MP540 / MP545

SIMPLIFIED SERVICE MANUAL

1. LIST OF ERROR DISPLAY
2. ADJUSTMENT / SETTINGS
3. EXTERNAL VIEW / PARTS LIST

QY8-13CA-000

Rev.00

July 31, 2008

Canon Inc.

1. LIST OF ERROR DISPLAY

Errors and warnings are displayed by the following ways:

- Operator call errors are indicated by the Alarm LED lit in orange, and the error and its solution are displayed on the LCD in text and by icon.
- Messages during printing from a computer are displayed on the MP driver Status Monitor.
- Error codes (the latest 10 error codes at the maximum) are printed in the "operator call/service call error record" area in EEPROM information print.

Buttons valid when an operator call error occurs:

- ON button: To turn the machine 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.

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

Error	Error code	U No.	Message on the LCD	Solution
No paper in the rear tray.	[1000]	---	Rear tray. There is no paper. Load paper and press [OK].	Confirm that the rear tray is selected as the paper source. Set the paper in the rear tray, and press the OK button.
No paper in the cassette.	[1003]	---	Cassette. There is no paper. Load paper and press [OK].	Confirm that the cassette is selected as the paper source. Set the paper in the cassette, and press the OK button. Note: Only plain paper can feed from the cassette.
Paper jam.	[1300]	---	The paper is jammed. Clear the paper and press [OK].	Remove the jammed paper, and press the OK button.
Paper jam in the rear guide.	[1303]	---		
Ink may have run out.	[1600]	U041	The following ink may have run out. Replacing the ink tank is recommended.	Replace the applicable ink tank, or press the OK button to clear the error without ink tank replacement. When the error is cleared by pressing the OK button, ink may run out during printing.
Ink tank not installed.	[1660]	U043	The following ink tank cannot be recognized. (Applicable ink tank icon)	Install the applicable ink tank(s) properly, and confirm that the LED's of all the ink tanks light red.
Print head not installed, or not properly installed.	[1401]	U051	Print head is not installed. Install the print head.	Install the print head properly.
Faulty print head ID.		U052	The type of print head is incorrect. Install the correct print head.	Re-set the print head. If the error is not cleared, the print head may be defective. Replace the print head.
Print head temperature sensor error.	[1403]			
Faulty EEPROM data of the print head.	[1405]			
Multiple ink tanks of the same color installed.	[1681]	U071	More than one ink tank of the following color is installed.	Replace the wrong ink tank(s) with the correct one(s).
Ink tank in a wrong position.	[1680]	U072	Some ink tanks are not installed in place.	Install the ink tank(s) in the correct position.

Error	Error code	U No.	Message on the LCD	Solution
Warning: The ink absorber becomes almost full.	[1700, 1701]	---	Contact the support center or service center for ink absorber replacement. Press [OK] to continue printing.	Replace the ink absorber, and reset its counter. Pressing the OK 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.
The connected digital camera or digital video camera does not support Camera Direct Printing.	[2001]	---	The device may be incompatible. Remove the device and check the manual supplied with the connected device.	Remove the cable between the camera and the machine.
The remaining ink amount unknown.	[1683]	U130	(Applicable ink tank icon) The remaining level of the following ink cannot be correctly detected. Replace the ink tank.	An ink tank which has once been empty is installed. Replace the applicable ink tank with a new one. Printing with a once-empty ink tank can damage the machine. To continue printing without replacing the ink tank(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 machine EEPROM that the function to detect the remaining ink amount was disabled.
Ink tank not recognized.	[1684]	U140	The following ink tank cannot be recognized. (Applicable ink tank icon)	A non-supported ink tank (an ink tank that is sold in a different region from where the machine was purchased) is installed (the ink tank LED is turned off). Install the supported ink tanks.
Ink tank not recognized.	[1410 to 1419]	U150	The following ink tank cannot be recognized. (Applicable ink tank icon)	A hardware error occurred in an ink tank (the ink tank LED is turned off). Replace the ink tank(s).
No ink (no raw ink).	[1688]	U163	Printer detected ink out condition of the following ink. Replace the ink tank. (Applicable ink tank icon)	Replace the empty ink tank(s), and close the scanning unit (cover). Printing with an empty ink tank can damage the machine. To continue printing without replacing the ink tank(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 machine that the function to detect the remaining ink amount was disabled.
Non-supported hub	[2002]	---	An unsupported USB hub is connected. Remove the hub.	Remove the applicable USB hub from the PictBridge (USB) connector.

Error	Error code	U No.	Message on the LCD	Solution
Time-out for the scanner device	[2700]	---	Timeout error has occurred. Press [OK].	The buffer became full in the middle of scanning operation, and 60 minutes have elapsed since then, making re-scanning unstable. Press the OK button to clear the error.

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

Service call errors are indicated by the number of cycles the Alarm and Power LEDs blink, and the corresponding error code with the message, "Printer error has occurred. Turn off power then back on again. If problem persists, see the manual." is displayed on the LCD.

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 carriage slit film; clean the timing slit film. 2) Foreign material or paper debris that obstructs the carriage movement; remove foreign material. 3) Ink tank conditions; re-set the ink tanks. 4) Cable connection 5) Part replacement: - Timing slit disk film - Carriage unit - Logic board - Carriage motor
3 times	Line feed error	[6000]	An error occurred in the LF encoder signal.	1) Smearing or scratches on the LF slit film; clean the LF slit film. 2) Foreign material or paper debris in the LF drive; remove foreign material. 3) Cable connection 4) Part replacement: - LF slit film - LF timing sensor unit - Paper feed roller unit - Logic board - Paper feed motor
4 times	Purge cam sensor error	[5C00]	An error occurred in the purge unit.	1) Foreign material or paper debris around the purge drive system unit; remove foreign material. 2) Cable connection 3) Part replacement: - Purge drive system unit - Logic board

Cycles of blinking of Alarm and Power LEDs	Error	Error code	Conditions	Solution (Check points and replacement items)
5 times	ASF (cam) sensor error	[5700]	An error occurred in the ASF cam sensor.	1) Cable connection 2) Part replacement: - ASF unit - PE sensor board unit - Logic board
6 times	Internal temperature error	[5400]	The internal temperature is not normal.	1) Cable connection 2) Part replacement: - Carriage unit - Logic board - Print head
7 times	Ink absorber full	[5B00] [5B01]	The ink absorber is supposed to be full. Message on the LCD: Ink absorber full. Service required. Error codes: 5B00: Main ink absorber is full (non-Japan). 5B01: Main ink absorber is full (Japan).	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) Print head condition 2) Cable connection 3) Part replacement: - Print head - Logic board
9 times	EEPROM error	[6800] [6801]	A problem occurred in reading from or writing to the EEPROM.	1) Part replacement: - Logic board
10 times	VH monitor error	[B200]	The internal temperature exceeded the specified value.	1) Part replacement: - Print head and logic board (Replace them at the same time.) - Power supply unit
11 times	Carriage lift mechanism error	[5110]	The carriage did not move up or down properly.	1) Foreign material or paper debris that obstructs the carriage movement; remove foreign material. 2) Part replacement: - Switch system unit - Carriage unit
12 times	APP position error	[6A80]	An error occurred in the APP motor.	1) Foreign material or paper debris around the purge drive system unit; remove foreign material. 2) Foreign material or paper debris around the ASF unit; remove foreign material. 3) Cable connection 4) Part replacement: - Purge drive system unit - Logic board
14 times	APP sensor error	[6A90]	An error occurred during paper feeding or purging.	

Cycles of blinking of Alarm and Power LEDs	Error	Error code	Conditions	Solution (Check points and replacement items)
15 times	USB Host VBUS overcurrent	[9000]	The USB Host VBUS is overloaded.	1) Part replacement: - Logic board
16 times	Pump roller sensor error	[5C20]	The pump roller position cannot be detected.	1) Cable connection 2) Part replacement: - Purge drive system unit
19 times	Ink tank position sensor error	[6502]	None of the ink tank position is detected.	1) Ink tank position; confirm the ink tank position. 2) Re-set or replacement of ink tanks 3) Cable connection 4) Part replacement: - Spur unit - Logic board
20 times	Other errors	[6500]	An unidentified error occurred.	1) Part replacement: - Logic board
21 times	Drive switch error	[C000]	Drive was not switched properly.	1) Foreign material or paper debris in the drive switch area; remove foreign material. 2) Part replacement: - Purge drive system unit - ASF unit
22 times	Scanner error	[5011]	An error occurred in the scanner.	1) Document pressure sheet conditions 2) Cable connection 3) Part replacement: - Document pressure sheet (sponge sheet) - Scanner unit - Logic board
	Flatbed motor error	[5012]	An error occurred in the scanner flatbed motor.	1) Cable connection 2) Part replacement - Scanner unit
23 times	Valve cam sensor error	[6C10]	The valve cam sensor was faulty at power-on or when purging was attempted.	1) Foreign material or paper debris around the purge drive system unit; remove foreign material. 2) Cable connection 3) Part replacement: - Purge drive system unit - Logic board

Note: Before replacement of the logic board ass'y, check the ink absorber counter value (by service test print or EEPROM information print). If the counter value is 7% or more, also replace the ink absorber kit when replacing the logic board ass'y. If the counter value is less than 7%, register the current ink absorber counter value to the replaced new logic board.

1-3. Warnings

Warning	Message on the LCD	Solution
Low ink	"!" is indicated for an applicable ink tank icon in the Status Monitor.	Since the ink will be used up soon, prepare for a new ink tank.
Print head temperature rise	If the print head temperature does not fall, the print head error will occur.	When the print head temperature falls, the error is automatically cleared. If the print head error is indicated, repair servicing is required.
Protection of excess rise of the print head temperature	If the print head temperature does not fall, the print head error will occur.	If the print head temperature exceeds the specified limit, an intermission is inserted during printing.
Restrictions on paper	The current paper cannot be set. Change the size and type.	Re-select the supported paper type and size.
USB cable not connected	Set the PC to start scan.	Connect the USB cable, then turn on the computer.
Cancellation of image select information	Reset the selected photo information? Yes No	- Select **Yes**, and press the OK button. => The image selection is cancelled, and the LCD returns to the display before the message was displayed. - Select **No**, and press the OK button. => The LCD returns to the display immediately before the message was displayed.
	Do you want to clear the image scanned from the photo? Yes No	
	Do you want to clear the scanned image and rescan? Yes No	

2. ADJUSTMENT / SETTINGS

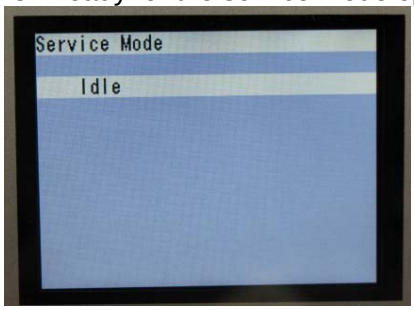
2-1. Service Mode

< Service mode operation procedures >

Use the Service Tool on the connected computer.

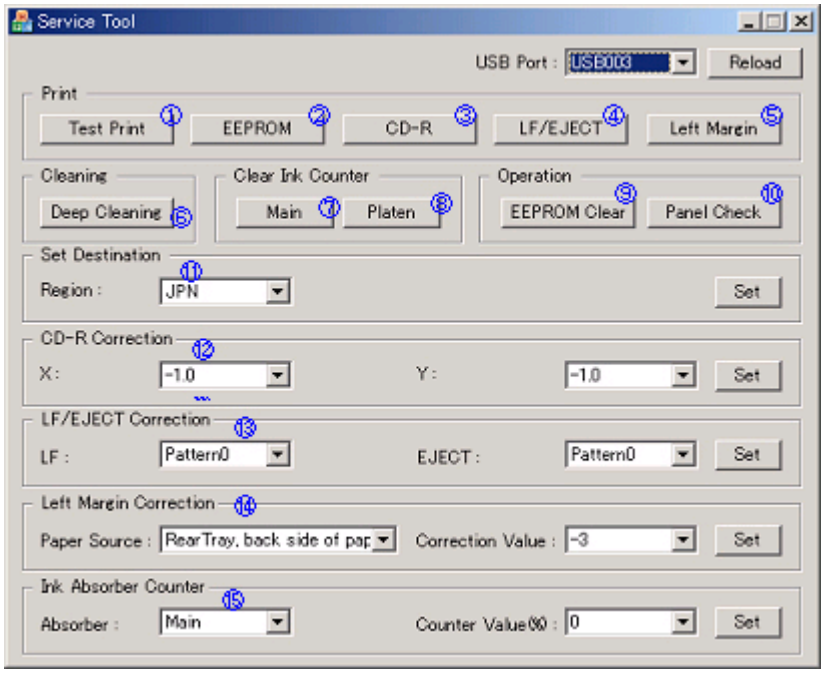
1) Start the machine in the service mode.
   i. With the machine power turned off, while pressing the Stop button, press and hold the ON button. (DO NOT release the buttons).
   ii. When the Power LED lights in green, while holding the ON button, release the Stop button. (DO NOT release the ON button.)
   iii. While holding the ON button, press the Stop button 2 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.)
   iv. When the Power LED lights in green, the machine is ready for the service mode operation.

   - LCD ready for the service mode operation:



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

< Service Tool Functions >



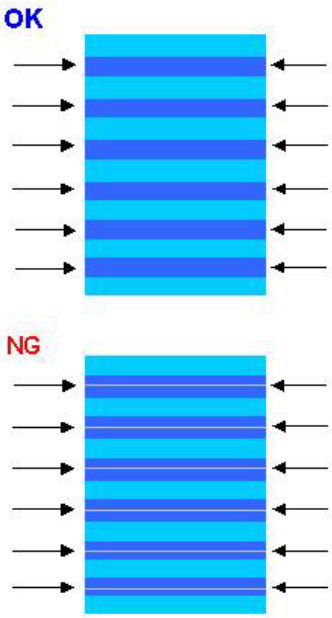
No.	Name	Function	Remarks
(1)	Test Print	Service test print	Paper will feed from the rear tray. Service test print: - Model name - ROM version - Ink absorber counter value (ink amount in the ink absorber) - USB serial number - Destination - EEPROM information - Process inspection information - Barcode (model name + destination) - Ink system function check result
(2)	EEPROM	EEPROM information print	The dialog box opens to select the paper source. Select **Rear tray** or **Cassette**, and click **OK**. EEPROM information print: - Model name - ROM version - Ink absorber counter value (ink amount in the ink absorber) - Print information - Error information, etc.
(3)	CD-R	CD-R check pattern print	Not used.
(4)	LF / Eject	LF / Eject correction pattern print	See “LF / Eject correction” below.
(5)	Left Margin	Left margin pattern print	Not used.
(6)	Deep Cleaning	Print head deep cleaning	Cleaning of both Black and Color at the same time.
(7)	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.
(8)	Platen	Platen ink absorber counter resetting	Not used.

No.	Name	Function	Remarks
(9)	EEPROM Clear	EEPROM initialization	The following items are NOT initialized, and the shipment arrival flag is not on: - USB serial number - Destination settings - Record of ink absorber counter resetting and setting - Record of repair at the production site - LF / Eject correction values - Left margin correction value - Production site E-MIP correction value and enabling of it - Endurance correction value and enabling of it - Record of disabling the function to detect the remaining ink amount - Ink absorber counter value (ink amount in the ink absorber)
(10)	Panel Check	Button and LCD test	See "Button and LCD test" below.
(11)	Set Destination	Destination settings	Select the destination, and click **OK**. ASA, AUS, BRA, CHN, CND, EUR, JPN, KOR, LTN, TWN, USA
(12)	CD-R Correction	CD / DVD print position correction (X and Y direction)	Not used.
(13)	LF / EJECT Correction	LF / Eject correction value setting	See " LF / Eject correction " below.
(14)	Left Margin Correction	Left margin correction value setting	Not used.
(15)	Ink Absorber Counter	Ink absorber counter setting	See " Ink absorber counter setting " below.

< LF / Eject correction >

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

1) Print the LF / Eject correction pattern.
   Click **LF/EJECT** of the Service Tool on the connected computer, select the paper source and the paper type, and print the pattern. 5 sheets of paper will be used for the pattern printing.
   - Paper source: Select either **Rear tray** or **Cassette**.
   - Media type: Select one from **HR-101**, **GF-500/Office Planner**, **HP Bright White**, and **Canon Extra/STEINBEIS**.
2) When printing is finished, the machine returns to be ready for selection of another function ("Service Mode Idle" is displayed on the LCD).
3) In the printout, determine the Pattern No. in which streaks or lines are the least noticeable for the LF check pattern and the Eject check pattern respectively. (LF Pattern No. 0 to 4, Eject Pattern No. 0 to 4)


OK
NG

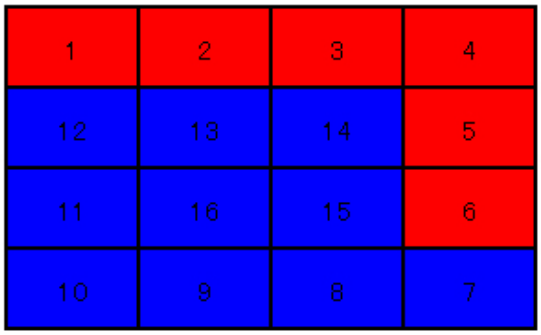
4) In the **LF/EJECT Correction** section of the Service Tool, select the Pattern No. (from 0 to 4) determined in step 3) for **LF** and **EJECT** respectively, and click **Set**.
5) The selected LF and Eject correction values are written to the EEPROM, making the E-MIP correction value (which was set at shipment from the production site) invalid.

Note: At the production site, the E-MIP correction, which is equivalent to the LF / Eject correction, is performed using the special tool, and the E-MIP correction value is written to the EEPROM as the valid data.
When LF / Eject correction is performed, the LF / Eject correction values become valid instead of the E-MIP correction value (thus, in the initial EEPROM information print, "LF = *" and "EJ = *" are printed, but the selected values are printed after the LF / Eject correction).

< Button and LCD test >

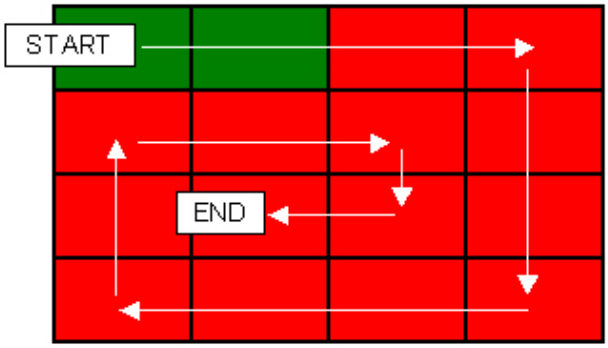
Confirm the operation after replacement of the operation panel unit, board, or LCD unit.

1) Click **Panel Check** of the Service Tool on the connected computer. The machine LCD turns blue, waiting for a button to be pressed.
2) Press each button of the operation panel.
3) Only one button should be pressed at one time. If 2 or more buttons are pressed at the same time, only one of them is considered to be pressed, and the other buttons are ignored.
The LCD is divided into 16 segments, representing each button. The color of a segment corresponding to the pressed button changes to red.



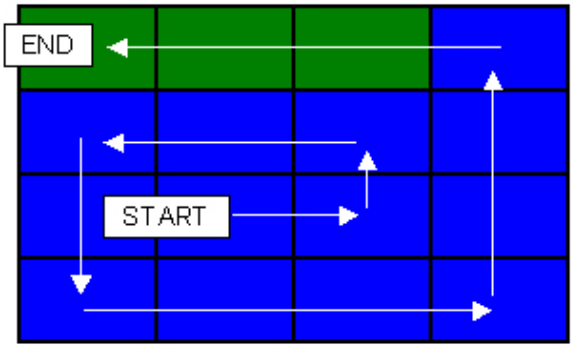
1: ON button
2: Back button
3: OK button
4: Up cursor button
5: Down cursor button
6: Left cursor button
7: Right cursor button
8: Black button
9: Color button
10: Stop button
11: NAVI button
12: HOME button
13: Left function button
14: Right function button
15: [+] button
16: [-] button

4) Rotate the Easy-Scroll Wheel clockwise and counterclockwise 1 round (16 steps) each, as follows:
4-1) Rotate the Easy-Scroll Wheel clockwise step by step. The LCD is divided into 16 segments, representing each step. The color of a segment corresponding to the step changes from red to green.
If the wheel is rotated counterclockwise before clockwise round completes, the color of segment(s) corresponding to the number of steps the wheel is rotated counterclockwise returns to red.
If the wheel keeps rotated clockwise over 1 round (16 steps), the color of segment(s) corresponding to the extra number of steps returns to red, starting with the "Start" segment in the figure below.

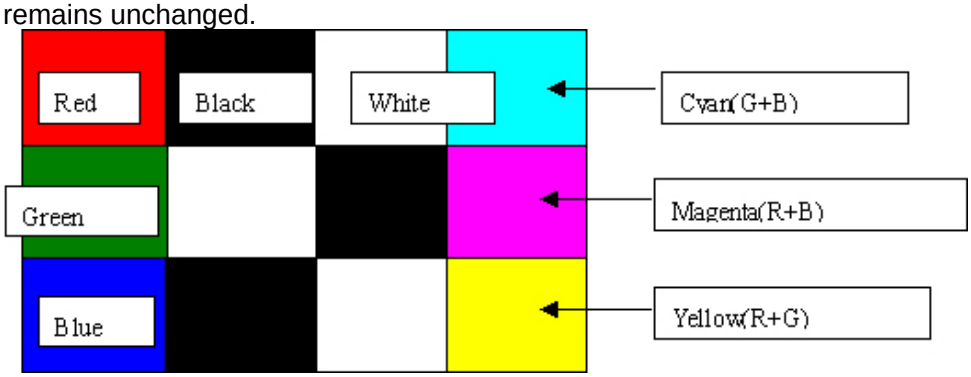


4-2) When the Easy-Scroll Wheel is rotated clockwise 1 round (16 steps), press the OK button.

4-3) Rotate the Easy-Scroll Wheel counterclockwise step by step. The LCD is divided into 16 segments, representing each step. The color of a segment corresponding to the step changes from green to blue.
If the wheel is rotated clockwise before counterclockwise round completes, the color of segment(s) corresponding to the number of steps the wheel is rotated clockwise returns to green.
If the wheel keeps rotated counterclockwise over 1 round (16 steps), the color of segment(s) corresponding to the extra number of steps returns to green, starting with the "Start" segment in the figure below.

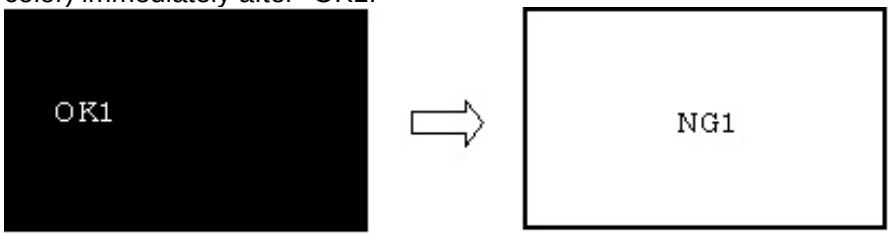


4-4) When the Easy-Scroll Wheel is rotated counterclockwise 1 round (16 steps, and all the segments are in blue), press the OK button. The color pattern is displayed on the LCD.
If there is any segment that is not in blue when the OK button is pressed, the display remains unchanged.

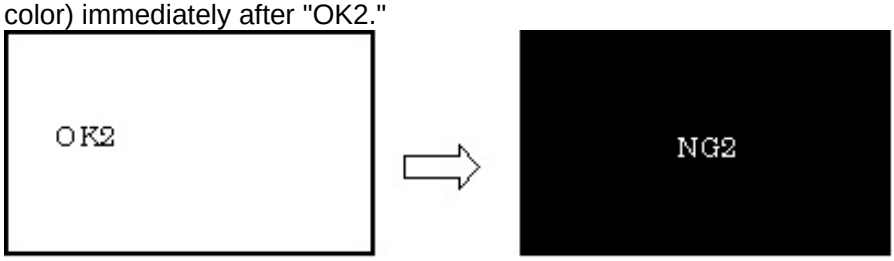


5) Adjust the transparent color, as follows:

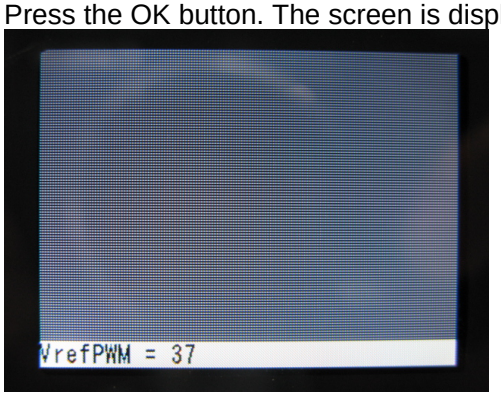
5-1) Press the OK button. "OK1" in white is displayed on the black background.
If the result is not good, "NG1" in black is displayed on the white background (transparent color) immediately after "OK1."



5-2) Press the OK button. "OK2" in black is displayed on the white background.
If the result is not good, "NG2" in white is displayed on the black background (transparent color) immediately after "OK2."



6) Adjust the LCD flicker, as follows:
6-1) Press the OK button. The screen is displayed as below for LCD flicker adjustment.



6-2) If the screen flickers, press the left or right cursor button until the flickering disappears. By pressing the left or right cursor, the **VrefPWM** value displayed at the bottom of the LCD changes from 36 to 3D (in hexadecimal).
6-3) Press the OK button. The machine returns to be ready for selection of another function ("Service Mode Idle" is displayed on the LCD).

< Ink absorber counter setting >

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

1) Before replacement of the logic board, check the ink absorber counter value in EEPROM information print.
2) After replacement of the logic board, the ink absorber counter value should be set in the service mode using the Service Tool.
In the **Ink Absorber Counter** section of the Service Tool, select **Main** from the **Absorber** pull-down menu.
From the **Counter Value(%)** pull-down menu, select the value (in 10% increments) which is the closest to the actual counter value confirmed before replacement of the logic board, and click **Set**.
3) Print EEPROM information to confirm that the value is properly set to the EEPROM.

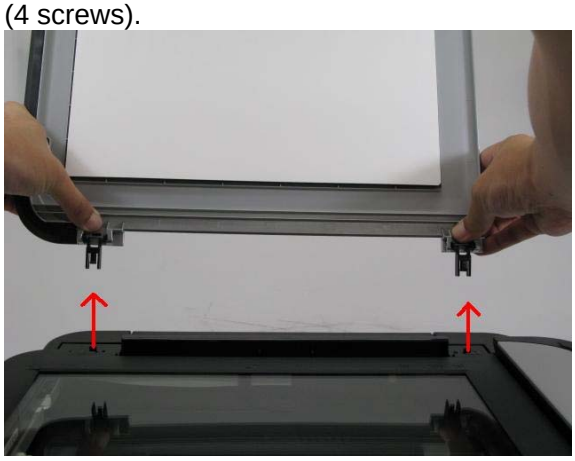
2-2. User Mode

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

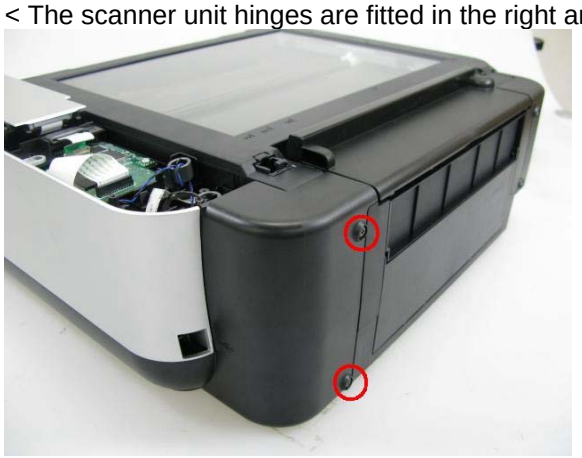
2-3. Special Notes on Assembling

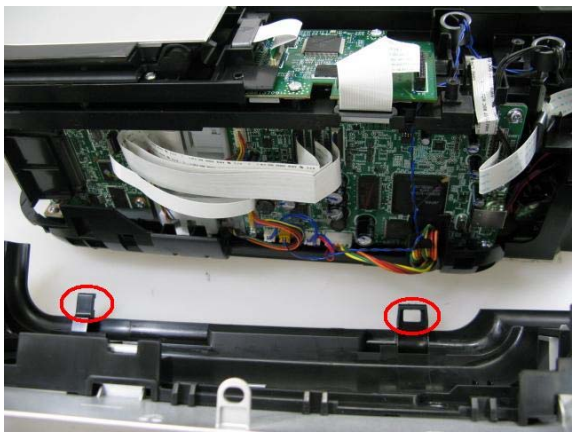
(1) External housing, scanner unit, and document cover removal

1) Remove the cassette, and open the front door.
2) Pull up the document cover to remove it, then remove the rear top cover and the middle frame (4 screws).

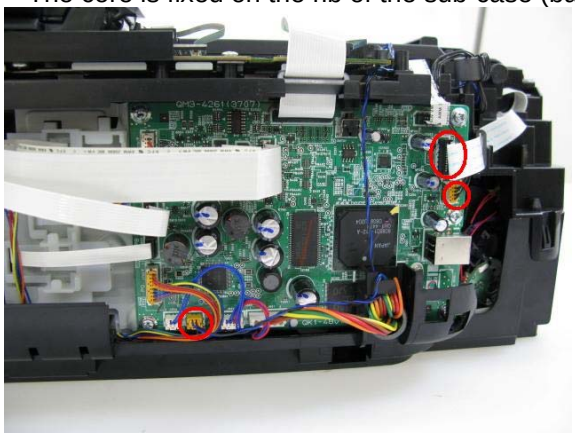


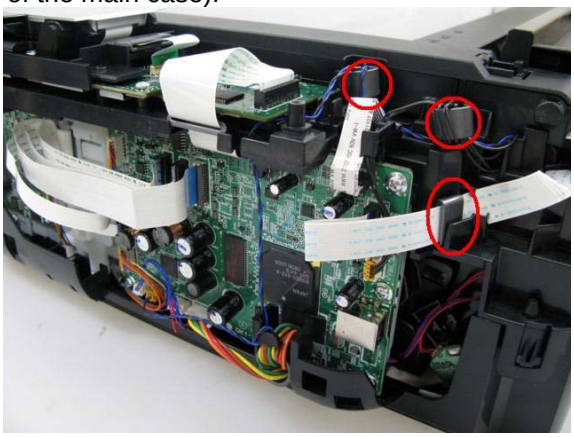

3) Remove the side cover R (2 screws).
< The scanner unit hinges are fitted in the right and left side covers. >

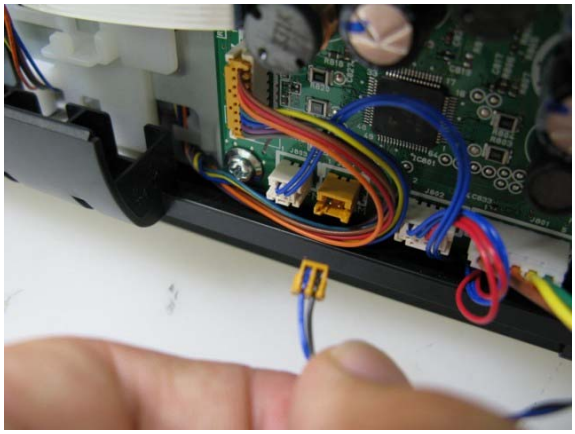


4) Remove the scanner cable, panel cable, FB encoder cable, and core.
< The core is fixed on the rib of the sub-case (back of the main case). >





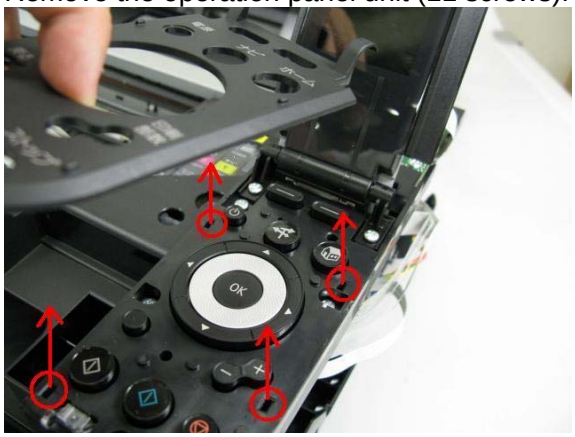
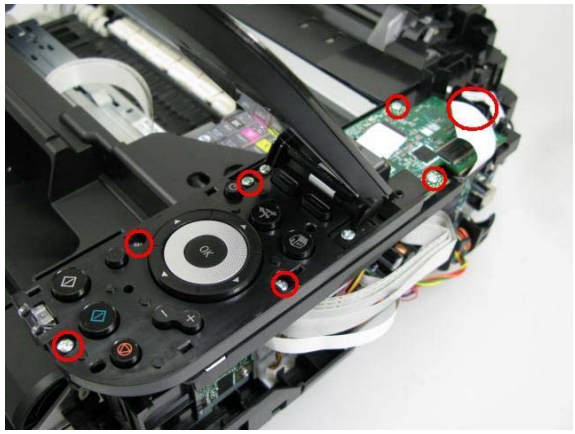


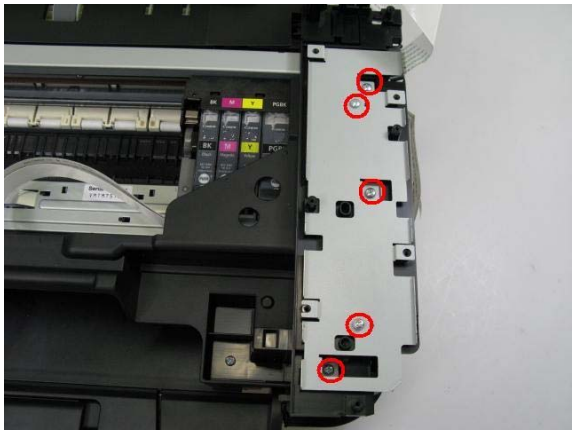
5) Remove the side cover L and scanner unit (2 screws).
< While holding the scanner unit, separate the scanner stay from the side cover L. >



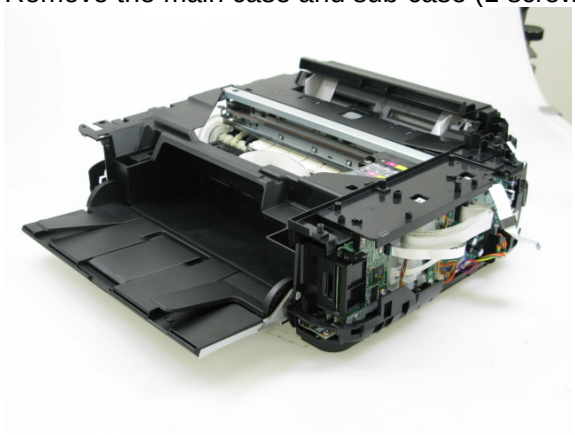


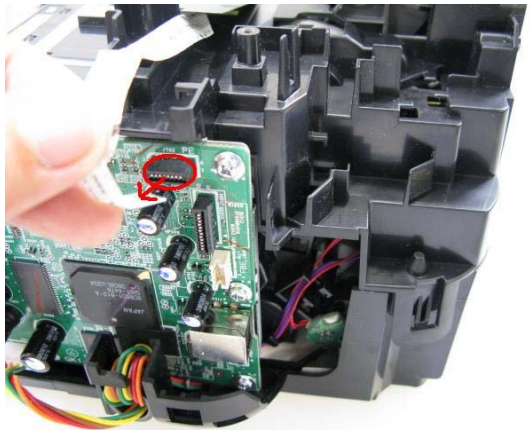

6) Remove the operation panel unit (11 screws).

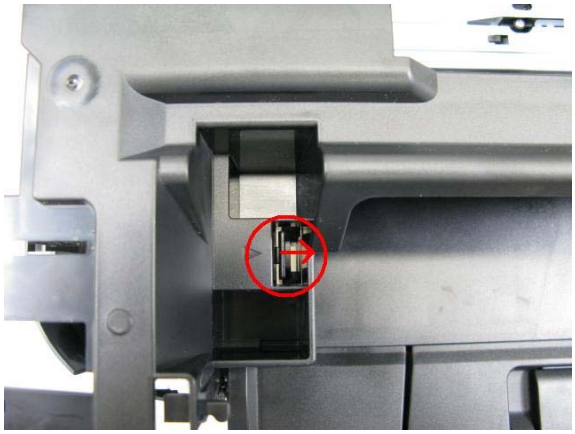



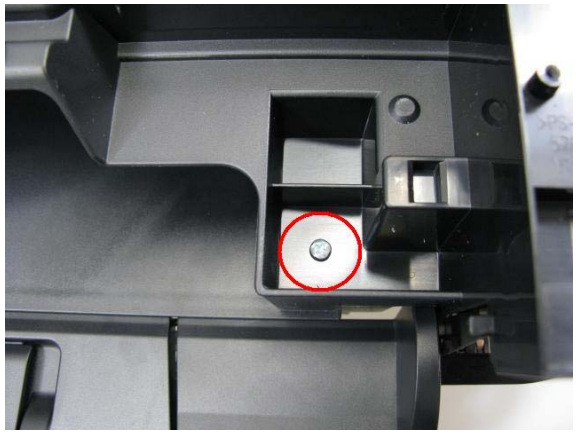


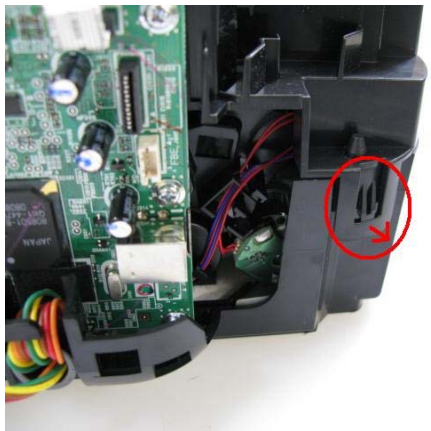
7) Remove the main case and sub-case (1 screw).

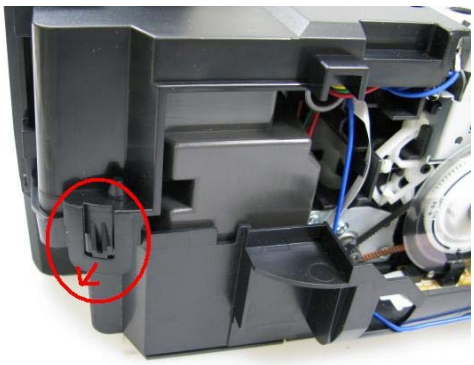


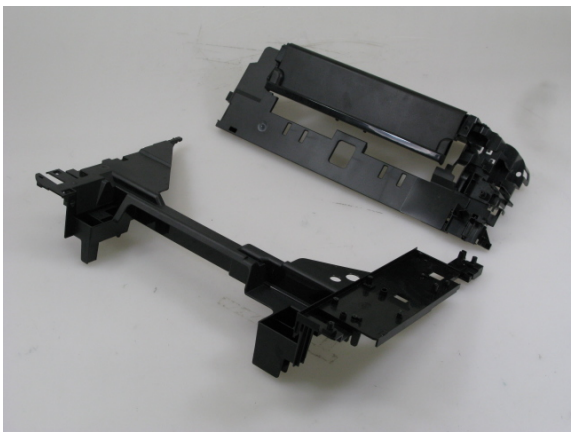












(2) Notes on Service Part Replacement (and Disassembling / Reassembling)

Service part	Notes on replacement*1	Adjustment / settings	Operation check
Logic board ass'y	- 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 counter value (by service test print or EEPROM information print).	**After replacement:** 1) Initialize the EEPROM. 2) Set the ink absorber counter value. 3) Set the destination in the EEPROM. 4) Check the ink system function. 5) Perform LF / Eject correction. 6) Perform button and LCD test. Perform 1 to 6 in the service mode. 7) Perform print head alignment and LCD language setting in the user mode.	- EEPROM information print - Service test print - Printing via USB connection - Copying - Direct printing from a digital camera (PictBridge)
Absorber kit		**After replacement:** 1) Reset the ink absorber counter.	- Ink absorber counter value print (After the ink absorber counter is reset, the counter value is printed automatically.)
Carriage unit		**At replacement:** 1) Before removal of the carriage rail, mark the carriage rail position. 2) Apply grease to the sliding portions of the carriage rail. 3) Check the ink system function. 4) Perform print head alignment in the user mode.	- Service test print (Confirm ink system function.)
Switch system unit	- The red screws securing the paper feed motor are allowed to be loosened only for paper feed motor replacement. (DO NOT loosen them in any other cases.)	**At replacement:** 1) Adjust the paper feed motor.	- EEPROM information print - Service test print
Paper feed motor			

Service part	Notes on replacement*1	Adjustment / settings	Operation check
Platen unit		**After replacement:** 1) Perform LF / Eject correction in the service mode.	- EEPROM information print - Service test print
Spur unit	- DO NOT contact the spur edges.	**After replacement:** 1) Check the ink system function. 2) Perform LF / Eject correction in the service mode.	- EEPROM information print - Service test print
Purge drive system unit		**After replacement:** 1) Confirm the purging operation and the machine operation.	- Service test print
Carriage rail and main chassis Idler pulley parallel pin Easy-Scroll Wheel base APP code wheel gear shaft		**At replacement:** 1) Apply grease to the sliding portions.	- Service test print
Document cover unit Scanner unit		**At replacement:** 1) Confirm the document pressure sheet position.	- Service test print
Panel board ass'y LCD unit	- Be cautious not to scratch or damage the LCD cable.	**At replacement:** 1) Perform button and LCD test.	- Service test print
Timing slit strip film Timing slit disk feed film	- 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 print head alignment in the user mode. 2) Perform LF / Eject correction in the service mode.	- EEPROM information print - Service test print
Print head		**After replacement:** 1) Perform print head alignment in the user mode.	- Service test print

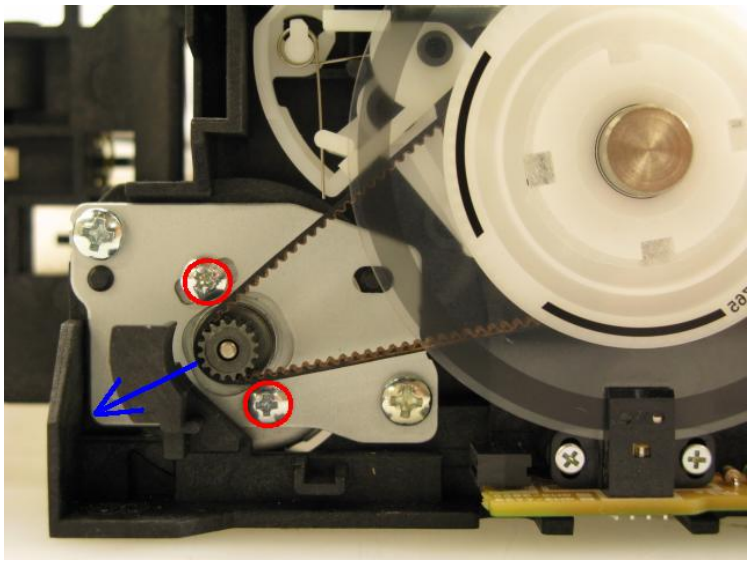
*1: General notes:

- Make sure that the flexible cables and wires in the harness are in the proper position and connected correctly.
- 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 machine 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 feed film. No grease or abrasion is allowed.
- Protect the units from soiled with ink.
- Protect the housing from scratches.
- Exercise caution with the screws, as follows:
    i. The screws of the paper feed motor may be loosened only at replacement of the paper feed motor unit (DO NOT loosen them in other cases).
    ii. Before loosening the 3 screws that fix the carriage rail to the main chassis, mark the screw positions so that the carriage rail will be re-attached to the main chassis in its

original position.

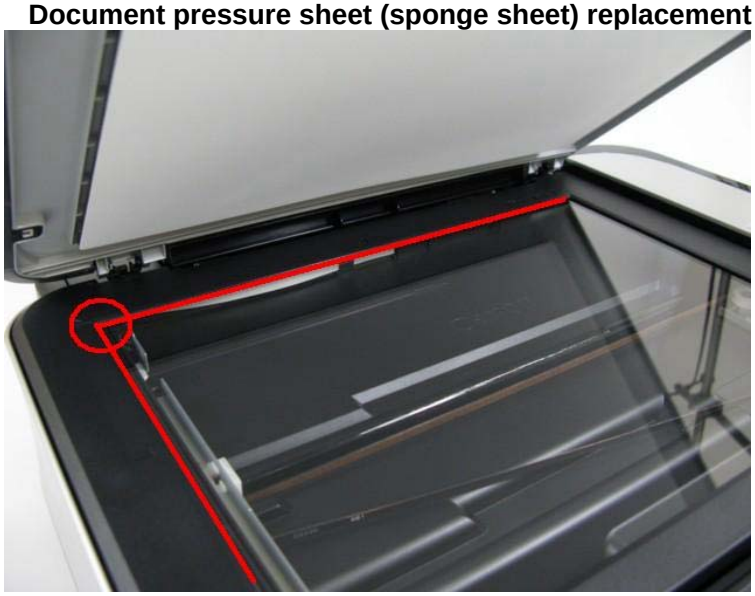
(3) Paper feed motor adjustment

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



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

(4) Document pressure sheet (sponge sheet) replacement



1) Peel off the cover sheet from the double-sided adhesive tape on the back of the document pressure sheet.
   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 where the red lines cross in the photo above).
2) Slowly close the document pressure plate while maintaining the hinge position. The document pressure sheet will attach to the plate.
3) Open the plate to confirm the following:

- No extension of the sponge edges over the mold part of the upper scanner cover.
- No gap between the platen glass reference edges and the corresponding sponge edges.
- No shades or streaks in monochrome test printing without a document on the platen glass.

(5) Ink absorber counter setting

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

In addition, according to the ink absorber counter value, replace the ink absorber (ink absorber kit). When the ink absorber is replaced, reset the applicable ink absorber counter (to 0%).

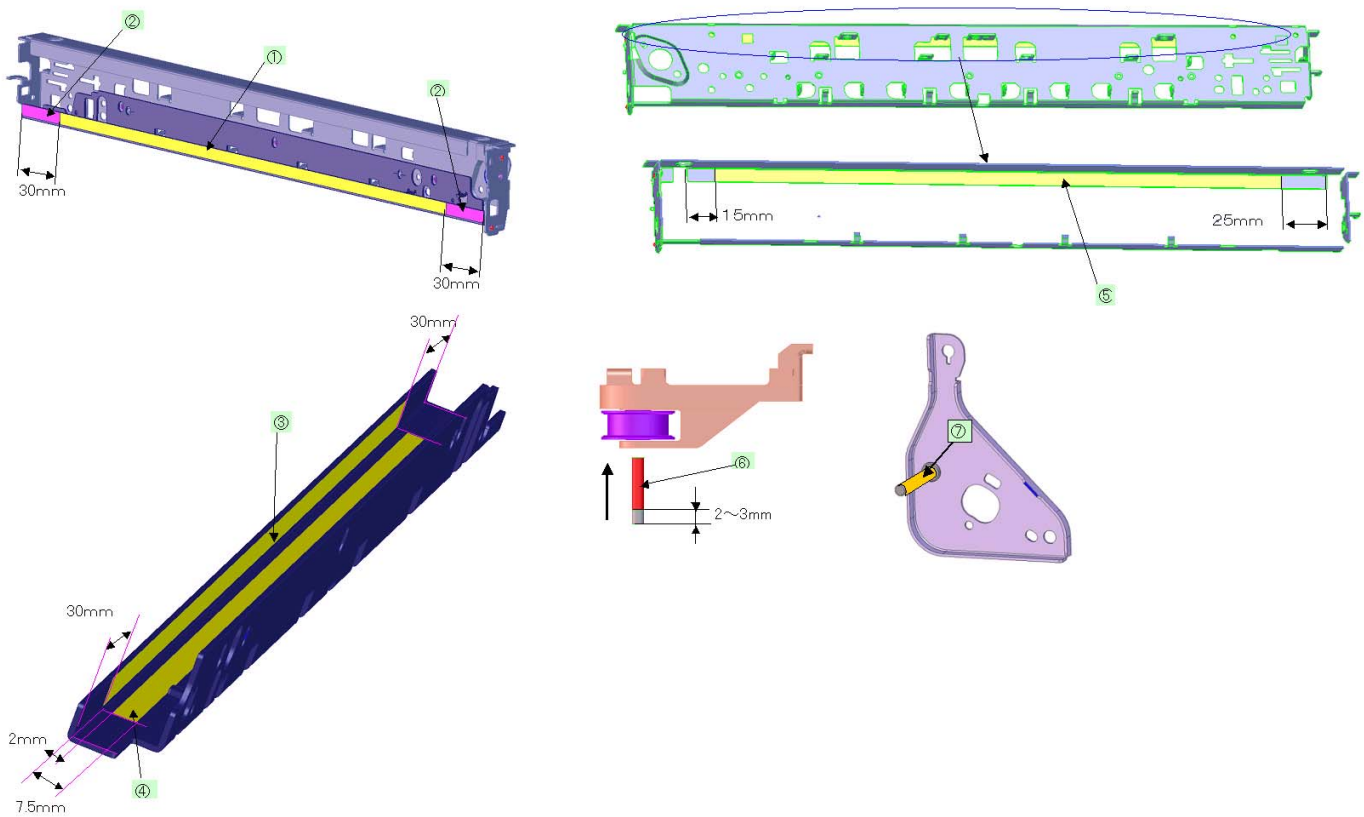
2-4. Grease application

(1) Printer unit

No.	Part name	Where to apply grease / oil	*1	Grease	Grease amount (mg)	*2
1	Carriage rail	The surface where the carriage unit slides	(1)	Floil KG107A	270 to 330	---
2	Carriage rail	The surface where the carriage unit slides	(2)	Floil KG107A	18 to 36	1 x 2
3	Carriage rail	The surface where the carriage unit slides	(3)	Floil KG107A	360 to 440	---
4	Carriage rail	The surface where the carriage unit slides	(4)	Floil KG107A	360 to 440	---
5	Main chassis	The surface where the carriage unit slides	(5)	Floil KG107A	230 to 290	---
6	Parallel pin	The pin surface which contacts the idler pulley hole	(6)	Floil KG107A	9 to 18	1 x 1
7	APP code wheel gear shaft	APP code wheel gear sliding portion (the entire surface)	(7)	Floil KG107A	9 to 18	1 x 1

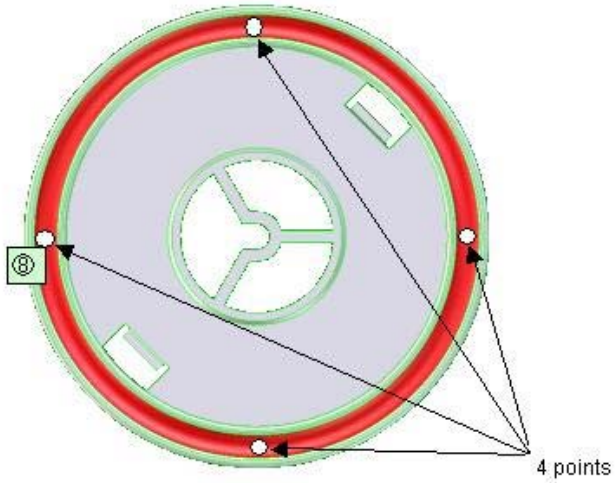
*1: Drawing No.

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



(2) Operation panel, Easy-Scroll Wheel

No.	Part name	Where to apply grease / oil	Drawing No.	Grease	Grease amount (mg)
8	Easy-Scroll Wheel base	Easy-Scroll Wheel sliding portions	(8)	Floil KG107A	9 to 18



2-5. Notes on Transportation

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

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 print head and ink tanks installed in the carriage. See Caution (a) below.
3) Turn off the machine to securely lock the carriage in the home position. (When the machine is turned off, the carriage is automatically locked in place.) See Caution (b) below.

Caution: a. If the print head is removed from the machine and left alone by itself, ink (the pigment-based black ink in particular) is likely to dry. For this reason, keep the print head installed in the machine even during transportation.

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

Note: - If the print head must be removed from the machine and transported alone, 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).

- If the packing material that fixed the carriage from the factory is still available, re-use it to fix the carriage (to prevent the carriage unlocked during transportation).

3. EXTERNAL VIEW / PARTS LIST

FIGURE 1 PACKING CONTENTS & PRINT HEAD

LIST OF FIGURE 1

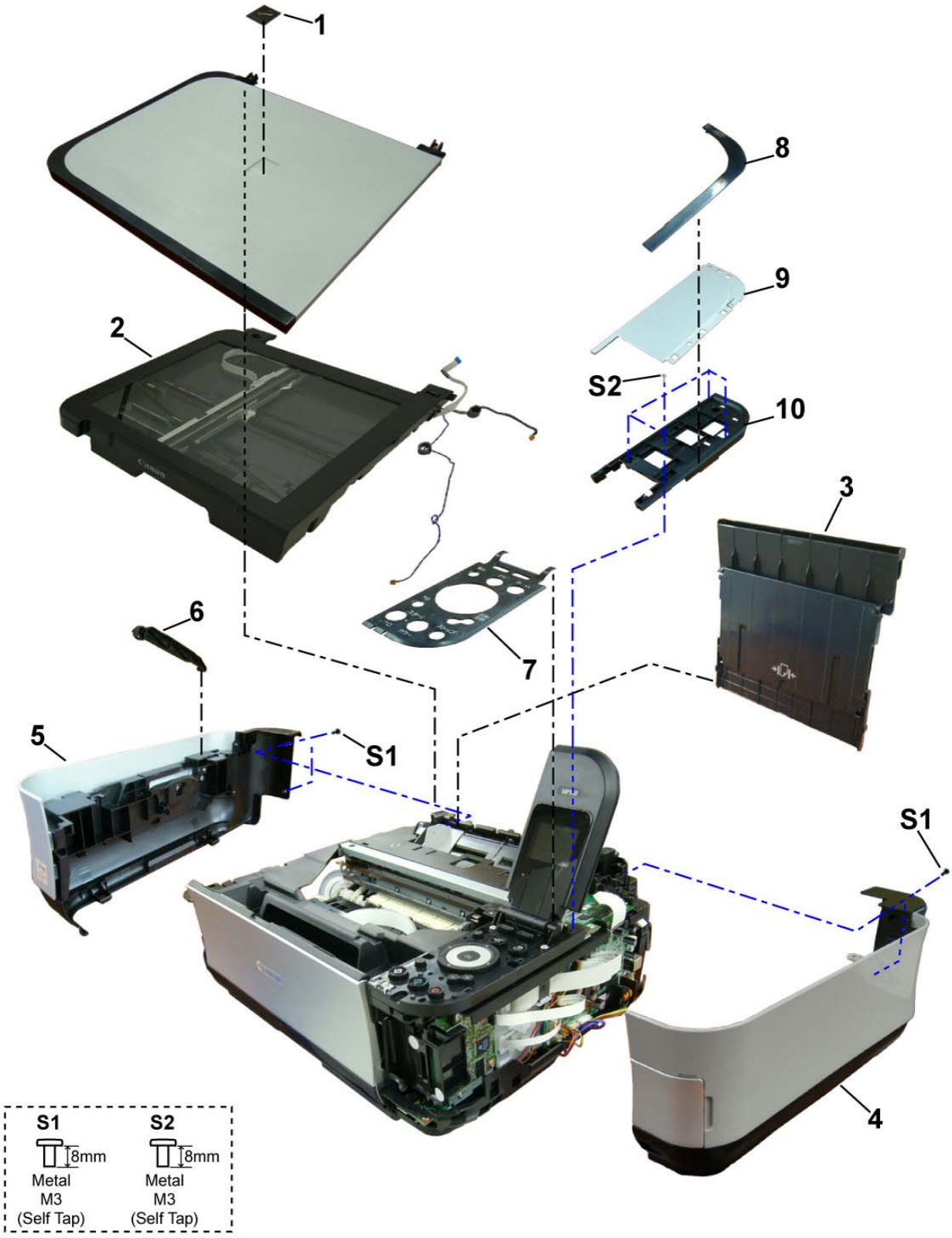
FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
1-	1	QM3-3685-000		1	CASSETTE UNIT	
	2	QY6-0073-000		1	PRINT HEAD	
	3	QH2-2716-000		1	CORD, POWER	220V-240V(EUM, EMB, ASA, MY)
	3	QH2-2719-000		1	CORD, POWER	100V-120V
	3	QK1-0776-000		1	CORD, POWER	220V-240V(AU)
	3	QK1-2017-000		1	CORD, POWER	100V-120V(TW)
	3	QK1-3048-000		1	CORD, POWER	120V-240V(LAM, CHN)
	3	QK1-3761-000		1	CORD, POWER	100V(JP)
	3	WT3-5156-000		1	CORD, POWER	220V-240V(GB, HK)
	3	WT3-5160-000		1	CORD, POWER	220V-240V(KR)
	4	QC2-7932-000		1	LABEL, PANEL	CA

FIGURE 2 AC ADAPTER

LIST OF FIGURE 2

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
2-	1	QK1-4965-000		1	AC ADAPTER: 100V-240V 50/60HZ	

FIGURE 3 EXTERNAL COVERS & SCANNER UNIT



LIST OF FIGURE 3

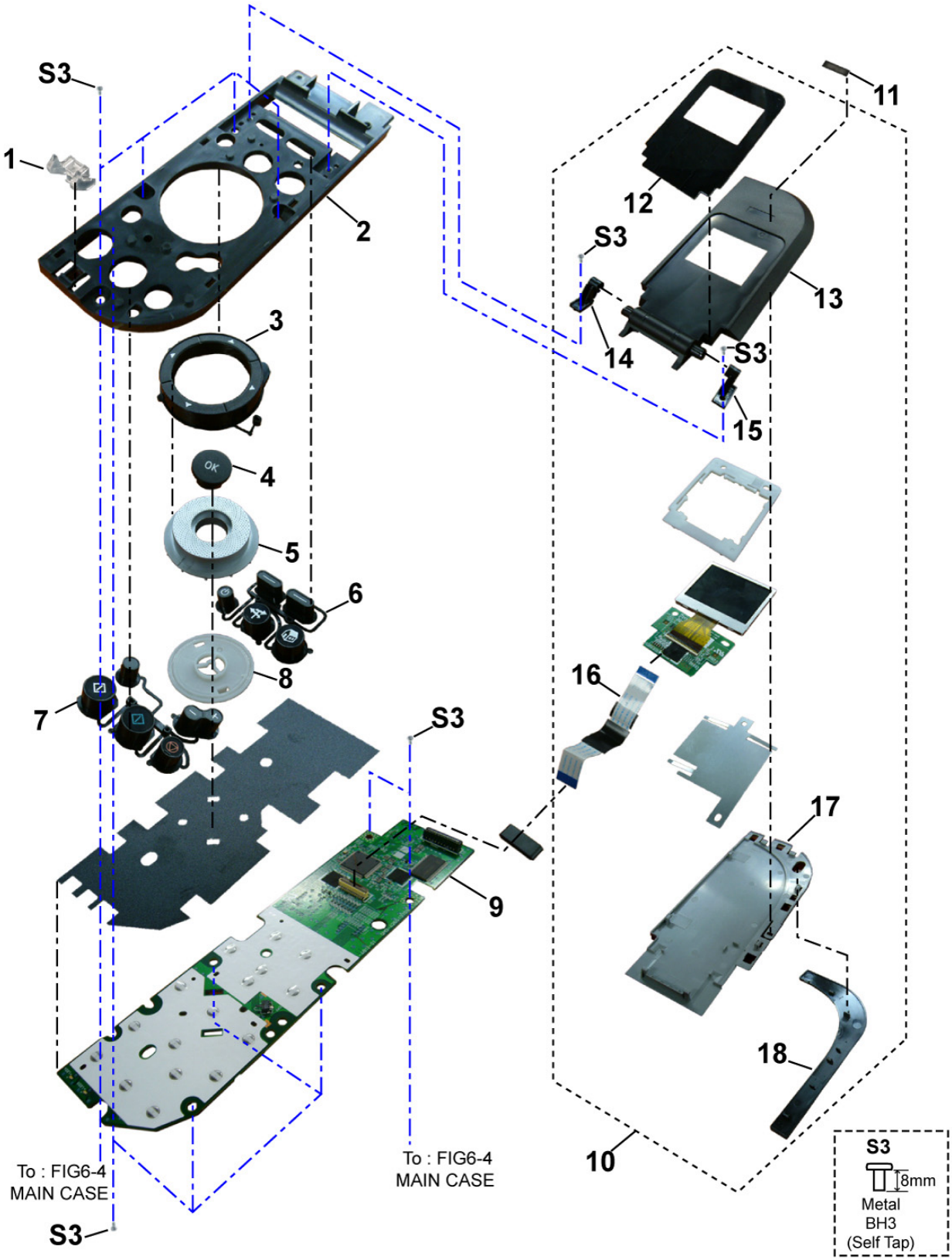
FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
3-	1	QC1-9023-000		1	EMBLEM	FOR JAPAN
	1	QC1-9024-000		1	EMBLEM	FOR OTHER REGIONS
	2	QM3-3689-000		1	SCANNER UNIT	
	3	QM3-3684-000		1	ASF COVER UNIT	
	4	QM3-3682-000		1	SIDE COVER R UNIT	
	5	QM3-3683-000		1	SIDE COVER L UNIT	
	6	QC2-7841-000		1	STAY, SCANNER	
	7	QL2-2602-000		1	COVER, OPERATION PANEL	CA, AU, ASA
	7	QL2-2603-000		1	COVER, OPERATION PANEL	JP
	7	QL2-2604-000		1	COVER, OPERATION PANEL	LAM, GB, EUM, EMB
	7	QL2-2605-000		1	COVER, OPERATION PANEL	HK, TW
	7	QL2-2606-000		1	COVER, OPERATION PANEL	CN
	7	QL2-2607-000		1	COVER, OPERATION PANEL	KR
	8	QC2-7872-000		1	EDGE PANEL, OPERATION	
	9	QC2-7871-000		1	TOP COVER, OPERATION REAR	
	10	QC2-7874-000		1	MIDDLE FRAME, OPERATION REAR	

FIGURE 4 DOCUMENT PRESSURE PLATE UNIT

LIST OF FIGURE 4

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
4-	1	QM3-3692-000		1	DOCUMENT COVER UNIT	
	2	QC2-7863-000		2	HINGE	
	3	QC2-9324-000		1	SHEET, DOCUMENT PRESSURE	

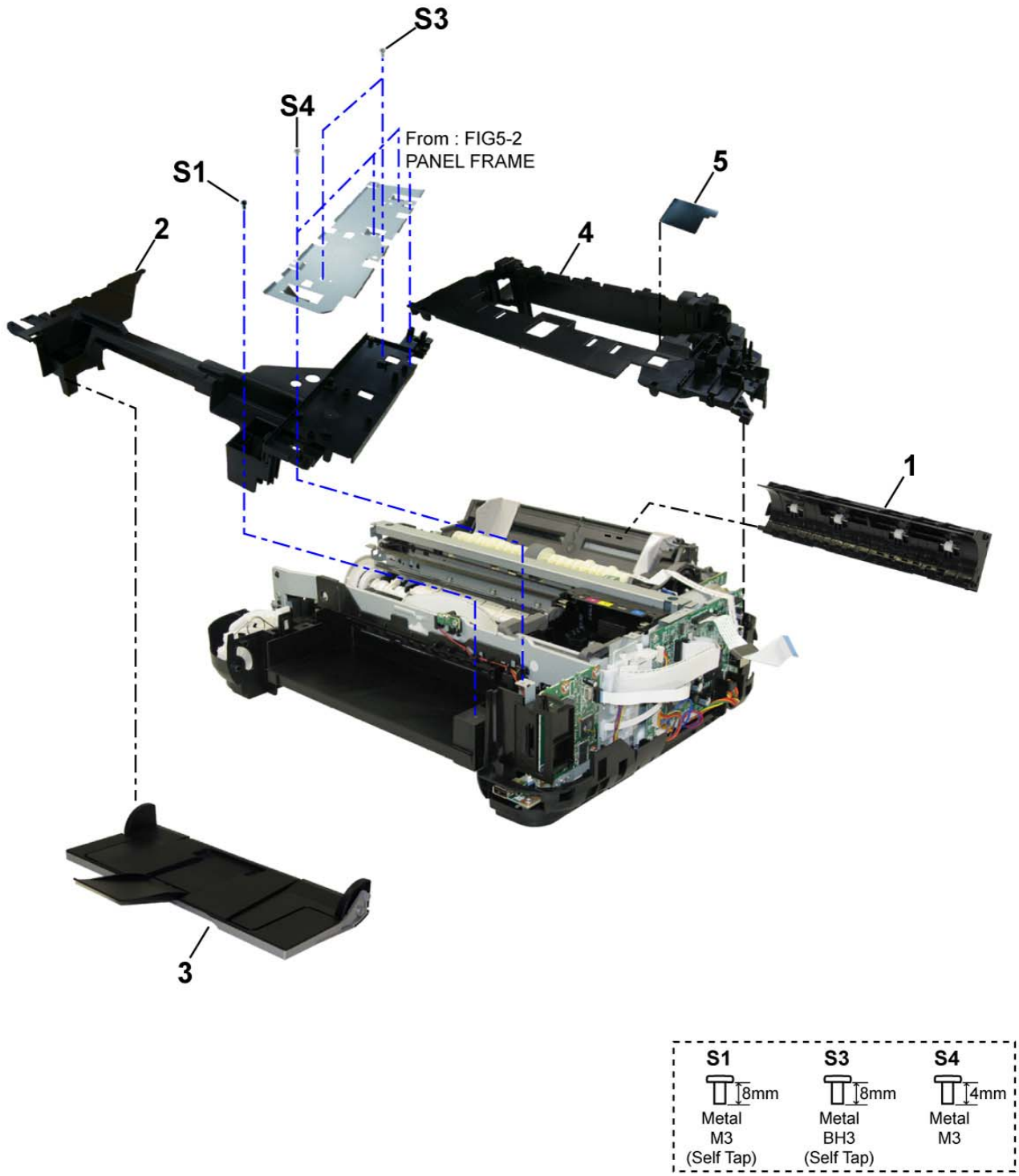
FIGURE 5 OPERATION PANEL UNIT



LIST OF FIGURE 5

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
5-	1	QC2-7873-000		1	GUIDE, LIGHT	
	2	QC2-7870-000		1	FRAME, PANEL	
	3	QC2-7919-000		1	KEY, ARROW	
	4	QC2-7878-000		1	KEY, OK	
	5	QC2-7879-000		1	JOG WHEEL	
	6	QC2-7877-000		1	KEY, POWER	
	7	QC2-7876-000		1	KEY, START	
	8	QC2-8026-000		1	BASE, JOG WHEEL	
	9	QM3-3709-000		1	PANEL BOARD ASS'Y	
	10	QM3-3696-000		1	LCD UNIT	
	11	QC2-9308-000		1	LABEL, PRODUCT NAME	MP540
	11	QC2-9309-000		1	LABEL, PRODUCT NAME	MP545
	12	QC2-7885-000		1	WINDOW, LCD	
	13	QC2-7882-000		1	COVER, LCD FRONT	
	14	QC2-7886-000		1	HINGE, LCD L	
	15	QC2-7887-000		1	HINGE, LCD R	
	16	QL2-2609-000		1	LCD CABLE ASS'Y	
	17	QC2-7883-000		1	COVER, LCD TOP	
	18	QC2-7884-000		1	EDGE PANEL, LCD	

FIGURE 6 MAIN CASE & FRONT DOOR UNIT

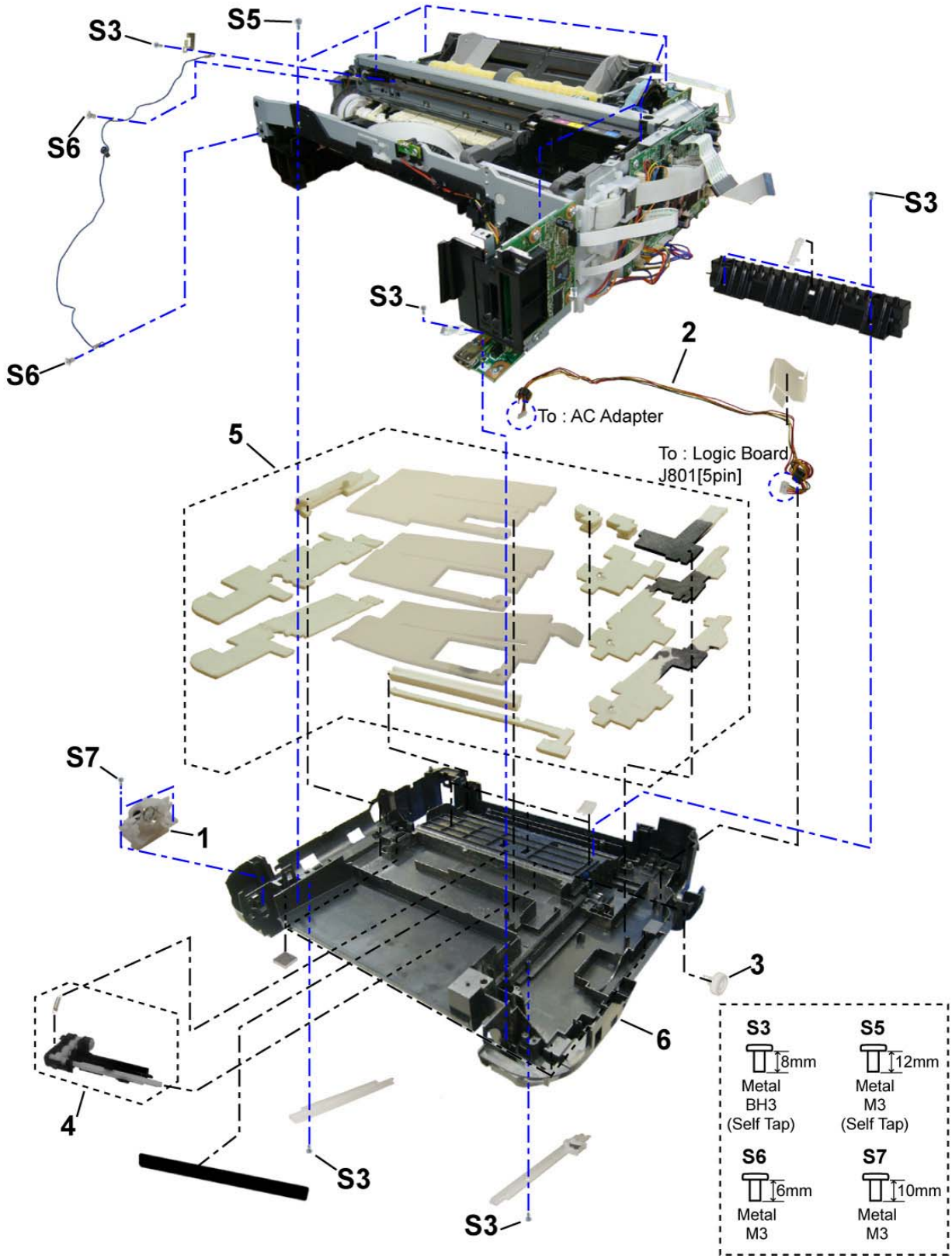


S1	S3	S4
8mm	8mm	4mm
Metal M3 (Self Tap)	Metal BH3 (Self Tap)	Metal M3

LIST OF FIGURE 6

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
6-	1	QM3-3641-000		1	REAR GUIDE UNIT	
	2	QC2-7844-000		1	CASE, MAIN	
	3	QM3-3681-000		1	FRONT DOOR UNIT	
	4	QM3-3694-000		1	SUB CASE UNIT	
	5	QC2-7925-000		1	SHEET, PE BIND	

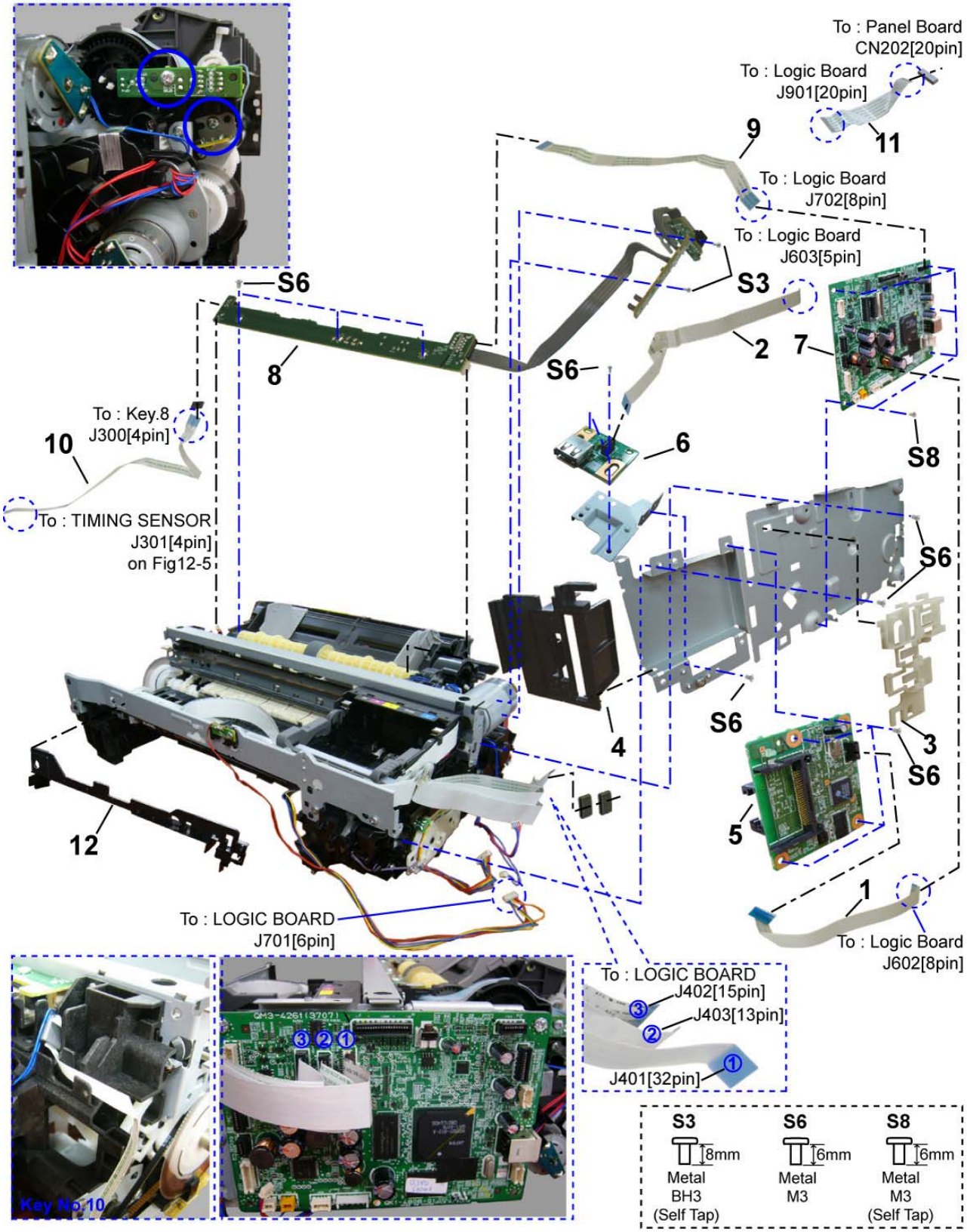
FIGURE 7 BOTTOM CASE & INK ABSORBER



LIST OF FIGURE 7

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
7-	1	QM3-3711-000		1	FRONT DOOR LINK UNIT	
	2	QM3-4278-000		1	DC HARNESS ASS'Y	
	3	QC2-7654-000		1	GEAR, PICK UP SHAFT	
	4	QM3-3644-000		1	PICK UP ARM UNIT	
	5	QY5-0239-000		1	ABSORBER KIT	
	6	QC2-7908-000		1	CASE, BOTTOM	

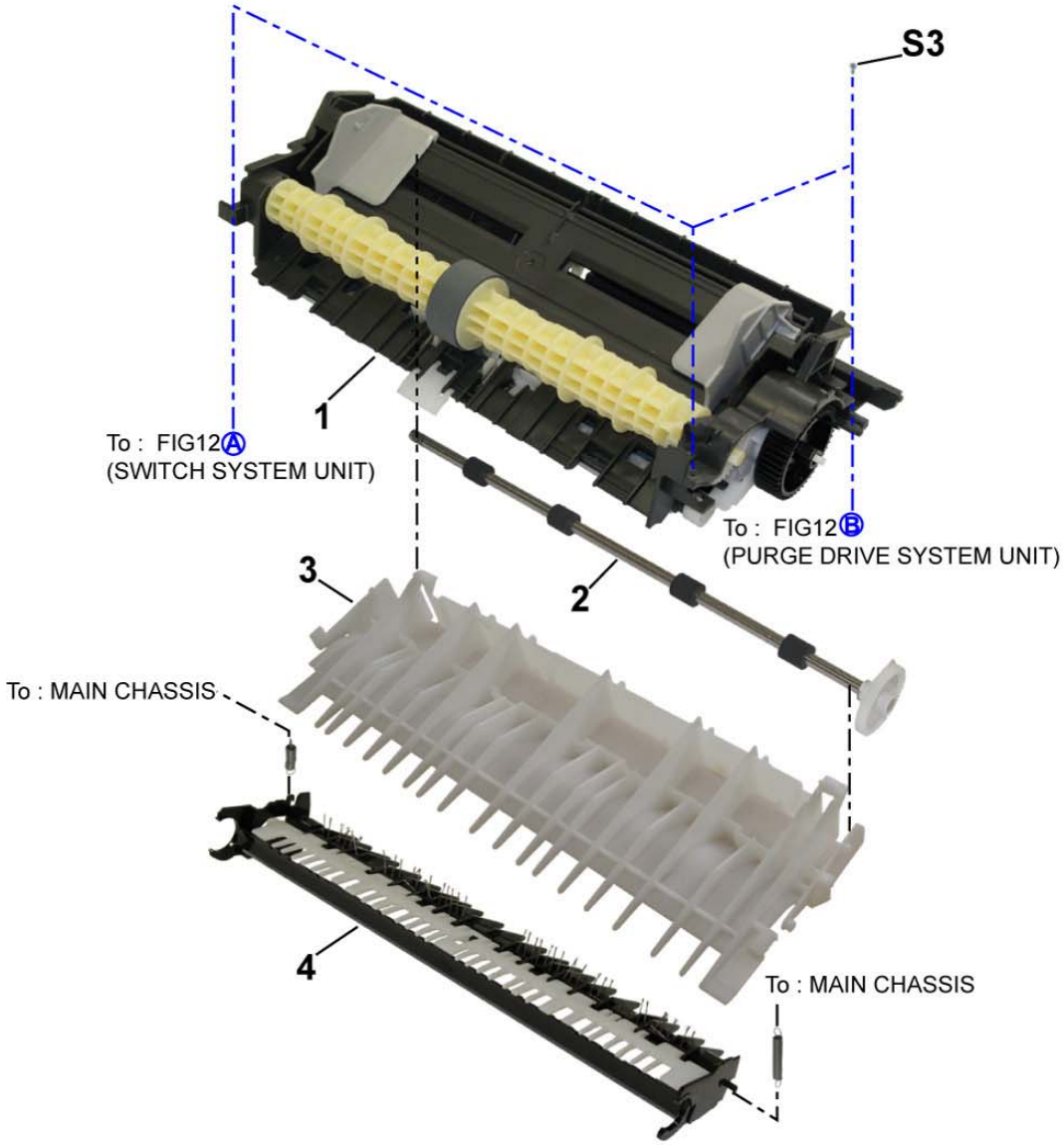
FIGURE 8 LOGIC BOARD ASS'Y & PE SENSOR BOARD ASS'Y

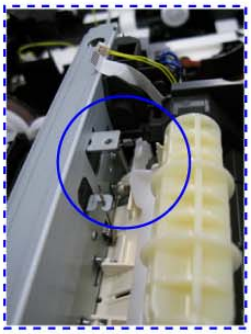


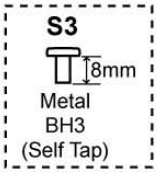
LIST OF FIGURE 8

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
8-	1	QK1-4512-000		1	CABLE, CARD SLOT	
	2	QK1-5002-000		1	CABLE, PICTBRIDGE	
	3	QC2-8523-000		1	HOLDER, CORE	
	4	QC2-7850-000		1	PANEL, CARD	
	5	QM3-3708-000		1	CARD BOARD ASS'Y	
	6	QM3-4467-000		1	PICTBRIDGE BOARD UNIT	
	7	QM3-3707-000		1	LOGIC BOARD ASS'Y	
	8	QM3-4451-000		1	PE SENSOR BOARD ASS'Y	
	9	QK1-4835-000		1	CABLE, PE SENSOR	
	10	QK1-5034-000		1	CABLE, LF ENCODER	
	11	QK1-4815-000		1	CABLE, PANEL	
	12	QC2-7921-000		1	FRONT COVER, MIDDLE	

FIGURE 9 SHEET FEED UNIT



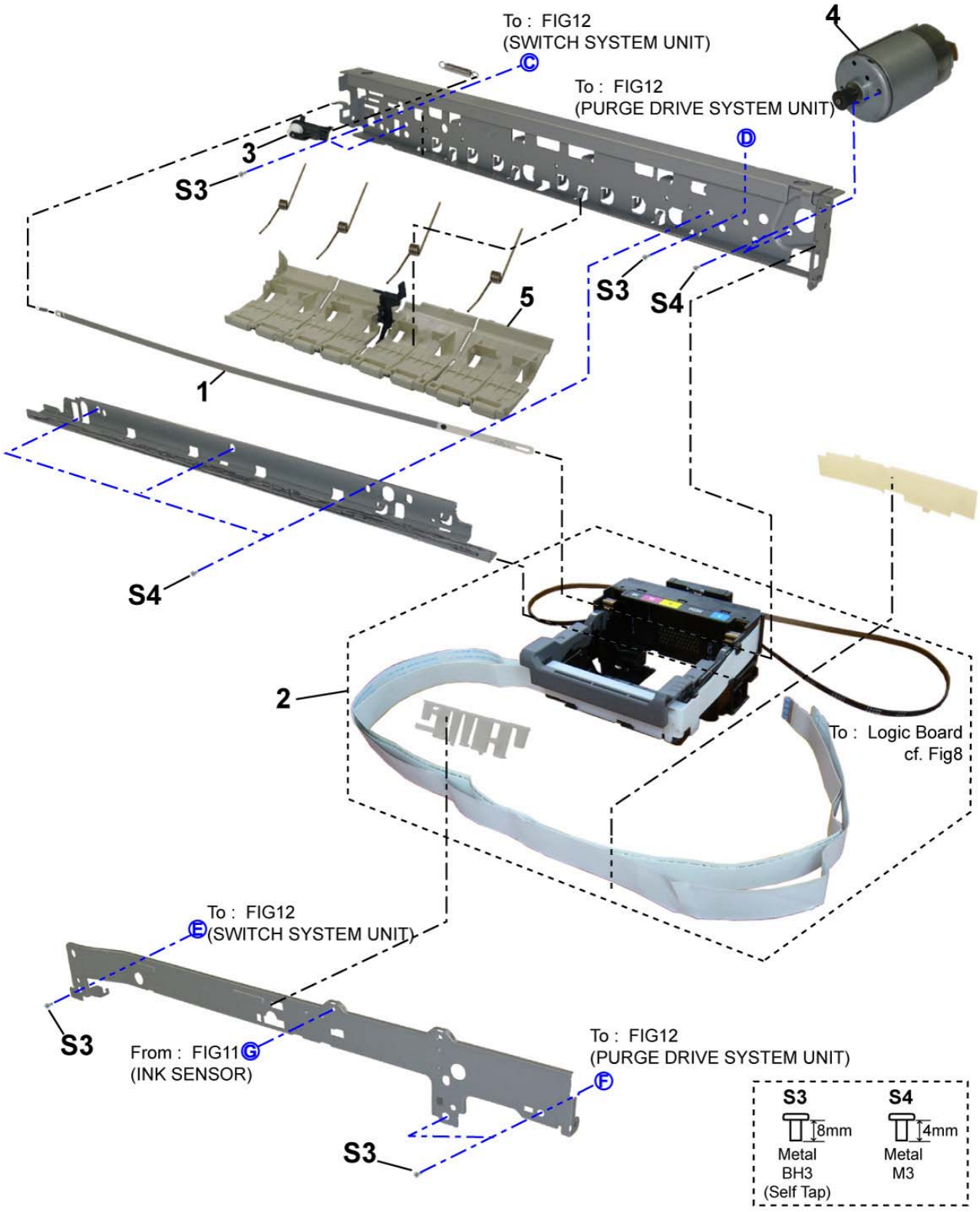




LIST OF FIGURE 9

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
9-	1	QM3-3633-000		1	ASF UNIT	
	2	QL2-2529-000		1	PAPER FEED ROLLER ASS'Y	
	3	QM3-3610-000		1	CASSETTE FEED GUID UNIT	
	4	QM3-4757-000		1	PAPER GUIDE UNIT	

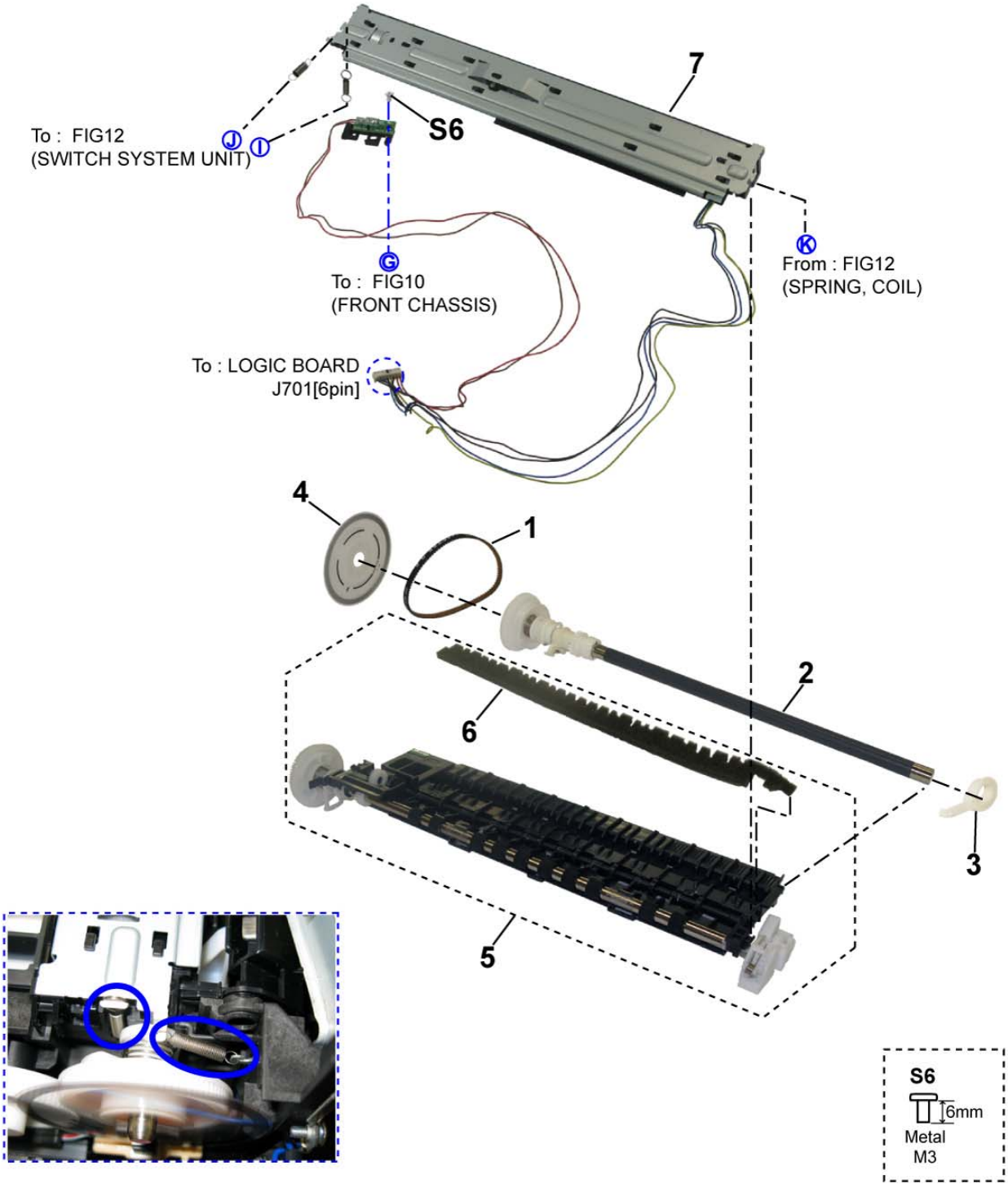
FIGURE 10 CARRIAGE UNIT & PRESSURE ROLLER UNIT



LIST OF FIGURE 10

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
10-	1	QC2-7783-000		1	FILM, TIMING SLIT STRIP	
	2	QM3-3598-000		1	CARRIAGE UNIT	
	3	QL2-2528-000		1	PULLEY HOLDER UNIT	
	4	QK1-1500-000		1	MOTOR, CARRIAGE	
	5	QM3-3614-000		1	PRESSURE ROLLER ASS'Y	

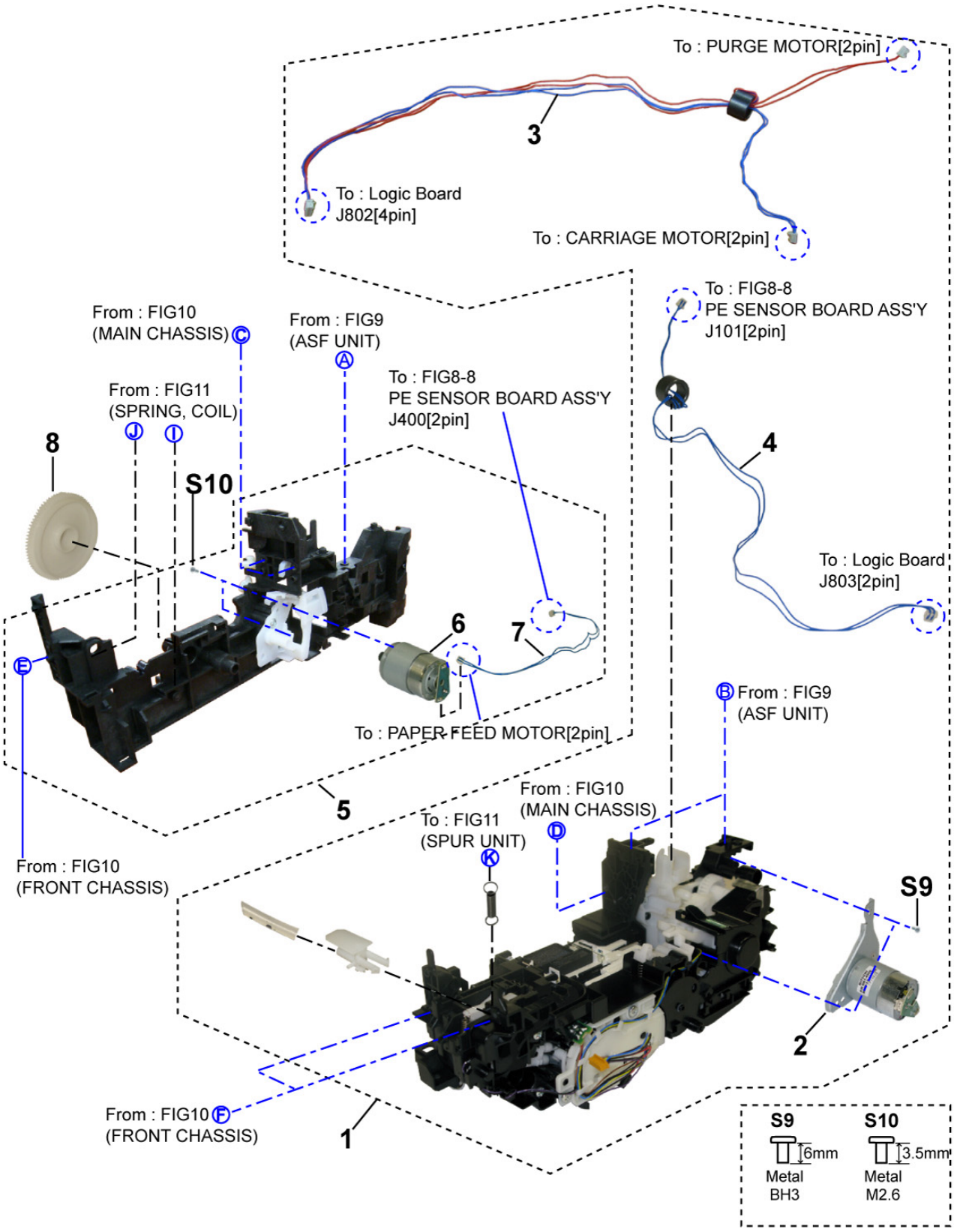
FIGURE 11 PLATEN UNIT & SPUR UNIT



LIST OF FIGURE 11

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
11-	1	QC2-7526-000		1	BELT, PAPER FEED	
	2	QL2-2525-000		1	LF ROLLER ASS'Y	
	3	QC2-7667-000		1	BUSHING, PAPER FEED ROLLER	
	4	QC2-7765-000		1	FILM, TIMING SLIT DISK FEED	
	5	QM3-3618-000		1	PLATEN/EJECT ROLLER UNIT	
	6	QC2-7671-000		1	ABSORBER, INK	
	7	QM3-3617-000		1	SPUR UNIT	

FIGURE 12 PURGE DRIVE SYSTEM UNIT & SWITCH SYSTEM UNIT



LIST OF FIGURE 12

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
12-	1	QM3-3619-000		1	PURGE DRIVE SYSTEM UNIT	
	2	QM3-3651-000		1	PURGE MOTOR UNIT	
	3	QM3-4449-000		1	MOTOR MULTI HARNESS ASS'Y	
	4	QM3-4453-000		1	PAPER FEED RELAY HANESS ASS'Y	
	5	QM3-5094-000		1	SWITCH SYSTEM UNIT	
	6	QK1-3849-000		1	MOTOR, PAPER FEED	
	7	QM3-4445-000		1	LF MOTOR HARNESS ASS'Y	
	8	QC2-7682-000		1	GEAR, IDLER	

FIGURE 13 OPTION & CONSUMABLES

1

2

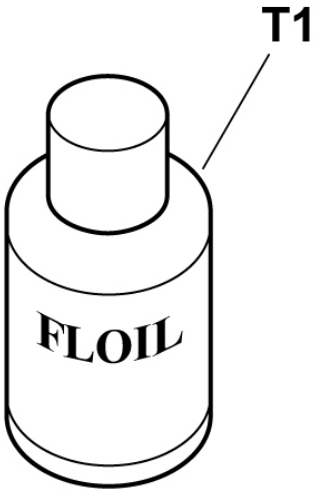
3

4

LIST OF FIGURE 13

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
13-	1	NPN		1	BLACK INK TANK CLI-221BK	CONSUMABLES
		NPN		1	MAGENTA INK TANK CLI-221M	CONSUMABLES
		NPN		1	YELLOW INK TANK CLI-221Y	CONSUMABLES
		NPN		1	BLACK INK TANK PGI-220BK	CONSUMABLES
		NPN		1	CYAN INK TANK CLI-221C	CONSUMABLES
	2	NPN		1	BLACK INK TANK CLI-821BK	CONSUMABLES
		NPN		1	MAGENTA INK TANK CLI-821M	CONSUMABLES
		NPN		1	YELLOW INK TANK CLI-821Y	CONSUMABLES
		NPN		1	BLACK INK TANK PGI-820BK	CONSUMABLES
		NPN		1	CYAN INK TANK CLI-821C	CONSUMABLES
	3	NPN		1	BLACK INK TANK CLI-521BK	CONSUMABLES
		NPN		1	MAGENTA INK TANK CLI-521M	CONSUMABLES
		NPN		1	YELLOW INK TANK CLI-521Y	CONSUMABLES
		NPN		1	BLACK INK TANK PGI-520BK	CONSUMABLES
		NPN		1	CYAN INK TANK CLI-521C	CONSUMABLES
	4	NPN		1	BLACK INK TANK BCI-321BK	CONSUMABLES
		NPN		1	MAGENTA INK TANK BCI-321M	CONSUMABLES
		NPN		1	YELLOW INK TANK BCI-321Y	CONSUMABLES
		NPN		1	BLACK INK TANK BCI-320PGBK	CONSUMABLES
		NPN		1	CYAN INK TANK BCI-321C	CONSUMABLES

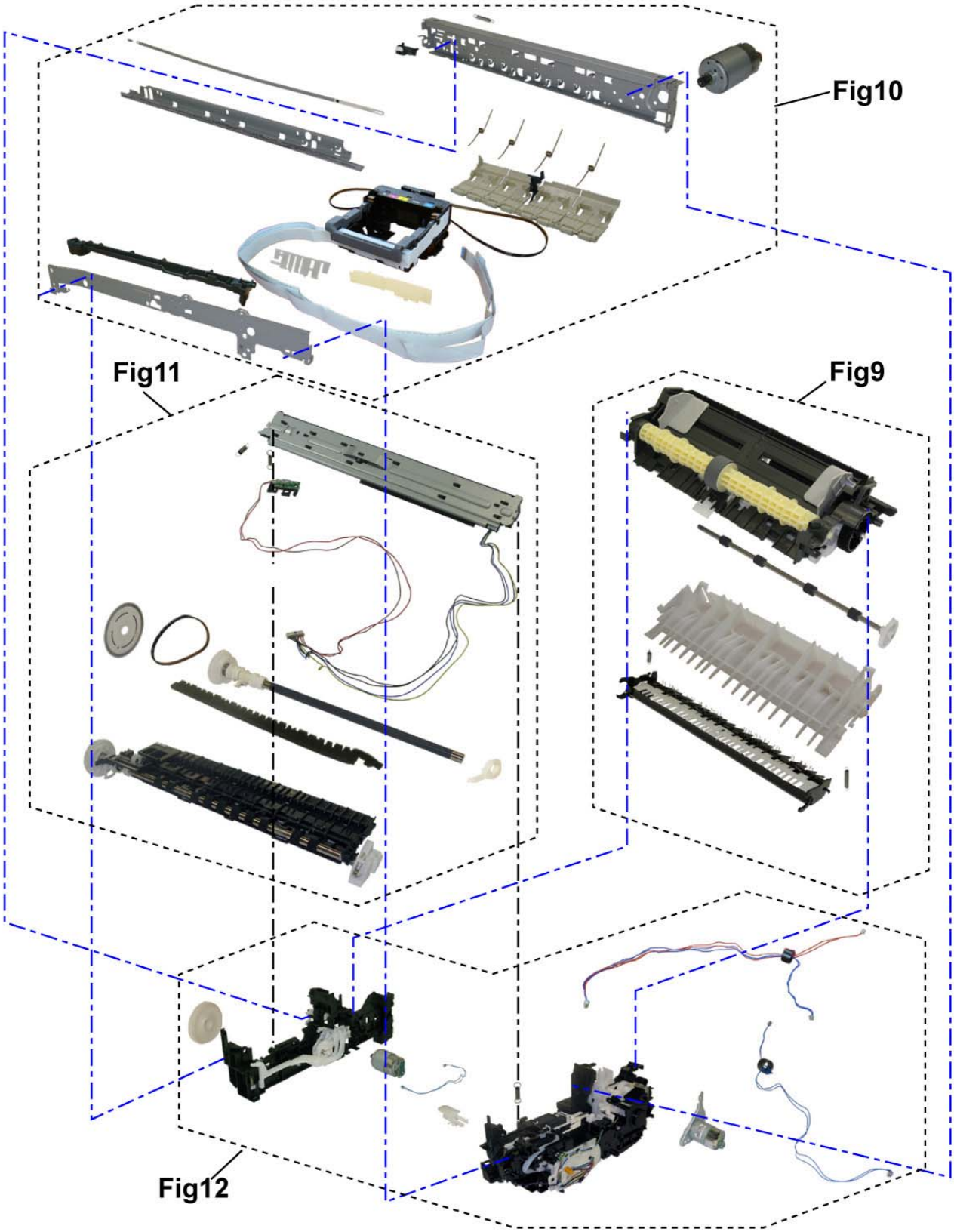
FIGURE 14 TOOL



LIST OF FIGURE 14

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
T-	1	QY9-0057-000		1	LUBE, FLOIL KG107A, OIL	

REFERENCE PRINTER UNIT



SCREW & WASHER LIST

FIGURE & KEY No.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
S-	1	XB4-7300-809			SCREW, TAP, BINDING HEAD, M3X8	
	2	XA9-1756-000			SCREW, TP, M3X8	
	3	XB4-7300-805			SCREW, TP, BH3X8	
	4	XB1-2300-405			SCREW, MACH.BH, M3X4	
	5	XA9-1752-000			SCREW, TAP, WASHER HEAD, M3X12	
	6	XB1-2300-605			SCREW, MACHINE, M3X6	
	7	XA9-1915-000			SCREW, SPRING W WASHER M3X10	
	8	XB6-7300-605			SCREW, MACHINE, TP, M3X6	
	9	XB4-7300-605			SCREW, BH M3X6	
	10	XA9-1783-000			SCREW, BINDING HEAD M2.6X3.5	

NUMERICAL INDEX

PART NUMBER	FIGURE & KEY No.		DESCRIPTION
QC1-9023-000	3-	1	EMBLEM
QC1-9024-000	3-	1	EMBLEM
QC2-7526-000	11-	1	BELT, PAPER FEED
QC2-7654-000	7-	3	GEAR, PICK UP SHAFT
QC2-7667-000	11-	3	BUSHING, PAPER FEED ROLLER
QC2-7671-000	11-	6	ABSORBER, INK
QC2-7682-000	12-	8	GEAR, IDLER
QC2-7765-000	11-	4	FILM, TIMING SLIT DISK FEED
QC2-7783-000	10-	1	FILM, TIMING SLIT STRIP
QC2-7841-000	3-	6	STAY, SCANNER
QC2-7844-000	6-	2	CASE, MAIN
QC2-7850-000	8-	4	PANEL, CARD
QC2-7863-000	4-	2	HINGE
QC2-7870-000	5-	2	FRAME, PANEL
QC2-7871-000	3-	9	TOP COVER, OPERATION REAR
QC2-7872-000	3-	8	EDGE PANEL, OPERATION
QC2-7873-000	5-	1	GUIDE, LIGHT
QC2-7874-000	3-	10	MIDDLE FRAME, OPERATION REAR
QC2-7876-000	5-	7	KEY, START
QC2-7877-000	5-	6	KEY, POWER
QC2-7878-000	5-	4	KEY, OK
QC2-7879-000	5-	5	JOG WHEEL
QC2-7882-000	5-	13	COVER, LCD FRONT
QC2-7883-000	5-	17	COVER, LCD TOP
QC2-7884-000	5-	18	EDGE PANEL, LCD
QC2-7885-000	5-	12	WINDOW, LCD
QC2-7886-000	5-	14	HINGE, LCD L
QC2-7887-000	5-	15	HINGE, LCD R
QC2-7908-000	7-	6	CASE, BOTTOM
QC2-7919-000	5-	3	KEY, ARROW
QC2-7921-000	8-	12	FRONT COVER, MIDDLE
QC2-7925-000	6-	5	SHEET, PE BIND
QC2-7932-000	1-	4	LABEL, PANEL
QC2-8026-000	5-	8	BASE, JOG WHEEL
QC2-8523-000	8-	3	HOLDER, CORE
QC2-9308-000	5-	11	LABEL, PRODUCT NAME
QC2-9309-000	5-	11	LABEL, PRODUCT NAME
QC2-9324-000	4-	3	SHEET, DOCUMENT PRESSURE
OH2-2716-000	1-	3	CORD, POWER

PART NUMBER	FIGURE & KEY No.		DESCRIPTION
QK1-0776-000	1-	3	CORD, POWER
QK1-1500-000	10-	4	MOTOR, CARRIAGE
QK1-2017-000	1-	3	CORD, POWER
QK1-3048-000	1-	3	CORD, POWER
QK1-3761-000	1-	3	CORD, POWER
QK1-3849-000	12-	6	MOTOR, PAPER FEED
QK1-4512-000	8-	1	CABLE, CARD SLOT
QK1-4815-000	8-	11	CABLE, PANEL
QK1-4835-000	8-	9	CABLE, PE SENSOR
QK1-4965-000	2-	1	AC ADAPTER: 100V-240V 50/60HZ
QK1-5002-000	8-	2	CABLE, PICTBRIDGE
QK1-5034-000	8-	10	CABLE, LF ENCODER
QL2-2525-000	11-	2	LF ROLLER ASS'Y
QL2-2528-000	10-	3	PULLEY HOLDER UNIT
QL2-2529-000	9-	2	PAPER FEED ROLLER ASS'Y
QL2-2602-000	3-	7	COVER, OPERATION PANEL
QL2-2603-000	3-	7	COVER, OPERATION PANEL
QL2-2604-000	3-	7	COVER, OPERATION PANEL
QL2-2605-000	3-	7	COVER, OPERATION PANEL
QL2-2606-000	3-	7	COVER, OPERATION PANEL
QL2-2607-000	3-	7	COVER, OPERATION PANEL
QL2-2609-000	5-	16	LCD CABLE ASS'Y
QM3-3598-000	10-	2	CARRIAGE UNIT
QM3-3610-000	9-	3	CASSETTE FEED GUID UNIT
QM3-3614-000	10-	5	PRESSURE ROLLER ASS'Y
QM3-3617-000	11-	7	SPUR UNIT
QM3-3618-000	11-	5	PLATEN/EJECT ROLLER UNIT
QM3-3619-000	12-	1	PURGE DRIVE SYSTEM UNIT
QM3-3633-000	9-	1	ASF UNIT
QM3-3641-000	6-	1	REAR GUIDE UNIT
QM3-3644-000	7-	4	PICK UP ARM UNIT
QM3-3651-000	12-	2	PURGE MOTOR UNIT
QM3-3681-000	6-	3	FRONT DOOR UNIT
QM3-3682-000	3-	4	SIDE COVER R UNIT
QM3-3683-000	3-	5	SIDE COVER L UNIT
QM3-3684-000	3-	3	ASF COVER UNIT
QM3-3685-000	1-	1	CASSETTE UNIT
QM3-3689-000	3-	2	SCANNER UNIT
QM3-3692-000	4-	1	DOCUMENT COVER UNIT
QM3-3694-000	6-	4	SUB CASE UNIT

QH2-2719-000	1-	3	CORD, POWER

PART NUMBER	FIGURE & KEY No.		DESCRIPTION
QM3-3707-000	8-	7	LOGIC BOARD ASS'Y
QM3-3708-000	8-	5	CARD BOARD ASS'Y
QM3-3709-000	5-	9	PANEL BOARD ASS'Y
QM3-3711-000	7-	1	FRONT DOOR LINK UNIT
QM3-4278-000	7-	2	DC HARNESS ASS'Y
QM3-4445-000	12-	7	LF MOTOR HARNESS ASS'Y
QM3-4449-000	12-	3	MOTOR MULTI HARNESS ASS'Y
QM3-4451-000	8-	8	PE SENSOR BOARD ASS'Y
QM3-4453-000	12-	4	PAPER FEED RELAY HANESS ASS'Y
QM3-4467-000	8-	6	PICTBRIDGE BOARD UNIT
QM3-4757-000	9-	4	PAPER GUIDE UNIT
QM3-5094-000	12-	5	SWITCH SYSTEM UNIT
QY5-0239-000	7-	5	ABSORBER KIT
QY6-0073-000	1-	2	PRINT HEAD
QY9-0057-000	T-	1	LUBE, FLOIL KG107A, OIL

QM3-3696-000	5-	10	LCD UNIT

PART NUMBER	FIGURE & KEY No.		DESCRIPTION
WT3-5156-000	1-	3	CORD, POWER
WT3-5160-000	1-	3	CORD, POWER
XA9-1752-000	S-	5	SCREW, TAP, WASHER HEAD, M3X12
XA9-1756-000	S-	2	SCREW, TP, M3X8
XA9-1783-000	S-	10	SCREW, BINDING HEAD M2.6X3.5
XA9-1915-000	S-	7	SCREW, SPRING W WASHER M3X10
XB1-2300-405	S-	4	SCREW, MACH.BH, M3X4
XB1-2300-605	S-	6	SCREW, MACHINE, M3X6
XB4-7300-605	S-	9	SCREW, BH M3X6
XB4-7300-805	S-	3	SCREW, TP, BH3X8
XB4-7300-809	S-	1	SCREW, TAP, BINDING HEAD, M3X8
XB6-7300-605	S-	8	SCREW, MACHINE, TP, M3X6