

iP4800 series
SIMPLIFIED SERVICE MANUAL

(iP4810 / iP4820 / iP4840 / iP4850 / iP4870 / iP4880)

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1. TROUBLESHOOTING

1-1. Troubleshooting by Symptom

	Symptom	Solution
Faulty operation	The power does not turn on. The power turns off immediately after power-on.	(1) Confirm cable connection: - Harness ass'y => No incomplete connection, cable breakage, or cable caught in units (2) Replace the following item(s): - Logic board ass'y - AC adapter - DC harness ass'y
	A strange noise occurs.	(1) Examine and remove any foreign material from the drive portions. (2) Replace the following item(s): - The part generating the strange noise - Logic board ass'y
	Paper feed problems (multi-feeding, skewed feeding, no feeding).	(1) Examine and remove any foreign material from the following parts: - ASF unit - PE sensor - Paper guide unit - Pressure roller unit - Spur unit (2) Confirm that the paper guides are set properly. (3) Confirm the PF rear cover and the cassette conditions. (4) Confirm cable connection - PE sensor cable - Paper feed relay harness ass'y => No incomplete connection, cable breakage, or cable caught in units (5) Replace the following item(s): - ASF unit (for paper feeding error from the rear tray) - Pick-up arm unit (for paper feeding error from the cassette) - PE sensor board ass'y - Pressure roller unit - PE sensor cable - Cassette unit
	The disc tray is not pulled in the feeder ^{*2} .	(1) Confirm that the reflector on the back of the disc tray is clean: - Cleaning of the reflector (2) Replace the following item(s): - Logic board ass'y - CDR tray ass'y - Platen unit

	Symptom	Solution
	Printer not recognized by a USB-connected computer.	(1) Confirm the USB cable connection. (2) Connect the printer to another computer via the USB cable, and check if the printer is recognized. (3) Replace the following item(s): - USB cable - Logic board ass'y
Unsatisfactory print quality	No printing, or no color ejected. Faint printing, or white lines on printouts. Uneven printing. Improper color hue.	(1) Confirm the ink tank conditions: - No remainder of the outer film (the air-through must be opened) - Re-setting of an ink tank - Whether the ink tank is Canon-genuine one or not - Whether the ink tank is refilled one or not (2) Remove foreign material from the purge unit caps, if any. (3) Perform cleaning or deep cleaning of the print head. (4) Perform print head alignment. (5) Replace the following item(s): - Print head ^{*1} , and ink tanks - Logic board ass'y - Purge drive system unit
	Paper gets smeared.	(1) Clean the inside of the printer. (2) Perform bottom plate cleaning. (3) Perform paper feed roller cleaning. (4) Replace the following item(s): - Pressure roller unit (if smearing is heavy) - Print head*1 (when smearing is caused by the print head)
	The back side of paper gets smeared.	(1) Clean the inside of the printer. (2) Perform bottom plate cleaning. (3) Examine the platen ink absorber. (4) Examine the paper eject roller. (5) Replace the following item(s): - The part in the paper path causing the smearing
	Graphic or text is enlarged on printouts in the carriage movement direction.	(1) Confirm that the carriage slit film is free from smearing or scratches: - Cleaning of the timing slit film. (2) Replace the following item(s): - Timing slit strip film - Carriage unit - Logic board ass'y
	Graphic or text is enlarged on printouts in the paper feed direction.	(1) Confirm that the LF / EJ slit film is free from smearing or scratches: - Cleaning of the LF / EJ slit film. (2) Replace the following item(s): - Timing slit disk feed film - Timing slit disk eject film - Timing sensor unit - Platen unit - Logic board ass'y

Symptom	Solution
Smearing in disc label printing. Streaks on the printed disc label	(1) Check if the printable disc is the recommended one or not: - Change of the printer driver settings (2) Replace the following item(s): - CDR tray ass'y - Pressure roller unit (if smearing is heavy) - Platen unit

*1: Replace the print head only after the print head deep cleaning is performed 2 times, and when the problem persists.

*2: Only for disc label printing supported regions.

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

Errors and warnings are displayed by the following ways:

- Operator call errors are indicated by the Alarm LED lit in orange, and messages are displayed on the printer driver Status Monitor.
- Error codes (the latest 10 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.
- Resume/Cancel button: To cancel the job at error occurrence, and to clear the error.

LED (Blinking in orange)	Error	Error code	Solution	Parts that are likely to be faulty
2 times	No paper in the rear tray.	[1000]	Confirm that the rear tray is selected as the paper source. Set the paper in the rear tray, and press the Resume/Cancel button. If the error is not cleared, confirm that no foreign material is inside the paper feed slot.	- PE sensor board ass'y - ASF unit - Pressure roller unit
	No disc tray ^{*1} .	[1001]	Set the disc tray, and press the Resume/Cancel button. If the error is not cleared, confirm that the disc tray is not cracked or damaged.	- CDR tray ass'y - Carriage unit
	No printable disc ^{*1} .	[1002]	Set a printable disc in the disc tray, and insert the disc tray in the proper position. Then, press the Resume/Cancel button. If the error is not cleared, re-set the printable disc in the tray, and try again.	- CDR tray ass'y - Carriage unit
	No paper in the cassette.	[1003]	Confirm that the cassette is selected as the paper source. Set the paper in the cassette, and press the Resume/Cancel button. Note that the cassette is for plain paper only.	- Pick-up arm unit - Pressure roller unit - Cassette unit

LED (Blinking in orange)	Error	Error code	Solution	Parts that are likely to be faulty
3 times	Paper jam.	[1300]	Remove the jammed paper and press the Resume/Cancel button. For paper jam in the rear guide, confirm that the rear guide is not dislocated.	- Pick-up arm unit
	Paper jam in the rear guide.	[1303]		- ASF unit
	Paper jam in the under guide.	[1304]		- Pressure roller unit
	The front door is closed.	[1205]	- Cassette unit	- Rear guide unit
			Open the front door (paper output tray).	- Front door switch unit
4 times	Ink may have run out.	[1600]	Replace the applicable ink tank, or press the Resume/Cancel button to clear the error without ink tank replacement. When the error is cleared by pressing the Resume/Cancel button, ink may run out during printing.	- Spur unit
	Ink tank not installed.	[1660]	Install the applicable ink tank(s) properly, and confirm that the LED's of all the ink tanks light red.	- Ink tank
				- Carriage unit
5 times	Print head not installed, or not properly installed.	[1401]	Install the print head properly. If the error is not cleared, confirm that the print head contact pins of the carriage are not bent.	- Print head
	Faulty print head ID.		Re-set the print head. If the error is not cleared, the print head may be defective. Replace the print head.	- Carriage unit
	Print head temperature sensor error.	[1403]		- Print head
	Faulty EEPROM data of the print head.	[1405]		- Carriage unit
6 times	Inner cover open.	[1841] ^{*2} [1846] ^{*2} [1851] ^{*1} [1856] ^{*1}	Close the inner cover, and press the Resume/Cancel button. If the error is not cleared, examine that the inner cover sensor is properly installed.	- Spur unit
				- Inner cover unit
	Inner cover closed in disc label printing.	[1850] ^{*1} [1855] ^{*1}	Open the inner cover, set the disc tray, and press the Resume/Cancel button.	- Spur unit
	Time-out in disc label printing	[1830] ^{*1}	A prescribed period of time (12 minutes) has elapsed without any printing since printing was attempted. Press the Resume/Cancel button to clear the error.	- Inner cover unit
7 times	Multiple ink tanks of the same color installed.	[1487]	Replace the wrong ink tank(s) with the correct one(s).	- Ink tank
	Ink tank in a wrong position.	[1680]	Install the ink tank(s) in the correct position.	- Ink tank

LED (Blinking in orange)	Error	Error code	Solution	Parts that are likely to be faulty
8 times	Warning: The ink absorber becomes almost full.	[1700]	Replace the ink absorber, and reset its counter. Pressing the Resume/Cancel button will exit the error, and 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.	- Ink absorber
9 times	The connected digital camera or digital video camera does not support Camera Direct Printing.	[2001]	Remove the cable between the camera and the printer.	
10 times	Automatic two-sided printing cannot be performed.	[1310]	The paper length is not supported for two-sided printing. Press the Resume/Cancel button to eject the paper being used at error occurrence. Data which was to be printed on the back side of paper at error occurrence is skipped (not printed).	- Duplex paper feed roller unit - PE sensor board ass'y
11 times	Failed in automatic print head alignment.	[2500]	Press the Resume/Cancel button to clear the error, then perform the automatic print head alignment again. (Use Matte Photo Paper MP-101.) If the alignment pattern was not printed properly (faint printing, etc.), perform print head cleaning, then perform the print head alignment again.	- Carriage unit - Print head - Purge drive system unit
12 times	Premium Contents print error.	[4100]	Non-genuine ink tanks are installed. Install the supported (Canon-genuine) ink tanks.	- Ink tank
13 times	The remaining ink amount unknown (raw ink present).	[1683]	An ink tank which has once been empty is installed. Replace the applicable ink tank with a new one. Printing with a once-empty ink tank can damage the printer. To continue printing without replacing the ink tank(s), press the Resume/Cancel button for 5 sec. or longer to disable the function to detect the remaining ink amount. After the operation, it is recorded in the printer EEPROM that the function to detect the remaining ink amount was disabled.	- Ink tank - Spur unit
14 times	Ink tank not recognized.	[1684]	A non-supported ink tank is installed (the ink tank LED is turned off). Install the supported ink tanks.	- Ink tank
15 times	Ink tank not recognized.	[1682]	A hardware error occurred in an ink tank (the ink tank LED is turned off). Replace the ink tank(s).	- Ink tank

LED (Blinking in orange)	Error	Error code	Solution	Parts that are likely to be faulty
16 times	No ink (no raw ink).	[1688]	Replace the empty ink tank(s), and close the scanning unit (cover). Printing with an empty ink tank can damage the printer. To continue printing without replacing the ink tank(s), press the Resume/Cancel button for 5 sec. or longer to disable the function to detect the remaining ink amount. After the operation, it is recorded in the printer that the function to detect the remaining ink amount was disabled.	- Ink tank - Spur unit
19 times	Non-supported hub.	[2002]	Remove the applicable USB hub from the PictBridge (USB) connector.	

*1: Only for disc label printing supported regions.

*2: Only for disc label printing non-supported regions.

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

- Check each point in "Check points & Solution," and perform the solution if it applies.
- When no solution in "Check points & Solution" is effective, then replace the part listed under "Parts to be replaced" one by one from the one most likely to be faulty. The parts are listed in the order of likeliness to be faulty.

Cycles of LED blinking	Error	Error code	Check points & Solution	Parts that are likely to be faulty (in the order of likeliness to be faulty)
2 times	Carriage error	[5100]	(1) Smearing or scratches on the carriage slit film: -> Clean the film using lint-free paper. (2) Foreign material that obstructs the carriage movement: -> Remove foreign material. (3) Ink tank conditions: -> Re-set the ink tanks. (4) Cable connection: - CR FFC CN401, CN402, CN403 - Motor multi harness ass'y -> Re-connect the cables. If any damage or breakage of the cable is found, replace the cable. (5) Scratches or damages to the carriage slit film: -> Replace the timing slit strip film. (6) Black debris around the carriage rail or pressure roller: -> Replace the carriage unit.	-Logic board ass'y -Carriage motor -Carriage unit -Motor multi harness ass'y

Cycles of LED blinking	Error	Error code	Check points & Solution	Parts that are likely to be faulty (in the order of likeliness to be faulty)
3 times	Line feed error	[6000]	(1) Opening and closing of the paper output tray: -> Remove obstacles from around the paper output tray so that the tray opens and closes properly. (2) Smearing or scratches on the LF / EJ slit film: -> Clean the LF / EJ slit film using lint-free paper. (3) Foreign material in the LF drive: -> Remove foreign material. (4) Cable connection: - LF encoder cable - PE sensor cable - Paper feed relay harness ass'y - Paper feed motor harness ass'y -> Re-connect the cables. If any damage or breakage of the cable is found, replace the cable. (5) LF lock arm spring: -> Attach the spring properly.	-Timing slit disk feed film -Timing slit disk eject film -Timing sensor unit -Paper feed roller unit -Logic board ass'y -Paper feed motor
4 times	Purge cam sensor error	[5C00]	(1) Foreign material around the purge drive system unit: -> Remove foreign material. (2) Cable connection: - Valve cam harness (CN700) -> Re-connect the cable. (3) Strange sound at power-on: -> Replace the purge drive system unit.	-Purge drive system unit -Logic board ass'y
5 times	ASF (cam) sensor error	[5700]	(1) Cable connection: - PE sensor cable -> Re-connect the cable. If any damage or breakage of the cable is found, replace the cable.	-ASF unit -PE sensor board ass'y -Logic board ass'y
6 times	Internal temperature error	[5400]	(1) Cable connection: - Ink absorber multi harness (CN701) -> Re-connect the cable. If any damage or breakage of the cable is found, replace the spur unit.	-Spur unit -Logic board ass'y -Print head
7 times	Ink absorber full	[5B00] [5B01]	(1) Ink absorber condition: -> Replace the ink absorber, and reset the ink absorber counter value in the EEPROM.	

Cycles of LED blinking	Error	Error code	Check points & Solution	Parts that are likely to be faulty (in the order of likeliness to be faulty)
8 times	Print head temperature rise error	[5200]	(1) Print head condition (face surface and mold): -> If the face surface or the mold is heat-deformed, replace the print head. (2) Head contact pin condition of the carriage unit: -> If the pin is bent or deformed, replace the carriage unit. (3) Cable connection: - CR FFC (CN401, CN402, CN403) -> Re-connect the cable. If any damage or breakage of the cable is found, replace the carriage unit.	-Print head -Logic board ass'y -Carriage unit
9 times	EEPROM error	[6800] [6801]	(1) Part replacement: -> Replace the logic board ass'y.	
10 times	VH monitor error	[B200]	(1) Print head condition (face surface and mold): -> If the face surface or the mold is heat-deformed, replace <u>the print head and the logic board in set</u> . Be sure to replace them at the same time. (2) Burn mark or heat deformation of the logic board: -> If a burn mark or heat deformation is seen on the logic board, replace <u>the print head and the logic board in set</u> . Be sure to replace them at the same time. (3) Head contact pin condition of the carriage unit: -> If the pin is bent or deformed, replace the carriage unit. (4) Cable connection: - CR FFC (CN401, CN402, CN403) -> Re-connect the cable. If any damage or breakage of the cable is found, replace the carriage unit.	-AC adapter -Carriage unit
11 times	Carriage lift mechanism error	[5110]	(1) Foreign material that obstructs the carriage movement: -> Remove foreign material.	-Switch system unit -Carriage unit
12 times	APP position error	[6A80]	(1) Cap absorber and wiper blade of the purge drive system unit: -> If the cap absorber contacts the wiper blade, lower the cap absorber so that it will	-Timing slit disk APP film -PE sensor board ass'y
	APP position error during initial purging	[6A81]		

Cycles of LED blinking	Error	Error code	Check points & Solution	Parts that are likely to be faulty (in the order of likeliness to be faulty)
14 times	APP sensor error	[6A90]	not contact the wiper blade. (2) Foreign material around the purge drive system unit: -> Remove foreign material. (3) Ink absorber right beneath the purge drive system unit: -> Confirm that the absorber stays in place and does not contact the unit. (4) Foreign material around the ASF unit: -> Remove foreign material. (5) APP slit film condition: -> Clean the APP slit film using lint-free paper. (6) APP code wheel gear condition: -> If the gear wears, replace the gear. (7) Cable connection: - PE sensor cable - Motor multi harness ass'y -> Re-connect the cables. If any damage or breakage of the cable is found, replace the cable.	-Purge drive system unit -Logic board ass'y
	Paper feed cam sensor error	[6B10]	(1) Ink absorber counter value: -> If the value exceeds 60%, replace the ink absorber. Follow the "Guideline for Preventive Replacement of the Ink Absorber." (2) Jammed paper in the under guide: -> Remove the jammed paper and foreign material.	-Pick-up arm unit -Duplex paper feed roller unit
15 times	USB host Vbus overcurrent	[9000]	(1) Part replacement: -> Replace the logic board ass'y.	
17 times	Paper eject encoder error	[6010]	(1) Smearing on the LF / EJ slit film: -> Clean the LF / EJ slit film using lint-free paper. (2) Foreign material in the paper path: -> Remove foreign material. (3) Cable connection: - LF encoder cable - PE sensor cable -> Re-connect the cable. If any damage or breakage of the cable is found, replace the cable. (4) Scratches on the LF / EJ slit film: -> Replace the timing slit disk feed film or the timing slit disk eject film.	-Timing sensor unit -Platen unit -Logic board ass'y -Paper feed motor

Cycles of LED blinking	Error	Error code	Check points & Solution	Parts that are likely to be faulty (in the order of likeliness to be faulty)
19 times	Ink tank position sensor error	[6502]	(1) Ink tank position: -> Confirm the ink tanks are installed in the correct slots. (2) Re-set or replacement of ink tanks: -> If the error persists, replace the ink tanks. (3) Cable connection: - Ink absorber multi harness (CN701) -> Re-connect the cable.	-Spur unit -Logic board ass'y
20 times	Other errors	[6500]	(1) Cable connection: - Wireless LAN cable -> Re-connect the cable. If any damage or breakage of the cable is found, replace the cable.	-Logic board ass'y
21 times	Drive switch error	[C000]	(1) Foreign material in the drive switch area of the purge drive system unit: -> Remove foreign material. (2) Ink tank conditions: -> Confirm that the ink tanks are seated properly and they do not interfere with the carriage movement.	-Purge drive system unit -ASF unit -Carriage unit
23 times	Valve cam sensor error	[6C10]	(1) Foreign material around the purge drive system unit: -> Remove foreign material. (2) Cable connection: - Valve cam harness (CN700) -> Re-connect the cable.	-Purge drive system unit -Logic board ass'y

Note: Before replacement of the logic board, check the ink absorber counter value, and register it to the replaced new logic board. (The value can be set in 10% increments.)
 In addition, according to the "Guideline for Preventive Replacement of Ink Absorber," replace the ink absorber.

2. REPAIR / ADJUSTMENT / SETTINGS

2-1. Major Replacement Parts and Adjustment

Service part	Recommended removal procedure ^{*1} / Notes on replacement	Adjustment / settings / operation check
Logic board ass'y	(1) Cassette unit (2) Paper support unit (3) Access cover (4) Left and right side covers (5) Front door unit (6) Main case (7) Panel board (8) Logic board Note: - Before replacement, check the ink absorber counter value (by service test print or EEPROM information print). - Before removal of the logic board ass'y, remove the power cord, and allow for approx. 1 minute (for discharge of capacitor's accumulated charges), to prevent damages to the logic board ass'y.	In the service mode: 1. Initialize the EEPROM. 2. Set the ink absorber counter value. 3. Set the destination. 4. Print the integrated inspection pattern. 5. Perform LF / Eject correction (only when streaks or uneven printing occurs). 6. Print the EEPROM information. In the user mode: 7. Perform print head alignment. 8. Print via USB connection. 9. Perform direct printing from a digital camera (PictBridge).
Absorber kit	(1) to (7) Same as for the logic board ass'y procedures. (8) Print unit (9) Ink absorber	In the service mode: 1. Reset the ink absorber counter. 2. After the ink absorber counter is reset, the counter value is printed automatically.
Carriage unit	(1) to (7) Same as for the logic board ass'y procedures. (8) Timing slit strap - Before removal of the carriage rail, put a mark of the carriage rail position. (9) Carriage rail (10) Carriage unit Note: - Before removing the carriage rail, put a mark on the main chassis to indicate the carriage rail position. - Keep the timing slit strip film (carriage encoder film) free from stain or damage. When returning the strip, make sure of its orientation (left and right, front and back).	1. Apply grease to the sliding portions of the carriage rail. In the service mode: 2. Print the integrated inspection pattern. In the user mode: 3. Perform print head alignment.

Service part	Recommended removal procedure ^{*1} / Notes on replacement	Adjustment / settings / operation check
Switch system unit, Paper feed motor	(1) to (7) Same as for the logic board ass'y procedures. (8) Print unit (9) Timing slit strap - Before removal of the carriage rail, put a mark of the carriage rail position. (10) Carriage rail (11) Carriage unit (12) Spur unit (13) Platen unit (14) Purge drive system unit (15) Switch system unit Note: - The screws securing the paper feed motor are allowed to be loosened only for paper feed motor replacement. (DO NOT loosen them in any other cases.)	1. Adjust the paper feed motor. In the service mode: 2. Print the integrated inspection pattern.
Platen unit	(1) to (7) Same as for the logic board ass'y procedures. (8) Print unit (9) Timing slit strap - Before removal of the carriage rail, put a mark of the carriage rail position. (10) Carriage rail (11) Carriage unit (12) Spur unit (13) Platen unit	In the service mode: 1. Perform LF / Eject correction (only when uneven printing or streaks appear on printouts after replacement). 2. Print the integrated inspection pattern.
Spur unit	(1) to (7) Same as for the logic board ass'y procedures. (8) Print unit (9) Timing slit strap - Before removal of the carriage rail, put a mark of the carriage rail position. (10) Carriage rail (11) Carriage unit (12) Spur unit Note: - DO NOT contact the spur edges.	In the service mode: 1. Print the integrated inspection pattern. 2. Perform LF / Eject correction (only when uneven printing or streaks appear on printouts after replacement).

Service part	Recommended removal procedure ^{*1} / Notes on replacement	Adjustment / settings / operation check
Purge drive system unit	(1) to (7) Same as for the logic board ass'y procedures. (8) Print unit (9) Timing slit strap - Before removal of the carriage rail, put a mark of the carriage rail position. (10) Carriage rail (11) Carriage unit (12) Spur unit (13) Platen unit (14) Purge drive system unit	In the service mode: 1. Print the integrated inspection pattern.
Carriage rail	(1) to (7) Same as for the logic board ass'y procedures. (8) Print unit (9) Timing slit strap - Before removal of the carriage rail, put a mark of the carriage rail position. (10) Carriage rail (11) Carriage unit (12) Spur unit (13) Platen unit (14) Main chassis	1. Apply grease to the sliding portions.
Main chassis		In the service mode: 2. Print the integrated inspection pattern.
Idler pulley parallel pin		
APP code wheel gear shaft		
Timing slit strip film	(1) to (7) Same as for the logic board ass'y procedures. (8) Print unit (9) Timing slit strap (10) Timing slit disk feed film or timing slit disk eject film Note: - Upon contact with the film, wipe the film with ethanol. - Confirm no grease is on the film. (Wipe off any grease thoroughly with ethanol.) - Do not bend the film.	In the user mode: 1. Perform print head alignment.
Timing slit disk feed film		In the service mode: 2. Print the nozzle check pattern. 3. Perform LF / Eject correction (only when uneven printing or streaks appear on printouts after replacement).
Timing slit disk eject film		
Print head		In the user mode: 1. Perform print head alignment. In the service mode: 2. Print the integrated inspection pattern.

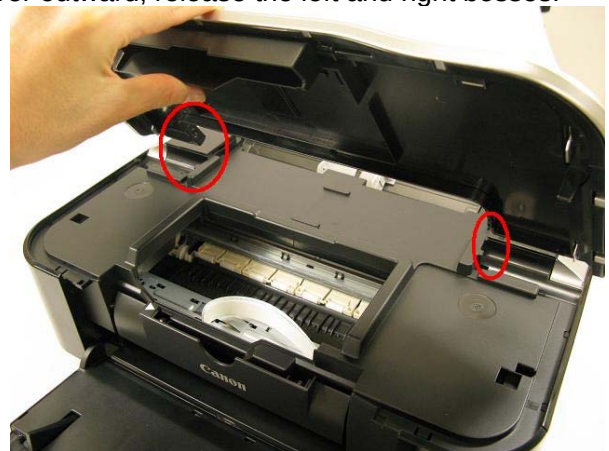
*1: To reassemble the unit after replacement, follow the procedures in the reverse order.

(2) How to remove external housing

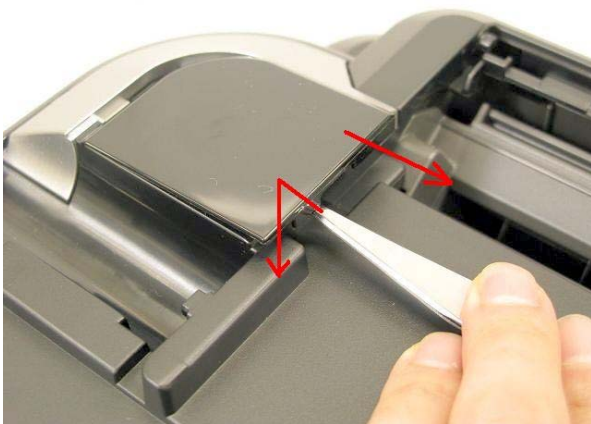
- 1) Remove the cassette.



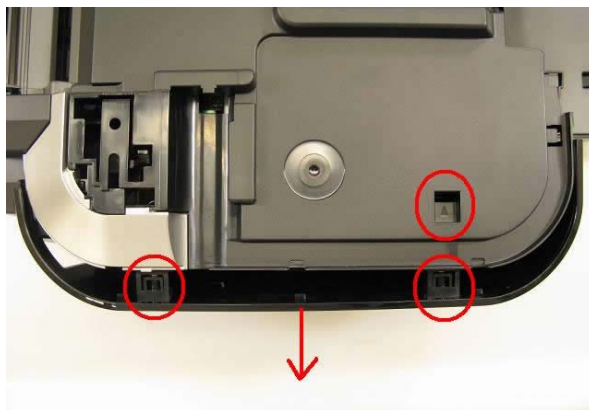
- 2) Remove the paper support unit and the top cover.
< While slightly pushing the center of the top cover outward, release the left and right bosses. >



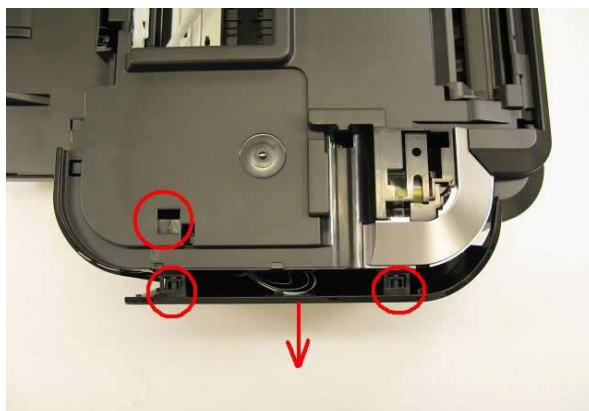
- 3) Remove the main case covers L and R.
< Through the slit under the cover, while pushing the tab of the main case downward, slide the cover to remove it from the main unit. >



- 4) Remove the side cover L.



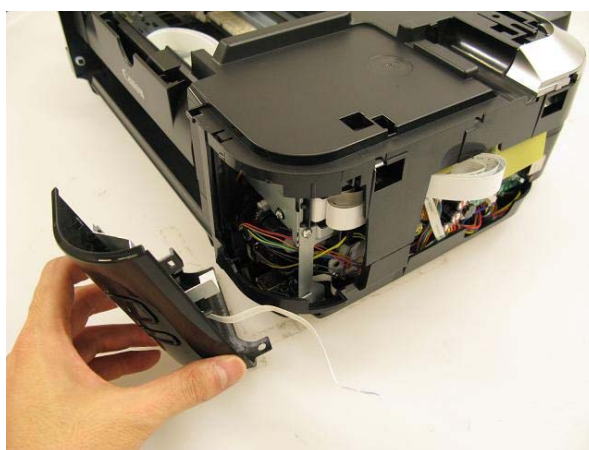
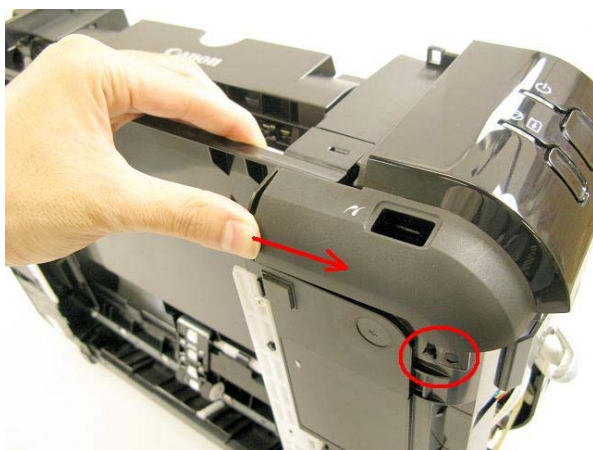
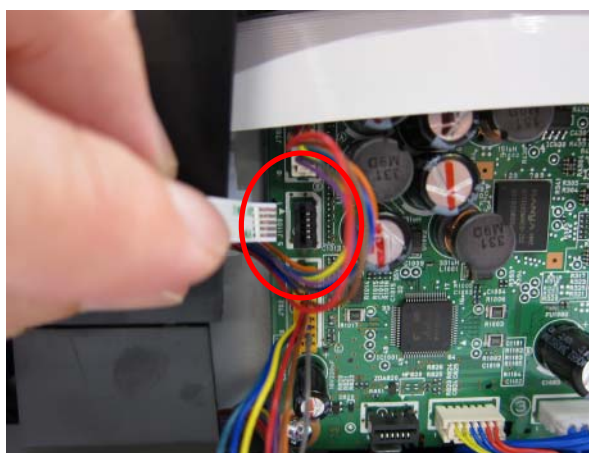
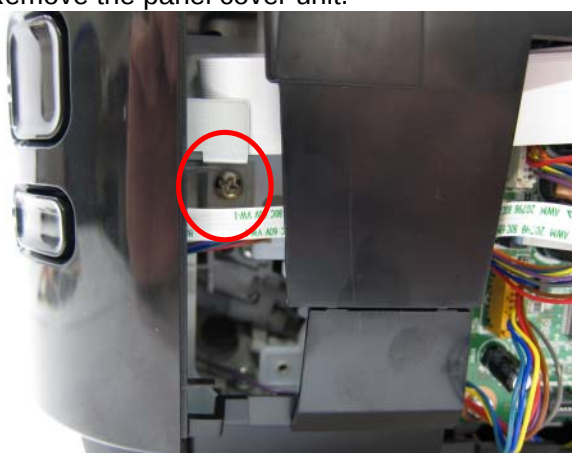
- 5) Remove the side cover R.



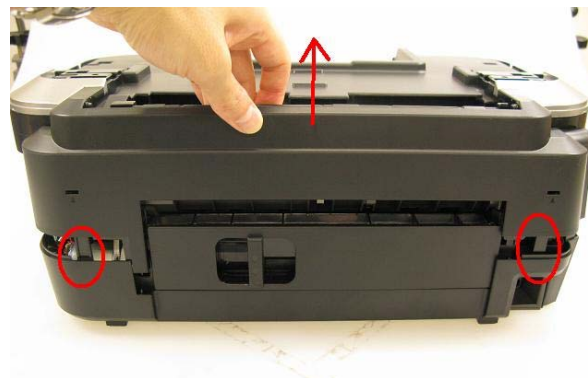
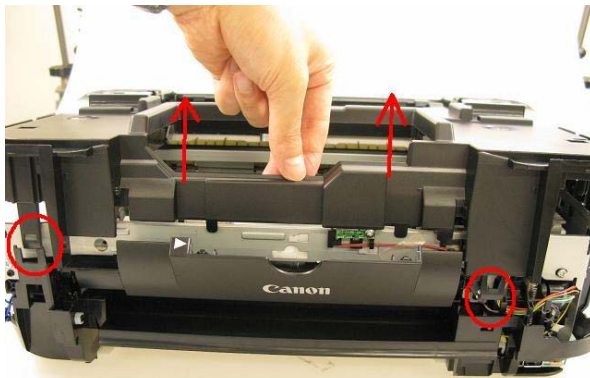
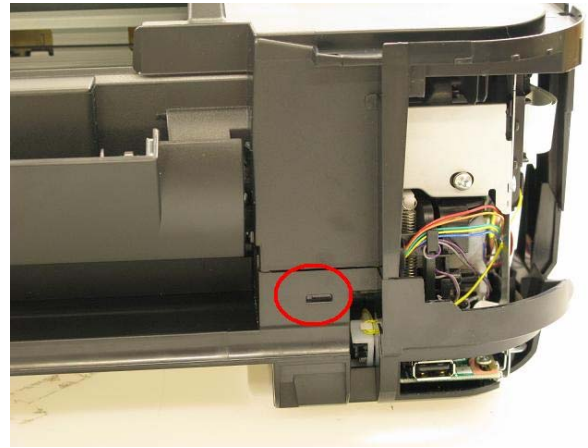
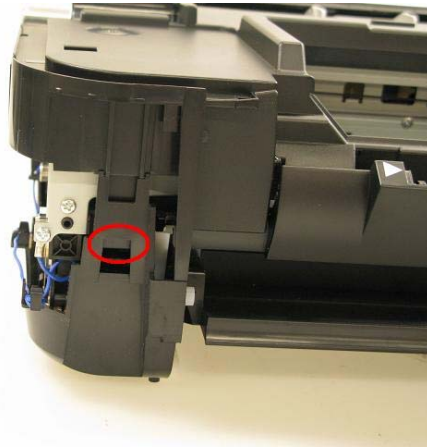
- 6) Remove the front door unit.
< While slightly pushing the center of the unit outward, release the left and right bosses. >



- 7) Remove the panel cover unit.



8) Remove the main case.



2-2. Adjustment and Settings in Service Mode

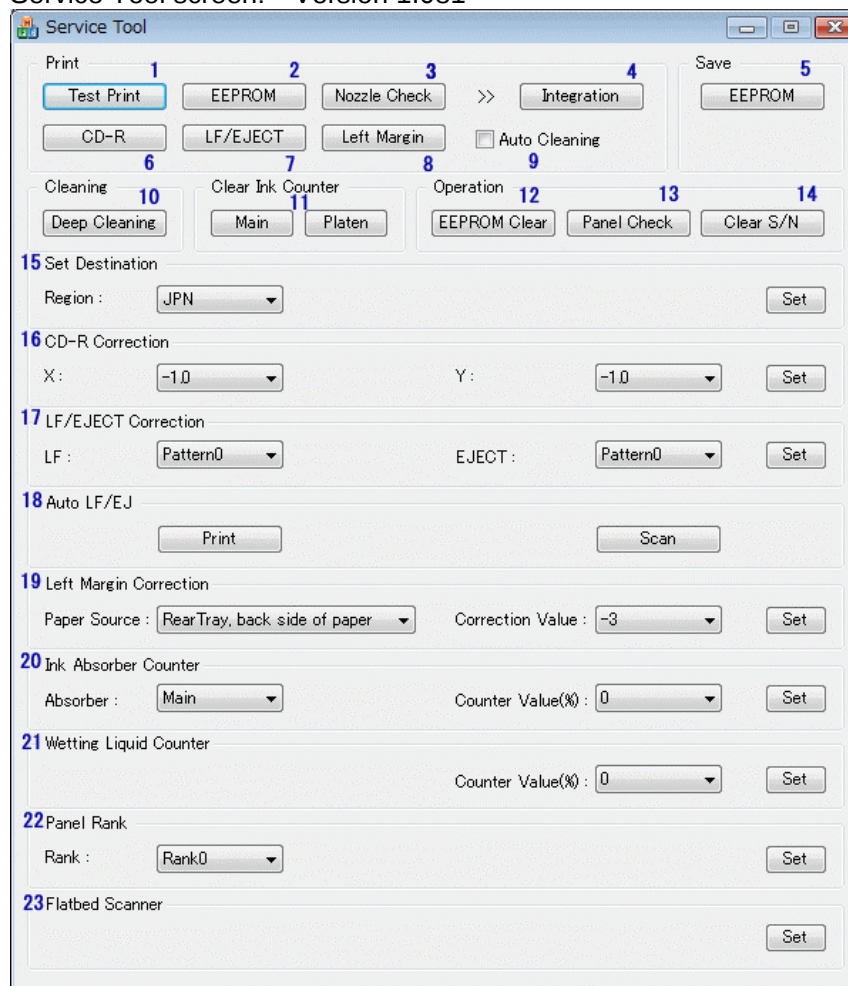
(1) Service mode operation procedures

Use the Service Tool on the connected computer.

- 1) Start the printer in the service mode.
 - i. With the printer power turned off, while pressing the Resume/Cancel button, press and hold the ON button. (DO NOT release the buttons.)
 - ii. When the Power LED lights in green, while holding the ON button, release the Resume/Cancel button, then press the Resume/Cancel button 5 times^{*1}, and release the ON button. (Each time the Resume/Cancel button is pressed, the Alarm and Power LEDs light alternately.)
 - iii. When the Power LED lights, the printer is ready for the service mode operation.
- 2) Start the Service Tool on the connected computer.
 - 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.
 - iii. If a non-supported function is selected, "Error!" is displayed. Click **OK** in the error message dialog box to exit the error.

(2) Service Tool functions

Service Tool screen: Version 1.081



No.	Name	Function	Remarks
1	Test Print	Service test print	Paper will feed from the rear tray (2 sheets). Printed items: - Model name - ROM version - USB serial number - Process inspection information - Barcode (model name + destination + printer serial number) - Ink system function check result (printed on the second sheet) - CD / DVD sensor check result (printed on the second sheet)
2	EEPROM	EEPROM information print	The dialog box opens to select the paper source. Select Rear tray or Cassette, and click OK. Printed items: - Model name - Destination - ROM version - Ink absorber counter value (ink amount in the ink absorber) - Print information - Error information, etc.
3	Nozzle Check	Nozzle check pattern print	The dialog box opens to select the paper source. Select Rear tray or Cassette, and click OK. The same pattern as the one in the user mode is printed.
4	Integration	Integrated inspection pattern print	Paper will feed from the rear tray (if the cassette is selected, the error is displayed). Multiple inspection items are printed just in one page, it is recommended to use this function for the standard inspection. Printed items: - Model name - ROM version - USB serial number - Nozzle check pattern (same as the one in the user mode) - Process inspection information - Barcode (printer serial number) - Ink system function check result - CD / DVD sensor check result
5	EEPROM	EEPROM information saving	The EEPROM information is displayed on the computer or is saved to the computer as a text file. This function is not available in most cases of errors.

No.	Name	Function	Remarks
6	CD-R	CD-R check pattern print	For refurbishment use, and not used in servicing. The same calibration as the one performed at the production site is performed.
7	LF / EJECT	LF / Eject correction pattern print	Perform LF / Eject correction only when streaks or uneven printing occurs after the repair.
8	Left Margin	Left margin pattern print	Not used.
9	Auto Cleaning	Enabling / disabling of automatic print head cleaning	Automatic print head cleaning prior to printing (after replacement of an ink tank or the print head). Select this option to enable the cleaning.
10	Deep Cleaning	Print head deep cleaning	Cleaning of both Black and Color at the same time
11	Main (Clear Ink Counter)	Main ink absorber counter resetting	Set a sheet of A4 or Letter sized plain paper. After the ink absorber counter is reset, the counter value is printed automatically.
	Platen (Clear Ink Counter)	Platen ink absorber counter resetting	Not used.
12	EEPROM Clear	EEPROM initialization	The following items are NOT initialized, and the shipment arrival flag is not on: - USB serial number - Destination settings - Record of ink absorber counter resetting and setting - Record of repair at the production site - Disc label print position correction value - LF / Eject correction values - Left margin correction value - Production site E-MIP correction value and enabling of it - Endurance correction value and enabling of it - Record of disabling the function to detect the remaining ink amount - Ink absorber counter value (ink amount in the ink absorber)
13	Panel Check	Button and LCD test	Not used.
14	Clear S/N	Serial number resetting (to zero)	The printer serial number is reset to "000000000."
15	Set Destination	Destination settings	Select the destination, and click Set . ASA, AUS, BRA, CHN, CND, EMB, EUR, JPN, KOR, LTN, TWN, USA
16	CD-R Correction	Disc label print position correction (X and Y direction)	To be used with 6. CD-R check pattern print, mainly in refurbishment operation. The reference center in the X direction and in the Y direction can be adjusted respectively. (Adjustable range between -1.0 mm to +1.0 mm, in 0.1 mm increment)
17	LF / EJECT Correction	LF / Eject correction value setting	Set the correction value based on the printed pattern (7. LF / EJECT correction pattern print).
18	Auto LF / EJ	Automatic LF / Eject correction	Note used.
19	Left Margin Correction	Left margin correction value setting	Not used.

No.	Name	Function	Remarks
20	Ink Absorber Counter	Ink absorber counter setting	("Main" absorber only for the iP4800 series)
21	Wetting Liquid Counter	Wetting liquid counter setting	Not used.
22	Panel Rank	Capacitive sensor sensitivity setting	Not used.
23	Flatbed Scanner	Individual scanner adjustment	Not used.

(3) LF / Eject correction

After replacement of the feed roller, platen unit, LF / Eject encoder, carriage encoder film, or logic board in repair servicing or in refurbishment operation, perform the adjustment to maintain the optimal print image quality.

If the print quality is considered unaffected by replacement of those parts, it is not necessary to perform LF / Eject correction.

1) Print the LF / Eject correction pattern.

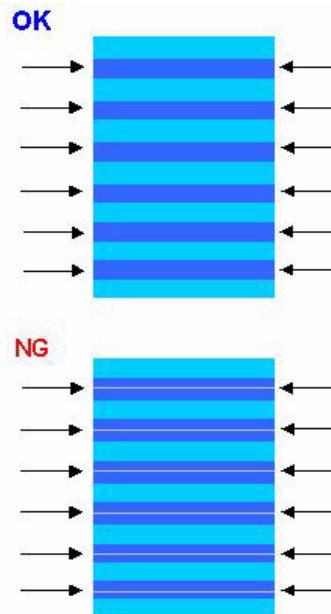
Click **LF/EJECT** of the Service Tool on the connected computer, select the paper source and the paper type, and print the pattern. 5 sheets of A4 paper will be used for the pattern printing.

- Paper source: Select either **Rear tray** or **Cassette**.

- Media type: Select one from **HR-101**, **GF-500/Office Planner**, **HP Bright White**, and **Canon Extra/STEINBEIS**.

2) When printing is finished, the printer returns to be ready for selection of another function ("A function was finished" is displayed on the screen).

3) In the printout, determine the Pattern No. in which streaks or lines are the least noticeable for the LF check pattern and the Eject check pattern respectively. (LF Pattern No. 0 to 4, Eject Pattern No. 0 to 4)



4) In the **LF/EJECT Correction** section of the Service Tool, select the Pattern No. (from 0 to 4) determined in step 3) for **LF** and **EJECT** respectively, and click **Set**.

5) The selected LF and Eject correction values are written to the EEPROM, making the E-MIP correction value (which was set at shipment from the production site) invalid.

Note: At the production site, the E-MIP correction, which is equivalent to the LF / Eject correction, is performed using the special tool, and the E-MIP correction value is written to the EEPROM as

the valid data.

When LF / Eject correction is performed, the LF / Eject correction values become valid instead of the E-MIP correction value (thus, in the initial EEPROM information print, "LF = *" and "EJ = *" are printed, but the selected values are printed after the LF / Eject correction).

(4) Ink absorber counter setting

Set the ink absorber counter value to a new EEPROM after the logic board is replaced in servicing.

- 1) Before replacement of the logic board, check the ink absorber counter value in EEPROM information print.
- 2) After replacement of the logic board, 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 logic board, and click **Set**.

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

(5) Disc label print position correction

Set the disc label print position value to a new EEPROM after the logic board is replaced in servicing. This function can be also used in solving user complaints in the field, however, use of the application software is recommended for solution of user complaints.

- 1) Before replacement of the logic board, check the disc label print position value in EEPROM information print.
- 2) After replacement of the logic board, set the disc label print position value in the service mode using the Service Tool, **CD-R Correction** section.
- 3) If the disc label print position value from the original logic board is not available due to the logic board failure, etc., print the CD-R check pattern and confirm that the intersection of the X axis and Y axis is at the center of a printable disc.

2-3. Adjustment in User Mode

Function	Procedures	Remarks
Nozzle check pattern printing	Perform from the printer driver Maintenance tab.	Set a sheet of plain paper (A4 or Letter) in the cassette, or the rear tray if selected.
Print head manual cleaning	Perform from the printer driver Maintenance tab. (cleaning Black or Color separately, or both Black and Color)	Unclogging of the print head nozzles, and maintenance to keep the print head conditions good. If there is a missing portion or white streaks in the nozzle check pattern printout, perform this cleaning.
Print head deep cleaning	Perform from the printer driver Maintenance tab.	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.
Automatic print head alignment	Perform from the printer driver Maintenance tab.	Set a sheet of Matte Photo Paper MP-101 (A4) in the rear tray. If the automatic print head alignment is not effective, perform manual print head alignment.

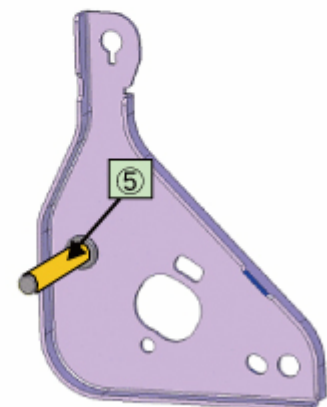
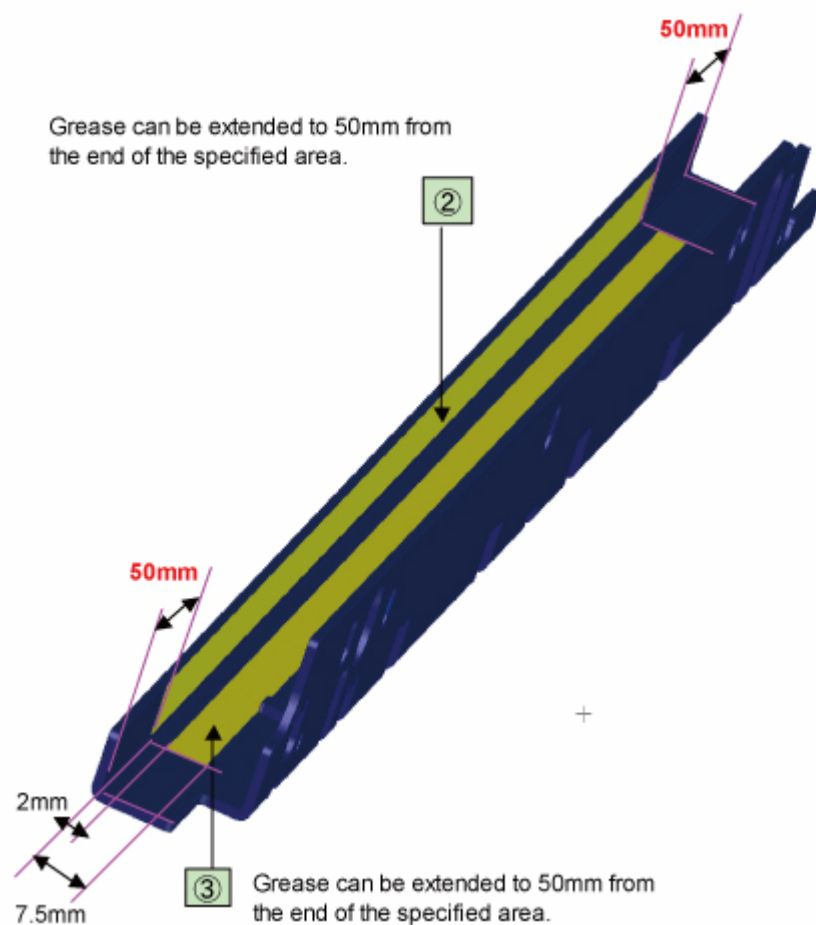
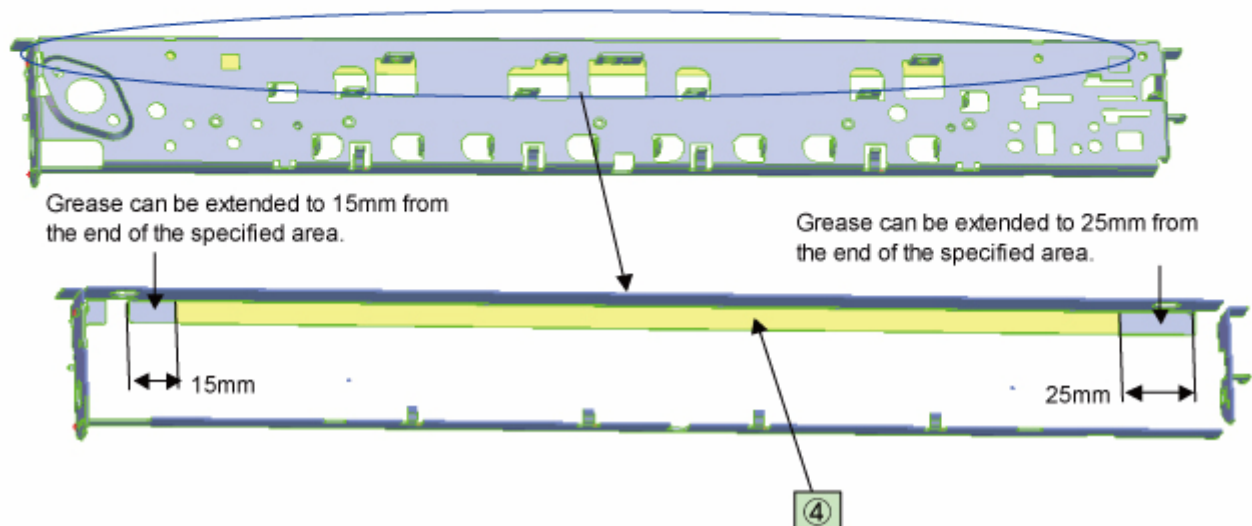
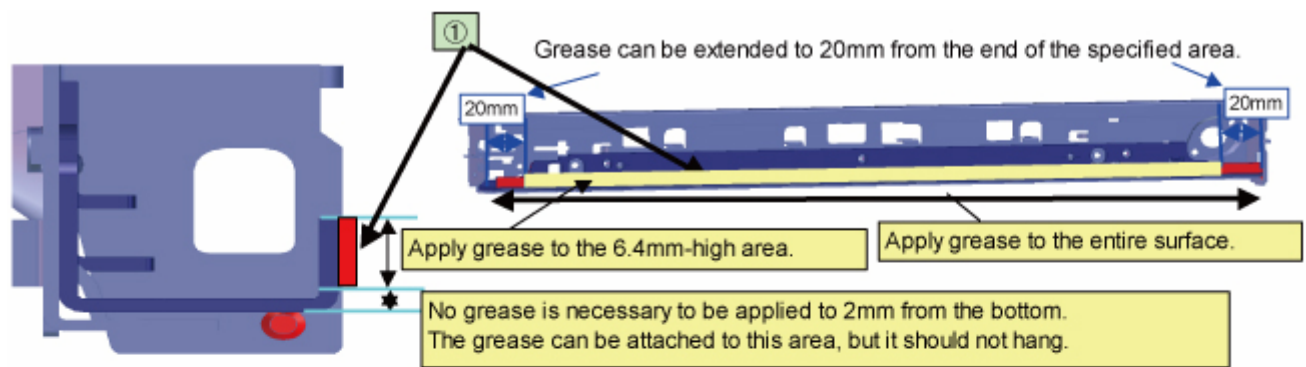
Function	Procedures	Remarks
Manual print head alignment	Perform from the printer driver Maintenance tab.	Set 3 sheets of plain paper (A4 or Letter) in the cassette, or the rear tray if selected.
Print head alignment value printing	Perform from the printer driver Maintenance tab.	Confirmation of the current print head alignment values.
Paper feed roller cleaning	Perform from the printer driver Maintenance tab.	The paper feed rollers of the selected paper source (the rear tray or the cassette) rotate while being pushed to the paper lifting plate. Since the rollers will wear out in this cleaning, it is recommended that you perform this only when necessary.
Bottom plate cleaning	Perform , or from the printer driver Maintenance tab.	Cleaning of the platen ribs when the back side of paper gets smeared. Fold a sheet of plain paper (A4 or Letter) in half crosswise, then unfold and set it in the rear tray with the folded ridge facing down. (No paper feeding from the cassette)

2-4. Grease Application

No.	Part name	Where to apply grease / oil	*1	Grease	Grease amount (mg)	*2
1	Carriage rail	The surface where the carriage unit slides	(1)	Floil KG107A	230 to 290	---
2	Carriage rail	The surface where the carriage unit slides	(2)	Floil KG107A	180 to 220	---
3	Carriage rail	The surface where the carriage unit slides	(3)	Floil KG107A	180 to 220	---
4	Carriage upper rail	The surface where the carriage slider moves.	(4)	Floil KG107A	230 to 290	---
5	APP code wheel gear shaft	APP code wheel gear sliding portion (the entire surface)	(5)	Floil KG107A	9 to 18	1 x 1

*1: Drawing No.

*2: Number of drops (1 drop = 9 to 18 mg) x locations



2-5. Special Notes on Servicing

(1) For smeared printing, uneven printing, or non-ejection of ink

When smeared printing, uneven printing, or non-ejection of ink occurs, print the nozzle check pattern to determine whether the print head is faulty or not.

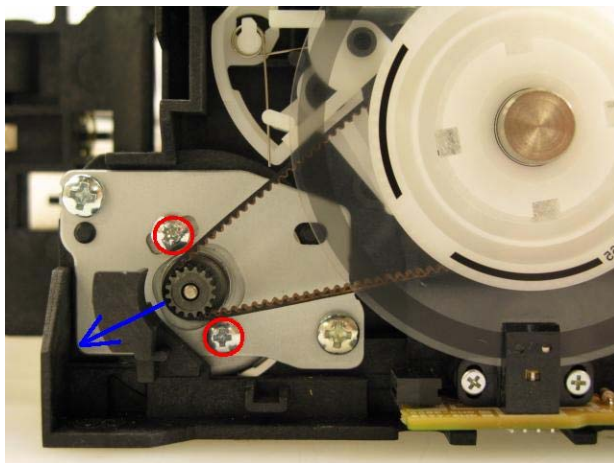
< Procedures >

- 1) Examine the ink tank conditions.
 - Is the outer film completely removed to open the air-through?
 - Re-install the ink tanks.
 - Is the ink tank Canon-genuine or not?
 - Is the ink tank refilled one or not?
- 2) Remove and clean any foreign material from the caps of the purge unit.
- 3) Perform print head cleaning or deep cleaning.
- 4) Perform print head alignment.
- 5) Print the nozzle check pattern.
- 6) If the nozzle check pattern is not printed properly, the print head may be faulty.
Perform troubleshooting while referring to the Print Head Workshop Manual or the Print Head Service Manual, 1-4. Troubleshooting.

Manual name	No.	Form	Price
Print Head Workshop Manual	QY8-9120-D0C	CD-ROM	¥50,000
Print Head Service Manual	QY8-9121-D0C	CD-ROM	¥30,000

(2) Paper feed motor adjustment

- 1) When attaching the motor, fasten the screws so that the belt is properly stretched (in the direction indicated by the blue arrow in the photo below).
- 2) After replacement, be sure to perform the service test print, and confirm that no strange noise or faulty print operation (due to dislocation of the belt or gear, or out-of-phase motor, etc.) occurs.



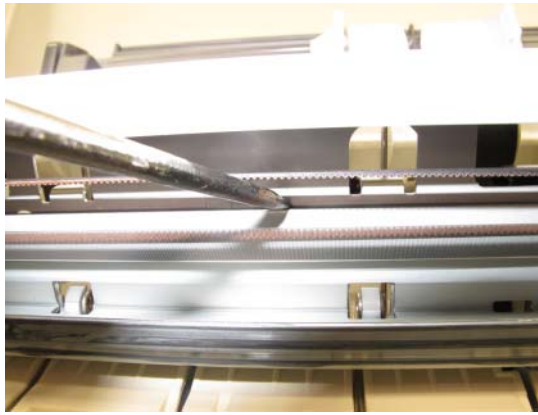
Caution: The screws securing the paper feed motor may be loosened only at replacement of the paper feed motor unit. DO NOT loosen them in other cases.

(3) Carriage unit replacement

In the iP4800 series, the carriage rail needs to be removed from the main chassis.

Before removing the screws from the carriage rail, put a mark on the main chassis to indicate the carriage rail position.

After replacing the carriage, return the carriage rail to the original position while aligning the rail to the mark on the chassis.



(4) Ink absorber counter setting

Before replacement of the logic board, check the ink absorber counter value, and register it to the replaced new logic board. (The value can be set in 10% increments.)

In addition, according to the "Guideline for Preventive Replacement of Ink Absorber," replace the ink absorber. When the ink absorber is replaced, reset the applicable ink absorber counter (to 0%).

(5) Preventive replacement of ink absorber

Replace the ink absorber in accordance with the "Guideline for Preventive Replacement of Ink Absorber" even when the ink absorber is not full. (Related Service Information #Q-12E/J-0188)

< Guideline for Preventive Replacement of Ink Absorber >

Replace the ink absorber when it falls in either Criteria 1 or Criteria 2.

Criteria	Purpose	How to know the criteria values
Criteria 1: The ink absorber life* is 2 years or less.	To avoid re-repair for ink absorber replacement in a short period of time after repair for other reasons.	For 2009 2H or earlier products: EEPROM information print and the quick reference table (refer to Service Information #Q-12E/J-0188 for details). For 2010 1H and later products: EEPROM information print
Criteria 2: The ink absorber counter value is 80% or more.	To prevent ink leakage during return of the repaired printer to users.	EEPROM information print

* The estimated number of months until the ink absorber will become full

< How to judge >

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

Step 1: Is "D" 80% or more?

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

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

Step 2: Is "DF" 24 or more?

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

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

Note: If the "ST" (installation date) value is 2010/07/31 or earlier, the "DF" (ink absorber life) value is incorrect. Skip Step 2.

The ink absorber life is an estimated value calculated based on the user's machine

usage.

< How to read the EEPROM information print >

iP4800	SN=40---	1055	JPN	V0.300	ST=20
D=028.5	Ink absorber counter value				Installation date
DF=00002	Ink absorber life				
ER(ER0=1600 ER1=1000 ER2=1600 ER3=1000					
ER5=1000 ER6=1600 ER7=1000 ER8=1600					