PIXMA Pro9500 Service Manual

Revision 0

ENTER

QY8-13AR-000

Scope

This manual has been issued by Canon Inc., to provide the service technicians of this product with the information necessary for qualified persons to learn technical theory, installation, maintenance, and repair of products. The manual covers information applicable in all regions where the product is sold. For this reason, it may contain information that is not applicable to your region.

Revision

This manual could include technical inaccuracies or typographical errors due to improvements or changes made to the product. When changes are made to the contents of the manual, Canon will release technical information when necessary. When substantial changes are made to the contents of the manual, Canon will issue a revised edition.

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I. MANUAL OUTLINE

This manual consists of the following three parts to provide information necessary to service the PIXMA Pro9500:

Part 1: Maintenance

Information on maintenance and troubleshooting of the PIXMA Pro9500

Part 2: Technical Reference

New technology and technical information such as FAQ's (Frequently Asked Questions) of the PIXMA Pro9500

Part 3: Appendix

Block diagrams and pin layouts of the PIXMA Pro9500

Reference	This manual does not provide sufficient information for disassembly and reassembly procedures. Refer to the graphics in the separate Parts Catalog.

<I. MANUAL OUTLINE>

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Part 1

MAINTENANCE

←→

1. MAINTENANCE

1-1. Adjustment, Periodic Maintenance, Periodic Replacement Parts, and Replacement Consumables by Service Engineer

	Adjustment	Timing	Purpose	Tool	Approx. time
	Destination settings (EEPROM settings)	At logic board replacement	To set the destination.	None. Perform in the service mode.	1 min.
	Ink absorber / blade cleaner unit replacement	- When the ink absorber becomes full[*2] - When the blade cleaner unit becomes empty (wetting liquid is used up)[*2]	To replace the ink absorber or the blade cleaner unit with a new one.	None.	12 min.
New	Ink absorber / wetting liquid counter resetting[*1] (EEPROM settings)	- At logic board replacement- At ink absorber replacement[*2] - At blade cleaner replacement[*2]	To reset the ink absorber or wetting liquid counter.	None. Perform in the service mode.	1 min.
	Paper feed motor position adjustment	At paper feed motor replacement	To adjust the belt tension. (Position the paper feed motor so that the belt is stretched tight.)	None.	2 min.
	CD / DVD detection sensor light volume correction[*3]	- At logic board replacement - At carriage unit replacement	To correct the light volume for the CD / DVD detection sensor.	None.	2 min.
	Grease application	- At carriage unit replacement - At PR lift shaft replacement - At other part replacement	To maintain sliding properties of the carriage shaft, PR lift shat, and other parts.	- EU-1 - FLOIL GP-1000R - MOLYKOTE PG641 - MOLYKOTE HP300 - FLOIL KG-107A	1 min.
	Ink system function check	- At logic board replacement - At platen unit replacement - At carriage unit replacement	To maintain detection functionality for presence of the ink tanks and each ink tank position.	None. Perform in the service mode.	1 min.
New	Carriage position adjustment	At carriage unit installation (at carriage unit or platen unit replacement)	To adjust the carriage position (Mark the position of the red screws before loosening them.)	None.	1 min.
New	LF / Eject correction	- At logic board replacement - At LF roller replacement - At platen unit replacement	To correct the paper feeding amount according to each LF and eject roller.	None. Perform in the service mode.	6 min.
New	Eject roller position adjustment	At platen unit replacement	To prevent the eject roller from being deflected due to the pressure of the spur unit. (Before installing the spur unit, attach each retainer to the eject roller and fix them with the red screws.)	None.	1 min.

(1) Adjustment

Note: - The red screws on the right side of the chassis, which secure the carriage shaft position, may be loosened only when necessary.

- The red screws securing the paper feed motor may be loosened only at replacement of the paper feed motor.

- DO NOT loosen the red screw of the carriage upper shaft in servicing.

- The red screws at the central part of the eject roller may be loosened only at replacement of the platen unit.

*1: Wetting liquid is applied from the blade cleaner unit to the wiper to prevent the print head face from being clogged. The amount of wetting liquid is counted and recorded in the EEPROM on the logic board.

*2: Replace the ink absorber and the blade cleaner unit at the same time.

*3: Only for CD / DVD printing supported regions.

(2) Periodic maintenance

No periodic maintenance is necessary.

(3) Periodic replacement parts

There are no parts in this printer that require periodic replacement by a service engineer.

(4) Replacement consumables

There are no consumables that require replacement by a service engineer.

1-2. Customer Maintenance

Adjustment	Timing	Purpose	Tool	Approx. time
Print head alignment	At print head replacement.	To ensure accurate dot placement.	- Printer buttons - Computer (automatic settings via the printer driver)	6 min.
Print head cleaning	When print quality is not satisfying.	To improve nozzle conditions.	- Printer buttons - Computer (settings via the printer driver)	2 min.
Print head deep cleaning	When print quality is not satisfying, and not improved by print head cleaning.	To improve nozzle conditions.	Computer (settings via the printer driver)	3 min.
Ink tank replacement	When an ink tank becomes empty. ("No ink error" via the computer, or ink tank LED flashing fast in red)	-----	-----	2 min.
Paper feed roller cleaning	When necessary	To clean the paper feed rollers.	Printer buttons	2 min.
CD / DVD print position adjustment*1	At CD / DVD printing, when necessary.	To correct CD / DVD print position.	Computer (application software)	5 min.
Bottom plate cleaning	When the back side of the paper is smeared.	To clean the platen ribs.	- Plain paper - Computer (settings via the printer driver)	1 min.
Ink agitation (Side-to-side shaking of the carriage)	Prior to the first printing after printing has not been performed for 1 week or longer.	To prevent pigment sedimentation (and to equalize ink density)	Printer buttons	10 sec. to 2 min.

*1: Only for CD / DVD printing supported regions.

1-3. Product Life

(1) Printer

Specified print volume (I) or the years of use (II), whichever comes first.

(I) Print volume: 21,000 pages

Black	1,500 character pattern (B5 to A3)	4,280 pages
	Postcard	2,650 pages
Color	7.5% duty per color pattern (B5 to A3)	1,100 pages
	10% duty per color pattern (B5 to A3)	1,670 pages
	Photo, borderless printing (5 x 7 to A3+)	6,430 pages
	4 x 6, photo, borderless printing	1,590 pages
	Postcard, photo, borderless printing	790 pages
	Postcard	730 pages
	CD / DVD printing	1,760 pieces

(II) Years of use: 5 years of use

(2) Print head

Print volume: 21,000 pages
(The breakdown is the same as the above.)

(3) Ink tank (target value)

Pattern	Ink tank used	Print yield
Color document[*1]	PGI-9MBK	Approx. 329 pages
	PGI-9PBK	Approx. 3,325 pages
	PGI-9C	Approx. 2,265 pages
	PGI-9M	Approx. 1,625 pages
	PGI-9Y	Approx. 1,315 pages
	PGI-9PC	Approx. 720 pages
	PGI-9PM	Approx. 720 pages
	PGI-9R	Approx. 1,335 pages
	PGI-9G	Approx. 2,265 pages
	PGI-9GY	Approx. 2,905 pages
Photo (4" x 6")[*2]	PGI-9MBK	Approx. 735 pages
	PGI-9PBK	Approx. 525 pages
	PGI-9C	Approx. 930 pages
	PGI-9M	Approx. 880 pages
	PGI-9Y	Approx. 575 pages
	PGI-9PC	Approx. 282 pages
	PGI-9PM	Approx. 242 pages
	PGI-9R	Approx. 565 pages
	PGI-9G	Approx. 650 pages
	PGI-9GY	Approx. 228 pages

*1: Declared yield value in accordance with ISO/IEC FCD24711. Values obtained by continuous printing.

*2: When printing Canon standard patterns on 4" x 6" Photo Paper Plus Semi-gloss or Photo Paper Plus Glossy continuously with the default settings of Photo Paper Plus Semi-gloss or Photo Paper Plus Glossy using Windows XP printer driver in borderless printing mode and Windows XP Photo Printing Wizard. Declared yield value determined based on Canon standard method referring to ISO/IEC FCD24712.

Note: Ink yield may vary depending on texts/photos printed, applications software used, print mode and type of paper used.

1-4. Special Tools

Name	Tool No.	Price (JPY)	Application	Remarks
FLOIL KG-107A	QY9-0057-000	210	To protect the printer's sliding portions.	In common with the S520.
EU-1	QY9-0037-000	3,080	To maintain sliding properties of the carriage shaft.	In common with the i990.
MOLYKOTE PG641	CK-0562-000	820	To protect the printer's sliding portions	In common with the S520.
MOLYKOTE HP300	QY9-0035-000	4,200	To protect the printer's sliding portions	In common with the iP4000.
FLOIL GP-1000R	QY9-0071-000	1,300	To maintain sliding properties of the PR lift shaft.	In common with the Pro9000.

1-5. Serial Number Location

On the carriage flexible cable holder (visible on the right of the carriage after the printer is turned on, the access cover is opened, and the carriage moves to the center).

2. LIST OF ERROR DISPLAY / INDICATION

Errors are indicated by the LED, and warnings are displayed on the monitor of the computer connected to the printer.

2-1. Operator Call Errors (by Alarm LED Blinking in Orange)

Alarm LED blinking in orange	Error [Error code]	Solution	Remarks
Alarm LED lit	Printing from the front tray not completed [1320]	Set the paper, and press the Resume/Cancel button.	The Power LED lights in blue (to distinguish this error from the RAM error, which is a service call error).
2 times	No paper (ASF) [1000]	Set the paper in the ASF, and press the Resume/Cancel button.	
	No CD / DVD tray [1001]*1	Set the CD / DVD tray, and press the Resume/Cancel button.	
	No CD or DVD [1002]*1	Set a CD or DVD in the CD / DVD tray (which is ejected at error occurrence), and inset the CD / DVD tray in the proper position. Then, press the Resume/Cancel button.	
3 times	Paper jam (ASF) [1300]Paper jam (front tray) [1305]	Remove the jammed paper, and press the Resume/Cancel button.	
	Front tray closed [1250]	Open the front tray.	The error is indicated when the front tray is not opened at start of printing, or when the front tray is closed during printing.
Rear support closed [1260]	Open the rear support, and press the Resume/Cancel button.	The error is indicated when the rear support is not opened at start of paper feeding from the front tray.	
4 times	No ink [1600]	Replace the empty ink tank(s), or press the Resume/Cancel button.	Pressing the Resume/Cancel button will exit the error without ink tank replacement, however, ink may run out during printing.
	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.	
5 times	The print head is not installed [1401], or it is not properly installed (Print head temperature sensor error [1403] / Faulty EEPROM data of the print head [1405]).	Install the print head properly.	
6 times	Inner cover open [1841]*2	Close the inner cover, and press the Resume/Cancel button.	
	Inner cover open during printing on paper [1846]*2	Close the inner cover, and press the Resume/Cancel button.	
	Inner cover open during printing on paper (print continuable) [1851]*1	Close the inner cover, and press the Resume/Cancel button.	
	Inner cover open during printing on paper (print NOT	Close the inner cover, and press the Resume/Cancel button to clear the error.	

		The paper being printed at error occurrence will be ejected without printing the remaining data for the ejected paper, then printing will resume from the next page.	
	Inner cover closed during CD / DVD printing (print continuable) [1850][1]	Open the inner cover which functions as the CD / DVD tray feeder, set the CD / DVD tray in the feeder, and press the Resume/Cancel button.	
	Inner cover closed during CD / DVD printing (print NOT continuable) [1855][1]	Open the inner cover, and press the Resume/Cancel button to clear the error. The CD or DVD being printed at error occurrence will be ejected without printing the remaining data for the ejected CD or DVD, then the next print job will be done.	
7 times	Multiple ink tanks of the same color installed [1681]	Replace the wrong ink tank(s) with the correct one(s).	
	Ink tank in a wrong position [1680]	Install the ink tank(s) in the correct position.	
8 times	Warning: The ink absorber becomes almost full. [1700]	Pressing the Resume/Cancel button will exit the error, and enable printing.	The service call error indicating the ink absorber is full is likely to occur soon.
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	Front tray in the raised position [1281]	Lower the front tray, and press the Resume/Cancel button.	The error is indicated when the front tray is in the raised position at the start of printing from the ASF.
	Front tray in the raised position [1283]	Lower the front tray, and press the Resume/Cancel button. (The paper being printed at error occurrence will be ejected, and the print job will be cancelled automatically.)	The error is indicated when the front tray is raised during printing from the ASF.
	Front tray in the lowered position [1284]	Raise the front tray, and press the Resume/Cancel button. (The paper being printed at error occurrence will be ejected, and the print job will be cancelled automatically.)	The error is indicated when the front tray is lowered during printing from the front tray.
11 times	Failed in automatic print head alignment [2500]	Press the Resume/Cancel button. - If paper is being fed at error occurrence, the error is indicated after the paper is ejected. - If the error occurs, the print head alignment values are not changed. - After exit from the error by the Resume/Cancel button, the automatic print head alignment will not be re-done.	The error is indicated when the pattern is not printed due to no ink or non-ejection of ink, or when the sensor's AD value is incorrect.
	Paper size smaller than specified [1062]	Press the Resume/Cancel button. (The paper will be ejected, and the print job will be cancelled automatically.)	The error is indicated when the size of paper actually set is smaller than the one selected in the printer driver. Printing on the platen can occur. (e.g.When A4 paper is set though A3 is selected in the printer driver, the error

			occurs. v.v. If A3 paper is set and A4 is selected in the printer driver, then the error is not indicated and printing is performed.)
12 times	Paper not set properly in the front tray / Non-supported size of paper set in the front tray [1321]	Press the Resume/Cancel button to clear the error, then set a supported size of paper properly in the front tray.	
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.	
15 times	Ink tank not recognized [1410 to 1419]	An error occurred in an ink tank (the ink tank LED is turned off). Replace the ink tank(s).	
17 times	Ink tank empty [1688]	Replace the empty ink tank with a new one.(The error cannot be cleared by pressing the Resume/Cancel button.)	If an ink tank has never been removed since the first installation, this error can occur.
18 times	Remaining ink amount unknown [1689]	Replace the applicable ink tank with a new one.	If an ink tank has once been removed, this error can occur.If printing is continued without replacing the applicable ink tank, the print head can be damaged.To continue printing with a refilled ink tank, press the Resume/Cancel button for 5 sec. or longer to record the use of the refilled ink tank. Note:After the above operation, the function to detect the remaining ink amount is disabled.
	Access cover open. [1200]	Close the access cover.	

*1: Only for CD / DVD printing supported regions.

*2: Only for CD / DVD printing no-supported regions.

2-2. Service Call Errors (by Cyclic Blinking in Orange (Alarm LED) and Blue (Power LED), or Alarm LED Lit in Orange)

Cycles of blinking in orange (Alarm LED) and blue (Power LED)	Error [Error code]	Solution (Replacement of listed parts, which are likely to be faulty)
2 times	Carriage error [5100]	- Carriage unit (QM2-2993) - Timing slit strip film (QC1-9466) - Logic board ass'y (QM2-3471)[*1] - Carriage motor (QK1-2141)
3 times	Line feed error [6000]	- Timing sensor unit (QM2-2683) - Timing slit disk film (QC1-4375) - Feed roller ass'y (QL2-1232) - Platen unit (QM2-3000) - Logic board ass'y (QM2-3471)[*1] - Paper feed motor (QK1-0637)
4 times	Purge cam sensor error [5C00]	- Purge unit (QM2-3002) - Logic board ass'y (QM2-3471)[*1]
5 times	ASF (cam) sensor error [5700]	- Sheet feed unit (QM3-1672)
6 times	Internal temperature error [5400]	- Logic board ass'y (QM2-3471)[*1]
7 times	Ink absorber full [5B00] No wetting liquid [5250]	- Ink absorber kit (QY5-0165) - Blade cleaner unit (QM2-3003)
8 times	Print head temperature rise error	- Print head (QY6-0065)

	[5200]	- Logic board ass'y (QM2-3471)[1]
9 times	EEPROM error [6800]	- Logic board ass'y (QM2-3471)[1]
10 times	Carriage board error [9100 / 9200 / 9201]	- Carriage unit (QM2-2993) - Logic board ass'y (QM2-3471)[1]
11 times	Carriage lift mechanism error [5110]	- PR lift shaft ass'y (QL2-2192) - Sheet feed unit (QM3-1672) - Logic board ass'y (QM2-3471)[1] - CR lift sensor unit (QM2-3184)
12 times	AP position error [6A00]	- Sheet feed unit (QM3-1672) - Logic board ass'y (QM2-3471)[1] - Purge unit (QM2-3002)
13 times	PF position error [6B00]	- Sheet feed unit (QM3-1672) - Logic board ass'y (QM2-3471)[1]
14 times	PF cam sensor error [6B10]	- Sheet feed unit (QM3-1672) - Logic board ass'y (QM2-3471)[1]
15 times	USB Host VBUS overcurrent [9000]	- Logic board ass'y (QM2-3471)[1]
16 times	Valve sensor error [6C00]	- Logic board ass'y (QM2-3471)[1] - Purge unit (QM2-3002)
17 times	Motor driver error [6D00]	- Logic board ass'y (QM2-3471)[1]
18 times	Spur base lift mechanism error [5120]	- Spur base lift shaft ass'y (QL2-1223) - Spur base unit (QM2-3001) - Spur base lift unit (QM2-2982) - Sheet feed unit (QM2-1672) - Logic board ass'y (QM2-3471)[1]
19 times	Ink tank position sensor error [6502]	- Sensor multi harness ass'y (QM2-3458) - Logic board ass'y (QM2-3471)[1]
20 times	Other hardware error [6500]	- Logic board ass'y (QM2-3471)[1]
Continuous alternate blinking	ROM error	- Logic board ass'y (QM2-3471)[1]
Alarm LED lit (Power LED turned off)	RAM error	- Logic board ass'y (QM2-3471)[1]

*1: Before replacement of the logic board ass'y, check the ink absorber or wetting liquid counter value (by EEPROM information print). If the counter value is 7% or more, also replace the ink absorber kit (QY5-0165) and blade cleaner unit (QM2-3003) when replacing the logic board ass'y.
[See Section 3-3. Adjustment / Settings, (7) Service mode, for details.]

2-3. Warnings

Printer (no LED indications):

Displayed warning	Remarks
Low ink	Status indication only.
Print head temperature rise	If the print head temperature is high when the access cover is opened, the warning is displayed[1]. When the print head temperature falls, the warning is released.
Protection of excess rise of the print head temperature	If the print head temperature exceeds the specified limit, a Wait is inserted during printing,

*1: If the warning is displayed, the carriage does not move to the ink tank replacement position when the access cover is opened.

2-4. Troubleshooting by Symptom

	Symptom	Solution	Remarks
Faulty operation	The power does not turn on.The power turns off immediately after power-on.	Replace the - AC adapter, or - logic board ass'y[*1].	
	A strange noise occurs.	Remove foreign material, or attach a removed part if any.	
	Printing stops mid-way.	Replace the logic board ass'y[*1].	
Paper feed problems	Multiple sheets feed.	Replace the sheet feed unit.	
	Paper does not feed.	Remove foreign material, or replace the sheet feed unit.	
	Paper feeds at an angle.	Remove foreign material, adjust the paper guide, or replace the sheet feed unit.	
Unsatisfactory print quality	No printing, or no color ejected.	Replace the - ink tank, - print head[*2], or - logic board ass'y[*1], remove foreign material from the purge unit caps, if any, orreplace the purge unit.	
	Printing is faint, or white lines appear on printouts even after print head cleaning.Line(s) not included in the print data appears on printouts.	Remove and re-install the print head, or replace the - ink tank,- print head[*2], - purge unit,- blade cleaner unit, or - logic board ass'y[*1].	
	Paper gets smeared.	Feed several sheets of paper, perform bottom plate cleaning, orclean the paper path with cotton swab or cloth.	
	A part of a line is missing on printouts.	Replace the - ink tank, or - print head[*2].	
	Color hue is incorrect.	Replace the - ink tank, or - print head[*2], orperform print head alignment.	
	Printing is incorrect.	Replace the logic board ass'y[*1].	
	No ejection of black ink.	Replace the - ink tank, or - print head[*2], or remove foreign material from the purge unit caps, if any, or replace the purge unit.	
	Graphic or text is enlarged on printouts.	When enlarged in the carriage movement direction,clean grease or oil off the timing slit strip film, orreplace the - timing slit strip film, - carriage unit, or - logic board ass'y[*1]. When enlarged in the paper feed direction,clean grease or oil off the timing slit disk film, orreplace the - timing slit disk film,- timing sensor unit, or - logic board ass'y[*1].	

*1: Before replacement of the logic board ass'y, check the ink absorber or wetting liquid counter value (by EEPROM information print). If the counter value is 7% or more, also replace the ink absorber kit (QY5-0165) and blade cleaner unit (QM2-3003) when replacing the logic board ass'y.
[See Section 3-3. Adjustment / Settings, (7) Service mode, for details.]

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

3. REPAIR

3-1. Notes on Service Part Replacement (and Disassembling / Reassembling)

Service part	Notes on replacement[*1]	Adjustment / settings	Operation check
Logic board ass'y QM2-3471	- 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. - Before replacement, check the ink absorber or wetting liquid counter value (by EEPROM information print). If the value is 7% or more, also replace the ink absorber kit and blade cleaner unit when replacing the logic board ass'y. [See 3-3. Adjustment / Settings, (7) Service mode, for details.]	**After replacement:** 1. Initialize the EEPROM. 2. Reset the ink absorber and wetting liquid counters. 3. Set the destination in the EEPROM. 4. Correct the CD / DVD and automatic print head alignment sensors. 5. Check the ink system function. 6. Perform LF / Eject correction. [See 3-3. Adjustment / Settings, (7) Service mode, for details of 1 to 6] 7. Perform the print head alignment in the user mode.	- EEPROM information print - Service test print - Printing via USB connection - Direct printing from a digital camera
Ink absorber kit QY5-0165 Blade cleaner unit QM2-3003		**After replacement:** 1. Reset the ink absorber and wetting liquid counters. [See 3.3. Adjustment / Settings, (7) Service mode.]	- Service test print - EEPROM information print
Carriage unit QM2-2993	- The red screws on the right side of the chassis, which secure the carriage shaft position, may be loosened (only for removal and re-installation of the carriage unit. Do not loosen them for other purposes.)	**At replacement:** 1. Apply grease to the sliding portions. [See 3-3. Adjustment / Settings, (4) Grease application.] **After replacement:** 1. Correct the CD / DVD and automatic print head alignment sensors. [See 3.3. Adjustment / Settings, (7) Service mode.] 2. Check the ink system function. [See 3.3. Adjustment / Settings, (7) Service mode.] 3. Perform the print head	- Service test print (Confirm ink system function.)

		alignment in the user mode. **At removal and re-installation:** 1. Before loosening the red screws, mark their positions. After the carriage unit is installed, adjust the carriage shaft position. [See 3.3. Adjustment / Settings, (2) Carriage unit position adjustment.]	
Paper feed motor QK1-0637	- The red screws securing the paper feed motor are allowed to be loosened. (DO NOT loosen them for any other purposes than paper feed motor replacement.)	**At replacement:** 1. Adjust the paper feed motor. [See 3-3. Adjustment / Settings, (1) Paper feed motor adjustment.]	- Service test print (Confirm the CD / DVD sensor and automatic print head alignment correction, and the ink system function.)
Sensor multi harness ass'y QM2-3458		**After replacement:** 1. Check the ink system function. [See 3-3. Adjustment / Settings, (7) Service mode.]	- Service test print (Confirm the CD / DVD sensor and automatic print head alignment correction, and the ink system function.)
Timing slit strip film QC1-9466 Timing slit disk film QC1-4375	- 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.	**After replacement:** 1. Perform the print head alignment in the user mode.	- Service test print
Print head QY6-0065		**After replacement:** 1. Perform the print head alignment in the user mode.	- Service test print
Feed roller ass'y QL2-1232		**After replacement:** 1. Perform LF / Eject correction. [See 3.3. Adjustment / Settings, (7) Service mode.]	- Service test print
Platen unit QM2-3000	- The red screws at the central part of the eject roller are allowed to be loosened. (DO NOT loosen them for any other purposes than platen unit replacement.)	**After replacement:** 1. Adjust the eject roller position. [See 3.3. Adjustment / Settings, (3) Eject roller position adjustment.] 2. Perform LF / Eject correction. [See 3.3. Adjustment / Settings, (7) Service mode.]	- Service test print

*1: General notes:

- Make sure that the flexible cables and wires in the harness are in the proper position and connected correctly.
  [See 3-2. Special Notes on Repair Servicing, (1) Flexible cable and harness wiring, connection, for details.]

- Do not drop the ferrite core, which may cause damage.

- Protect electrical parts from damage due to static electricity.

- Before removing a unit, after removing the power cord, allow the printer to sit for approx. 1 minute (for capacitor discharging to protect the logic board ass'y from damages).

- Do not touch the timing slit strip film and timing slit disk film. No grease or abrasion is allowed.

- Protect the units from soiled with ink.

- Protect the housing from scratches.

- Exercise caution with the red screws, as follows:

    i. The red 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. The red screws on the right side of the main chassis, securing the carriage shaft position, may be loosened only at removal and re-installation of the carriage unit. (DO NOT loosen them in other cases).

    iii. DO NOT loosen the red screw of the carriage upper shaft.

    iv. The red screws at the central part of the eject roller may be loosened only at replacement of the platen unit (DO NOT loosen them in other cases).

3-2. Special Notes on Repair Servicing

(1) Flexible cable and harness wiring, connection

Be cautious of wiring of the flexible cables and harness. Improper wiring or connection may cause breakage of a line, leading to ignition or emission of smoke.
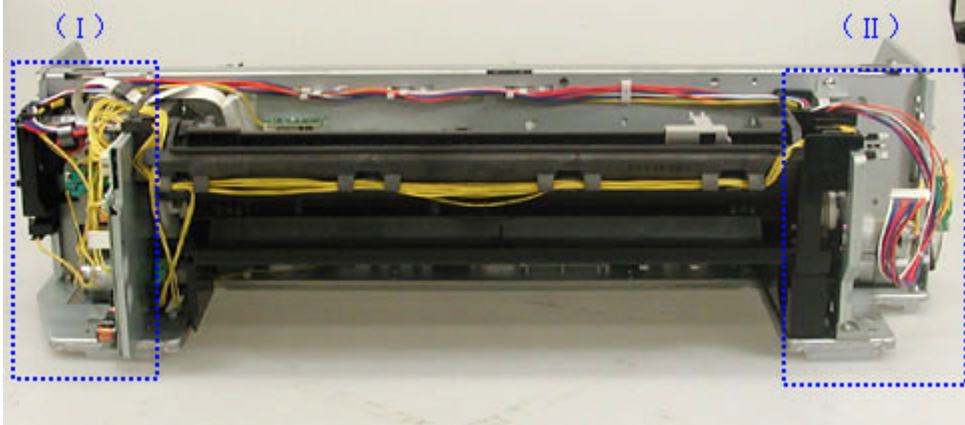
(I) Logic board ass'y wiring
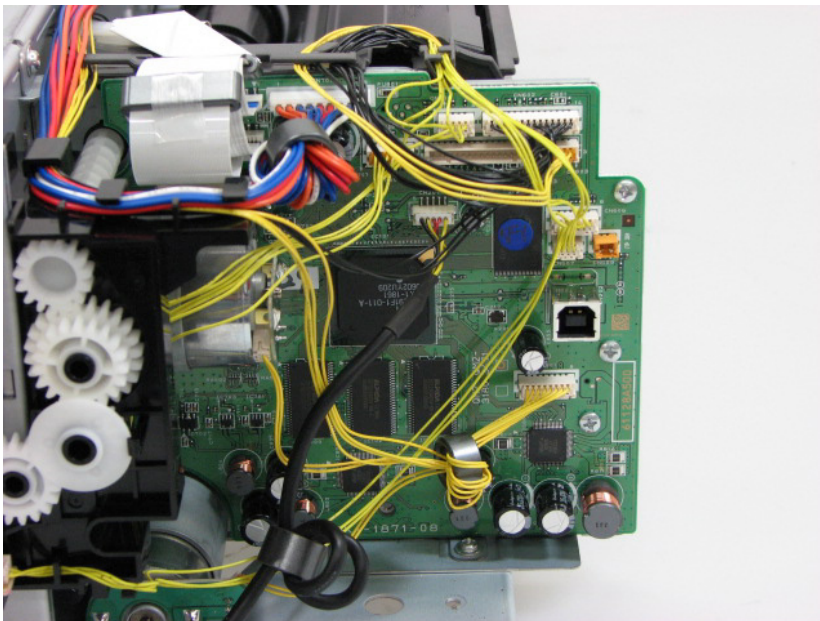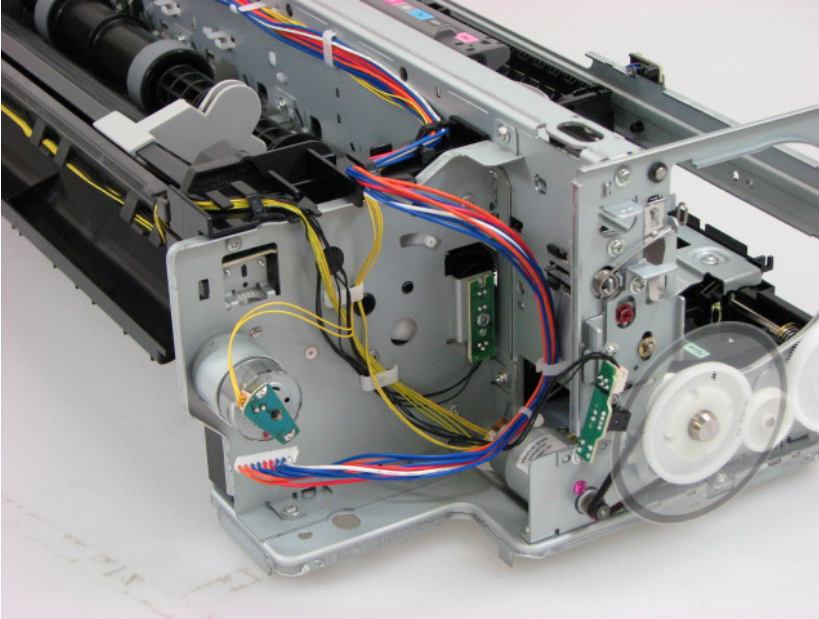
(2) Red screw of the carriage upper shaft

The carriage upper shaft is adjusted and secured by the red screw before shipment to keep the distance between the print head and paper evenly from one end of the shaft to the other end of the shaft.

Since the screw is not adjustable in servicing, DO NOT loosen it.
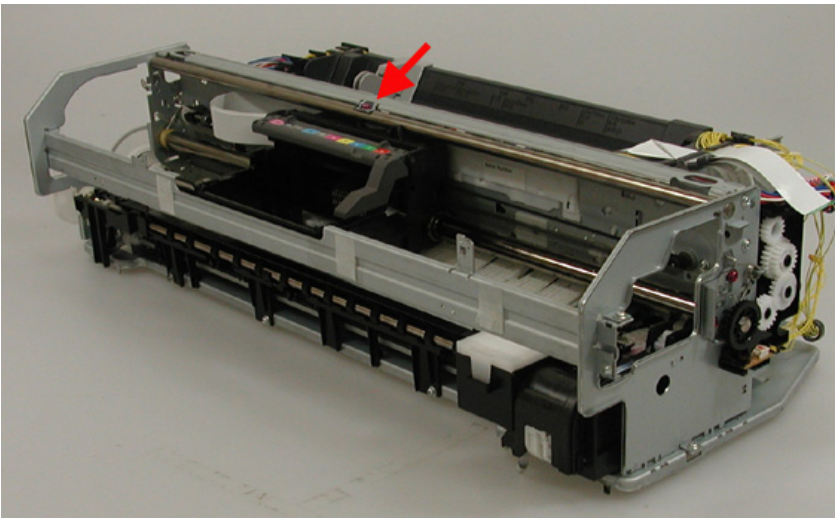
(3) Printer unit assembly

Connect the ink tube to the purge unit when assembling the printer unit into the bottom case. (If the tube is not securely connected to the purge unit, ink may leak.)
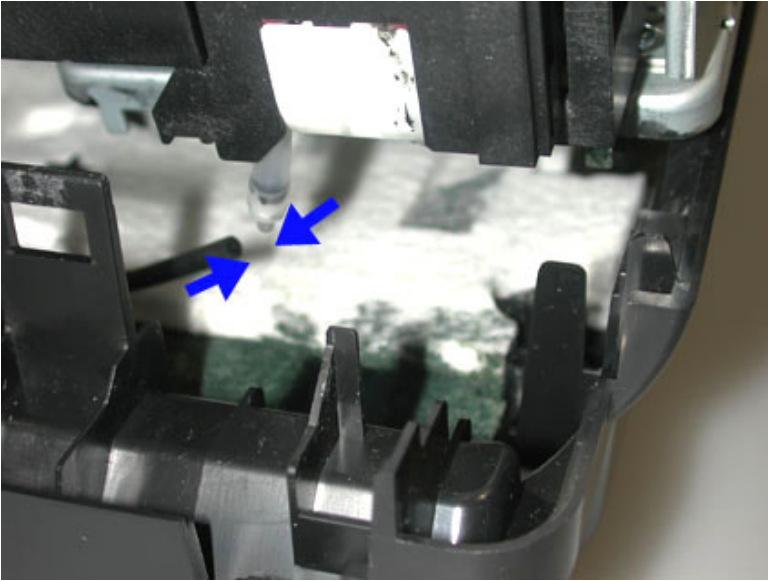
Ink tube and purge unit connected:
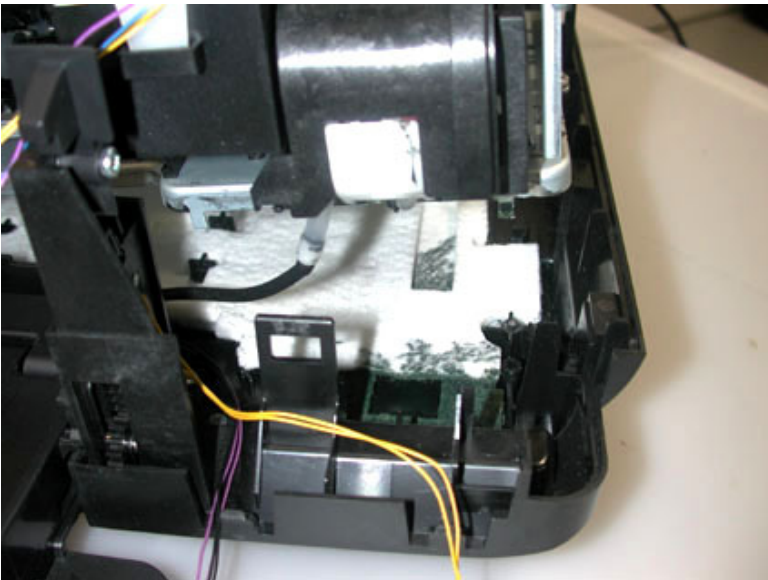
3-3. Adjustment / Settings

(1) Paper feed motor adjustment

Perform the following adjustments when the paper feed motor unit is replaced:

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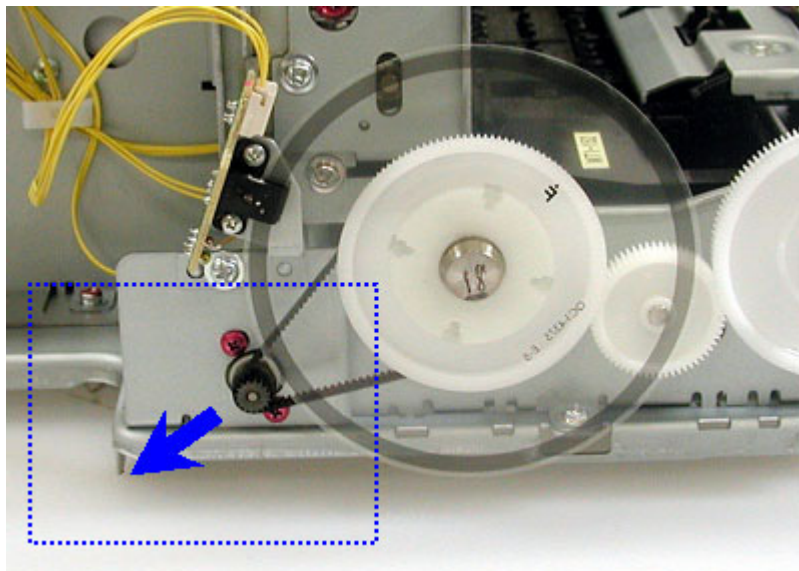
Note: The red screws securing the paper feed motor may be loosened only at replacement of the paper feed motor unit. DO NOT loosen them in other cases.

(2) Carriage unit position adjustment

Perform the following adjustments when the carriage unit is removed and reassembled:

Before removal of the carriage unit:

1) Draw a mark-off line on the chassis along the straight line below the "R" on the right carriage shaft adjusting plate before removal, so that you can easily tell where to align on e part to the other when reassembling them. (The left adjusting plate is not removed.)
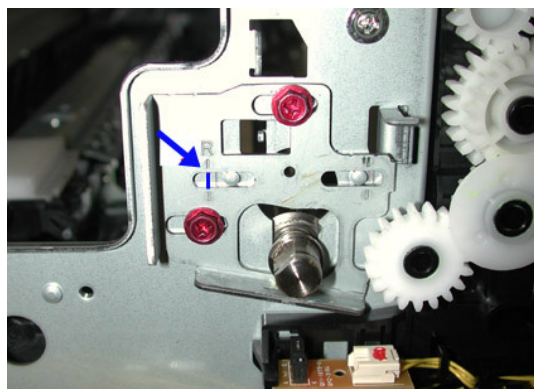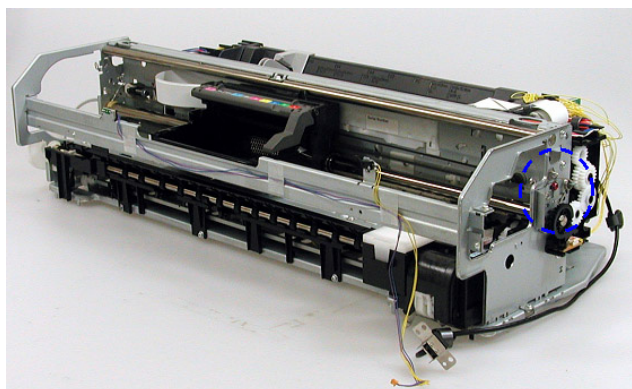
2) Remove the red screws from the adjusting plate.

At assembly of the carriage unit:

1) Align two parts at the mark-off line, then fasten the red screws.

2) After assembly of the carriage unit, be sure to perform the service test print, and confirm that no strange noise or faulty printing (uneven printing or contact of the print head to the paper) occur.

Note: The red screws securing the carriage-shaft-adjusting plate may be loosened only at replacement of the carriage unit. DO NOT loosen them in other cases.

(3) Eject roller position adjustment

When the platen unit is removed and reassembled, perform the following adjustments to prevent the eject roller from being deflected due to pressure of the spur unit:

Point to be adjusted:
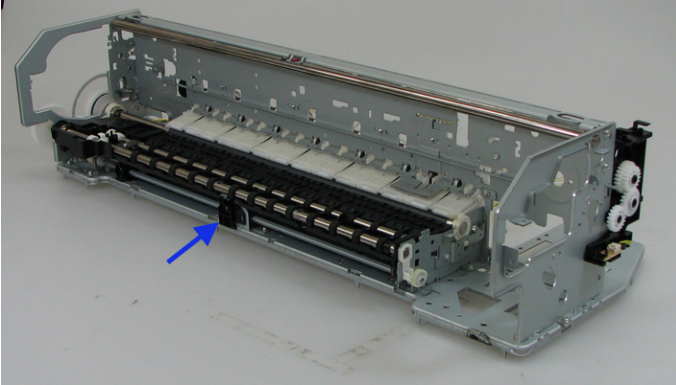
Procedures:

1) With the spur unit removed, slide the adjustment plate upward (as shown in the left photo) until it contacts the eject roller (as shown in the right photo).

   Note: Be cautious not to push the eject roller up.
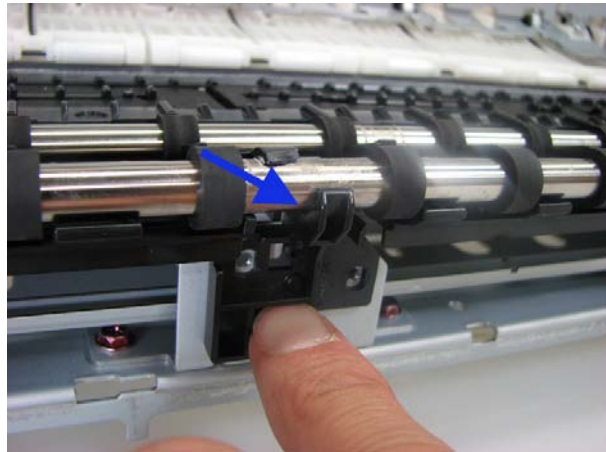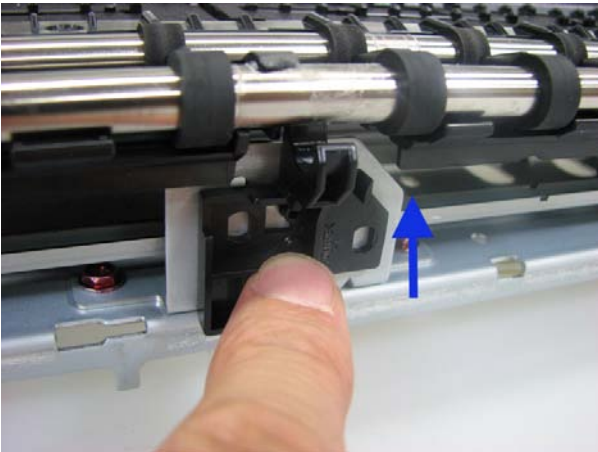
2) While holding the adjustment plate in the position in step 1), fasten the red screws.
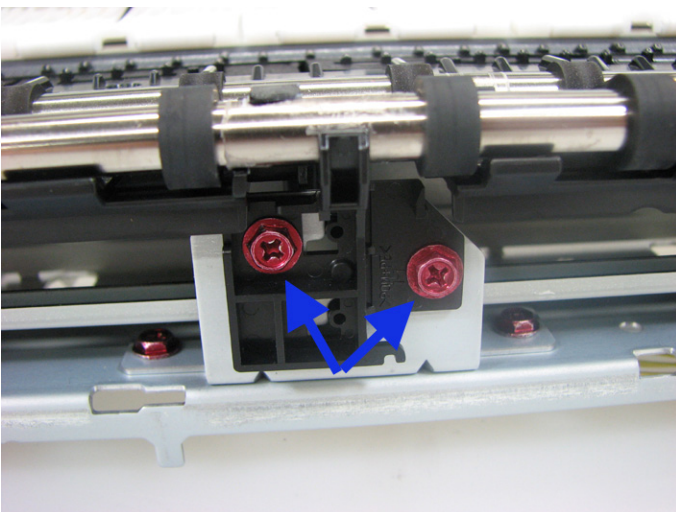
3) After assembly of the platen unit, be sure to perform the service test print, and confirm that no strange noise or faulty printing (uneven printing or contact of the print head to the paper) occurs.

   Caution: DO NOT loosen the other red screws indicated by the blue arrows in the photo below.
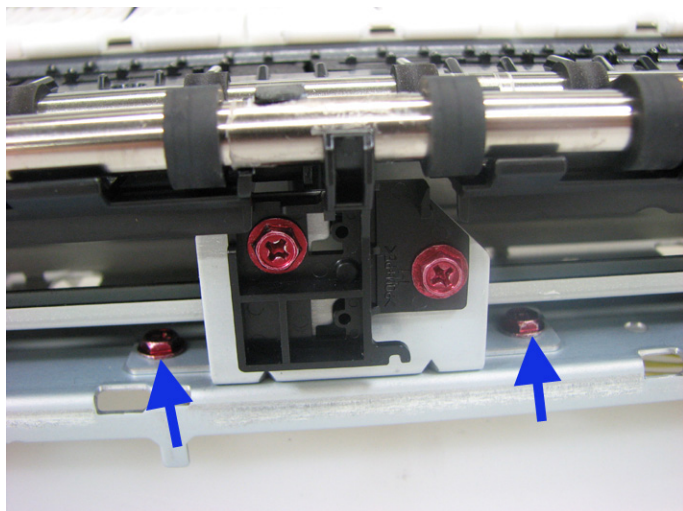
(4) Grease application

No	Part name	Where to apply grease	Grease name	Grease amount (mg)	Number of drops*	Number of locations to apply grease
1	Carriage upper shaft	Carriage slider sliding portion	KG107A	300 +/- 40	-	-
2	Paper guide flapper	Line feed roller sliding portion (paper guide flapper bushing)	KG107A	18 to 36	2	1
3	CL input gear shaft	CL input gear shaft sliding portion of the CL gear base	PG641	18 to 36	1	2
4	ASF pick-up shaft	Cam contacting the pressure plate slider	HP-300	18 to 36	2	1
5	Chassis	Carriage shaft sliding portion on the left side of the chassis	KG107A	18 to 36	1	2
6	Chassis	Carriage shaft cam L sliding portion on the left side of the chassis	KG107A	18 to 36	1	2
7	Adjust plate L	Carriage shaft cam L sliding portion of the adjust plate L	KG107A	18 to 36	2	1
8	Chassis	Carriage shaft sliding portion on the right side of the chassis	KG107A	18 to 36	1	2
9	Adjust plate R	Carriage shaft cam R sliding portion of the adjust plate R	KG107A	18 to 36	2	1
10	Oil pad	Oil pads (right and left)	EU-1	190 +/- 19	-	2
11	Carriage shaft	Carriage shaft	EU-1	180 +/- 45	-	-
12	Carriage shaft spring L	Carriage shaft sliding portion of the carriage shaft spring L	KG107A	4.5 to 9	1/2	1
13	Carriage shaft spring R	Carriage shaft sliding portion of the carriage shaft spring R	KG107A	4.5 to 9	1/2	1
14	Bottom chassis	SB lift cam L sliding portion	KG107A	9 to 18	1	1
15	SB lift base	SB lift input gear sliding portion	PG641	9 to 18	1	1
16	Center chassis	SB lift cam R sliding portion	KG107A	9 to 18	1	1
17	SB lift cam L	Cam contacting the spur base	PG641	18 to 36	2	1
18	SB lift cam R	Cam contacting the spur base	PG641	18 to 36	2	1
19	AP swing arm lock cam	AP swing arm lock lever sliding portion	PG641	9 to 18	1	1

1-19

20	AP swing arm lock cam	AP swing arm lock lever sliding portion	PG641	4.5 to 9	1/2	1
21	PR lift chassis	PR release cam sliding portion	HP-300	27 to 54	3	1

* 1 drop = 9 to 18 mg

No.4

No.2

No.1

No.3

No.8 No.9

No.5

No.13

No.6
No.7

No.16

No.10

No.11

No.12

No.14 No.15

No.17

No.18

No.19
No.20

No.21

<Part 1: 3. REPAIR; 3-3. Adjustment / Settings, (1) to (4)>
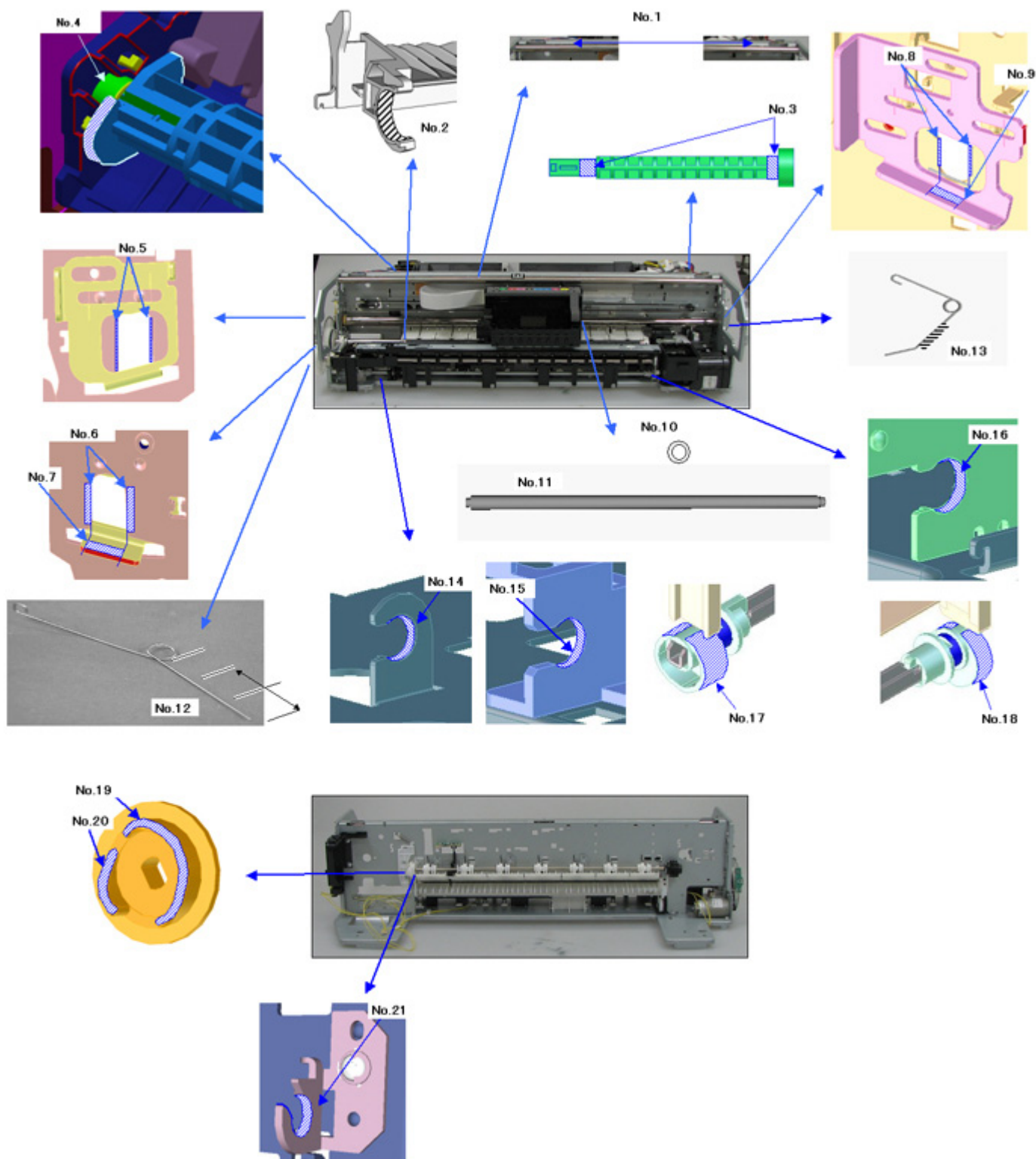
(5) Ink absorber counter / wetting liquid counter setting

When the logic board ass'y is replaced, reset the ink absorber and wetting liquid counters. In addition, according to their counter values, replace both the ink absorber kit and the blade cleaner unit.

The standard counter value for replacement is given in the table below.

Ink absorber and wetting liquid counters[1]	Ink absorber kit and blade cleaner unit replacement
Less than 7% on both the counters	Not required.
7% or more on either of the counters	Required. (Replace both the ink absorber kit and blade cleaner unit.)

[1]: Check the counter values by EEPROM information print.
[See 3.3. Adjustment / Settings, (7) Service mode, for details.]

(6) User mode

Function	Procedures	Remarks

Print head manual cleaning	- Cleaning both black and color:
	  See "Standalone printer operation" below.
	- Cleaning black or color separately, or both black and color:
	  Perform from the printer driver Maintenance tab.	

Print head deep cleaning	- Cleaning black or color separately, or both black and color: Perform from the printer driver Maintenance tab.	
Paper feed roller cleaning	See "Standalone printer operation" below.	
Nozzle check pattern printing	See "Standalone printer operation" below.	Also available from the printer driver Maintenance tab.
Print head alignment	See "Standalone printer operation" below.	In Custom Settings of the printer driver Maintenance tab, manual print head alignment (by selecting the optimum values) as with the conventional models can be performed.
Bottom plate cleaning	Perform from the printer driver Maintenance tab.	Cleaning of the platen ribs when the back side of paper gets smeared.
Print head replacement	The print head is replaceable at the same position as for ink tank replacement. (Open the access cover. When the carriage stops at the center, the print head can be replaced.)	
Ink agitation[1]	See "Standalone printer operation" below.	Not available from the printer driver Maintenance tab.It is recommended to perform the ink agitation once a week.

[1]: Shaking of the carriage side to side to prevent pigment sedimentation inside the ink tank, and equalize the ink density.

\<Standalone printer operation\>

1) Turn on the printer.

2) Press and hold the Resume/Cancel button until the Power LED blinks in blue the specified number of times listed in the table below, and release it. The operation starts.

Power LED blinking	Operation	Remarks
0 times[*1]	Ink agitation	
1 time	Print head manual cleaning	
2 times	Nozzle check pattern printing	Set a sheet of plain paper (A4 or letter) in the ASF.
3 times	Paper feed roller cleaning	
4 times	Automatic print head alignment	Set a sheet of plain paper (A4 or letter) in the ASF.
5 times	Bottom plate cleaning	Fold a sheet of plain paper (A4 or letter) in half, then unfold and set it in the ASF with the folded ridge facing down.
6 times	Unspecified	
7 times	Head-to-paper distance setting to the widest	
8 times or more	Unspecified	

*1: After pressing the Resume/Cancel button, release it soon before the Power LED starts blinking.

(7) Service mode

Function	Procedures	Remarks
Service test print - Model name - Destination - ROM version - USB serial number - Ink amount in the ink absorber - Ink system function check result	See "Service mode operation procedures" below.	Set a sheet of A3 or LDR size paper.For print sample, see 3-4. Verification Items, (1) Service test print, \<Service test print sample\>.
EEPROM initialization	See "Service mode operation procedures" below.	The following items are NOT initialized, and the shipment arrival flag is not on: - USB serial number - Destination settings - Ink absorber counter - Wetting liquid counter
Ink absorber counter / wetting liquid counter reset	See "Service mode operation procedures" below.	If either of the counter value is 7% or more, replace both the ink absorber kit and blade cleaner unit.
Destination settings	See "Service mode operation procedures" below.	

Note: At the end of the service mode, press the Power button. The paper lifting plate of the sheet feed unit will be raised.

<Service mode operation procedures>

1) With the printer power turned off, while pressing the Resume/Cancel button, press and hold the Power button. (DO NOT release the buttons. The Power LED lights in blue to indicate that a function is selectable.)

2) While holding the Power button, release the Resume/Cancel button. (DO NOT release the Power button.)

3) While holding the Power button, press the Resume/Cancel button 2 times, and then release both the Power and Resume/Cancel buttons. (Each time the Resume/Cancel button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in blue, starting with Alarm LED.)

4) When the Power LED lights in blue[*1], press the Resume/Cancel button the specified number of time(s) according to the function listed in the table below. (Each time the Resume/Cancel button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in blue, starting with Alarm LED.)

Time(s)	LED indication	Function	Remarks
0 times	Blue (Power)	Power off	When the print head is not installed, the carriage returns and locks in the home position capped.
1 time	Orange (Alarm)	Service test print	See 3-4. Verification Items, (1) Service test print.
2 times	Blue (Power)	EEPROM information print	See 3-4. Verification Items, (2) EEPROM information print.
3 times	Orange (Alarm)	EEPROM initialization	
4 times	Blue (Power)	Ink absorber counter / wetting liquid counter resetting	After entering the counter resetting mode, press the Resume/Cancel button 2 times, then the Power button. The counters will be reset.
5 times	Orange (Alarm)	Destination settings	After entering the destination settings mode, press the Resume/Cancel button the specified number of time(s) to select the destination. For detail, see "Destination settings procedures" below.
6 times	Blue (Power)	Print head deep cleaning	(Cleaning of both black and color)
7 times	Orange (Alarm)	LF / Eject correction	
8 times	Blue (Power)	CD / DVD check pattern print	Not used in servicing.
9 times	Orange (Alarm)	CD / DVD print position correction (horizontal: X direction)	Not used in servicing.
10 times	Blue (Power)	CD / DVD print position correction (vertical: Y direction)	Not used in servicing.
11 to 13 times	Orange (Alarm) at odd numbers Blue (Power) at even numbers	Return to the menu selection	
14 and 15 times	Blue (Power) at 14 times Orange (Alarm) at 15 times	Reserved	
16 to 21 times[*2]	Blue (Power) at even numbers Orange (Alarm) at odd numbers	Return to the menu selection	

*1: If the LED does not light in blue (the printer does not enter the service mode), disconnect the power cord and plug it again. Then start from step 1) to start the printer in the service mode again.
If the automatic power-on function is enabled in the printer, the printer enters the service mode for the first time, but it will never enter the service mode if the printer is turned off by the Power button. This is because the printer remains to be turned on internally if the power is turned off by the Power button. To prevent this, disconnection of the power cord is required before starting the printer in the service mode.

*2: If the Resume/Cancel button is pressed 22 or more times, the Alarm or Power LED lights steadily without any changes.

\<Destination settings procedures\>

In the destination settings mode, press the Resume/Cancel button the specified number of time(s) according to the destination listed in the table below, and press the Power button.

Time(s)	LED indication	Destination	CD / DVD print
0 times	Blue (Power)	No change of the destination	
1 time	Orange (Alarm)	Japan	Supported
2 times	Blue (Power)	Korea	Not supported
3 times	Orange (Alarm)	US	Not supported
4 times	Blue (Power)	Europe	Supported
5 times	Orange (Alarm)	Australia	Supported
6 times	Blue (Power)	Asia	Supported
7 times	Orange (Alarm)	China	Supported
8 times	Blue (Power)	Taiwan	Supported
9 times or more	Orange (Alarm)	Return to the menu selection	

Note: After setting the destination, confirm the model name and destination in service test print or EEPROM information print.
[See 3.4. Verification Items, (1) Service test print, or (2) EEPROM information print.]

\<LF / Eject correction procedures\>

After replacement of the feed roller ass'y, logic board ass'y, or platen unit in repair servicing or in refurbishment operation, perform the adjustment.

(After platen unit replacement, be sure to attach paper debris to the eject roller first, then perform the LF / Eject correction.)

In the LF / Eject correction mode, press the Resume/Cancel button the specified number of time(s) according to the operation listed in the table below, and press the Power button.

Time (s)	LED indication	Operation	Remarks
0 times	Blue (Power)	10 sheets of paper are fed and ejected successively (no printing).	For attachment of paper debris to the eject roller. Use A3 or LDR plain paper.
1 time	Orange (Alarm)	The LF / Eject correction pattern is printed.	Use A3+ SG-201.
2 times	Blue (Power)	No operation.	

Note: After the operation, the printer returns to the service mode menu selection.

Details:

When the platen unit is replaced, perform steps 1) to 5).

When the feed roller ass'y or logic board is replaced, perform steps 3) to 5).

1) Set the following kind of paper in the ASF:

   - Paper type: Plain paper

   - Paper size: A3 or LDR

   - Number of sheet: 10

   Note: A4 or Letter sized plain paper can be used when set in landscape orientation. In that case, perform steps 1) to 2) two times (20 sheets in total).

2) In the LF / Eject correction mode, press the Power button without pressing the Resume/Cancel button (the Power LED lights in blue).

   10 sheets of paper are fed and ejected, then the printer returns to the service mode menu selection.

3) Set the following kind of paper in the ASF, and open the rear tray (rear support):

   - Paper type: SG-201

   - Paper size: A3+

   - Number of sheet: 1

4) Enter the LF / Eject correction mode, press the Resume/Cancel button one time (the Alarm LED lights in orange), then press the Power button.

5) The LF / Eject correction pattern (as shown below) is printed, and the correction values are automatically written to the EEPROM. After this, the printer returns to the service mode menu selection.
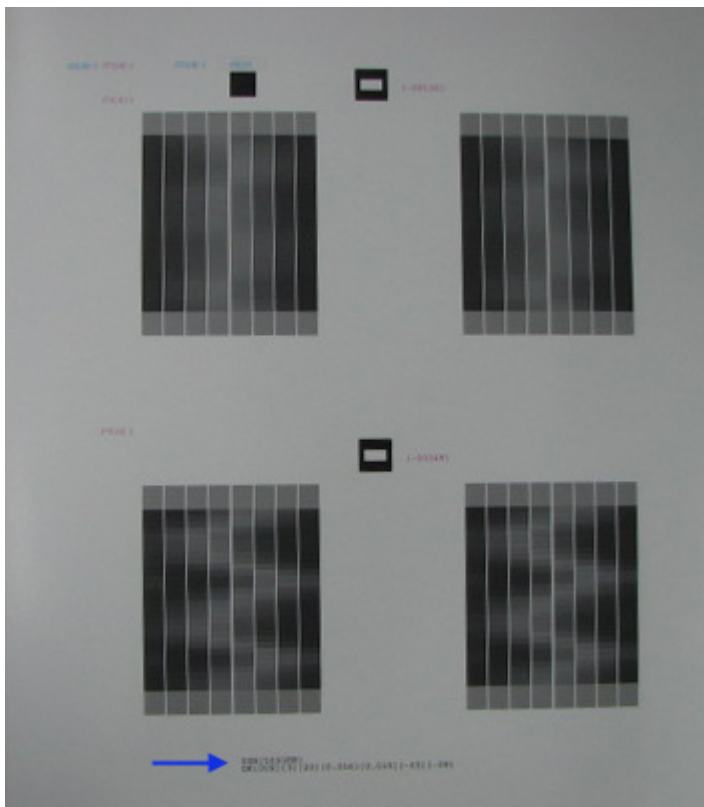
Confirm that "OK" is printed at the bottom of the paper (the blue arrow-indicated area in the photo above).

If "NG" is printed, perform steps 3) to 5) again.

3-4. Verification Items

(1) Service test print

<EEPROM information contents>

On the service test print (sample below), confirm the EEPROM information as shown below. (The information is given in the upper portion of the printout.)

Pro9500: Model name
JPN: Destination
Vx.xx: ROM version
USB (xxxxxx): USB serial number
FA = xx xx xx: Reserved for plant use
D = xxx.x: Ink amount in the ink absorber (%)
LF,EJ = OK (...): LF / Eject correction value
AB (LM = OK ...): Ink system check result

Note: The ink amount in the ink absorber should be confirmed by EEPROM information print (not by service test print).

<Print check items>

On the service test print (sample below), confirm the following items:

- Check 1, top of form accuracy: The lines shall not extend off the paper.

- Check 2, EEPROM information

- Check 3, nozzle check pattern: Ink shall be ejected from all nozzles.

- Check 4, check pattern for uneven printing due to line feeding: There shall be no remarkable streaks or unevenness.

- Check 5, check pattern for uneven printing due to carriage movement (standard mode): There shall be no remarkable unevenness.

- Check 6, check pattern for straight line and carriage accuracy: There shall be no misalignment or breakage of the lines.

- Check 7, Light volume calibration for the CD / DVD sensor and automatic print head alignment sensor: There shall be no NG.

- Check 8, CD / DVD sensor correction: There shall be no NG.

<Service test print sample>

Check1

Check2

Check3

Check4

Check5

Check6

Check7

CALIBRATION = OK OK OK

Check8

CDR(+00190,-00031)

1-27
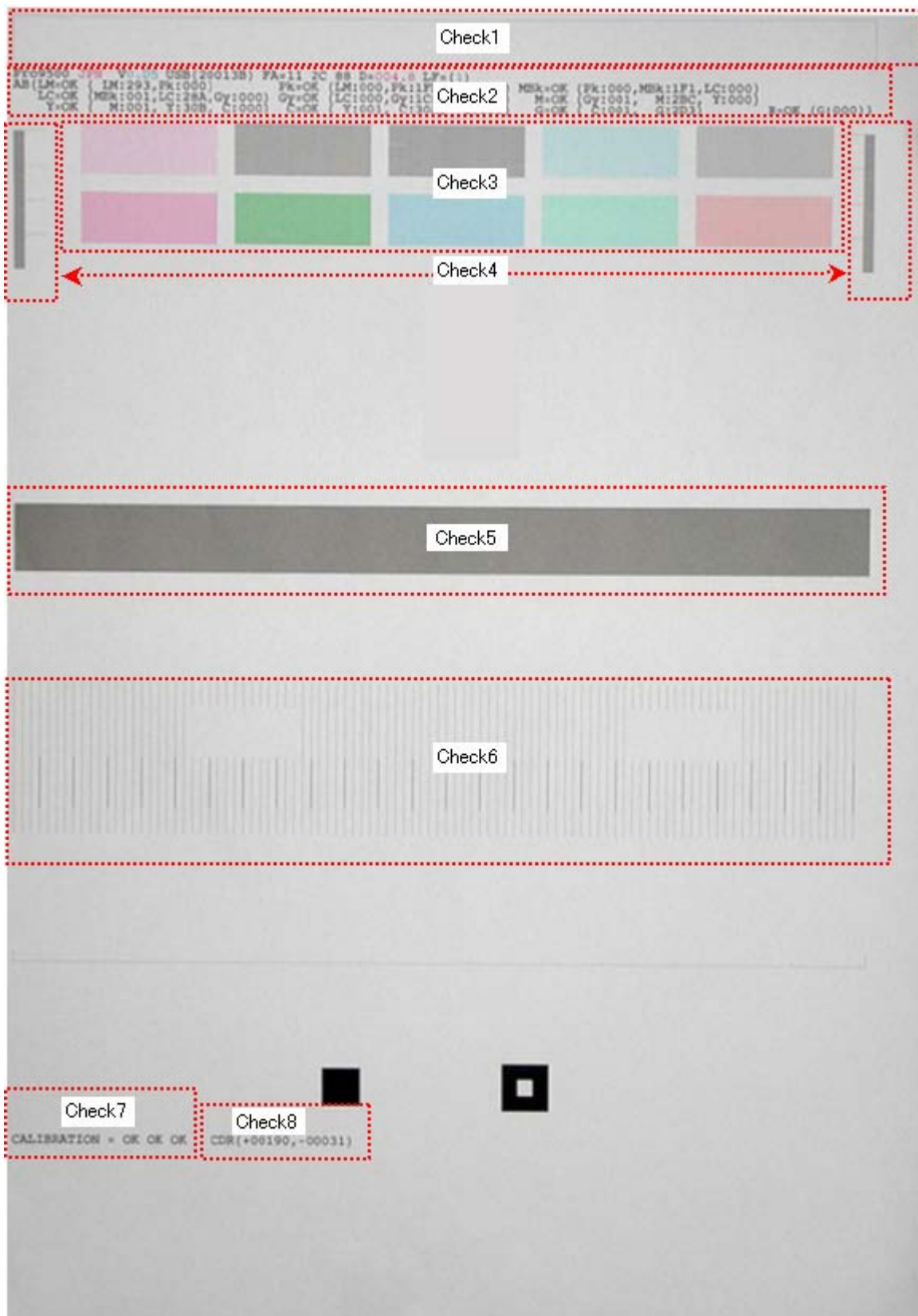
(2) EEPROM information print

<How to read EEPROM information print>

Print sample:

Pro9500 JPN V1.04 IF(USB2=1) D=004.5 W=000.4 ST=2005/12/27-18:30

ER(ER0=1000 ER1=5100) LPT=2006/02/09-09:09
PC(M=002 R=000 T=001 D=009 C=009)
CLT0=2006/02/25-18:30 CLT1=2006/02/25-18:30)
CH=00002 CT(PM=003 PBK=040 MBK=001 GR=001 PC=001 C=009 Y=002 M=012 G=001 R=001)
IS(PM=0 PBK=0 MBK=0 GR=0 PC=0 C=0 Y=0 M=0 G=0 R=0)
P_ON(S=00009) A_REG=1 M_REG=0
UR(1A(PMoe)=000 1B(PBKoe)=-01 1C(MBKoe)=-01 1D(GRYoe)=000 1E(PCoe)=-01
1F(Coe)=000 1G(Moe)=-01 1H(Goe)=-01 1I(Roe)=000 1J(BK-CL)=-01 1K(BK-MBK)=000
2A(PMbi)=000 2B(PBKbi)=000 2C(MBKbi)=000
2D(GRYbi)=000 2E(PCbi)=000 2F(Cbi)=000 2G(Mbi)=000 2H(Gbi)=000 2I(Rbi)=000
3A(PMbiPP)=000
3B(PBKbiPP)=000 3C(MBKbiPP)=000 3D(GRYbiPP)=000 3E(PCbiPP)=000 3F(CbiPP)=000
3G(MbiPP)=000 3H(GbiPP)=000 3I(RbiPP)=000

WP=0024 CDIN(PB=000) MSD(015)
PAGE(All=00083 PP=00035 HR+MP=00003 PR+SP+SG =00000 GP =00000 FA=00000 PC=00000
EV=00000)
SPPAGE(All=00003 PP=00005 HR+MP=00003 PR+SP+SG =00000 GP =00000 FA=00000 PC=00000
EV=00000)
CDPAGE(All=00000 A3=00000 A4=00000) EDGE=(All=00000 A3=00000 A4=00000)
SIZE=(A3=00020 A4=00050 2L=00000 L=00000 PC=00013)   GRAY=00000 CDR=00000
CDRP=(+00192, +00042) CDRS(PWM=464 RES=3) LF=(009 3 20 -05 -08)
Head TempBK=18.5 Head TempC=17.5 Env Temp=30.0 FF(88 2C 11)

HDEEPROM

V0001 SN=0000-0074
LN(00000 00000 00001 00003 00001 00000 00000) ID=00
IL=(PM=000 PBK=000 MBK=000 GR=000 PC=000 C=000 Y=000 M=000 G=000 R=000)

Printed items:

1. Model name (destination)   2. ROM version   3. Connected I/F (USB2)   4. Ink amount in the ink absorber   5. Wetting liquid use amount   6. Installation date

7. Operator call/service call error record   8. Last printing time

9. Purging count (manual/deep cleaning/timer/dot count/ink tank replacement)

10. Cleaning time (Gr.1/Gr.2)

11. Print head replacement count   12. Ink tank replacement count (PM/PBK/MBK/GRY/PC/C/Y/M/G/R)

13. Ink status (PM/PBK/MBK/GRY/PC/C/Y/M/G/R)

14. Power-on count (soft)   15. Automatic print head alignment by user   16. Manual print head alignment by user

17. User print head alignment values (PMoe/PBKoe/MBKoe/GRYoe/PCoe/
    Coe/Moe/Goe/Roe/BK-CL/BK-MBK/
    PMbi/PBKbi/MBKbi/
    GRYbi/PCbi/Cbi/Mbi/Gbi/Rbi/
    PMbiPP/
    PBKbiPP/MBKbiPP/GRYbiPP/PCbiPP/CbiPP/
    MbiPP/GbiPP/RbiPP)

18. Wiping count   19. Camera Direct Print-supported device connection record   20. Longest period where printing stops

21. ASF feed pages (total, plain paper, High Resolution Paper & Matte Photo Paper, Photo Paper Pro & Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, Fine Art Paper, postcard, envelope)

22. Front tray feed pages (total, plain paper, High Resolution Paper & Matte Photo Paper, Photo Paper Pro & Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, Fine Art Paper & Canvas & board paper, postcard, envelope)

23. Camera Direct print pages (total, A3, A4)   24. Borderless print pages (total, A3, A4)

25. Print pages by paper size (A3, A4, 5x6, 4x6, postcard)   26. Grayscale print pages   27. CD / DVD print count

28. CD / DVD print position correction value   29. CD / DVD sensor correction value   30. LF / Eject correction value

31. Print head temperature (Chip 1/Chip 2)   32. Inside temperature   33. Line inspection information

HDEEPROM

34. Version   35. Serial number

36. Lot number   37. Print head ID

38. Ink ejection level (PM, PBK, MBK, GR, PC, C, Y, M, G, R)
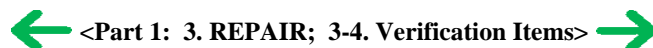
4. PRINTER TRANSPORTATION

This section describes the procedures for transporting the printer for returning after repair, etc.

1) In the service mode, press the Power button to finish the mode, and confirm that the paper lifting plate of the sheet feed unit is raised.

2) Keep the print head and ink tanks installed in the carriage.
   [See Caution 1 below.]

3) Turn off the printer to securely lock the carriage in the home position. (When the printer is turned off, the carriage is automatically locked in place.)
   [See Caution 2 below.]

Caution:

(1) If the print head is removed from the printer and left alone by itself, ink is likely to dry. For this reason, keep the print head installed in the printer even during transportation.

(2) Securely lock the carriage in the home position, to prevent the carriage from moving and applying stress to the carriage flexible cable, or causing ink leakage, during transportation.

Memo:

If the print head must be removed from the printer and transported alone, perform the following:

(1) Attach the protective cap (used when the packing was opened) to the print head (to protect the print head face from damage due to shocks).

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◄ **<Part 1: 4. PRINTER TRANSPORTATION>** ►

Part 2

TECHNICAL REFERENCE

1. NEW TECHNOLOGIES

(1) Ten-color, pigment-based ink (PGI-9)

By adding Matte Black and Gray to the accustomed eight colors, the total of ten pigment-based color inks is equipped.

Adoption of the pigment-based ink for all colors achieves the higher weather resistance.

(2) Monochrome printing

In addition to the Photo Black, the newly adopted Matte Black and Gray in k realize the excellently graded, full-fledged monochrome picture without graininess.

(3) Front feed

In addition to ASF, the manual and switchback paper feed system from the front tray is adopted. This system makes the various types of media such as the large sized paper (14" x 17"), non-Canon branded Fine Art paper, and board paper (maximum: 1.2 mm) usable.

(4) High durability

The printable number of paper is greatly increased by enlarging the ink absorber and attaching the special bushings to the paper feed and eject rollers.

i9900 / i9950: 10,000 pages -> Pro9500: 21,000 pages.

(5) Paper width sensor

The sensor on the carriage detects the width of paper to prevent users' operation errors (to prevent printing on the platen).

(6) Direct Printing function

The Pro9500 supports PictBridge. (Bubble Jet Direct is not supported.)

New function:

  - Supported paper size: 10" x 12", 14" x 17"
  - Supported paper type: Fine Art paper, SG201 8" x 10"
  - Manual color adjustment: The color modes of Natural, Natural M, Warm Tone, Cool Tone, and Black / White are added.
    Brightness can be corrected with Vivid ON / OFF options.

(7) New color mode

The new color mode which is best suited for a retouch is employed.

(8) Easy-PhotoPrint Pro

Easy-PhotoPrint Pro is packed with the printer for Photoshop CS / CS2 to enable plug-in.

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◀ **<Part 2: 1. NEW TECHNOLOGIES>** ➡

2. CLEANING MODE AND AMOUNT OF INK PURGED

To prevent printing problems due to bubbles, dust, or ink clogging, print head cleaning is performed before the start of printing (when the cleaning flag is on), except in the following cases:

- Cleaning on arrival: Performed when the access cover is closed.
- Manual cleaning / deep cleaning: Performed manually.

<Cleaning mode list>

HB-A: PM, PBK, MBK, PC, GY
HB-B: M, Y, C, G, R

Condition	Details	Approx. amount of ink used (g) (in the normal temperature/humidity environment)	Est. required time (sec.) (from cap closing to standby)
On arrival of the printer (All at the same time)	First cleaning after shipped from the plant.	10.0	155
Dot count cleaning (HB-A/HB-B/All at the same time)	When the specified number of dots are printed since the previous cleaning.	1.4 (HB-A) 1.8 (HB-B)	100 (All at the same time) 90 (HB-A) 90 (HB-B)
Timer cleaning - 1 (HB-A/HB-B/All at the same time)	If 60 to 120 hours have elapsed since the previous cleaning till the start of the next printing.	1.4 (HB-A) 1.8 (HB-B)	100 (All at the same time) 90 (HB-A) 90 (HB-B)
Timer cleaning - 2 (HB-A/HB-B/All at the same time)	If 120 to 240 hours have elapsed since the previous cleaning till the start of the next printing.	1.4 (HB-A) 1.8 (HB-B)	100 (All at the same time) 90 (HB-A) 90 (HB-B)
Timer cleaning - 3 (HB-A/HB-B/All at the same time)	If 240 to 480 hours have elapsed since the previous cleaning till the start of the next printing.	2.5 (HB-A) 2.8 (HB-B)	100 (All at the same time) 90 (HB-A) 90 (HB-B)
Timer cleaning - 4 (HB-A/HB-B/All at the same time)	If 480 or longer hours have elapsed since the previous cleaning till the start of the next printing.	4.2 (HB-A) 4.7 (HB-B)	140 (All at the same time) 125 (HB-A) 125 (HB-B)
At print head replacement (All at the same time)	When the print head is removed and a different one is installed.	10.0	155
At print head re-installation (All at the same time)	When the print head is removed and the same one is re-installed.	8.8	155
At ink tank replacement[*1] (HB-A/HB-B/All at the same time)	When an ink tank is replaced (without the print head removal or re-installation)	Replaced ink tank(s): PC or GY: 1.9 (HB-A) PBK or MBK: 2.2 (HB-A) PM: 2.5 (HB-A) M or Y: 2.1 (HB-B) C or G: 2.4 (HB-B) R: 2.8 (HB-B)	100 (All at the same time) 90 (HB-A) 90 (HB-B)
Manual cleaning (HB-A/HB-B/All at the same time)	- Via the operation panel (All at the same time only) - Via the printer driver (Selectable from HB-A, HB-B, or All at the same time)	2.5 (HB-A) 2.8 (HB-B)	100 (All at the same time) 90 (HB-A) 90 (HB-B)
Deep cleaning	Via the printer driver (Selectable from	4.2 (HB-A)	155 (All at the same time)

(HB-A/HB-B/All at the same time)	HB-A, HB-B, or All at the same time)	4.7 (HB-B)	140 (HB-A) 140 (HB-B)
If the print head has not been capped before power-on (All at the same time)		8.8	155 (All at the same time)

*1: Cleaning is performed when an ink tank is removed from the print head, regardless of whether it is actually replaced with a new one or not.

3. INK AGITATION MODE AND TIME

To prevent pigment sedimentation inside the ink tank, and to equalize the ink density and maintain the color hue, ink agitation is performed according to the conditions (listed in the table below) at the following events:

  - Closing of the top cover
  - Manual ink agitation (by pressing the Resume/Cancel button)
  - Closing of the cap

\<Conditions\>

Conditions	Est. required time (sec.)
At replacement of C, M, or G ink tank	120
At replacement of other ink tank(s)	60
When 0 to 120 hours have elapsed since the previous agitation.	10
When 120 to 240 hours have elapsed since the previous agitation.	30
When 240 to 480 hours have elapsed since the previous agitation.	60
When 480 or longer hours have elapsed since the previous agitation.	120

← **\<Part 2: 3. INK AGITATION MODE AND TIME\>** →

4. PRINT MODE

(cyan)	Default setting
(green)	Selectable in the printer driver Main tab
(yellow)	Selectable after clicking Custom in the Main tab

Print control   Bi: Bi-directional
                 Uni: Uni-directional

Ink used   4-color A: PGI-9MBK / C / M / Y
                 4-color B: PGI-9PBK / C / M / Y
                 5-color A: PGI-9MBK / PC / PM / Y / GY
                 5-color B: PGI-9PBK / PC / PM / Y / GY
                 5-color C: PGI-9PBK / C / M / Y / GY
                 9-color A: PGI-9MBK / C / M / Y / PC / PM / R / G / GY
                 9-color B: PGI-9PBK / C / M / Y / PC / PM / R / G / GY

4-1. Color Printing via Computer

Paper type	Item	Printer driver Custom setting				
		5	**4**	**3**	**2**	**1**
Plain paper	Print quality Print control Resolution Ink used	Custom 1 pass, Uni 600 x 1200 4-color A	Fast 1 pass, Uni 600 x 1200 4-color A	Standard 4 passes, Bi 2400 x 1200 9-color A		High 8 passes, Bi 2400 x 2400 9-color A
Photo Paper Plus Glossy (PP-101)	Print quality Print control Resolution Ink used			Standard 8 passes, Uni 1200 x 1200 9-color B	High 24 passes, Bi 1200 x 1200 9-color B	Custom 12 passes, Uni[*1] 1200 x 1200 9-color B
Photo Paper Plus Semi-gloss (SG-201)	Print quality Print control Resolution Ink used			Standard 8 passes, Bi 1200 x 1200 9-color B	High 24 passes, Bi 1200 x 1200 9-color B	Custom 12 passes, Uni[*1] 1200 x 1200 9-color B
Matte Photo Paper (MP-101)	Print quality Print control Resolution Ink used			Standard 8 passes, Bi 1200 x 1200 9-color B		High 24 passes, Bi 1200 x 1200 9-color B
Fine Art Paper (FA-PR1 / FA-PM1 / FA-ME1)	Print quality Print control Resolution Ink used			Standard 8 passes, Bi 1200 x 1200 9-color A	High 24 passes, Bi 4800 x 2400 9-color A	Custom 12 passes, Uni[*1] 1200 x 1200 9-color A
Fine Art Paper (Canvas / Board paper / other)	Print quality Print control Resolution Ink used			Standard 8 passes, Bi 1200 x 1200 9-color A		High 24 passes, Bi 4800 x 2400 9-color A
DVD / CD	Print quality Print control Resolution Ink used			Standard 24 passes, Bi 1200 x 1200 9-color B		High 12 passes, Uni[*1] 1200 x 1200 9-color B

*1: 384/768 nozzles used

4-2. Monochrome Printing via Computer

Paper type	Item	Printer driver Custom setting				
		5	4	3	2	1
Plain paper	Print quality Print control Resolution Ink used	Custom 1 pass, Uni 600 x 1200 4-color A	Fast 1 pass, Uni 600 x 1200 4-color A	Standard 4 passes, Uni 1200 x 1200 4-color A		High 8 passes, Bi 1200 x 1200 4-color A
Photo Paper Plus Glossy Photo Paper Plus Semi-gloss (PP-101 / SG-201)	Print quality Print control Resolution Ink used			Standard 24 passes, Bi 1200 x 1200 5-color B	High 24 passes, Bi 1200 x 1200 5-color B	Custom 12 passes, Uni[*1] 1200 x 1200 5-color B
Matte Photo Paper (MP-101)	Print quality Print control Resolution Ink used			Standard 24 passes, Bi 1200 x 1200 4-color B		High 24 passes, Bi 1200 x 1200 4-color B
Fine Art Paper (FA-PR1 / FA-ME1)	Print quality Print control Resolution Ink used			Standard 24 passes, Bi 1200 x 1200 5-color A	High 24 passes, Bi 1200 x 1200 5-color A	Custom 12 passes, Uni[*1] 1200 x 1200 5-color B
Fine Art Paper (FA-PM1)	Print quality Print control Resolution Ink used			Standard 24 passes, Bi 1200 x 1200 5-color A	High 24 passes, Bi 1200 x 1200 5-color A	Custom 12 passes, Uni[*1] 1200 x 1200 5-color A
Fine Art Paper (Canvas / Board paper / other)	Print quality Print control Resolution Ink used			Standard 24 passes, Bi 1200 x 1200 5-color A		High 24 passes, Bi 1200 x 1200 5-color A
DVD / CD	Print quality Print control Resolution Ink used			Standard 24 passes, Bi 1200 x 1200 5-color C		High 24 passes, Bi 1200 x 1200 5-color C

*1: 384/768 nozzles used.

4-3. Camera Direct Printing (Color)

Paper type	Item	Printer driver Custom setting				
		5	4	3	2	1
Plain paper	Print quality Print control Resolution Ink used					High 8 passes, Bi 2400 x 1200 9-color A
Photo Paper Plus Glossy Photo Paper Plus Semi-gloss (PP-101 / SG-201)	Print quality Print control Resolution Ink used					High 24 passes, Bi 1200 x 1200 9-color B
Fine Art Paper	Print quality Print control Resolution Ink used					High 24 passes, Bi 1200 x 1200 9-color A

4-4. Camera Direct Printing (Monochrome)

Paper type	Item	Printer driver Custom setting				
		5	4	3	2	1
Plain paper	Print quality Print control Resolution Ink used		2-7			High 8 passes, Bi 1200 x 1200 9-color A
Photo Paper Plus Glossy Photo Paper Plus Semi-gloss (PP-101 / SG-201)	Print quality Print control Resolution Ink used					High 24 passes, Bi 1200 x 1200 5-color B
Fine Art Paper	Print quality Print control Resolution Ink used					High 24 passes, Bi 1200 x 1200 5-color B

← **<Part 2: 4. PRINT MODE>** →

5. FAQ (Problems Specific to the Pro9500 and Corrective Actions)

No.	*	Function	Phenomenon	Condition	Cause	Corrective action	Possible call or complaint
1	A	Print results	Non-ejection of yellow ink.	- Low humidity environment (approx. 30% or lower). - When the printer is left unused for 2.5 days or less.	In the low humidity environment (approx. 30% or lower), the yellow ink is more likely to dry than any other colors, and it will not eject in some instances after the printer is left unused for 2 days or so. However, if the printer is left unused for 2.5 days or longer, the automatic cleaning is performed, thus all the inks will be ejected properly.	1. Perform Print head cleaning if non-ejection of ink occurs. 2. To prevent the ink from drying, recommend users avoiding the low humidity environment and closing the front tray, paper support, and rear support when the printer is not used.	- Yellow ink is not ejected. - Colors are strange.
2	B	Print results	Strange colors (due to pigment sedimentation).	- When printing is performed after printing is not performed for a certain period of time.	Pigment component of ink sediments, and the ink density inside the ink tank becomes uneven.	- When stocking a spare ink tank, do not place it with its opening facing down (place the tank with its opening facing up). - When printing has not been performed for 1 week or longer, perform Manual ink agitation (via the printer button) (max. 2 minutes).	- Colors are strange. - Colors change in mid-printing.
3	B	Print results	Non-ejection of ink or white spots on Fine Art Paper.	- Fine Art Paper	Typically, Fine Art Paper is likely to have paper debris on it. If paper debris comes in the nozzles, it prevents ink ejection. If paper debris comes off the surface of the printed paper, it causes white spots.	- Brush away paper debris from the Fine Art Paper before printing. - If non-ejection of ink occurs, perform Print head cleaning. - The information sheet of the Museum Etching explains how to brush away paper debris.	- Streaks appear. - White spots appear on printouts.
4	C	Setup	Carriage error during setup.	- The protective material is not removed from the inside of the printer before power-on.	A user did not follow the Easy Setup Instruction.	- Remove the left and right protective material by pulling their tapes, then turn the printer off and turn it on again. The error will be cleared.	- An error occurs. - The Power and Alarm lamps blink cyclically 2 times. - Strange noise.

*1: Change the paper in each Bottom plate cleaning. The cleaning can end when paper does not get any soiling.

* Occurrence level:
  A: The symptom is likely to occur frequently. (Caution required)
  B: The symptom may occur under certain conditions, but likeliness is assumed very low in practical usage.
  C: The symptom is unlikely to be recognized by the user, and no practical issues are assumed.
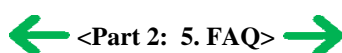
Part 3

APPENDIX

←→

Pro9500 Block Diagram

MAIN

SDRAM 128Mbit

SDRAM 128Mbit

SDRAM 128Mbit

ROM 64Mbit

MEMC CHO

MEMC CH1

USB Host FS w/ RootHub

USB — USB

REG — VBUS
5.5V

EEPROM 4kbit

Tr — head / HVDD
3.3V — VH(32V)

CR_ENC

OP AMP — diode sns

α β

VH moni*

VH_DA **

Tr — multiLED
7.5V

OP AMP — multiAD

USB Device HS Multi End Point

USB HS

UART0

ASF_CAM_SENS

Remote Debugger

Shielded Harness

Pict Bridge

FFC 1mm 22 x 2 + 0.5mm 45

1mm 22pin x 2 + 0.5mm 45pin

1mm 20 + 0.5mm 45

Carriage

CR Encoder

DA — VH Modulation — REG / REG — Print Head ZF642 — EEPROM

Diode Sensor

α β CONNECTER 4 / 4

Thermistor 8 / 8

MULTI Sensor

T20520only

unmount

Panel

Power LED

Power KEY

Error LED

Resume KEY

FPP LED

FPP KEY

unmount

F CVR Sensor 2

AB Sensor 5

A CVR Sensor

FP TRAY Sensor 4

TRAY GUIDE Sensor

17

VSEN3.3V
3.3V(for α β)

3.3V(for α β)

REG — 5.5V

3.3V(for analog)

REG — 5.5V 5V(for analog)

REG — 5.5V

ASIC TRINITY

VSEN3.3V

unmount

VSEN3.3V

PR SB ENC Sensor 4

PR LIFT Sensor 3

PE Sensor 3

LF ENC Sensor 4

VSEN3.3V — UR Sensor 3

VSEN3.3V — AP CL ENC Sensor 3

VSEN3.3V — MAIN CAM Sensor 3 / PUMP ROLLER Sensor 3

VSEN3.3V — FPP Sensor 3 / CR LIFT Sensor 3

VSEN3.3V — SB LIFT Sensor 3

VSEN3.3V — R CVR Sensor 2

VSEN3.3V(for sensors)

CR Motor DC

AP_CL Motor DC

LF Motor DC

PR_SB Motor DC

unmount

Motor Driver TB62227 x 2

RESET

5.5V 7.5V 3.3V 1.5V

VM(32V)

VH(32V)

PW_CONT

Xtal 30MHz

Tr — 3.3V

9

VH +32V, VM +32V

Power Supply

3-1
⟨Part 3: 1. BLOCK DIAGRAM⟩

2. CONNECTOR LOCATION AND PIN LAYOUT

2-1. Logic Board Ass'y
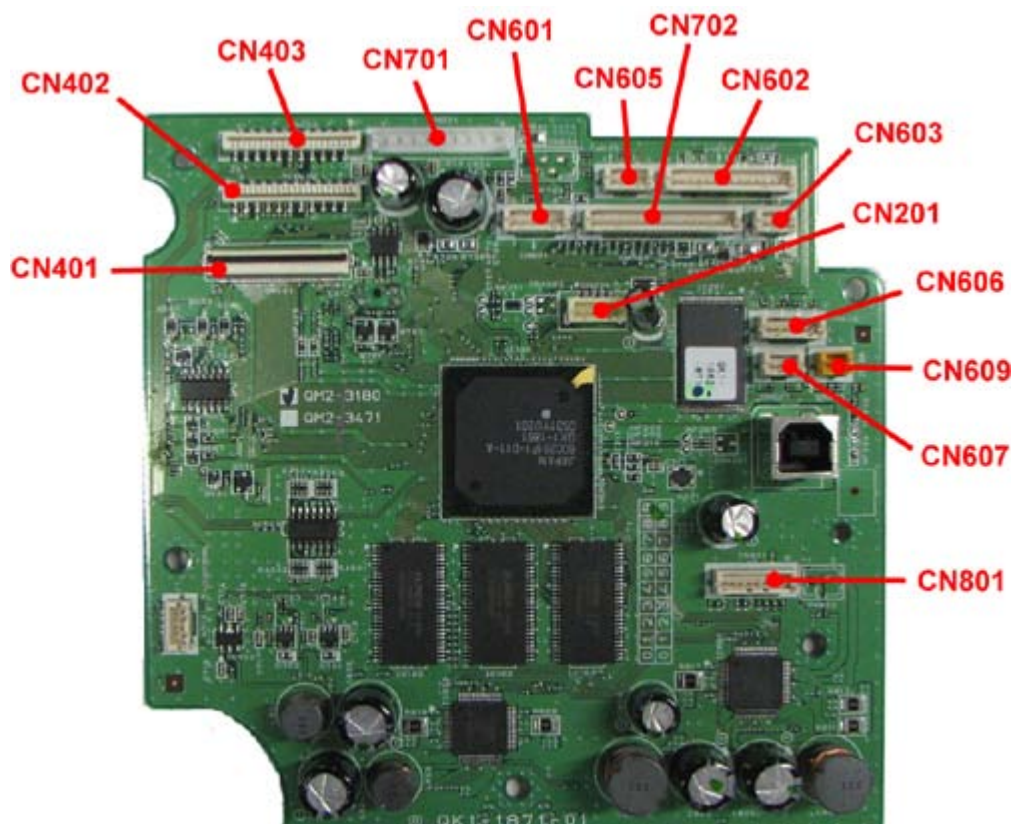
CN201 (DSC harness)

No.	Signal name	Function	Input / Output
1	PWR	DSC-USB: VBUS signal	OUT
2	D-	DSC-USB: D- signal	BUS
3	D+	DSC-USB: D+ signal	BUS
4	GND	GND	-
5	GND	GND	-

CN202 (USB I/F)

No.	Signal name	Function	Input / Output
1	SNS_USB	USB: VBUS power supply sense	IN
2	D-	USB: D- signal	BUS
3	D+	USB: D+ signal	BUS
4	GND	GND	-
5 to 9	GND	GND	-

CN401 (Print head 1/3 [Carriage unit])

No.	Signal name	Function	Input / Output
1	S_GND	Logic ground	-
2	CR_ENCA	CR encoder phase A	IN
3	VSEN33	Power supply for sensor 3.3V	OUT
4	CR_ENCB	CR encoder phase B	IN
5	EEPROM_CS	Head EEPROM chip select signal	OUT
6	EEPROM_DT	Head EEPROM data signal	OUT
7	JMULTI_POW	Multi Sensor Power supply	OUT
8	HVDD	Head logic power supply	OUT
9	EEPROM_CLK	Head EEPROM serial clock signal	OUT
10	HCLK	Head data transfer clock signal	OUT
11	S_GND	Logic ground	-
12	LT	Head data latch signal	IN
13	JMULTI_IF	Multi Sensor PWM control	OUT
14	HE5	Head heat enable signal 5	OUT
15	HE4	Head heat enable signal 4	OUT
16	HE3	Head heat enable signal 3	OUT
17	HD15	Head data 15	OUT
18	HD19	Head data 19	OUT
19	HD18	Head data 18	OUT
20	HD17	Head data 17	OUT
21	HD16	Head data 16	OUT
22	HD14	Head data 14	OUT
23	HD12	Head data 12	OUT
24	HD10	Head data 10	OUT
25	HD13	Head data 13	OUT
26	HD11	Head data 11	OUT
27	HD4	Head data 4	OUT
28	HD0	Head data 0	OUT
29	HD9	Head data 9	OUT
30	HD8	Head data 8	OUT
31	HD1	Head data 1	OUT
32	HD2	Head data 2	OUT
33	HE2	Head heat enable signal 2	OUT
34	HD5	Head data 8	OUT
35	HE1	Head heat enable signal 1	OUT
36	HE0	Head heat enable signal 0	OUT
37	HD7	Head data 7	OUT
38	HD6	Head data 6	OUT
39	HD3	Head data 3	OUT
40	AD_TH	CR thermo sensor signal	IN
41	JMULTI_AD	Multi sensor AD signal	IN

No.	Signal name	Function	Input / Output
42	JMULTI_LED3	Power supply for multi Sensor LED3	OUT
43	JMULTI_LED2	Power supply for multi Sensor LED2	OUT
44	JMULTI_LED1	Power supply for multi Sensor LED1	OUT
45	S_GND	Logic ground	-

CN402 (Print head 2/3 [Carriage unit])

No.	Signal name	Function	Input / Output
1	H_GND	Head ground	-
2	AB_CLK	AB Clock signal	BUS
3	AB_POW	AB power supply	OUT
4	H_GND	Head ground	-
5	AB_DATA	AB data signal	BUS
6	VH2_MONI	Head drive power supply monitor signal 2	IN
7	VH1_MONI	Head drive power supply monitor signal 1	IN
8	VH_DCHRG	Head power supply discharg signal	OUT
9	VH_DA_DT	Head power D/A convertor data signal	OUT
10	VH_DA_CLK	Head power D/A convertor clock signal	OUT
11	VH_DA_LD	Head power D/A convertor road signal	OUT
12	DIA1	Diode sensor anode 1	IN
13	DIA3	Diode sensor anode 3	IN
14	VH_ENB	Head heat enable signal	OUT
15to16	H_GND	Head ground	-
17to21	VH	Head drive power supply	OUT
22	H_GND	Head ground	-

CN403 (Print head 3/3 [Carriage unit])

No.	Signal name	Function	Input / Output
1	H_GND	Head ground	-
2to6	VH	Head drive power supply	OUT
7to8	H_GND	Head ground	-
9	DIK	DIK(Head ground)	-
10	DIA2	Diode sensor anode 2	IN
11	DIA0	Diode sensor anode 0	IN
12	H_VDD	Head logic drive power supply 3.3V	OUT
13to22	H_GND	Head logic ground	-

CN601 (Main cam sensor / PUMP roller sensor)

No.	Signal name	Function	Input / Output
1	VSEN_3.3V	Power supply for sensor 3.3V	OUT
2	GND	Ground	-
3	SNS_MAIN_CAM	Main cam sensor	IN
4	VSEN_3.3V	Power supply for sensor 3.3V	OUT
5	GND	Ground	-
6	SNS_PR	Pump roller sensor	IN

CN602 (PR_SB_encoder / PR_Lift sensor / PE sensor / LF encoder)

No.	Signal name	Function	Input / Output
1	GND	Ground	-
2	PR_SB_ENCA	PR_SB encoder phase A	IN
3	GND	Ground	-
4	PR_SB_ENCB	PR_SB encoder phase B	IN
5	VSEN3.3V	Power supply for sensor 3.3V	OUT
6	GND	Ground	-
7	SNS_PR_LIFT	PR_LIFT sensor	IN
8	VSEN3.3V	Power supply for sensor 3.3V	OUT

CN603 (LF Adjust Sensor)

No.	Signal name	Function	Input / Output
1	VSEN3.3V	Power supply for sensor 3.3V	OUT
2	GND	Ground	-
3	SNS_LF_ADJ	LF adjust sensor	IN

CN605 (AP_CL Encoder)

No.	Signal name	Function	Input / Output
1	GND	Ground	-
2	AP_CL_ENCA	AP_CL encoder phase A	IN
3	VSEN3.3V	Power supply for sensor 3.3V	OUT
4	AP_CL_ENCB	AP_CL encoder phase B	IN

CN606 (CR Lift Sensor / FLAT pass paper Sensor)

No.	Signal name	Function	Input / Output
1	VSEN3.3V	Power supply for sensor 3.3V	OUT
2	GND	AP_CL encoder phase A	-
3	SNS_CR_LIFT	CR_LIFT sensor	IN
4	VSEN3.3V	Power supply for sensor 3.3V	OUT
5	GND	Ground	-
6	SNS_FPP	Flat pass paper sensor	IN

CN607 (SB Lift sensor)

No.	Signal name	Function	Input / Output
1	VSEN3.3V	Power supply for sensor 3.3V	OUT
2	GND	Ground	-
3	SNS_SB_LIFT	SB_Lift Sensor	IN

CN609 (Rear cover sensor)

No.	Signal name	Function	Input / Output
1	GND	Ground	-
2	SNS_R_CVR	Rear cover Sensor	IN

CN701 (Power supply)

No.	Signal name	Function	Input / Output
1to2	VH	Head power supply 32V	IN
3to4	VH_GND	Head ground	-
5to6	VM	Motor power supply 32V	IN
7to8	VM_GND	Motor ground	-
9	VM_SLEEP	Power supply control signal	OUT

CN702 (PANEL IF)

No.	Signal name	Function	Input / Output
1	GND	Ground	-
2	SNS_A_CVR	Accece cover sensor	IN
3	SNS_FPT	Flat pass tray sensor	IN
4	GND	Ground	-
5	SNS_CDR_G	CDR guide sensor	IN
6	SNS_F_CVR	Front cover sensor	IN
7	FPP_SW	Flat pass key switch	IN
8	SNS_AB	AB sensor	IN
9	FPP_LED	Flat pass LED display	OUT
10	AB_POW	Power supply for AB	OUT
11	ERROR LED	Resume LED display	IN
12	SNS_INK	Ink sensor(NC)	IN
13	RESUME_SW	Resume key switch	IN
14	Blue LED PWR	Blue LED power supply	OUT
15	POWER_SW	Power key switch	IN
16	POWER_LED	Power LED display	OUT
17	GND	Ground	-

CN801 (Motor multi harness)

No.	Signal name	Function	Input / Output
1	CR_M	CR motor +	OUT
2	CR_MN	CR motor -	OUT
3	PR_SB_MN	PR_SB motor -	OUT
4	PR_SB_M	PR_SB motor +	OUT
5	AP_CL_M	APCL motor +	OUT
6	AP_CL_MN	AP_CL motor -	OUT
7	LF_M	LF motor +	OUT
8	LF_MN	LF motor -	OUT

2-2. Carriage Board (Print Head Connector)
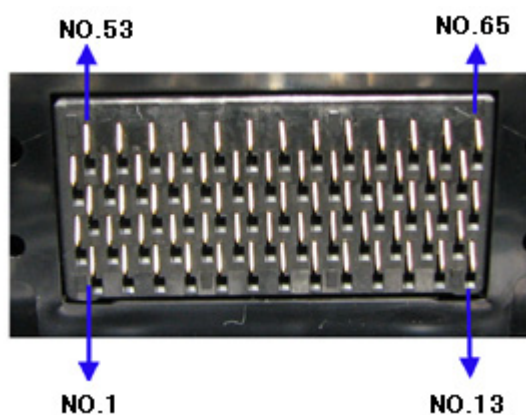
No.	Signal name	Function	Input / Output
1to3	B-VH	Head drive power supply 32V B	OUT
4	B-DIA1	Diode sensor anode B_1	IN
5	E-DI	Head EEPROM data signal	IN
6	E-DO	Head EEPROM data signal	OUT
7	E-SK	Head EEPROM serial clock signal	-
8	E-CS	Head EEPROM chip select signal	OUT
9	DATA 0 EV	Head data LM even	OUT
10	VDD	Head logic power supply 3.3V	OUT
11	VHT	Head drive power supply 32V	OUT
12to13	A-VH	Head drive power supply 32V A	OUT
14to16	B-VH	Head drive power supply 32V B	OUT
17	B-DIA2	Diode sensor anode B_2	OUT
18	DATA 8 OD	Head data R odd	OUT
19	DATA 7 EV	Head data G even	OUT
20	DATA 6 OD	Head data M odd	OUT
21	DATA 2 EV	Head data MBk even	OUT
22	A-DIA1	Diode sensor anode A_1	OUT
23	VDD	Head logic power supply	OUT
24to26	A_VH	Head drive power supply 32V A	OUT
27	B-HE 3	Head heat enable signal B_3	OUT
28	B-HE 2	Head heat enable signal B_2	OUT
29	B-HE 1	Head heat enable signal B_1	OUT
30	LT	Head data latch signal	OUT
31	DATA 7 OD	Head data G odd	OUT
32	DATA 8 EV	Head data R even	OUT
33	DATA 5 OD	Head data Y odd	OUT
34	DATA 4 EV	Head data Gray even	OUT

35	DATA 0 OD	Head data LM odd	OUT
36	A-DIA2	Diode sensor anode A_2	OUT
37	A-HE 3	Head heat enable signal A_3	OUT
38	A-HE 2	Head heat enable signal A_2	OUT
39	A-HE 1	Head heat enable signal A_1	OUT
40to42	B-GNDH	Head ground B	-
43	DIK	Diode sensor cathode(NC)	-
44	DATA 9 OD	Head data C odd	OUT
45	DATA 5 EV	Head data Y even	OUT
46	DATA 4 OD	Head data Gray odd	OUT
47	DATA 1 EV	Head data PBk even	OUT
48	DATA 2 OD	Head data MBk odd	OUT
49	VSS	Head logic ground	-
50to52	A-GNDH	Head ground A	-
53to55	B-GNDH	Head ground B	-
56	CLK	Head clock signal	OUT
57	DATA 9 EV	Head data C even	OUT
58	DATA 6 EV	Head data M even	OUT
59	DATA 3 OD	Head data LC odd	OUT
60	DATA 6 EV	Head data M even	OUT
61	DATA 1 OD	Head data PBk odd	OUT
62	VSS	Head logic ground	-
63to65	A_DNDH	Head ground	-

<Part 3:2.CONNECTOR LOCATION AND PIN LAYOUT;2-2.Carriage Board>

3. PIXMA Pro9500 Specifications

<Printer>

Type	Desktop serial color bubble jet printer
Paper feeding method	Auto sheet feed (ASF, front feed, CD / DVD printing*)
Resolution	4,800 x 2,400dpi (Max.)
Throughput (target value)	- Photo L (SG-201, Standard, borderless)*: Approx. 65 sec. - Photo L (SG-201, High (default), borderless)*: Approx. 185 sec. - Photo 4 x 6 (SG-201, Standard, borderless)*: Approx. 75 sec. - Photo 4 x 6 (SG-201, High (default), borderless)*: Approx. 220 sec. <For reference> Custom 5 Standard Black (J) (Fine Black) 9ppm 1.9ppm Black (E) (Fine Black) 9ppm 2.0ppm Color (Fine Color) 8ppm 1.7ppm *: Based on the ISO/JIS SCID N2 pattern. Print speed may vary depending on system configuration, interface, software, document complexity, print mode, page coverage, type of paper used and does not take into account data processing time on host computer.
Printing direction	Bi-directional, uni-directional
Print width	Max. 348.8mm (356mm in borderless printing)
Interface	USB 2.0 Hi-Speed
ASF stacking capacity	Plain paper:Max. 13mm (Approx. 150 sheets of 64g/m2 paper)
Paper weight	ASF:64 to 105g/m2 Front tray: 1.2mm (Max.)
Detection functions	Access cover open, Presence of print head, Opening / Closing of front door, Remaining ink amount (optical / dot count), Printing position, Paper presence, Paper end sensor, Ink amount in the ink absorber, Internal temperature, Pick-up roller, Paper feed roller position, Carriage position, Head-to-paper distance, Supported camera direct printing device, Presence of CD / DVD*, Paper width sensor, Opening / Closing of rear tray, Front tray position, Wetting liquid amount sensor
Acoustic noise (Highest print quality)	Highest print quality settings (using Photo Paper Plus Semi-gloss): Approx. 36dB

Environmental requirements	During operation Temperature 5C to 35C (41F to 95F)
	
	                Humidity 10%RH to 90%RH (no condensation)
	Non operation Temperature 0C to 40C (32F to 104F)
	
	                Humidity 5%RH to 95%RH (no condensation)

Power supply	Power supply voltage, frequency Power consumption Standby Power-off AC 100 to 240V, 50/60Hz Approx. 20W Approx. 1.8W Approx. 1.0W

External dimensions	Printer:
	  With the support and trays retracted: Approx. 660 (W) x 354 (D) x 191 (H)mm
	  With the support and trays extended: Approx. 600 (W) x 904 (D) x 372 (H)mm

Weight	Approx. 15.4kg, not including print head and optional units

Related standards (Printer, Adapter)	Electromagnetic radiance:
	  VCCI, FCC, IC, CE Mark, SATO, Gost-R, C-Tick, CCC, RPC
	Electrical safety:
	  Electrical Appliance and Material Safety Law (DENAN), UL, C-UL, CB Report,
	  CE Mark, GS, Gost-R, FT, SASO, CCC, SPRING, RPC
	Environmental regulations:
	  RoHS (EU), WEEE (EU), Green Point (Germany), Energy Star, Blue Angel, Eco
	  Mark, Law on Promoting Green Purchasing

Serial number location	On the carriage flexible cable holder (visible on the right of the carriage after the printer is turned on, the access cover is opened, and the carriage moves to the center.)
Remaining ink amount detection	Available (automatic detection by dot count, enabled at default)
Paper type detection	Not available
Print head alignment	Available (automatic or manual alignment via the printer driver Maintenance tab, or automatic alignment via the Resume/Cancel button in Camera Direct Printing, automatic alignment at default)

\<Print head\>

Type	Single head with 10 removable ink tanks (each color)
Print head	Each color: 768 nozzles (1,200dpi) All nozzles: 3pl of ink droplet (Min.)
Ink color	Pigment-based matte black, black, cyan, magenta, yellow, photo cyan, photo magenta, red, green, and gray
Ink tank	PGI-9MBK / PBK / C / M / Y / PC / PM / R / G / GY
Weight (Net)	Print head, approx. 120g (not including ink tanks, packing materials, and packaging)
Supply method	As a service part (not including ink tanks)
Part number	QY6-0065-000

Note: The ink tanks for the Japanese models (PGI-2) are not compatible with those for the non-Japanese models (PGI-9).
    Be sure to use the appropriate ink tanks in servicing.

<Part 3: 3. PIXMA Pro9500 Specifications>