PIXMA
MX340 / MX350

SIMPLIFIED SERVICE MANUAL

Canon

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QY8-13CS-000

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Canon Inc.

1. LIST OF ERROR DISPLAY

Errors and warnings are displayed by the following ways:

- Operator call errors are indicated by the Alarm lamp lit in orange, and the error and its solution are displayed on the LCD.
- Messages during printing from a computer are displayed on the printer driver Status Monitor.
- Error codes are printed in the "operator call/service call error record" area in EEPROM information print.

1-1. Operator Call Errors (Alarm Lamp Lit In Orange)

Buttons valid when an operator call error occurs:

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

Error	Error code	U No.	Message on the LCD	Solution	Parts that are likely to be faulty
No paper in the rear tray.	[1000]	---	There is no paper. Load paper and press [OK].	Set the paper in the rear tray, and press the OK button.	- PE PWB unit - Pick-up roller - Drive unit - Logic board
The paper output tray closed.	[1251]	---	Paper output tray is closed. Open the paper output tray.	Open the paper output tray, and press the OK button.	
Paper jam.	[1300]	---	The paper is jammed. Clear the paper and press [OK].	Remove the jammed paper, and press the OK button.	- PE PWB unit - Logic board
Ink cartridge not installed, or not properly installed.	[1401]	U051	Print head is not installed. Install the print head.	Install the ink cartridge properly. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.	- Ink cartridge - Carriage unit - Logic board
Ink cartridge temperature sensor error.	[1403]	U052	The type of print head is incorrect. Install the print head.	Re-set the ink cartridge. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.	- Ink cartridge - Carriage unit - Logic board
Non-supported ink cartridge installed.	[1485]	U059	The ink cartridge cannot be recognized.	A non-supported ink cartridge is installed. Install the supported ink cartridge. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.	- Ink cartridge - Carriage unit - Logic board
Ink cartridge in a wrong position.	[1486]	U076	Some ink cartridges are not installed in place.	Install the ink cartridge(s) in the correct position. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.	- Ink cartridge - Carriage unit - Logic board

Error	Error code	U No.	Message on the LCD	Solution	Parts that are likely to be faulty
Multiple ink cartridges of the same color installed.	[1487]	U075	Some ink cartridges are not installed in place.	Replace the wrong ink cartridge(s) with the correct one(s). If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.	- Ink cartridge - Carriage unit - Logic board
Ink cartridge hardware error	[1682]	U150	The ink cartridge cannot be recognized.	Re-set the ink cartridge(s). If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.	- Ink cartridge - Carriage unit - Logic board
Ink cartridge not recognized	[1684]	U140	The ink cartridge cannot be recognized.	A non-supported ink cartridge is installed. Install the supported ink cartridge.	- Ink cartridge - Carriage unit - Logic board
The remaining ink amount unknown.	[1686]	U162	Ink may have run out. Replacing the ink cartridge is recommended.	Replace the applicable ink cartridge with a new one. Printing without replacing the ink cartridge can damage the printer. To continue printing without replacing the ink cartridge(s), press the Stop 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 cartridge - Logic board
Ink cartridge not installed properly.	[1687]	U053	The ink cartridge cannot be recognized.	Re-set the ink cartridge. If the error is not cleared, the ink cartridge may be defective. Replace the ink cartridge.	- Ink cartridge - Carriage unit - Logic board

Error	Error code	U No.	Message on the LCD	Solution	Parts that are likely to be faulty
No ink (no raw ink).	[1688]	U163	Ink has run out. Replace the ink cartridge.	Replace the empty ink cartridge(s). Printing with an empty ink cartridge can damage the printer. To continue printing without replacing the ink cartridge(s), press the Stop 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 cartridge - Logic board
Warning: The ink absorber becomes almost full.	[1700]	---	The ink absorber is almost full.	Replace the ink absorber, and reset its counter. (See 2-1, Service Mode.) Pressing the STOP 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 kit
The connected digital camera or digital video camera does not support Camera Direct Printing.	[2001]	---	Incompatible device detected. Remove the device.	Remove the cable between the camera and the printer.	- PictBridge harness - Logic board
Non-supported hub	[2002]	---	An unsupported USB hub is connected. Remove the hub.	Remove the applicable USB hub from the PictBridge (USB) connector.	- PictBridge harness - Logic board
Paper jam in the ADF	[2801]	---	Document in ADF. Redo operation after checking document in ADF and pressing [OK].	Remove the jammed paper from the ADF, press the OK button, then perform the operation again.	- Document upper guide unit
No paper in the ADF	[2802]	---	No document in ADF. Press [OK] and redo operation after setting document.	Press the OK button, set the document in the ADF, and perform the operation again.	- Document upper guide unit
The paper in the ADF is too long.	[2803]	---	Document is too long. Press [OK] and redo operation.	Press the OK button, and perform the operation again.	- Document upper guide unit

1-2. Service Call Errors (by Cyclic Blinking of Alarm and Power Lamps)

Cycles of blinking of Alarm and Power LEDs	Error	Error code	Conditions	Solution (Check points and replacement items)
2 times	Carriage error	[5100]	An error occurred in the carriage encoder signal.	1) Smearing or scratches on the timing slit film; clean the timing slit film. 2) Foreign material or paper debris that obstructs the carriage movement; remove foreign material. 3) Ink cartridge conditions; reseat the ink cartridges. 4) Cable connection 5) Part replacement: - Timing slit film - Carriage unit - Logic board
3 times	Line feed error	[6000]	An error occurred in the LF encoder signal.	1) Smearing or scratches on the LF encoder; clean the LF encoder. 2) Foreign material or paper debris in the LF drive; remove foreign material. 3) Cable connection 4) Part replacement: - LF encoder - Logic board
5 times	ASF cam sensor error	[5700]	An error occurred in the ASF cam sensor (during paper feeding from the rear tray).	1) Cable connection 2) Part replacement: - PE PWB unit - Drive unit - Logic board
6 times	Internal temperature error	[5400]	The internal temperature is not normal.	1) Cable connection 2) Part replacement: - Logic board - Ink cartridge
7 times	Ink absorber full	[5B00]	The ink absorber is supposed to be full.	1) Ink absorber condition 2) Part replacement: - Ink absorber kit 3) Ink absorber counter value in the EEPROM; reset the ink absorber counter.
8 times	Print head temperature rise error	[5200]	The print head temperature exceeded the specified value.	1) Ink cartridge conditions 2) Cable connection 3) Part replacement: - Ink cartridge - Logic board
9 times	EEPROM error	[6800] [6801]	A problem occurred in reading from or writing to the EEPROM.	1) Part replacement: - Logic board

Cycles of blinking of Alarm and Power LEDs	Error	Error code	Conditions	Solution (Check points and replacement items)
10 times	VH monitor error	[B200]	The print head voltage is not normal.	1) Part replacement: - Ink cartridge and logic board - Power supply unit
15 times	USB VBUS overcurrent	[9000]	The USB VBUS is overloaded.	1) Part replacement: - Logic board
20 times	Other errors	[6500]		1) Part replacement: - Logic board
22 times	Scanner error	[5011]	An error occurred in the scanner.	1) Document pressure sheet condition 2) Cable connection 3) Part replacement: - Document pressure sheet - Scanner unit - Logic board
Power LED turned off, and Alarm LED lit	ROM / RAM error	---	The check sum value is incorrect in the ROM check or RAM check at hard-power-on.	1) Part replacement: - Logic board

1-3. FAX Errors

For errors other than those listed below, please refer to the "G3 / G4 Facsimile Error Code List (Rev. 2)" (HY8-23A0-020 in English).

< User error codes >

Error code	TX / RX	Meaning	Solution (parts that are likely to be faulty)
#001	TX	Document jam	-Document upper guide
#003	TX / RX	Document is too long, or page time-over	-Document upper guide
#005	TX / RX	Initial identification (T0 / T1) time-over	-Check the telephone line type settings (rotary pulse / touch tone).
#012	TX	No recording paper at the receiving machine	
#017	TX	Redial time-over, but no DT detected	
#018	TX	Auto dialing transmission error, or redial time-over	-Check the telephone line type settings (rotary pulse / touch tone).
#022	TX	Call failed (no dial registration)	-Register a dial number.
#037	RX	Memory overflow at reception of an image	-Delete unnecessary image data from the memory.
#046	RX	Direct mail rejection (rejection of mail reception)	-Register the dial number of the calling machine.
#059	TX	Dialed number not matches the CSI of the connected machine	-Register the dial number (CSI) properly on the receiving machine.
#085	TX	No color fax function supported in the receiving machine	-Send a fax in the B&W mode.
#099	TX / RX	Transmission terminated mid-way by pressing the Stop button	
#995	TX / RX	During TX (sending): Memory transmission reservation cancelled During RX (receiving): Image data received in the memory cleared	

< Service error codes >

Error code	TX / RX	Meaning	Solution (parts that are likely to be faulty)
##100	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.	-Try a higher transmission level.
##101	TX / RX	Sender's modem speed does not match the receiving machine.	
##102	TX	Fallback is not available.	-Try a higher transmission level.
##103	RX	EOL has not been detected for 5 seconds (or 15 seconds in CBT).	-Increase the transmission level of the sending machine.
##104	TX	RTN or PIN has been received.	-Try a higher transmission level.
##106	RX	The procedure signal has been expected for 6 seconds, but not received.	-Increase the transmission level of the sending machine.
##107	RX	Fallback is not available at the sending machine.	-Increase the transmission level of the sending machine.

Error code	TX / RX	Meaning	Solution (parts that are likely to be faulty)
##109	TX	After DCS transmission, a signal other than DIS, DTC, FTT, CFR, or CRP has been received, and re-transmission of the procedure signal has been attempted the specified number of times but failed.	
##111	TX / RX	Memory error	-Eliminate all the data, and register them again.
##114	RX	RTN has been received.	-Increase the transmission level of the sending machine.
##200	RX	A carrier has not been detected for 5 seconds during image reception.	-Increase the transmission level of the sending machine.
##201	TX / RX	DCN has been received in a method other than the binary procedure.	-Set the other machine ready for reception.
##204	TX	DTC has been received even when there is no sending data.	
##220	TX / RX	System error (main program hang-up)	-Turn the machine off, and turn it on again. -NCU board
##224	TX / RX	An error has occurred in the procedure signal in G3 transmission.	
##226	TX / RX	The stack pointer has shifted from the RAM area.	-Turn the machine off, and turn it on again.
##229	RX	The recording area has been locked for 1 minute.	-After the area is unlocked, print the recorded image.
##232	TX	The encoder control unit has malfunctioned.	-NCU board
##237	RX	The decoder control unit has malfunctioned.	-NCU board
##238	RX	The print control unit has malfunctioned.	-NCU board -Logic board
##261	TX / RX	A system error has occurred between the modem and the system control board.	-NCU board -Logic board
##280	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.	-Try a higher transmission level.
##281	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.	-Try a higher transmission level.
##282	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.	-Try a higher transmission level.
##283	TX	Re-transmission of the procedure signal has been attempted the specified number of times, but failed.	-Try a higher transmission level.
##284	TX	After TCF transmission, DCN has been received.	-Set the receiving machine ready for reception.
##285	TX	After EOP transmission, DCN has been received.	-Re-send the fax.
##286	TX	After EOM transmission, DCN has been received.	-Re-send the fax.
##287	TX	After MPS transmission, DCN has been received.	-Re-send the fax.
##288	TX	After EOP transmission, a signal other than PIN, PIP, MCF, RTP, RTN has been received.	
##289	TX	After EOM transmission, a signal other than PIN, PIP, MCF, RTP, RTN has been received.	
##290	TX	After MPS transmission, a signal other than PIN, PIP, MCF, RTP, RTN has been received.	

Error code	TX / RX	Meaning	Solution (parts that are likely to be faulty)
##670	TX	In V.8 late start, the DIS V.8 ability from the receiving machine was detected, and CI was sent in response; however, the procedure failed, causing T1 time-over.	-In bit 0 of the service data #1 SSSW SW28, prohibit the V.8 / V.34 procedure of the sending machine.
##671	RX	In V.8 call reception, the procedure fails to proceed to phase 2 after CM detection, causing T1 time-over.	-In bit 0 of the service data #1 SSSW SW28, prohibit the V.8 / V.34 procedure of the sending machine.
##672	TX	In V.34 transmission, the procedure fails to proceed from phase 2 to phase 3 or later, causing T1 time-over	-In bit 0 of the service data #1 SSSW SW28, prohibit the V.8 / V.34 procedure of the sending machine.
##673	RX	In V.34 reception, the procedure fails to proceed from phase 2 to phase 3 or later, causing T1 time-over	-In bit 0 of the service data #1 SSSW SW28, prohibit the V.8 / V.34 procedure of the sending machine.
##674	TX	In V.34 transmission, the procedure fails to proceed from phase 3 or 4 to the control channel or later, causing T1 time-over	-In bit 0 of the service data #1 SSSW SW28, prohibit the V.8 / V.34 procedure of the sending machine.
##675	RX	In V.34 reception, the procedure fails to proceed from phase 3 or 4 to the control channel or further, causing T1 time-over	-In bit 0 of the service data #1 SSSW SW28, prohibit the V.8 / V.34 procedure of the sending machine.
##750	TX	After transmitting PPS-NULL in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level.
##752	TX	After transmitting PPS-NULL in ECM transmission, DCN has been received.	-Try a higher transmission level.
##753	TX	After transmitting PPS-NULL in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.	-Increase the period of time of the T5 time-over.
##754	TX	After transmitting PPS-NULL in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level.
##755	TX	After transmitting PPS-MPS in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level.
##757	TX	After transmitting PPS-MPS in ECM transmission, DCN has been received.	-Try a higher transmission level.
##758	TX	After transmitting PPS-MPS in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.	-Increase the period of time of the T5 time-over.
##759	TX	After transmitting PPS-MPS in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level.
##760	TX	After transmitting PPS-EOM in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level.

Error code	TX / RX	Meaning	Solution (parts that are likely to be faulty)
##762	TX	After transmitting PPS-EOM in ECM transmission, DCN has been received.	-Try a higher transmission level.
##763	TX	After transmitting PPS-EOM in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.	-Increase the period of time of the T5 time-over.
##764	TX	After transmitting PPS-EOM in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level. -Increase the transmission level of the receiving machine.
##765	TX	After transmitting PPS-EOP in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level. -Increase the transmission level of the receiving machine.
##767	TX	After transmitting PPS-EOP in ECM transmission, DCN has been received.	-Try a higher transmission level.
##768	TX	After transmitting PPS-EOP in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.	-Increase the period of time of the T5 time-over.
##769	TX	After transmitting PPS-EOP in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level. -Increase the transmission level of the receiving machine.
##770	TX	After transmitting EOR-NULL in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level. -Increase the transmission level of the receiving machine.
##772	TX	After transmitting EOR-NULL in ECM transmission, DCN has been received.	-Try a higher transmission level.
##773	TX	After transmitting EOR-NULL in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.	-Increase the period of time of the T5 time-over.
##774	TX	After transmitting EOR-NULL in ECM transmission, ERR has been received.	-Try a higher transmission level.
##775	TX	After transmitting EOR-MPS in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level.
##777	TX	After transmitting EOR-MPS in ECM transmission, DCN has been received.	-Try a higher transmission level.
##778	TX	After transmitting EOR-MPS in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.	-Increase the period of time of the T5 time-over.
##779	TX	After transmitting EOR-MPS in ECM transmission, ERR has been received.	-Try a higher transmission level.

Error code	TX / RX	Meaning	Solution (parts that are likely to be faulty)
##780	TX	After transmitting EOR-EOM in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level. -Increase the transmission level of the receiving machine.
##782	TX	After transmitting EOR-EOM in ECM transmission, DCN has been received.	-Increase the transmission level of the receiving machine.
##783	TX	After transmitting EOR-EOM in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.	-Increase the period of time of the T5 time-over.
##784	TX	After transmitting EOR-EOM in ECM transmission, ERR has been received.	-Try a higher transmission level.
##785	TX	After transmitting EOR-EOP in ECM transmission, no significant signal has been received, and re-transmission of the procedure signal has been attempted the number of specified times but failed.	-Try a higher transmission level. -Increase the transmission level of the receiving machine.
##787	TX	After transmitting EOR-EOP in ECM transmission, DCN has been received.	-Try a higher transmission level.
##788	TX	After transmitting EOR-EOP in ECM transmission, re-transmission of the procedure signal has been attempted the number of specified times but failed, or T5 time-over (60 sec.) has occurred.	-Increase the period of time of the T5 time-over.
##789	TX	After transmitting EOR-EOP in ECM transmission, ERR has been received.	-Try a higher transmission level.
##790	RX	After receiving EOR-EOP in ECM reception, ERR has been transmitted.	-Increase the transmission level of the sending machine.
##791	TX / RX	During the ECM mode procedure, a signal other than a significant one has been received.	
##792	RX	In ECM reception, PPS-NULL between partial pages has not been detected.	-Increase the transmission level of the sending machine.
##793	RX	During high-speed signal reception in ECM, no effective frame has been detected, and a time-over has occurred.	-Try a higher transmission level. -Increase the transmission level of the sending machine.

2. MAJOR UNIT REPLACEMENT

Unit	Est. time required (min.)	Recommended removal procedure	Adjustment / settings	Operation check
Logic board	15	(1) Rear cover unit (2) NCU cover (3) PCB cover (4) Logic board	- Print the EEPROM information. - Set the destination. - Set the ink absorber counter value. See 3-1, "Ink absorber counter setting." - Perform print head alignment.	- Unified inspection pattern print or service test print - Camera Direct print - Copying
Scanner unit	20	(1) Rear cover unit (2) ASF tray unit (3) Side covers L / R (4) Bottom cover L (5) Damper cover unit (6) Damper rack gear (7) ADF unit (8) Scanner unit		- Copying
Carriage unit	40	(1) Rear cover unit (2) ASF tray unit (3) Side covers L / R (4) Bottom cover L (5) Damper cover unit (6) Damper rack gear (7) ADF unit (8) Scanner unit (9) Middle frame (10) NCU cover (11) PCB cover (12) Logic board / NCU board (13) PE PWB unit (14) Chassis (15) Carriage unit	- Adjust the head-to-paper distance. See 3-4, (1) Carriage rail and main chassis adjustment. - Perform print head alignment.	- Unified inspection pattern print or service test print
Cap-Blade unit	30	(1) Rear cover unit (2) ASF tray unit (3) Side covers L / R (4) Bottom cover L (5) Damper cover unit (6) Damper rack gear (7) ADF unit (8) Scanner unit (9) Middle frame (10) Cap-Blade F (11) Blade trigger lever (12) Cap-Blade unit		- Unified inspection pattern print or service test print

Unit	Est. time required (min.)	Recommended removal procedure	Adjustment / settings	Operation check
Drive unit	45	(1) Rear cover unit (2) ASF tray unit (3) Side covers L / R (4) Bottom cover L (5) Damper cover unit (6) Damper rack gear (7) ADF unit (8) Scanner unit (9) Middle frame (10) NCU cover (11) PCB cover (12) Logic board / NCU board (13) PE PWB unit (14) Chassis (15) Drive unit		- Unified inspection pattern print or service test print
Ink absorber (partial replacement)	13	(1) Rear cover unit (2) NCU cover (3) PCB cover (4) Logic board (4 screws) (5) Ink absorber	- Set the ink absorber counter value. See 3-1, "Ink absorber counter setting."	- Unified inspection pattern print or service test print
Timing slit film	30	(1) Rear cover unit (2) ASF tray unit (3) Side covers L / R (4) Bottom cover L (5) Damper cover unit (6) Damper rack gear (7) ADF unit (8) Scanner unit (9) Middle frame (10) Timing slit film	- Perform print head alignment	- Unified inspection pattern print or service test print

3. ADJUSTMENT / SETTINGS

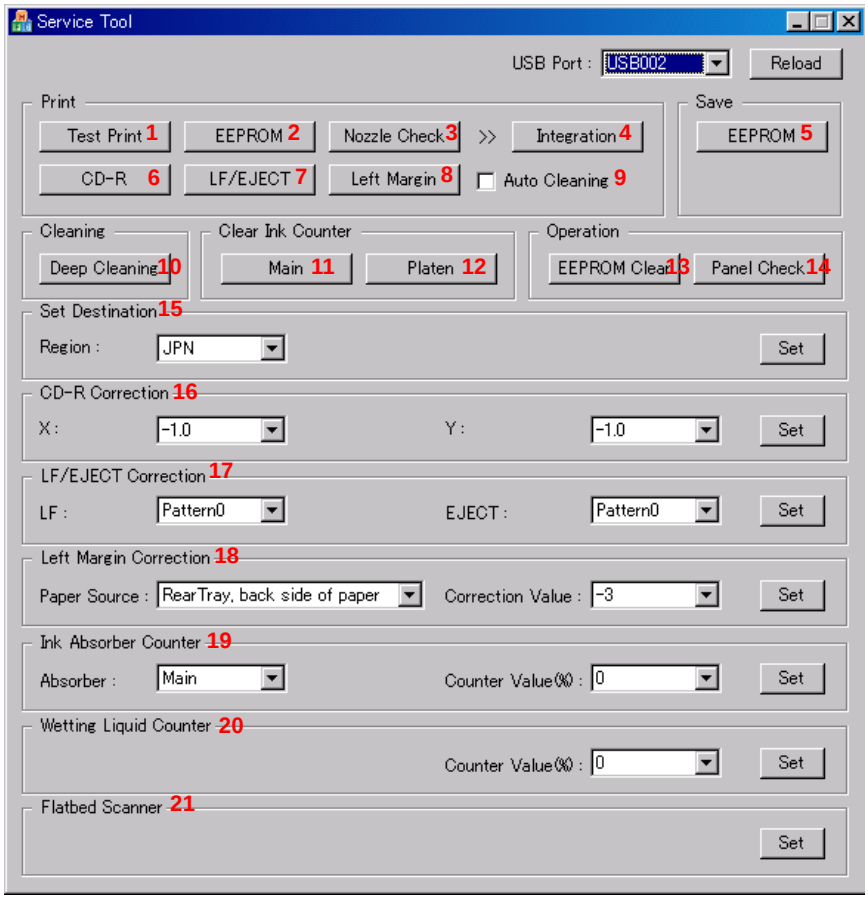
3-1. Service Mode

< 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 Stop 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 Stop button. (DO NOT release the ON button.)
   iii. While holding the ON button, press the Stop button 5 times, and then release both the ON and Stop buttons. (Each time the Stop button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in green, starting with Alarm LED.)
   Without the scanner (connect the operation panel unit.);
   While holding the ON button, press the Stop button 6 times, and then release both the ON and Stop buttons. (Each time the Stop button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in green.)
   iv. When the Power LED lights in green, the printer is ready for the service mode operation. The LCD turns in black, and nothing is displayed.
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.

< Service Tool Functions >



No.	Name	Function	Remarks
(1)	Test Print	Service test print	Service test print: - Model name - ROM version - Ink absorber counter value (ink amount in the ink absorber) - USB serial number - Destination - EEPROM information - Barcode (model name + destination), etc.
(2)	EEPROM	EEPROM information print	The dialog box opens to select the paper source. Select **Rear tray**, and click **OK**. EEPROM information print: - 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 same nozzle check pattern as the one in the user mode is printed.
(4)	Integration	Unified inspection pattern print	The unified inspection pattern (for reduction of time required for the inspection) is printed.
(5)*	EEPROM	EEPROM information saving	When no printing can be performed due to a problem, the EEPROM information is displayed on the computer or is saved to the computer as a text file.
(6)	n/a		Not used.
(7)	LF / Eject	LF / Eject correction pattern print	Not used.
(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. 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	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.
(12)	Platen	Platen ink absorber counter resetting	Not used.

No.	Name	Function	Remarks
(13)	EEPROM Clear	EEPROM initialization	The following items are NOT initialized, and the shipment arrival flag is not on: - Destination settings - Ink absorber counter value - USB serial number - Ink cartridge region code - Record of ink absorber counter resetting and setting - Record of repair at the production site, etc.
(14)	Panel Check	Button and LCD test	See "Button and LCD test" below.
(15)	Set Destination	Destination settings	Select the destination, and click **Set**. ASA, AUS, BRA, CHN, CND, EUR, JPN, KOR, LTN, TWN, USA
(16)	n/a		Not used.
(17)	LF / EJECT Correction	LF / Eject correction value setting	Not used.
(18)	Left Margin Correction	Left margin correction value setting	Not used.
(19)	Ink Absorber Counter	Ink absorber counter setting	See " Ink absorber counter setting " below.
(20)	Wetting Liquid Counter	Wetting liquid counter setting	Not used.
(21)*	Flatbed Scanner	Individual scanner adjustment	Not used.

* New functions in Service Tool version 1.071:
(5) EEPROM information saving
(9) Enabling / disabling of automatic print head cleaning
(21) Individual scanner adjustment

< Button and LCD test >

Confirm the operation after replacement of the operation panel unit or logic board.

MX340:

1) Click **Panel Check** of the Service Tool on the connected computer. The LCD turns gray, waiting for a button to be pressed.
2) Press each button of the operation panel.
   The LCD is divided into segments, representing each button. The color of a segment corresponding to the pressed button turns off. When all the 27 buttons are pressed, the entire LCD turns off.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

1:	COPY button	11:	Settings button	21:	6
2:	FAX button	12:	Redial button	22:	7
3:	SCAN button	13:	Coded Dial button	23:	8
4:	Black button	14:	Hook button	24:	9
5:	Color button	15:	FAX Quality button	25:	0
6:	Left cursor button	16:	1	26:	*
7:	Right cursor button	17:	2	27:	#
8:	OK button	18:	3		
9:	Back button	19:	4		
10:	Menu button	20:	5		

3) Press the ON button. The printer returns to be ready for selection of another function.

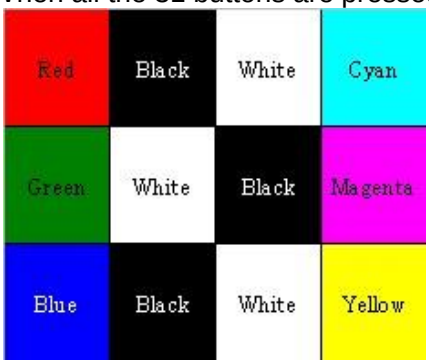
MX350:

1) Click **Panel Check** of the Service Tool on the connected computer. The LCD turns blue, waiting for a button to be pressed.
2) Press each button of the operation panel.
   The LCD is divided into segments, representing each button. The color of a segment corresponding to the pressed button changes to red.

1	**2**	**3**	**4**	**5**	**6**
20	**21**	**22**	**23**	**24**	**7**
19				**25**	**8**
18				**26**	**9**
17	**30**	**29**	**28**	**27**	**10**
16	**15**	**14**	**13**	**12**	**11**

1:	COPY button	11:	Down cursor button	21:	2	31:	#
2:	FAX button	12:	OK cursor button	22:	3		
3:	SCAN button	13:	Back button	23:	4		
4:	CARD button	14:	Redial button	24:	5		
5:	Setup button	15:	Coded Dial button	25:	6		
6:	Black button	16:	Hook button	26:	7		
7:	Color button	17:	Left function button	27:	8		
8:	Left cursor button	18:	Center function button	28:	9		
9:	Right cursor button	19:	Right function button	29:	0		
10:	Up cursor button	20:	1	30:	*		

When all the 31 buttons are pressed, the color pattern is displayed on the LCD.



3) Press the OK button. The printer returns to be ready for selection of another function.

< 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) In the **Ink Absorber Counter** section of the Service Tool, select **Main** from the **Absorber** pull-down menu.
3) 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.
4) Click **Set**.

3-2. PTT Parameter Mode

Enter the PTT parameter mode in the user mode as below. (The PTT parameter mode cannot be entered in the service mode.)

1) In the user mode, press the SCAN button to enter the scan mode.
2-a) Press **#, 9, 7, 6, 9, #** to enter the PTT parameter mode.
2-b) Press **#, 9, 7, 6, 8, #** to print the PTT parameter setting value.

- How to finalize the data:
  Press the OK button to finalize the data, then press the Stop button to save the data.

- How to exit the PTT parameter mode:
  Press the ON button to write the saved data to the EEPROM and turn off the printer.

< PTT parameter mode operation procedures >

1) In the user mode, press the SCAN button to enter the scan mode, and press **#, 9, 7, 6, 9, #**.
2) The following message is displayed on the LCD:

PTT PARAMETER #1 BIT SWITCH

BIT SWITCH menu

3) Each time the right or left cursor key is pressed, the menu is changed.

PTT PARAMETER #2 NUMERIC PARAM.

NUMERIC PARAM. menu

PTT PARAMETER #3 FAX TYPE

Not used in servicing.

PTT PARAMETER #4 NCU

Not used in servicing.

PTT PARAMETER #5 PTT SPECIAL

Not used in servicing.

PTT PARAMETER #6 FAX TEST

Not used in servicing.

4) Press the OK button when "#1 BIT SWITCH" or "#2, NUMERIC PARAM." is displayed to enter either of those modes.

< #1 BIT SWITCH >

1) In the #1 BIT SWITCH menu, the following screen is displayed:

```
#1 BIT SWITCH
SW#01      00000000
```

2) Each time the OK button is pressed, the SW# changes from 01 to 20.
   Be cautious not to select the SW numbers which are not used in servicing.
   - The SW numbers used in servicing:
     SW# 01, 02, 03, 04, 05, 06, 07, 10, 11, 13
   - The SW numbers not used in servicing (as of December 2009):
     SW# 08, 09, 12, 14 to 20
3) Each SW# has 8 bit information. Using the left or right cursor buttons, move the cursor to the bit to be changed, and enter the setting value (1 or 0).
   Bit 7 -> 00000000 <- Bit 0
4) Press the OK button to finalize the setting value. For the definition and description of each bit of each SW#, refer to the "*G3 Facsimile Service Data Service Handbook*."
   - English: QY8-13BC-010
   - Japanese: QY8-12B6-020
5) Press the Stop button to save the setting value.
6) Press the ON button.

< #2 NUMERIC PARAM. >

1) In the #2 NUMERIC PARAM. menu, the following screen is displayed:

```
#2 NUMERIC PARAM.
01:              00000
```

2) Each time the OK button is pressed, the SW# changes from 01 to 60.
   Be cautious not to select the SW numbers which are not used in servicing.
   - The SW numbers used in servicing:
     SW# 01, 02, 04 to 09, 16 to 24, 26, 27, 30, 31, 41, 42
   - The SW numbers not used in servicing (as of December 2009):
     SW# 03, 10 to 15, 25, 28, 29, 32 to 40, 43 to 60
3) Enter a desired setting value, using the right or left cursor button or numeric buttons. (Specific values vary depending on the item.)
4) Press the OK button to finalize the setting value. For the definition and description of each bit of each SW#, refer to the "*G3 Facsimile Service Data Service Handbook*."
   - English: QY8-13BC-010
   - Japanese: QY8-12B6-020
5) Press the Stop button to save the setting value.
6) Press the ON button.

< Confirmation of the setting values >

Print and confirm the PTT parameter setting values in the following procedures:

1) In the user mode, press the SCAN button, then press **#, 9, 7, 6, 8,** #.
2) The PTT parameter mode values are printed.
   For the definition and description of each bit of the SW#, refer to the "*G3 Facsimile Service Data Service Handbook*."
   - English: QY8-13BC-010
   - Japanese: QY8-12B6-020

PTT parameter print sample for the MX350 US model:

01/01/2010 00:02 FAX ☑001

1.000
PRAM 14.1

****
*** PTT PARAMETER ***
****

#1 BIT SW

SW01 --- 00000000	SW06 --- 00000000	SW11 --- 00100100	SW16 --- 00000000
SW02 --- 00000000	SW07 --- 00000000	SW12 --- 00010000	SW17 --- 00000000
SW03 --- 00000000	SW08 --- 10000101	SW13 --- 00001000	SW18 --- 00000000
SW04 --- 00000100	SW09 --- 00100001	SW14 --- 00110000	SW19 --- 00000000
SW05 --- 00101010	SW10 --- 10000000	SW15 --- 00000000	SW20 --- 00000000

#2 NUMERIC PARAM.

01:	0	13:	150	25:	58	37:	2	49:	5632
02:	10	14:	100	26:	60	38:	45	50:	4480
03:	10	15:	4	27:	5	39:	60	51:	1
04:	10	16:	100	28:	8	40:	30	52:	0
05:	15	17:	0	29:	6	41:	120	53:	0
06:	12	18:	200	30:	0	42:	350	54:	0
07:	5500	19:	100	31:	0	43:	0	55:	0
08:	3500	20:	0	32:	10	44:	0	56:	0
09:	1300	21:	200	33:	25	45:	2	57:	0
10:	600	22:	4	34:	2	46:	1000	58:	0
11:	60	23:	44	35:	2	47:	18	59:	0
12:	600	24:	10	36:	10	48:	6	60:	0

#3 FAX TYPE ---- U.S.A.

#4 NCU

1. TONE/PULSE

01:	---	39
02:	---	780
03:	---	90
04:	---	180
05:	---	1
06:	---	3

2. DIAL TONE 1

01:	---	10
02:	---	80
03:	---	14
04:	---	130
05:	---	12
06:	---	7
07:	---	130
08:	---	4

3. DIAL TONE 2 --- 00000000

01:	---	350
02:	---	90
03:	---	10
04:	---	0
05:	---	0
06:	---	0
07:	---	5
08:	---	3

4. BUSY TONE --- 10000000

01:	---	0
02:	---	16
03:	---	60
04:	---	16
05:	---	60
06:	---	12
07:	---	3
08:	---	3

5. REORDER TONE --- 10000000

01:	---	0
02:	---	18
03:	---	63
04:	---	18
05:	---	82
06:	---	12
07:	---	3
08:	---	3

6. AUTO RX

01:	---	10
02:	---	60
03:	---	10
04:	---	120
05:	---	1100
06:	---	0
07:	---	2
08:	---	13
09:	---	84

7. CNG DETECT

01:	---	40
02:	---	60
03:	---	85
04:	---	40
05:	---	64
06:	---	5
07:	---	2
08:	---	70

3-3. User Mode

Function	Procedures	Remarks
Nozzle check pattern printing	Perform via the printer operation panel, or from the printer driver Maintenance tab.	Set a sheet of plain paper (A4 or Letter) in the rear tray.
Print head cleaning	Perform via the printer operation panel, or from the printer driver Maintenance tab.	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 via the printer operation panel, or 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 via the printer operation panel.	Set a sheet of plain paper (A4 or Letter) in the rear tray.
Manual print head alignment	Perform from the printer driver Maintenance tab.	Set 3 sheets of plain paper (A4 or Letter) in the rear tray.
Print head alignment value printing	Perform via the printer operation panel, or from the printer driver Maintenance tab.	Confirmation of the current print head alignment values.
Paper feed roller cleaning	Perform via the printer operation panel, or from the printer driver Maintenance tab.	The paper feed rollers 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 via the printer operation panel, or from the printer driver Maintenance tab.	Cleaning of the platen ribs when the back side of paper gets smeared. Set a sheet of plain paper (A4 or Letter) in the rear tray, then fold another sheet of plain paper (A4 or Letter) crosswise in half, unfold and set it over the other paper in the rear tray with the folded ridge facing down.

3-4. Special Notes on Servicing

(1) Carriage rail and main chassis adjustment

< Carriage rail >

Perform the following adjustments when attaching the carriage rail:

1) Before loosening the screws, mark their positions on the rail.


2) In attaching the carriage rail, make sure that the screws fit to the marks made in step 1) respectively, then fasten the screws.
3) Be sure to perform the confirmation test detailed below; confirm that the print quality is proper and the print head is not contacting the paper.

< Main chassis >

After the main chassis is attached, be sure to perform the confirmation test detailed below; confirm that the print quality is proper and the print head is not contacting the paper.

< Confirmation test >

Using Photo Paper Pro Platinum, print an image and confirm that the print quality is proper, and the print head is free from contacting the paper.
If the print quality is not proper, or the print head contacts the paper, adjust the head-to-paper distance in the following procedures:

< How to adjust the head-to-paper distance >

1) Mark the current position of the screws at the both ends of the chassis. (See the step 1 of the carriage rail adjustment above.)
2) Loosen the screws, and adjust the head-to-paper distance.
   - To prevent the print head from contacting the paper, raise the carriage rail from the current position.
   - To improve the print quality, lower the carriage rail from the current position.

(2) Document pressure sheet replacement

At replacement of the document pressure sheet, perform the following:

1) With the long-side down, position the upper-left corner of the document pressure sheet at the scanning reference point on the platen glass (back left). Peel off the cover sheet from the double-sided adhesive tape on the back of the document pressure sheet.
2) Slowly close the document cover. The document pressure sheet will be attached to the document cover in the appropriate position.

(3) Ink absorber replacement

The following two replacement methods are available for these models.
Perform Partial Replacement for users in your usual service activity since estimated print yield for the MX340 is approx. 9,000 and approx.12,000 for the MX350.

Whole Replacement is for heavy users since once Whole Replacement is performed, the printer allows users to output approx.17, 000 pages. However, approx. 60 minutes is necessary to operate Whole Replacement.

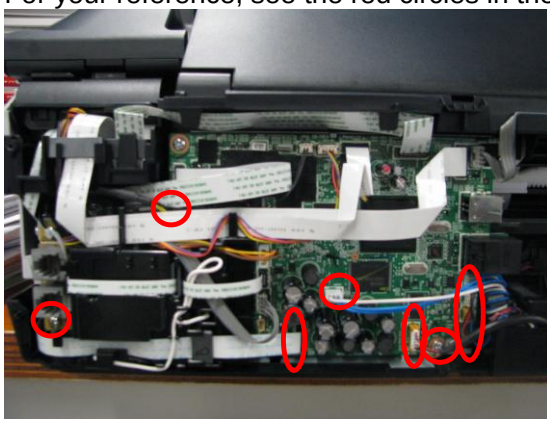
	Difficulties	Print yield after replacement
Partial Replacement	Low (approx. 13 min.)	Approx. 10,000
Whole Replacement	High (approx. 60 min.)	Approx. 17,000

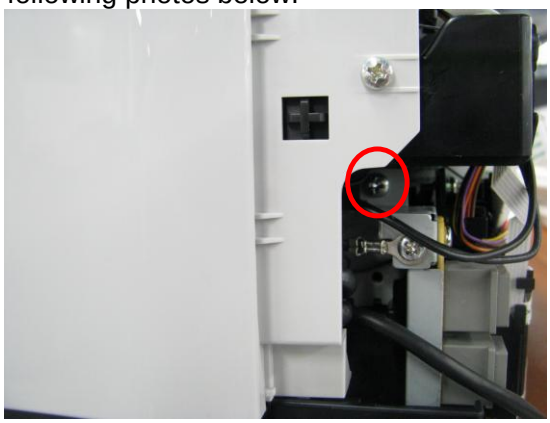
1) Partial replacement

Remove the Rear Cover Unit and Logic Board Ass'y, then replace the ink absorber.
(Time required: Approx. 13 min. including the operation check after replacement)

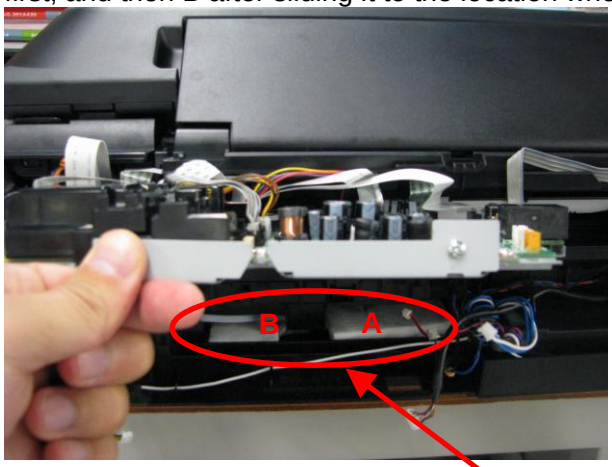
< How to perform the partial replacement >

i. Pull out the Rear Cover Unit, and remove 5 connectors from the Logic Board Ass'y, the DCD board connector, 2 screws, 1 flexible cable, and 1 screw from the Side Cover R. For your reference, see the red circles in the following photos below.





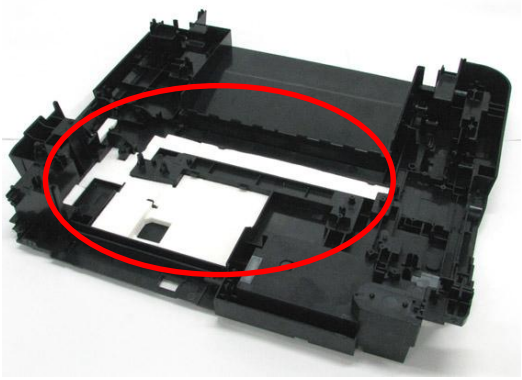
ii. Lifting the Logic Board Ass'y, pull out the ink absorbers (QC2-9603/QC2-9604) with a pair of tweezers. For your reference, see the red circle in the following photo below (pull out A first, and then B after sliding it to the location where absorber A was.).



Absorbers for Partial Replacement

iii. Attach new absorbers (QC2-9603/QC2-9604) to the printer.
Insert QC2-9603 into A; then slide QC2-9603 to B and then, insert QC2-9604.
iv. Set the ink absorber counter value to 40% (so that the printer can absorb 60% more).

2) Whole replacement
Remove the external housing and printer unit, then replace all the ink absorbers (total: 6).
The ink absorber counter value must be reset to 0%.
(Time required: Approx. 60 min. including the operation check after replacement)



< Estimation of the ink absorber life >
For your reference in servicing, the estimated number of months until the ink absorber will become full is given in EEPROM information print.

Sample: DF = 00165 (It indicates that there will be 165 months before the ink absorber becomes full.)

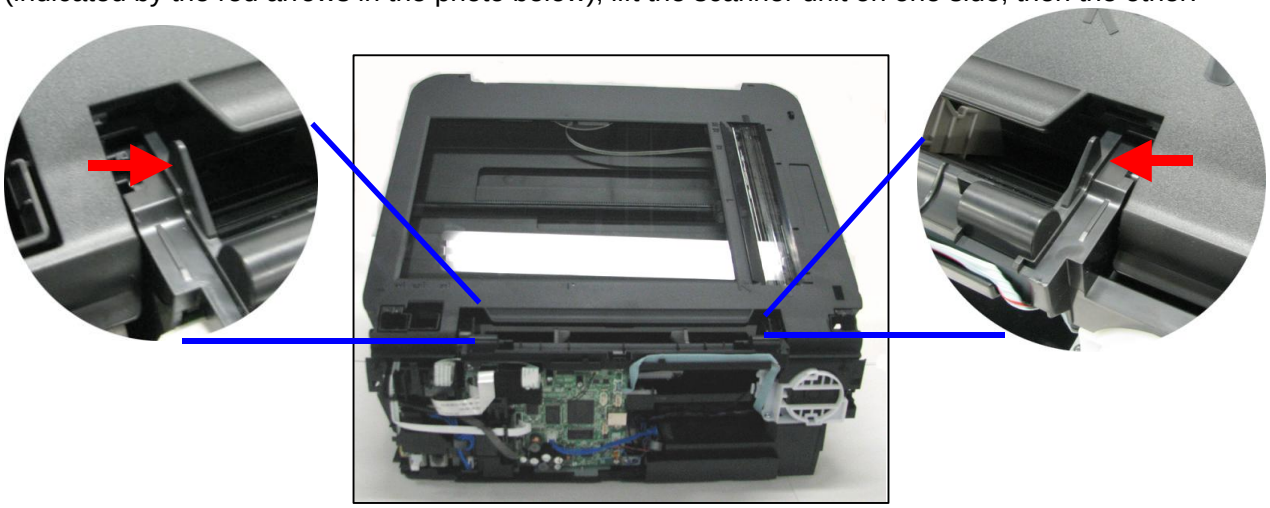
```
MX350   SN=VMTM24018 USA V1.000 ST=2009/12/07-12:16 LPT=2009/12/07-13:37
D=000.6
DF=00165
ER(ER0=0000 ER1=0000 ER2=0000 ER3=0000 ER4=0000
   ER5=0000 ER6=0000 ER7=0000 ER8=0000 ER9=0000)
PC(M=000 R=000 T=000 D=000 C=001 I=000)
LG=01 Japanese
TPAGE(TTL=00001 COPY=00000)
CH_NEW_BK=(STD=00000 MINI=00000)
CH_NEW_CL=(STD=00001 MINI=00000)
CH_BK=000
CH_CL=000
```

Note: 1. In the following cases, estimation of the ink absorber life will not be properly given:
- The printer is not connected to a computer.
- The time is not properly set in the computer.
- The ink absorber counter has been reset (to zero) before.
Reason: The ink absorber life is calculated using data of the printer installation date and the current ink counter value.
Data of the printer installation date is updated when the printer is connected to a computer.

2. The ink absorber life is calculated based on the user's usage (frequency of printing, printed items, etc.) before EEPROM information print (i.e. before repair servicing). It will vary according to the user's usage after EEPROM information print (i.e. after repair servicing).

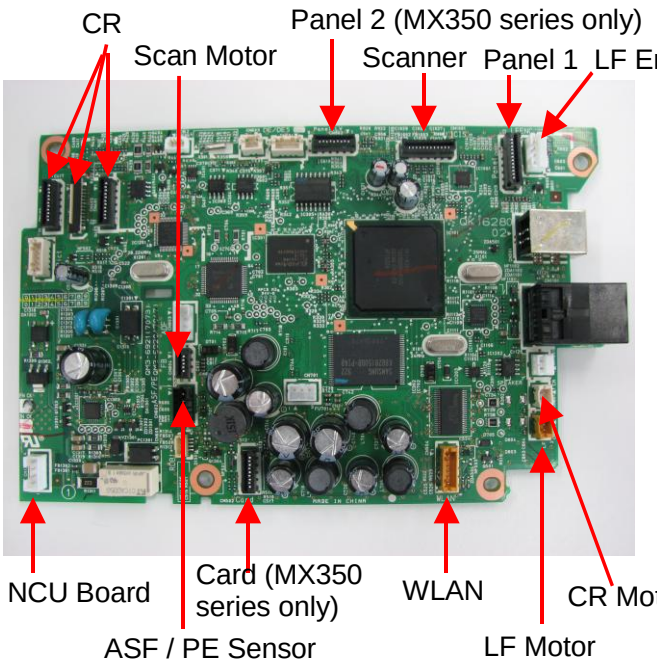
(4) Scanner unit removal

Remove the ADF first. Then while pressing the tabs on the both sides of the scanner unit inward (indicated by the red arrows in the photo below), lift the scanner unit on one side, then the other.



(5) PCB connector layout and flexible cable wiring

< Without cables >



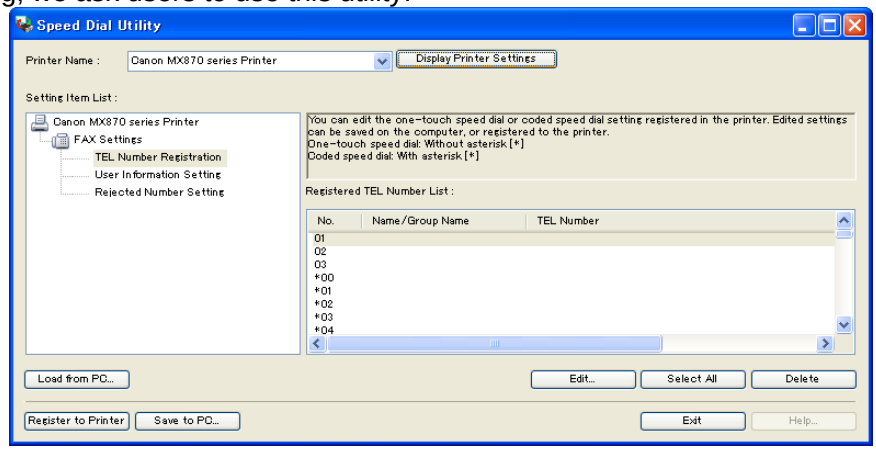
< When connected with cables >

(6) Ink mist cleaning

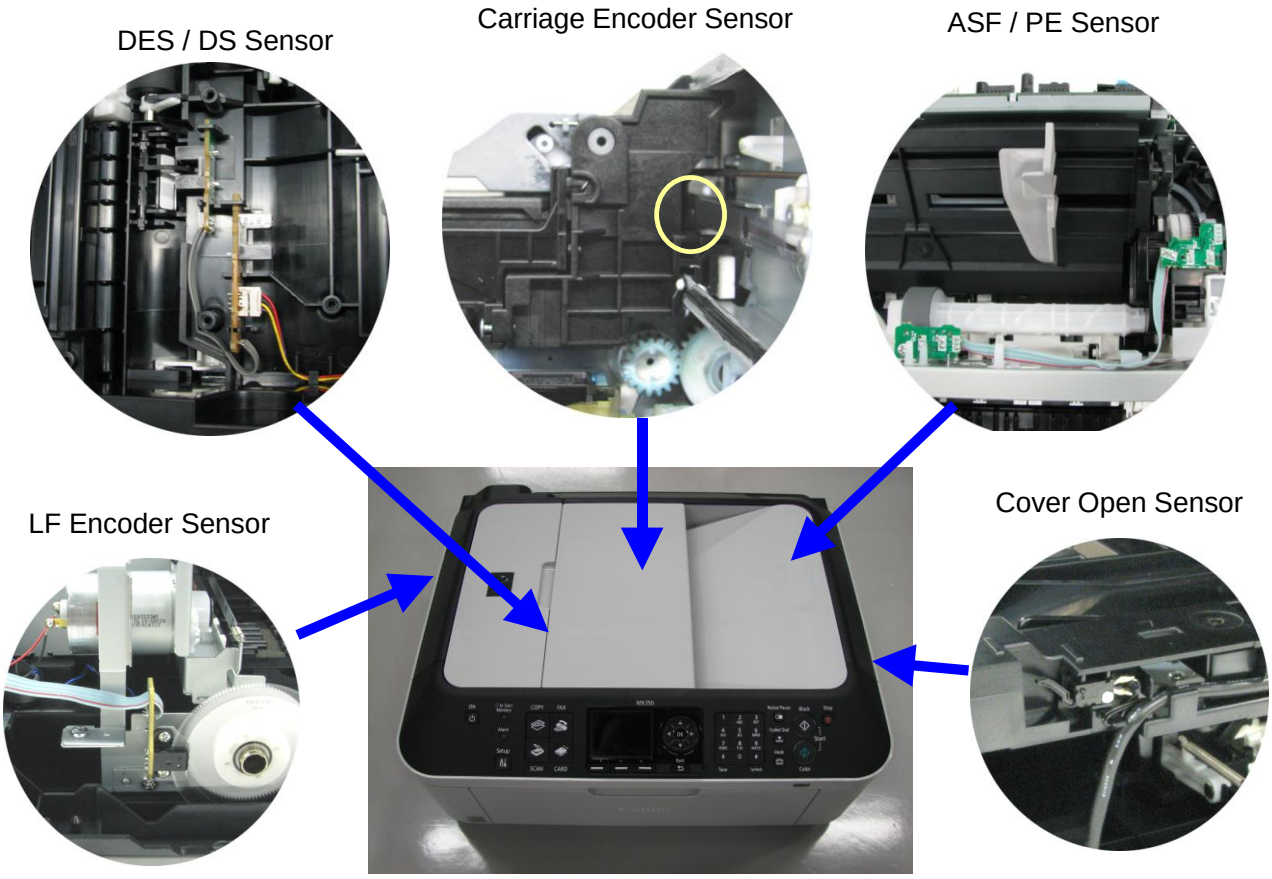
In repair servicing, using a soft and dry cloth or tissue, wipe ink mist off from both the inside and outside of the printer, especially from the ink cartridge locking covers (A in the photo below) and the inside of the tray (B in the photo below).

(7) Speed Dial Utility

Speed Dial Utility allows users to back up or edit the registered user data (coded speed dials, group dials, etc.) on a computer. Since those user data is considered as private information and requires a careful handling, we ask users to use this utility.



(8) Sensors

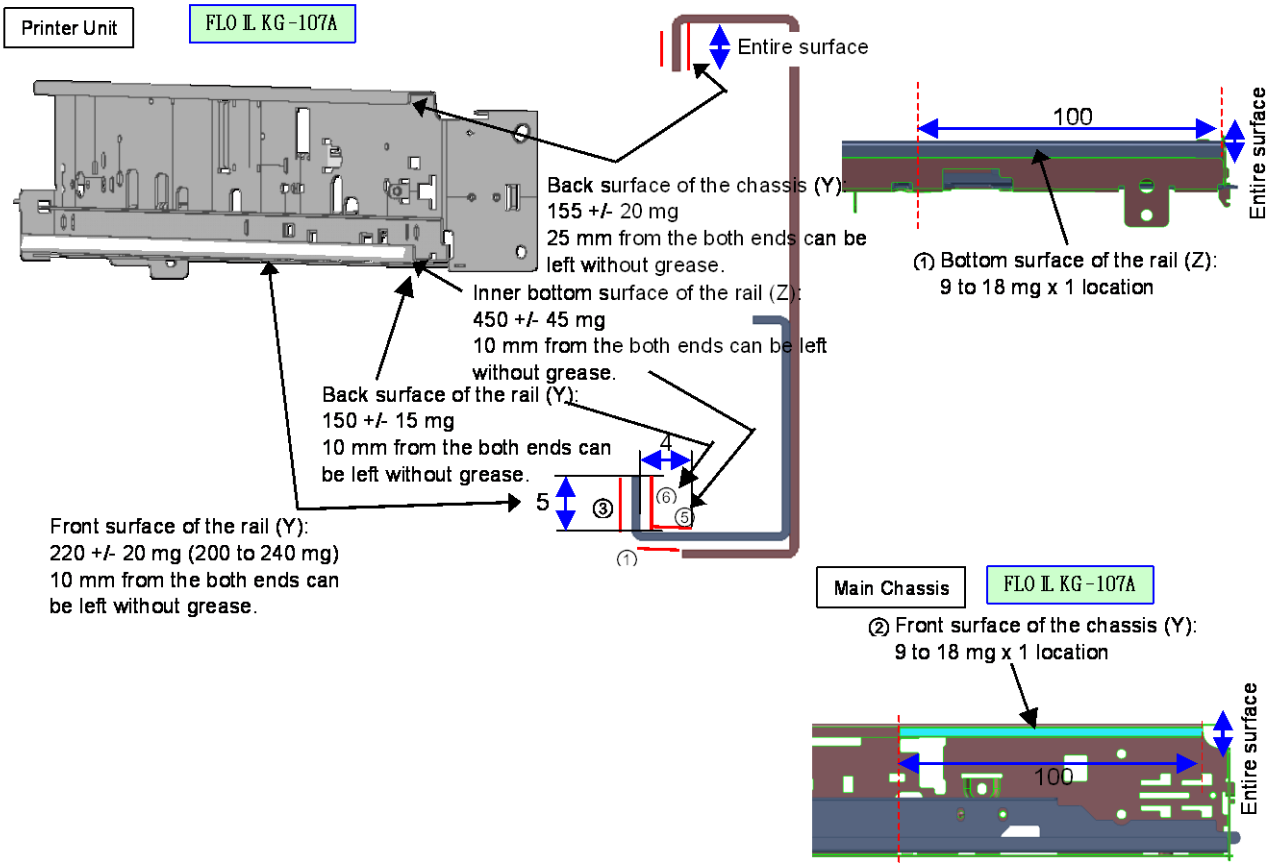


Sensor	Function	Possible problem
DES / DS sensor	Detects paper feeding and ejection from the ADF.	- No paper in the ADF - Paper jam in the ADF
ASF / PE sensor	Detects paper feeding and ejection from the rear tray.	- No paper in the rear tray - Paper jam in the rear tray
Cover open sensor	Detects opening and closing of the document cover.	- The carriage does not move to the center.
LF encoder sensor	Detects the number of times the LF encoder rotates, and controls its drive.	- Uneven printing
Carriage encoder sensor	Detects the position of the timing slit film, and controls printing.	- Uneven printing (due to grease attached to the timing slit film) - Carriage error

3-5. Grease application

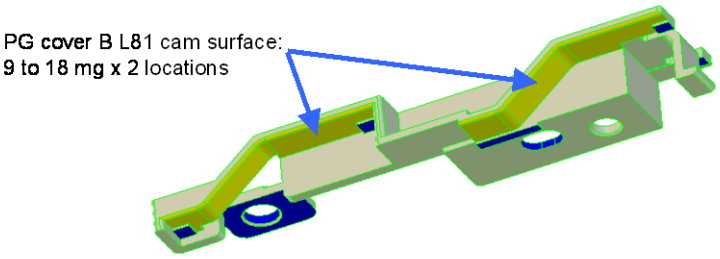
Location & Grease Amount

Printer Unit | FLOIL KG-107A



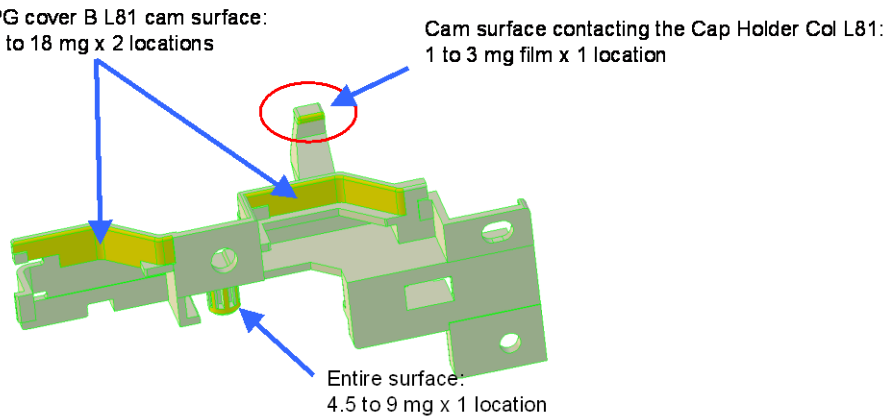
Main Chassis | FLOIL KG-107A

PG Cover B | MOLYKOTE PG-641



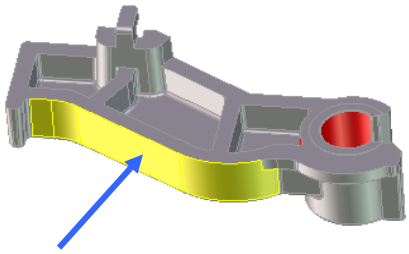
PG Cover F

MOLYKOTE PG-641



FD LINK

MOLYKOTE PG-641

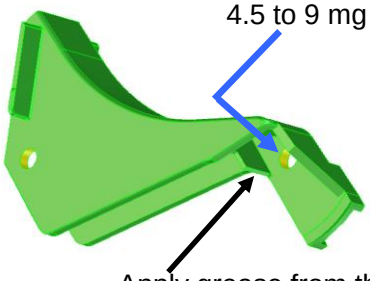


Over the entire surface where the cam slides:
9 to 18 mg

FD LINK C

MOLYKOTE PG-641

Sliding portion:
4.5 to 9 mg x 1 location

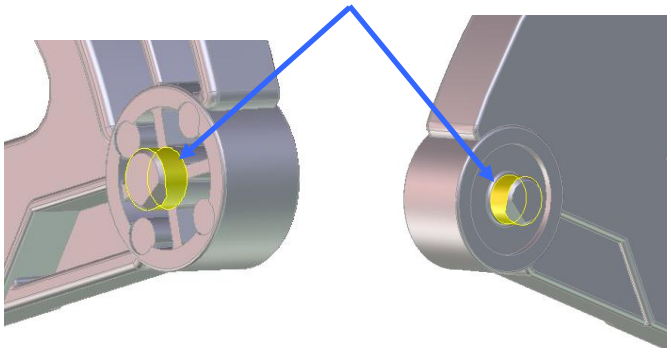


Apply grease from this side.

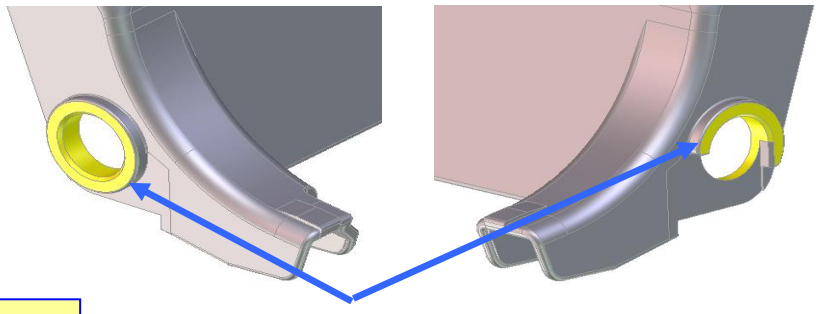
FD LINK A

MOLYKOTE PG-641

Sliding portions: 4.5 to 9 mg x 2 locations



EJECT TRAY BACK



MOLYKOTE PG-641

Sliding portions: 4.5 to 9 mg x 2 locations

3-6. Notes on Transportation

1) In the service mode, press the ON button to finish the mode, and confirm that the paper lifting plate of the rear tray is raised.
2) Keep the ink cartridges installed in the carriage. If the ink cartridge is removed from the printer and left alone by itself, ink (the pigment-based black ink in particular) is likely to dry.
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.) This is to prevent the carriage from moving and applying stress to the carriage flexible cable, or causing ink leakage, during transportation.

4. EXTERNAL VIEW / PARTS LIST

4-1. External View

Fig. 1:

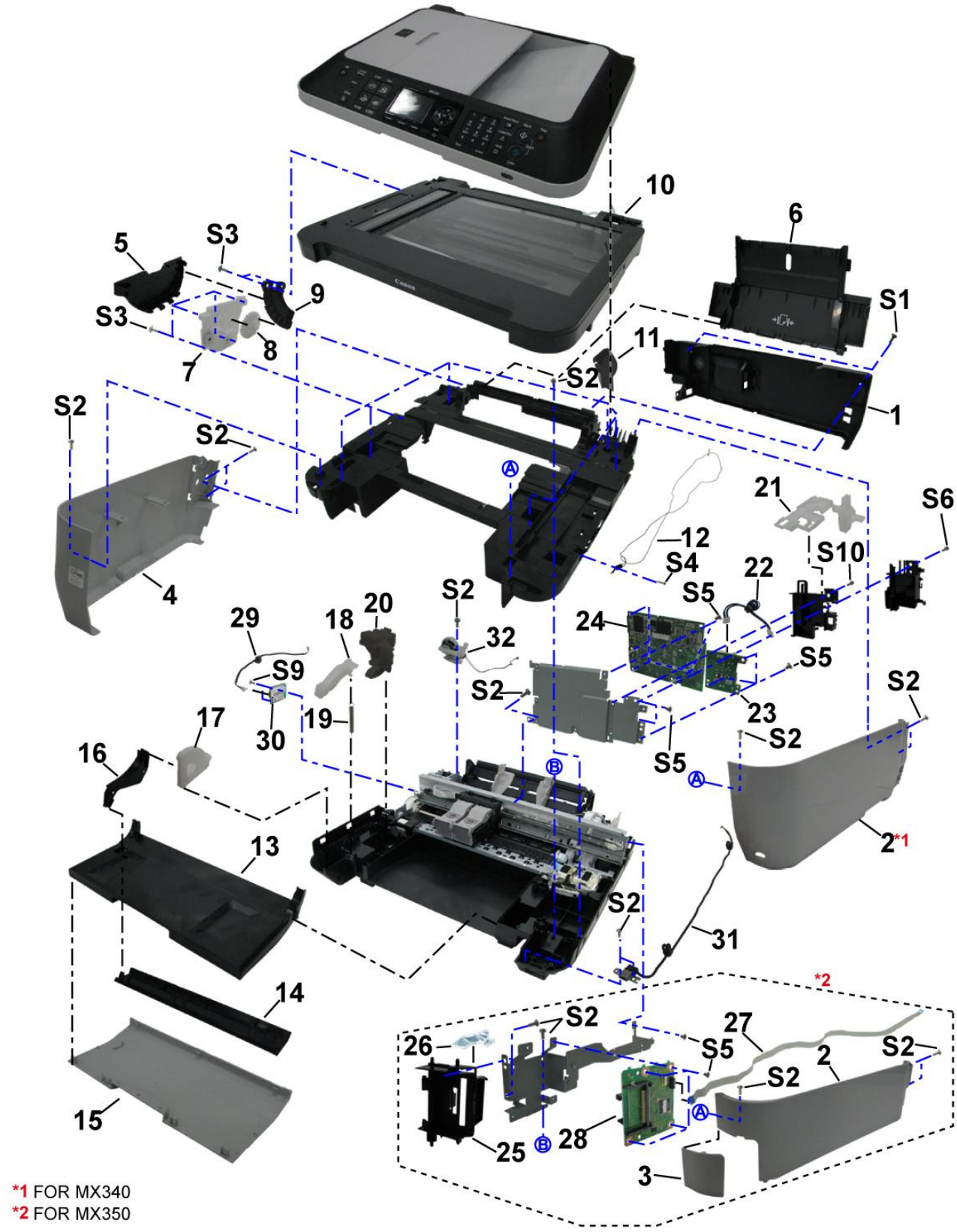
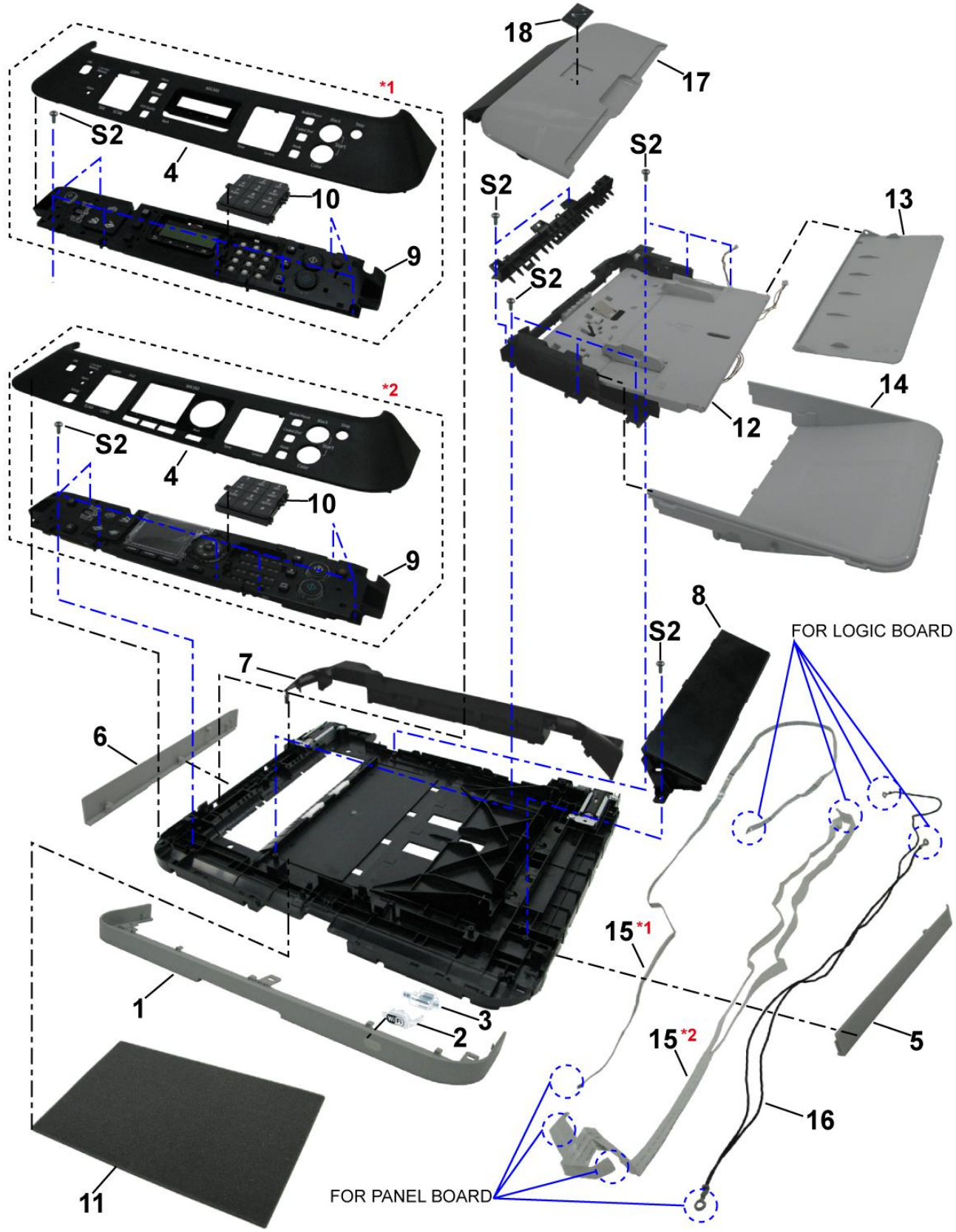


Fig. 2:



*1: For the MX340

*2: For the MX350

Fig. 3:

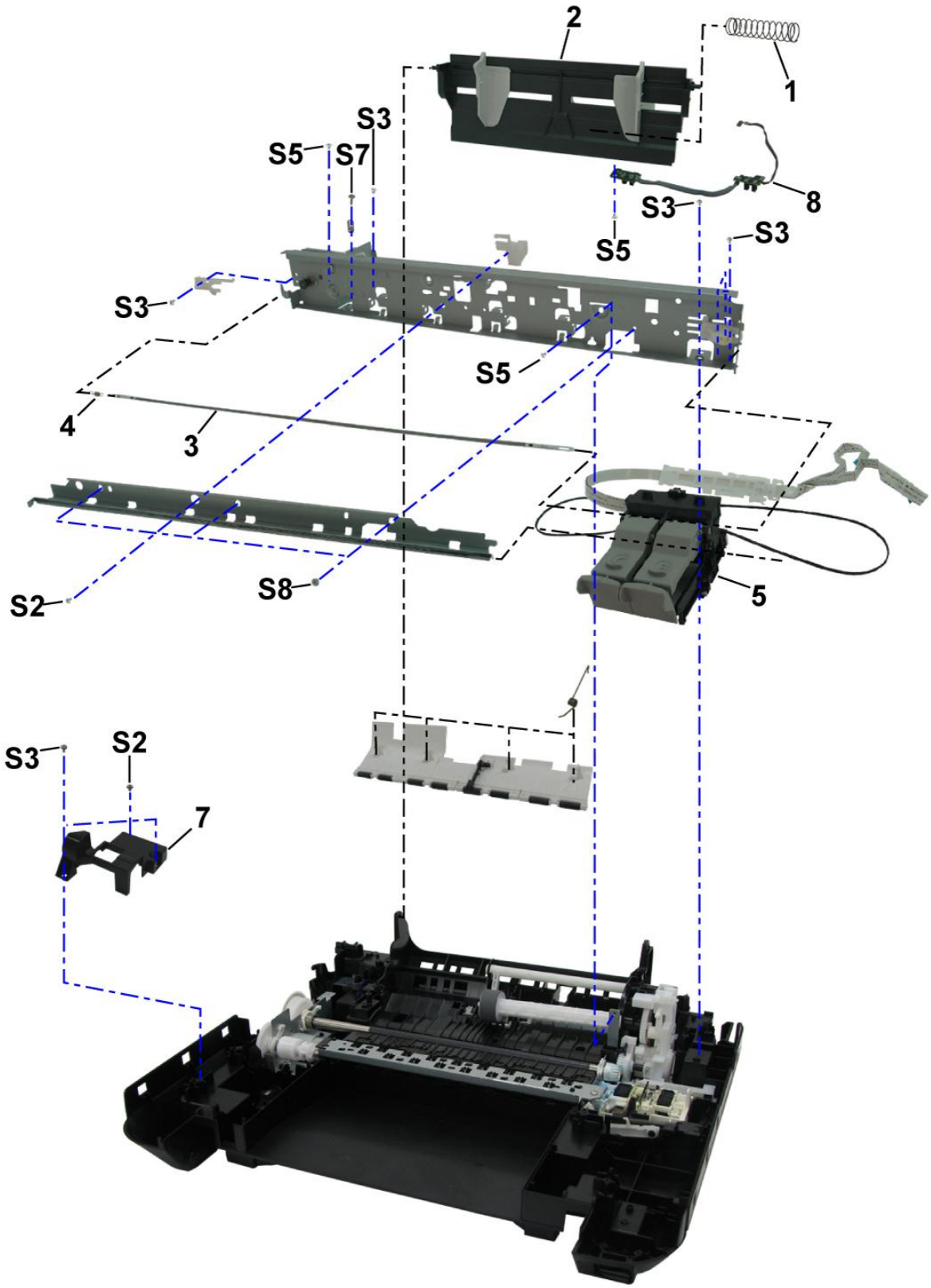
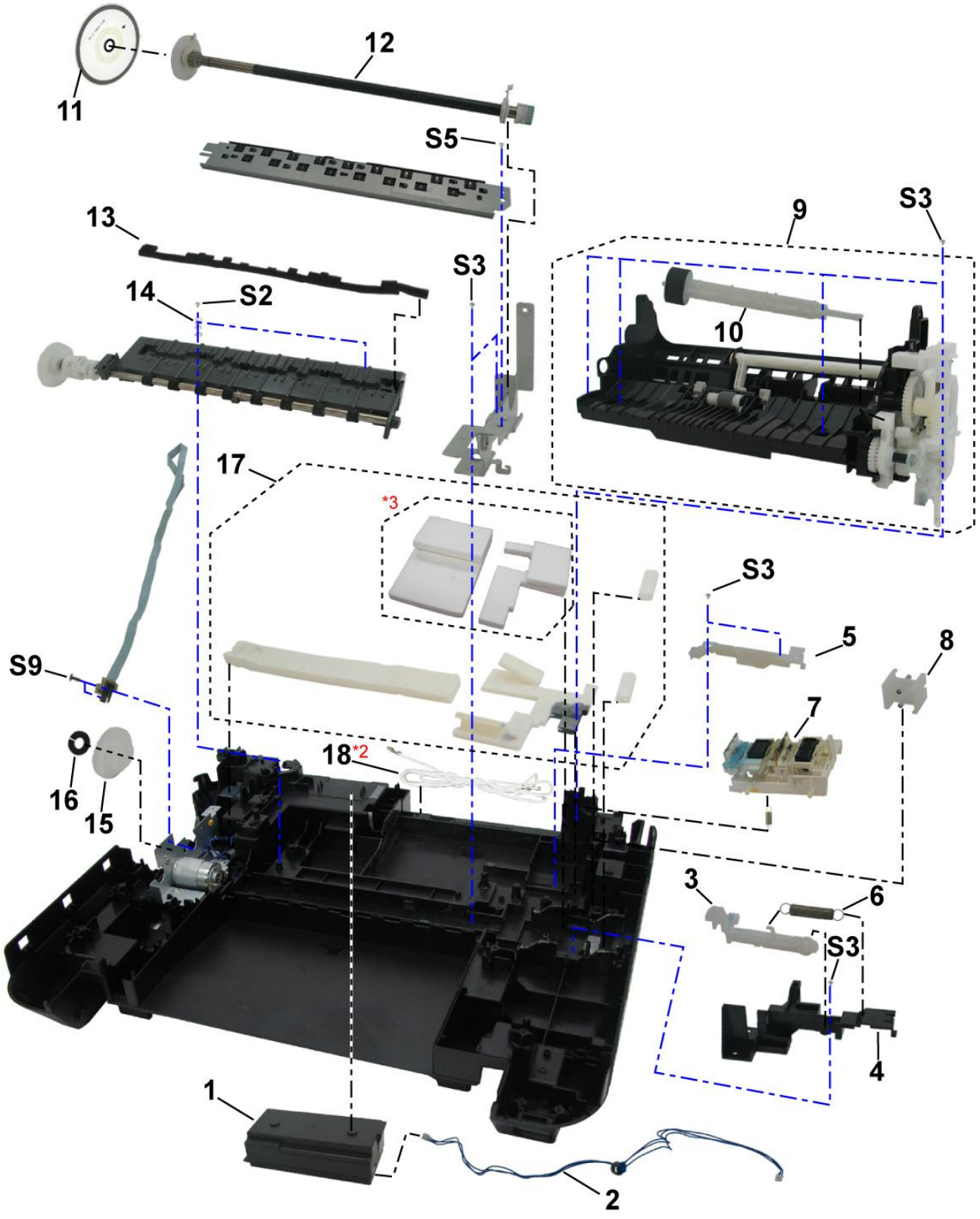


Fig. 4:



*2: For the MX350 only

*3: Ink absorbers to be replaced in the partial replacement