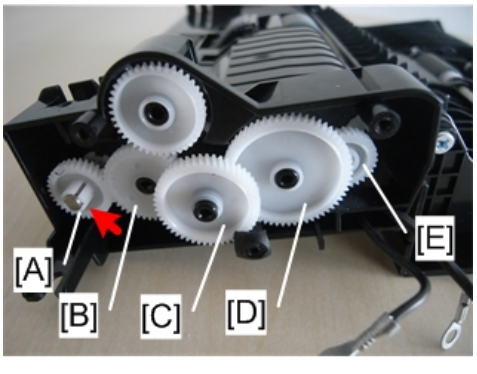
Remove

- Original feed motor (☛page 88)



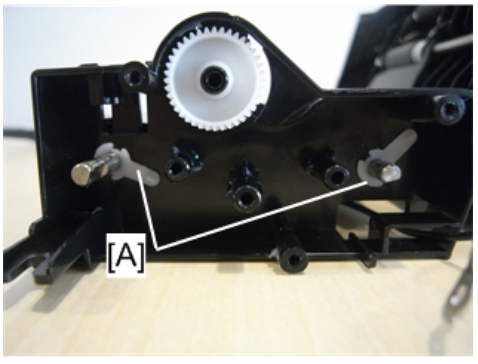
j0301019

1. Remove the metal frame [A] (x4, harness [B] x1, shielded tape [C] x1).



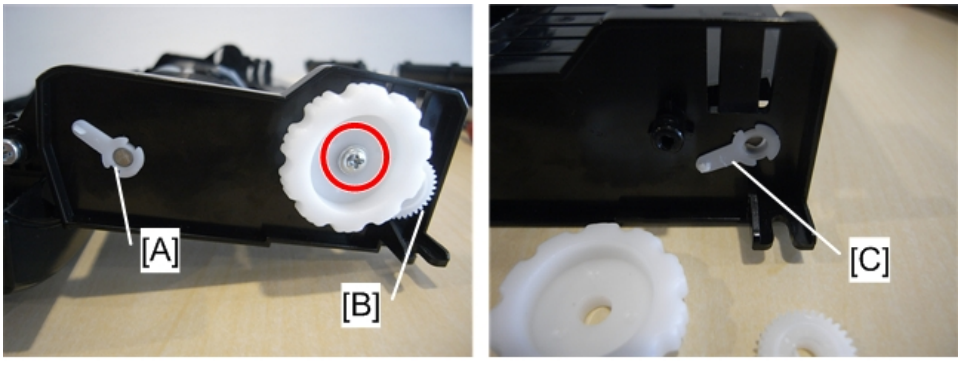
j0301020

2. Remove the gears [A] to [E]. The gear [A] has a hook on it (x1).



j0301021

3. Remove the rod's stay [A].

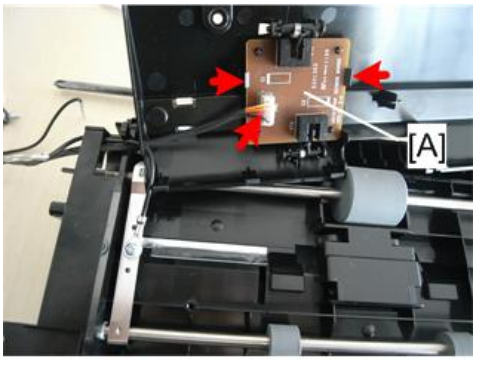


j0301022

4. Remove the stay [A] and gear [B] on the other side, and then remove the stay [C] located behind the gear [B] (x1).

j0301023

5. Remove the screws (x2).



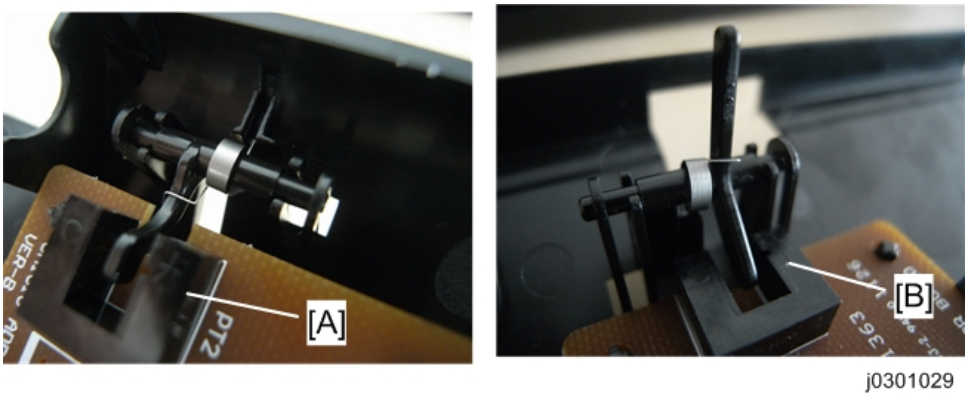
j0301119

6. Remove the original sensor board [A] and feelers (x1, x2).

j0301028

Re-installation

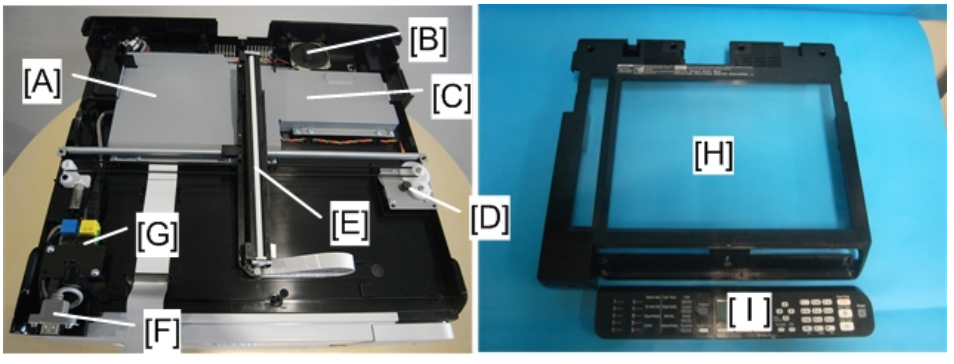
Mount the feelers of the sensors [A] and [B] with the correct orientation and spring position as shown.



j0301029

Scanner

The following parts are mounted on the scanner unit.



j0301030

[A] CTL Board

[B] Speaker

[C] Fax Board

[D] Scanner Motor

[E] CIS Module Unit

[F] USB flash drive port

[G] Wireless LAN Board

[H] Exposure glass

[I] Operation Panel

Scanner Unit

Before Replacement

Before replacing the scanner unit:

- The address book data should be downloaded from the machine to a computer with the Device Setting Utility.
- After the scanner unit has been replaced, the address book data must be uploaded from the computer to the machine.

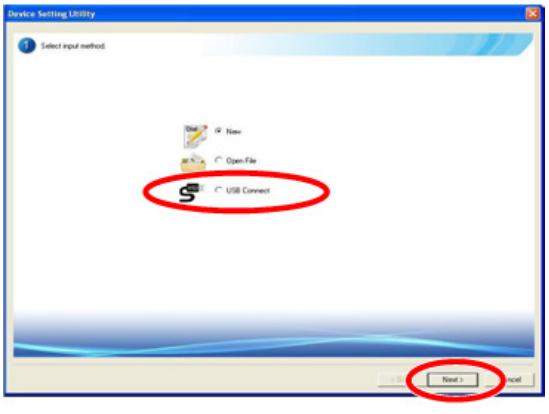
To install the Device Setting Utility:

1. **Mount the CD-ROM in the CD-ROM drive.**

2. Follow the instructions to install the utility.

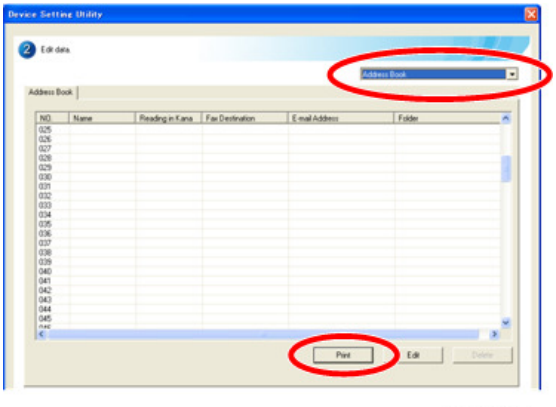
To download address book data from the machine:

1. Confirm:
   - Printer driver installed?
   - TWAIN driver installed?
   - Machine connected and switched on?
   - Printer in standby mode?
2. Start the Device Setting Utility.



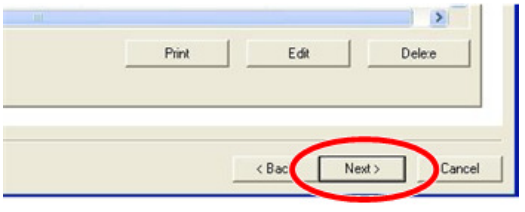
j0300020

3. Click [USB Connect], and then click [Next].



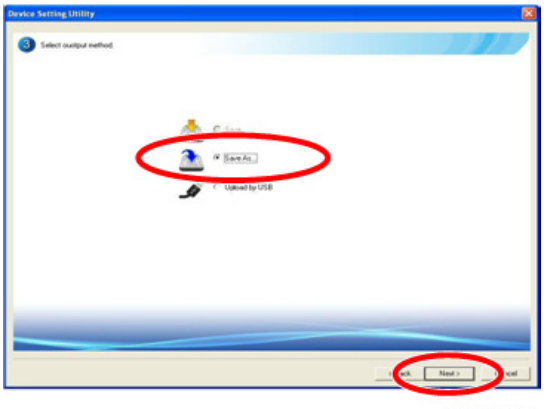
j0300024

4. Select "Address Book" from the pull-down menu, and then click "Print" to print the address book.



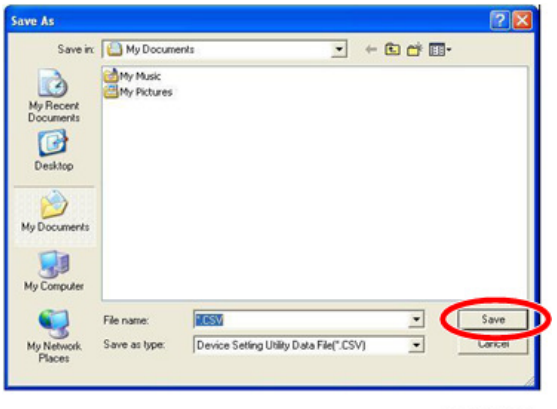
j0300021

5. Click [Next].



j0300022

6. Click [Save as...], and then click [Next].



j0300023

7. Create a folder to hold the file or navigate to another target folder, enter a filename of your choice and save it.

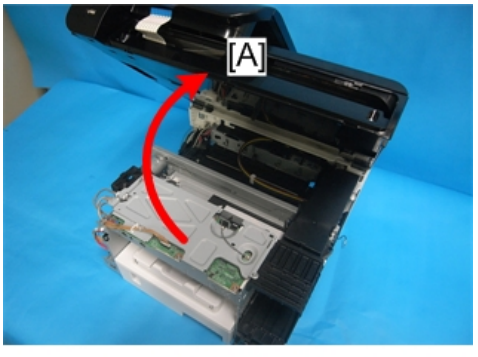
Scanner Unit Replacement

Preparation

Remove:

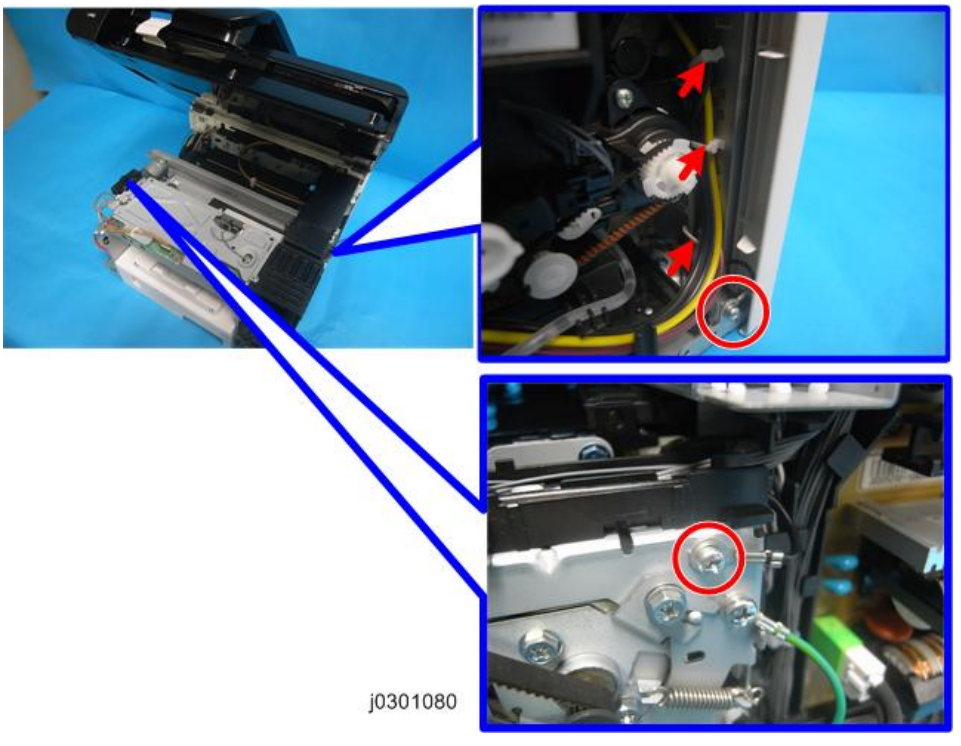
- Right cover (☛page 70)
- Left cover (☛page 72)
- Canopy cover (☛page 73)
- Front cover (☛page 74)

1. Remove the operation panel (☛page 104 "Operation Panel Board").



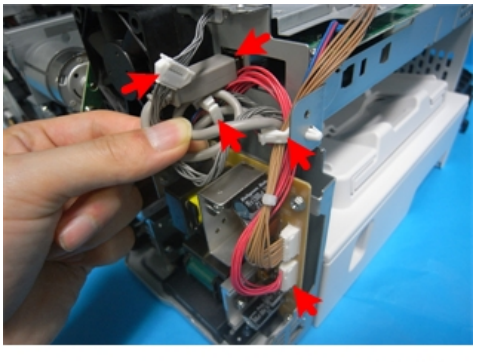
j0301079

2. Open the scanner unit [A].



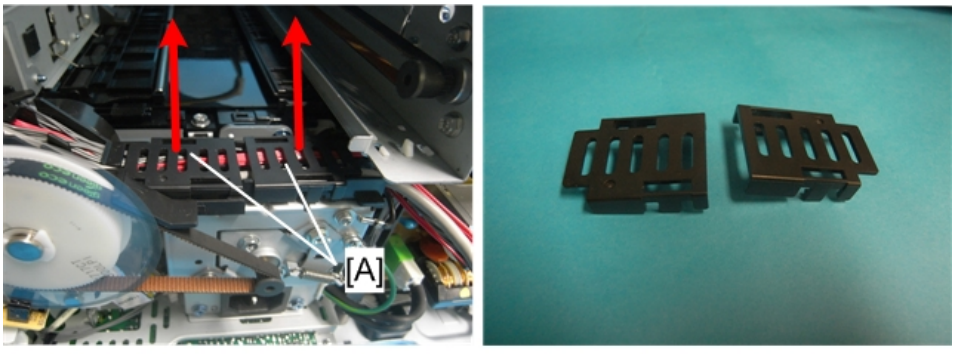
j0301080

3. Remove the ground wire (x2, x3).



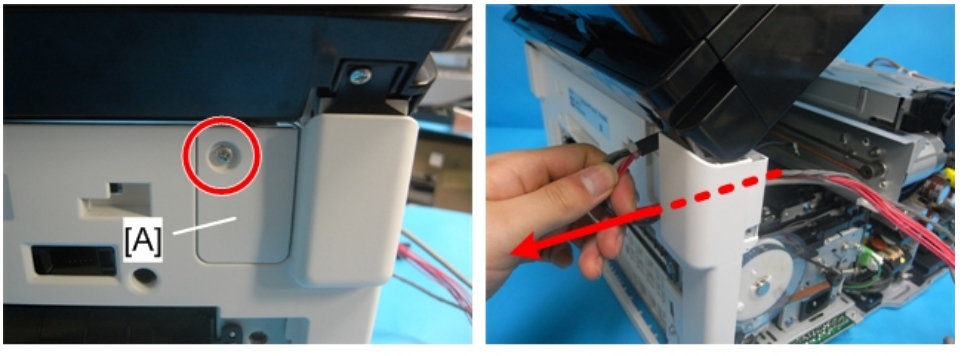
j0301081

4. Remove the cable (x2, Ethernet cable x1 x2).



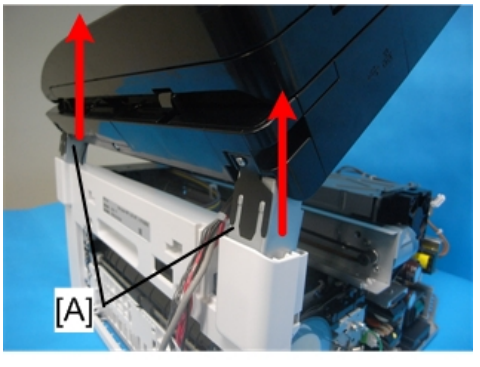
j0301082

The cable is housed in a holder, so remove the holder cover [A] in advance.



j0301083

5. Remove the cover [A], and then pull the scanner cable out (x1).

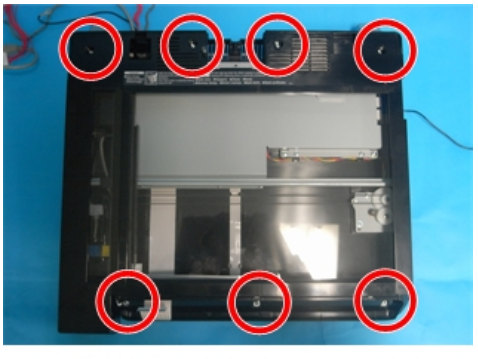


j0301084

6. Remove the scanner unit [A].
7. Remove the ADF (page 83 "ADF Unit").

j0301085

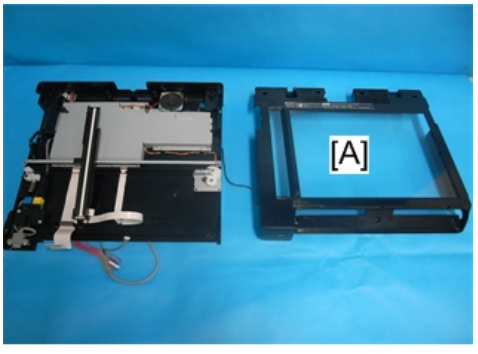
8. Remove the covers [A], [B].



j0301086

j0301087

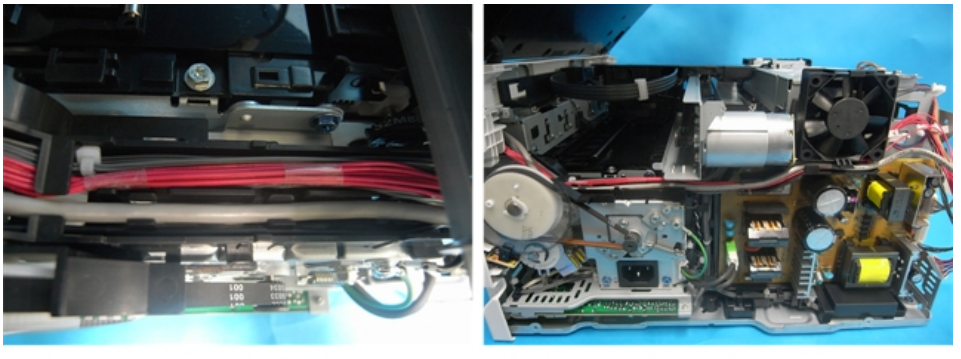
9. Remove the exposure glass (x 7).



j0301088

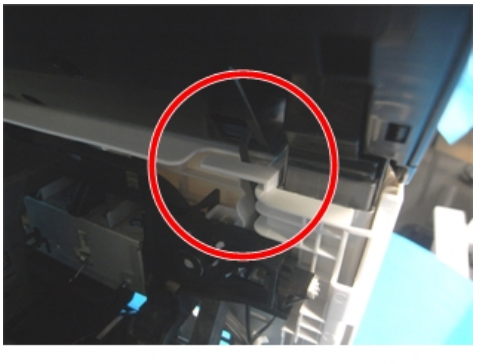
[A] Exposure glass

Re-installation



j0301091

- To ensure that the cables stay in place, place them into the guide in the order of the ground wire, harness, and Ethernet cable.



j0301092

- To ensure that the ground wire stays behind the rear cover, place the ground wire into the guide.

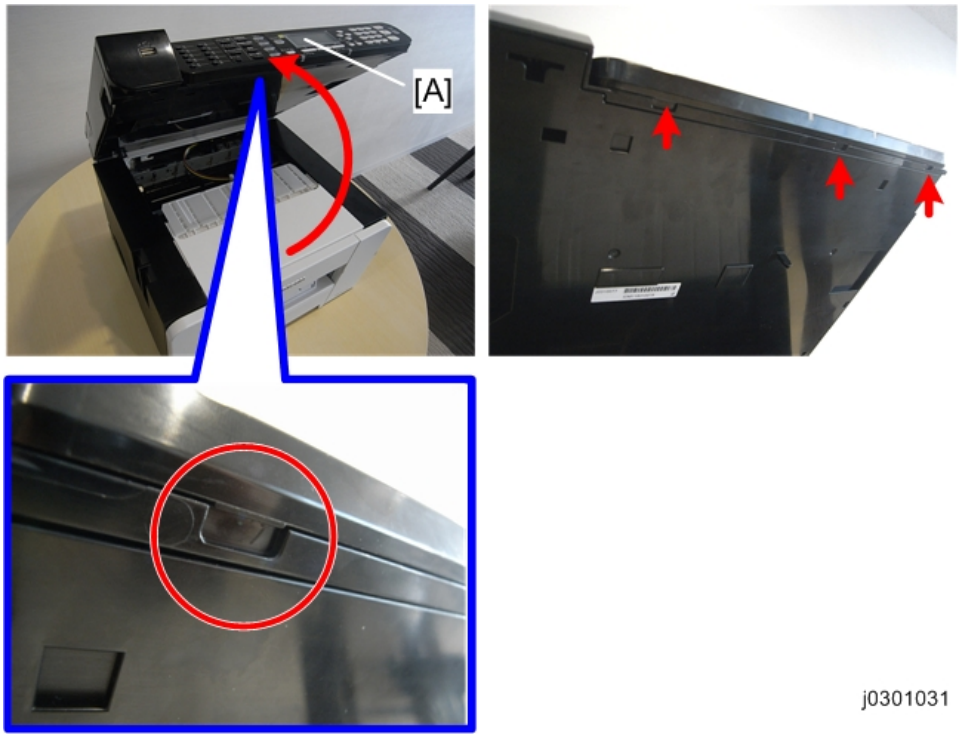
After Replacement

To upload address book data to the machine:

Do this procedure after the scanner unit has been replaced.

1. **Start the Device Setting Utility.**
2. **Click [Open File], and then click [Next].**
3. **Select the address book file stored before the replacement, and then click "Open".**
4. **Click [Next].**
5. **Click [Upload by USB], and then click [Next].**
6. **Click [Finish].**
7. **After the upload has finished, close the Device Setting Utility and cycle the machine off/on.**
8. **Print the address book and check that it is the same as the address book printed before the replacement in order to check that the file has been uploaded correctly.**

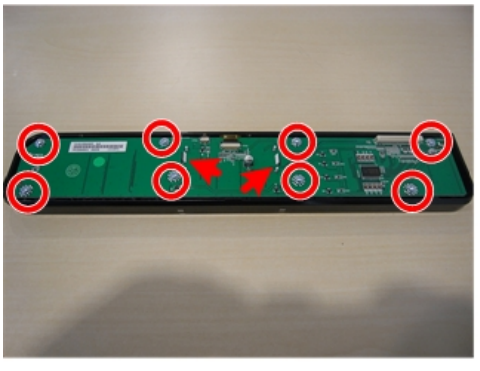
Operation Panel Board



1. Release the hooks on the back of the scanner unit, and then remove the operation panel [A]. (☛ x4).

j0301032

2. Remove the FCC on the back of the operation panel (x1).



j0301033

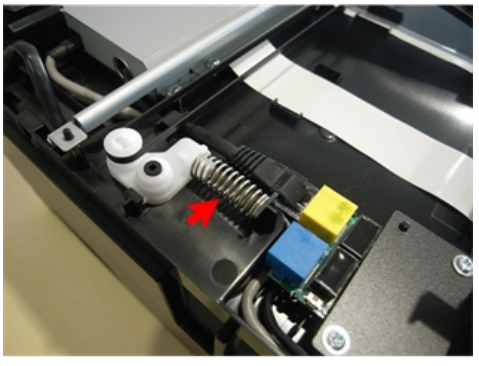
3. Remove the operation panel board (x8, x2, x2).

CIS Module Unit

Preparation

Remove:

- ADF unit (page 83)
- Exposure glass (page 96 "Scanner Unit")

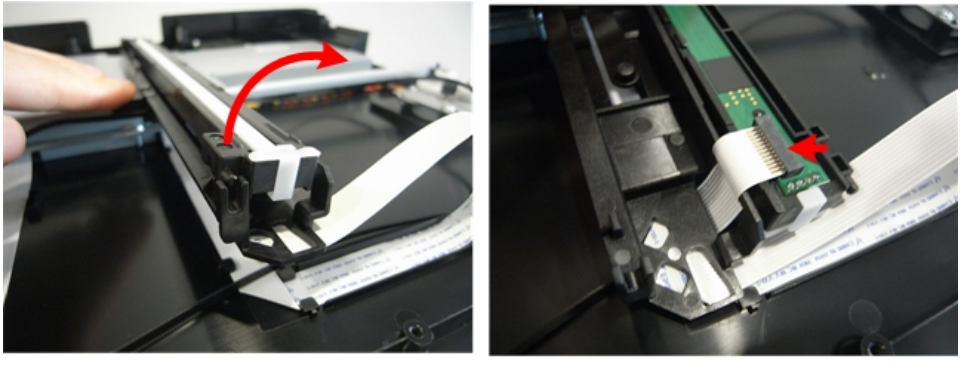


j0301034

1. Loosen the tension of the belt (spring x1).

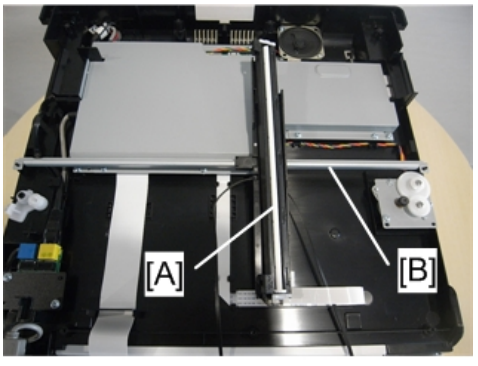
j0301035

2. Remove the belt.



j0301036

3. Remove the FCC of the CIS module unit (x 1).



j0301037

4. Remove the CIS module unit [A] and guide rail [B].

j0301039

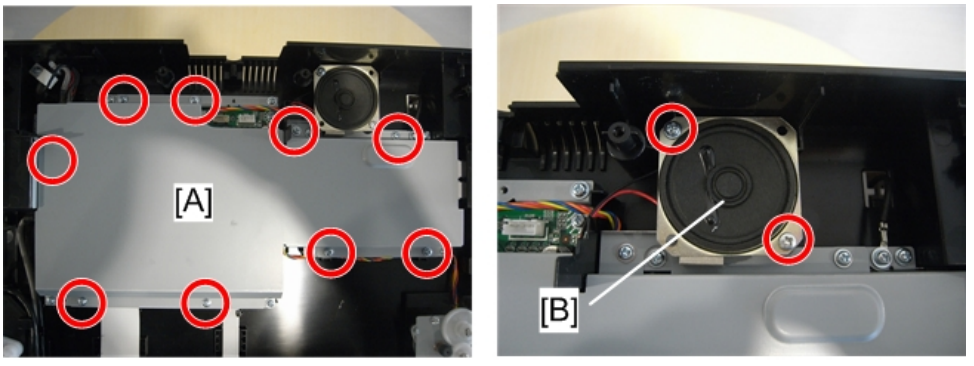
Scanner Motor

Preparation

Remove:

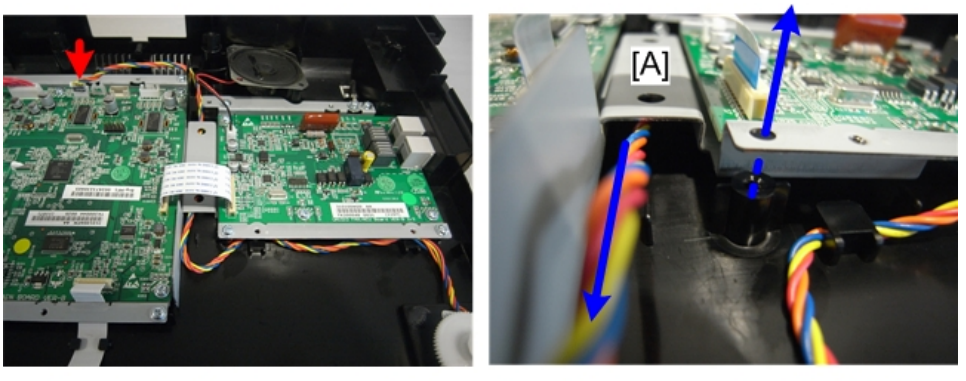
- ADF unit (page 83)
- Exposure glass (page 96 "Scanner Unit")
- CIS module unit (page 105)

1. Remove the board cover.



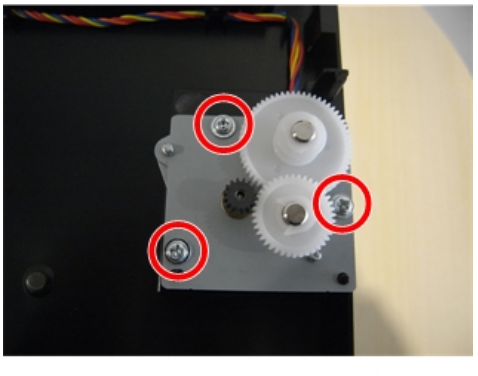
j0301038

To remove the cover [A] blocked by the loudspeaker driver [B], remove the screws of the loudspeaker driver (x11).



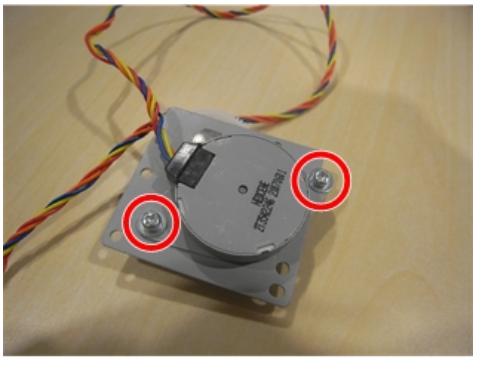
j0301041

2. Remove the connector (x1). If the harness is stuck in the tunnel [A], remove the screw of the metal plate under the board, lift the plate slightly to create clearance, and then pull the harness out.



j0301040

3. Remove the screws (x3).



j0301042

4. Remove the motor (x2).

j0301043

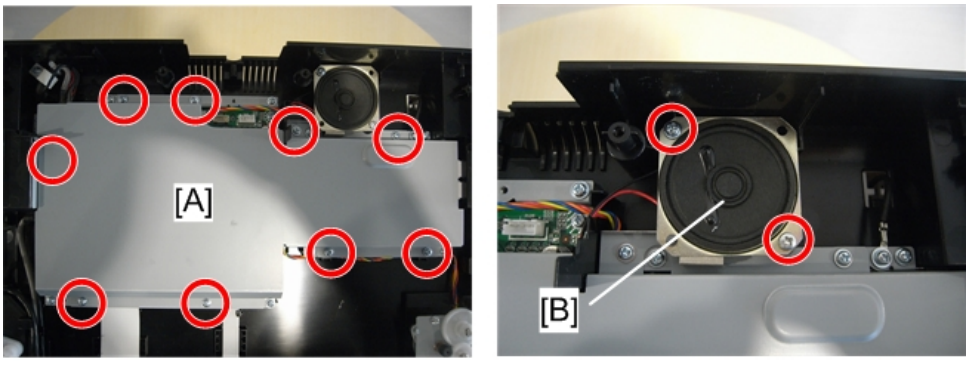
Scanner CTL Board

Preparation

Remove:

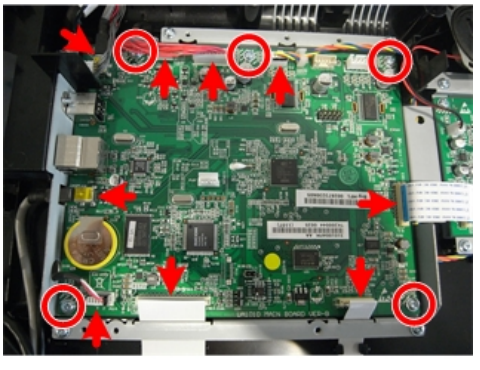
- ADF unit (page 83)
- Exposure glass (page 96 "Scanner Unit")
- CIS module unit (page 105)

1. Remove the board cover.



j0301038

To remove the cover [A] blocked by the loudspeaker driver [B], remove the screws of the loudspeaker driver (x11).



j0301044

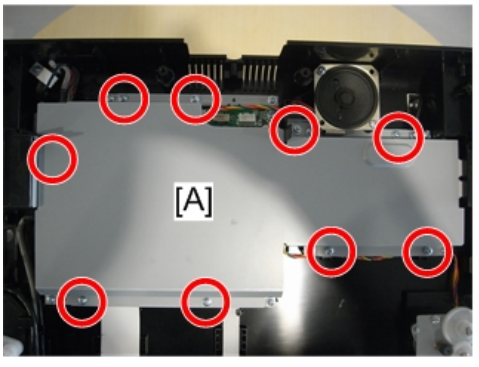
2. Remove the CTL board (x5, x all, x all).

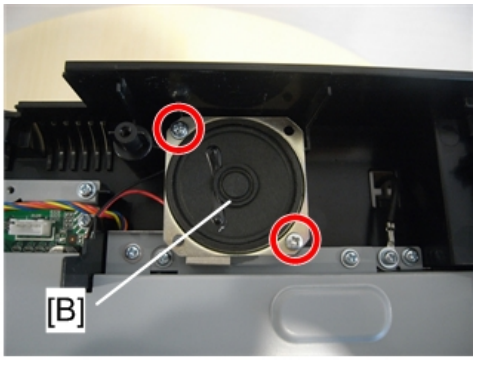
Fax Board, Speaker

Preparation

Remove:

- ADF unit (page 83)
- Exposure glass (page 96 "Scanner Unit")
- CIS module unit (page 105)





j0301038

1. Remove the board cover. To remove the cover [A] blocked by the loudspeaker driver [B], remove the screws of the loudspeaker driver (x11).

j0301045

2. Remove the board and speaker (x4, x1, x1).

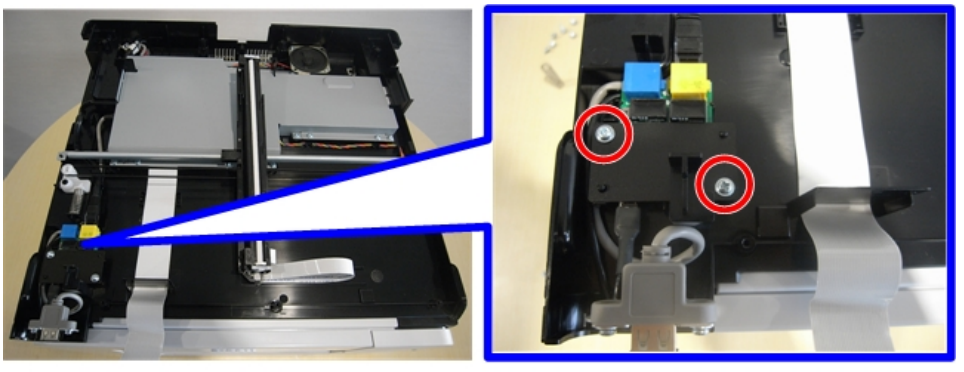
j0301046

Wireless LAN

Preparation

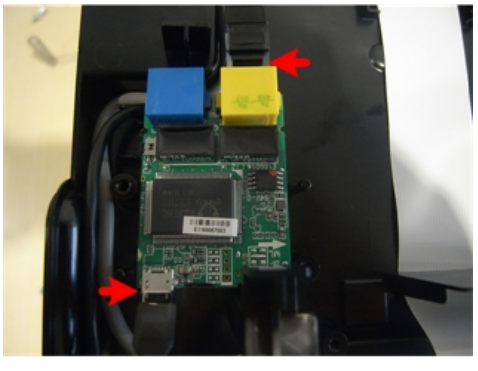
Remove:

- ADF unit (☛page 83)
- Exposure glass (☛page 105)



j0301047

1. Remove the plastic plate (x2).



j0301048

2. Remove the board (x2).

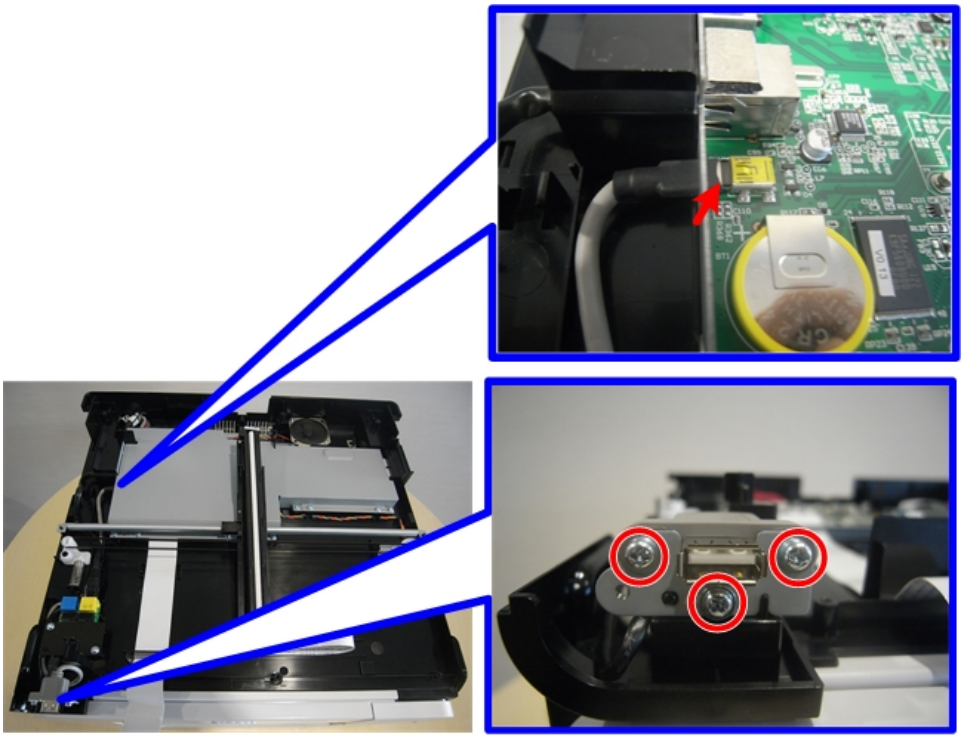
j0301049

USB flash drive port

Preparation

Remove:

- ADF unit (☛page 83)
- Exposure glass (☛page 105)



j0301050

1. Remove the port (x3, x1).

Maintenance Unit, Right Ink Sump

Maintenance Unit

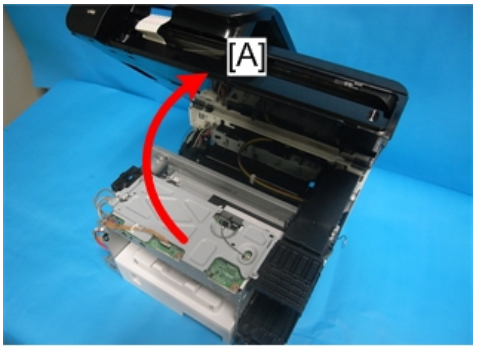
Preparation:

Remove:

- Canopy cover (page 73)
- Left cover (page 72)
- Right cover (page 70)
- Spread some of paper (not cloth) several sheets thick where you can set the unit after it has been removed.
- Unlock the carriage (page 81)

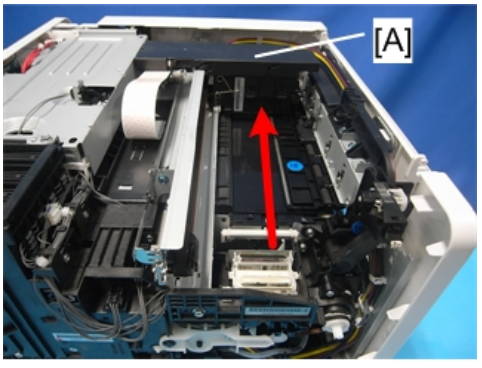
Important

- **The bottom edges of the maintenance unit are covered with ink.**
- **Avoid touching the bottom of the maintenance unit.**



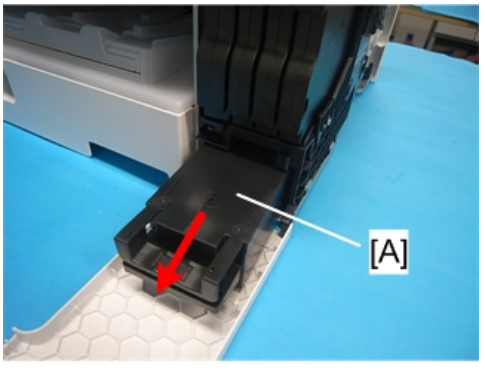
j0301079

1. Open the scanner unit [A].



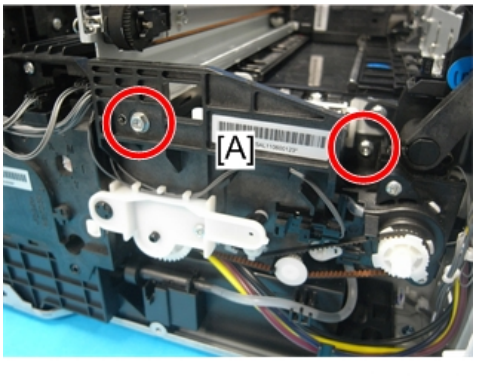
j0271049

2. Push the carriage [A] to the left side of the machine.



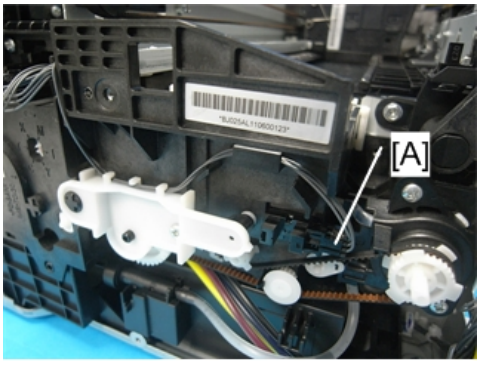
j0271050

3. Open the right front cover and pull out the ink collector [A] about half-way. (You do not need to remove it.)



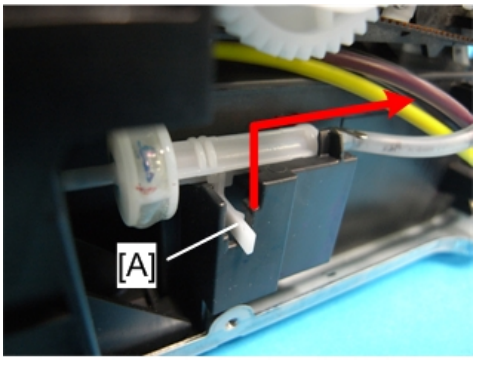
j0271051

4. Remove screws of maintenance unit [A] (x2).



j0271052

5. Disconnect maintenance unit sensor [A] (x1).



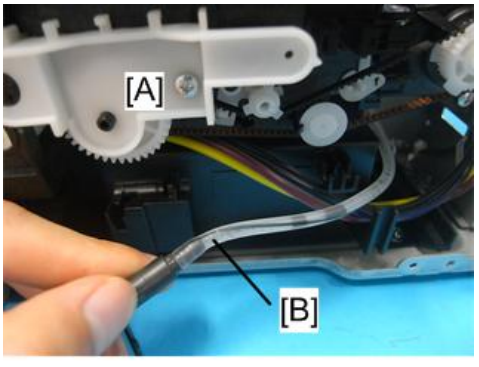
j0271053

6. Release the lock [A], and then remove the injector.

j0271054

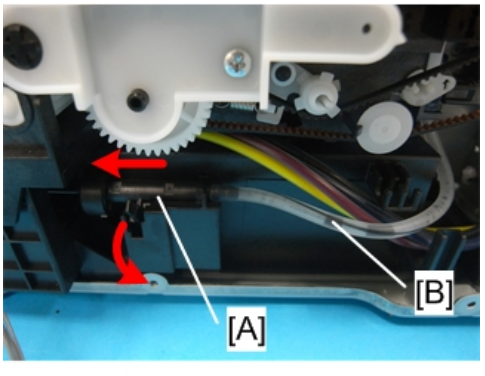
7. Pull the maintenance unit and injector out of the printer and lay them on some paper.
   - Handle the maintenance unit carefully.
   - The bottom of the unit is covered with ink. Place it on a piece of clean paper (not cloth).
   - Never touch the bottom of the unit.

Re-installation



j0271055

1. Re-install the top of the maintenance unit [A] first.
2. Check the tubing [B] between the needle and the bottom of the maintenance unit.
3. Make sure that the line on the tube is straight and not bent. This confirms that the tubing is not twisted.
4. If the tubing is twisted, remove the maintenance unit and make sure that the tubing is straight before re-installing the top half of the maintenance unit.



j0271056

5. Set the needle [A] in its cradle and slowly insert it into the hole on the left.
6. Slowly push the ink collector into the machine and close the right front cover.
7. Check the line on the tubing [B] again to make sure that the tubing is straight and not twisted.
8. Print the Nozzle Check Pattern and perform print head cleaning if necessary.

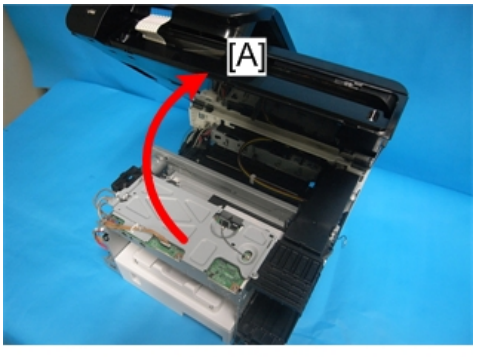
Right Ink Sump

Normally the right ink sump never requires replacement.

Preparation

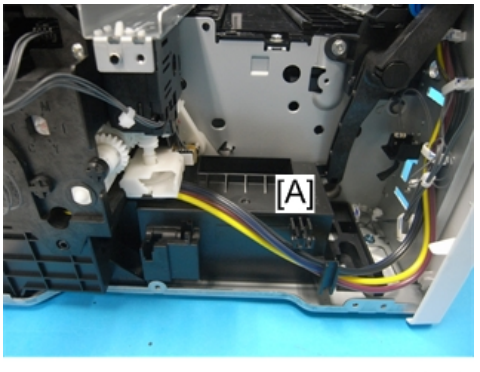
Remove:

- Canopy cover (☛page 73)
- Left cover (☛page 72)
- Right cover (☛page 70)
- Maintenance unit (☛page 114)



j0301079

1. Open the scanner unit [A].



j0271057

2. The right ink sump [A] is located below and to the left of the maintenance unit (shown removed in the photo above).

j0271058

3. Remove screw (x1).
4. Pull the right ink sump aside to expose the ink tubes, and then remove the right ink sump using its handles.

j0271060

5. After re-installing the maintenance unit, execute manual cleaning.

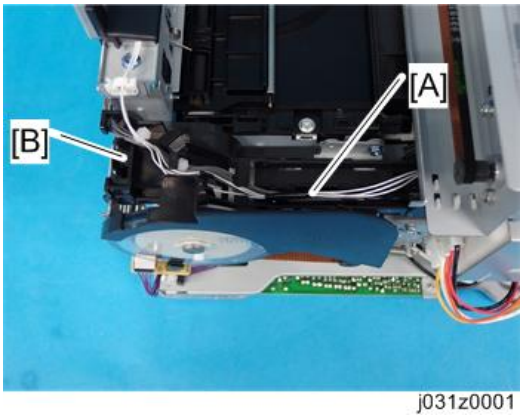
Encoders

Vertical Encoder Wheel

Preparation

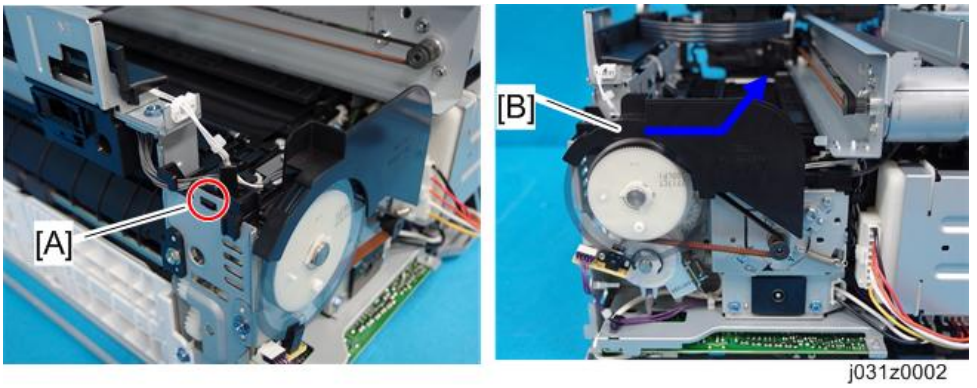
Remove:

- ADF (☛page 83)
- Scanner unit (☛page 96)
- Rear cover (☛page 68)



j031z0001

1. Release the harnesses [A] on the harness guide [B].

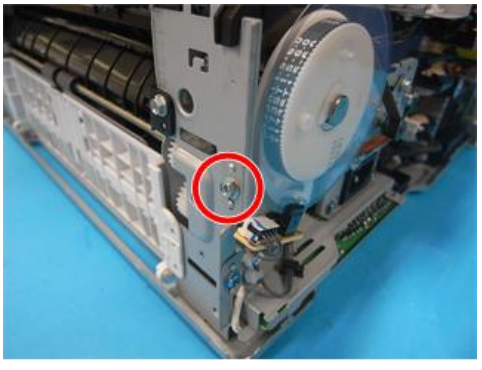


j031z0002

2. Release the tab [A] of the harness guide.
3. Slide the harness guide [B] to the front side, and then take it out.

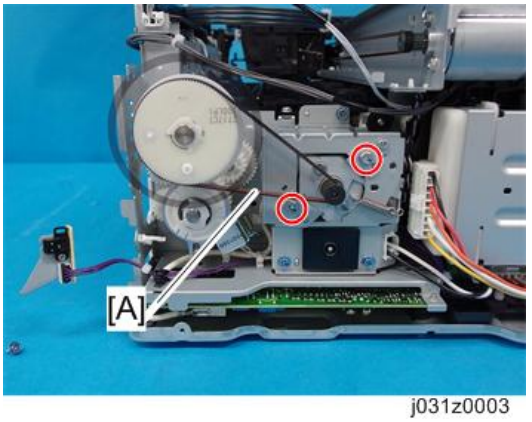
Note

- Be careful not to bend or scratch the vertical encoder wheel when taking out the harness guide.



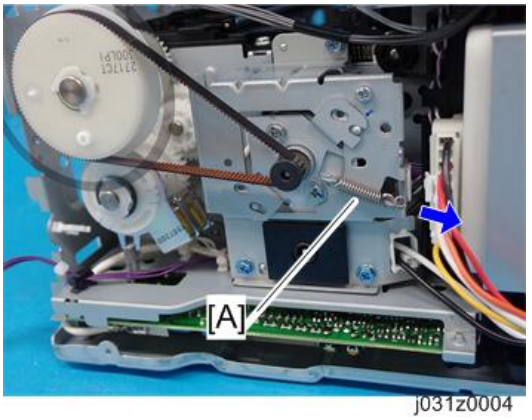
j0271061

4. Remove the bracket [A] of the vertical encoder sensor (x1).



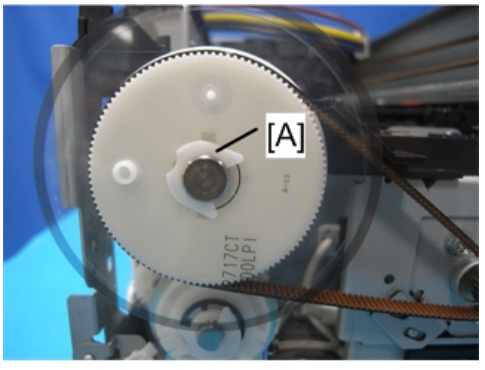
j031z0003

5. Remove screws (x2) to release tension on the belt [A].



j031z0004

6. Remove the tension spring [A] (x1).



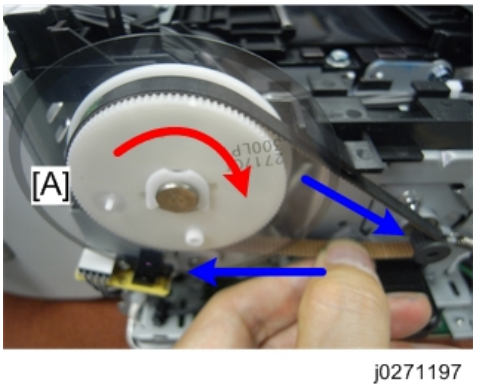
j0271064

7. Use a pair of needle-nose pliers to remove C-clip [A] (ℭ x1).
8. Carefully insert the tip of a long, thin screwdriver behind the drive wheel.
9. Nudge the wheel slight to the front and remove the wheel with the vertical encoder attached.

j0271065

10. Handle the vertical encoder carefully. Never touch the edges of the wheel.

Reinstallation



j0271197

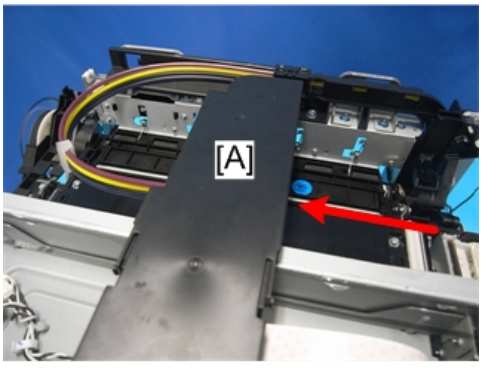
- When reinstalling the vertical encoder wheel [A], turn the wheel slowly while pressing in slightly until it snaps into the correct position.
- After attaching the timing belt, move the belt by hand to check that the wheel rotates smoothly.

Horizontal Encoder Strip

Preparation

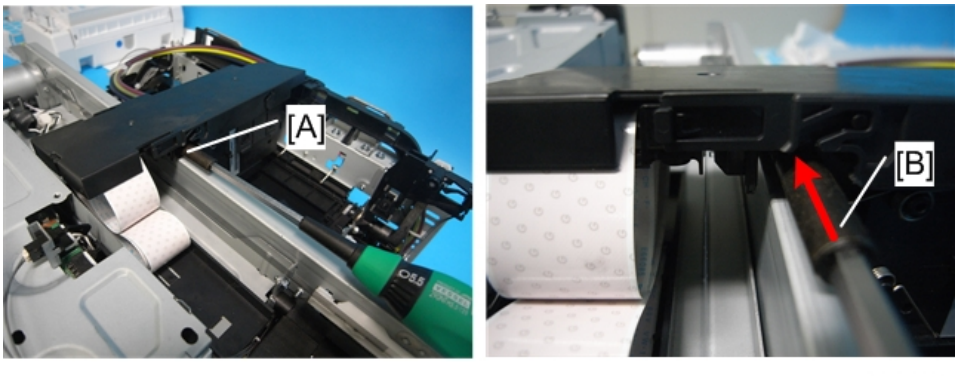
Remove:

- Scanner unit (page 96)
- Unlock the carriage (page 81)



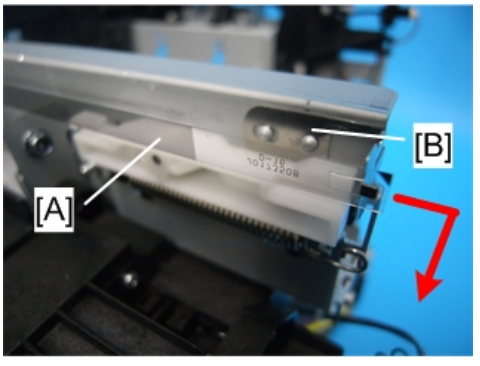
j0271066

1. Push the carriage unit [A] to the center.



j0271226

2. Insert the driver [B] in [A] between the guide rail and carriage, and then lift the carriage unit. This is necessary for engaging the horizontal encoder strip into the sensor's recess without making contact.

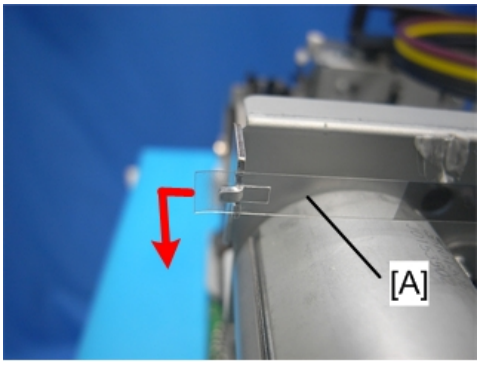


j0271067

3. On the right, pull the right end of the encoder strip [A] and disconnect it.

Important

- The encoder strip has a small metal bracket [B] attached to the end of the encoder strip. Be sure to remove this with the strip so it does not fall down into the machine.



j0271068

4. On the left, disconnect the left end of the strip [A].

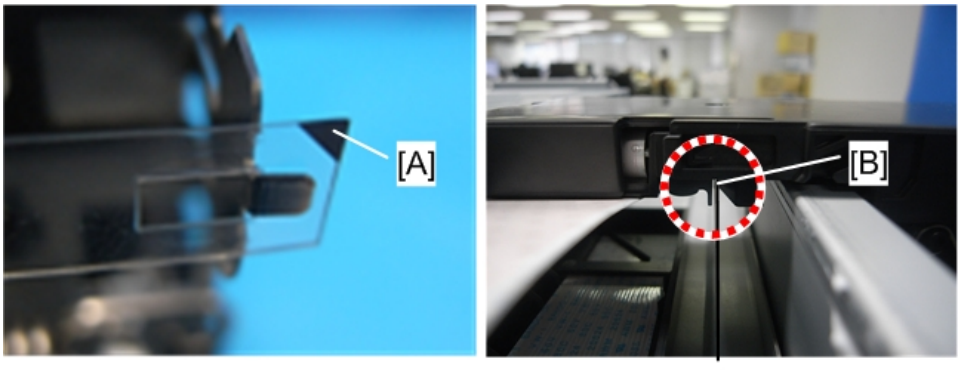
Note

- If the sensor for reading the horizontal encoder strip is stained, clean the sensor when you replace the strip.

Reinstallation

Important

- If you have removed the strip or if you are replacing the strip with a new one:

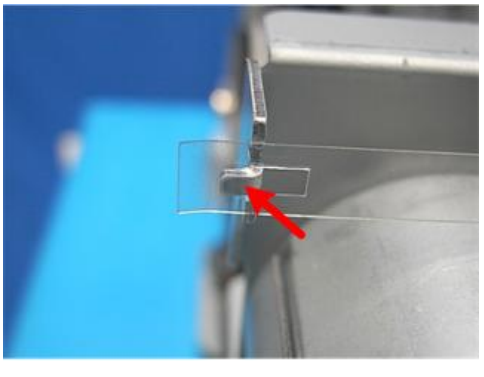


j0271069

- Hold the encoder strip with the black triangle [A] facing up.
- Pass the strip through the gap [B] of the sensor inside the carriage.

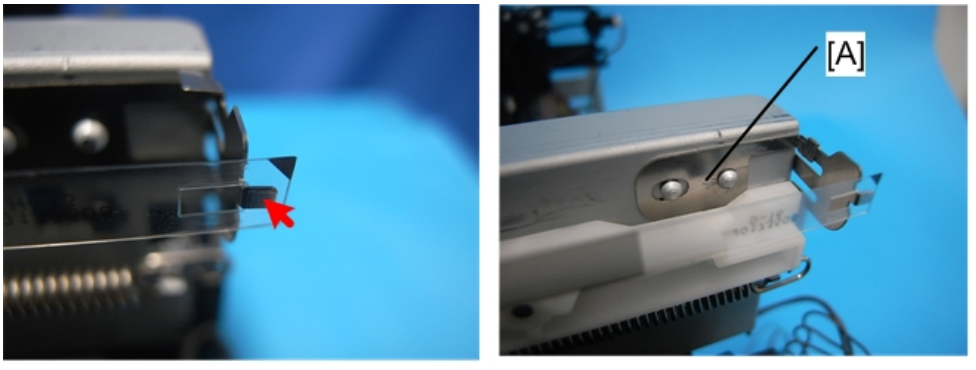
j0271232

1. Lifting the carriage, mount the new horizontal encoder strip.



j0271070

2. First, hook the strip's left end to the tab.

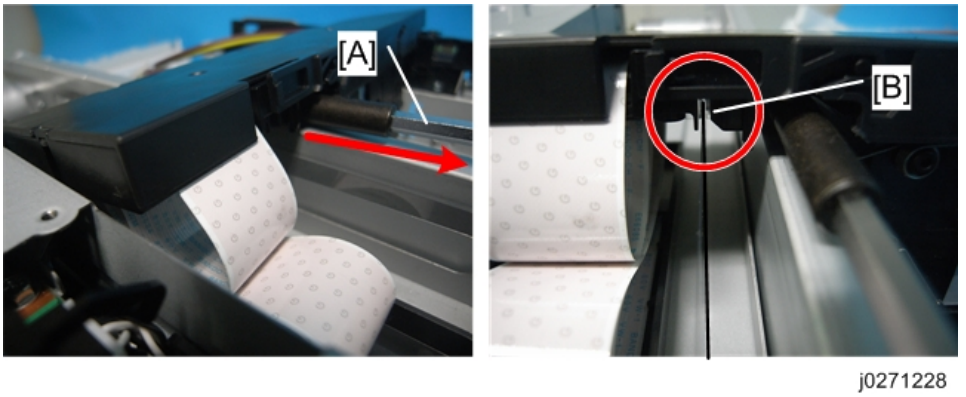


j0271071

3. Next, stretch to straighten the strip and hook the strip's right end to the tab.

Important

- Make sure the black triangle is facing up.
- You must re-attach the extension bracket [A].



j0271228

4. Pull out the driver [A], and then place the carriage back to its original position. Make sure that the horizontal encoder strip is engaged in the sensor's recess [B].

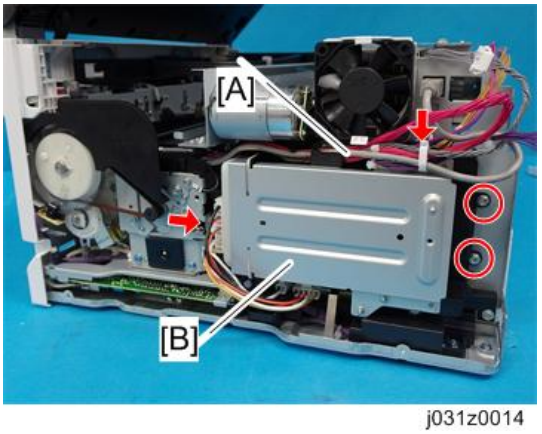
Boards

Battery Socket

Preparation:

Remove:

- Canopy cover (page 73)
- Front cover (page 74)



j031z0014

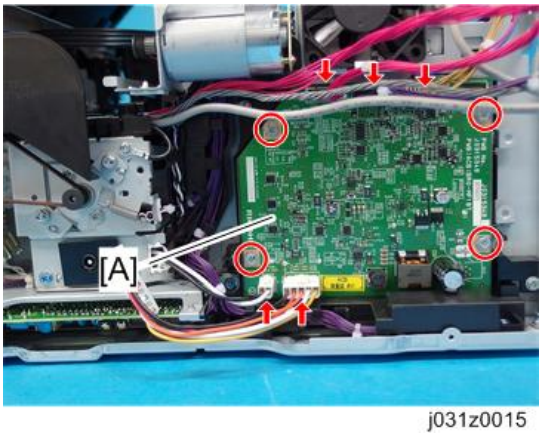
1. Take aside the harnesses [A] (x1).
2. Battery socket [B] (x2, x1)

ACB Board (AC adapter Battery selector Board)

Preparation:

Remove:

- Canopy cover (page 73)
- Front cover (page 74)
- Battery socket (page 127)



j031z0015

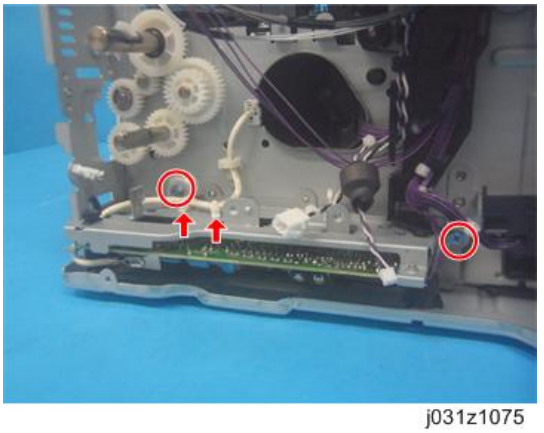
1. ACB board [A] (x5, x4)

HVPS

Preparation:

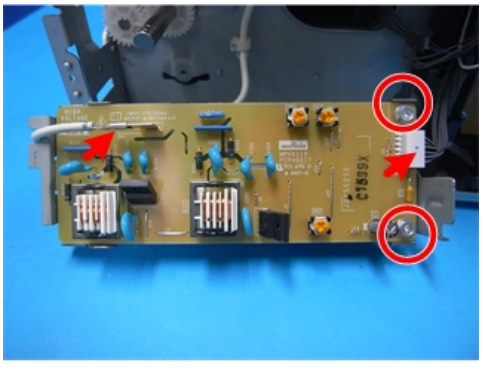
Remove:

- Scanner unit (page 96)
- Vertical encoder wheel (page 120)
- Vertical motor (page 138)
- Feed clutch (page 142)



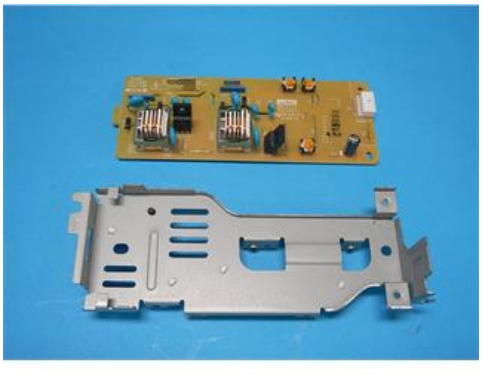
j031z1075

1. Turn the HVPS over together with its bracket (x2, x2).



j0271076

2. Remove the HVPS from its bracket (x2, x1, bayonet x1).



j0271077

Printer Engine CTL Board

Before Replacement

Before replacing the control board you should always print Service Summary and an Engine Summary Chart.

Important

- **You will need these reports to refer to previous settings that may require resetting.**

To print the Service Summary

1. Enter the Service Menu.
2. [▲] or [▼] "Printer Setting"> [OK].
3. [▲] or [▼] "Controller Setting"> [OK].
4. [▲] or [▼] "Service Summary"> [OK].

The list is printed.

To print the Engine Summary Chart:

Do **SP5-990-002** (Print SMC). (Printing requires about 2 minutes.)

1. Confirm that paper is loaded in the paper tray.
2. Enter the Service Menu.
3. [▲] or [▼] "Printer Setting"> [OK].
4. [▲] or [▼] "Engine Setting"> [OK].
5. Enter "**5990002**"> [OK].
6. Press [OK].
7. Press [OK].
   - Wait for the report to print (it does not start immediately).
   - Printing requires about 2 min.
8. Exit the Service Menu, and switch the machine off.

Note

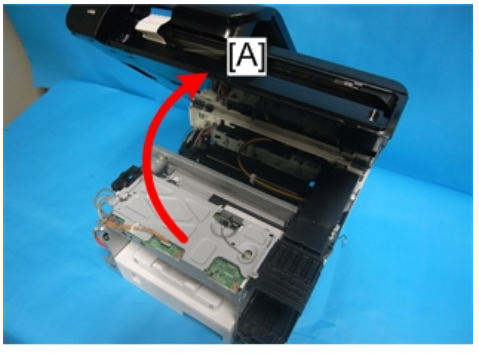
- For more details about these reports, please refer to Section "5. System Maintenance Reference".

CTL Board Replacement

Preparation:

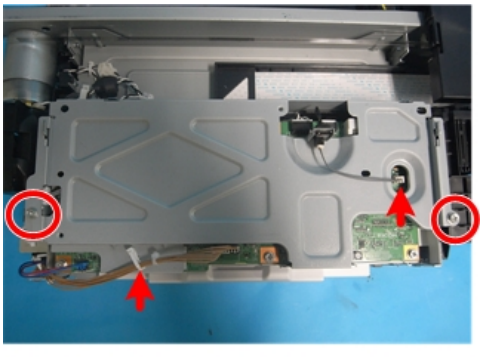
Remove:

- Left cover (page 72)
- Right cover (page 70)
- Canopy cover (page 73)
- Front cover (page 74)
- Ink cartridges



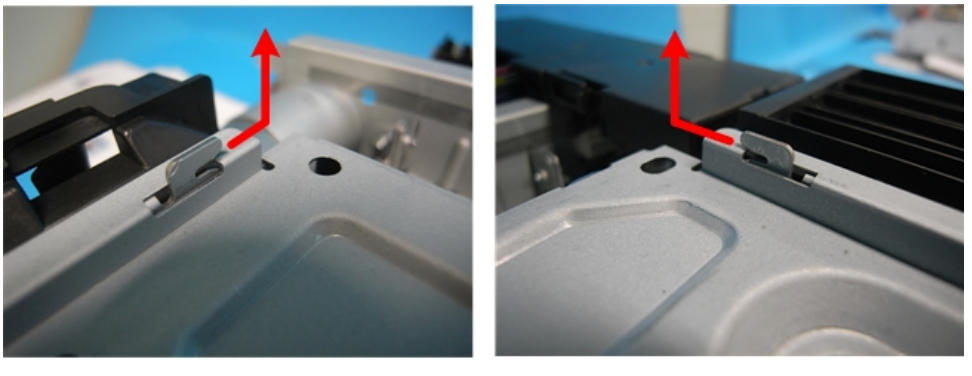
j0301079

1. Open the scanner unit [A].



j0301111

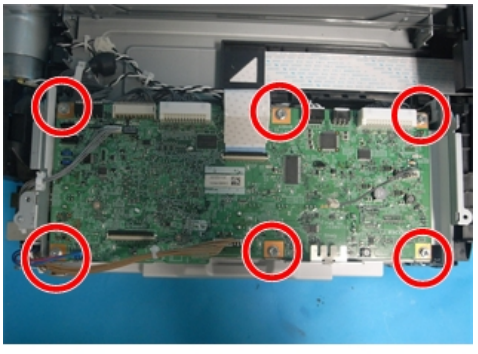
2. Remove the CTL Board cover (x1, x2, x1).



j0271208

Note

- Slide the cover, and then remove it. Make sure that the carriage is in the home position. Otherwise, the cover is blocked by the carriage.



j0301109

3. Remove the CTL Board (xAll, xAll, x6).

After Replacement

After replacing the CLT board, you need to specify the serial number, PnP code, and destination, and then initialize the VMRAM. Be sure to perform this in the order of (1) specifying the serial number, (2) specifying the PnP code and destination, and (3) initializing the VMRAM.

(1) Serial number

1. **Switch the machine on.**
2. **Enter the Service Menu.**
3. **[▲] or [▼] "Printer Setting"> [OK].**
4. **[▲] or [▼] "Controller Setting"> [OK].**
5. **[▲] or [▼] "Serial No.Edit"> [OK].**
6. **Enter the machine serial number.**
   - Press [▲] or [▼] to move the cursor vertically, press [OK] to select the digit you want to change (among 11 digits), press [▲] or [▼] to change the character, and then and then press [OK] to confirm the entry. The confirmed entry appears on the upper row of the display.
7. **After completing the entry, press [Escape].**
8. **Exit the Service Menu.**

(2) PnP code, Destination

1. **Enter the Service Menu.**
2. **[▲] or [▼] "Model Setting"> [OK].**
3. **Select the machine's model (area of use). > [OK].**

   If you change the model, the machine automatically clears the SRAM.
4. **Exit the Service Mode.**

SRAM Clear List

Settings			SRAM Clear
User Tools	Maintenance		-
	System Setting - General Features		Set to Default
	System Setting - Tray Paper Setting		Set to Default
	System Setting - Timer Setting	Date & Time	-
		Others	Set to Default
	System Setting - Interface Setting		Set to Default
	System Setting - File Transfer		Set to Default
	System Setting - Administortor Tools	Address Book Data	-
		Counter	-
		Others	Set to Default
	Others		Set to Default
Display	TX/RX Result (Activity Data)		Clear
Fax Data	Image Data for Fax		Clear
Service Mode	Adjust		-
	Soft Switch		-
	Clear Data		-
	Special Test		-
	H/W Test		-
	Report		-
	Model Setting		-
	Printer Setting		Set to Default

(3) Initializing the NVRAM

1. **Enter the Service Mode.**

2. [▲] or [▼] "Printer Setting"> [OK].
3. [▲] or [▼] "Engine Setting"> [OK].
4. Enter "5831001"> [OK].
5. Press [OK].
6. Press [OK].
7. Press [OK].
8. Exit the Service Mode.
9. Turn the machine off, and then turn it on again.

Changing destination and PnP code influences the following settings:

Destination

Settings	NA	EU
Paper Size	LT: SEF	A4:SEF
Time Zone	GMT-5	GMT 0
mm /inch	inch	mm
Page Size	LT: SEF	A4:SEF
Density	Dark	Standard
Form Line	60	64
Summer Time Setting	Inactive	Inactive
Month to Start the Summer Time	Mar.	Mar.
The Number of Times the Summer Time Started	2nd	2nd
Time to Start the Summer Time	2:00 AM	2:00 AM
Month to Finish the Summer Time	Nov.	Nov.
The Number of Times the Summer Time Finished	1st	1st
Time to Finish the Summer Time	2:00 AM	2:00 AM

PnP code

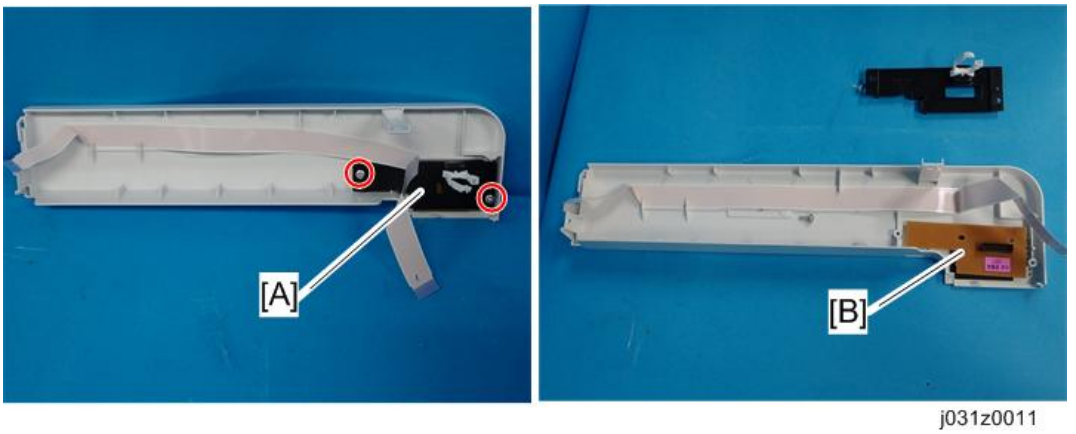
Settings	Ricoh	LANIER	SAVIN	NRG
Language	English (UK)	English (UK)	English (UK)	English (UK)
DHCPv4	Enable	Enable	Enable	Enable
SNMPv1 Community Name 2.	admin	admin	admin	admin

LED Board

Preparation:

Remove:

- Left cover (page 72)
- Right cover (page 70)
- Canopy cover (page 73)
- Front cover (page 74)



j031z0011

1. LED board holder [A] (x2)
2. LED board [B]

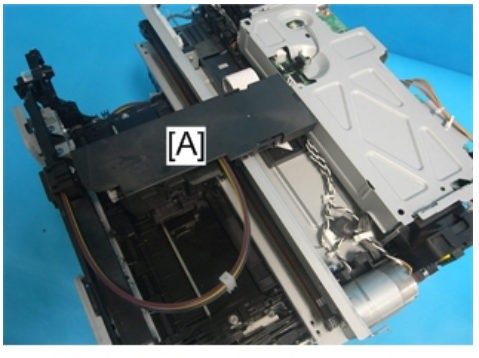
Motors

Horizontal Motor

Preparation:

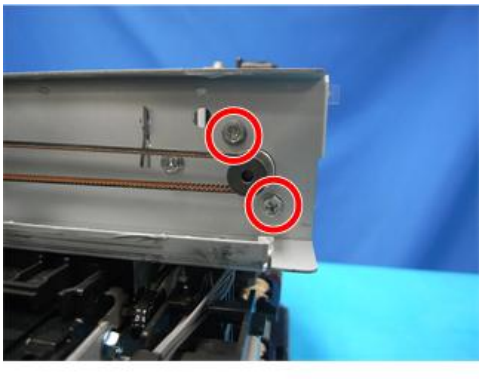
Remove:

- Scanner unit (page 96)
- Rear cover (page 68)
- Vertical encoder wheel (page 120)
- Fan, Fan bracket (page 140)
- Unlock carriage unit (page 81)



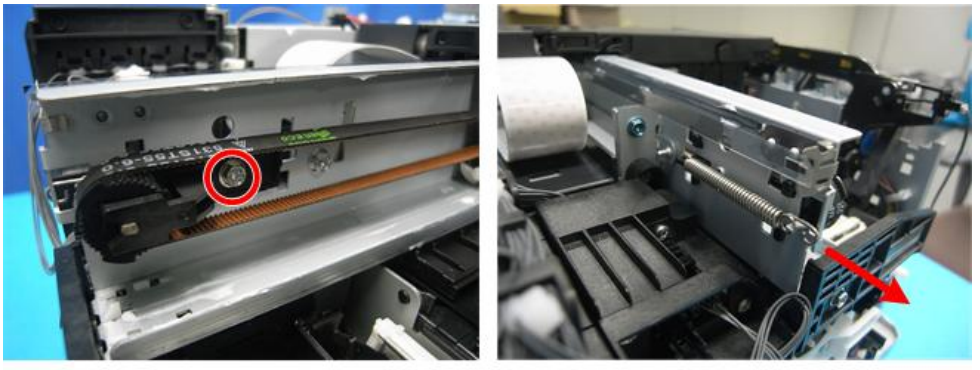
j0301110

1. Push the carriage [A] to the center.



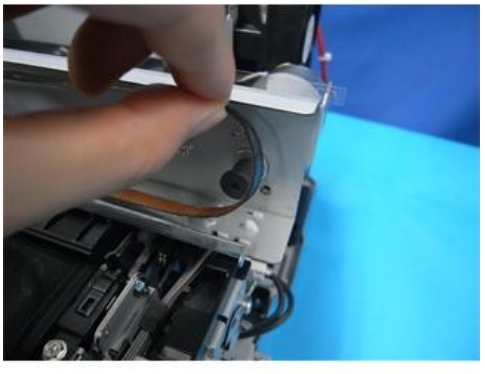
j0271081

2. Remove the screws at the right end (x2).



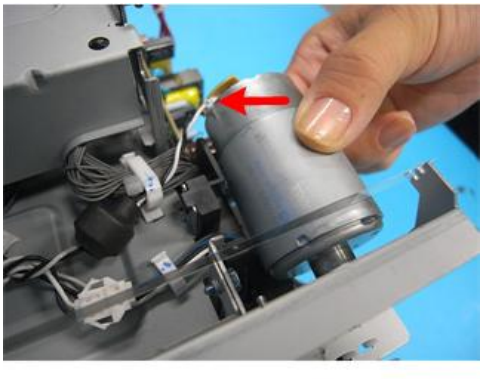
j0271082

3. Remove the screw at the left end, loosen the belt's tension, and then remove the spring. (x1, x1)



j0271083

4. Remove the timing belt on the right end.



j0271084

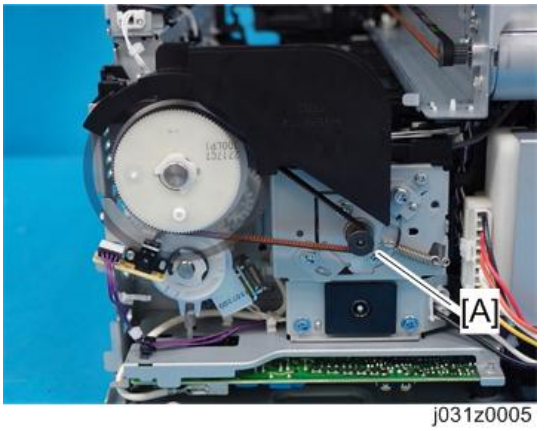
5. Remove the motor (x1).

Vertical Motor

Preparation:

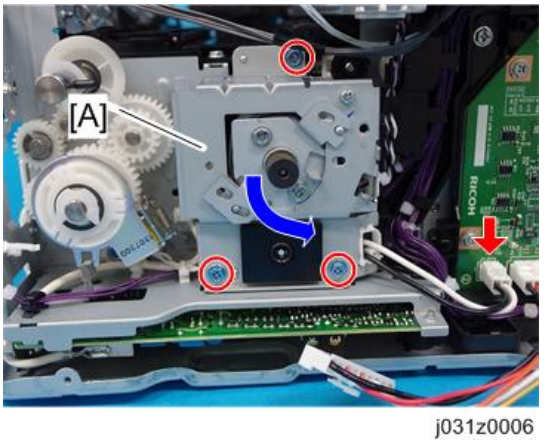
Remove:

- Scanner unit (page 96)
- Rear cover (page 68)
- Vertical encoder wheel (page 120)
- Battery socket (page 127)



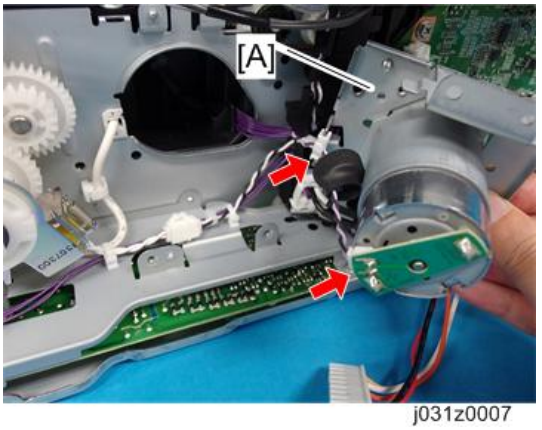
j031z0005

1. The vertical motor [A] is on the left side of the machine, behind the left frame.



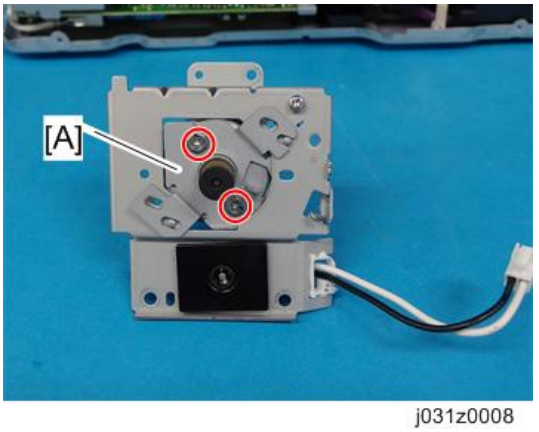
j031z0006

2. Open the DC socket bracket [A] (x3, x1).



j031z0007

3. Take out the DC socket bracket [A] (x1, x1).

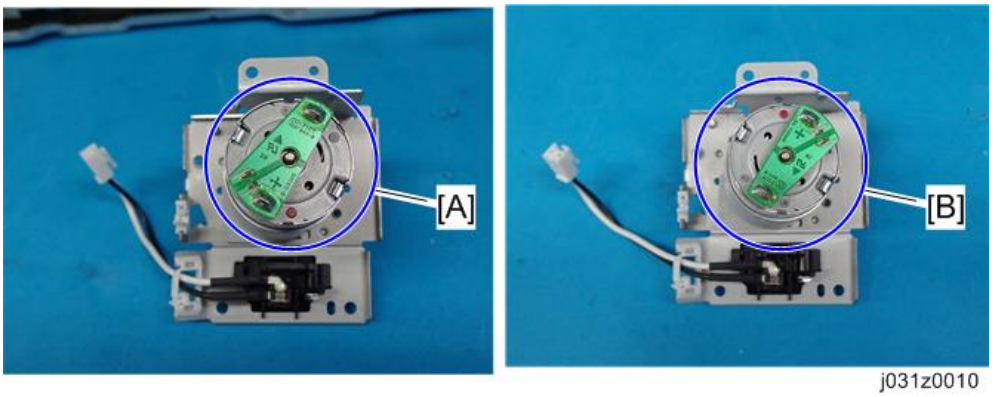


j031z0008

4. Separate the vertical motor and motor bracket [A] (x2).

j031z0009

Re-installation:



j031z0010

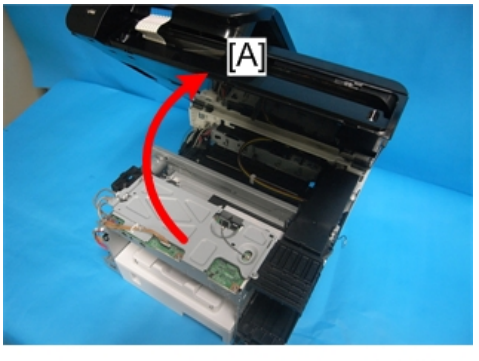
Make sure that the vertical motor is set as shown [A] when attaching the vertical motor to the motor bracket. If you set the vertical motor as shown [B], the harness from the controller board does not reach the connector on the motor drive board.

Fan

Preparation:

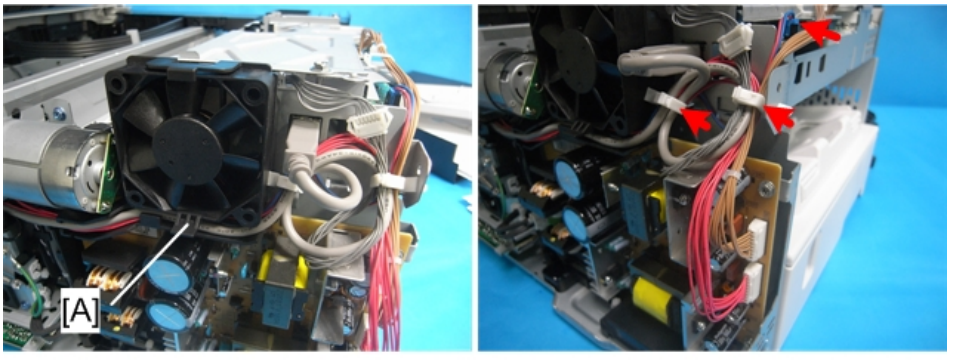
Remove:

- Front cover (page 74)
- Right cover (page 70)
- Left cover (page 72)
- Canopy cover (page 73)



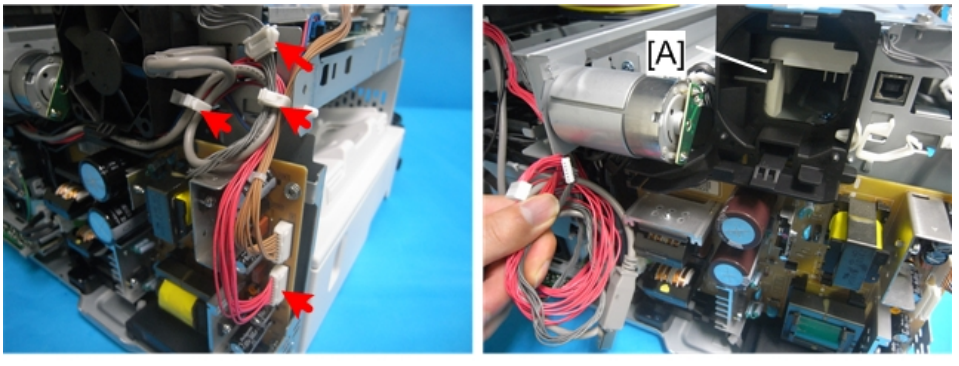
j0301079

1. Open the scanner unit [A].



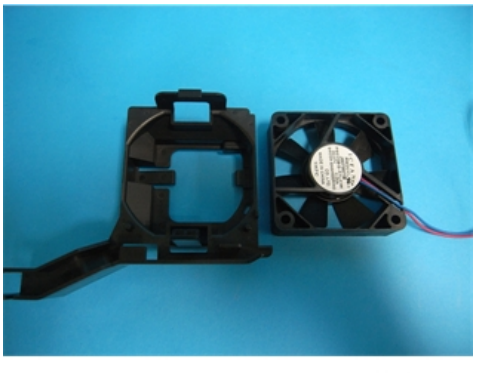
j0301093

2. Pressing the tab [A], remove the fan from its bracket (x1, x2).



j0301094

3. Remove the scanner cables, and then remove the bracket while pressing the tab [A] (x2, x2).



j0271095

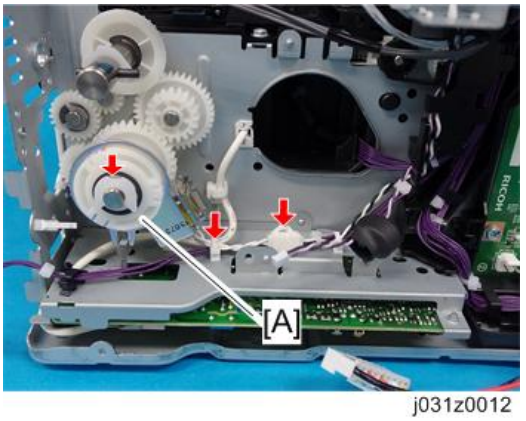
Clutches

Feed Clutch

Preparation

Remove:

- Scanner unit (page 96)
- Rear cover (page 68)
- Vertical encoder wheel (page 120)
- Vertical motor (page 138)

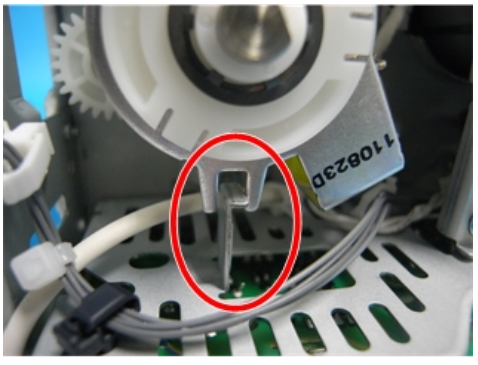


j031z0012

1. Feed clutch [A] (x1, x1, x1)

j0271099

Re-installation



j0271209

1. Fasten the clutch with the machine's protruding part positioned between the clutch guide.

Transport Belt

Transport Belt, Charge Roller, Pressure Plate, Pressure Rollers

Preparation

Remove:

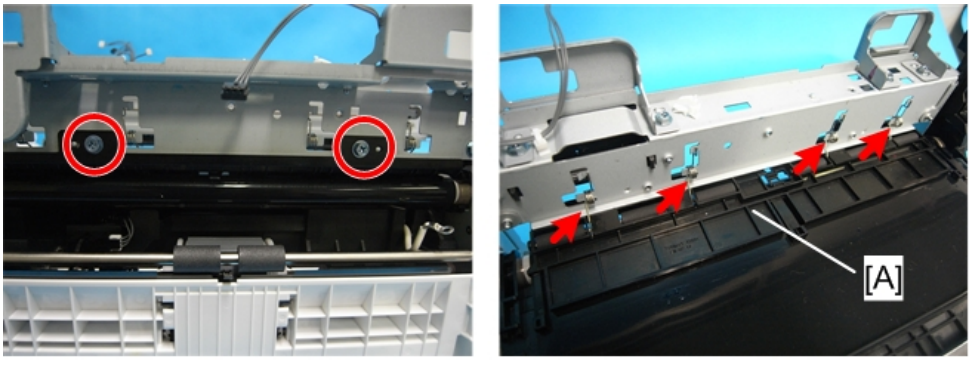
- Scanner unit (page 96)
- Rear cover (page 68)
- 2nd registration sensor (page 154)
- Bypass drawer connector (page 165)
- Vertical encoder wheel (page 120)
- Carriage unit + ink supply unit

j0271138

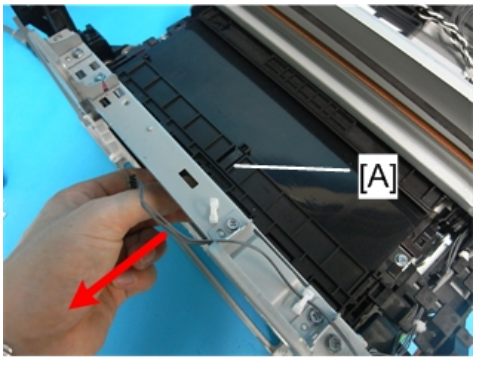
1. Open the charge roller cover (x2).

j0271139

2. Take out the charge roller and the cover (x1).

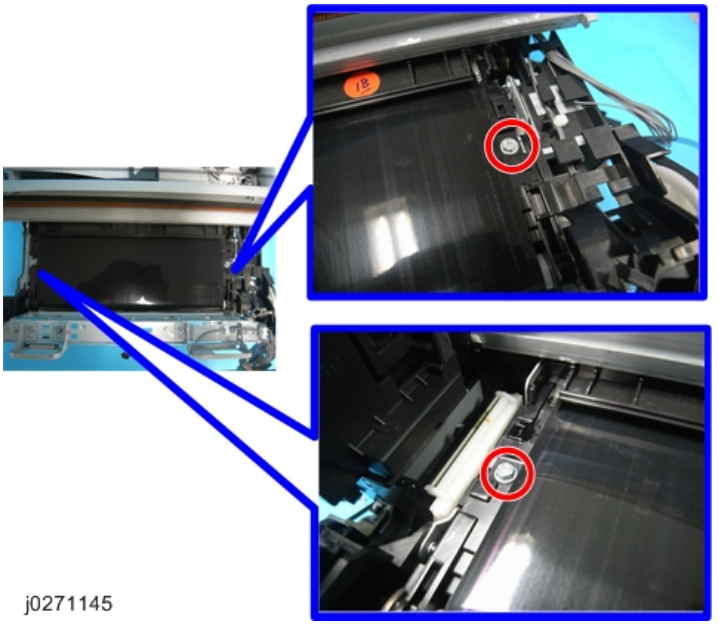


j0271143



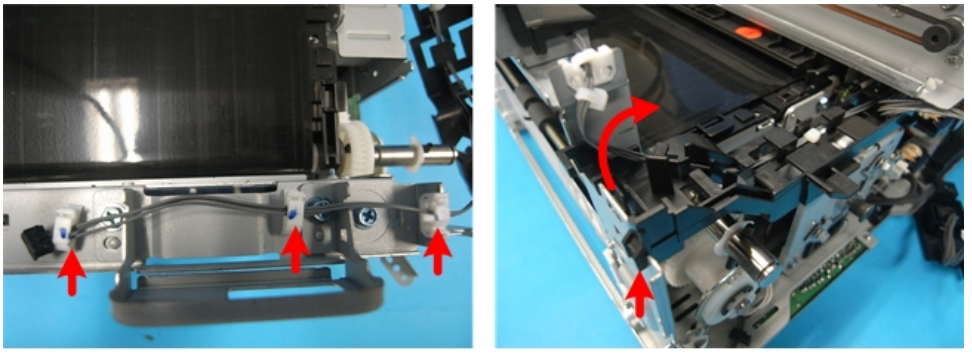
j0271144

3. Pull the pressure plate [A] out to remove it (x2, Spring x4).



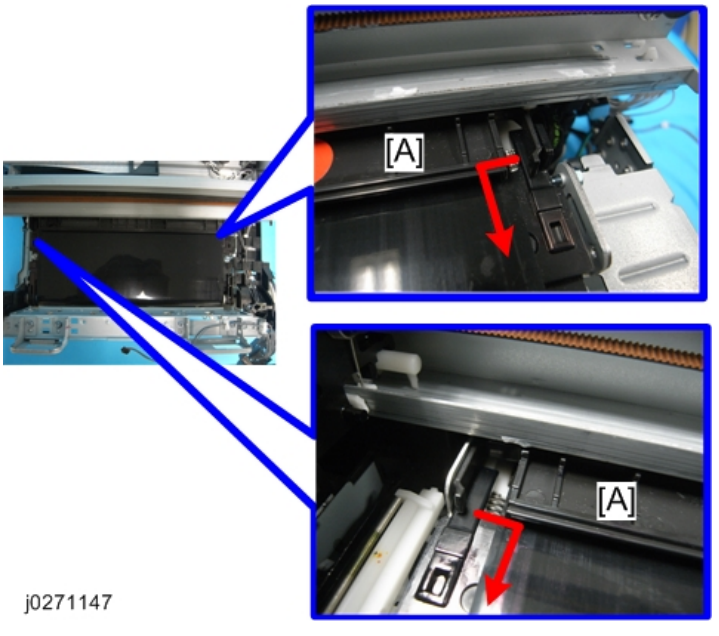
j0271145

4. Remove the transport belt screws (x2).



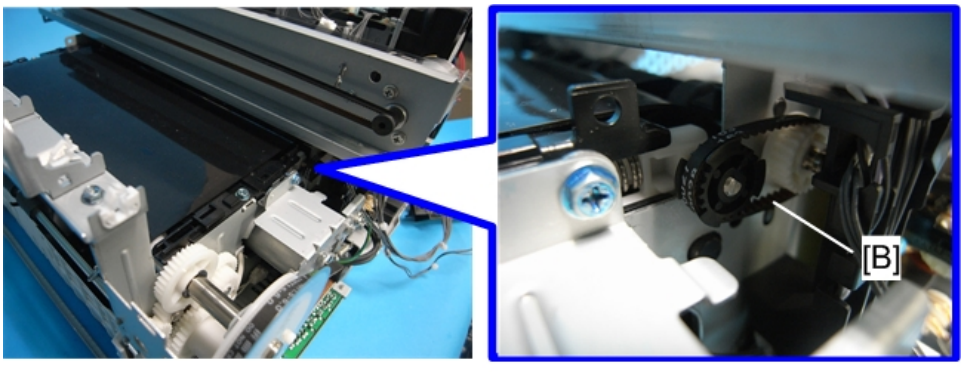
j0271146

5. Remove the harness holders (x3, x1).



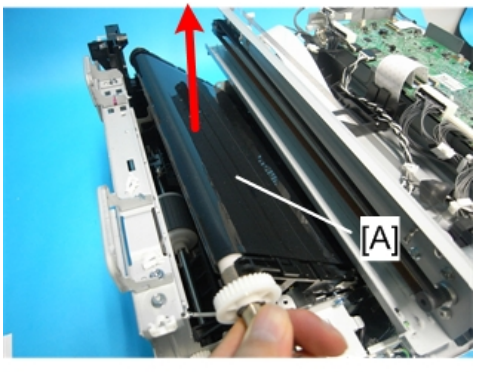
j0271147

6. Remove the exit guide [A].



j0271148

7. Remove the timing belt [B] (x1).



j0271211

8. Remove the transport belt [A].

j0271149

Sensors, Switches

Vertical Encoder Sensor

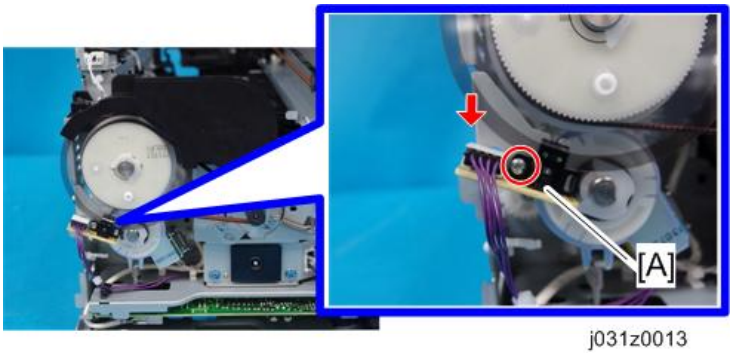
Preparation:

Remove:

- Scanner unit (page 96)
- Rear cover (page 68)

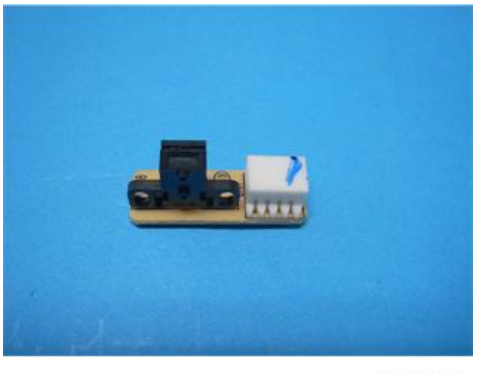
Important

- Work carefully to avoid bending or scratching the edge of the vertical encoder wheel.



j031z0013

1. The vertical encoder sensor is near the left rear corner of the machine below the vertical encoder wheel.
2. Remove the vertical encoder sensor [A] (x1, x1).



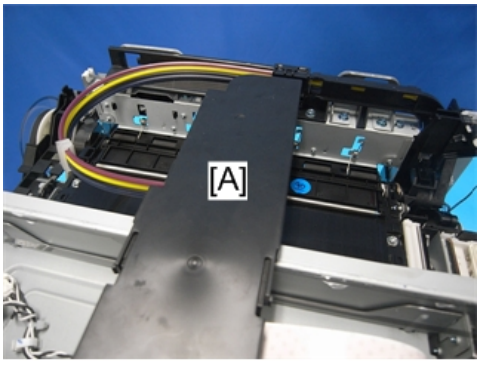
j0271101

Ink Level Sensor

Preparation:

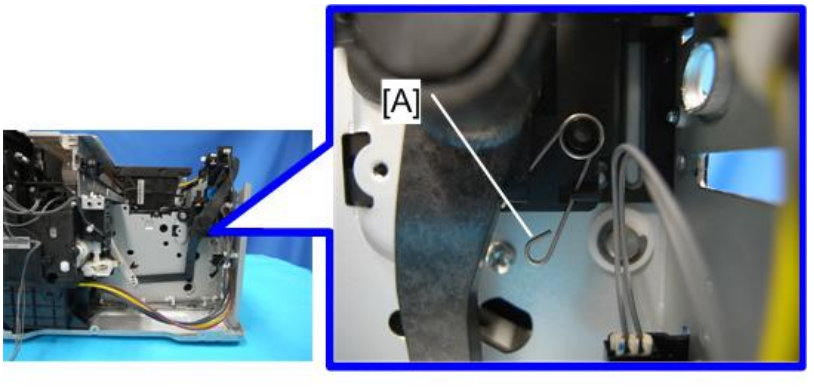
Remove:

- Scanner unit (page 96)
- Rear cover (page 68)
- Maintenance unit (page 114)
- Right ink sump (page 117)
- Unlock the carriage (page 81)

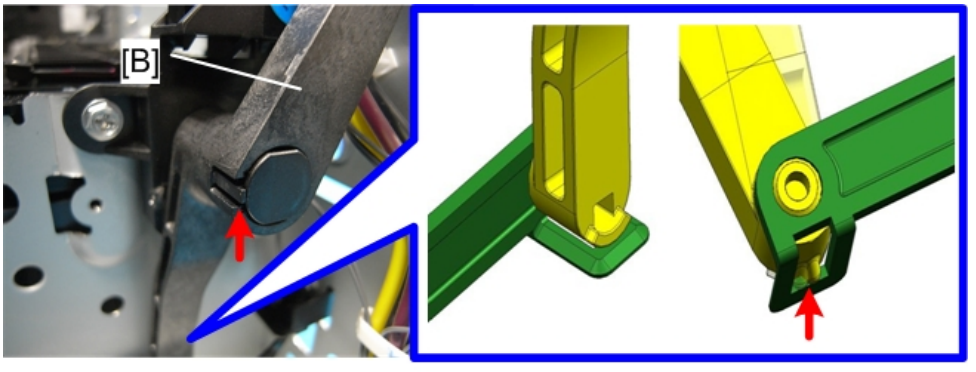


j0271102

1. Push the carriage unit [A] to the center.

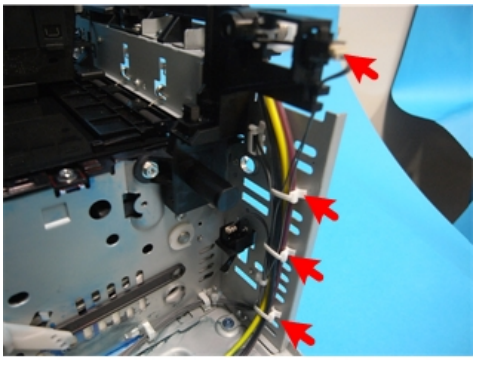


j0271103



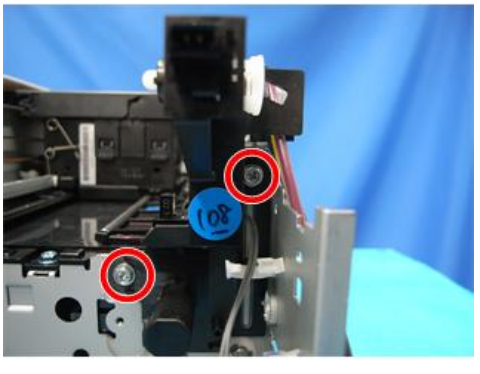
j0271104

2. Remove the spring [A], and then remove the air release lever [B] (x2).



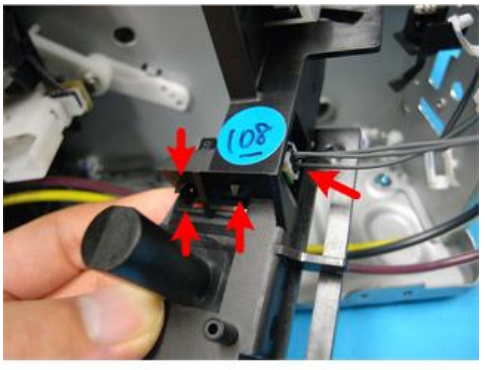
j0271105

3. Remove the clamps holding the ink tubes, remove the connector, and then move the ink tubes aside to expose the screw holes (x1, x3).



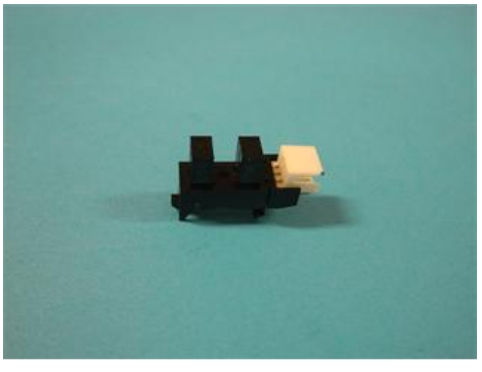
j0271106

4. Remove the screws (x2).



j0271107

5. Remove the ink level sensor (x1, x3).



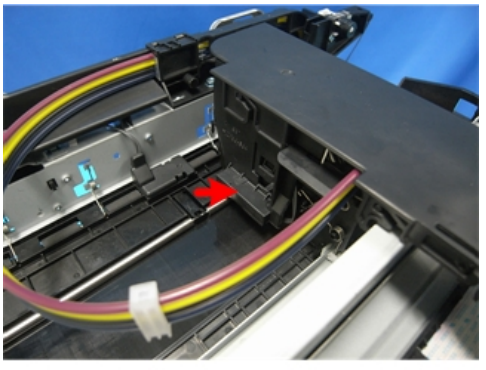
j0271108

1st Registration Sensor

Preparation:

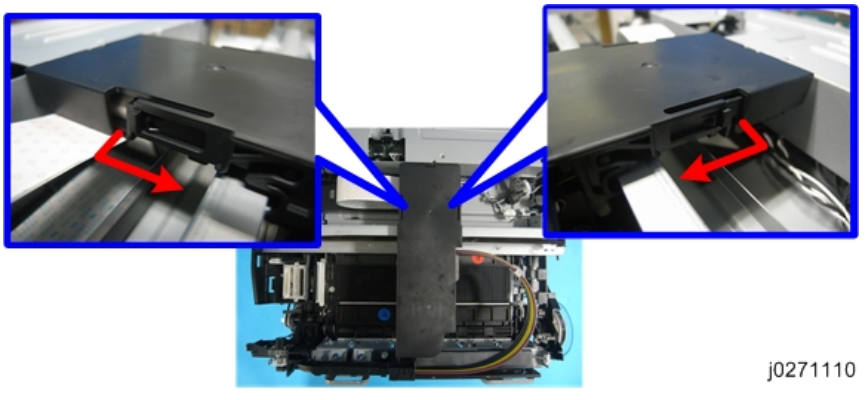
Remove:

- Scanner unit (page 96)
- Unlock the carriage (page 81)



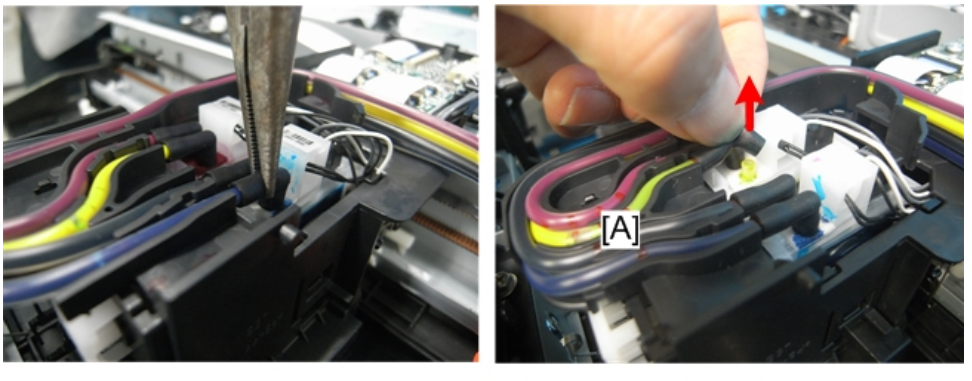
j0271109

1. The 1st registration sensor is located on the side of the carriage unit.
2. Push the carriage to the center.



j0271110

3. Remove the carriage top cover.

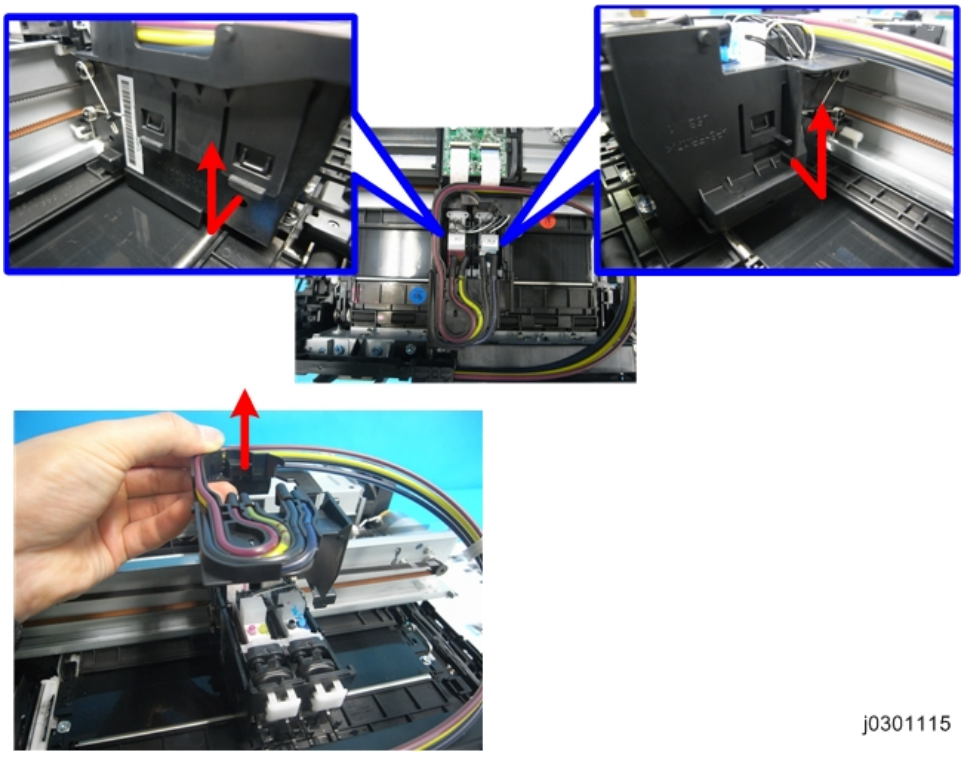


j0301116

4. Disconnect the ink tubes.

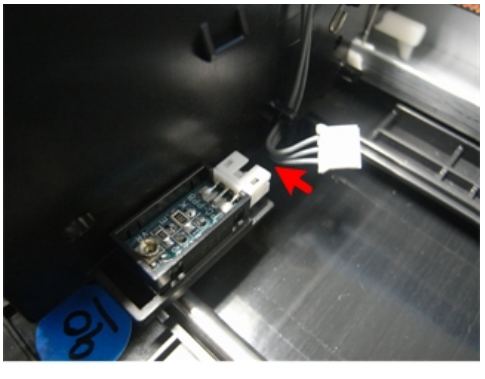
   Before you disconnect the ink tubes, squeeze their connecting parts with fingers or radio pliers to empty their contents into the print head tanks, so as to prevent the ink from dropping.

Make sure not to pull the ink tubes out of the tube guide [A].



j0301115

5. Remove the carriage side cover.

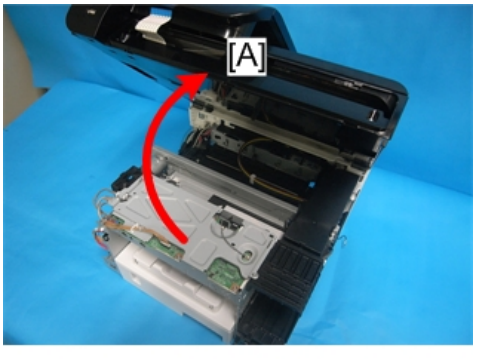


j0271113

6. Remove the 1st Registration Sensor (x1, x2).

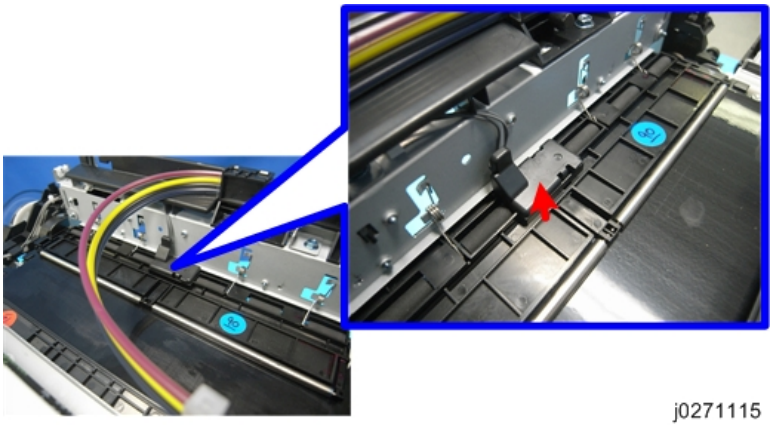
j0271114

2nd Registration Sensor



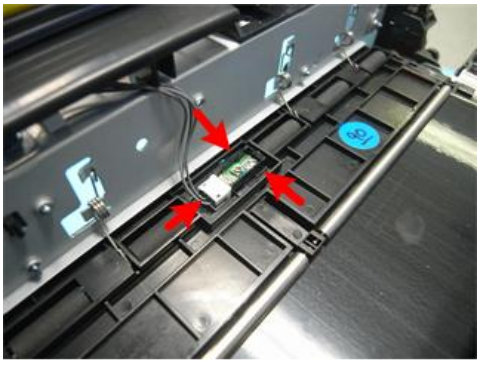
j0301079

1. Open the scanner unit [A].



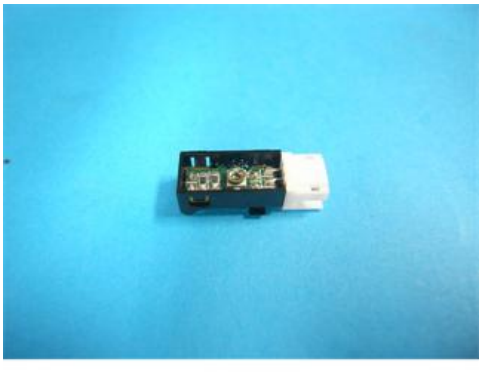
j0271115

2. The 2nd registration sensor is located on the pressure plate.
3. Remove the cover.



j0271117

4. Remove the 2nd registration sensor (x1, x2).



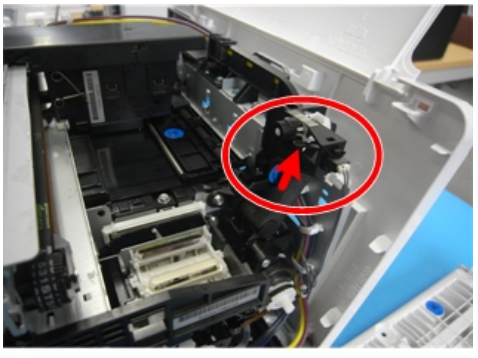
j0271116

Air Purge Detection Switch

Preparation:

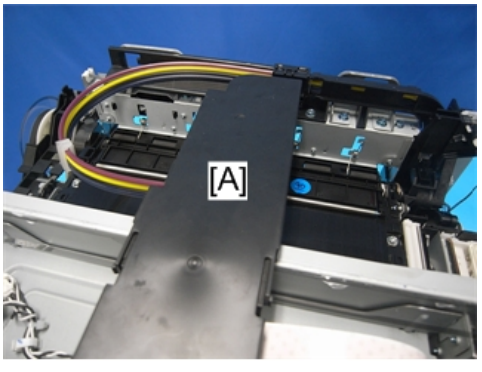
Remove:

- Scanner unit (page 96)
- Rear cover (page 68)
- Unlock the carriage (page 81)



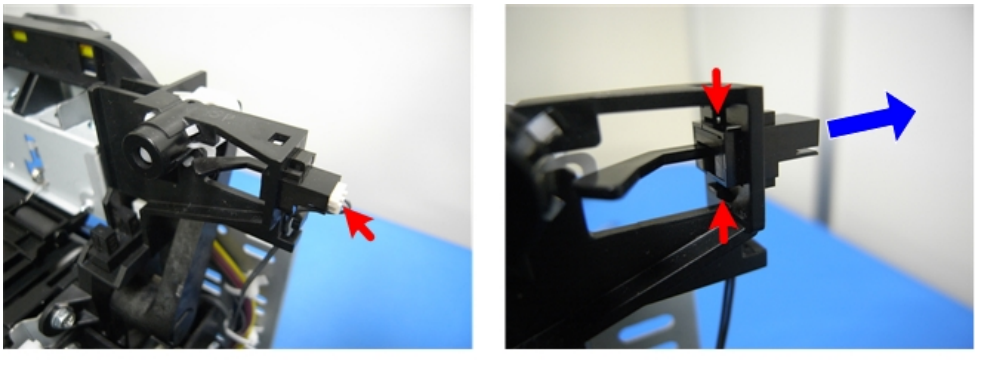
j0271175

1. The air purge detection switch is located at the recess of the carriage home position.



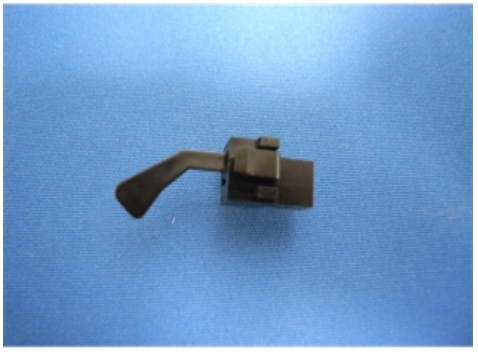
j0271102

2. Push the carriage unit [A] to the center.



j0271176

3. Remove the air purge detection switch (x1, x2).



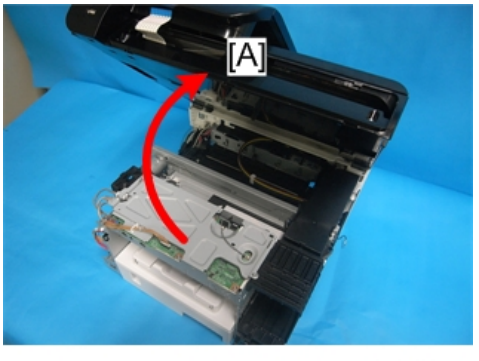
j0271177

Scanner Unit Switch

Preparation:

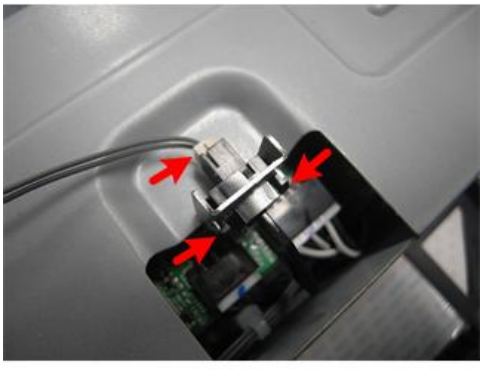
Remove:

- Canopy cover (page 73)
- Right cover (page 70)
- Left cover (page 72)



j0301079

1. Open the scanner unit [A].
2. The scanner unit switch is located on the CTL board.



j0271119

3. Remove the switch (x1, x2).

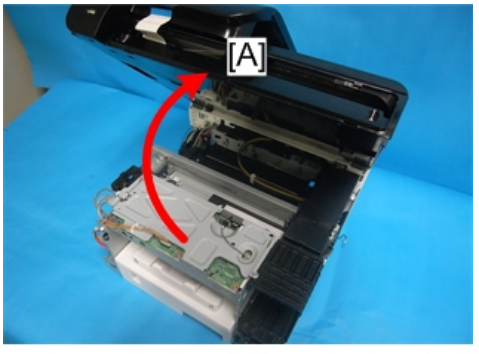
j0271120

Right Front Cover Switch

Preparation:

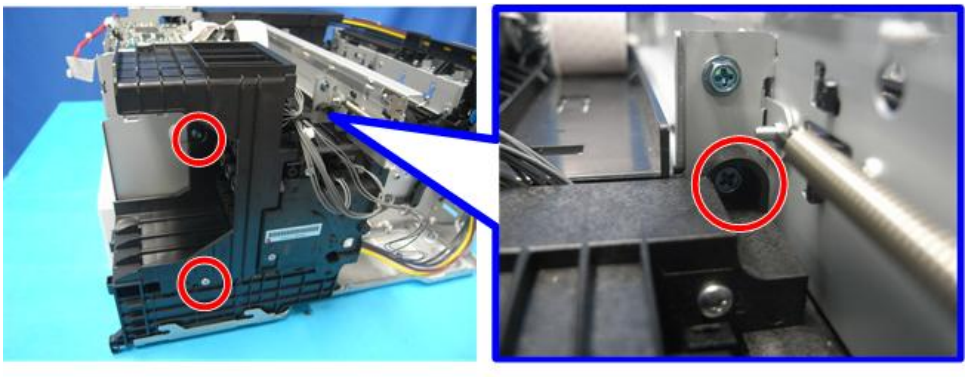
Remove:

- Left, Right, Canopy, Front cover (page 66 "Covers")
- CTL board cover (page 129)
- Maintenance unit (page 114)
- Right ink sump (page 117)
- Ink cartridges



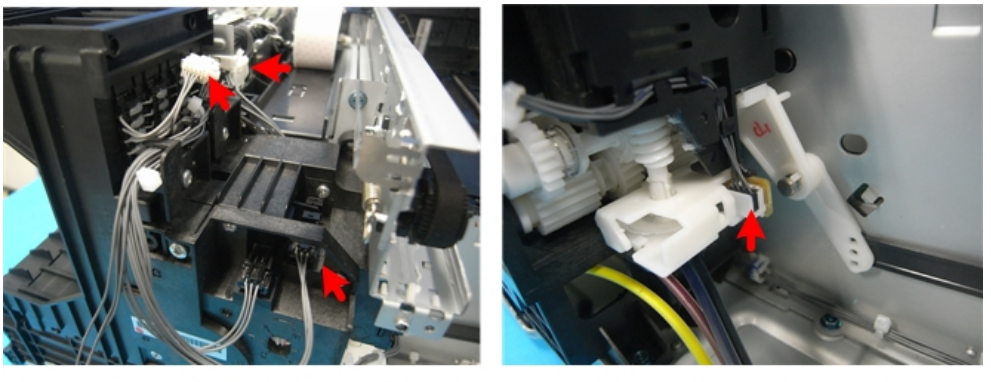
j0301079

1. Open the scanner unit [A].
2. Push the carriage to the left side of the machine.



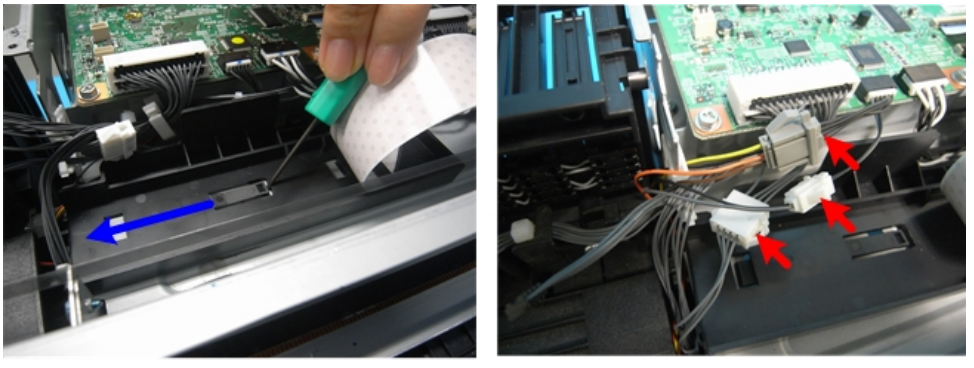
j0271121

3. Remove the screws (x3).



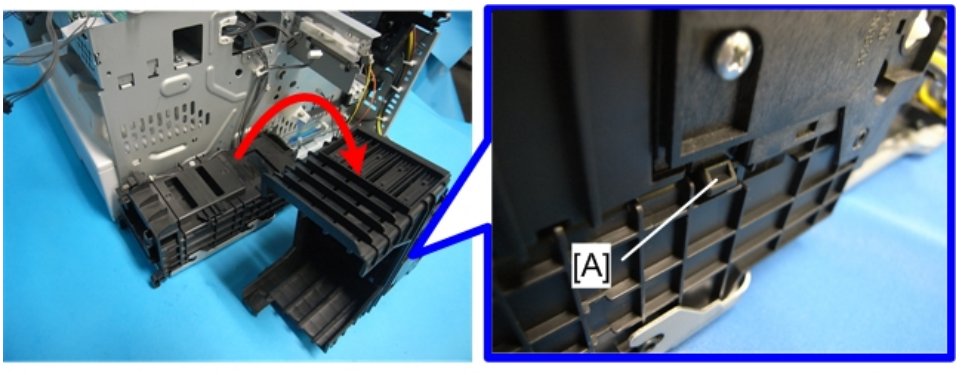
j0271122

4. Remove the connectors (x3, x1).



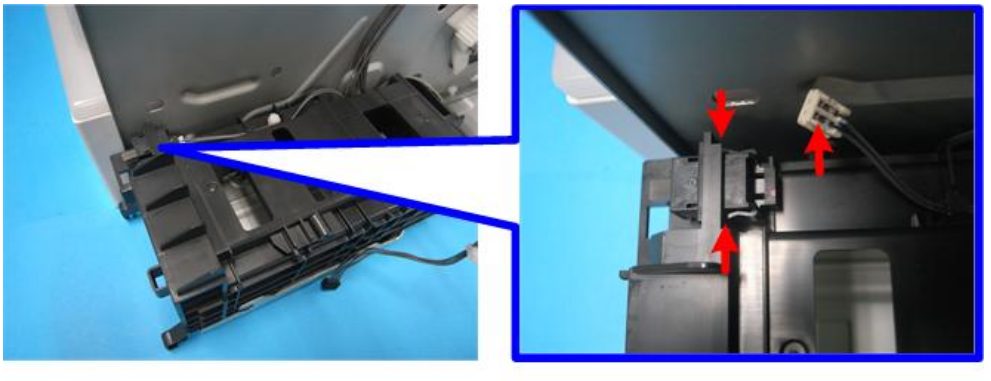
j0271123

5. Unfasten the FFC holder, and then remove the connectors at the bottom of the CTL board (x3).



j0271124

6. Check that all connectors connected to the ink supply unit have been disconnected, and then remove the ink supply unit (it is not necessary to disconnect the ink tubes). Before you remove the unit, release the lock [A].



j0271125

7. Remove the switch (x1, x2).

j0271126

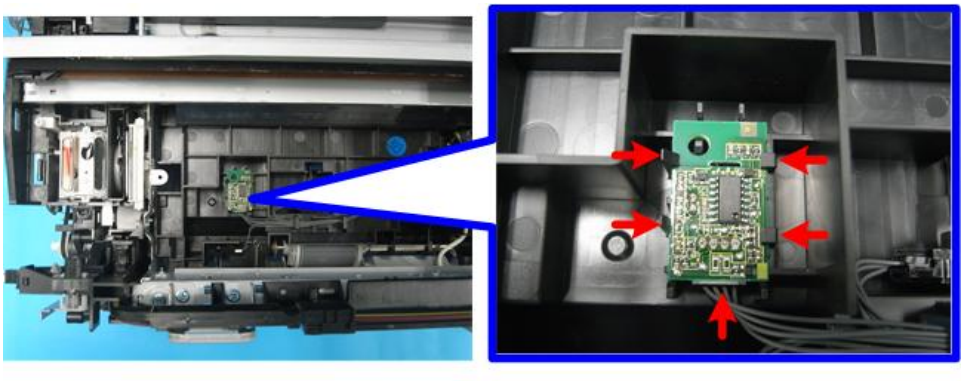
8. After re-installing the maintenance unit, execute manual cleaning.

Temperature/Humidity Sensor

Preparation:

Remove:

- Scanner unit (page 96)
- All covers (page 66)
- 2nd registration sensor (page 154)
- Bypass drawer connector (page 165)
- Vertical encoder wheel (page 120)
- Transport belt (page 144)



j0271150

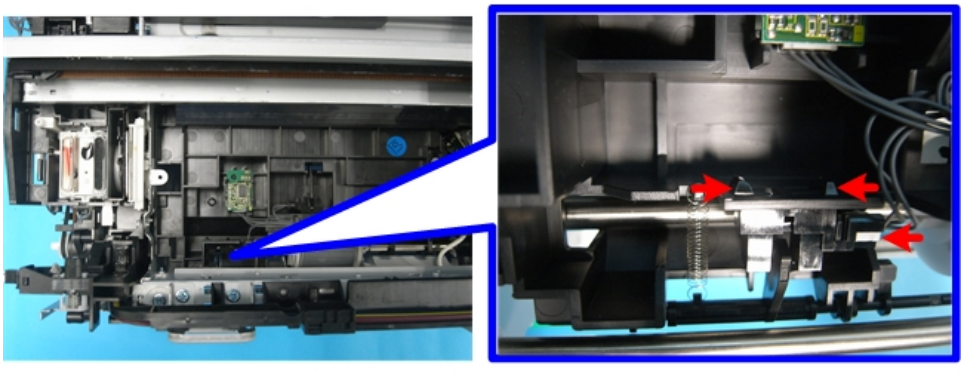
1. Remove the temperature/humidity sensor (x1, x4).

Trailing Edge Sensor

Preparation:

Remove:

- Scanner unit (☛page 96)
- All covers (☛page 66)
- 2nd registration sensor (☛page 154)
- Bypass drawer connector (☛page 165)
- Vertical encoder wheel (☛page 120)
- Transport belt (☛page 144)



j0271151

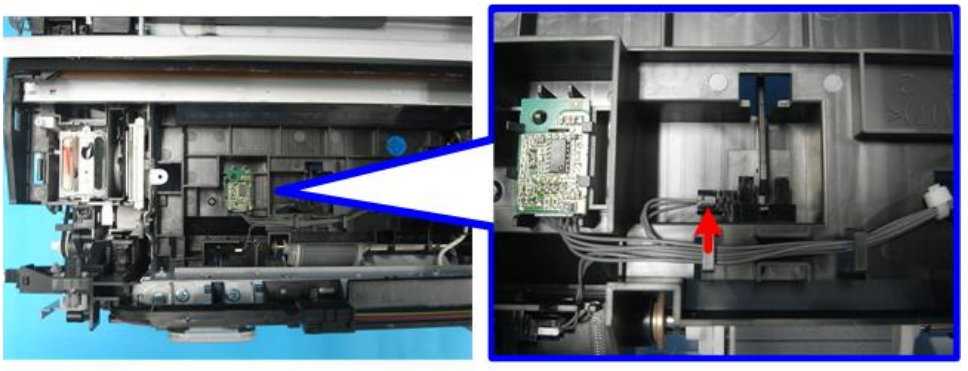
1. Remove the trailing edge sensor (x1, x3).

Paper End Sensor

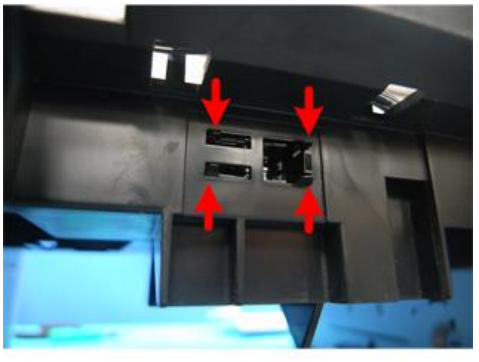
Preparation:

Remove:

- Scanner unit (☛page 96)
- All covers (☛page 66)
- 2nd registration sensor (☛page 154)
- Bypass drawer connector (☛page 165)
- Vertical encoder wheel (☛page 120)
- Transport belt (☛page 144)
- Feed Clutch (☛page 142)
- Paper feed roller (☛page 171)



j0271152



j0271153

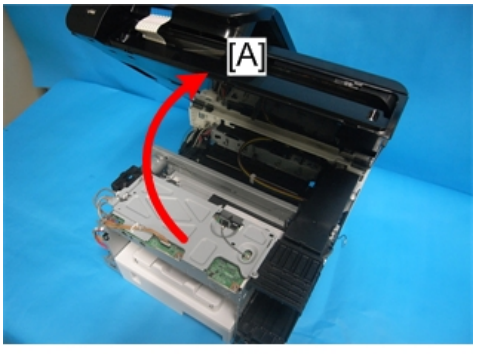
1. Remove the paper end sensor (x1, x4).
2. The hooks can be exposed by removing the paper feed roller.

Duplex Unit Set/Cover Open Switch

Preparation

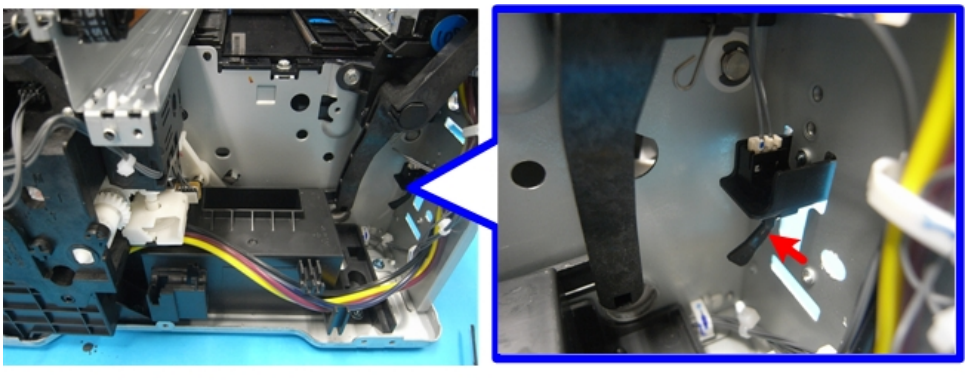
Remove:

- Right cover (page 70)
- Left cover (page 72)
- Canopy cover (page 73)
- Maintenance unit (page 114)



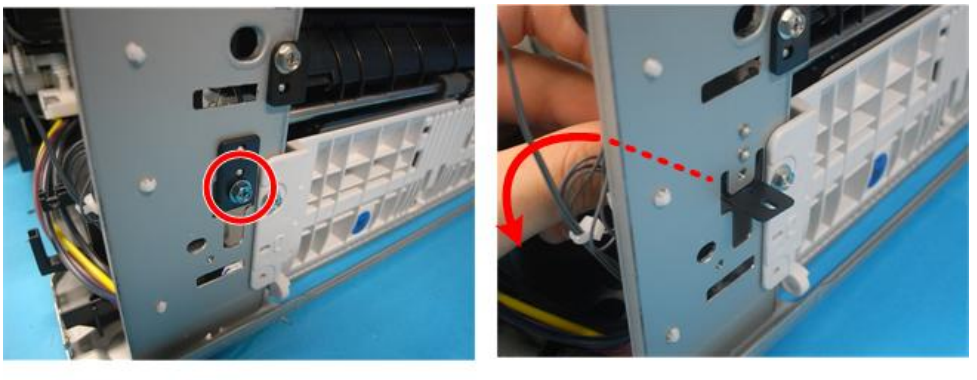
j0301079

1. Open the scanner unit [A].
2. Push the carriage to the center.



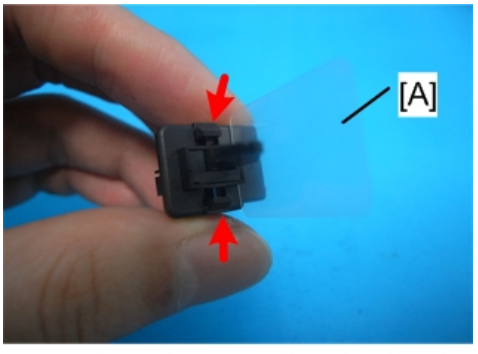
j0271127

3. The duplex unit set switch is located at the machine's right rear corner.
4. Remove the connector (x1).



j0271128

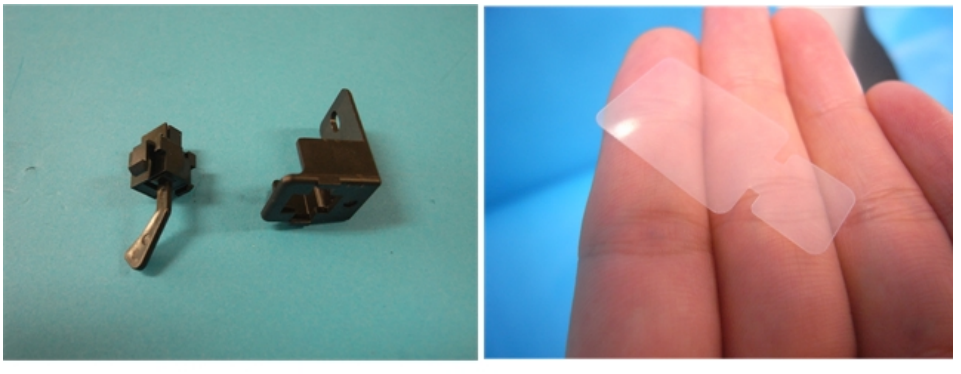
5. Remove the bracket at the rear side (x1).



j0301102

[A] Film for stabilizing detection

6. Separate the bracket and switch (☛ x2).



j0301103

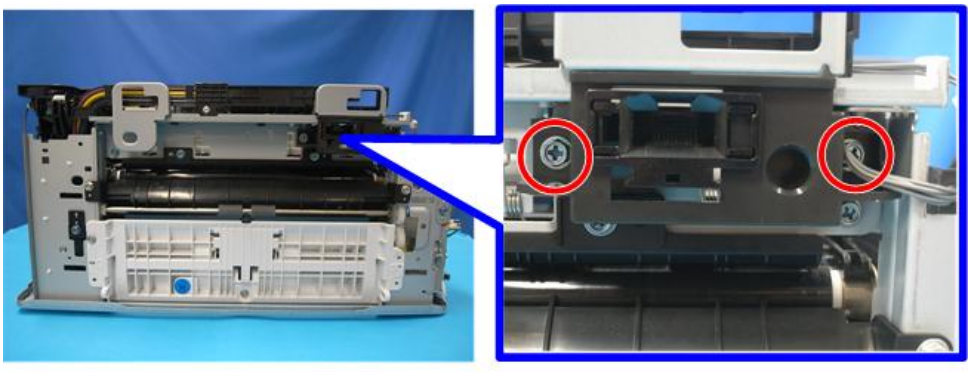
7. After re-installing the maintenance unit, execute manual cleaning.

Bypass Drawer Connector

Preparation

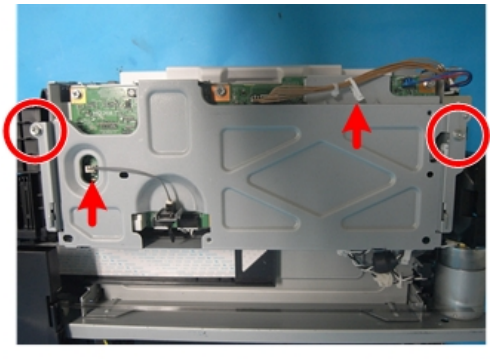
Remove:

- Scanner unit (☛page 96)
- Rear cover (☛page 68)
- Fan, Fan bracket (☛page 140)
- Vertical motor (☛page 138)



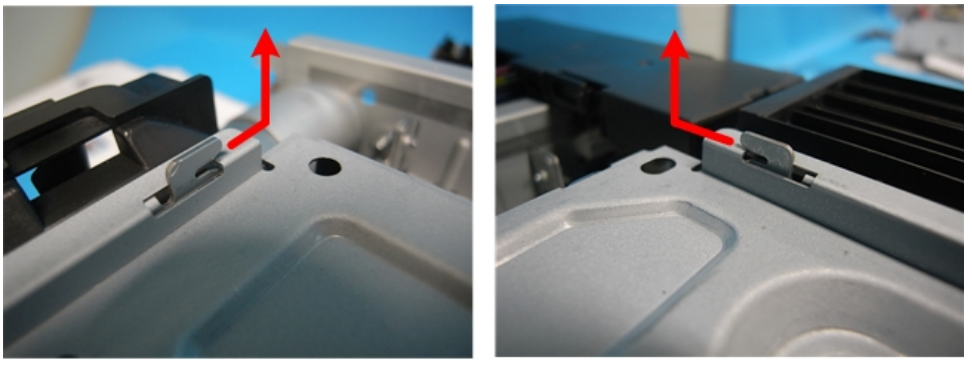
j0271131

1. Remove the bracket (x2)



j0301112

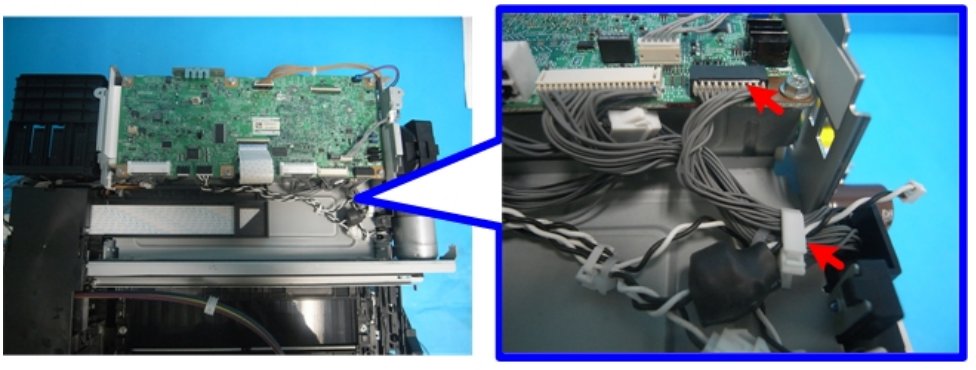
2. Remove the CTL Board cover (x2, x1, x1).



j0271208

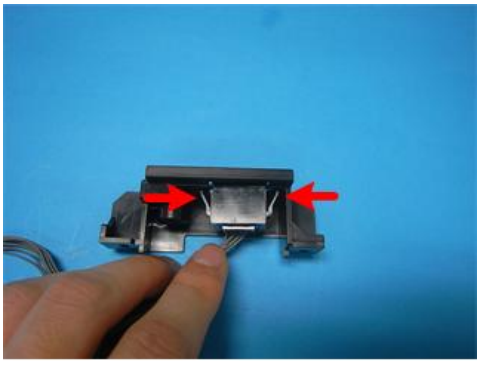
Note

- Slide the cover, and then remove it. Make sure that the carriage is in the home position. Otherwise, the cover is blocked by the carriage.



j0301113

3. Remove the multi bypass tray connectors (x1, x1).



j0271134

4. Separate the drawer connector and its bracket (x2).

j0271135

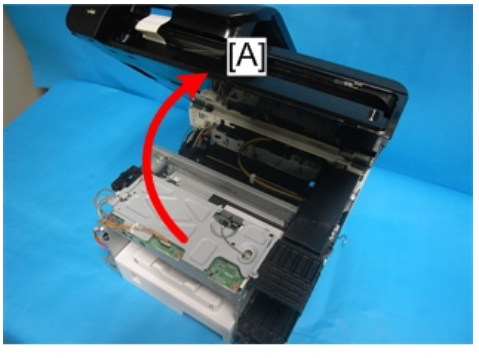
Drive Switching Module

The drive motor, drive switching motor, drive switching position sensor, and maintenance unit control sensor are mounted in the drive switching module.

Preparation

Remove:

- Left, Right, Canopy, Front cover (page 66)
- Maintenance unit (page 114)
- Ink cartridges
- CTL board cover (page 129)

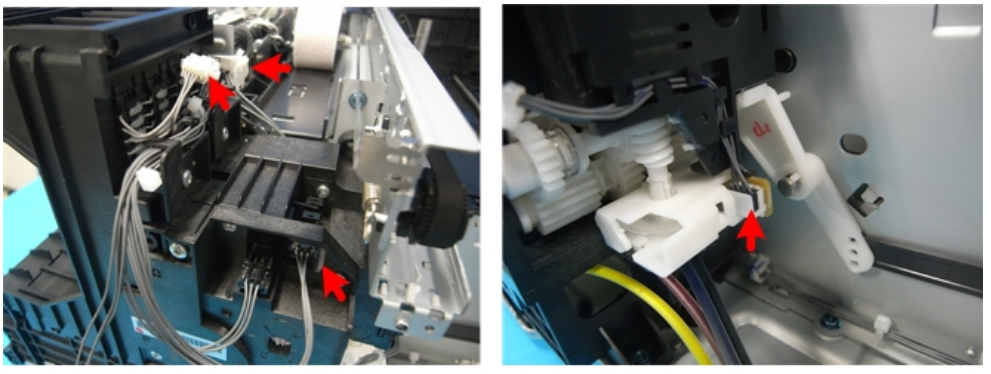


j0301079

1. Open the scanner unit [A].
2. Push the carriage to the left side of the machine.

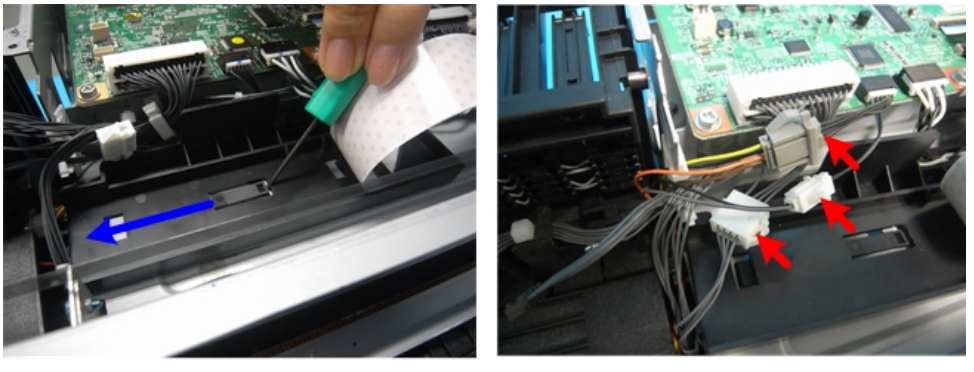
j0271121

3. Remove the screws (x3).



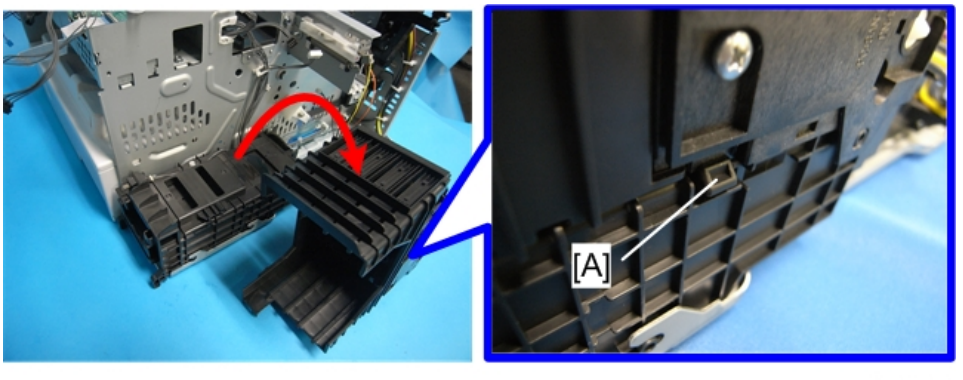
j0271122

4. Remove the connectors (x3, x1).

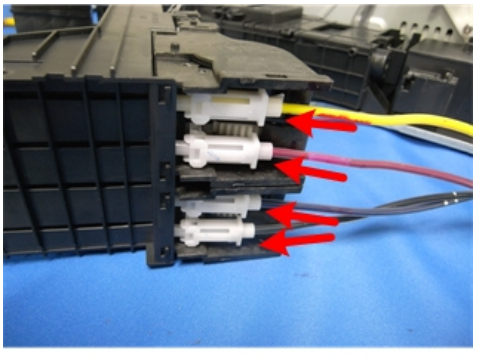


j0271123

5. Unfasten the FFC holder, and then remove the connectors at the bottom of the CTL board (x3).

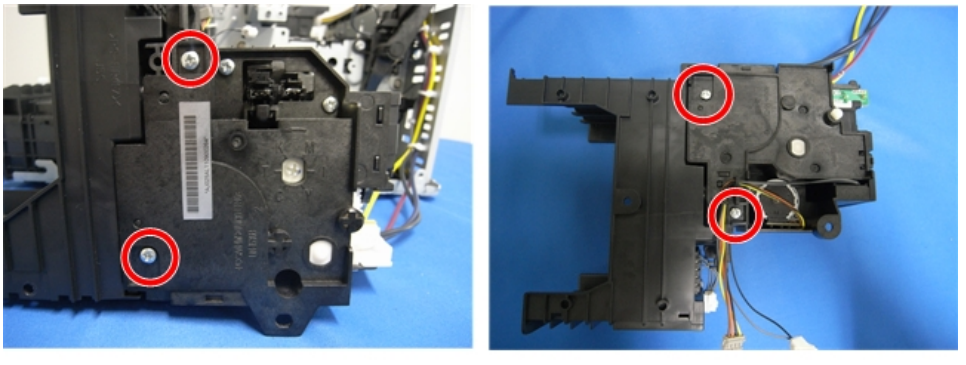


j0271124

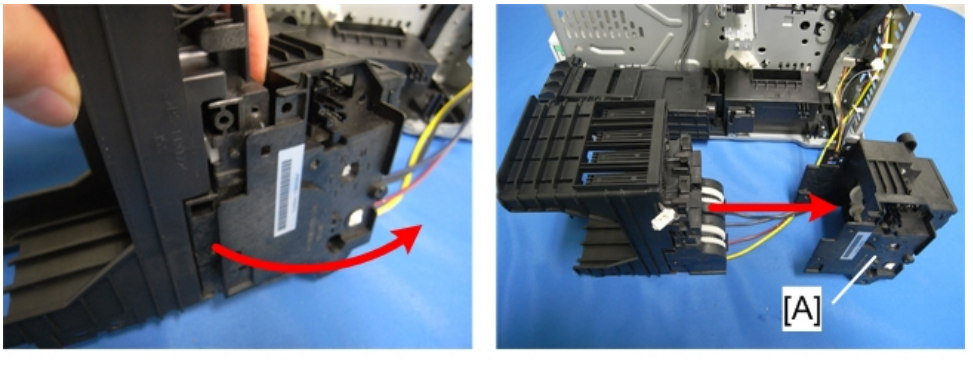


j0271178

6. Check that all connectors connected to the ink supply unit have been disconnected, and then remove the ink supply unit (Do not disconnect the ink tubes. Check that they are connected properly.) Before you remove the unit, release the lock [A].



j0271179



j0271180

7. Separate the ink supply unit and drive switching module [A]. (x4)

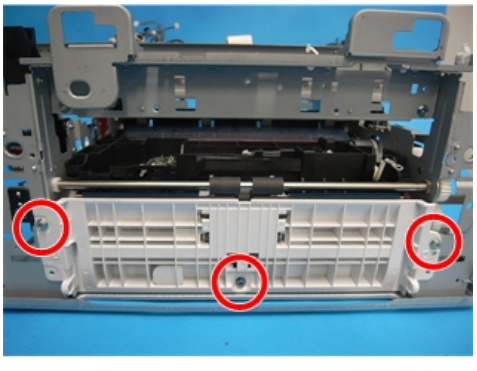
Rollers

Paper Feed Roller

Preparation

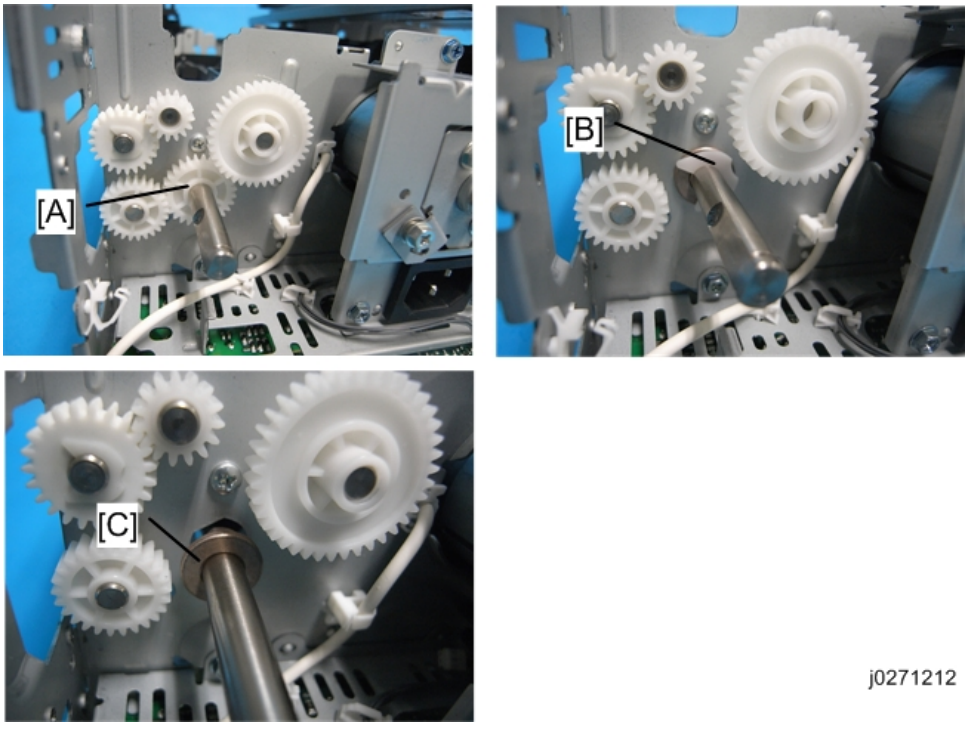
Remove:

- Scanner unit (page 96)
- All covers (page 66)
- Transport belt (page 144)
- Feed clutch (page 142)
- 2nd registration sensor (page 154)
- Bypass drawer connector (page 165)
- Vertical encoder wheel (page 120)
- Carriage Unit (page 177)
- Paper cassette



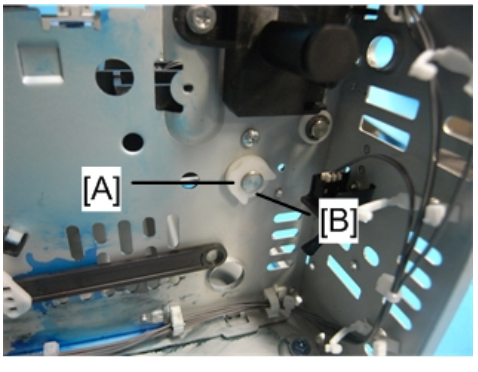
j0271222

1. Remove the guide board (x3).



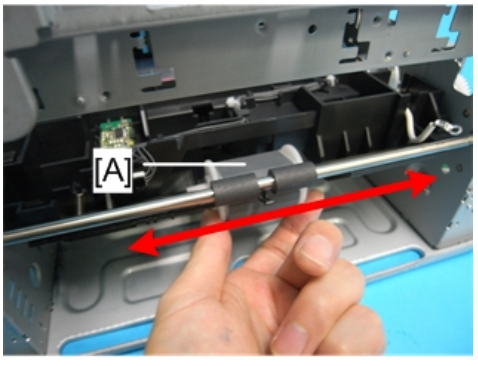
j0271212

2. Remove the gear [A], E-ring [B], and brown stay [C].



j0271213

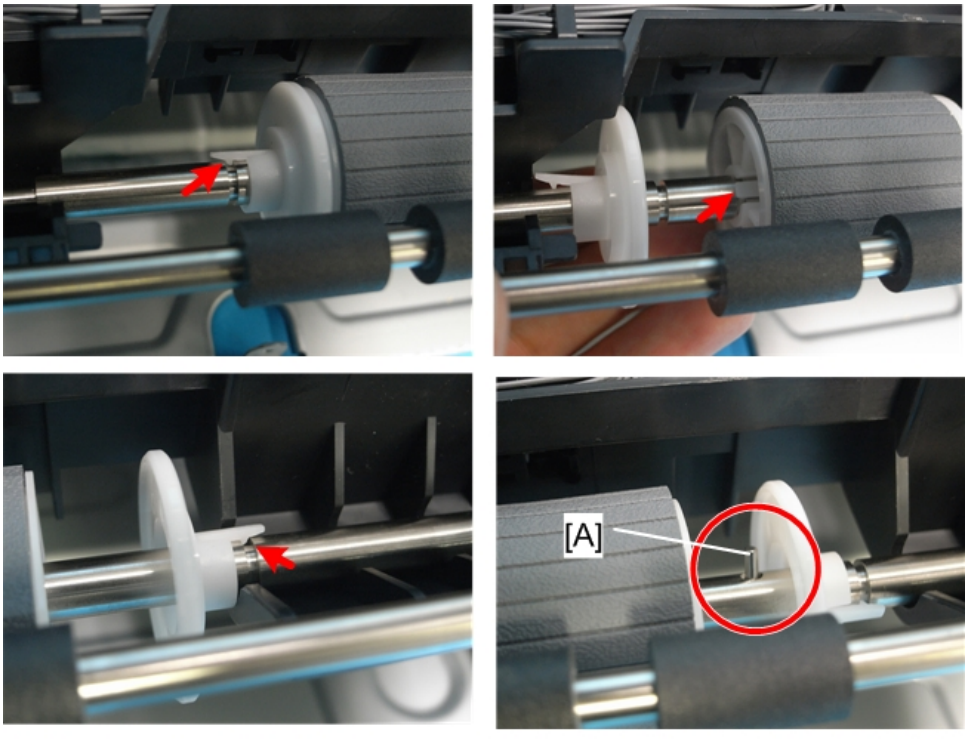
3. Remove the E-ring [A] and white stay [B] on the opposite side.



j0271214

[A] Paper Feed Roller

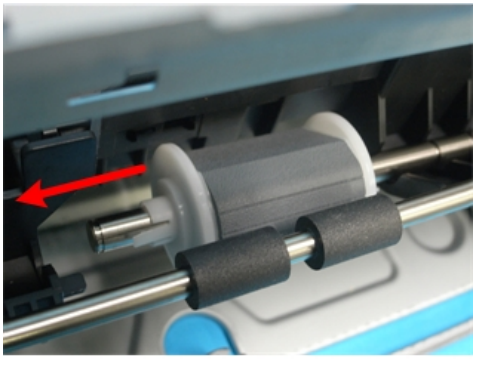
4. The rod is released from its fastened position.



j0271215

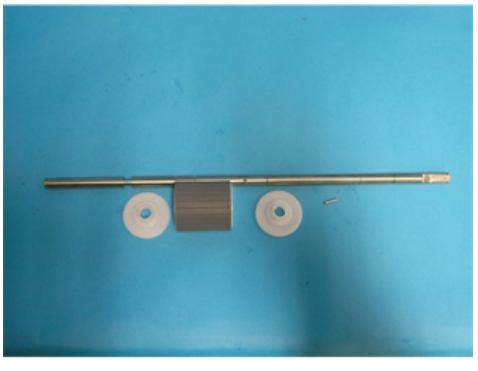
5. Each part of the paper feed roller has a hook on it. They are locked when their hooks are engaged in the rod's grooves. Unhook the parts and slide them to remove from the rod.

   Remove the paper feed roller's fixing pin [A].



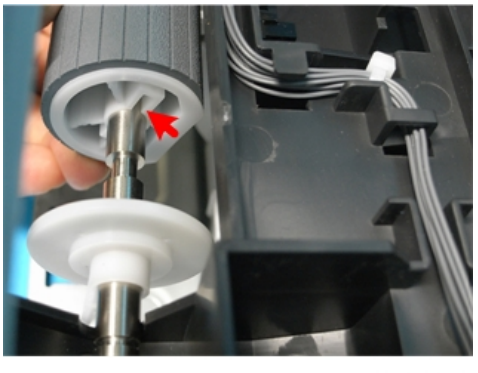
j0271216

6. Remove the paper feed roller.



j0271217

Re-installation



j0271218

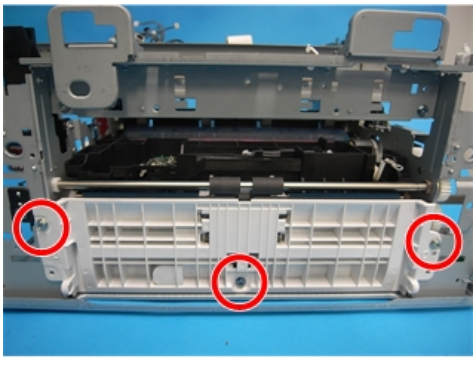
1. When you mount the paper feed roller into the rod, mount the side with the fixing pin's guide first.

Connecting Rollers

Preparation

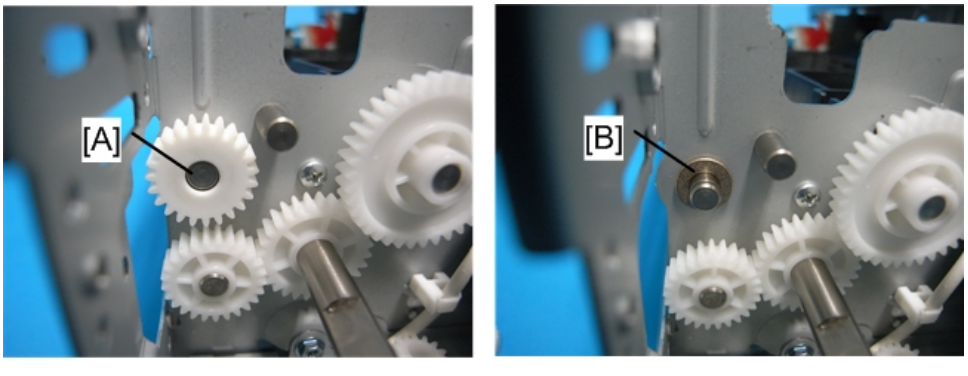
Remove:

- Scanner unit (☛page 96)
- All covers (☛page 66)
- Transport belt (☛page 144)
- Feed clutch (☛page 142)
- 2nd registration sensor (☛page 154)
- Bypass drawer connector (☛page 165)
- Vertical encoder wheel (☛page 120)
- Carriage Unit (☛page 177)
- Paper cassette



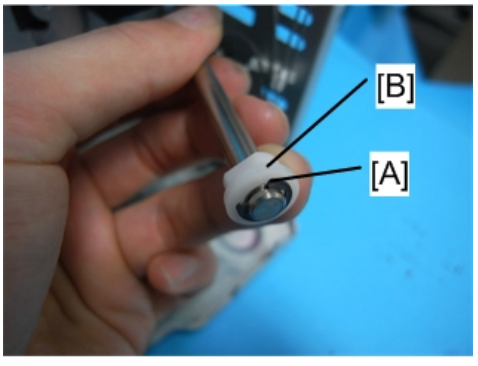
j0271222

1. Remove the guide board (x3).



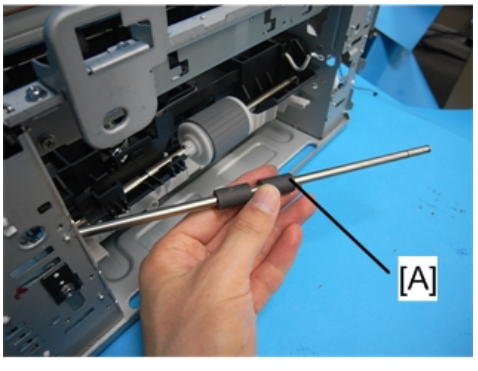
j0271219

2. Remove the gear [A] and brown stay [B].



j0271220

3. Remove the E-ring [A] and white stay [B] on the opposite side.



j0271221

4. Remove the connecting rollers [A].

Carriage Unit

Replacing the Carriage Unit

Accessories

Check the items in the carriage replacement kit with the list below.

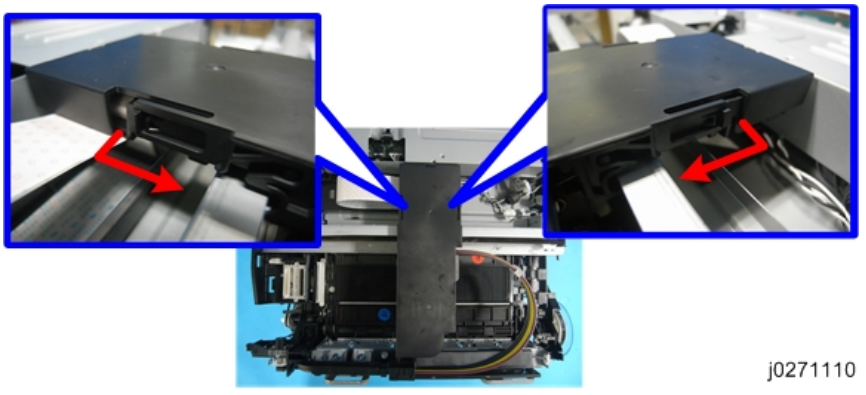
j0271196

	Item	Qty
[1]	Carriage Unit	1
[2]	Ink Cartridges	4
[3]	Ink Collector Unit	1

Preparation

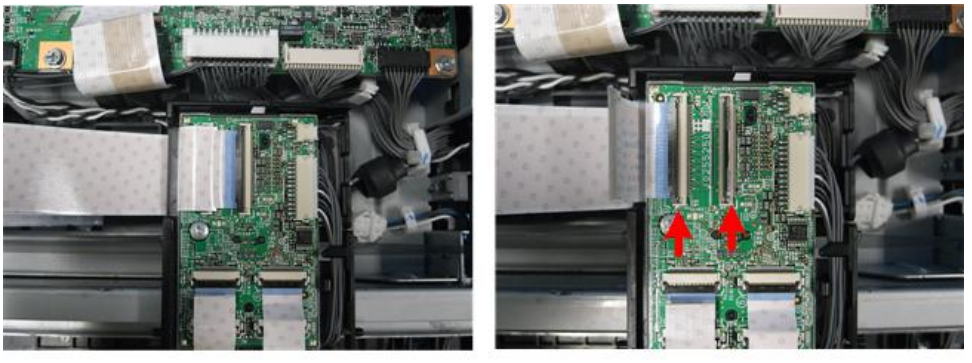
Switch the machine off and remove:

- Scanner unit (page 96)
- All covers (page 66)
- Maintenance unit (page 114)
- CTL board cover (page 129)
- Ink cartridges
- Horizontal encoder strip (page 123)



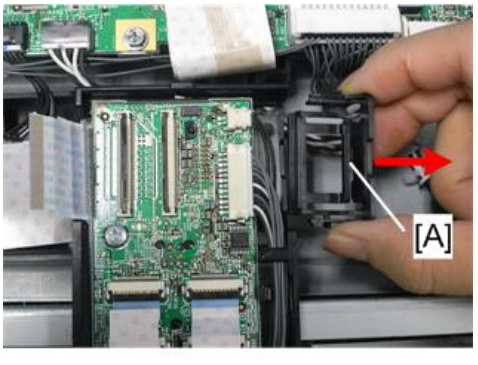
j0271110

1. Push the carriage to the center, and then remove the top cover.



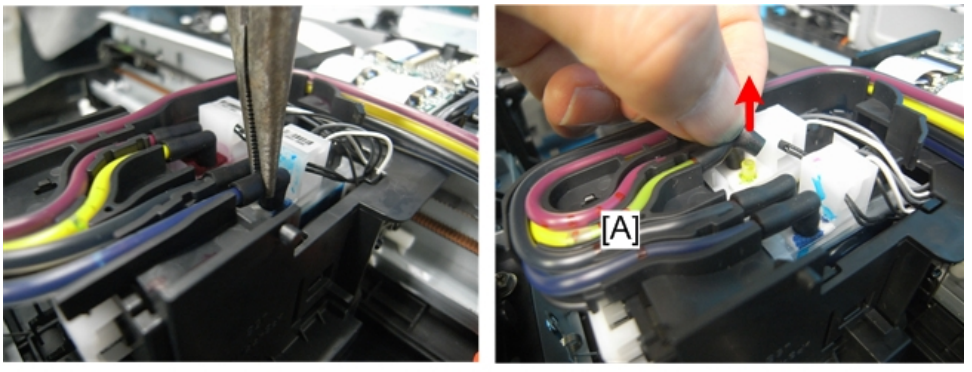
j0271154

2. Remove the FFC from the board (x2).



j0271155

3. Remove the FFC holder [A], and then release the FFC from the carriage.

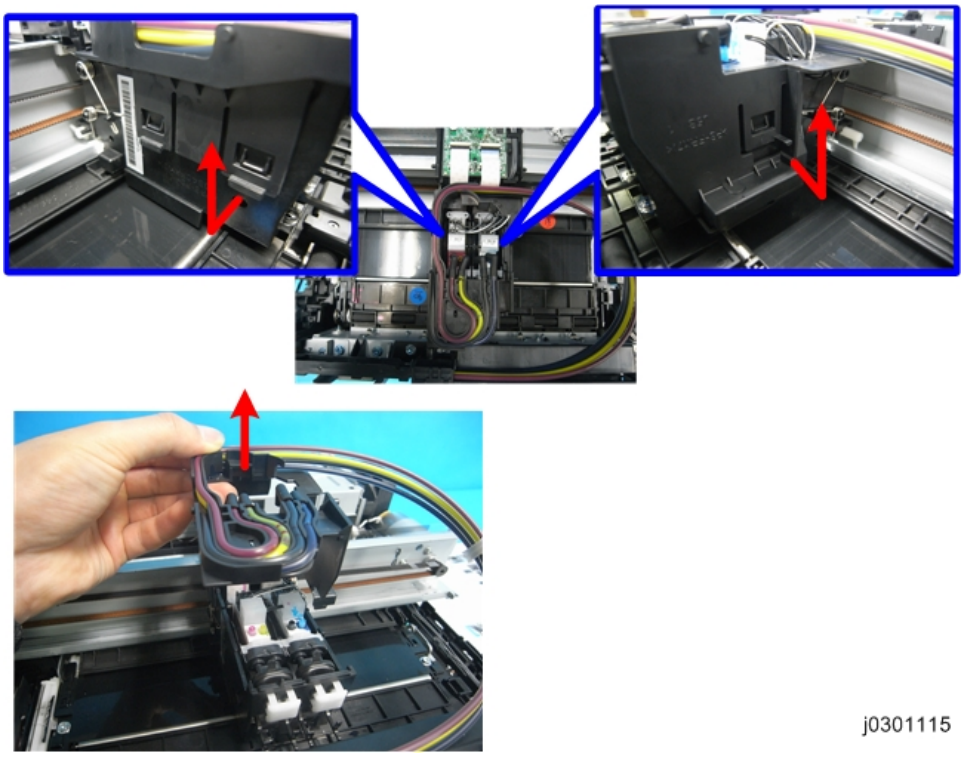


j0301116

4. Disconnect the ink tubes.

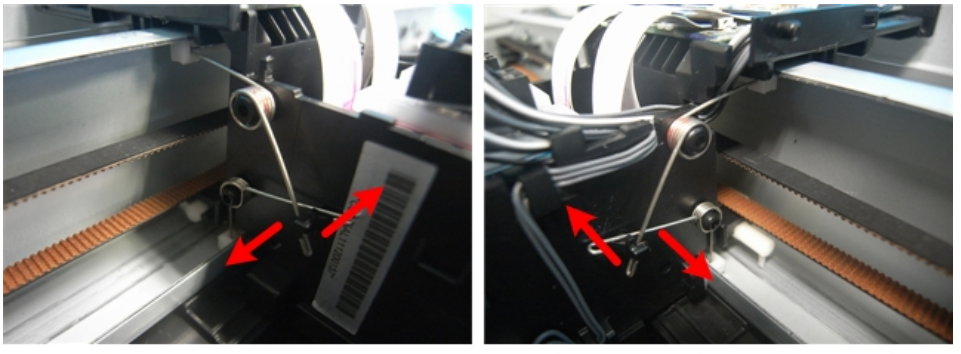
Note

- Before you disconnect the ink tubes, squeeze their connecting parts with fingers or radio pliers to empty their contents into the print head tanks, so as to prevent the ink from dropping.
- Make sure not to pull the ink tubes out of the tube guide [A].



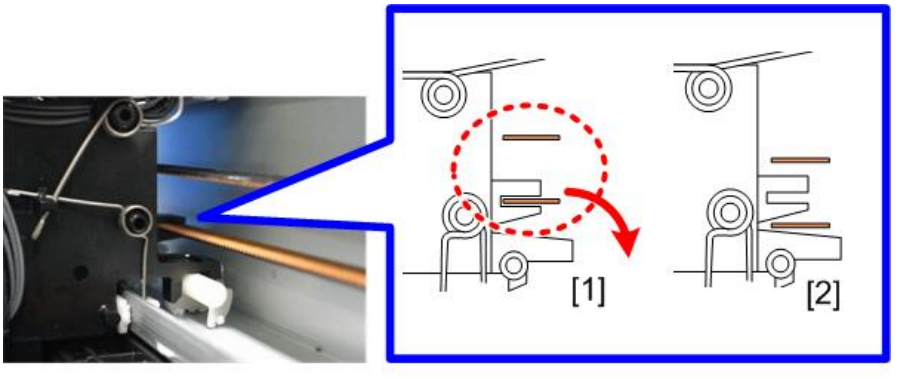
j0301115

5. Remove the carriage side cover.



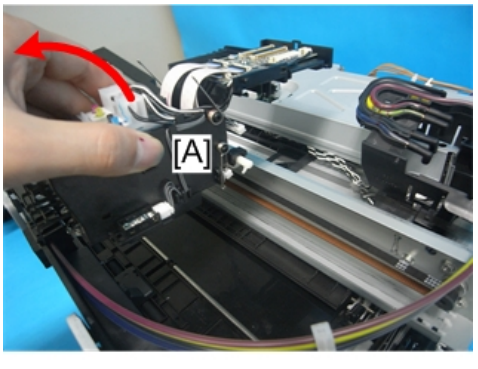
j0301117

6. Unfasten the carriage unit to make it ready to be removed from the guide rail.



j0271157

7. Release the carriage from the timing belt. Make sure the top [1] and bottom [2] of the belt are disengaged from the carriage.



j0301118

8. Remove the carriage unit [A].

Note

- Place the carriage it on a sheet of paper to prevent ink stains.

9. Mount the new carriage, and then attach the side cover with ink tubes.

Note

- Before you re-assemble the printer, be sure to read through the "Re-installation" tips described in the next section.

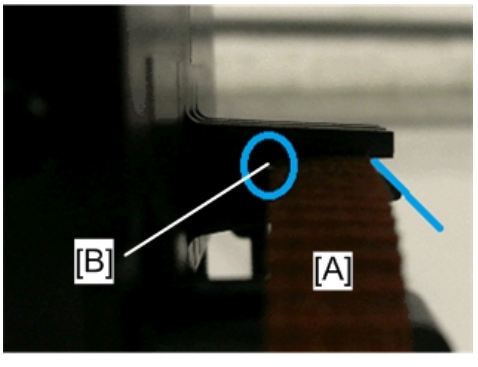
10. After re-assembling the printer, do the SP settings for after carriage replacement. (See "After Replacing the Carriage" at the end of this section.)

Re-installation

Engaging the carriage to the timing belt

If the carriage is insufficiently engaged to the timing belt, the movement of the carriage becomes disordered, resulting in problems such as fat or blurred printed text.

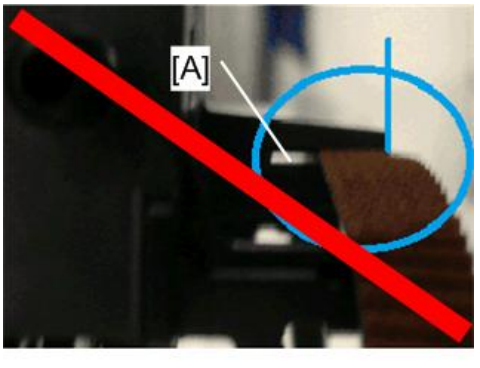
Correct engagement



j0301100

To prevent defective printing, engage the carriage to the timing belt [A] with the belt inserted into the carriage's engaged part thoroughly so that there is no clearance between the carriage and belt [B].

Incorrect engagement (likely to cause a malfunction)

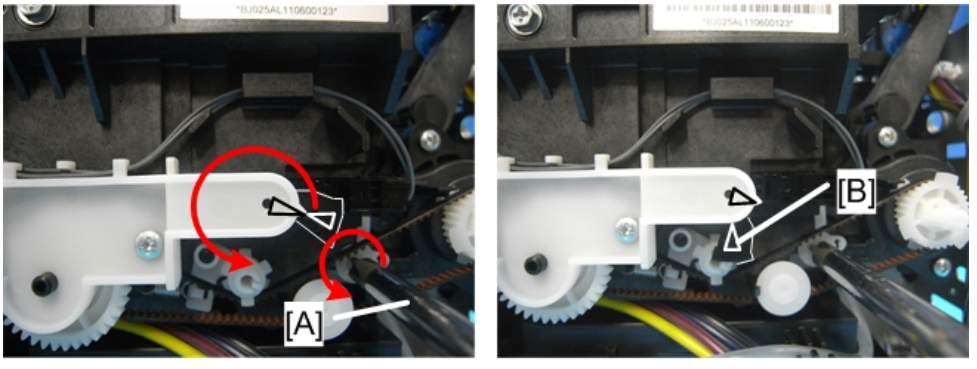


j0301101

There is a clearance between the carriage and belt [A] and the belt protrudes from the tip of the engaged part.

Lock the Carriage

Make sure the carriage is locked before re-attaching the machine covers.



j0271162

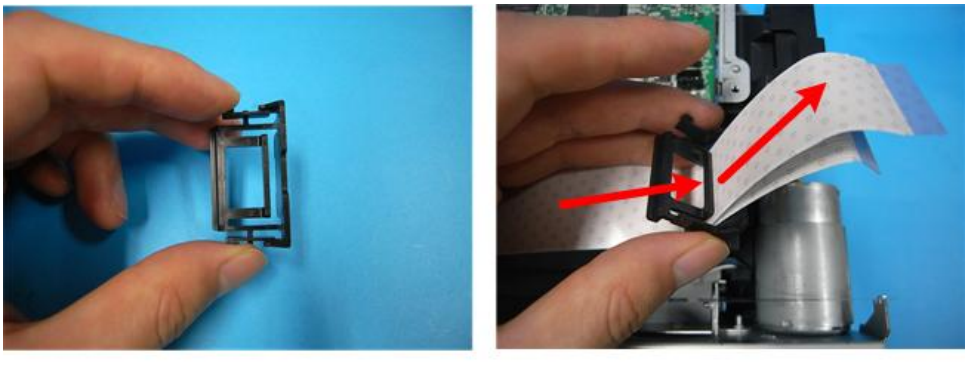
1. Turn the screwdriver [A] counter-clockwise to rotate the triangle.
2. Stop rotating when the triangle is at the lock position [B].

Note

- Never rotate the screwdriver clockwise.

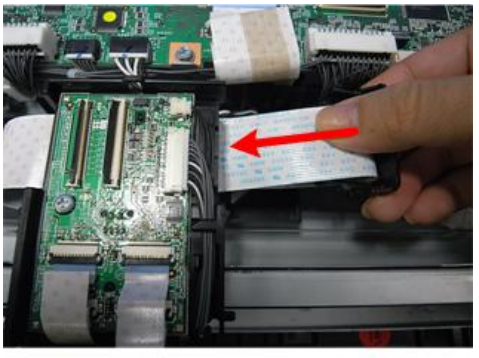
FFC Installation

To prevent the FFC from arching too much, store part of it in the holder.



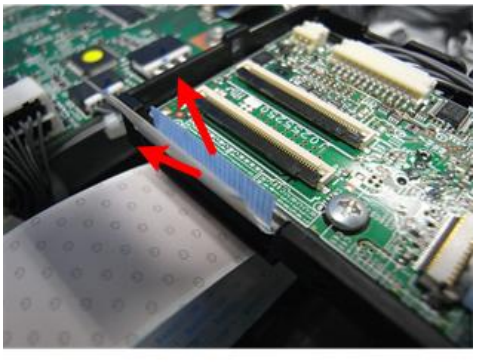
j0271163

1. Pass the FFC through the holder's slit.



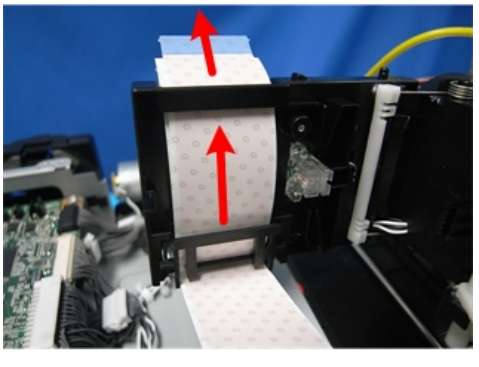
j0271164

2. Fold the holder and attach it to the carriage.



j0271165

3. Pull the FFC out from the other side.



j0271166

4. When stored correctly, it will be as shown.

After Replacing the Carriage

1. With the machine OFF, open the right front door.

Important

- The right front door must be open before you switch the machine on.
- With the right front door open, the printer will not perform auto maintenance (this can waste ink).

2. Switch the machine on.
3. Enter the Service Menu.
4. [▲] or [▼] "Printer Setting"> [OK].
5. [▲] or [▼] "Engine Setting"> [OK].
6. Enter "3009002"> [OK].
7. Press [OK].
8. Press [OK].
9. Press [OK].
10. Exit the Service Menu.
11. Switch the machine off.
12. Replace the four ink cartridges with new ones (provided).
13. Replace the ink collector unit (new one provided).

Important

- You must replace the ink cartridges and the ink collector unit with the ones provided.
- If you do not replace them, the machine will issue an error and prompt you to install the new ink cartridges or collector unit.

14. After you have installed the new ink cartridges and the ink collector unit, close the right front cover.
15. Switch the machine on.
16. Wait for the machine to fill the print head ink tanks. This may take about 7 minutes.

After filling the print head ink tanks, check and adjust the carriage unit settings.

1. **Press [User Tools].**
2. **Select "Maintenance"> "Nozzle Check Pattern"> [OK].**
   - Print the Nozzle Check Pattern. Clean and flush the print heads if required.
3. **Select "Head Position Adjust"> [OK].**
   - Adjust all resolutions; "High Speed", "Standard", "High Quality", and "Envelope".
4. **Select "Adjust Paper Feed"> [OK].**
   - Adjust the paper feed setting.
5. **Select "Registration"> [OK].**
   - Adjust all trays; "Tray 1", "Tray 2", "Tray 3", and "Bypass".

6. **Select "Printer Features"> [OK]> "List/Test Print"> [OK].**
7. **Print the color demo page and a system summary.**
    - Select "Color Sample" to print the color fish pattern.
    - On the same level of the menu, select "Config. Page" and press [OK]. Confirm that all the settings have been initialized.
8. **Press [Escape] until you see the "Ready" message.**

   This completes the carriage replacement procedure.
9. **Switch the machine off.**

Print Head Cleaning and Adjustment

You can see the image adjustment features on the “Maintenance” menu of the machine operation panel.

Note

- The test prints and adjustments described in this section can also be done with the printer driver. For more details about doing these test prints and adjustments with the printer driver, please refer to the User Guide.

Preparing for Test Printing

1. Make sure A4 size or LTR size paper is loaded in the machine.
2. Make sure the machine is ready to print.

Nozzle Check

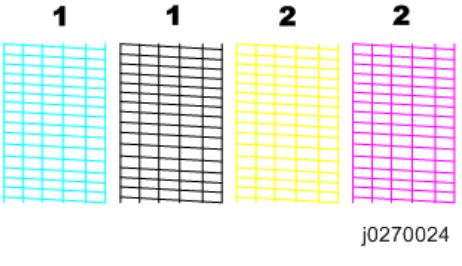
Nozzle Check Pattern

Do this procedure to print the Nozzle Check test pattern. Look at the pattern to determine if the printer is operating properly or not.

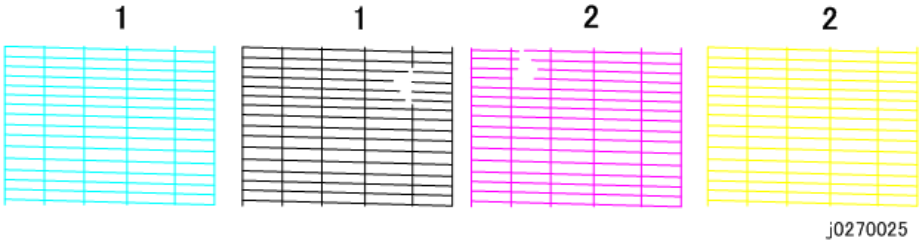
1. Push [User Tools].
2. Select "Maintenance"> [OK].
3. Select "Nozzle Check Pattern"> [OK].
4. Press [B&W Start] or [Color Start].

   The Nozzle Check pattern prints.
5. Examine the Nozzle Check pattern for broken lines or white patches. The first sample below is normal, the second sample shows white patches.

   Normal Pattern



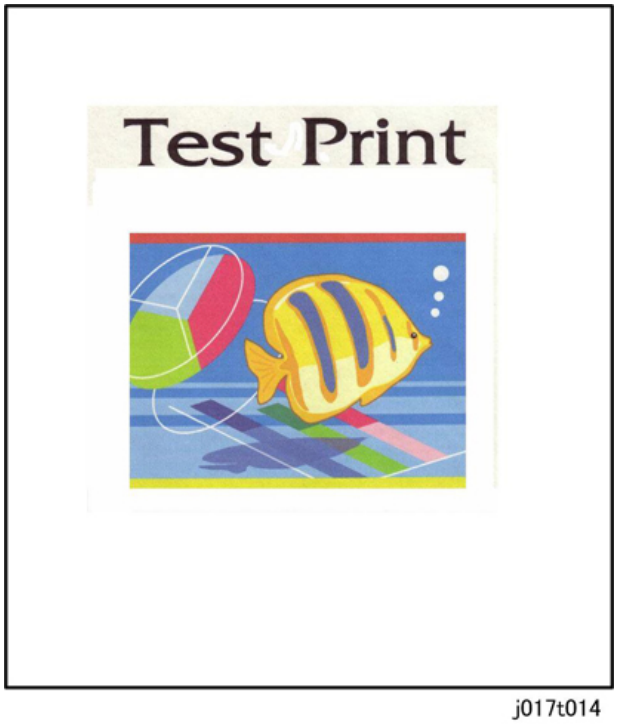
   Abnormal Pattern



Color Sample Print

The color sample (Test Print) is printed from the printer operation panel to demonstrate the color quality of the printer.

1. Press [User Tools]
2. Select "Printer Features"> [OK].
3. Select "List/Test Print"> [OK].
4. Select "Color Sample"> [OK].
5. Press [B&W Start] or [Color Start].



j017t014

Print Head Cleaning

Important

- **Print head cleaning consumes ink. Do this procedure only if you see a problem in the Nozzle Check test pattern.**

1. Check the ink level indicator in the printer driver or the operation panel display to determine if the ink cartridge is empty.
2. Print a Nozzle Check test pattern.
3. Look at the Nozzle Check pattern to determine which nozzles are blocked.

   Note

   - If one or more color is missing, is extremely faint, or shows broken lines, this tells you where there is a blockage.

4. Press [User Tools].
5. Select "Maintenance" > [OK].
6. Select "Clean Print-heads"> [OK].
7. Select the print heads to be cleaned: "All Heads" (all print heads), "Head 1" (Cyan/Black), "Head 2" (Yellow/Magenta) > [OK].
8. Press [Yes].

   Important

   - **Do not try to start another procedure and never switch the machine off while head-cleaning is in progress.**

9. Print another Nozzle Check test pattern and check the result.
10. If the Nozzle Check test pattern is normal, the procedure is finished.

    -or-

    If there is still a problem in the Nozzle Check pattern, repeat this procedure and print another Nozzle Check pattern. Do the procedure again if the results are still not satisfactory.

    If three consecutive Nozzle Check pattern prints and head-cleanings do not solve the problem, then flush the print heads. (See procedure below.)

    Important

    - **Head flushing consumes ink. Do not flush the print heads unless three head cleanings have failed to correct the problem.**

Print Head Flushing

Flushing the print heads consumes much more ink than print head cleaning. Do not flush the print heads until you have done the print head cleaning procedure (see above) at least three times.

1. Press [User Tools].
2. Select "Maintenance" > [OK].
3. Select "Flush Print-heads" > [OK].
4. Select the print heads to be cleaned: "All Heads" (all print heads), "Head 1" (Cyan/Black), "Head 2" (Yellow/Magenta) > [OK].
5. Press [Yes].

   Do not start any other operation until cleaning stops.

   Important

   - **Do not try to start another procedure and never switch the machine off while head-flushing is in progress.**
6. Print another Nozzle Check test pattern and check the result.
7. If the Nozzle Check test pattern is normal, the procedure is finished.
   - If there is still a problem in the Nozzle Check pattern, allow the machine to remain idle for 10 minutes and repeat the procedure.
   - If the problem persists, allow the machine to remain idle for 8 hours, and then flush the print heads again.

Configuring the Factory-Adjusted Value (for Adjust Paper Feed, Head Position Adjust, and Registration)

For "Adjust Paper Feed", "Head Position Adjust", and "Registration", there are user-adjusted value that can be configured by users and factory-adjusted values that can be configured by the factory or service representative. The actual adjustment is performed by adding both adjusted values.

To switch from the user adjustment mode to factory adjustment mode, set the third bit in "Bit Switch #006" in the Service menu to "1".

1. Enter the Service Menu.
2. Select "Printer Setting" > [OK].
3. Select "Bit Switch" > [OK].
4. To switch to the factory adjustment mode, set the third bit in "#006" to "1".
5. Exit the Service Menu.
6. In the Maintenance menu in the User tools menu, configure the factory-adjusted value for "Head Position Adjust", "Registration", and "Adjust Paper Feed".

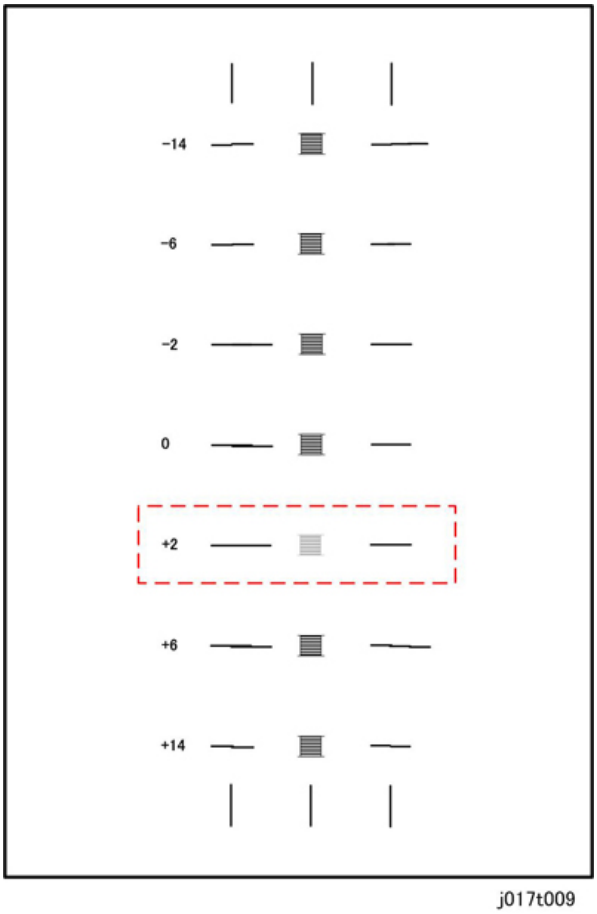
7. Exit the User Tools Menu.
8. Enter the Service menu, and then set the third bit in " Bit Switch #006" to "1" in order to return to the user adjustment mode.
9. Exit the Service Menu.

Adjust Paper Feed

Print the 'Adjust Paper Feed Test Pattern' and do this adjustment if you see broken horizontal lines, patchy images, or white lines printed at regular intervals.

1. Press [User Tools].
2. Select "Maintenance"> [OK].
3. Select "Adjust Paper Feed" > [OK].
4. Press [B&W Start] or [Color Start].

   The test pattern prints. Do not start any other operation until printing stops.
5. Check the printed numbers and patterns.



j017t009

- The adjustment value appears to the left of the lightest gray square with straight horizontal lines on both sides.
- If this number is "+2", for example, then the adjustment value is "+2".
- If horizontal lines beside the gray square are broken, look at where the lines are broken in the opposite direction.
- For example, if the "+2" square is the lightest gray square and the "+6" lines are broken, then the best adjustment value is between "+3" and "+5".

6. Press [Adjust].
7. Press [+] or [-] until the number of the pattern that you selected in Step 5 appears.
8. Press [OK].
9. Press [Exit].

   This completes the adjustment.
10. Push [Escape] to leave the menu mode.

Head Position

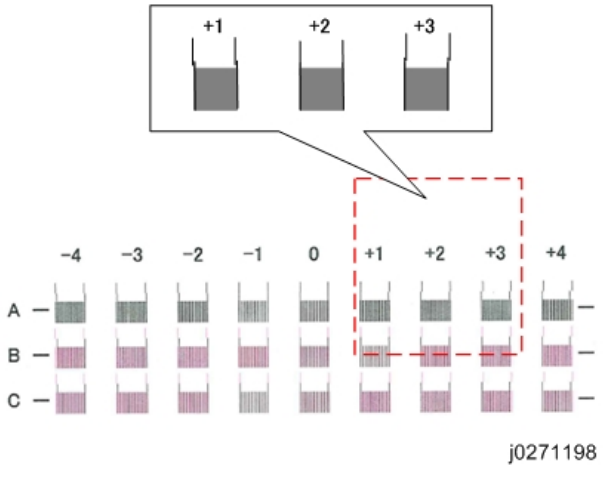
The print head is out of position if you see these:

- Broken vertical lines
- Blurred, smeared or streaked colors

Do the following procedure to correct these problems.

1. Press [User Tools].
2. Select "Maintenance"> [OK].
3. Select "Head Position Adjust"> [OK].
4. Select the target's resolutions; "High Speed", "Standard", "High Quality", or "Envelope"> [OK].
5. Press [B&W Start] or [Color Start].

   The test pattern prints. Do not start any other operation until printing stops.



6. Look at the patterns and determine which is the best.
   - The best pattern is the gray square with straight vertical lines on both sides.
   - The pattern setting is read as a matrix value from the pattern. For example, if the best pattern is in column "+2", line "A", the entry for adjustment will be "A" then "+2"
7. Press [Adjust].
8. Select the letter of the line of the best pattern noted in Step 6> [OK].
9. Select the number of the line of the best pattern noted in Step 6> [OK].
10. Press [Exit].

    This completes the adjustment.
11. Push [Escape] to leave the Menu mode.

Registration

Do this procedure to adjust the print start position. The print start position is the point at the upper left corner of each sheet where printing begins. This procedure can be done for all the paper feed sources: Tray 1 (Standard), Multi-Bypass Tray (Option).

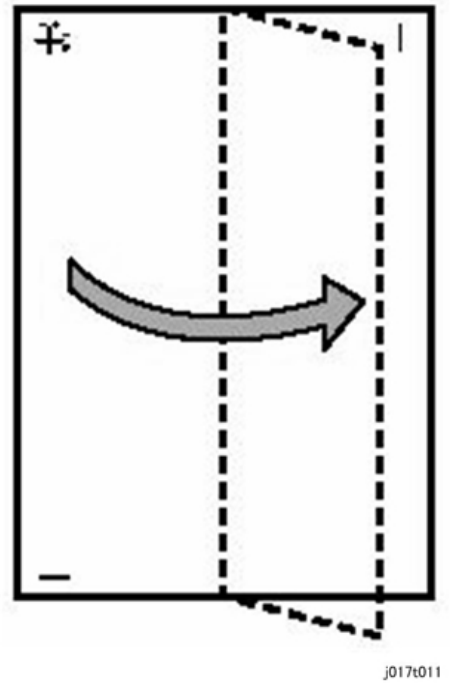
1. Press [User Tools].
2. Select "Maintenance"> [OK].
3. Select "Registration" > [OK].
4. Select the select a paper tray; "Tray1", "Tray2", "Tray3", or "Bypass".> [OK].

   Note

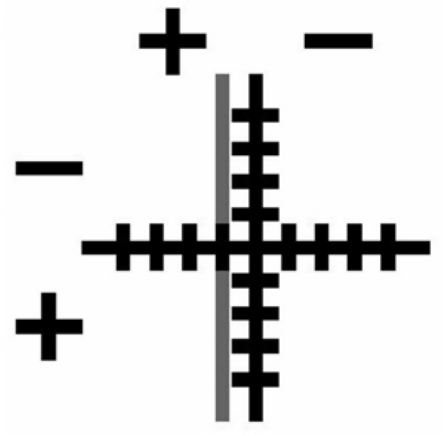
   - "Tray 2" and "Tray 3" appear only if the paper feed unit(s) is attached.
   - "Bypass" appears only if the bypass tray unit is attached.

5. Press [B&W Start] or [Color Start].

   The test pattern for Registration prints. Do not start any other operation until printing stops.



6. Fold the printed sheet in half lengthwise as shown.
7. Hold the corner of the folded paper in front of a light and look at the cross-pattern overlapping the single vertical line below.
8. Determine the 1st adjustment for the Read Direction.



j107t012

- The adjustment value in the Read Direction is the difference between the single vertical line and cross vertical line.
- If the difference is one calibration mark on the "+" side, for example, the adjustment is +1.0.

9. Fold the sheet in half widthwise.
10. Determine the 2nd adjustment for the Feed Direction. The value read after folding the sheet widthwise, is the adjustment value for the Feed Direction.
11. Press [Adjust].
12. Enter the adjustment for the Read Direction determined in Step 8 and push [OK].
13. Enter the adjustment for the Feed Direction determined in Step 10 and push [OK].
14. Press [Exit].

    This completes the adjustment.
15. Push [Escape] to leave the Menu mode.

Cleaning

The responsibility of the service technician is limited because this machine is adjusted for optimum performance at the factory before it is shipped.

Return the printer to the repair center or replace the machine if a serious problem occurs.

There are no parts that require scheduled maintenance or replacement. However, the service technician should do the procedures described in this section when a service call is requested.

Here is a summary of the procedures described in this section.

Description	At Service Call (or When Necessary)
External Covers	Damp cloth.
Connecting Rollers	Damp cloth.
Friction Pad	Damp cloth. This is the cork friction pad on the front edge of the standard paper cassette (Tray 1).
Printer Operation, Print Quality	Print a Nozzle Check Pattern and check the results. Clean the print heads if necessary.
Ink Collector Unit	A message on the printer operation panel prompts you to replace the ink collector unit after it has become full.
Maintenance unit	Damp cloth (use water). Always use a tightly wrapped damp cloth to remove the ink that has hardened around the suction cap and wiper blade when you replace the ink collector unit.
Horizontal Encoder Strip	Clean linen cloth, dampened with alcohol. Do not use cotton, tissue paper, any material that could shred and leave fibers.
Horizontal Encoder Sensor	Damp cloth.
Vertical Encoder Wheel	Clean linen cloth, dampened with alcohol. Do not use cotton, tissue paper, any material that could shred and leave fibers.

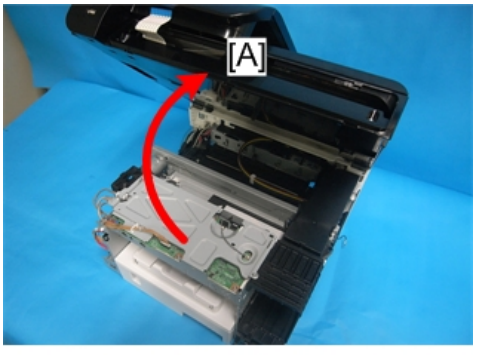
Maintenance Unit Cleaning

Preparation

Remove:

- Canopy Cover (☛page 73)
- Right Cover (☛page 70)

- Spread some of paper (not cloth) several sheets thick where you can set the unit after it has been removed.
- Unlock the carriage (☛page 81)

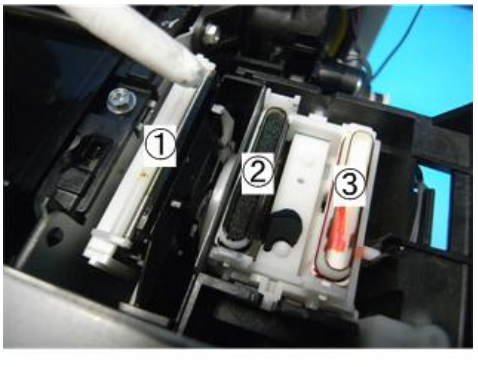


j0301079

1. Open the scanner unit [A].
2. Wrap the tip of a screwdriver or similar tool with a piece of finely woven cloth which is slightly damp.

   Important

   - **The damp cloth prevents scratches on the suction cup. A scratched suction cup could cause poor print quality.**
   - **Never use tissue or cotton, or any other such of material to wrap the tip of the screwdriver. Such material will contaminate the maintenance unit with loose fiber.**



j0271167

3. Use the wrapped tip of the screwdriver to clean inside and around the blade (1) , air vent (2) and suction cap (3).

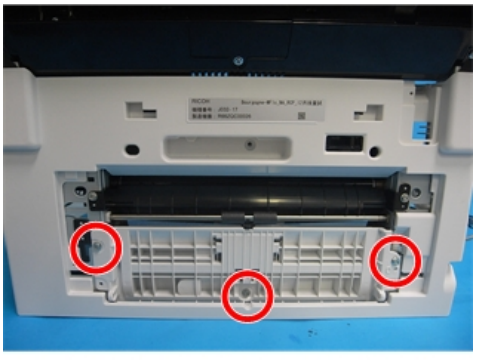
   Clean the vent and cap carefully to avoid:

   - Damaging the movable feeler inside the right air vent.
   - Damaging the fragile lip of the suction cap.

Important

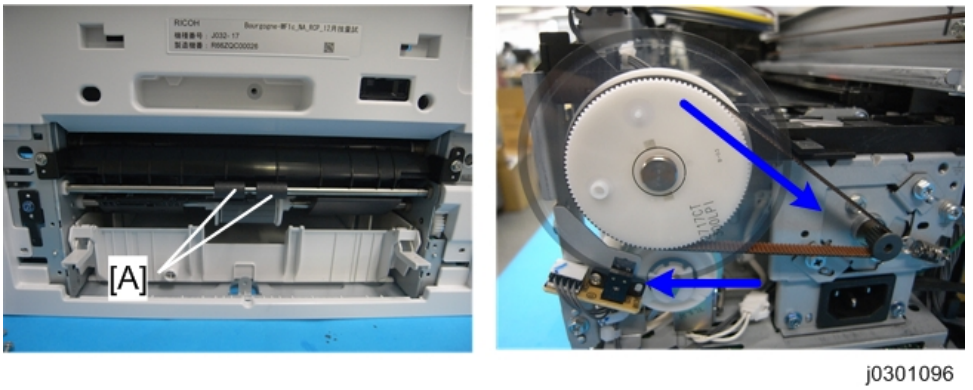
- Never insert the tip of the screwdriver into the right air vent or suction cap.

Connecting Rollers Cleaning



j0301095

1. Remove the guide board (x3).



j0301096

2. Move the timing belt by hand to rotate the connecting rollers [A] as you wipe it with a dry cloth.

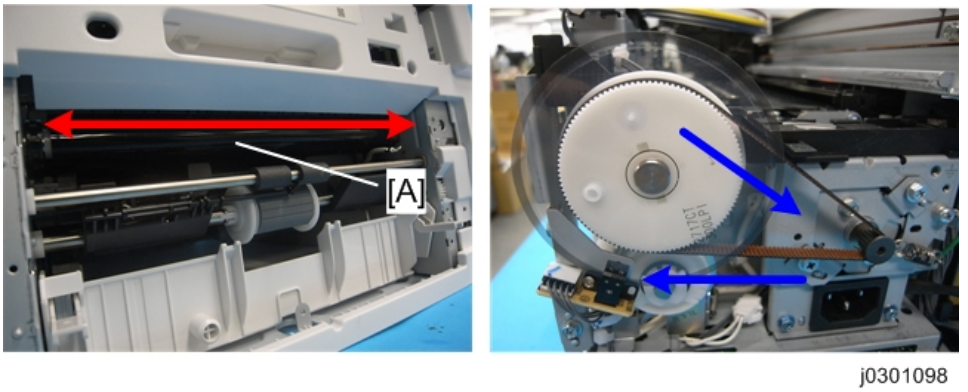
Transport Belt Cleaning

j0301097

1. Open the charge roller cover (x2).

j0271139

2. Take out the charge roller and the cover (x1).



j0301098

3. Move a clean, slightly damp cloth from side to side to clean the transport belt [A].

Important

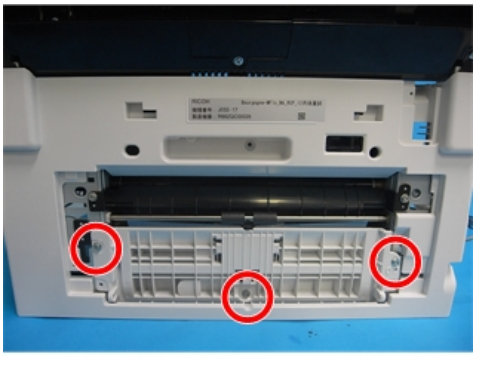
- Do not use tissue, cotton or any other material that may leave fibers on the surface of the transport belt.
- Use a slightly damp cloth moistened with clean water.
- Never use alcohol, or any other solvent to clean the belt.

4. Move the timing belt by hand to rotate the wheel far enough to expose the next section of the transport belt.
5. Repeat Steps 3 and 4 until the entire surface of the belt has been wiped clean.

Friction Pad Cleaning

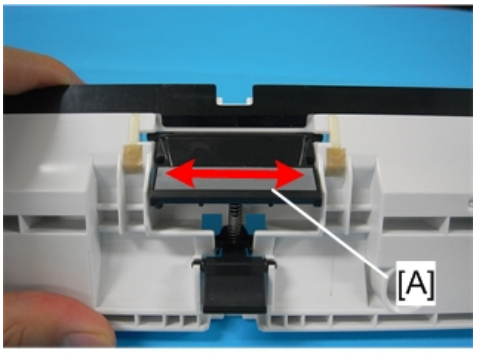
j0301099

1. The friction pad is located behind the guide board.



j0301095

2.Remove the guide board (x3).



j0271142

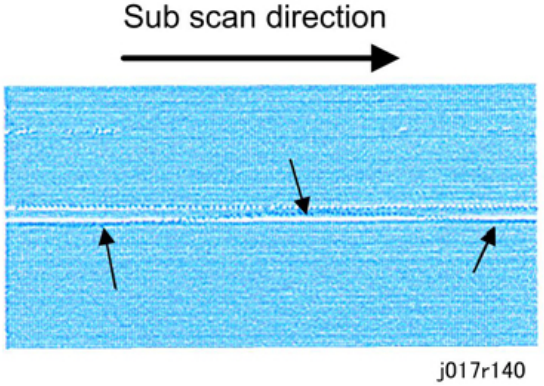
3.Use a damp cloth to clean the surface of the friction pad [A].

Horizontal Encoder Strip Cleaning

Clean the horizontal encoder strip if the following conditions occur:

- Vertical white lines on an image
- Double image
- Broken vertical lines
- JAM 14

Sample image of horizontal white lines



j017r140

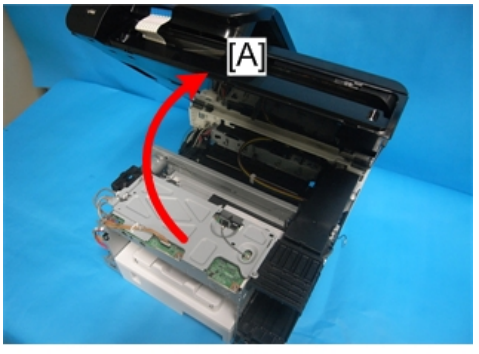
Cleaning procedure

Preparation:

Remove:

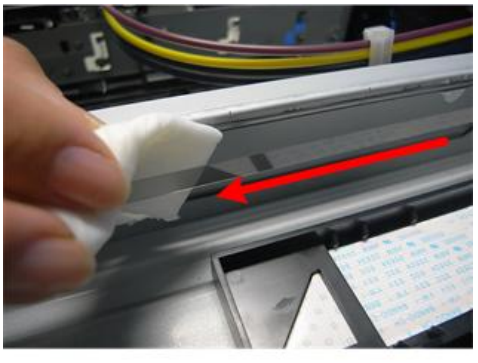
- Left cover (☛page 72)

- Right cover (☛page 70)
- Canopy cover (☛page 73)
- Unlock the carriage (☛page 81)



j0301079

1. Open the scanner unit [A].
2. Push the carriage to the left side of the printer.



j0271168

3. Dampen a small piece of clean linen cloth with a small amount of alcohol.

Important

- **Never use cotton, soft tissue, or any other type of material that could shred and leave fibers on the encoder film strip.**

4. Gently wipe the horizontal encoder strip always from **right** to **left** in one direction.

Important

- **To avoid bending the spring plate on the left end of the encoder strip, always wipe the strip from right to left. The horizontal encoder strip is fragile.**
- **Never apply excessive tension to the horizontal encoder strip when cleaning it.**

5. Push the carriage unit to the right with your hand.
6. Repeat the procedure to clean the left side of the encoder strip.

7. Lock the carriage.
8. Turn on the machine.
9. Confirm that the machine is in standby mode and ready to operate.

   Important

   - **Switch on the printer immediately after cleaning to ensure that the carriage returns to the right side of the machine and caps the print heads.**
   - **If this is not done immediately, the print heads may dry out.**
10. Do the "Nozzle Check" after cleaning, and then check the patterns for missing or broken lines.
11. Do "Print Head Cleaning" if the pattern is not satisfactory.
12. Do "Print Head Flushing" if the pattern is not satisfactory, even after three print head cleanings.
13. Do "Print-Head Flushing" and print another Nozzle Check Pattern.
14. If the Nozzle Check Pattern is still not satisfactory after flushing the print heads, replace the horizontal encoder strip.

Horizontal Encoder Sensor Cleaning

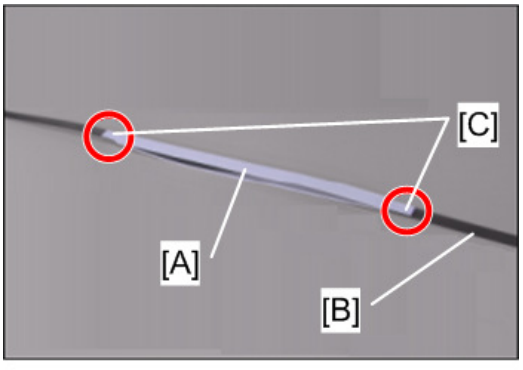
This section explains how to clean the encoder sensor when you replace the horizontal encoder strip.

Preparation

Remove:

- Left cover (page 72)
- Rear cover (page 68)
- Canopy cover (page 73)
- Unlock the carriage (page 81)

1. Open the scanner unit.
2. Remove the old horizontal encoder strip.
3. Wipe the surface of the old horizontal encoder strip with a clean alcohol-dampened cloth.



j0271229

4. Paste two cleaning felts [A] on both sides of the strip [B] at the center.

Note

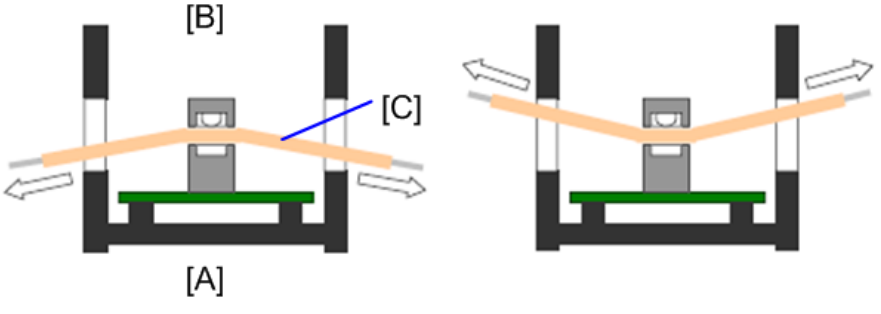
- There are double-sided adhesive tapes [C] at both ends of each cleaning felt
- Make sure that the cleaning felts are straightened.

5. Dampen the felts with alcohol.

Note

- Make sure that the adhesive tapes on the ends of the felts stay free of alcohol.

6. Insert the strip with the felt into the horizontal encoder sensor in the carriage.



j0271230

[A] Machine's front

[B] Machine's rear

[C] Cleaning felt

7. Holding the felt against the front or rear part of the sensor's recess, move the strip back and forth to wipe off the stain.

Note

- Wipe each of the front and rear parts back and forth a few times.
- Shift the stripe with the felt horizontally a few times to completely wipe off the stain.

- The cleaning is over if the felt does not become stained by ink any more.

8. After completing the cleaning, mount the new horizontal encoder strip to the machine.

Vertical Encoder Wheel Cleaning

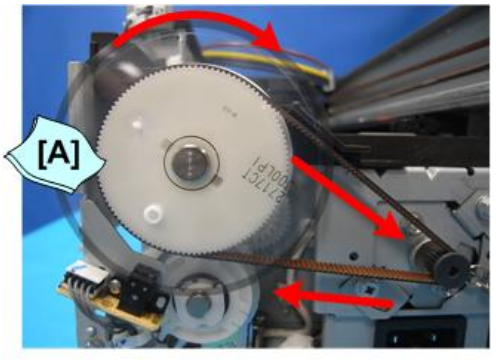
Clean the vertical encoder wheel if the following problems occur:

- Horizontal banding
- Mis-aligned text, images

Preparation

Remove:

- Scanner unit (page 96)
- Rear cover (page 68)



j0271169

1. Dampen a small piece of clean linen cloth with a small amount of alcohol.

   Important

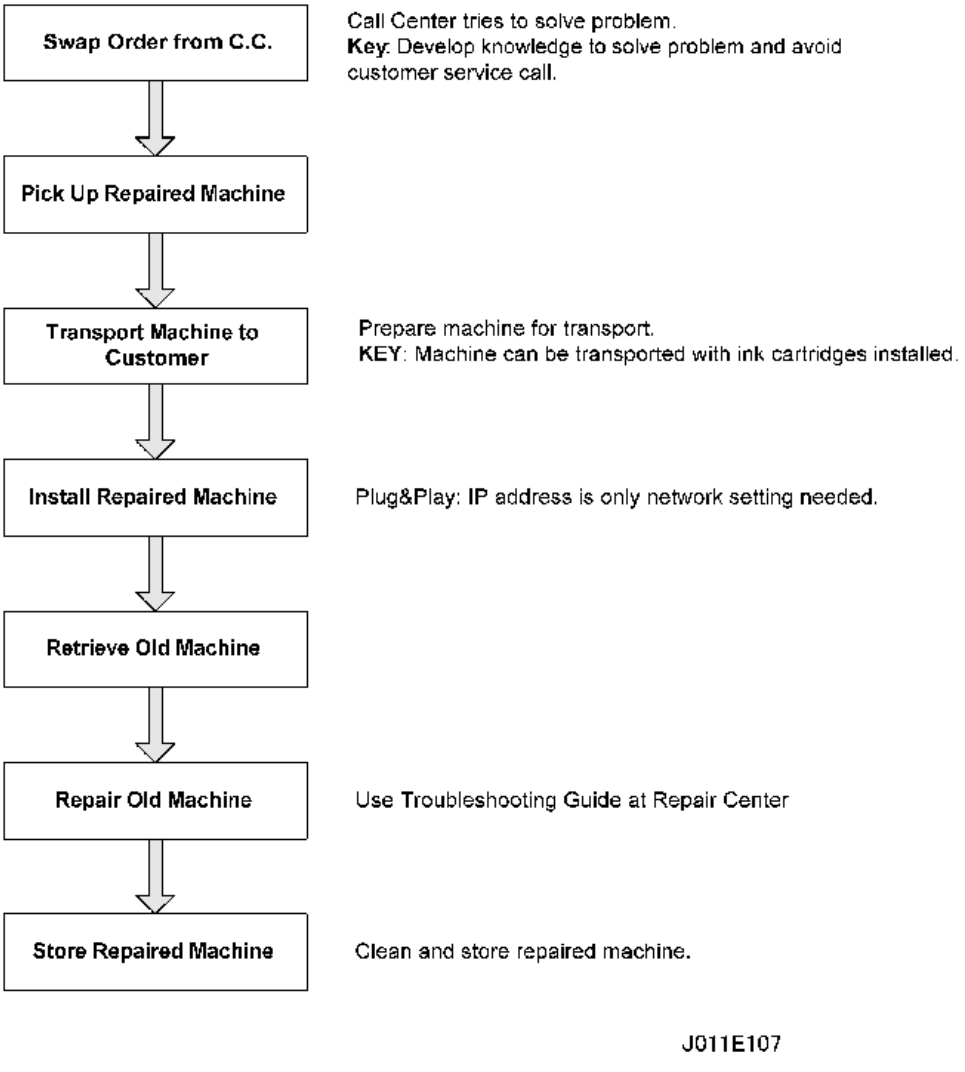
   - **Never use cotton, soft tissue, or any other type of material that could shred and leave fibers on the encoder wheel.**

2. Hold the dampened cloth [A] at the edge on both sides of the wheel.
3. Move the timing belt by hand to rotate the encoder wheel as you wipe it with a dry cloth.
4. Continue to rotate the wheel through at least 2 or 3 full turns so the entire edge of the wheel is clean.
5. Re-attach covers and turn on the machine.
6. Confirm that the machine is in standby mode and ready to operate.
7. Do the "Nozzle Check" after cleaning, and then check the patterns.
8. Do "Print Head Cleaning" if the pattern is not satisfactory.
9. Do "Print Head Flushing" if the pattern is not satisfactory, even after three print head cleanings.

10. Do "Print-Head Flushing" and print another Nozzle Check Pattern.
11. If the Nozzle Check Pattern is still not satisfactory after flushing the print heads, replace the vertical encoder wheel.

Refurbishing

Swap and Repair Flow



Before Shipping from Customer Site to Repair Center

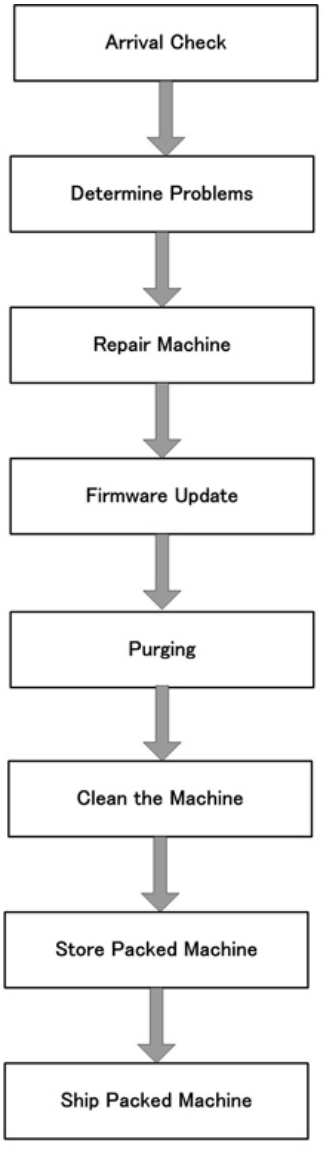
Check Point	Comment
Box Proper Side Up	Keep the box with the top up and bottom down. Do not tilt the box more than 45 degrees from the horizontal.
Ink Collection Tank	Check the ink collection tank to confirm that it is not leaking. Insert a paper towel between the tank and cover to prevent leakage during transport. Confirm that the paper towel is removed after the machine is set up.
Machine Cover	Cover the machine with a plastic bag. This prevents spillage if the ink cartridges leak.
Ink Cartridges	Return the ink cartridges to the customer.
Options	Return all options (PFU, Bypass Tray, etc.) to customer.

What You Need

The following items and equipment are required for packing the machine before shipping.

- Boxes
- Vinyl Bag
- InstaPak Kit or InstaPak Quick Kit
- Ink Cartridges: C, M, Y, K: Starter Cartridges

Refurbishing Flow



Check the machine to determine whether it is replaceable.

Use the Troubleshooting Guide to determine the cause of the problem.

Repair machine only if the problem can be repaired.

See procedure below.

See procedure below.

Storage Conditions
Range: 20C to 34C (68F to 93.2F) , rH: 15% to 80%
Recommended: 20C to 27C (68F to 80.6F, rH 15% to 80%

Pack new ink cartriges with machine.

j011e108

Purging

Cleaning cartridges that contain liquid cleaner will be provided as service parts. These cleaning cartridges will be used in the field to purge ink paths, print head, sub tanks, and nozzles. Do this procedure to clean the print heads before storing the repaired printer for one month or longer.

Important

- **This procedure should be done at the Repair Center before storing a repaired printer until it can be reused. This procedure is not intended for use at the job site for the customer.**

Preparation

You will need an ink collection tank and four cleaning cartridges.

- The ink collection tank must be replaced after cleaning. Before you start the cleaning procedure, make sure that an ink collection tank is available.
- Four cleaning cartridges, one for each ink tank.

1. Turn the printer on.
2. When the printer enters standby mode, enter the Service Menu.
3. Select "Printer Setting" > "Engine Setting" > [OK].
4. Select "3009001"> [OK].
5. When you see "WASHING" push [OK].
6. Open the ink cartridge cover, remove the ink cartridges, replace them with the cleaning cartridges, and close the ink cartridge cover.
7. Confirm that "WASHING" and "EXEC" are still displayed, then push [OK].
8. When you see "OK?" push [OK].
   - "RUNNING" displays while the cleaning sequence executes.
   - When cleaning is finished, the display returns to "WASHING" and "EXEC"

     Note

     - If the "Alert" lamp lights red, this indicates that an error has occurred. At this step you cannot see the error displayed on the printer operation panel.
     - Complete the procedure to return to standby mode, read the number of the error displayed to determine the cause of the error.
9. Exit the Service Menu.
10. Switch the printer off.
11. Remove the cleaning cartridges and store the printer.
    - The initial ink fill counter resets at the end of washing. The next time the ink cartridges are installed and the printer is switched on, the initial filling sequence will begin.
    - Do not install the ink cartridges and turn the printer on again after washing until you are ready to use or service the printer again.
12. Remove the ink collection tank.
13. Insert a new ink collection tank.
14. Do **"3008003"** to reset the software counter for the new ink collection tank.

Clean the Machine

These are general guidelines for cleaning and maintenance.

Item	Action
External Covers	Clean with damp cloth.
Paper Feed Rollers, Connecting Rollers	Clean with damp cloth.
Right Ink Sump	Clean with damp cloth.
Friction Pad (Paper Trays)	Clean with damp cloth.
Ink Collection Tank	Replace then reset counter with **SP3-008-003**

5. System Maintenance Reference

Service Program Mode

See "Appendices" for the following information:

- Service Mode
- Engine Maintenance SP Mode
- Bit Switch Settings
- SP Mode Service Tables

SP Mode Service Tables

SP Table Key

Notation	What It Means	
[range/**default**/step/units]	Example: [-127 to +128/**4.5**/1/0.1 mm].	
	-127 to +128	Range
	4.5	Default
	1	Screen increments
	0.1 mm	Unit change for every screen increment.

Here is a summary of common terms and abbreviations used in the SP code descriptions.

Term	What It Means
DFU	Denotes “Design or Factory Use”. Do not change this value.
DNA This Series	Does not Apply. Applies to a machine of another GELJET series, not J032.
DOM	"Domestic" market only (Japan)
EUA	Europe/Asia
EXP	"Export" markets (North America, Europe, Asia)
FA	"Factory Adjusted". The default setting is set at the factory or service center.
FU	Future Use. These SP codes appear but they are not enabled at this time.
This Series Only	Applies to the J032 only.
LE	Leading Edge
LE/TE	Leading Edge/Trailing Edge
LEF	Long Edge Feed (paper feeds sideways with the long edge feeding first)

Term	What It Means
Main Scan	This refers to printing horizontally across the width of an SEF (portrait) page.
NA	North America
SEF	Short Edge Feed (paper feeds lengthways with the short edge feeding first)
Sub Scan	This is printing vertically down the length of an SEF (portrait) page.
TE	Trailing Edge

SP3-XXX

Reset and Restoration Settings

3-008-001	RST:INIT CNT:F	Reset Initial Tank Fill Count to Manufacturing Operation Count
	Resets the initial fill counter to the initial factory setting (-2).	
3-008-002	RST:INIT CNT:A	Reset Initial Tank Fill Count to Factory Shipping
	Resets the initial fill counter to the initial factory setting before shipping (-1).	
3-008-003	RST:WASTE:RC	Reset Ink Collector Count/Flag: Right Ink Collector unit
	Resets the ink flag and ink counter for the right Ink Collector unit.	
3-008-004	RST:WASTE:R	Reset Ink Collector Count/Flag: Right Ink Sump
	Resets the ink counter for the right ink sump.	
3-008-005	RST:FACT	Restore Factory Default Setting
	Resets and threshold settings and user adjusted values.	

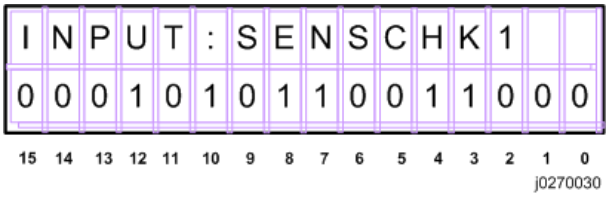
Maintenance, Replacement

3-009-001	WASHING	Execute Auto Washing
	Executes the automatic flushing procedure.	
3-009-002	CARRIAGE CHANGE	After Carriage Replacement
	Execute this SP after replacing the carriage unit.	

SP5-XXX

Input Check: Sensors

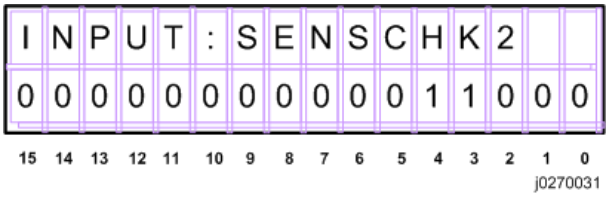
5-804-004	INPUT:SENSCHK1	Check Input Sensors
	Use this SP to display the on/off status of each sensor and switch. The status of each sensor (0, 1) is displayed on the 2nd line of the display.	



No.	Meaning	No.	Meaning
0	Scanner Unit Switch	8	Paper Feed Unit (Tray 2) Relay Sensor
1	Not Used	9	Paper End Sensor (Tray 1)
2	Duplex Unit Set Sensor	10	Paper End Sensor (Tray 2)
3	Multi Bypass Set Sensor	11	Paper End Sensor (Tray 3)
4	Paper Feed Unit (Tray 2) Set Detection	12	Not Used
5	1st Registration Sensor	13	Ink Level Sensor (Feeler)
6	2nd Registration Sensor	14	Maintenance HP Sensor
7	Trailing Edge Sensor	15	Right Front Cover Switch

Input Check: Sensors

5-804-005	INPUT:SENSCHK2	Check Input Sensors
	Use this SP to display the on/off status of each sensor. The status of each sensor (0, 1) is displayed on the 2nd line of the display.	



No.	Meaning
0	USB Connection Detection
1	GJ10 Option Detection
2	Not Used
3	Not Used
4	Not Used
5	Paper Feed Unit (Tray 3) Set Detection
6	Paper Feed Unit (Tray 3) Relay Sensor
7	Paper Feed Unit (Tray 2/Tray3) Rear Cover
8	HRB Fuse Blown Detection

Input Check: Temperature and Humidity

5-804-006	INPUT CHK HTEMP	Display Print Head Temperature
	Displays the temperature reading of the print head temperature sensor. Units: 0.1oC	
5-804-007	INPUT CHK HUTMP	Display Temperature/Humidity Sensor Reading: Temperature

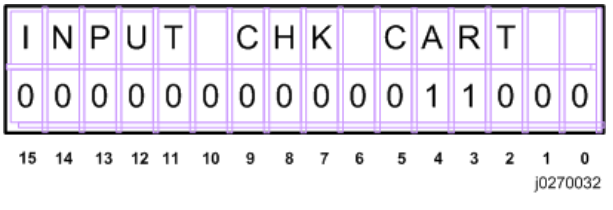
	Use this SP to display the temperature reading of temperature/humidity sensor. Units: 0.1oC	
5-804-008	INPUT CHK HUMI	Display Temperature/Humidity Sensor Reading: Humidity
	Use this SP to display the humidity reading of temperature/humidity sensor. Units: 0.1%	

Input Check: Air

5-804-009	INPUT CHK AIR1	Tank 1: Analog
5-804-010	INPUT CHK AIR2	Tank 2: Analog
5-804-011	INPUT CHK AIR3	Tank 3: Analog
5-804-012	INPUT CHK AIR4	Tank 4: Analog
	Use this SP to display the analog reading of the air sensor in print head tank.	

Input Check: Ink Cartridge Set Sensors

5-804-015	INPUT CHK CART	Display Status of Ink Cartridge Set Sensors
	Use this SP to display the status of the cartridge set sensors for each ink cartridge. The status of each sensor is assigned to a column in the 2nd line of the operation panel display as shown below.	



No.	Meaning	No.	Meaning
0	K Ink Cartridge Set	8	M Ink Cartridge Refill
1	K Ink Cartridge New	9	Y Ink Cartridge Set
2	K Ink Cartridge Refill	10	Y Ink Cartridge New

No.	Meaning	No.	Meaning
3	C Ink Cartridge Set	11	Y Ink Cartridge Refill
4	C Ink Cartridge New	12	Not Used
5	C Ink Cartridge Refill	13	
6	M Ink Cartridge Set	14	
7	M Ink Cartridge New	15	

Input Check: Ink Cartridge Levels

5-804-016	INPUT CHK RES:Y	Yellow Ink Cartridge
5-804-017	INPUT CHK RES:M	Magenta Ink Cartridge
5-804-018	INPUT CHK RES:C	Cyan Ink Cartridge
5-804-019	INPUT CHK RES:K	Black Ink Cartridge
	Use this SP to display the amount of ink that remains in each ink cartridge. Units: %	

Print an Engine Maintenance Summary

5-990-002	PRINT SMC	
	Use this SP to print an engine maintenance summary. You need at least 6 sheets of paper to do this print. It will take at least 3 minutes before the print will start.	

SP7-XXX

Display Count: Machine Total

7-001-001	INIT CNT:A	This counter operates from the initial ink filling after the machine's arrival.
	This total counter starts from "-1", which indicates the flag before the machine's installation.	

7-001-002	LIFE TOTAL CNT	Normal Total Counter
	This total counter starts from "0".	

Display Count: User Cleaning

7-002-001	USER CL CNT:H1	Print Head 1 (C / K)
7-002-002	USER CL CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the total number of print head cleanings executed from the printer driver and from the printer operation panel.	

Display Count: User Flushing

7-002-005	USER RF CNT:H1	Print Head 1 (C / K)
7-002-006	USER RF CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the total number of print head flushings executed from the printer driver and from the printer operation panel.	

Date Display SC Log

7-014-003	SC CODE1	Log 1: Previous
7-014-004	SC CODE2	Log 2: Previous-1
7-014-005	SC CODE3	Log 3: Previous-2
7-014-006	SC CODE4	Log 4: Previous-3
7-014-007	SC CODE5	Log 5: Previous-4
	Use this SP to display the SC code history. • The occurrences of SC codes are stored in the order 1, 2, 3, 4, 5. • Duplicate occurrences of SC codes are not recorded (each SC code recorded only once).	

Display Total Count: SC Log

7-014-008	SC COUNT1	Log 1: Previous
7-014-009	SC COUNT2	Log 2: Previous-1
7-014-010	SC COUNT3	Log 3: Previous-2
7-014-011	SC COUNT4	Log 4: Previous-3
7-014-012	SC COUNT5	Log 5: Previous-4
	Use this SP to display the number of times SC codes have been issued. The occurrences of SC codes are stored in the order 1-5.	

Display Jam Log

7-014-013	JAM CODE1	Log 1: Previous
7-014-014	JAM CODE2	Log 2: Previous-1
7-014-015	JAM CODE3	Log 3: Previous-2
7-014-016	JAM CODE4	Log 4: Previous-3
7-014-017	JAM CODE5	Log 5: Previous-4
7-014-018	JAM CODE6	Log 6: Previous-5
7-014-019	JAM CODE7	Log 7: Previous-6
7-014-020	JAM CODE8	Log 8: Previous-7
7-014-021	JAM CODE9	Log 9: Previous-8
7-014-022	JAM CODE10	Log 10: Previous-9
	Use this SP to display the jam code history. The occurrences of jam codes are stored in the order 1-10	

Display Total Count: Jam Log

7-014-023	JAM COUNT1	Log 1: Previous
7-014-024	JAM COUNT2	Log 2: Previous-1

7-014-025	JAM COUNT3	Log 3: Previous-2
7-014-026	JAM COUNT4	Log 4: Previous-3
7-014-027	JAM COUNT5	Log 5: Previous-4
7-014-028	JAM COUNT6	Log 6: Previous-5
7-014-029	JAM COUNT7	Log 7: Previous-6
7-014-030	JAM COUNT8	Log 8: Previous-7
7-014-031	JAM COUNT9	Log 9: Previous-8
7-014-032	JAM COUNT10	Log 10: Previous-9
	Use this SP to display the number of times jam codes have been issued. The occurrences of jam codes are stored in the order 1-10.	

Status Reports

12 reports can be printed to tell you what you know to need about the machine for setting and servicing. This section shows you how to print these reports:

1. Page Counter (Counter)
2. Page Counter (System Settings)
3. Configuration List
4. PCL Configuration Page
5. I/F Settings List
6. Menu List
7. Error Log
8. Service Summary (Service Menu)
9. Engine Summary Chart (Service Menu)
10. Service Parameter List (Service Menu)
11. Error Log List (Service Menu)
12. T.30 Protocol List (Service Menu)

1. Page Counter (Counter)

```
                    *
                  *****
                 ******
                ********
              Page Counter   Date          Time
                          21/12/2011   21:00:32

   Serial No                    BCP00000028

   Total Full Color             00000000
   Total Black                  00000000
   Printer:Full Color           00000000
   Printer:Economy Color        00000000
```

j0300036

Date, Time.

The date is displayed:

NA: MM/DD/YYYY, HH:MM:SS AM/PM

EU/Asia: DD/MM/YYYY, HH:MM:SS

Total Full Color

The total number of sheets printed with in color.

Total Black

The total number of sheets printed in monochrome.

Printer:Full Color

This counter shows the number of sheets printed in full color in the printer mode.

Printer:Economy Color

This counter shows the number of sheets printed in Economy Color in the printer mode.

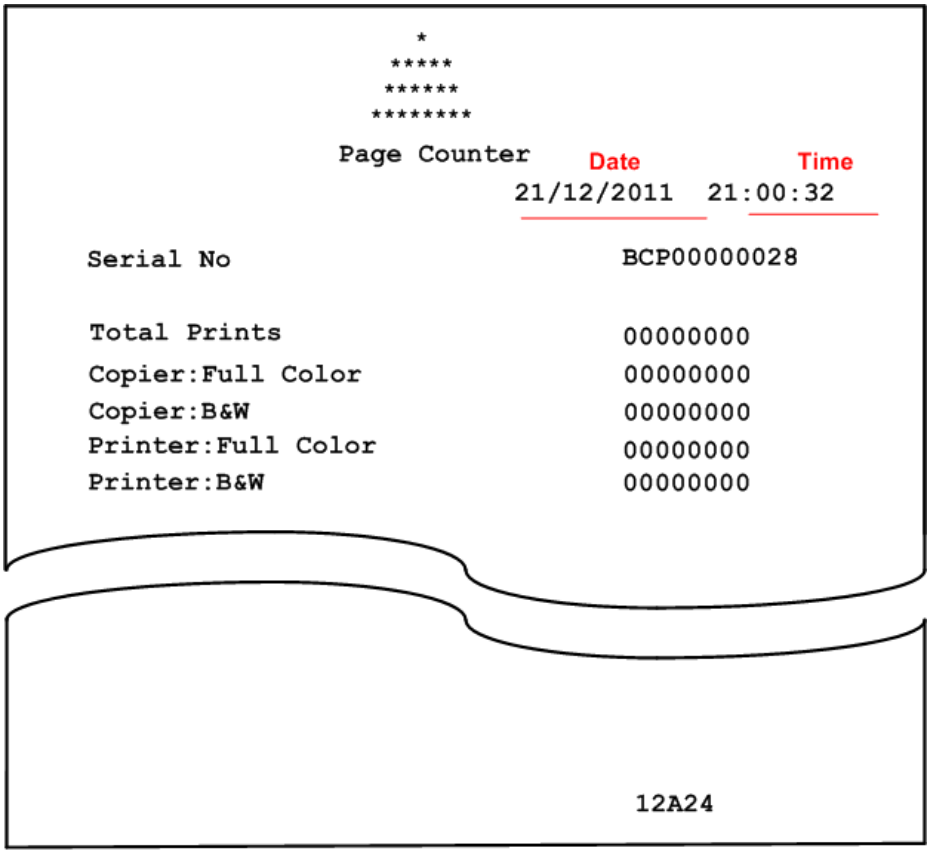
1. [User Tools]> [▲] or [▼] "Counter" > [OK].
2. [▲] or [▼] "Print".
3. [B&W Start] or [Color Start].

   The list is printed.

   Note

   - A printed single-sided sheet counts as "1".
   - A printed double-sided sheet counts as "2".
   - The counter limit is 99,999.

2. Page Counter (System Settings)



j0300037

Date, Time.

The date is displayed:

NA: MM/DD/YYYY, HH:MM:SS AM/PM

EU/Asia: DD/MM/YYYY, HH:MM:SS

Total Prints

This counter shows the total number of sheets printed.

Copier:Full Color

This counter shows the number of sheets printed in full color in the copier mode.

Copier:B&W

This counter shows the number of sheets printed in black and white in the copier mode.

Printer:Full Color

This counter shows the number of sheets printed in full color in the printer mode.

Printer:B&W

This counter shows the number of sheets printed in black and white in the printer mode.

Printer:Economy Color

This counter shows the number of pages printed in Economy Color in the printer mode.

Printer:B&W+Economy Color

This counter shows the total number of pages printed in black and white and Economy Color in the printer mode.

Fax Print:B&W

This counter shows the number of sheets printed in black and white in the fax mode.

Send Total:Color

This counter shows the total number of pages scanned and sent in color (in the scanner and fax modes).

Send Total:B&W

This counter shows the total number of pages scanned and sent in black and white (in the scanner and fax modes).

Fax Transmission

This counter shows the total number of faxed pages.

Scan Send:Color

This counter shows the total number of pages scanned and sent in color in the scanner mode.

Scan Send:B&W

This counter shows the total number of pages scanned and sent in black and white in the scanner mode.

Total Duplex

The total number of sheets printed on both sides.

Total Full Color Coverage

This shows the full color coverage ratio.

Total Black Color Coverage

This shows the black and white coverage ratio.

Total Economy Color Cover

This shows the total of the black and white coverage and Economy Color coverage.

Coverage

This shows the degree of coverage.

Coverage 0: Indicates a print coverage ratio between 0 and 5%.

Coverage 5: Indicates a print coverage ratio between 5 and 20%.

Coverage 20: Indicates a print coverage ratio of 20% and higher.

Initial use date of the machine

This shows the encrypted initial use date of the machine.

1. [User Tools].
2. [▲] or [▼] "System Settings"> [OK].
3. [▲] or [▼] "Administrator Tools"> [OK].
4. [▲] or [▼] "Display/Print Counter"> [OK].
5. [Print]> [B&W Start] or [Color Start].

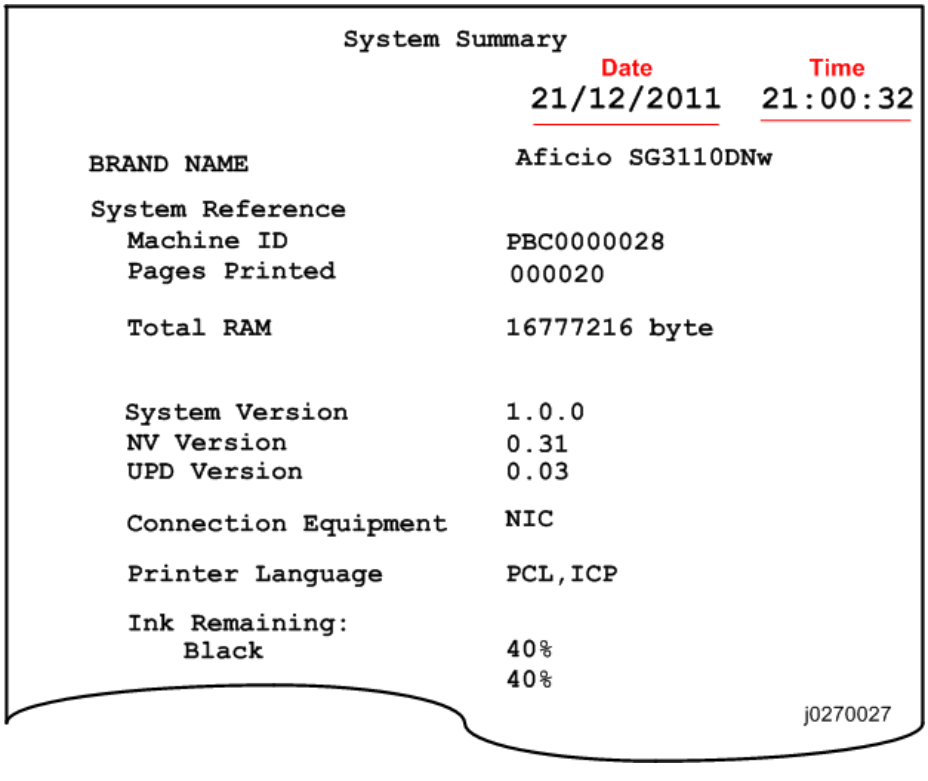
   The list is printed

3. Config. Page

The System Summary lists information about the configuration of the machine.

Important

- This report does not show the log data. To see the log data, print Service Summary.


System Summary

Date 21/12/2011 Time 21:00:32

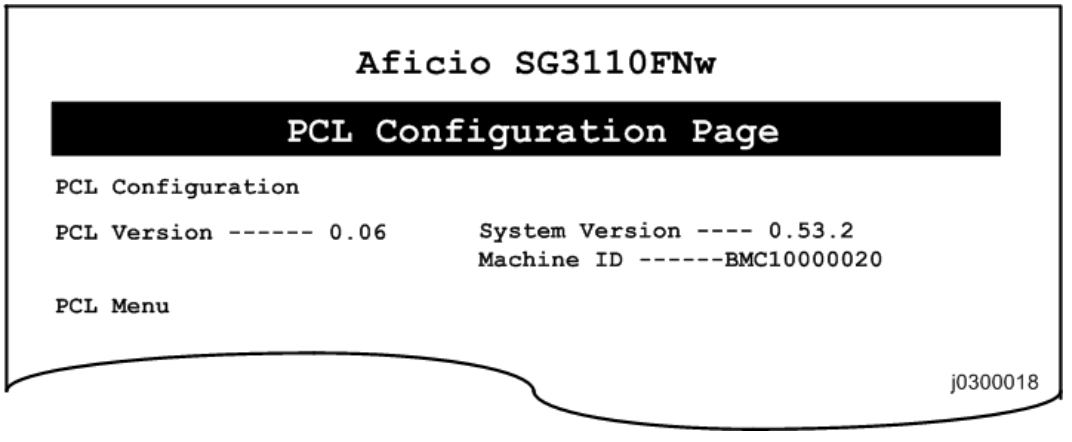
BRAND NAME	Aficio SG3110DNw
System Reference	
Machine ID	PBC0000028
Pages Printed	000020
Total RAM	16777216 byte
System Version	1.0.0
NV Version	0.31
UPD Version	0.03
Connection Equipment	NIC
Printer Language	PCL,ICP
Ink Remaining:	
Black	40%
	40%

j0270027

1. [User Tools]> [▲] or [▼] "Printer Features"> [OK].
2. [▲] or [▼] "List/Test Print"> [OK].
3. [▲] or [▼] "Config. Page"> [OK].
4. [B&W Start] or [Color Start].

The list is printed.

4. PCL Configuration Page



1. [User Tools]> [▲] or [▼] "Printer Features"> [OK].
2. [▲] or [▼] "List/Test Print"> [OK].
3. [▲] or [▼] "PCL Config. Page"> [OK].
4. [B&W Start] or [Color Start].

   The list is printed.

5. I/F Settings List

The I/F Settings List shows the current network settings and network information.

```
                                                12/12/2012  21:00:32
Aficio SG3110FNw Configuration Page / Network Control System

 RN Ethernet 10/100
 Mac Address                  : 00:26:73:23:05:DB
 Interface Speed              : Auto
 Host Name                    : RNP00267305

[COMMON]
  Device Name                 :
  Comment                     :
  Network I/F                 : Ethernet
  Protocol Settings
       IPv4 : Active           IPv6 : Inactive        SNMP : Active
       PictBridge :
  Interface Settings
       Ethernet : Active          USB : Active   USB Host :

[IPv4]
  DHCP                        : Off
  IPv4 Address                : 192.168.166.111
  Gateway Address             : 255.255.255.000
```

j0300012

1. [User Tools]> [▲] or [▼] "System Settings"> [OK].
2. [▲] or [▼] "Interface Settings"> [OK].
3. [▲] or [▼] "Print I/F Settings List"> [OK].
4. [B&W Start] or [Color Start].

   The list is printed.

6. Menu List

The menus and settings in the User Tools menu are printed.

```
Menu List
Maintenance
Nozzle Check Patter
Clean Print-Heads ------------  All Heads, Head1 , Head2
Flush Print-Heads ------------  All Heads, Head1 , Head2
Head Position Adjus
  High Speed  ----------------  -4 - +4
  Fast&Fine  -----------------  -4 - +4
  Finest  --------------------  -4 - +4
  Envelope   -----------------  -4 - +4
Registration
  Tray1  ---------------------  -4.0 - +4.0
    Main Scan ----------------  -4.0 - +4.0
    Sub Scan -----------------  -4.0 - +4.0
  Tray2  ---------------------  -4.0 - +4.0
    Main Scan ----------------  -4.0 - +4.0
    Sub Scan -----------------  -4.0 - +4.0
```

j0300013

1. [User Tools]> [▲] or [▼] "Printer Features"> [OK].
2. [▲] or [▼] "List/Test Print"> [OK].
3. [▲] or [▼] "Menu List"> [OK].
4. [B&W Start] or [Color Start].

   The list is printed.

7. Error Log

This log records errors that occur in the printer during printing.

```
                         Error Log
                                          25/12/2011  7:53:52

User Name          Document            Data and Time

User Name 1        Test1.doc             25/12/2011 7:53:52
 PCL5c             PDL Memory Overflow
  Font Priority      Fine


User Name 2        Test2.doc             24/12/2011 8:53:52
 SYSTEM            Job Reset
```

j0300014

1. [User Tools]> [▲] or [▼] "Printer Features"> [OK].
2. [▲] or [▼] "List/Test Print"> [OK].
3. [▲] or [▼] "Error Log"> [OK].
4. [B&W Start] or [Color Start].

   The list is printed.

8. Service Summary

```
                    Service Summary
                                        Date          Time
                                    21/12/2011    21:00:32

    BRAND NAME                      Aficio SG3110DNw

    System Reference
      Machine ID                    BPC0000028
      Pages Printed                 000020
      Total RAM                     16777216 byte
      System Version                1.0.0
      NV Version                    0.31

      Total Mono Color
      Cartridge Use Number
          Black                         00000 00001
          Cyan                          00000 00001
          Magenta                       00000 00001
          Yellow                        00000 00001

      Manual Maintenance Counter        <H1>  <H2>
          Head-cleaning                 00000 00001
          Flushing                      00000 00001
```

j0270028

1. Enter the Service Menu.
2. [▲] or [▼] "Printer Setting"> [OK].
3. [▲] or [▼] "Controller Setting"> [OK].
4. [▲] or [▼] "Service Summary"> [OK].

   The list is printed.

9. Engine Summary Chart

The Engine Summary Chart lists all the current SP code settings.

```
ENGINE SUMMARY CHART
MODEL        :        Aficio SG3110DNw
SER_NO       :        BCP0000028
DUMMY NO     :        BCP0000028
Firm Ver     :        0.31
SENSOR 1     :        0000000000000000
SENSOR 2     :        0000000000000000
SENSOR 3     :        0000000000000000

SP No                 Name          Value
1001001               FDLEN:F       0000000
.                     .             .
.                     .             .
3001001               GAP:MJ1:A:F   000
.                     .             .
.                     .             .
.                     .             .
.                     .             .

                                    j0271231
```

1. Confirm that paper is loaded in the paper tray. (The report is about 6 pages long.)
2. Enter the Service Menu.
3. [▲] or [▼] "Printer Setting"> [OK].
4. [▲] or [▼] "Engine Setting"> [OK].
5. Enter "5990002" > [OK].
6. Press [OK].
7. Press [OK].
   - Wait for the report to print (it does not start immediately).
   - Printing requires about 2 min.
8. Exit the Service Menu, and switch the machine off.
9. [Power] to switch the machine on.

Here is a brief summary of what is listed in the Engine Summary Chart.

Heading	Meaning
MODEL	Number of the Printer Model
SER_NO	Printer Serial Number
DUMMY_NO	
Firm Ver	Version number of the firmware in the printer

Heading	Meaning
SENSOR 1	See details below.
SENSOR 2	
SENSOR 3	
SP No, Name, Value	SP number, name, value of current setting

Sensor 1: Input Sensors (1 of 2)

The status of these sensors are also displayed by SP5-804-004.

No.	Meaning	No.	Meaning
0	Scanner Unit Switch	8	Paper Feed Unit (Tray 2) Relay Sensor
1	Not Used	9	Paper End Sensor (Tray 1)
2	Duplex Unit Set Sensor	10	Paper End Sensor (Tray 2)
3	Multi Bypass Set Sensor	11	Paper End Sensor (Tray 3)
4	Paper Feed Unit (Tray 2) Set Detection	12	Not Used
5	1st Registration Sensor	13	Ink Level Sensor (Feeler)
6	2nd Registration Sensor	14	Maintenance HP Sensor
7	Trailing Edge Sensor	15	Right Front Cover Switch

Sensor 2: Input Sensors (2 of 2)

The status of these sensors are also displayed by SP5-804-005.

No.	Meaning
0	USB Connection Detection
1	GJ10 Option Detection
2	Jam Wheel Cover Switch
3	Tray 1 Cover
4	Not Used
5	Paper Feed Unit (Tray 3) Set Detection

No.	Meaning
6	Paper Feed Unit (Tray 3) Relay Sensor
7	Paper Feed Unit (Tray 2/Tray3) Rear Cover
8	HRB Fuse Blown Detection

Sensor 3: Ink Cartridge Sensors

The status of these sensors are also displayed by SP5-804-015.

No.	Meaning	No.	Meaning
0	K Ink Cartridge Set	8	M Ink Cartridge Refill
1	K Ink Cartridge New	9	Y Ink Cartridge Set
2	K Ink Cartridge Refill	10	Y Ink Cartridge New
3	C Ink Cartridge Set	11	Y Ink Cartridge Refill
4	C Ink Cartridge New	12	Not Used
5	C Ink Cartridge Refill	13	
6	M Ink Cartridge Set	14	
7	M Ink Cartridge New	15	

10. Service Parameter List

```
            ***Service Data List (25/12/2011)***

Serial Number
Controller F/W Version          V00.32.00
Engine F/W Version              V00.53.2
Boot Version                    V00.20

Fax Header                      abcdefghijk
Fax Own Number                  123456789

E-Mail Settings
 Administrator E-mail Address


Counter
 TX Page                        000000000
 RX Page                        000000000
 E-mail Transmission Page       000000000
 E-mail Reception Page          000000000

SW Setting
```

j0300015

Serial number of machine

Print the serial number of FAX. The serial number of System must be printed together.

Controller F/W Version

Print the version number of Controller F/W.

Engine F/W Version

Print the version number of Engine F/W.

Fax Header

Print the registered TTI up to 20 letters.

Own Fax Number

Print the registered Own Fax Number up to 20 letters.

E-mail Settings

Administrator E-mail Address

Counter

Print the value of each counter in 8 digits.

Only the below items are printed.

- Transmission (Number of pages)

- Reception (Number of pages)
- E-mail Transmission
- E-mail Reception

Soft Switch Setting

Print the default values and the current values of the Service Setting.

1. Enter the Service Menu.
2. [▲] or [▼] "Report"> [OK].
3. [▲] or [▼] "Service Parameter List"> [OK].

   The list is printed.

11. Error Log List


```
        * * * Error Log History List (25/12/2011) * * *
Index           Error           Maker           Tele.
0001            :0070           49EE            88634733507
0002            :00A0           49EE
0003            :0070           0000
0004            :0070           0000
0005            :0070           0000
0006            :0070           0000
0007            :0070           0000
0008            :0070           0000
```

j0300016

Index

Index number from 0001 - 9999

Error

Error code number

Maker

NSF frame maker code

Tele.

Remote side or TX side telephone number for that transaction

1. Enter the Service Menu.
2. [▲] or [▼] "Report"> [OK].
3. [▲] or [▼] "Error Log List"> [OK].

   The list is printed.

12. T.30 Protocol List

```
                    Protocol Monitor Report
                                          Data)      25.12.2011
                                          Fax Header)
                                          Fax Number)
Data  Time    Destination/Sender    TX/RX  Duration Pages Status File No. Mode
-----------------------------------------------------------------------------

Ring          Data
-----------------------------------------------------------------------------
```

j0300017

Date/Time

Communication date and time

Destination/Sender

Destination name/Telephone number

TX/RX

TX or RX

TX: T.30 command sent by local fax

RX: T.30 command received from remote fax

Duration

Communication time for this transaction

Pages

Total page number for this session

Status

Communication result

File No.

Job number

Mode

Communication speed and ECM mode

Ring

Recording ring ON/OFF time by “ms”. Only for RX function and record last 16 time.

Data

T.30 frame that include address & control & data

1. Enter the Service Menu.
2. [▲] or [▼] "Report"> [OK].
3. [▲] or [▼] "T.30 Protocol List"> [OK].

   The list is printed.

Firmware Updates

J032 allows updating of the master controller (MFP unit) and wireless LAN firmware.

MF Unit (Master Controller Firmware)

Operating Environment and Other Requirements

If the machine is connected to computers by network peer-to-peer or directly via a single USB cable, successful updates are guaranteed.

Supported Operating Systems

- Microsoft Windows XP (x86/x64)
- Microsoft Windows Server 2003 (x86/x64)
- Microsoft Windows Vista (x86/x64)
- Microsoft Windows Server 2008 (x86/x64)
- Microsoft Windows Server 2008 R2 (x64)
- Microsoft Windows 7 (x86/x64)
- Microsoft Windows 8 (x86/x64)
- Microsoft Windows Server 2012 (x64)

You must login as an administrator or as a user with administrator privileges.

Limitation or Attention

1. Please remove telephone line before starting update the firmware.
2. Confirm that device is in ready status and connects to PC directly by a USB cable. Connecting to PC with USB hub is not guaranteed.
3. Please keep only one device connects to the PC when updating.
4. The memory available on the device must be 100%, otherwise image stored in the device memory will be lost after update.
5. Do not turn off the device during programming stage.
6. This firmware update tool is exclusive to certain devices. Confirm that this firmware update tool supports your device.
7. When updating does not complete successfully, restart the device then try again.
8. Firmware files are merged in firmware update tool.
9. The TWAIN driver must be installed before using the Firmware Update Tool to update the firmware.

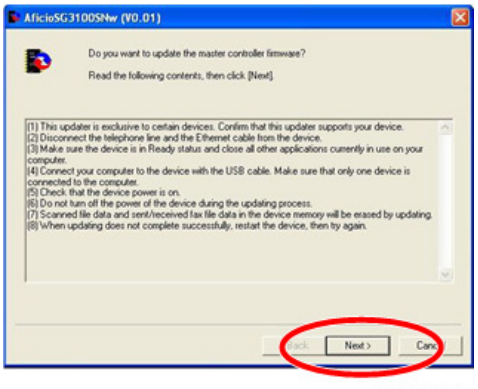
Firmware Update Operating Instructions

These instructions explain how to update the firmware of the machine.

Before you start the update, make sure of the following:

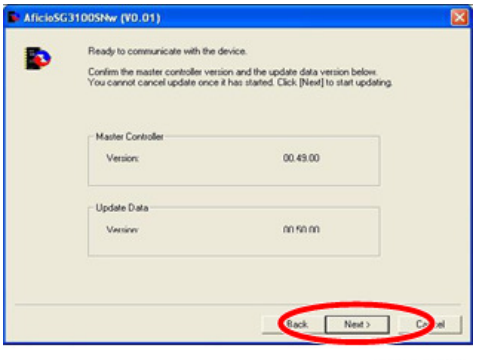
- The machine is in standby mode.
- No applications are running on the computer.
- The machine is connected to the computer with a USB cable or via network peer-to-peer.

1. Double-click the update file.



j0300051

2. Click [Next].
3. Click [Next].



j0300047

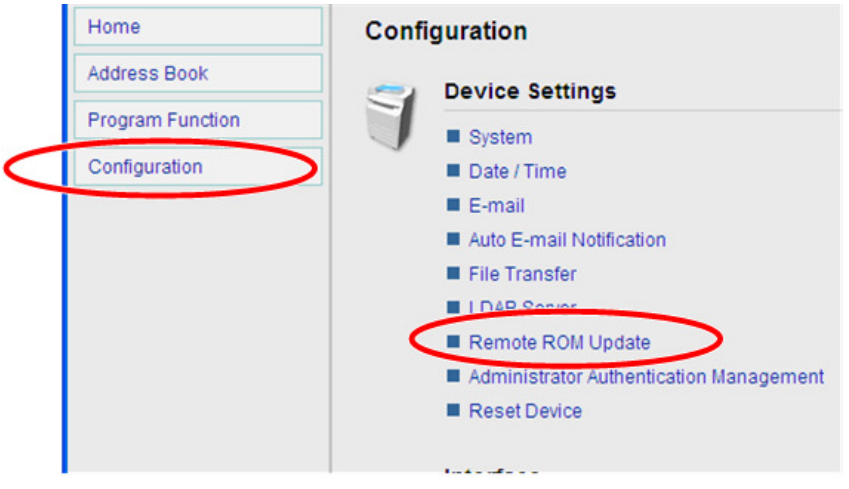
4. Check that the version for [Update data] is later than the version for [Master Controller], and then click [Next >].

j0300048

5. Click [OK].

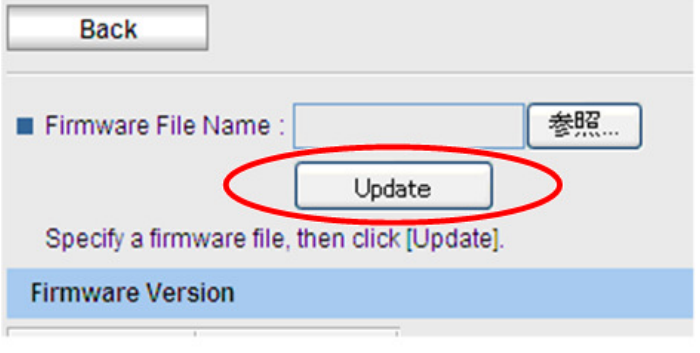
Wireless LAN

1. Open Web Image Monitor.
2. Log in as the administrator.



j0300052

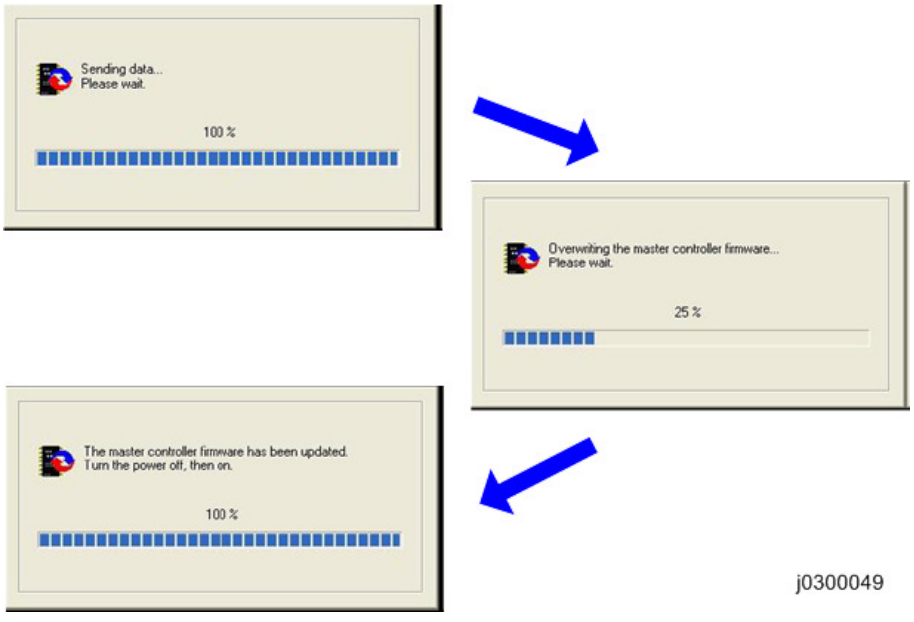
3. [Configuration] > [Remote ROM Update]



j0300053

4. Select the firmware file, and then, click [Update].

5. The progress is displayed on the Panel.



j0300049

6. Updating starts.
7. Do not switch the machine off while updating.

j0300050

8. Turn the main power switch off and then back on.
9. After updating, check the version, and then click [Finish].

6. Troubleshooting

Troubleshooting Guide

See "Appendices" for the following information:

- Operation Panel Display
- Operation Panel Messages
- Service Call Conditions
- Jam Codes
- Status Monitor Messages

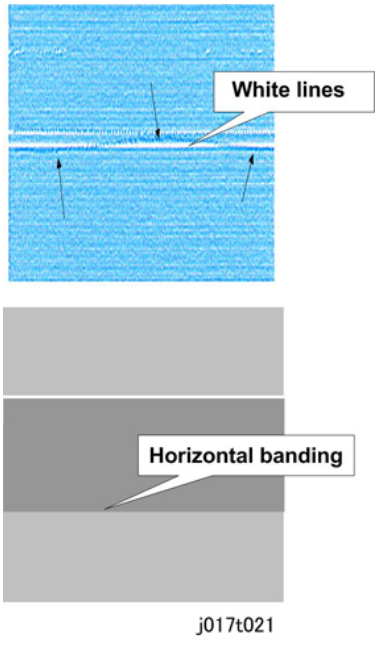
Image Problems

Basic Check Points and Specifications

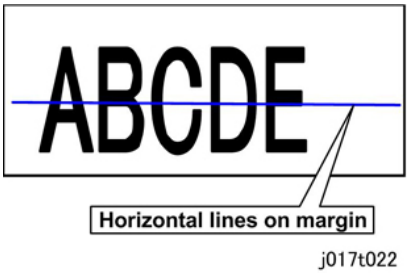
Work environment	Is there a problem at the printer location?
	• Make sure that the printer is level. Place the printer in a location where it will not be subject to shaking or excessive force. • Make sure the temperature and humidity are within the acceptable ranges: Temperature: 10° C to 32°C (50°F to 89.6°F) Humidity: 15% to 80% rH
Ink cartridge	Is an old print cartridge being used?
	• Print cartridges should be opened before their expiration date and used within six months of being opened. Use new cartridge. • To replace all ink inside the print head tank, perform print head flushing 4 times.
	Is a genuine print cartridge being used?
	• Using a cartridge other than a genuine print cartridge or using a cartridge refilled with ink will lower the print quality and could cause a breakdown. • Always use a genuine print cartridge.
Paper	Printing on the wrong side of the paper?
	• Check which side should be printed on when using inkjet plain paper. • If you print on the wrong side, the quality of the printing may be lower and the inside of the printer may get dirty.
	Are you using damp paper?
	• Paper can absorb moisture in a humid environment. • Damp paper tends to curl more. This can interfere with paper transport inside the printer and result in poor image quality.
	Is the paper too thick or too thin?

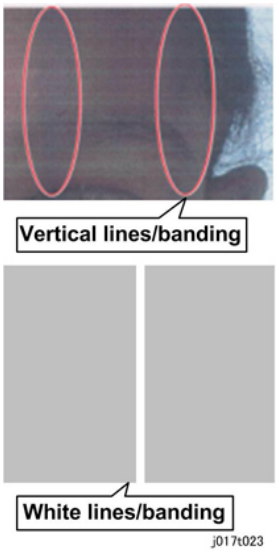
	• Check the paper specifications to be sure that the paper is within the range of paper thickness allowed for the printer. • The print heads can abrade extremely thick or thin paper and cause smears and running.
Driver settings	**Is the driver setting correct for the paper size?**
	• Open the printer driver. • Make sure that the paper size setting in the printer driver is correct for the paper in use. • Check the settings in the "Print On:" list in the Printer Properties dialog box.
	Is the driver setting correct for the paper type?
	• Open the printer driver. • Make sure that the paper type setting in the printer driver is correct for the paper in use. • Check the settings in the "Print On:" list in the Printer Properties dialog box.
	Have the print quality settings been made?
	• Open the printer driver • In the "Select Print Quality:" box, check and set the "Quality Priority" and "Speed Priority" settings for the job.
Application	**Does the same problem occur with other applications?**
	Confirm whether the problem occurs with only one application or with other applications as well. • If the problem does not occur with another application use that application to do the print job. • If the problem occurs with the same file using other applications, try saving the file under a different name and then printing out this renamed file.
Firmware	**Has the firmware in the machine been updated to the latest version?**
	If not, update the firmware to the latest version.

Problems and Solutions

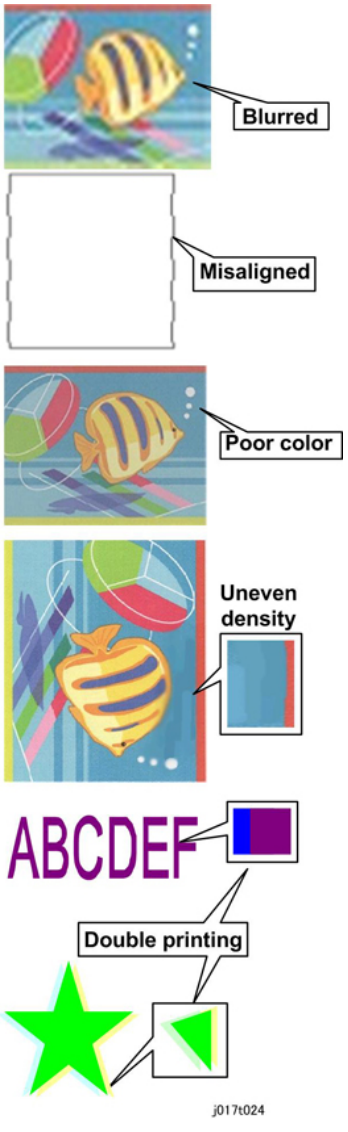
White lines, horizontal banding	
	**1. Are nozzles clogged?** Print out the nozzle check pattern and check if any of the nozzles are clogged. If there is a blockage, start the cleaning procedure for the print head(s) in question. **Note**: In some cases, this will only solve the problem temporarily. If the problem persists, clean the maintenance unit. **Cleaning Sequence To Solve the Problem:** 1. Nozzle check 2. Head cleaning 3. Nozzle check 4. Leave the machine 5 to 10 minutes 5. Do Steps 2, 3 twice 6. Head flushing 7. Nozzle check 8. Leave the machine 8 hours 9. Nozzle check
	2. Are all adjustments correct? Check and adjust the paper feed.
	3. If none of the above work **Note**: If the operator prints out an image comprised mainly of photos or solid filled areas , horizontal lines may still appear on the printouts after performing the recommended action. The machine needs to be repaired. • Ink built-up in maintenance unit, or maintenance unit failed. Clean or replace maintenance unit. • Vertical encoder wheel dirty or damaged. Clean or replace vertical encoder wheel • Print head failed. Replace the carriage unit.

Horizontal lines on the margin

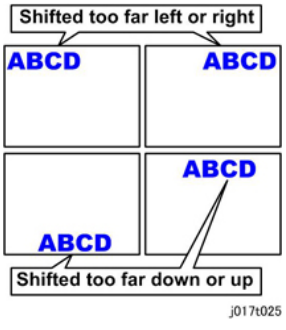
	**1. No action** Due to print head failure, the machine needs to be swapped. It cannot be repaired. Replace the carriage unit.

Vertical lines, vertical banding	
	**1. Are all adjustments correct?** Check and adjust the head position. **2. If none of the above work** The machine needs to be repaired. • The horizontal encoder sheet may be dirty, damaged, or installed incorrectly. • Clean or replace horizontal encoder strip.

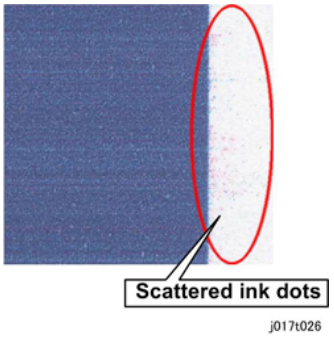
- Image blurred, misaligned
- Poor color, uneven density
- Double printing

	**1. Is the envelope lever set forward at the standard position?**
	Pull the lever forward to the standard position.
	2. Are the nozzles clogged?
	Print out the nozzle check pattern and check if any of the nozzles are clogged. If there is a blockage, start the cleaning procedure for the print head(s) in question. **Note**: In some cases, this will only solve the problem temporarily. If the problem persists, clean the maintenance unit. **Cleaning Sequence To Solve the Problem:** 1. Nozzle check 2. Head Cleaning 3. Nozzle check 4. Leave the machine 5 to 10 minutes 5. Do Steps 2, 3 twice 6. Head flushing 7. Nozzle check 8. Leave the machine 8 hours 9. Nozzle check
	3. Are all the adjustments correct?
	Check paper feed and adjust as necessary.
	4. If none of the above work
	The machine needs to be repaired: • Horizontal encoder strip dirty, damaged. Clean or replace horizontal encoder strip. • Carriage cover over the 1st registration sensor is loose, missing or damaged. Attach the cover correctly or replace it.

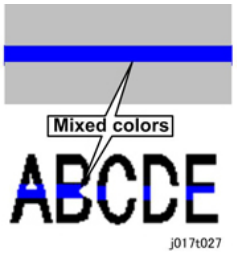
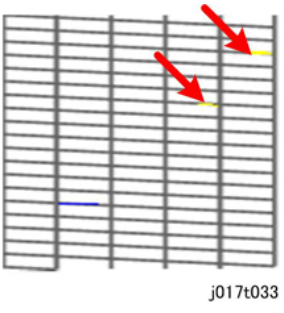
Misaligned printing

	1. Is the enveloper lever set forward at standard position?
	Set the envelope lever to standard position.
	2. Is the paper set correctly?
	Reset the side fence and end fence.
	3. Are all the adjustments correct?
	Check registration and adjust as necessary.
	**4. Check inside the machine.**
	• Rotate the transfer belt manually. • Check to see if there are any paper fragments or ink on the belt surface. • If you see anything on the belt, feed a blank sheet through the machine in de-condensation mode to clean the belt.
	5. If none of the above work
	The machine needs to be repaired: • Horizontal encoder strip is dirty or damaged. Clean or replace horizontal encoder strip. • Vertical encoder wheel dirty or damaged. Clean or replace vertical encoder wheel. • Carriage cover missing or damaged. Re-attach or replace carriage cover. • Transfer belt dirty or damaged. Clean transfer belt. • Replace the carriage unit.

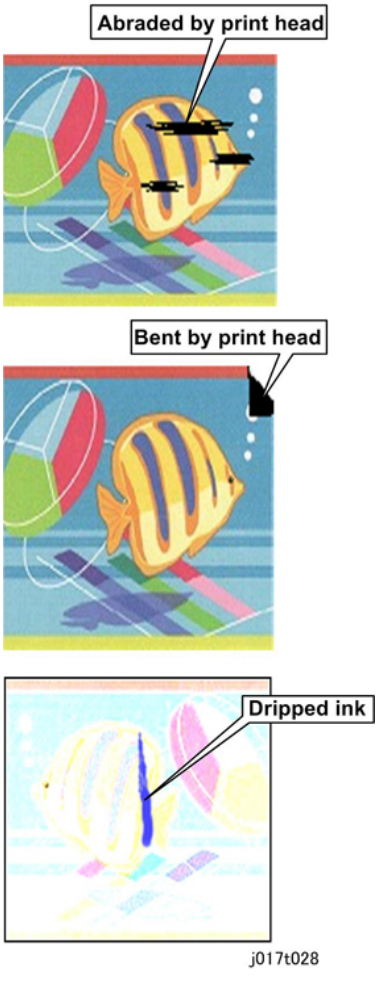
Ink scatter

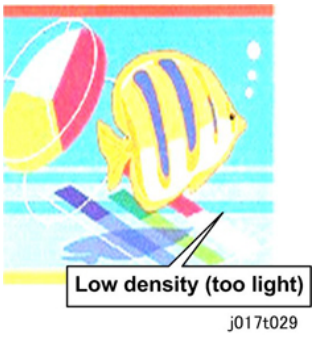
	**1. Is the enveloper lever set forward at standard position?**
	Pull the lever forward to the standard position.
	2. Are the ink nozzles clogged?
	Print out the nozzle check pattern and check if any of the nozzles are clogged. If there is a blockage, start the cleaning procedure for the print head(s) in question. **Note**: In some cases, this will only solve the problem temporarily. If the problem persists, clean the maintenance unit. **Cleaning Sequence To Solve the Problem:** 1. Nozzle check 2. Head Cleaning 3. Nozzle check 4. Leave the machine 5 to 10 minutes 5. Do Steps 2, 3 twice 6. Head flushing 7. Nozzle check 8. Leave the machine 8 hours 9. Nozzle check
	3. If none of the above work
	The machine needs to be repaired: • Replace maintenance unit. Ink build-up or maintenance unit may have failed. • Replace the carriage unit.

Mixed colors

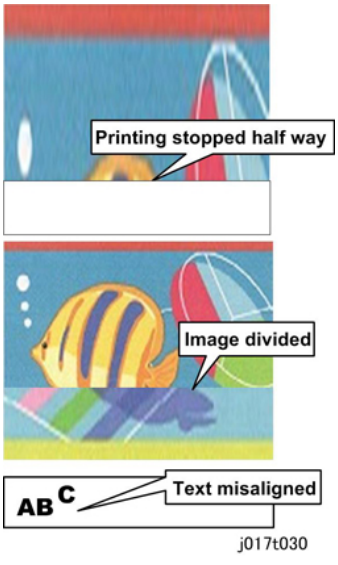
	**1. Are the ink nozzles clogged?**
	Print out the nozzle check pattern and check if any of the nozzles are clogged. If there is a blockage, perform the cleaning procedure on the print head(s) in question. If any of the lattice patterns show ink mixing (e.g., yellow ink appears on the lattice pattern for black), perform cleaning on the print head for that lattice pattern.  **Note**: In some cases, this will only solve the problem temporarily. If the problem persists, clean the maintenance unit.
	2. If none of the above work
	The machine needs to be repaired: • Replace the maintenance unit. Ink has built up or the unit has failed.

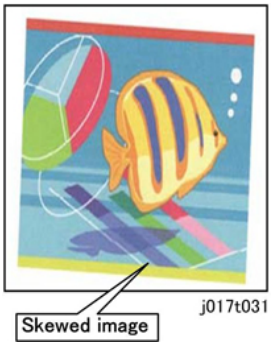
Output dirty, ink running

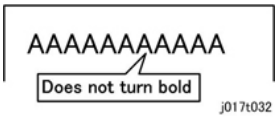
	**1. Is the enveloper lever set forward at standard position?**
	Pull the lever forward to the standard position.
	2. Is the paper set correctly?
	• Adjust the side fences and end fence of the paper cassette • Make sure the edges of the paper are properly aligned • Make sure the paper does not have any folds • Make sure the paper exit tray has been lowered (closed)
	3. Check inside the machine.
	• Rotate the paper transport belt and check for are any ink leakage or paper fragments. • Check to see if there are any paper fragments behind the carriage unit or maintenance unit. If there are, remove them if possible. After removing them, perform the cleaning procedure.
	4. If none of the above work
	The machine needs to be repaired: • Transport belt dirty or damaged. Clean transport belt. • Replace the carriage unit.

Light density	
	**1. Change the driver settings.**
	• Disable "Economy Color" in the printer driver. • If this occurs when performing duplex jobs (as image density tends to be lighter with duplex prints on this model), try printing in simplex mode.
	2. If none of the above work
	This is product specification.

Abnormal image

	**1. Check the type and condition of the paper.**
	• Check the paper size. • If the operator is using paper with lines already printed on it, with an image already printed on the rear side, or with holes in the paper, try printing onto blank white paper that does not have holes.
	2. Is the ink cartridge empty, or has the printer job been canceled?
	• Check the amount of ink remaining. • Confirm whether [Cancel] was pressed. This is possible from the PC in cases where the Ink End or Paper End condition has stopped the print job.
	3. If none of the above work
	The machine needs to be repaired: • Controller board failure, replace controller board.

Skew	
	**1. Is the paper set correctly?**
	Re-set the side fences and end fence of the paper cassette.
	2. Check inside the machine.
	Confirm whether there are any fragments of jammed paper still inside the machine (especially in the rear area of the paper feed tray).
	3. If none of the above work
	This is product specification.

Font does not get bold.	
	**1. Printer driver settings correct?**
	Check the "Bold Text Adjustment" checkbox.
	2. If none of the above work
	This is product specification.

Facsimile Errors

Communication (RX)

Code	Possible Cause
0001	Manual RX mode, no G3 signal received within 35 sec.
0003	Received DIS after sending DIS signal.
0004	Received DCN after sending DTC signal.
0009	No signal received within 35 sec. in manual polling mode.
0010	Received DCN signal after sending DTC signal during polling RX.
0011	Cannot receive correct response after sending three DTC signals.
0012	Remote/local password mismatch during polling RX, or no local file to be polled.
0013	No carrier received within 6 sec. after sending CFR in data phase C.
0014	No T.30 signal received after sending FTT signal.
0016	Received DCN signal after sending PTT signal.
0017	No response received from remote machine after sending xxx_EOM signal.
0018	Nothing detected within 6 sec after sending FTT command
0019	Received DCN signal after sending CFR signal
001A	No power on line over 6 sec. within phase C before a corrected ECM frame.
001D	Detected flag but nothing after CFR.
001E	Timeout in V.17 ECM RX phase C
0x1F	Machine cannot detect V.21 or V.8 signal with 35 sec.
0020	Cannot correct frame within 6 sec., a decoding line over 6 sec in non-ECM mode..
0021	File full.
0022	Correct data not received within specified time due to noise interference on the line.
0023	Received PWD error in RSD or upgrade firmware.

Code	Possible Cause
0029	Mailbox password not set or password mismatch for mailbox receiving.
0030	No signal received within 6 sec. at phase D.
0031	Received incorrect signal at phase D (not EOP, MPS,EOM,DCS PPS_Q, PPS_Q, etc).
0032	No carrier received within 6 sec. after sending MCF, RTP, or RTN signal.
0033	Received DCN signal at phase D between pages (not last page) .
0039	Data received in non-ECM mode but did not receive next line within 13.1 seconds.
003F	Remote machine TSI not defined for one touch or speed dial directory.
0040	No carrier signal received within 6 sec. after sending CTR.
0041	No carrier signal within 6 sec. after sending PPR.
0042	No correct signal received after sending RNR signal.
0043	Received incorrect signal at phase D in ECM mode.
0044	No carrier /FSK signal received within 6 sec. after sending MCF in ECM mode.
0047	No correct signal received after sending ERR signal.
0048	No correct signal received after receive PPS_PRI_Q. PRI_Q, orEOR_PRI_Q .
004A	Line power over threshold for 60 sec. after MCF. No FSK or carrier signal detected in ECM mode.
004B	Correct FSK signal not detected even though FSK tone detected within 6 sec.
004C	Handshake failed during re-training or between page during V34 RX.
004E	Received DCN signal after DIS sent in V.34.
0050	No correct signal received after CJ signal sent in V.8 phase.
0051	No phase 3 signal sent after phase 2 within 20 sec. in V.34.
0053	Modem disconnected after phase 4 in V.34.
0054	Remote machine disconnected after phase 4 in V.8
0055	Received incorrect signal after DIS signal sent in V.34
0056	Modem disconnected after CFR sent in V.34.

Code	Possible Cause
0058	No image signal detected within 6 sec. after modem entered primary phase in V.34.
0059	Relay box deleted while relay job was being received.
005A	Modem did not detect a correct ECM frame with 3 min. in phase C.
005B	No phase 5 signal detected after primary channel within 6 sec.
005C	Busy tone detected on control channel after phase C.
005D	Modem did not detect a correct ECM frame within 12 sec. in phase C.
005E	No control channel signal detected within 6 sec. after RCP frame was received.
005F	No silence detected after JM signal was sent during TX polling.
0060	No bulletin files to be polled in V.34.
0061	No V.21 or V.8 signal detected with 35 sec.
0062	Modem disconnected in phase D after local machine sent flag sequence on control channel.
0063	No flag sequence on control channel within 6 sec. in phase D.
0064	No control channel signal received in phase D within 60 sec. even with power on the line.
0065	Cannot detect any control channel signal within 60 seconds after detect silence in phase D.
0066	No T.30 signal or carrier received after CFR was sent in V.34.
0069	Paper size mismatch after DCS signal received.
0070	Operator press [Stop] key during receiving.
0071	Memory became full during receiving.

Communication (TX)

Code	Possible Cause
0080	No G3 signal detected within 35 sec. in Phase B as specified by ITU-T.
0081	Received DTC signal in TX phase.

Code	Possible Cause
0082	TX unit received a signal other than DIS or DTC, or DCN in Phase B.
0083	FSK signal detected no signal received within 35 sec.
0084	Detected DCN signal in Phase B.
0085	TX unit sent DCS 3 times but each send met DIS/DTC response.
0086	After DCS sent response signal was other than DTC, DIS, FTT, DCN or CFR.
0087	Training attempt failed because machine speed could not adjust to low speed.
0088	Received DCN signal after DCS signal sent.
0089	Remote machine has no mailbox function or mailbox function is not compatible.
008B	Local RX machine received DIS protocol but protocol not compatible.
008C	Local machine memory insufficient for starting relay sending.
008D	Received RX machine DIS protocol but remote machine could not receive document because it was out of paper, or for some other reason.
008F	Modem was not ready to receive V.34 data within 6 sec. after it received CFR signal.
0090	Remote machine not ready for document polling.
0091	DCS+TCF signal sent 3 times but no response signal in response.
0093	DCN signal received after DCS signal sent for V.34
0094	Time-out during ECM frame or RCP command transmission.
0092	Wrong ID number for polling RX or mailbox TX.
0096	Sub-address or password mismatch in polling RX mode.
009A	No signal detected after CI signal sent.
009D	Remote machine hung up before V.34 modem entered Phase 2 during V.34 polling RX.
009E	Manual TX over 15 min. in Phase C of non-ECM mode.
00A0	Operator stopped or cancelled TX job.
00A1	Document jammed during transmission
00A9	The line could not be connected correctly

Code	Possible Cause
00AA	No Dial Tone
00AB	Line Busy
00AC	No Answer
00AD	Destination not Fax
00AE	V.8 procedure did not complete, or no V.21 signal detected after CM signal within 30 sec.
00AF	Modem did not enter control channel after TX side sent RCP signal for V.34
00B1	V.8 procedure did not complete, or V.21 signal not detected after ANSAM signal within 35 sec.
00B2	Phase 2 signal not detected within 30 sec. after local machine sent CJ signal.
00B3	V.21 or JM signal not detected after CM signal was sent.
00B4	No Phase 2 signal detected within 25 sec. after CM/JM signal exchange.
00B5	No Phase 3 signal detected within 25 sec. after Phase 2.
00B6	No Phase 4 signal detected within 25 sec. after CM/JM exchange.
00B8	Remote machine disconnected after local machine sent DCS signal in V.34.
00BA	No correct signal received after local machine sent DTC signal in V.34.
00BB	Every time our side received DIS signal after sending DTC in V.34.
00BC	Modem was not ready within 10 sec. after entering primary channel in V.34.
00BD	No correct V.21 or JM signal detection after FSK frequency detection.
00BE	No document to poll on remote machine after V8 handshake.
00BF	Capability mismatch after V8 handshake.
00C1	At Phase D TX unit cut out EOP 3 times but received no answer from RX unit.
00C2	Remote side disconnect after sending out V.8 CM signal.
00C3	Set transmission finish when receiving negative code at G3 direct transmission)
00C4	After MPS signal received, data was not MCF, RTN, PIP, PIN, RTP, or DCN.

Code	Possible Cause
00C5	DCN signal received after MPS signal sent.
00C9	MPS was sent 3 times at Phase D but there was no answer from RX unit.
00CA	After EOP signal was sent, the data received was not MCF, RTN, PIP, PIN, PRI-EOP, or DCN.
00CB	After EOP signal was sent, the data received had no DCN signal.
00CC	After EOM signal was sent, the data received was not MCF, RTN, PIP, PIN, RTP, or DCN.
00CD	TX units sent EOM 3 times at Phase D, but no answer was received.
00CE	TX unit send EOM at Phase D but received DCN.
00CF	Incorrect signal received after sending DTC signal for V.34 polling.
00D0	Received ERR signal after sending EOR_NULL.
00D1	Received incorrect response after sending PPS_EOP signal in V.34.
00D2	Received DCN after sending PPS_EOP signal.
00D3	Received DCN after sending PPS_NULL signal.
00D4	Received DCN after sending PPS_EOM signal.
00D8	No correct phase 3 signal detected for polling within 25 sec.
00D9	No correct phase 3 signal detected when silence detected after phase 2.
00DA	No Phase 4 signal detected within 30 sec. or remote machine hung up longer than 6 sec.
00DB	Cannot received any T.30 signal within 15 seconds within phase 4.
00DC	T.30 signal received in Phase 4 was signal other than DCS, DIS or DTC.
00DD	Remote machine is not the same model, or no mailbox ID defined for mailbox TX.
00DE	Remote machine has no SUB capability in V34.
00E0	TX unit sent PPS_NULL 3 times at Phase D but received no answer.
00E1	Received incorrect response after sending PPS_NULL.
00E2	No response received during RR response procedure after PPS_NULL was sent.

Code	Possible Cause
00E3	Dial Failed.
00E4	TX unit sent PPS_MPS 3 times at Phase DTX but received no answer.
00E5	Received incorrect response after sending PPS_MPS.
00E6	No response received during RR response procedure after PPS_MPS was sent.
00E7	Received DCN after sending PPS_MPS.
00E8	TX sent PPS_EOP 3 times at Phase D but received no answer.
00E9	PIN signal received after last page was sent three times.
00EA	No RX response received during RR response procedure after PPS_EOP was sent.
00EB	TX unit sent PPS_EOM 3 times at Phase D but received no answer.
00EC	Received incorrect response after sending PPS_EOM.
00ED	No response received during RR response procedure after PPS_EOM was sent.
00EE	TX unit sent EOR_NULL 3 times at Phase D but received no answer.
00EF	Received incorrect response after sending EOR_NULL.
00F0	No response received after sending EOR_NULL.
00F1	TX unit sent EOR_MPS 3 times at Phase D but received no answer.
00F2	Received incorrect response after sending EOR_MPS.
00F3	Received ERR signal after sending EOR_MPS.
00F4	No response received during RR response procedure after EOR_MPS was sent.
00F5	TX unit sent EOR_EOP 3 times at Phase D but received no answer.
00F6	Received incorrect response after sending EOR_EOP.
00F7	After ERR was received the local machine could not receive response after sending EOR_EOP command
00F8	TX unit sent EOR_EOM 3 times at Phase D but received no answer.
00F9	Received incorrect response after sending EOR_EOM.
00FA	Received ERR signal after sending EOR_EOM.

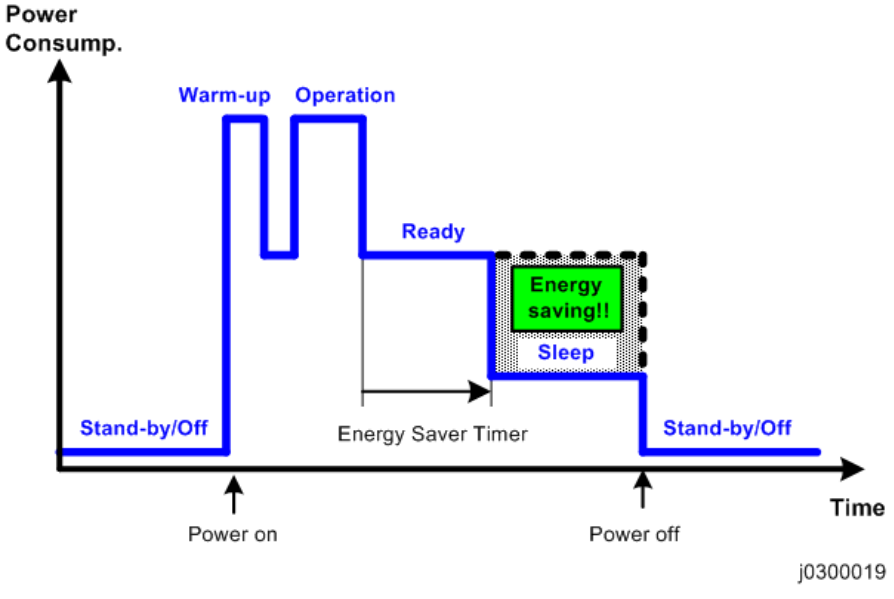
Code	Possible Cause
00FB	No response received during RR response procedure after EOR_EOM was sent.
00FC	No response received after sending CTC.
00FD	Machine could not reduce speed in ECM mode
00FE	Memory full for TX.
00FF	All failed, redial

7. Energy Saving

Energy Save

Energy Saver Modes

The customer should use the energy saver mode correctly to save energy and protect the environment.



The area shaded grey in this diagram represents the amount of energy that is saved.

Timer Settings

The user can set the energy saver timer:

1. Press [User Tools].
2. Select "System Settings" > [OK].
3. Select "Timer Settings" > [OK].
4. Select "Energy Saver Timer" > [OK].

- The default is 15 min.
- The setting can be changed within a range of 1 to 240 min.
- After the selected time has elapsed the machine will enter the Sleep Mode.

Return to Standby Mode

The machine returns to standby mode from energy saver mode after 2 seconds. This applies to all two models.

Recommendation

We recommend that the default settings should be kept. If the customer requests that these settings should be changed, please explain that their energy costs could increase, and that they should consider the effects on the environment of extra energy use.

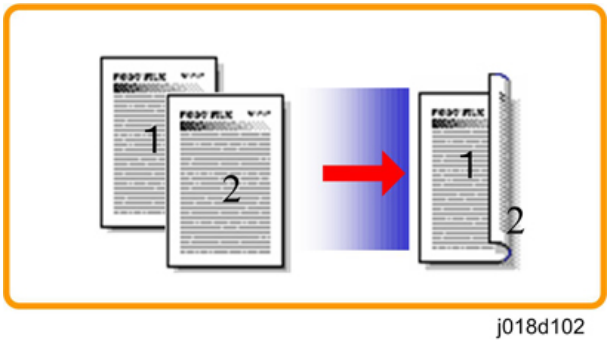
Paper Save

Effectiveness of Duplex/Combine Function

Duplexing and the combine functions reduce the amount of paper used. This means that less energy overall is used for paper production, which improves the environment.

1. Duplex:

Reduce paper volume in half!



j018d102

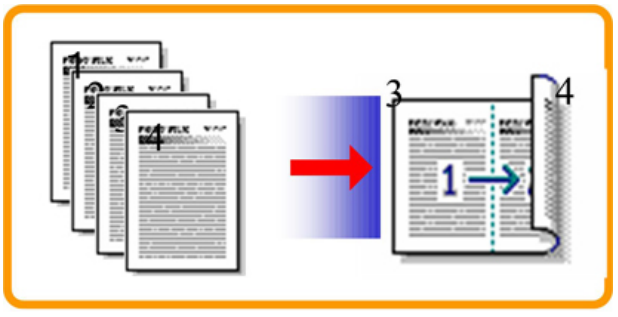
2. Combine mode:

Reduce paper volume in half!

j018d100

3. Duplex + Combine:

Using both features together can further reduce paper volume by 3/4!



j018d101

To check the paper consumption, look at the total counter and the duplex counter.

The total counter counts all pages printed.

- For one duplex page, the total counter goes up by 2.
- For a duplex job of a three-page original, the total counter goes up by 3.

The duplex counter counts pages that have images on both sides.

- For one duplex page, the duplex counter goes up by 1.
- For a duplex job of a three-page original, the duplex counter will only increase by 1, even though two sheets are used.

Recommendation

Please explain these features to the customers so they can reduce their paper usage.

Duplex Mode Tables

The following table shows paper savings and how the counters increase for some simple examples of single-sided and duplex jobs

Duplex mode:

Originals	Simplex Sheet used	Duplex Sheets used	**Paper Saved**	Total counter	Duplex counter
1	1	1	**0**	1	0
2	2	1	**1**	2	1
3	3	2	**1**	3	1
4	4	2	**2**	4	2
5	5	3	**2**	5	2

Originals	Simplex Sheet used	Duplex Sheets used	**Paper Saved**	Total counter	Duplex counter
10	10	5	**5**	10	5
20	20	10	**10**	20	10

If combine mode is used, the total and duplex counters work in the same way as explained previously. The following table shows paper savings and how the counters increase for some simple examples of duplex/combine jobs.

2 in 1 mode:

Originals	Simplex Sheet used	Duplex Sheets used	**Paper Saved**	Total counter	Duplex counter
1	1	1	**0**	1	1
2	2	1	**1**	1	1
3	3	2	**1**	2	2
4	4	2	**2**	2	2
5	5	3	**2**	3	2
10	10	5	**5**	5	5
20	20	10	**10**	10	10

Duplex + 2 in 1 mode:

Originals	Simplex Sheet used	Duplex Sheets used	**Paper Saved**	Total counter	Duplex counter
1	1	1	**0**	1	1
2	2	1	**1**	1	1
3	3	1	**2**	2	2
4	4	1	**3**	2	2
5	5	2	**3**	3	3
6	6	2	**4**	3	3
7	7	2	**5**	4	4

Originals	Simplex Sheet used	Duplex Sheets used	**Paper Saved**	Total counter	Duplex counter
8	8	2	**6**	4	4
9	9	3	**6**	5	5
10	10	3	**7**	5	5
11	11	3	**8**	6	6
12	12	3	**9**	6	6

Model:
BRG-MF1 BT
Machine Code: J032-13, -23

Appendices

January, 2014

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1. Appendix: Specifications

Specifications

ADF

ADF method	Single-side scanning		
Capacity	35 sheets (80g/m^2, 20 lb, 70 kg)		
Original size	Width: 139.7-215.9 mm (5.5-8.5 in.) Length (1-sided): 139.7-355.6 mm (5.5-14 in.) Length Fax Transmission (1-sided): 139.7-1000 mm (5.5-39.3 in.) Length (2-sided): 155-355.6 mm (6.1-14 in.)		
Original Weight	50-110 g/m^2 (13-28 lb)		
Original Feed Speed (Copying A4)		300 x 300 dpi	600 x 600 dpi
	B&W	63.66 mm/sec	15.91 mm/sec
	Color	31.83 mm/sec	7.96 mm/sec
ADF monthly duty cycle	10K sheets/ month		
Dimensions (w x d x h)	399 x 346.9 x 65.5 mm (15.7 x 13.7 x 2.6 in.)		
Weight	2.5 kg (5.5 lb) and less		

Scanner

Carriage	When using the ADF: stationary When using the exposure glass: flatbed scanning
Scan sensor	CIS
Light source	LED + Light Guiding Panel
Optical Resolution	600dpi

Printer Engine

The following terms are used in the tables below.

- **J1**. This refers to the "JEITA J1 Chart", A4/LT size normal paper with 2% BW coverage.
- **J6**. This refers to the "JEITA J6 Chart", A4/LT size normal paper with 3.5% COLOR coverage.
- **High Speed**. This is the fastest print selection available in the printer driver. This mode minimizes the use of ink for draft prints.
- **Speed Priority**. This is the moderately fast selection available in the printer driver (quality is better than that of "High Speed").
- **Quality Priority**. This slowest selection in the printer driver but delivers the best quality print.

Quick Comparison

Resolution (max.)		3600 x 1200	
Print speed	FC	29 ppm (Using RPCS Raster driver : "Standard, High speed" mode, Chart: Ricoh original speed priority chart)	
	B&W		
Dimensions (w x d x h)		399 x 436.5 x 329.5 mm (15.8 x 17.2 x 13.0 in.)	
Paper capacity	Printer	250 sheets	
	Bypass	100 sheets	
	PFU	250 sheets x2	
Duplex unit		Yes	
NIC		Yes*1	
Wireless LAN (IEEE 802.11 b/g/n)		Yes	
PCL supported		No	Yes

*1 The NIC is incorporated not in the FIGO controller but in the MF unit.

Base Specifications

Configuration	Desktop		
Printing Method	On-Demand piezo inlet GEL JET Ink Printing Technology with pigment-base ink (4 colors)		
Resolution (dpi, bit/pixel)	Max. 3600x1200dpi equivalent		
Print Speed (Normal Paper) A4/LT			
	Full-page Color 8.0 ppm / BW 10.5 ppm*1		
	Max. Speed with catalog sample Color 29ppm / BW 29ppm*2		
*1 Using RPCS raster driver : "Standard, Speed Priority" mode, Color: JEITA J6 chart, BW: JEITA J1 chart *2 Using RPCS Raster driver : "Standard, High speed" mode, Chart: Ricoh original speed priority chart			
First Print Speed (A4/LT, SEF, Std. Tray)	BW *1	J032 (PCL)	Less than 5.5 sec.
	Color *2	J032 (PCL)	Less than 7.0 sec.
*1 JEITA J1 chart, "Standard Speed Priority" mode *2 JEITA J6 chart, "Standard Speed Priority" mode			
Duplex Printing (A4/LT)	PCL		Color: 6.8 ppm*1 BW: 7.9 ppm*1
*1 "Standard, Speed Priority" mode, Color: JEITA J6 chart, BW: JEITA J1 chart			
Dimensions (w x d x h)			

	Stand alone	399 x 436.5 x 329.5mm (15.8 x 17.2 x 13.0 in.)
	With Bypass Tray only	399 x 571x 329.5mm (15.8 x 22.5 x 13.0 in.)
	With PFU (1 tray) only	399 x 436.5 x 419mm (15.8 x 17.2 x 16.5 in.)
	With PFU (2 trays) only	399 x 436.5 x 507.5mm (15.8 x 17.2 x 20.0 in.)
	With PFU x2 and Bypass	399 x 571x 507.5mm (15.8 x 22.5 x 20.0 in.)
Weight		
	With consumables	Approximately 16.0 kg (35.3 lb.).
	When fully equipped	Approximately 28.3 kg (62.4 lb.).
Paper Feed Capacity		
	Standard Cassette	250 sheets
	Multi Bypass Tray	100 sheets
	PFU	250 sheets x2
	Maximum	850 sheets
Paper Output Tray Capacity	Std. Tray(Tray 1) Face up	100 sheets

Media Type	Standard Tray	Simplex/Duplex	Plain Paper, Postcard, Inkjet Postcard
		Simplex Only	Inkjet Plain Paper, Glossy Paper, Envelope
	PFU	Simplex/Duplex	Plain Paper
		Simplex Only	Inkjet Plain Paper, Glossy Paper
	Multi Bypass	Simplex/Duplex	Plain Paper, Postcard, Inkjet Postcard
		Simplex Only	Inkjet Plain Paper, Glossy Paper, Envelope, Thick Paper (157-256 g/m^2) (42 to 68 lb.)
Paper Weight	Standard Tray	60 to 163 g/m^2 (16 LB. BOND-90 LB. INDEX)	
	Multi Bypass	60 to 256 g/m^2 (16 LB. BOND-140 LB. INDEX)	
	PFU	60 to 105 g/m^2 (16 LB. BOND-28 LB. BOND)	
Power Supply	NA	100 to 120V 60 Hz	
	EU/Asia	220 to 240V 50/60 Hz	
Power Consumption	Print Mode*1	54.0W	
	Energy Saver Mode	NA: (USB+Wifi)	4.0W
		EU: (USB+Wifi)	4.2W
Warm-up Time		Less than 35 sec.	

*1: Average power consumption for printing 1 min. with ISO Chart.

Options Available

Multi Bypass Tray (J313)
Paper Feed Unit (J312)

Ink Cartridge Yield (Target)

Medium Print Cartridge with ISO standard*1	Black	Ave.2,500
	Color (M, Y, C)	Ave. 2,200
Small Print Cartridge with ISO standard*1	Black	Ave. 600
	Color (M, Y, C)	Ave. 600
Starter Print Cartridge	Use only to initialize ink at installation.	
Ink Collector Unit with ISO standard	Ave. 27,000	

*1: ISO Standard: ISO/IEC 24711

Print Volume, Service Life

Duty	10K prints
Monthly Volume	APV 750 prints, Max. 2,500 prints
Estimated Service Life	5 years, or 150K prints

Operating Environment

		Area
Safety Regulation	UL60950-1	US
	CAN/CSA C22.2 No 60950-1 (c-UL)	Canada
	EN60950-1 (CE marking) (TUV)	EU
	IEC60950-1 (CB certificate)	EU, China, Oceania

		Area
EMC	FCC Part15 SubpartB	US
	IC ES-003	Canada
	EN55022, EN61000-3-2, EN61000-3-3, EN 55024	EU
	AS/NZS CISPR22 (C-tick)	AUS/NZ
	GOST R	RUS
Radiocommunication	FCC Part15 SubpartC	US
	FCC Part15 SubpartE	US
	IC RSS-210	Canada
	EN300 328 (CE marking)	EU
	EN301 489-1, EN301 489-17 (CE marking)	EU
	Australia Radiocommunication (C-tick)	AUS
EMF	EN62311 (CE marking)	EU

			Area
Environmental Regulation	RoHS Directive		EU
	REACH Regulation		EU
	EuP Directive (Lot6)		EU
	EU Battery Directive (2006/66/EC)		EU
	EU Packaging and Packaging Waste Directive (94/62/EC)		EU
	WEEE Directive		EU
	Denmark Cadmium Prohibition		Denmark
	Turkey RoHS		Turkey
	California Perchlorate Best Management Practices		US
	Vermont Mercury Regulations		US
	Model Toxics in Packaging Legislation		US
	New York City Local Law		US
	California Proposition 65		US
	Interstate Mercury Education & Reduction Legislation		US
	RECSIS		WW
Green Label	BAM		Germany
Energy Saving	Energy Star v.1.2		WW
Noise emission*1			
Sound Power Level	During Printing	Speed priority: 59.7 dB(A)*2	
	Standby	5.3 dB(A) *2	
Sound Pressure Level*3	During Printing	Speed priority: 50.4 dB(A)* 2	
	Standby	33.7 dB(A)* 2	

*1 The preceding measurements made in accordance with ISO7779 are actual values.

*2 Main unit only

*3 Measured at the position of a bystander.

Transportation and Storage

	Storage	Transportation
J032	-30 to 43°C (-54 to 109°F) 15% to 80% RH Storage max.: 540 days	-30 to 50°C (-54 to 122°F) 15% to 90% RH
Multi Bypass Tray (J313)	-30 to 43°C (-54 to 109°F) 15% to 80% RH Storage max.: 540 days	-30 to 50°C (-54 to 122°F) 15% to 90% RH
Paper Feed Unit (J312)	-30 to 43°C (-54 to 109°F) 15% to 80% RH Storage max.: 540 days	-30 to 50°C (-54 to 122°F) 15% to 90% RH
Print Cartridges	-30 to 43°C (-54 to 109°F) 15% to 80% RH Storage max.: 540 days	-30 to 50°C (-54 to 122°F) 15% to 90% RH

For best print quality units should be unpacked and used within 540 days of the production date and within 180 days after unpacking.

Multi Bypass Tray BY1040 (J313) Option

Paper Size	Universal adjustable Width: 55 to 216 mm (2.2 to 8.5 in.) Length: 127 to 1295.5 mm (5 to 51 in.)
Paper Capacity	100 sheets (80 g/m^2, 20 lb.)
Paper Weight	60 to 256 g/m^2 (16 LB. BOND-140 LB. INDEX)

Dimensions	376 x 234 x 230 mm (14.9 x 9.3 x 9.1 in.) 376 x 280 x 323 mm (14.9 x 11.1 x 12.8 in.) if the tray is extended
Weight	2.3 kg (5.1 lb.)

Paper Feed Unit TK1160 (J312) Option

Paper Size	A4 SEF, B5 SEF, B6 SEF*1, A5 SEF*1, A6 SEF, LT SEF, LG SEF, Executive SEF, 8 1/2"x13" SEF, 8 1/4"x13" SEF, 8"x13" SEF, 16-kai SEF A5 LEF	
Custom Paper Sizes	Length	148.0 - 356.0 mm (5.83-14.01 in.)
	Width	105.0 - 216.0 mm (4.13-8.50 in.)
Paper Capacity	1 tray 250 sheets ea. 1 or 2 trays can be installed for max. paper supply of 500 sheets (250 + 250)	
Paper Type	Plain paper, Inkjet Plain Paper, Glossy Paper*2	
Paper Weight	60 to 105 g/m^2 (16.0 to 28.0 lb.)	
Dimensions (w x d x h)	399 x 360 x 90 mm (15.8 × 14.2 × 3.6 in.)	
PFU Weight	5.0 kg (110 lb.)	

*1 SP mode

*2 Glossy paper can be fed and delivered only one at a time.

Supported Paper Sizes

EU version

Type	Name	Feed	Size	Byp	T-1	PFU	F-up	Dplx
Plain	A3 W	SEF	12" x 18"	N	N	N	N	N
Paper	A3	SEF	297 x 420 mm	N	N	N	N	N
	B4	SEF	257 x 364 mm	N	N	N	N	N
	A4	SEF	210 x 297 mm	Y	Y	Y	Y	Y

Type	Name	Feed	Size	Byp	T-1	PFU	F-up	Dplx
		LEF	297 x 210 mm	N	N	N	N	N
	B5	SEF	182 x 257 mm	Y	Y	Y	Y	Y
		LEF	257 x 182 mm	N	N	N	N	N
	A5	SEF	148 x 210 mm	SP	SP	SP	SP	SP
		LEF	210 x 148 mm	Y	Y	Y	Y	Y
	B6	SEF	125 x 176 mm	SP	SP	SP	SP	SP
		LEF	176 x 125 mm	N	N	N	N	N
	A6	SEF	105 x 148 mm	Y	Y	Y	Y	Y
	DLT	SEF	11" x 17"	N	N	N	N	N
	LG	SEF	$8^1/_2$" x 14"	Y	N	Y	Y	N
	LT	SEF	81/2" x 11"	Y	Y	Y	Y	Y
		LEF	11" x $8^1/_2$"	N	N	N	N	N
	HLT	SEF	$5^1/_2$" x $8^1/_2$"	N	N	N	N	N
		LEF	$8^1/_2$" x $5^1/_2$"	Y	Y	N	Y	Y
	Exe	SEF	$7^1/_4$" x $10^1/_2$"	Y	Y	Y	Y	Y
		LEF	$10^1/_2$" x $7^1/_4$"	N	N	N	N	N
	F	SEF	8" x 13"	N	Y	Y	Y	N
	Foolscap	SEF	$8^1/_2$" x 13"	N	Y	Y	Y	N
	Folio	SEF	$8^1/_4$" x 13"	N	Y	Y	Y	N
	8 Kai	SEF	267 x 390 mm	N	N	N	N	N
	16 Kai	SEF	195 x 267 mm	Y	Y	Y	Y	Y
		LEF	267 x 195 mm	N	N	N	N	N
Env	Com10	SEF	$4^1/_8$" x $7^1/_2$"	Y	Y	N	Y	N
	Monarch	LEF	$3^7/_8$" x $7^1/_2$"	Y	Y	N	Y	N
	C6	LEF	114 x 162 mm	Y	Y	N	Y	N

Type	Name	Feed	Size	Byp	T-1	PFU	F-up	Dplx
	C5	LEF	162 x 229 mm	Y	Y	N	Y	N
	DL Env	LEF	110 x 220 mm	Y	Y	N	Y	N

US version

Type	Name	Feed	Size	Byp	T-1	PFU	F-up	Dplx
Plain	A3 W	SEF	12" x 18"	N	N	N	N	N
Paper	A3	SEF	297 x 420 mm	N	N	N	N	N
	B4	SEF	257 x 364 mm	N	N	N	N	N
	A4	SEF	210 x 297 mm	Y	Y	Y	Y	Y
		LEF	297 x 210 mm	N	N	N	N	N
	B5	SEF	182 x 257 mm	Y	Y	Y	Y	Y
		LEF	257 x 182 mm	N	N	N	N	N
	A5	SEF	148 x 210 mm	SP	SP	SP	SP	SP
		LEF	210 x 148 mm	Y	Y	Y	Y	Y
	B6	SEF	125 x 176 mm	SP	SP	SP	SP	SP
		LEF	176 x 125 mm	N	N	N	N	N
	A6	SEF	105 x 148 mm	Y	Y	Y	Y	Y
	DLT	SEF	11" x 17"	N	N	N	N	N
	LG	SEF	$8^1/_2$" x 14"	Y	Y	Y	Y	N
	LT	SEF	81/2" x 11"	Y	Y	Y	Y	Y
		LEF	11" x $8^1/_2$"	N	N	N	N	N
	HLT	SEF	$5^1/_2$" x $8^1/_2$"	N	N	N	N	N
		LEF	$8^1/_2$" x $5^1/_2$"	Y	Y	N	Y	Y
	Exe	SEF	$7^1/_4$" x $10^1/_2$"	Y	Y	Y	Y	Y
		LEF	$10^1/_2$" x $7^1/_4$"	N	N	N	N	N

Type	Name	Feed	Size	Byp	T-1	PFU	F-up	Dplx
	F	SEF	8" x 13"	Y	Y	Y	Y	N
	Foolscap	SEF	$8^1/_2$" x 13"	Y	Y	Y	Y	N
	Folio	SEF	$8^1/_4$" x 13"	Y	Y	Y	Y	N
	8 Kai	SEF	267 x 390 mm	Y	N	N	N	N
	16 Kai	SEF	195 x 267 mm	Y	Y	Y	Y	Y
		LEF	267 x 195 mm	N	N	N	N	N
Env	Com10	SEF	$4^1/_8$" x $7^1/_2$"	Y	Y	N	Y	N
	Monarch	LEF	$3^7/_8$" x $7^1/_2$"	Y	Y	N	Y	N
	C6	LEF	114 x 162 mm	Y	Y	N	Y	N
	C5	LEF	162 x 229 mm	Y	Y	N	Y	N
	DL Env	LEF	110 x 220 mm	Y	Y	N	Y	N

Remarks:

Y	Supported
N	Not supported.
SP	Can be set by SP mode

This table shows the smallest and largest paper sizes that can be loaded in the standard tray and options.

Custom Size Range

	Min./Max Width		Min./Max. Length	
	mm	**in.**	**mm**	**in.**
Standard Tray	88 to 216	3.5 to 8.5	US:139.7 to 356 EU:139.7 to 297	US:5.5 to 14.01 EU:139.7 to 356
Bypass Tray	55 to 216*1	2.17 to 8.5	127 to 1295.4	5 to 51
PFU	105 to 216	4.14 to 8.5	148 to 356	5.83 to 14

*1: A 320 x 450 mm (12.6 x 17.7 in.) paper size will feed. However, the quality of image reproduction and efficiency of paper feed cannot be guaranteed.

Operation Specifications

Printing Operation

Print Area	Plain Paper	Sides	Margin: Approx. 3 mm (0.12 in.)*1
		Leading, Trailing Edges	Margin: Approx. 3 mm (0.12 in.)*1
	Envelopes	Sides	Margin: Approx. 3 mm (0.12 in.)
		Leading Edge	Margin: Approx. 38 mm (1.5 in.)
		Trailing Edge	Margin: Approx. 8 mm (0.32 in.)

*1 Under Mac OS, the margins on both sides and on the leading and trailing edges are 4.2 mm (0.17 in.)..

Printing Functions
Job Spooling, Sub Paper Size, Extended A4 Width, Registration Adjustment, Image Density Adjustment.
Driver Adjustment
Reduce/Enlarge (Scaling, Centering), Collate, Layout (n-Up), Poster, Duplex, Booklet, Booklet 2 (Magazine), Dithering, Edge Smoothing, Watermark, Form Overlay, Header/Footer, Adjust Image Position, Binding Margins, Rotate Print, Reverse Order Print, Do Not Print Blank Pages, Economy Color

Print Speed and Resolution

J032 (PCL): BW

Paper Type	Print Mode	dpi	Simplex (A4)
Plain Paper Mode	High Speed (with Ricoh original chart)	300 x 150	29.0 ppm
	High Speed	300 x 150	20.0 ppm
	Speed Priority	600 x 300	10.5 ppm
	Quality Priority	600 x 600	NA
	High Quality	1200 x 1200	NA

J032 (PCL): Color

Paper Type	Print Mode	dpi	Simplex (A4)
Plain Paper Mode	High Speed (with Ricoh original chart)	300 x 150	29.0 ppm
	High Speed	300 x 150	16.0 ppm
	Speed Priority	600 x 300	9.0 ppm
	Quality Priority	600 x 600	NA
	High Quality	1200 x 1200	NA

Continuous Print Speed: Monochrome/Full Color

Print Mode	J032	
	BW (A4/J1 Chart)	Color (J6 Chart)
High Speed	> 20.0 ppm	> 14.0 ppm
Speed Priority	> 10.5 ppm	> 8.0 ppm

Copier Features

Maximum Original Size

	Platen	216 x 297mm (8.5 x 11.7 in.)	
	ADF	216 x 356mm (8.5 x 14 in.), 216 x 1000mm (8.5 x 39.3 in.) when fax sending (only simplex)	
Multi Copy Speed			
	Plain paper	Color 14.0 cpm / BW 20.0 cpm*1 Color 8.0 cpm / BW 10.5 cpm*2	
*1 High Speed" mode, Color: JEITA J6 chart, BW: JEITA J1 chart *2 Standard" mode, Color: JEITA J6 chart, BW: JEITA J1 chart			
	ADF (1 to 1)	Mono	Normal: 10 cpm and above.* 1
		F/C	Normal: 5 cpm and above.* 1
*1 "Standard" mode, Color: JEITA J6 chart, BW: JEITA J1 chart			
	Max speed on catalogue		29 cpm
Multiple copy			
	Up to 99		
Resolution			
	Plain paper	High Speed	Reading: 300 dpi x 300 dpi / 8bit Writing: 300 dpi x 150 dpi / 2-bit value duplex/1 path
		Standard	Reading: 300 dpi x 300 dpi / 8bit Writing: 600 dpi x 300 dpi / 2-bit value duplex/1 path
		High Quality	Reading: 600dpi x 600 dpi / 8bit Writing: 600 dpi x 600 dpi / 2-bit value simplex/1 path
	Inkjet Plain Paper	High Speed	NA
		Standard	Reading: 600 dpi x 600 dpi / 8bit Writing: 600 dpi x 600 dpi / 2-bit value simplex/1path
		High Quality	Reading: 600 dpi x 600 dpi / 8bit Writing: 600 dpi x 600 dpi / 2-bit value simplex/2 path

	Thick paper/ Envelope	High Speed	NA
		Standard	Reading: 300 dpi x 300 dpi / 8bit Writing: 600 dpi x 300 dpi / 3 value simplex/1 path
		High Quality	Reading: 600 dpi x 600 dpi / 8bit Writing: 600 dpi x 600 dpi / 3 value simplex/1 path
	Postcard	High Speed	Reading: 300 dpi x 300 dpi / 8bit Writing: 300 dpi x 150 dpi / 2-bit value simplex/1 path
		Standard	Reading: 300 dpi x 300 dpi / 8bit Writing: 600 dpi x 300 dpi / 2-bit value simplex/1 path
		High Quality	Reading: 600 dpi x 600 dpi / 8bit Writing: 600 dpi x 600 dpi / 2-bit value simplex/1 path
	Inkjet postcard	High Speed	NA
		Standard	Reading: 300 dpi x 300 dpi / 8bit Writing: 600 dpi x 600 dpi / 2-bit value simplex/1 path
		High Quality	Reading: 600 dpi x 600 dpi / 8bit Writing: 600 dpi x 600 dpi / 2-bit value simplex/2 path
	Glossy paper	High Speed	NA
		Standard	Reading: 600 dpi x 600 dpi / 8bit Writing: 600 dpi x 1200 dpi / 2-bit value simplex/2 path
		High Quality	NA
Grayscale			
	4C (C,M,Y, Bk) Photo mode		
Reduction / Enlargement			
	Fix	NA: 65, 78, 93, 100, 129, 155% EU: 50, 71, 93, 100, 141, 200%	
	Custom	1% increase between 25% and 400%	
Image Density Adjustment			

	Manual (5 level), Auto (Text mode and Text&Photo mode only)	
Copy Mode		
	Text & Photo mode (default), Photo mode, Text mode	
Memory Copy		
	J032	300 x 300 dpi/ A4/ BW/ Text-Photo/ MH 9 page, 300 x 300 dpi/ A4/ Grayscale 4 page, 300 x 300 dpi/ A4/ Full-colour 2 page
Interrupt Copy		
	NA	
Combine Copy		
	Only when ARDF is selected: 2 in 1(Single/Double)	

Fax Features

Compatibility	Super G3		
Coding System	MH/MR/MMR		
Modem Speed	G3: 33.6K-2.4Kbps (Auto-shift down)		
Document Size	A4, Letter, Legal, A3*, B4* (* Automatically scaled down to A4).		
Polling Type	Not sequential but available in both transmission and reception.		
Resolution	Loading	Fine	200 x 400 dpi
		Detail	200 x 200 dpi
		Standard	200 x 100 dpi
	Printing		600 x 600 dpi
One-Touch Dial	Max. 20		
Speed-Dial	Max. 90		
Broadcasting	100		
Automatic Redial	Yes		

Auto Answer	The number of calling: Between 1 and 16.
Communication Source	Super G3
Memory Transmission	Yes
Out of Paper Reception	Buzzer notification
Internet Fax	T37 (simple mode): Yes, T38: NA
LAN Fax Utility	Yes

Scanner Features

Color/ Black	Color / Black	
I/F (Scanner Protocol)	POP/ SMTP/ FTP/ CIFS/ SMB	
TWAIN Compliant	TWAIN	
Color Depth	Mono:1bit/ 1bit halftone / 8bit F/C: 8bit	
Resolution	Max.	1200dpix1200dpi
	TWAIN	100/150/200/300/400/600/1200 dpi 8bit/ 1bit gray-scale
	Scan to E-mail Scan to FTP Scan to USB	150 dpi/ 300 dpi/ (600 dpi *1) *1 Monochrome only
Maximum Document Size	Exposure glass	A4, LT
	ADF	A4, LT, LG
Scanning Width	Exposure glass	Width max.: 216 mm (8.5 in.) Length max.: 297 mm (11.7 in.)
	ADF	Width max.: 216 mm (8.5 in.) Length max.: 356 mm (14 in.) (simplex & duplex)
Gray Scale	1bit/8bit halftone	

Scanner Utilities & Drivers	TWAIN driver (via network/USB) WIA driver (Windows) Web management utility

Control Boards

J032 (FIGO) Controller

CPU	PowerPC 464FP
SoC	FIGO
RAM	DDR2 (128MB)
Program ROM	On Board: 8MB
Font ROM	None
EEPROM	4KB
Optional EEPROM slot	None
PDL	RPCS Raster, PCL5c/6
Fonts	PCL: 45 fonts, 13 International fonts
Connectivity	
Host Interface(Std)	USB 2.0 High Speed, 10 BASE-T/100 BASE-TX, IEEE 802.11 b/g/n
Network Protocol	TCP/IP

MIB Support	Private: Ricoh Original Standard: RFC1213(MIB-II) RFC1514/RFC2970(Host Resource MIB) RFC1759(Printer MIB) RFC3412(MPD-MIB) RFC3413(Target-MIB, Norification-MIB) RCF3414(USM-MIB) RFC3415(VACM-MIB) RFC3584(COMMUNITY-MIB) Printer Working Group Candidate Standard 5107.1-2005 (Printer Port Monitor MIB 1.0)
Networking Operating Systems	• Microsoft Windows XP/Vista/Windows 7 • Microsoft Windows Server 2003/2003 R2/2008 • Mac OS X 10.5 Leopard and later versions*1

*1: Mac driver included on CD-ROM (The supported languages are English, French, German and Japanese.).

Print Resolution		
Controller	PCL5c	300x150dpi-2bit, 600x300dpi-2bit, 600x600dpi-2bit, 600x1200dpi-2bit
	PCL6	300x150dpi-2bit, 600x300dpi-2bit, 600x600dpi-2bit, 600x1200dpi-2bit
	RPCS Raster	300x150dpi-2bit, 600x300dpi-2bit, 600x600dpi-2bit, 600x1200dpi-2bit, 1200x1200dpi-2bit Max. 3600x1200dpi equivalent
Drivers	RPCS Raster	300 x 150, 300 x 300, 600 x 300, 600 x 600, 1200 x 600, 1200 x 1200, Max.: 3600 x 1200 dpi equivalent Max. 3600x1200dpi equivalent
Language		

Operation Panel	EU Model	1.English, 2.German, 3.French, 4.Italian, 5.Spanish, 6.Dutch, 7.Swedish, 8.Danish, 9.Norwegian, 10.Portuguese, 11.Finnish, 12.Czech, 13.Hungarian, 14.Polish
	NA Model	1.Japanese, 2.english, 3.German, 4.French, 5.Italian, 6.Spanish, 7.Dutch, 8.Swedish, 9.Norwegian, 10.Danish, 11.Portuguese, 12.Finnish
Drivers	RPCS Raster (EU model)	1.English, 2.German, 3.French, 4.Italian, 5.Spanish, 6.Dutch, 7.Swedish, 8.Danish, 9.Norwegian, 10.Portuguese, 11.Russian, 12.Finnish, 13.Czech, 14.Hungarian, 15.Polish
	RPCS Raster (NA model)	1.English, 2.French, 3.Italian, 4.Spanish, 5.Dutch, 6.Swedish, 7.Danish, 8.Norwegian, 9.Portuguese, 10.Russian, 11.Finnish, 12.Czech, 13.Hungarian, 14.Polish
Test Pages	NA	1.English, 2.German, 3.French, 4.Italian, 5.Spanish, 6.Dutch, 7.Swedish, 8.Danish, 9.Norwegian, 10.Portuguese, 11.Finnish, 12.Czech, 13.Hungarian, 14.Polish
	EU	1.Japanese, 2.English, 3.French, 4.Spanish, 5.Portuguese

Interface Specifications

USB 2.0

Distance Between Devices	USB cable: 5 m (5.5 yd.)
Data Transmission Speed	480 Mbps (High Speed), 12 Mbps (Full Speed)

Ethernet

Data Transmission Speed	10 Mbps, 100 Mbps
Protocol	TCP/IP
Distance Between Devices	100 m (109 yd.)

Wireless LAN

Transmission Specification	Based on IEEE 802.11b/g/n

Data Transfer Speed	Auto select from the following speed: • 802.11b 1, 2, 5.5, 11 (Mbps) • 802.11g 6, 9, 12, 18, 24, 36, 48, 54 (Mbps) • 802.11n 6.5, 7.2, 13, 13.5, 14.4, 15, 19.5, 21.7, 26, 27, 28.9, 30, 39, 40.5, 43.3, 45, 52, 54, 57.8, 58.5, 60, 65, 72.2, 81, 90, 108, 120, 121.5, 135, 150 (Mbps)
Frequency Range	• EU/Asia 2412 to 2472 Mhz (1 to 13 Channels) • US 2412 to 2462 Mhz (1 to 11 Channels)
Transmission Mode	Infrastructure mode

Supported Utilities

Bundled	None
Web	The following software can be downloaded. • Smart Device Monitor for Admin • Smart Device Monitor for Client
Optional	• Remote Communication Gate S Pro • Smart Device Monitor for Admin Accounting Report Package • Desk Top Binder Lt

2. Appendix: SP Mode Tables

Service Mode, Engine Setting (SP Mode)

There are two service modes for this machine:

- **Service Mode.** This mode is menu driven and includes important items for some adjustments as well as other important functions such as displaying the firmware version number, clearing the memory, printing reports, and so on.
- **Engine Setting (SP Mode).** Consists of SP codes SP1-XXX to SP9-XXX. These are printer engine SP adjustments, primarily but not exclusively used by designers for machine adjustments.

Service Mode

Entering/Exiting Service Mode

To enter Service Mode:

1. Press [User Tools] > [#] > [*] > [OK] key.

   The MF unit's firmware version appears for two seconds after entering the service mode, and then the service menu appears.

   - Adjust
   - Soft Switch
   - Clear Data
   - Special Test
   - H/W Test
   - Report
   - Model Setting
   - USB Host
   - Printer Setting

To Exit the Service Mode

1. Press [Escape] key.

   -or-

   If you changed a setting the machine may switch off. Press [Power] to switch the machine on again. This enables the new setting(s).

Service Menu List

Item	Function
ADJUST	**CIS Main Zoom** Adjust horizontal zoom ratio while CIS scanning. **CIS Sub Zoom** Adjust vertical zoom ratio while CIS scanning. **CIS Main Regist** Adjust horizontal start position while CIS scanning. **CIS Sub Regist** Adjust vertical start position while CIS scanning. **ADF Sub Zoom** Adjust vertical zoom ratio while ADF scanning. **ADF Main Regist** Adjust horizontal start position while ADF scanning **ADF Sub Regist** Adjust vertical start position while ADF scanning.
SOFT SWITCH	There are a total of 32 8-bit switches in machine flash ROM, mainly used for PTT regulation.
CLEAR DATA	**SRAM Clear** Clear all image memory and setting item return to factory default. **Memory Clear** Clear all the contents of a memory **User Restriction Password Clear** Clear all the contents of a memory **Redial Destination Clear** Clear all redial destination include fax mode and scanner mode
Special Test	You can execute some special function test.
H/W Test (J032 only)	You can check machine each part working status.

Item	Function
Report	You can print out service mode setting value and last time communication protocol report. • Service Parameter List • Error Log List (J032 only) • T.30 Protocol List (J032 only)
Model Setting	You can set machine model type.
USB Host (J032 only)	You can set USB Host.
Printer Setting	You can set printer settings. • Bit Switch • Counter Setting • Controller Setting • Service Summary

Engine Setting (SP Mode)

Entering/Exiting Engine Setting (SP Mode)

To enter Engine Setting (SP Mode)

1. Enter the Service Mode.
2. [▲] or [▼] "Printer Setting"> [OK].
3. [▲] or [▼] "Engine Setting"> [OK].
4. Enter SP number.
   - "Engine Setting" allows changing the settings of individual SP codes
   - For more about individual SP code settings, refer to the tables in this section.

To exit Engine Setting (SP Mode)

1. Press [Escape] to exit Engine Setting (SP Mode)

   -or-

   If you changed a setting the machine may switch off. Press [Power] to switch the machine on again. This enables the new setting(s).

Using Engine Setting (SP Mode) Menus

Entering an Engine SP Code Directly

Do this procedure to enter an SP code directly if you know the number.

1. In the service tables of this section look up the number and name of the SP code to set.

   Example: Set SP1-001-003 FDLEN:OFFSET for -2.5mm

   "Adjust Amount of LF Offset in Sub Scan Direction"

   Range: [-128 to +127/0/1/0.1mm]
2. Enter the Service Mode.
3. [▲] or [▼] "Printer Setting"> [OK]
4. [▲] or [▼] "Engine Setting"> [OK].
5. "1" is entered at the first digit, press [#Enter] to move the cursor to the 2nd digit.
6. Press [#Enter] twice to confirm the entry of "0" in the second and third fields.
7. Press [▲] once to display "1" in the fourth field, and then press [#Enter] to confirm the entry.
8. Press [#Enter] twice to confirm the entry of "0" in the fifth and sixth fields.
9. Press [▲] once to display "1" in the seventh field, and then press [#Enter] to confirm the entry.

   ```
   FDLEN:OFFSET
   1001003
   ```
10. Press [#Enter].

    ```
    FDLEN:OFFSET
    _000
    ```
11. The first digit is blank. This is the digit for the sign (plus or minus). When this digit is empty, the value is set for plus (+) but the plus sign is not displayed.
12. [▼/Menu] or [▲]> "-000"> [#Enter]> Cursor moves to 1st zero

    ```
    FDLEN:OFFSET
    -000
    ```
13. [▲]> "-000"> To enter the first "0", cursor moves to 2nd "0".
14. [#Enter] x2 times> "-020"> [#Enter] To enter "2" at the 2nd zero, cursor moves to 3rd "0".
15. [▲] x5 times> "-025"> [#Enter]

    ```
    FDLEN:OFFSET
    -025
    ```

16. [#Enter] To save the setting.

SP No. 1001003

17. [Escape]> "Engine Maint."
18. [▼/Menu] or [▲]> "End"> [#Enter]. The machine returns to standby mode.

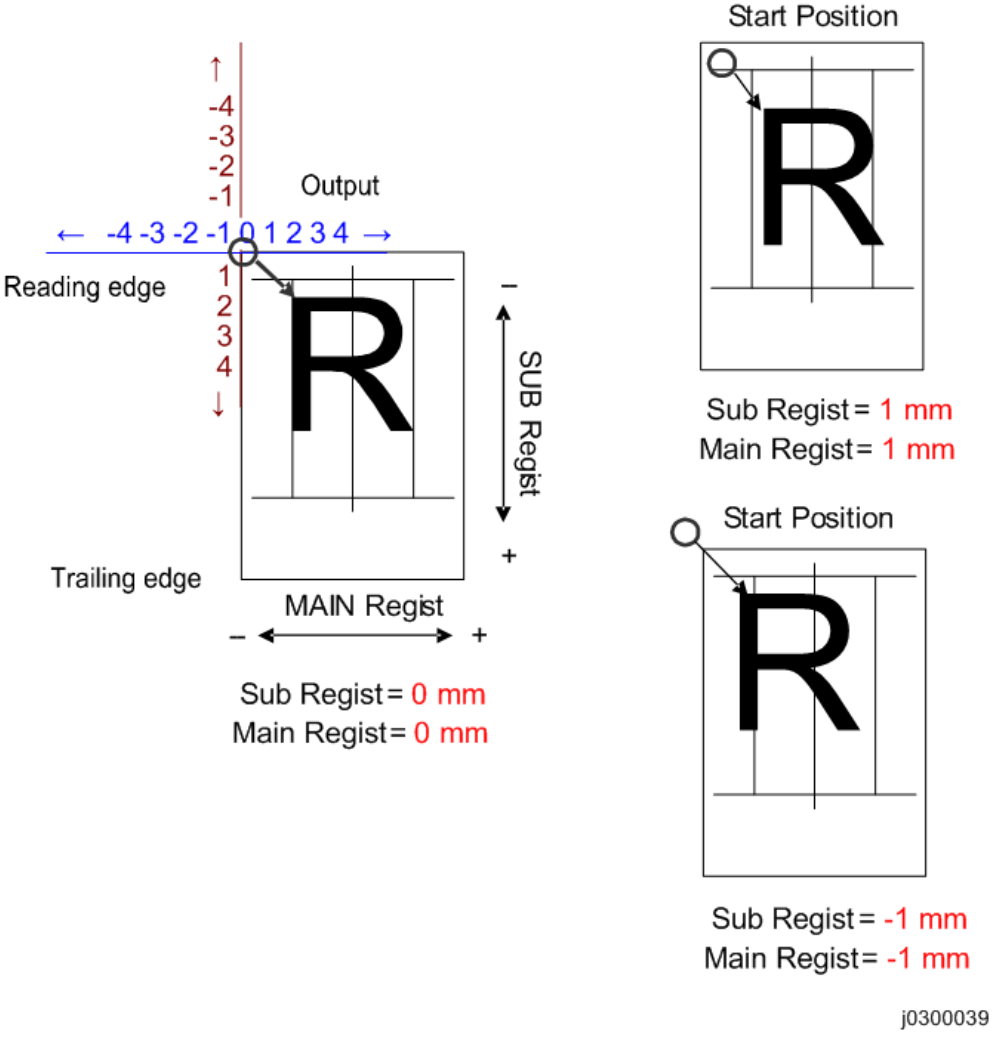
    -or-

    If you changed a setting the machine may switch off. Press [Power] to switch the machine on again. This enables the new setting(s).

Adjust

You can adjust the scan position and print position.

Item	Setting value Min./Max./Step	Default	Function
CIS Main Zoom	-2%/+2%/0.2%	0%	Adjusts horizontal zoom ratio while CIS canning.
CIS Sub Zoom	-2%/+2%/0.2%	0%	Adjusts vertical zoom ratio while CIS scanning.
CIS Main Regist	-1.5mm/+1.5mm/0.5mm	0	Adjusts horizontal start position while CIS scanning.
CIS Sub Regist	-5mm/+5mm/0.5mm	0	Adjusts vertical start position while CIS scanning.
ADF Sub Zoom	-2%/+2%/0.4%	0%	Adjusts vertical zoom ratio while ADF scanning.
ADF Main Regist	-1.5mm/+1.5mm/0.5mm	0	Adjusts horizontal start position while ADF scanning
ADF Sub Regist	-1.5mm/+1.5mm/0.5mm	0	Adjusts vertical start position while ADF scanning.



The adjusted values will be applied as follows:

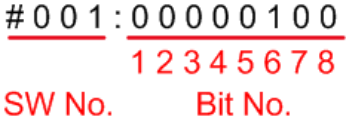
	Function							
	Copy		Fax		Twain		Scanner	
Adjust item	CIS	ADF	CIS	ADF	CIS	ADF	CIS	ADF
CIS Main Zoom	Applied	Applied	Applied	Applied	---	---	---	---
CIS Sun Zoom	Applied	---	Applied	---	---	---	---	---
CIS Main Regist	Applied	---	Applied	---	Applied	---	Applied	---
CIS Sub Regist	Applied	---	Applied	---	Applied	---	Applied	---

ADF Sub Zoom	---	Applied	---	Applied	---	---	---	---
ADF Main Regist	---	Applied	---	Applied	---	Applied	---	Applied
ADF Sub Regist	---	Applied	---	Applied	---	Applied	---	Applied

Soft Switch

There are a total of 32 8-bit switches in machine flash ROM, mainly used for PTT regulation. The "Country Code" selection in the Service Mode determines the default settings.

Setting screen explain



Soft Switch Settings

SW	Bit	Name	Function
4	6	Select to downshift when receiving G3 negative code	0: OFF 1: ON(shift down)
	5	Print out decode error occurs to receive the page on nonECM mode	0: Disable 1: Enable
5	6 5	Relation Between TenKey # & No.of Dial Pulse	0 0: Normal Method 0 1: Swidish Method 1 0: Osio Method
6	2	Select transmission Continue or finish when receiving negative code(RTN signal)	0: OFF(Continue) 1: ON(Finish)
	1	Auto calling	0: Permit 1: Prohibit
9	8 7 6	The number of retransmitting times in one connection	0 0 0: 0 0 0 1: 1 0 1 0: 2 0 1 1: 3 1 0 0: 4

SW	Bit	Name	Function
11	6	Pulse Dial allowed to select	0: Allow 1: Not allowed
12	8	ECM Mode Capability	0: Off - also disable V.34 modem capability 1: On
15	8	The interval of automatic call (unit:sec)	0 0 0 0 0 1 1 0: 12 0 0 0 0 0 1 1 1: 14 0 0 0 0 1 0 0 0: 16 0 0 0 0 1 0 0 1: 18 0 0 0 0 1 0 1 0: 20 1 1 1 1 1 1 0 1: 506 1 1 1 1 1 1 1 0: 508 1 1 1 1 1 1 1 1: 510
	7		
	6		
	5		
	4		
	3		
	2		
	1		
16	8	Fax communication coding method (Transmission)	00: MMR 01: MR 10: MH 11: Reserved
	7		
	2	Fax communication coding method (Reception)	00: MMR 01: MR 10: MH 11: Reserved
	1		
21	2	Increase default T1 Timing during calling (Only for TX function)	0 0: T1 sec 0 1: T1+ 30 sec 1 0: T1+ 40 sec 1 1: T1 + 60 sec
	1		
22	1	Auto Redial (ADF TX)	0: Off (Permit) 1: On (Prohibit)

SW	Bit	Name	Function
25	8	Non-ringing Incoming Call Signal Reception	0: Off 1: On
26	4	The time of pause when dial tone detection setting is disabled, there will be a pause to make sure to connect to PBX.	0 0 0 0: 500 ms 0 0 0 1: 600 ms 0 0 1 0: 700 ms 0 0 1 1: 800 ms 0 1 0 0: 900 ms 0 1 0 1: 1 sec
	3		
	2		
	1		
27	1	When any processing of a page does not work for an hour after closing the line, the job is reset.	0: Off 1: On
42	8	TX Mode for modem	0 0: V.34 0 1: V.17 1 0: V.29 1 1: V.27
	7		
	6	RX Mode for modem	0 0: V.34 0 1: V.17 1 0: V.29 1 1: V.27
	5		

SW	Bit	Name	Function
43	8 7 6 5	V.34 TX Start Speed	0 0 0 0: 33600 (bps) 0 0 0 1: 31200 (bps) 0 0 1 0: 28800 (bps) 0 0 1 1: 26400 (bps) 0 1 0 0: 24000 (bps) 0 1 0 1: 21600 (bps) 0 1 1 0: 19200 (bps) 0 1 1 1: 16800 (bps) 1 0 0 0: 14400 (bps) 1 0 0 1: 12000 (bps) 1 0 1 0: 9600 (bps) 1 0 1 1: 7200 (bps) 1 1 0 0: 4800 (bps)
44	8 7 6 5	V.34 RX Start Speed	0 0 0 0: 33600 (bps) 0 0 0 1: 31200 (bps) 0 0 1 0: 28800 (bps) 0 0 1 1: 26400 (bps) 0 1 0 0: 24000 (bps) 0 1 0 1: 21600 (bps) 0 1 1 0: 19200 (bps) 0 1 1 1: 16800 (bps) 1 0 0 0: 14400 (bps) 1 0 0 1: 12000 (bps) 1 0 1 0: 9600 (bps) 1 0 1 1: 7200 (bps) 1 1 0 0: 4800 (bps)

SW	Bit	Name	Function
45	8	Set the number of page retransmission in single TX at G3	0 0 0 0 0 0 0 0: 0
	7		0 0 0 0 0 0 0 1: 1
	6		0 0 0 0 0 0 1 0: 2
	5		0 0 0 1 0 0 1 1: 19
	4		0 0 0 1 0 1 0 0: 20
	3		0 0 0 1 0 1 0 1: 21
	2		1 0 0 1 1 0 1 0: 154
	1		1 0 0 1 1 0 1 1: 155
			1 1 1 1 1 1 1 0: 254
			1 1 1 1 1 1 1 1: 255
47	5	Print Receive Time (Footer)	0: Off 1: On - Print footer information at each of received page
48	8	TCR (Journal)	0: No 1: Yes - Auto print after 60 record
49	4	No. of rings	0 0 0 0: 1
	3		0 0 0 1: 2
	2		0 0 1 0: 3
	1		0 0 1 1: 4
			0 1 0 0: 5
			1 1 1 1: 16
51	2	Re-transmission start pages at re-calling of memory TX	0: From error page 1: from start page
54	1	Frame Size	0: 256 bytes/64 bytes 1: Fixed 64 bytes

SW	Bit	Name	Function
62	8	Remote Switching Function	0: Do not use 1: Use
	7	Calling Signal False Detection Avoidance Function	0: Do not avoid 1: Avoid
	6	Facsimile Communication Network Non-ringing Calling Signal Reception Selection	0: Do not receive 1: Receive
	5	FAX Dial Operation Function	0: Input Fax Number once 1: Input Fax Number twice
66	8	Print Prohibition Mode	0 : OFF 1 : ON
	5	Footer - file number	0: Off 1: On - Footer include file number
	4	Stop Fax RX printing Job	0: Cannot cancel printing job. 1: pressing the [Stop/Clear] key can stop the current printing operation.
68	5	All Document Transfer function	0: Display the menu in Fax Features in User Tools 1: Disappear the menu in Fax Features in User Tools
	4	Completion condition Monitoring function	0: Monitor until the completion condition. 1: Monitor all of the communication.
	3	Line Monitor function	0: Display the menu in Fax Features in User Tools 1: Disappear the menu in Fax Features in User Tools

SW	Bit	Name	Function
76	8 7 6 5	Reduction Print (alpha value)	0 0 0 0: 0 0 0 0 1: 1 0 0 1 0: 2 0 0 1 1: 3 0 1 0 0: 4 1 1 1 1: 15
	1	Reduction Print function	0: Prohibition 1: Permission
77	8 7 6 5 4 3 2 1	Reduction Print (beta value)	0 0 0 0 0 0 0 0: 0 0 0 0 0 0 0 0 1: 1 0 0 0 0 0 0 1 0: 2 0 0 0 1 0 0 1 1: 19 0 0 0 1 0 1 0 0: 20 0 0 0 1 0 1 0 1: 21 1 0 0 1 1 0 1 0: 154 1 0 0 1 1 0 1 1: 155 Following is reserved.
78	8 7 6 5 4	Overlay(unit: mm)	0 0 0 0 0: 0 0 0 0 0 1: 1 0 1 0 1 0: 10 0 1 0 1 1: 11 1 0 0 1 1: 19 1 0 1 0 0: 20
	1	Overlay function	0: Do not overwrite when recording division 1: Overwrite when recording division

SW	Bit	Name	Function
79	4 3 2 1	The number for Remote Switch function	0 0 0 0: 0 0 1 0 1: 5 0 0 0 1: 1 0 1 1 0: 6 0 0 1 0: 2 0 1 1 1: 7 0 0 1 1: 3 1 0 0 0: 8 0 1 0 0: 4 1 0 0 1: 9
80	8 7	Immediate TX Result Report	0 0: On 0 1: Off (Same as On (Error)) 1 0: Reserved 1 1: Reserved
	6 5	Communication Result Report	0 0: On 0 1: Off (Same as On (Error)) 1 0: Reserved 1 1: Reserved
	4 3	Error Report	0 0: On 0 1: Off (Same as On (Error)) 1 0: Reserved 1 1: Reserved
	2 1	Polling Result Report	0 0: On 0 1: Off (Same as On (Error)) 1 0: Reserved 1 1: Reserved
81	2 1	LAN-Fax Error Report	0 0: On 0 1: Off (Same as On (Error)) 1 0: Reserved 1 1: Reserved

SW	Bit	Name	Function
86	2	Scan to file Coding format	0 0: MH (default) 0 1: MR 1 0: MMR 1 1: (Reserved)
	1		

Clear Data

You can clear all country to "0" and all setting return to initial (default).

Perform the main switch OFF/ON after execute clear function.

User Tools

		SRAM Clear	Memory Clear	User Restriction PWD Clear	Redial Destination Clear
Maintenance		---	---	---	---
General Features (System Setting)		Set to Default	---	---	---
Tray Paper Setting (System Setting)		Set to Default	---	---	---
Timer Setting (System Setting)	Date & Time Setting	---	---	---	---
	Others	Set to Default	---	---	---
Interface Setting (System Setting)		Set to Default	---	---	---
File Transfer (System Setting)		Set to Default	---	---	---

		SRAM Clear	Memory Clear	User Restriction PWD Clear	Redial Destination Clear
Administrator Tools (System Setting)	Address Book Data	---	---	---	---
	Counter	---	---	---	---
	User Restriction Password	Set to Default	---	Set to Default	---
	Others	Set to Default	---	---	---

Display

		SRAM Clear	Memory Clear	User Restriction PWD Clear	Redial Destination Clear
TX/RX Result (Activity Data)		Clear	---	---	---

Fax Data

		SRAM Clear	Memory Clear	User Restriction PWD Clear	Redial Destination Clear
Image Data for Fax		Clear	Clear	---	---

Redial

		SRAM Clear	Memory Clear	User Restriction PWD Clear	Redial Destination Clear
Image Data for Fax		Clear	---	---	Clear

Service Mode

		SRAM Clear	Memory Clear	User Restriction PWD Clear	Redial Destination Clear
Adjust		---	---	---	---
Soft Switch		Set to Default	---	---	---
Clear Data		---	---	---	---
Special Test		---	---	---	---
H/W Test		---	---	---	---
Report		---	---	---	---
Model Setting		---	---	---	---
Printer Setting		Set to Default	---	---	---

Special Test

You can execute some special function test.

No.	Function	Function No.	Details
1	Mode that ADF's Rollers keep moving without setting Paper. It is possible to set by operation panel.	10	BW 600 x 600
		11	BW 300 x 300
		12	COLOR 600 x 600
		13	COLOR 300 x 300
2	Mode that scanner continue to scan by flat bed.	20	BW 600 x 600
		21	BW 300 x 300
		22	COLOR 600 x 600
		23	COLOR 300 x 300

3	Mode to keep On hook status for over 15 minutes.	3	On Hook status
	On/Off function to keep Scanner LED lighting.	40	R LED On
		41	G LED On
		42	B LED On

H/W Test

You can check machine each part working status.

Item	Include on LCD	Function
Signal Test	TX FSK	Output sync. Char (Test PSK/FSK /CED/CNG/Ring Signal output signal level. There are PSK, FSK, CED, CNG signal and Ring Signal, the output message are as below.)
	TX PSK	Output Zero at each data rate
	2100Hz(CED)	Output answer tone
	1100Hz(CNG)	Output calling tone
	V.34 SIGNAL TX	Output carrier at each sample rate.
Dial Test	DTMF	Outputs following DTMF frequency in sequence then stop. ("0","1" - "9", "#", "*".)
	PULSE	Outputs following PULSE frequency in sequence then stop. ("1"- "9", "0")
	PB	Output DTMF frequency for the input digit continuously until change to other digit or stop key

Bit Switch Settings

Bit SW 1

Bit	Function	Default	Details
0	Not Used	---	---

Bit	Function	Default	Details
1	Periodical straightening of the transfer belt	0	The transfer belt is held under tension at all time, so its bent part around the roller may become deformed. To prevent it, you can have the machine turn the roller periodically to change the part of the transfer belt in contact with the roller. 0: Straighten. 1: Do not straighten.
2	Pulling back envelopes	0	You can prevent the banding caused by vibration of the envelope when its trailing edge passes through the 1st pressure rollers during printing. The machine first feeds the envelope until its trailing edge passes through the 1st pressure roller, pulls it back to the position to start printing, and then starts printing. To use this function, the following requirements must be met. (1) Paper tray: Tray 1 (2) Paper size: Envelope (3) Paper type: Envelope or Inkjet Envelope This function is available only if the duplex unit is mounted. 0: Do not pull back envelopes. 1: Pull back envelopes.
3	Not Used	---	---
4	Capping print heads after printing	0	You can specify whether or not to cap print heads immediately after printing. If the capping is not executed immediately, it is executed nine seconds after printing by the capping timer. 0: Cap immediately. 1: Do not cap immediately.

Bit	Function	Default	Details
5	Periodic sending of Gratuitous ARP packets	0	You can specify whether or not to send gratuitous ARP packets at regular intervals of 60 seconds. This will not affect the sending of gratuitous ARP packets when detecting a linked device. 0: Do not send gratuitous ARP packets every 60 seconds. 1: Send gratuitous ARP packets every 60 seconds.
6	Not Used	---	---
7	Not Used	---	---

Bit SW 2: Not used. Do not change these settings.

Bit SW 3: Emulation

Bit	Function	Default	Details
0	Not Used	---	---
1	Not Used	---	---
2	PCL5e/5c	0	Makes the printer compatible with old HP PCL printer drivers (HP4000, HP8000, etc.)
3	Not Used	---	---
4	Not Used	---	---
5	Not Used	---	---
6	Not Used	---	---
7	Not Used	---	---

Bit SW 4. Not used. Do not change these settings.

Bit SW 5. Functions Common to All Models

Bit	Function	Default	Details
0	Not Used	---	---

Bit	Function	Default	Details
1	Counter menu display for charge on printer use, printing enabled after coverage counted up.	0	This is a GW specification. 0: Does not print. 1: Prints
2	Error skip.	0	Switches error skip on/off 0: Errors skipped regardless of paper size, paper type. 1: Error skipped only for PPC.
3	Not Used	---	---
4	Not Used	---	---
5	Counter Display	0	Switches the counter display on/off. 0: Counter not displayed. 1: Counter is displayed
6	Color Level Display	0	Switches the Level Color display on/off. 0: Color level not displayed 1: Color level displays
7	Not Used	---	---

Bit SW 6. Enable Functions for Individual Printer Models

Bit	Function	Default	Details
0	Flushing Mist Prevention	0	This switch determines whether the machine waits for a while before printing in low temperature (15°C or less). OFF: No waiting ON: Waiting until the flushing mist in low temperature goes off.
1	Not Used	---	---

Bit	Function	Default	Details
2	Double-Count	0	This switch sets whether the double-count counter is printed out in the system summary. OFF: No printing ON: Printing
3	Not Used	---	---
4	Not Used	---	---
5	Not Used	---	---
6	Not Used	---	---
7	Hidden Functions	0	Determines whether hidden functions (hidden paper sizes A5 SEF, B6 SEF) are displayed. 0: No A5 SEF, B6 SEF display 1: A5 SEF, B6 SEF displayed

Bit SW 7. Not Used

Bit SW 8: GW Bit Switch

Bit	Function	Default	Details
0	Not Used	---	---
1	Design Waveform Switching	0	**DFU** Designates waveform switch 0: For product 1: For design
2	Speed Mode Priority	0	
3	Operation Control Mode After Printer Idle	0	
4	Maintenance Mode	0	
5	Recycled Paper Menu Display	0	This switch sets whether the recycled paper charge menu of the operational panel. 0: Not displayed 1: Displayed

Bit	Function	Default	Details
6	Charge Setting for Recycled Paper	0	This switch sets whether the charge bias is selected for normal paper or recycled paper. 0: Recycled paper charge 1: Normal paper charge
7	Auto Cleaning for High Volume User	0	1: Cycling the printer off/on cancels error 976, 977 and restores operation of the printer when air is frequently detected in the print heads. 0: No message is issued for frequent air detection. Set to "0" only as a temporary setting. Be sure to reset to "1" to restore normal air detection.

SP Mode Service Tables

SP Table Key

Notation	What It Means	
[range/**default**/step/units]	Example: [-127 to +128/**4.5**/1/0.1 mm].	
	-127 to +128	Range
	4.5	Default
	1	Screen increments
	0.1 mm	Unit change for every screen increment.

Here is a summary of common terms and abbreviations used in the SP code descriptions.

Term	What It Means
DFU	Denotes "Design or Factory Use". Do not change this value.
DNA This Series (J032)	Does not Apply. Applies to a machine of another GELJET series, not J032.
DOM	"Domestic" market only (Japan)
EUA	Europe/Asia
EXP	"Export" markets (North America, Europe, Asia)
FA	"Factory Adjusted". The default setting is set at the factory or service center.
FU	Future Use. These SP codes appear but they are not enabled at this time.
This Series Only	Applies to the J032 only.
LE	Leading Edge
LE/TE	Leading Edge/Trailing Edge
LEF	Long Edge Feed (paper feeds sideways with the long edge feeding first)

Term	What It Means
Main Scan	This refers to printing horizontally across the width of an SEF (portrait) page.
NA	North America
SEF	Short Edge Feed (paper feeds lengthways with the short edge feeding first)
Sub Scan	This is printing vertically down the length of an SEF (portrait) page.
TE	Trailing Edge

SP1-XXX

Paper Feed

1-001-001	FDLEN:F **(FA)**	Adjust Sub Scan Registration (Normal Paper)
1-001-002	FDLEN:U	
	Do this SP adjust the amount of line feed for 1 scan line. Do this setting only if the line feed amount cannot be adjusted on the user menu of the printer operation panel with "Adj. Paper Feed". [-1481620 to -1481620/FA/1/0.1mm]	
1-001-003	FDLEN:OFFSET	Adjust Amount of LF Offset in Sub Scan Direction
	Use this SP to set the amount of line feed before the print head begins its 2nd pass during bidirectional printing. Do this SP when it is necessary to correct color offset that occurs during bi-directional printing. [-128 to +127/FA/1/0.1mm]	

Sub Scan Registration

1-001-004	REG:FD1:NORM:F **(FA)**	Adjust Sub Scan Registration (Normal Paper: Tray 1)
1-001-005	REG:FD1:NORM:U	

	Use this SP code to adjust writing in the sub scan registration for normal paper loaded in Tray 1. Do this setting when it is necessary to fine adjust the line feed position. [-128 to +127/FA/1/0.1mm]	
1-001-006	REG:FD:GLOS:F **(FA)**	Adjust Sub Scan Registration (Glossy Paper)
1-001-007	REG:FD:GLOS:U	
	Use this SP code to adjust writing in the sub scan registration for glossy paper. Do this setting when it is necessary to fine adjust the line feed position. [-128 to +127/FA/1/0.1mm]	
1-001-008	REG:FD2:NORM:F **(FA)**	Adjust Sub Scan Registration (Normal Paper: Tray 2)
1-001-009	REG:FD2:NORM:U	
	Use this SP code to adjust writing in the sub scan registration for normal paper loaded in Tray 2. Do this setting when it is necessary to fine adjust the line feed position. [-128 to +127/FA/1/0.1mm]	
1-001-010	REG:FD3:NORM:F **(FA)**	Adjust Sub Scan Registration (Normal Paper: Tray 3)
1-001-011	REG:FD3:NORM:U	
	Use this SP code to adjust writing in the sub scan registration for normal paper loaded in Tray 3. Do this setting when it is necessary to fine adjust the line feed position. [-128 to +127/FA/1/0.1mm]	
1-001-012	REG:FDM:NORM:F **(FA)**	Adjust Sub Scan Registration (Normal Paper: Bypass Tray)
1-001-013	REG:FDM:NORM:U	
	Use this SP code to adjust writing in the sub scan registration for normal paper loaded in Bypass Tray. Do this setting when it is necessary to fine adjust the line feed position. [-128 to +127/FA/1/0.1mm]	

Carriage

1-002-001	ADJ:SIDEBORAD	Adjust Sideboard (Carriage Home Position)

	Use this SP to set the reference position for installation of the right plate. Do this SP to correct the alignment of the capping position with the carriage. [-128 to +127/FA/1/0.1mm]

Main Scan Registration

1-002-002	REG:TR1:NORM:F **(FA)**	Adjust Main Scan Registration (Normal Paper: Tray 1)
1-002-003	REG:TR1:NORM:U	
	Use this SP code to adjust writing in the main scan direction for normal paper loaded in Tray 1. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1mm]	
1-002-004	REG:TR2:NORM:F **(FA)**	Adjust Main Scan Registration (Normal Paper: Tray 2)
1-002-005	REG:TR2:NORM:U	
	Use this SP code to adjust writing in the main scan direction for normal paper loaded in Tray 2. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1mm]	
1-002-006	REG:TR3:NORM:F (FA)	Adjust Main Scan Registration (Normal Paper: Tray 3)
1-002-007	REG:TR3:NORM:U	
	Use this SP code to adjust writing in the main scan direction for normal paper loaded in Tray 3. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1mm]	
1-002-008	REG:MAN:NORM:F **(FA)**	Adjust Main Scan Registration (Normal Paper: Bypass Tray)
1-002-009	REG:MAN:NORM:U	
	Use this SP code to adjust writing in the main scan direction for normal paper loaded in Bypass Tray. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1mm]	

1-002-010	REG:TR1:GROS:F (FA)	Adjust Main Scan Registration (Glossy Paper: Tray 1)
1-002-011	REG:TR1:GROS:U	
	Use this SP code to adjust writing in the main scan direction for glossy paper loaded in Tray 1. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1mm]	
1-002-012	REG:TR2:GROS:F (FA)	Adjust Main Scan Registration (Glossy Paper: Tray 2)
1-002-013	REG:TR2:GROS:U	
	Use this SP code to adjust writing in the main scan direction for glossy paper loaded in Tray 2. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1mm]	
1-002-014	REG:TR3:GROS:F (FA)	Adjust Main Scan Registration (Glossy Paper: Tray 3)
1-002-015	REG:TR3:GROS:U	
	Use this SP code to adjust writing in the main scan direction for glossy paper loaded in Tray 3. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1mm]	
1-002-016	REG: MAN:GROS:F (FA)	Adjust Main Scan Registration (Glossy Paper: Bypass Tray)
1-002-017	REG: MAN:GROS:U	
	Use this SP code to adjust writing in the main scan direction for glossy paper loaded in Bypass Tray. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1mm]	

Charge Width Setting Mj1,2 : Simplex (DFU)

1-010-001	CHG:W1:EDGE:1	LE/TE: Mj1,2: ID1
1-010-002	CHG:W1:MIDL:1	MIDLL: Mj1,2: ID1
1-010-003	CHG:W1:EDGE:2	LE/TE: Mj1,2: ID2
1-010-004	CHG:W1:MIDL:2	MIDLL: Mj1,2: ID2

1-010-005	CHG:W1:EDGE:3	LE/TE: Mj1,2: ID3
1-010-006	CHG:W1:MIDL:3	MIDL: Mj1,2: ID3
1-010-007	CHG:W1:EDGE:4	LE/TE: Mj1,2: ID4
1-010-008	CHG:W1:MIDL:4	MIDL: Mj1,2: ID4

Charge Width Setting Mj3,4,5 : Simplex (DFU)

1-010-009	CHG:W1:EDGE:9	LE/TE: Mj3,4,5: ID1
1-010-010	CHG:W1:MIDL:9	MIDLL: Mj3,4,5: ID1
1-010-011	CHG:W1:EDGE:10	LE/TE: Mj3,4,5: ID2
1-010-012	CHG:W1:MIDL:10	MIDLL: Mj3,4,5: ID2
1-010-013	CHG:W1:EDGE:11	LE/TE: Mj3,4,5: ID3
1-010-014	CHG:W1:MIDL:11	MIDL: Mj3,4,5: ID3
1-010-015	CHG:W1:EDGE:11	LE/TE: Mj3,4,5: ID4
1-010-016	CHG:W1:MIDL:12	MIDL: Mj3,4,5: ID4

Charge Width Setting Mj1,2 : Duplex (DFU)

1-011-001	CHG:W2:EDGE:1	LE/TE: Mj1,2: ID1
1-011-002	CHG:W2:MIDL:1	MIDLL: Mj1,2: ID1
1-011-003	CHG:W2:EDGE:2	LE/TE: Mj1,2: ID2
1-011-004	CHG:W2:MIDL:2	MIDLL: Mj1,2: ID2
1-011-005	CHG:W2:EDGE:3	LE/TE: Mj1,2: ID3
1-011-006	CHG:W2:MIDL:3	MIDL: Mj1,2: ID3
1-011-007	CHG:W2:EDGE:4	LE/TE: Mj1,2: ID4
1-011-008	CHG:W2:MIDL:4	MIDL: Mj1,2: ID4

Charge Width Setting Mj3,4 : Duplex (DFU)

1-011-009	CHG:W2:EDGE:9	LE/TE: Mj3,4: ID1
1-011-010	CHG:W2:MIDL:9	MIDLL: Mj3,4: ID1
1-011-011	CHG:W2:EDGE:10	LE/TE: Mj3,4: ID2
1-011-012	CHG:W2:MIDL:10	MIDLL: Mj3,4: ID2
1-011-013	CHG:W2:EDGE:11	LE/TE: Mj3,4: ID3
1-011-014	CHG:W2:MIDL:11	MIDL: Mj3,4: ID3
1-011-015	CHG:W2:EDGE:12	LE/TE: Mj3,4: ID4
1-011-016	CHG:W2:MIDL:12	MIDL: Mj3,4: ID4

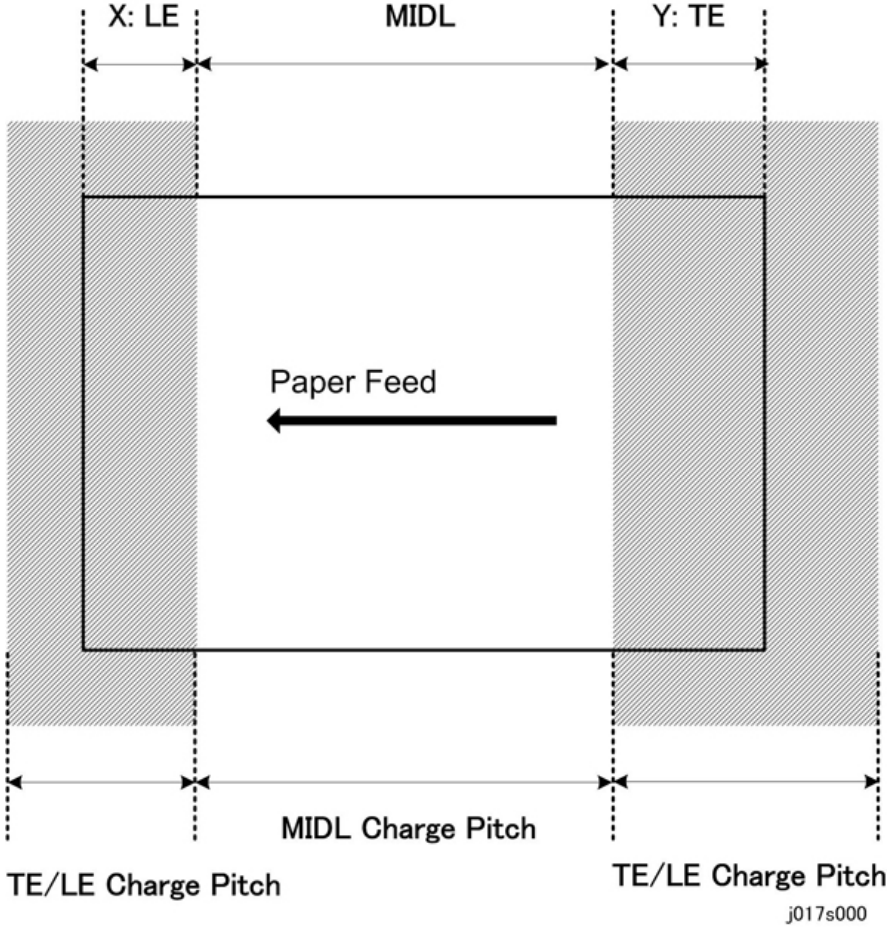
Calibrate Humidity/Temperature for Duplex (DFU)

1-012-001	CHG:TEMP:B	Calibrate Humidity Setting for Duplex
1-012-002	CHG:HUMI:B	Calibrate Temperature Setting for Duplex

Set Charge Area

1-012-003	CHG:AREA:EDGE:F	Set Charge of Area for LE/TE: Simplex
Use this SP to set the size of the leading and trailing edges for the 1st side of paper. Do this setting when you want to adjust pitch amount of the charge applied to the leading and trailing edges for printing. The areas of the leading and trailing edges is shown below. [0 to 0xff/0/1/---]		
1-012-004	CHG:AREA:EDGE:B	Set Charge of Area for LE/TE: Duplex
Use this SP to set the size of the midle area for the 1st ide of paper. Do this setting when you want to adjust pitch amount of the charge applied to the leading and trailing edges for printing. The areas of the leading and trailing edges is shown below. [0 to 0xff/0/1/---]		
1-012-005	CHG:AREA:MIDL:F	Set Charge of Area for Middle: Simplex

Use this SP to set the size of the leading and trailing edges for the 1st side of paper. Do this setting when you want to adjust pitch amount of the charge applied to the middle area for printing. The middle area is shown below. [0 to 0xff/0/1/---]		
1-012-006	CHG:AREA:MIDL:B	Set Charge of Area for Middle: Duplex
Use this SP to set the size of the leading and trailing edges for the 2nd side of paper. Do this setting when you want to adjust pitch amount of the charge applied to the middle area for printing. The middle area is shown below. [0 to 0xff/0/1/---]		



Set Charge for Target Market

1-012-007	CHG:REGION	Set Charge for Geographic Region
	Use the SP to set the charge for the areas listed below. 0: Enable geographical area setting 1: Japan 2: NA (North America) 3: Europe 4: China (Mainland) 5: China (Taiwan) "5" and "4" refer to same pitch table. 6: Asia. "4" "5" "6" refer to same charge pitch table If any item other than "0" is selected that item and its setting is enabled and takes priority. [0 to 255/0/1/---]	

SP2-XXX

Not used.

SP3-XXX

Adjust Printhead Gap

3-001-001	GAP:MJ1:A:F **(FA)**	Drive Waveform: Mj1, Print Head: A
3-001-002	GAP:MJ1:A:U	
3-001-003	GAP:MJ1:B:F **(FA)**	Drive Waveform: Mj1, Print Head: B
3-001-004	GAP:MJ1:B:U	
3-001-005	GAP:MJ1:C:F **(FA)**	Drive Waveform: Mj1, Print Head: C
3-001-006	GAP:MJ1:C:U	
3-001-011	GAP:MJ2:A:F **(FA)**	Drive Waveform: Mj2, Print Head: B
3-001-012	GAP:MJ2:A:U	

3-001-013	GAP:MJ2:B:F **(FA)**	Drive Waveform: Mj2, Print Head: B
3-001-014	GAP:MJ2:B:U	
3-001-015	GAP:MJ2:C:F **(FA)**	Drive Waveform: Mj2, Print Head: C
3-001-016	GAP:MJ2:C:U	
3-001-021	GAP:MJ3:A:F **(FA)**	Drive Waveform: Mj3, Print Head: A
3-001-022	GAP:MJ3:A:U	
3-001-023	GAP:MJ3:B:F **(FA)**	Drive Waveform: Mj3, Print Head: B
3-001-024	GAP:MJ3:B:U	
3-001-025	GAP:MJ3:C:F **(FA)**	Drive Waveform: Mj3, Print Head: C
3-001-026	GAP:MJ3:C:U	
3-001-031	GAP:MJ4:A:F **(FA)**	Drive Waveform: Mj4, Print Head: A
3-001-032	GAP:MJ4:A:U	
3-001-033	GAP:MJ4:B:F **(FA)**	Drive Waveform: Mj4, Print Head: B
3-001-034	GAP:MJ4:B:U	
3-001-035	GAP:MJ4:C:F **(FA)**	Drive Waveform: Mj4, Print Head: C
3-001-036	GAP:MJ4:C:U	
3-001-041	GAP:MJ5:A:F **(FA)**	Drive Waveform: Mj5, Print Head: A
3-001-042	GAP:MJ5:A:U	
3-001-043	GAP:MJ5:B:F **(FA)**	Drive Waveform: Mj5, Print Head: B
3-001-044	GAP:MJ5:B:U	
3-001-045	GAP:MJ5:C:F **(FA)**	Drive Waveform: Mj5, Print Head: C
3-001-046	GAP:MJ5:C:U	

Set Print Head Rank (Wave)

3-002-001	HRANK:H1:W	Print Head 1

3-002-002	HRANK:H2:W	Print Head 2
	Use this SP to set the print head rank (wave rank) [0 to 7/FA/1/---]	

Set Print Head Rank (Voltage)

3-002-005	HRANK:H1:V	Print Head 1
3-002-006	HRANK:H2:V	Print Head 2
	Use this SP to set the print head rank (voltage rank) [0 to 7/FA/1/---]	

DAC Adjustment Value

3-004-001	DAC:Y1:B	Y1 Down Position
3-004-002	DAC:Y1:T	Y1 Up Position
3-004-003	DAC:Y2:B	Y2 Down Position
3-004-004	DAC:Y2:T	Y2 Up Position
	DFU	
3-004-005	DAC:C1	C1
3-004-006	DAC:C2	C2
3-004-007	DAC:X1	X1
3-004-008	DAC:X2	X2
3-004-009	DAC:C3	C3
	DFU	

Ink Consumption in the Print Cartridge

3-005-001	C:INKCONSUME:T1	Print Head Tank 1 (Cyan)
3-005-002	C:INKCONSUME:T2	Print Head Tank 2 (Black)

3-005-003	C:INKCONSUME:T3	Print Head Tank 3 (Yellow)
3-005-004	C:INKCONSUME:T4	Print Head Tank 4 (Magenta)
	Use this SP to check the ink consumption counter.	

Margin for Detecting if the Print Cartridge Has Run out of Ink

3-006-001	C:ENDMARGINE:K	K (Black)
3-006-002	C:ENDMARGINE:C	C (Cyan)
3-006-003	C:ENDMARGINE:M	M (Magenta)
3-006-004	C:ENDMARGINE:Y	Y (Yellow)
	DNA This Series (J027/J028/J029)	

Set Threshold for Near-Full Alert

3-007-001	TH:WASTE:R	Software Count : Ink Collector Unit Near Full
	Use this SP to set the threshold value to trigger the near-full alert for the ink collector unit sensor. [0 to 4294967295/0/1/nl]	
3-007-002	TH:WASTE:R:FULL	Software Count: Ink Collector Unit Full Alert
	Use this SP to set the threshold value of the firmware counter to trigger the full alert for the right ink collector unit sensor. [0 to 4294967295/0/1/nl]	
3-007-005	TH:WASTE:RF	Right Ink Sump Near-Full Threshold
	Use this SP to set the threshold value to trigger the near-full alert for the right ink sump.	
3-007-006	TH:WASTE:RF:FULL	Right Ink Sump Threshold
	Use this SP to set the threshold value of the firmware counter to trigger the full alert for the right ink sump.	

Reset and Restoration Settings

3-008-001	RST:INIT CNT:F	Reset Initial Tank Fill Count to Manufacturing Operation Count
	Resets the initial fill counter to the initial factory setting (-2).	
3-008-002	RST:INIT CNT:A	Reset Initial Tank Fill Count to Factory Shipping
	Resets the initial fill counter to the initial factory setting before shipping (-1).	
3-008-003	RST:WASTE:RC	Reset Ink Collector Count/Flag: Right Ink Collector unit
	Resets the ink flag and ink counter for the right Ink Collector unit.	
3-008-004	RST:WASTE:R	Reset Ink Collector Count/Flag: Right Ink Sump
	Resets the ink counter for the right ink sump.	
3-008-005	RST:FACT	Restore Factory Default Setting
	Resets and threshold settings and user adjusted values.	

Maintenance, Replacement

3-009-001	WASHING	Execute Auto Washing
	Executes the automatic flushing procedure.	
3-009-002	CARRIAGE CHANGE	After Carriage Replacement
	Execute this SP after replacing the carriage unit.	

SP4-XXX

Not used.

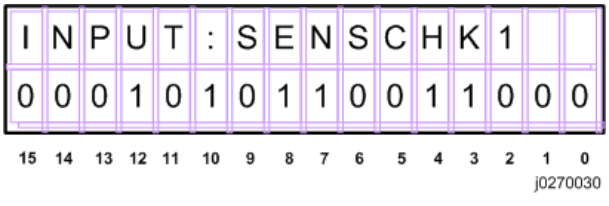
SP5-XXX

Plotter Settings

5-804-001	PLOTTER NUMBER	Plotter Machine Number Setting
	Use this SP to specify the plotter's machine number (11 digits).	
5-804-002	PLOTTER SW1	SW1(7-0bit)
5-804-003	PLOTTER SW2	SW2(15-8bit)
	DFU	

Input Check: Sensors

5-804-004	INPUT:SENSCHK1	Check Input Sensors
	Use this SP to display the on/off status of each sensor and switch. The status of each sensor (0, 1) is displayed on the 2nd line of the display.	

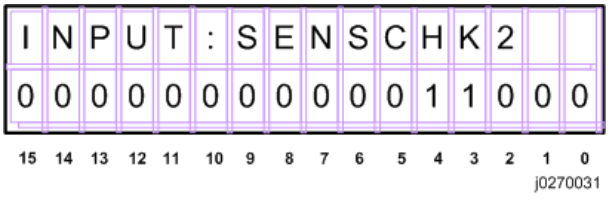


No.	Meaning	No.	Meaning
0	Scanner Unit Switch	8	Paper Feed Unit (Tray 2) Relay Sensor
1	Not Used	9	Paper End Sensor (Tray 1)
2	Not Used Duplex Unit Set Sensor	10	Paper End Sensor (Tray 2)
3	Multi Bypass Set Sensor	11	Paper End Sensor (Tray 3)
4	Paper Feed Unit (Tray 2) Set Detection	12	Not Used
5	1st Registration Sensor	13	Ink Level Sensor (Feeler)
6	2nd Registration Sensor	14	Maintenance HP Sensor

No.	Meaning	No.	Meaning
7	Trailing Edge Sensor	15	Right Front Cover Switch

Input Check: Sensors

5-804-005	INPUT:SENSCHK2	Check Input Sensors
	Use this SP to display the on/off status of each sensor. The status of each sensor (0, 1) is displayed on the 2nd line of the display.	



No.	Meaning
0	USB Connection Detection
1	GJ10 Option Detection
2	Not Used
3	Not Used
4	Not Used
5	Paper Feed Unit (Tray 3) Set Detection
6	Paper Feed Unit (Tray 3) Relay Sensor
7	Paper Feed Unit (Tray 2/Tray3) Rear Cover
8	HRB Fuse Blown Detection

Input Check: Temperature and Humidity

5-804-006	INPUT CHK HTEMP	Display Print Head Temperature
	Displays the temperature reading of the print head temperature sensor. Units: 0.1oC	

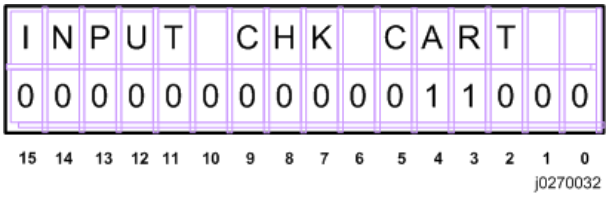
5-804-007	INPUT CHK HUTMP	Display Temperature/Humidity Sensor Reading: Temperature
	Use this SP to display the temperature reading of temperature/humidity sensor. Units: 0.1oC	
5-804-008	INPUT CHK HUMI	Display Temperature/Humidity Sensor Reading: Humidity
	Use this SP to display the humidity reading of temperature/humidity sensor. Units: 0.1%	

Input Check: Air

5-804-009	INPUT CHK AIR1	Tank 1: Analog
5-804-010	INPUT CHK AIR2	Tank 2: Analog
5-804-011	INPUT CHK AIR3	Tank 3: Analog
5-804-012	INPUT CHK AIR4	Tank 4: Analog
	Use this SP to display the analog reading of the air sensor in print head tank.	

Input Check: Ink Cartridge Set Sensors

5-804-015	INPUT CHK CART	Display Status of Ink Cartridge Set Sensors
	Use this SP to display the status of the cartridge set sensors for each ink cartridge. The status of each sensor is assigned to a column in the 2nd line of the operation panel display as shown below.	



No.	Meaning	No.	Meaning
0	K Ink Cartridge Set	8	M Ink Cartridge Refill

No.	Meaning	No.	Meaning
1	K Ink Cartridge New	9	Y Ink Cartridge Set
2	K Ink Cartridge Refill	10	Y Ink Cartridge New
3	C Ink Cartridge Set	11	Y Ink Cartridge Refill
4	C Ink Cartridge New	12	Not Used
5	C Ink Cartridge Refill	13	
6	M Ink Cartridge Set	14	
7	M Ink Cartridge New	15	

Input Check: Ink Cartridge Levels

5-804-016	INPUT CHK RES:Y	Yellow Ink Cartridge
5-804-017	INPUT CHK RES:M	Magenta Ink Cartridge
5-804-018	INPUT CHK RES:C	Cyan Ink Cartridge
5-804-019	INPUT CHK RES:K	Black Ink Cartridge
	Use this SP to display the amount of ink that remains in each ink cartridge. Units: %	

Encoder Readings

5-804-020	INPUT CHK MENC	Horizontal Encoder
	Use this SP to display the current reading of the main scan encoder.	
5-804-021	INPUT CHK SENC	Vertical Encoder
	Use this SP to display the current reading of the sub scan encoder.	

Board Temperature Sensors

5-804-022	INPUT CHK DTEMP	Drive Board Temperature Sensor

	Displays the temperature reading of the temperature sensor in the DRV board circuits. Units: 0.1oC	
5-804-023	INPUT CHK RCWS	Right Ink Sump Set Status
	This SP code checks the current status of the right ink sump. Displays "1" if set correctly.	
5-804-024	INPUT CHK RCWR	Right Ink Sump Capacity
	The SP code checks and displays the amount of space remaining in the right ink sump.	
5-804-025	INPUT CHK RCWC	Right Ink Sump Count
	This SP code checks and displays the software count for the right ink sump.	

USB POWER MODE

5-844-011	USB POWER MODE	Power Interlock via USB
	Use this SP code to specify whether to enable or disable Power Interlock via USB (a function to detect if a USB cable is connected and if the power of the host computer connected via USB is on or off and switching the printer on or off accordingly).	

Installation Date / Printing Installation Date

5-849-001	Install Date	
	The date of the initial operation by the user is displayed as the installation date.	
5-849-002	InstallDate Prnt	
	Specify whether to print the installation date on the page counter and system summary.	

Print an Engine Maintenance Summary

5-990-002	PRINT SMC	

	Use this SP to print an engine maintenance summary. You need at least 6 sheets of paper to do this print. It will take at least 3 minutes before the print will start.

SP6-XXX

Not used.

SP7-XXX

Display Count: Machine Total

7-001-001	INIT CNT:A	This counter operates from the initial ink filling after the machine's arrival.
	This total counter starts from "-1", which indicates the flag before the machine's installation.	
7-001-002	LIFE TOTAL CNT	Normal Total Counter
	This total counter starts from "0".	

Display Count: User Cleaning

7-002-001	USER CL CNT:H1	Print Head 1 (C / K)
7-002-002	USER CL CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the total number of print head cleanings executed from the printer driver and from the printer operation panel.	

Display Count: User Flushing

7-002-005	USER RF CNT:H1	Print Head 1 (C / K)
7-002-006	USER RF CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the total number of print head flushings executed from the printer driver and from the printer operation panel.	

Display Count: Air Purges/Re-fillings After SC990

7-002-009	AOFL CNT:S:H1	Print Head 1 (C / K)
7-002-010	AOFL CNT:S:H2	Print Head 2 (Y / M)
	Use this SP to display the number of air purge/ink tank re-fillings after SC990 has occurred.	

Display Count: Air Purges/Re-fillings After Ink End

7-002-013	AOFL CNT:I:H1	Print Head 1 (C / K)
7-002-014	AOFL CNT:I:H2	Print Head 2 (Y / M)
	Use this SP to display the number of air purge/ink tank re-fillings after an ink tank has run out of ink.	

Display Count: Air Purges/Re-fillings after Excessive Ink Consumption

7-002-017	AOFL CNT:P:I:H1	Print Head 1 (C / K)
7-002-018	AOFL CNT:P:I:H2	Print Head 2 (Y / M)
	Use this SP to display the number of air-purge/ink tank re-fillings performed after excessive ink consumption.	

Display Count: Additional Air Purges/Re-fillings after Detecting Air

7-002-021	AOFL CNT:A:H1	Print Head 1 (C / K)
7-002-022	AOFL CNT:A:H2	Print Head 2 (Y / M)
	Use this SP to display the number of air-purge/ink tank re-fillings performed after air is detected in the head tank and the problem remains even after ink re-fillings.	

Display Count: Air Purges/Re-fillings after Detecting Air

7-002-025	AOFL CNT:P:A:H1	Print Head 1 (C / K)

7-002-026	AOFL CNT:P:A:H2	Print Head 2 (Y / M)
	Use this SP to display the number of air-purge/ink tank re-fillings performed after air is detected in the head tank and the problem remains even after ink re-fillings.	

Display Count: Additional Air Purges/Re-fillings after Humidity Change

7-002-029	AOFL CNT:H:H1	Print Head 1 (C / K)
7-002-030	AOFL CNT:H:H2	Print Head 2 (Y / M)
	Use this SP to display the number of air-purge/ink tank re-fillings performed after humidity change of 15% or more and the problem remains even after ink re-fillings.	

Display Count: Air Purges/Re-fillings after Humidity Change

7-002-033	AOFL CNT:P:H:H1	Print Head 1 (C / K)
7-002-034	AOFL CNT:P:H:H2	Print Head 2 (Y / M)
	Use this SP to display the number of air-purge/ink tank re-fillings performed after humidity change of 15%.	

Display Count: Ink Circulation Sequence

7-002-037	SND LQD TUP:H1	Print Head 1 (C / K)
7-002-038	SND LQD TUP:H2	Print Head 2 (Y / M)
	Use this SP to display the number of ink circulation sequence performed.	

Display Count: Ink Circulation Sequence after Humidity Change

7-002-041	SND LQD TUP:H:H1	Print Head 1 (C / K)
7-002-042	SND LQD TUP:H:H2	Print Head 2 (Y / M)
	Use this SP to display the number of ink circulation sequence performed if humidity change of 15% of above occurs within six hours after the last air-purge/ink tank re-filling.	

Display Count: Air Purges/Re-fillings after Feed Pump Idle Time

7-002-045	LONG PUMP AIR:H1	Print Head 1 (C / K)
7-002-046	LONG PUMP AIR:H2	Print Head 2 (Y / M)
	DNA This Series (J027/J028/J029)	

Display Count: Air Detected at Power On

7-002-049	AIR CNT:P:T1	Print Head Tank 1 (Cyan)
7-002-050	AIR CNT:P:T2	Print Head Tank 2 (Black)
7-002-051	AIR CNT:P:T3	Print Head Tank 3 (Yellow)
7-002-052	AIR CNT:P:T4	Print Head Tank 4 (Magenta)
	Use this SP to display the number of times air was detected by the air sensor a print head tank at power on.	

Display Count: Air Detection Frequency

7-002-055	AIRLEAKCHK:TH	Threshold
7-002-056	AIRLEAKCHK:TIM	Time/Date
7-002-057	AIRLEAKCHKCNT:H1	Print Head 1 (C / K)
7-002-058	AIRLEAKCHKCNT:H2	Print Head 2 (Y / M)
	-055: Use this SP to specify the threshold for displaying SC282-11-13 (The default is to 17). **-056:** Use this SP to specify the period over which to count the number of air detection (The default is 10 days). **-057, -058:** Use this SP to display the number of air detection in the specified period.	

Display Count: Automatic Cleanings Between Page Prints

7-002-061	ACL CNT:P:H1	Print Head 1 (C / K)
7-002-062	ACL CNT:P:H2	Print Head 2 (Y / M)
	Use this SP to display the number of automatic print head cleanings between page prints while print jobs were executing.	

Display Count: Automatic Cleanings Before Print Head Capping

7-002-065	ACL CNT:B:H1	Print Head 1 (C / K)
7-002-066	ACL CNT:B:H2	Print Head 2 (Y / M)
	Use this SP to display the number of automatic print head cleanings before print head capping.	

Display Count: Automatic Print Head Cleanings (After De-Cap Time Elapsed)

7-002-069	ACL CNT:D:H1	Print Head 1 (C / K)
7-002-070	ACL CNT:D:H2	Print Head 2 (Y / M)
	Use this SP to display the number of times the automatic print head cleaning executed triggered by time exceeded the threshold set for the de-capping time.	

Display Count: Time Length after the Last Automatic Maintenance

7-002-073	ALNMNT CNT:TM1	Idle Time 1
7-002-074	ALNMNT CNT:TM2	Idle Time 2
7-002-075	ALNMNT CNT:TM3	Idle Time 3
7-002-076	ALNMNT CNT:TM4	Idle Time 4
	DNA This Series (J027/J028/J029)	

Display Count: Ink Discharge for Maintenance after Idle Time (Small/Large)

7-002-077	ALNSPURG CNT:H1	Small Head 1
7-002-078	ALNSPURG CNT:H2	Small Head 2
7-002-081	ALNLPURG CNT:H1	Large Head 1
7-002-082	ALNLPURG CNT:H2	Large Head 2
	Use this SP to display the counter of the 7-002-073 and 7-002-074 maintenances of each print head.	

Display Count: Cleaning after Idle Time

7-002-085	ALNCL CNT:H1	Print Head 1 (C / K)
7-002-086	ALNCL CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the counter of the 7-002-075 and 7-002-076 maintenances of each print head.	

Display Count: Air Purges/Re-fillings after Idle Time

7-002-089	ALNAOFL CNT:H1	Print Head 1 (C / K)
7-002-090	ALNAOFL CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the number of air-purge/ink tank re-fillings performed after detecting air during the automatic maintenance performed after the set idle time (SP7-002-073 to 076).	

Display Count: Ink Circulation Sequence after Idle Time

7-002-093	ALNSNDLQD CNT:H1	Print Head 1 (C / K)
7-002-094	ALNSNDLQD CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the number of ink circulation sequence performed after the machine is left idle for 45 or more days.	

Display Count: Tank Full: Ink Collector Unit

7-003-001	WASTE CNT:R:FULL	Ink Collector Unit
	Use this SP to display the current count for the number of times the status of the Ink Collector unit has changed from near-full to full. Note: The full threshold is 3 ml.	

Display Full Count for Right Ink Sump

7-003-002	WASTE CNT:RF:FUL	Right Ink Sump Full Count
	This SP code displays the full count for the right ink sump.	

Display Count: Mist Counter for Automatic Cleaning

7-003-003	MIST CNT:T1	Print Head Tank 1 (Cyan)
7-003-004	MIST CNT:T2	Print Head Tank 2 (Black)
7-003-005	MIST CNT:T3	Print Head Tank 3 (Yellow)
7-003-006	MIST CNT:T4	Print Head Tank 4 (Magenta)
	Use this SP to display the number of times that the swing plate of the left Ink Collector unit has made contact with the carriage.	

Display Count: Paper Dust Counter for Automatic Cleaning

7-003-009	FEED CNT:H1	Print Head 1 (C / K)
7-003-010	FEED CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the current reading of the ink mist counter that determines when to execute automatic cleaning.	

Display Count: Cap Off Time for Automatic Print Head Cleaning

7-003-013	DECAP TIME	

	Use this SP to display the de-capping time used to determine whether automatic cleaning is executed after the printer returns from idle mode.

Display Humidity Reading Before Automatic Print Head Cleaning

7-003-014	HUMI:ACL:AL	
	Use this SP to display the temperature reading before capping operation used to determine whether automatic print head cleaning is done after the printer returns from idle mode.	

Display Count: Ink Circulation Starting Time

7-004-001	START:SNDLQD:H1	Print Head 1 (C / K)
7-004-002	START:SNDLQD:H2	Print Head 2 (Y / M)
	Use this SP to display the starting time of ink circulation sequence.	

Display Count: Pump Suspension Starting Time

7-004-005	START:PM STOP:T1	Print Head Tank 1 (Cyan)
7-004-006	START:PM STOP:T2	Print Head Tank 2 (Black)
7-004-007	START:PM STOP:T3	Print Head Tank 3 (Yellow)
7-004-008	START:PM STOP:T4	Print Head Tank 4 (Magenta)
	DNA This Series (J027/J028/J029)	

Display Count: Time Length of Feed Pump Suspension with the Power On

7-005-001	STOP:PON PUMP:T1	Print Head Tank 1 (Cyan)
7-005-002	STOP:PON PUMP:T2	Print Head Tank 2 (Black)
7-005-003	STOP:PON PUMP:T3	Print Head Tank 3 (Yellow)
7-005-004	STOP:PON PUMP:T4	Print Head Tank 4 (Magenta)

	DNA This Series (J027/J028/J029)

Display Count: Uncapped Time Length

7-006-001	ENV:ACL DECAPTIM	
	Use this SP to display the total time length when the maintenance unit's cap is released from the print head.	

Display Count: Need for Ink Circulation Sequence

7-007-001	JDG:LIQUID MNT	
	Use this SP to display if it is necessary to perform ink circulation sequence. 0bit for Print Head 1 1bit for Print Head 2 1: Ink circulation sequence needed 0: Ink circulation sequence not needed	

Display: Print Head Temperature during the Last Air-Purge/Ink Re-filling

7-008-001	TEMP:DIFF POS:H1	Print Head 1 (C / K)
7-008-002	TEMP:DIFF POS:H2	Print Head 2 (Y / M)
	Use this SP to display the print head temperature during the last time air-purge/ink tank re-filling was performed.	

Display: Print Head Humidity during the Last Air-Purge/Ink Re-filling

7-009-001	HUMI:DIFF POS:H1	Print Head 1 (C / K)
7-009-002	HUMI:DIFF POS:H2	Print Head 2 (Y / M)
	Use this SP to display the print head humidity during the last time air-purge/ink tank re-filling was performed.	

Display: Temperature during the Last Maintenance

7-010-001	HTEMP:FIN MNT:H1	Print Head 1 (C / K)
7-010-002	HTEMP:FIN MNT:H2	Print Head 2 (Y / M)
	Use this SP to display the temperature during the last time print head maintenance was performed.	

Display Count: Ink Discharge to the Cap for Maintenance

7-011-001	PURGE INKCNT:CAP	
	DNA This Series (J027/J028/J029)	

Display Count: Ink Discharge for Maintenance after Idle Time (Small)

7-012-001	SMALL PURGE CNT	
	DNA This Series (J027/J028/J029)	

Display Count: Ink Cartridge Replacements

7-013-001	CART CHG CNT:K	K (Black)
7-013-002	CART CHG CNT:C	C (Cyan)
7-013-003	CART CHG CNT:M	M (Magenta)
7-013-004	CART CHG CNT:Y	Y (Yellow)
	Use this SP to display the number of times the carriage has been replaced.	
7-013-005	CART RFIL CNT:K	Ink cartridge refill count: K (Black)
7-013-006	CART RFIL CNT:C	Ink cartridge refill count: C (Cyan)
7-013-007	CART RFIL CNT:M	Ink cartridge refill count: M (Magenta)
7-013-008	CART RFIL CNT:Y	Ink cartridge refill count: Y (Yellow)
	Use this SP to display the number of times the ink cartridges have been refilled.	

Display Count: Total Ink Cartridge Out

7-013-009	EMPTY CNT:C1	Ink Cartridge K (Black)
7-013-010	EMPTY CNT:C2	Ink Cartridge C (Cyan)
7-013-011	EMPTY CNT:C3	Ink Cartridge M (Magenta)
7-013-012	EMPTY CNT:C4	Ink Cartridge Y (Yellow)
	Use this SP to display the number of times that each ink cartridge has become empty.	

Display Standby Time

7-014-001	PWAIT:DATE	YY:MM:DD
	Display the total time the printer has remained in standby mode. Date Standard: 2000	

Display Operation Start Date

7-014-002	START:DATE	YY:MM:DD
	Display the total time the printer has remained in full operation. Date Standard: 2000	

Date Display SC Log

7-014-003	SC CODE1	Log 1: Previous
7-014-004	SC CODE2	Log 2: Previous-1
7-014-005	SC CODE3	Log 3: Previous-2
7-014-006	SC CODE4	Log 4: Previous-3
7-014-007	SC CODE5	Log 5: Previous-4

	Use this SP to display the SC code history. • The occurrences of SC codes are stored in the order 1, 2, 3, 4, 5. • Duplicate occurrences of SC codes are not recorded (each SC code recorded only once).

Display Total Count: SC Log

7-014-008	SC COUNT1	Log 1: Previous
7-014-009	SC COUNT2	Log 2: Previous-1
7-014-010	SC COUNT3	Log 3: Previous-2
7-014-011	SC COUNT4	Log 4: Previous-3
7-014-012	SC COUNT5	Log 5: Previous-4
	Use this SP to display the number of times SC codes have been issued. The occurrences of SC codes are stored in the order 1-5.	

Display Jam Log

7-014-013	JAM CODE1	Log 1: Previous
7-014-014	JAM CODE2	Log 2: Previous-1
7-014-015	JAM CODE3	Log 3: Previous-2
7-014-016	JAM CODE4	Log 4: Previous-3
7-014-017	JAM CODE5	Log 5: Previous-4
7-014-018	JAM CODE6	Log 6: Previous-5
7-014-019	JAM CODE7	Log 7: Previous-6
7-014-020	JAM CODE8	Log 8: Previous-7
7-014-021	JAM CODE9	Log 9: Previous-8
7-014-022	JAM CODE10	Log 10: Previous-9
	Use this SP to display the jam code history. The occurrences of jam codes are stored in the order 1-10	

Display Total Count: Jam Log

7-014-023	JAM COUNT1	Log 1: Previous
7-014-024	JAM COUNT2	Log 2: Previous-1
7-014-025	JAM COUNT3	Log 3: Previous-2
7-014-026	JAM COUNT4	Log 4: Previous-3
7-014-027	JAM COUNT5	Log 5: Previous-4
7-014-028	JAM COUNT6	Log 6: Previous-5
7-014-029	JAM COUNT7	Log 7: Previous-6
7-014-030	JAM COUNT8	Log 8: Previous-7
7-014-031	JAM COUNT9	Log 9: Previous-8
7-014-032	JAM COUNT10	Log 10: Previous-9
	Use this SP to display the number of times jam codes have been issued. The occurrences of jam codes are stored in the order 1-10.	

Display Total Count: Ink Fill Log

7-014-033	FILL PROGRESS1	Log 1: Previous
7-014-034	FILL PROGRESS2	Log 2: Previous-1
7-014-035	FILL PROGRESS3	Log 3: Previous-2
7-014-036	FILL PROGRESS4	Log 4: Previous-3
	Use this SP to display the number of times initial tank filling has been performed.	

Display Maintenance Log

7-014-037	LAST MNT TM1	Log 1: Previous
7-014-038	LAST MNT TM2	Log 2: Previous-1
7-014-039	LAST MNT TM3	Log 3: Previous-2
	Use this SP the total time for all maintenance executions.	

Display Maintenance Log: By Type of Maintenance

7-014-040	LAST MAINTE1	Log 1: Previous
7-014-041	LAST MAINTE2	Log 2: Previous -1
7-014-042	LAST MAINTE3	Log 3: Previous -2
	Use this SP to display the types of maintenance executed. The types of maintenance are number coded as shown below:	
	1	Maintenance at power on
	6	Maintenance idle operation
	7	Auto print head cleaning after idle time elapsed
	8	Maintenance air detection
	9	ink collector unit filling before maintenance page
	10	ink collector unit filling between maintenance pages
	11	ink collector unit filling before maintenance capping
	12	Maintenance cartridge replacement
	13	Cleaning between maintenance pages
	14	Cleanings before maintenance capping
	15	Maintenance manual cleaning
	16	Maintenance manual flushing

Display Maintenance Log: Total Count

7-014-043	LAST MNT CNT1	Log 1: Previous
7-014-044	LAST MNT CNT2	Log 2: Previous-1
7-014-045	LAST MNT CNT3	Log 3: Previous-2
	Use this SP to display the total count for all maintenance executions.	

Display: Time/Type of the Last Print Head Maintenance

7-014-046	LAST MNT TM:H1	Print Head 1 (C / K) Maintenance Time
7-014-047	LAST MNT TM:H2	Print Head 2 (Y / M) Maintenance Time
7-014-050	LAST MAINTE:H1,2	Print Head 1 , 2 Maintenance Type
	Use this SP to display the time and type of the last maintenance performed to each print head.	

Display Position of Tank Full Feeler for Each Print Head Tank After Air Purge

7-015-001	INIT POS:T1	Print Head Tank 1 (Cyan)
7-015-002	INIT POS:T2	Print Head Tank 2 (Black)
7-015-003	INIT POS:T3	Print Head Tank 3 (Yellow)
7-015-004	INIT POS:T4	Print Head Tank 4 (Magenta)
	Use this SP to display the detected position of the print head tank full sensor at air venting/ink filling.	

Display Normal Position for Detection of Full Print Head Tank

7-015-007	FULL POS:T1	Print Head Tank 1 (Cyan)
7-015-008	FULL POS:T2	Print Head Tank 2 (Black)
7-015-009	FULL POS:T3	Print Head Tank 3 (Yellow)
7-015-010	FULL POS:T4	Print Head Tank 4 (Magenta)
	Use this SP to display the usual position of the print tank full sensor when the ink collector unit is filled	

Display: Encoder Count Difference Between Air-Purge/Ink Re-fillings and Usual Re-fillings

7-015-013	DIFF POS:T1	Print Head Tank 1 (Cyan)
7-015-014	DIFF POS:T2	Print Head Tank 2 (Black)

7-015-015	DIFF POS:T3	Print Head Tank 3 (Yellow)
7-015-016	DIFF POS:T4	Print Head Tank 4 (Magenta)
	Use this SP to display the difference in the encoder counter in the scanning direction (1200 dpi) between air-purge/ink tank re-fillings and usual re-fillings.	

Display Count: Number of Drive Cleanings

7-015-019	DCL CNT:H1	Print Head 1 (C / K)
7-015-020	DCL CNT:H2	Print Head 2 (Y / M)
	Use this SP to display the number of automatic print head cleanings done during printing	

Display Count: Ink Supply Time Up

7-015-023	DCL CNT:T1	Print Head Tank 1 (Cyan)
7-015-024	DCL CNT:T2	Print Head Tank 2 (Black)
7-015-025	DCL CNT:T3	Print Head Tank 3 (Yellow)
7-015-026	DCL CNT:T4	Print Head Tank 4 (Magenta)
	Use this SP to display the number of times near-end/end was detected by time up while ink was being supplied to the ink collector units.	

Display Count: Ink Discharge for Maintenance at the Right

7-015-029	PMNT CNT	
	Use this SP to display the number of ink discharge for maintenance performed when the carriage moves to the right end.	

SP8-XXX

Not used.

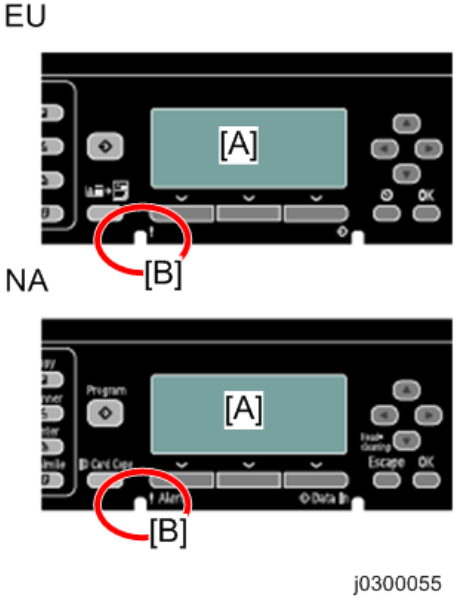
SP9-XXX

Not used.

3. Appendix: Troubleshooting Guide

Troubleshooting

Operation Panel Display



Messages follow a priority in keeping the operator informed about the status of the machine.

- The LCD [A] and Alert LED [B] are used to indicate errors.
- If two or more status messages are issued at the same time, the message with the highest priority is displayed first.
- The table below shows the priority of how status messages are displayed on the operation panel.

Error Priority Table

Priority	Classification	Machine state	Contents
1	Service Call (SC)	Copy impossible	It is a copy impossible situation until it cancels ERROR by serviceman
2	ERROR	Copy impossible	It is a copy impossible situation until it cancels ERROR by user

Priority	Classification		Machine state	Contents
3	ATTENTION	High/Low Temperature	Copy impossible	It is a copy possible situation under ATTENTION.
		Others	Copy possible	

Error Classifications

Y : Appears when using the machine in that mode.

--- : Does not appear when using the machine in that mode.

Service Call List

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	Service Call (xxxxx)	Y	Y	Y	Y

Machine Error List

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	Bill is detected	Y	---	Y	---
2	Replace the handset	---	Y	---	---
3	Original Misfeed	Y	Y	Y	---
4	Ink Collector Not Set	Y	Y	---	Y
5	Used Ink Collector	Y	Y	---	Y
6	Ink Collector Full	Y	Y	---	Y

Priority	Name		Indicate on each mode			
			Copy	Fax	Scanner	Printer
7	Paper Misfeed	Rear (Tray 2 /Tray 3)	Y	Y	---	Y
8		Remaining Paper	Y	Y	---	Y
9		Rear (Tray 3)	Y	Y	---	Y
10		Rear (Tray 2)	Y	Y	---	Y
11		Carriage	Y	Y	---	Y
12		Duplex unit	Y	Y	---	Y
13		Bypass	Y	Y	---	Y
14		Tray 3	Y	Y	---	Y
15		Tray 2	Y	Y	---	Y
16		Tray 1	Y	Y	---	Y
17	Cover Open	Duplex Unit Not Set	Y	Y	---	Y
18		Bypass Tray Not Set	Y	Y	---	Y
19		Tray 3 cover	Y	Y	---	Y
20		Tray 2 cover	Y	Y	---	Y
21		Back cover	Y	Y	---	Y
22		Front cover	Y	Y	---	Y
23	Independent Ink Cartridge		Y	Y	---	Y
24	Cartridge Not Set		Y	Y	---	Y
25	Cover Open	Right Front Cover	Y	Y	---	Y
26	Paper Misfeed	Transfer misfeed	Y	Y	---	Y
27	Used Ink Cartridge		Y	Y	---	Y
28	Ink Empty Stop		Y	Y	---	Y
29	Copy Memory Full		Y	---	---	Y
30	Copy File Memory Full		Y	---	---	---

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
31	Cannot recover error pages	---	---	---	Y
32	Paper Size Error	Y	Y	---	Y
33	Fax Paper Mismatch	---	Y	---	---
34	Printer Paper Mismatch	---	Y	---	Y
35	Printer Check Paper Size	---	---	---	Y
36	Printer Paper Type Error	---	---	---	Y
37	Out of Paper	Y	Y	---	Y

Fax Communication Error List

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	Communication Error	---	Y	---	---
1	Memory Full (TX)	---	Y	---	---
1	Mail Size over limitation	---	Y	Y	---
1	Memory Full (RX)	---	Y	---	---
1	Memory Full (Report)	---	Y	---	---

Scanner Mode Error List

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	Memory Full	---	---	Y	---
1	Mail Size over limitation	---	Y	Y	---
1	Memory File Full	---	---	Y	---
1	USB memory Full	---	---	Y	---

Internet Fax & Network Scanner Communication Error List

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	**Cannot Connect:**				
	• SMTP Server	---	Y	Y	---
	• POP3 Server	---	Y	Y	---
	• FTP Proxy Server	---	---	Y	---
	• SMB Server	---	---	Y	---
	• LDAP Server	---	Y	Y	---
1	**Cannot obtain IP address:**				
	• SMTP Server	---	Y	Y	---
	• POP3 Server	---	Y	Y	---
	• FTP Proxy Server	---	---	Y	---
	• LDAP Server	---	Y	Y	---
1	**Communication Error:**				
	• SMTP Server	---	Y	Y	---
	• POP3 Server	---	Y	Y	---
	• FTP Proxy Server	---	Y	Y	---
	• SMB Server	---	Y	Y	---
	• LDAP Server	---	Y	Y	---
	• USB memory	---	Y	Y	---

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	**Invalid Password:**				
	• SMTP Server	---	Y	Y	---
	• POP3 Server	---	Y	Y	---
	• FTP Server	---	---	Y	---
	• SMB Server	---	---	Y	---
	• LDAP Server	---	Y	Y	---
1	Invalid RX Data	---	Y	---	---
1	Memory Full	---	Y	---	---
1	**Failed to Connect:**				
	• SMTP Server	---	Y	Y	---
	• POP3 Server	---	Y	Y	---
	• FTP Proxy Server	---	---	Y	---
	• SMB Server	---	---	Y	---
	• LDAP Server	---	Y	Y	---
	• USB memory	---	---	Y	---
1	SMTP Server Memory Full	---	Y	Y	---
1	**Server Error:**				
	• FTP Server	---	---	Y	---
	• SMB Server	---	---	Y	---

Printer Job Error List

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	Printer Paper Mismatch	---	---	---	Y

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	Printer Check Paper Size	---	---	---	Y
1	Printer Paper Type Error	---	---	---	Y
1	Cannot Recover Error Pages	---	---	---	Y

Attention List

Priority	Name	Indicate on each mode			
		Copy	Fax	Scanner	Printer
1	Low Temperature	Y	Y	Y	Y
2	High Temperature	Y	Y	Y	Y
3	Unsupported USB Device	---	---	Y	---
4	Unsupported USB Hub	---	---	Y	---
5	Set Original in ADF	Y	---	---	---
6	Remove Original from ADF	Y	---	---	---
7	Return number of original display	Y	Y	Y	---
8	Fax Operation Error	---	Y	---	---
9	Ink Low KCMY	Y	Y	Y	Y
10	Ink Collector Almost Full	Y	Y	Y	Y
11	Internal Unit Almost Full	Y	Y	Y	Y
12	Independent Ink Cartridge	Y	Y	Y	Y

Operation Panel Messages

Service Call

	Message	Details/Action
	Service Call (XXXXX) Cannot use the machine. Turn power off then on.	Refer to "Service Call Conditions" in this chapter.

Machine Error

Type	Message	Details/Action
Paper Misfeed		
	Paper Misfeed: Tray 1 Remove paper.	Paper has jammed in or failed to feed from Tray 1. Remove the paper from Tray 1.
	Paper Misfeed: Tray 2 Remove paper.	Paper has jammed in or failed to feed from Tray 2. Remove the paper from Tray 2.
	Paper Misfeed: Tray 3 Remove paper.	Paper has jammed in or failed to feed from Tray 3. Remove the paper from Tray 3.
	Paper Misfeed: Bypass Tray Press OK key.	Paper has jammed in or failed to feed from the multi bypass tray. Remove the paper from multi bypass tray.
	Paper Misfeed: Duplex Unit Remove paper.	Paper has jammed in or failed to feed from the duplex unit. Remove the paper from the duplex unit.
	Paper Misfeed: Int. Path Remove paper.	Paper has jammed in or failed to feed from in the area below the scanner unit. Remove the paper from the area below the scanner unit.
	Paper Misfeed: Rear Remove Tray 2 or Duplex Unit then remove misfed paper.	Paper has jammed in or failed to feed from the duplex unit or feed unit of Tray 2. Remove the paper.
	Paper Misfeed: Rear Remove Tray 2, 3 or Duplex Unit then remove misfed paper.	The paper fed from Tray 2 or 3 is jammed in the Tray 2 or 3 paper path. Remove the paper.

Type	Message	Details/Action
	Paper Misfeed:Int. Path Remove misfed paper and press [FormFeed].	Paper failed to feed from the specified tray. Press [Form Feed] to eject the sheet. - or - Paper scraps remain in the machine, or a jammed sheet has not been removed. Press [Form Feed] to eject the sheet, and then, remove the paper from the area below the scanner unit.
Original Misfeed		
	Original Misfeed Remove paper then press Start key.	The Original has jammed in or failed to feed from ADF. Remove the original from ADF.
Paper Size Error		
	Paper Size Error Set correct size paper in Tray # (1, 2, 3, Bypass) then press OK key.	The size of paper in the selected tray does not match the size of the paper selected for the job, or the specified Tray Paper Size setting in the Paper Input menu does not match the actual paper size. • Press [Form Feed], select a paper tray containing paper of the specified size, and then print. • Cancel the copy/print job.
Cover Open		
	Bypass tray is not set. Set bypass tray correctly.	Multi bypass tray unit is not set correctly. Make sure that the multi bypass tray is set correctly.
	Duplex unit is not set. Set duplex unit correctly.	The duplex unit is not mounted correctly and/or the duplex unit cover is open. Mount the duplex unit correctly and close the duplex unit cover.
	Right front cover is open. Close right front cover.	The right front door is open. Close the right front door.

Type	Message	Details/Action
	Scanner unit or duplex unit is open. Close scanner unit or duplex unit.	The scanner unit is open. Check and close the scanner unit. - or - The duplex unit is not mounted correctly and/or the duplex unit cover is open. Mount the duplex unit correctly and close the duplex unit cover.
	Tray 3 Rear Cover is Open. Close Tray 3 Rear Cover.	The Tray 3 rear cover is open. Close the Tray 3 rear cover.
	Tray 2 Rear Cover is open. Close Tray 2 Rear Cover.	The Tray 2 rear cover is open. Close the Tray 2 rear cover.
Out of Paper		
	Out of paper. Load paper in Tray # (1, 2, 3, Bypass).	Paper has run out in the selected tray. Load paper in the selected tray. Or, press [Form Feed] and select another tray holding paper for printing. Press [Job Reset] to delete any data remaining from the previous job.
Copy Memory Full		
	Memory is full.	This error is occurred when scanned document data becomes unable to save in the mounted memory. It generates during a sorting copy/non-sort copying.
Ink Empty Stop		
	Add ink: KCMY See instructions in front cover to replace ink cartridge.	Ink cartridge has run out for the color indicated on the operation panel display. Replace the ink cartridge for the color indicated on the operation panel display.
Ink Collector Full		
	Ink collctr. unit is full. Replace ink collctr. unit.	Ink collector unit is full. Replace the ink collector unit.
Ink Collector Not Set		
	Ink collector unit is not set. Set ink collector unit correctly.	The replaceable ink collector unit is not set correctly. Set the ink collector unit correctly.
Cartridge not set		

Type	Message	Details/Action
	Set ink cartridge correctly.	Ink cartridge is not installed. Or, the ink cartridge is installed but not set correctly. Set the ink cartridge correctly.
Used Ink Cartridge		
	Used Ink Cartridge: KCMY See instructions in front cover to replace ink cartridge.	A used print cartridge has been installed. Install a new print cartridge.
Independent Ink Cartridge		
	Indep. Ink Cartridge: KCMY See instructions in front cover to replace ink cartridge.	An ink tank cartridge unapproved for use with this machine has been installed. Use of ink cartridges not approved for use with this machine, or attempting to re-fill depleted ink cartridges, will diminish print quality. Always use new Ricoh ink cartridges specifically designed for use with these machines.
Replace the Handset		
	Replace the handset.	The extension telephone is off the hook. After using the telephone, replace the handset properly.
Fax Paper Mismatch		
	Paper Size/Type Mismatch Set A4, 8 1/2 x11, or 8 1/2 x 14 plain paper.	The loaded paper is the wrong size or type. To print a received file, load A4, letter (81/2 × 11), or legal (81/2 × 14) paper.
Used Ink Collector		
	Used ink collector unit. Set a new ink collector unit.	A used ink collector unit has been installed. Install a new ink collector unit.

Fax Communication Error

Type	Message	Details/Action
Communication Error		

Type	Message	Details/Action
	Communication Error (####)	Communication was lost during fax transmission or reception. For details about the codes that appear with the message, see "Fax Communication Error Codes".
Memory Full (TX)		
	Exceeded max. memory capacity. Do you want to send the scanned data? - or - Exceeded maximum memory capacity.	There is not enough memory to send a fax. • Change the resolution setting, and then try sending/receiving the fax again. • Reduce the number of originals.
Memory Full (RX)		
	Exceeded maximum memory capacity.	There is not enough memory to receive a fax. An error occurs when the received image data (or PC fax image data) cannot store in image memory.
Memory Full (Report)		
	Exceeded maximum memory capacity.	There is not enough memory to print a report (TX Standby File List). An error is occurred when manual print report but memory cannot store report image.
Mail Size over Limitation		
	Exceeded max. email size. Sending email has been cancelled. - or - Exceeded max. Email size. Do you want to send the scanned data?	The machine is unable to send an e-mail, because its size has exceeded the maximum limit.

Scanner Mode Error

Type	Message	Details/Action
Memory Full		
	Exceeded max. memory capacity. Do you want to send the scanned data? - or - Exceeded max. memory capacity.	There is not enough memory to send a file. • Change the resolution setting, and then try sending/receiving the file again. • Reduce the number of originals.
USB Memory Full		
	Memory of USB device is full.	An error is occurred when the memory capacity of USB is over during scanning the original.
Memory File Full		
	Memory File Full	An error is occurred when the scanned image file is over 1024 files.
Mail Size over Limitation		
	Exceeded max. email size. Sending email has been cancelled. - or - Exceeded max. Email size. Do you want to send the scanned data?	The machine is unable to send an e-mail, because its size has exceeded the maximum limit.

Internet Fax & Network Scanner Communication Error

Type	Message	Details/Action
Cannot Connect		
	Cannot connect to ### (SMTP, POP3, FTP, SMB, LDAP) server.	This error means that the machine cannot connect the host even if try to connect set times that is set by Menu.
Cannot obtain IP address		
	Cannot obtain IP address from ### (SMTP, POP3, FTP, LDAP) server.	The error means that cannot get IP address from server.
Communication Error		

Type	Message	Details/Action
	Communication Error: ### (SMTP, POP3, FTP, SMB, LDAP, USB Memory)	An error occurs when present connect is normal, but communication has something wrong.
Invalid Password		
	Invalid Password: ### (SMTP, POP3, FTP, SMB, LDAP) Server	An error occurs when login to the server could not complete, since the password had been wrong.
Invalid RX Data		
	Received data is invalid.	An error occurs when the machine received data that cannot print (Appending files other than TIFF-F or B/W format).
Memory Full		
	Exceeded maximum memory capacity.	TX during scanning or during receiving, the machine becomes memory full (Occurs memory full on RX the machine will auto retry two times).
Failed to Connect		
	Failed to Connect: ### (SMTP, POP3, FTP, SMB, LDAP, USB Memory)	An error occurs when connection to server is disconnected after connected server.
Server Memory Full		
	Memory of SMTP server is full.	An error occurs when connection to server is disconnected.
Server Error		
	FTP Server Error	This error means that the FTP/SMB server cannot store the data that is sent from the machine. (Ex: disk space becomes full.)
	SMB Server Error	

Printer Job Error

Type	Message	Details/Action
Printer Paper Mismatch		

Type	Message	Details/Action
	Paper Size/Type Mismatch Set paper of the following size.	The type and size of paper in the selected tray does not match the type and size of the paper selected for the job, or the type and size of the paper in any of the paper trays does not match the type and size of the paper selected for the job when using Auto Tray Select. • Check the paper cassette and make sure that the paper size and type matches the settings selected in the printer driver. • Press [Form Feed], select a paper tray containing paper of the specified size and type, and then print. • Cancel the print job.
Printer Check Paper Size		
	Paper Size Mismatch Set paper of the following size in Tray # (1, 2, 3, Bypass).	The size of paper in the selected tray does not match the size of the paper selected for the job, or the specified Tray Paper Size setting in the Paper Input menu does not match the actual paper size. • Check the paper cassette and make sure that the paper size matches the settings selected in the printer driver. • Press [Form Feed], select a paper tray containing paper of the specified size, and then print. • Cancel the print job.
Printer Paper Type Error		
	Paper Type Mismatch Set paper of the following type in Tray # (1, 2, 3, Bypass).	The type of paper in the selected tray does not match the size of the paper selected for the job • Check the paper cassette and make sure that the paper type matches the settings selected in the printer driver. • Press [Form Feed], select a paper tray containing paper of the specified type, and then print. • Cancel the print job.

Type	Message	Details/Action
Cannot Recover Error Pages		
	Cannot recover error page(s).	An unprinted page still remains after recovery from a paper jam or another problem and re-starting printing. Press [Form Feed] to eject the sheet. Press [Job Reset] to delete any data remaining from the previous job.

Attention

Type	Message	Details/Action
Low Temperature		
	Temperature is too low. Cannot use the machine now. Please wait...	Machine temperature was abnormal at power on. Wait for the "Ready" message. - or - Machine temperature is low and has fallen below the low temperature range for normal operation. Re-locate the machine to a location within the temperature range and wait for the machine to acquire room temperature.
High Temperature		
	Temperature is too high. Cannot use the machine now. Please wait...	Machine temperature was abnormal at power on. Wait for the "Ready" message. - or - Machine temperature is high and has exceeded the high temperature range for normal operation. Re-locate the machine to a location within the temperature range and wait for the machine to acquire room temperature.
Ink Collector Almost Full		

Type	Message	Details/Action
	Ink Collector Almost Full	The ink collector unit is almost full. Make sure you have a new ink collector on hand. If a print cartridge starts running out of ink when the ink collector unit is almost full, the alert indicator will flash and a message informing you of the cartridge's low ink level will appear on the display. To prevent job delay due to a full ink collector unit, always have a new ink collector unit ready.
Ink Near Empty		
	Low Ink Remaining: KCMY	Ink cartridge is almost empty. Note the color of the ink cartridge where ink supply is low, and then procure and new cartridge of the same color.
Internal Unit Almost Full		
	Internal Unit Almost Full	Replace the internal unit (right ink sump).
Independent Ink Cartridge		
	Indep. Ink Cartridge	An ink tank cartridge unapproved for use with this machine has been installed. Use of ink cartridges not approved for use with this machine, or attempting to re-fill depleted ink cartridges, will diminish print quality. Always use new Ricoh ink cartridges specifically designed for use with these machines.
Set Original in ADF		
	Set original(s) on ADF to use SADF Copy function.	The SADF copy function is enabled, but no original is loaded in the ADF. Load originals in the ADF.
Remove document from ADF		
	Set original(s) on the exposure glass to use ID Card Copy function.	ID Card Copy is not available with the ADF. Place the original on the exposure glass.
Return number of original display		
	Reset XX original(s) on ADF, then press [Resume].	Reload originals in the ADF. To resume scanning, press [Resume].
Unsupported USB Device		

Type	Message	Details/Action
	Unsupported USB Device	An unsupported USB device is connected. Disconnect the USB device.
Unsupported USB Hub		
	Unsupported USB Hub	USB hubs are not supported. Disconnect the hub.

Fax Communication Error Codes

Communication (RX)

Code	Possible Cause
0001	Manual RX mode, no G3 signal received within 35 sec.
0003	Received DIS after sending DIS signal.
0004	Received DCN after sending DTC signal.
0009	No signal received within 35 sec. in manual polling mode.
0010	Received DCN signal after sending DTC signal during polling RX.
0011	Cannot receive correct response after sending three DTC signals.
0012	Remote/local password mismatch during polling RX, or no local file to be polled.
0013	No carrier received within 6 sec. after sending CFR in data phase C.
0014	No T.30 signal received after sending FTT signal.
0016	Received DCN signal after sending PTT signal.
0017	No response received from remote machine after sending xxx_EOM signal.
0018	Nothing detected within 6 sec after sending FTT command
0019	Received DCN signal after sending CFR signal
001A	No power on line over 6 sec. within phase C before a corrected ECM frame.
001D	Detected flag but nothing after CFR.
001E	Timeout in V.17 ECM RX phase C
0x1F	Machine cannot detect V.21 or V.8 signal with 35 sec.

Code	Possible Cause
0020	Cannot correct frame within 6 sec., a decoding line over 6 sec in non-ECM mode.
0021	File full.
0022	Correct data not received within specified time due to noise interference on the line.
0023	Received PWD error in RSD or upgrade firmware.
0029	Mailbox password not set or password mismatch for mailbox receiving.
0030	No signal received within 6 sec. at phase D.
0031	Received incorrect signal at phase D (not EOP, MPS,EOM,DCS PPS_Q, PPS_Q, etc).
0032	No carrier received within 6 sec. after sending MCF, RTP, or RTN signal.
0033	Received DCN signal at phase D between pages (not last page) .
0039	Data received in non-ECM mode but did not receive next line within 13.1 seconds.
003F	Remote machine TSI not defined for one touch or speed dial directory.
0040	No carrier signal received within 6 sec. after sending CTR.
0041	No carrier signal within 6 sec. after sending PPR.
0042	No correct signal received after sending RNR signal.
0043	Received incorrect signal at phase D in ECM mode.
0044	No carrier /FSK signal received within 6 sec. after sending MCF in ECM mode.
0047	No correct signal received after sending ERR signal.
0048	No correct signal received after receive PPS_PRI_Q. PRI_Q, orEOR_PRI_Q .
004A	Line power over threshold for 60 sec. after MCF. No FSK or carrier signal detected in ECM mode.
004B	Correct FSK signal not detected even though FSK tone detected within 6 sec.
004C	Handshake failed during re-training or between page during V34 RX.
004E	Received DCN signal after DIS sent in V.34.
0050	No correct signal received after CJ signal sent in V.8 phase.
0051	No phase 3 signal sent after phase 2 within 20 sec. in V.34.

Code	Possible Cause
0053	Modem disconnected after phase 4 in V.34.
0054	Remote machine disconnected after phase 4 in V.8
0055	Received incorrect signal after DIS signal sent in V.34
0056	Modem disconnected after CFR sent in V.34.
0058	No image signal detected within 6 sec. after modem entered primary phase in V.34.
0059	Relay box deleted while relay job was being received.
005A	Modem did not detect a correct ECM frame with 3 min. in phase C.
005B	No phase 5 signal detected after primary channel within 6 sec.
005C	Busy tone detected on control channel after phase C.
005D	Modem did not detect a correct ECM frame within 12 sec. in phase C.
005E	No control channel signal detected within 6 sec. after RCP frame was received.
005F	No silence detected after JM signal was sent during TX polling.
0060	No bulletin files to be polled in V.34.
0061	No V.21 or V.8 signal detected with 35 sec.
0062	Modem disconnected in phase D after local machine sent flag sequence on control channel.
0063	No flag sequence on control channel within 6 sec. in phase D.
0064	No control channel signal received in phase D within 60 sec. even with power on the line.
0065	Cannot detect any control channel signal within 60 seconds after detect silence in phase D.
0066	No T.30 signal or carrier received after CFR was sent in V.34.
0069	Paper size mismatch after DCS signal received.
0070	Operator press [Stop] key during receiving.
0071	Memory became full during receiving.

Communication (TX)

Code	Possible Cause
0080	No G3 signal detected within 35 sec. in Phase B as specified by ITU-T.
0081	Received DTC signal in TX phase.
0082	TX unit received a signal other than DIS or DTC, or DCN in Phase B.
0083	FSK signal detected no signal received within 35 sec.
0084	Detected DCN signal in Phase B.
0085	TX unit sent DCS 3 times but each send met DIS/DTC response.
0086	After DCS sent response signal was other than DTC, DIS, FTT, DCN or CFR.
0087	Training attempt failed because machine speed could not adjust to low speed.
0088	Received DCN signal after DCS signal sent.
0089	Remote machine has no mailbox function or mailbox function is not compatible.
008B	Local RX machine received DIS protocol but protocol not compatible.
008C	Local machine memory insufficient for starting relay sending.
008D	Received RX machine DIS protocol but remote machine could not receive document because it was out of paper, or for some other reason.
008F	Modem was not ready to receive V.34 data within 6 sec. after it received CFR signal.
0090	Remote machine not ready for document polling.
0091	DCS+TCF signal sent 3 times but no response signal in response.
0093	DCN signal received after DCS signal sent for V.34
0094	Time-out during ECM frame or RCP command transmission.
0092	Wrong ID number for polling RX or mailbox TX.
0096	Sub-address or password mismatch in polling RX mode.
009A	No signal detected after CI signal sent.
009D	Remote machine hung up before V.34 modem entered Phase 2 during V.34 polling RX.
009E	Manual TX over 15 min. in Phase C of non-ECM mode.
00A0	Operator stopped or cancelled TX job.

Code	Possible Cause
00A1	Document jammed during transmission
00A9	The line could not be connected correctly
00AA	No Dial Tone
00AB	Line Busy
00AC	No Answer
00AD	Destination not Fax
00AE	V.8 procedure did not complete, or no V.21 signal detected after CM signal within 30 sec.
00AF	Modem did not enter control channel after TX side sent RCP signal for V.34
00B1	V.8 procedure did not complete, or V.21 signal not detected after ANSAM signal within 35 sec.
00B2	Phase 2 signal not detected within 30 sec. after local machine sent CJ signal.
00B3	V.21 or JM signal not detected after CM signal was sent.
00B4	No Phase 2 signal detected within 25 sec. after CM/JM signal exchange.
00B5	No Phase 3 signal detected within 25 sec. after Phase 2.
00B6	No Phase 4 signal detected within 25 sec. after CM/JM exchange.
00B8	Remote machine disconnected after local machine sent DCS signal in V.34.
00BA	No correct signal received after local machine sent DTC signal in V.34.
00BB	Every time our side received DIS signal after sending DTC in V.34.
00BC	Modem was not ready within 10 sec. after entering primary channel in V.34.
00BD	No correct V.21 or JM signal detection after FSK frequency detection.
00BE	No document to poll on remote machine after V8 handshake.
00BF	Capability mismatch after V8 handshake.
00C1	At Phase D TX unit cut out EOP 3 times but received no answer from RX unit.
00C2	Remote side disconnect after sending out V.8 CM signal.

Code	Possible Cause
00C3	Set transmission finish when receiving negative code at G3 direct transmission)
00C4	After MPS signal received, data was not MCF, RTN, PIP, PIN, RTP, or DCN.
00C5	DCN signal received after MPS signal sent.
00C9	MPS was sent 3 times at Phase D but there was no answer from RX unit.
00CA	After EOP signal was sent, the data received was not MCF, RTN, PIP, PIN, PRI-EOP, or DCN.
00CB	After EOP signal was sent, the data received had no DCN signal.
00CC	After EOM signal was sent, the data received was not MCF, RTN, PIP, PIN, RTP, or DCN.
00CD	TX units sent EOM 3 times at Phase D, but no answer was received.
00CE	TX unit send EOM at Phase D but received DCN.
00CF	Incorrect signal received after sending DTC signal for V.34 polling.
00D0	Received ERR signal after sending EOR_NULL.
00D1	Received incorrect response after sending PPS_EOP signal in V.34.
00D2	Received DCN after sending PPS_EOP signal.
00D3	Received DCN after sending PPS_NULL signal.
00D4	Received DCN after sending PPS_EOM signal.
00D8	No correct phase 3 signal detected for polling within 25 sec.
00D9	No correct phase 3 signal detected when silence detected after phase 2.
00DA	No Phase 4 signal detected within 30 sec. or remote machine hung up longer than 6 sec.
00DB	Cannot received any T.30 signal within 15 seconds within phase 4.
00DC	T.30 signal received in Phase 4 was signal other than DCS, DIS or DTC.
00DD	Remote machine is not the same model, or no mailbox ID defined for mailbox TX.
00DE	Remote machine has no SUB capability in V34.
00E0	TX unit sent PPS_NULL 3 times at Phase D but received no answer.

Code	Possible Cause
00E1	Received incorrect response after sending PPS_NULL.
00E2	No response received during RR response procedure after PPS_NULL was sent.
00E3	Dial Failed.
00E4	TX unit sent PPS_MPS 3 times at Phase DTX but received no answer.
00E5	Received incorrect response after sending PPS_MPS.
00E6	No response received during RR response procedure after PPS_MPS was sent.
00E7	Received DCN after sending PPS_MPS.
00E8	TX sent PPS_EOP 3 times at Phase D but received no answer.
00E9	PIN signal received after last page was sent three times.
00EA	No RX response received during RR response procedure after PPS_EOP was sent.
00EB	TX unit sent PPS_EOM 3 times at Phase D but received no answer.
00EC	Received incorrect response after sending PPS_EOM.
00ED	No response received during RR response procedure after PPS_EOM was sent.
00EE	TX unit sent EOR_NULL 3 times at Phase D but received no answer.
00EF	Received incorrect response after sending EOR_NULL.
00F0	No response received after sending EOR_NULL.
00F1	TX unit sent EOR_MPS 3 times at Phase D but received no answer.
00F2	Received incorrect response after sending EOR_MPS.
00F3	Received ERR signal after sending EOR_MPS.
00F4	No response received during RR response procedure after EOR_MPS was sent.
00F5	TX unit sent EOR_EOP 3 times at Phase D but received no answer.
00F6	Received incorrect response after sending EOR_EOP.
00F7	After ERR was received the local machine could not receive response after sending EOR_EOP command
00F8	TX unit sent EOR_EOM 3 times at Phase D but received no answer.

Code	Possible Cause
00F9	Received incorrect response after sending EOR_EOM.
00FA	Received ERR signal after sending EOR_EOM.
00FB	No response received during RR response procedure after EOR_EOM was sent.
00FC	No response received after sending CTC.
00FD	Machine could not reduce speed in ECM mode
00FE	Memory full for TX.
00FF	All failed, redial

Service Call Conditions

SC code display patterns and how to clear them

Pattern	Display/Description	How to clear the SC code	SC call/alarm for customer support
A	An SC code appears on the control panel and the machine becomes inaccessible (Safety-related SC).	The service engineer must reset the machine. Enter the SP mode, turn the main power switch off and then back on.	Occurrence & alarm count => reports immediately.
B	When a function is selected, an SC code appears on the control panel and the machine becomes inaccessible.	The user must reset the machine. Turn the power key or the main power switch off and then back on.	Occurrence & alarm count => Turn the main power switch off and then back on. => Alarm count and reporting is performed only if it occurs again.
C	The SC code does not appear on the control panel and the machine remains accessible.	Only the logging is counted.	Occurrence => Logging count and alarm count

Pattern	Display/Description	How to clear the SC code	SC call/alarm for customer support
D	An SC code appears on the control panel and the machine becomes inaccessible (machine error SC).	The user must reset the machine. Turn the power key or the main power switch off and then back on.	Occurrence & alarm count => Turn the main power switch off and then back on. => Alarm count and reporting is performed only if it occurs again.

Note

- If the usual SC code appears (pattern D), the machine automatically reboots itself. Even in the case of a usual SC, if the machine calls the customer support, it does not reboot itself. After the machine automatically reboots itself, a message reporting the rebooting appears.
- However, if an event that requires successive rebooting occurs, the machine will display the SC code without rebooting and perform logging count. If you print the service summary, the events that required successive rebooting will be displayed with asterisks.
- Automatic rebooting can be set to on/off in SP5-875-001 (Default: on).

Service Call Code Tables

Printer Service Call Codes

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20000	D	The maintenance motor is not in the home position.
		• maintenance motor error • maintenance HP sensor error • Cannot remove the cap from the carriage.
		• The maintenance motor is faulty. • The harness between the maintenance unit and CTL board is broken. • The maintenance motor harness is loose. • The CTL board is faulty. • The maintenance HP sensor is faulty. • The maintenance HP sensor harness is loose. • The maintenance unit (cam/gear/wiper) is damaged. • A peripheral part (reading edge pressure roller or nozzle head cover) is damaged. • Ink is clogged. • A piece of paper is jammed.
		• Replace the ink supply unit. • Replace the harness between the maintenance motor and CTL board. • Replace the CTL board. • Replace the maintenance unit. • Replace the harness between the maintenance unit and CTL board. • Replace the damaged peripheral part. • Remove the jammed piece of paper.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20200	D	Failure to form negative pressure in the maintenance unit (while assessing the negative pressure in the tank)
		One of SC20211 - 20254 is applicable.
		• The maintenance unit is faulty. • The carriage is faulty. • The horizontal encoder strip is faulty.
		• Replace the maintenance unit. • Replace the carriage unit. • Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20211	D	Failure to form negative pressure in the maintenance unit (air leak) (**Tank 1** error)
		Air leak (The failure to form negative pressure due to immediate air leak was detected.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20212	D	Failure to form negative pressure in the maintenance unit (air leak) (**Tank 2** error)
		Air leak (The failure to form negative pressure due to immediate air leak was detected.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20213	D	Failure to form negative pressure in the maintenance unit (air leak) (**Tank 3** error)
		Air leak (The failure to form negative pressure due to immediate air leak was detected.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20214	D	Failure to form negative pressure in the maintenance unit (air leak) (**Tank 4** error)
		Air leak (The failure to form negative pressure due to immediate air leak was detected.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20221	D	Failure to form negative pressure in the maintenance unit (nozzle/filter clogging) (**Tank 1** error)
		• Nozzle/filter clogging
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20222	D	Failure to form negative pressure in the maintenance unit (nozzle/filter clogging) (**Tank 2** error)
		• Nozzle/filter clogging
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20223	D	Failure to form negative pressure in the maintenance unit (nozzle/filter clogging) (**Tank 3** error)
		• Nozzle/filter clogging
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20224	D	Failure to form negative pressure in the maintenance unit (nozzle/filter clogging) (**Tank 4** error)
		• Nozzle/filter clogging
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20231	D	Failure to form negative pressure in the maintenance unit (insufficient suction) (**Tank 1** error)
		Insufficient suction
		• The maintenance unit is faulty. • The carriage is faulty.
		• Replace the maintenance unit. • Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20232	D	Failure to form negative pressure in the maintenance unit (insufficient suction) (**Tank 2** error)
		Insufficient suction
		• The maintenance unit is faulty. • The carriage is faulty.
		• Replace the maintenance unit. • Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20233	D	Failure to form negative pressure in the maintenance unit (insufficient suction) (**Tank 3** error)
		Insufficient suction
		• The maintenance unit is faulty. • The carriage is faulty.
		• Replace the maintenance unit. • Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20234	D	Failure to form negative pressure in the maintenance unit (insufficient suction) (**Tank 4** error)
		Insufficient suction
		• The maintenance unit is faulty. • The carriage is faulty.
		• Replace the maintenance unit. • Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20241	D	Failure to form negative pressure in the maintenance unit (failure to release air (due to ink intrusion, etc.) (**Tank 1** error)
		Failure to release air (due to ink intrusion, etc.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20242	D	Failure to form negative pressure in the maintenance unit (failure to release air (due to ink intrusion, etc.) (**Tank 2** error)
		Failure to release air (due to ink intrusion, etc.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20243	D	Failure to form negative pressure in the maintenance unit (failure to release air (due to ink intrusion, etc.) (**Tank 3** error)
		Failure to release air (due to ink intrusion, etc.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20244	D	Failure to form negative pressure in the maintenance unit (failure to release air (due to ink intrusion, etc.) (**Tank 4** error)
		Failure to release air (due to ink intrusion, etc.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20251	D	Failure to form negative pressure in the maintenance unit (misalignment (failure to detect by the feeler) / occasional failure to release air) (**Tank 1** error)
		Misalignment (failure to detect by the feeler)
		• The horizontal encoder strip is faulty.
		• Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20252	D	Failure to form negative pressure in the maintenance unit (misalignment (failure to detect by the feeler) / occasional failure to release air) (**Tank 2** error)
		Misalignment (failure to detect by the feeler)
		• The horizontal encoder strip is faulty.
		• Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20253	D	Failure to form negative pressure in the maintenance unit (misalignment (failure to detect by the feeler) / occasional failure to release air) (**Tank 3** error)
		Misalignment (failure to detect by the feeler)
		• The horizontal encoder strip is faulty.
		• Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20254	D	Failure to form negative pressure in the maintenance unit (misalignment (failure to detect by the feeler) / occasional failure to release air) (**Tank 4** error)
		Misalignment (failure to detect by the feeler)
		• The horizontal encoder strip is faulty.
		• Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20300	D	Failure to form negative pressure in the ink supply unit (while assessing the negative pressure in the tank)
		One of SC20311 - 20354 is applicable.
		• The ink supply unit is faulty. • The carriage is faulty. • The horizontal encoder strip is faulty.
		• Replace the ink supply unit. • Replace the carriage unit. • Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20311	D	Failure to form negative pressure in the ink supply unit (air leak) (**Tank 1** error)
		Air leak
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20312	D	Failure to form negative pressure in the ink supply unit (air leak) (**Tank 2** error)
		Air leak
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20313	D	Failure to form negative pressure in the ink supply unit (air leak) (**Tank 3** error)
		Air leak
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20314	D	Failure to form negative pressure in the ink supply unit (air leak) (**Tank 4** error)
		Air leak
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20321	D	Failure to form negative pressure in the ink supply unit (failure send ink by the pump) (**Tank 1** error)
		Failure send ink by the pump
		• The ink supply unit is faulty.
		• Replace the ink supply unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20322	D	Failure to form negative pressure in the ink supply unit (failure send ink by the pump) (**Tank 2** error)
		Failure send ink by the pump
		• The ink supply unit is faulty.
		• Replace the ink supply unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20323	D	Failure to form negative pressure in the ink supply unit (failure send ink by the pump) (**Tank 3** error)
		Failure send ink by the pump
		• The ink supply unit is faulty.
		• Replace the ink supply unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20324	D	Failure to form negative pressure in the ink supply unit (failure send ink by the pump) (**Tank 4** error)
		Failure send ink by the pump
		• The ink supply unit is faulty.
		• Replace the ink supply unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20331	D	Failure to form negative pressure in the ink supply unit (failure to release air (due to ink intrusion, etc.) (**Tank 1** error)
		Failure to release air (due to ink intrusion, etc.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20332	D	Failure to form negative pressure in the ink supply unit (failure to release air (due to ink intrusion, etc.) (**Tank 2** error)
		Failure to release air (due to ink intrusion, etc.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20333	D	Failure to form negative pressure in the ink supply unit (failure to release air (due to ink intrusion, etc.) (**Tank 3** error)
		Failure to release air (due to ink intrusion, etc.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20334	D	Failure to form negative pressure in the ink supply unit (failure to release air (due to ink intrusion, etc.) (**Tank 4** error)
		Failure to release air (due to ink intrusion, etc.)
		• The carriage is faulty.
		• Replace the carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20351	D	Failure to form negative pressure in the ink supply unit (misalignment (failure to detect by the feeler) / occasional failure to release air) (**Tank 1** error)
		• Misalignment (failure to detect by the feeler) • Failure send ink y the pump
		• The horizontal encoder strip is faulty. • The ink supply unit is faulty.
		• Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Replace the ink supply unit. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20352	D	Failure to form negative pressure in the ink supply unit (misalignment (failure to detect by the feeler) / occasional failure to release air) (**Tank 2** error)
		• Misalignment (failure to detect by the feeler) • Failure send ink by the pump
		• The horizontal encoder strip is faulty. • The ink supply unit is faulty.
		• Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Replace the ink supply unit. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20353	D	Failure to form negative pressure in the ink supply unit (misalignment (failure to detect by the feeler) / occasional failure to release air) (**Tank 3** error)
		• Misalignment (failure to detect by the feeler) • Failure send ink by the pump
		• The horizontal encoder strip is faulty. • The ink supply unit is faulty.
		• Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Replace the ink supply unit. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20354	D	Failure to form negative pressure in the ink supply unit (misalignment (failure to detect by the feeler) / occasional failure to release air) (**Tank 4** error)
		• Misalignment (failure to detect by the feeler) • Failure send ink by the pump
		• The horizontal encoder strip is faulty. • The ink supply unit is faulty.
		• Replace or clean the horizontal encoder strip. • Check if anything is jammed between the tank feelers and remove it. • Replace the ink supply unit. • Turn the main power switch off and then back on.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20400	D	The drive switching motor is not in the home position.
		• The drive switching motor is not running. • The drive switching module is malfunctioning. • The drive switching position sensor does not operate properly.
		• The drive switching motor is faulty. • The drive switching module is faulty. • The drive switching motor harness is broken or loose. • The drive switching position sensor is faulty. • The drive switching position sensor harness is broken or loose. • The CTL board is faulty.
		• Replace the ink supply unit. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20501	D	Drive motor error (error in the motor drive period) [during maintenance operation]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or maintenance unit is faulty. • The drive switching module is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Replace the drive motor. • Replace the maintenance unit. • Replace the encoder. • Replace the ink supply unit. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20502	D	Drive motor error (error in the motor output) [during maintenance operation]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or maintenance unit is faulty. • The drive switching module is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Replace the drive motor. • Replace the maintenance unit. • Replace the encoder. • Replace the ink supply unit. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20503	D	Drive motor error (error in the motor's direction of rotation) [during maintenance operation]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or maintenance unit is faulty. • The drive switching module is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Replace the drive motor. • Replace the maintenance unit. • Replace the encoder. • Replace the ink supply unit. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20601	D	Drive motor error (error in the motor drive period) [during maintenance operation]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or ink supply unit is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Replace the drive motor. • Replace the ink supply unit. • Replace the encoder. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20602	D	Drive motor error (error in the motor output) [during ink supply]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or ink supply unit is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Replace the drive motor. • Replace the ink supply unit. • Replace the encoder. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20603	D	Drive motor error (error in the motor's direction of rotation) [during ink supply]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or ink supply unit is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Replace the drive motor. • Replace the ink supply unit. • Replace the encoder. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20701	D	Drive motor error (error in the motor drive period) [during air release]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or air release system is faulty. • The drive switching module is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Check the drive motor or air release system. • Replace the encoder. • Replace the ink supply unit. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20702	D	Drive motor error (error in the motor output) [during air release]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or air release system is faulty. • The drive switching module is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Check the drive motor or air release system. • Replace the encoder. • Replace the ink supply unit. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
20703	D	Drive motor error (error in the motor's direction of rotation) [during air release]
		• maintenance motor error • The drive switching module is malfunctioning. • Encoder output error
		• The drive motor or air release system is faulty. • The drive switching module is faulty. • The encoder is faulty. • The harness is broken. • The connector is not attached properly.
		• Check the drive motor or air release system. • Replace the encoder. • Replace the ink supply unit. • Replace the harness. • Reattach the connector. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
21000	D	Failure to detect the signal from the horizontal encoder
		The horizontal encoder sensor signal is unstable.
		• The horizontal encoder strip is stained or damaged. • The horizontal encoder strip is loose. • A peripheral part (reading edge pressure roller or nozzle head cover) is damaged. • The horizontal encoder strip is faulty. • The FFC between the HRB and CTL board is broken, improperly connected, or has shorted. • The carriage timing belt is loose. • The horizontal motor is faulty. • The harness between the horizontal motor and CTL board is broken. • The CTL board is faulty.
		• Replace the horizontal encoder strip. • Replace the spring of the horizontal encoder strip retainer plate. • Replace the damaged peripheral part. • Replace the on-site carriage unit. • Replace the FFC between the HRB and CTL board. • Replace the carriage timing belt. • Replace the horizontal motor. • Replace the harness between the horizontal motor and CTL board. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
21100	D	Horizontal encoder error
		• The horizontal encoder sensor signal is missing. • The horizontal motor is not running.
		• The horizontal encoder strip is broken or bent. • A peripheral part (reading edge pressure roller or nozzle head cover) is damaged. • The horizontal encoder strip is faulty. • The power supply unit is faulty. • The FFC between the HRB and CTL board is broken, or improperly connected. • The CTL board is faulty. • The horizontal motor is faulty. • The harness between the horizontal motor and CTL board is broken. • The horizontal motor harness is loose.
		• Replace the horizontal encoder strip. • Replace the damaged peripheral part. • Replace the on-site carriage unit. • Replace the power supply unit. • Replace the FFC between the HRB and CTL board. • Replace the CTL board. • Replace the horizontal motor. • Replace the harness between the horizontal motor and CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
28000	D	Air sensor error
		Air sensor error
		• The maintenance unit is faulty. • The air sensor is faulty. • The HRB (including the harness) is faulty. • The air release pin is faulty.
		• Replace the maintenance unit. • Replace the carriage unit. • Replace the ink supply unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
28111	D	Ink supply timeout error (**Tank 1** error)
		• ink supply pump error • air sensor error • The tank feeler is malfunctioning. • ink level senor error
		• The ink supply pump is faulty. • The carriage is faulty. • The ink level sensor is faulty. • The CTL board is faulty.
		• Turn the main power switch off and then back on. • Replace the ink supply unit. • Replace the carriage unit. • Replace the air purge detection switch. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
28112	D	Ink supply timeout error (**Tank** 2 error)
		• ink supply pump error • air sensor error • The tank feeler is malfunctioning. • ink level senor error
		• The ink supply pump is faulty. • The carriage is faulty. • The ink level sensor is faulty. • The CTL board is faulty.
		• Turn the main power switch off and then back on. • Replace the ink supply unit. • Replace the carriage unit. • Replace the air purge detection switch. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
28113	D	Ink supply timeout error (**Tank 3** error)
		• ink supply pump error • air sensor error • The tank feeler is malfunctioning. • ink level senor error
		• The ink supply pump is faulty. • The carriage is faulty. • The ink level sensor is faulty. • The CTL board is faulty.
		• Turn the main power switch off and then back on. • Replace the ink supply unit. • Replace the carriage unit. • Replace the air purge detection switch. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
28114	D	Ink supply timeout error (**Tank 4** error)
		• ink supply pump error • air sensor error • The tank feeler is malfunctioning. • ink level senor error
		• The ink supply pump is faulty. • The carriage is faulty. • The ink level sensor is faulty. • The CTL board is faulty.
		• Turn the main power switch off and then back on. • Replace the ink supply unit. • Replace the carriage unit. • Replace the air purge detection switch. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
28211	D	Air detection frequency error (**Print Head 1** error)
		• Air leak
		• The carriage is faulty. • The harness between the ink level sensor (air sensor) and HRB is broken or has shorted. • The FFC between the HRB and CTL board is broken, improperly connected, or has shorted.
		• Replace the carriage unit. • Replace the harness between the ink level sensor (air sensor) and HRB. • Replace the FFC between the HRB and CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
28212	D	Air detection frequency error (**Print Head 2** error)
		• Air leak
		• The carriage is faulty. • The harness between the ink level sensor (air sensor) and HRB is broken or has shorted. • The FFC between the HRB and CTL board is broken, improperly connected, or has shorted.
		• Replace the carriage unit. • Replace the harness between the ink level sensor (air sensor) and HRB. • Replace the FFC between the HRB and CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
28213	D	Air detection frequency error (**Print Head 1, 2** error)
		• Air leak
		• The carriage is faulty. • The harness between the ink level sensor (air sensor) and HRB is broken or has shorted. • The FFC between the HRB and CTL board is broken, improperly connected, or has shorted.
		• Replace the carriage unit. • Replace the harness between the ink level sensor (air sensor) and HRB. • Replace the FFC between the HRB and CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
29200	D	Auto washing error
		The feed pump time-out has occurred during auto washing and idle running of the feed pump has been detected.
		• The cartridge for washing is running out of its content.
		• Replace the cartridge for washing.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
29500	D	Air release error (Air purge detection switch error or air release lever error)
		The air purge detection switch cannot be switched on/off.
		• The air release system is faulty (a component has come off or is damaged, etc.). • The air purge detection switch is faulty. • The air purge detection switch harness is broken or loose. • The ink supply unit is faulty.
		• Replace the air release system. • Replace the air purge detection switch. • Replace the harness. • Reattach the connector. • Replace the ink supply unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
49002	D	The right ink sump is full.
		• The right ink sump is full • The software counter is incorrect.
		• The right ink sump is full. • The EEPROM (NV memory) is faulty. • The CTL board is faulty.
		• Replace the right ink sump. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
52000	D	Vertical motor error
		• The vertical encoder sensor signal is unstable. • The vertical encoder sensor signal is missing. • The vertical motor is not running.
		• The vertical encoder wheel is stained or damaged. • The vertical encoder wheel is damaged. • The vertical encoder sensor is faulty. • The harness between the vertical encoder board and CTL board is broken, improperly connected, or has shorted. • The vertical motor is faulty. • The vertical motor timing belt is loose. • The harness between the vertical motor and CTL board is broken or loose. • A peripheral part (reading edge pressure roller or nozzle head cover) is damaged. • The transport belt is curled. • The CTL board is faulty. • The power supply unit is faulty.
		• Replace the vertical encoder wheel. • Replace the vertical encoder board. • Replace the harness between the vertical encoder board and CTL board. • Replace the vertical motor. • Replace the timing belt between the vertical motor and transport belt. • Replace the harness between the vertical motor and CTL board. • Replace the damaged peripheral part. • Replace the base feed unit*1. • Replace the CTL board. • Replace the power supply unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
57000	D	Error: charge leak (1)
		• A leak has occurred due to the ink stain on the charge belt. • A leak has occurred due to condensation.
		• Ink has spilled due to carriage misalignment caused by jammed paper. • Ink has spilled due to carriage misalignment caused by loose horizontal encoder strip. • Ink has spilled due to carriage misalignment caused by stained horizontal encoder strip. • Ink has spilled due to the faulty air release lever. • Ink has dropped due to the leaking from the head tank. • Ink has spilled due to the faulty ink level sensor (air sensor). • Ink has spilled, because the ink level sensor has failed to detect ink due to the machine's excessive tilt. • Ink has been discharged to the area out of the sheet due to a faulty print head. • Ink has been discharged to the area out of the sheet, because the FFC between the HRB and CTL board is broken, improperly connected, or has shorted. • Ink has been discharged to the area out of the sheet due to the CTL board error. • Condensation absorbed by paper dust • Intentionally moistened by a user
		• Replace the horizontal encoder strip. • Replace the spring of the horizontal encoder strip retainer plate. • Replace the maintenance unit. • Replace the air release lever. • Replace the head unit. • Replace the FFC between the HRB and CTL board. • Replace the CTL board. • Remove the paper dust. • Remove the condensation.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
57000	D	Error: charge leak (2)
		• A leak has occurred due to the entry of an extraneous substance. • A leak has been detected by mistake due to the damage to the charge belt. • The leak detection signal remains ON.
		• The charge roller is stained due to extraneous substances (such as staples) on sheets. • The charge belt is damaged by a damaged peripheral component (reading edge pressure roller). • The charge belt is damaged by falling of a peripheral component (such as the head nozzle cover). • The charge belt is curled or wrinkled. • The power pack is faulty. • The harness between the power pack and CTL board is broken or has shorted. • The CTL board is faulty.
		• Remove the extraneous substance. • Replace the damaged peripheral part. • Replace the base feed unit*1. • Replace the fallen component (* If the head nozzle cover has fallen, the on-site carriage unit may be replaced). • Replace the power pack. • Replace the harness between the power pack and CTL board. • Replace the CTL board.

57001
RTB 5

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
57100	D	Print head thermal sensor error
		The thermistor signal is missing.
		• The thermistor harness is loose. • The thermistor is faulty. • The HRB is faulty. • The FFC between the HRB and CTL board is broken, improperly connected, or has shorted. • The CTL board is faulty.
		• Replace the thermistor. • Replace the on-site carriage unit. • Replace the FFC between the HRB and CTL board. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
57300	D	Humidity sensor error
		• The humidity signal of the temperature/humidity sensor has exceeded the maximum (or minimum) measurable value.
		• The temperature/humidity sensor is faulty. • The CTL board is faulty.
		• Replace the base feed unit*1. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
57301	D	Thermal sensor error
		• The temperature signal of the temperature/humidity sensor is missing.
		• The temperature/humidity sensor is faulty. • The harness between the temperature/humidity sensor and CTL board is broken or has shorted. • The CTL board is faulty.
		• Replace the base feed unit*1. • Replace the harness between the temperature/humidity sensor and CTL board. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
57302	D	Power harness error
		• The temperature signal of the temperature/humidity sensor is missing.
		• The harness is loose or broken.
		• Replace the harness between the temperature/humidity sensor and CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
57400	D	KAKA correction error
		Unable to communicate with EEPROM (NV memory) for KAKA
		• The EEPROM (NV memory) is faulty. • The CTL board is faulty.
		• Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
82300	D	Self-diagnostic error: NIC
		This appears if sum value error occurs three times in a row during the attempt to read the Mac address stored in the EEPROM when turning the power on.
		EEPROM (NV memory) error EEPROM (NV memory) connection error CTL board error
		Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
84000	D	EEPROM access error
		This appears if reading of the data stored in the EEPROM fails or writing on the EEPROM fails.
		EEPROM (NV memory) error EEPROM (NV memory) connection error CTL board error
		Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
93200	D	Thermal error in the DRV circuit
		• The signal from the temperature sensor in the CTL board is missing.
		• The cooling fan harness is loose. • The cooling fan is faulty. • The temperature sensor in the drive circuit is faulty. • The CTL board is faulty.
		• Replace the cooling fan. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
93300	D	HRB fuse blown
		HRB fuse blown
		• The print heads is faulty. • The CTL board is faulty.
		• Replace the CTL board. • Replace the on-site carriage unit.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
93400	D	HRB version not matching
		• The HRB signal is missing.
		• The HRB is faulty. • The FFC between the HRB and CTL board is broken, improperly connected, or has shorted. • The CTL board is faulty.
		• Replace the on-site carriage unit. • Replace the FFC between the HRB and CTL board. • Replace the CTL board.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
93500	D	The maximum number of sheets that can be printed by the prototype control board has been exceeded.
		The board mounted during the assembly had not been initialized.
		• An error during the assembly
		• Replace the machine.

*1 The base feed unit refers to the machine with the following components removed.

- All cover
- carriage unit
- control panel

- ink collector unit
- Maintenance unit
- Duplex unit
- CTL board
- Supplied accessories

Copier Service Call Codes

Scanning

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
S0001	D	Home position error
		The machine does not detect the CIS module unit at its home position.

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
S0003	D	CIS lamp error
		The machine detects the CIS lamp is not sufficient.

Data Communication

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
S0002	D	USB communication error (Controller board and MF unit)
		• The USB between the controller board and MF unit is disconnected. • The controller board is defective. • The scanner controller board is defective.

ACF System

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
S0004	D	ACF error
		• The scanner controller board is defective. • A note (money) is scanned.

Fax

SC	Pattern	Error Name / Detection Criteria / Major Cause / Solution
S0005	D	Modem error
		• The fax/ NCU board is defective.

Jam Codes

Depending on the paper jam location, the branch number (-xx) is displayed to identify the paper jam location more precisely. The JAM code does not appear on the machine's panel display. Check it on the printer driver's Status Monitor.

Here is a list of jam codes and what they mean. A separate list is provided for each machine.

Jam Codes

In the tables below "Action 1" and "Action 2" have the following meanings:

- Action 1. To be performed by the user on site, or at the service center to see if these simple procedures solve the problem.
- Action 2. To be performed by the service technician at the Service Center. These procedures are for the user at the work site.

Jam 1	Paper Feed Jam (Tray 1: Paper Cassette)
Message	Paper Misfeed Remove Tray 1 and reset the paper. If there is any paper that is jammed remove it.
Cause	Paper slipped, paper cassette not set correctly.
Details	The registration sensor detected the leading edge of the paper, but the trailing edge sensor failed to detect the trailing edge of the paper fed from the printer paper tray within the prescribed time.

Action 1	• Check how paper is loaded in the tray. • Remove paper, fan paper to remove static cling, and re-load. • Reduce or increase the amount of paper loaded. • Check and reset the position of the end fence. • Confirm that the paper is not curled. • Confirm that the type of paper can be used with the printer. • Confirm that the paper cassette is installed correctly. (Remove the cassette and set it again). • If another paper cassette is available, use the extra cassette.
Action 2	• Replace friction pad. • Replace paper feed clutch. • Replace paper cassette unit.

Jam 2	Paper Feed Jam (Tray 2: PFU)
Message	Paper Misfeed Remove Tray 2 and reset the paper. If there is any paper that is jammed remove it.
Cause	• Paper slick (non-feed) • Paper tray was not set properly.
Details	The registration sensor detected the leading edge of the paper from the paper cassette, but the trailing edge sensor failed to detect the trailing edge of the paper within the prescribed time.
Action 1	• Remove the cassette • Remove remaining paper. • Re-set the cassette correctly.
Action 2	• Replace paper feed clutch in Tray 2. • Replace paper cassette. • Replace Tray 2.

Jam 3	Duplex Unit Jam
Message	Paper Misfeed Open Duplex Unit Cover or pull out Duplex Unit, then remove the jammed paper.

Cause	Ink has wrinkled or curled the paper
Details	The trailing edge sensor failed to detect the trailing edge of the paper after it was fed to the duplex unit for duplex/inverted printing within the prescribed time.
Action 1	• Remove the duplex unit • Remove remaining paper.
Action 2	• Confirm that duplex unit is set correctly. • Remove jammed paper, paper scraps, etc. • Re-install duplex unit (the duplex unit should lock automatically on both ends). • Replace duplex unit.

Jam 4	Feed Jam (Paper Remains in Duplex Unit)
Message	Paper Misfeed Press the Form Feed button.
Cause	The paper that exited duplex unit after inversion got caught.
Details	After the trailing edge sensor detected the trailing edge of the paper fed to the duplex unit for duplex/inverted printing, the paper failed to leave the trailing edge sensor within the prescribed time.
Action 1	• Press [Form Feed] on printer operation panel.
Action 2	• Replace inverter guide. • Replace TE sensor. • Replace CTL board.

Jam 5	Transport Jam (Tray 1)
Message	Paper Misfeed Press the Form Feed button.
Cause	Paper longer than the paper selected in printer driver was loaded.
Details	After the registration sensor detected the leading edge of the paper fed from the paper cassette, the paper failed to pass the trailing edge sensor within the prescribed time.
Action 1	• Press [Form Feed] on printer operation panel.

Action 2	• Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

Jam 6	Paper Feed Jam (Bypass Tray)
Message	Paper Misfeed Remove Bypass Tray and reset the paper. If there is any paper that is jammed remove it.
Cause	• Paper slippage • Paper not loaded correctly
Details	The registration sensor did not detect the leading edge of the paper fed from the bypass tray within the prescribed time .
Action 1	• Remove bypass tray • Load paper correctly. • Check inside the paper for jammed paper or paper scraps.
Action 2	• Clean transport belt. • Replace Registration Sensors 1, 2. • Replace Multi Bypass Tray. • Replace the printer.

Jam 7	Transport Jam (Tray 2: PFU)
Message	Paper Misfeeed Press the Form Feed button.
Cause	Paper longer than the paper selected in printer driver was loaded.
Details	When paper was fed from Tray 2 the paper fed but the paper failed to leave the trailing edge sensor within the prescribed time.
Action 1	• Check the size of the paper loaded in the PFU • Make sure that the size of the paper selected in the printer driver matches the size of the paper loaded in the tray.

Action 2	• Clean transport belt. • Replace TE sensor. • Replace Tray 2.

Jam 8	Not Used

Jam 9	Registration Late Jam: Tray 1
Message	Paper Misfeeed Press the Form Feed button.
Cause	• Paper feed rollers slipped, could not feed paper • Paper caught, warped in paper feed path.
Details	After the paper fed from the tray, or when the paper was inverted for duplexing, after the trailing edge sensor went ON, the registration sensor failed to detect within the prescribed time.
Action 1	• Press [Form Feed] on operation panel.
Action 2	• Replace registration sensor 1. • Replace trailing edge sensor 2.

Jam 10	Registration Late Jam: Tray 2 (PFU)
Message	Paper Misfeeed Press the Form Feed button.
Cause	• Paper feed rollers slipped, could not feed paper • Paper caught, warped in paper feed path.
Details	After the paper fed from the tray, or when the paper was inverted for duplexing, after the trailing edge sensor went ON, the registration sensor failed to detect within the prescribed time.
Action 1	• Press [Form Feed] on operation panel.
Action 2	• Replace inverter guide. • Replace TE sensor. • Replace CTL board.

Jam 11	Registration Late Jam: Duplex Unit
Message	Paper Misfeeed Press the Form Feed button.
Cause	• Paper feed rollers slipped, could not feed paper • Paper caught, warped in paper feed path.
Details	After the paper fed from the tray, or when the paper was inverted for duplexing, after the trailing edge sensor went ON, the registration sensor failed to detect within the prescribed time.
Action 1	• Press [Form Feed] on operation panel.
Action 2	• Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

Jam 12	Not Used

Jam 13	Not Used

Jam 14	Carriage Jam
Message	Paper Misfeed Open the Top Cover and press [Form Feed] to remove the paper. If this does not work or pieces of paper still remain then manually remove it from the top of the machine. Also check paper is set correctly in all the paper source trays
Cause	The carriage failed to reach its target position within the prescribed time.
Details	An obstruction is blocking movement of the carriage unit.
Action 1	• Open the scanner unit. • Turn the paper feed wheel on the left side of the printer to feed out any remaining paper. • Check around the carriage unit for paper scraps or any other type of obstruction. • Make sure that the paper cassette and bypass tray are set correctly.

Action 2	• Clean the horizontal encoder strip. • Replace horizontal encoder strip. • Replace the horizontal encoder sensor. • Check maintenance unit, replace if necessary. • Replace carriage unit.

Jam 15	Not Used

Jam 16	Carriage Unit Homing Failure
Message	Paper Misfeed Open the Top Cover and press [Form Feed] to remove the paper. If this does not work or pieces of paper still remain then manually remove it from the top of the machine. Also check paper is set correctly in all the paper source trays.
Cause	Something is blocking the movement of the carriage unit.
Details	The machine detected an obstruction blocking operation of carriage unit at power ON or after jammed paper was removed.
Action 1	• Open the scanner unit and while checking for paper, turn the paper feed wheel on the left side of the printer and remove the paper. • If the paper cannot be removed easily and paper scraps remains inside the printer, remove the paper. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	• Clean the horizontal encoder strip. • Replace horizontal encoder strip. • Replace the horizontal encoder sensor. • Check maintenance unit, replace if necessary. • Replace carriage unit.

Jam 17	Paper Remains Jam

Message	Paper Misfeed Open the Top Cover and press [Form Feed] to remove the paper. If this does not work or pieces of paper still remain then manually remove it from the top of the machine. Also check paper is set correctly in all the paper source trays.
Cause	Obstruction or paper remains in the printer after a jam was removed.
Details	Paper trailing edge sensor switched on while paper was being removed.
Action 1	• Open the scanner unit and while checking for paper, turn the paper feed wheel on the left side of the printer and remove the paper. • If the paper cannot be removed easily and paper scraps remains inside the printer, remove the paper. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	• Check the 1st registration sensor on the side of the carrier unit. (This sensor detects the leading edge of the paper.) • Make sure the cover on the print head unit is installed correctly. • Replace 1st registration sensor. • Replace carriage unit.

Jam 18	Condensation Error During Printing
Message	Paper Misfeed Press the Form Feed button.
Cause	A belt charge leak was detected during printing.
Details	Condensation on the belt, or there is a hole in the transfer belt.
Action 1	• Feed and eject 3 blank sheets to remove moisture from the belt.
Action 2	• [User Tools] > "Maintenance"> "De-condensation"> [OK] • Do the print job again. • If the problem occurs again, repeat Step 1. • Confirm that the work site is within the ranges for ambient temperature and humidity. (See "Installation"). • Inspect the transport belt. • If the belt is damaged the machine must be replaced.

Jam 19	TE Sensor (Main Unit) Paper Late Jam (Tray 2)
Message	Paper Misfeed Remove the Duplex Unit or the Rear Cover of the machine, and remove the paper. Or, open the Tray 2 Rear Cover and remove the paper.
Cause	The paper was wrinkled or caught in the paper feed path.
Details	Even though the paper fed from Tray 2 reached the prescribed position, the TE sensor could not detect the leading edge of the paper.
Action 1	• Remove the duplex unit and remove any paper inside the printer. • Remove the rear unit of Tray 2 and remove any paper inside the tray.
Action 2	• Remove the duplex unit, open the rear cover and remove all remaining paper. • Close the rear cover and re-install the duplex unit. • Remove the rear unit of Tray 2 and remove any remaining paper. • Re-install the rear unit of Tray 2.

Jam 20	TE Sensor (Main Unit) Late Jam (Tray 3)
Message	JAM20-04: Paper Misfeed Remove the Duplex Unit or the Rear Cover of the machine, and remove the paper. Or, open the Tray 2 Rear Cover and remove the paper. JAM20-12: Paper Misfeed Please remove the Duplex Unit or the Rear Cover of the machine, and remove the paper. Or, open the Rear Cover of all additional Trays and remove the paper.
Cause	The paper was wrinkled or caught in the paper feed path.
Details	Even though the paper fed from Tray 3 reached the prescribed position, the TE sensor could not detect the leading edge of the paper.
Action 1	• Remove the duplex unit and remove any paper inside the printer. • Remove the rear unit of Tray 3 and remove any paper inside the tray.

Action 2	• Remove the duplex unit, open the rear cover and remove all remaining paper. • Close the rear cover and re-install the duplex unit. • Remove the rear unit of Tray 2 and remove any remaining paper. • Re-install the rear unit of Tray 2. • Remove the rear unit of Tray 3 and remove any remaining paper. • Re-install the rear unit of Tray 3

Jam 21	Tray 2 Relay Sensor Paper Late Jam (Tray 3)
Message	Paper Misfeed Open the Rear Cover of all additional Trays and remove the paper.
Cause	The paper was wrinkled or caught in the paper feed path
Details	Even though the paper fed from Tray 3 reached the prescribed position, the relay sensor of Tray 2 could not detect the leading edge of the paper.
Action 1	• Remove the rear unit of Tray 2 and Tray 3 and remove any paper inside the tray.
Action 2	• Remove the rear unit of Tray 2 and remove any remaining paper. • Re-install the rear unit of Tray 2. • Remove the rear unit of Tray 3 and remove any remaining paper. • Re-install the rear unit of Tray 3.

Jam 22	Paper Remains in Vertical Paper Path of Tray 2, Tray 3 (Failure to Remove Jam)

Message	**JAM22-04,05,06,07:** Paper Misfeed Open the Tray 2 Rear Cover and remove the paper. Or, remove the Tray2 and remove the paper. **JAM22-08:** Paper Misfeed Remove the Tray3 and remove the paper. Or, open the Tray 3 Rear Cover and Tray 2 Rear Cover, then remove the paper. **JAM22-09,10,11,12,13,14,15:** Paper Misfeed Open the Rear Cover of the all additional Trays and remove the paper Or, remove the all additional Trays and remove the paper.
Cause	Foreign object is inside the printer, or paper remains inside the printer.
Details	The relay sensor of Tray 2 or Tray 3 went ON while the jammed paper was being removed.
Action 1	• Remove the rear unit of Tray 2 and Tray 3 and remove any paper inside the tray. • Make sure that the paper is stacked correctly in Tray 2 and Tray 3.
Action 2	• Remove the rear unit of Tray 2 and remove any remaining paper. • Re-install the rear unit of Tray 2. • Remove the rear unit of Tray 3 and remove any remaining paper. • Re-install the rear unit of Tray 3. • Remove Tray 2 and remove any jammed paper. • Re-install the tray correctly. • Remove Tray 3 and remove any jammed paper. • Re-install the tray correctly.

Jam 23	Paper Feed Jam (Tray 3)
Message	Paper Misfeed Press the Form Feed button.
Cause	The paper being fed is longer than the paper size selected in the printer driver.

Details	When paper fed from Tray 3 even though the sensor detected the leading edge of the paper at the prescribed position, the paper did not leave the relay sensor of Tray 3.
Action 1	• Check the size of the paper loaded in the tray. • Make sure that the size of the loaded paper is the same length as the paper selected in the printer driver
Action 2	On the printer operation panel menu, make sure that the correct paper size is selected for the Tray. • [User Tools]> "Tray Paper Setting"> [OK] • "Paper Size: Tray 3"> [OK] • Select correct paper size.

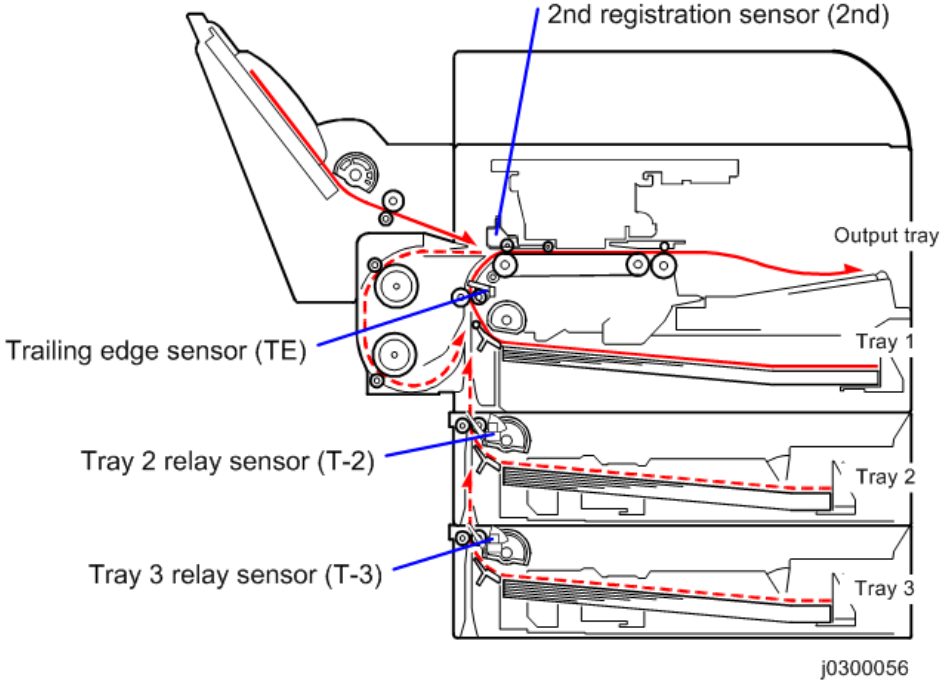
Jam 24	2nd Registration Sensor Late Jam (Tray 3)
Message	Paper Misfeed Press the Form Feed button.
Cause	Paper feed rollers slipping, or the paper was wrinkled or caught in the paper feed path.
Details	After the paper fed from Tray 3, or after the paper was inverted in the duplex unit, the paper fed as far as the prescribed position, but the registration sensor did not detect the leading edge of the paper after the TE sensor went ON.
Action 1	• Press [Form Feed] on printer operation panel.
Action 2	• Replace inverter guide. • Replace TE sensor. • Replace CTL board.

Jam 25	Not Used

Jam 26	No Feed Jam (Tray 3)
Message	Paper Misfeed Remove Tray 3 and reset the paper. If there is any paper that is jammed remove it.
Cause	Paper slippage (no feed) Paper tray was not set properly.

Details	The paper fed from Tray 3 reached the prescribed position, but the paper did not arrive at the relay sensor.
Action 1	Remove Tray 3 and set the paper stack correctly. Remove the rear unit of Tray 3 and remove any remaining paper.
Action 2	• Remove Tray 3 and remove any jammed paper. • Re-install the tray correctly. • Remove the rear unit of Tray 3 and remove any remaining paper. • Re-install the rear unit of Tray 3.

Jammed paper location



ON: Paper jam detected

--- : Paper jam not detected

Branch	Sensor				Jammed paper location
	2nd	TE	T-2	T-3	
-04	---	---	On	---	Paper is jammed between the Tray 2 relay sensor and trailing edge sensor. If the paper was fed from Tray 2, its trailing edge is remaining in Tray 2.
-05	On	---	On	---	1. The paper is jammed at the 2nd registration sensor. It is not located at the trailing edge sensor or Tray 3 relay sensor. 2. The paper is jammed in between the Tray 2 relay sensor and trailing edge sensor.
-06	---	On	On	---	The paper is jammed in between the trailing edge sensor and 2nd registration sensor. It is also jammed at the Tray 2 relay sensor. If the paper was fed from Tray 2, its trailing edge is located before the Tray 2 relay sensor (closer to Tray 2).
-07	On	On	On	---	The paper is located past the Tray 3 relay sensor (closer to the output tray).
-08	---	---	---	On	The paper is jammed in between the Tray 3 relay sensor and Tray 2 relay sensor. If "JAM21-08" appears, the paper's trailing edge is remaining in Tray 3.
-09	On	---	---	On	1. The paper is jammed at the 2nd registration sensor. It is not located at the trailing edge sensor or Tray 2 relay sensor. 2. The paper is jammed in between the Tray 3 relay sensor and Tray 2 relay sensor.
-10	---	On	---	On	1. The paper is jammed in between the trailing edge sensor and 2nd registration sensor. It is not located at the Tray 2 relay sensor. 2. The paper is jammed in between the Tray 3 relay sensor and Tray 2 relay sensor.

Branch	Sensor				Jammed paper location
	2nd	TE	T-2	T-3	
-11	On	On	---	---	1. The paper is located past the Tray 2 relay sensor (closer to the output tray). 2. The paper is jammed in between the Tray 3 relay sensor and Tray 2 relay sensor.
-12	---	---	On	On	The paper is jammed in between the Tray 2 relay sensor and trailing edge sensor. If "JAM20-12" appears, the paper's trailing edge is remaining in Tray 3.
-13	On	---	On	On	1. The paper is jammed at the 2nd registration sensor. It is not located at the trailing edge sensor. 2. The paper is jammed in between the Tray 2 relay sensor and trailing edge sensor. It is also located in the Tray 3 relay sensor.
-14	---	On	On	On	The paper is jammed in between the trailing edge sensor and 2nd registration sensor. If "JAM24-14" appears, the paper's trailing edge is remaining in Tray 3.
-15	On	On	On	On	The paper is jammed in the entire paper path between Tray 3 and the 2nd registration sensor.

Status Monitor Messages

Bypass Tray Not Detected

The bypass tray unit is not mounted correctly. Mount it correctly.

Cannot recover error page(s)

The machine has failed to print some pages when it resumed printing of a job after recovering from an error. Cancel the job or print rest of the pages by Form Feed.

Cartridge/Print-head Tank Empty

One or more ink cartridges empty.

- Check the operation panel display. You will see "Ink Depleted" displayed over the indicator of the cartridge that is almost empty.

- The ink cartridge and the ink tank inside the printer head are both empty. The printer cannot be used until the empty cartridge has been replaced.

Communication Error

Cannot transmit to the other party. Check the control panel on the machine.

Communication Not Available

Cannot transmit to the other party. Check the control panel on the machine.

Cover Open

Any of the following covers is open.

- Scanner unit
- Tray 2 rear cover
- Tray 3 rear cover

1. Check the covers.
2. Open and close them

Device Error

An error has occurred in another function.

1. Cycle the printer off/on.

Loading from Cartridge...

Ink is being filled from the print cartridge. Wait for the filling of the ink to finish.

Maintenance failed

Head cleaning, head flushing, or other maintenance operations have failed.

Run the maintenance again after clearing the error.

You can clear a maintenance error as follows:

- The printer receives another print job.
- Press the [OK] key.

Independent-supplier Cartridge

An ink tank cartridge unapproved for use with this machine has been installed. Use of ink cartridges not approved for use with this machine, or attempting to re-fill depleted ink cartridges, will diminish print quality. Always use new Ricoh ink cartridges specifically designed for use with these machines.

Ink Collector Unit Not Detected

1. Open the right front cover.
2. Confirm that the ink collector is installed.
3. Pull it out and set it again.

No Paper

The bypass tray has run out of paper or is not mounted correctly.

1. Load bypass tray,
2. Press [OK].

Insufficient Memory

Scanning memory or fax memory is full. Check the control panel on the machine.

In Use

The machine is in use for another function (in fax or copier mode).

Waiting for start printing

The machine is in use for another function. Wait for a while until it starts printing.

No Paper/Tray Not Detected

Any of the following paper trays has run out of paper or is not mounted correctly.

- Tray 1
- Tray 2
- Tray 3

1. Pull out the paper cassette.
2. Load paper if it is empty.

1. Close the cassette and make sure that it is locks in place.

No Response From Printer

1. Make sure the printer is switched on.
2. Check the connection of the USB cable at the printer and computer.
3. Make sure "USB" is selected on the "Ports" sheet of the printer driver.

Offline

The machine is offline. By closing the menu and switching to an online status, the machine becomes able to print.

Original Misfeed

Original is jammed. Check the jam code (JAM##-##) to solve the problem.

Out of Printable Temperature Range

- Room to cold or too warm?

1. Printer must be located where the temperature range is 10 to 32°C (50 to 89.6°F)
2. Turn the printer off and allow it to cool.

Note: If humidity is higher than 54%, the high end of the temperature range will be lower. The printer will not return to standby mode until it has acclimated to the room temperature. Wait for the Power lamp to stop flashing.

Paper Misfeed

Paper is jammed. Check the jam code (JAM##-##) to solve the problem.

Paper Size Mismatch

The size of paper in the selected tray does not match the size of the paper selected for the job, or the specified Tray Paper Size setting in the Paper Input menu does not match the actual paper size.

Follow the procedure below:

- Check the paper cassette and make sure that the paper size matches the settings selected in the printer driver.
- Press [Form Feed], select a paper tray containing paper of the specified size, and then print.
- Cancel the print job.

Paper Type Mismatch

The type of paper in the selected tray does not match the size of the paper selected for the job

Follow the procedure below:

- Check the paper cassette and make sure that the paper type matches the settings selected in the printer driver.
- Press [Form Feed], select a paper tray containing paper of the specified type, and then print.
- Cancel the print job.

Paper Size and Type Mismatch

The type and size of paper in the selected tray does not match the type and size of the paper selected for the job, or the type and size of the paper in any of the paper trays does not match the type and size of the paper selected for the job when using Auto Tray Select.

Follow the procedure below:

- Check the paper cassette and make sure that the paper size and type matches the settings selected in the printer driver.
- Press [Form Feed], select a paper tray containing paper of the specified size and type, and then print.
- Cancel the print job.

Print Cartridge(s) Not Detected/Cover Open

- The right front cover is open. Close the right front cover.
- The print cartridges are not installed or are installed incorrectly. Install the print cartridges correctly.

Printer Error

An error has occurred in the printer. An error code ("SC###-"##") appears at the end of the message.

1. Cycle the printer off/on.

2. If the printer has just been moved from a cold location to a warm room, wait at least 1 hour and try again.

Replace Ink Collector Unit (Consumables)

The ink collector is full. Printing cannot continue. The ink collector must be replaced.

Unit Not Detected / Cover Open

The duplex unit is not mounted correctly and/or the duplex unit cover is open.

Mount the duplex unit correctly and close the duplex unit cover.

Make sure the latches are lock at both ends. They should lock automatically.

Updating Wireless LAN Board...

Wait for the machine to complete the process.

Used Cartridge

The installed print cartridge is empty. Printing cannot continue. Replace the ink cartridge with a new one.

Updating Data...

Wait for the machine to complete the process.

Used Ink Collector Unit

A used ink collector unit has been installed. Remove it an replace it with a new one.