

**Model M-G1/R-G1 Series
Machine Code:
J017/J018/J019/J021/J023
Field Service Manual**

07 June 2011

Safety Instructions, Conventions

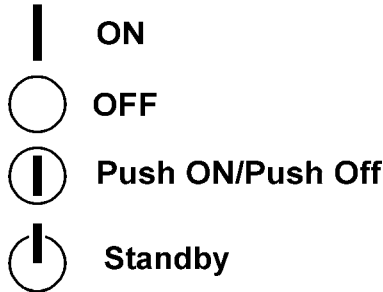
For your safety, please read this manual carefully before you service the machine. Always keep this manual handy for future reference.

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.



_onoff

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.

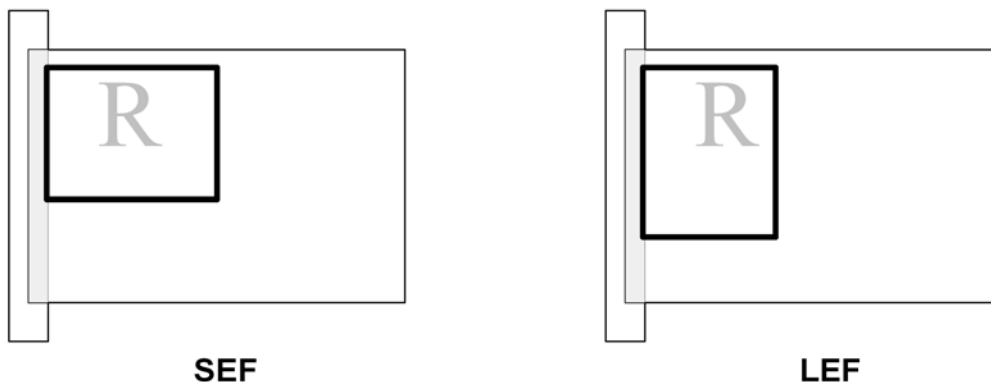
Conventions Used in this Manual

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.



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

Machine Names

Printer Name	Model No.
M-G1a	J017
M-G1b	J019
M-G1L	J021
M-G1W	J023
R-G1	J018

- Throughout this manual the machines are referenced by the model numbers only: J017, J018, J019, J021, or J023.
- The J017, J021, and J023 have the G1a controller. The J017 and J023 have a NIC mounted on the controller board, but the J021 does not have the NIC. The J017, J021 and J023 controllers do not support PCL.
- The J018, J019 have the G1b controller. In both models the NIC is a separate board connected directly to the controller. This controller is PCL compatible for both models.

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

1

See "Appendices" for the following information:

- Printer Engine
- Supported Paper Sizes
- Control Boards
- J023 Specifications

Overview

1

Before You Begin...

What This Manual Contains

This Service Manual covers four models of this printer series. This is a brief summary of the differences between these machines:

- **J017.** The NIC is mounted on the CTL board. This model is not PCL compatible.
- **J019.** The NIC is a separate board connected to the CTL board. This model is PCL compatible.
- **J018.** This model is a larger version of the J017/J019. It has four print heads (not two) and can use the optional Paper Feed Unit J307. It also has a separate NIC board connected to the CTL board. This model is PCL compatible.
- **J021.** This model is a low cost version of the J017. It does not have an NIC and it does not have a duplex unit on the back of the machine. This model is not PCL compatible.
- **J023.** This is a new model added to this series.



j023f001

This machine accommodates A3 paper for duplexing, bypass feed, and paper feed from a new paper feed unit. The Multi Bypass Tray Type BY1020 and Paper Feed Unit TK1140 are new options available for this machine. Like the J017 and J018, the NIC is mounted on the CTL board and is not PCL compatible.

This table below compares the five models covered in this Service Manual. The size and number of components differ in some cases but their basic design and function are the same. The removal procedures described in the manual apply to all four models.

	J017	J019	J021	J023	J018
Main Components					

	J017	J019	J021	J023	J018
Print Heads	x2				x4
Maint Unit	Common			Larger	
Ink Supply Unit	Motors x4				Motors x6
Ink Collector Unit	Common				Larger
Ink Cartridges	M Size				M size, L Size
Horizontal Encoder Film	Common			Longer	Longer
PCBs					
CTL Board* ¹	Unique				
PSU	J017, J021 common PSU, J019, J018, J023 common PSU				
Supply Unit Board	Common				Unique
Carriage Unit Board	Common				Unique
Operation Panel	White	White	Gray	White	White
Covers					
Right Front Door	Product Name Printed on Each				
Other Covers	White				
Options					
Duplex	Yes	Yes	No	Yes	Yes
Multi Bypass	Yes	Yes	Yes	Yes	Yes
PFU	No	No	No	Yes	Yes

*
1

- The NIC is mounted on the CTL board of the J017/J023.
- The NIC is a separate card connected to the CTL board of the J018/J019.
- The J021 has USB only; it does not have an NIC.

Printer Models and Options

This manual describes five printer models.

No.	Name	Ricoh Name
J017	M-G1a	Aficio GX e3300N
J018	R-G1	Aficio GX e5550N
J019	M-G1b	Aficio GX e3350N
J021	M-G1L	Aficio GX e2600
J023	M-G1W	Aficio GX e7700N
J307	Paper Feed Unit	Paper Feed Unit Type TK1110
J308	Paper Feed Unit	Paper Feed Unit TK1140
J311	Multi Bypass Tray	Multi Bypass Tray BY1020
J507	Multi Bypass Tray	Multi Bypass Tray Type BY1000

The electrical components and mechanisms that drive these printers are nearly identical. However, you should note these differences about options:

- The Multi Bypass Tray (J507) can be used with any of these machines except the J023.
- The Multi Bypass Tray BY1020 (J311) is designed for use with the J023 and cannot be used with other machines.
- The Paper Feed Unit (J307) is an optional paper tray that holds 500 sheets. This option can be installed with the J018 only. One or two of these optional paper trays can be installed with the J018.
- The Paper Feed Unit TK1140 (J308) is an optional paper tray that holds 250 sheets. This option can be installed with the J023 only. One or two of these optional paper trays can be installed with the J023.

Print Cartridges

The following print cartridges can be used with the J017, J018, J019, or J021.

★ Important

- **The starter cartridges of the J017, J108, J019, and J023 are not the same. Make sure that you use the correct type for each machine.**

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)	
Starter Ink Cartridge (M)	
Starter Ink Cartridge (Y)	
Print Cartridge GC 31K	These are medium-size cartridges. All models can use these medium-size cartridges.
Print Cartridge GC 31C	
Print Cartridge GC 31M	
Print Cartridge GC 31Y	
Print Cartridge GC 31KH	These are large-size cartridges. Only the J018 can use these large-size (H) cartridges.
Print Cartridge GC 31CH	
Print Cartridge GC 31MH	
Print Cartridge GC 31YH	

*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.

Ink Collector Units

The ink collector unit is installed on the right side of the machine behind the right front door below the ink supply unit. The J018 requires a different ink collector unit.

Collector	Comment
Ink Collector Unit GX e3300	Ink Collector Unit for J017/J019/J021/J023
Ink Collector Unit GX e5500	Ink Collector Unit for J018.

The ink collector unit for the J018 is larger than the ink collector units of the other machines..

Main Machine

1

Front View



j08d001a

1. Top Cover

Open to see inside the printer if a jam occurs.

2. Envelope selector

Push back to print on envelopes. Pull forward to print on all other types of paper.

3. Operation panel

Operation keys and the 2-line LCD. The operation panel can be raised and set in the upright position if the printer is placed at a height where it is difficult to reach.

4. Ink cartridges (K), (C), (M), (Y)

Supply ink to the print heads.

5. Ink collector unit

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

6. 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.

7. Paper Cassette (Standard Tray 1)

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

8. 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.

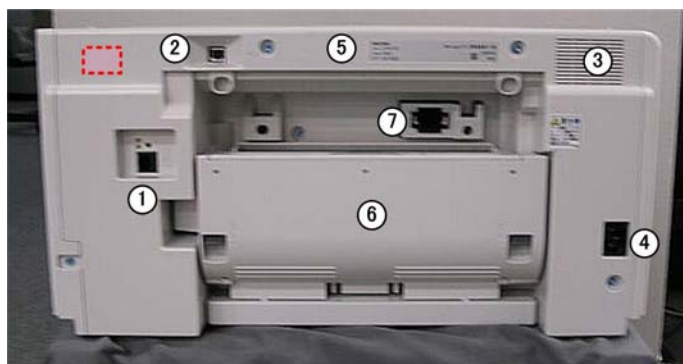
9. Paper jam feed wheel cover

Cover the jam feed wheel. A switch detects when this cover is opened and closed. This cover must be closed for the printer to operate.

10. Paper jam feed wheel

Open the cover and turn the wheel in either direction to feed out a jam sheet. A decal attached to the door illustrates where the paper exits when the wheel is turned to the left or right.

Rear View



j018d002

1. Ethernet Port

The port for the NIC. The NIC is mounted on the controller board of the J017. The Ethernet board is a separate board on the J018/J019. The J021 does not have an NIC.

↓ Note

- The Ethernet port on the J023 is located on the right upper corner (marked in the photo above by the dotted red square).

2. USB slot

This is the connection point for the USB cable from the PC.

3. Vent

Vents air from inside the machine to prevent overheating. Never block this vent.

4. Power cord

The connection point for the power cord. Use only the detachable power cord provided with the printer. Make sure you ground (earth) the head of the plug at the power source.

5. **Rear cover**

Opens for paper jam removal. To remove paper that has jammed and wrapped around the guide board, rotate the jam feed wheel on the right side of the printer. This cover must be removed before installation of the duplex unit. This cover or the duplex unit must be installed for the printer to operate.

6. **Duplex Unit**

The duplex is standard for the J017, J018, J019, and J023 (it is not an option). It is easily detached and re-attached. A small switch detects the presence or absence of the duplex unit. The J021 does not have a duplex unit.

7. **Bypass Tray Connection Point**

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

Options

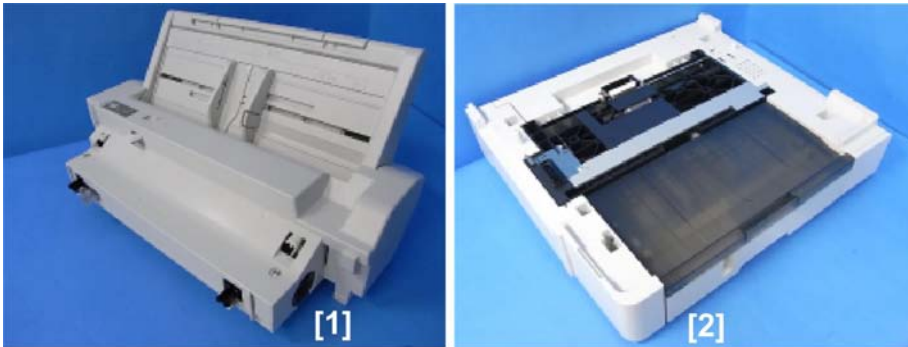
External Options: J018



j018d001

The Paper Feed Unit TK1110 (J307) is used with the J018 only. One (1) or two (2) paper feed units can be installed. The Multi Bypass Tray Type BY1000 (3) can be used with the J017, J018, J019, or J021. These options cannot be used with the J023.

External Options: J023



j023d001

The Multi Bypass Tray Type BY1020 [1] can be used with the J023 only. The Paper Feed Unit TK1140 (J308) (capacity: 250 sheets) is used with the J023 only. One or two paper feed units can be installed below the machine.

What's New?

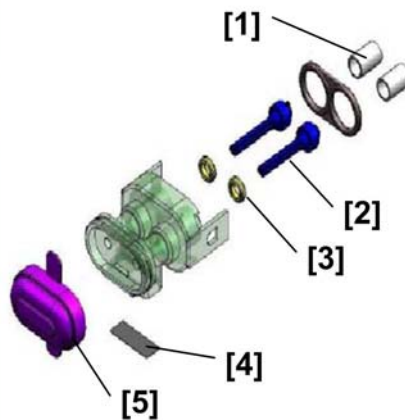
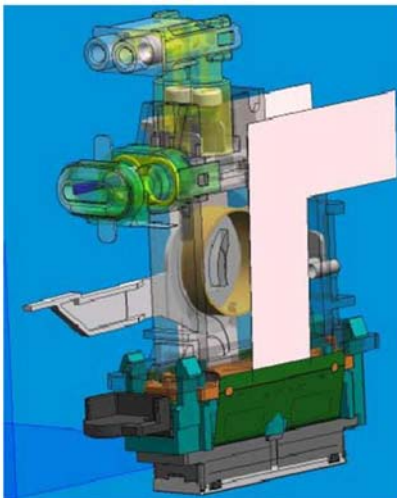
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General



j018i013a

- **New ink.** This ink is ideal for use where ambient temperature is high or humidity is low. Because the inks gel quickly, this eliminates ink clogging which can cause poor images or trigger errors like SC999, SC990, etc.



j017d005a

[1]	Springs
[2]	Valves

[3]	O-rings (packing)
[4]	Filter
[5]	Rubber cap

- **Print head units.** The print heads have new seals that prevent paper dust or other matter from enter the print head ink tanks and fouling the ink.



j018d005b

- **New paper cassette design.** The new paper cassette (Tray 1) is easy to remove and re-install (there is no interference with the paper output tray above the cassette).



j018d002a

- **Duplex unit locks.** The locks on both ends of the new duplex unit snap into the lock position automatically when the duplex unit is installed. This reduces the number of paper jams in the duplex unit caused by incorrect installation of the unit.



j018d001b

- **Printer covers.** The printer covers have been re-designed with fewer tabs on the edges of the covers. They are much easier to remove and re-attach.



d018d001c

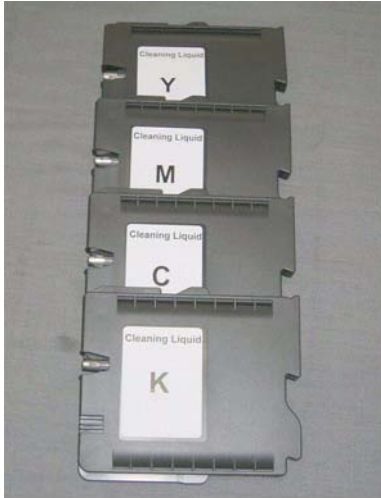
- **Operation panel.** The operation panel can be raised for easy access.



d017d029a

- **Right ink sump.** A right ink sump has been added next to the ink collector unit.

The maintenance motor drives the side-to-side movement of the right ink sump to keep the level of purged ink flat inside the tank.



j017r142a

- **Cleaning cartridges.** New cleaning cartridges (used to clean the print head before printer storage) have been designed for these machines.

↓ **Note**

- These new cartridges must be used to clean the print heads of the J017, J018, J019, J021 or J023 before storage.
- The cleaning cartridges of previous models cannot be used to clean the print heads of these printers.
- However, these new cleaning cartridges can be used to clean the print heads of earlier models.
- **Print heads.** The print heads are of the same design as the previous print heads, but seals have been added to prevent paper dust and other matter from contaminating ink in the print head tanks.

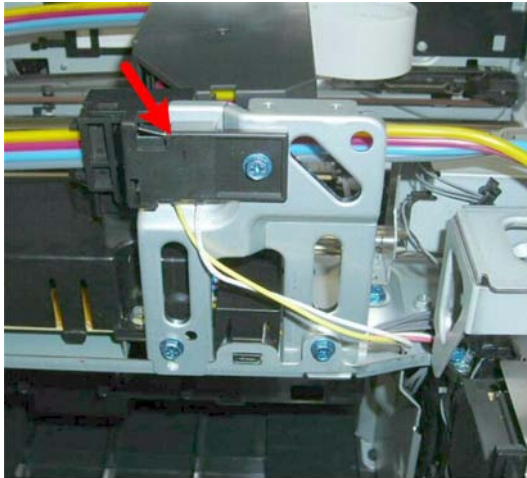
New Components

1



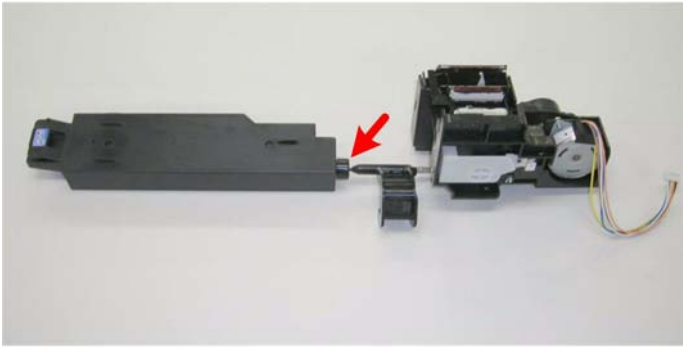
j018r113a

- **Right front cover switch.** The right front cover switch is no longer attached to the operation panel PCB. The new right front cover switch is mounted near the right lower corner of the machine.



j017r108a

- **Top cover switch.** The location of the top cover switch has changed. It is mounted behind a bracket on the frame of the machine.



j017d021a

- **Maintenance unit, ink collector connection.** A flexible tube and needle connects the maintenance unit to the new ink collector unit. The ink collector unit is completely sealed. This arrangement is the same for all models of this series.


J017/J019/J021/J023



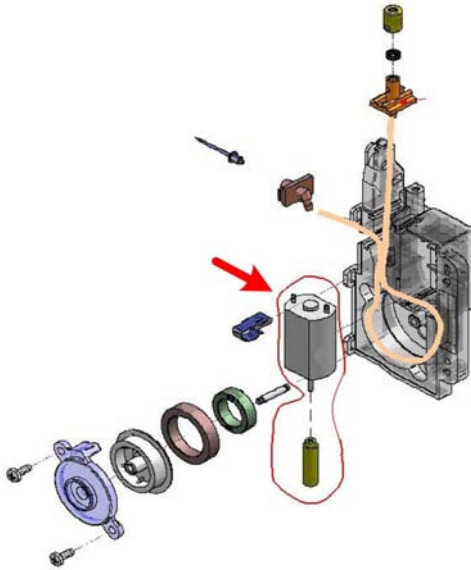
J018



j018d031a

- **Ink collector unit position.** The new ink collector unit is inserted behind the right front cover (not the rear). The ink collector unit of the J018 is much larger than the ink collector of the J017, J019, J021, and J023. 

- **Ink collector units.** The J017/J019/J021/J023 use the smaller Ink Collector Unit GX e3300 and the J018 uses the larger Ink Collector Unit GX e5500. Both ink collectors use the ID chip [1] and WTR.

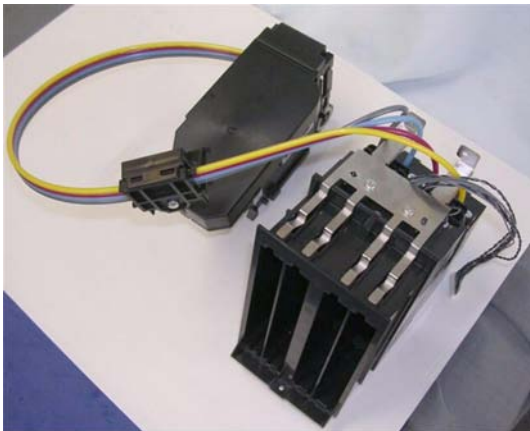


j018d020

- **Ink cartridge pumps.** An independent motor for each ink cartridge drives the ink pump mechanism that sends ink to print head tanks. (In the previous model, two ink cartridges shared one motor.)

Carriage Unit Replacement

J017/J019/J021/J023 Carriage Replacement



j017r167

For the J017, J019, J021, and J023 the ink supply unit, tubing, and carriage unit are replaced together.

J018 Carriage Replacement

1



j018r244

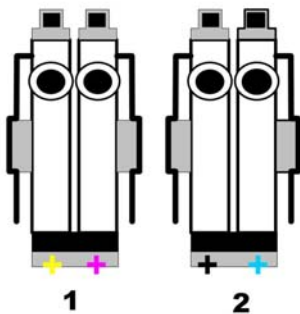
For the J019 only the carriage unit is replaced.

Print Heads

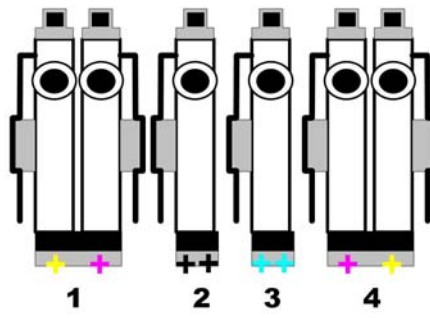
The basic mechanisms that supply ink from the ink cartridges to the print heads are identical for all printer models. However, the number of components and their arrangement are slightly different.

J017/J019/J021/J023 and J018 Print Head Configurations

J017/J019/J021/J023



J018



j018w004

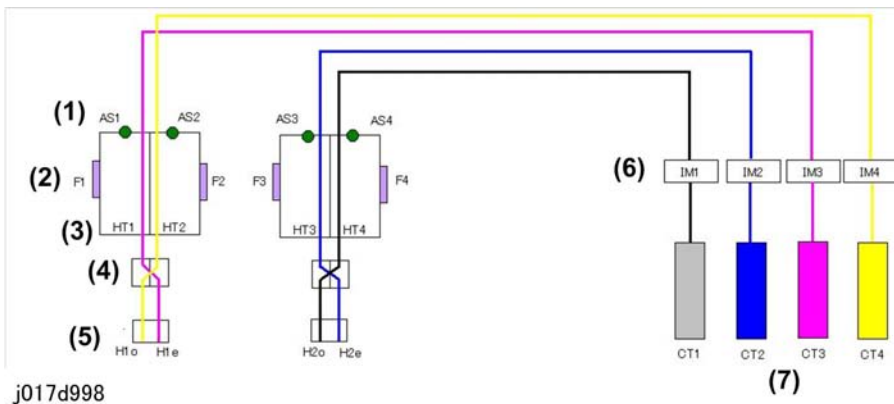
There are major differences between the print heads of the J017, J019, J021, J023 and J018.

- The J017, J019, J021, and J023 have two print head units with two print head ink tanks on each unit (see above).
- The J018 has four separate print head units with two print head ink tanks or one tank each print head unit (see above).

Machine	Print Heads	Nozzles	Nozzles/Color
J017, J019, J021, J023	2	4 (Y, M, K, C)	1
J018	4	8 (Y,M, K,K, C,C, M,Y)	2

Note that the outer tanks of the J018 configuration both have yellow and magenta ink tanks but are arranged in different order: Y, M on the left and M, Y on the right. This ensures that yellow ink always prints over magenta ink when the carriage moves left to right, or right to left.

J017/J019/J021/J023 Print Head Detailed Configuration



No.	J017/J019/J021	
1	AS	Air Sensors x4
2	F	Feelers x4
3	HT	Head Tanks x4
4	---	Filter Units x2
5	H	Print Heads x 2
6	IM	Ink Pump Motors x4

No.	J017/J019/J021	
7	CT	Ink Cartridges x4

An air sensor [1], two feelers [2], and head tank [3] comprise the reservoir of the ink supply system.

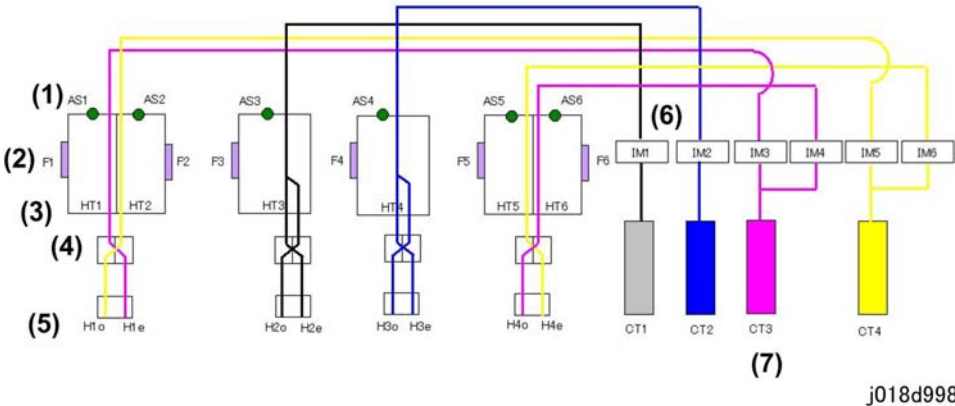
The ink flows from the head tank through a filter [4] that contains the piezoelectric element which expands upon application of a electrical charge to force ink out of the nozzles of the print head [5].

Four ink pump motors [6] drive simple pump mechanisms that draw ink out of the ink cartridges [7] and send it to the head tanks.

Each cartridge is pumped with an independent motor.

The ink pump motor switches on in response to a request for more ink when the ink level sensor detects that the position of a feeler on the side of a tank indicates that a tank is low. Ink is also drawn into the tank from the ink supply tubes when the air sensors detect too much air in a tank and not enough ink. The air sensor activates the air release solenoid which creates a partial vacuum inside the tank that purges the air from the tank through a vent and at the same time draws more ink from the supply tubes into the tank.

J018 Print Head Detailed Configuration



No.	J018	
1	AS	Air Sensors x 6
2	F	Feelers x 6
3	HT	Head Tanks x6
4	---	Filter Units x 4
5	H	Print Heads x 4

1

No.	J018	
6	IM	Ink Pump Motors x 6
7	CT	Ink Cartridges x4

The components and operation of the print heads in the J018 are identical to those of the J017/J019/J021/J023. However, in the J018 there two additional print heads and two additional ink pump motors. The two outer print heads both supply Yellow and Magenta ink.

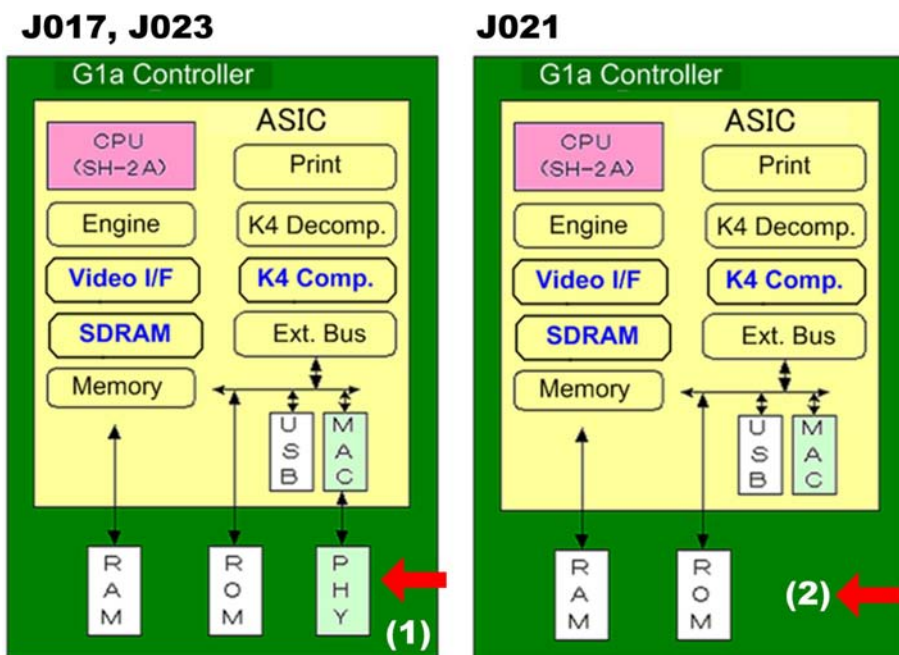
During bi-directional printing:

- On the left-to-right pass, the print heads on the far right lay down yellow ink over magenta.
- On the right-to-left pass, the print heads on the far left once again lay down yellow ink over magenta.

This arrangement ensures that yellow ink is always laid down over magenta ink during bi-directional printing. The order of application of the other inks (cyan and black) is not important. Another important difference is that there are six ink pump motors in the J018 (not four as in the J017/J019/J021).

Controllers

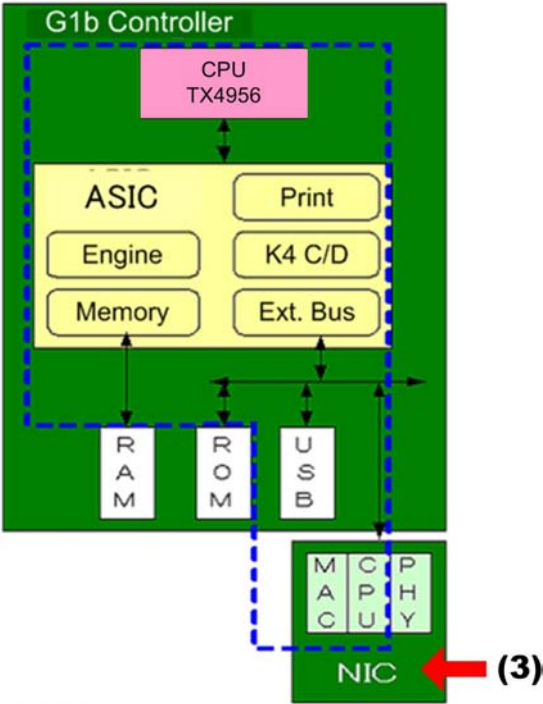
The machines employ different controllers.



j018d057

- The J017/J023 controller has the NIC (1) mounted on the CTL board. This controller is not PCL compatible.
- The J021 has the same CTL board but it does not have an NIC (2). The MAC remains but it has no function. Like the J017 it is not PCL compatible.

J019/J018



j018d058

- The J018 and J019 controllers do not have the NIC mounted on the CTL board. The NIC (3) is a separate board connected to the CTL board.
- This controller supports PCL in both models.

Paper Feed Unit TK1110 (J307)



j018d900

The paper feed unit(s) can be installed with the J018 only. One or two paper feed units can be installed under the J018.

Rear Covers

J021

The J021 is a low-cost version of the J017 and J019.

- The duplex unit is provided with the J017 and J019 as standard (not an option).
- The J021 does not have the duplex unit and it cannot be installed as an option.



j021w001

A simple rear cover [1] replaces the duplex unit on the J021. The cover is easy to remove in order to remove a paper jam. This cover must be installed for the printer to operate.

J023

The J023 is shipped with both a rear cover and a duplex unit.



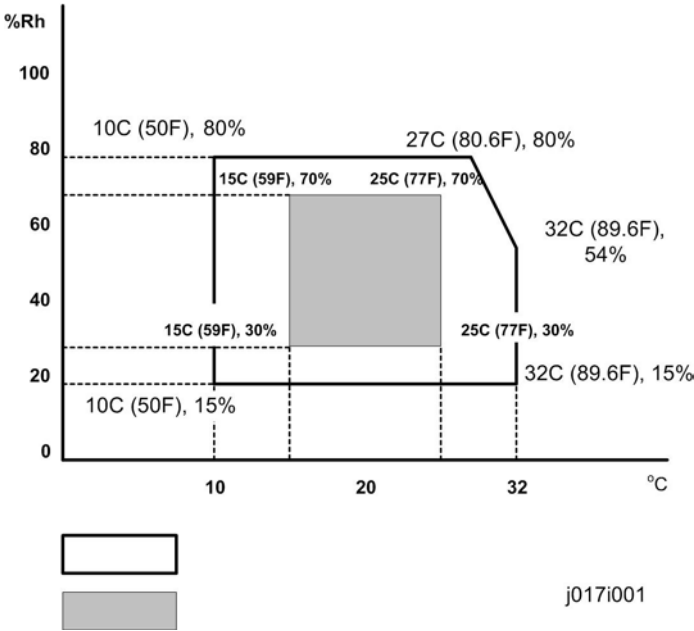
j023w001

- The rear cover [1] must be removed in order to install the duplex unit [2]. This is done by the user.
- Either the rear cover or the duplex tray must be installed. If neither is installed the machine will prompt the user to install the rear cover (rear cover or duplex unit).

2. Installation

Preparation

Environment



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 1,500 Lux (never expose to direct sunlight).
Ventilation:	More than 30 m ³ /hr/person in the work area
Ambient Dust:	Less than 0.10 mg/m ³

Choosing a Location

- 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 2,000 m (6,500 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.

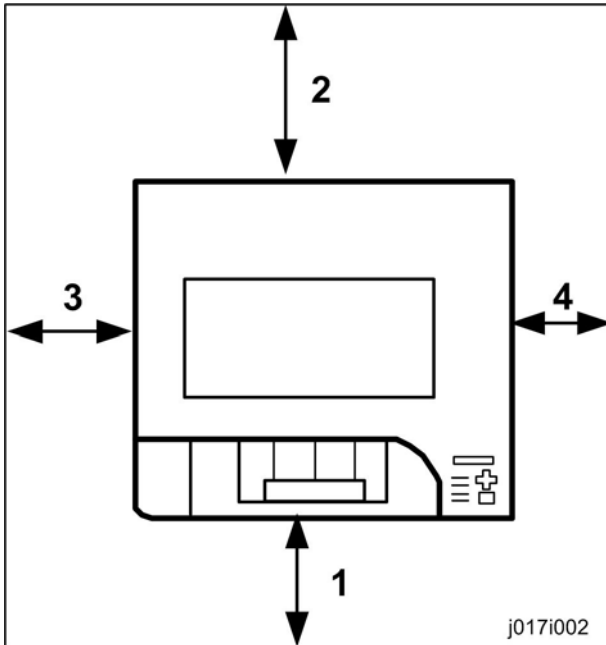
Required Software Environment

Software	<ul style="list-style-type: none"> • Windows 2000, Windows XP, Windows Vista, Windows 2003 Server, Windows 2008 Server*¹ • Mac-OSX Power PC 10.3 to 10.5.2, Mac OSX Intel 10.4.5 to 10.5.2*²
Hardware	80-100 MB of HDD space available

* 1: 32-bit version provided on CD-ROM, 64-bit version available from Ricoh Website.

* 2: Mac driver included on CD-ROM (English only).

Minimum Space Requirements



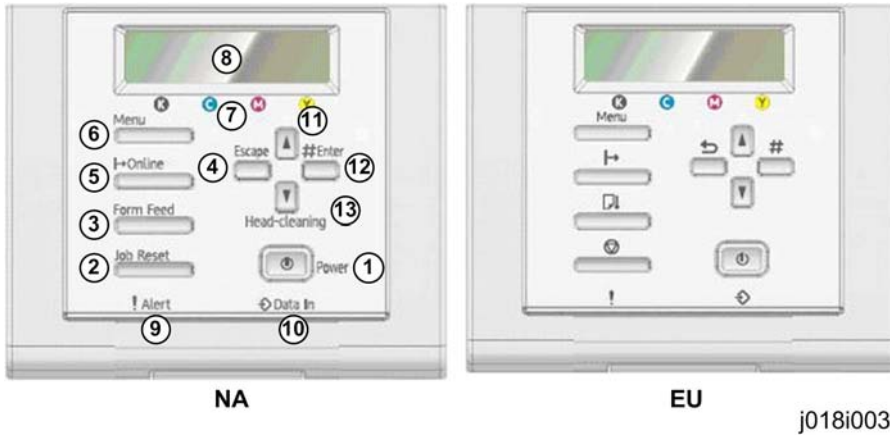
1	At least 300 mm (11.9 in.)
2	At least 120 mm (4.8 in.) At least 290 mm (11.5 in.)
3	At least 100 mm (4.0 in.)
4	At least 30 mm (1.2 in.)

Power Source

North America	100-120 V, 50-60 Hz
Europe	220-240V 50-60 Hz

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.



j018i003

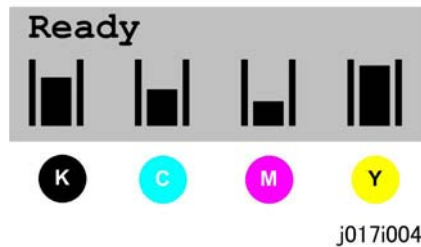
Key Summary Table

	Key/Indicator	What It Does
1	Power	Push to turn the printer on/off
2	Job Reset	Push to cancel the print job in progress.
3	Form Feed	When the printer is offline, push to print all the data in the printer buffer.
4	Escape	Push to restore the display to the previous condition.
5	Online	Push to toggle the printer between online/offline. When lit the printer is online, and when off the printer is offline.
6	Menu	Push to view the current printer settings.
7	Cartridge End LEDs	Show the ink levels of the print cartridges.
8	Display	Shows the current printer status and error messages.
9	Alert	The symbol appears in the LCD when an error occurs. <ul style="list-style-type: none"> Red indicates an error that will stop printing. Yellow indicates a potential error (follow the instruction that appears in the display).

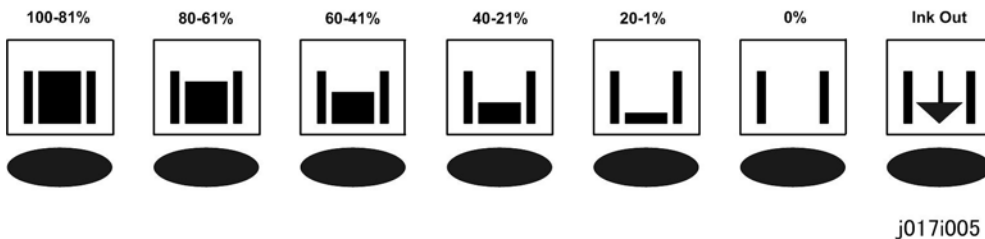
	Key/Indicator	What It Does
10	Data-In	The symbol appears in the LCD when the printer is receiving data. Lights and stays on when data is in the printer buffer to be printed.
11	▲ or ▼	Push once to increment the display setting by 1 (up or down). Press and hold to increment the setting by 10.
12	#Enter	Push to execute the menu item on the display.
13	Head-cleaning	Push once to start head cleaning.

Printer Display Summary

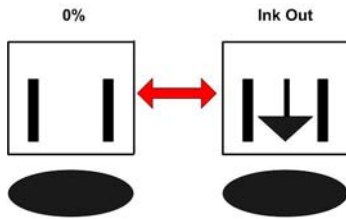
Operation Panel Ink Low/Ink End Indicator



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.



- A software count determines when the ink cartridge is has less than 20% ink remaining. The 0% and Ink Out display begin flashing alternately at 3 sec. intervals. This is the near-end alert.



j017i005a

2

- When the cartridge is empty the machine issues the ink-end alert and printing stops.
- The operator can continue printing by pressing [Form Feed] on the operation panel. 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.

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 (*).

Normal Menu Mode

Menu/Menu Item	Function
Counter	Displays or prints the number of pages printed in B&W, full color, and Level Color. Note: Changing Bit SW 5 modifies the display: <ul style="list-style-type: none"> • Setting Bit SW 5-6 to "0" switches the Level Color display off. • The default setting for Bit SW 5-6 is "1". Mono and Color Level are both displayed.
Show Counter	Displays the counters on the LCD ("Black", "Color")
Print	Prints the "Page Counter" report that lists: the machine serial number, Total Full Color, Total Mono Color, Total Level Color, and Total Duplex. It also lists Coverage information for full color, mono, and Level Color.
Paper Input	

Menu/Menu Item	Function
Tray Paper Size	Specifies size of paper to be loaded in the paper tray. Note: The setting of Bit SW6-7 determines whether hidden functions (hidden paper sizes A5 SEF, B6 SEF) are displayed: <ul style="list-style-type: none"> • 0: No A5 SEF, B6 SEF display (default) • 1: A5 SEF, B6 SEF displayed
Aut. Tray Select	Specifies which tray is selected for paper feed. Tray 1 (the standard paper cassette) is the default. Other selections (Tray 2, Tray 3) are not displayed unless an optional paper feed tray is installed.
Paper Type	Specifies type of paper loaded in the paper tray.
List/Test Print	
Config.Page *	Prints information that tells you the current configuration of the printer. <ul style="list-style-type: none"> • System Reference. Lists printer version, attached options, name of print language, amount of ink remaining for each ink cartridge. • Paper Input. Lists the specified Tray Priority setting and the Paper Input menu settings. • Host Interface, Interface Information. Lists the settings of the Host Interface menu
Color Demo Page	Prints a color sample.
Error Log	Prints list of most recent errors.
PCL Config. Page	Lists current PCL configuration Note: Only J018/J019 support PCL.
Maintenance	
Nozzle Check *	Prints the cross-hatch test pattern so you can visually confirm whether inks are ejecting correctly from the print head.
Head-cleaning *	Cleans the print head. Clean the print head when certain colors are missing or printing faintly. Head cleaning consumes ink.
Head-flushing *	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 *	Adjusts the alignment of the print head if the Nozzle Check test pattern shows broken vertical lines, or if printed images are blurred.

Menu/Menu Item	Function
Adj. Paper Feed *	Adjusts the paper feed setting if the Nozzle Check test pattern shows horizontal misalignment, or if printed images appear uneven.
Registration	Adjusts the print starting point for each paper tray. Use the Nozzle Check test pattern as reference.
Date/Time	Allows setting current date/time.
Key Repeat	Enables/disables repetition of a key pushed and held down on the operation panel.
Dry-delay (Dup)	Pauses printing to allow first side of duplex print to dry before printing second side of same page. Note: Supported by the J019 only.
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.
Move Print-Heads	Moves the print heads to the center of the platen for maintenance. After the print heads are moved to the center, a message prompts you to switch the machine off.
System	
Prt. Err Report	Prints error report. Note: Supported by the J019 only.
Auto Continue	Determines how the printer handles a print job when the specified paper size and type is not loaded in the tray. Off: The job does not print if the specified paper size/type is not loaded in the tray. The job will execute once the specified paper size/type is loaded. On: The job prints even if the specified paper size/type is not loaded in the tray.
Sub Paper Size	Determines whether to print on A4 paper if LT size paper is specified in the printer driver, and vice versa. Default: Off

Menu/Menu Item	Function
Energy Saver	Switches the energy saving function on/off. When this function is on, the printer will automatically shut down some of its functions automatically after it remains idle for the prescribed amount of time. The "E. Saver Timer" can be set for 5, 15, 30, 35, 60 min. Once the printer enters the energy save mode, it will require some time to recover full operation once it receives a print job.
Notify by Email*	Determines whether a notification is sent to a specified email address when a printer error occurs. Be sure to cycle the printer off/on after doing this setting.
Memory Usage* ¹	Frame Priority, Font Priority
Unit of Measure* ¹	Determines the units of measure ("mm" or "in.") Default: mm
Page Size* ¹	Allows selection of page size.
Paper Type* ¹	Plain Paper, IJ Plain Paper, Glossy Paper, Thick Paper, Postcard, Inkjet Postcard, Envelope
Preprinted Ppr. * ¹	Off, On
Copies* ¹	Allows selection of number of copies: 1 to 999.
Duplex* ¹	Off, Short Edge Bind, Long Edge Bind
Blank Pg. Print* ¹	On (Prints), Off (Does Not Print)
Tray Switching* ¹	Off (Does Not Switch Trays), On (Switches Trays)
Uni-direct Ppr. * ¹	Env. Selector: On, Auto Detect, Always
Density* ¹	Dark, Light, Standard
Color Mode* ¹	Color, Level Color, Black and White
Recycl. Ppr. Mode	Off, On

*¹: These menu items are available for the J019/J018 only.

Env. Slctr Alert	<p>The direction of printing (uni- or bi-directional) is determined by the setting of the envelope selector.</p> <ul style="list-style-type: none"> • When the selector is set to the rear, printing is uni-directional for envelopes • When set forward printing is uni-directional or bi-directional depending on the paper type. <p>This feature menu item has two setting:</p> <ul style="list-style-type: none"> • Display Alert (default). An alert is displayed if the envelope selector is back and set for envelope printing. • No Alert & Print. No alert is displayed. A message prints to tell the operator that the envelope selector is set for envelope printing. 	
Page Error Alert	Display, Do not Display	
Ink CU Space	Displays the current status of ink collector unit. The number means the amount of space remaining. (100% means the unit is empty.)	
Host Interface		
I/O Timeout	Determines how long the printer waits for the interface to respond. After the specified time elapses, the printer can receive data from another interface. If the specified time is too short, a timeout might occur while a data transfer is in progress. If this occurs, the print job will be interrupted by a new job from another interface. Default: 15 sec.	
Network Setup	Use to do the network settings.	
	Setting	Default
	DHCP	Off
	IP Address	0.0.0.0
	Subnet Mask	0.0.0.0
	Gateway Address	0.0.0.0
	Active Protocol	All Active
	Ethernet Speed	Auto Select
	Restore Default	

USB Setting	<p>Two settings are available:</p> <p>USB Speed.</p> <ul style="list-style-type: none"> • Auto: 480 Mbps or 12 Mbps automatically adjusted • Full Speed: 12 Mbps fixed <p>Default: Auto. Normally, this setting does not require changing.</p> <p>Port Setting.</p> <p>Specifies communication settings for a USB connection.</p> <p>On/Off Default: Off</p>
PCL Menu	<p>Orientation, Form Lines, Font Source, Font Number, Point Size, Font Pitch, Symbol Set, Courier Font, Ext. A4 Width, Append CR to LF, Resolution. Black Printing</p> <p>Note:</p> <ul style="list-style-type: none"> • This item appears on the menu for the J018, J019 only because these models are PCL compatible. • This item does not appear for the J017, J021, J023 because they are not PCL compatible.
Language	<p>Determines the language used for all prompts and messages on the operation panel display.</p>
English	<p>NA Model: English, German, French, Italian, Dutch, Danish, Swedish, Norwegian, Spanish, Finnish, Portuguese, Japanese. (Default: English)</p> <p>EU/Asia Model: Same as above plus: Czech, Polish, Hungarian</p>

Super User Menu

You can open and use some items on the menus in the super user menu mode before the ink cartridges are initialized or while an error is displayed so you can do the network settings, set date/time, select paper size settings, and so on.

Generally, any item on the menu which does not involve printing or paper feeding can be accessed. For example:

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

★ Important

- This feature is not available for the J017/J019 at the present time (December 2009). However, it will be available in a future version of the firmware for the J017 and J019.

To enter the override menu mode:

1. While an error message is displayed, or when the printer is busy.
2. Press [▲] [▲] then press [Menu]. "Counter" (the first item of the Menu display appears).

You can use this override mode to perform settings (Date/Time, Paper Size settings for trays, etc.) while the printer is busy.

2

Counter	Show Counter
Paper Input	Tray Paper Size
	Paper Type
List/Test Print	---
Maintenance	Date/Time
	Key Repeat
	Dry-delay (Dup)
	Dry-delay (Exit)
System	Auto Continue
	Sub Paper Size
	Energy Saver
	Notify by Email*
	Memory Usage* ¹
	Unit of Measure* ¹
	Page Size* ¹
	Paper Type* ¹
	Preprinted Ppr. * ¹
	Copies* ¹
	Duplex* ¹
	Blank Pg. Print* ¹
	Tray Switching* ¹
	Uni-direct Prt. * ¹

	Density* ¹
	Color Mode* ¹
	Recycl. Ppr. Mode
	Env. Slctr Alert
	Page Recov. Error
	Ink CU Replace*
Host Interface	I/O Timeout
	Network Setup
	USB Setting
PCL Menu	<p>PCL Settings</p> <p>Note:</p> <ul style="list-style-type: none"> • This item appears on the menu for the J018, J019 only because these models are PCL compatible. • This item does not appear for the J017, J021, J023 because they are not PCL compatible.
Language	Languages

* 1: These menu items are available for the J018/J019 only.

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 Printer

2

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

★ Important

- **Never disconnect the power cord without first turning off the printer.**
2. To lift the printer, 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 Printer 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

3

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.
Feed Roller	Damp cloth. Release the feed clutch lock. Rotate the roller freely as you clean it.
Left Ink Sump Gate	Dry cloth. Always remove the ink that has hardened around the gate when you replace the ink collector tank. To remove hardened ink, you may need to use a small screwdriver or similar tool.
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 "Image Adjustment" in section "3. 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.

4. Replacement and Adjustment

Before Replacing Parts

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
4	Ink Cartridge	Front
5	Ink Collector Unit	Front
6	Ink Collector Unit Cover	Front
7	Paper Cassette	Standard
8	Paper Output Tray	On top of paper cassette
9	Right front cover	Front

4

Level 2: Replaced by Service Technician

	Component	Difficulty: Low, Medium, High
1	Canopy cover, top cover	Low
2	Feed Roller	Low
3	Front Cover	Low
4	High Voltage Power Supply (HVPS)	Low
5	Jam Wheel Cover	Low
6	Left Ink Sump	Low
7	Left Middle Cover	Low

	Component	Difficulty: Low, Medium, High
8	Left Rear Cover	Low
9	Maintenance Unit	Low
10	NIB (J019)	Low
11	Operation Panel	Low
12	PSU	Low
13	Rear Cover	Low
14	Rear Right Cover	Low
15	Vertical Encoder Sensor	Low
16	Vertical Encoder Wheel	Low
17	Vertical Motor	Low
18	Air Release Solenoid	Medium
19	Carriage Position Sensor	Medium
20	Controller Board	Medium
21	Cooling Fan	Medium
22	Duplex Unit Detection Board	Medium
23	Right Ink Sump	Medium
24	2nd Registration Sensor	High
25	Carriage Unit	High
26	Friction Pad	High
27	Horizontal Motor	High

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

	Component	Comments
1	Transport Belt	Replace the machine. Do not attempt to repair or replace in the field.
2	Charge Roller	
3	Temperature/Humidity Sensor	
4	Paper End Sensor	
5	Paper Feed Roller	
6	NVRAM	

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)
6	Digital Multi-meter FLUKE87	1	C (General)
7	20X Magnification Scope	1	C (General)
8	Grease Barrierta S552R	1	C (General)
9	Silicon Grease G-501	1	C (General)

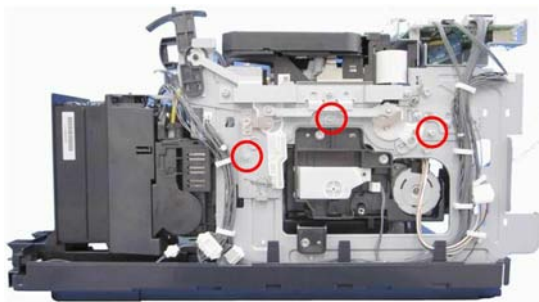
↓ Note

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

Important Notice

During parts removal never remove the screws shown below.

Right Rear Cover Removed



j017r001

Left Covers Removed



j017r002

- These screws fasten the carriage brackets that keep the carriage unit correctly aligned.
- If these screws are loosened or removed, this could throw the carriage mechanism out of alignment.

Common Procedures

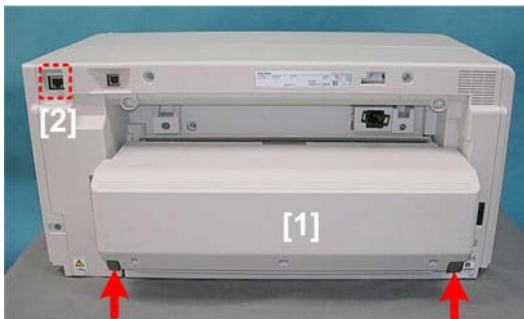
Easy Removals

Duplex Unit



j018r003

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



j023d003

The duplex unit of the J023 [1] is larger but the procedure is the same.

↓ Note

- Note that the connection point [2] for the network cable is on the upper corner of the J023.

Reinstallation

- The duplex unit must be installed in the machine at all times. The machine will not operate without the duplex unit installed.



j018r004

- Reinstall the duplex unit carefully to avoid bending the contact pins.
- The locks on either end of the duplex unit lock automatically when the unit is attached to the back of the printer.

4

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.

1. [Menu]> [▲] or [▼]> "System"> [#Enter]
2. [▲] or [▼]> "Ink CU Replace"> "Ink Collector Change Not Yet Required"> [#Enter].
3. [Menu]> Standby

CAUTION

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

To remove the ink collector unit:



j018r005

4. Gently touch the right front cover to release and open it.
5. Pull the ink collector unit out.

4



j018r006

6. The ink collector [A] is completely enclosed to prevent leakage.

Note

- The illustration shows the larger ink collection unit for the J018/J023. The unit for the other machines is smaller.

7. If you are replacing the ink collector unit, insert the new one.
8. Push in the ink collector [B] until you hear it snap and lock in place.
9. 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.

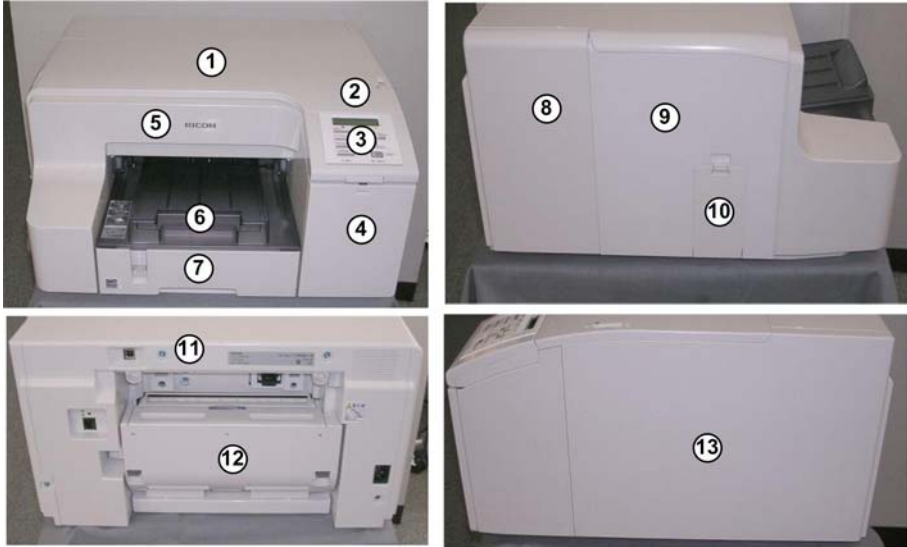
10. Discard the used ink collector unit.

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.

Covers

Cover Names



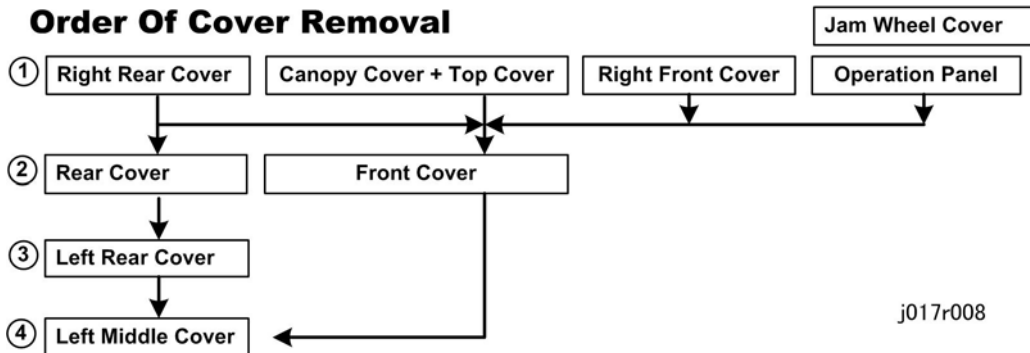
j018r007

①	Top Cover	Top cover and canopy cover are removed together.
②	Canopy Cover	
③	Operation Panel	
④	Right Front Cover	
⑤	Front Cover	Logo attached
⑥	Output Tray	
⑦	Paper Cassette	
⑧	Left Rear Cover	No screws, tabs only.
⑨	Left Middle Cover	
⑩	Jam Wheel Cover	
⑪	Rear Cover	Rear cover, left rear cover are always removed together.
⑫	Duplex Unit	

⑬	Right Rear Cover	
---	------------------	--


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.



Right Rear Cover



1. Remove the screw at the right rear corner ( x1).

★ Important

- If you are servicing the J018 or J023 with one or two paper feed units attached, remove the machine from the top of the paper feed unit. The right rear cover cannot be removed with the machine mounted on a PFU.



j018r010

4

2. Slide the cover to the rear and remove it.

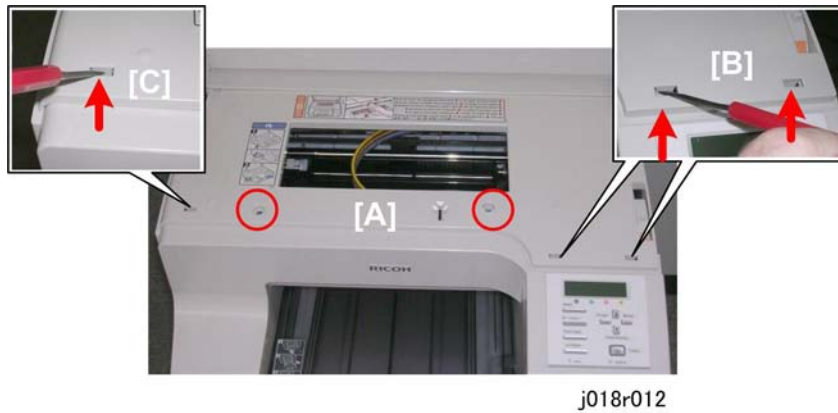
Top Cover, Canopy Cover


Always remove the top cover and canopy together.



j018r011

1. Raise the top cover.



2. Remove the canopy cover screws [A] ( x2).
3. Disconnect the tabs.

J018, J023

- Insert the tip of a small screwdriver into the two slots [B] above the operation panel, and push the tabs slightly to the rear to release the cover.
- Use the screwdriver to release the single tab [C] on the left.

J017/J019/J021

- There is only one tab on the right above the operation panel. Use the screwdriver to release it.



4. Remove the top cover and canopy cover together.

Right Front Cover

4



j018r014

1. Gently press the right front cover to release it.
2. Lower the door.



j018r015

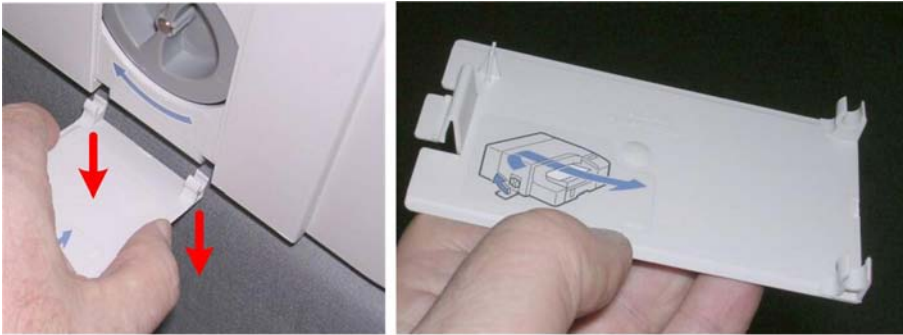
3. Release the latch.
4. Remove the door.

Jam Wheel Cover



j018r016

1. Open the jam wheel cover.



j018r017

2. With firm even pressure on both ends of the bottom edge of the cover, push the cover down to disconnect it.

★ Important

- To avoid breaking the plastic hinges on the bottom of the cover, do not twist it when you remove it.

Operation Panel

4




j018r018

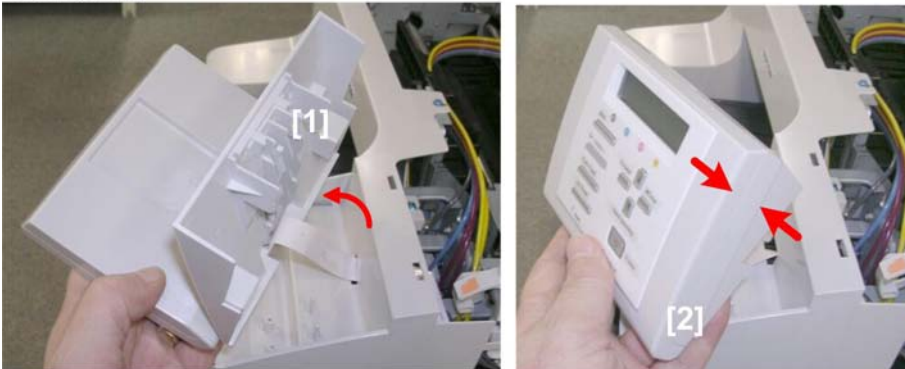
1. Raise the operation panel.



j018r019

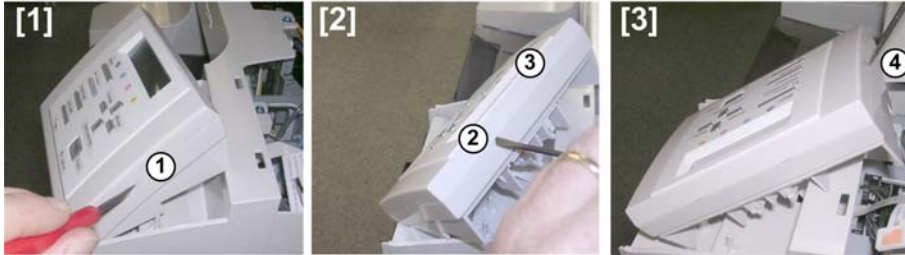
2. While holding the panel, remove the screws ( x2).

J018, J023



j018r020a

- Pull the operation panel slightly away from the machine and close it.

J018, J023

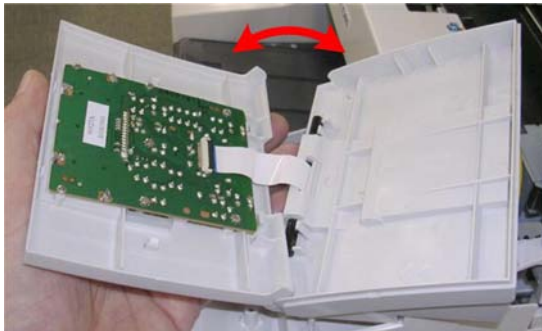
j018r020b

- Open the operation panel.

For the J018 or J023 use the tip of a small screwdriver to release the tab on the right [1], two tabs on the top [2], and tab on the left [3] as shown above.

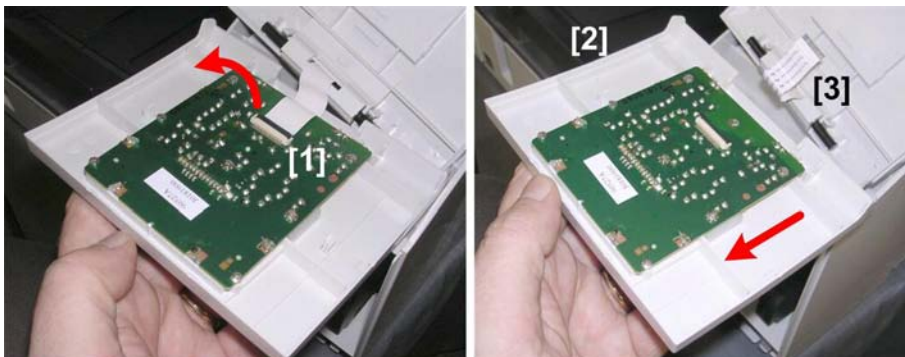
-or-

For the J017/J019/J021 just squeeze the sides of the operation panel together to release the side tabs.



j018r020c

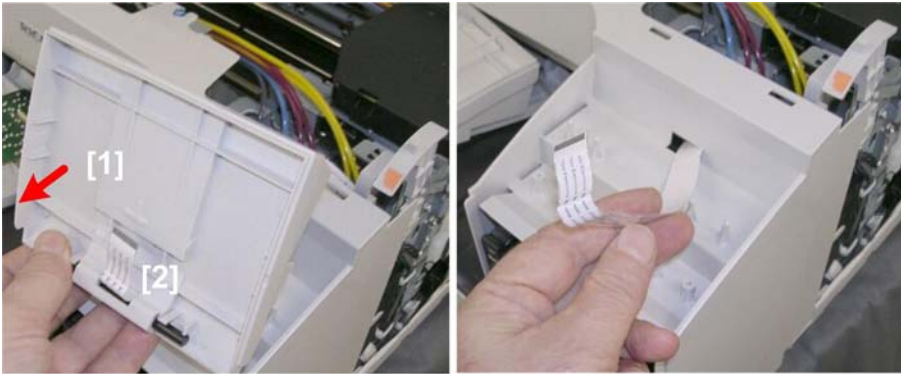
- Open the operation panel so you can see the flat, white ribbon connector.



j018r021

- Raise the clip [1] to disconnect the FCC.

7. Pull the operation panel [2] away from its bottom cover.



j018r022

4

8. Pull the bottom [1] away from the FFC [2].

Front Cover

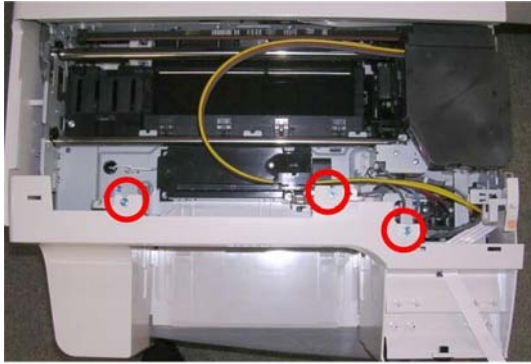
1. Remove:

- Top cover, canopy cover
- Operation panel




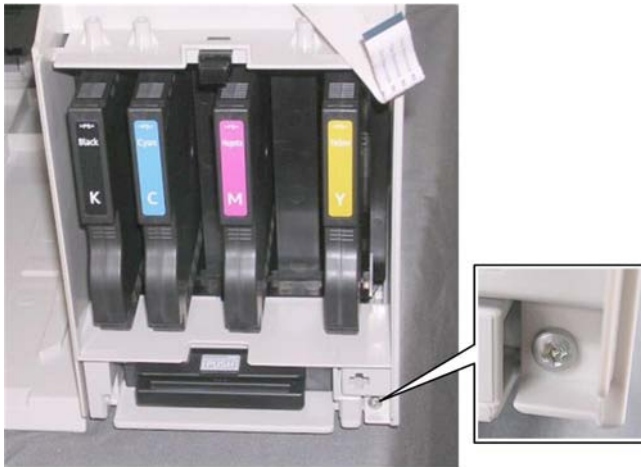
j018r023

2. Remove the paper cassette and output tray.




j018r024

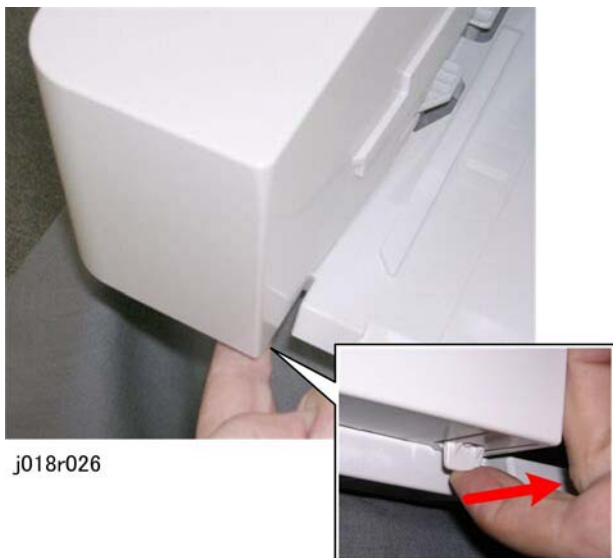
3. Remove the screws ( x3).



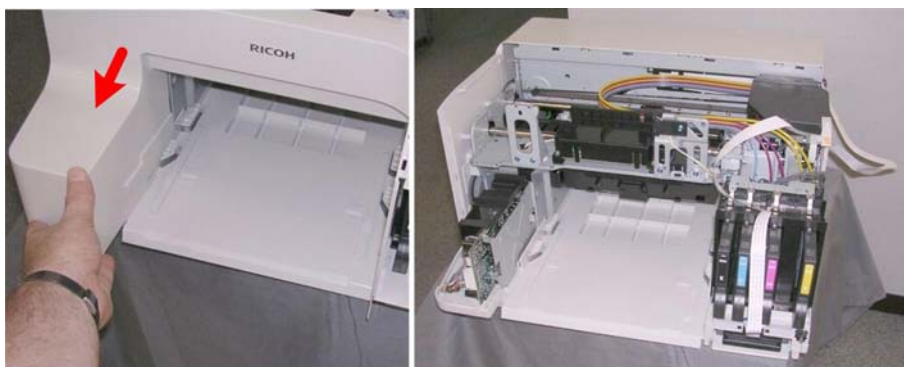
j018r025

4. Remove the set screw ( x1).

4

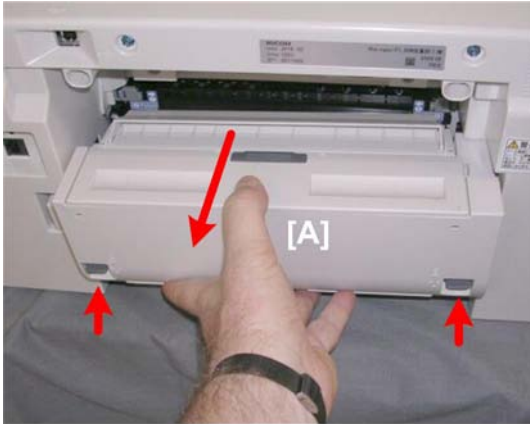


5. Release the tab below the front left corner of the machine.



6. Remove the front cover.

Rear Cover, Left Rear Cover




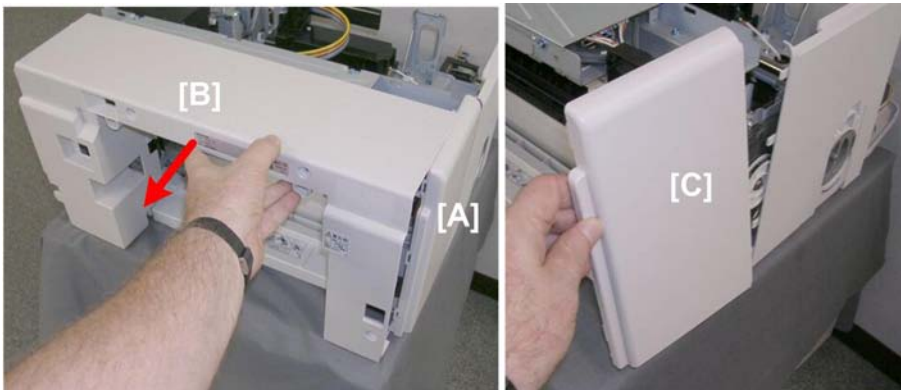
j018r028

1. Raise the latches of the duplex unit [A] and remove it.



j018r029

2. Remove screws ( x4).



j018r030


3. While supporting the left rear cover [A] with your hand, remove the rear cover [B].

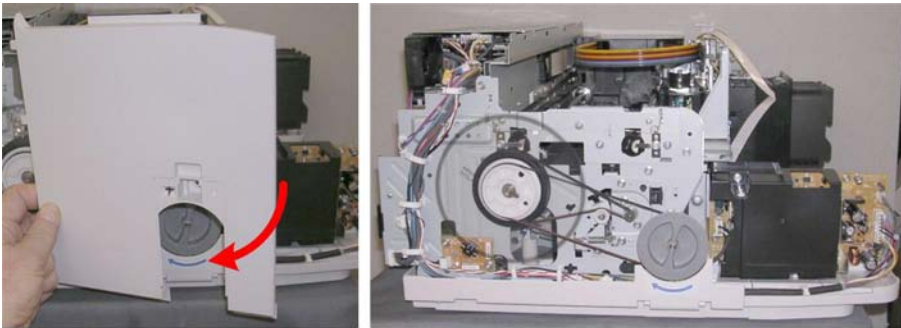
4. Remove the left rear cover [C]. (There are no screws for this cover.)

Left Middle Cover



j018r031

1. Remove the screw ( x1).

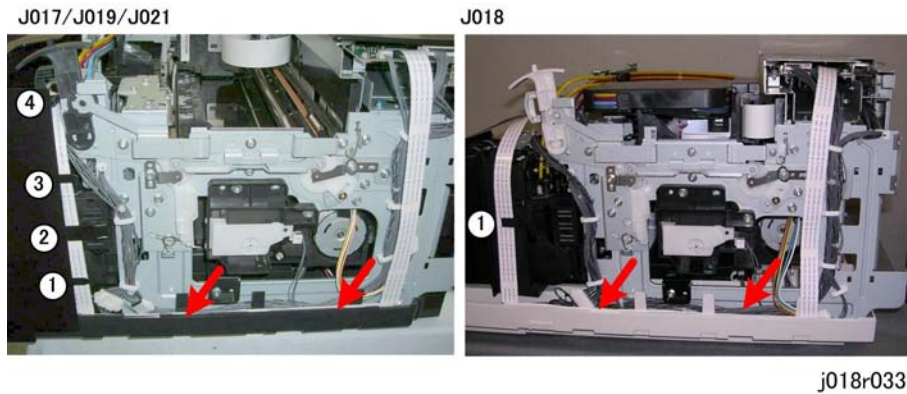


j018r032

2. Remove the cover. The photo on the right shows the machine with all the covers removed

Re-assembly

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

Before reattaching the right rear cover:

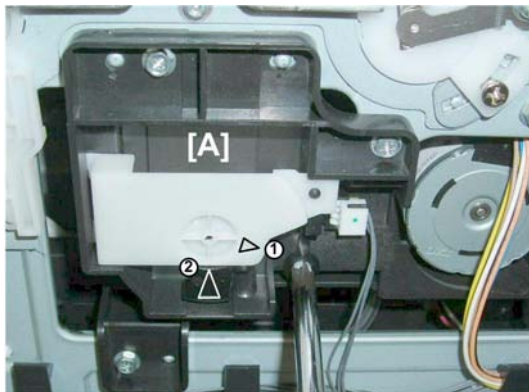
j018r033

1. Arrange the FFC on the right side as shown above.

- Tuck the FFC along the right bottom edge of the printer.
- At the front put the FFC behind the four tabs.

Note

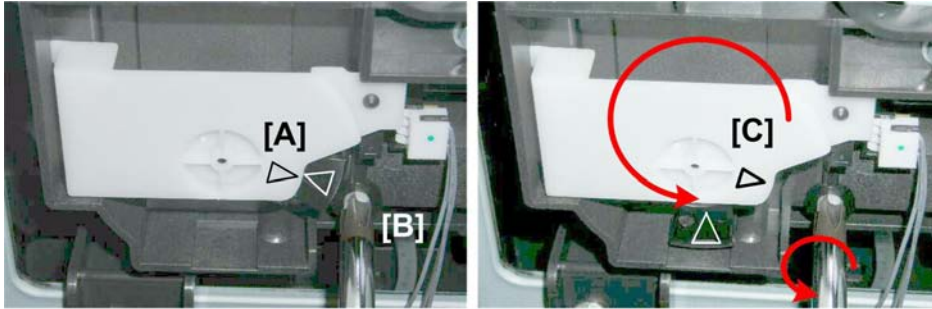
- The J017/J019/J021 have four tabs arranged vertically at the front as shown on the left in the photo above.
- The J018 has only one tab as shown on the left. The J023 has a single mylar strip (not shown) that protects the FFC.



j017r034

2. Check the maintenance unit [A].

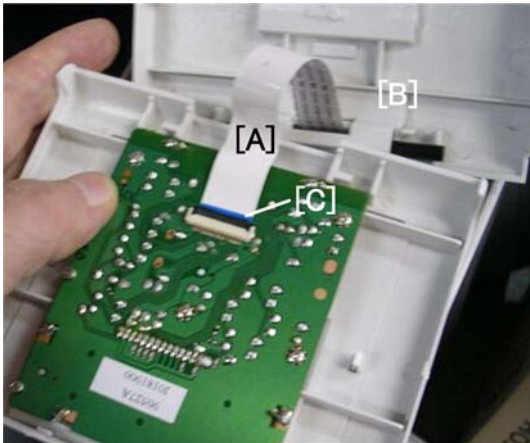
- If the triangles are not aligned as shown above, this means the print head is locked and ready for operation. You can re-attach the right cover.



j018r035

- 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.

Operation Panel



j018r036

1. Push the FFC [A] through the bottom of the operation panel [B].
2. Make sure that the blue band of the FFC edge connector [C] is facing up.
 - The blue band must be facing up when you reconnect the FFC to the operation FFC.
 - If the FFC is twisted and connected with the blue band facing down, the printer will not operate.

Top Cover, Canopy Cover



j018r037

1. There are tabs on the rear edge of the canopy cover [A].
2. These tabs must be inserted into the holes on the side of the controller frame [B] when the top cover and canopy cover are re-attached.

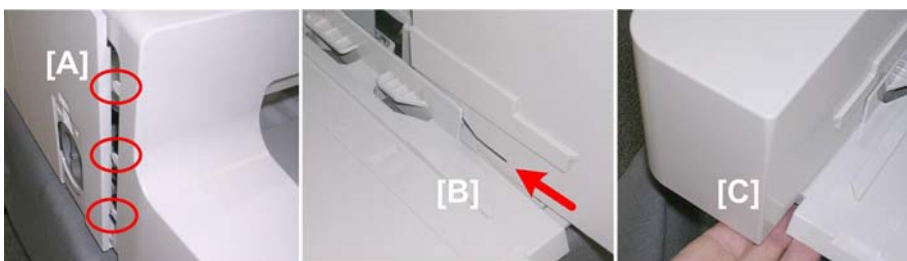
4



j018r038

3. Make sure the top cover tabs are locked.
 - For the J018/J023 insert tabs (1), (2), and (3) to make sure that the tabs are locked in place.
 - For the J017/J019 there is only one tab above the operation panel. Make sure that it is locked.

Front Cover



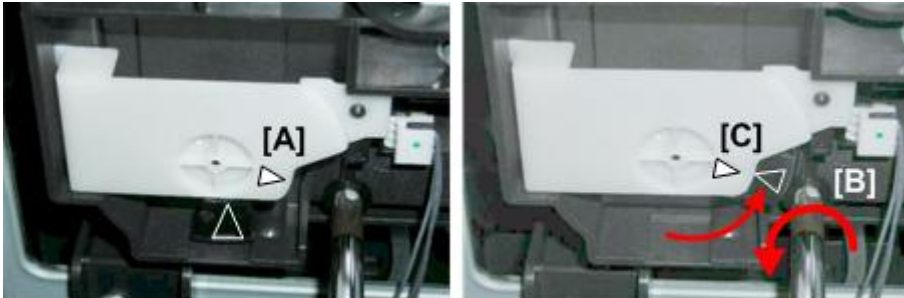
j018r039

1. On the left side [A] make sure the tabs engage with the holes on the front edge of the left middle cover.

2. On the right make sure that the long tab [B] engages with the printer frame.
3. At the left front corner [C], make sure that the tab under the cover is locked..

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.



j017r040

1. Remove the right rear 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.



j017r041

5. Push the selector [A] to the rear.
 - Always push the envelope selector to the rear before you move the carriage manually.
 - Pushing the envelope selector to the rear raises the print head unit. This prevents damaging the print head unit when the carriage is moved manually.

- Moving the envelope selector to the rear also makes it easier to remove the maintenance unit.
6. Push the carriage [B] completely to the left.
 7. 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 rear cover.

Maintenance Unit, Ink Sumps

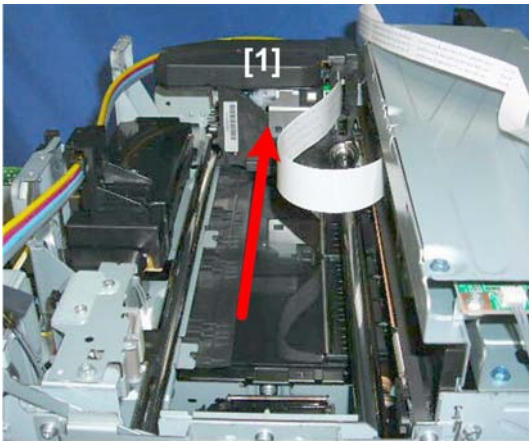
Maintenance Unit

Preparation:

- Right rear cover off
- Spread some of paper (not cloth) several sheets thick where you can set the unit after it has been removed.
- Unlock the carriage (p.80)

★ Important

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



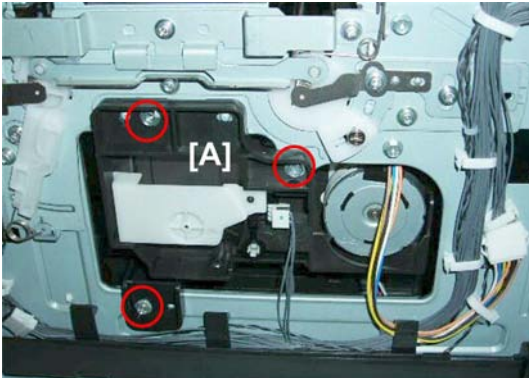
j017r044

1. Push the carriage [1] to the left side of the machine.



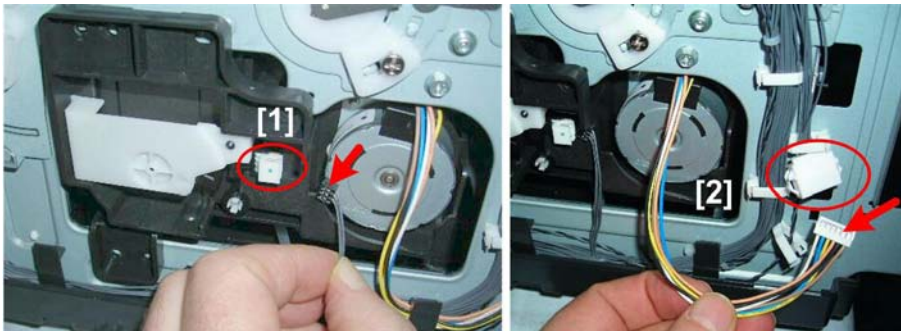
j017r045

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



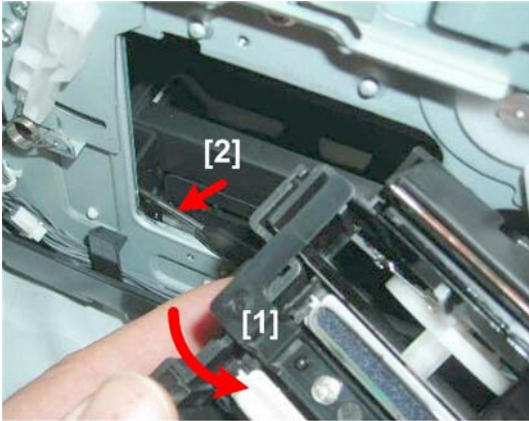
j017r046

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



j017r047

4. Disconnect maintenance unit sensor [1] and motor [2] ( x2,  x1).



j017r048

4

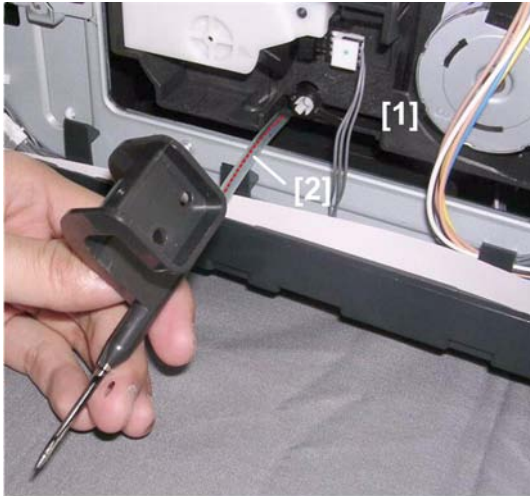
5. Pull out the maintenance unit [1] as shown but do not pull it away from the printer.
6. Pull the injector [2] out of its hole and cradle.



j017r049

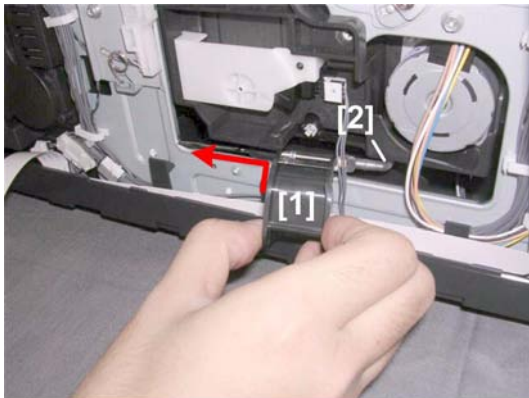
7. Pull the maintenance unit and injector out of the printer and lay them on some paper.
 - If the maintenance unit is difficult to remove, make sure that the envelope selector is pushed completely to the rear position.
 - Handle the maintenance unit carefully.
 - The bottom of the unit is covered with ink. Place it on a piece of clean paper (not cloth).
 - Never touch the bottom of the unit.

Re-installation



j017r050a

1. Re-install the top of the maintenance unit [1] first.
2. Check the tubing [2] 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.

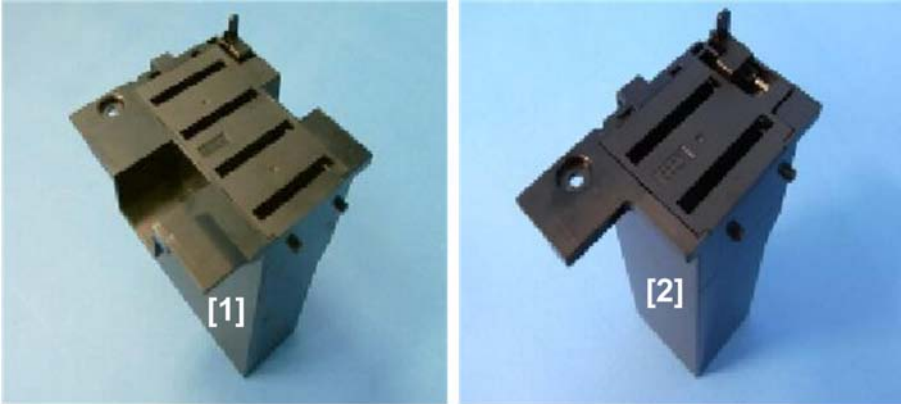


j017r050b

5. Set the needle [1] 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 [2] 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.

Left Ink Sump

Before You Begin...



j023r042

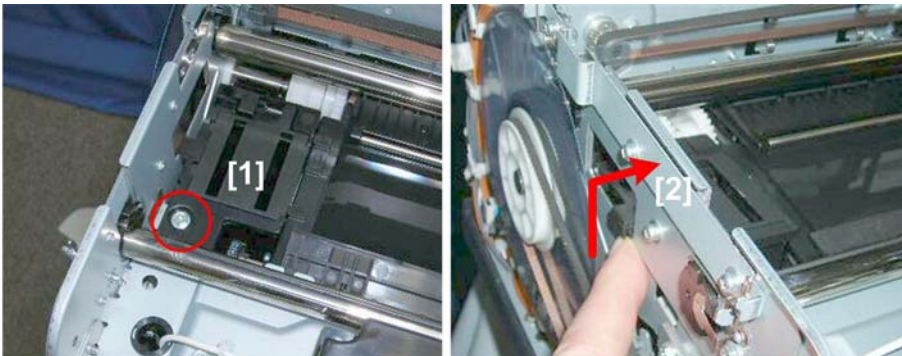
The left ink sump of the J018 is different.

- The left ink sump of the J018 [1] has four open slots.
- The left ink sump of the other machines have only two open slots.
- The removal procedure is the same for both types.


Preparation:

The left ink sump is difficult to remove with the left covers attached.

- Remove all covers

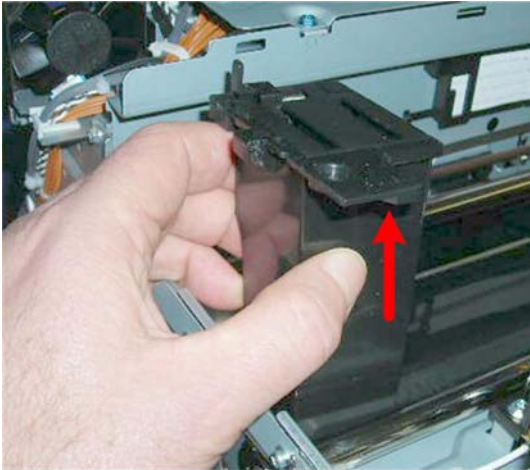


j017r042

1. Remove screw [1] ( x1).
2. Lift hook [2] to disconnect.

★ Important

- Never touch the surface vertical encoder wheel around its edges.



j017r043

3. Lift the left ink sump out of the machine.

Right Ink Sump

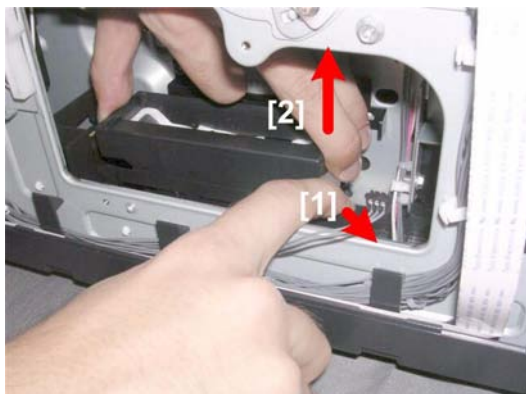
Normally the right ink sump never requires replacement.



j017r051

1. Remove the maintenance unit.

The right ink sump [1] is located below and to the left of the maintenance unit (shown removed in the photo above.)



j017r052

4

2. Use the index finger of the right hand to release the pressure tab at [1].
3. From the top use the other hand to pull the rear end [2] up to release it, then remove.



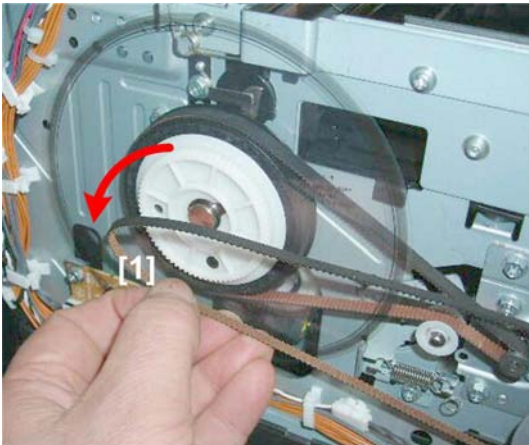
j017r053

Encoders

Vertical Encoder Wheel

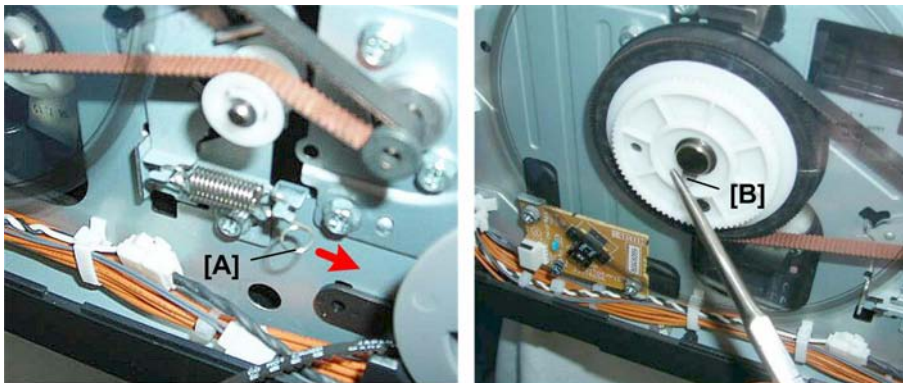
Preparation

- Remove all covers



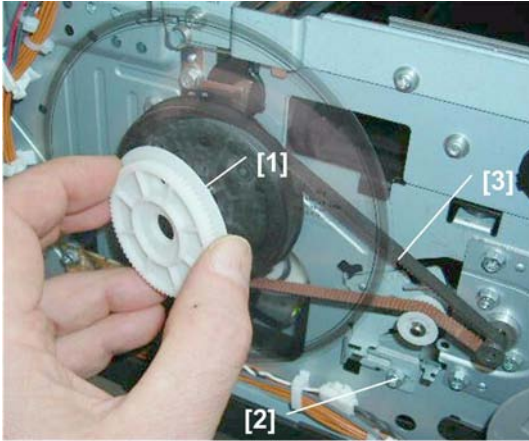
j017r054

1. Remove the timing belt from wheel of the vertical encoder [1].



j017r055

2. Remove tension spring [A].
3. Use a pair of needle-nose pliers to remove C-clip [B].



j017r056

4

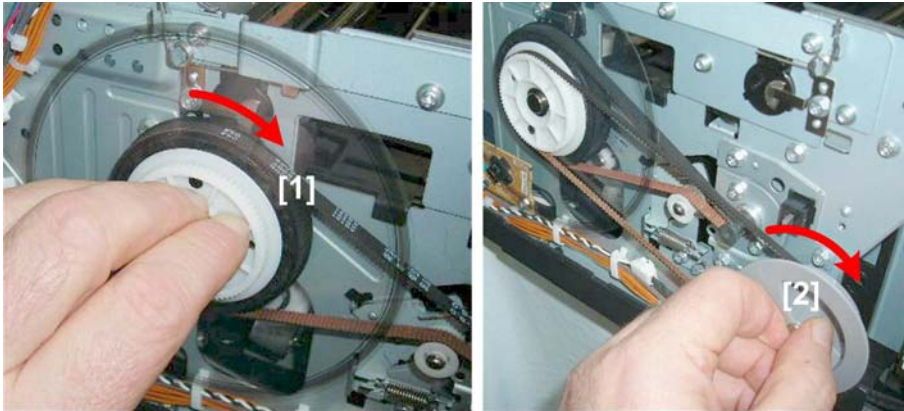
4. Remove gear-wheel [1].
5. Loosen screw [2] to release tension on the belt [3].
6. Carefully insert the tip of a long, thin screwdriver behind the drive wheel.
7. Nudge the wheel slight to the front and remove the wheel with the vertical encoder attached.



j017r057

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

Reinstallation



j017r058

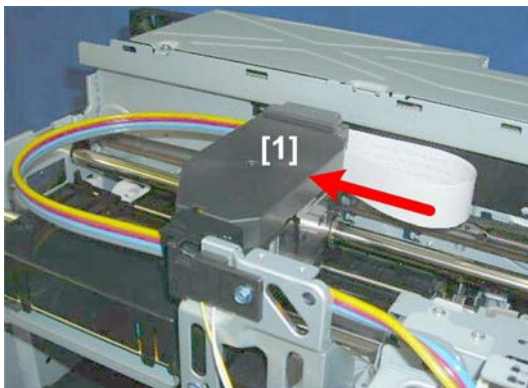
- When reinstalling the vertical encoder wheel [1], turn the wheel slowly while pressing in slightly until it snaps into the correct position.
- After attaching the manual feed belt, turn the jam feed wheel [2] to make sure that the wheel and belt rotate smoothly.

4

Horizontal Encoder Strip

Preparation

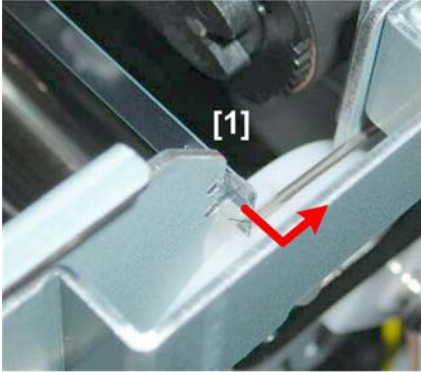
- Right rear cover
- Canopy cover, top cover
- Unlock the carriage (p.80)



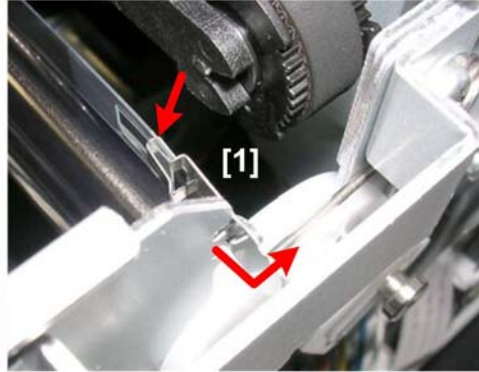
j017r059

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

J017, J019, J021, J023



J018



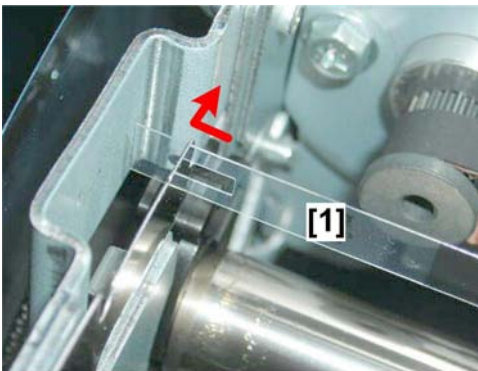
j018r060

4

2. On the right, pull the right end of the encoder strip [1] and disconnect it.

★ Important

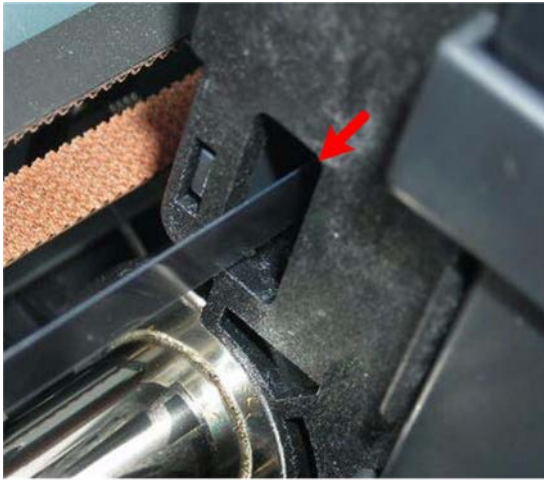
- The encoder strip of the J018 (shown on the right) has a small metal bracket attached to the end of the encoder strip. Be sure to remove this with the strip so it does not fall down into the machine.



j018r061

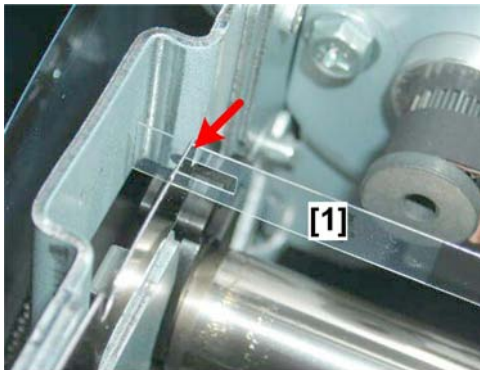
3. On the left, disconnect the left end of the strip [2].

Reinstallation



j017r061

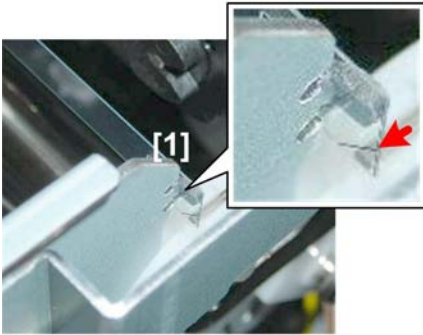
1. If you have removed the strip or if you are replacing the strip with a new one:
 - Hold the encoder strip with the notch or black triangle facing down.
 - Pass the strip through the gap of the sensor inside the carriage.



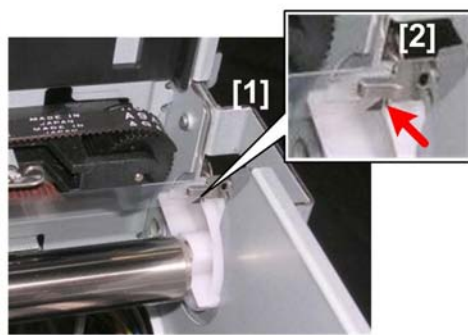
j018r062

2. First, connect the left end of the strip to the leaf spring.

J017, J019, J021



J018, J023



j018r063

4

3. Next, on the right, attach the other end of the strip [1].

Make sure that the diagonal notch is facing down.

-or-

Make sure the black triangle is facing down (J018/J023).

★ Important

- For the J018 encoder strip you must re-attach the extension bracket [2].
- There is no extension bracket on the encoder strip of the J023.

Boards

PSU

★ Important

- Always replace a PSU with the PSU designed for the machine.

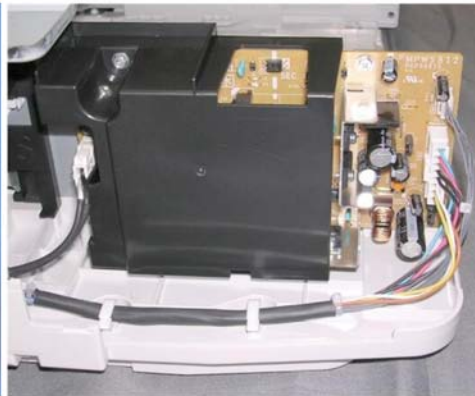
Preparation:

- Remove all covers

J017, J019, J021



J018, J023



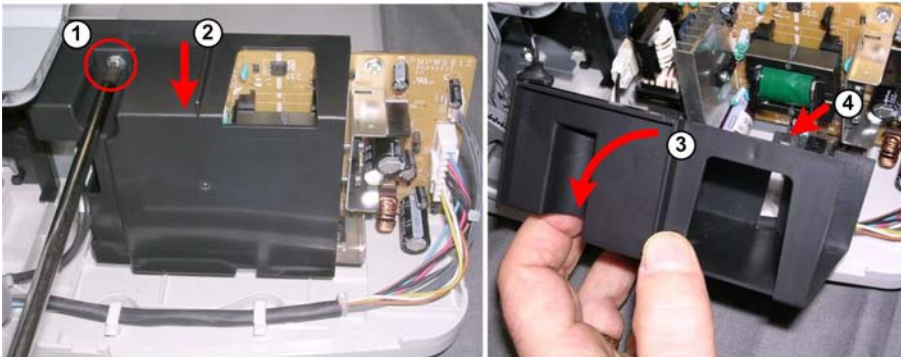
j018r064

1. The PSU is on the left front corner of the printer.

↓ Note

- The PSU of the J018/J023 has a cover held in place by one screw and one tab (the other models do not have this cover).

J018, J023



j018r067

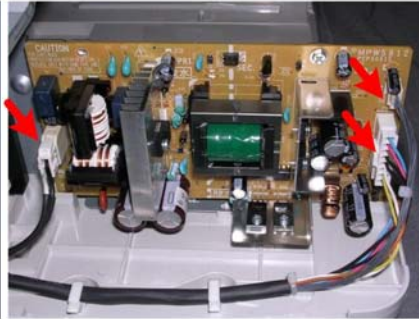
2. Remove the PSU cover of the J018/J023.

- Remove the screw [1].
- Press down gently on the cover [2].
- Pull the cover [3] away to disengage the tab [4] below.

J017, J019, J021



J018, J023



j018r065

3. Disconnect the PSU:

- J017, J019, J021 (🔧 x2)
- J018, J023 (🔧 x3)

J017, J019, J021



J018, J023



j018r066

4. Remove the PSU

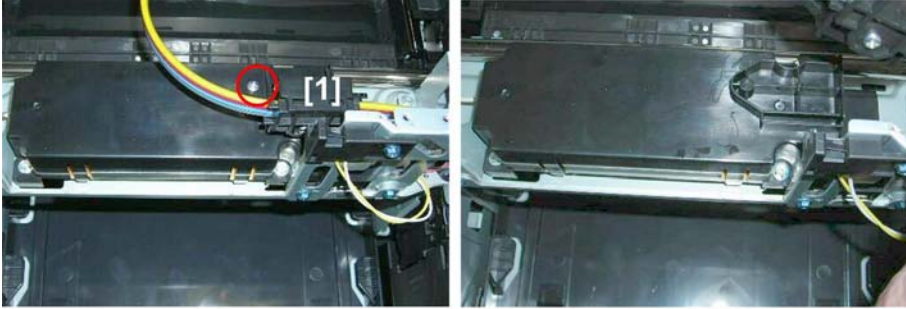
- J017, J019, J021 (🔧 x4)
- J018, J023 (🔧 x3)

HVPS

Preparation:

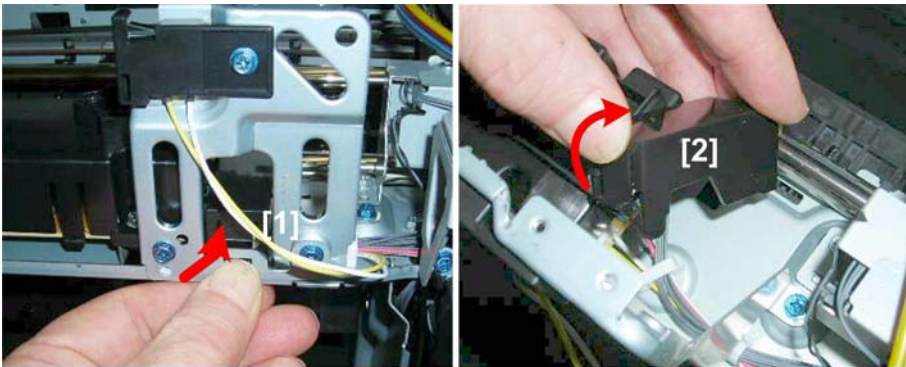
Remove:

- Canopy cover, top cover
- Right front cover
- Front cover



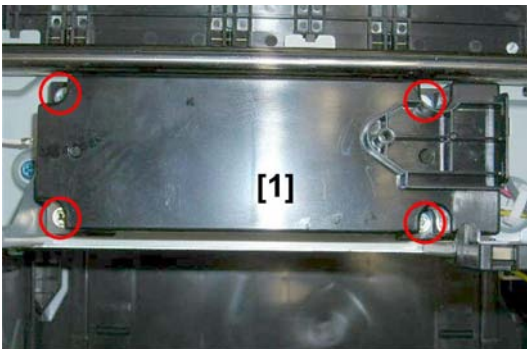
j017r067

1. Remove the ink tube housing [1] (⚙️ x1).



j017r068

2. Release the connector cover at [1].
3. Remove the cover [2] (Tab x1).



j017r069

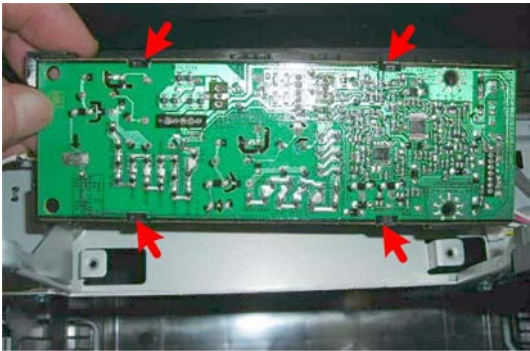
4. Remove the HVPS cover [1] (⚙️ x4).



j017r070

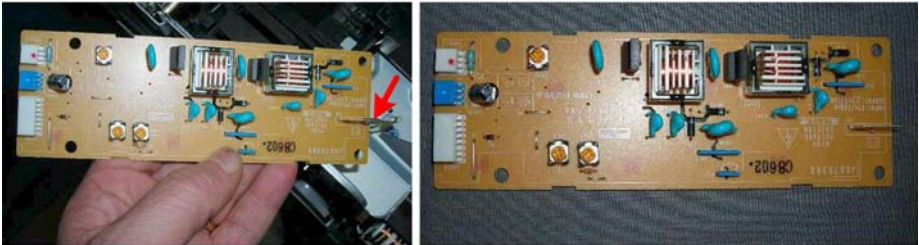
4

5. On the right side, disconnect the HVPS (HVPS x3)



j017r071

6. Turn the cover over and separate the PCB from the latch hooks (Hooks x4).



j017r072

7. Disconnect the bayonet connector.

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

- Enter the Service Menu.
- [#Enter]> "Bit Switch"> [▲] or [▼]> "Service Summary"
- [#Enter]> "Press # to Start"> [#Enter]

To print the Engine Summary Chart:

Do SP5200 (Print SMC). (Printing requires about 2 minutes.)

- Confirm that paper is loaded in the paper tray.
- Enter the Service Menu.

```
SYSTEM Ver. nnn
Service Menu
```

- [▼]> "Engine Main."> [#Enter].

```
SP No.
1000
```

- [▲] 4 times> "5000"> [#Enter]
- [▲] twice> "5200"> [Yes] x 3 times

```
PRINT SMC
5200
```

- [#Enter]

```
PRINT SMC
EXEC
```

- [#Enter]> "RUNNING"

- Wait for the report to print (it does not start immediately).
- Printing requires about 2 min.

- [No] x 3 times > [▲] or [▼] > "End" > [#Enter] > Machine switches off.
- [Power] to switch the machine on.

Note

- For more details about these reports, please refer to Section "4. Troubleshooting".

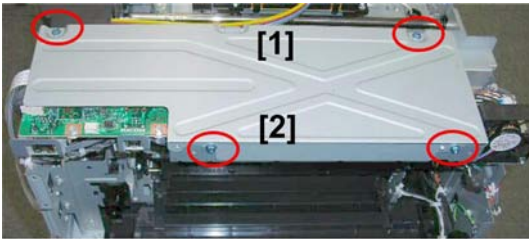
CTL Board Replacement

Preparation:

Remove:

- If you are servicing the J018 with one or two paper feed units installed, remove the printer from the paper feed unit. The right cover is difficult to remove if the printer is on the paper feed unit.
- Right rear cover
- Canopy cover, top cover
- Rear cover, left Rear cover

4

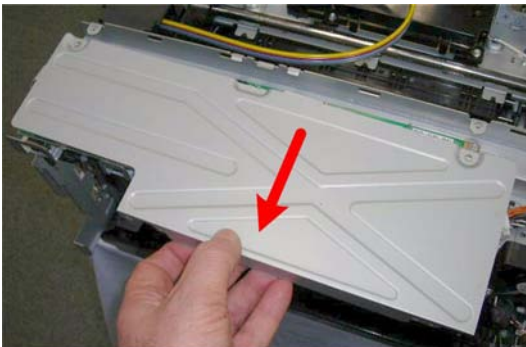


j017r073

1. Remove:

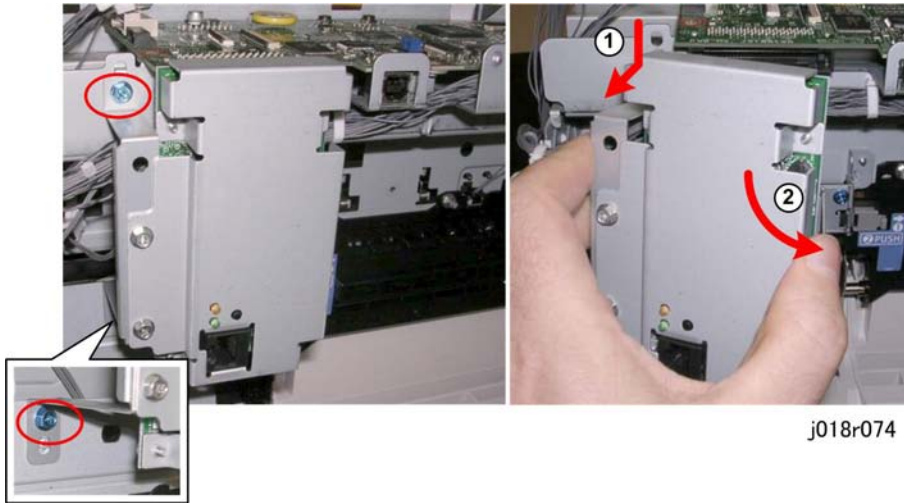
[1] Front (🔧 x2)

[2] Rear (🔧 x2)





j017r074

2. Slide the cover to the left until it stops then lift to remove it.



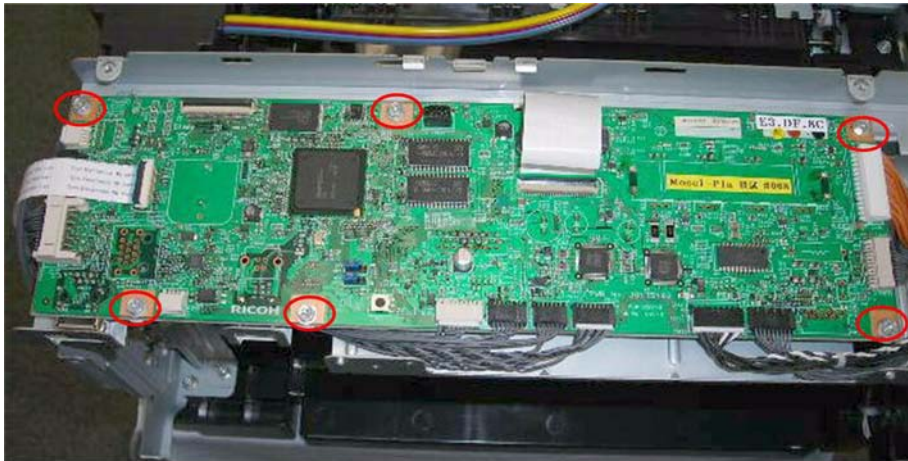
j018r074

4



3. If you are servicing the J018 or J019, remove the NIC board ( x2,  x1).

Note

- This step is not required for the J017, J019, or J023 because the NIC is mounted on the CTL board.



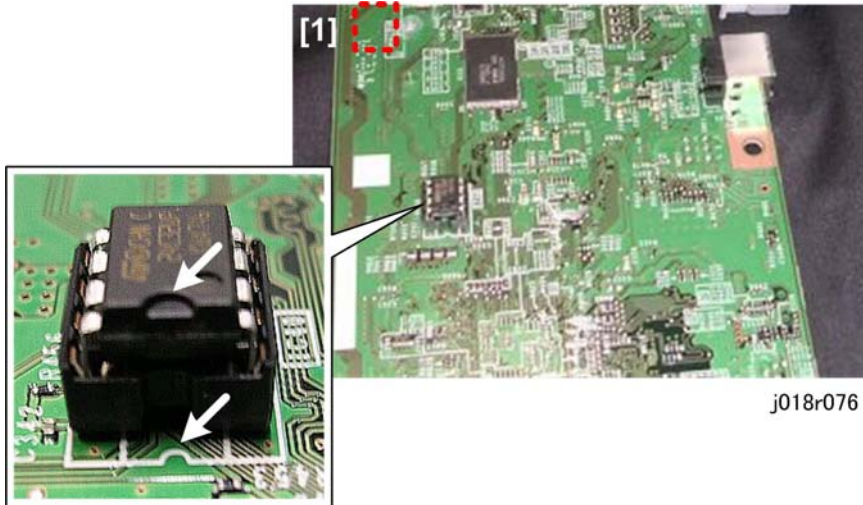
j017r075

4. Remove the CTL board ( x All, FFC xAll,  x6).

[Important information about replacing the controller board](#)

[J017 RTB 7](#)

[J018 RTB 4](#)



4

5. Turn the board over (bottom side up) so you can see the NVRAM.

Note

- On the J023 CTL board the NVRAM is located near the corner at [1].

6. Pull the NVRAM from the control board removed from the printer.

7. Install the NVRAM on the new control board.

Important

- The NVRAM must be installed so the curvature of the white line on the board matches the curvature of the notch on the NVRAM (shown by white arrows above).

8. Install the new control board in the printer.

Important

- Do not attempt to replace the NVRAM in the field.
- If the NVRAM is defective, swap the printer. If the NVRAM is replaced in the field, the Japanese model name will appear in the System Summary print.

Motors

Horizontal Motor

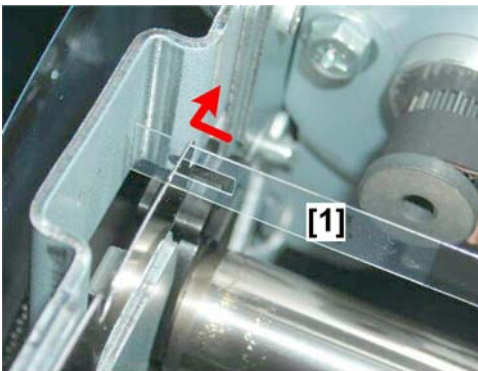
Preparation:

- Canopy cover, top cover
- Right rear cover
- Unlock carrier (p.80)



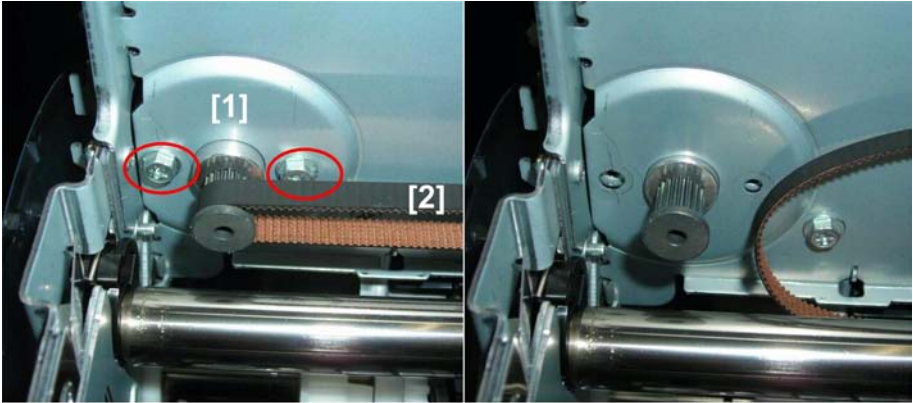
j017r078

1. Push the carriage to the center.



j018r061


2. On the left [1] disconnect the left end of the encoder strip.

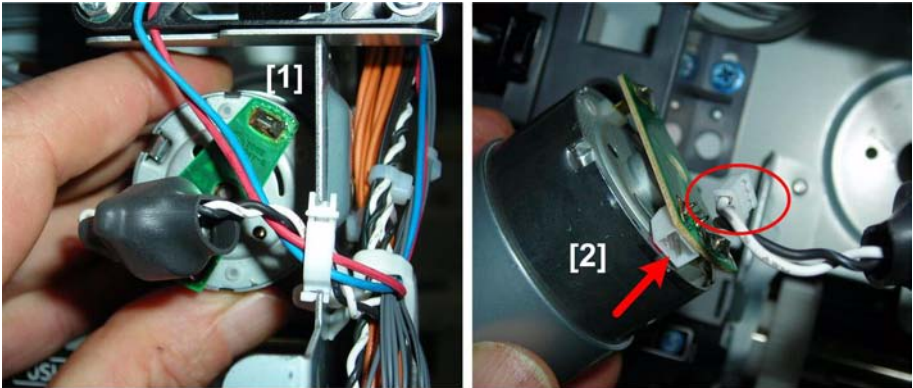


j017r080

4


3. Remove:

- [1] Screws ( x2)
- [2] Timing belt x1



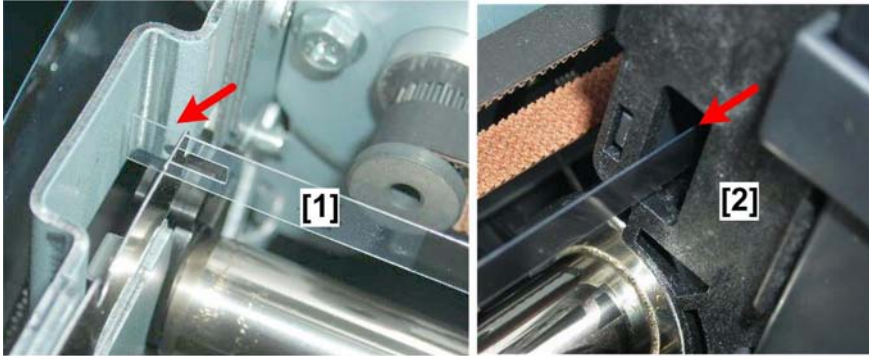
j017r081

4. At the rear corner.

- [1] Pull out the motor
- [2] Disconnect motor and remove ( x1)

Re-installation:

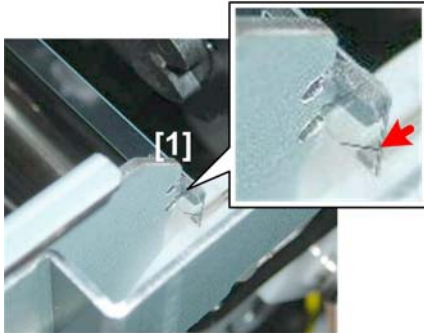
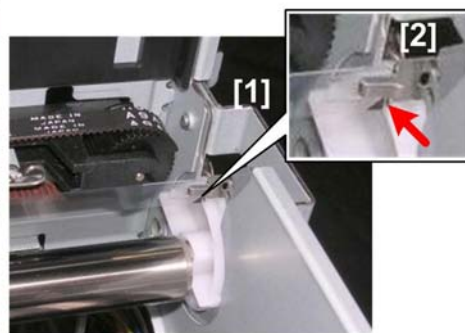
Make sure that the horizontal encoder strip is re-attached correctly.



j018r079

- Make sure that the encoder is connected on the left [1] and threaded through the carriage unit [2].

4

J017, J019, J021**J018, J023**

j018r063

- On the right make sure that the diagonal notch [1] is facing down.

-or-

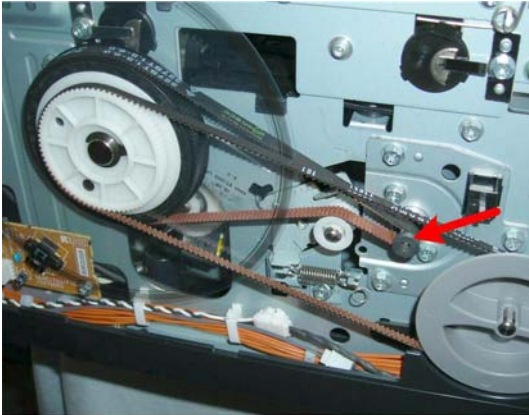
Make sure the black triangle [1] is facing down (J018/J023).

★ Important

- For the J018 encoder strip, you must re-attach the extension bracket [2].

Vertical Motor**Preparation:**

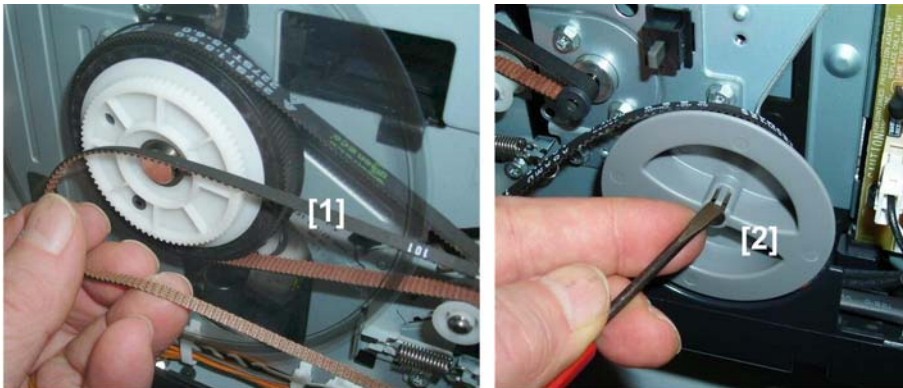
- Remove all covers



j017r082

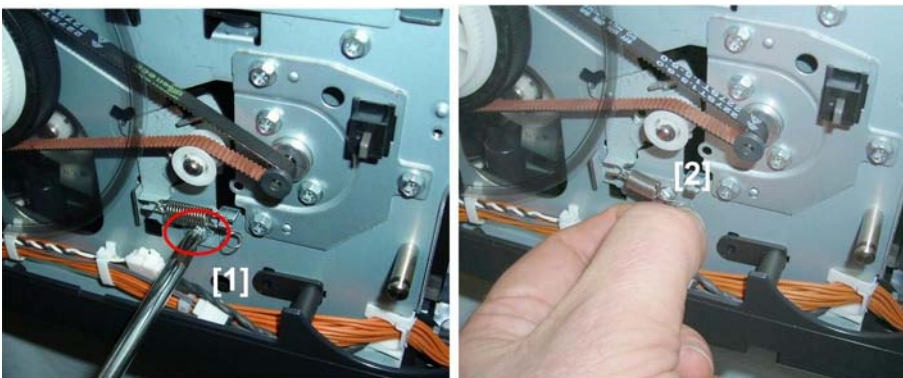
4

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



j017r083

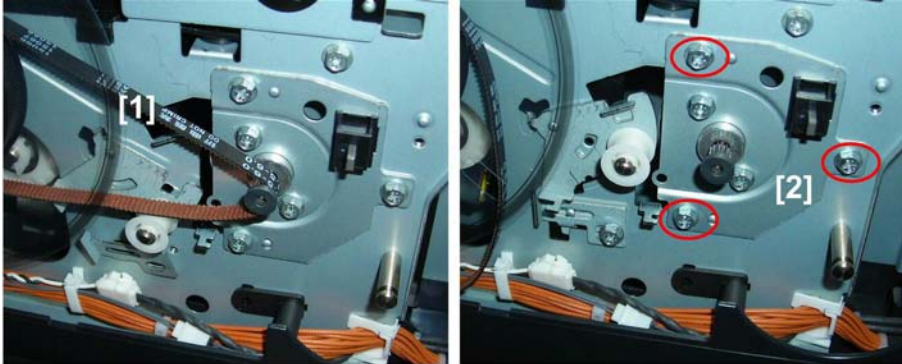
2. Disconnect timing belt [1].
3. Remove jam wheel [2]. Use the tip of a small screwdriver to release the plastic tab lock.




j017r084

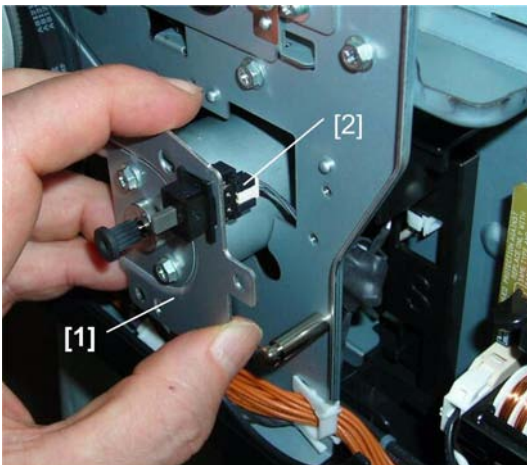
4. Loosen timing belt tension screw [1].

- Remove spring [2].



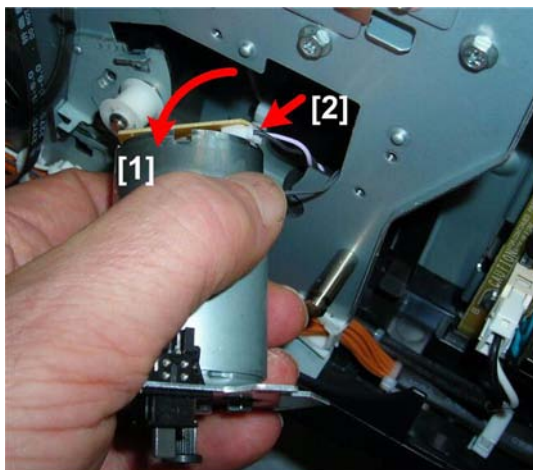
j017r085

- Disconnect the timing belt [1].
- Disconnect the vertical motor bracket [2] ( x3).



j017r086

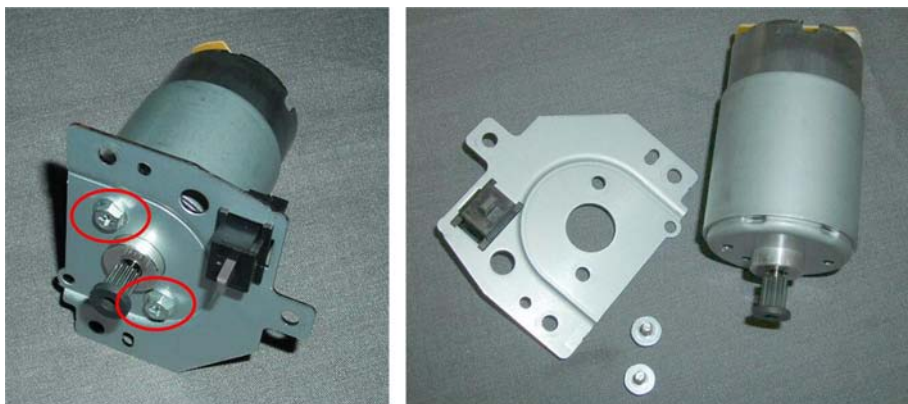
- Pull out the vertical motor bracket [1] about half-way.
- Disconnect the jam wheel cover sensor [2].



j017r087

10. Pull the vertical motor bracket [2].

11. Disconnect the motor [2] (🔌 x1).



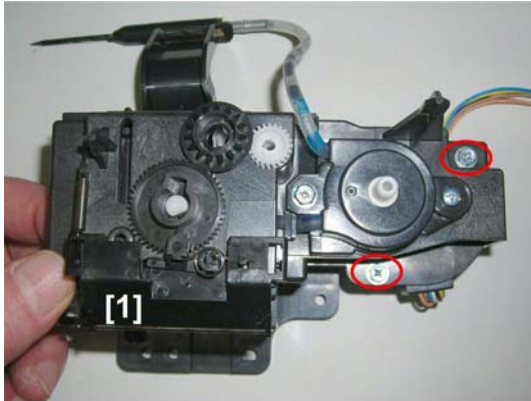
j017r088

12. Separate the motor and bracket (🔧 x2).

Maintenance Unit Motor

Preparation:

- Remove right rear cover
- Unlock carriage (🔑 Unlocking, Moving the Carriage)
- Push the carrier to the left side of the printer.
- Remove the maintenance unit



j017r089

1. Turn over the maintenance unit [1] and remove the screws ( x2).

4



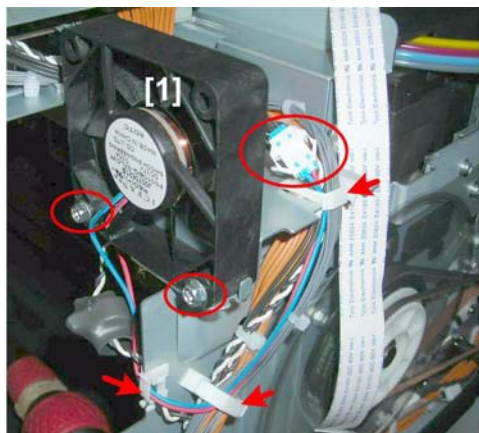
j017r090

Fan

Preparation:

Remove:

- Right rear cover
- Canopy cover, top cover
- Rear cover
- Left rear cover



j017r094

4

1. Remove the fan ( x2,  x3,  x1).

Clutches

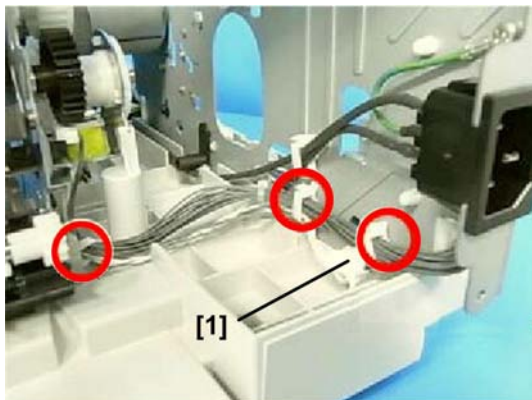
Feed Clutch

Preparation

Remove:

- Duplex unit
- Paper cassette and output tray
- Operation panel
- All covers
- Vertical encoder wheel
- Vertical encoder sensor

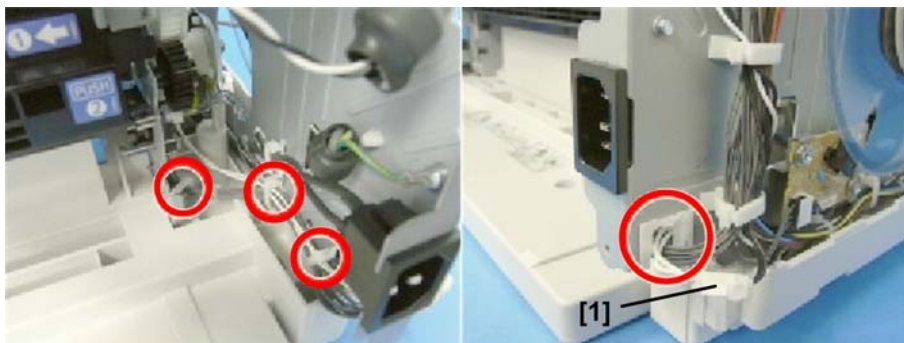
J017/J018/J019/J021



j023r028

1. Disconnect the clutch harness and connector [1] (🔌x3, 📁x1)

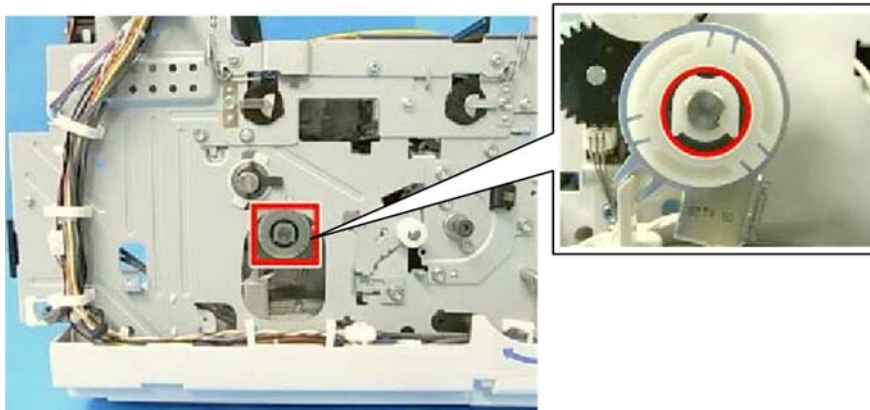
J023



j023r029

4

Disconnect the clutch harness [1] (⚙️x4, 🛠️x1)



j023r030

2. Remove the feed clutch (🛠️x1).

Sensors, Switches

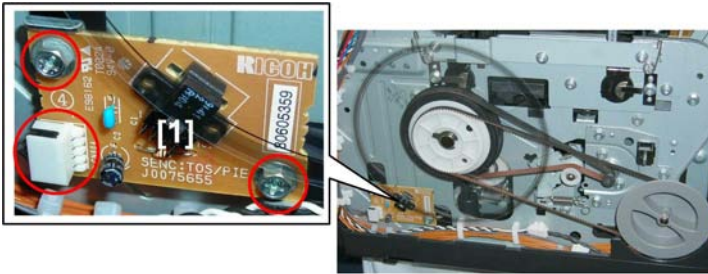
Vertical Encoder Sensor

Preparation:

- Remove all covers

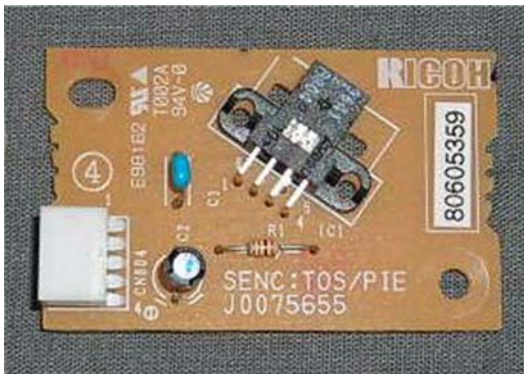
★ Important

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



j017r095

- The vertical encoder sensor is near the left rear corner of the machine below the vertical encoder wheel.
- Remove the vertical encoder sensor [1] (🔧 x2, 📦 x1).



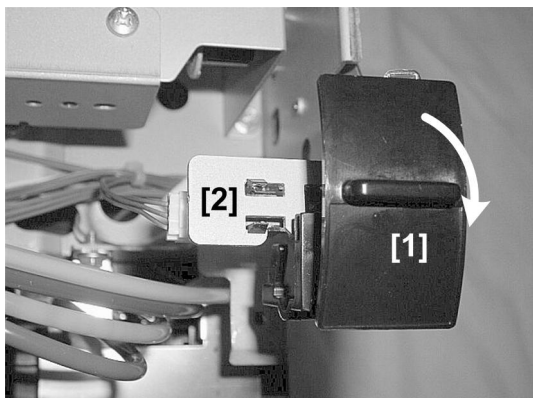
j017r096

Carriage Position Sensor

Preparation:

Remove:

- Canopy cover, top cover



j017r097

4

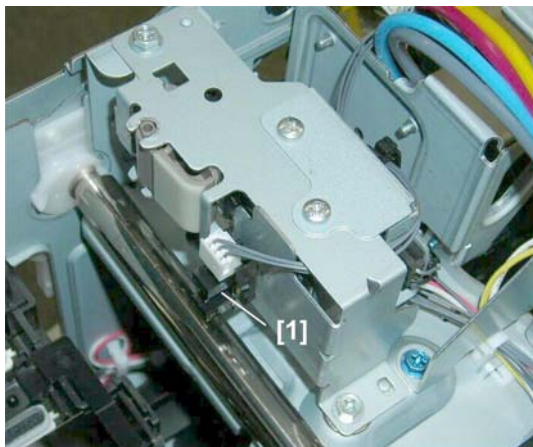
1. Move the envelope selector [1] forward.
2. Remove the sensor [2] from under the air release solenoid bracket (Hooks x3)
3. Disconnect the sensor (E x1)

Ink Level Sensor

Preparation:

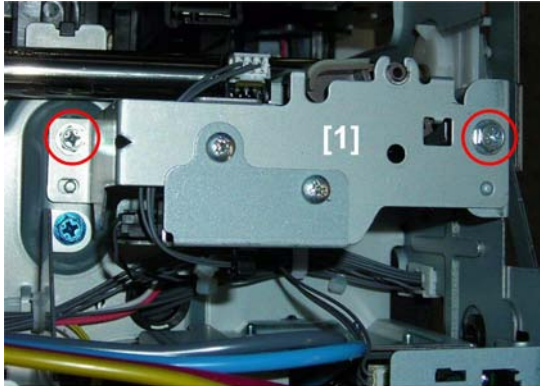
Remove:

- Right front cover
- Canopy cover, top cover
- Unlock the carriage (Unlocking, Moving the Carriage)
- Push the carriage to the left side of the printer.



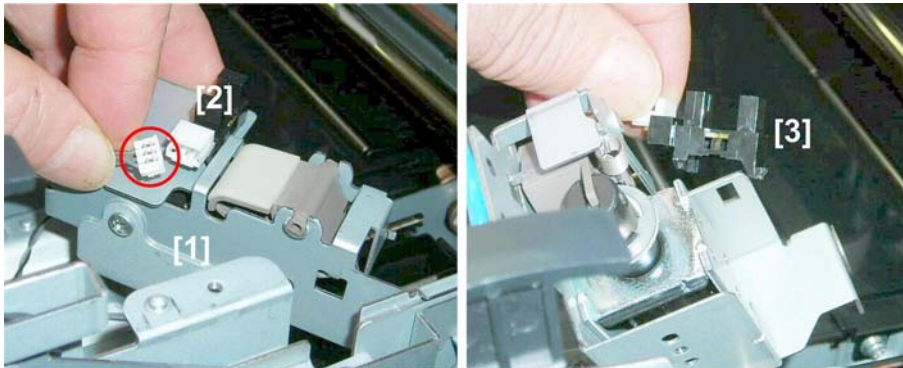
j017r098

1. The ink level sensor [1] is on the right side of the machine on the same bracket with the air release solenoid.




j017r099

2. Disconnect the solenoid bracket [1] ( x2).




j017r100

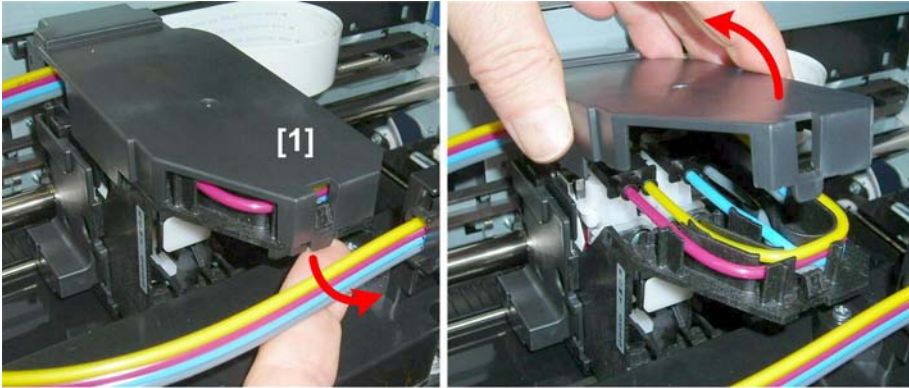
3. Lift the solenoid bracket [1].
4. Disconnect sensor [2] ( x1).
5. Remove sensor [3] (Pawls x5).

1st Registration Sensor

Preparation:

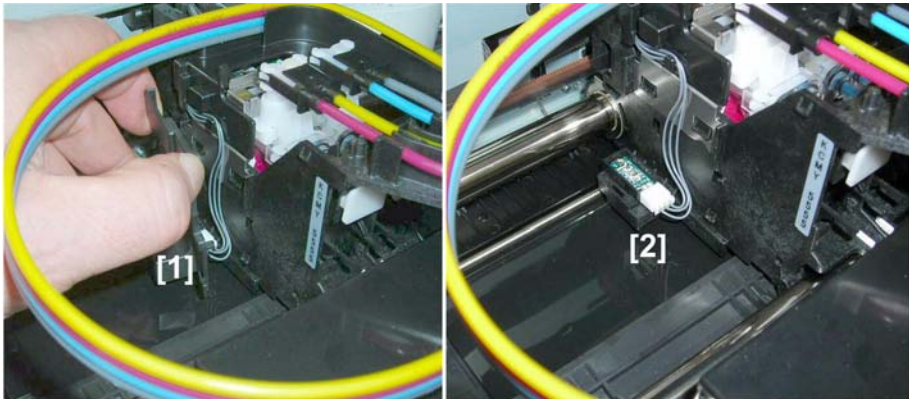
Remove:

- Right rear cover
- Canopy cover, top cover
- Unlock the carriage ( Unlocking, Moving the Carriage)
- Push the carriage to the center



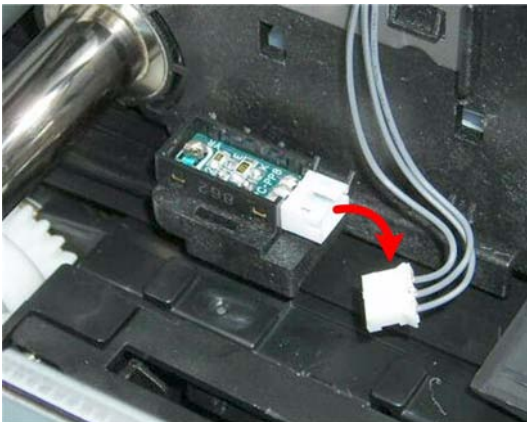
j017r101

- 4
1. Release the tab on the front of the print head cover [1] then remove the cover.



j017r102

2. Remove the left side cover [1] so you can see the sensor [2].



j017r103

3. Disconnect the sensor and remove it (🗑️ x1).

2nd Registration Sensor, Pressure Plates and Rollers

Preparation

Remove:

- Right rear cover
- Canopy cover, top cover
- Duplex unit
- Rear cover

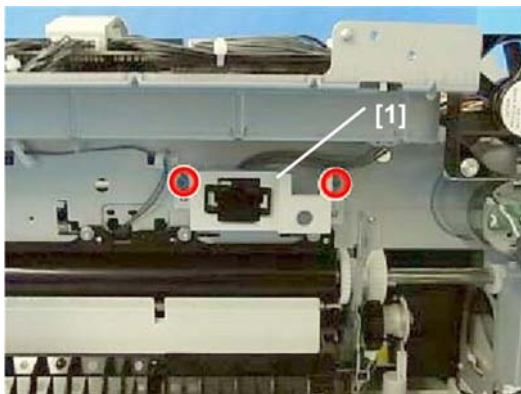
★ Important

- Before you begin, note that the J023 has three sets of pressure plates but the other machines have only two pressure plates.



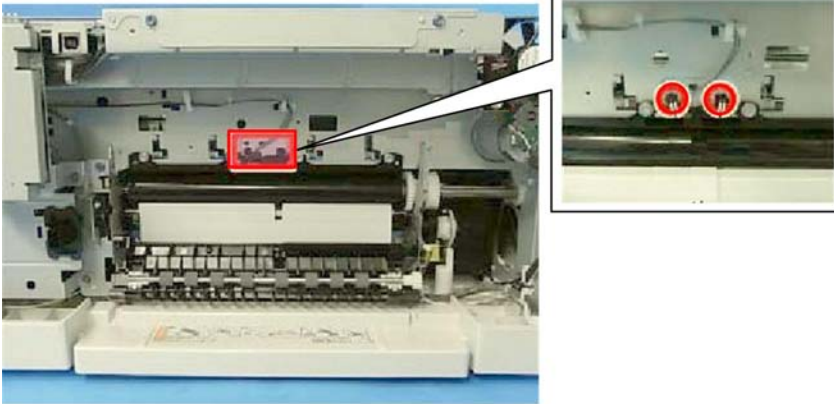
j023r001

1. Release the locks on both ends and lower the inverter guide [1].



j023r002

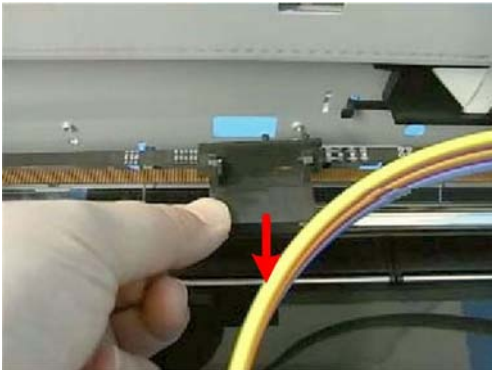
2. Remove the right drawer connector bracket [1] (🔧 x2, 📦 x1).



j023r003

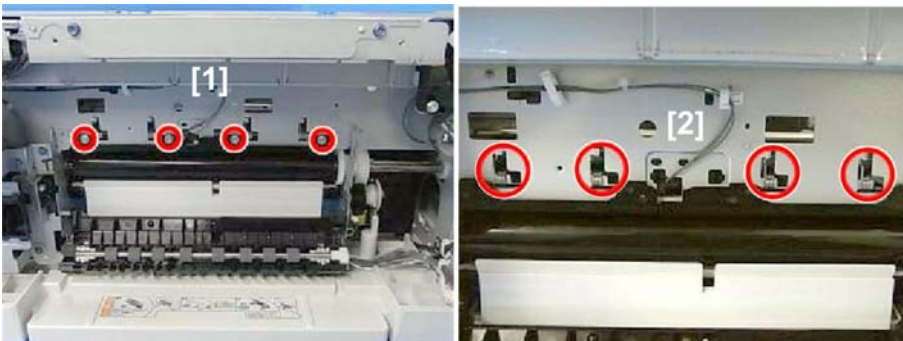
4

- 3. At the rear, unfasten the 2nd registration sensor (▼ x2).





j023r004

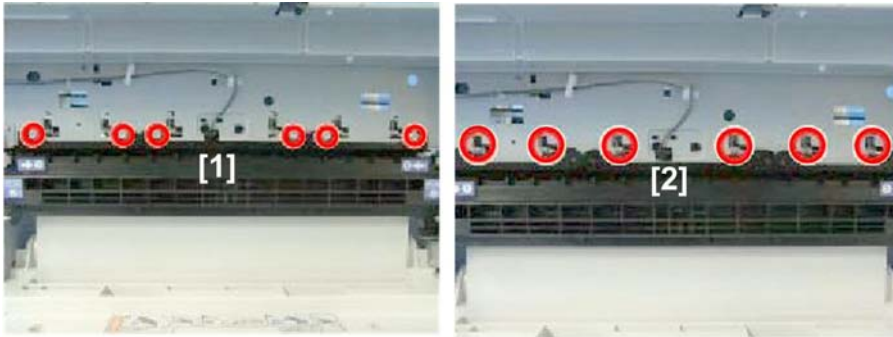
- 4. At the front, remove the 2nd registration sensor cover.
- 5. At the rear disconnect the pressure plates
J017/J018/J019/J021





j023r005

- Disconnect the left and right pressure plate screws [1] and left and right pressure plate springs [2] ( x4,  x4).

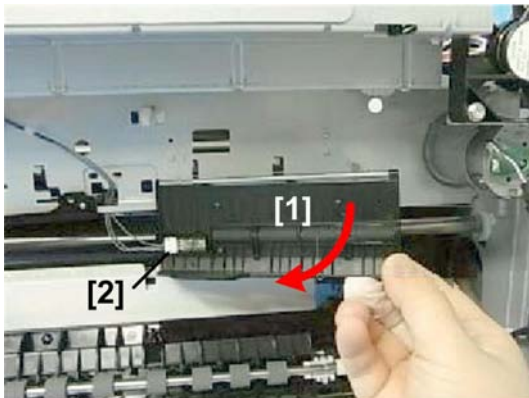
J023




j023r006

- Disconnect the left, center, and right pressure plate screws [1] and springs [2] ( x6,  x6)
6. Remove the pressure plate and 2nd registration sensor.

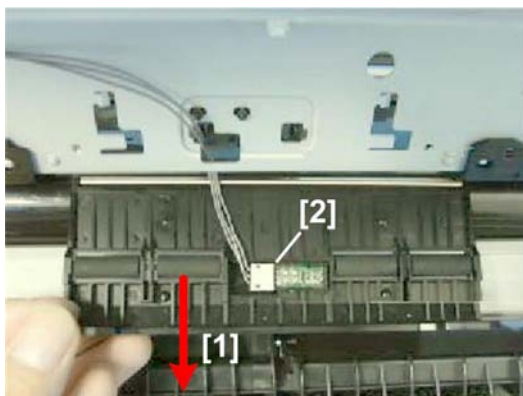
J017/J018/J019



j023r007

- Remove the right pressure plate [1] and rollers.
- Disconnect the 2nd registration sensor [2] ( x1).

J023



j023r008

4

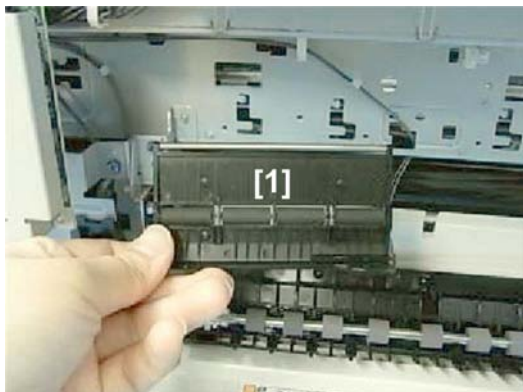
- Remove the center pressure roller plate [1] and rollers.
- Disconnect the 2nd registration sensor [2] (E x1).

★ Important

- Work carefully during replacement to avoid touching the horizontal encoder strip.

7. Remove the remaining pressure plates and rollers.

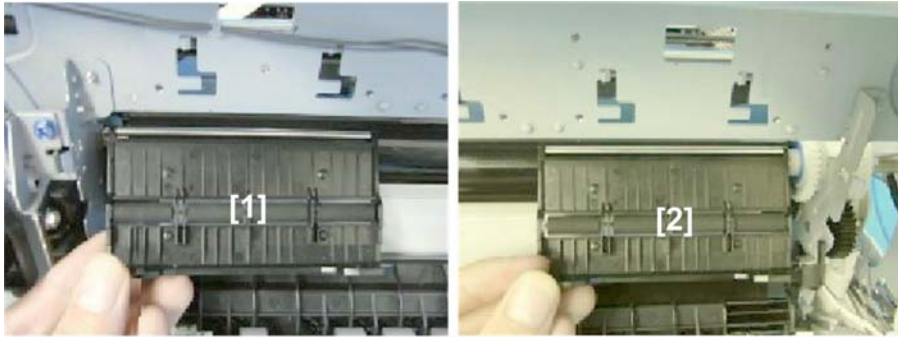
J017/J018/J019



j023r009

- Remove the left pressure plate and rollers [1].

J023



j023r010

- Remove the left pressure plate and rollers [1].
- Remove the right pressure plate and rollers [2].

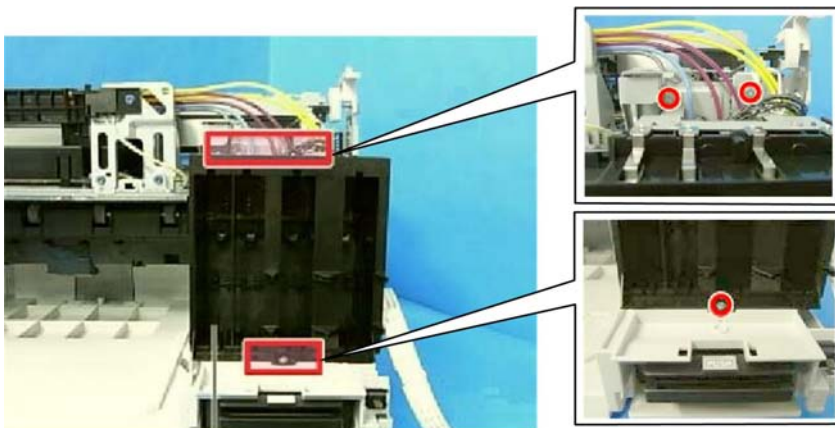
4

Cartridge Set Sensors

Preparation

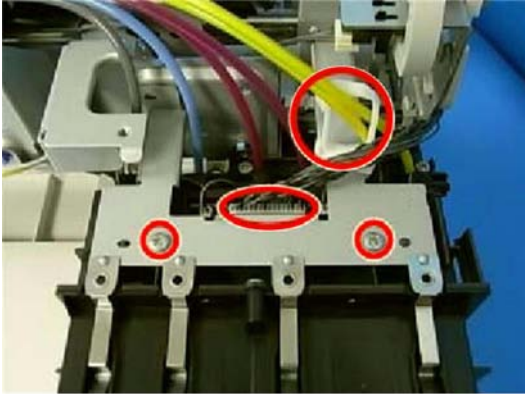
Remove:

- Paper cassette
- Output tray
- Right cover
- Canopy cover, top cover
- Right front door
- Operation panel
- Front cover



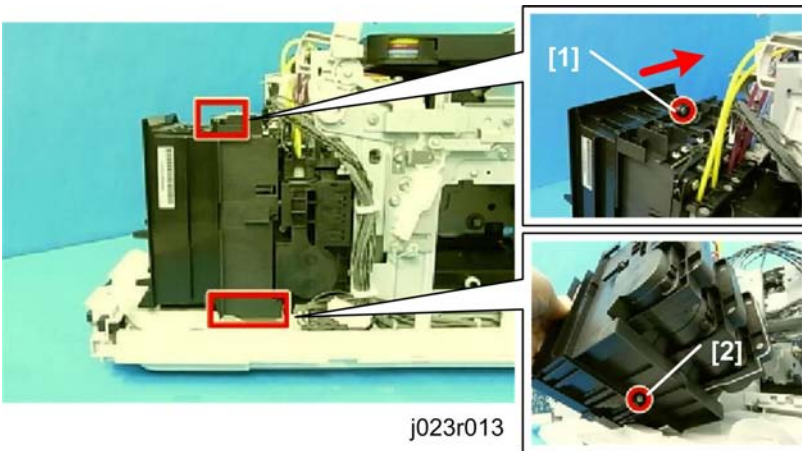
j023r011

1. Remove the ink supply unit ( x3,  x1)





j023r012

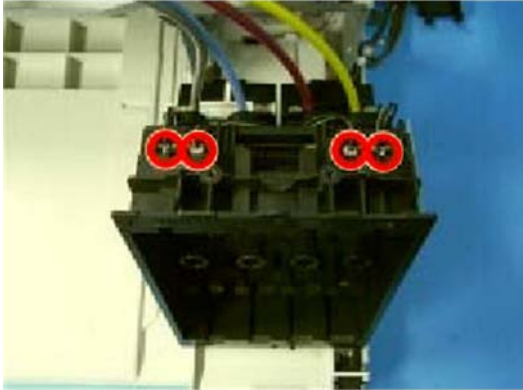
2. Remove the cartridge positioning plate and disconnect the ink supply unit ( x2,  x1,  1)



j023r013

3. Unfasten the cartridge case at the top [1] and slide the case to the left ( x1).
4. Remove bottom screw [2] ( x1).

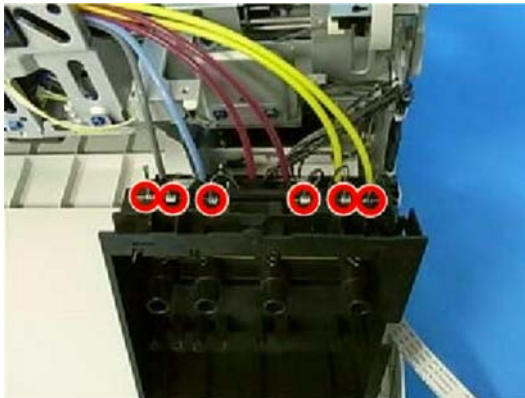
J017, J019, J021, J023



j023r015

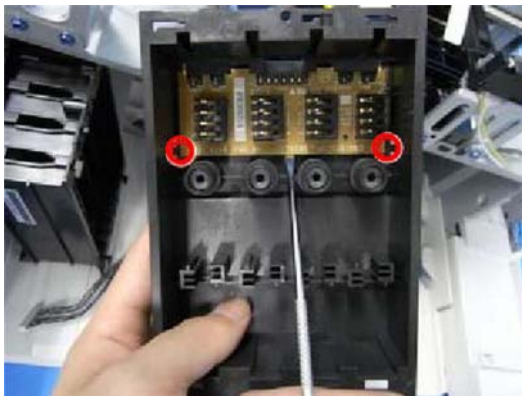
1. Disconnect the cartridge set sensors (🔌 x4, Hooks x2)

J018



j023r014

2. Disconnect the cartridge set sensors (🔌 x6, Hooks x2).



j023r016

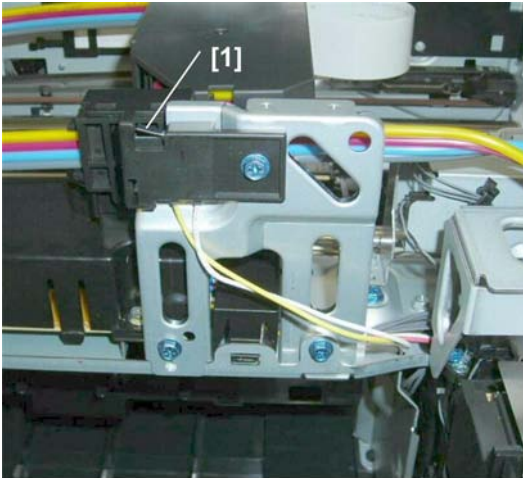
3. Remove the sensor board (Hooks x2)

Top Cover Switch

Preparation:

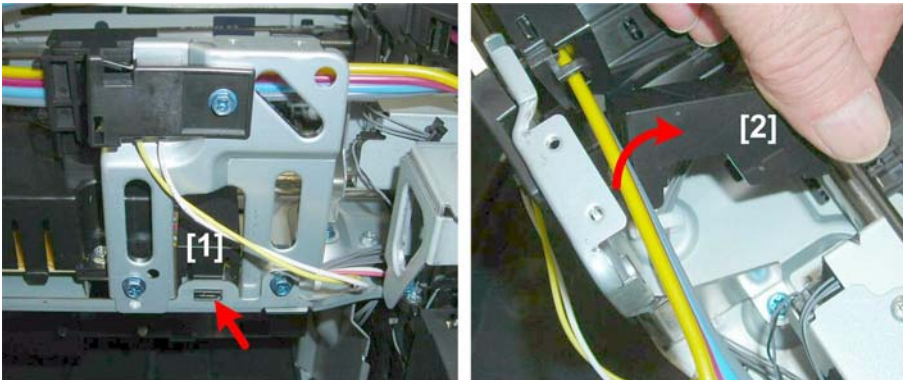
Remove:

- Right front cover
- Canopy cover, top cover
- Front cover



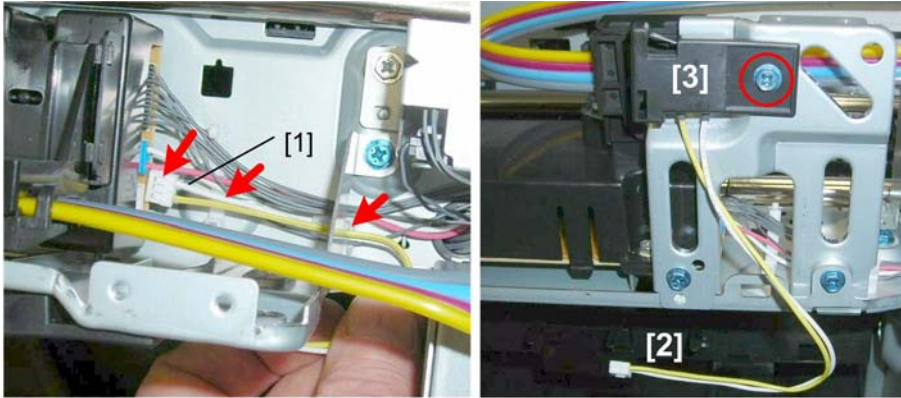
j017r108

1. The top cover switch [1] is mounted here.



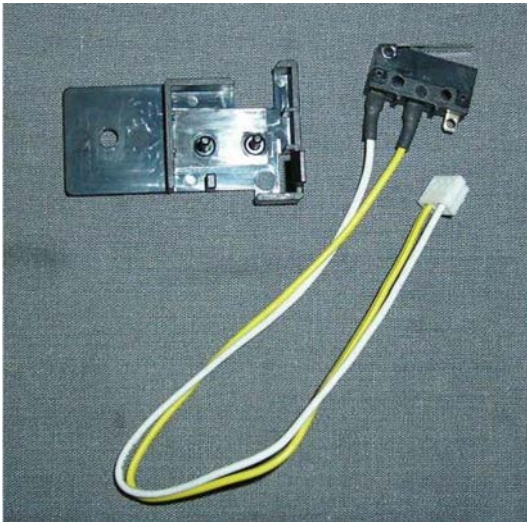
j017r109

2. Release the front tab [1] of the connector cover.
3. Remove connector cover [2].



j017r110

4. Disconnect the switch harness [1] (🔧 x2, 📏 x1).
5. Pull out the harness [2].
6. Remove the switch bracket [3] and switch (🔧 x1, Tab x1).

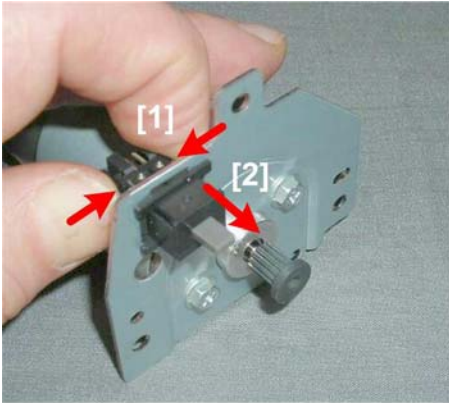


j017r111

7. Separate the bracket and switch.

Jam Wheel Cover Switch

1. Remove the vertical motor bracket.



j017r112

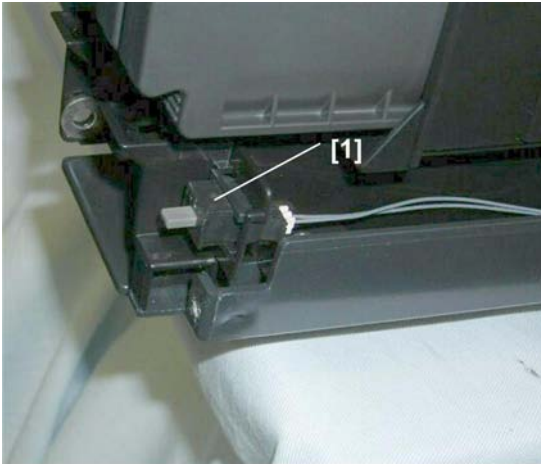
4

2. Pinch the sides of the switch [1], push it out [2].

Right Front Cover Switch

Remove:

- Right front cover
- Right cover



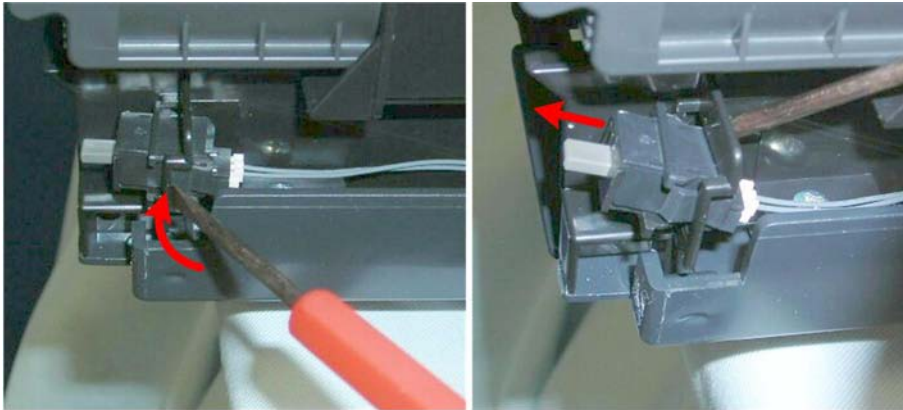
j017r113

1. The right front cover switch [1] is at the bottom of the front right corner.



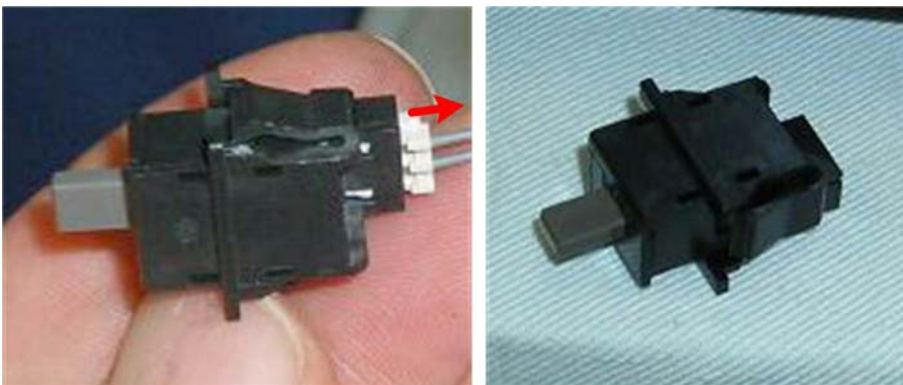
j017r114

2. Disconnect the switch harness (E x1).



j017r115

3. Use the tip of a small screwdriver to release and remove the switch.



j017r116

4. Disconnect the switch.

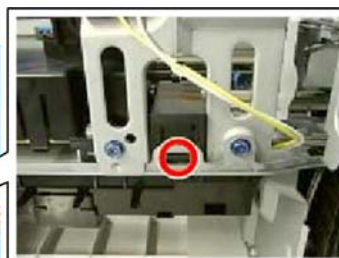
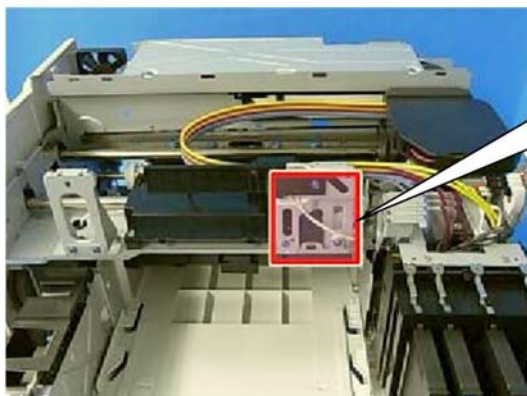
Duplex Unit Set Switch

Preparation

Remove:

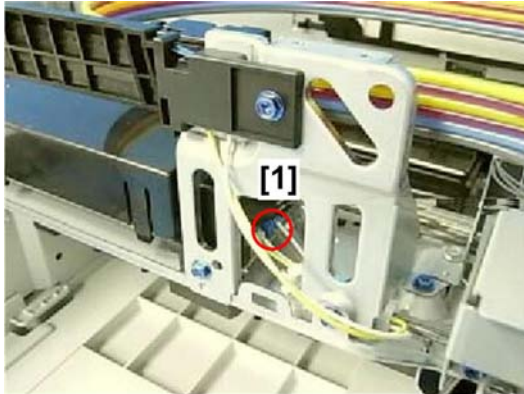
- Paper cassette
- Output tray
- Right cover
- Canopy cover, top cover
- Right front door
- Operation panel
- Duplex unit
- Rear cover
- Front cover
- Maintenance unit

4



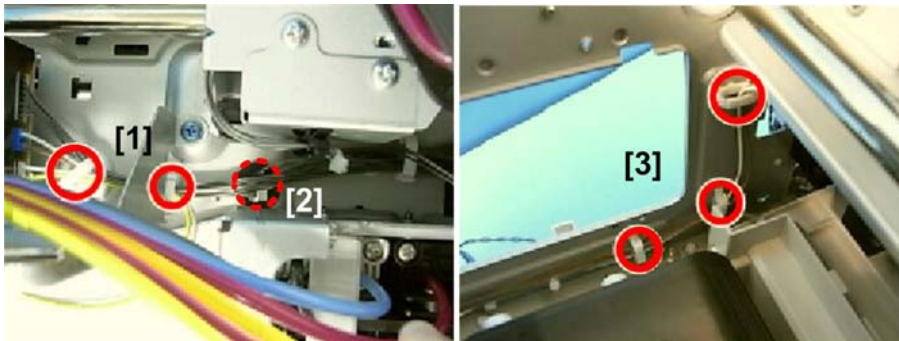
d023j017

1. Remove the harness cover (Hook x1).



j023r018

2. Disconnect harness [1] (🔧 x1).



j023r019

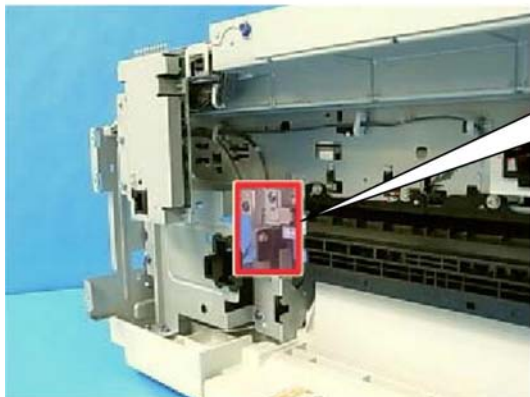
3. From above, free the harness [1] and push the harness through the hole [2] (🔧 x2).
4. On the right side, free the harness [3] (🔧 x3).



j023r020


5. On the right side above the right ink collection tank, free the harness (🔧 x2).

J017, J018

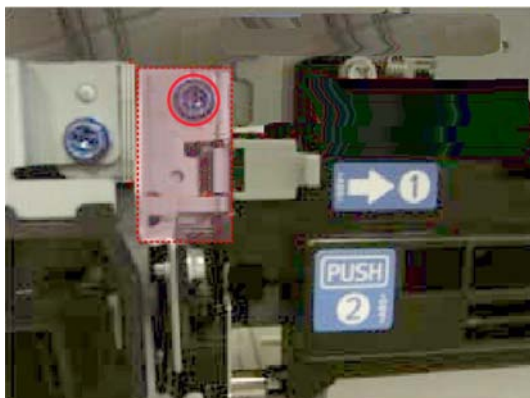


j023r021

4

6. Remove switch bracket [1] ( x1).

J023



j023r022


 **Note**

- The shape of the bracket is different.

Remove switch bracket [1] ( x1).



j023r023

7. Remove the set switch ( x1).
8. After re-installing the maintenance unit execute manual cleaning.

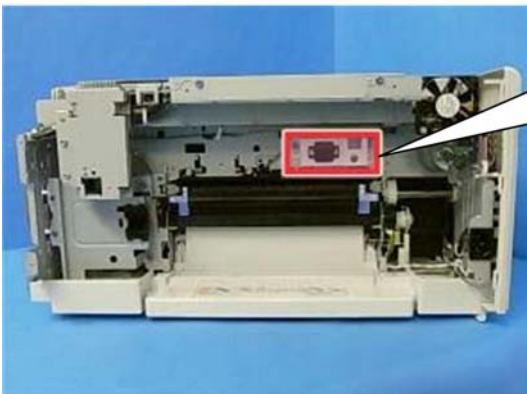
4

Bypass Drawer Connector

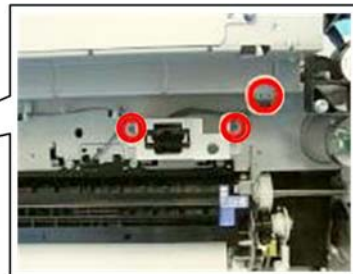
Preparation

Remove:

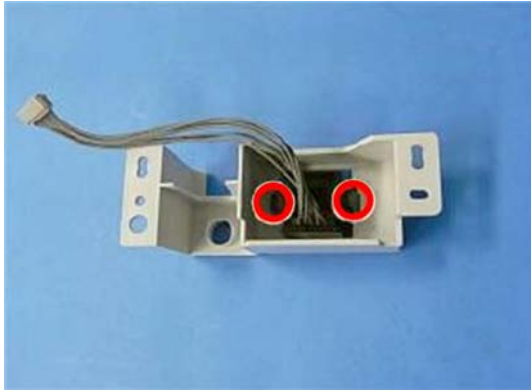
- Duplex unit
- Right cover
- Rear cover



j023r026



1. Remove the drawer connector bracket ( x2,  x1).



j023r027

4

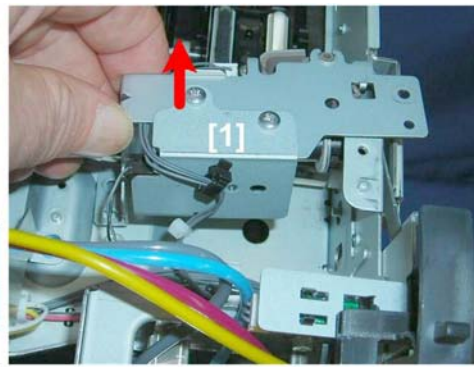
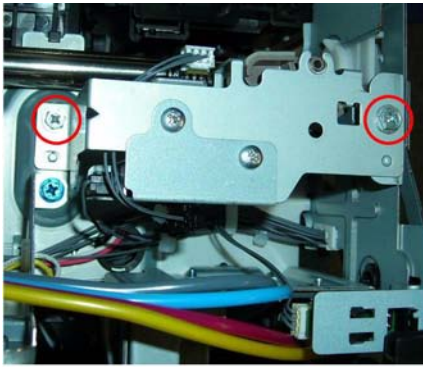
2. Separate the connector and bracket (▼ x2).

Air Release Solenoid

Preparation:

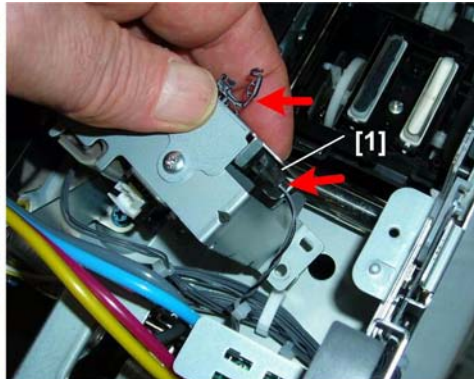
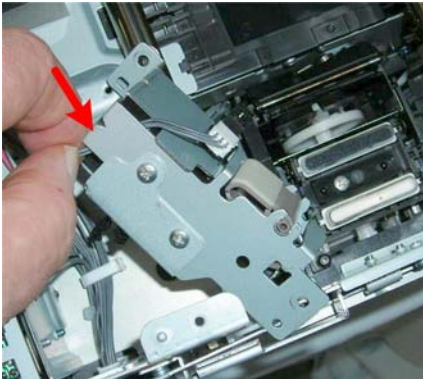
Remove:

- Remove canopy cover, top cover.
- Remove right rear cover.
- Unlock carriage (p.80)
- Move the carriage to the left.



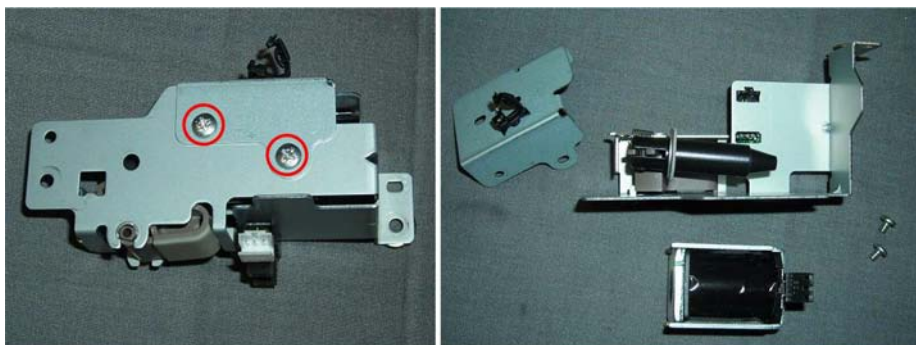
j017r117

1. Disconnect solenoid bracket [1] (🔧 x2).



j017r118

2. Free the harness and disconnect solenoid [1] (🔧 x2, 📏 x1)



J017r119

4

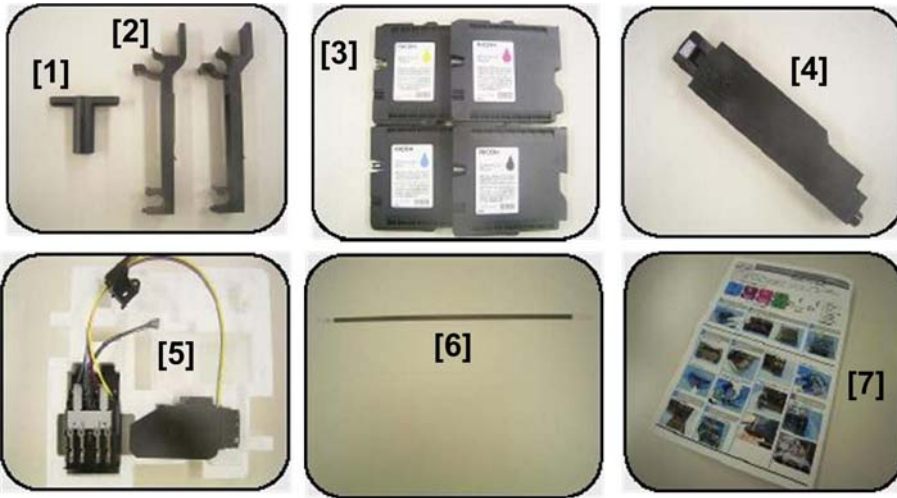
3. Separate the bracket and solenoid ( x2).

Carriage Unit

Replacing the Carriage Unit (J017/J019/J021/J023)

Accessories

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



j017r151a

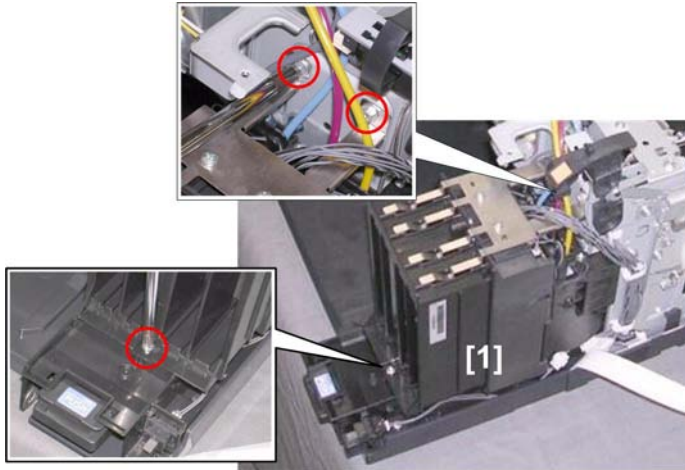
	Item	Qty
[1]	Holder	1
[2]	Jigs	2
[3]	Ink Cartridges	4
[4]	Ink Collector Unit	1
[5]	Carriage Unit (with Ink Supply Unit)	1
[6]	Encoder Strip	1
[7]	Instructions	1

Preparation

Switch the machine off and remove:

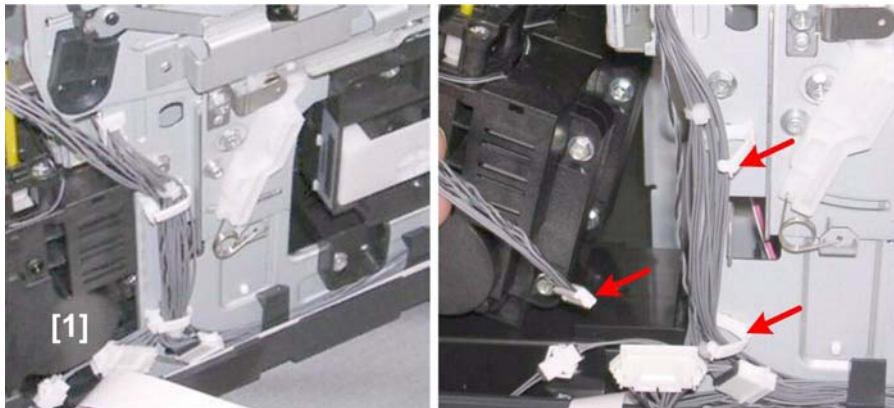
- Paper cassette
- Output tray
- Right cover
- Top cover, canopy cover
- Right front cover
- Front cover

4



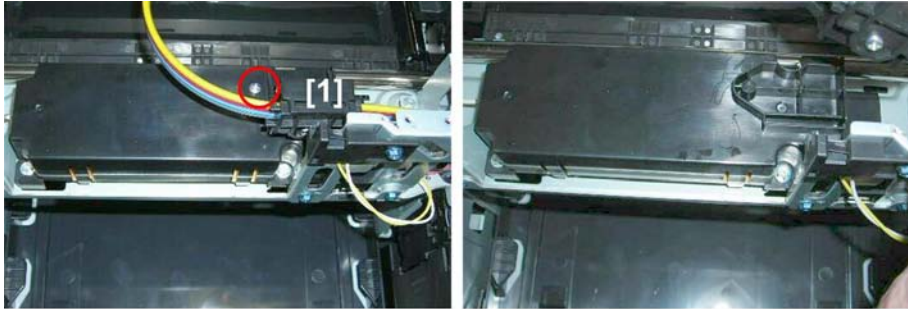
j017r152

1. Remove screws of ink supply unit [1] (🔩 x3)



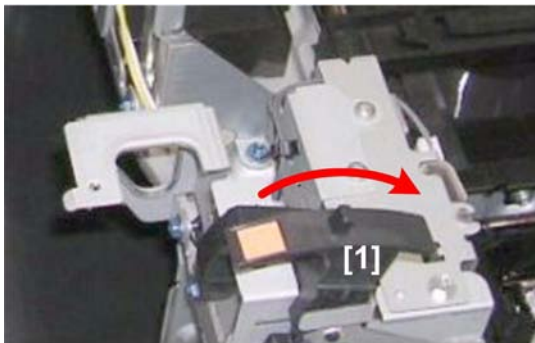
j107r153

2. Disconnect the ink supply unit [1] (🔌 x2, 📁 x1)



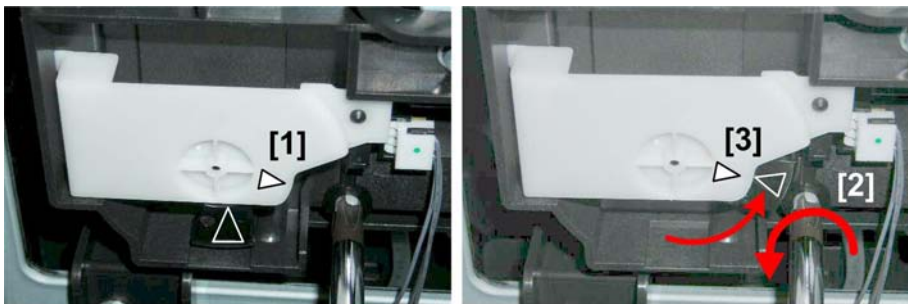
j017r067

3. Remove the ink tube housing [1] ( x1).



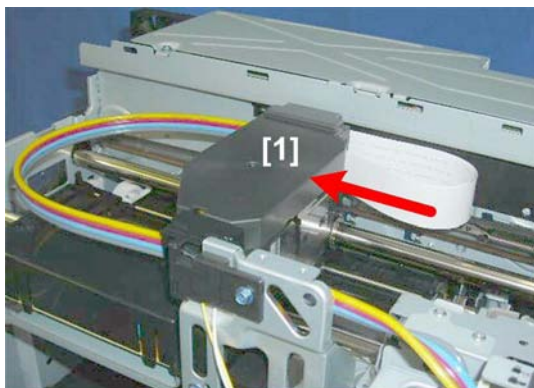
j017r154

4. Push the carriage position lever (envelope selector) [1] to the rear position.



j017r155

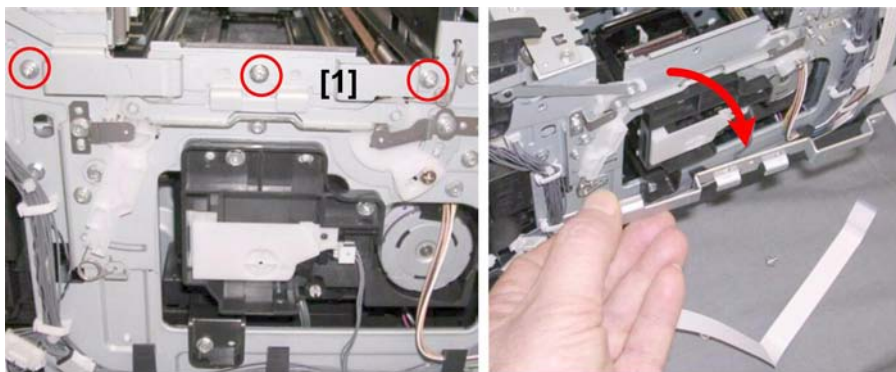
5. Look at the maintenance unit and locate the two triangles [1].
6. Insert the tip of a screwdriver into the hole [2] and turn it counter-clockwise to rotate the lower triangle up to the other triangle until their points align [3]. This unlocks the carriage.




j017r156

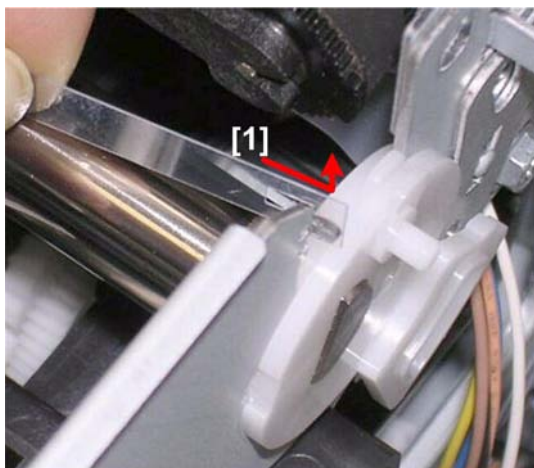
4

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



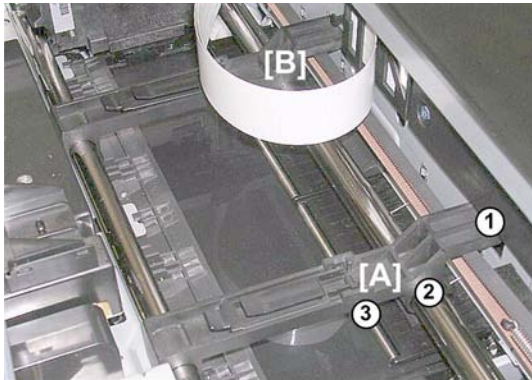
j017r157

8. Remove the right stay plate [1] ( x3).



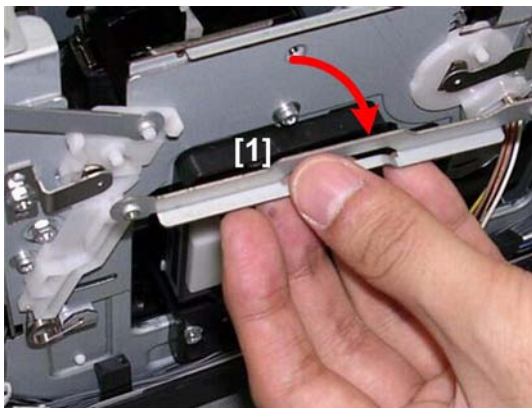
j017r158

9. Disconnect and remove horizontal encoder strip [1]. Pull the strip gently to the right and lift it off its hook.



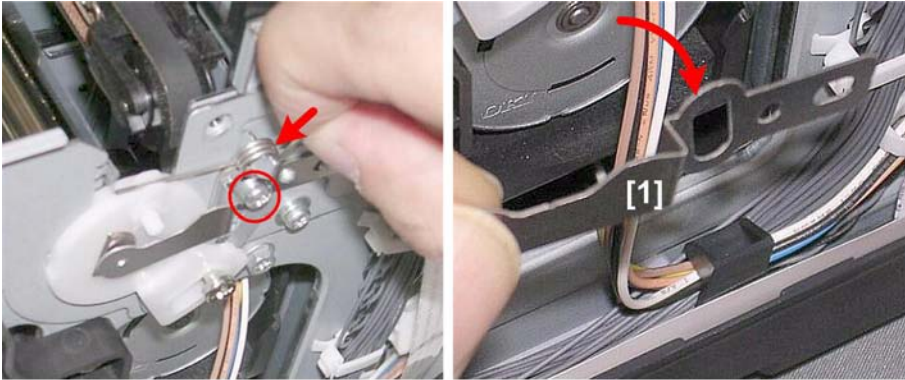
j017r159

10. Attach the jigs provided with the carriage replacement kit.
- Insert the end of the right jig [A] into the hole (1) at the rear.
 - Fasten the rear end of the right jig to the rear guide rod (2).
 - Fasten the front end of the right jig to the front guide rod (3).
 - Repeat this procedure for the left jig [B].




j107r160

11. Remove the linkage [1].

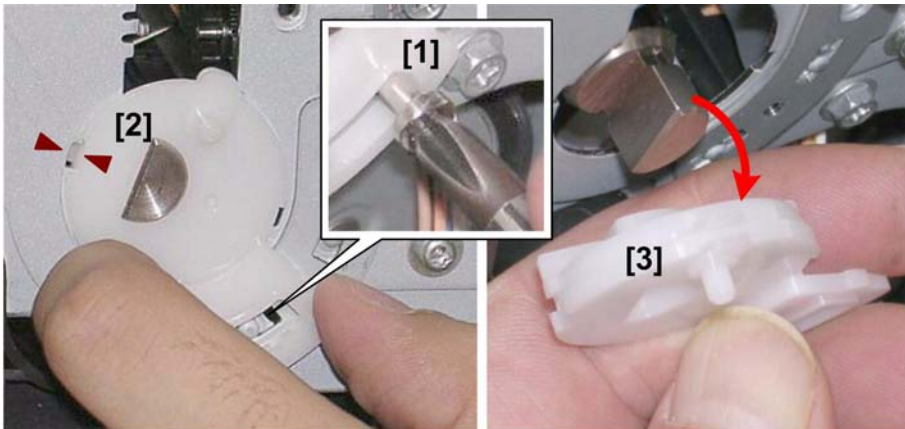


j017r161

4


12. Remove guide lock [1] (Spring x1,  x1).

- Remove the spring from the rear as shown above.
- Do not touch the opposite side.



j017r162

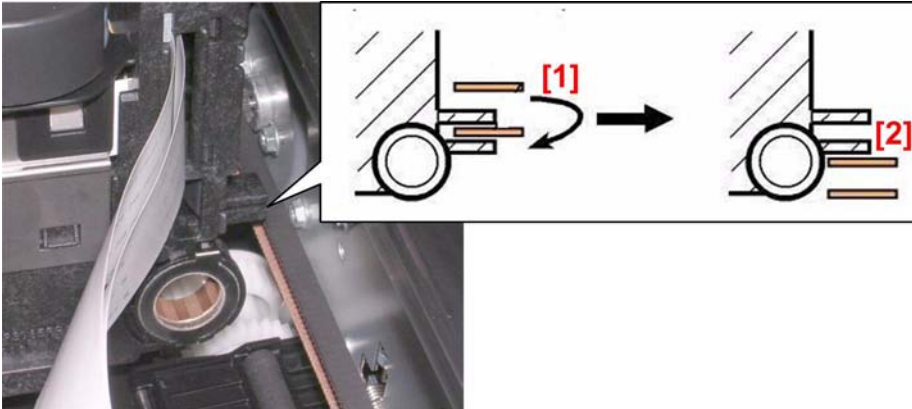
13. Remove the cam.

- Remove screw [1] ( x1).
- Rotate the cam [2] to align the triangles.
- Remove the cam [3].



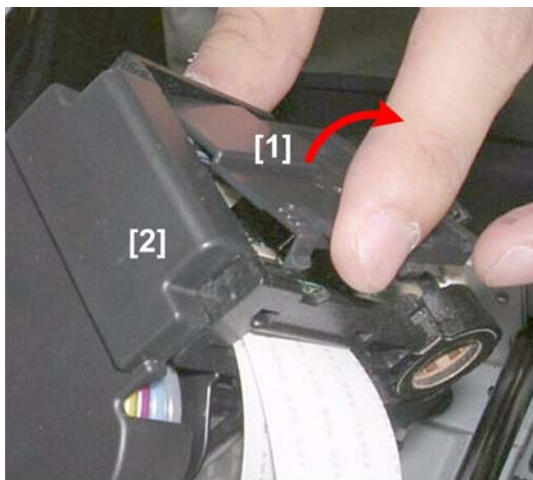
j017r163

14. Attach the holder [1] (provided with the carriage replacement kit) to the end of the guide rod [2]. To attach the holder to the end of the rod:
- Align the triangle on the holder with the white line on the guide rod.
 - Push the holder onto the end of the rod, rotate it 180 degrees to lock it
15. Pull out the holder with the rod attached.



j017r164

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



j017r165

17. Remove the cover [1] from the back of the carriage [2].

★ Important

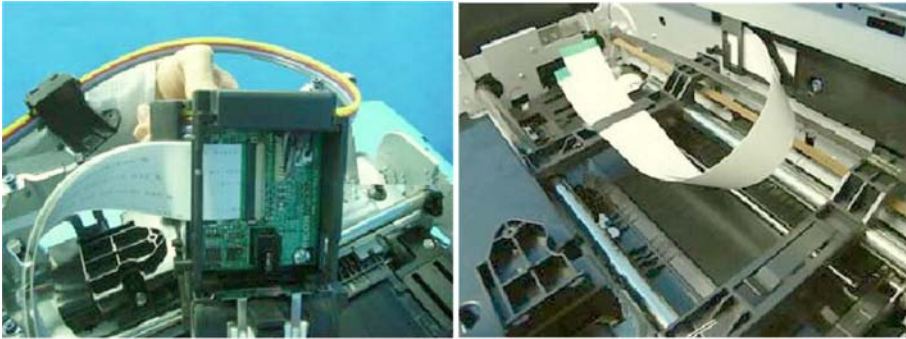
- Work carefully when disconnecting the FFC's in the next step to avoid contaminating them with grease from the guide rod.

J017/J021/J023



j017r166

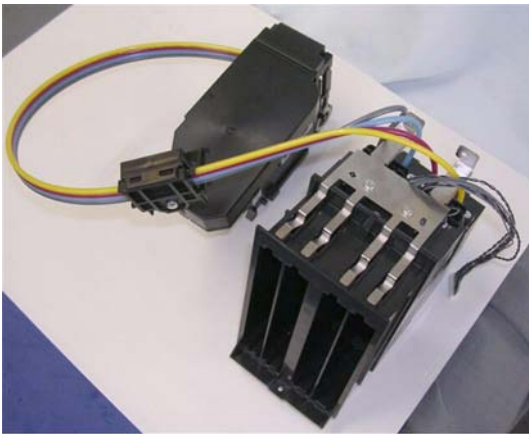
18. Disconnect the flat cables [1] ( x2).



j018r166

↓ **Note**

- The J018 requires disconnection of three flat cables.



j017r167

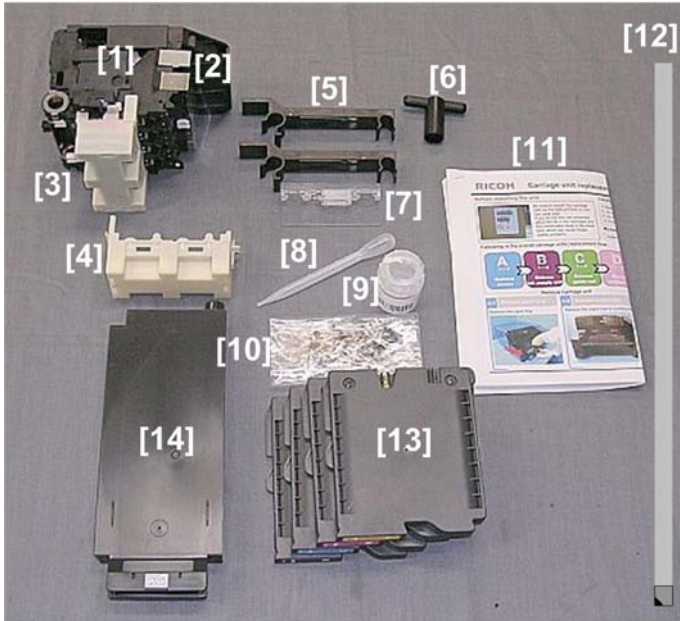
19. Without disconnecting any tubing, remove the carriage [1] and ink supply unit [2] together.
20. Set the carriage and ink supply unit on a flat surface covered with paper or the packing of the new unit.
21. Re-assemble the printer.

↓ **Note**

- Before you re-assemble the printer, be sure to read through the "Re-installation" tips described at the end of this section.
22. After re-assembling the printer, do the SP settings for after carriage replacement. (See "After Replacing the Carriage" at the end of this section.)

Replacing the Carriage (J018)

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



j018r200

4

	Item	Qty
[1]	New Carriage	1
[2]	Front Cover Plate - Metal (on New Carriage)	1
[3]	Bottom Cover (on New Carriage)	1
[4]	Bottom Cover (for Old Carriage)	1
[5]	Jigs	2
[6]	Holder	1
[7]	Valve Cover - Clear Plastic	1
[8]	Dropper - Plastic	1
[9]	Filling liquid - Bottle	1
[10]	Extra Valves (In Plastic Bag)	4
[11]	Instructions	1
[12]	Horizontal Encoder Film Strip	1
[13]	Ink Cartridges	4

	Item	Qty
[14]	Ink Collector Unit (not shown)	1

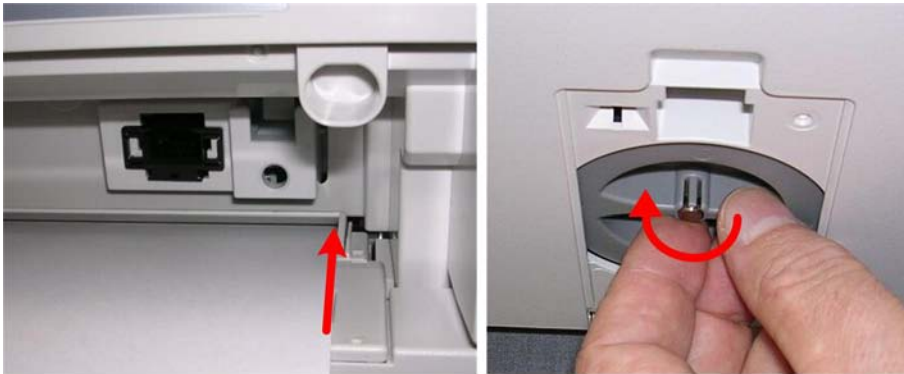
Preparation

Switch the machine off and remove:

- Push the envelope selector to the rear.
- Top cover, canopy cover
- Right cover

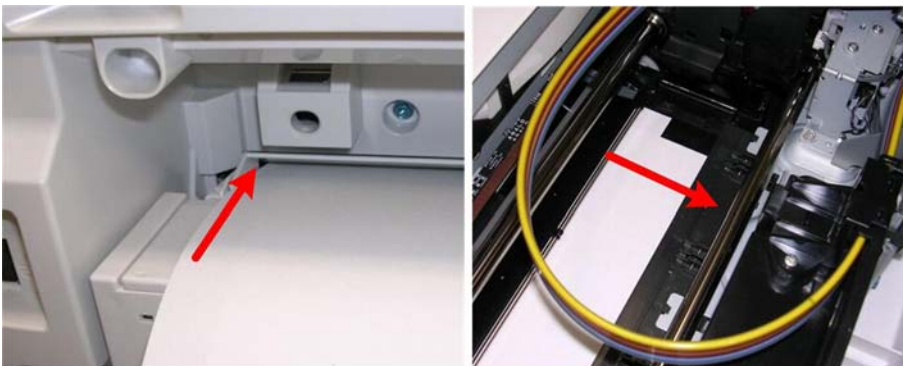
Protecting the Transfer Belt

4



j018r201

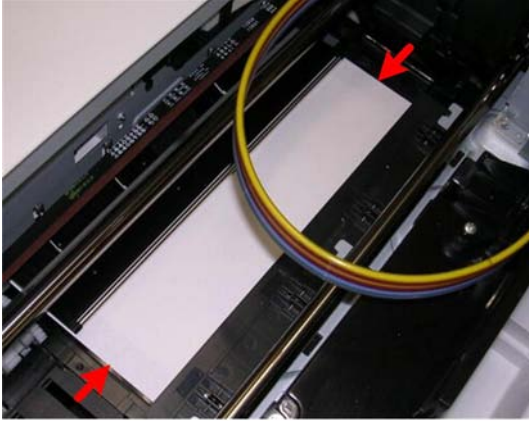
1. At the back of the machine, insert one sheet of A4 flush with the right side of the slot.
2. Open the jam wheel cover and turn the wheel clockwise until the paper starts to feed.



j018r202

3. Insert another sheet of A4 paper flush with the left side of the slot.

4. Turn the jam wheel clockwise until you see both sheets on the transfer belt.
5. Make sure that both ends of the transport belt are covered.



j018r203

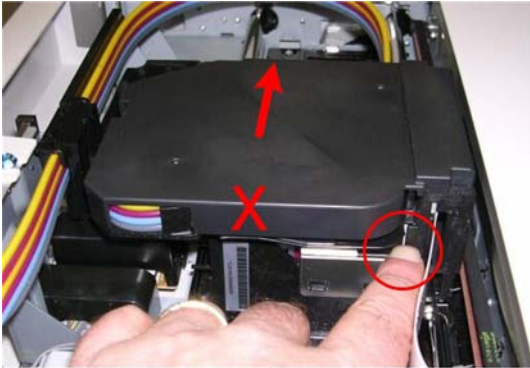
6. Turn the jam wheel until the sheets cover the entire surface of the transfer belt

Disassembly



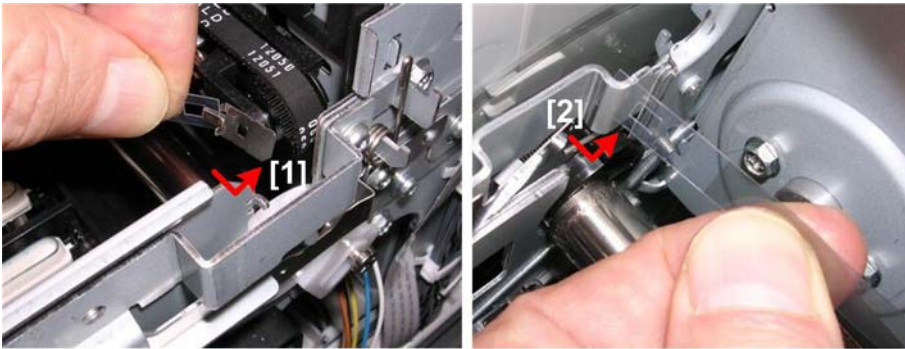
j018r204

1. Look at the maintenance unit and locate the two triangles [1].
2. Insert the tip of a screwdriver into the hole [2] and turn it counter-clockwise to rotate the lower triangle up to the other triangle until their points align [3]. This unlocks the carriage.



j018r205

3. Push the carriage to the center. Press on the carriage itself as shown, not the top cover.



j018r206

4. Remove the horizontal film encoder.
- Disconnect the encoder strip on the right [1].
 - Disconnect the strip on the left [2].

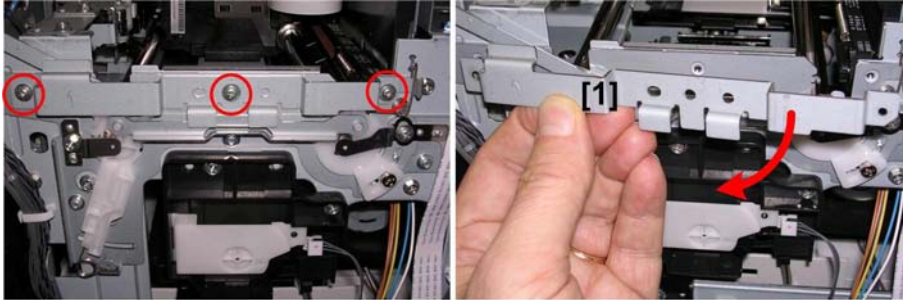


j018r207

5. Gently pull the encoder strip to the right through the carriage then remove it and set it aside.

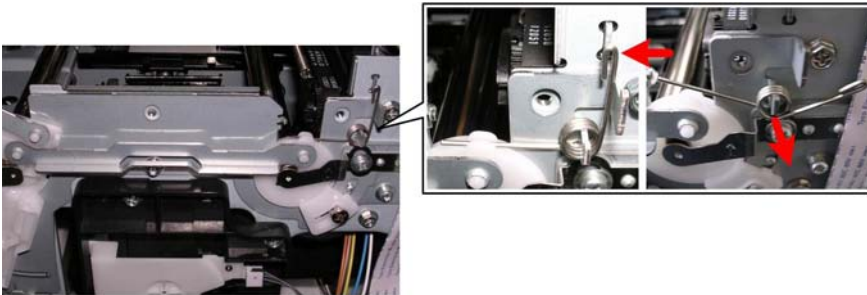
★ Important

- Pull the encoder strip out of the right side of the carriage.
- The right end of the encoder strip has a metal fastener on it. Do not try to pull the metal fastener through the carriage.



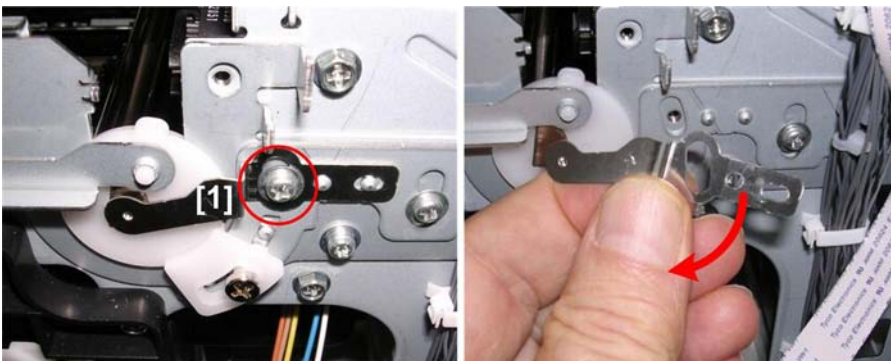
j018r208

6. Remove the right stay plate [1] (⚙️ x3).



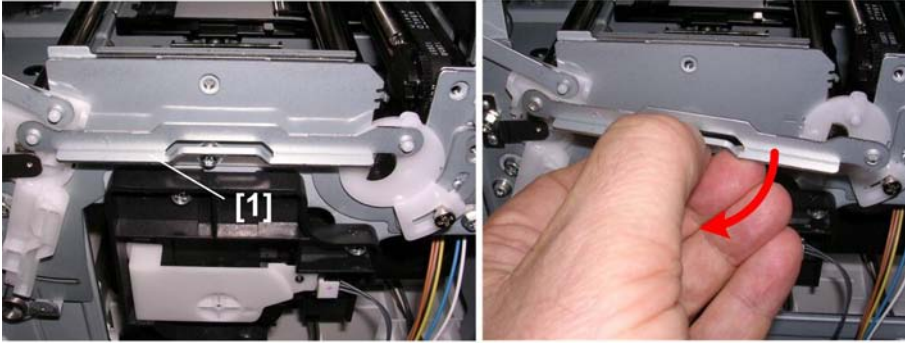
j018r209

7. Disconnect the vertical arm of the spring and remove it.



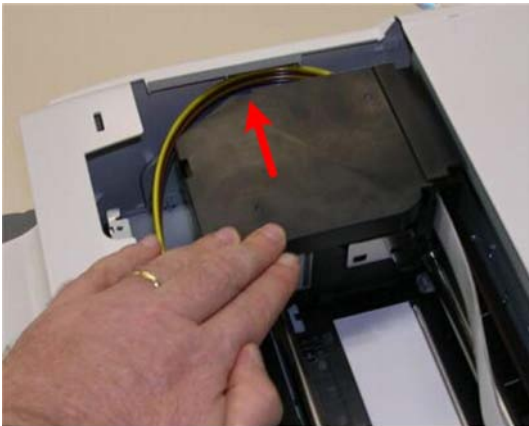
j018r210

8. Remove the guide lock [1] (⚙️ x1).



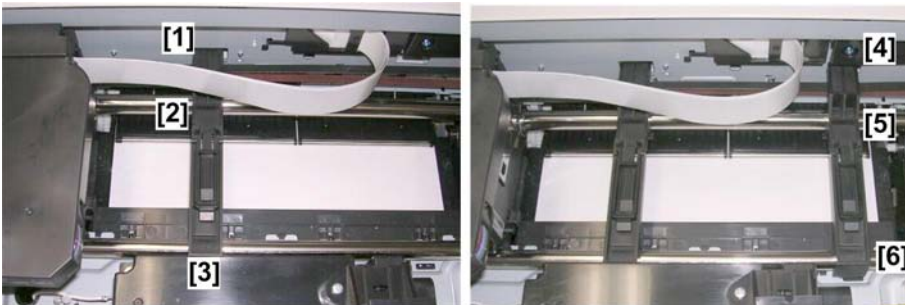
j018r211

9. Remove the linkage (no screws).



j018r212

10. Push the carriage all the way to the left side of the machine until it stops.

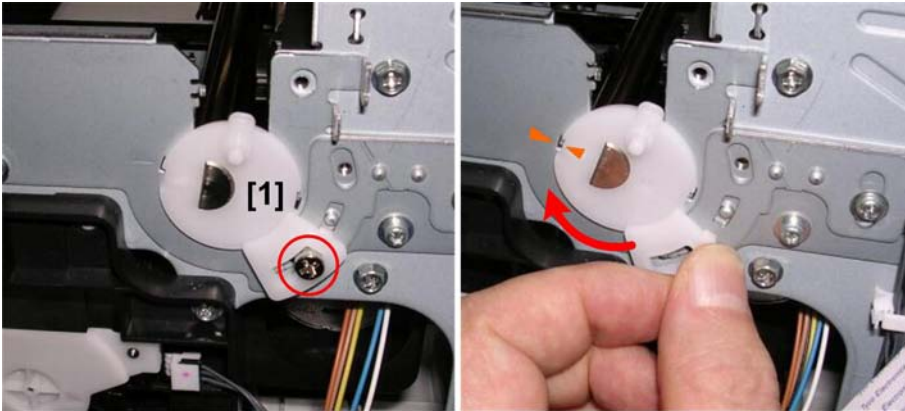


j018r213

11. Attach the jigs provided with the Carriage replacement kit.


- Insert the end of a jig into the hole [1] at the rear.
- Fasten the jig to the rear guide rod [2]
- Fasten the jig to the front guide rod [3]

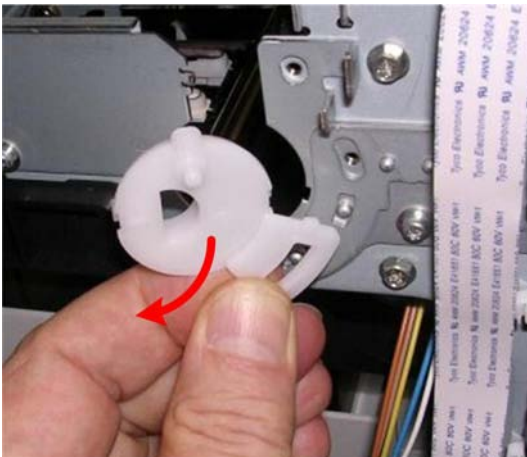
- Repeat this procedure for the other jig [4], [5], [6]



j018r214

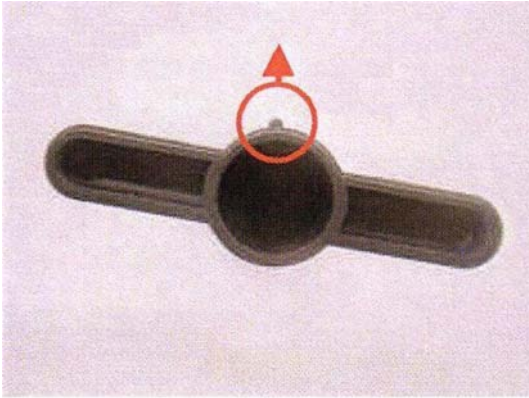
12. Disconnect the cam [1].

- Remove screw ( x1).
- Rotate the cam clockwise to align the triangles.



j018r215

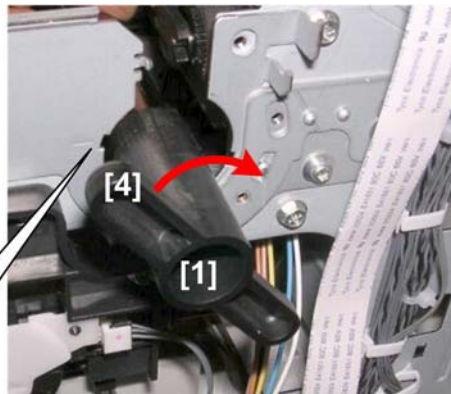
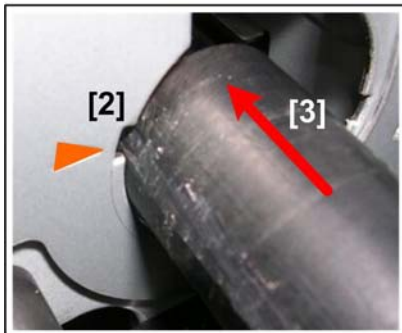
13. Remove the cam.



t_013b

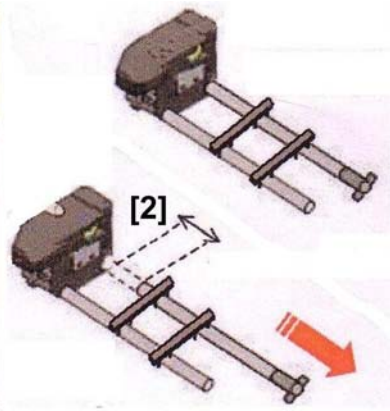
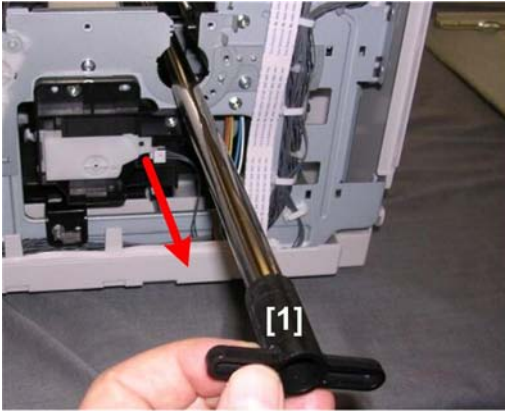
14. Locate the peg on the rim of the accessory holder provided with the new carriage.

4



j018r216

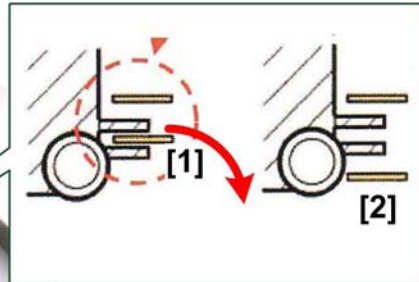
15. Attach the holder [1] to the end of the guide rod. To attach the holder to the end of the rod:
- Align the peg on the rim of the holder with the notch [2] indicated by the triangle.
 - Push the holder peg and holder [3] through the notch onto the end of the rod.
 - Rotate the holder handle [4] about 180 degrees to lock the holder onto the guide rod.



j018r217

4

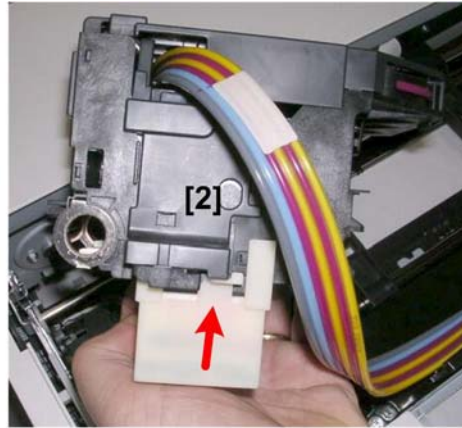
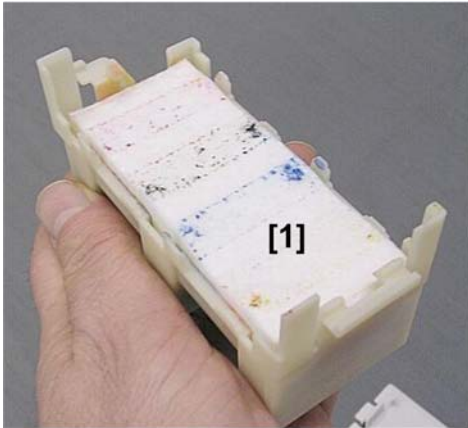
16. Pull the guide rod [1] out as far as the first jig [2]. Do not pull the guide rod through the jig.



j018r218

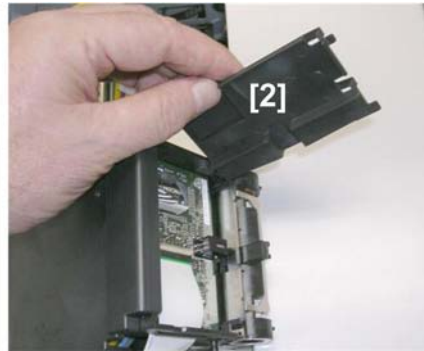
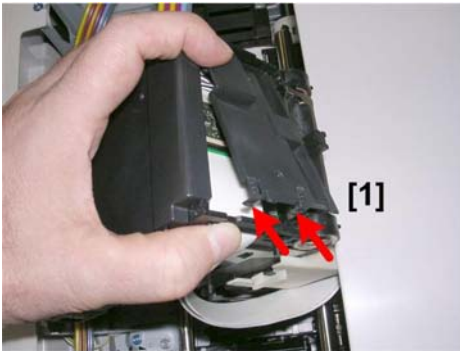
- 17. Disconnect the bottom half [1] of the carriage timing belt from the back of the carriage.
- 18. Make sure the top and bottom of the belt are disengaged from the carriage as shown above [2].

Removing the Old Carriage



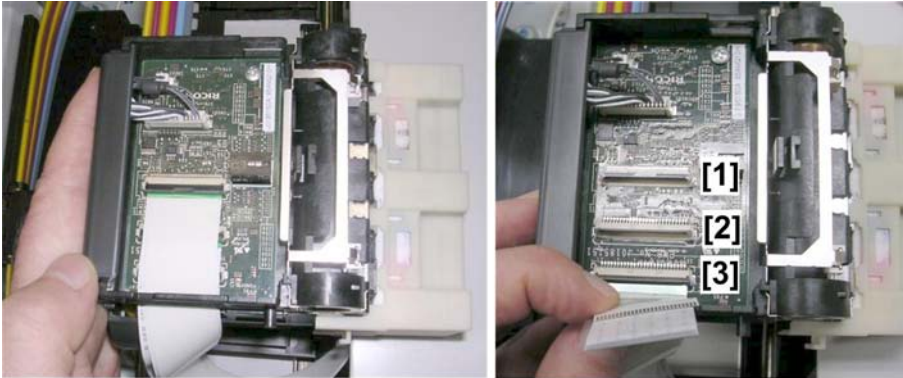
j018r219

1. Pick up the unattached accessory bottom cover [1] and hold it as shown.
2. Attach the cover to the bottom of the carriage [2] to cover the print heads.



J018r220

3. Release the tabs of the HRB cover [1] on the back of the carriage.
4. Remove the HRB cover [2].



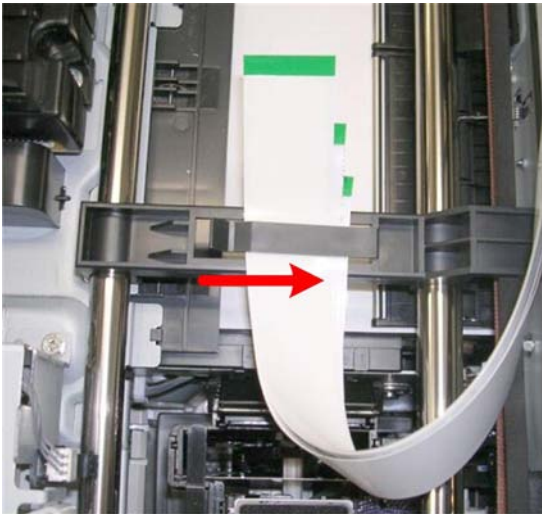
j018r221

4

5. Disconnect the three flat cables from the HRB [1], [2], [3].

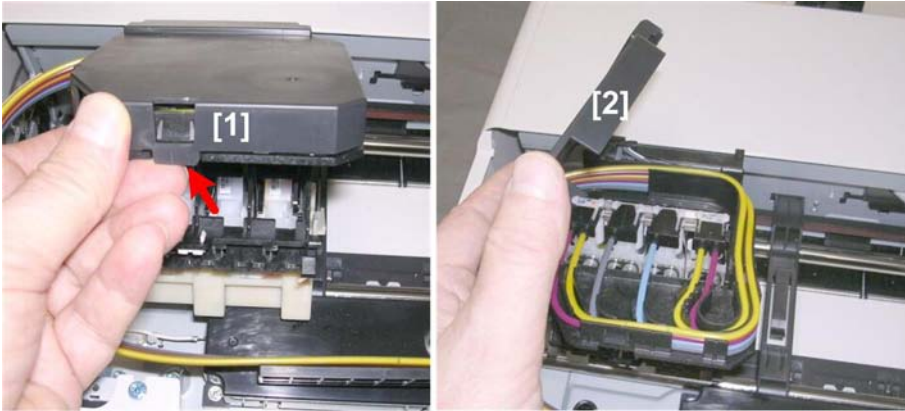
★ Important

- Work carefully when disconnecting the FFC's to avoid contaminating them with grease from the guide rod.



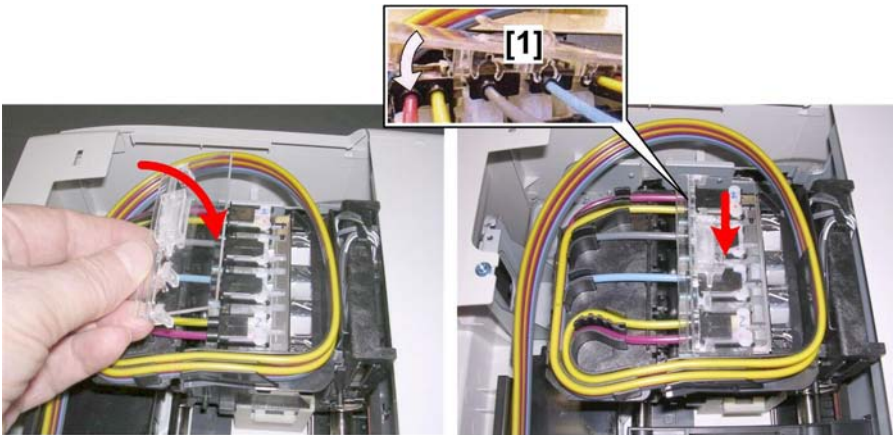
j018r222

6. Pull the three FCCs out of the carriage and insert them into the slot on top of the right jig to keep them from interfering with other procedures.



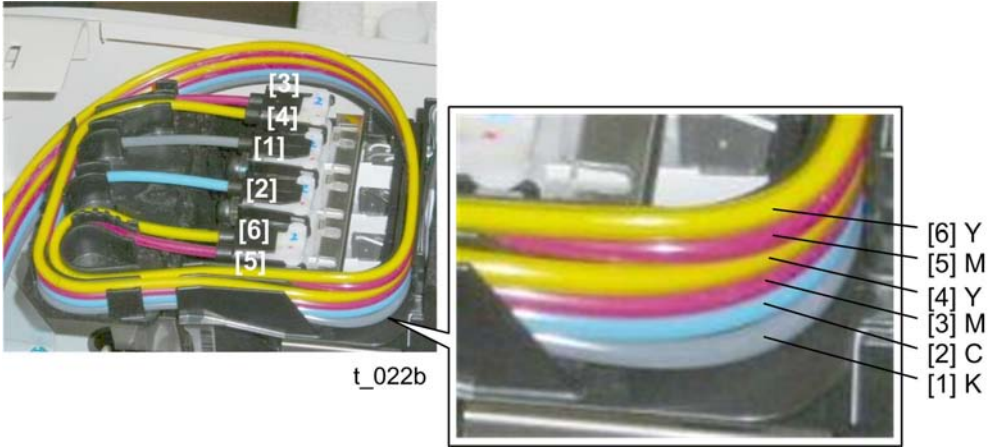
j018r223

7. Release the latch [1] of the carriage top cover.
8. Remove the top cover [2].



j018r224

9. Attach the valve cover (kit accessory) over the tubes and valves on top of the carriage.
10. Make sure that the C-clamps [1] snap securely over the O-rings.



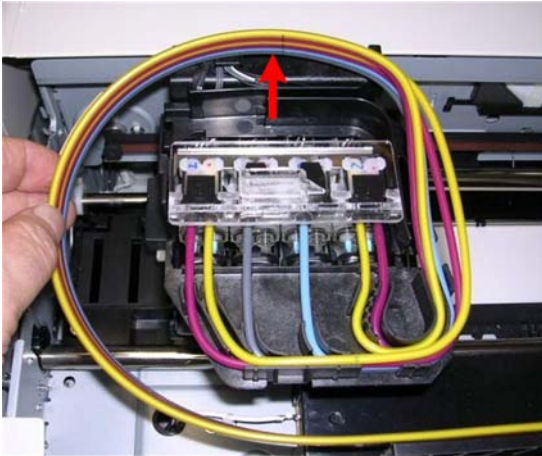
t_022b

4

★ Important

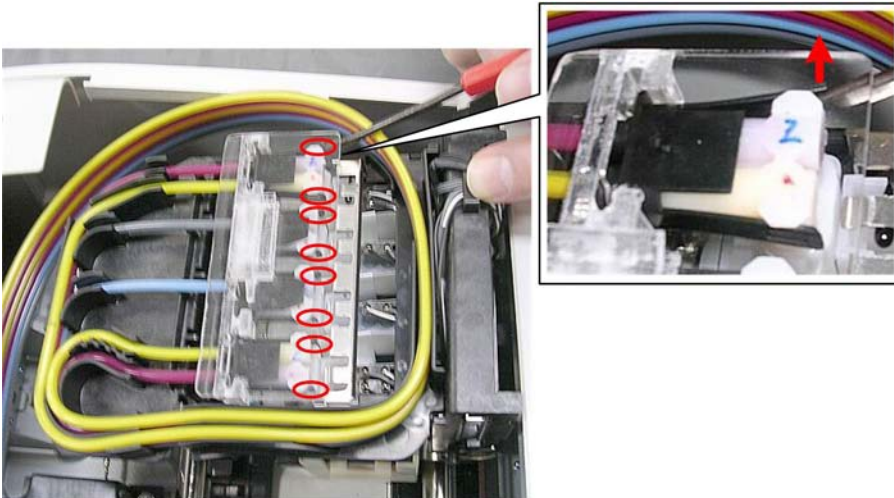
- Before disconnecting the tubes, note how they are arranged and connected.
- Note the order of how the tubes are stacked at the right rear corner of the carriage (numbered [1] through [6] from bottom to top).
- Note how they are routed to the print heads at the front

Tube No.	Color.
[3]	M
[4]	Y
[1]	K
[2]	C
[6]	Y
[5]	M



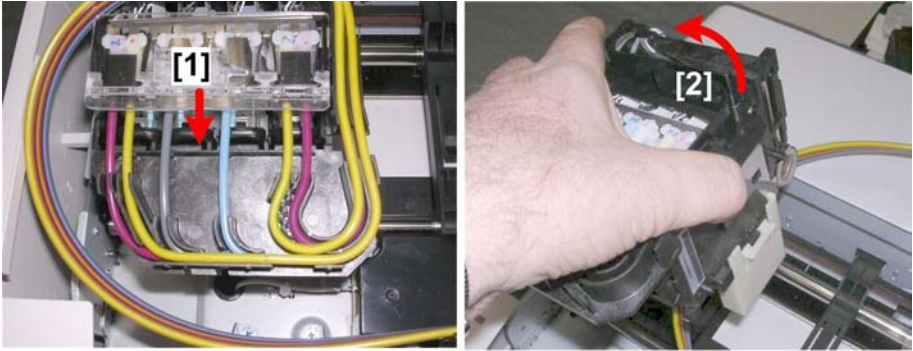
j018r225

11. Lift the tubes out of the rear guide.
12. Lift the tubes out of the rear guide.



j018r226

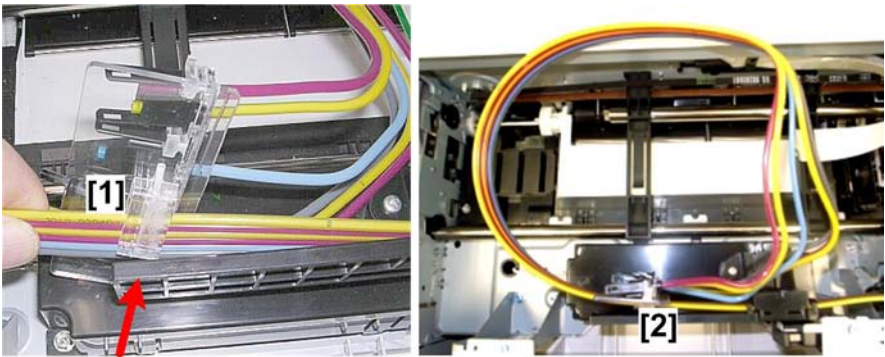
13. Release the snap arms (x8) on each of the four valve sets.



j018r227

4

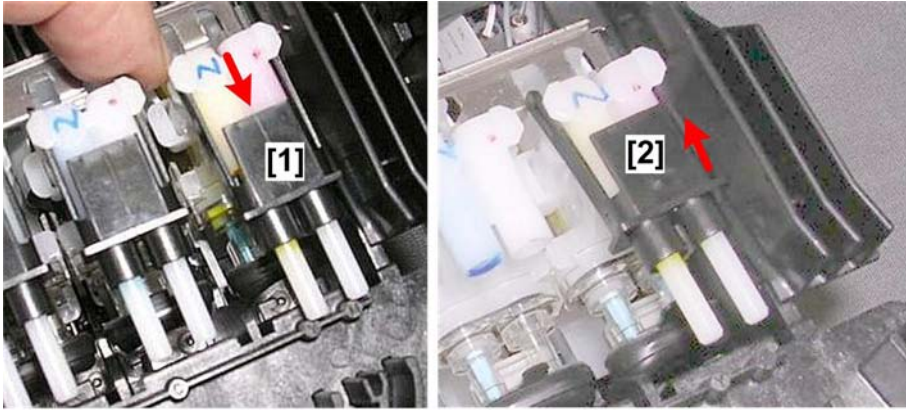
- 14. Remove the valve cover [1] with the tubes attached.
- 15. Remove the carriage [2].



j018r228

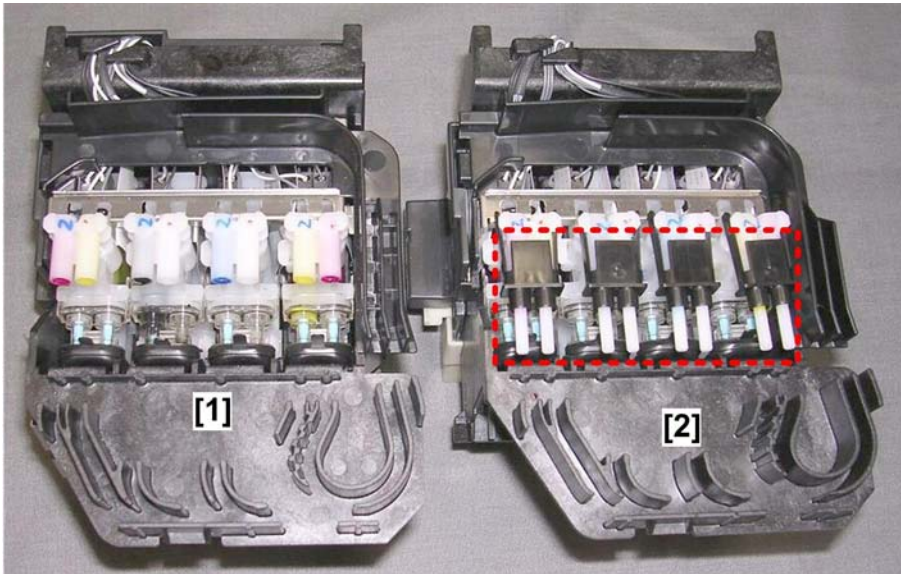
- 16. Slide the tube stack under the arm on top of the valve cover [1]. This holds the tubes in their original positions and makes it easier to re-connect them later.
- 17. Set the valve cover on the HVPS cover as shown [2].

Installing the New Carriage



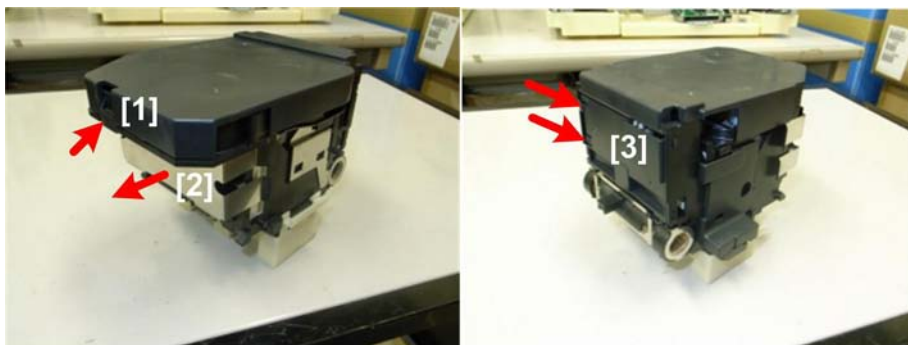
j018r229

1. Remove the clean valves from the plastic back in the carriage replacement kit.
2. Remove each valve from the old carriage [1] and put it in the plastic bag for disposal.
3. Attach the clean valves [2] to the old carriage removed from the machine.



j018r230

4. The illustration shows the new carriage [1] with no valves attached and the old carriage with valves attached to prevent leakage.

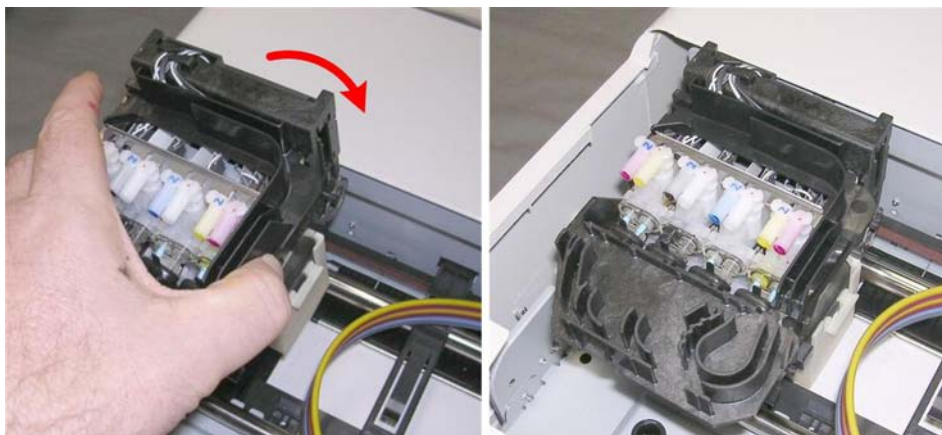


j018r231

4

5. Prepare the new carriage for installation. Remove:

- [1] Top cover
- [2] Side cover
- [3] HRB cover



j018r233

6. Set the new carriage in the printer.

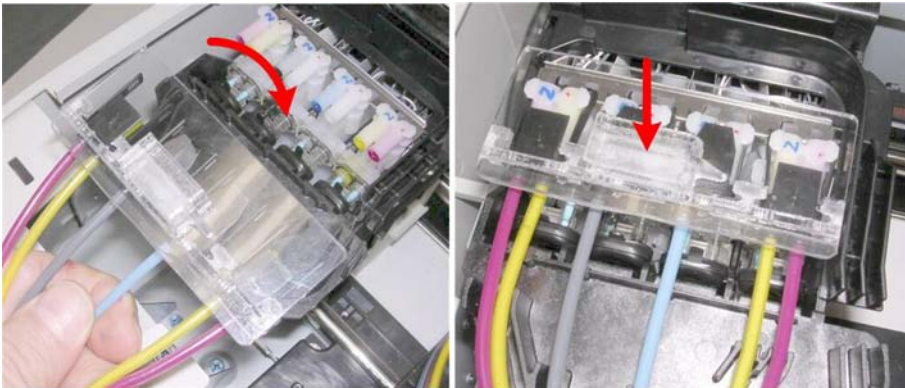


j018r232

7. Pull the valve cover out of the machine with the tubes attached and place a piece of paper under the cover.
8. Push each tube out slightly to expose the O-rings.
9. Use the dropper and filling liquid (provided) to apply one or two drops to each of the six O-rings.

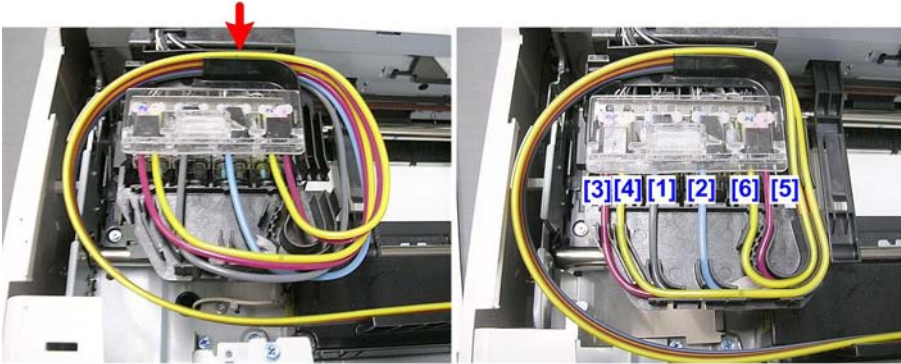
Note

- This filling liquid is completely neutral and does not affect the ink.



j018r234

10. Re-connect the valve cover to the top of the carriage.

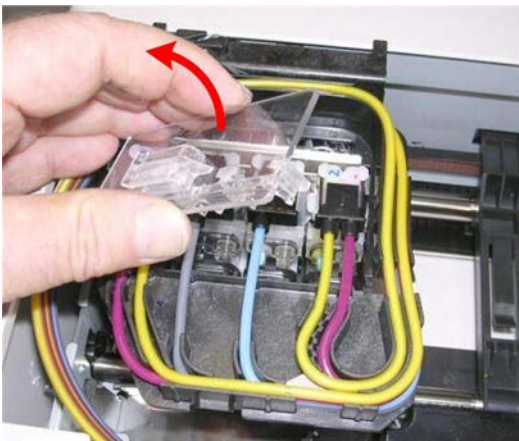


j018r235

4

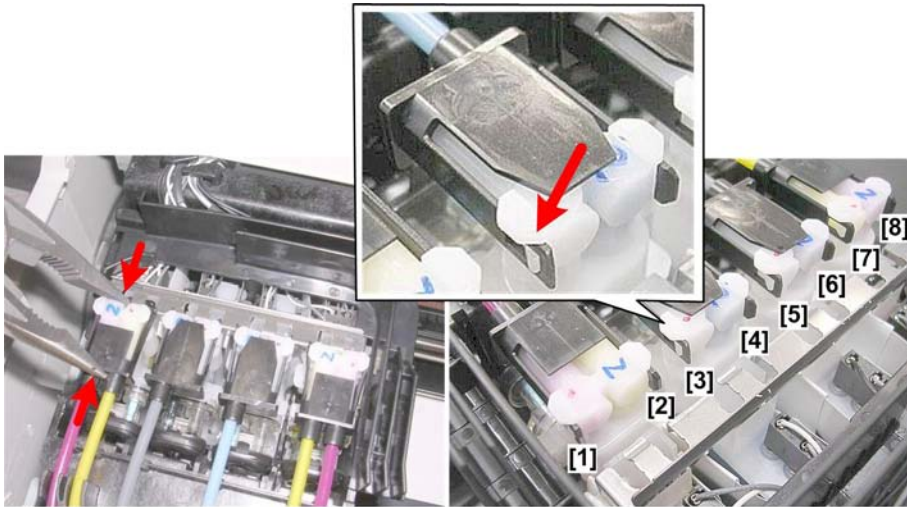
11. Set the tube bundle in the guide at the back of the carriage.
12. Route the tubes to their correct slots in the order shown by the numbers [1] to [6].

Tube No.	Color.
[1]	K
[2]	C
[3]	M
[4]	Y
[5]	M
[6]	Y



j018r236

13. Disconnect and remove the valve cover.

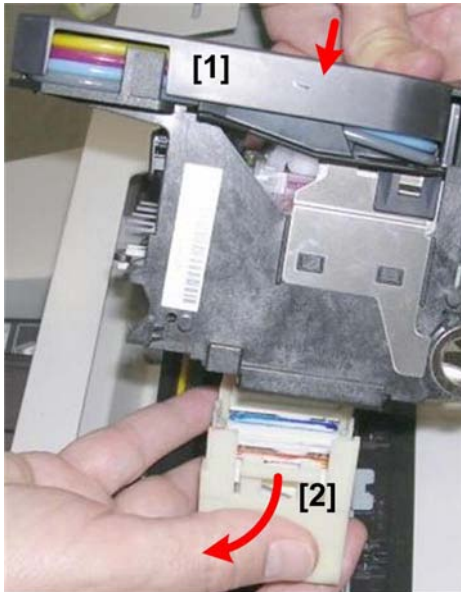


j018r237

14. Use a pair of long-nose pliers to press each valve set onto its connection point on the carriage.
15. Check the sides of each connector to confirm that the 8 snap arms [1] to [8] are locked and flat as shown at [3].

★ Important

- Double-check and make sure that each snap are is locked and flat.
- Make sure there are none of the hoses is twisted.
- If a hose is twisted, or if a valve connection is loose at the snap arms, this could cause the machine to issue SC991.



j018r238

16. Remove the bottom cover from the bottom of the carriage.
17. Re-assemble the printer.

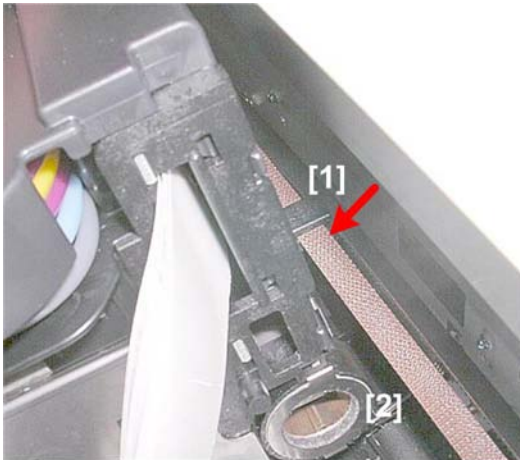
Note

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

18. 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:

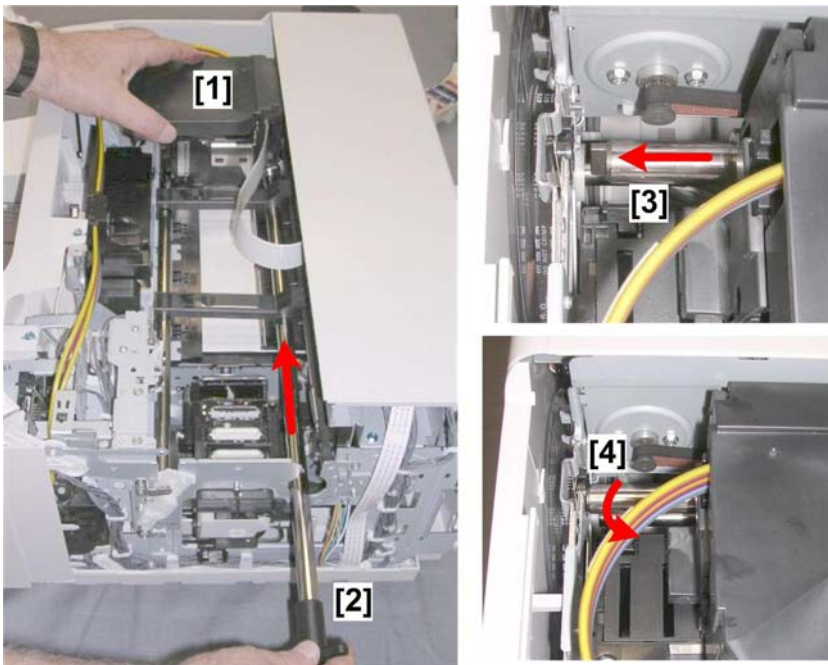
Timing Belt Re-attachment



j018r239

- It is easier to re-attach the timing belt [1] before re-installing the guide rod [2].
- Access to the timing belt notch is very difficult with the guide rod installed.

Guide Rod Re-installation



j018r240

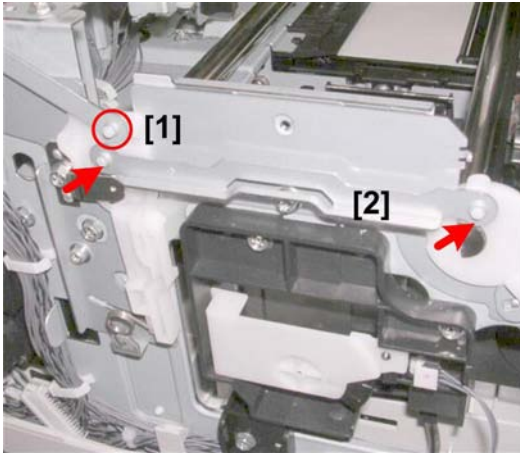
1. Lift the carriage [1] slightly.
2. Push the guide rod [2] through the hold in the bottom of the carriage.
3. Push the guide rod [3] into the hole on the left frame of the machine.

4. Rotate the guide rod [4] until the inserts and locks in place.

Note

- If the guide rod is not locked and flush with the left frame, you will not be able to re-install the cam on the right end of the guide rod.

Linkage Re-attachment



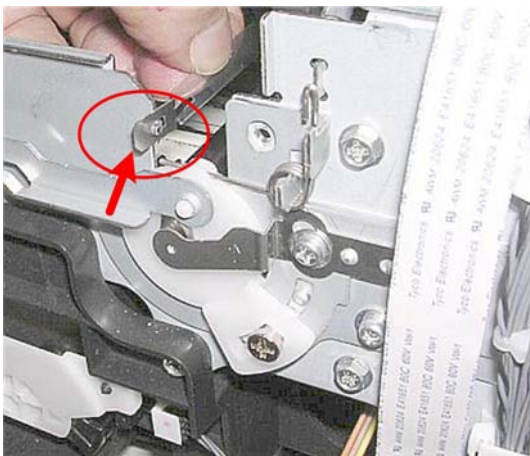
j018r241

1. Attach the linkage [1] of the envelope selector.
2. You may have to move the envelope selector slightly to the left or right so the holes of the linkage (indicated by the arrows) are aligned with the pegs.

Note

- Be sure the envelope selector linkage [1] is re-attached before you re-install the right stay.

Horizontal Encoder Installation



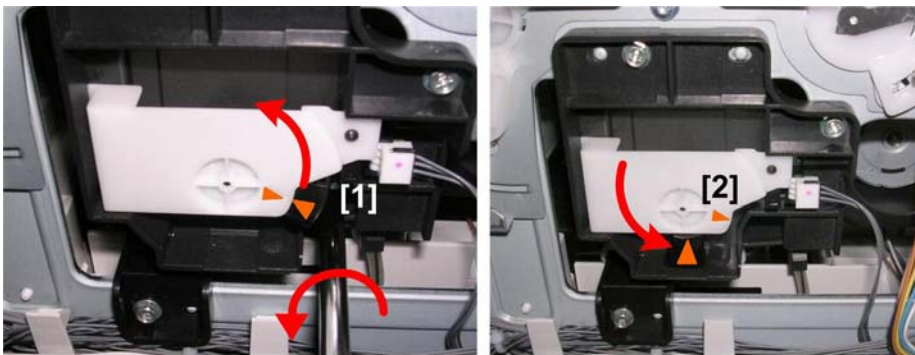
j018r242

1. Install the horizontal encoder provided with the carriage replacement kit.
2. Hold the strip with the beveled corner of the metal connector down (shown by the arrow).
3. Thread the left end of the strip through the carriage (not the right end with the metal connector).
4. Attach the left end of the strip to the frame, then connect the right end as shown above with the beveled corner down.

Note

- The encoder strip is much easier to connect on the right end before the right stay is re-attached.

Lock the Carriage



j018r243

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

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

Note

- Never rotate the screwdriver clockwise.

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.



j017r168

4

3. Open the top cover.
4. Write down the numbers on the label attached to the left side of the print head unit. These are the values you must enter for the SP codes below.
5. Close the top cover.
6. Enter the SP mode.
7. Select "Engine Maint"> [#Enter].

SP no.
1000

8. Enter "5101".

SP no.
5101

9. Press [#Enter].

CARRIAGE UNIT CHANGE
5101

10. Press [#Enter].

CARRIAGE UNIT CHANGE
EXEC

11. Press [#Enter]> "OK?"> [#Enter].
12. ~~Press the down arrow key until you see "SP3104".~~

J017, J019, J021

These models have two print heads. Two settings are required.

[RTB 6](#)

[Delete step 12: not needed](#)

RTB 6
Delete step 12:
not needed

HRANK:H1:V 3104	Example Label
HRANK:H2:V 3105	
j017r168a	

J018

This model has four print heads. Four settings are required.

HRANK:H1:V 3104	Example Label
HRANK:H2:V 3105	
HRANK:H3:V 3106	
HRANK:H4:V 3107	
j018r168a	

- The set of numbers are the numbers assigned to the print heads.
- The second set of numbers list the values that you must enter for the SP codes.

★ Important

- **The second numbers that must be entered may be different on your label. Be sure to check the label on the side of the print head unit.**

13. Do the SP codes and enter the numbers specified on the label.

J017, J019, J021

1. Replace the four ink cartridges with new ones (provided).
2. 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.**
3. After you have installed the new ink cartridges and the ink collector unit, close the right front cover.

4. Wait for the machine to fill the print head ink tanks. This may take about 7 minutes.

All Models

1. Press [Menu].
2. Select "Maintenance" and do the following adjustments.
 - Select "Nozzle Check" and print the Nozzle Check Pattern. Clean and flush the print heads if required.
 - Select "Head Position" and print the Adjust Print Head Position Pattern. Do the adjustments if required.
 - Select "Registration" and print the Registration Test Pattern. Do the adjustments if required.
3. Press [Escape] to return to the first level of the menu, select "List/Test Print", and press [#Enter].
4. Print the color demo page and a system summary.
 - Select "Color Demo Page" to print the color fish pattern.
 - On the same level of the menu select "Config. Page" and press [#Enter]. Confirm that all the settings have been initialized.
5. Press [Escape] until you see the "Ready" message.

This completes the carriage replacement procedure.

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.

4

Nozzle Check

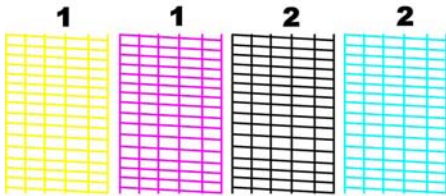
Nozzle Check Pattern

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

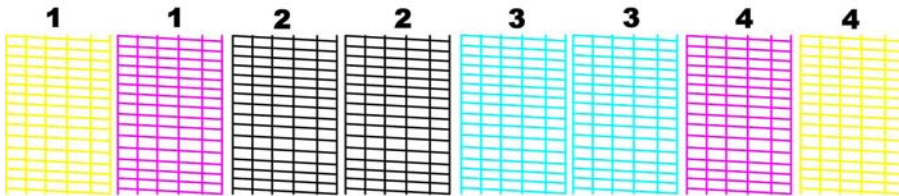
1. Push [Menu], select "Maintenance", and push [#Enter].
2. Select "Nozzle Check" and press [#Enter]. The Nozzle Check pattern prints.
3. Examine the Nozzle Check pattern for broken lines or white patches. The first sample below is normal, the second sample shows white patches.

Normal Pattern

J017, J019, J021



J018

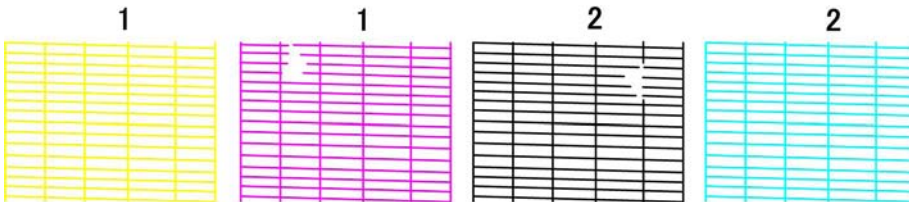


j018t007

Note

- The Nozzle Check Pattern for the J018 is larger than those of the J017, J019, J021 because it has two additional print heads.

Abnormal Pattern

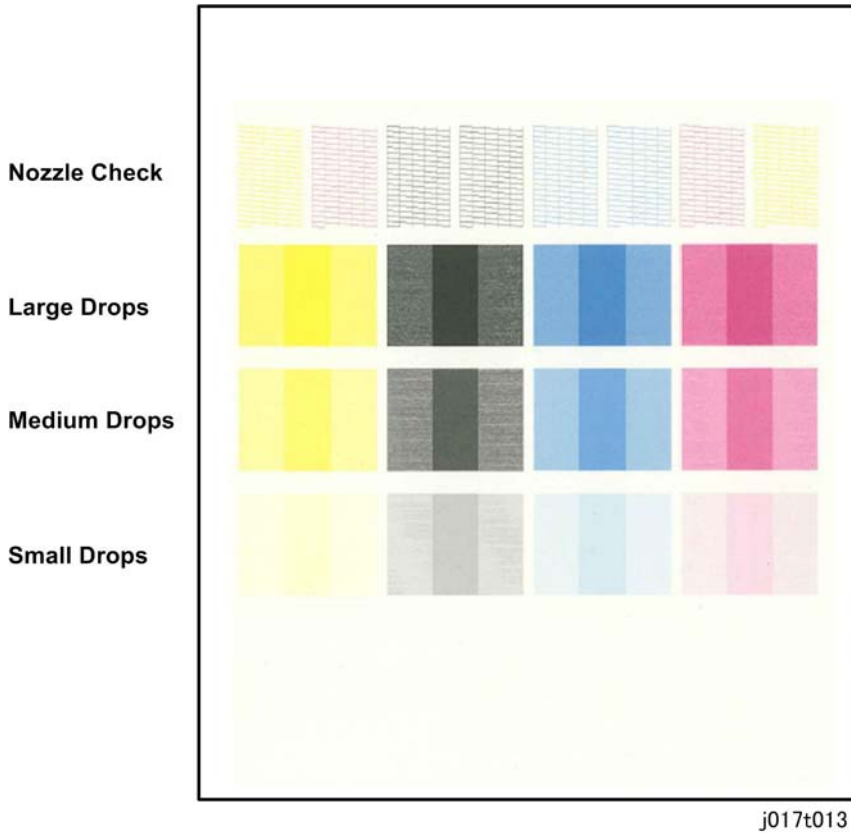


j017t008

Nozzle Coverage Check Pattern

Follow this procedure to print the coverage check pattern.

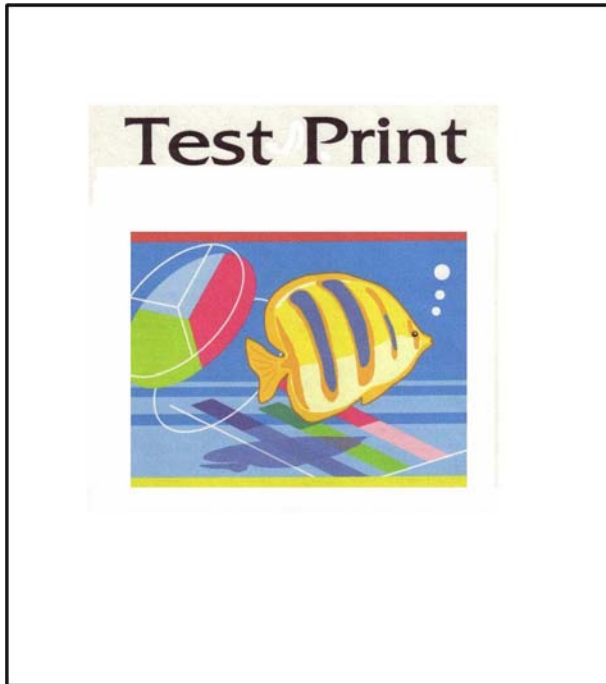
1. Make sure that there is paper loaded in the printer.
2. On the connected printer open the printer driver for this printer.
3. Click the "Maintenance" tab then click the "Nozzle Check" button.
4. On the "Nozzle Check" panel, click [Next].
5. At the next screen press [Ctrl]+[Shift]+[3] together and release when you see "Processing" displayed on the operation panel.



Color Demo Print

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

1. At the "Ready" prompt press [Menu]> select "List/Test Print"> [#Enter].
2. Select "Color Demo Page"> ["Enter].



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. Confirm that the envelope selector is forward.
 5. [Menu]> "Counter"
 6. [▼] or [▲]> "Maintenance" > [#Enter]> "Nozzle Check"
 7. [▼] or [▲]> "Head-cleaning"> [#Enter]> "All Heads"

8. [▼] or [▲]> Select the print heads to be cleaned: "All" (all print heads), "Head 1" (Black/Cyan), "Head 2" (Magenta/Yellow) > [#Enter]

"Please Wait" displays until cleaning is finished.

★ Important

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

9. [Escape] > To the previous level.
10. Print another Nozzle Check test pattern and check the result.
11. 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. Confirm that the envelope selector is forward.
2. [Menu]> "Counter"
3. [▼] or [▲]> "Maintenance" > [#Enter]> "Nozzle Check"
4. [▼] or [▲]> "Head-flushing"> [#Enter]> "All Heads"
5. [▼] or [▲]> Select the print heads to be flushed: "All" (all print heads), "Head 1" (Black/Cyan), "Head 2" (Magenta/Yellow) > [#Enter]

"Please Wait" displays until flushing is finished. 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. [Escape] > to return to the previous level.
 7. Print another Nozzle Check test pattern and check the result.
 8. 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.
- If the problem still persists, execute drive cleaning with SP5301. Only the service technician can do this procedure.

Adjust Paper Feed

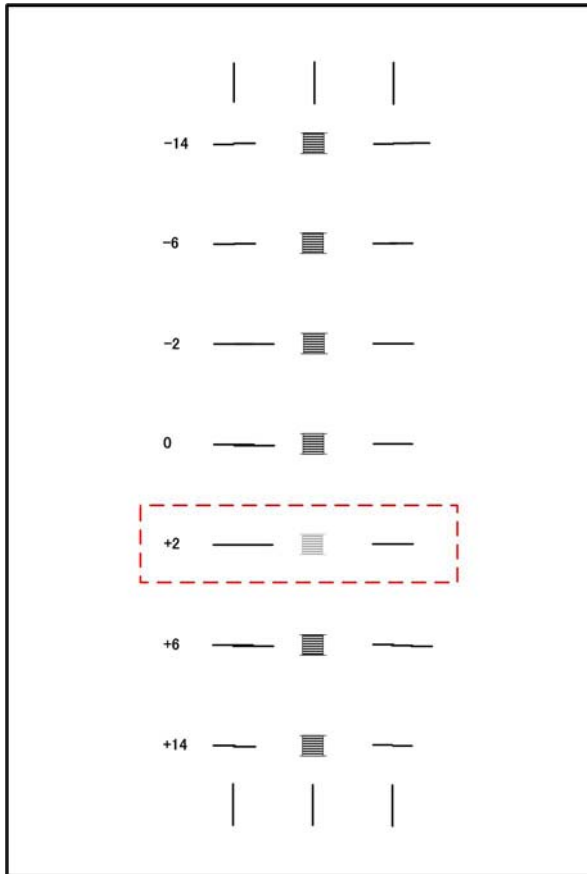
4

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. [Menu]> "Maintenance"> [#Enter].
2. [▼] or [▲]> "Adj. Paper Feed"> [#Enter]> "Pr. Test Print".
3. [#Enter]. The test pattern prints.

"Please Wait" displays until pattern printing is finished. Do not start any other operation until printing stops.

4. Check the printed numbers and patterns.



- 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".

5. [▼] > "Adjustment" > [#Enter].
6. Press [▼] or [▲] until the number of the pattern that you selected in Step 4 appears.
7. [#Enter]. This completes the adjustment.
8. Push [Menu] to leave the menu mode.

Head Position

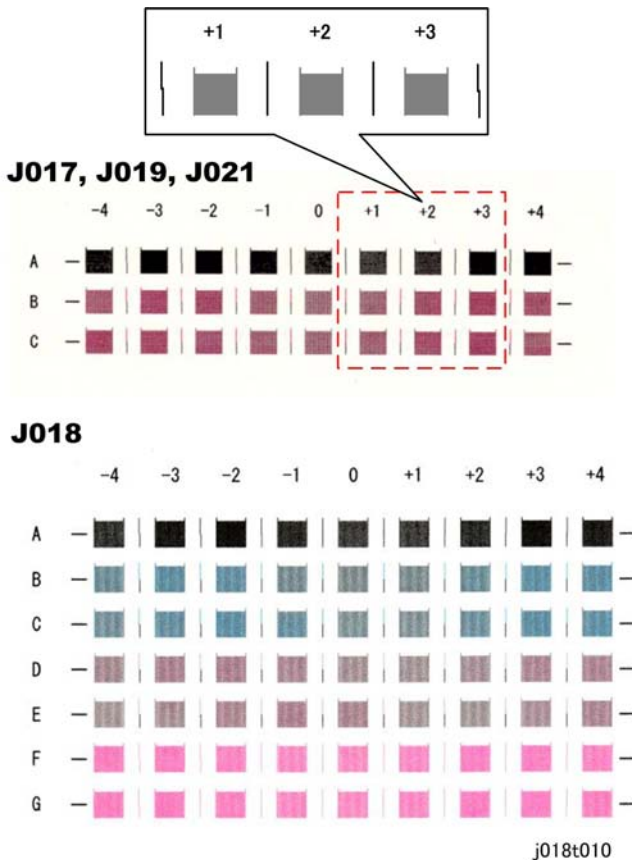
The print head is out of position if you see these:

- Broken vertical lines
- Blurred, smeared or streaked colors

Do the following procedure to correct these problems.

1. [Menu]> "Counter"
2. [▼] or [▲]> "Maintenance"> [#Enter]> "Nozzle Check".
3. [▼] or [▲]> "Head Position"> [#Enter]> "Select "Pr. Test Pattern"
4. [#Enter]> [▼] or [▲]> "Standard", "Quality", or "High Speed"> [#Enter]. The test pattern prints.

"Please Wait" displays until pattern printing is finished. Do not start any other operation until printing stops.



Note

- The Head Position Pattern for the J018 is larger than those of the J017, J019, J021 because it has two additional print heads.

5. 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"
6. [▼]> "Adjustment"> [#Enter].
7. [▼] or [▲]> Select same setting selected for "Pr. Test Pattern" in Step 4 ("Standard", "Quality", "High Speed")> [#Enter].
8. [▼] or [▲]> Select the letter of the line of the best pattern noted in Step 5> [#Enter].
9. [▼] or [▲]> Select the number of the line of the best pattern noted in Step 5> [#Enter]. This completes the adjustment.
10. Push [Escape] to leave the Menu mode.

Registration

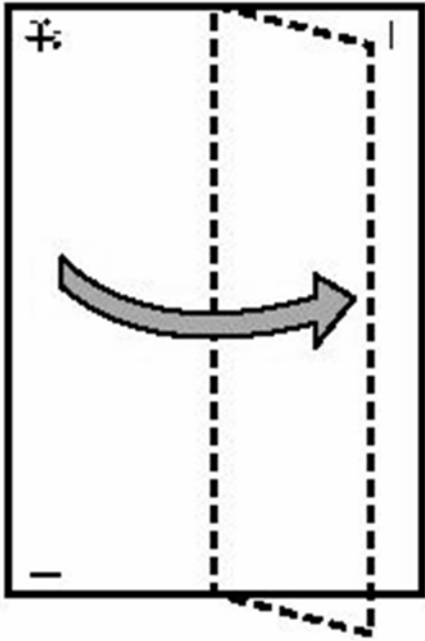
Do this procedure to adjust the print start position. The print start position is the point at the upper left corner of each sheet where printing begins. This procedure can be done for all the paper feed sources: Tray 1 (Standard), Multi-Bypass Tray (Option).

1. [Menu]> "Counter">
2. [▼] or [▲]> "Maintenance"> [#Enter].
3. [▼] or [▲]> "Registration"> [#Enter]> "Pr. Test Sheet"
4. [#Enter]> [▼] or [▲]> "Tray1", or "Bypass".

↓ Note

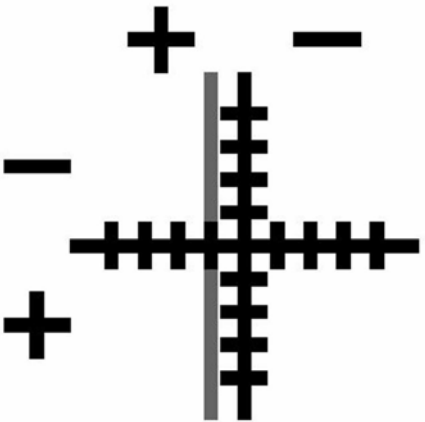
- "Bypass" does not appear unless this option has been installed
5. [#Enter]> [▼] or [▲]> "Plain Paper" or "Glossy Paper".
 6. [#Enter]. The test pattern for Registration prints.
"Please Wait" displays until pattern printing is finished. Do not start any other operation until printing stops.

4



j017t011

7. Fold the printed sheet in half lengthwise as shown.
8. Hold the corner of the folded paper in front of a light and look at the cross-pattern overlapping the single vertical line below.
9. 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.

10. Fold the sheet in half widthwise.

11. Determine the 2nd adjustment for the Feed Direction. The value read after folding the sheet widthwise, is the adjustment value for the Feed Direction.
12. [▼] or [▲]> "Adjustment"> [#Enter].
13. [▼] or [▲]> Select the paper tray> [#Enter].
14. [▼] or [▲]> Select the paper type> [#Enter].
15. Enter the adjustment for the Read Direction determined in Step 9 and push [#Enter].
16. Enter the adjustment for the Feed Direction determined in Step 11 and push [#Enter]. This completes the adjustment.
17. Push [Menu] to leave the Menu mode.

Note

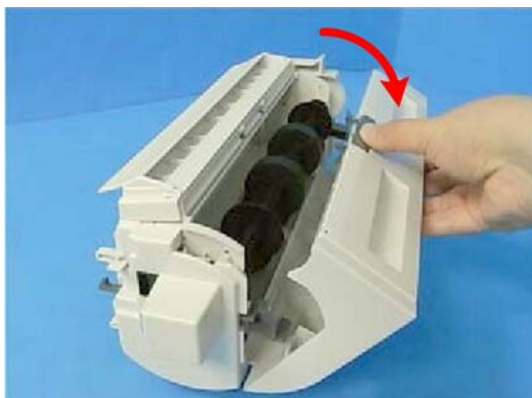
- The "Plain", and "Glossy" are provided because the sensor timing for each medium is different.

Duplex Unit

Duplex Unit Cover Switch (For J017/J018)

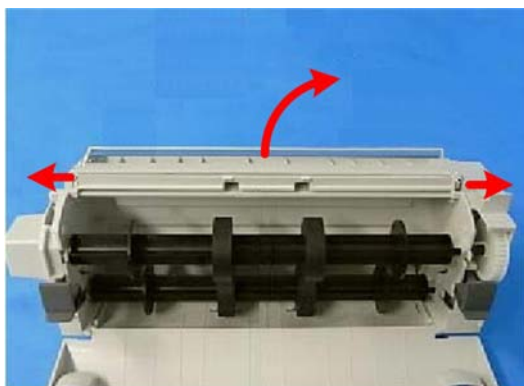
Preparation

- Remove the duplex unit from the machine.



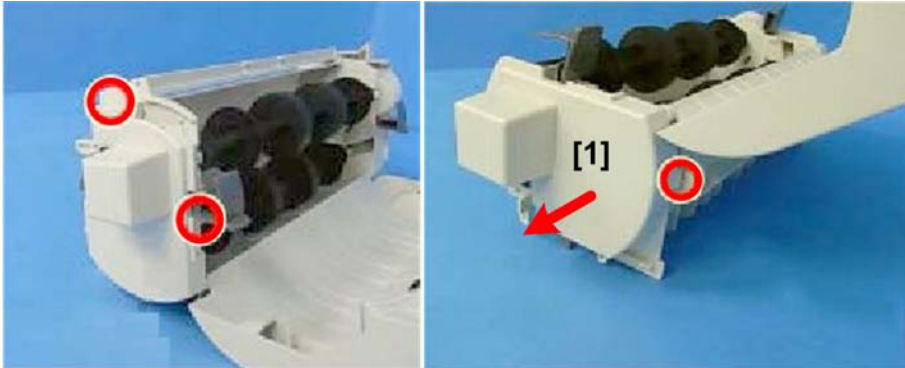
j018r401

1. Open the duplex unit.



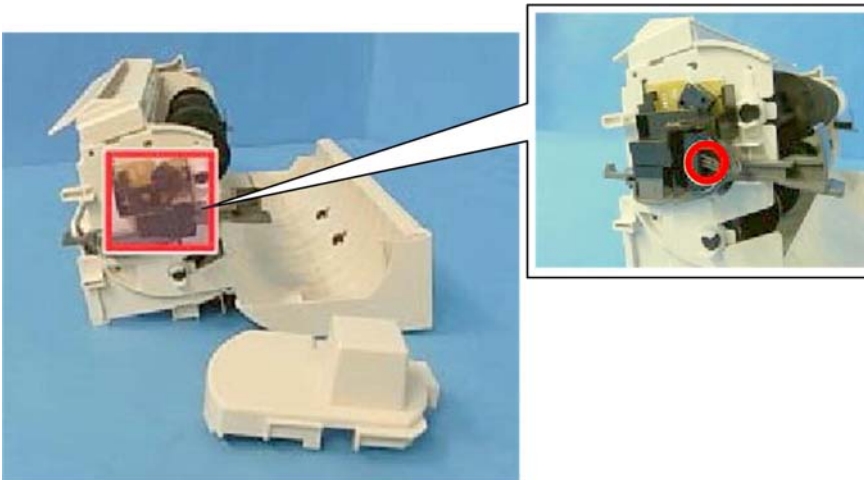
j018r402

2. Release the hinges on both ends of the guide plate and remove it.



j018r403

3. Remove the left cover [1] (▼ x3).



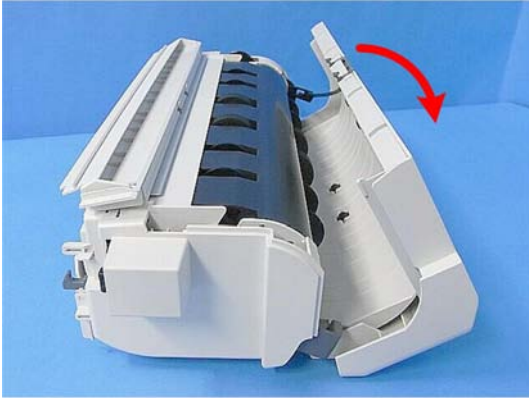
j018r404

4. Remove the cover sensor (🔧 x1, ▼ x2).

Duplex Unit Cover Switch (for J023)

Preparation

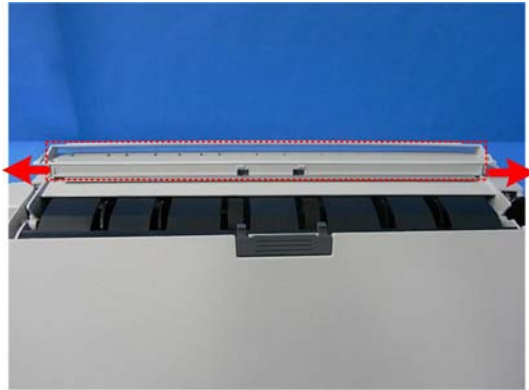
- Remove the duplex unit from the machine.



j666r001

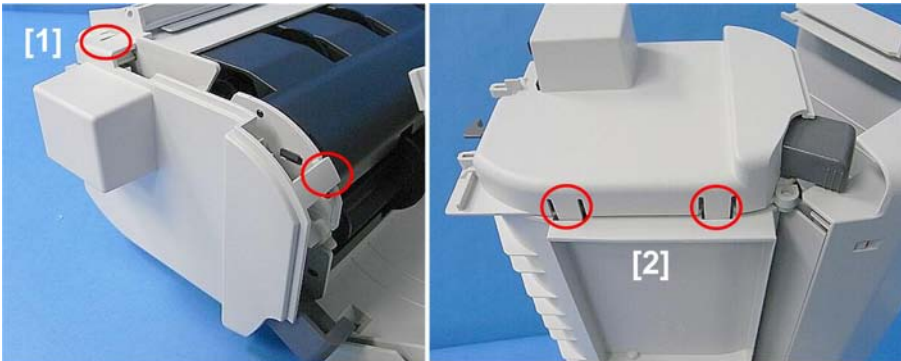
4

1. Open the duplex unit.



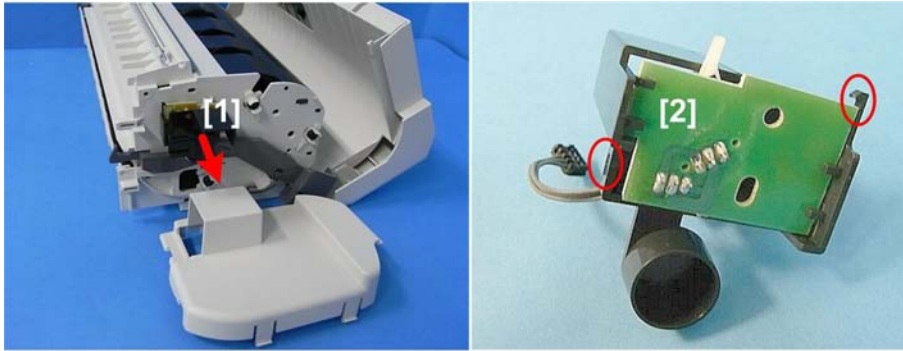
j666r002

2. Release the hinges on both ends of the guide plate and remove it.



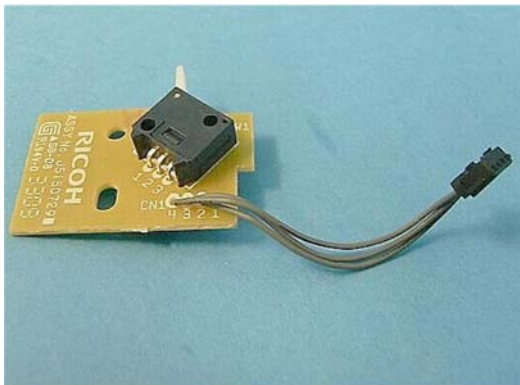
j666r003

3. On the left side of the duplex unit, release the hooks on the top [1] and bottom [2] and remove the left cover (Hooks x4).



j666r004

4. Remove the cover switch bracket [1].
5. Disconnect the switch and board from the bracket. (⏏ x1, ⏏ x1).



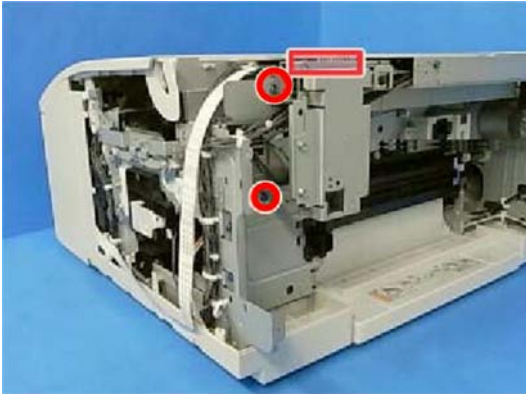
j666r005

Duplex Drawer Connector (For J017/J018/J023)

Preparation

Remove:

- Duplex unit
- Main machine left cover
- Main machine rear cover



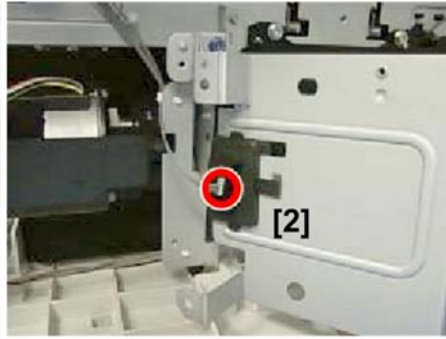
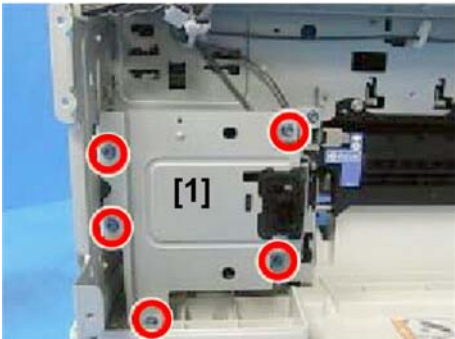
j023r424

4



1. Remove the NIC board bracket ( x2,  x1, Hook x1)

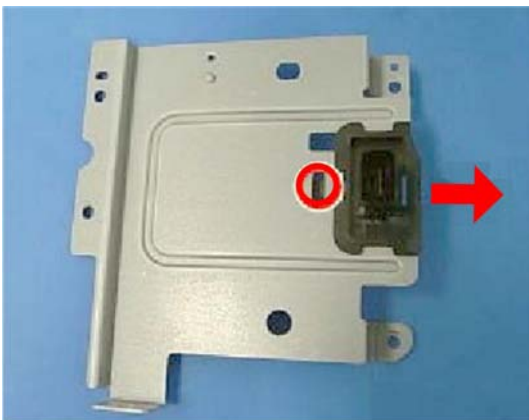
Note

- This step is required for the J018 only.



j023r425

2. Disconnect the bracket [1] ( x5).
3. Disconnect the drawer connector [2] ( x1).



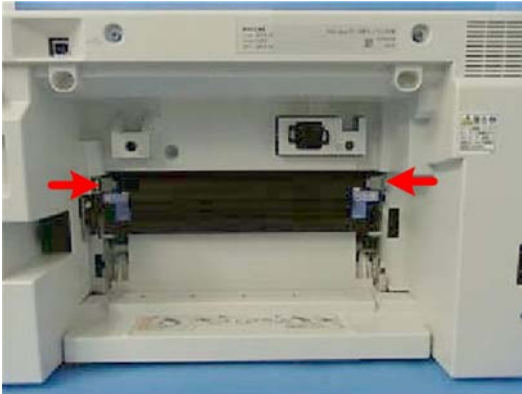
j023r426

4. Separate the bracket and drawer connector (▼ x1).

Inverter Guide Roller

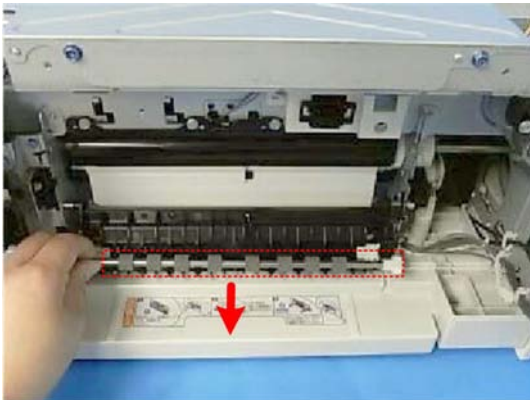
Preparation

- Remove the duplex unit



j023r024

1. Press in the tabs on both ends of the inverter guide and lower the guide.



j023r025

2. With the guide lowered, pull the roller shaft straight out.

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.

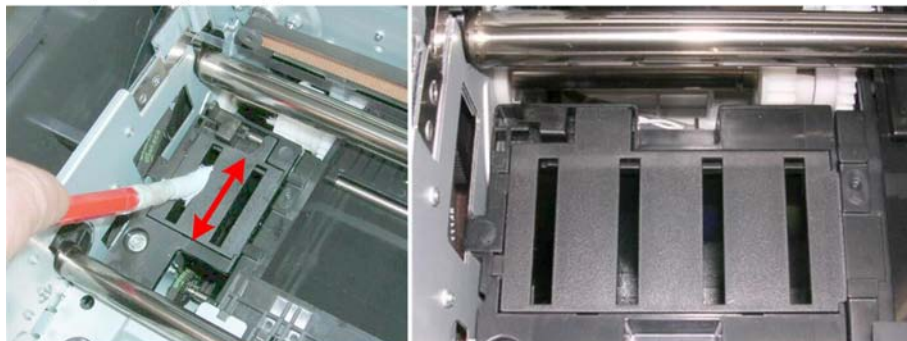
There are no parts that require scheduled maintenance or replacement. However, the service technician should do the procedures described in this section when a service call is requested.

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

Description	At Service Call (or When Necessary)
External Covers	Damp cloth.
Feed Roller	Damp cloth. Release the feed clutch lock. 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 (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.
Left Ink Sump Gate	Dry cloth. Always remove the ink that has hardened around the gate slots when you replace the ink collector unit. To scrape away hardened ink, you may need to use a small screwdriver
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.
Vertical Encoder Wheel	Clean linen cloth, dampened with alcohol. Do not use cotton, tissue paper, any material that could shred and leave fibers.

Left Ink Sump Gate

J017, J019, J021, J023 J018



j018r131

4

Dry ink flakes that collect around the flushing gate can cause streaking in printouts.

1. Remove the top cover, canopy cover.
2. Wrap the tip of a screwdriver or other tool with a piece of soft cloth.
3. Use the tip of the screwdriver to remove ink that has hardened inside the slits of the flushing gate.
4. Use a damp cloth to wipe clean the ink splatter around the flushing gates.

★ Important

- The J018 has more slots. Be sure to clean them all.

Maintenance Unit Cleaning

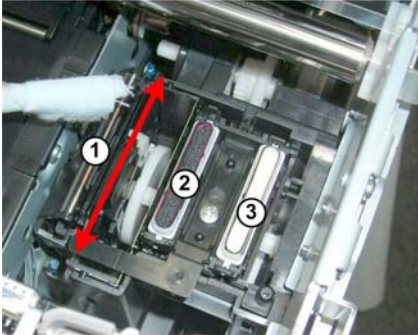
Preparation

- Remove right rear cover
 - Unlock carriage unit (p.80)
 - Push the carriage to the center.
1. Wrap the tip of a screwdriver or similar tool with a piece of finely woven cloth which is slightly damp.

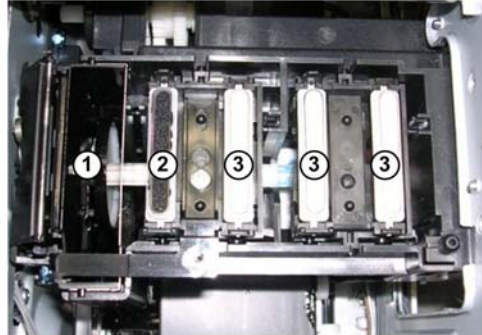
★ Important

- 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.

J017, J019, J021, J023



J018



j018r133

4

2. 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

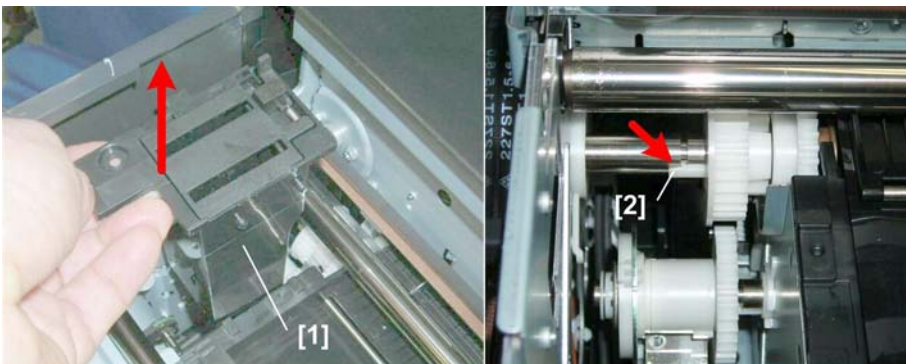
- Never insert the tip of the screwdriver into the right air vent or suction cap.
- The J018 has more suction caps. Be sure to clean all of them.

Feed Roller Cleaning

Preparation

Remove:

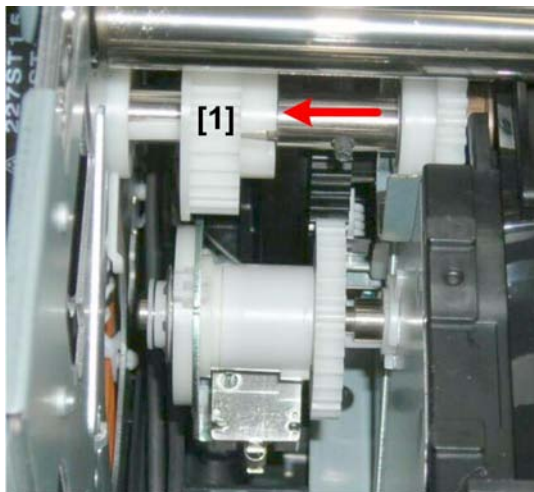
- Canopy cover, top cover



j017r134

1. Remove the left ink sump [1] ( x1).

- Use the tip of a long flat-head screwdriver to release the Teflon lock tab [2] of the transport roller.



j017r135

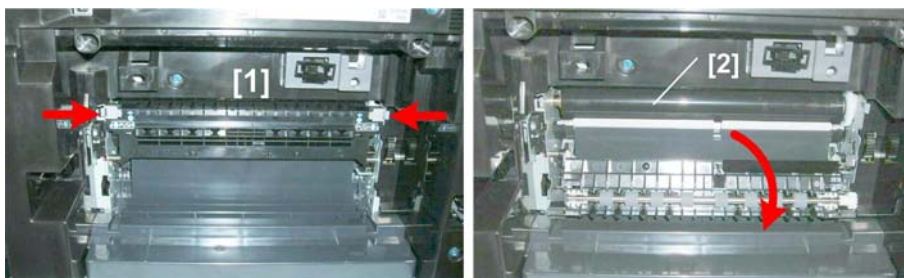
- Push the transport roller gear [1] to the left. This unlocks the roller and allows it to rotate freely.
- Rotate the roller as you wipe it with a dry cloth.

★ Important

- Lock the roller in place after cleaning.

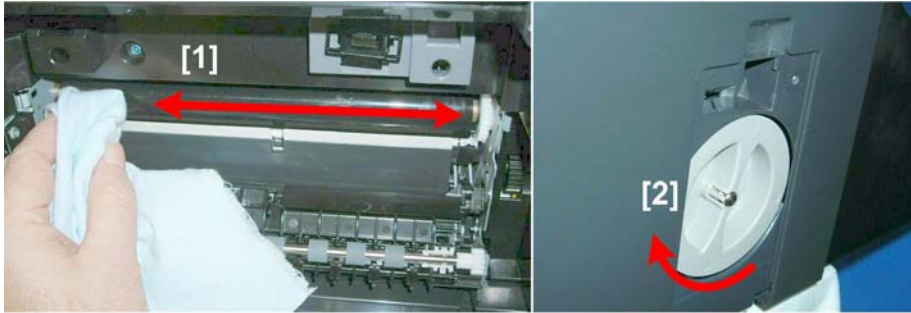
Transport Belt Cleaning

- Remove the duplex unit from the back of the printer.



j017r136

- Press in the end tabs [1] of the transport roller.
- Carefully lower the plate to expose the surface of the transport roller [2].



j017r137

4. Move a clean, slightly damp cloth from side to side to clean the transport belt [1].

★ 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.

5. Open the jam feed wheel door and rotate the wheel [2] far enough to expose the next section of the transport belt.

6. Repeat Steps 4 and 5 until the entire surface of the belt has been wiped clean.

Friction Pad Cleaning

The friction pad is located on the bottom of the machine.

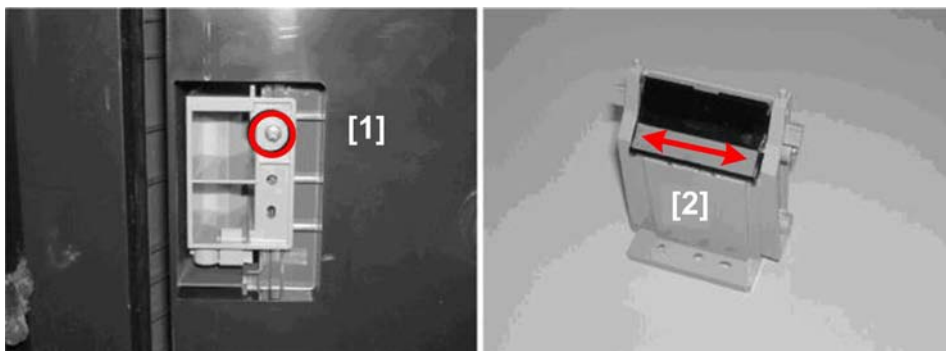
★ Important

- To avoid ink spillage never set the machine on its side, tilt it or turn it upside down to remove the friction pad.



j017r138

1. Position the machine with the front and back supported by two tables as shown above. (The arrow shows the approximate position of the friction pad under the machine.)



j017r139

4

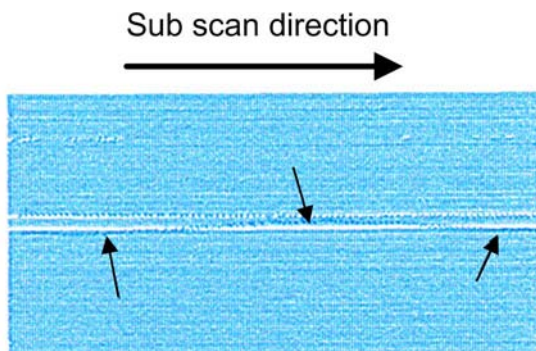
2. Under the machine remove the screw [1] and remove the friction pad.
3. Use a damp cloth to clean the surface of the friction pad [2].

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

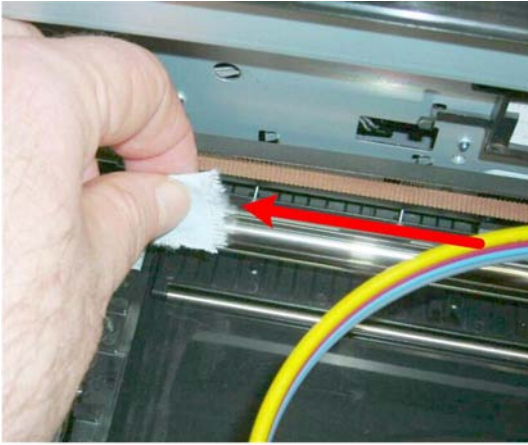


j017r140

Cleaning procedure

Preparation:

- Remove the canopy cover, top cover
- Remove the right rear cover.
- Unlock the carriage (p.80).
- Push the carriage to the left side of the printer.



j017r141

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 film strip.

2. 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.

3. Push the carriage unit to the right with your hand.
4. Repeat the procedure to clean the left side of the encoder strip.
5. Lock the carriage (p.80).
6. Turn on the machine.
7. 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.
8. Do the "Nozzle Check" after cleaning, and then check the patterns for missing or broken lines.
 9. Do "Print Head Cleaning" if the pattern is not satisfactory.
 10. Do "Print Head Flushing" if the pattern is not satisfactory, even after three print head cleanings.
 11. Do "Print-Head Flushing" and print another Nozzle Check Pattern.
 12. If the Nozzle Check Pattern is still not satisfactory after flushing the print heads, replace the horizontal encoder strip.

4

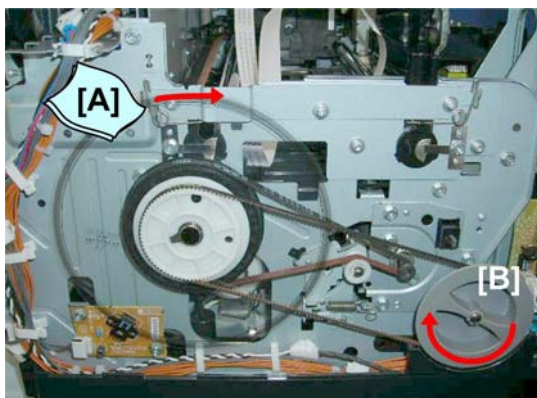
Vertical Encoder Wheel Cleaning

Clean the vertical encoder wheel if the following problems occur:

- Horizontal banding
- Mis-aligned text, images

Preparation

- Remove all covers



j017r141a

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

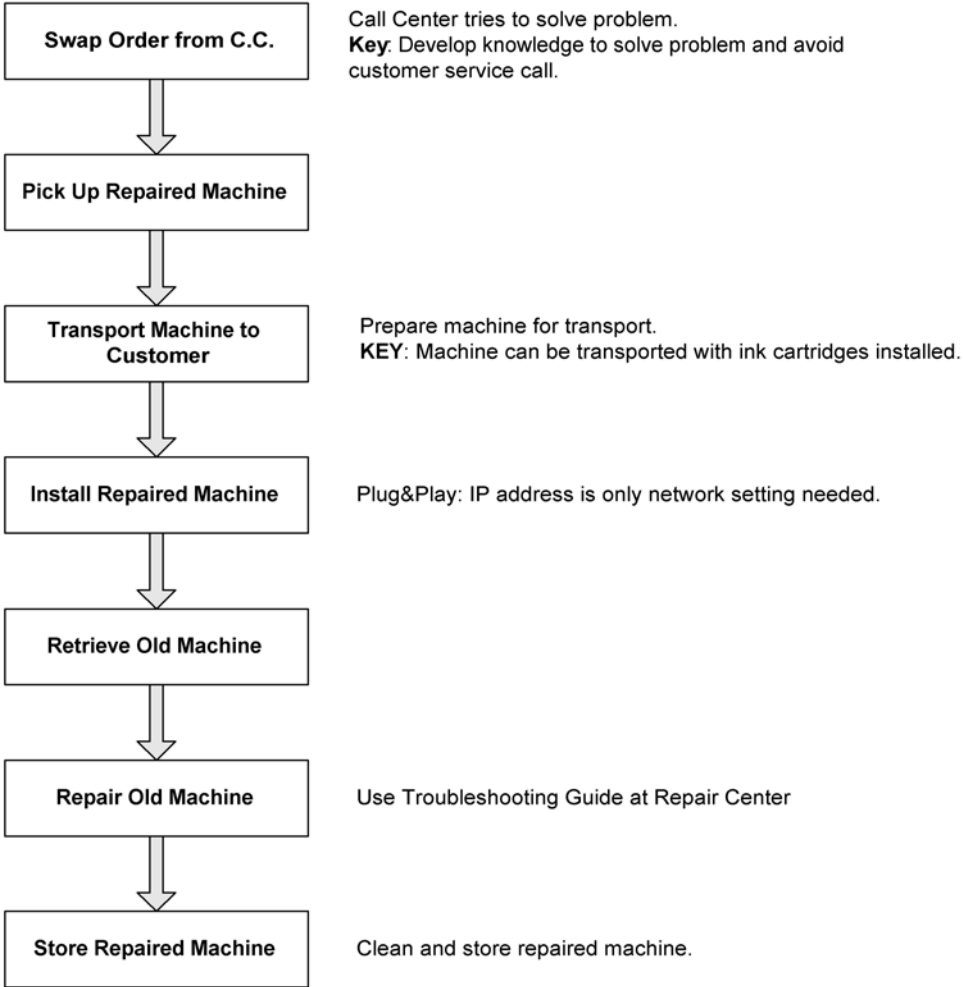
★ Important

- 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. Rotate the jam wheel [B] slowly to move the edge of the wheel between the folds of the 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



J011E107

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, NIC, etc.) to customer. Note: Network settings are stored on the NIB. If the NIB is not swapped, the settings do not need to be done again after machine swapping.

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

Production Name	Ink Cartridges Needed
J017, J019, J021, J023	C, M, Y, K: Starter Cartridges
J018	C, K: Medium-Size Cartridges M, Y: Large-Size Cartridges

Vinyl Bag Specifications

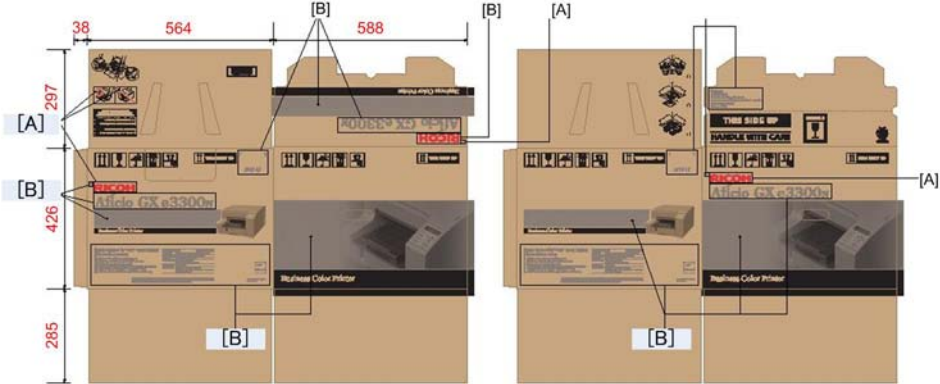
Material	Width	Length	Thickness
Low-density Poly-ethylene	1200 mm (47.4")	800 mm (31.5")	0.07 mm (0.003")

Box Specifications

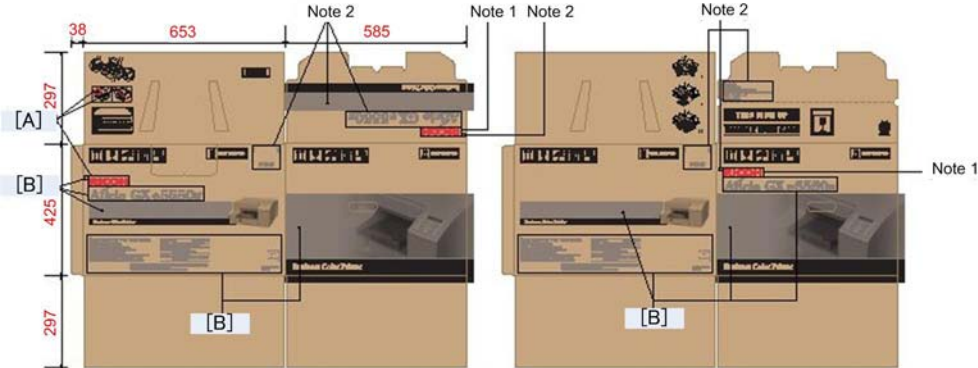
Note

- All measurements below are millimeters.

J017, J019, J021 (mm)



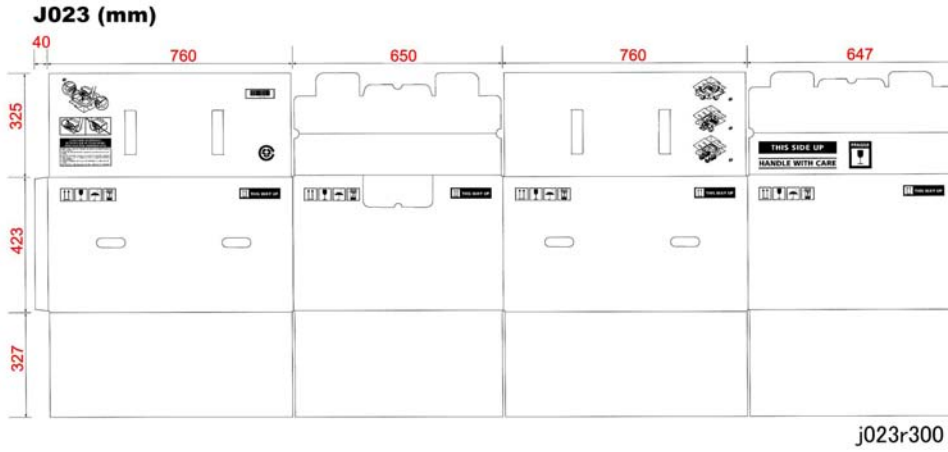
J018 (mm)



j018r300

Key

- [Red Box]: Note 1 [A]: Print Color: PANATONE 186C (Red)
- [Gray Box]: Note 2 [B]: Print Color: PANATONE 424U (Gray)
- [Black Box]: Color with no specification: DF26 (Black)

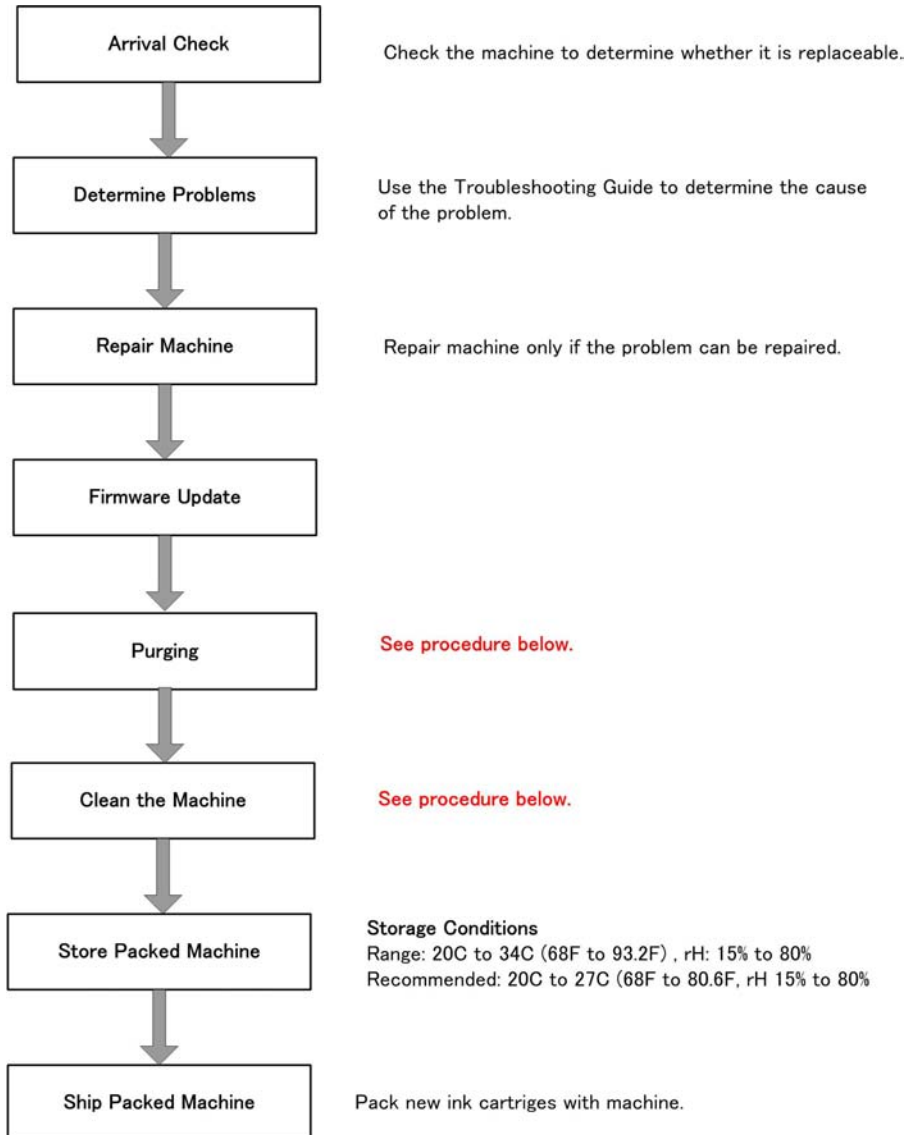


4

↓ Note

- The J023 requires a larger box.

Refurbishing Flow



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 "2. ENGINE MAINTEN".
 4. Select "5007" and push [#Enter].
 5. When you see "WASHING" push [#Execute].
 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 [#Enter].
 8. When you see "OK?" push [#Enter].
- "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.
1. Press [Escape] to return to the "2. ENGINE MAINTEN." display.
 2. Select "3. END" and push [#Enter] to return to standby.
 3. Switch the printer off.
 4. 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.
 1. Remove the ink collection tank from the back of the printer and discard it.
 2. Insert a new ink collection tank.
 3. Do SP7200 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	Clean with damp cloth.
Left Ink Sump	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 SP5003

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

Status Reports

Four 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:

- Page Counter
- Configuration List
- Service Summary
- Engine Summary Chart

The System Summary contains the base system information. The Service Summary also contains not only the base system information but includes other information such as Bit Switch settings, etc. The Service Summary is the more comprehensive report and is only two pages long (the same length as the System Summary.)

Here is a quick reference list that tells what type information is found in each report.

5

Item	Report Name	
Bit Switch		Service Summary
Brand Name	System Summary	Service Summary
Host Interface	System Summary	Service Summary
Interface Information	System Summary	Service Summary
Language	System Summary	Service Summary
Log Data		Service Summary
Maintenance	System Summary	Service Summary
Model		Service Summary
Page Total: Color	Page Counter	Service Summary
Page Total: Duplex	Page Counter	Service Summary
Page Total: Mono	Page Counter	Service Summary
Paper Input	System Summary	Service Summary
Printer Log		Service Summary
Serial No.	Page Counter	
Service Menu		Service Summary

Item	Report Name	
System	System Summary	Service Summary
System Reference	System Summary	Service Summary

1. Page Counter

* ***** ***** *****		
Page Counter		
	Date	Time
	<u>21/12/2008</u>	<u>21:00:32</u>
Serial No.	J017-10110	
Total Full Color	00000000	
Total Mono Color	00000000	
Total Duplex	00000000	
FAX No. (Not used)		
j017t001		

The counter lists the number of prints. The print totals do not include the number of test patterns that have been printed. The counter keeps totals for these items:

- **Date, Time.** The date is displayed DD/MM/YY, the time is 24-hour time hh:mm:ss.
- **Total Full Color.** The total number of sheets printed with in color.
- **Total Mono Color.** The total number of sheets printed in monochrome.
- **Total Duplex.** The total number of sheets printed on both sides.

1. [Menu]> "Counter"> [#Enter]> "Show Counter"
2. [▼] or [▲]> "Print"> [#Enter]>"Press # Key"> [#Enter]

Note

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

2. Config. List

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 <u>21/12/2008</u>
	Time <u>21:00:32</u>
BRAND NAME	GelSprinter GX e3300N
System Reference	
Machine ID	J017-10110
Pages Printed	000020
System Version	1.0.0
NV Version	0.31
UPD Version	0.03
Connection Equipment	NIC
Printer Language	PCL, ICP
Ink Remaining:	
Black	40%
Cyan	40%
Magenta	40%
Yellow	40%
	j017t002

To print the Service Summary:

1. Confirm that paper is loaded in the paper tray.
2. [Menu]> "Counter"> [▲] or [▼]> "List/Test Print".
3. [#Enter]> "Config. Page"> [#Enter]> "Processing..."

3. Service Summary

Service Summary		Date	Time
		<u>21/12/2008</u>	<u>21:00:32</u>
BRAND NAME	GelSprinter GX e3300N		
System Reference			
Machine ID	J017-10110		
Pages Printed	000020		
System Version	1.0.0		
NV Version	0.31		
UPD Version	0.03		
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	

j017t003

1. Enter the Service Menu.
2. [#Enter]> "Bit Switch"> [▲] or [▼]> "Service Summary"
3. [#Enter]> "Press # to Start"> [#Enter]

4. Engine Summary Chart

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

```

ENGINE SUMMARY CHART
MODEL      :      GX e3300N
SER_NO    :      J017-10110
DUMMY NO  :      J017-10110
Firm Ver  :      0.31
SENSOR 1  :      0000 0000 0000 0000
SENSOR 2  :      0000 0000 0000 0000
SENSOR 3  :      0000 0000 0000 0000

SP No.    Name      Value
1000     REG:FD:NORM  100
.        .          .
.        .          .
2000     FULLPOS1  23
.        .          .
.        .          .
.        .          .
.        .          .

```

j071t004

5

To print the Engine Summary Chart:

1. Confirm that paper is loaded in the paper tray. (The report is about 16 pages long.)
2. Enter the Service Menu.

```

SYSTEM Ver. nnn
Service Menu

```

3. [▼]> "Engine Maint."

```

SP No.
1000

```

4. [▲] x 4 times> "5000"> [#Enter]
5. [▲] twice> "5200"> [#Enter] x 3 times

```

PRINT SMC
5200

```

6. [#Enter]

```

PRINT SMC
EXEC

```

7. [#Enter]> "RUNNING"

- Wait for the report to print (it does not start immediately).
 - Printing requires about 2 min.
8. [Escape] x 3 times> [▼] or [▲]> "End"> [#Enter]> Machine switches 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
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 SP5400.

No.	Meaning	No.	Meaning
0	Top Cover Switch	8	Not Used
1	Duplex Unit Set Sensor	9	Paper Sensor (Tray1)
2	Multi Bypass Set Sensor	10	Not Used
3	Carriage Position Sensor	11	Not used
4	Not Used	12	Env. Selector Sensor
5	Registration Sensor 1	13	Ink Coll. Tank Sensor
6	Registration Sensor 2	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 SP5401

No.	Meaning
0	USB Connection Detection
1	Option Detection
2	Jam Wheel Cover Switch
3	Tray 1 Cover

Sensor 3: Ink Cartridge Sensors

The status of these sensors are also displayed by SP541 1

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	

6. Troubleshooting

Troubleshooting Guide

See "Appendices" for the following information:

- Operation Panel Display
- Service Call Conditions
- Jam Codes
- Error Messages

Image Problems

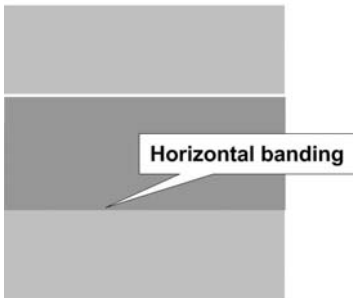
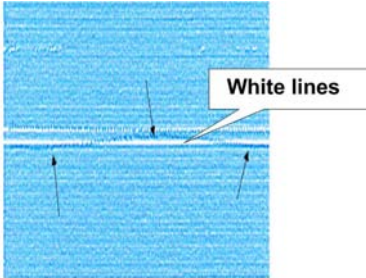
Basic Check Points and Specifications

Work environment	Is there a problem at the printer location?
	<ul style="list-style-type: none"> • 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?
	<ul style="list-style-type: none"> • 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?
	<ul style="list-style-type: none"> • 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?
	<ul style="list-style-type: none"> • 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?
	<ul style="list-style-type: none"> • 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?

	<ul style="list-style-type: none"> • 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?
	<ul style="list-style-type: none"> • 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 "Printout paper size" list in the Printer Properties dialog box.
	Is the driver setting correct for the paper type?
	<ul style="list-style-type: none"> • 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 "Printout paper size" list in the Printer Properties dialog box.
	Have the print quality settings been made?
	<ul style="list-style-type: none"> • Open the printer driver • In the Print Quality group box, check and set the "Quality priority" and "Speed priority" settings for the job.
Application	Does the same problem occur with other applications?
	<p>Confirm whether the problem occurs with only one application or with other applications as well.</p> <ul style="list-style-type: none"> • 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



j017t021

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



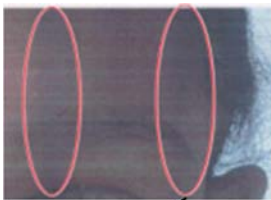
Horizontal lines on margin

j017t022

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



Vertical lines/banding



White lines/banding

j017t023

1. Are all adjustments correct?

Check and adjust the head position.

2. If none of the above work

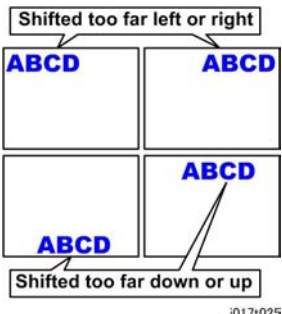
The machine needs to be repaired.

- The horizontal encoder sheet may be dirty, damaged, or installed incorrectly.
- Clean or replace horizontal encoder strip.

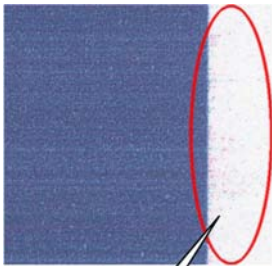
- Image blurred, misaligned
- Poor color, uneven density
- Double printing

<p>Blurred</p> <p>Misaligned</p> <p>Poor color</p> <p>Uneven density</p> <p>Double printing</p> <p>j017t024</p>	<p>1. Is the envelope lever set forward at the standard position?</p> <p>Pull the lever forward to the standard position..</p> <p>2. Are the nozzles clogged?</p> <p>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.</p> <p>Note: In some cases, this will only solve the problem temporarily. If the problem persists, clean the maintenance unit..</p> <p>Cleaning Sequence To Solve the Problem:</p> <ol style="list-style-type: none"> 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 <p>3. Are all the adjustments correct?</p> <p>Check paper feed and adjust as necessary.</p> <p>4. If none of the above work</p> <p>The machine needs to be repaired:</p> <ul style="list-style-type: none"> • 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

 <p>Shifted too far left or right</p> <p>ABCD</p> <p>ABCD</p> <p>ABCD</p> <p>ABCD</p> <p>Shifted too far down or up</p> <p>J017r025</p>	<p>1. Is the envelope lever set forward at standard position?</p>
	<p>Set the envelope lever to standard position.</p>
	<p>2. Is the paper set correctly?</p>
	<p>Reset the side fence and end fence.</p>
	<p>3. Are all the adjustments correct?</p>
<p>Check registration and adjust as necessary.</p>	
<p>4. Check inside the machine.</p> <ul style="list-style-type: none"> • 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. 	
<p>5. If none of the above work</p> <p>The machine needs to be repaired:</p> <ul style="list-style-type: none"> • 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



Scattered ink dots
j017t026

1. Is the enabler 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:


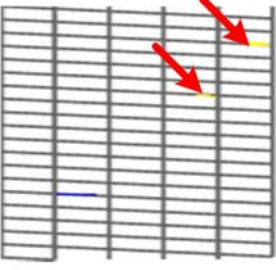
1. Nozzle check
2. Head Cleaning
3. Nozzle check
4. Leave the machine 5 to 10 minutes
5. Do Steps 2, 3 twice
6. Head flushing
7. Nozzle check
8. Leave the machine 8 hours
9. Nozzle check

3. If none of the above work



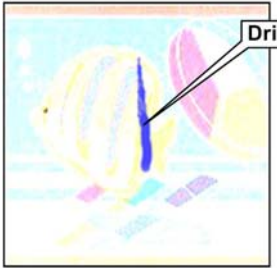
The machine needs to be repaired:


- Replace maintenance unit. Ink build-up or maintenance unit may have failed.
- Replace the carriage unit.

Mixed colors

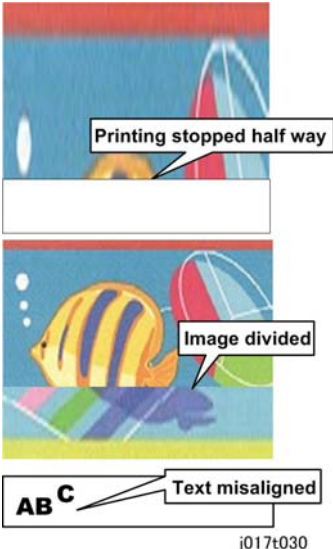
 <p data-bbox="166 658 395 799">Mixed colors ABCDE j017t027</p>	<p data-bbox="477 250 801 282">1. Are the ink nozzles clogged?</p>
	<p data-bbox="477 309 1199 486">Print out the nozzle check pattern and check if any of the nozzles are clogged. If there is a blockage, perform the cleaning procedure on 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.</p>  <p data-bbox="477 831 1199 897">Note: In some cases, this will only solve the problem temporarily. If the problem persists, clean the maintenance unit.</p>
	<p data-bbox="477 925 769 956">2. If none of the above work</p> <p data-bbox="477 987 834 1019">The machine needs to be repaired:</p> <ul data-bbox="499 1034 1146 1099" style="list-style-type: none"> • Replace the maintenance unit. Ink has built up or the unit has failed.

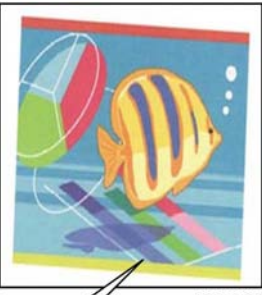
Output dirty, ink running


 <p>Abraded by print head</p>  <p>Bent by print head</p>  <p>Dripped ink</p> <p>j017t028</p>	<p>1. Is the envelope lever set forward at standard position?</p> <p>Pull the lever forward to the standard position..</p> <p>2. Is the paper set correctly?</p> <ul style="list-style-type: none"> • 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) <p>3. Check inside the machine.</p> <ul style="list-style-type: none"> • 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. <p>4. If none of the above work</p> <p>The machine needs to be repaired:</p> <ul style="list-style-type: none"> • Transport belt dirty or damaged. Clean transport belt. • Replace the carriage unit.
--	---

<p>Light density</p>	
 <p>Low density (too light)</p> <p>j017t029</p>	<p>1. Change the driver settings.</p> <ul style="list-style-type: none"> • Disable "Level 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. <p>2. If none of the above work</p> <p>This is product specification.</p>

<p>Abnormal image</p>

	<p>1. Check the type and condition of the paper.</p> <ul style="list-style-type: none"> • 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. <p>2. Is the ink cartridge empty, or has the printer job been canceled?</p> <ul style="list-style-type: none"> • 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. <p>3. If none of the above work</p> <p>The machine needs to be repaired:</p> <ul style="list-style-type: none"> • Controller board failure, replace controller board.
---	--

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

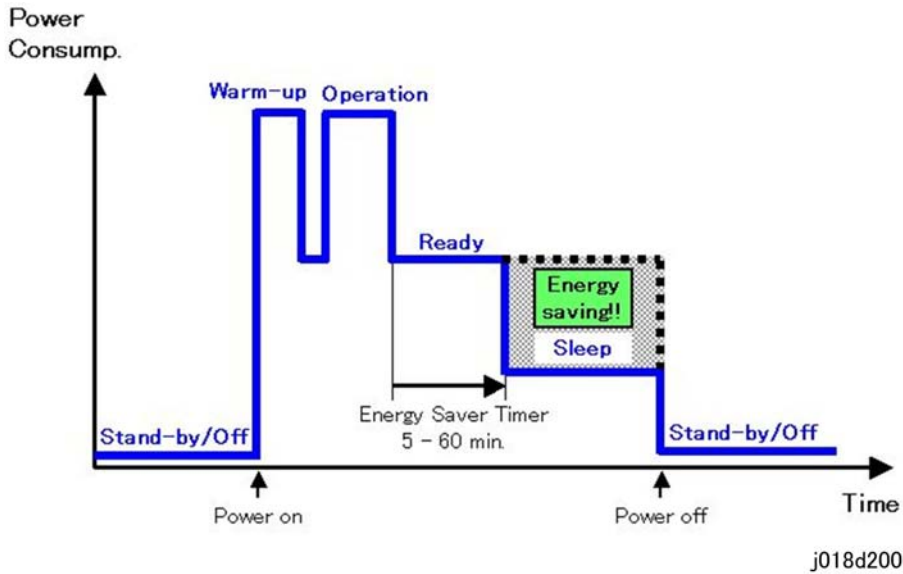
Font does not get bold.	
	<p>1. Printer driver settings correct?</p> <p>Check the "Increase bold with font size" checkbox.</p> <p>2. If none of the above work</p> <p>This is product specification.</p>

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. [Menu]> ▲ or ▼ "System"> [Enter].
2. ▲ or ▼ > "Energy Saver"> [Enter].
 - The default is 5 min.
 - The setting can be changed within a range of 5 to 60 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 sec. This applies to all four 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.

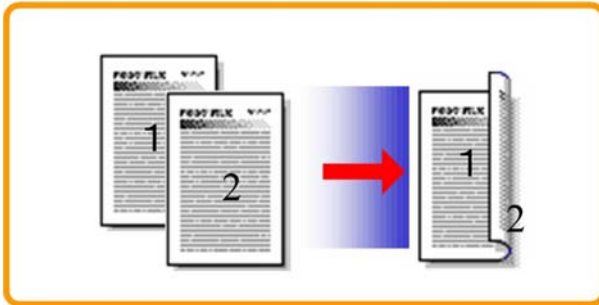
Paper Save

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

7

2. Combine mode:

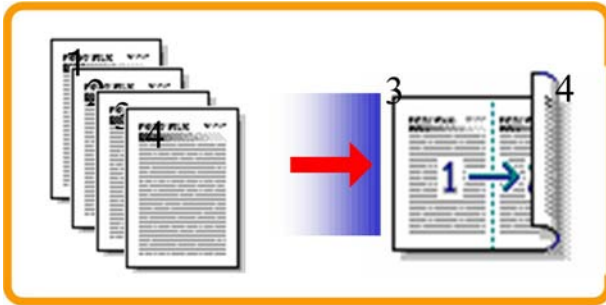
Reduce paper volume in half!



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.

7

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

**M-G1/R-G1 Series
Machine Code:
J017/J018/J019/J021/J023
Appendices**

07 June 2011

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1. Appendix: Specifications

Specifications

Printer Engine: J017, J018, J019, J021

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: J017/J019/J021 and J018

		J017/J019/J021	J018
Resolution (max.)		1200 x 1200	
Print speed	FC	29 ppm	30 ppm
	B&W		
Dimensions (w x d x h)		420 x 485 x 259 mm (16.5 x 19.1 x 10.2 in.)	509 x 485 x 263 mm (20 x 19.1 x 10.4 in.)
Paper capacity	Printer	250 pp.	250 pp.
	Bypass*1	100	100
	PFU*2	---	500 x2 (1000)
Duplex unit		Yes*3	
NIC		Yes*4	
PCL supported		Yes*5	

*1	Bypass Unit J507 is an option for all models.
*2	Paper Feed Unit J307 is an option for the J018 only. One or two PFUs can be installed for a maximum paper capacity of 1000 sheets (500 + 500)
*3	Duplex unit is standard for J017, J018, J019. Duplex unit is not provided for the J021.
*4	The NIC is mounted on the CTL board of the J017 controller. The NIC is a separate board with the J018 and J019 controller. The J021 does not have an NIC.
*5	The J017, J021 controllers do not support PCL. The J018, J019 controllers both support PCL.

Base Specifications: J017/J018/J019/J021

Configuration	Desktop
Printing Method	On-Demand piezo inlet GELJET Ink Printing Technology with pigment-base ink (4 colors)
Print Speed (Normal Paper) A4/LT	
J017, J019, J021	Full-page RPCS; Color: 9.0 ppm/ Mono: 10.5 ppm*1 PCL; Color: 8.0 ppm/ Mono: 10.5 ppm*2
	Max. Speed with catalog sample RPCS/ PCL; Color: 29.0 ppm/ Mono: 29.0 ppm*1/2
	ISO Based speed RPCS; Color: 11.7 ppm/ Mono: 12.0 ppm*1
J018	Full-page RPCS; Color: 14.5 ppm/ Mono: 18.5 ppm*1 PCL; Color: 13.0 ppm/ Mono: 18.5 ppm*2
	Max. Speed with catalog sample RPCS/ PCL; Color: 30.0 ppm/ Mono: 30.0 ppm*1/2
	ISO Based speed RPCS; Color: 19.0 ppm/ Mono: 20.0 ppm*1

*1:	With RPCS Raster driver, "Standard, Speed Priority Color": JEITA J6 Chart, Mono: JEITA J1 Chart.		
*2:	With PCL driver, "Standard High Speed" mode, Chart: Ricoh Original Speed Priority Chart.		
First Print Speed (J017/J019/J021 with A4 LEF)	Mono	RPCS Raster	Less than 6 sec.
		PCL	Less than 6 sec.
	Color	RPCS Raster	Less than 7.5 sec.
		PCL	Less than 8.0 sec.
First Print Speed (J018 with A4 LEF)	Mono	RPCS Raster	Less than 4 sec.
		PCL	Less than 4 sec.
	Color	RPCS Raster	Less than 5 sec.
		PCL	Less than 5.5 sec.
Duplex Printing (A4/LT Standard, Speed Priority)	J017/J019/J021	RPCS Raster	Color: 6.8 ppm, Mono: 8.6 ppm
	J018	RPCS	Color: 10.9 ppm Mono: 13.5 ppm
		PCL	Color: 7.5 ppm Mono: 12.4 ppm
	J019	PCL	Color: 6 ppm, Mono: 8.6 ppm
Dimensions (w x d x h) J017, J019, J021	Stand alone		420 x 485 x 259 mm (16.5 x 19.1 x 10.2 in.)
	With Bypass Tray		420 x 707 x 452 mm (16.5 x 27.8 x 17.8 in.)

Dimensions (w x d x h) J018	Stand alone	509 x 485 x 263 mm (20 x 19.1 x 10.4 in.)
	With Bypass Tray only	509 x 707 x 456 mm (20 x 27.8 x 18 in.)
	With PFU (1 tray) only	509 x 485 x 373 mm (20 x 19.1 x 14.7 in.)
	With PFU (2 trays) only	509 x 485 x 488 mm (20 x 19.1 x 19 in.)
	With PFU x2 and Bypass	509 x 707 x 556 mm (20 x 27.8 x 22.3 in.)
Weight (J017/J019/J021)	Without Bypass Tray	14 kg (30.8 lb.)
	With Bypass Tray	16.5 kg (36.3 lb.)
Weight (J018)	Stand alone	15.5 kg (34.1 lb.)
	Max. with all options (Bypass + PFU x2)	29.9 kg (65.8 lb.)
Paper Feed Capacity		
J017/J019/J021	Standard Cassette	250 sheets
	Multi Bypass Tray	100 sheets
	Maximum	350 sheets
J018	Standard Cassette	250 sheets
	Multi Bypass Tray	100 sheets
	PFU	500 sheets x2
	Maximum	1350 sheets
Paper Output Tray Capacity	J017/J018/J019/J021	100 sheets

Print Area	Plain Paper	Sides	Approx. 3 mm
		Leading, Trailing Edges	Approx. 3 mm
	Envelopes	Sides	Approx. 3 mm
		Leading Edge	Approx. 8 mm
		Trailing Edge	Approx. 38 mm

Media Type	Standard Tray, PFU	Simplex/Duplex	Plain Paper, Postcard, Inkjet Postcard
		Simplex Only	Inkjet Plain Paper, Glossy Paper, Envelope
	Multi Bypass	Simplex/Duplex	Plain Paper, Postcard, Inkjet Postcard
		Simplex Only	Inkjet Plain Paper, Glossy Paper, Envelope, Thick Paper (42 to 68 lb.)
Paper Weight	Standard Tray	60 to 163 g/m ² (Bond 16 to 42 lb.)	
	Multi Bypass	60 to 255 g/m ² (Bond 16 to 68 lb.)	
	PFU	60 to 105 g/m ² (Bond 16 to 28 lb.)	
Power Supply	NA	100 to 120V 50/60 Hz	
	EU	220 to 240V 50/60 Hz	
	Note: J017 employs a universal type PSU: 100V to 240V for both NA/EU.		

Power Consumption	Print Mode* ¹ J017/J019/J021		36W or less
	Print Mode J018		38W or less
	Energy Saver Mode	J017 (NA)	2W or less
		J017 (EU)	2.5W or less
		J018 (NA/EU)	3.499 W or less
		J019 (NA/EU)	3.499 W or less
		J021 (EU)	2W or less
Warm-up Time	J017, J019, J021	Less than 35 sec.	
	J018	Less than 40 sec.	
Options Available	Multi Bypass Tray (J507)		

*1: Average power consumption for printing 1 min. with J6 Chart.

Ink Cartridge Yield (Target)

Large (J018 with 5% chart)* ¹	Black	Ave. 3,000
	Color (M, Y, C)	Ave. 2,300
Large (J018 with ISO chart)	Black	4,470
	Color (M, Y, C)	C: 4,950 M: 4,180 Y: 4,180
Medium (J017/J019/J021) with ISO standard)* ²	Black	2,220
	Color (C, M, Y)	C: 2,220 M: 1,840 Y: 1,840
Medium (J017, J019 with 5% chart)* ³	Black	Ave. 1,500
	Color (M, Y, C)	Ave. 1,000
Starter (J017, J018, J019, J021)	Use only to initialize ink at installation.	

*1: 3 P/J APV 1,500

*2: ISO Standard: ISO/IEC 24711

*3: 3P/J APV 750

Print Volume, Service Life

J017/J019

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

J018

Duty	20K prints
Monthly Volume	Ave.: 1,500 prints Max.: 3,300 prints
Estimated Service Life	5 years or 200K prints

J021

Duty	10K prints
Monthly Volume	Ave. 500 prints Max. 1,700
Estimated Service Life	5 years, or 100K prints

Operating Environment

Safety Standard	Asia, other areas (including Russia): IEC60950
EMI	Australia: AS/NZS CISPR 22 Class B Russia: GOST R 51318:22-99, R 515173.3.2-98 Other areas: CISPR22

Environmental Standard	Thailand: Thai Green Level Hong Kong: Hong Kong Energy Save Level New Zealand: New Zealand Green Level 1 Singapore: Singapore Green Level 1	
	EU	BAM, RoHS Directive Compliance, WEEE
Sound Level	Standby	Less than 40 dB (A)
	Printing	
	J017/J019/J021	60.7 dB (A) or less* ¹
	J018	66.5 dB (A) or less* ¹
Sound Pressure Level	Standby	Less than 34 dB (A)
	Printing	
	J017/J019/J021	54.7 dB (A)
	J018	60.5 dB (A)

*¹ Standard, Speed Priority Mode

Transportation and Storage

	Storage	Transportation
J017/J018/J019/J021	-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 (J507)	-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

	Storage	Transportation
Paper Feed Unit (J307)	-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 Type BY1000 (J507) Option

Paper Size	Universal adjustable Width: 55 to 216 mm (2.2 to 8.5 in.) Length: 127 to 1295.4 mm (5 to 51 in.)
Paper Capacity	100 sheets (80 g/m ²)
Paper Weight	60 to 255 g/m ² (Bond 16 to 68 lb.)
Dimensions	253.6 x 348.7 x 233.1 mm (10 x 13.7 x 9.2 in.)
Weight	2.5 kg (5.5 lb.)

Paper Feed Unit Type TK1110 (J307) Option

The PFU is an option for the J018 only (it cannot be used with the other machines.)

Paper Size	A4 SEF, A5 LEF, A6 SEF, B5 JIS SEF, LT SEF, Legal SEF, Executive SEF, 8" x 13" SEF, 8.5" x 13" SEF, 8.25" x 13" SEF, 16 Kai SEF	
Custom Paper Sizes	Vertical	148 to 356 mm (5.83 to 14.01 in.)
	Horizontal	105 to 216 mm (4.14 to 8.5 in.)

Paper Capacity	1 tray 500 sheets ea. 1 or 2 trays can be installed for max. paper supply of 1000 sheets (500 + 500)
Paper Type	Plain, Recycled paper, Color paper, Inkjet Plain Paper, Glossy Paper (A4: Max. capacity 500, max output: 1 sheet).
Paper Weight	60 to 105 g/m ² (16.0 to 28.0 lb.)
Dimensions (w x d x h)	509 x 485 x 127 mm (20 x 19.1 x 5 in.)
PFU Weight	6.0 kg (13.2 lb.)

Supported Paper Sizes: J017, J018, J019, J021

The PFU (Paper Feed Unit) column is for the J018 only.

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
	A4	SEF	210 x 297 mm	Y	Y	Y	Y	Y
	A5	SEF	148 x 210 mm	Y	Y	Y	Y	Y
		LEF	210 x 148 mm	Y	Y	Y	Y	Y
	A6	SEF	105 x 148 mm	Y	Y	Y	Y	Y
	B4	SEF	257 x 364 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
	B6	SEF	125 x 176 mm	Y	Y	Y	Y	Y
	B6	LEF	176 x 125 mm	N	N	N	N	N
	DLT	SEF	11" x 17"	N	N	N	N	N
	LT	SEF	8 1/2" x 11"	Y	Y	Y	Y	Y
	LT	LEF	11" x 8 1/2"	N	N	N	N	N

Type	Name	Feed	Size	Byp	T-1	PFU	F-up	Dplx
	LG	SEF	8 ¹ / ₂ " x 14"	Y	Y	Y	Y	N
	HLT	SEF	5 ¹ / ₂ " x 8 ¹ / ₂ "	N	N	N	N	N
	HLT	LEF	8 ¹ / ₂ " x 5 ¹ / ₂ "	Y	Y	Y	Y	Y
	Exe	SEF	7 ¹ / ₄ " x 10 ¹ / ₂ "	Y	Y	Y	Y	Y
	Exe	LEF	10 ¹ / ₂ " x 7 ¹ / ₄ "	N	N	N	N	N
	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
		LEF		N	N	N	N	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	Y
	Monarch	LEF	3 ⁷ / ₈ " x 7 ¹ / ₂ "	Y	Y	N	Y	Y
	C6	LEF	114 x 162 mm	Y	Y	N	Y	Y
	C5	LEF	162 x 229 mm	Y	Y	N	Y	Y
	DL Env	LEF	110 x 220 mm	Y	Y	N	Y	N

Remarks:

Y	Supported
N	Not supported.

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	139.7 to 356	5.5 to 14.01
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.

Print Speed and Resolution

J017: Mono

Paper Type	Print Mode	dpi	Simplex (A4) RPCS Driver
Plain Paper Mode	High Speed (with Ricoh original chart)	300 x 150	29.0 ppm
	High Speed	300 x 150	20.5 ppm
	Speed Priority	600 x 300	18.5 ppm
	Quality Priority	600 x 600	NA

J017: Color

Paper Type	Print Mode	dpi	Simplex (A4) RPCS Driver
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

J018: Mono

Paper Type	Print Mode	dpi	Simplex (A4) RPCS Driver
Plain Paper Mode	High Speed (with Ricoh original chart)	300 x 150	30.0 ppm
	High Speed	300 x 150	21.5 ppm
	Speed Priority	600 x 300	19.5 ppm
	Quality Priority	600 x 600	---

J018: Color

Paper Type	Print Mode	dpi	Simplex (A4) RPCS Driver
Plain Paper Mode	High Speed (with Ricoh original chart)	300 x 150	30.0 ppm
	High Speed	300 x 150	16.5 ppm
	Speed Priority	600 x 300	14.5 ppm
	Quality Priority	600 x 600	---

J019: Mono

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

J019: Color

1

Paper Type	Print Mode	dpi	Simplex (A4)	
			RPCS Diver	PCL Driver
Plain Paper Mode	High Speed (with Ricoh original chart)	300 x 150	29.0 ppm	29.0 ppm
	High Speed	300 x 150	16.0 ppm	14.0 ppm
	Speed Priority	600 x 300	9.0 ppm	8.0 ppm
	Quality Priority	600 x 600	NA	NA

Continuous Print Speed: Simplex/Duplex

J017, J019, J021: RPCR

Paper	Mode	Coverage	Simplex (ppm)	Duplex (ppm)
Plain Paper	High Speed	J1	> 20.0	---
		J6	> 16.0	---
	Speed Priority	J1	> 10.5	> 8.6
		J6	> 9.0	> 6.8

J019 EXP: PCL

Paper	Mode	Coverage	Simplex (ppm)	Duplex (ppm)
Plain Paper	High Speed	J1	> 20.0	---
		J6	> 14.0	---
	Speed Priority	J1	> 10.5	> 8.6
		J6	> 8.0	> 6.0

J018: RPCR

Paper	Mode	Coverage	Simplex (ppm)	Duplex (ppm)	PFU* ¹ (ppm)
Plain Paper	High Speed	J1	> 20.5	---	> 19.8
		J6	> 16.5	---	> 14.9
	Speed Priority	J1	> 18.5	> 13.5	>18.5
		J6	> 14.5	> 10.9	> 13.8

* 1: PFU applies to J018 only

J018: PCL: EXP

Paper	Mode	Coverage	Simplex (ppm)	Duplex (ppm)	PFU* ¹ (ppm)
Plain Paper	High Speed	J1	> 20.5	---	> 18.5
		J6	> 16.0	---	> 13.5
	Speed Priority	J1	> 18.5	> 12.4	>17.1
		J6	> 13.0	>7.5	> 11.9

* 1: PFU applies to J018 only

Continuous Print Speed: Monochrome/Full Color

High Speed

	J017, J019, J021	
	RPCR	PCL* ¹
	J018	
	RPCR	PCL* ²
Mono	> 29.0 ppm	> 29.0 ppm
FC	> 29.0 ppm	> 29.0 ppm
Mono	> 30.0 ppm	> 30.0 ppm
FC	> 30.0 ppm	> 30.0 ppm

* 1: J019 EXP only

* 2: J018 EXP only

Speed Priority

	J017, J019, J021	
	RPCR	PCL *1
	J018	
	RPCR	PCL *2
Mono	> 17.0 ppm	> 17.0 ppm
FC	> 17.0 ppm	> 16.0 ppm
Mono	> 26.0 ppm	> 27.0 ppm
FC	> 26.0 ppm	> 25.0 ppm

* 1: J019 EXP only

* 2: J018 EXP only

Control Boards: J017, J018, J019, J021

J017, J021 Controller

RAM	Std. 16 MB, Max. 16 MB	
PDL	Std.: RPCS Raster	
Connectivity	Host Interface (Std)	USB 1.1, 2.0, 10Base-T, 100Base-TX
	Network Protocol	TCP/IP
	MIB Support	Private: Ricoh Original Standard: MIB-2 (RFC1213). HostResourceMIB (RFC1514), PrinterMIB (RFC1759)

	Networking Operating Systems	<ul style="list-style-type: none"> • Windows 7 (from Dec. 2009) • Windows 2000, Windows XP, Windows Vista, Windows 2003 Server, Windows 2008 Server*¹ • Mac-OSX Power PC 10.3 to 10.5.2 • Mac OSX Intel 10.4.5to 10.5.2*²
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* 1: 32-bit version provided on CD-ROM, 64-bit version available from Ricoh Website.

* 2: Mac driver included on CD-ROM (English only).

Print Resolution	Engine		150 x 150, 300 x 300, 600 x 300, 600 x 600, 1200 x 1200 dpi 2-bit
	Controller: RPCS Raster (2-bit)		300 x 150, 300 x 300, 600 x 300, 600 x 600, 1200 x 600, 1200 x 1200 dpi
	Drivers: RPCS Raster		300 x 150, 300 x 300, 600 x 300, 600 x 600, 1200 x 600, 1200 x 1200 dpi
Language	Operation Panel	EU Model	1. English, 2. Italian, 3. French, 4. German, 5. Spanish, 6. Dutch, 7. Swedish, 8. Norwegian, 9. Danish, 10. Portuguese, 11. Finnish, 12. Czech, 13. Hungarian, 14. Polish
		NA Model	1. Japanese, 2. English, 3. Italian, 4. French, 5. German, 6. Spanish, 7. Dutch, 8. Swedish, 9. Norwegian, 10. Danish, 11. Portuguese, 12. Finnish
	Drivers	RPCS Raster	1. English, 2. Italian, 3. French, 4. German, 5. Spanish, 6. Dutch, 7. Swedish, 8. Norwegian, 9. Danish, 10. Portuguese, 11. Russian, 12. Finnish, 13. Czech, 14. Polish
	Test Pages	NA	1. Japanese, 2. English, 3. Italian, 4. French, 5. German, 6. Spanish, 7. Dutch, 8. Swedish, 9. Norwegian, 10. Danish, 11. Portuguese,
		EU	1. English, 2. Italian, 3. French, 4. German, 5. Spanish, 6. Dutch, 7. Swedish, 8. Norwegian, 9. Danish, 10. Portuguese, 11. Finnish, 12. Czech
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
Bundled Utilities	Smart Net Monitor for Admin, Smart Net Monitor for Client

J018, J019 Controller

CPU	TX4956C	
RAM	64 MB	
PDL	RPCS Raster, PCL5c/6	
Fonts	PCL: 45 fonts, 13 International fonts	
Connectivity	Host Interface	Std.: USB 1.1, 2.0, 10Base-T, 100Base-TX
	Network Protocol	TCP/IP
	MIB Support	Private: Ricoh Original Standard: MIB-2 (RFC1213). HostResourceMIB (RFC1514), PrinterMIB (RFC1759)
	Networking Operating Systems	<ul style="list-style-type: none"> Windows 7 (from Dec. 2009) Windows 2000, Windows XP, Windows Vista, Windows 2003 Server, Windows 2008 Server*¹ Mac-OSX Power PC 10.3 to 10.5.2, Mac OS X Intel 10.4.5 to 10.5.2*²

* 1: 32-bit version provided on CD-ROM, 64-bit version available from Ricoh Website.

* 2: Mac driver included on CD-ROM (English only).

USB 2.0

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

NIC

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

Utilities

Bundled	Smart Net Monitor for Admin
	Smart Net Monitor for Client (pre-packaged)
Optional	Desk Top Binder V2 Professional

Print Resolution	Engine		150 x 150, 300 x 300, 600 x 300, 600 x 600, 1200 x 1200 dpi 2-bit
	Controller	PCL5c	150 x 150, 300 x 300, 600 x 600 dpi
		PCL6	150 x 150, 300 x 300, 600 x 600 dpi
		RPCS Raster	300 x 150, 300 x 300, 600 x 300, 600 x 600, 1200 x 600, 1200 x 1200
	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
Language	Operation Panel	EU Model	1. English, 2. Italian, 3. French, 4. German, 5. Spanish, 6. Dutch, 7. Swedish, 8. Norwegian, 9. Danish, 10. Portuguese, 11. Finnish, 12. Czech, 13. Hungarian, 14. Polish
		NA Model	1. Japanese, 2. English, 3. Italian, 4. French, 5. German, 6. Spanish, 7. Dutch, 8. Swedish, 9. Norwegian, 10. Danish, 11. Portuguese, 12. Finnish
	Drivers	RPCS Raster	1. English, 2. Italian, 3. French, 4. German, 5. Spanish, 6. Dutch, 7. Swedish, 8. Norwegian, 9. Danish, 10. Portuguese, 11. Russian, 12. Finnish, 13. Czech

	Test Pages	NA	1. Japanese, 2. English, 3. Italian, 4. French, 5. German, 6. Spanish, 7. Dutch, 8. Swedish, 9. Norwegian, 10. Danish, 11. Portuguese,
		EU	1. English, 2. Italian, 3. French, 4. German, 5. Spanish, 6. Dutch, 7. Swedish, 8. Norwegian, 9. Danish, 10. Portuguese, 11. Finnish, 12. Czech
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		
Bundled Utilities	Smart Net Monitor for Admin, Smart Net Monitor for Client		

J023 Specifications

Configuration	Desktop	
Printing Method	GELJET™ Technology, on demand with piezo inlet, pigment base 4-color inks.	
Paper Transport System	GELJET™ BT System	
Ink Supply System	Tubing-Pump System	
Ink	Y, M, C, K GELJET Viscous Ink	
Continuous Print Speed	B&W	More than 29 ppm (with standard print pattern on A4 size paper)
	FC	
First Print (High Speed)	B&W	< 2.6 sec. with A4 B&W original (JEITA Standard J1 Pattern)
	FC	< 2.6 sec. with A4 FC original (JEITA Standard J6 Pattern)
Resolution	Max. 3600 x 1200 dpi	
Nozzles	192 nozzles/per color	

Paper Size			
Standard Cassette	SEF	A3, A4, B4, B5, A5, A6* ¹ , LT, LG, Executive, 320x450 mm, 11"x17", 8.5"x13", 8 1/2"x13", 8 1/4"x13", 8"x13", 8-kai, 16-kai,	
	LEF	5 1/2"x8 1/2"	
	Envelopes	COM 10 (4 1/8" x 9 1/2"), Monarch 3 7/8" x 7 1/2"), C6, C5, DL Env	
	Custom Size	SEF	139.7 to 432 mm
		LEF	88 to 297 mm
Bypass Tray	SEF	A3, A4, B4, B5, A5, A6* ¹ , LT, LG, Executive, 320x450 mm, 11"x17", 12"x18", 8 1/2"x13", 8 1/4"x13", 8"x13", 8-kai, 16-kai,	
	LEF	5 1/2"x8 1/2"	
	Envelopes	COM 10 (4 1/8" x 9 1/2"), Monarch 3 7/8" x 7 1/2"), C6, C5, DL Env	
	Custom Size	SEF	127 to 1295 mm
		LEF	55 to 330 mm
PFU	SEF	A3, A4, B4, B5, A5, LT, LG, Executive, 11"x17", 8 1/2"x13", 8 1/4"x13", 8"x13", 8-kai, 16-kai,	
	Custom Size	SEF	210 to 432 mm
		LEF	148 to 297 mm

*¹ For feeding A6 paper, Ricoh NBS copy paper (105 g/m²) is recommended

Paper Type	Standard Cassette	Plain Paper, HG Standard, Glossy Paper, Postcard, Envelope, Inkjet Postcard
	Bypass Tray	Plain Paper, HG Standard, Glossy Paper, Postcard, Envelope, Inkjet Postcard, Thick Paper (157 to 255 g/m ²)
	PFU	Normal Paper, HG Standard, Glossy Paper
Thick Paper	Standard Cassette	60 to 157 g/m ²

	Bypass Tray	53 to 255 g/m ²
	PFU	60 to 104 g/m ²
Paper Capacity	Standard Cassette	250 sheets
	Bypass Tray	100 sheets
	PFU	250 sheets
Max. Capacity	600 sheets (250 + 100 + 250)	
Output Tray	Plain Paper	150 sheets
	Postcards	70 sheets
	Envelopes (long)	30 sheets
Print Area	Printable	3 mm border (top, bottom, left, right)
	Guaranteed	4.2 border (top, bottom, left, right)
Duplexing	Duplex provided (standard)	

Power Supply	100V ±10%, 50/60 Hz ±3Hz	
Power Consumption	Energy Save Mode	Less than 2.2W
	Operation Mode	Less than 35W (main machine only)
Noise	Acoustics	High speed: Less than 58.9 dB(A)
		Standby: Less than 27.3 dB (A)
	Sound Pressure	High speed: Less than 58.9 dB(A)
		Standby: Less than 27.3 dB (A)
Dimensions (w x d x h)	540 x 789 x 451 mm (21.3 x 31.1 x 17.8 in.)	
Weight	Standalone	Less than 17.5 kg (38.5 lb.)
	With options *2	Less than 28 kg (61.6 lb.)
	*2 :Bypass Tray + PFUs x2	
Printer Language	RPCS Raster	
Interfaces	Ethernet 10BASE-T, 100BASE-TX, USB 2.0 High Speed	

Operating Systems	Windows 2000, Windows XP, Windows Vista, Windows Server 2003/2008, Macintosh OS X Ver. 10.3 a
Service Life	5 years or 150,000 A4 prints
Environment	
Operating	10 to 32°C (50 to 89.5°F), 15 to 80% rH (no condensation)
Storage	1 to 40°C (33.8 to 104°F), 5 to 80% rH (no condensation)



2. Appendix: SP Mode Tables

Service Mode, Engine Maintenance

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 Maintenance (SP) Mode.** Consists of SP codes SP1000 to SP7532. These are printer engine SP adjustments, primarily but not exclusively used by designers for machine adjustments.

2

Service Mode

Entering/Exiting Service Mode

To enter Service Mode:

1. Enter the Service Mode.
2. [#Enter]> "Bit Switch"
 - Bit Switch
 - Reset Settings
 - Service Summary
 - Version Display
 - Serial No. Edit
 - Counter Setting
 - Fax No. (Not Used)
 - E. Saver Display
 - Emergency Print

To Exit the Service Mode

1. Press [Escape]> "Service Menu".
2. [▼] or [▲] > "End"> [#Enter]> Standby

-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).

These items are available on the Service Menu.

Bit Switch	Bit switches 1 to 8. (Described in detail below.)
Reset Settings	<ul style="list-style-type: none"> • Initialize System. Clears all SP code settings and restores their default settings. • Clear Counters. Clears all counters.
Service Summary	Prints the Service Summary. The service summary lists information about the current status of the machine. For more details, see Section 4.
Version Display	Displays the version number of the printer engine.
Counter Settings	<ul style="list-style-type: none"> • Counter Display. Switches the counter display on and off. • LevColor Disp. Switches the level counter display on and off. • Coverage Count. Switches the coverage counter on and off. • Double Count. Switches double counting on and off. <p>The default setting for all these items is "Off".</p>

Engine Maintenance (SP) Mode

Entering/Exiting SP Mode

To enter SP Mode

1. Enter the Service Mode.

```
SYSTEM Ver. nnn
Service Menu
```

2. [▼] or [▲]> "Engine Maint."> [#Enter].
 - Engine Maint. allows changing the settings of individual SP codes (SP1000 to SP7532).
 - For more about individual SP code settings, refer to the tables in this section.
 - There are no settings available for the following groups: SP4000, SP6000, SP8000, SP9000.

To exit SP mode

1. At any level in the SP mode press [Escape] to return to the first level.

```
SYSTEM Ver. nnn
Service Menu
```

2. [▼] 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).

Using SP Mode Menus

2

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 SP1164 HUMI:B for -2.5%

Calibrate Humidity Setting for Duplex

Range: [-128 to +127/0/1/0.1%]

2. Enter the Service Mode.

```
SYSTEM Ver. 0.08
Service Menu
```

3. [▼] or [▲]> "Engine Maint."> [#Enter]

```
SP No.
1000
```

4. "1" is entered at the first digit, press [#Enter] to move the cursor to the 2nd digit.
5. [▲] once> "1100"> [#Enter] to enter "1" at the 2nd digit and move the cursor to the 3rd digit.
6. [▲] x6 times> "1160"> [#Enter] to enter "6" at the 3rd digit and move the cursor to the 4th digit.
7. [▲] x4 times> "1164"> [#Enter].

```
CHG:HUMI:B
1164
```

8. [#Enter]

```
CHG:HUMI:B
_000
```

9. 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.
10. [▼] or [▲]> "-000"> [#Enter]> Cursor moves to 1st zero

```
CHG:HUMI:B
-000
```

11. [▲]> "-000"> To enter the first "0", cursor moves to 2nd "0".
12. [#Enter] x2 times> "-020"> [#Enter] To enter "2" at the 2nd zero, cursor moves to 3rd "0".
13. [▲] x5 times> "-025"> [#Enter]

```
CHG:HUMI:B
-025
```

14. [#Enter] To save the setting.

```
SP No.
1164
```

15. [Escape]> "Engine Maint."
16. [▼] 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).

Bit Switch Settings

- Bit SW 1:** Not used. Do not change these settings. [RTB 16](#)
- Bit SW 2:** Not used. Do not change these settings. [Bit switch added](#)
- 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	Advanced Level Color, Level Color Switch	0	0: Advanced color 1: Enables "Level Color" feature of previous machines.
4	Not Used	---	

Bit	Function	Default	Details
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	---	
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	Sheet Recovery	0	0: Recovery enabled. If an error occurs after paper has fed, scanned data in memory when the error occurred is recovered. 1: Recovery disabled If an error occurs after paper has feed, empty sheets may feed.
4	Re-filling confirmation	1	1: During ink-refilling an error message is displayed on the printer operation panel and the PC screen to alert the operator that a tank is re-filling. The operator is given the option of continuing without re-filling. 0: No ink-re-filling message is displayed on the PC screen. Note: <ul style="list-style-type: none"> • Default: 0 for China, 1 for all other areas. • This feature operates with the RPCS Raster printer driver only.

Bit	Function	Default	Details
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	Re-fill Detection Warning	0	0: Displays an alert message on both the printer operation panel and the PC screen while ink re-filling is in progress. 1: Does not display the alert message on the PC screen (displays on printer operation panel only).

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	Paper Error Detection	0	This switch sets whether the paper error detection executes. OFF: No detection ON: Paper error detection
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	---	

Bit	Function	Default	Details
6	USB Serial Signal	0	Determines how the USB signal is fixed. 0: Serial signal is set with the value in NVRAM. 1: USB serial signal fixed at "0" (value in NVRAM is not changed).
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	0	
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
6	Charge Setting for Recycled Paper	0	This switch sets whether the charge bias is selected for normal paper or recycled paper. 0: Normal paper charge 1: Recycled paper charge

Bit	Function	Default	Details
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.

2

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 (J017/ J018/ J019/ J021/J023)	Does not Apply. Applies to a machine of another GEIJET series, not J017/J018/J019/J021/J023.
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 J017/J018/J019/J021/J023 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

Group 1000

Main Scan, Sub Scan Registration

1000	REG:FD:NORM:F	Adjust Sub Scan Registration (Normal Paper)
	<p>Use this SP code to adjust writing in the sub scan registration for normal paper. Do this setting when registration does not match the direction of paper feed selected in the user image adjustment menu.</p> <p>[-128 to +127/FA/1/0.1 mm]</p>	
1001	REG:TR1:NORM:F	Adjust Main Scan Registration (Normal Paper: Tray 1)
	<p>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.</p> <p>[-128 to +127/FA/1/0.1 mm]</p>	
1002	REG:TR2:NORM:F	Adjust Main Scan Registration (Tray 2: Normal Paper: FA)
	<p>Use this SP code to adjust writing in 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.</p> <p>[-128 to +127/FA/1/0.1 mm]</p>	
1003	REG:MAN:NORM:F	Adjust Main Scan Registration (Bypass: Normal Paper: FA)

		Use this SP code to adjust writing in the main scan direction for normal paper loaded in the bypass tray. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1 mm]
1004	REG:FD:GLOS:F	Adjust Sub Scan Registration (Glossy Paper: FA)
		Use this SP code to adjust writing in the the sub scan registration for glossy paper. Do this setting when registration does not match the direction of paper feed selected in the user image adjustment menu. [-128 to +127/FA/1/0.1 mm]
1005	REG:TR1:GLOS:F	Adjust Main Scan Registration (Glossy Paper: FA) FU
		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/1/0.1 mm]
1006	REG:TR2:GLOS:F	Adjust Main Scan Registration (Tray 2: Glossy Paper: FA) FU
		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/1/0.1 mm]
1007	REG:MAN:GLOS:F	Adjust Main Scan Registration (Bypass: Glossy Paper: FA) FU
		Use this SP code to adjust writing in the main scan direction for glossy paper loaded in the bypass tray. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/FA/1/0.1 mm]
1008	REG:FD:OHP:F	Adjust Sub Scan Registration (OHP: FA) FU
		Use this SP code to adjust writing in the sub scan direction for transparencies (OHP). Do this setting when registration does not match the direction of paper feed selected in the user image adjustment menu. [-128 to +127/FA/1/0.1 mm]
1009	REG:TR1:OHP:F	Adjust Main Scan Registration (Tray 1: OHP: FA) FU

		Use this SP code to adjust writing in the main scan direction for transparencies (OHP) 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 /1/0.1 mm]
1010	REG:MAN:OHP:F	Adjust Main Scan Registration (Bypass: OHP: FA) FU
		Use this SP code to adjust writing in the main scan direction for transparencies (OHP) loaded in the bypass tray. Do this setting when registration does not match the image start position on the user image adjustment menu. [-128 to +127/ FA /1/0.1 mm]
1011	REG:FD2:NORM:F	Adjust Sub Scan Registration (Normal Paper: 2nd Registration: FA)
		Use this SP code to adjust writing in the sub scan registration for normal paper. Do this setting when it is necessary to fine adjust the line feed position. [-128 to +127/ FA /1/0.1 mm]
1012	REG:FD2:GLOS:F	Adjust Sub Scan Registration (Glossy Paper: 2nd Registration: FA) FU
		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 /1/0.1 mm]
1013	REG:FD2:OHP:F	Adjust Sub Scan Registration (OHP: 2nd Registration: FA) FU
		Use this SP code to adjust writing in the sub scan direction for transparencies (OHP). Do this setting when it is necessary to fine adjust the line feed position. [-128 to +127/ FA /1/0.1 mm]

Paper Feed

1014	FDLEN:F	Adjust Amount of Paper Feed (FA)
		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". [-1000000 to +1000000/ FA /1 μm]

1015	FDLEN:OFFSET	Adjust Amount of LF Offset in Sub Scan Direction
	<p>Use this SP to set the amount of line feed before the print head begins its 2nd pass during bi-directional printing. Do this SP when it is necessary to correct color offset that occurs during bi-directional printing.</p> <p>[-128 to +128/FA/1/Vertical Encoded Pulse Count]</p>	

Carriage

1016	ADJ:SIDEBOARD	Adjust Sideboard (Carriage Home Position)
	<p>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.</p> <p>[-128 to +128/FA/1/0.1 mm]</p>	

Suction Vents

1017	PRGPOS:R	Adjust Position of Right Suction Vent DFU FU
	<p>Use this SP to adjust the venting position of the right air vent. Do this SP after it has been determined that the ink is not venting at the center of the right ink suction vent.</p> <p>[-128 to +128/FA/1/0.1 mm]</p>	
1018	PRGPORS:L	Adjust Position of Left Suction Vent DFU FU
	<p>Use this SP to adjust the venting position of the left ink suction vent. (Do this SP after it has been determined that the ink is not venting at the center of the left ink suction vent.)</p> <p>[-128 to +128/FA/1/0.1 mm]</p>	

Charge Width Setting Mj1: Simplex (DFU)

1100	CHG:W1:EDGE:1	LE/TE: Mj1: ID1
1101	CHG:W1:MIDL:1	MIDLL: Mj1: ID1
1102	CHG:W1:EDGE:2	LE/TE: Mj1: ID2
1103	CHG:W1:MIDL:2	MIDLL: Mj1: ID2
1104	CHG:W1:EDGE:3	LE/TE: Mj1: ID3

1105	CHG:W1:MIDL:3	MIDL: Mj1: ID3
1106	CHG:W1:EDGE:4	LE/TE: Mj1: ID4
1107	CHG:W1:MIDL:4	MIDL: Mj1: ID4

2

Charge Width Setting Mj2: Simplex (DFU)

1108	CHG:W1:EDGE:5	LE/TE: Mj2: ID1
1109	CHG:W1:MIDL:5	MIDL: Mj2: ID1
1110	CHG:W1:EDGE:6	LE/TE: Mj2: ID2
1111	CHG:W1:MIDL:6	MIDL: Mj2: ID2
1112	CHG:W1:EDGE:7	LE/TE: Mj2: ID3
1113	CHG:W1:MIDL:7	MIDL: Mj2: ID3
1114	CHG:W1:EDGE:8	LE/TE: Mj2: ID4
1115	CHG:W1:MIDL:8	MIDL: Mj2: ID4

Charge Width Setting Mj3: Simplex (DFU)

1116	CHG:W1:EDGE:9	LE/TE: Mj3: ID1
1117	CHG:W1:MIDL:9	MIDL: Mj3: ID1
1118	CHG:W1:EDGE:10	LE/TE: Mj3: ID2
1119	CHG:W1:MIDL:10	MIDL: Mj3: ID2
1120	CHG:W1:EDGE:11	LE/TE: Mj3: ID3
1121	CHG:W1:MIDL:11	MIDL: Mj3: ID3
1122	CHG:W1:EDGE:12	LE/TE: Mj3: ID4
1123	CHG:W1:MIDL:12	MIDL: Mj3: ID4

Charge Width Setting Mj4: Simplex (DFU)

1124	CHG:W1:EDGE:13	LE/TE: Mj4: ID1
1125	CHG:W1:MIDL:13	MIDL: Mj4: ID1
1126	CHG:W1:EDGE:14	LE/TE: Mj4: ID2
1127	CHG:W1:MIDL:14	MIDL: Mj4: ID2
1128	CHG:W1:EDGE:15	LE/TE: Mj4: ID3
1129	CHG:W1:MIDL:15	MIDL: Mj4: ID3
1130	CHG:W1:EDGE:16	LE/TE: Mj4: ID4
1131	CHG:W1:MIDL:16	MIDL: Mj4: ID4

Charge Width Setting Mj1 : Duplex (DFU)

1132	CHG:W2:EDGE:1	LE/TE: Mj1: ID1
1133	CHG:W2:MIDL:1	MIDL: Mj1: ID1
1134	CHG:W2:EDGE:2	LE/TE: Mj1: ID2
1135	CHG:W2:MIDL:2	MIDL: Mj1: ID2
1136	CHG:W2:EDGE:3	LE/TE: Mj1: ID3
1137	CHG:W2:MIDL:3	MIDL: Mj1: ID3
1138	CHG:W1:EDGE:4	LE/TE: Mj1: ID4
1139	CHG:W2:MIDL:4	MIDL: Mj1: ID4

Charge Width Setting Mj2: Duplex (DFU)

1140	CHG:W2:EDGE:5	LE/TE: Mj2: ID1
1141	CHG:W2:MIDL:5	MIDL: Mj2: ID1
1142	CHG:W2:EDGE:6	LE/TE: Mj2: ID2
1143	CHG:W2:MIDL:6	MIDL: Mj2: ID2

1144	CHG:W2:EDGE:7	LE/TE: Mj2: ID3
1145	CHG:W2:MIDL:7	MIDL: Mj2: ID3
1146	CHG:W2:EDGE:8	LE/TE: Mj2: ID4
1147	CHG:W2:MIDL:8	MIDL: Mj2: ID4

Charge Width Setting Mj3: Duplex (DFU)

1148	CHG:W2:EDGE:9	LE/TE: Mj3: ID1
1149	CHG:W2:MIDL:9	MIDL: Mj3: ID1
1150	CHG:W2:EDGE:10	LE/TE: Mj3: ID2
1151	CHG:W2:MIDL:10	MIDL: Mj3: ID2
1152	CHG:W2:EDGE:11	LE/TE: Mj3: ID3)
1153	CHG:W2:MIDL:11	MIDL: Mj3: ID3
1154	CHG:W2:EDGE:12	LE/TE: Mj3: ID4
1155	CHG:W2:MIDL:12	MIDL: Mj3: ID4

Charge Width Setting Mj4: Duplex (DFU)

1156	CHG:W2:EDGE:13	LE/TE: Mj4: ID1
1157	CHG:W2:MIDL:13	MIDL: Mj4: ID1
1158	CHG:W2:EDGE:14	LE/TE: Mj4: ID2
1159	CHG:W2: MIDL:14	MIDL: Mj4: ID2
1160	CHG:W2:EDGE:15	LE/TE: Mj4: ID3
1161	CHG:W2: MIDL:15	MIDL: Mj4: ID3
1162	CHG:W2EDGE:16	LE/TE: Mj4: ID4
1163	CHG:W2: MIDL:16	MIDL: Mj4: ID4

Calibrate Humidity/Temperature for Duplex (DFU)

1164	CHG:HUMI:B	Calibrate Humidity Setting for Duplex
1165	CHG:TEMP:B	Calibrate Temperature Setting for Duplex

Charge ID Tables: Mj1

2

1200	CHG:PITCH:A1	Mj1: Less Than 10% Lookup Table	DNA This Series
1201	CHG:PITCH:A2	Mj1: 10% → 25% Lookup Table	
1202	CHG:PITCH:A3	Mj1: 25% → 35% Lookup Table	
1203	CHG:PITCH:A4	Mj1: 35% → 45% Lookup Table	
1204	CHG:PITCH:A5	Mj1: 45% → 55% Lookup Table	
1205	CHG:PITCH:A6	Mj1: 55% → 65% Lookup Table	
1206	CHG:PITCH:A7	Mj1: 65% → 75% Lookup Table	
1207	CHG:PITCH:A8	Mj1: More than 75% Lookup Table	

Charge ID Tables: Mj2

1208	CHG:PITCH:B1	Mj2: Less Than 10% Lookup Table	DNA This Series
1209	CHG:PITCH:B2	Mj2: 10% → 25% Lookup Table	
1210	CHG:PITCH:B3	Mj2: 25% → 35% Lookup Table	
1211	CHG:PITCH:B4	Mj2: 35% → 45% Lookup Table	
1212	CHG:PITCH:B5	Mj2: 45% → 55% Lookup Table	
1213	CHG:PITCH:B6	Mj2: 55% → 65% Lookup Table	
1214	CHG:PITCH:B7	Mj2: 65% → 75% Lookup Table	
1215	CHG:PITCH:B8	Mj2: More than 75% Lookup Table	

Charge ID Tables: Mj3

1216	CHG:PITCH:C1	Mj3: Less Than 10% Lookup Table	DNA This Series
1217	CHG:PITCH:C2	Mj3: 10% → 25% Lookup Table	
1218	CHG:PITCH:C3	Mj3: 25% → 35% Lookup Table	
1219	CHG:PITCH:C4	Mj3: 35% → 45% Lookup Table	
1220	CHG:PITCH:C5	Mj3: 45% → 55% Lookup Table	
1221	CHG:PITCH:C6	Mj3: 55% → 65% Lookup Table	
1222	CHG:PITCH:C7	Mj3: 65% → 75% Lookup Table	
1223	CHG:PITCH:C8	Mj3: More than 75% Lookup Table	

Charge ID Tables: Mj4

1224	CHG:PITCH:D1	Mj4: Less Than 10% Lookup Table	DNA This Series
1225	CHG:PITCH:D2	Mj4: 10% → 25% Lookup Table	
1226	CHG:PITCH:D3	Mj4: 25% → 35% Lookup Table	
1227	CHG:PITCH:D4	Mj4: 35% → 45% Lookup Table	
1228	CHG:PITCH:D5	Mj4: 45% → 55% Lookup Table	
1229	CHG:PITCH:D6	Mj4: 55% → 65% Lookup Table	
1230	CHG:PITCH:D7	Mj4: 65% → 75% Lookup Table	
1231	CHG:PITCH:D8	Mj4: More than 75% Lookup Table	
1232	CHG:AREA1:OHP		

Set Charge Area 1

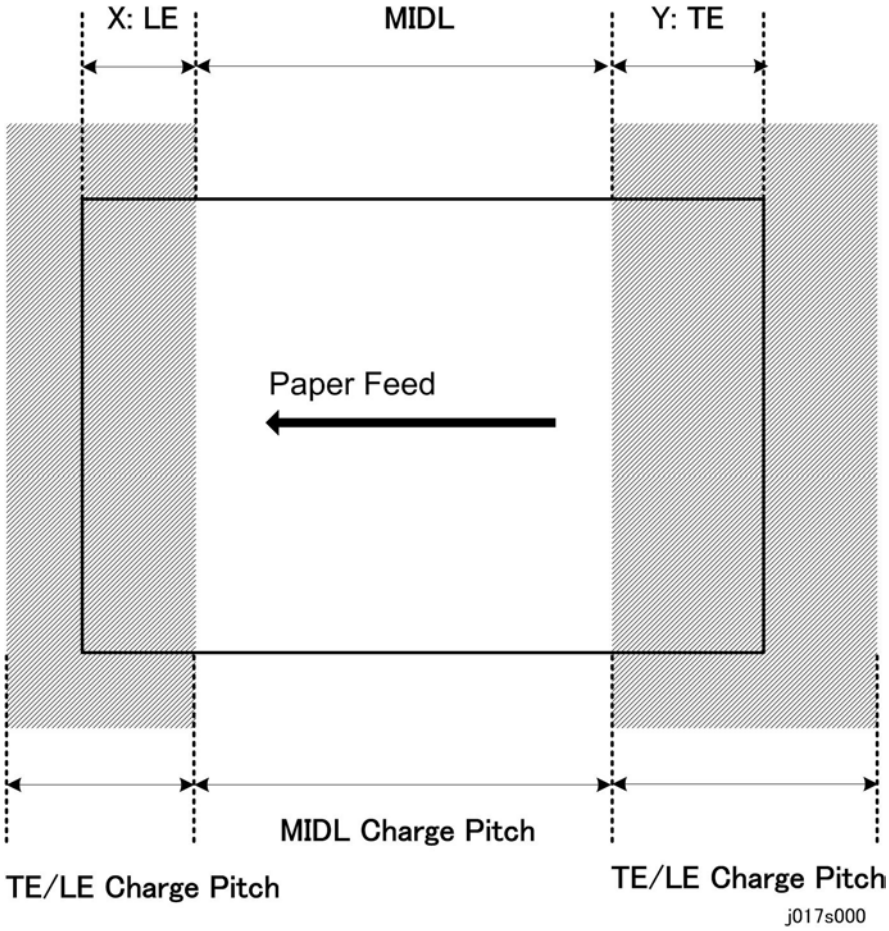
1233	CHG:AREA1:F	Set Charge of Area 1 for LE/TE: OHP
------	-------------	-------------------------------------

		Use this SP to set the size of the leading and trailing edges of transparencies (OHP). Do this setting when you want to adjust pitch amount of the charge applied to the leading and trailing edge of transparencies for printing. The areas of the leading and trailing edges is shown below. [0 to 0xffff ffff/0/1/---]
1234	CHG:AREA1:B	Set Charge of Area 1 for LE/TE: Simplex: Any Other Than OHP
		Use this SP to set the size of the leading and trailing edges for the 1st side of any paper except transparencies (OHP). Do this setting when you want to adjust pitch amount of the charge applied to the leading and trailing edges on the 1st side any paper except transparencies. The areas of the leading and trailing edges is shown below. [0 to 0xffff ffff/0/1/---]
1235	CHG:AREA2:OHP	Set Charge of Area 1 for LE/TE: Duplex: Any Other Than OHP DNA This Series
		Use this SP to set the size of the leading and trailing edges for the 2nd side (duplex printing) of any paper except transparencies (OHP). Do this setting when you want to adjust pitch amount of the charge applied to the leading and trailing edges on the 2nd side any paper except transparencies for duplex printing. The areas of the leading and trailing edges are shown below. [0 to 0xffff ffff/0/1/---]

Set Charge Area 2

1236	CHG:AREA2:F	Set Charge of Area 2 for MIDL: OHP
		Use this SP to set the size of the MIDL area of transparencies (OHP). Do this setting when you want to adjust pitch amount of the charge applied to the MIDL area of transparencies for printing. The MIDL area is shown below. [0 to 0xffff ffff/0/1/---]
1237	CHG:AREA2:B	Set Charge of Area 2 for MIDL: Simplex: Any Other Than OHP
		Use this SP to set the size of the MIDL on the 1st side of any paper except transparencies (OHP). Do this setting when you want to adjust pitch amount of the charge applied to the MIDL area on the 2nd side of any paper other than transparencies. The MIDL area is shown below. [0 to 0xffff ffff/0/1/---]

2



Set Charge for Target Market

1238	CHG:REGION	Set Charge for Geographic Region
------	------------	----------------------------------

<p>Use the SP to set the charge for the areas listed below.</p> <p>0: Enable geographical area setting</p> <p>1: Japan</p> <p>2: NA (North America)</p> <p>3: Europe</p> <p>4: China (Mainland)</p> <p>5: China (Taiwan) "5" and "4" refer to same pitch table.</p> <p>6: Asia. "4" "5" "6" refer to same charge pitch table</p> <p>If any item other than "0" is selected that item and its setting is enabled and takes priority.</p> <p>[0 to 255/0/1/---]</p>

Print Head Temperature Thresholds

1300	HTEMP:H:STOP	Trigger Shutdown: Standby, Printing
1301	HTEMP:H:JUDG	Trigger Shutdown: Power On
1302	HTEMP:H:RCVR	Recovery After High Temp Shutdown
1303	HTEMP:L:RCVR	Recovery After Low Temp Shutdown
1304	HTEMP:L:JUDG	Trigger Shutdown: Power On
1305	HTEMP:L:STOP	Trigger Shutdown: Standby, Printing
	<p>Use this SP to set the threshold for the operating temperature range of the print head.</p> <p>[0 to 65535/0/1/0.1°C]</p>	

Ambient Temperature Thresholds

1306	ETEMP:H:STOP	High Temperature to Trigger Shutdown: Standby, Printing
1307	ETEMP:H:JUDG	High Temperature to Trigger Shutdown: Power On
1308	ETEMP:H:RCVR	Recovery After High Temp Shutdown
1309	ETEMP:L:RCVR	Recovery After Low Temp Shutdown
1310	ETEMP:L:JUDG	Low Temperature to Trigger Shutdown: Power On
1311	ETEMP:L:RCVR	Low Temperature to Trigger Shutdown: Standby, Printing

	Use this SP to set the threshold for the operating humidity range of the print head. [0 to 65535/0/1/0.1°C]
--	--

Group 2000

2

Set Threshold for Near-Full Alert

2000	TH:WASTE:R:SNS	Ink Collector Unit Sensor DNA This Series
	Use this SP to set the threshold value to trigger near full alert for the Ink Collector unit sensor. [0 to 1023/0/1/---]	
2001	TH:WASTE:RC:NEAR	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/n]	
2002	TH:WASTE:RC: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/n]	
2003	TH:WASTE:L:NEAR	Software Count : Left Ink Sump Near Full
	Use this SP to set the threshold value of the firmware counter to trigger the near-full alert for the left Ink Collector unit sensor. [0 to 4294967295/0/1/n]	
2004	TH:WASTE:L:FULL	Software Count: Left Ink Sump Full Alert
	Use this SP to set the threshold value of the firmware counter to trigger the full alert for the left Ink Collector unit sensor. [0 to 4294967295/0/1/n]	
2005	TH:WASTE:R:NEAR	Right Ink Sump Near-Full Threshold This Series Only

SP2001, 2002
J017 RTB 9:
Modified

2006	TH:WASTE:R:FULL	Right Ink Sump Threshold This Series Only

Set Threshold for Automatic Print Head Cleaning

2

2100	TH:ACL:MIST:B	Before Capping (Mist Count) This Series Only: FU	
	Use this SP to set the threshold value of the mist counter that triggers automatic print head cleaning before capping at the end of a print job. [0 to 4294967295/0/1/nl]		
2101	TH:ACL:MIST:P	During Printing This Series Only: FU	
	Use this SP to set the threshold value of the mist counter that triggers automatic print head cleaning between pages during a print job. [0 to 4294967295/0/1/nl]		
2102	TH:ACL:FEED	Before Capping (Paper Dust Count) This Series Only: FU	
	Use this SP to set the threshold value of the paper dust counter that triggers automatic print head cleaning before capping at the end of a print job. [0 to 65535/0/1/Pages]		
2103	TH:ACL:AL:T1H1	Idle Time (1 Hour): Humidity Step 1	FU
2104	TH:ACL:AL:T1H2	Idle Time (1 Hour): Humidity Step 2	
2105	TH:ACL:AL:T1H3	Idle Time (1 Hour): Humidity Step 3	
2106	TH:ACL:AL:T1H4	Idle Time (1 Hour): Humidity Step 4	
	Use this SP to set the threshold value for the de-capping time for automatic print head cleaning done before the start of printing. [0 to 65535/0/1/sec.]		

2107	TH:ACL:AL:T2H1	Idle Time (2 Hours): Humidity Step 1	FU
2108	TH:ACL:AL:T2H2	Idle Time (2 Hours): Humidity Step 2	
2109	TH:ACL:AL:T2H3	Idle Time (2 Hours): Humidity Step 3	
2110	TH:ACL:AL:T2H4	Idle Time (2 Hours): Humidity Step 4	
<p>Use this SP to set the threshold value for the de-capping time for automatic print head cleaning done before the start of printing.</p> <p>[0 to 65535/0/1/sec.]</p>			

Set Threshold Idle Time for Maintenance Alarm

2111	TH:ALM:TM1	Time 1: 20 Hours This Series Only: FU
2112	TH:ALM:TM2	Time 2: 7 Days This Series Only: FU
2113	TH:ALM:TM3	Time 3: 1 Month This Series Only: FU
2114	TH:ALM:TM4	Time 4: 3 Months FU
<p>Use this SP to set the threshold time for the printer to remain idle for maintenance to execute before the start of a print job. (Default: 7 Days). These threshold values are related to SP2115 to 2118.</p> <p>[0 to 65535/0/1/sec.]</p>		

Set Maintenance Method

2115	TH:ALM:TM1:MNT1	After Time 1 Alarm (SP2111): Venting	FU
2116	TH:ALM:TM1:MNT2	After Time 2 Alarm (SP2112): Cleaning	
2117	TH:ALM:TM1:MNT3	After Time 3 Alarm (SP2113): Cleaning *1	
2118	TH:ALM:TM1:MNT4	After Time 4 Alarm (SP2114): Cleaning *2	
<p>Use this SP to select the type of maintenance that will be executed before the first print job begins after the idle time threshold has elapsed.</p> <p>*1 Air venting/filling is done if Bit 1 of SW8-3 is ON.</p> <p>*2 Print head refreshing (flushing) is done if Bit 2 of SW8-3 is ON.</p> <p>[0 to 65535/0/1/hours.]</p>			

Set Threshold for Venting During Printing

2200	TH:PRG:HUMI1	35% Humidity	FU
2201	TH:PRG:HUMI2	65% Humidity	
<p>Use this SP to set the threshold value in the humidity table switches to the table for air venting during printing.</p> <ul style="list-style-type: none"> • SP2200: Looks up the low humidity table (35%). • SP2201: Looks up the high humidity table (65%). <p>[0 to 100/0/1/°C.]</p>			

2202	TH:PRG:TM	Threshold: Purge Time FU
<p>Use this SP to set the threshold time for the printer to flush the print heads before the start of a print job.</p> <p>[0 to 4294967295/0/1/nl]</p>		

Group 3000

Adjust Printhead Gap for dpi DFU

3000	GAP:300:H1:G:F	Print Head 1: 300 dpi: 1st Pass
3001	GAP:300:H1:B:F	Print Head 1: 300 dpi: 2nd Pass
3002	GAP:300:H2:B:F	Print Head 2: 300 dpi: 2nd Pass
3003	GAP:300:H3:G:F	Print Head 3: 300 dpi: 1st Pass
3004	GAP:300:H3:B:F	Print Head 3: 300 dpi: 2nd Pass
3005	GAP:300:H4:G:F	Print Head 4: 300 dpi: 1st Pass
3006	GAP:300:H4:B:F	Print Head 4: 300 dpi: 2nd Pass
[-128 to +127/FA/1/count.]		
3007	GAP:600:H1:G:F	Print Head 1: 600 dpi: 1st Pass
3008	GAP:600:H1:B:F	Print Head 1: 600 dpi: 2nd Pass
3009	GAP:600:H2:B:F	Print Head 2: 600 dpi: 2nd Pass

3010	GAP:600:H3:G:F	Print Head 3: 600 dpi: 1st Pass
3011	GAP:600:H3:B:F	Print Head 3: 600 dpi: 2nd Pass
3012	GAP:600:H4:G:F	Print Head 4: 600 dpi: 1st Pass
3013	GAP:600:H4:B:F	Print Head 4: 600 dpi: 2nd Pass
	Use this SP to adjust the print head gap for 600 dpi printing. [-128 to +127/ FA /1/count.]	
3014	GAP:1200:H1:G:F	Print Head 1: 1200 dpi: 1st Pass
3015	GAP:1200:H1:B:F	Print Head 1: 1200 dpi: 2nd Pass
3016	GAP:1200:H2:B:F	Print Head 2: 1200 dpi: 2nd Pass
3017	GAP:1200:H3:G:F	Print Head 3: 1200 dpi: 1st Pass
3018	GAP:1200:H3:B:F	Print Head 3: 1200 dpi: 2nd Pass
3019	GAP:1200:H4:G:F	Print Head 4: 1200 dpi: 1st Pass
3020	GAP:1200:H4:B:F	Print Head 4: 1200 dpi: 2nd Pass
	Use this SP to adjust the print head gap for 1200 dpi printing. [-128 to +127/ FA /1/count.]	

Set Print Head Rank (Wave)

3100	HRANK:H1:W	Print Head 1
3101	HRANK:H2:W	Print Head 2
3102	HRANK:H3:W	Print Head 3
3103	HRANK:H4:W	Print Head 4
	Use this SP to set the print head rank (wave rank) [0 to 7/ FA /1/---]	

Set Print Head Rank (Voltage)

3104	HRANK:H1:V	Print Head 1
3105	HRANK:H2:V	Print Head 2

3106	HRANK:H3:V	Print Head 3
3107	HRANK:H4:V	Print Head 4
	Use this SP to set the print head rank (voltage rank) [0 to 7/FA/1/---]	

Set Amount for Standard Ink Coverage

3200	COVER:REG:B	Black: 319 u1
3201	COVER:REG:M	Magenta: 273 u1
3202	COVER:REG:C	Cyan: 187 u1
3203	COVER:REG:Y	Yellow: 276 u1
	Use this SP to adjust the standard amount of ink to be applied for full coverage areas. [0 to 65535/0/1/um]	

Gamma: K, C, M, Y

3300	GAMMA:K	
3301	GAMMA:C	
3302	GAMMA:M	
3303	GAMMA:Y	
	This SP prints the Gamma Adjustment Chart and allows you to set the optimum settings for gamma adjustment. The optimum settings are printed on a decal attached to the carriage.	

Group 4000

Not used.

Group 5000

Reset and Restoration Settings

5000	RST:FACT	Restore Factory Default Setting
		Resets and threshold settings and user adjusted values.
5001	RST:INIT CNT:F	Reset Initial Tank Fill Count to Manufacturing Operation Count
		Resets the initial fill counter to the initial factory setting (-2).
5002	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).
5003	RST:WASTE:RC	Reset Ink Collector Count/Flag: Right Ink Sump
		Resets the ink flag and ink counter for the right Ink Collector unit.
5004	RST:WASTE:L	Reset Ink Collector Count/Flag: Left Ink Sump
		Resets the ink counter for the left Ink Collector unit.

NVRAM Download/Upload

5005	NV: DOWNLOAD	FU
		Downloads data to NVRAM on the controller board.
5006	NV: UPLOAD	FU
		Uploads data from NVRAM on the controller board.

Maintenance, Replacement

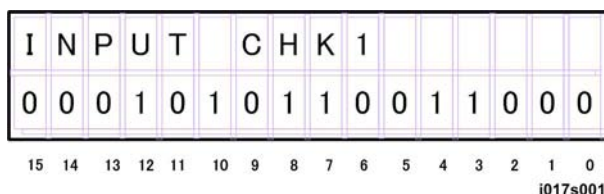
5007	WASHING	Execute Auto Washing
		Executes the automatic flushing procedure.
5008	RST:WASTE:R	Resets the count for the right ink sump
		Resets the count for right ink sump after it has become full and been replaced with a new one.

5100	INK DISCHARGE	Purge Maintenance: Right Vent FU
	Moves the carriage in order to access the right air vent for cleaning.	
5101	CARRIAGE CHANGE	After Carriage Replacement This Series Only
	Execute this SP after replacing the carriage unit.	
5102	CARRIAGE ADJUST	After Carriage Replacement FU
5200	PRINT SMC	Print an Engine Maintenance Summary
	Use this SP to print an engine maintenance summary. You need at least 8 sheets of paper to do this print. It will take at least 3 minutes before the print will start.	
5300	DUMMY NUMBER	Set a Dummy Number
	Use this SP to set the dummy number.	
5301	ENGINE SW1	
	Engine Bit Switches.	
5302	ENGINE SW2	
	Engine Bit Switches.	

Input Check: Sensors

J017/J019/J021

5400	INPUT CHK1	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.	



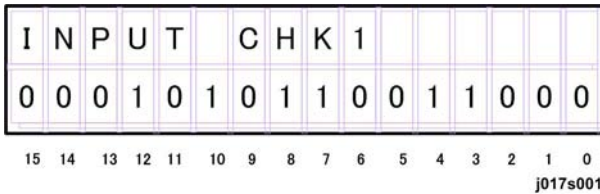
No.	Meaning	No.	Meaning
0	Top Cover Switch	8	Multi Bypass Set Sensor

5400
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J018 RTB 6
J021 RTB 3

No.	Meaning	No.	Meaning
1	Registration Sensor 1	9	Not Used
2	Registration Sensor 2	10	Not Used
3	Trailing Edge Sensor	11	Not Used
4	Duplex Unit Set Sensor	12	Env. Selector Sensor
5	Duplex Cover Sensor	13	Ink Level Sensor (Feeler)
6	Not Used	14	Maintenance HP Sensor
7	Not Used	15	Right Front Cover Switch

J018

5400	INPUT CHK1	Check Input Sensors J018
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.		



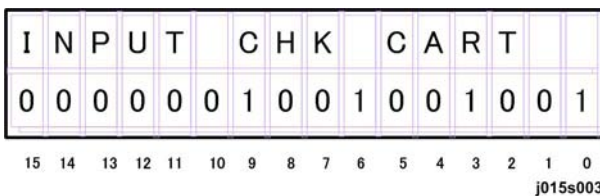
No.	Meaning	No.	Meaning
0	Top Cover Switch	8	TE Sensor (Tray 2)
1	Duplex Cover Sensor	9	Paper End Sensor (Tray 1)
2	Duplex Unit Set Sensor	10	Paper End Sensor (Tray 2)
3	Trailing Edge Sensor	11	Not Used
4	Multi Bypass Set Sensor	12	Env. Selector Sensor
5	1st Registration Sensor	13	Ink Level Sensor (Feeler)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

Input Check: Air

5405	INPUT CHK AIR1	Tank 1: Analog
	Use this SP to display the analog reading of the air sensor in print head tank 1.	
5406	INPUT CHK AIR2	Tank 2: Analog
	Use this SP to display the analog reading of the air sensor in print head tank 2.	
5407	INPUT CHK AIR3	Tank 3: Analog
	Use this SP to display the analog reading of the air sensor in print head tank 3.	
5408	INPUT CHK AIR4	Tank 4: Analog
	Use this SP to display the analog reading of the air sensor in print head tank 4.	
5409	INPUT CHK AIR5	Tank 5: Analog
	Use this SP to display the analog reading of the air sensor in print head tank 5.	
5410	INPUT CHK AIR6	Tank 6: Analog
	Use this SP to display the analog reading of the air sensor in print head tank 6.	

Input Check: Ink Cartridge Set Sensors

5411	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

No.	Meaning	No.	Meaning
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

5412	INPUT CHK RES:Y	Yellow Ink Cartridge
5413	INPUT CHK RES:M	Magenta Ink Cartridge
5414	INPUT CHK RES:C	Cyan Ink Cartridge
5415	INPUT CHK RES:K	Black Ink Cartridge
	Use this SP to display the amount of ink that remains in each ink cartridge. Units: %	

Input Check: Ink Collector Unit Sensor

5416	INPUT CHK WASTE	Current Analog Reading DNA This Series
	Use this SP to display the analog reading of the Ink Collector unit sensor.	

Encoder Readings

5417	INPUT CHK MENC	Horizontal Encoder
	Use this SP to display the current reading of the main scan encoder.	
5418	INPUT CHK SENC	Vertical Encoder
	Use this SP to display the current reading of the sub scan encoder.	

Board Temperature Sensors

5419	INPUT CHK PTEMP	PSU Ambient Temperature Sensor FU
	Displays the temperature reading of the PSU ambient temperature sensor. At present nothing displays because there is no temperature sensor on the PSU PCB. Units: 0.1°C	
5420	INPUT CHK DTEMP	Drive Board Temperature Sensor
	Displays the temperature reading of the temperature sensor in the DRV board circuits. Units: 0.1°C	

5421	INPUT CHK WST	Right Ink Sump Set Status This Series Only
	This SP code checks the current status of the right ink sump. Displays "1" if set correctly.	
5422	INPUT CHK RES:W	Right Ink Sump Capacity This Series Only
	The SP code checks and displays the amount of space remaining in the right ink sump.	
5423	INPUT CHK WST CNT	Right Ink Sump Count This Series Only
	This SP code checks and displays the software count for the right ink sump.	

Group 6000

Not Used

Group 7000

Display Charge Count

7000	CHG CNT:S:P:M	Single Counter: Monochrome Application
7001	CHG CNT:S:P:L	Single Counter: Level Color Application
7002	CHG CNT:S:P:C	Single Counter: Color Application
7003	CHG CNT:W:P:M	Double Counter: Monochrome Application

7004	CHG CNT:W:P:L	Double Counter: Level Color Application
7005	CHG CNT:W:P:C	Double Counter: Color Application
	Use this SP to display the charge counts.	

Display Coverage Count

2

7006	COVER CNT:P:M	Monochrome Application
7007	COVER CNT:P:L	Color Application
7008	COVER CNT:P:C	Level Color Application
	Use this SP to display the charge counts.	

Display User Cleaning Count

7100	USER CL CNT:H1	Print Head 1 (Y / M)
7101	USER CL CNT:H2	Print Head 2 (K / C)
7102	USER CL CNT:H3	Print Head 3 For j011 only
7103	USER CL CNT:H4	Print Head 4 For j011 only
	Use this SP to display the total number of print head cleanings executed from the printer driver and from the printer operation panel.	

Display User Flushing Count

7104	USER RF CNT:H1	Print Head 1 (Y / M)
7105	USER RF CNT:H2	Print Head 2 (K / C)
7106	USER RF CNT:H3	Print Head 3 For j011 only
7107	USER RF CNT:H4	Print Head 4 For j011 only
	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

7108	AOFL CNT:S:H1	Print Head 1 (Y / M)
7109	AOFL CNT:S:H2	Print Head 2 (K / C)
7110	AOFL CNT:S:H3	Print Head 3 For j011 only
7111	AOFL CNT:S:H4	Print Head 4 For j011 only
	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

7112	AOFL CNT:I:H1	Print Head 1 (Y / M)
7113	AOFL CNT:I:H2	Print Head 2 (K / C)
7114	AOFL CNT:I:H3	Print Head 3 For j011 only
7115	AOFL CNT:I:H4	Print Head 4 For j011 only
	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 Air Detected

7116	AOFL CNT:A:H1	Print Head 1 (Y / M)
7117	AOFL CNT:A:H2	Print Head 2 (K / C)
7118	AOFL CNT:A:H3	Print Head 3 For j011 only
7119	AOFL CNT:A:H4	Print Head 4 For j011 only
	Use this SP to display the number of air purge/ ink tank re-fillings after the air sensor detected air in a print head ink tank.	

Display Count: Air Detected at Power On

7120	AIR CNT:P:T1	Print Head Tank 1 (M)
7121	AIR CNT:P:T2	Print Head Tank 2 (Y)

7122	AIR CNT:P:T3	Print Head Tank 3 (C)
7123	AIR CNT:P:T4	Print Head Tank 4 (K)
7124	AIR CNT:P:T5	Print Head Tank 5 For j011 only
7125	AIR CNT:P:T6	Print Head Tank 6 For j011 only
	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 Detected Before Capping, Between Pages, or When Ink Cartridge Replaced

7126	AIR CNT:BPC:T1	Print Head Tank 1 (M)	DNA This Series
7127	AIR CNT:BPC:T2	Print Head Tank 2 (Y)	
7128	AIR CNT:BPC:T3	Print Head Tank 3 (C)	
7129	AIR CNT:BPC:T4	Print Head Tank 4 (K)	
7130	AIR CNT:BPC:T5	Print Head Tank 5	
7131	AIR CNT:BPC:T6	Print Head Tank 6	
	Use this SP to display the number of times the air sensor detected air in an ink tank (1) re-filling before capping at the end of a print job, (2) re-filling between pages, (3) after replacing and ink cartridge.		

Display Count: Air Detected in Print Head Tank After Maintenance Purge

7132	AIR CNT:A:T1	Print Head Tank 1 (M)	DNA This Series
7133	AIR CNT:A:T2	Print Head Tank 2 (Y)	
7134	AIR CNT:A:T3	Print Head Tank 3 (C)	
7135	AIR CNT:A:T4	Print Head Tank 4 (K)	
7136	AIR CNT:A:T5	Print Head Tank 5	
7137	AIR CNT:A:T6	Print Head Tank 6	

	Use this SP to display the number of times air was detected by the air sensor in a print head tank during automatic print head maintenance triggered by the printer remaining idle.
--	---

Display Count: Automatic Cleanings Between Page Prints

2

7138	ACL CNT:P:H1	Print Head 1 (Y / M)
7139	ACL CNT:P:H2	Print Head 2 (K / C)
7140	ACL CNT:P:H3	Print Head 3 For j011 only
7141	ACL CNT:P:H4	Print Head 4 For j011 only
	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

7142	ACL CNT:B:H1	Print Head 1 (Y / M)
7143	ACL CNT:B:H2	Print Head 2 (K / C)
7144	ACL CNT:B:H3	Print Head 3 For j011 only
7145	ACL CNT:B:H4	Print Head 4 For j011 only
	Use this SP to display the number of automatic print head cleanings before print head capping.	

Display Count: Automatic Cleanings After Printer Has Remained Idle

7146	ACL CNT:A:TM1	Idle Time 1 >10 hrs, <7 days	DNA This Series
7147	ACL CNT:A:TM2	Idle Time 2 >7 days, <1 mo.	
7148	ACL CNT:A:TM3	Idle Time 3 >1 mo., <3 mo.	
7149	ACL CNT:A:TM4	Idle Time 4 >3 Mo.	
	Use this SP to display the number of automatic print head cleanings triggered by automatic maintenance after the printer remained idle longer than the specified threshold time.		

Display Count: Maintenance Operations After Printer Idle

7150	AMNT CNT:TM1	Idle Time 1 < 10hours, < 7days
7151	AMNT CNT:TM2	Idle Time 2 < 7days, < 1month
7152	AMNT CNT:TM3	Idle Time 3 < 1month, < 3months
7153	AMNT CNT:TM4	Idle Time 4 > 3 Months
	Use this SP to display the number of times maintenance executed automatically.	

Display Count: Total Ink Cartridge Out

7154	EMPTY CNT:C1	Ink Cartridge 1 (K)
7155	EMPTY CNT:C2	Ink Cartridge 2 (C)
7156	EMPTY CNT:C3	Ink Cartridge 3 (M)
7157	EMPTY CNT:C4	Ink Cartridge 4 (Y)
	Use this SP to display the number of times that each ink cartridge has become empty.	

Display Count: Ink Cartridge Out (Equal or More Than Guaranteed Service Life)

7158	END CNT:C1	Ink Cartridge 1 (K)	DNA This Series
7159	END CNT:C2	Ink Cartridge 2 (C)	
7160	END CNT:C3	Ink Cartridge 3 (M)	
7161	END CNT:C4	Ink Cartridge 4 (Y)	
	Use this SP to display the number of times that each ink cartridge equaled or surpassed the guaranteed service life of the cartridge.		

Display Software Count: Near End for Ink Collector Unit

7200	WASTE CNT:R:NEAR	Ink Collector Unit
	Use this SP to display the current software count for the flushing tank. Note: The near-end threshold is 413 ml.	

Display Count: Tank Full: Ink Collector Unit

7201	WASTE CNT:R:FULL	Ink Collector Unit
	<p>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.</p> <p>Note: The full threshold is 3 ml.</p>	

Display Count: Tank Full: Ink Collector Unit

7202	WASTE CNT:L:FULL	Left Ink Collector Unit
	<p>Use this SP to display the current count for the number of times the status of the left Ink Collector unit has changed from near-full to full.</p>	

Display Count: Swing Plate Contacts With Carriage

7203	SWNG PLATE CNT	Left Ink Collector Unit DNA This Series
	<p>This SP logs the number of times the swing plate operates to rid itself of accumulated ink due to air purging.</p>	

Display Count: Mist Counter for Automatic Cleaning

7204	MIST CNT:T1	Print Head Tank 1 (M)
7205	MIST CNT:T2	Print Head Tank 2 (Y)
7206	MIST CNT:T3	Print Head Tank 3 (C)
7207	MIST CNT:T4	Print Head Tank 4 (K)
7208	MIST CNT:T5	Print Head Tank 5 For j011 only
7209	MIST CNT:T6	Print Head Tank 6 For j011 only
	<p>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.</p>	

Display Count: Paper Dust Counter for Automatic Cleaning

7210	FEED:CNT:H1	Print Head 1 (Y / M)
7211	FEED:CNT:H2	Print Head 2 (K / C)
7212	FEED:CNT:H3	Print Head 3 For j011 only
7213	FEED:CNT:H4	Print Head 4 For j011 only
	Use this SP to display the current reading of the ink mist counter that determines when to execute automatic cleaning.	

2

Display Count: Cap Off Time for Automatic Print Head Cleaning

7214	DECAP TIME	Print Head Tank 1
	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

7215	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 Full Count for Right Ink Sump (This Series Only)

7216	WASTE:CNT:R:FULL	Right Ink Sump Full Count
	This SP code displays the full count for the right ink sump.	

Display Count: Ink Cartridge Replacements

7300	CART CHG CNT:K	K (Black)
7301	CART CHG CNT:C	C (Cyan)
7302	CART CHG CNT:M	M (Magenta)

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7303	CART CHG CNT:Y	Y (Yellow)
	Use this SP to display the number of times the carriage has been replaced.	

7304	CART RFIL CNT:K	Ink cartridge refill count: K (Black)
7305	CART RFIL CNT:C	Ink cartridge refill count: C (Cyan)
7306	CART RFIL CNT:M	Ink cartridge refill count: M (Magenta)
7307	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 Date of Ink Collector Unit Replacement

7400	WASTE:DATE	YY:MM:DD DNA This Series
	Use this SP to display the date the Ink Collector units were replaced. Date Standard: 2000	

Display Standby Time

7401	PWAIT:DATE	YY:MM:DD
	Display the total time the printer has remained in standby mode. Date Standard: 2000	

Display Operation Start Date

7402	START:DATE	YY:MM:DD
	Display the total time the printer has remained in full operation. Date Standard: 2000	

Display SC Code Log

7403	SC CODE1	Log 1: Previous
------	----------	-----------------

7404	SC CODE2	Log 2: Previous -1
7405	SC CODE3	Log 3: Previous -2
7406	SC CODE4	Log 4: Previous -3
7407	SC CODE5	Log 5: Previous -4
	<p>Use this SP to display the SC code history.</p> <ul style="list-style-type: none"> • 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 Jam Log

7408	JAM CODE1	Log 1: Previous
7409	JAM CODE2	Log 2: Previous -1
7410	JAM CODE3	Log 3: Previous -2
7411	JAM CODE4	Log 4: Previous -3
7412	JAM CODE5	Log 5: Previous -4
	<p>Use this SP to display the jam code history. The occurrences of jam codes are stored in the order 1, 2, 3, 4, 5.</p>	

Display Total Count: Jam Log

7413	JAM COUNT1	Log 1: Previous
7414	JAM COUNT2	Log 2: Previous -1
7415	JAM COUNT3	Log 3: Previous -2
7416	JAM COUNT4	Log 4: Previous -3
7417	JAM COUNT5	Log 5: Previous -4
	<p>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, 2, 3, 4, 5.</p>	

Display Total Count: Ink Fill Log

7418	FILL PROGRESS1	Log 1: Previous
7419	FILL PROGRESS2	Log 2: Previous -1
7420	FILL PROGRESS3	Log 3: Previous -2
7421	FILL PROGRESS4	Log 4: Previous -3
Use this SP to display the number of times initial tank filling has been performed.		

Display Maintenance Log

7422	LAST MNT:TM1	Log 1: Previous
7423	LAST MNT:TM2	Log 2: Previous -1
7424	LAST MNT:TM3	Log 3: Previous -2
Use this SP the total time for all maintenance executions.		

Display Maintenance Log: By Type of Maintenance

7425	LAST MAINT1	Log 1: Previous
7426	LAST MAINT2	Log 2: Previous -1
7427	LAST MAINT3	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

7428	LAST MNT CNT1	Log 1: Previous
7429	LAST MNT CNT2	Log 2: Previous -1
7430	LAST MNT CNT3	Log 3: Previous -2
	Use this SP to display the total count for all maintenance executions.	

Display Near Full Flag: Right Ink Collector Unit

7431	WASTE NEAR FLG	Ink Collector Full Flag DNA This Series
	Use this SP to display the near-full flag of the ink collector. This SP does not apply to the J017/J018/J019/J021 because they have a new type of ink collector tank.	

Display Position of Tank Full Feeler for Each Print Head Tank After Air Purge

7500	INIT POS:T1	Print Head Tank 1 (M)
7501	INIT POS:T2	Print Head Tank 2 (Y)
7502	INIT POS:T3	Print Head Tank 3 (C)
7503	INIT POS:T4	Print Head Tank 4 (K)
7504	INIT POS:T5	Print Head Tank 5 For j011 only

7505	INIT POS:T6	Print Head Tank 6 For j011 only
	Use this SP to display the detected position of the print head tank full sensor at air venting/ink filling.	

2 Display Normal Position for Detection of Full Print Head Tank

7506	FULL POS:T1	Print Head Tank 1 (M)
7507	FULL POS:T2	Print Head Tank 2 (Y)
7508	FULL POS:T3	Print Head Tank 3 (C)
7509	FULL POS:T4	Print Head Tank 4 (K)
7510	FULL POS:T5	Print Head Tank 5 For j011 only
7511	FULL POS:T6	Print Head Tank 6 For j011 only
	Use this SP to display the usual position of the print tank full sensor when the ink collector unit is filled	

Display Count: Number of Drive Cleanings

7512	DCL CNT:H1	Print Head 1 (Y / M)
7513	DCL CNT:H2	Print Head 2 (K / C)
7514	DCL CNT:H3	Print Head 3 For j011 only
7515	DCL CNT:H4	Print Head 4 For j011 only
	Use this SP to display the number of automatic print head cleanings done during printing	

Display Count: Ink Supply Time Up

7516	PTMOUT:CNT:T1	Print Head Tank 1 (M)
7517	PTMOUT:CNT:T2	Print Head Tank 2 (Y)
7518	PTMOUT:CNT:T3	Print Head Tank 3 (C)
7519	PTMOUT:CNT:T4	Print Head Tank 4 (K)

7520	PTMOUT:CNT:T5	Print Head Tank 5 For j011 only
7521	PTMOUT:CNT:T6	Print Head Tank 6 For j011 only
	Use this SP to display the number of times near-end/end was detected by timeup while ink was being supplied to the ink collector units.	

Display Count: Automatic Print Head Cleanings (After De-Cap Time Elapsed)

7522	ACL:CNT:D:H1	Print Head 1 (Y / M)
7523	ACL:CNT:D:H2	Print Head 2 (K / C)
7524	ACL:CNT:D:H3	Print Head 3 For j011 only
7525	ACL:CNT:D:H4	Print Head 4 For j011 only
	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: Maintenance Cleanings of Right Vent

7526	PMNT:CNT	Right Vent Purges
	Use this SP to display the number of times the right air vent was cleaned during maintenance.	

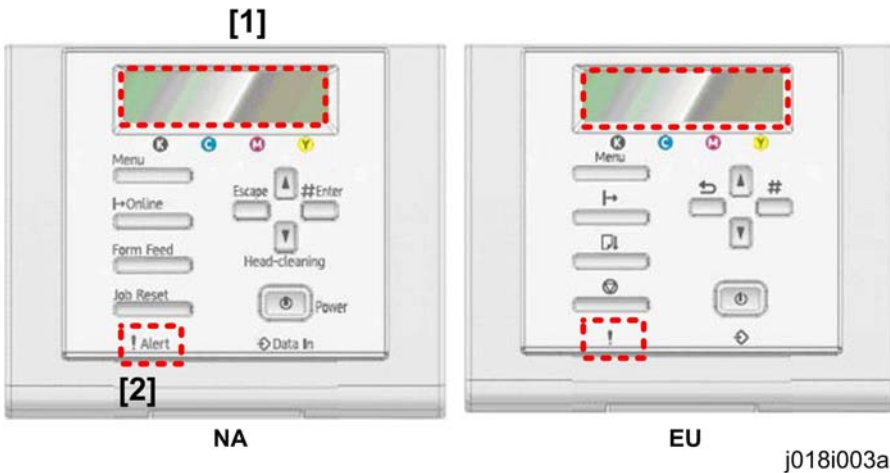
Display Count: Air Detections Before Maintenance Cleanings

7527	PMNT CNT:A:T1	Print Head Tank 1 (M)	DNA This Series
7528	PMNT CNT:A:T2	Print Head Tank 2 (Y)	
7529	PMNT CNT:A:T3	Print Head Tank 3 (C)	
7530	PMNT CNT:A:T4	Print Head Tank 4 (K)	
7531	PMNT CNT:A:T5	Print Head Tank 5 (J011)	
7532	PMNT CNT:A:T6	Print Head Tank 6 (J011)	
	Use this SP to display the number of times air was detected during maintenance cleaning of the right ink suction vent.		

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 [1] and Alert LED [2] 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	Error Type	Alarm LED (Red)	LCD Display
High	ERR (SC)	ON	No. Display
	Operator Call	ON	Message Display
Low	Normal Status	ON	
	Warning Condition	ON	
	Diagnostic Error	ON	

- An "ERR-###" display (were ### is a 3-digit number) is used for these machines, not the "SC###" (Service Call) notation used for other machines. A table of these errors referenced by number is provided in this section.

- There are two types of error displays, one uses text messages and another uses numbers.

Error Classifications

Error Type	Description	Main Error
Warning Condition	The machine can print, but the warning message is issued to the operator because the machine will stop printing if the condition is left unattended and not corrected.	<ul style="list-style-type: none"> • Left ink sump near full • Ink collector unit near full • Ink low • Print head maintenance failed • Temperature out of operation range • Ink filling
Abnormal Conditions	An abnormal condition exists that prevents the machine from printing. The machine cannot print until the condition has been corrected. Once the condition has been corrected, the machine can resume printing without cycling the machine off/on. The corrective measures can be done by the operator to restore operation.	<ul style="list-style-type: none"> • Ink cartridge empty (printing possible) • Ink cartridge empty (printing not possible) • Ink end print error • Used ink cartridge • Ink collector unit full • Used ink collector unit • Paper jam • Confirmation after re-filling • Cover Open • Unit not detected • Paper jam • Print Cartridge(s) Not Detected/Cover Open • Paper size or paper type mismatch error • Paper size error • No paper present • Temperature out of operation range • Envelope selector lever position error

3

Error Type	Description	Main Error
Breakdown or failure error (ERR)	An abnormal condition exists indicating a breakdown that prevents the machine from printing. After the cause of the problem has been removed, the machine must be cycled off/on to restore normal operation. The machine basically requires servicing (the problem cannot be solved by the operator).	See the "Error Code" table.
Print/Data Errors	The designated print operation cannot function, or there is a print data error.	<ul style="list-style-type: none"> • Memory overrun • Work memory overrun • Data flow interruption
Diagnostic Error	The machine fails to operate due to a problem with the CTL board or a controller option.	<ul style="list-style-type: none"> • Parallel interface error • Memory error • Flash memory error

Temperature Range Errors

At power on	At power on, the printer is ready to print and Ready status is maintained	Once the machine has entered the usable temperature range that guarantees optimum operation, the machine automatically enters the Ready status.
Printing...	Operation has been interrupted to wait for the machine to resume the Ready status.	Maintains machine Ready status. The machine needs to be cycled off/on.

- Once the machine falls below or exceeds the usable temperature range, quality printing can no longer be assured so an error message will alert the operator that printing will stop until normal temperature has been restored.
- If such an error occurs, the machine should be moved to a location where ambient temperature is 10 to 32C (50 to 89.6F).

1. Normal Status

No.	Message	Action
01	Ink Filling... Do Not Touch Keys	Filling from ink cartridge Time required for filling is displayed on the operation panel.
02	Printing	Print job is in progress.
03	Ready	Machine is ready to print.
04	Offline	Printer is offline and cannot print. Press [On Line] to put the printer online and make it ready to print.
05	Waiting...	Printer is warming up or waiting for print job data.
06	Energy Save	Machine is in the energy save mode. Printing is possible.
07	Resetting Job...	A print job is being reset. Wait a few moments.
08	Setting Change	Print settings are being updated. Wait a few moments.
09	Panel Lock Cannot Use This Key	You have pressed a locked key on the operation panel, so release the lock.
10	Maintenance in Process...	Print head cleaning or flushing is in progress. Wait for print head maintenance to finish.

2. Diagnostic Errors

No.	Message	Action
11	Hardware Problem: Ethernet Board*1	Ethernet error occurred. Disconnect all connected cables, and then cycle the machine off/on. If this message is displayed again, call for service.

*1: Not used for J21.

3. Warning Errors

No.	Message	Action
12	Low Ink	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.
13	Cannot Use: High Temperature	Machine temperature was abnormal at power on. Wait for the "Ready" message.

No.	Message	Action
14	Ink Unit Almost Full	Replace the internal unit (left ink sump).
15	Non-Standard Ink	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.
16	Maintenance Failed Press [#]*2	Print head cleaning, print head flushing, or another operation failed. The machine can be released from the error by one of the following conditions. <ul style="list-style-type: none"> • When the next job request is detected • After the [#] key is pressed

*2: Not used for J017, J021

4. Operator Calls

No.	Message	Action
18	Replace Ink Cartridge	Ink cartridge is empty. Replace the empty cartridge with a new one.
19	Reset Ink Cartridge	Ink cartridge is not installed. Or, the ink cartridge is installed but not set correctly. Set the ink cartridge correctly.
20	Cannot Print Page Remains	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.
21	Top Cover or Duplex Cover Open Close Cover*1	The top cover or duplex unit is open. Check and close the covers, and make sure that the duplex unit is set correctly.
22	Close Top Cover or Rear Cover*3	The top cover or rear cover is open. . Close the covers.

No.	Message	Action
23	Inverter Guide Open Close Inverter Guide	Inverter guide is open. Close the inverter guide.
24	Initial Temperature Out of Range Move Machine to Cooler Site	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.
25	Initial Temperature Out of Range Move Machine to Warmer Site	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.
26	Used Cartridge Replace Ink Cartridge	A used print cartridge has been installed. Install a new print cartridge.
27	Ink Collector Unit Full Replace Ink Collector Unit	A used ink collector unit has been installed. Install a new ink collector unit.
28	Bypass Tray Not Set Correctly Set Bypass Tray Correctly	Multi bypass tray unit is not set correctly. Make sure that the multi bypass tray is set correctly.
29	Load Paper Tray # Or Press [Form Feed]	<p>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. The tray numbers depend on the machine model.</p> <ul style="list-style-type: none"> • For J018 the trays are designated Tray 1, 2, 3 or Bypass. • For J017, J021 the trays are designated Tray 1 or Bypass.

No.	Message	Action
30	Change Tray # Paper Size Or Press [Form Feed] to Print	The size of the paper in the selected tray is different from the size of the paper selected for the job. Replace the paper in the tray with paper of the size selected for the job, and then change the paper size on the operation panel. Or, press [Form Feed] and select another tray holding paper of the size selected for printing. Press [Job Reset] to delete any data remaining from the previous job. The tray numbers depend on the machine model. <ul style="list-style-type: none"> • For J018 the trays are designated Tray 1, 2, 3 or Bypass. • For J017, J021 the trays are designated Tray 1 or Bypass.
31	Change Tray # Setting Or Press [Form Feed] to Print	The type of paper in the selected tray is different from the type of paper selected for the print job. Replace the paper in the tray with paper of the type selected for the job, and then change the paper type on the operation panel. Or, press [Form Feed] and select another tray holding paper of the type selected for printing. Press [Job Reset] to delete any data remaining from the previous job. The tray numbers depend on the machine model. <ul style="list-style-type: none"> • For J018 the trays are designated Tray 1, 2, 3 or Bypass. • For J017, J021 the trays are designated Tray 1 or Bypass.
32	Ink Collector Not Detected Set Ink Collector Unit Correctly	The replaceable ink collector unit is not set correctly. Set the ink collector unit correctly.
33	Ink Collector Unit Full Replace Ink Collector Unit	Ink collector unit is full. Replace the ink collector unit.
34	Bypass Unit Set Incorrectly Set Bypass Unit Correctly*4	Bypass unit is not set correctly. Set bypass unit correctly.

No.	Message	Action
35	Left Cover Open Close Left Cover	The right front door is open Close the right front door.
36	Envelope Selector Position Incorrect Set Correctly or Press [Form Feed]	The envelope selector position is not correct for the type of paper selected for the job. This message is also displayed if the envelope selector is pushed to the rear during print head maintenance. <ul style="list-style-type: none"> • Change the position of the envelope selector. • Or, press [Form Feed]. Press [Job Reset] to delete any data remaining from the previous job.
37	Right Front Cover Open Close Right Front Cover	The right front door is open Close the right front door.
38	Open Right Front Cover 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.
39	Paper Jam Press [Form Feed]	Paper failed to feed from the specified tray. Press [Form Feed] to eject the sheet.
40	Paper Jam or Open Rear Cover Turn Left Cover Dial and Remove Jam* ⁴	Paper scraps remain in the machine, or a jammed sheet has not been removed. Remove the paper from around the inverter guide.
41	Paper Jam Bypass Unit Remove Unit and Jammed Paper* ⁴	Paper has jammed in or failed to feed from the multi bypass tray. Remove the paper from multi bypass tray.
42	Paper Jam in Tray # Remove Jammed Paper* ⁴	Paper has jammed in or failed to feed from Tray 1, 2, or 3. Remove the paper from Tray 1, 2, or 3.
43	Paper Jam in Tray 1 Remove and Reload Paper* ⁵	Paper has jammed in or failed to feed from Tray 1. Remove the paper from Tray 1.

No.	Message	Action
44	Paper Jam Bypass Tray Set Paper Correctly and Press [Form Feed]	This message is displayed after paper has jammed in or failed to feed from the multi bypass tray, or after the tray runs out of paper.
45	Paper Jam or Top Cover Open Rotate Left Dial to Remove Jam	Paper has jammed in or failed to feed from in the area below the top cover. Remove the paper from the area below the top cover.
46	Paper Jam in Bypass Unit or Remove Tray 1, 2 and Reload Paper*4	Paper has jammed in or failed to feed from Tray 1, 2, 3 or the multi bypass tray. Remove the paper.
47	Paper Jam in Duplex Unit or Remove Tray 2 and Reload Paper*4	Paper has jammed in or failed to feed from the duplex unit or feed unit of Tray 2. Remove the paper.
48	Paper Jam in Duplex Unit or Remove Bypass Unit and Reload Paper*4	Paper has jammed in or failed to feed from the duplex unit or bypass tray. Remove the paper.
49	Paper Jam in Duplex Unit Rotate Left Dial to Remove Jam*1	Paper has jammed in or failed to feed from the duplex unit. Remove the paper from the duplex unit.
50	Duplex Unit Set Incorrectly Set Duplex Unit Correctly*1	Duplex unit is not installed. Install the duplex unit.
51	Close Duplex Unit Cover*1	Duplex unit cover is open Close the duplex unit cover.

*1: Not used for J21.

*2: Not used for J017, J021

*3: Not used for J017, J018

*4: J018 only

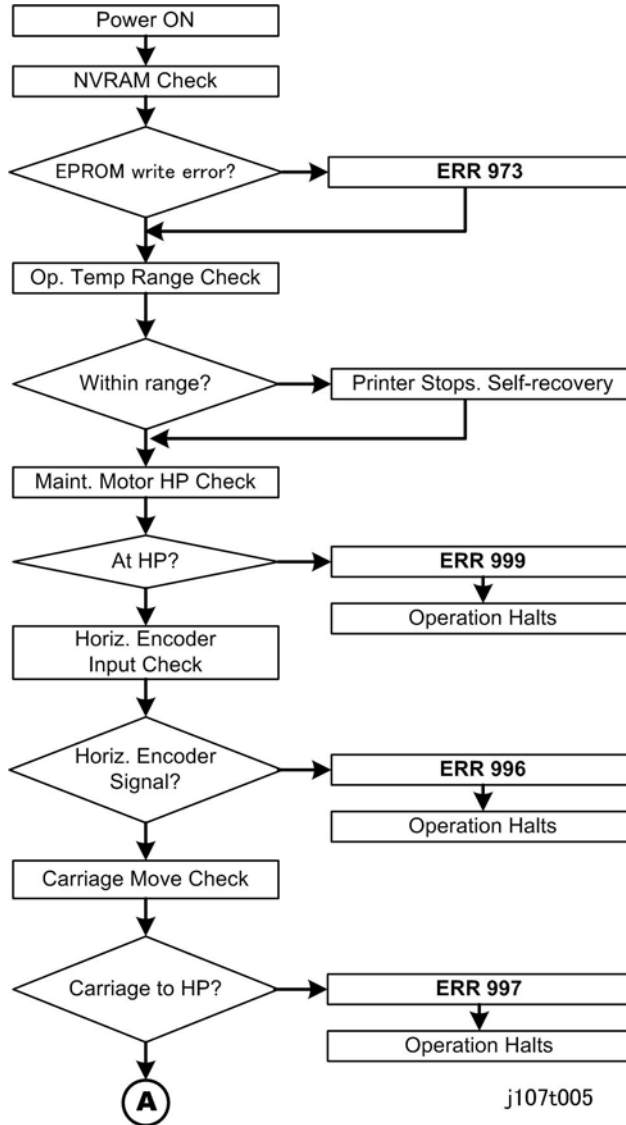
*5: Not used J023, J018

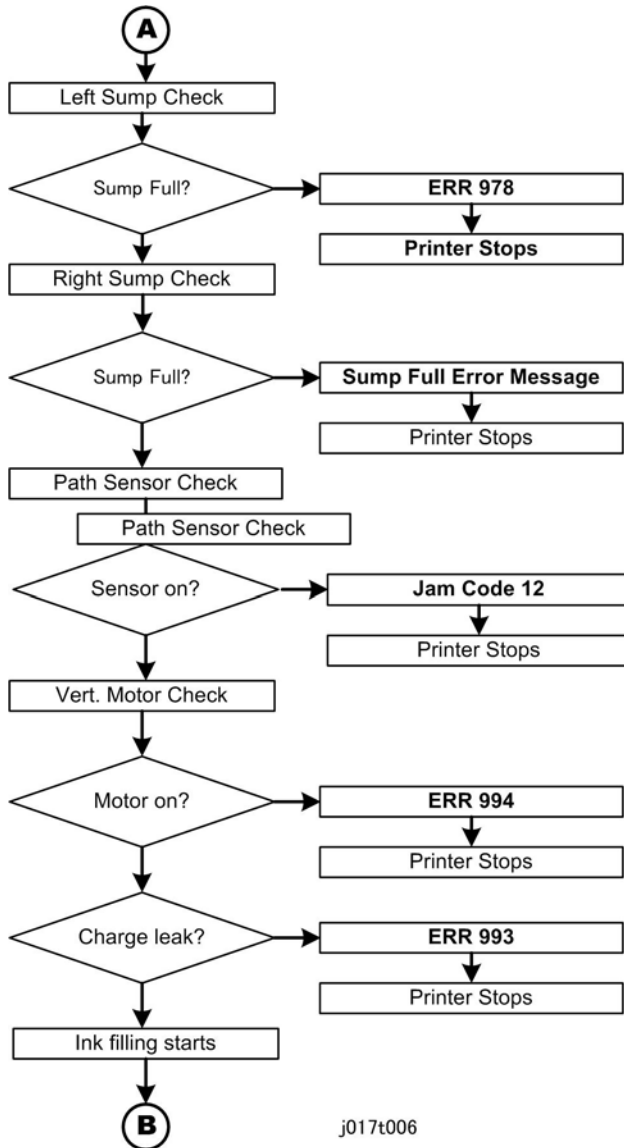
5. ERR

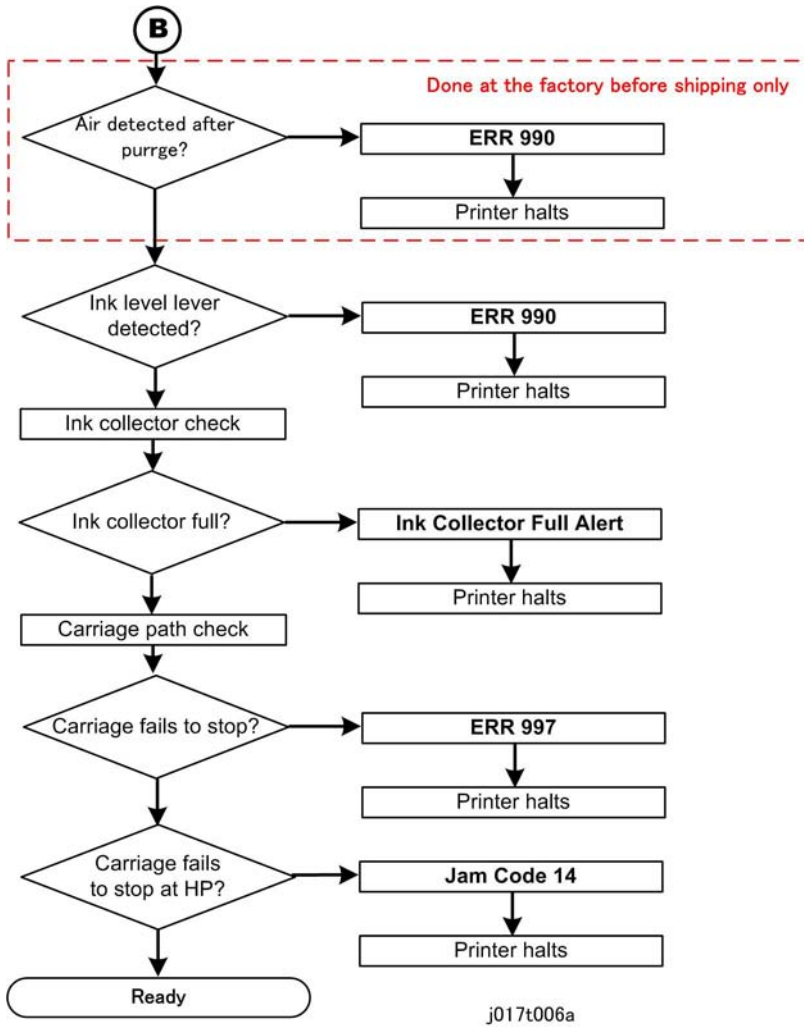
No.	Message	Action
52	ERR ## Cycle Machine Off/On Call for Service if Error Recurs	An error has occurred. Cycle the machine off/on. If this message is displayed again, call for service.

Service Call Conditions

Self-Diagnostic Flow







Summary of Service Call Condition Levels

Level	Definition	Typical Errors
A	The printer is damaged or disabled, and the printer cannot operate. Even after removing the cause of the problem, turning the printer off and on does not solve the problem.	<ul style="list-style-type: none"> • ERR Error Code. • This is a Service Call Error.

Level	Definition	Typical Errors
B	An abnormal condition exists in the printer, and the printer cannot operate until the problem is corrected. Once the operator removes the cause of the problem, turning the printer off and on should restore the printer to normal operation.	<ul style="list-style-type: none"> • Cover open. • Paper jams. • Ink cartridge out. • Ink cartridge missing. • Ink cartridge installed incorrectly. • Paper size error.
C	The printer can continue to print, but if the problem is not corrected soon the printer will no longer be able to operate. The operator must correct the problem as soon as possible.	<ul style="list-style-type: none"> • Ink near end. • Ink collector unit near full.

Service Call Code Tables

Print the System Summary (Config. Page) to see the 5 most recent ERR codes.

[Menu]> "Counter"

1. [▲] or [▼]> "List/Test Print"> [#Enter]> "Config. Page"> [#Enter]

900	A	HRB Fuse Blown J018 Only
		The fuse on the HRB (Head Relay Board) mounted behind the print heads on the carriage unit has blown.
		<ul style="list-style-type: none"> • The fuse cannot be replaced.
		<ul style="list-style-type: none"> • Replace the HRB.

969	A	EEPROM Access Error J017 Only
		A read/write error by I2C did not execute normally, and caused a verify error after data write.
		<ul style="list-style-type: none"> • The CTL board may be disconnected or defective. • There may be excessive electronic noise present.
		<ul style="list-style-type: none"> • Make sure the printer is not being used near equipment that can generate excessive electrical interference. • Replace the CTL board.

970	A	Flash ROM Erase Error DFU
		The device erasing the Flash ROM generated an error.
		<ul style="list-style-type: none"> Flash ROM device defective.
		<ul style="list-style-type: none"> Replace CTL board.

971	A	Flash ROM Write Error DFU
		The device writing to the Flash ROM generated an error.
		<ul style="list-style-type: none"> Flash ROM device defective.
		<ul style="list-style-type: none"> Cycle printer on/off, check result. Replace CTL board.

972	A	Flash ROM Verify Error DFU
		<ul style="list-style-type: none"> The verify operation after write failed (the data written to the Flash ROM did not match the content of the data in the Flash ROM). Flash ROM device defective.
		<ul style="list-style-type: none"> Cycle printer on/off, check result. Replace CTL board.

973	A	EEPROM/RTC Access Error
		<ul style="list-style-type: none"> Machine cannot communicate with EEPROM (NVRAM)
		<ul style="list-style-type: none"> Cycle printer on/off, check result. Ink cartridge connections loose, broken, defective Ink cartridge ID chip defective, replace ID cartridges Replace CTL board.

974	A	RTC Abnormal
		The RTC (Real Time Clock) malfunctioned.
		<ul style="list-style-type: none"> Electrical flow to RTC interrupted. Excessive condensation in machine.

SC974
J017 RTB 7a
J018 RTB 4a

		<ul style="list-style-type: none"> • Check the ambient temperature and humidity. • Make sure the readings are within the ranges for optimum operation of the machine • Replace CTL board Correction J017 RTB 9
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975		Right Ink Sump Full
		The count prescribed for the right ink sump has expired.
		<ul style="list-style-type: none"> • Replace right ink sump • Do SP5008 to reset counter • Replace CTL board

976	A	Air Detection Frequency Error 1: Initialization
		The occurrences of air detection in the print head ink tanks by the terminal pins have exceeded the number allowed within a 10 day period after installation or replacement of the carrier unit. 30 occurrences allowed per 10-day period.
		<ul style="list-style-type: none"> • The print head tank is worn out, and there is a slow leak due to poor seals. • Poor connection
		<ul style="list-style-type: none"> • Replace carriage unit or print head. • HRB harness or FCC connection loose, broken, defective • CTL board defective

977	A	Air Detection Frequency Error 2
		The occurrences of air detection in the print head tanks by the terminal pins exceeded the number of detections twice within a one-month period. 50 occurrences allowed per month.
		<ul style="list-style-type: none"> • The print head tank is worn out, and there is a slow leak due to poor seals. • Poor connection
		<ul style="list-style-type: none"> • Replace carriage unit or print head. • HRB harness or FCC connection loose, broken, defective • CTL board defective

978	A	Left Ink Sump Full
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		<p>The left ink sump on the left side of the printer is full.</p> <p>Note: A software counter monitors the usage of the ink sump. There are no sensors associated with the ink sump.</p>
		<ul style="list-style-type: none"> • Cycle printer on/off, check result. • Push [Menu], select "List/Test Print" then push [#Enter] to print the System Summary. • Check the Total Counter reading of the System Summary. • Replace the left ink sump. • EEPROM or CTL board defective

979	A	Ink Supply Timeout
		<ul style="list-style-type: none"> • This error code is issued if full auto cleaning is done before the bubbles inside the print head are consumed (within 24 hours after power on).
		<ul style="list-style-type: none"> • Cycle the machine off/on


980	A	Carriage Position Lever Error DFU
981	A	Version Error DFU
982	A	PSU Temperature Sensor Error DFU
983	A	Temperature/Humidity Sensor Error DFU

984	A	DRV Circuit Temperature Abnormal
		The temperature of the DRV board (driver board) is out of range.
		<ul style="list-style-type: none"> • The temperature of the DRV board (driver board) circuit is not within the specified range: J023: -19°C to 55°C (2.2°F to 131°F) Others: -13°C to 65°C (-8.6°F to 149°F)
		<ul style="list-style-type: none"> • Cycle printer on/off, check result. • Fan harness connection loose, broken, defective • Fan motor defective • Replace CTL board.

985	A	Print Head Temperature Sensor Abnormal DFU
		<ul style="list-style-type: none"> • Print head temperature sensor was detected as abnormal when the printer was turned on.
		<ul style="list-style-type: none"> • Sensor connector loose, broken, defective • Print head FFC connection loose, broken, defective • HRB defective, replace print head • Replace CTL board

986	A	Humidity Sensor Abnormal
		The printer detected that the humidity sensor was abnormal.
		<ul style="list-style-type: none"> • Sensor connector loose, damaged, or defective. • Sensor defective
		<ul style="list-style-type: none"> • Cycle printer on/off, check result. • Check CTL board connections. • Replace CTL board.

987	A	Not Used
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988	A	Ink Supply Error (Air Sensor Abnormal)
		Printer detected air sensor was abnormal when suction was applied 3 times when the printer was powered on for the first time for ink tank filling or print head refreshing, but no air was detected.
		 <ul style="list-style-type: none"> • Cycle the printer off and on and try again. • If the problem persists, the print head air sensors may be defective.
		<ul style="list-style-type: none"> • Print head connector loose, broken, defective • Harness between maintenance unit and print head loose, broken, defective • HRB (behind the print head) harness loose, broken, defective • Replace the air release lever sensor and solenoid • Replace maintenance unit • Replace print head unit • CTL board defective

SC 988
R-G1 RTB 3a
M-G1 RTB 10

989	---	Not Used
990	A	Ink Level Feeler Position Error
		The position of one or more ink level feelers could not be detected at initial filling. Correct voltage could not be created for operation of the print head tank, so the print heads cannot operate.
		<ul style="list-style-type: none"> • Ink level sensor defective • Horizontal encoder film dirty, installed incorrectly, broken • Maintenance unit dirty, defective • Ink nozzles clogged
		<ul style="list-style-type: none"> • Cycle printer on/off, check result. • Clean suction cap. • Replace horizontal encoder film strip. • Replace maintenance unit. • Check the position of the feelers attached to the sides of the tanks.
991	A	Ink Pump Timeout Error
		The feeler of the ink lever sensor could not be detected.
		<ul style="list-style-type: none"> • Obstruction blocking operation of the feeler • Ink tube twisted, broken • Tube disconnected causing an air leak • Ink pump motor defective
993	A	High Voltage Leak
		At power on or during a print job, a leak detection signal was detected. The signal was triggered by the accumulation of condensation or ink spillage onto the transport belt.
		<ul style="list-style-type: none"> • This signal is triggered by the HVPS due to an accumulation of condensation or ink spillage onto the transport belt.

		<ul style="list-style-type: none"> • Cycle printer on/off, check result. • Raise top cover and check condition of transfer belt surface. • Push [Menu > select "Maintenance" > "De-Condensation" to feed 3 sheets of blank paper through the paper path to absorb condensation. This cleans the transport belt. • Clean ink from transport belt. • Horizontal encoder film strip out of position • Maintenance unit defective • HRB connection loose, broken, defective • Replace HVPS pack. • CTL board defective • Replace print head or carriage unit
994	A	Vertical Motor Error
		The vertical encoder input signal was judged to be abnormal when the vertical motor was operating.
		<ul style="list-style-type: none"> • Cycle printer on/off, check result. • Vertical encoder connector loose, broken, or defective. • SENC defective. • Remove paper jam. • Replace encoder sensor. • Replace vertical motor. • PSU defective • CTL board defective
996	A	No Input Signal from the Horizontal Encoder
		No input signal from the horizontal encoder was detected during operation of the horizontal motor.
		<ul style="list-style-type: none"> • Horizontal encoder sensor loose, broken, or defective. • Horizontal encoder film broken, disconnected, or installed upside down. • HRB defective

		<ul style="list-style-type: none"> • Cycle printer on/off, check result. • Confirm film encoder not loose • Replace horizontal encoder film strip • Horizontal motor connection loose, broken, defective • Replace horizontal motor. • Check HRB FFC connections • Replace print head unit or carriage unit • PSU defective • CTL board defective
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997	A	Input Signal from the Horizontal Encoder Abnormal
		When the carriage moved to the right, the carriage did not stop at the HP. Or, the carriage scan check failed.
		<ul style="list-style-type: none"> • Horizontal encoder sensor loose, broken, or defective. • Horizontal encoder film broken, disconnected, or installed upside down. • HRB defective
		<ul style="list-style-type: none"> • Cycle printer on/off, check result. • Replace encoder sensor. • Check encoder film position. • Check carriage FFC (Flat Film Connector).

999	A	Maintenance Stepping Motor Out of Home Position
		The maintenance motor HP sensor failed to detect the motor at the home position.
		<ul style="list-style-type: none"> • Maintenance HP sensor connector loose, broken, or defective • Maintenance motor connector loose, broken, or defective • Movable Feeder connector loose, broken. • Cycle printer on/off, check result. • Clean wiper. • Check HP sensor connector. • Replace maintenance unit. • Replace CTL board

Jam Codes

Here is a list of jam codes and what they mean. A separate list is provided for each machine.

Jam Codes: J023

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.

3

Jam 1	Paper Feed Jam (Tray 1: Paper Cassette)
Message	Paper Set Incorrectly Tray 1
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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Replace friction pad. • Replace paper feed clutch. • Replace paper cassette unit.
Jam 2	Paper Feed Jam (Tray 2: PFU)

Message	Paper Set Incorrectly Tray 2
Cause	<ul style="list-style-type: none"> • Paper slick (non-feed) • Paper tray was not set properly. • Back cover of paper cassette open.
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	<ul style="list-style-type: none"> • Remove the cassette • Remove remaining paper. • Re-set the cassette correctly.
Action 2	<ul style="list-style-type: none"> • Replace paper feed clutch in Tray 2. • Replace paper cassette. • Replace Tray 2.

Jam 3	Duplex Unit Jam
Message	Paper Misfeed Duplex Unit
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	<ul style="list-style-type: none"> • Remove the duplex unit • Remove remaining paper.
Action 2	<ul style="list-style-type: none"> • 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 [Form Feed]

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	<ul style="list-style-type: none"> • Press [Form Feed] key on printer operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace TE sensor. • Replace CTL board.

Jam 5	Transport Jam (Tray 1)
Message	Paper Misfeed Press [Form Feed] button
Cause	Paper longer than the paper selected in printer driver was loaded.
Details	After the leading edge sensor (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	<ul style="list-style-type: none"> • Press [Form Feed] key on printer operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

Jam 6	Paper Feed Jam (Bypass Tray)
Message	Paper Set Incorrectly Bypass Tray
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Remove bypass tray • Load paper correctly. • Check inside the paper for jammed paper or paper scraps.

Action 2	<ul style="list-style-type: none"> • Clean transport belt. • Replace Registration Sensors 1, 2. • Replace Multi Bypass Tray. • Replace the printer.
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Jam 7	Transport Jam (Tray 2: PFU)
Message	Paper Misfeed Press [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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Clean transport belt. • Replace TE sensor. • Replace Tray 2.

Jam 8	Not Used
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Jam 9	Registration Late Jam: Tray 1
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace registration sensor 1. • Replace trailing edge sensor 2.

Jam 10	Registration Late Jam: Tray 2 (PFU)
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace TE sensor. • Replace CTL board.

Jam 11	Registration Late Jam: Duplex Unit
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

Jam 12	Paper Remains Jam: Printer
Message	Paper Misfeed Press [Form Feed] button

Cause	<ul style="list-style-type: none"> • Paper remains inside the printer. • Paper feed clutch malfunction.
Details	At power ON, or when a jam was released, the trailing edge sensor went ON.
Action 1	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel. • Open the top cover to make sure that no paper remains inside the printer.
Action 2	<ul style="list-style-type: none"> • Clean transport belt. • Replace inverter guide. • Replace TE sensor. • Replace Registration Sensors 1, 2.

Jam 13	Not Used
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Jam 14	Carriage Jam
Message	Paper Misfeed Open Top Cover
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	<ul style="list-style-type: none"> • Open the top cover. • 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	<ul style="list-style-type: none"> • 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	Feed Path Obstruction (No Sensor Detection)
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Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper remains inside the printer. • Transport belt is dirty.
Details	Before the trailing edge feeler of the relay sensor detected the trailing edge, the registration sensor detected.
Action 1	<ul style="list-style-type: none"> • Open the top cover. • 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	<ul style="list-style-type: none"> • Clean transport belt. • Replace the 1st registration sensor.

Jam 16	Carriage Unit Homing Failure
Message	Paper Misfeed Open Top Cover
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	<ul style="list-style-type: none"> • Open the top cover 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 from the top cover. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	<ul style="list-style-type: none"> • 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	Open Top, Rear Cover Remove Paper
Cause	Obstruction or paper remains in the printer after a jam was removed.
Details	Paper leading edge sensor switched on while paper was being removed.
Action 1	<ul style="list-style-type: none"> • Open the top cover 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 from the top cover. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	<ul style="list-style-type: none"> • 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]Form Feed]
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	<ul style="list-style-type: none"> • Feed and eject 3 blank sheets to remove moisture from the belt.
Action 2	<ul style="list-style-type: none"> • [Menu]> "Maintenance"> "De-condensation"> #. • 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. • Inspect the transport belt. • If the belt is damaged the machine must be replaced.

Jam 19 to 26	Not Used
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Jam 27	TE Sensor Paper from Tray 2 Late Error
Message	---
Cause	The trailing edge sensor failed to detect the trailing edge of the paper during the time prescribed for correct paper feed.
Details	One or more covers may be open, or the the duplex unit may be set incorrectly.
Action 1	<ul style="list-style-type: none"> • Check the top cover, duplex unit cover, duplex unit installation, left side (dial cover), right front door, Tray 2 cover, Tray 2 installation. • After closing all covers, press [Form Feed] to feed paper remaining in the paper path.

Jam Codes: J018

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 Set Incorrectly Tray 1
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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Replace friction pad. • Replace paper feed clutch. • Replace paper cassette unit.

Jam 2	Paper Feed Jam (Tray 2: PFU)
Message	Paper Set Incorrectly Tray 2
Cause	<ul style="list-style-type: none"> • Paper slick (non-feed) • Paper tray was not set properly. • Back cover of paper cassette open.
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	<ul style="list-style-type: none"> • Remove the cassette • Remove remaining paper. • Re-set the cassette correctly.
Action 2	<ul style="list-style-type: none"> • Replace paper feed clutch in Tray 2. • Replace paper cassette. • Replace Tray 2.

Jam 3	Duplex Unit Jam
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Message	Paper Misfeed Duplex Unit
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	<ul style="list-style-type: none"> Remove the duplex unit Remove remaining paper.
Action 2	<ul style="list-style-type: none"> 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 [Form Feed]
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	<ul style="list-style-type: none"> Press [Form Feed] key on printer operation panel.
Action 2	<ul style="list-style-type: none"> Replace inverter guide. Replace TE sensor. Replace CTL board.

Jam 5	Transport Jam (Tray 1)
Message	Paper Misfeed Press [Form Feed] button
Cause	Paper longer than the paper selected in printer driver was loaded.
Details	After the leading edge sensor (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	<ul style="list-style-type: none"> • Press [Form Feed] key on printer operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

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Jam 6	Paper Feed Jam (Bypass Tray)
Message	Paper Set Incorrectly Bypass Tray
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Remove bypass tray • Load paper correctly. • Check inside the paper for jammed paper or paper scraps.
Action 2	<ul style="list-style-type: none"> • Clean transport belt. • Replace Registration Sensors 1, 2. • Replace Multi Bypass Tray. • Replace the printer.

Jam 7	Transport Jam (Tray 2: PFU)
Message	Paper Misfeed Press [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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Clean transport belt. • Replace TE sensor. • Replace Tray 2.
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Jam 8	Exit Jam (Paper Remains in Bypass Tray)
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper slippage • Paper longer than the paper selected in printer driver was loaded.
Details	After the trailing edge sensor detected the trailing edge of the paper fed from the bypass tray (1st registration sensor ON) the paper fed but it stopped at the 2nd registration sensor and failed to leave within the prescribed time.
Action 1	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Replace Registration Sensors 1, 2. • Replace CTL board.

Jam 9	Registration Late Jam: Tray 1
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace registration sensor 1. • Replace trailing edge sensor 2.

Jam 10	Registration Late Jam: Tray 2 (PFU)
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Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace TE sensor. • Replace CTL board.

Jam 11	Registration Late Jam: Duplex Unit
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

Jam 12	Paper Remains Jam: Printer
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper remains inside the printer. • Paper feed clutch malfunction.

Details	At power ON, or when a jam was released, the trailing edge sensor went ON.
Action 1	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel. • Open the top cover to make sure that no paper remains inside the printer.
Action 2	<ul style="list-style-type: none"> • Clean transport belt. • Replace inverter guide. • Replace TE sensor. • Replace Registration Sensors 1, 2.

Jam 13	Not Used
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Jam 14	Carriage Jam
Message	Paper Misfeed Open Top Cover
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	<ul style="list-style-type: none"> • Open the top cover. • 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	<ul style="list-style-type: none"> • 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	Feed Path Obstruction (No Sensor Detection)
Message	Paper Misfeed Press [Form Feed] button

Cause	<ul style="list-style-type: none"> • Paper remains inside the printer. • Transport belt is dirty.
Details	Before the trailing edge feeler of the relay sensor detected the trailing edge, the registration sensor detected.
Action 1	<ul style="list-style-type: none"> • Open the top cover. • 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	<ul style="list-style-type: none"> • Clean transport belt. • Replace the 1st registration sensor.

Jam 16	Carriage Unit Homing Failure
Message	Paper Misfeed Open Top Cover
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	<ul style="list-style-type: none"> • Open the top cover 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 from the top cover. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	<ul style="list-style-type: none"> • 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
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Message	Open Top, Rear Cover Remove Paper
Cause	Obstruction or paper remains in the printer after a jam was removed.
Details	Paper leading edge sensor switched on while paper was being removed.
Action 1	<ul style="list-style-type: none"> • Open the top cover 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 from the top cover. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	<ul style="list-style-type: none"> • 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]Form Feed]
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	<ul style="list-style-type: none"> • Feed and eject 3 blank sheets to remove moisture from the belt.
Action 2	<ul style="list-style-type: none"> • [Menu]> "Maintenance"> "De-condensation"> #. • 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)
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Message	<p>Paper Misfeed</p> <p>Tray 2 Rear Unit Not Set</p> <p>Duplex Unit</p> <p>Remove Jammed Paper</p>
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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Paper Misfeed</p> <p>Tray 3 Rear Unit Not Set</p> <p>Duplex Unit</p> <p>Remove Jammed Paper</p>
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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Tray 2 Rear Unit Not Set Duplex Unit Remove Jammed 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	<ul style="list-style-type: none"> Remove the rear unit of Tray 2 and Tray 3 and remove any paper inside the tray.
Action 2	<ul style="list-style-type: none"> 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	Paper Misfeed Trays Not Set Remove Rear Units Remove Jammed 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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.
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Jam 23	Paper Feed Jam (Tray 3)
Message	Paper Misfeed Press [Form Feed]
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 LE 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	<ul style="list-style-type: none"> • 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	<p>On the printer operation panel menu, make sure that the correct paper size is selected for the Tray.</p> <ul style="list-style-type: none"> • [Menu]> "Paper Input"> #Enter • "Tray Paper Size"> #Enter • Select "Tray 3"> Select correct paper size.

Jam 24	2nd Registration Sensor Late Jam (Tray 3)
Message	Paper Misfeed Press [Form Feed]
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	<ul style="list-style-type: none"> • Press [Form Feed] key on printer operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace TE sensor. • Replace CTL board.

Jam 25	Not Used
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Jam 26	No Feed Jam (Tray 3)
Message	Double Feed Set Paper Correctly
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	<ul style="list-style-type: none"> • 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.

Jam Codes: J017

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 Set Incorrectly Tray 1

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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Replace friction pad. • Replace paper feed clutch. • Replace paper cassette unit.

Jam 2	Paper Feed Jam (Tray 2: PFU)
Message	Paper Set Incorrectly Tray 2
Cause	<ul style="list-style-type: none"> • Paper slick (non-feed) • Paper tray was not set properly. • Back cover of paper cassette open.
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	<ul style="list-style-type: none"> • Remove the cassette • Remove remaining paper. • Re-set the cassette correctly.
Action 2	<ul style="list-style-type: none"> • Replace paper feed clutch in Tray 2. • Replace paper cassette. • Replace Tray 2.

Jam 3	Duplex Unit Jam
Message	Paper Misfeed Duplex Unit
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	<ul style="list-style-type: none"> • Remove the duplex unit • Remove remaining paper.
Action 2	<ul style="list-style-type: none"> • 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 [Form Feed]
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	<ul style="list-style-type: none"> • Press [Form Feed] key on printer operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace TE sensor. • Replace CTL board.

Jam 5	Transport Jam (Tray 1)
Message	Paper Misfeed Press [Form Feed] button
Cause	Paper longer than the paper selected in printer driver was loaded.

Details	After the leading edge sensor (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	<ul style="list-style-type: none"> • Press [Form Feed] key on printer operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

Jam 6	Paper Feed Jam (Bypass Tray)
Message	Paper Set Incorrectly Bypass Tray
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Remove bypass tray • Load paper correctly. • Check inside the paper for jammed paper or paper scraps.
Action 2	<ul style="list-style-type: none"> • Clean transport belt. • Replace Registration Sensors 1, 2. • Replace Multi Bypass Tray. • Replace the printer.

Jam 7	Not Used
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Jam 8	Exit Jam (Paper Remains in Bypass Tray)
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper slippage • Paper longer than the paper selected in printer driver was loaded.

Details	After the trailing edge sensor detected the trailing edge of the paper fed from the bypass tray (1st registration sensor ON) the paper fed but it stopped at the 2nd registration sensor and failed to leave within the prescribed time.
Action 1	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Replace Registration Sensors 1, 2. • Replace CTL board.

Jam 9	Registration Late Jam: Tray 1
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace registration sensor 1. • Replace trailing edge sensor 2.

Jam 10	Not Used
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Jam 11	Registration Late Jam: Duplex Unit
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

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Jam 12	Paper Remains Jam: Printer
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper remains inside the printer. • Paper feed clutch malfunction.
Details	At power ON, or when a jam was released, the trailing edge sensor went ON.
Action 1	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel. • Open the top cover to make sure that no paper remains inside the printer.
Action 2	<ul style="list-style-type: none"> • Clean transport belt. • Replace inverter guide. • Replace TE sensor. • Replace Registration Sensors 1, 2.

Jam 13	Paper Remains Jam: Bypass tray
	There is no sensor that detects when paper remains in the bypass tray.

Jam 14	Carriage Jam
Message	Paper Misfeed Open Top Cover
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	<ul style="list-style-type: none"> • Open the top cover. • 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	<ul style="list-style-type: none"> • 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	Feed Path Obstruction (No Sensor Detection)
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper remains inside the printer. • Transport belt is dirty.
Details	Before the trailing edge feeler of the relay sensor detected the trailing edge, the registration sensor detected.
Action 1	<ul style="list-style-type: none"> • Open the top cover. • 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	<ul style="list-style-type: none"> • Clean transport belt. • Replace the 1st registration sensor.

Jam 16	Carriage Unit Homing Failure
Message	Paper Misfeed Open Top Cover
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	<ul style="list-style-type: none"> • Open the top cover 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 from the top cover. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	<ul style="list-style-type: none"> • 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	Open Top, Rear Cover Remove Paper
Cause	Obstruction or paper remains in the printer after a jam was removed.
Details	Paper leading edge sensor switched on while paper was being removed.
Action 1	<ul style="list-style-type: none"> • Open the top cover 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 from the top cover. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	<ul style="list-style-type: none"> • 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 to 26	Not Used
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Jam Codes: J021

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 Set Incorrectly Tray 1
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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Replace friction pad. • Replace paper feed clutch. • Replace paper cassette unit.

Jam 2 to 4	Not Used
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Jam 5	Transport Jam (Tray 1)
Message	Paper Misfeed Press [Form Feed] button

Cause	Paper longer than the paper selected in printer driver was loaded.
Details	After the leading edge sensor (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	<ul style="list-style-type: none"> • Press [Form Feed] key on printer operation panel.
Action 2	<ul style="list-style-type: none"> • Replace inverter guide. • Replace trailing edge sensor. • Replace CTL board.

Jam 6	Paper Feed Jam (Bypass Tray)
Message	Paper Set Incorrectly Bypass Tray
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Remove bypass tray • Load paper correctly. • Check inside the paper for jammed paper or paper scraps.
Action 2	<ul style="list-style-type: none"> • Clean transport belt. • Replace Registration Sensors 1, 2. • Replace Multi Bypass Tray. • Replace the printer.

Jam 7	Not Used
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Jam 8	Exit Jam (Paper Remains in Bypass Tray)
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper slippage • Paper longer than the paper selected in printer driver was loaded.

Details	After the trailing edge sensor detected the trailing edge of the paper fed from the bypass tray (1st registration sensor ON) the paper fed but it stopped at the 2nd registration sensor and failed to leave within the prescribed time.
Action 1	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Replace Registration Sensors 1, 2. • Replace CTL board.

Jam 9	Registration Late Jam: Tray 1
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel.
Action 2	<ul style="list-style-type: none"> • Replace registration sensor 1. • Replace trailing edge sensor 2.

Jam 10 to 11	Not Used
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Jam 12	Paper Remains Jam: Printer
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper remains inside the printer. • Paper feed clutch malfunction.
Details	At power ON, or when a jam was released, the trailing edge sensor went ON.
Action 1	<ul style="list-style-type: none"> • Press [Form Feed] key on operation panel. • Open the top cover to make sure that no paper remains inside the printer.

Action 2	<ul style="list-style-type: none"> • Clean transport belt. • Replace inverter guide. • Replace TE sensor. • Replace Registration Sensors 1, 2.
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Jam 13	Paper Remains Jam: Bypass tray
	There is no sensor that detects when paper remains in the bypass tray.

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Jam 14	Carriage Jam
Message	Paper Misfeed Open Top Cover
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	<ul style="list-style-type: none"> • Open the top cover. • 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	<ul style="list-style-type: none"> • 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	Feed Path Obstruction (No Sensor Detection)
Message	Paper Misfeed Press [Form Feed] button
Cause	<ul style="list-style-type: none"> • Paper remains inside the printer. • Transport belt is dirty.
Details	Before the trailing edge feeler of the relay sensor detected the trailing edge, the registration sensor detected.

Action 1	<ul style="list-style-type: none"> • Open the top cover. • 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	<ul style="list-style-type: none"> • Clean transport belt. • Replace the 1st registration sensor.

Jam 16	Carriage Unit Homing Failure
Message	Paper Misfeed Open Top Cover
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	<ul style="list-style-type: none"> • Open the top cover 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 from the top cover. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	<ul style="list-style-type: none"> • 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	Open Top, Rear Cover Remove Paper
Cause	Obstruction or paper remains in the printer after a jam was removed.
Details	Paper leading edge sensor switched on while paper was being removed.

Action 1	<ul style="list-style-type: none"> • Open the top cover 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 from the top cover. • Make sure that the paper cassette and bypass tray are set correctly.
Action 2	<ul style="list-style-type: none"> • 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 to 26	Not Used
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Error Messages

Cartridge Almost 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.

Cover Open

- Top cover open?
 - Duplex unit cover open?
 - Duplex unit installed properly and locked in place?
1. Check the covers.
 2. Open and close them

Duplex Unit Not Detected

- Duplex unit attached correctly?
1. Check the duplex unit on the back of the machine.
 2. Make sure the latches are lock at both ends. They should lock automatically.

Envelope Select Mismatch

- Envelope selector set correctly?
1. Set the envelope selector to the correct position or change the printer driver settings.

2. Alternatively, press the [Form Feed] key, select a tray containing paper of the required size, and then print. To cancel the print job, press [Job Reset]

Ink Collector Unit Almost Full

The ink collector unit is almost full and must be replaced. Request a new one soon.

Ink Collector Unit Full

The ink collector is full. Printing cannot continue. The ink collector must be replaced.

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.

Network Interface Error

An error has occurred in the Ethernet port network.

1. Cycle the printer off/on.
2. If the error persists, call for service.

No Paper

Tray Not Detected (Bypass Tray)

1. Load bypass tray,
2. Press [#Enter]

No Paper

Tray Not Detected (Tray 1)

1. Pull out the paper cassette.
2. Load paper if it is empty.
3. Close the cassette and make sure that it 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.

Out of Printable Temperature Range

- Room too 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 Size Mismatch (Auto Tray Select)

1. Check the printer driver and paper cassette.
2. Make sure the size and type of the paper matches the settings selected in the printer driver.
3. Push [Form Feed]> Select Size/Type for Bypass> [#Enter]

Paper Type Mismatch (Auto Tray Select)

1. Check the printer driver and paper cassette.
2. Make sure the size and type of the paper matches the settings selected in the printer driver.
3. Push [Form Feed]> Select Size/Type for Bypass> [#Enter]

Paper Size Mismatch/Paper Type Mismatch (Bypass Tray)

1. Check the printer driver and paper cassette.
2. Make sure the size and type of the paper loaded in the bypass tray matches the settings selected in the printer driver.
3. Push [Form Feed]> Select Size/Type for Bypass> [#Enter]

Paper Size Mismatch

1. Check the paper cassette and make sure that the paper size matches the settings selected in the printer driver.
2. Push [Form Feed]> Select Size/Type for Tray 1> [#Enter]

Paper Type Mismatch (Tray 1)

1. Check the paper cassette and make sure that the paper type matches the settings selected in the printer driver.
2. Push [Form Feed]> Select Size/Type for Tray 1> [#Enter]

Printer Error

An error has occurred in the printer.

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.

Used Cartridge

The installed print cartridge is empty. Printing cannot continue. Replace the ink cartridge with a new one.

Used Ink Collector Unit

A used ink collector unit has been installed. Remove it and replace it with a new one.