

G1000 series, G2000 series, G3000 series
SERVICE MANUAL

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Revision	Date	Page	Revised Items
00	October 2015	All	New edition
01	November 2015	P. 16, 17, 23, 24, 25, 26, 28, 30	The disassembly and reassembly procedures revised and added.
		P. 34	The incorrect description revised. (service mode operation procedures)
		P. 53	The incorrect description revised. (special notes on the items using printer serial number (G3000 series only))
		P. 62	The number of flashing (transportation mode) revised.
02	January 2016	P. 20	The notes for disassembly and reassembly are added.
03	September 2016	All	Revised
04	March 2017	P. 20, 21	The procedures for removing CIS unit added.
		P. 24, 25, 26	The procedures for removing middle cover and main tank cover revised.
		P. 38, 39	The illustration of absorber kit changed to the one of the new shape absorber kit.

Table of Contents

1. TROUBLESHOOTING	5
1-1. Troubleshooting by Symptom.....	5
1-2. Operator Call Error (Alarm Lamp Lit In Orange) Troubleshooting	8
1-3. Service Call Error (by Cyclic Blinking of Alarm and Power Lamps) Troubleshooting.....	10
1-4. FAQs (Specific Problems and their solutions).....	14
2. REPAIR.....	16
2-1. Disassembly & Reassembly Procedures	16
3. ADJUSTMENT / SETTINGS.....	40
3-1. Adjustment.....	40
3-2. Adjustment and Maintenance in User Mode	41
3-3. Adjustment and Settings in Service Mode.....	42
(1) Start the printer in the service mode.....	42
(2) How to operate the service mode.....	42
(3) Service Tool functions	47
(4) Ink absorber counter setting	54
(5) Service Test Pattern	55
(6) EEPROM information	56
3-4. Grease Application	58
3-5. Special Notes on Servicing.....	60
(1) Ink absorber counter setting	60
(2) Preventive replacement of ink absorber	60
(3) Remaining ink detection	61
(4) How to Replace the Cartridges.....	61
(5) How to Replace the Cartridges.....	62
(6) Ink Absorber Replacement	63
(7) System Cleaning.....	63
(8) On Re-box or Refurbishment.....	64
(9) Special Notes on the Items Using Printer Serial Number (G3000 series only)	64
(10) Change of the Threshold When Waste Ink-related Error Occurs.....	65
(11) Countermeasure Against The Ink Leakage From The Main Tank	66
(12) Countermeasure against Items Included with Printer Left in Printer Packing Box	67
(13) Initial Setup	67
(14) Phenomenon "Ink flows into the buffer room".....	67
(15) The ink is consumed too early.....	68
(16) On Replenishing ink tanks with ink.....	68
(17) Broken Print Head Surface	68
(18) "Cartridge Not Installed Completely" Error (Error Code: 1470)	68
(19) Durability of Ink on Photo Paper.....	68
(20) How to Transport Printers.....	69
4. VERIFICATION AFTER REPAIR	70
4-1. Inspection Flow.....	70
4-2. Standard Inspection.....	70
4-3. Optional Inspection to Verify Specific Repair	72
5. APPENDIX.....	73
5-1. Customer Maintenance.....	73
5-2. Special Tools	75
5-3. Sensors.....	75
(1) Sensor location	75

(2) Sensor function	75
5-4. Main PCB Ass'y Block Diagram	76
6. PRINTER TRANSPORTATION.....	79

1. TROUBLESHOOTING

1-1. Troubleshooting by Symptom

	Symptom	Check points & Solution
Paper feed failure	Paper does not feed.	(1) Foreign material in the paper path. -> Remove it. (2) The pick-up roller is smeared. -> Clean the pick-up roller ass'y or replace it.
	Paper feeds at an angle.	(1) The paper guides are not adjusted properly. -> Align them to the paper edges properly. (2) The pick-up roller is smeared. -> Clean the pick-up roller ass'y or replace it. (3) Foreign material in the paper path. -> Remove it.
	Paper feeds but not properly (multiple paper feed)	(1) More than the specified number of sheets are set in the feeder. -> Reduce the number of sheets to lower than the limit. (2) The pick-up roller is smeared. -> Clean the pick-up roller ass'y or replace it.
	Ejects blank paper	(1) The pick-up roller is smeared. -> Clean the pick-up roller ass'y. (2) The paper end harness ass'y is not properly connected. -> Connect it properly. (3) The pick-up roller unit is broken or deformed. -> Replace pick-up roller ass'y. (4) Photo Interrupter does not detect well. -> Replace the paper end sensor PCB ass'y.
	Spur marks on the printed paper	(1) Foreign material (such as a hair) in the spur unit -> Remove it.
Communication error	The printer is not recognized by a connected PC, or a communication error occurs.	(1) The USB cable is not properly connected. -> Connect it properly. (2) The wireless LAN FFC*1 is damaged. -> Replace it*1.
	Printing from the PC stops halfway.	If the problem still occurs, replace the following: - Wireless LAN PCB ass'y*1 - Main PCB ass'y
Faulty operation	The power does not turn on. The power turns off immediately after power-on.	(1) The DC harness is not properly connected. -> Connect it properly. (2) The panel FFC is not connected properly. -> Connect it properly or replace it. If the problem still occurs, replace the following: - Power supply unit - Main PCB ass'y - Panel PCB ass'y
Faulty operation	Strange noise during purging	(1) Foreign material inside the printer. -> Remove it. (2) The cap blade unit is damaged. -> Replace it. (3) The ASF and driver unit is damaged. -> Replace the auto sheet feeder unit.

	Symptom	Check points & Solution
	Strange noise while the carriage is moving	(1) Foreign material inside the printer. -> Remove it. (2) The cap blade unit is defective, especially the cap comes off or is damaged, or the blade is damaged. -> Replace the cap blade unit. (3) The carriage unit is defective. -> Replace it.
	Strange noise during feeding paper	(1) Foreign material inside the printer. -> Remove it. (2) The pick-up roller unit is damaged. -> Replace the pick-up roller ass'y. (3) The paper feed roller is damaged. -> Replace the feed roller ass'y. (4) The ASF and driver unit is damaged. -> Replace the auto sheet feeder unit.
	Strange noise during ejecting paper	(1) Foreign material inside the printer. -> Remove it. (2) The paper feed roller is damaged. -> Replace the feed roller ass'y.
	The operation panel does not respond.	(1) The Panel FFC is not connected properly. -> Connect it properly. If the problem still occurs, replace the following: - Operation key ass'y - Panel PCB ass'y - Main PCB ass'y
Faulty scanning ²	Stains or streaks on the scanned image	(1) The platen glass is not clean. -> Clean it. (2) The scanner unit FFC is not properly connected. -> Connect it properly. If the problem still occurs, replace the following: - Scanner unit
	Strange noise from the Scanner Unit	(1) The problem is duplicated. -> Replace the scanner unit.
Unsatisfactory print quality	Horizontal streaks or uneven printing in small pitches on photo paper	(1) Ink is not properly ejected from the nozzles. -> Perform Print Head Cleaning (up to two times) or Deep Cleaning (one time). (2) The cartridge does not eject ink properly. -> Replace it. (3) The Carriage unit is defective. -> Replace it. (4) The paper feed roller is defective. -> Replace the feed roller ass'y. If the problem still occurs, replace the following: - Cap blade unit - Main PCB ass'y
	Horizontal streaks or uneven printing in medium pitches on photo paper	(1) The paper feed roller is defective. -> Replace the feed roller ass'y.
	Horizontal streaks or uneven printing in the area 30 to 40 mm from the top or bottom edge of photo paper	
	Horizontal white streaks or blank spots	

Symptom	Check points & Solution
Vertical streaks or uneven printing	(1) The Timing slit strip film is not clean. -> Clean it. (2) The Timing slit strip film is scratched or damaged. -> Replace it. (3) Grease is not evenly applied over the carriage rail. -> Apply grease properly.
Vertical streaks or inaccurate straight line on plain paper, or envelope	(1) The print head is not properly aligned. -> Perform Print Head Alignment. (2) The carriage unit is damaged. -> Replace it.
No color is printed, or printing is faint.	(1) Ink is not properly ejected from the nozzles. -> Perform Print Head Cleaning (up to two times) or Deep Cleaning (one time). (2) Foreign material on the cap. -> Remove it. (3) The cartridge does not eject ink properly. -> Replace it. (4) The carriage unit is defective. -> Replace it. (5) The blade is defective. -> Replace the cap blade unit.
Printing side of the paper is smeared.	(1) The paper is warped. -> Flatten the paper. (2) The carriage unit is damaged. -> Replace it. (3) The paper feed roller is damaged. -> Replace the feed roller ass'y. (4) The blade is defective. -> Replace the cap blade unit.

*1: For the G3000 series only.

*2: For the G2000 series and the G3000 series only.

1-2. Operator Call Error (Alarm Lamp Lit In Orange) Troubleshooting

Errors and warnings are displayed by the following ways:

- Operator call errors are indicated by the Alarm lamp blinking in orange, and the error and its solution are displayed by the cycles of the lamp blinking.
- Messages during printing from a PC are displayed on the printer driver Status Monitor.
- Error codes (the latest five error codes at the maximum) are printed in the "operator call/service call error record" area in EEPROM Information Print

Buttons valid when an operator call error occurs:

- ON button: To turn the printer off and on again.
- Black / Color button*¹:
To clear and recover from an error. In some operator call errors, the error will automatically be cleared when the cause of the error is eliminated, and pressing the Black / Color button may not be necessary.
- Stop button*²: To cancel the job at error occurrence, and to clear the error.

Cycles of lamp blinking	Error	Error code	Check points & Solution
2 times	No paper	[1000]	(1) Paper is not set in the rear tray. -> Set paper in the rear tray. (2) The pick-up roller does not operate properly. -> Replace the pick-up roller ass'y. (3) The photo interrupter is damaged. -> Replace the paper end sensor PCB ass'y.
3 times	Paper jam	[1300]	(1) Foreign material inside the printer -> Remove it. (2) The pick-up roller does not operate properly. -> Replace the right or left pick-up roller Ass'y. (3) The PE Lever is damaged. -> Make a product exchange.
5 times	No cartridge	[1471]	(1) The cartridge contact or the contact pins of the carriage unit are smeared. -> Clean the cartridge contact or the contact pins of the carriage Unit.
	Print head temperature sensor error	[1403]	(2) The contact pins of the carriage unit are deformed or damaged. -> Replace the carriage unit. If the error still occurs, replace the following: - Cartridge
	Non-supported cartridge	[1476]	(1) Non-genuine cartridge is installed. -> Install the supported (Canon-genuine) cartridge.
15 times	Cartridge hardware error	[1472]	(1) The cartridge is not installed properly. -> Install it properly. (2) Foreign material in the area where the cartridge is installed. -> Remove it. (3) The cartridge is damaged. -> Replace it. If the error still occurs, replace the following: - Main PCB ass'y
Lighted	No ink	[1640]	(1) The remaining ink level reaches the ink lower limit line on the ink tank. -> Select your visual check or continuous use of the remaining ink

Cycles of lamp blinking	Error	Error code	Check points & Solution
			detection. For details, see 3-5. (3) Remaining Ink Detection . If the error still occurs, replace the following: - Main PCB ass'y
4 times	Ink cartridge not completely installed	[1470]	(1) The cartridge lifts up. -> Install it completely. (2) The cartridge holder lifts up. -> Remove the protective film on the upper cartridge, and re-install the cartridge. (3) The joint lever lifts up or is not pushed. -> Push the joint lever completely. (4) Foreign material at the cartridge contacts. -> Remove it. (5) The cartridge is damaged. -> Replace it. (6) The carriage unit contact part is deformed or damaged. -> Replace the carriage unit. If the error still occurs, replace the following: - Main PCB ass'y
7 times	Multiple cartridges of the same color installed	[1475]	(1) The cartridge is damaged. -> Replace it. If the error still occurs, replace the following: - Main PCB ass'y
	Cartridge in a wrong position	[1474]	(1) The cartridge is damaged. -> Replace it. If the error still occurs, replace the following: - Main PCB ass'y
14 times	Unable to recognize a cartridge	[1473]	(1) A non-supported cartridge is installed. -> Install the supported cartridge. (2) The cartridge is damaged. -> Replace it.
8 times	Ink absorber almost full	[1700]	(1) Replace the ink absorber and reset its counter value. (Partial replacement: 30%, Whole replacement: 0%) Releasing the error will enable printing without replacing the ink absorber. However, when the ink absorber becomes full, no further printing can be performed unless the applicable ink absorber is replaced. -> Replace the partial or whole absorber kit. For details, see 2-1. (5) Removing the Absorber Kit (Partial) and (32) Removing the Absorber Kit .
9 times	Packing material not removed	[1890]	(1) The carriage stopper is installed. -> Remove it.
11 times	IVEC print settings error* ³	[4103]	(1) The paper set in the printer is not supported for double-sided printing. -> Set the supported paper.

*1: For the G2000 series and the G3000 series only.

*2: The **Resume** / **Cancel** button for the G1000 series.

*3: For the G3000 series only.

1-3. Service Call Error (by Cyclic Blinking of Alarm and Power Lamps) Troubleshooting

Service call errors are indicated by the number of cycles the Alarm and Power lamps blink, and the corresponding error message is displayed in the Status Monitor.

Cycles of lamp blinking	Error	Error code	Check points & Solution
2 times	Carriage position error	[5100]	<p>(1) Foreign material inside the printer -> Remove it.</p> <p>(2) The cartridge lifts up. -> Install it completely.</p> <p>(3) The cartridge holder lifts up. -> Close it completely.</p> <p>(4) The joint lever lifts up. -> Push it completely.</p> <p>(5) The Timing slit strip film is smeared. -> Clean it.</p> <p>(6) The following cables are disconnected or connected at an angle: - Carriage FFC - Carriage motor harness -> Connect the applicable cables properly.</p> <p>(7) The Timing slit strip film is scratched or deeply smeared. -> Replace it.</p> <p>If the error still occurs, replace the following:</p> <ul style="list-style-type: none"> - Carriage unit - Carriage motor unit - Main PCB ass'y
3 times	LF position error	[6000]	<p>(1) Foreign material inside the printer -> Remove it.</p> <p>(2) The following cables are disconnected or connected at an angle: - Paper feed motor harness - Paper feed encoder FFC -> Connect the applicable cables properly.</p> <p>(3) The paper feed encoder FFC is bent or damaged. -> Replace it.</p> <p>(4) The timing slit disk feed film is scratched or deeply smeared. -> Replace it.</p> <p>(5) The gear(s) of the following parts is damaged: - Paper feed roller unit -> Replace the applicable unit.</p> <p>If the error still occurs, replace the following:</p> <ul style="list-style-type: none"> - Main PCB Ass'y
5 times	ASF cam sensor	[5700]	<p>(1) The error is reproduced after powering off the printer and powering it on again. -> Replace the auto sheet feeder unit or the main PCB ass'y or the sheet feeder sensor PCB ass'y.</p>
6 times	Thermistor temperature abnormal	[5400]	<p>(1) The error is reproduced after powering off the printer, waiting 5 minutes, and powering it on again. -> Replace the main PCB Ass'y.</p>

Cycles of lamp blinking	Error	Error code	Check points & Solution
7 times	Ink absorber full	[5B00]	(1) The error is reproduced after powering off the printer and powering it on again. -> Replace the partial or whole absorber kit.
8 times	Print head temperature too high	[5200]	(1) Printing is performed though ink is used up. -> Replenish ink tanks with ink. (2) The cartridge is defective (the contacts, the TAB wires, or the surroundings of the nozzles are burnt, etc.). -> Replace the cartridge. (3) The contact pins of the carriage unit are bent or deformed. -> Replace the carriage unit. If the error still occurs, replace the following: - Main PCB ass'y
9 times	NVRAM error	[6800]	(1) The error is reproduced after powering off the printer and powering it on again. -> Replace the main PCB ass'y.
	NVRAM timeout	[6801]	
10 times	Discharge VH monitor error	[B202]	(1) The Carriage FFC is disconnected or connected at an angle. -> Connect the Carriage FFC properly. (2) The error is reproduced after removing the cartridge, powering off the printer and powering it on again. -> Replace the main PCB ass'y. (3) The error is reproduced after re-installing the cartridge. -> Replace the cartridge.
	Pre-charge VH monitor error	[B203]	(1) The Carriage FFC is disconnected or connected at an angle. -> Connect the carriage FFC properly. (2) The DC harness is not connected properly. -> Connect it properly. (3) If the error still occurs, replace the cartridge. -> Replace the cartridge. If the error still occurs, replace the following: - Main PCB ass'y - Power supply unit
	FET-on VH monitor error	[B204]	(1) The carriage FFC is disconnected or connected at an angle. -> Connect the carriage FFC properly. (2) Remove the cartridge, power off the printer and power it on again. -> If the error still occurs, replace the main PCB ass'y. (3) The error is reproduced after re-installing the cartridge. -> Replace the cartridge. If the error still occurs, replace the following: - Power supply unit
	VHIC status monitor error	[B205]	(1) The contact pins of the carriage unit are bent or deformed. -> Replace the carriage unit. If the error still occurs, replace the following: - Cartridge - Main PCB ass'y - Power supply unit
20 times	Other hardware errors	[6500]	(1) The error is reproduced after disconnecting the power cord and connecting it again (hard-power-off and on). -> Replace the main PCB ass'y.

Cycles of lamp blinking	Error	Error code	Check points & Solution
22 times	Electric circuit error* ¹	[5050]	(1) The scanner FFC is disconnected or connected at an angle. -> Connect the scanner FFC properly. (2) The scanner FFC is bent or damaged. -> Replace the scanner unit.
	Scanner error* ¹	[5011]	(1) The scanner FFC is disconnected or connected at an angle. -> Connect the scanner FFC properly. (2) The scanner FFC is bent or damaged. -> Replace the scanner unit. If the error still occurs, replace the following: - Main PCB ass'y
	Scanner motor error* ¹	[5012]	(1) The error is reproduced after disconnecting the power cord and connecting it again (hard-power-off and on). Or the scanner FFC is bent or damaged. -> Replace the scanner unit. (2) The scanner FFC is disconnected or connected at an angle. -> Connect the scanner FFC properly. If the error still occurs, replace the following: - Main PCB ass'y
26 times	Network sub-system launch error* ²	[6900]	(1) The error occurs immediately after power-on, and the printer cannot be operated thereafter. -> Replace the main PCB ass'y. If the error still occurs, replace the following: - Wireless LAN PCB ass'y
	Network sub-system timeout* ²	[6901]	(1) The wireless LAN FFC is disconnected or connected at an angle. -> Connect it properly. (2) The wireless LAN FFC is bent, scratched, or cut. -> Replace it. If the error still occurs, replace the following: - Wireless LAN PCB ass'y - Main PCB ass'y
	Other network sub-system errors* ²	[6902]	(1) The error is reproduced after powering off the printer and powering it on again. -> Replace the main PCB ass'y. If the error still occurs, replace the following: - Wireless LAN PCB ass'y
	Wireless LAN device not connected* ²	[6910]	(1) The wireless LAN FFC is disconnected or it is connected at an angle. -> Connect it properly.
	Wireless LAN hardware error* ²	[6911]	(2) The wireless LAN FFC is bent, scratched, or cut. -> Replace it. If the error still occurs, replace the following: - Wireless LAN PCB ass'y - Main PCB ass'y
27 times	USB control-out bus error	[6930]	(1) The error is reproduced after powering off the printer and powering it on again. -> Replace the main PCB ass'y.
	USB control-in bus error	[6931]	
	USBPRT bulk-out bus error	[6932]	

Cycles of lamp blinking	Error	Error code	Check points & Solution
	USBPRT bulk-in bus error	[6933]	
	USBSCN bulk-out bus error	[6936]	
	USBSCN bulk-in bus error	[6937]	
	USBSCN interrupt-in bus error	[6938]	
28 times	USB sub-system firmware error	[6940]	(1) The error is reproduced after powering off the printer and powering it on again. -> Replace the main PCB ass'y.
	USB sub-system command error	[6941]	
	USB sub-system data copy error	[6943]	
	USB sub-system instruction error	[6944]	
	USB sub-system not started properly	[6945]	
	USB sub-system improper timeout setting	[6946]	
29 times	USB sub-system timeout	[6942]	(1) The error is reproduced after powering off the printer and powering it on again. -> Replace the main PCB ass'y.

*1: For the G2000 series and the G3000 series only.

*2: For the G3000 series only.

Note: 1. Before replacement of the main PCB ass'y, check the ink absorber counter value, and register it to the replaced new main PCB ass'y. (The value can be set in 10% increments.)
In addition, according to the "*Guideline for Preventive Replacement of Ink Absorber*," replace the ink absorber. For details, see [3-5. \(2\) Preventive replacement of ink absorber.](#)

1-4. FAQs (Specific Problems and their solutions)

No.	Frequency	Stage	Phenomenon	Occurrence conditions	Cause	Solution	Expected customer calls
1	A	Installation	Ink mist inside the printer		Ink mist attaches to the inside the printer	Wipe the cartridge holder or the inside of the printer with a dry cloth at the right time.	When you perform the operation inside the printer (handling the jammed paper, etc.), your hands or clothes are gotten dirty.
2	B	Print results	Printing side of the paper is smeared.		If the warpage of the paper is large, the printing side at the edge of the paper touches the print head, and the printing side is smeared.	<ul style="list-style-type: none"> - Flatten the paper. - Printing within the print quality assurance area is recommended. 	<ul style="list-style-type: none"> - The paper (printing side) is smeared. - Printing cannot be performed normally (the print out is smudged). - The edge of the paper is creased.
3	B	Installation	Non-ejection of ink	The setup without filling the ink on arrival	The user has mistakenly performed the initial setup without filling the ink.	<ul style="list-style-type: none"> - Fill the ink and perform System Cleaning. - Replace the cartridge when the surface is clogged with ink. 	<ul style="list-style-type: none"> - Printing cannot be performed. - The ink is not ejected. - Not improved even after cleaning
4	B	Installation	Ejects blank paper	The cartridge was installed without removing the protective film on arrival.	The user did not mistakenly remove the protective film on the cartridge.	How to replace the cartridge is nonpublic to users, and it is replaced in the special mode, therefore repair or call center support is required.	<ul style="list-style-type: none"> - Printing cannot be performed. - Paper is delivered without printing.
5	B	Installation	Ink cartridge not completely installed (The alarm lamp blinks four times. The error code is "1470").	The protective film on the upper cartridge was not removed or the joint lever is not pushed due to user operation mistake.	<ul style="list-style-type: none"> - The protective sheet on the upper cartridge was not removed. - The joint lever lifts up. 	<ul style="list-style-type: none"> - Remove the protective sheet on the upper cartridge. - Push the joint lever completely. 	<ul style="list-style-type: none"> - The joint lever cannot be pushed. - The "Ink cartridge not completely installed" error occurs.

6	C	Print results	Color mixture	When the ink tank is replenished with ink	The ink tank is replenished with incorrect color ink.	The color mixture cannot be improved even after cleaning, therefore product exchange is required (the applicable parts are not assigned as service parts).	- Ink mixture occurs. - The color hue differs.
7	C	Installation	Packing material not removed (The alarm lamp blinks nine times. The error code is "1890").	When the carriage packing material is removed on arrival	The printer was turned on without removing the carriage packing material.	Remove and discard the carriage packing material at the installation.	- The "Packing material not removed" error occurs.
8	A	Installation	The Power lamp blinks twice (initial ink filling cannot be performed)	When the printer is initially turned on		Press and hold the Stop button for five seconds or more.	The Power lamp blinks, or it blinks twice.
9	B		Ink was consumed too early	At the time of printer transportation or due to pressure change	The ink is flowed into the buffer room, therefore, the amount of the ink is visible to users.	Advise customers that the ink flowed into the buffer room can be used through the tube to be usually used.	Ink was consumed too early

<<Occurrence frequency>>

A: Highly possible comparatively (caution needed)

B: The phenomenon may occur on certain conditions, however, the occurrence frequency is estimated to be very low in the actual usage.

C: No actual harms are estimated as the phenomenon is unlikely to be recognized by general users.

2. REPAIR

2-1. Disassembly & Reassembly Procedures

General notes:

- Be sure to protect the printer from static electricity in repair servicing, especially for the scanner unit, main PCB ass'y, and Wireless LAN PCB Ass'y.
- Make sure that the flexible cables and wires in the harness are in the proper position and connected correctly.
- Do not drop the ferrite core, which may cause damage.
- Before removing a unit, after removing the power cord, allow the printer to sit for approx. one minute (for capacitor discharging to protect the main PCB ass'y from damages).
- Do not touch the timing slit strip film and timing slit disk feed film. No grease or abrasion is allowed.
- Protect the units from soiled with ink.
- Protect the housing from scratches.
- Exercise caution with the screws, as follows:
 - i. The screws of the paper feed motor may be loosened only at replacement of the paper feed motor unit (DO NOT loosen them in other cases).
 - ii. Before loosening the four screws that fix the carriage rail to the main chassis, mark the screw positions so that the carriage rail will be re-attached to the main chassis in its original position. See [2-1. \(23\) Removing the Carriage Unit](#), for details.

How to replace the cartridge only

< In the user mode >

1. Open the scanner unit cover.
2. Press and hold the Stop button for five seconds or more, and wait for the carriage to move to the away side.
3. Press and hold the Stop button for five seconds or more, and wait for the carriage to move to the cartridge replacement position.
4. Open the ink tank covers for both black and color ink tanks.
5. Open the cartridge holder and replace the cartridge.

< In the service mode >

1. Open the scanner unit cover.
2. The carriage moves to the cartridge replacement position.
3. Open the ink tank covers for both black and color ink tanks.
4. Open the cartridge holder and replace the cartridge.

NOTE:

Before replacing or removing the cartridge, be sure to open the ink tank cover and turn off the tube valve (black and color). If you forget to open the ink tank cover, the ink filled in the tube flows into the tank side, and System Cleaning (stronger than Deep Cleaning) is required in order to replenish the ink again.

For reference:

To replace the parts other than cartridge, follow the procedures below to remove the cartridge.

(If the cartridge is removed first, the ink tank cover may be accidentally closed when removing the other parts. Therefore, follow the procedures below to replace the parts other than the cartridge.)

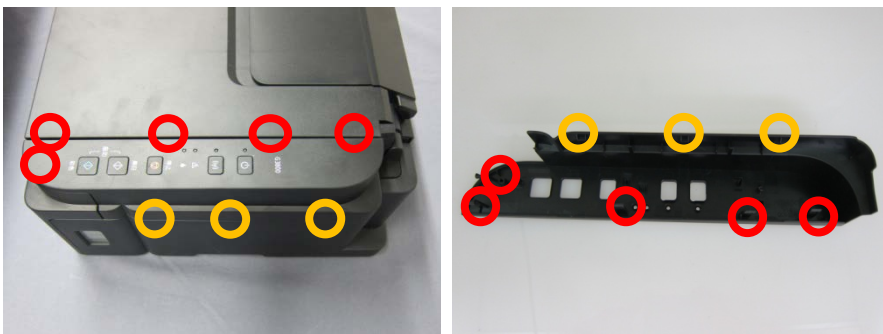
(1) Removing the Power Supply Unit

- 1) Release one tab, pull out the power supply unit, disconnect the power cord, then remove the power supply unit.

**(2) Removing the Panel PCB Unit**

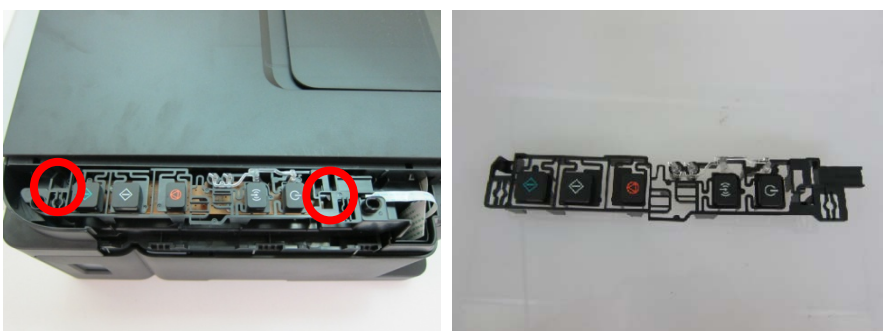
< G2000 and G3000 series >

- 1) Release the upper five tabs and the lower three tabs to remove the operation cover.

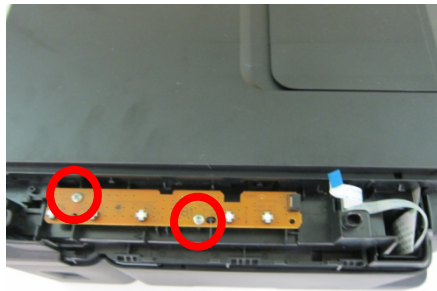
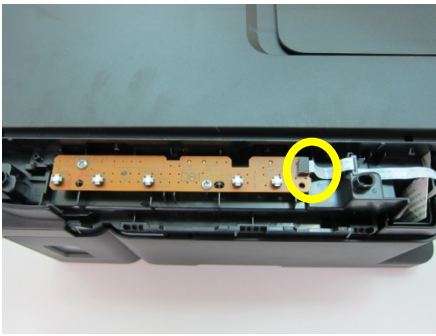


< Point > The operation cover can be easily removed by pulling the operation cover.

- 2) Release two tabs to remove the operation key ass'y.

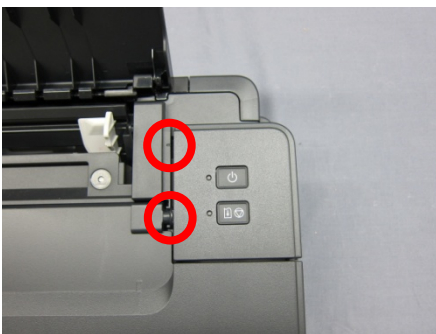


- 3) Remove the panel FFC from the panel PCB ass'y first, then remove two screws to remove the panel PCB ass'y.

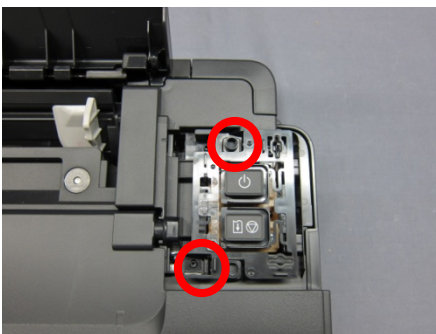


< G1000 series >

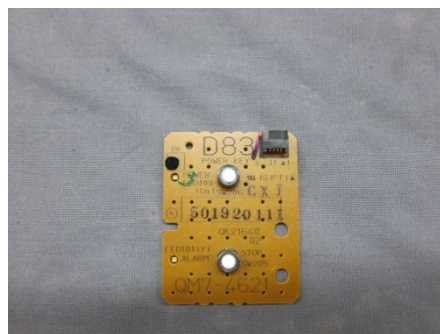
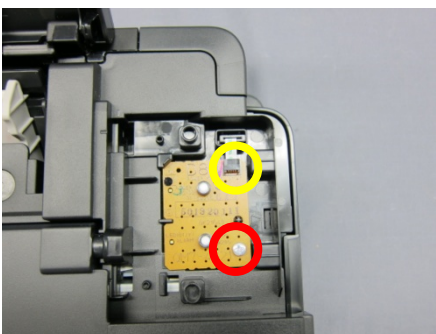
- 1) Release the two tabs, then detach the operation cover.



- 2) Release the two tabs, then detach the operation key ass'y.

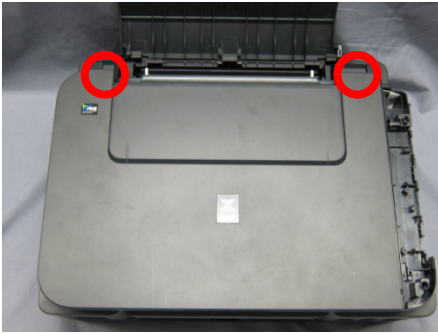


- 3) Remove the panel FFC from the panel PCB ass'y first, then remove one screw to remove the panel PCB ass'y.



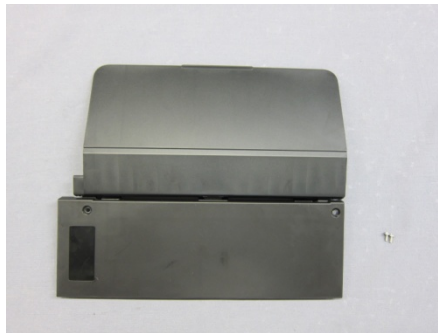
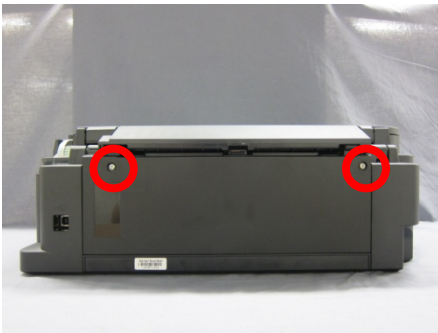
(3) Removing the Document Cover.

- 1) Remove the right and left bosses, then detach the document cover.



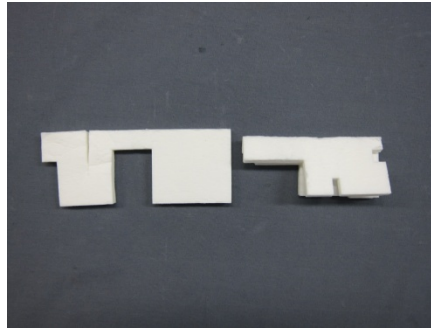
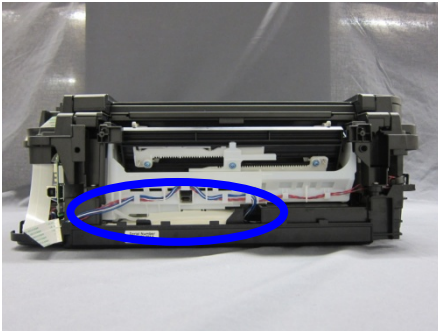
(4) Removing the Rear Cover

- 1) Remove two screws to detach the rear cover.



(5) Removing the Absorber Kit (Partial)

- 1) Remove the two sheets of absorber kit (partial).

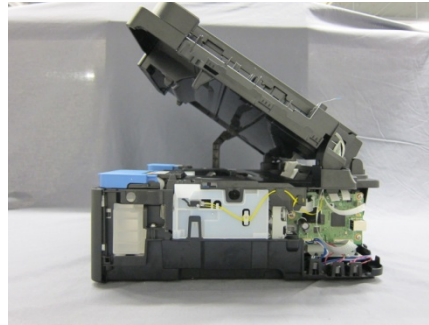
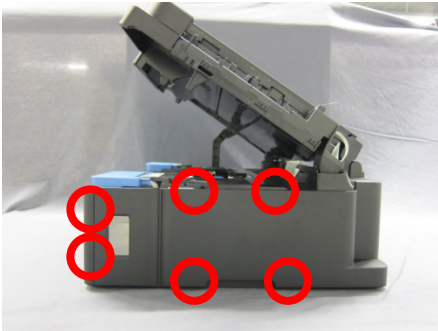


Note: Set the ink absorber counter value to 30% after the partial replacement.

See [3-3 \(4\) Ink absorber counter setting](#) for details.

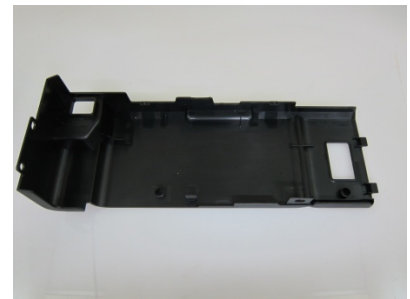
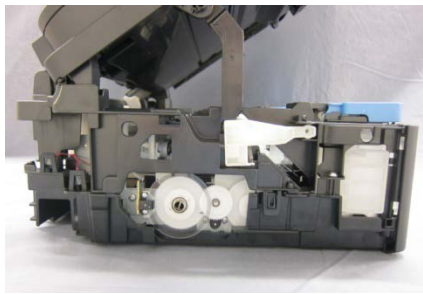
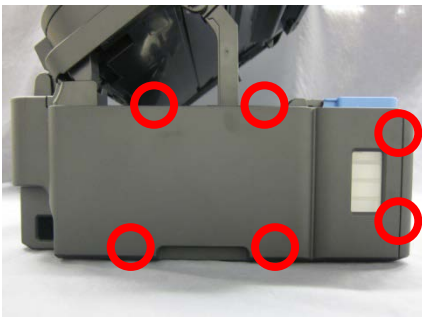
(6) Removing the Right Side Cover

- 1) Release the upper two tabs and the lower two tabs to remove the right side cover with careful attention to the front two tabs.



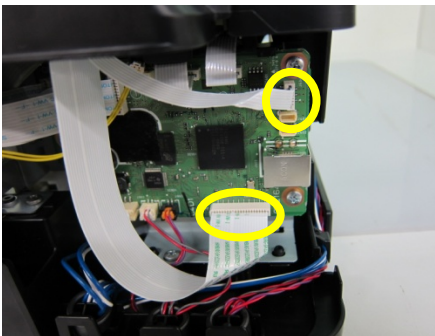
(7) Removing the Left Side Cover

- 1) Release the upper two tabs and the lower two tabs to remove the left side cover with careful attention to the front two tabs.

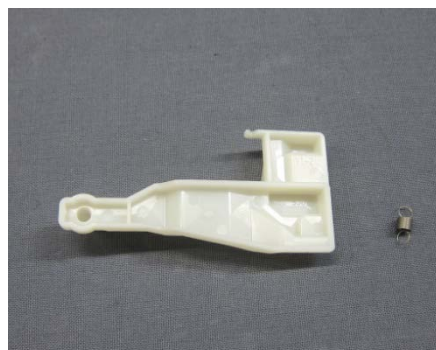
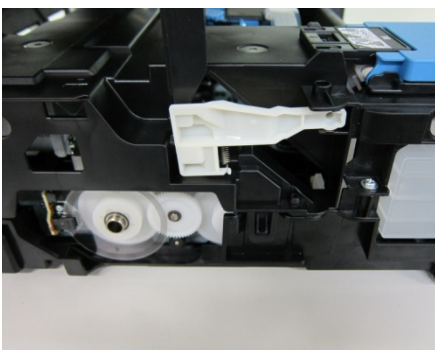


(8) Removing the Scanner Unit

- 1) Disconnect the panel FFC and the scanner FFC from the main PCB ass'y. Release the panel FFC from the scanner unit.



- 2) Remove the stay control lever and the stay control lever spring.

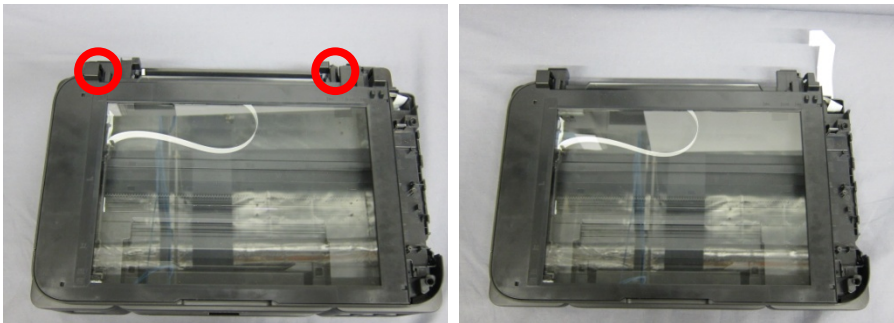


3) Remove the scanner stay.



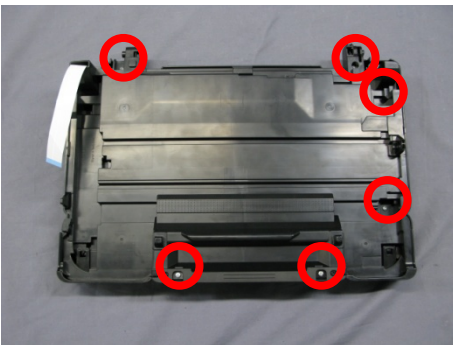
< Point > Move the scanner stay in the direction of the red arrow to fit to the position for removing the scanner stay, and remove the stay.

4) Remove the right and left bosses, then detach the scanner unit.

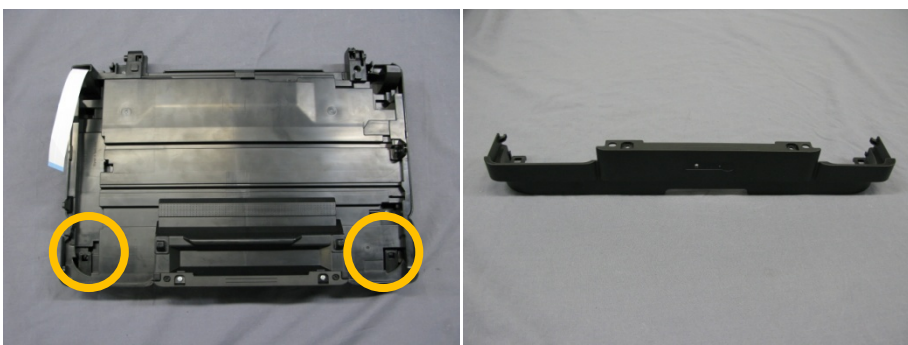


(9) Removing the CIS Unit

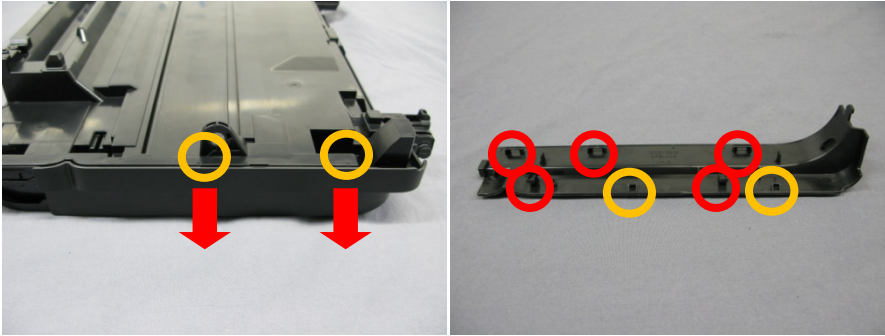
1) Reverse the scanner unit and remove the six screws.



2) Release the two tabs and remove the front deco.

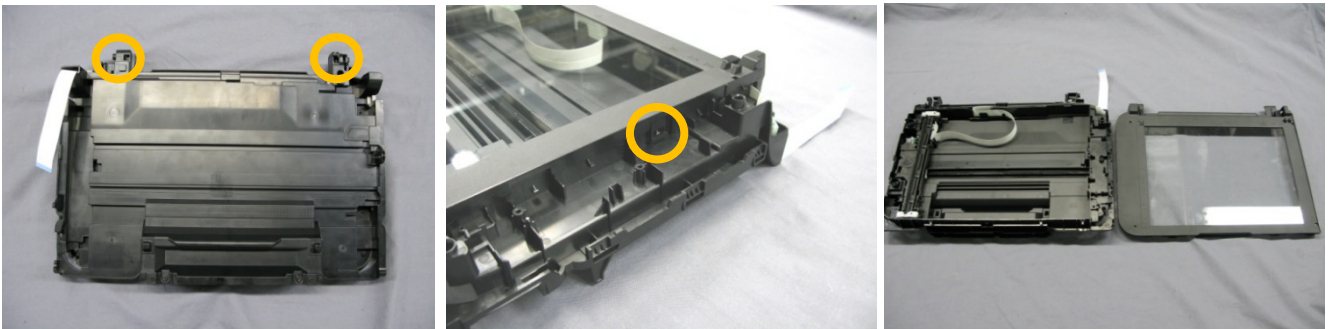


3) Release the two tabs and remove the side deco.



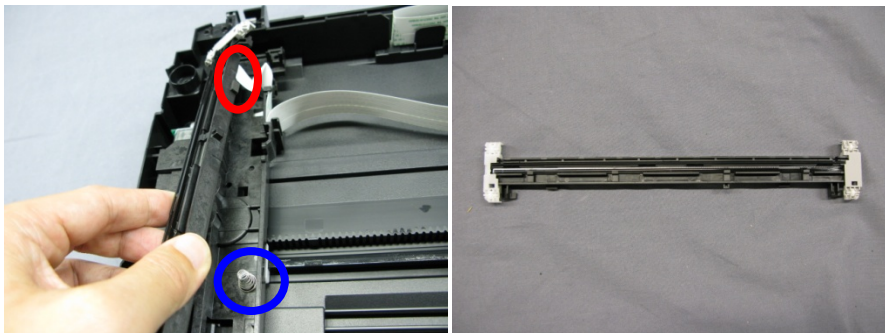
< Point > Remove the side deco by releasing the tabs and pushing the deco down.

4) Release the three tabs (two from the back side, one from the front side) to remove glass frame ass'y.



NOTE: When reversing the scanner unit, be careful not to drop CIS unit and glass frame ass'y. Also take care so that the dust does not adhere to the glass.

5) Disconnect CIS FB FFC, then remove the CIS unit.



NOTE: Be careful not to drop and lose the CIS spring under the sensor holder unit.

6) Release two tabs to remove CIS roller holder F and CIS roller holder R from the CIS unit.

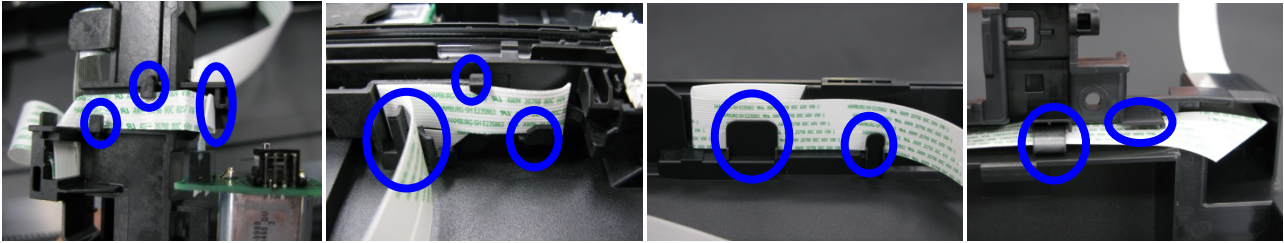


NOTE: Be careful not to lose CIS roller holder and CIS roller holder R. (After replacing the CIS unit, reassemble those parts.)

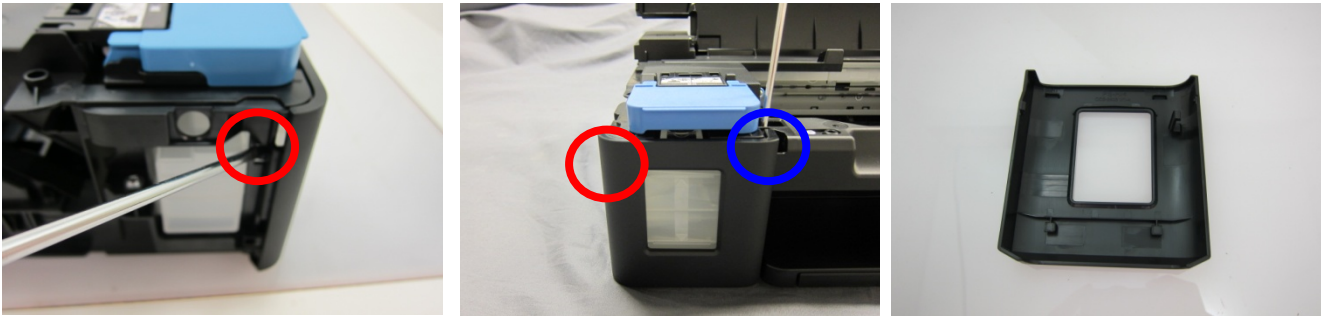
Take care so that the dust does not adhere to the CIS unit to be replaced. Do not touch CIS sensor part (the transparent part inside the unit).

<< Notes on reassembly >>

1. Arrange the CIS FB FFC properly with attention to the tabs (blue circles below), or an abnormal noise, etc. will be caused.

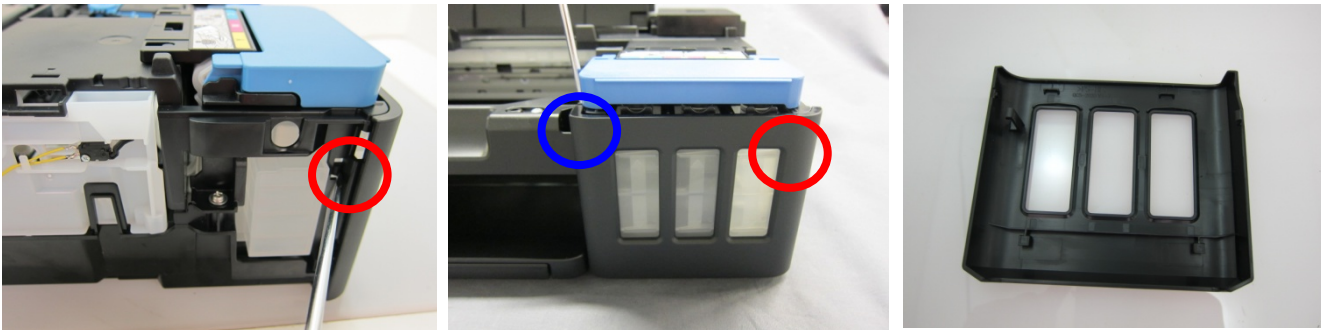
**(10) Removing the Front Cover**

1) Release the two tabs and remove the left front cover.



Note: The aluminum film of the side of the ink tank (black) may be torn when inserting a straight slot screwdriver from the side in order to release the right tab (blue-circled).

2) Release the two tabs and remove the right cover.



Note: The aluminum film of the side of the ink tank (color) may be torn when inserting a straight slot screwdriver from the side in order to release the left tab (blue-circled).

(11) Removing the Middle Cover and Main Tank Cover

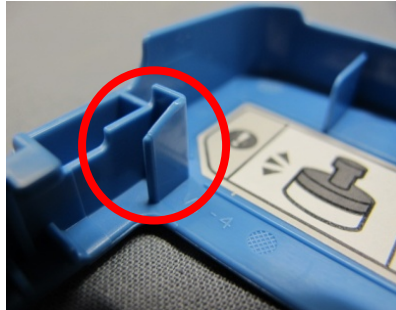
The main tank cover is different in its shape depending on the timing of production. Refer to how to distinguish the new shape from the old one to confirm the shape of the cover before removing the cover.

< How to distinguish the new shape from the old one >

Main tank cover (BK)



Old type



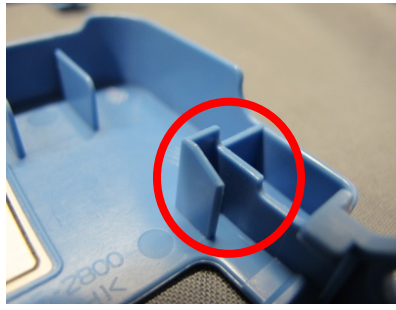
New type



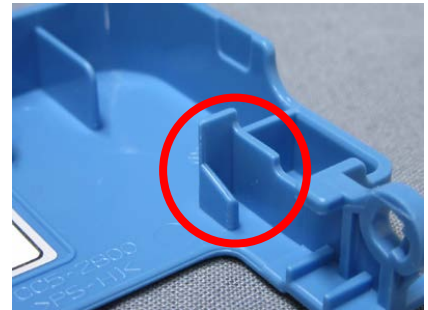
Main tank cover (CL)



Old type

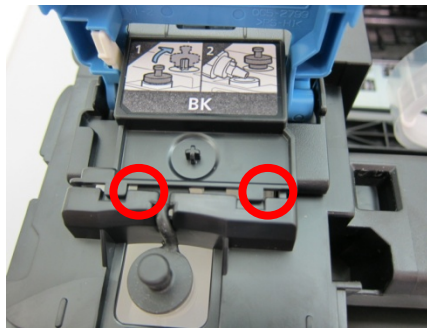


New type

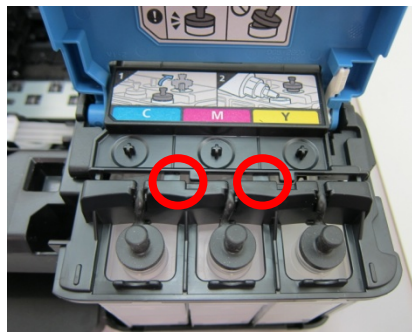
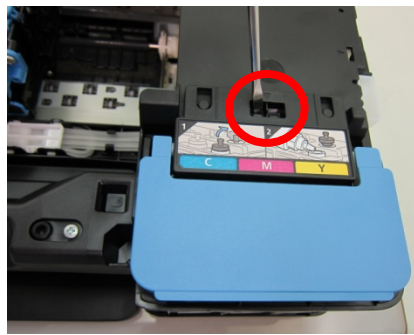


< How to remove the old-shape cover >

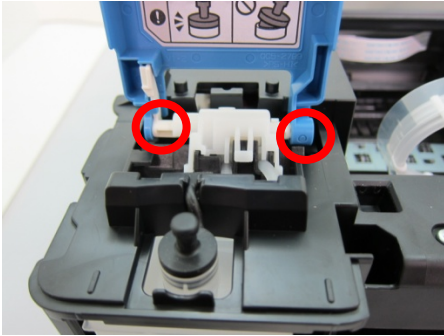
1) Release the one tab and pull to remove the left middle cover.



2) Release the one tab and pull to remove the right middle cover.

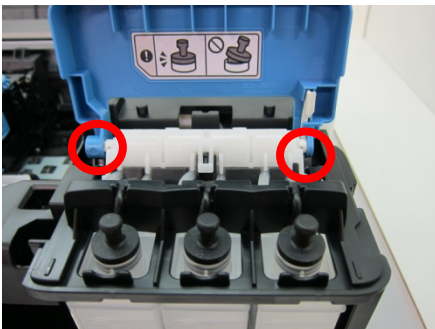


3) Remove the tank cover lever to remove the BK main tank cover.



Note: Remove the BK main tank cover with careful attention not to break the tabs of the tank cover lever.

4) Remove the tank cover lever to remove the CL main tank cover.



Note: Remove the CL main tank cover with careful attention not to break the tabs of the tank cover lever.

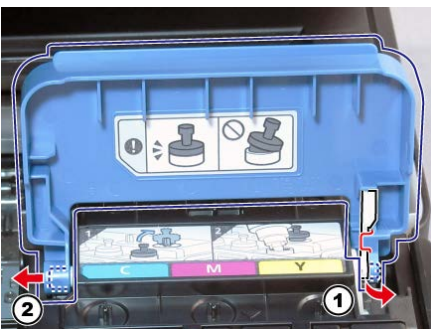
< How to remove the new-shape cover >

1) Remove right and left bosses, and remove the BK main tank cover.



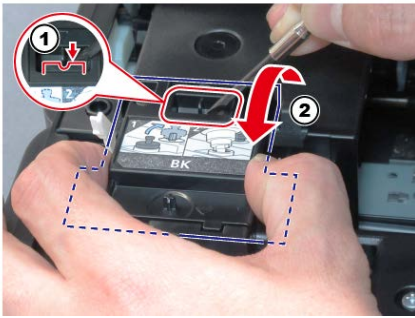
Note: Remove the BK main tank cover with careful attention not to break the tabs of the tank cover lever.

2) Remove right and left bosses, and remove the CL main tank cover.

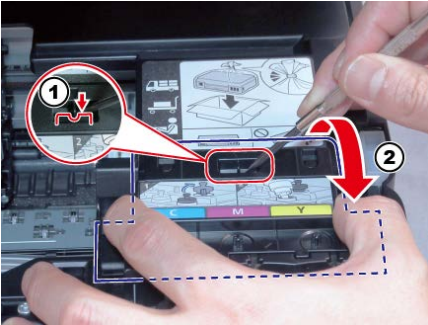


Note: Remove the CL main tank cover with careful attention not to break the tabs of the tank cover lever.

3) Release the one tab and pull to remove the left middle cover.

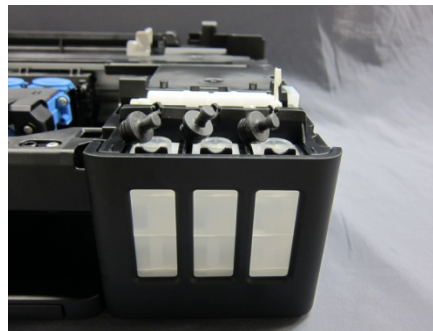
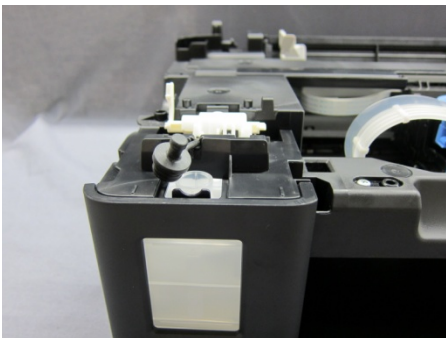


4) Release the one tab and pull to remove the right middle cover.

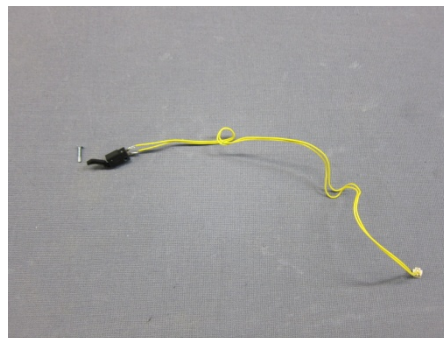
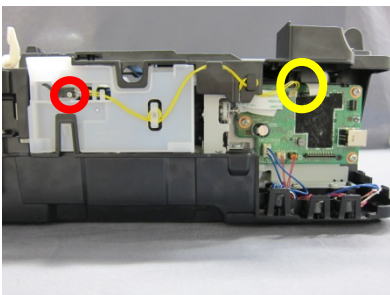


(12) Removing the Middle Frame

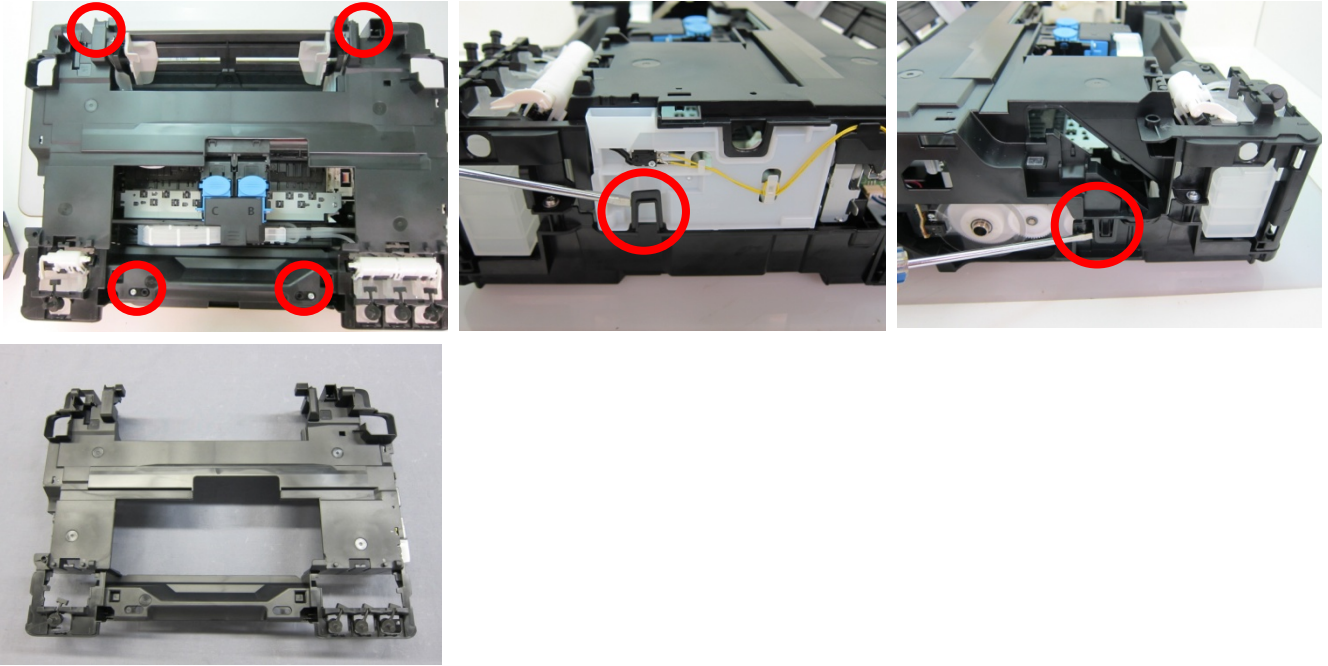
1) Remove the BK and CL ink tank caps from the ink tanks.



2) Remove the connector and one screw, then unplug the cover switch harness ass'y.



3) Remove the four screws and the right and left two tabs, then lift up and remove the middle frame.



For reference: Remove the middle frame, and the cap blade unit can be removed. (For details, see [2-1. \(25\) Removing the Cap Blade Unit](#)).

(13) Removing Ink Supply Tube and Air-through Hole (tube)

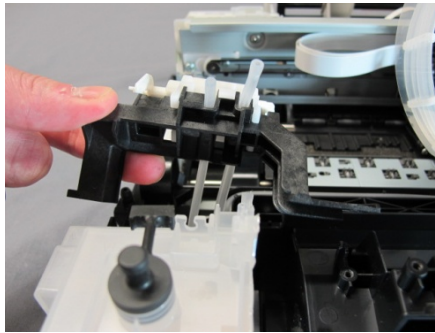
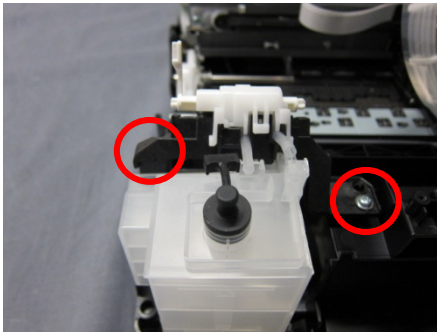
1) Remove ink supply tube and air-through hole (tube) from main tank. (Pinch the connection part of ink supply tube with main tank and gradually pull the ink supply tube to remove).



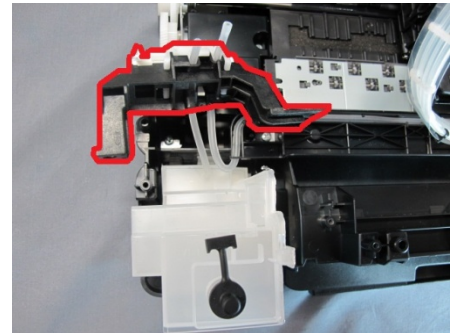
NOTE: Ensure that dust, etc. does not attach to the end of the tube. (The dust may not keep sealing performance).
Do not stretch, break, and scratch the tube.
If the tube is pulled at a time, its shape is changed and is easy to be broken or to be removed.

(14) Removing Tube Valve Holder

1) Remove two screws to remove tube valve holder.

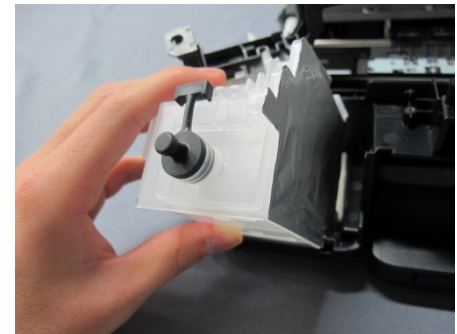
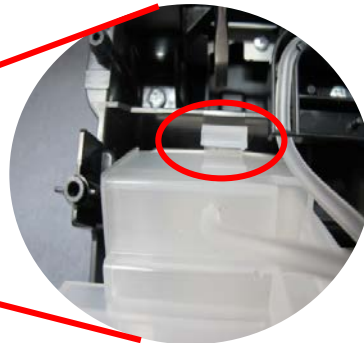
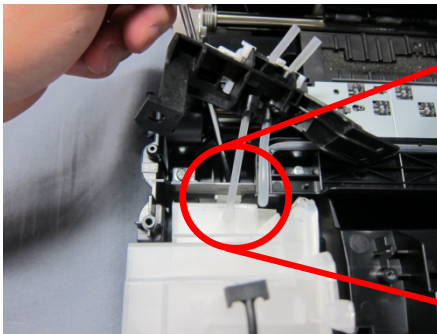


< With the holder removed >

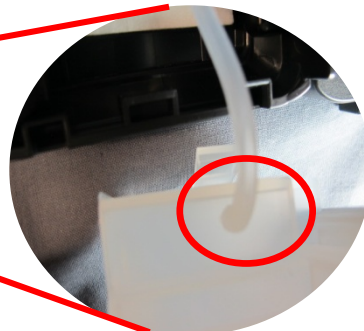
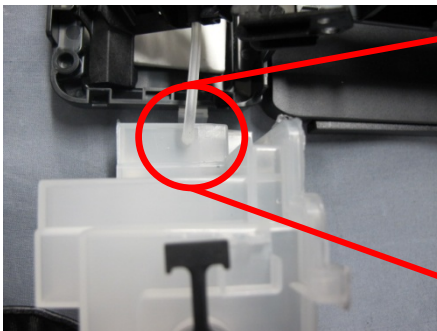


(15) Removing Main Tank

1) Remove one tab behind a main tank, then remove the main tank from bottom frame while slightly tilting the main tank forward.



2) Remove air-through hole (tube) behind a main tank.

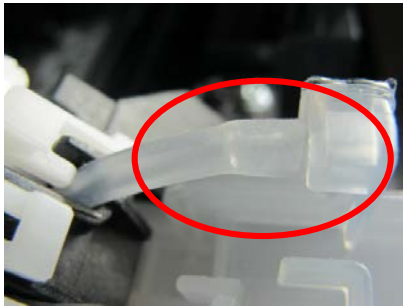


For how to remove Main Tank (COLOR), refer to Procedures for replacing Main Tank (BLACK).

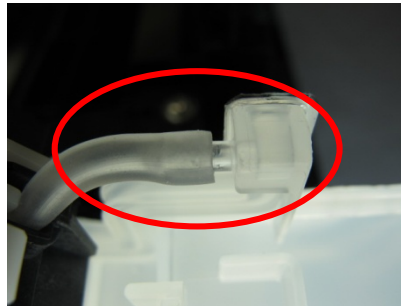
Install main tanks in reverse order of removing the tanks.

- NOTE:
1. Check visually whether there is no hole in aluminum film at the side of main tank, or whether the aluminum film is not torn.
 2. Confirm that an ink supply tube is securely inserted.
 - If not, insert it securely.

OK



NG (not inserted securely)



3. Confirm that the ink absorber of the bottom frame is located correctly.
- If it is misaligned, position it correctly.

OK

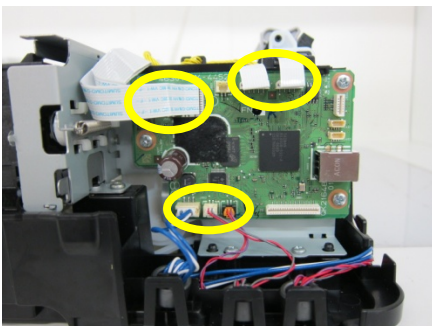


NG (misaligned)

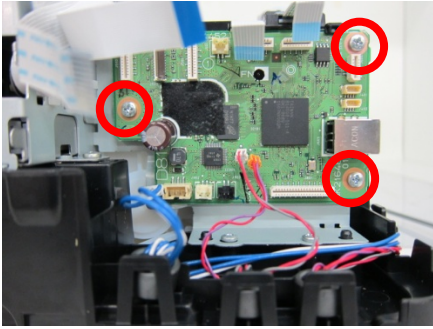


(16) Removing the Main PCB Ass'y

- 1) Disconnect all the cables and FFCs from the main PCB ass'y.

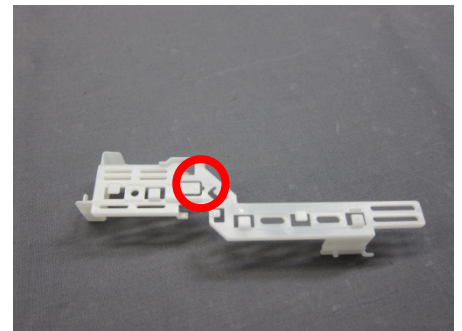
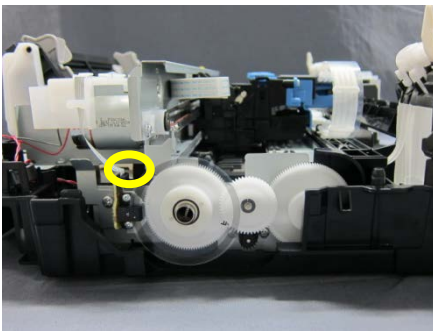


2) Remove the three screws to remove the main PCB ass'y.



(17) Removing the Paper Feed Encoder FFC

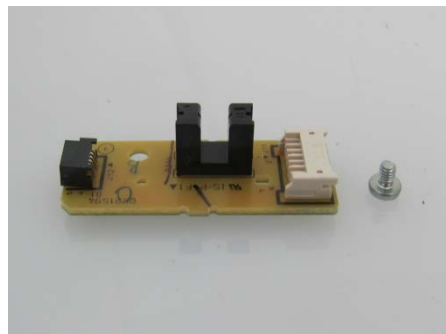
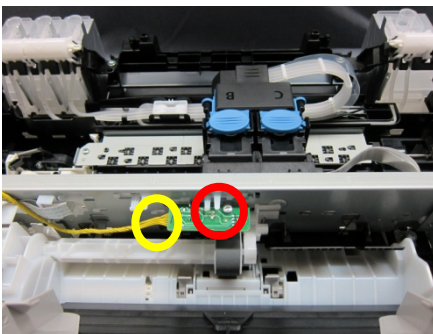
1) Remove the paper feed encoder FFC and the paper feed encoder FFC guide.



< Point > Release the tab behind the FFC to remove the paper feed encoder FFC guide.

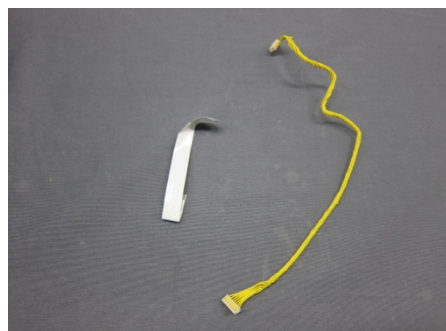
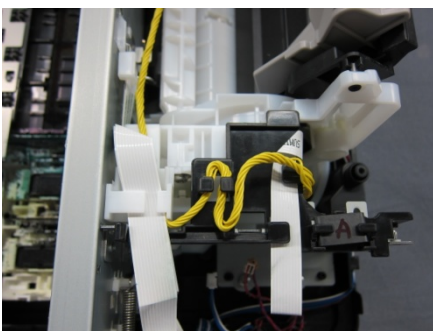
(18) Removing the Paper End Sensor PCB Ass'y

1) Remove the paper end sensor harness, remove the one screw, and detach the paper end sensor PCB ass'y.

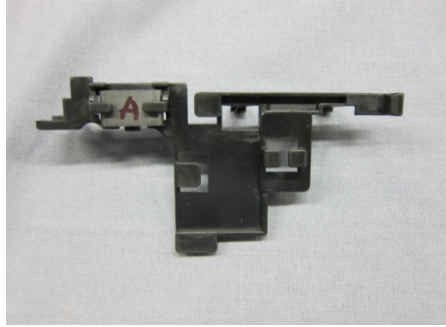
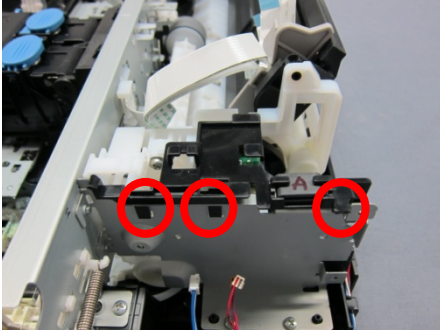


(19) Removing the Sheet Feeder Sensor PCB Ass'y

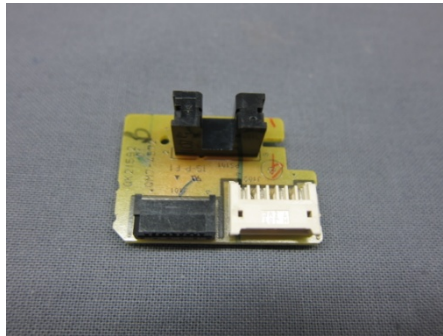
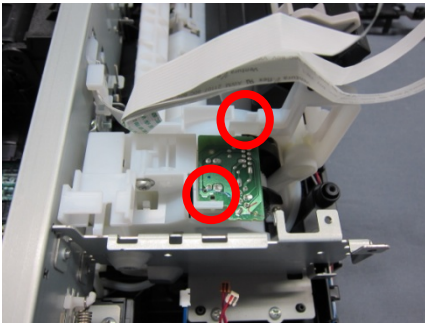
1) Remove the sheet feeder FFC and the paper end harness ass'y from the carriage FFC guide.



2) Release the three tabs to remove the carriage FFC guide.



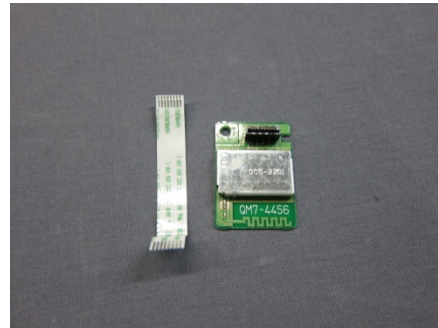
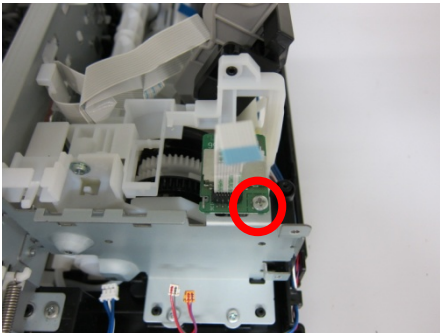
3) Release the tab to remove the sheet feeder sensor PCB ass'y.



Note: Be careful not to scratch the sheet feeder sensor PCB ass'y when removing it.

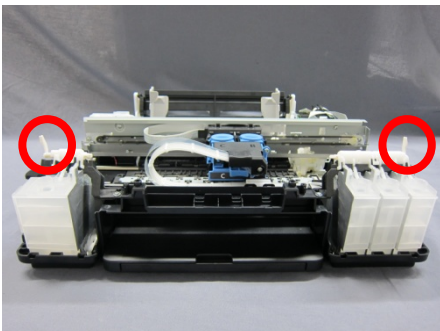
(20) Removing the Wireless LAN (for the G3000 series only)

1) Remove the screw to remove the wireless LAN PCB ass'y and wireless LAN FFC.



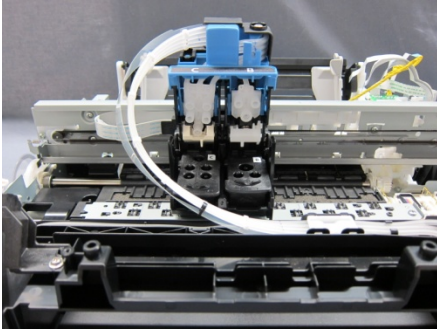
(21) Removing the cartridge

1) Confirm that the ink valve lever is raised. (If you forget to raise the ink valve lever, the air enters the tube and System Cleaning (stronger than Deep Cleaning) is required. Be sure to open the ink valve lever.)

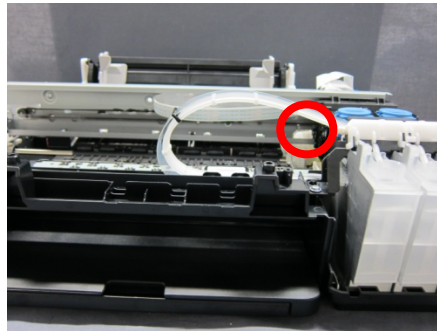
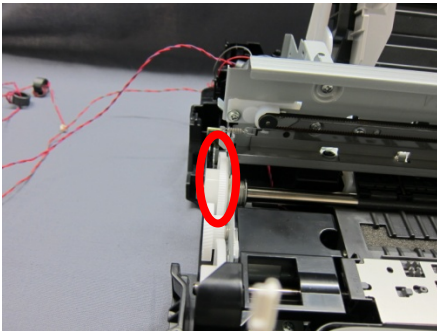


Note: Always raise the ink valve lever.

2) Open the cartridge holder to remove the cartridge.

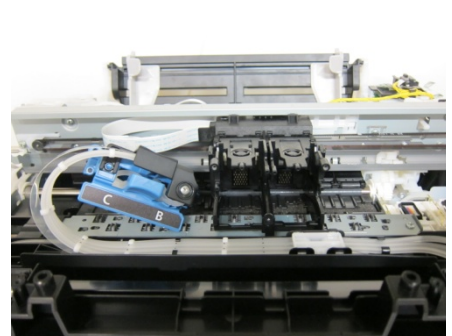
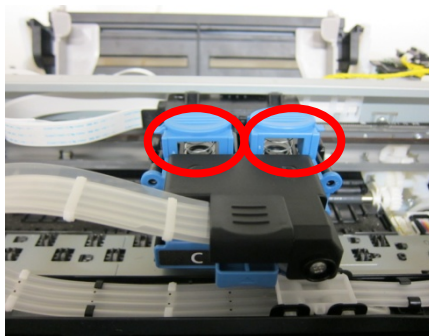
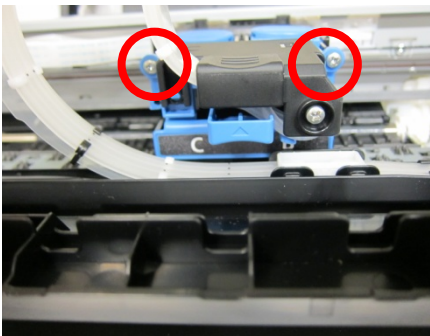


3) If the printer fails to operate properly (the printer is not powered on, etc.), rotate the feed roller ass'y (front side in the image below) clockwise to release the carriage lock.

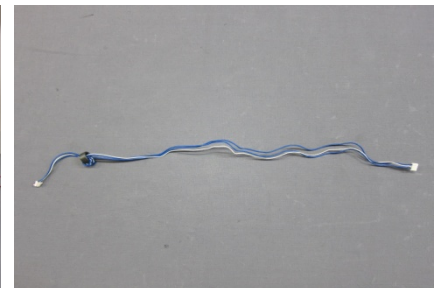
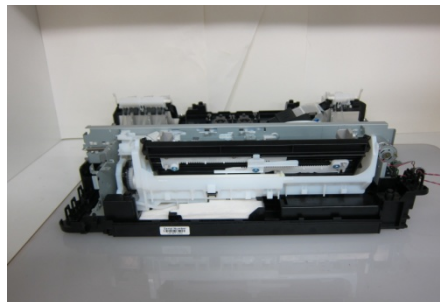
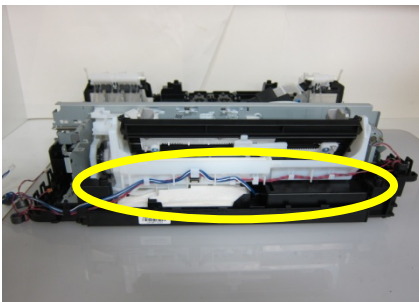


(22) Removing the Main Chassis

1) Remove the two screws and the springs of the joint lever for black and color cartridges, and slide the cartridge joint forward to remove from the carriage.

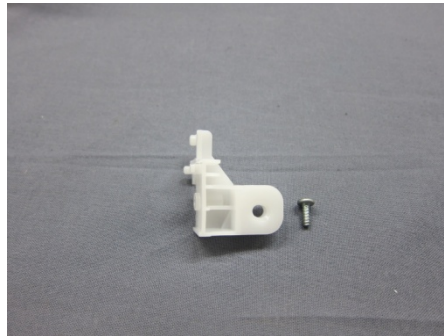
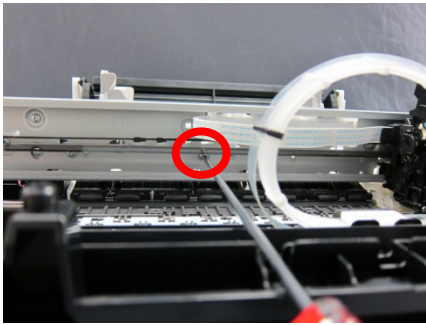


2) Remove the carriage motor cable, the line feed cable, and the DC harness ass'y.

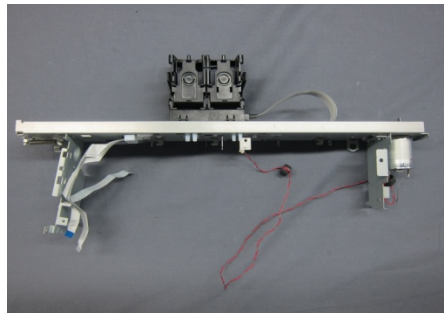
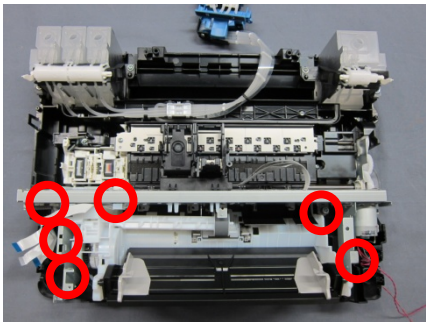


DC harness ass'y

3) Remove the one screw to release the pick-up roller bushing.

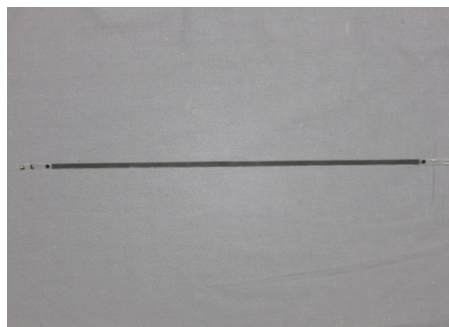
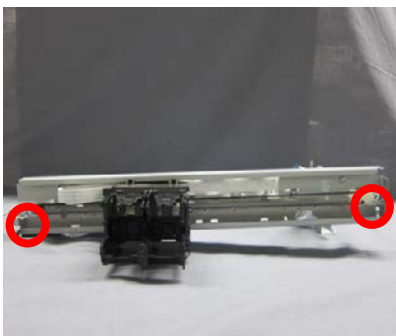


4) Remove the six screws to release the main chassis.



(23) Removing the Carriage Unit

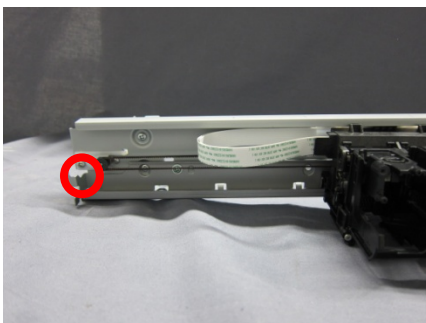
1) Remove the timing slit strip film.



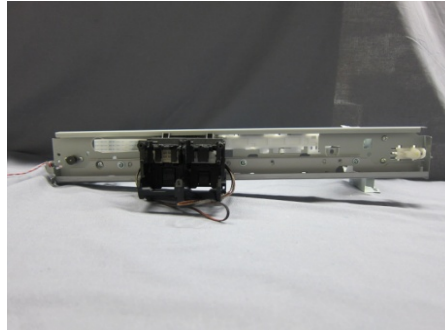
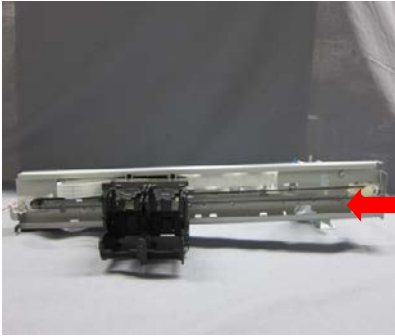
For reference: Be careful not to unbend the springs.

Note: Be careful not to scratch the timing slit strip film or apply the grease to the film.

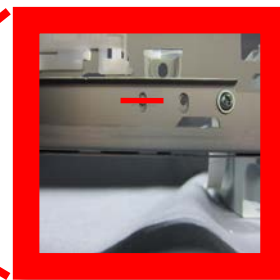
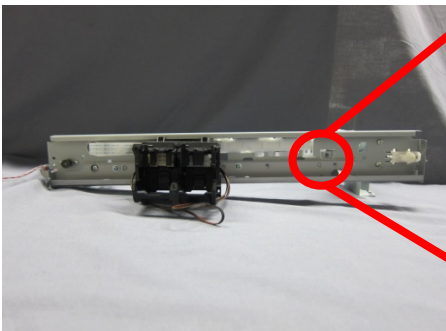
2) Remove the one screw to release the carriage belt stopper.



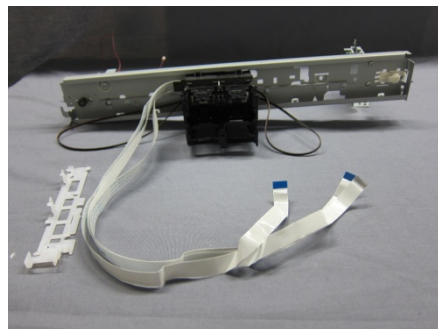
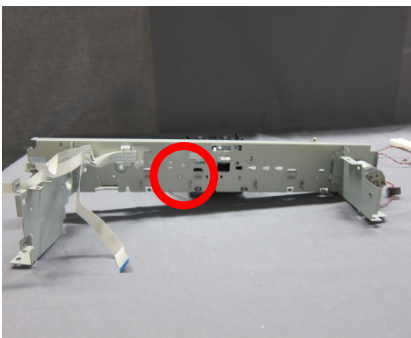
3) Remove the carriage belt by moving the pulley holder to the left.



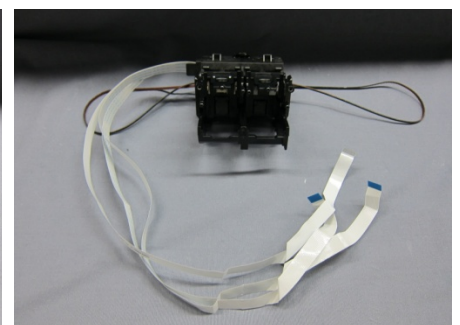
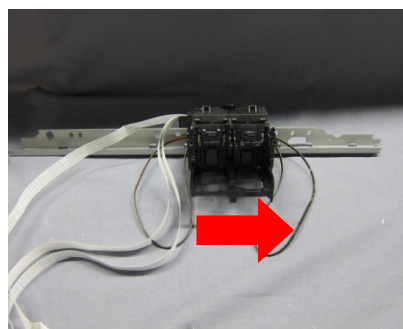
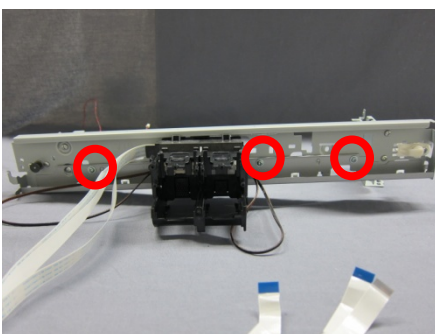
4) On the embossed portions at the both ends of the carriage lower rail, mark the rail position, as shown below.



5) Release the tab, slide the carriage FFC guide to the right and remove it.

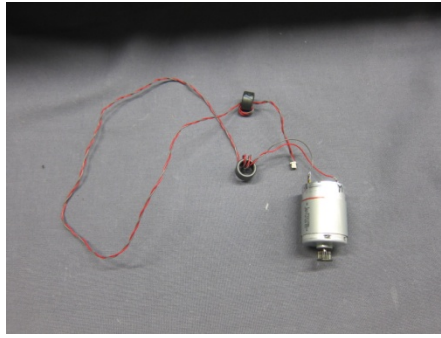
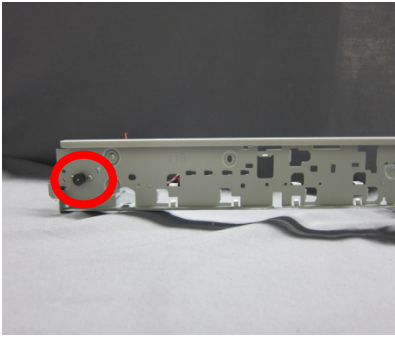


6) Remove the three screws to release the chassis upper rail. Slide the carriage unit to the right to detach it from the chassis lower rail.

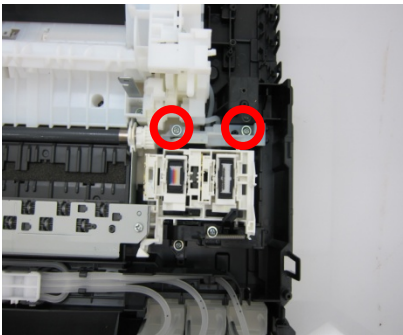


(24) Removing the Carriage Motor

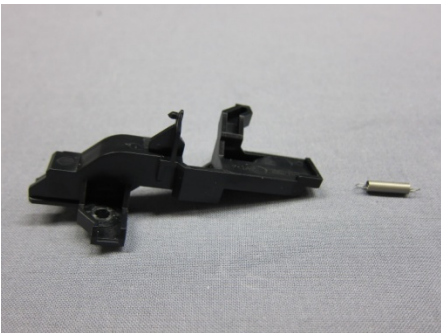
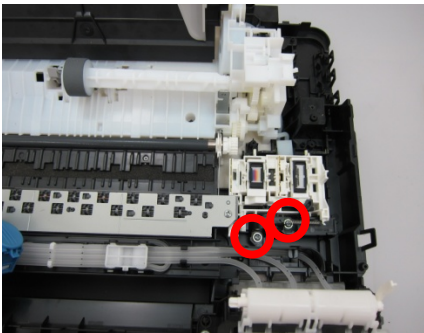
- 1) Remove the two screws to detach the carriage motor.

**(25) Removing the Cap Blade Unit**

- 1) Remove the two screws to detach the purge cover back.

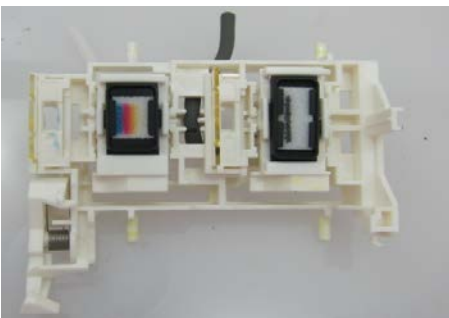
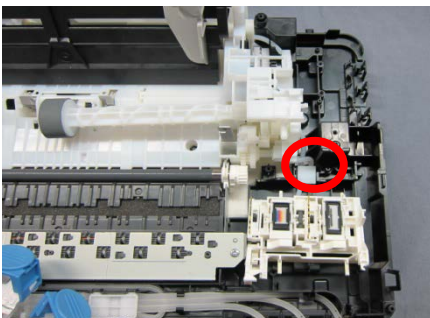


- 2) Remove two screws, and remove the purge cover front and the blade trigger lever spring.



For reference: Be careful not to lose the blade trigger lever spring.

- 3) Remove the tubes for black and color cartridges from the joint tube, and detach the cap blade unit.

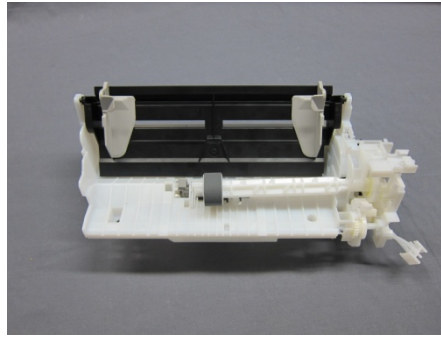
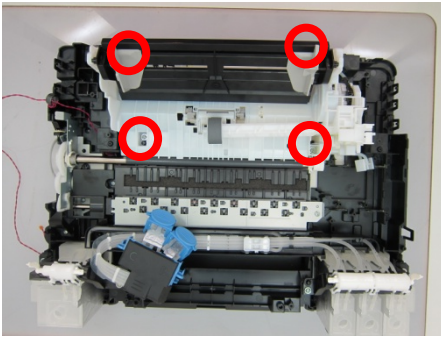


For reference: There are two tubes leading from the auto sheet feeder unit. The shorter one is for black and the longer one is for color.

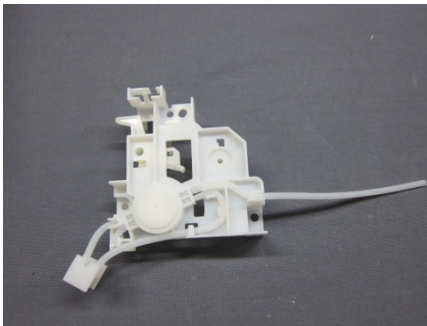
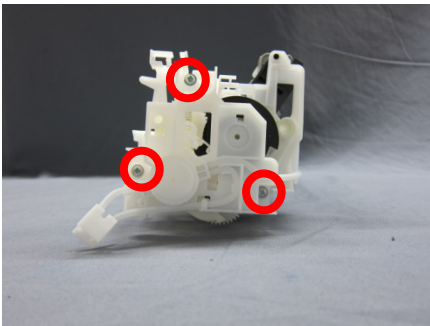
Note: Be careful not to break the waste ink tubes.

(26) Removing the Auto Sheet Feeder Unit

- 1) Remove the four screws to detach the auto sheet feeder unit.

**(27) Removing the Pick-up Roller Ass'y**

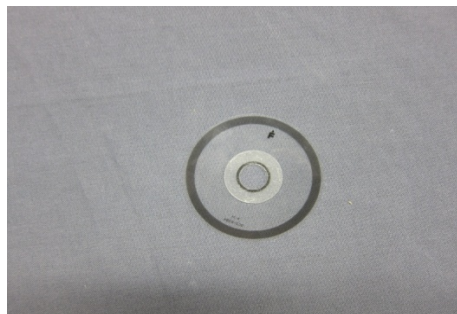
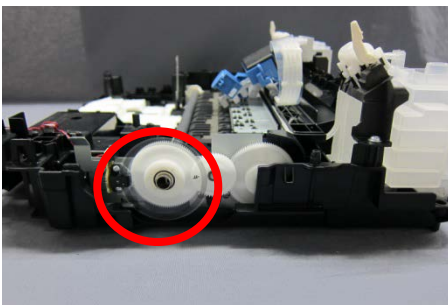
- 1) Remove the three screws to detach the driver unit cover.



- 2) Release the two tabs and pull out the pick-up roller ass'y.

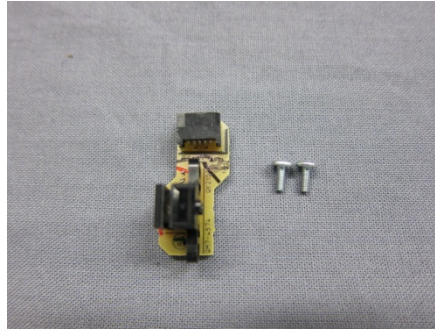
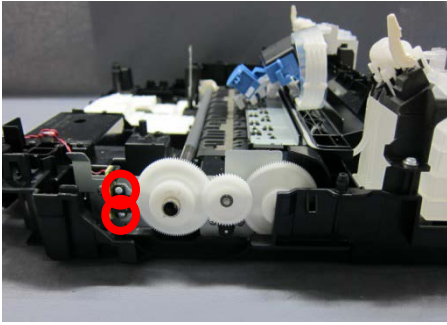
**(28) Removing the Paper Feed Encoder PCB Ass'y**

- 1) Remove the timing slit disk film.



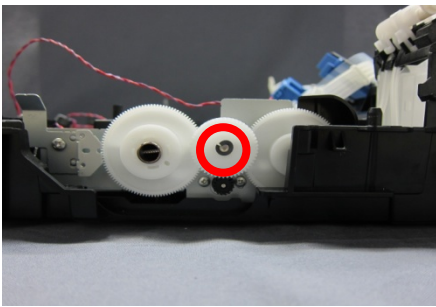
Note: Be careful not to scratch the timing slit disk film or apply the grease to the film.

2) Remove the two screws to detach the paper feed encoder PCB ass'y.

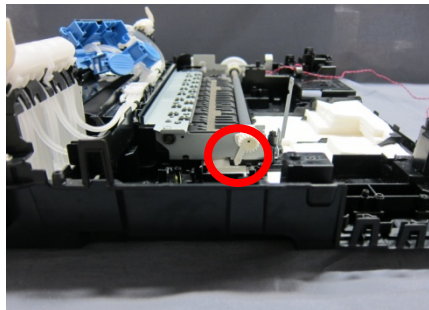
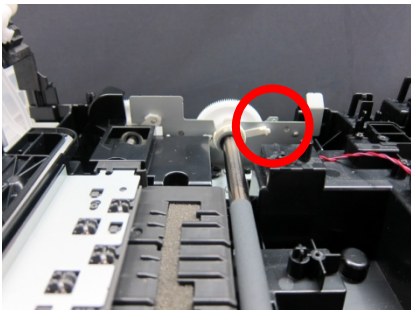


(29) Removing the Feed Roller Ass'y

1) Remove the slit ring, and detach the middle gear between the feed roller ass'y gear and the eject roller ass'y gear.

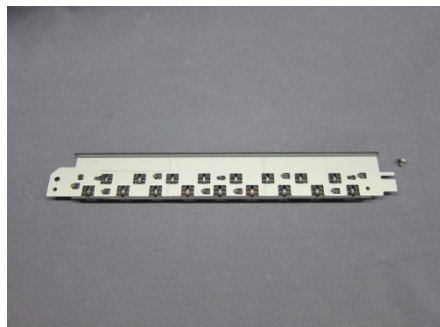
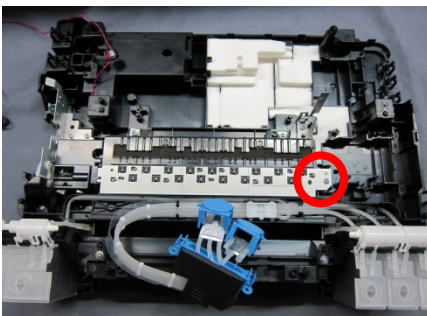


2) Detach the right and left cartridge lock levers of the feed roller ass'y to remove the feed roller ass'y.



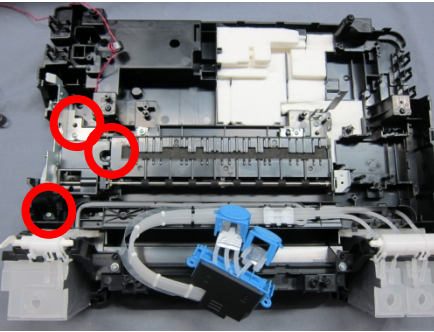
(30) Removing the Spur Unit

1) Remove the screw and detach the spur unit.

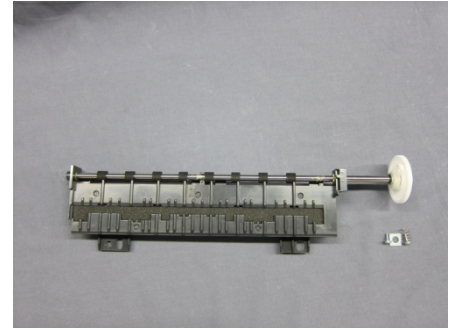
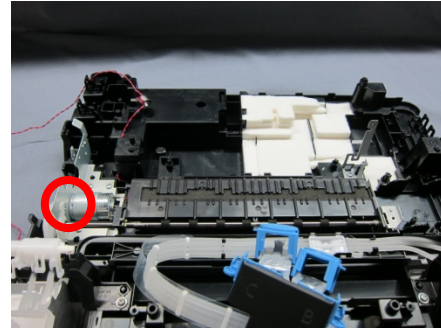
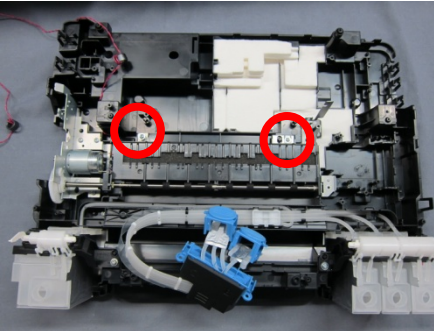


(31) Removing the Platen Unit

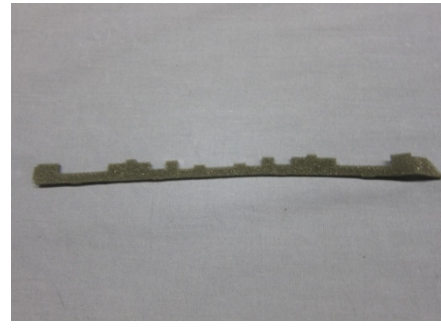
1) Remove the three screws and detach the LF motor cover.



2) Remove the two screws, release the cartridge lock lever, and detach the platen unit.

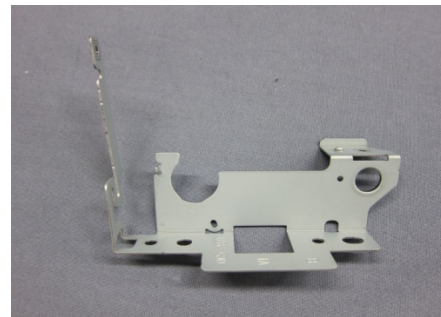
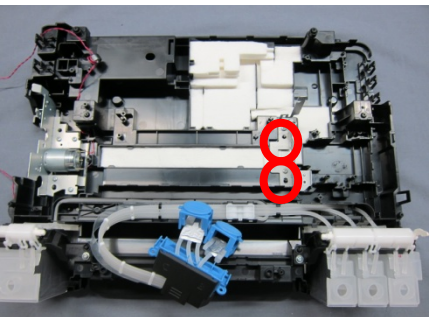


3) Remove the platen absorber.

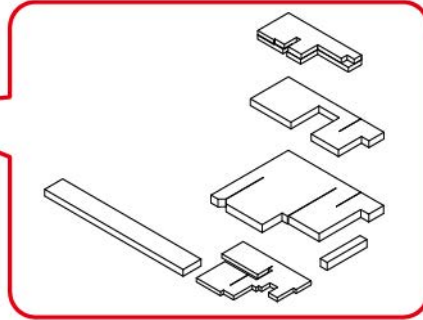
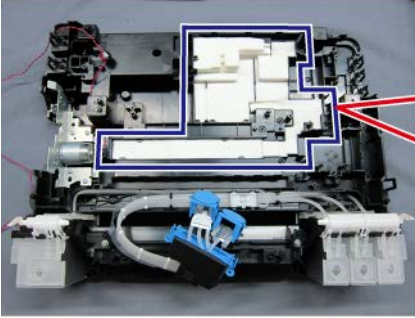


(32) Removing the Absorber Kit

1) Remove the two screws and detach the chassis.



2) Remove the absorber kit.



In assembling the units:

Follow the disassembly procedures in the reverse order.

3. ADJUSTMENT / SETTINGS

3-1. Adjustment

Adjustment	Purpose	Method	Approx. time
Destination settings (EEPROM settings)	To set the printer destination. - At Main PCB Ass'y replacement	Service Tool* ¹ Set Destination section	1 min.
Ink absorber counter resetting (EEPROM settings)	To reset the ink absorber counter. - At Main Absorber Kit (whole) replacement	Service Tool* ¹ Main in the Clear Ink Counter section	1 min.
Ink absorber counter value setting (EEPROM settings)	To set the data of the actual ink amount absorbed in the ink absorber to the EEPROM. - At Main PCB Ass'y replacement - At Main Absorber Kit (partial) replacement	Service Tool* ¹ Main in the Ink Absorber Counter section	1 min.
Automatic print head alignment* ²	To secure the dot placement accuracy. - At cartridge replacement - At Main PCB Ass'y replacement - When print quality is not satisfying	Perform Automatic Print Head Alignment in the user mode from the printer operation panel, or via the printer driver Maintenance tab.	3 min.
Manual print head alignment	To secure the dot placement accuracy. - At cartridge replacement - At Main PCB Ass'y replacement - When print quality is not satisfying even after Automatic Print Head Alignment is performed	Perform Manual Print Head Alignment in the user mode via the printer driver Maintenance tab.	8 min.
Grease application	To maintain sliding properties of the applicable portions. - At Carriage Unit replacement - At Cap Blade Unit replacement	Using a brush, etc., apply G-1054-2 or FLOIL KG-51K3. See 3-4, Grease Application , for details.	1 min.

*1: Install the Service Tool to a licensed PC.

*2: For the G2000 series and the G3000 series only.

3-2. Adjustment and Maintenance in User Mode

Function	Purpose	Procedures	Approx. time
Nozzle check pattern printing	Checks the current nozzle condition. Set one sheet of A4 or Letter plain paper in the feeder.	Perform from the printer operation panel or via the printer driver Maintenance tab.	1 min.
Print head cleaning	Maintains a good print head condition by clearing nozzle clogging. Print out the Nozzle Check Pattern. If white streaks or other irregular prints such as a missing portion are found, perform this function.	Perform from the printer operation panel or via the printer driver Maintenance tab. - Operation panel: -- Cleaning both black and colors - Printer driver Maintenance tab: -- Cleaning black only -- Cleaning colors only -- Cleaning both black and colors	1 min.
Print head deep cleaning	If Print Head Cleaning is not effective, perform this cleaning. Since the deep cleaning consumes more ink than regular cleaning, it is recommended to perform deep cleaning only when necessary.	Perform from the printer operation panel* ¹ or via the printer driver Maintenance tab. - Operation panel: -- Cleaning both black and colors - Printer driver Maintenance tab: -- Cleaning black only -- Cleaning colors only -- Cleaning both black and colors	1 min.
System cleaning	Clears non-ejection of ink by removing the bubbles gotten mixed in with the tube. Since the system cleaning consumes more ink than deep cleaning, it is recommended to perform system cleaning only when necessary.	- Operation panel: -- Cleaning both black and colors - Printer driver Maintenance tab: -- Cleaning black only -- Cleaning colors only -- Cleaning both black and colors	10 min.
Automatic print head alignment* ¹	Optimizes the print head condition. Set one sheet of A4 or LTR plain paper in the feeder.	Perform from the printer operation panel or via the printer driver Maintenance tab.	3 min.
Manual print head alignment	Optimizes the print head condition. Set two sheets of A4 or LTR plain paper in the feeder.	Perform via the printer driver Maintenance tab.	8 min.
Print head alignment value printing	The current print head alignment values are printed.	Perform from the printer operation panel* ¹ or via the printer driver Maintenance tab.	1 min.
Paper feed roller cleaning	Removes paper debris on the paper feed roller to improve paper feeding accuracy. Since the rollers will wear out in this cleaning, it is recommended that you perform this only when necessary. Set three sheets of A4 or LTR plain paper in the feeder.		1 min.
Bottom plate cleaning	Cleans the ribs of platen and the pinch roller. Fold A4 or LTR plain paper in half, then unfold it. With the ridges of the crease facing up, set the paper in the feeder.		1 min.

Function	Purpose	Procedures	Approx. time
LAN resetting	Resets the LAN settings to default via the operation panel, or using IJ Network Tool.	Perform from the printer operation panel ^{*2} or using IJ Network Tool.	1 min.

*1: For the G2000 series and the G3000 series only.

*2: For the G3000 series only.

3-3. Adjustment and Settings in Service Mode

(1) Start the printer in the service mode.

- 1) With the power cord connected and the printer power turned off, while pressing and holding the Stop button^{*1}, press the ON button. (DO NOT release the buttons.)
- 2) When the Power lamp lights, while holding the ON button, press the Stop button^{*1} 5 times^{*2}. Each time the Stop button^{*1} is pressed, the Alarm and Power lamps light alternately.
- 3) Release the ON button and Stop button in random order. The printer is ready for the service mode operation.

*1: The Resume / Cancel button for the G1000 series.

*2: Without the scanner, press the Stop button 6 times.

(2) How to operate the service mode.

The service mode for the G1000 series, G2000 series, and G3000 series can be operated by using the Service Tool on the connected PC.

- 1) Service mode operation using the Service Tool on the connected PC
 - i. When a button is clicked in the Service Tool dialog box, that function is performed. During operation of the selected function, all the Service Tool buttons are dimmed and inactive.
 - ii. When the operation is completed, "A function was finished." is displayed, and another function can be selected.
If a non-supported function is selected, "Error!" is displayed. Click **OK** in the error message dialog box to exit the error.

2) Multiple Use of Service Tool

In Service Tool version 4.710 and later, multiple Service Tools can be launched and used at the same time on one PC for connected printers when they are started in the service mode.

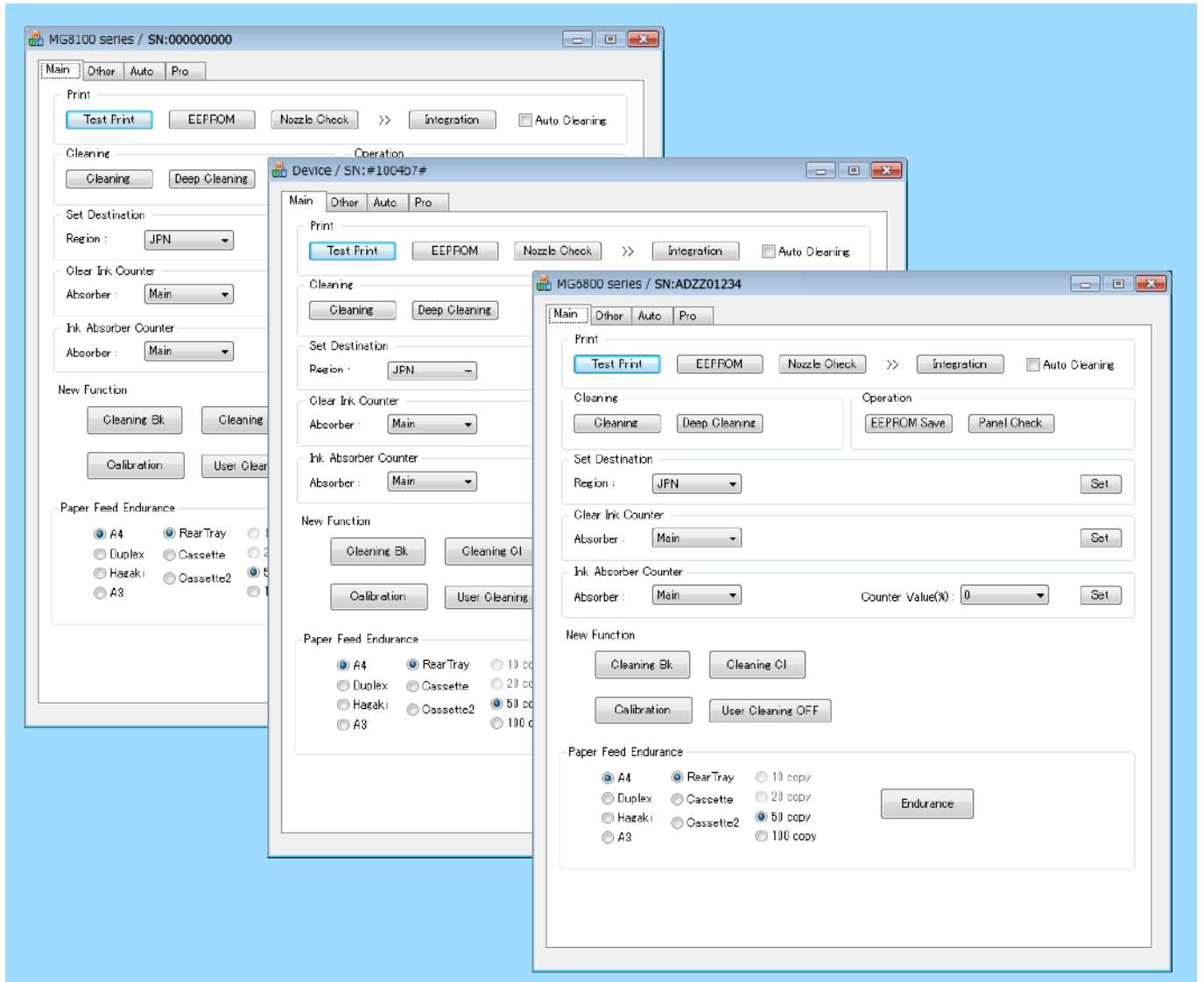
Procedures:

- (1) Connect a printer to the PC with a USB cable.
- (2) Start the printer in the service mode. The Power lamp will blink. Wait until it stays lit, then launch the Service Tool.
- (3) When the Service Tool is launched, the model name and the printer serial number are displayed at the top of the Service Tool window.

Restrictions:

- After connecting the printer to the PC with a USB cable and starting the printer in the service mode, launch the Service Tool after the PC recognizes the printer.
- At the top of the Service Tool window, the model name and serial number of the connected printer is displayed to identify each combination of Service Tool and printer.
For the 2009 or earlier printers, the model name is indicated as "Device" and the USB serial number is displayed instead of the printer serial number.
If the main PCB ass'y is replaced in servicing, no serial number will be displayed (the serial number will be blank).
- If the USB cable between the printer and the PC is disconnected during use of the Service Tool, that Service Tool will not recognize the printer thereafter even if the printer is re-connected.

After re-connecting the printer, close (exit) the Service Tool, then launch it again.



(3) Service Tool functions

Service Tool screen: Version 4.718

1) Main tab

Service Tool

Main Other Auto

Print

1 Test Print 2 EEPROM 3 Nozzle Check >> 4 Integration 5 Auto Cleaning

Cleaning

6 Cleaning 7 Deep Cleaning

Operation

8 EEPROM Save 9 Panel Check

10 Set Destination

Region : JPN Set

11 Clear Ink Counter

Absorber : Main Set

12 Ink Absorber Counter

Absorber : Main Counter Value(%) : 0 Set

New Function

13 Cleaning Bk 14 Cleaning CI

15 Calibration 16 Auto Cleaning OFF

17 Paper Feed Endurance

A4 RearTray 10 copy
 Duplex Cassette 20 copy
 Hagaki Cassette2 50 copy
 100 copy

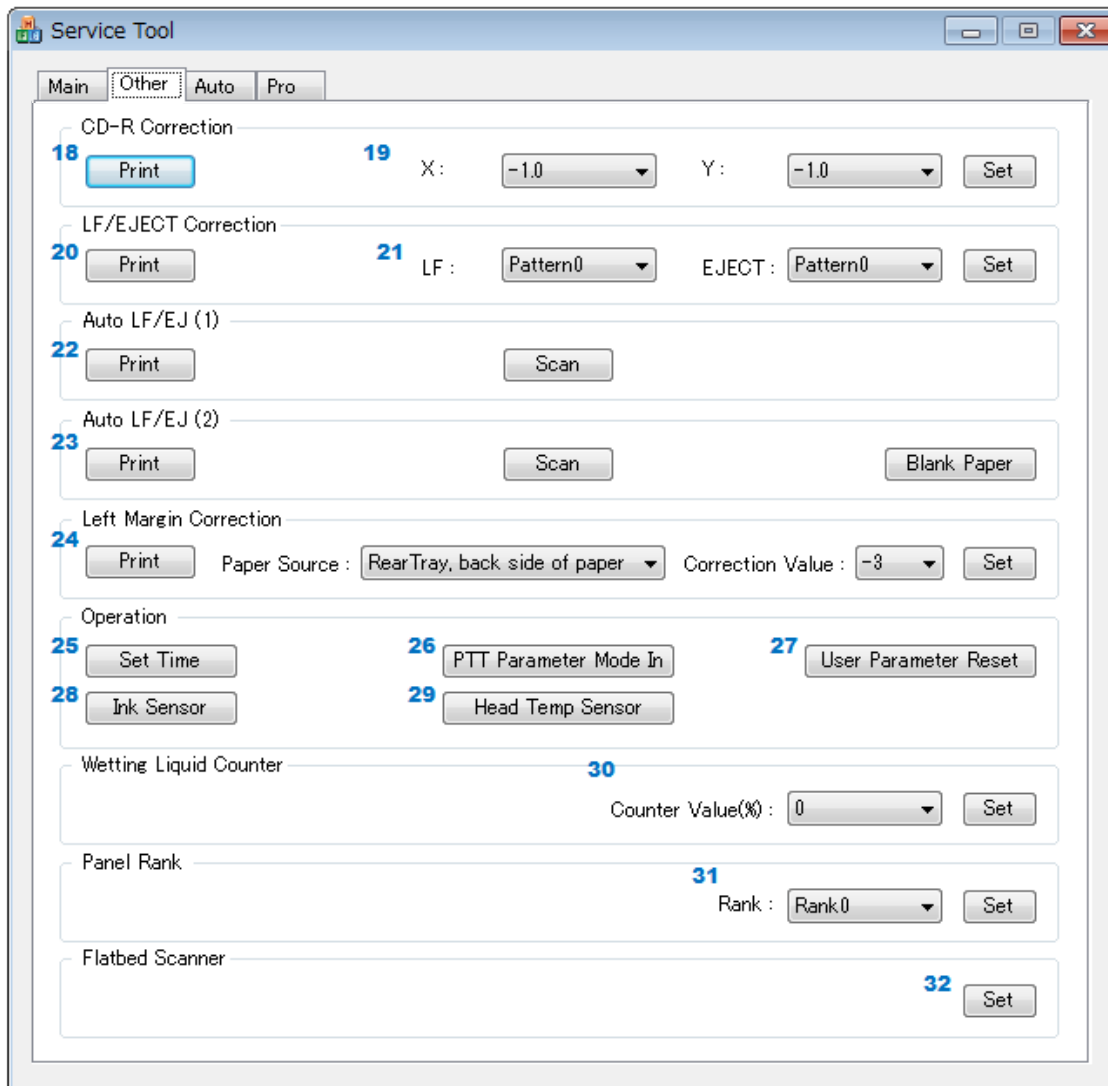
Endurance

No.	Name	Function	Remarks
1	Test Print	Service test print	Set one sheet of A4 or LTR paper in the feeder. Printed items: - Model name - ROM version - Ink absorber counter value - Print information - Error information, etc.
2	EEPROM	EEPROM information print	The dialog box opens for selecting the paper source. Select Rear Tray , and click OK . Printed items: - Model name - ROM version - Ink absorber counter value - Print information - Error information, etc.
3	Nozzle Check	Nozzle check pattern print	The dialog box opens for selecting the paper source. Select Rear Tray , and click OK .
4	Integration	Integrated inspection pattern print	Set one sheet of A4 or LTR paper in the feeder. The dialog box opens for selecting the paper source. Select Rear Tray , and click OK . Printed items: - Model name - ROM version - Ink absorber counter value - Print information - Error information, etc.
5	Auto Cleaning	Enabling / disabling of automatic print head cleaning	Select this option to enable automatic print head cleaning prior to printing (after replacement of a cartridge).
6	Cleaning	Print head cleaning	Cleaning of all the colors at the same time (same as the one in the user mode)
7	Deep Cleaning	Print head deep cleaning	Deep cleaning of all the colors at the same time (same as the one in the user mode)
8	EEPROM Save	EEPROM information saving	The EEPROM information (same as the one in EEPROM information print) is displayed on the PC or is saved to the PC as a text file. This function is not available in most cases of errors.
9	Panel Check*1	Operation panel check	Check the operation panel.
10	Set Destination	Destination settings	Select the destination, and click Set . ASA, AUS, BRA, CHN, CND, EMB, EUR, JPN, KOR, LTN, TWN, USA
11	Clear Ink Counter	Ink absorber counter resetting	Set a sheet of A4 or LTR paper. Select Main and click Set . After the ink absorber counter is reset, the counter value is printed automatically.

No.	Name	Function	Remarks
12	Ink Absorber Counter	Ink absorber counter setting	See 3-3. (4) Ink absorber counter setting below.
13	Cleaning Bk	Black print head cleaning	Same as the operation from the driver. Not used in G1000 / G2000 / G3000 series.
14	Cleaning Cl	Color print head cleaning	Same as the operation from the driver. Not used in G1000 / G2000 / G3000 series.
15	Calibration	Operation panel calibration	Calibration of the operation panel (touch screen) in repair servicing and refurbishment operation. Not used in G1000 / G2000 / G3000 series.
16	User Cleaning OFF	No automatic purging	Disabling of User Cleaning OFF in the user mode after exit from the service mode. After this button is clicked, the Automatic Print Head Cleaning in the user mode will keep disabled until the printer is turned off in the user mode by pressing the ON button (soft-power-off).
17	Endurance	Endurance check pattern print	A4: Endurance check with A4 plain paper. Select the paper feed source and paper amount, and click Endurance . Duplex: Endurance check in printing on both sides of A4 paper. Select the paper feed source and paper amount, and click Endurance . A3: Endurance check with A3 plain paper. Select the paper feed source and paper amount, and click Endurance . Hagaki: Endurance check with Hagaki (post card). Select the paper feed source and paper amount, and click Endurance . Not used in G1000 / G2000 / G3000 series for Duplex, A3, and Hagaki.

*1: For the G2000 series and the G3000 series only.

2) Other tab

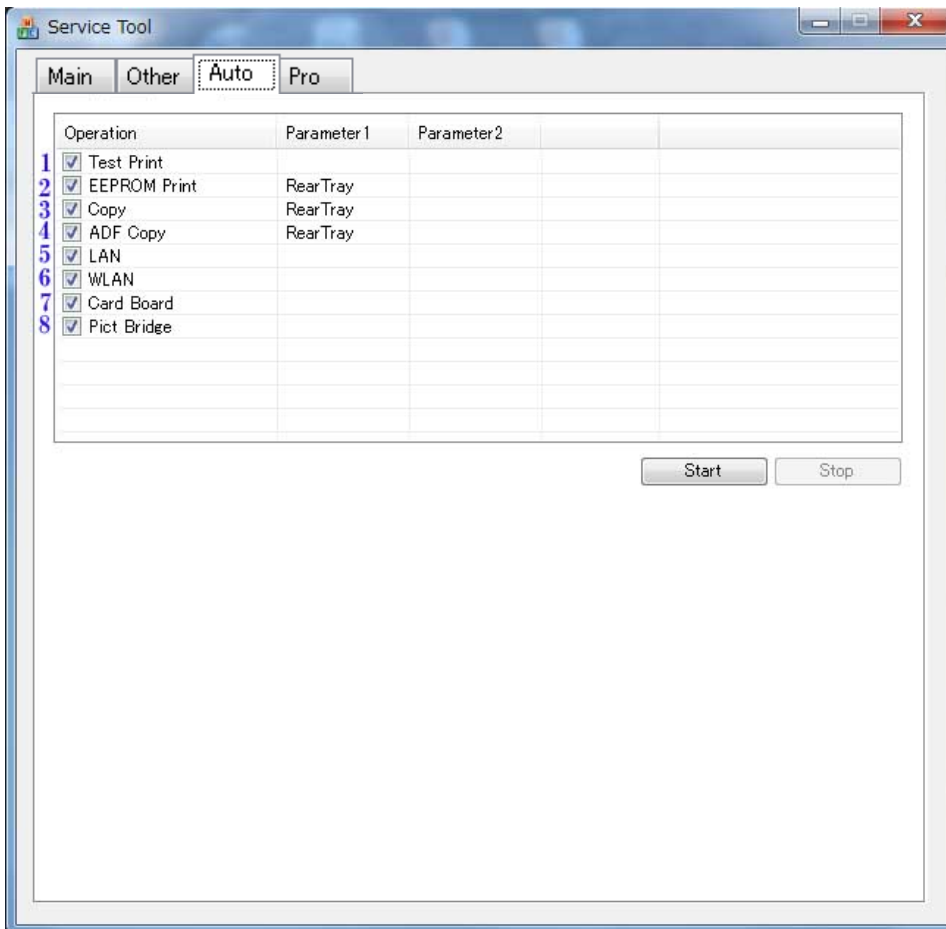


No.	Name	Function	Remarks
18	CD-R Correction Print	Printing of the pattern for Disc Label print position correction	Not used.
19	CD-R Correction X CD-R Correction Y	Disc Label print position correction X: Horizontal Y: Vertical	Not used.
20	LF/ EJECT Correction Print	LF / Eject Correction Pattern print	Not used.
21	LF/ EJECT Correction	LF / Eject Correction value settings	Not used.
22	Auto LF/EJ (1)	Automatic LF / Eject correction	Not used.
23	Auto LF/EJ (2)	Automatic LF / Eject correction	Not used.
24	Left Margin Correction	Left Margin Pattern print and correction	Not used.
25	Set Time	Time setting	Not used.
26	PTT Parameter Mode In	Entry in the PTT parameter mode	Not used.
27	User Parameter Reset*1	Resetting of the user settings	Same as Reset setting in the user mode.

No.	Name	Function	Remarks
28	Ink Sensor	Pressure sensor correction	Not used.
29	Head Temp Sensor	Print head diode sensor correction	Not used.
30	Wetting Liquid Counter Counter Value (%)	Wetting liquid counter setting	Not used.
31	Panel Rank	Capacitive sensor sensitivity setting	Not used.
32	Flatbed Scanner Set	Individual scanner adjustment	Not used.

*1: For the G2000 series and the G3000 series only.

3) Auto tab



No.	Name	Function	Remarks
1	Test Print	Service test print	Load one sheet of A4 or LTR paper into the feeder. Printed items: - Model name - ROM version - Ink absorber counter value - Print information - Error information, etc.
2	EEPROM	EEPROM information print	Load one sheet of A4 or LTR paper into the feeder. Select Rear Tray for Parameter 1. Printed items: - Model name - ROM version - Ink absorber counter value - Print information - Error information, etc.
3	Copy ^{*1}	Copy test	Load one sheet of A4 or LTR paper into the feeder, and set the document on the platen. Select Rear Tray for Parameter 1. Color copy on the A4 or LTR plain paper with the default settings is performed.
4	ADF Copy	Copy test from the ADF	The test is not supported, thus it is skipped even if selected.
5	LAN	Electric check of the wired LAN board and line connection	The test is not supported, thus it is skipped even if selected.
6	WLAN ^{*2}	Electric check of the wireless LAN board and connection	When no problems are detected in the electric connection, "success!" is displayed. When a problem is detected in the electric connection, "failure!" is displayed. Suspected causes of failure: - The WLAN FFC is disconnected. - The WLAN PCB or the FFC is faulty. - The Main PCB is faulty.
7	Card Board	Electric check of the card board connection	The test is not supported, thus it is skipped even if selected.
8	PictBridge	Electric check of the PictBridge board connection	The test is not supported, thus it is skipped even if selected.

*1: For the G2000 series and the G3000 series only.

*2: For the G3000 series only.

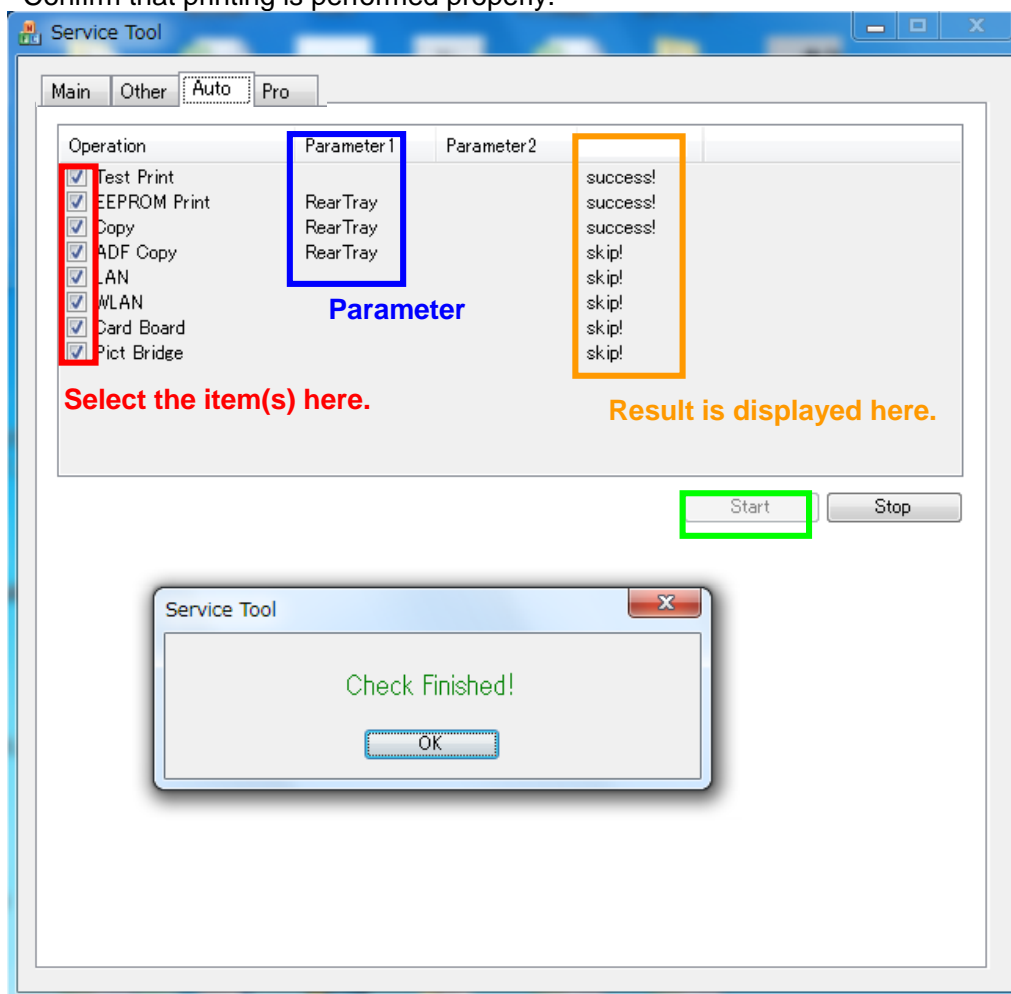
How to use the **Auto** tab (“One-Click Full Inspection” mode):

i. Preparation:

- Set three sheets of A4 or LTR paper in the feeder (for **Test Print**, **EEPROM Print**, and **Copy**).
- Set a document (any desired one) on the platen glass for **Copy**.

ii. Operation

- Select the test item(s).
- Click **Start**. The selected test(s) will be performed. (The test time is approx. two minutes in total when all the test items are selected.)
- The test result (“success”, “failure”, or “skip” for non-supported function) will be indicated on the right side of each test item as shown below.
- Confirm that printing is performed properly.



iii. Special notes

- The **Auto** tab (one-click full inspection mode) is to check a series of basic operation of the printer after repair, and it is not suitable to see if a specific problem pointed out by a user is repaired.
- DO NOT use the test on this tab to confirm that the user complaints are resolved.
- The tests of **LAN**, **WLAN**, **Card Board**, and **PictBridge** examine electric connection, and do not examine the functionalities. Thus, the test results do not guarantee the functions themselves.

4) **Pro** tab

Not supported.

(4) Ink absorber counter setting

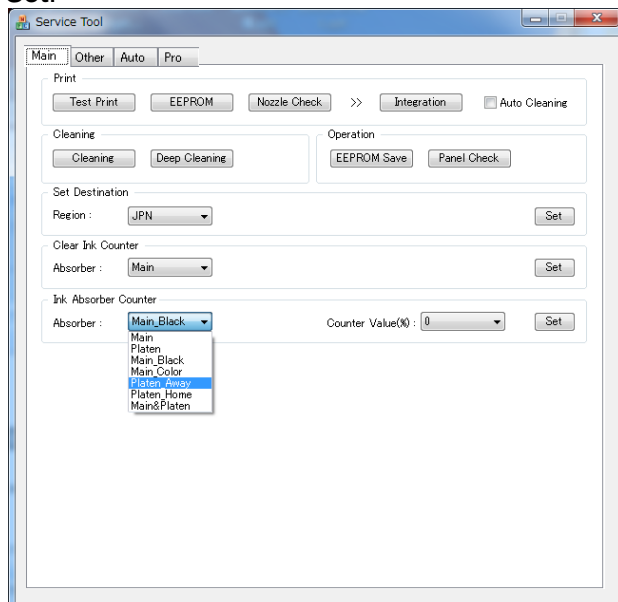
Set the ink absorber counter value to a new EEPROM after the main PCB ass'y is replaced in servicing.

- 1) Before replacement of the main PCB ass'y, check the ink absorber counter value in EEPROM Information Print.
- 2) Replace the main PCB ass'y.
- 3) After replacement, the ink absorber counter value should be set in the service mode using the Service Tool.

In the **Ink Absorber Counter** section of the Service Tool, select **Main**, from the **Absorber** pull-down menu.

From the **Counter Value(%)** pull-down menu, select the value (in 10% increments) which is the closest to the actual counter value confirmed before replacement of the main PCB ass'y, and click

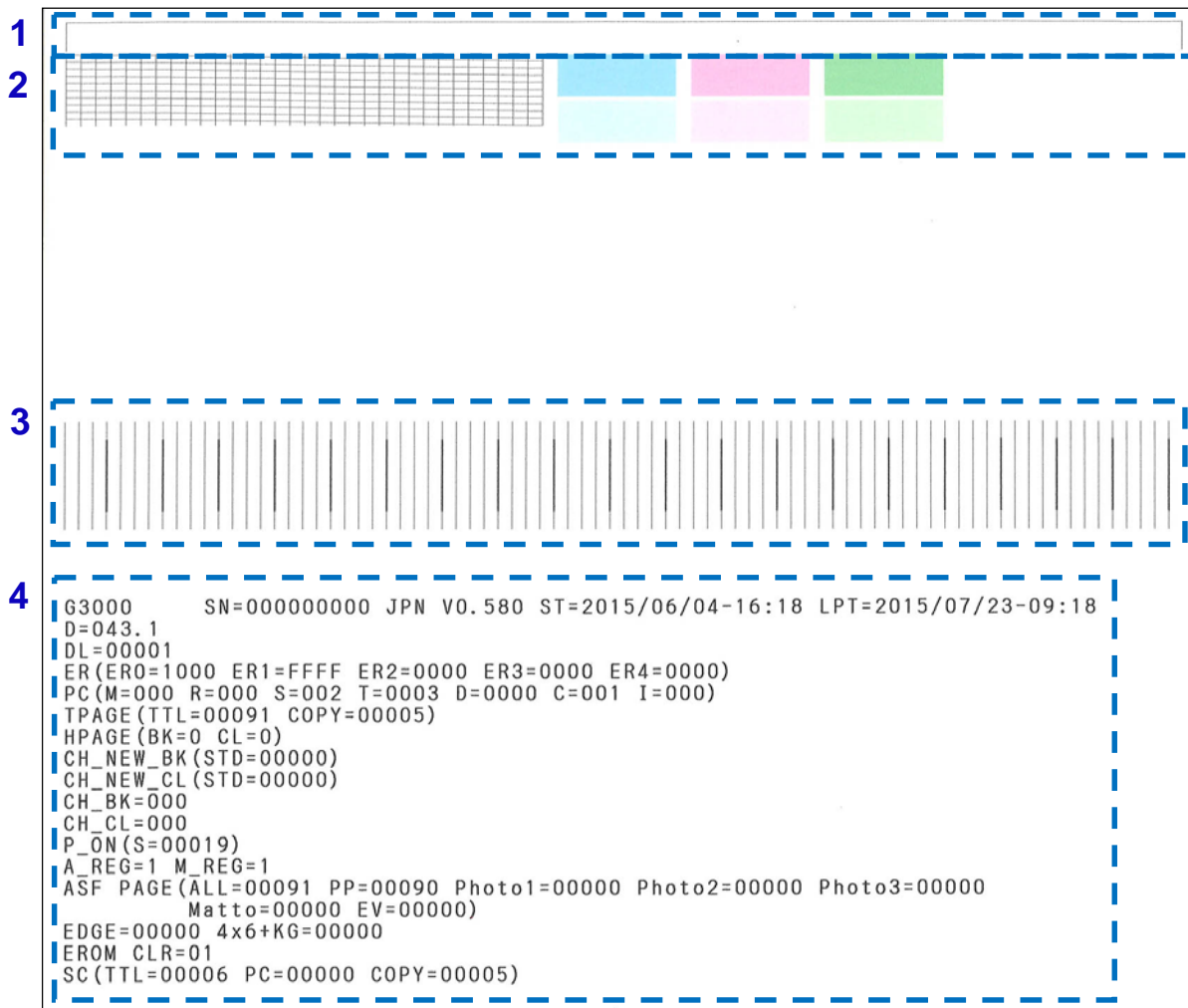
Set.



- 4) Print EEPROM information to confirm that the value is properly set to the EEPROM.

Set the ink absorber counter value to EEPROM after the ink absorber partial replacement.

- 1) Replace the Absorber Kit (Partial).
- 2) The ink absorber counter value should be set to 30% using the Service Tool.
In the **Ink Absorber Counter** section of the Service Tool, select **Main**, from the **Absorber** pull-down menu.
From the **Counter Value(%)** pull-down menu, select **30**, and click **Set.**

(5) Service Test Pattern

- Check 1: Top of form accuracy, skewed paper feeding, left margin, and carriage (outermost) accuracy
- Check 2: Nozzle check pattern print (Ink must be ejected from all nozzles, No improper color mixture)
- Check 3: Straight line accuracy (No remarkable dot mis-alignment on a line)
- Check 4: EEPROM information (See [\(6\) EEPROM information](#) for details.)

(6) EEPROM information

1) Printed items

- Model name
- Printer serial number (SN = Serial Number)
- Destination
- ROM version
- Installation date & time (ST = Set Time)
- Last printing time without any errors (LPT = Last Print Time)
- Main ink amount in the ink absorber (% , D = Drain sheet)
- Waste ink absorber life (month, DL = Drain sheet Life)
- Waste ink-related error threshold decided flag (DD = Drain Sheet Decide)
- Waste ink-related error threshold flag (DT = Drain Sheet Threshold)
- Operator call/service call error record (the last 5 errors, ER0 = the last error, ER1 = the one before the last,, ER4 = the 4th before the last)

If the same errors occur successively, only the latest one is recorded.

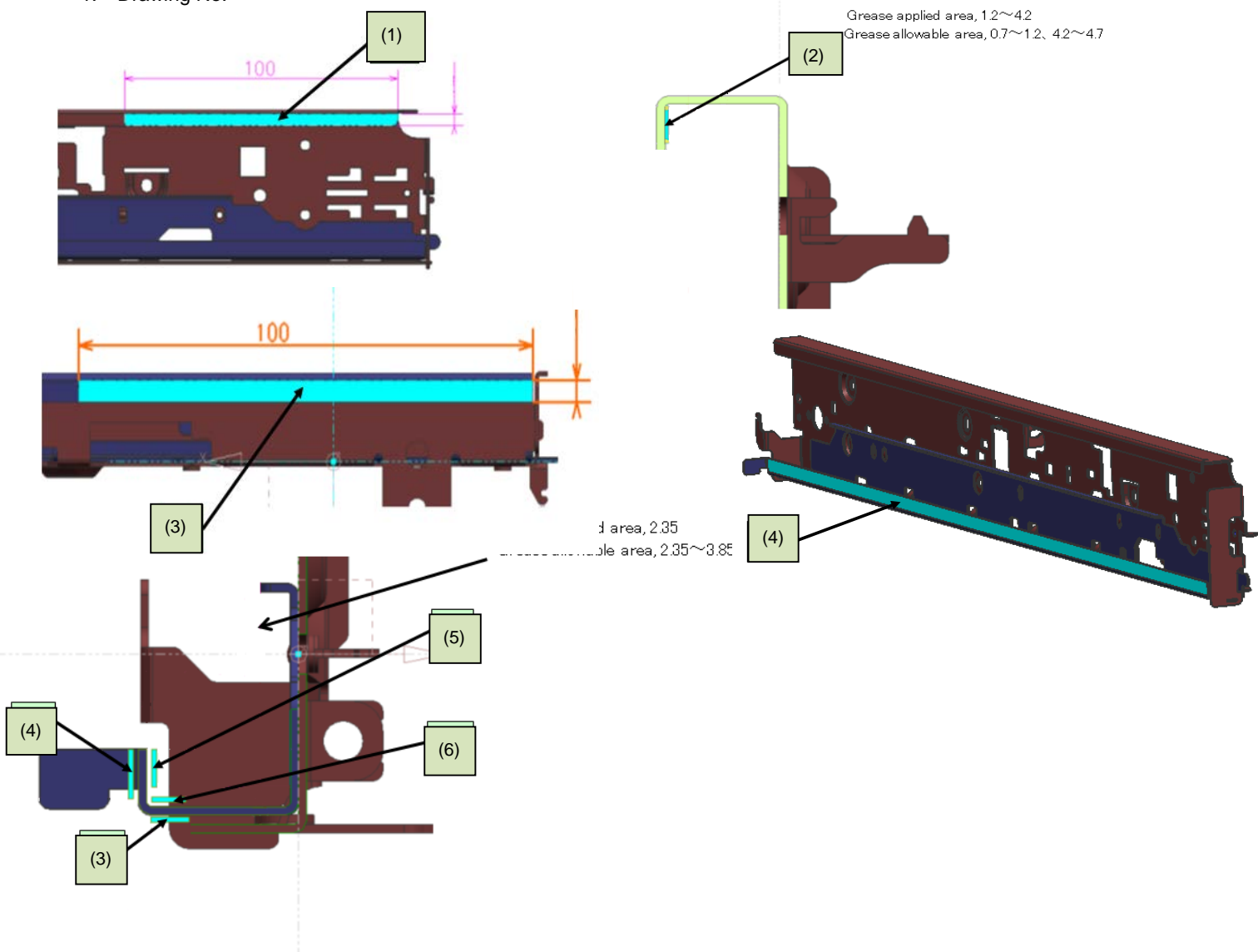
- Number of cleaning operation (PC = Purge Count) (M: Manual, R: Deep cleaning, S: System, T: Timer, D: Dot count, C: Ink / cartridge replacement, I: Incorrect termination)
- Total print pages (TPAGE, TTL = total, COPY = copy)*¹
- Cartridge print pages (HPAGE = Head Page)
- Number of changing to a new black cartridge (CH_NEW_BK = Change New head Black)
- Number of changing to a new color cartridge (CH_NEW_CL = Change New head Color)
- Number of removing and installing black cartridge (CH_BK = Change head Black)
- Number of removing and installing color cartridge (CH_CL = Change head Color)
- Power-on count (soft, P_ON = Power ON)
- Automatic print head alignment by user (A_REG) *¹
- Manual print head alignment by user (M_REG)
- ASF feed pages (ASF PAGE, All = total, PP = Plain Paper, Photo1, 2, and 3 = Glossy photo paper, Matto = Matte photo paper, EV = envelope)
- Number of borderless printing (EDGE)
- 4 x 6 and KG print pages (4 x 6 and KG)
- EEPROM reset record (EROM CLR)
- Scan count (SC = Scan Count, TTL = total, PC = scanning from a PC, COPY = scanning at copying) *¹

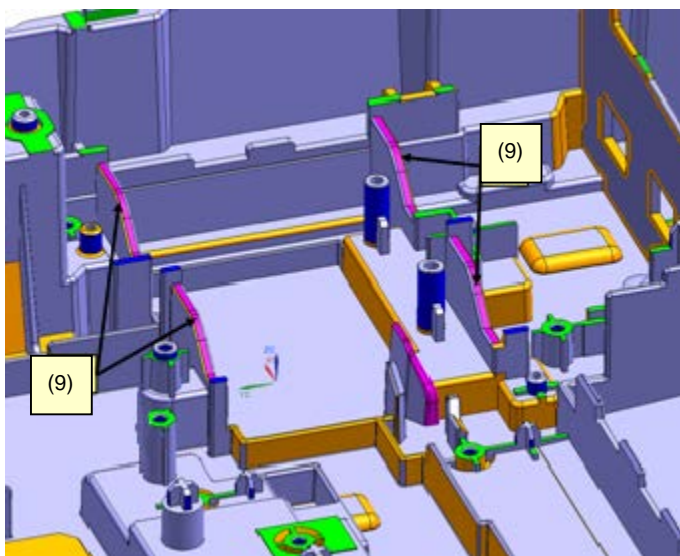
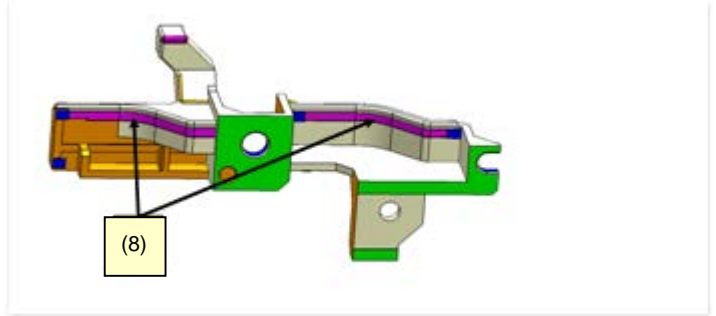
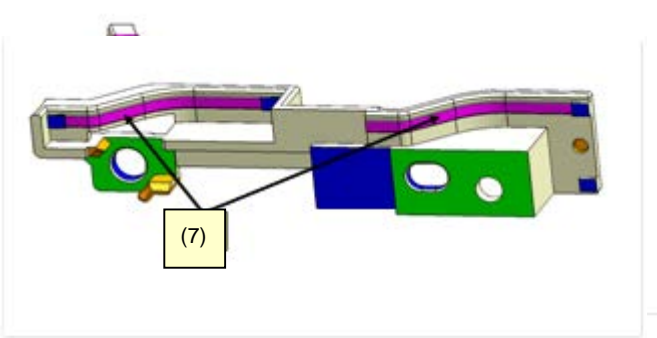
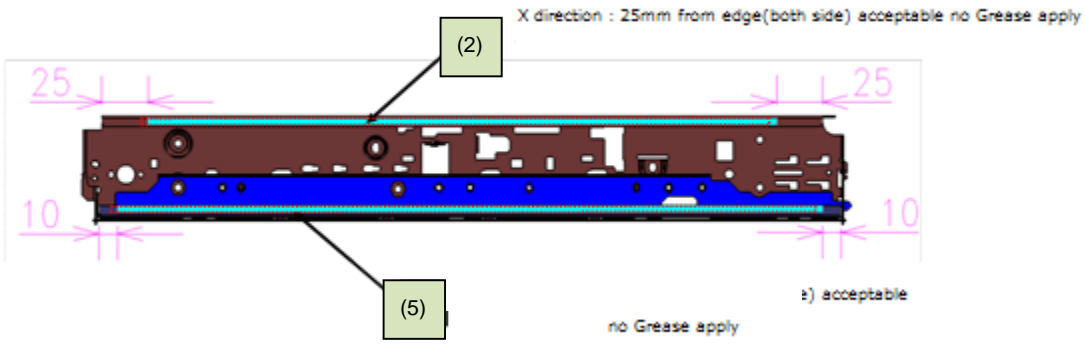
*¹: For the G2000 series and the G3000 series only.

3-4. Grease Application

No.	Part name	Where to apply grease / oil	*1	Grease	Grease amount (mg)
1	Main chassis	The surface where the carriage unit slides (Front surface of the chassis Y)	(1)	MOLYKOTE G1054	9 to 18
2	Main chassis	The surface where the carriage unit slides (Rear surface of the chassis Y)	(2)	MOLYKOTE G1054	155 +/- 220
3	Carriage rail	The surface where the carriage unit slides (Rear surface of the rail Z)	(3)	MOLYKOTE G1054	9 to 18
4	Carriage rail	The surface where the carriage unit slides (Rear surface of the rail Y)	(4)	MOLYKOTE G1054	220 +/- 20
5	Carriage rail	The surface where the carriage slides (Rear surface of the rail Y)	(5)	MOLYKOTE G1054	150 +/- 15
6	Carriage rail	The surface where the carriage slides (Rear surface of the rail Z)	(6)	MOLYKOTE G1054	450 +/- 45
7	PG cover B	The area where the cap slider slides	(7)	Floil KG-51K3	4.5 to 9
8	PG cover F	The area where the cap slider slides	(8)	Floil KG-51K3	4.5 to 9
9	Bottom frame	The area where the cap slider slides	(9)	Floil KG-51K3	9 to 18

*1: Drawing No.





3-5. Special Notes on Servicing

(1) Ink absorber counter setting

Before replacement of the main PCB ass'y, set the ink absorber counter again.

Check the ink absorber counter value using the "D" value in the EEPROM information, and register it to the replaced new main PCB ass'y. (The value can be set in 10% increments.)

When the ink absorber is replaced, set the ink absorber counter to 0% for whole replacement, or 30% for partial replacement. [For details, see 3-3, \(4\) Ink Absorber Counter Setting](#) .

(2) Preventive replacement of ink absorber

To maintain a proper replacement frequency and avoid possible accidents such as ink leakage during returning a printer to its owner, perform the following and replace the ink absorber even before ink absorber becomes full:

How to judge:

Print the EEPROM information, and check the "D" (ink absorber counter) and the calculated ink absorber life or the "DL" (ink absorber life) values.

Step 1: Is "D" 80% or more? (to avoid coming-back-to repair due to ink full in a short period of time)

Yes (80% or more) -> Replace the ink absorber.

No (less than 80%) -> Proceed to Step 2.

Step 2: Is the ink absorber life 24 or more? (to avoid ink leakage during returning the repaired printer to its owner)

No (less than 24 months) -> Replace the ink absorber.

Yes (24 months or more) -> No need to replace the ink absorber.

How to know the ink absorber life:

Use the "DL" value in the EEPROM information.

Note: The ink absorber life is an estimated value calculated based on the user's printer usage.

How to read the EEPROM information print:

```

MG6600 SN=000000000 JPN V0.460
D=006.4 Dp (AW=000.0 HM=000.0)
DL=00014
ST=2014/02/07-11:42 LPT=2014/02/12-14:48
  
```

Annotations in the image:

- Ink absorber counter value (%)**: Points to the value `D=006.4`.
- Ink absorber life (months)**: Points to the value `DL=00014`.
- Installation date**: Points to the value `ST=2014/02/07-11:42`.
- Last print date**: Points to the value `LPT=2014/02/12-14:48`.

(3) Remaining ink detection

As these products are CISS models, the volume of the ink replenished are managed by users, and the printer may not detect the remaining ink level properly depending on the replenished ink volume.

Therefore,
the specifications below are adopted.

<< Specifications: To disable the remaining ink detection >>

- 1) Fully fill all the ink tanks with initial ink at the set up.
- 2) No ink error occurs in any one of the color ink tanks among Black, Cyan, Magenta, and Yellow.
- 3) Shifting to the user's visual check is announced.
- 4) Replenish ink tanks with ink freely.
- 5) Press and hold the **Start** button (**Stop** button for the G1000 series), and the remaining ink detection will be disabled at the same time as the release of the error.
- 6) The remaining ink level is visually checked by the customer.



<< Specifications: To use the remaining ink detection function after ink is replenished >>

- 1) Fully fill all the ink tanks with initial ink at the set up.
- 2) No ink error occurs in any one of the color ink tanks among Black, Cyan, Magenta, and Yellow.
- 3) Shifting to the user's visual check is announced.
- 4) Replenish all colors of the ink tanks with ink to the point of the ink upper limit line.
- 5) In order to generate no ink error continuously, press and hold the **Start** button (**Stop** button for the G1000 series) for five seconds or more. (The counter is reset, and the detection is continuously performed.)

Note: If all colors of the ink tanks are replenished with ink to the point of the ink upper limit line, the printer cannot detect the remaining ink level properly.

(4) How to Replace the Cartridges

How to replace the cartridge (print head) is non-public to users, and it is replaced in the following two special modes:

< How to replace the cartridge (print head) in the user mode >

- 1) Open the scanner unit cover (top cover for the G1000 series) with the printer on (no error).
- 2) Press and hold the Stop button for five seconds or more.
- 3) The carriage moves to the far left of the printer.

- 4) Press and hold the Stop button for five seconds or more.
- 5) The carriage moves to the cartridge (print head) replacement position.
- 6) Open the main tank covers for both black and color ink tanks.
- 7) Open the cartridge (print head) holder.
- 8) Replace the cartridge.
- 9) Close the cartridge (print head) holder.
- 10) Push the joint lever.
- 11) Close the main tank covers for both black and color ink tanks, and then close the scanner unit cover (top cover for the G1000 series).



< How to replace the cartridge in the service mode >

- 1) Place the printer into the service mode.
- 2) Open the scanner unit cover (top cover for the G1000 series).
- 3) The carriage moves to the cartridge (print head) replacement position.
- 4) Open the main tank covers for both black and color ink tanks.
- 5) Open the cartridge (print head) holder.
- 6) Replace the cartridge (print head).
- 7) Close the cartridge (print head) holder.
- 8) Close the joint lever.
- 9) Close the main tank covers for both black and color ink tanks.
- 10) Close the scanner unit cover (top cover for the G1000 series).

Note:

If you forget to open the main tank cover, the ink filled in the tube flows backward into the tank side, and System Cleaning (stronger than Deep Cleaning) is required in order to replenish the ink again.

(5) How to Replace the Cartridges

Ink is supplied from the ink tank to the cartridge using the tube. Opening the main tank cover (tube valve lever) stops the supply of ink and prevents the air from entering the tube. If the air enters the tube, the printing problem occurs. To solve this problem, **System Cleaning** is required. Therefore, when replacing the service parts in repair servicing, be sure to open the main tank cover (tube valve lever) (left open) before removing each part or replacing parts. When replacing the carriage as well, removing the cartridge holder after opening the main tank cover (tube valve lever) prevents the air from entering, be sure to open

the main tank cover (tube valve lever) before replacing the carriage. If you forget to open the main tank cover (tube valve lever) (the same is true on the case the main tank cover (tube valve lever) is closed on the way), **System Cleaning** is required.

(6) Ink Absorber Replacement

The following replacement methods are available:

Whole replacement: All the ink absorbers are replaced. The printable pages after the replacement are 15000 pages. (The time required for the replacement is approx. 30 minutes).

Partial replacement: Two pieces of absorbers are replaced. The printable pages after the replacement are 11000 pages. (The time required for the replacement is approx. 3 minutes).

Note: In the partial replacement, set the ink absorber counter value to 30%.

Depending on the usage, select the appropriate replacement method.

(7) System Cleaning

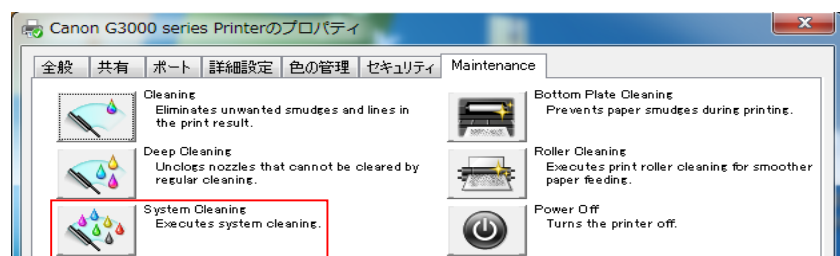
System Cleaning is a function of replacing ink when the bubbles, and air have gotten mixed in with the tube, therefore, an enormous amount of ink is consumed. **System Cleaning** can be executed from the printer driver or the printer's properties, however, note that a large amount of ink is consumed, and that you should reduce the use of **System Cleaning** as the ink absorber may be full by just performing **System Cleaning** several times. (**System Cleaning consumes an enormous amount of ink at one time, therefore, the waste ink amount increases by approx. 30 % of the total. This may cause the field claims "the ink is consumed too early" or "The Waste Ink Absorber Full error occurs early."**)

< Rough timing of the **System Cleaning** operation >

- (1) When the print quality problem such as non-ejection of ink is not solved even after normal cleaning is performed twice and deep cleaning is performed once.
- (2) When the ink filled in the tube flows backward into the tank side (the air has entered the tube) as you forgot to open the main tank cover when replacing the cartridge.
- (3) When the initial setup is performed without replenishing the ink on arrival.
(If the **Stop** button is not pressed and held and left as it is after the initial setup is performed without replenishing the ink, the cartridge surface may be clogged with ink, therefore, perform **System Cleaning** as soon as possible).

There are the following two methods of how to perform **System Cleaning**:

- (1) Use **Utilities** in the driver. (G1000 series, G2000 series and G3000 series)
- (2) Use the operation panel. Press and hold the **Stop** button, and release the button after the power lamp blinks five times (G2000 series and G3000 series). Use the operation panel. Press and hold the **Stop** button, and release the button after the Alarm lamp blinks five times (G2000 series and G3000 series).



NOTE:

When executing **System Cleaning**, select **All Colors** in order to reduce the waste ink amount.

< Precautions for **System Cleaning** >

Confirm that the amount of the remaining ink is greater than the single dot of the main tank before executing **System Cleaning**. Executing **System Cleaning** with the insufficient remaining ink may cause the failure.

The counter of remaining ink detection is cleared by **System Cleaning**, therefore, make sure to replenish ink tank with ink to the liquid level when the ink is fully filled before using continuously remaining ink detection.

< About non-ejection of ink >

After a certain period of time from the first use of the printer, the accumulation of the air in the cartridge may cause non-ejection of ink.

NOTE: Depending on the usage environment, the time to non-ejection of ink varies.

[Cause]

The air penetrates into the ink cartridge slowly from the outside for material reasons, therefore, the cartridge has an air layer and the ink is not getting to the nozzles, resulting in non-ejection of ink.

[Solution]

Perform **System Cleaning**.

(8) On Re-box or Refurbishment

Ink is supplied from the main tank to the cartridge (print head) using the tube. After the initial setup, a large amount of the ink is supplied to the tube. After that, ink always stays inside the tube. Once ink is supplied to the tube, ink cannot be removed as per specifications (the same applied to the ink inside the tank), therefore, the product with the initial setup completed cannot be refurbished.

(9) Special Notes on the Items Using Printer Serial Number (G3000 series only)

The G3000 series come with the following three items using the printer serial number:

- 1) "Initial logon password" for Remote UI
- 2) "Initial logon password" for AP mode
- 3) The serial number displayed in "Printers on Network List" at the initial Wi-Fi setup and initial logon password

The default password for the above three items is the printer serial number at shipment. However, after the main PCB ass'y is replaced, in repair servicing, the serial number written in the printer is changed.

< In Remote UI / AP mode >

Before change: The printer serial number at shipment (e.g. ABCD12345)

After change: 123456789 (no serial number is written in the main PCB ass'y for servicing).

< At the initial Wi-Fi setup >

- (1) The items displayed in "Printers on Network List":

Before change: Last five digits of the printer serial number (e.g. 12345)

After change: "-"

- (2) Initial logon password

Before change: The printer serial number at shipment

After change: 123456789 (no serial number is written in the main PCB ass'y for servicing)

In repair servicing:

< In Remote UI / AP mode >

Advise the customers the following:

- The login password for Remote UI and AP mode changes to "123456789" if the main PCB ass'y is replaced in repair servicing.
- If the customer changed the password to the desired one, or forgot the password, press and hold the **Stop** button, release it after the **Power** lamp flashes 21 times, enter the login password "123456789," and he / she can log in to Remote UI / AP mode.

< At the initial Wi-Fi setup >

Advise the customers the following:

(1) The items displayed in "Printers on Network List"

The serial number displayed in "Printers on Network List" at the initial Wi-Fi setup is the last five digits (numerical part) of the serial number registered in the printer. However, if the main PCB ass'y is replaced in repair servicing, "-" is displayed instead of "123456789." Select "-" to proceed the Wi-Fi setup.

(2) Initial logon password

After the main PCB ass'y is replaced, in repair servicing, the logon password is changed to "123456789."

(10) Change of the Threshold When Waste Ink-related Error Occurs

In order to prevent waste ink leakage due to placing the printer in the incorrect direction, the threshold when the waste ink-related errors such as waste ink full error and ink absorber almost full error occur is changed and the countermeasures against the ink leakage from ink absorber is implemented.

< Details >

(1) The shape change of the current ink absorber and the addition of new ink absorber. (The amount of absorbed waste ink is increased).

(2) The threshold when waste ink-related error occurs is changed from 220g to 140g.

With the change of threshold when waste ink-related error occurs, the period to waste ink-related error is shortened by 64%. However, the ink absorber life still satisfies the current 15,000 pages as there is a large margin in the ink amount of non-countermeasure ink absorber.

NOTE: The version of countermeasured ROM is Ver. 3.010 or later.

< The firmware change along with the change of threshold when waste ink-related error occurs >

Along with the change of the threshold when the waste ink-related errors such as waste ink full error and ink absorber almost full error occur, the sequences having established the current and new thresholds are incorporated into the printer firmware.

In the sequences having established the previous and new thresholds, the current value of the waste ink amount is read first. If it is 54% (129g) or lower, in order to prevent the ink leakage from the ink absorber, the new threshold of 140g is adopted. If it is 54% (129g) or higher, in order to prevent the immediate occurrence of waste ink-related error after the firmware version is upgraded, the previous threshold value of 220g is adopted.

< In repair servicing >

The function of confirming the current threshold when waste ink-related error occurs has been added.

In repair servicing, print EEPROM information to check the items below (DT: Waste ink-related error threshold flag).

- (1) New threshold (DT = 1): You do not have to do anything.
- (2) Old threshold (DT = 0): After replacing ink absorber, perform ink absorber counter setting or clear ink counter, and turn off the printer. Then enter the service mode again and confirm that a new threshold is used.

[Items to be checked in EEPROM information printing]

- 1) DT (Drain Sheet Threshold): Waste ink-related error threshold flag (Check if the current waste ink-related error threshold is a new one or a previous one).
When DT is 1, it is a changed threshold (new).
When DT is 0, it is a previous threshold.

NOTE:

The current threshold when waste ink-related error occurs can be reset by performing ink absorber counter setting or clearing ink counter. After resetting the threshold, turn off the printer once, enter the service mode again to confirm the current threshold when waste ink-related error occurs.

- 2) DD (Drain Sheet Decide): The flag for determining whether a waste ink-related error threshold flag has been decided or not (Check if the current threshold when waste ink-related error occurs has been decided or not).
When DD is 1, the threshold has been decided.
When DD is 0, the threshold has not been decided.

NOTE:

When DD is 0 (undetermined), turn off the printer once, enter the service mode again to check if DD is 1 (decided).

- 3) D (Drain Sheet): Main ink amount in the ink absorber (indicated by %)
When the waste ink amount is 64% (140g), a waste ink full error occurs.
When the waste ink amount is 59% (129.8g), an ink absorber almost full error occurs.
- 4) DL (Drain Sheet Life): Waste ink absorber life (indicated by month)
As with the previous ROM (Ver. 3.010 or before), when DL is 0, a waste ink full error occurs. Replace ink absorber partially or wholly.

(11) Countermeasure Against The Ink Leakage From The Main Tank

In order to prevent the ink leakage from the main tank during the transportation (to prevent the ink leakage from the air-through tube), the shape of the main tank is changed.

- The regions starting the sales from 2016 2H (AMR, EUR, AU):
Incorporated from the start of production.
- The regions having started the sales before 2016 2H (CN/ASA/LAM/TW/IN/CBR/EUM/EMB/HK/ID/KR):
To be incorporated on a running-change basis.

When the printer is transported (to return to the customer) with the ink in the ink tank, use the countermeasured main tank.

(12) Countermeasure against Items Included with Printer Left in Printer Packing Box

In order to prevent the items included with the printer such as cartridge, ink bottle, power cord, etc. left in the printer packing box from being thrown away, the illustration is added to the inner flap covering the shock absorbant material inside the printer packing box. This countermeasure has been implemented from May, 2016.

- The regions starting the sales from 2016 2H (AMR, EUR, AU):
Incorporated from the start of production.
- The regions having started the sales before 2016 2H (CN/ASA/LAM/TW/IN/CBR/EUM/EMB/HK/ID/KR):
Already implemented from May, 2016.

(13) Initial Setup

There are the following problems at the initial setup:

- (1) Pressing and holding the Stop button is hard. (The Power lamp blinks twice)
- (2) During ink filling on the printer, the message "The printer is performing another operation." is displayed.
The following two factors are assumed:
 - It takes long time to perform ink filling, therefore, the test for confirming the communication is performed before ink filling is completed (before the initial setup flag is turned off).
 - The test for confirming the communication is performed before the operation of initial purging (pressing and holding the Stop button) is executed.

<Countermeasures>

- (1) GS1 (Getting Started 1) is revised as follows.
 - The description of the printer operation status is in parallel with the one of the user's operations.
 - The sentence alerting users that the operation of ink filling is required is added.
 - The location of the description of the waiting time to ink filling (six minutes) is changed.
- (2) Master Setup is revised as follows.
 - The message window is added to remind users to perform initial purging (ink filling) after the printer status during the setup of driver installation is detected.
 - The Help button in the above-mentioned window directs users to the description of ink filling operation.

(14) Phenomenon "Ink flows into the buffer room"

The G1000 series, G2000 series, and G3000 series are equipped with the buffer room in order to adapt the change of temperature and humidity (to prevent ink leakage due to the expanded air in the ink tank).

In the cases below, ink flows into the buffer room, therefore, the amount of the ink that is visible to users seems to be reduced. However, the ink flowed into the buffer room is supplied to the print head through the tube to be usually used.

1. When meniscus between the ink room and the buffer room is broken due to the impact on the printer
2. When rapid temperature change or pressure change occurs
3. When the cartridge is removed without opening the ink tank cover
4. When the joint lever is unseated as it is pushed again without opening the ink tank cover.
5. When the ink tank cover is closed without closing the caps of the main tank completely

(15) The ink is consumed too early

The causes of this phenomenon include the following:

1. Approx. 25% of whole ink in the ink tank (all colors) is decreased after ink filling at the initial setup
2. Approx. 20% of whole ink in the ink tank (all colors) is decreased after System Cleaning is implemented.
3. Up to 30% of the ink in the ink tank is reduced as the ink in the ink room flows into the buffer room by forgetting closing the cap of the ink tank or the impact on the printer. (one color or multiple colors)
For details, see 3-5. Special Notes on Servicing (14) Phenomenon "Ink flows into the buffer room."
4. Much amount of ink is decreased when a cartridge problem (breakage of head surface) occurs. (one color or multiple colors) For details, see 3-5. Special Notes on Servicing (17) Broken Print Head Surface."

(16) On Replenishing ink tanks with ink

Be careful not to fill the ink tanks with incorrect color ink. Once the incorrect color ink is replenished, color mixture occurs. In this case, repair servicing is required.

(17) Broken Print Head Surface

If the print head surface is broken by hitting the surface on something or by scratching it at the print head installation, the phenomena below occur. Be careful not to scratch the print head surface.

- 1) The ink amount is decreased rapidly.
- 2) The platen or cap part is smeared with ink.
- 3) Partial non-ejection of ink
- 4) A "Print head temperature too high" error occurs.

(18) "Cartridge Not Installed Completely" Error (Error Code: 1470)

At the initial setup, if pushing the joint lever is forgotten after the cartridge is installed, 1470 error occurs. If 1470 error occurs, check if the cartridge joint lever is securely pushed.

(19) Durability of Ink on Photo Paper

The new ink for G1000 series, G2000 series, and G3000 series does not support ChromaLife100. On photo papers, the new ink can be discolored more easily. Depending on how the printouts are stored, discoloring starts within one year after printing. (On plain paper, the color fastness is higher than on photo paper, and the color remains unchanged over a year after printing in most cases.)

<Cause and prevention>

Discoloring occurs when the printed ink is exposed directly to the air.

When you receive user inquiries on discoloration of photo paper printouts, advise the users of the following to keep the printed colors longer:

"Keep the printed photo papers in an album or plastic bag, etc. to avoid them from exposed to the air."

(20) How to Transport Printers

To transport the printer, follow the procedures below.

- 1) Turn on the printer with the cartridge (print head) left installed in the printer.
 When you cannot turn on the printer, unplug the power cord and go to 3).
 When an error occurs, release the error using the **Black** button or the **Color** button.
 (For the G1000 series, press the **Stop** button to release the error).
 If you cannot release the error, push the **ON** button to turn off the printer, unplug the power cord and go to 3).
 If you cannot turn off the printer, unplug the power cord and go to 3).
- 2) Place the printer into the transportation mode.
 Press and hold the **Stop** button, release it after the Alarm lamp flashes seven times, and the printer will be placed into the transportation mode. (For G2000 series and G3000 series)
 Press and hold the **Stop** button, release it after the Alarm lamp flashes eight times, and the printer will be placed into the transportation mode. (For G1000 series)
- 3) Confirm that the carriage has already moved to the far right.
 If you cannot turn on the printer or the carriage cannot move due to the error, move the carriage to the far right manually.
- 4) Secure the carriage with the tape.
- 5) Confirm that the ink cap is closed.
- 6) Pack the printer in a plastic bag.
- 7) Attach the protective material to the printer when packing the printer in the box.

Notes on the transportation:

- Never remove the cartridges (print head). Transport the printer with the print head installed.
- Lock the carriage at the home position (far right of the printer).
 (If you cannot lock the carriage due to an error or failure, manually move the carriage to the far right).
- Secure the carriage with the tape.
- Pack the printer in a plastic bag so that the surroundings may not get dirty with ink.
- Pack the printer in a sturdy box so that it is placed with its bottom facing down, using sufficient protective material.
- Ensure the packed box remains flat and NOT turned upside down or on its side.

In order to prevent the ink leakage during transportation, the following actions will be taken:

- The instruction sheet "Retain this bag." is taped on a plastic bag for packing the printer in order to advise customers not to discard the plastic bag and to use it for transporting the printer.
- The instruction label for transporting the printer will be attached to the position seen when the scanning unit cover is opened in order to advise customers to put the printer in the plastic bag when transporting the printer.
- The mark indicating the following advices for customers is added to the top surface of the outer carton:
 - Put the printer into the plastic bag before transporting it.
 - Be sure to handle the printer with the right side up with care.

4. VERIFICATION AFTER REPAIR

4-1. Inspection Flow

Standard inspection:

Always conduct the standard inspection listed below for every repaired unit regardless of repair types.

Through the inspection, the minimal functionality of the printer will be assured.

The inspection using the **Auto** tab in the Service Tool checks the printer operation. Be sure to perform this.

In printing, use only the Canon genuine ink for the accurate judgment of the print result.

1. Operation panel check
2. Service Tool, **Auto** tab*
3. Check for missing parts
4. Default shipment settings
5. External and internal appearance check

* If a non-supported function is selected as a test item, the Service Tool skips it automatically.

Optional inspection to verify specific repair:

Conduct the inspection listed below according to the specific repair.

In printing, be sure to use the Canon genuine ink for the accurate judgment of the print result.

- Print result
- Strange sound

4-2. Standard Inspection

(1) Operation panel check

Check item	How to check	Criteria
Buttons	Press desired buttons.	The pressed button must be valid.

(2) [Service Tool, Auto tab](#)

- During operating:

Check item	How to check	Criteria
Paper pick-up properties	Feed paper from the paper sources.	The following must not occur during pick-up of paper: <ul style="list-style-type: none"> - No paper feeding - Feeding of multiple sheets of paper at the same time - Paper jam
Paper feed properties	Feed paper from the paper sources.	The following must not occur during feeding and ejecting paper: <ul style="list-style-type: none"> - Paper corner creasing - Paper jam
Operating sound	Feed paper from the paper sources.	The following must not occur: <ul style="list-style-type: none"> - Slip of gears - Rattling

- Function check:

Check item	How to check	Criteria
Service Test Pattern print		"Success" must be indicated for each test of the Service Tool. (Note that "Skip" must be indicated for non-supported functions).
Copy		
Copy from the ADF		
LAN board connection	Use the loop-back tool.	
WLAN board connection		
Card board connection	Use a desired memory card.	
PictBridge connection	Use a desired USB memory.	
Communication with PC	Print from a USB-connected PC.	

- Service Test Print check:

Check item	How to check	Criteria
Dot mis-alignment, Non-ejection of ink	Check the printed Service Test Pattern (Area 2).	There should be no remarkable dot mis-alignment or non-ejection of ink.
Color mixture	Check the printed Service Test Pattern (Area 2).	There should be no color mixture.
Line accuracy	Check the printed Service Test Pattern (Area 3).	There should be no remarkable dot mis-alignment on vertical and horizontal lines.
Paper smearing	Check the printed Service Test Pattern.	There should be no smearing.

- EEPROM Information Print check:

Check item	How to check	Criteria
Amount of ink absorbed in the ink absorber	Check the EEPROM information on the printed Service Test Pattern (Area 4).	The ink absorber counter values must be lower than the ones specified in the "Guideline for Preventive Replacement of ink absorber." For details, see 3-5, (2) Preventive replacement of ink absorber .
	Check the EEPROM information on the printed Service Test Pattern (Area 4).	The values must be correct (after the main PCB ass'y is replaced).
	Check the EEPROM information on the printed Service Test Pattern (Area 4).	After the ink absorber is replaced, the applicable ink absorber counter value must be reset, or the values must be correct.

- Copy quality check:

Check item	How to check	Criteria
Copy quality	Check the copy of a desired chart.	The following must not occur: <ul style="list-style-type: none"> - Streaks - Missing portion - Black spots - Blurred copy

(3) Check for missing parts

Check item	How to check	Criteria
Missing parts	Check if there is any part missing.	<ul style="list-style-type: none"> - All the parts must be assembled without fail. - No functional parts must be missing.

(4) Default shipment settings

Check item	How to check	Criteria
Carriage position	Power off the printer in the service mode.	The carriage must be locked in the home position.

(5) External and internal appearance check

Check item	How to check	Criteria
Improper gap, slanting, warpage, or unevenness of covers	Visually check the printer.	The following must not occur: <ul style="list-style-type: none"> - Incomplete assembling of covers - Wires or cables caught between covers
Smearing with ink or grease	Visually check the printer.	There must be no smearing.

4-3 Optional Inspection to Verify Specific Repair**(1) Print result**

Check item	How to check	Criteria
Uneven printing due to carriage movement or line feeding, or at the trailing edge of paper	Print any image on the Canon genuine photo paper.	There must be no uneven printing.
Roller marks or scratches	Print any image on the Canon genuine photo paper.	There must be no marks or scratches of rollers.

(2) Strange sound

Check item	How to check	Criteria
Strange sound	Perform the operation where the user reported a strange sound was heard.	The following must not occur: <ul style="list-style-type: none"> - Slip of gears - Rattling

5. APPENDIX

5-1. Customer Maintenance

Adjustment	Timing	Purpose	Tool	Approx. time
Automatic print head alignment* ¹	<ul style="list-style-type: none"> - At cartridge replacement - When print quality is not satisfying (uneven printing, etc.) 	To ensure accurate dot placement.	<ul style="list-style-type: none"> - Via the printer buttons - PC (printer driver) 	3 min.
Manual print head alignment	<ul style="list-style-type: none"> - At print head replacement - When print quality is not satisfying (uneven printing, etc.) - When automatic print head alignment is not effective - When MP-101 is not available 	To ensure accurate dot placement.	<ul style="list-style-type: none"> - Three sheets of A4 plain paper - PC (printer driver) 	8 min.
Print head cleaning	When print quality is not satisfying.	To improve nozzle conditions.	<ul style="list-style-type: none"> - Via the printer buttons - PC (printer driver) 	1 min.
Print head deep cleaning	When print quality is not satisfying, and not improved by print head cleaning.	To improve nozzle conditions.	<ul style="list-style-type: none"> - Via the printer buttons - PC (printer driver) 	3 min.
System cleaning	When print quality is not satisfying, the bubbles has gotten mixed in with the tube, and non-ejection of ink occurs	To improve ink supply system	<ul style="list-style-type: none"> - Via the printer buttons - PC (printer driver) *¹ 	10 min.
Ink replenishment	When an ink tank becomes empty. ("No ink" error indicated, or the remaining ink level reaches the ink lower limit line indicated on the ink tanks).	To replenish ink tanks with ink.	---	2 min.
Paper feed roller cleaning	<ul style="list-style-type: none"> - When paper does not feed properly. - When the front side of the paper is smeared. 	To clean the paper feed rollers.	<ul style="list-style-type: none"> - Via the printer buttons*¹ - Three sheets of A4 plain paper - PC (printer driver) 	1 min.
Bottom plate	When the back side	To clean the platen	- Via the printer	1 min.

cleaning	of the paper is smeared.	ribs.	buttons* ¹ - One sheet of A4 plain paper - PC (printer driver)	
Scanning area cleaning	When the platen glass or document pressure sheet is dirty.	To clean the platen glass and the pressure sheet.	- Soft, dry, and clean lint-free cloth.	1 min.
Exterior cleaning	When necessary	To clean the printer exterior, or to wipe off dusts.	- Soft, dry, and clean lint-free cloth.	3 min.

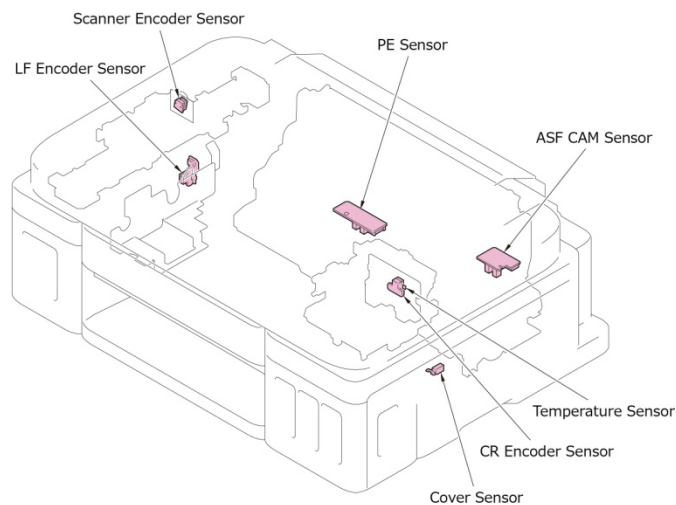
*1: For the G2000 series and the G3000 series only.

5-2. Special Tools

Name	Tool No.	Application	Remarks
MOLYKOTE G1054	QY9-0210-000	To the carriage rail sliding portions.	In common with other products on the market
FLOIL KG-51K3	QY9-0211-000	To the cap slider sliding portions.	In common with other products on the market

5-3. Sensors

(1) Sensor location

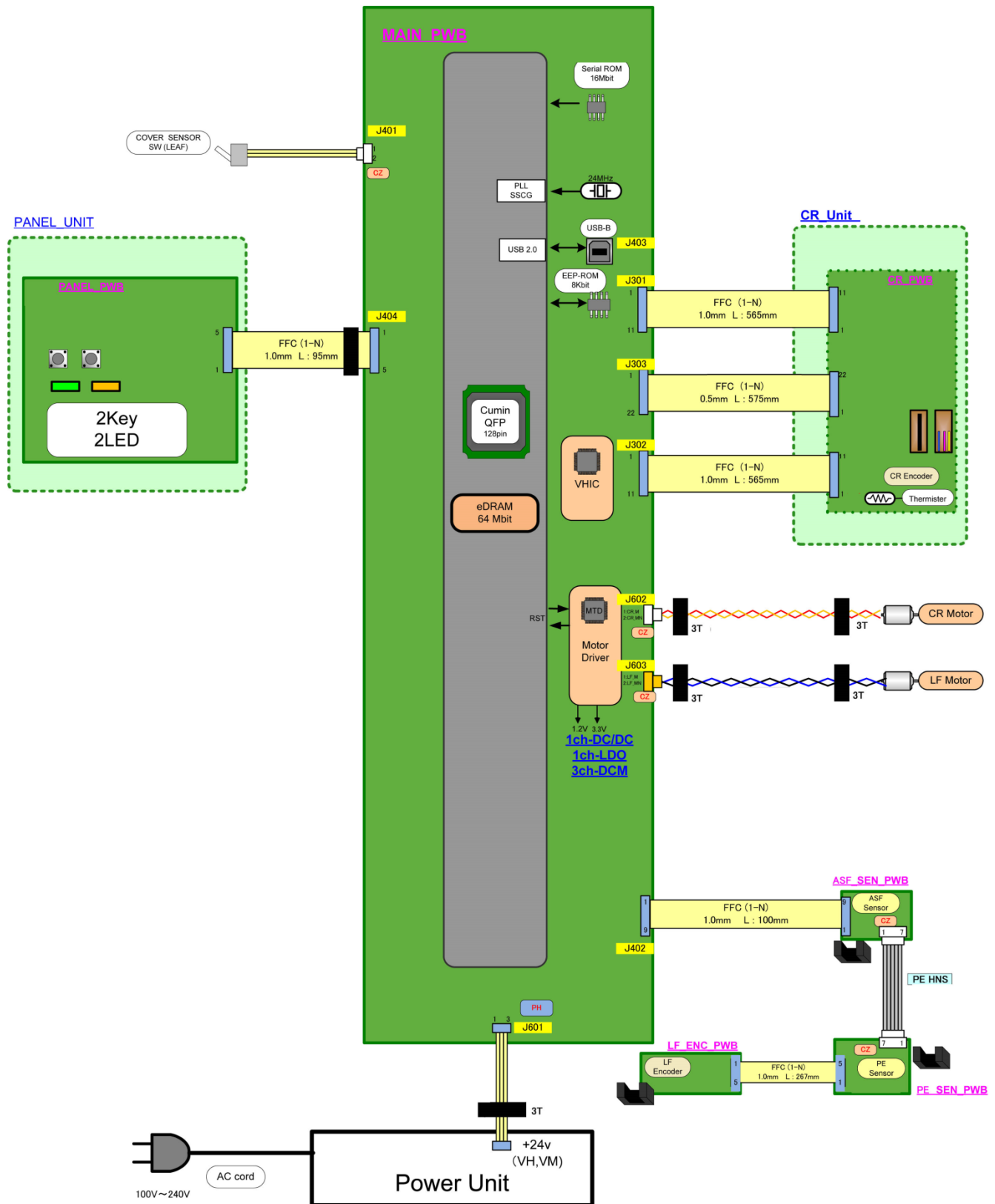


(2) Sensor function

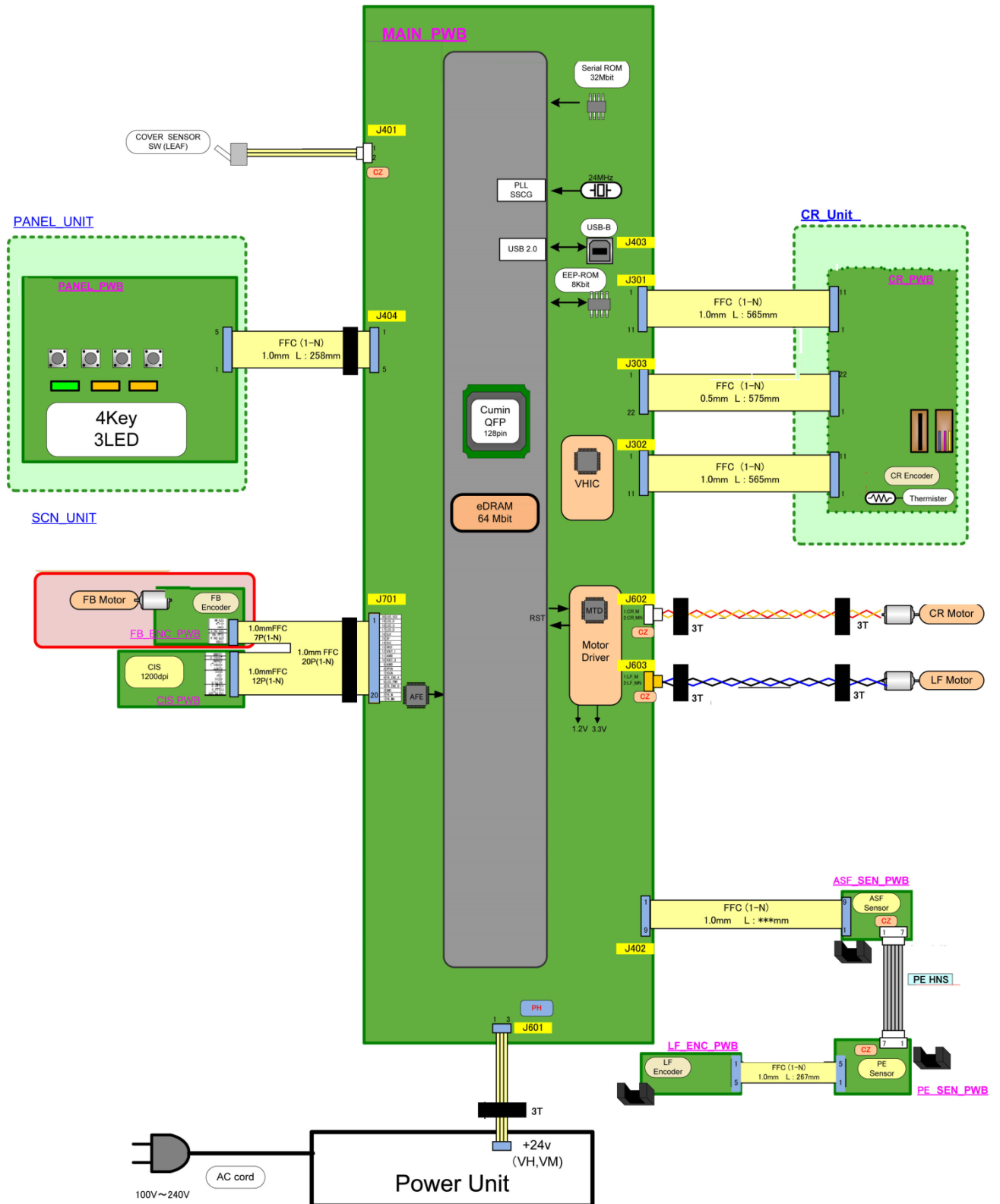
No.	Sensor	Function	Possible problems detected by the sensor
1	Cover sensor	Mechanical switch sensor that detects opening and closing of the Scanner Unit (Top Cover for the G1000 series)	- Notifies that the cover is open.
2	Scanner encoder sensor	Photo interrupter sensor that detects rotation of the scanner motor	- Scanner error (error code: 5011) - Scanner motor error (error code: 5012) - Faulty scanned or copied images
3	PE sensor	Photo interrupter sensor that detects paper presence	- No paper (error code: 1000) - Paper jam (error codes: 1300)
4	Temperature sensor	Detects the internal temperature of the printer.	- Internal temperature abnormal (error code: 5400)
5	Carriage encoder sensor	Photo interrupter sensor that detects position of the carriage unit	- Carriage position error (error code: 5100) - Improper print position or uneven printing
6	LF encoder sensor	Photo interrupter sensor that detects rotation of the LF encoder (and controls paper feeding)	- LF position error (error code: 6000) - Uneven printing
7	ASF cam sensor	Photo interrupter sensor that detects the position of the ASF cam.	ASF cam sensor error (error code: 5700)

5-4. Main PCB Ass'y Block Diagram

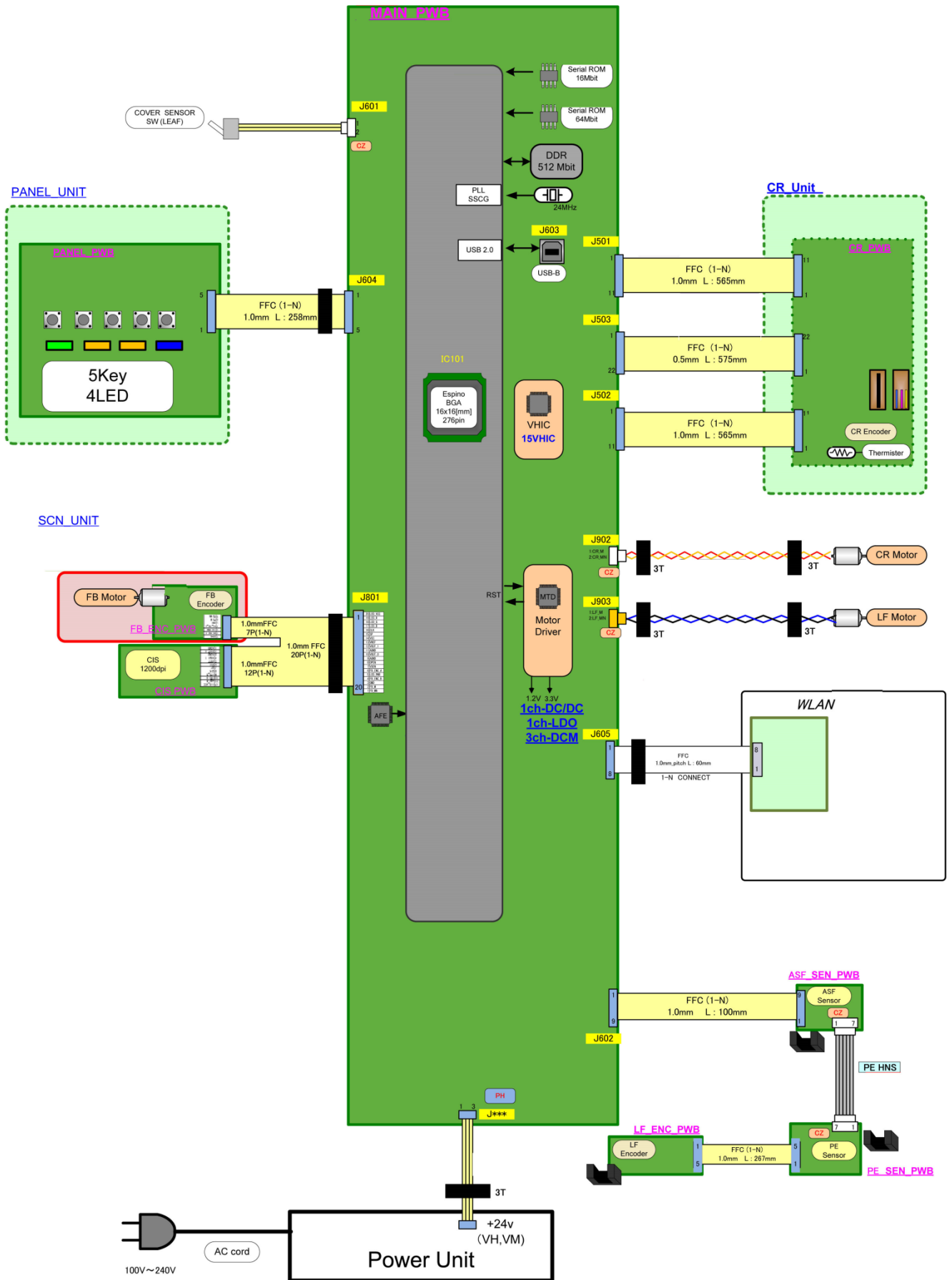
1. G1000 series:



2. G2000 series:



3. G3000 series:

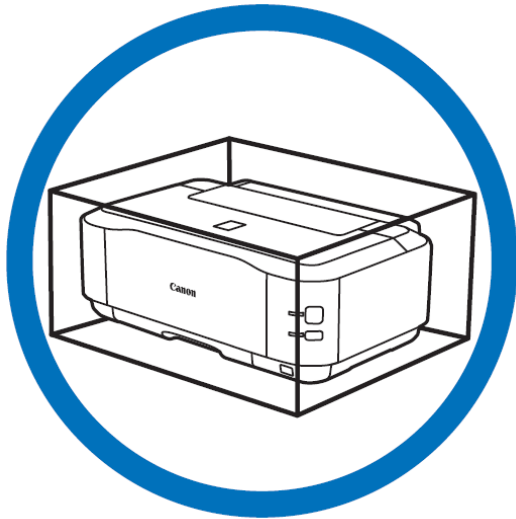


6. PRINTER TRANSPORTATION

Special notes on transportation of the printer:

To prevent ink leakage during transportation, be sure to follow the instructions below.

- 1) Never remove the cartridges (print head). Transport the printer with the print head installed.
- 2) Lock the carriage at the home position (far right of the printer).
(If you cannot lock the carriage due to an error or failure, manually move the carriage to the far right).
- 3) Secure the carriage with the tape.
- 4) Pack the printer in a plastic bag so that the surroundings may not get dirty with ink.
- 5) The printer must be kept with its bottom facing down in a box. Use a solid box and fill the box with packing material to protect the printer from moving in the box.
- 6) Keep the box so that the printer stays with its bottom facing down. **DO NOT** turn the box.
- 7) Be sure to tell the carrier that the box contains a precision equipment and it must be handled with the right side up with care.



Before transporting the printer:

- 1) Turn on the printer with the cartridge (print head) left installed in the printer.
When you cannot turn on the printer, unplug the power cord and go to 3).
When an error occurs, release the error using the **Black** button or the **Color** button.
(For the G1000 series, press the **Stop** button to release the error).
If you cannot release the error, push the **ON** button to turn off the printer, unplug the power cord and go to 3). If you cannot turn off the printer, unplug the power cord and go to 3).
- 2) Place the printer into the transportation mode.
Press and hold the Stop button, release it after the Alarm lamp flashes seven times, and the printer will be placed into the transportation mode.
(For the G1000 series, press and hold the Stop button, release it after the Alarm lamp flashes eight times, and the printer will be placed into the transportation mode.).
- 3) Confirm that the carriage has already moved to the far right.
If you cannot turn on the printer or the carriage cannot move due to the error, move the carriage to the far right manually.
- 4) Secure the carriage with the tape.
- 5) Confirm that the ink cap is closed.
- 6) Pack the printer in a plastic bag.
- 7) Attach the protective material to the printer when packing the printer in the box.

- Caution:
- a) If the cartridge is removed from the printer and left alone by itself, ink (the pigment-based black ink in particular) is likely to dry. For this reason, keep the print head installed in the printer even during transportation.
 - b) Securely lock the carriage in the home position, to prevent the carriage from moving and applying stress to the carriage flexible cable and ink tubes, or causing ink leakage, during transportation. Make sure that the carriage is locked in place at power-off.