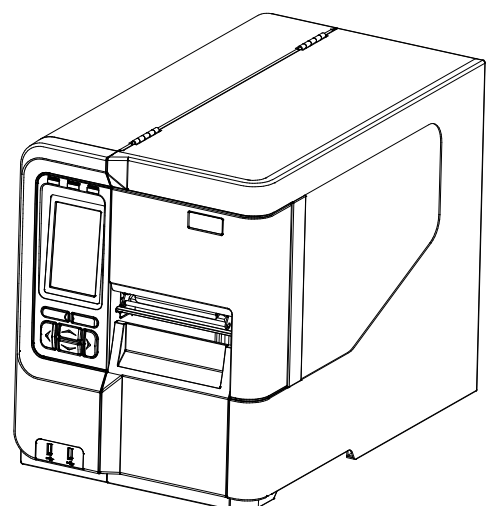


MX240P/ MX340P/ MX640P Series

**THERMAL TRANSFER / DIRECT THERMAL
BAR CODE PRINTER**

**SERVICE
MANUAL**



MX240P/ MX340P/ MX640P

Bar Code Printer Service Manual

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1. FUNDAMENTAL OF THE SYSTEM

1.1. Overview

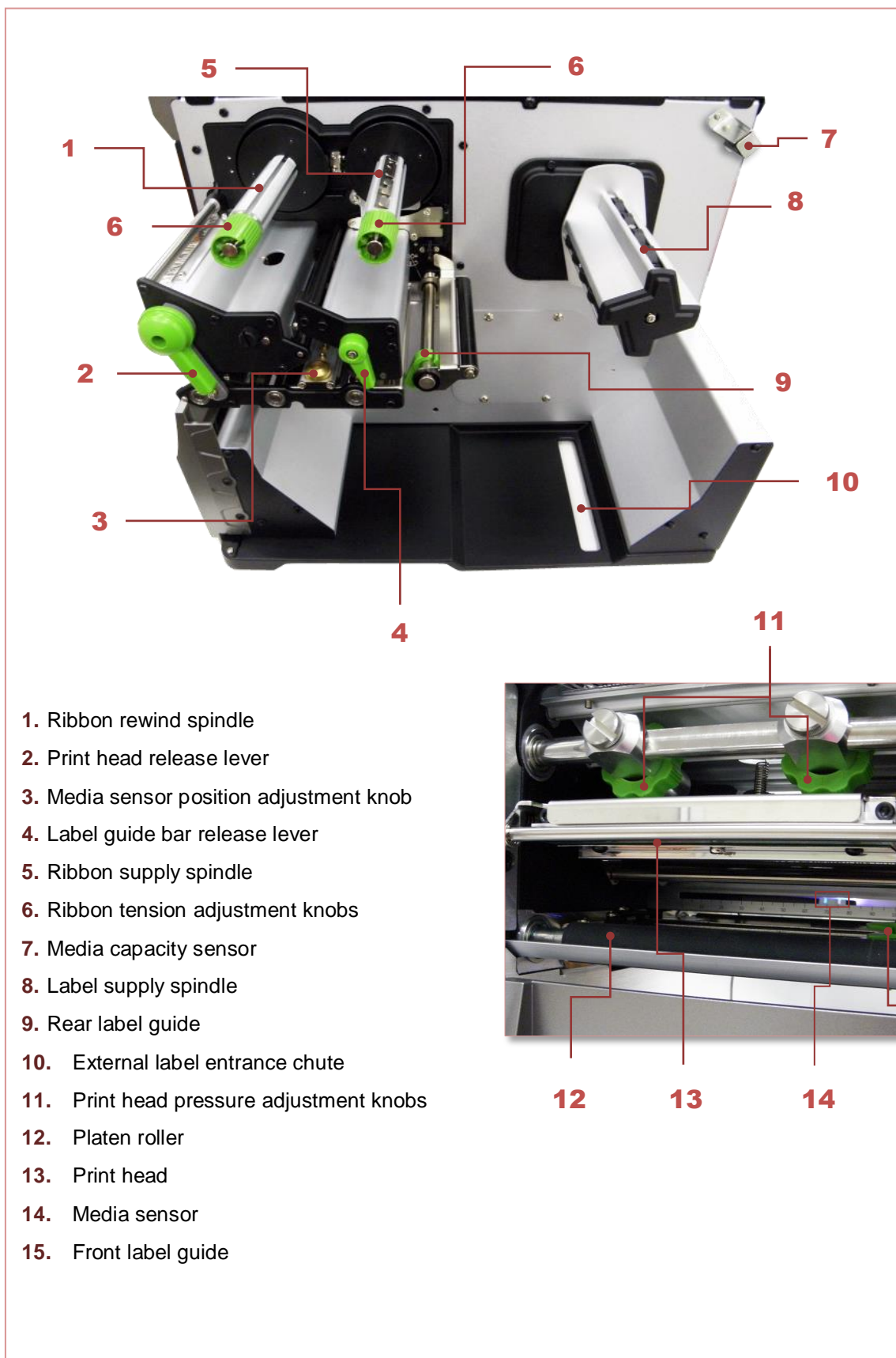
Front View



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Interior View

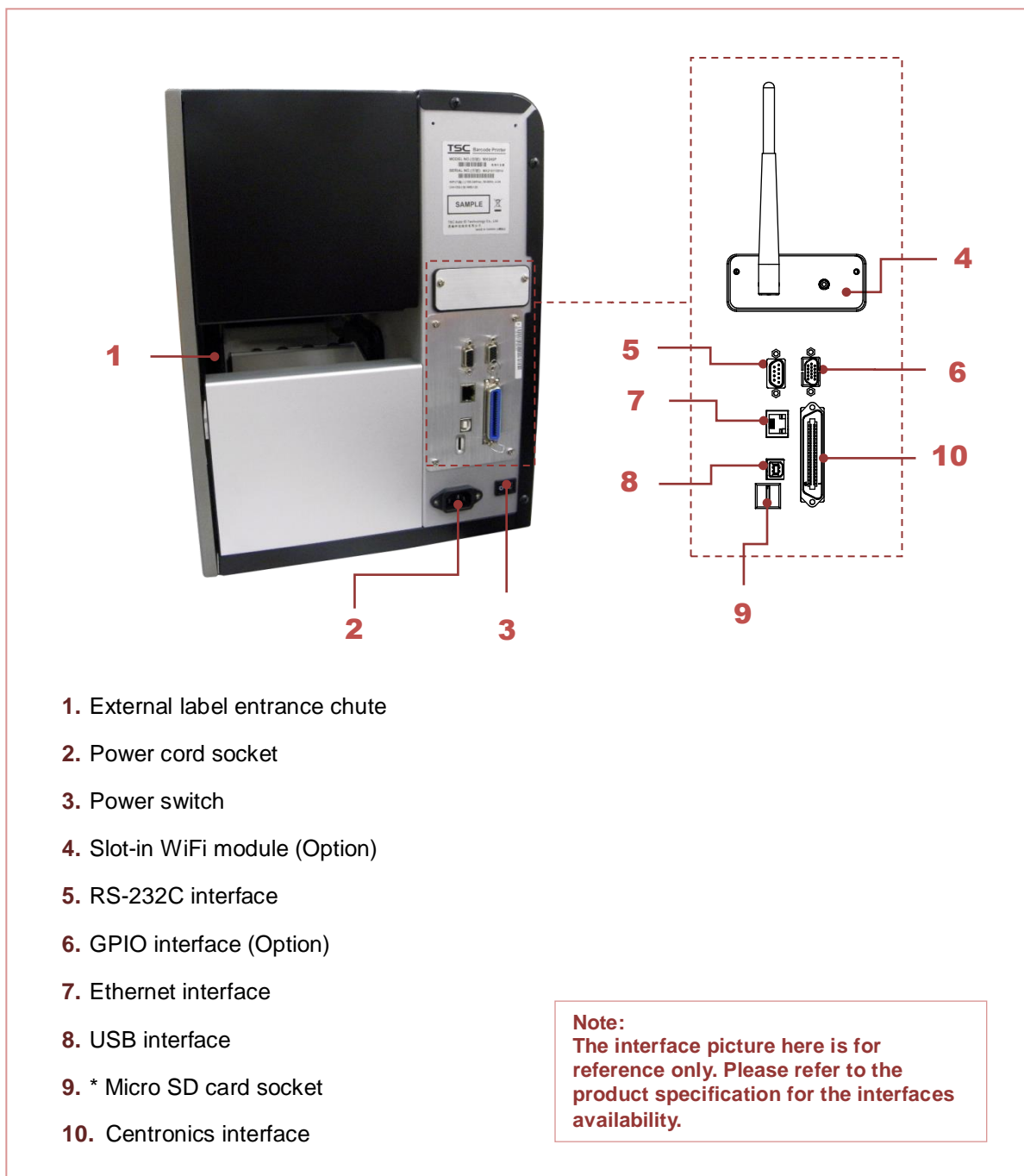


1. Ribbon rewind spindle
2. Print head release lever
3. Media sensor position adjustment knob
4. Label guide bar release lever
5. Ribbon supply spindle
6. Ribbon tension adjustment knobs
7. Media capacity sensor
8. Label supply spindle
9. Rear label guide
10. External label entrance chute
11. Print head pressure adjustment knobs
12. Platen roller
13. Print head
14. Media sensor
15. Front label guide

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Rear View



* Recommended SD card specification

Type	SD card spec	SD card capacity	Approved SD card manufacturer
Micro SD	V2.0 Class 4	4G	Transcend
	V2.0 Class 4	8G	Transcend

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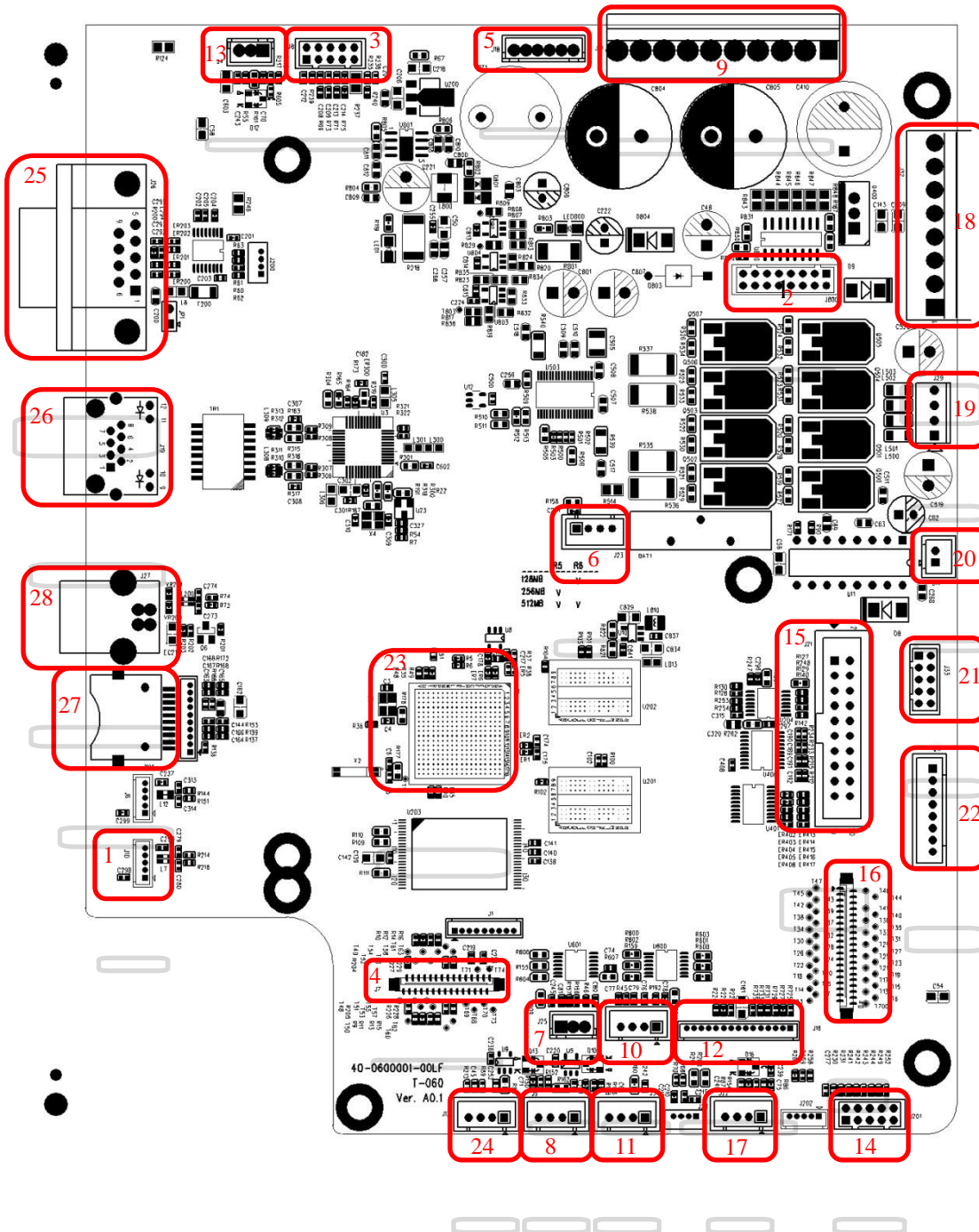
	V3.0 Class 10 UHS-I	16G	Transcend
	V3.0 Class 10 UHS-I	32G	Transcend
	V3.0 Class 10	16G	Kingston
	V2.0 Class 4	16G	Scandisk
	V3.0 Class 10 UHS-I	16G	Scandisk

- The DOS FAT file system is supported for the SD card.
- Folders/files stored in the SD card should be in the 8.3 filename format.
- The miniSD/microSD card to SD card slot adapter is required.

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2. ELECTRONICS

2.1 Summary of Board Connectors



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Main board

Connector	Description
1	USB Host connector
2	Power supply output (5V/36V DC) connector
3	Wi-Fi Module connector
4	Parallel Port board connector
5	GPIO interface board connector
6	Head open sensor connector
7	Gap sensor connector
8	Ribbon encoder sensor connector
9	Power supply output (24V DC) connector
10	BM Sensor connector
11	Paper roller open sensor connector
12	LCD Power & LED Power connector
13	Paper Distance Sensor connector
14	BT module connector
15	Print head connector
16	LCD panel connector
17	Ribbon end sensor connector
18	TPH Power (24V DC) connector
19	Stepping motor connector
20	DC motor connector
21	Cutter/peel-off connector
22	Paper REWIND connector
23	Micro processor
24	Paper damper sensor connector
25	RS-232C connector
26	Ethernet interface
27	MICRO SD card socket
28	USB interface

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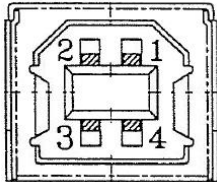
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2.2 Interface Pin Configuration

RS-232C

PIN	CONFIGURATION
1	+5 V
2	TXD
3	RXD
4	CTS
5	GND
6	RTS
7	N/C
8	RTS
9	N/C

USB

	PIN	CONFIGURATION
	1	N/C
	2	D-
	3	D+
	4	GND

Ethernet

PIN	CONFIGURATION
1	Tx+
2	Tx-
3	Rx+
4	N/C
5	N/C
6	Rx-
7	N/C
8	N/C

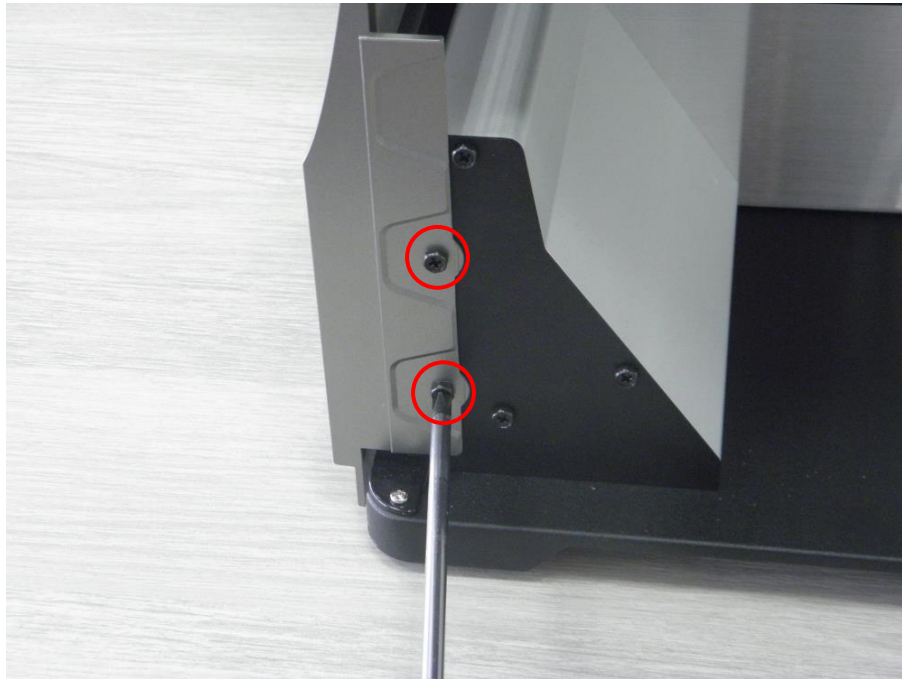
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3. MECHANISM

3.1 Remove the Lower Front Panel

Remove 2 screws to remove lower front panel.



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3.2 Remove the Electronics Cover

1. Open printer media cover to remove 1 screw inside the printer.



2. Remove 6 screws on electronics cover.



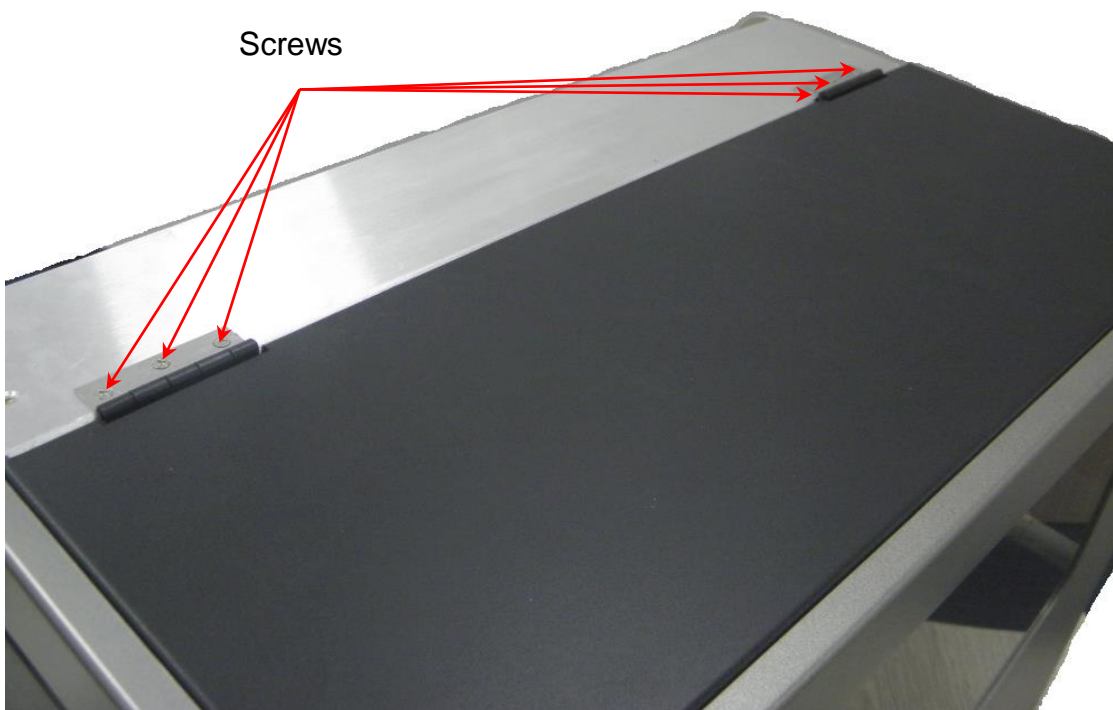
3. Remove the electronics cover
4. Reassemble the parts in the reverse procedures.

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3.3 Remove the Media Cover

1. Refer to section 3.2 to remove the electronics cover.
2. Remove 3 screws from each hinge. Be careful the media cover may fall out from the printer.
3. Take out the media cover from the printer.
4. Reassemble the parts in the reverse procedures.

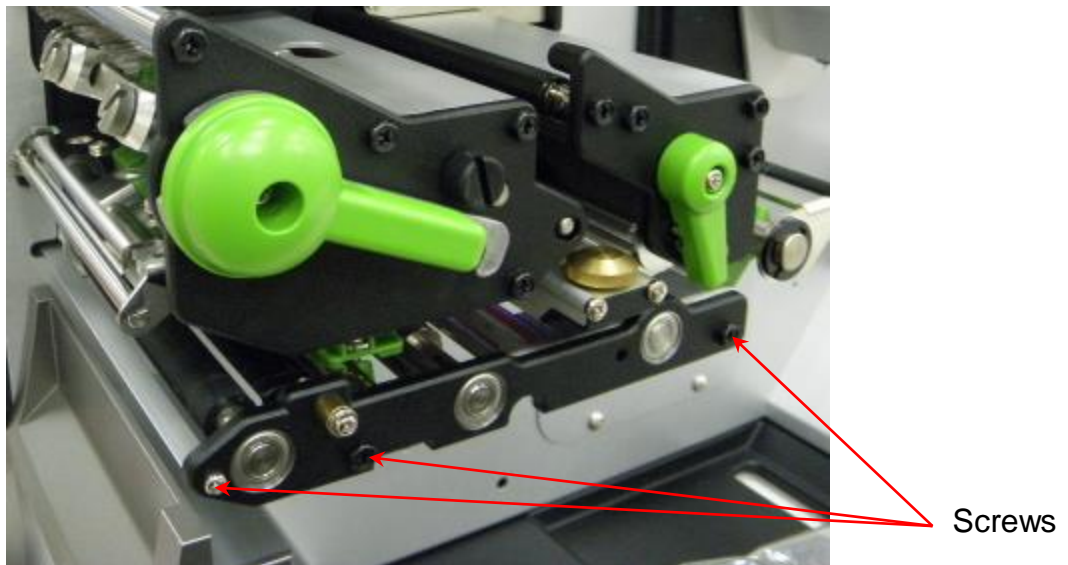


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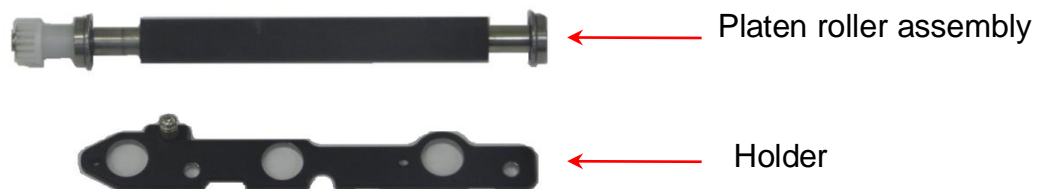
Bar Code Printer Service Manual

3.4 Replacing the Platen Roller Assembly

1. Open printer media cover.
2. Disengage print head release lever.
3. Remove 3 screws from the platen holder.



4. Take out the platen holder, tear bar and platen roller assembly and replace a new platen roller assembly.



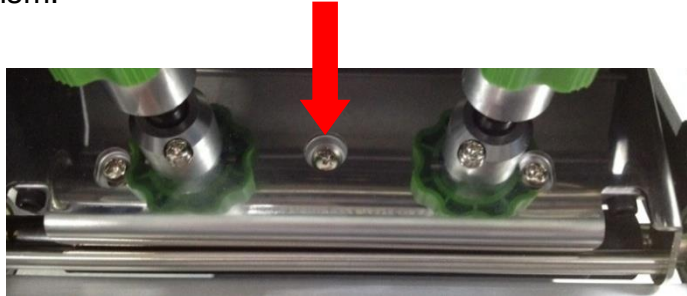
5. Reassemble the parts in the reverse procedures.

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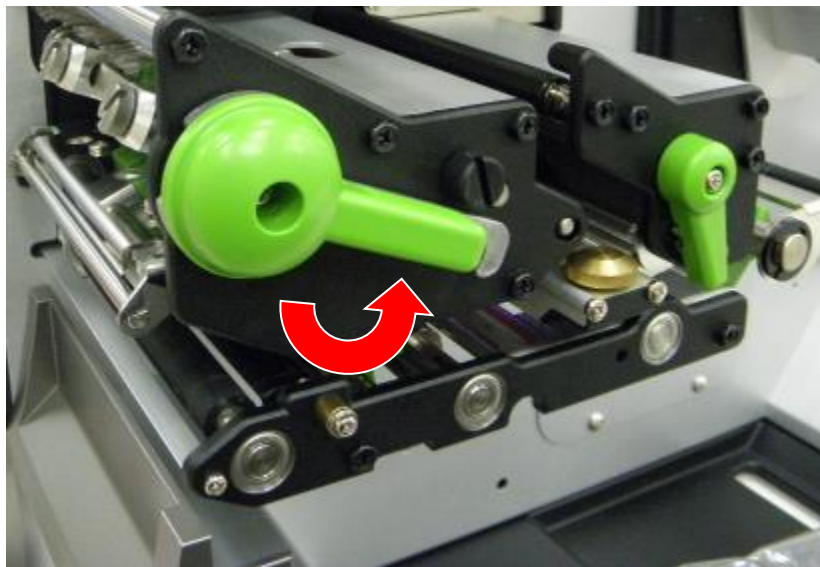
Bar Code Printer Service Manual

3.5 Replacing the Print head ASS'Y

1. Loosen the print head secure screw counterclockwise until it can be taken out from the mechanism.



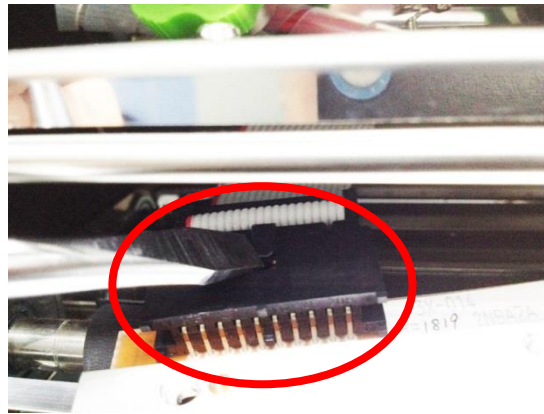
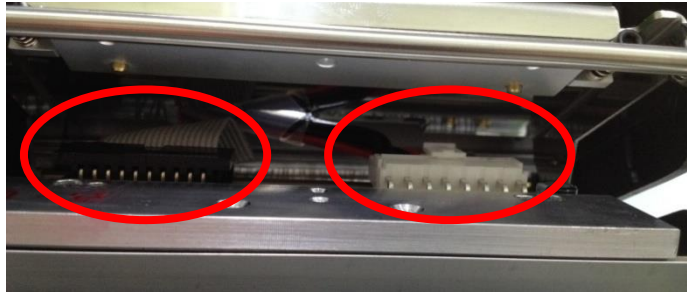
2. Disengage the print head release lever.



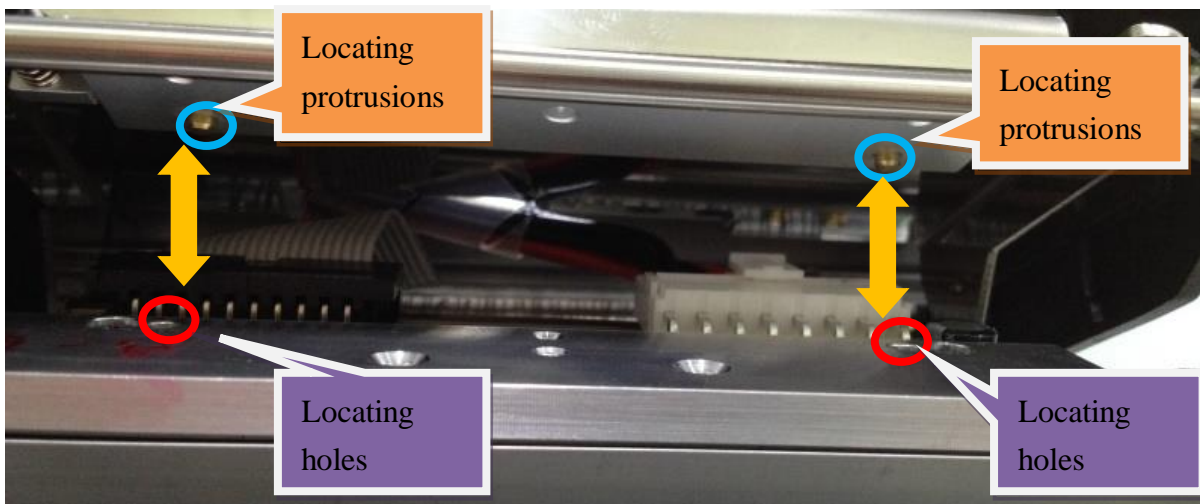
3. Carefully disconnect connectors from the print head assembly. Please do not pull the cable to right and left side alternatively in order to disconnect it from the print head connector. Please use the flat screw driver to push at the key in the middle of the connector. When the connector becomes loose from the print head connector, you can disconnect it.

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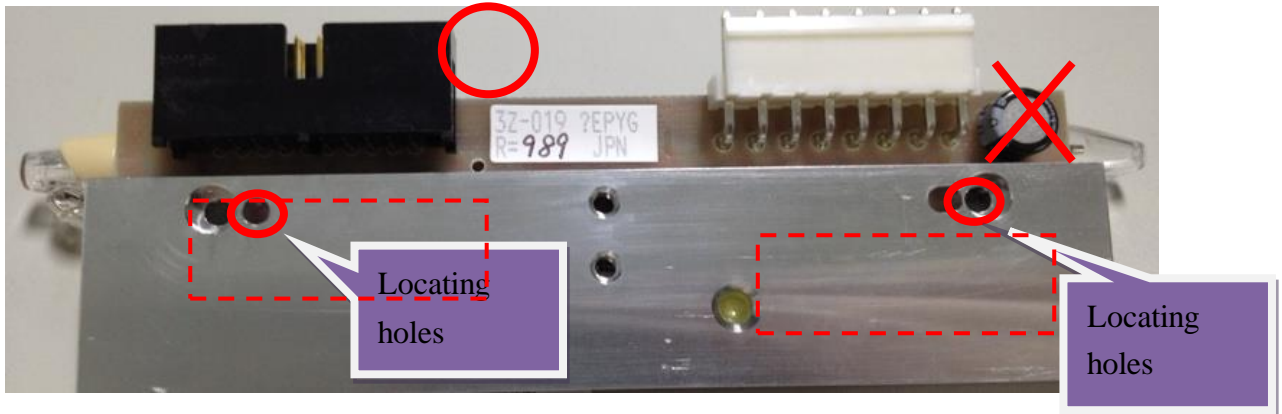


4. Remove/Replace the print head assembly.
5. Connect the print head cable and carefully slide print head assembly into the print mechanism. Make sure the two locating protrusion pins on the print mechanism mounting plate snap into the locating holes on the print head.

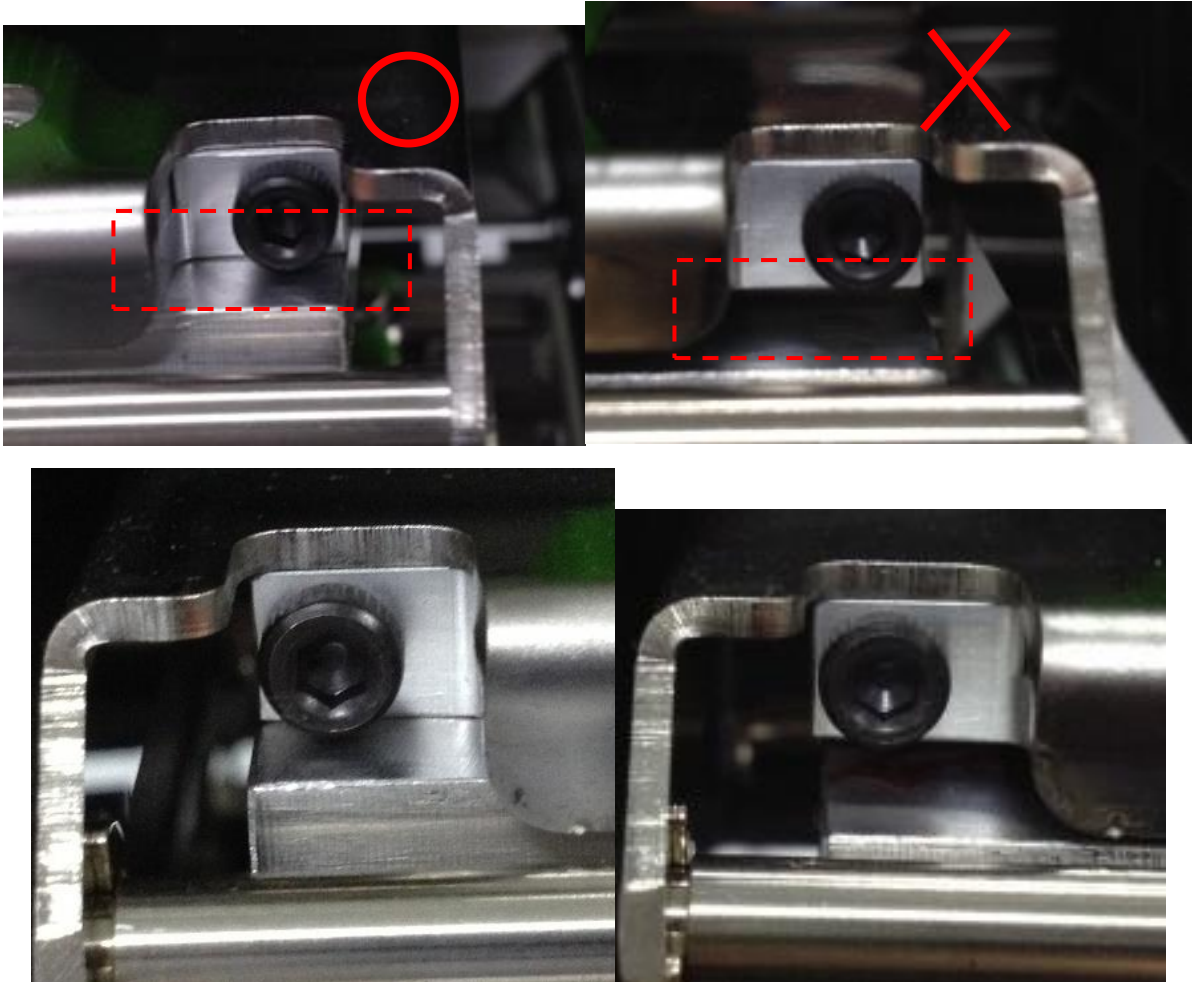


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6. Check the print head has been totally closed to the print mechanism before secure the print head by the previously removed thumbscrew.



7. Reassemble the parts in the reverse procedures.

Note:

Please use the come with new print head secure screw to replace the print head assembly. DO NOT re-use the original screw.

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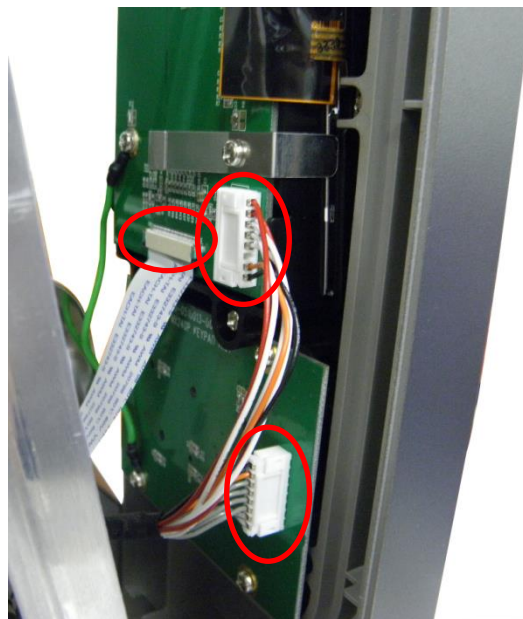
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3.6 Replacing the LCD Panel Module

1. Follow the previous step (refer to section 3.2) to remove the electronics cover.
2. Remove the marked fix LCD panel module two screws and disconnect one connector on USB host board.



3. Remove the module connecting cable & harness.



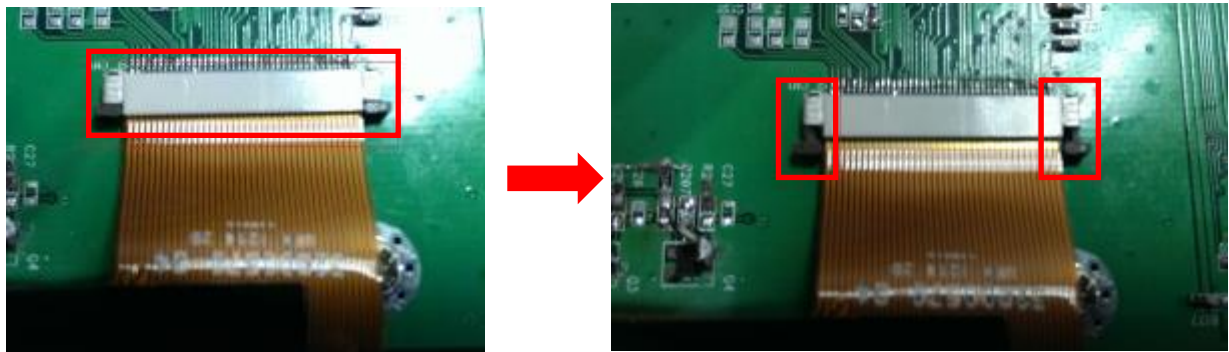
4. Reassemble the parts in the reverse procedures.

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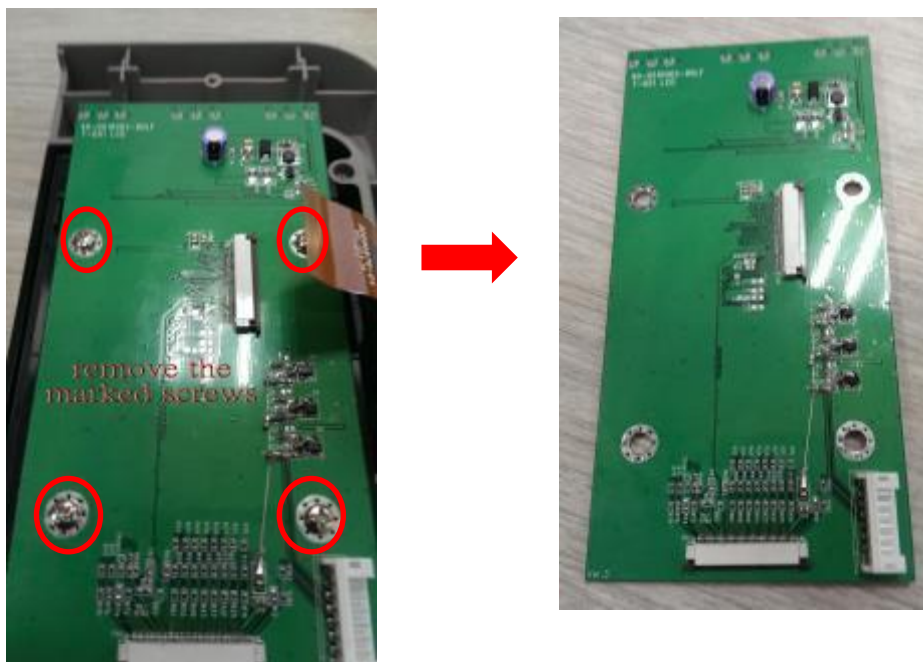
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3.7 Replacing the LCD Control Board & LCD Touch Panel

1. Follow the previous step (refer to section 3.6) to remove the LCD panel module.
2. Remove the FPC harness from the LCD control board.

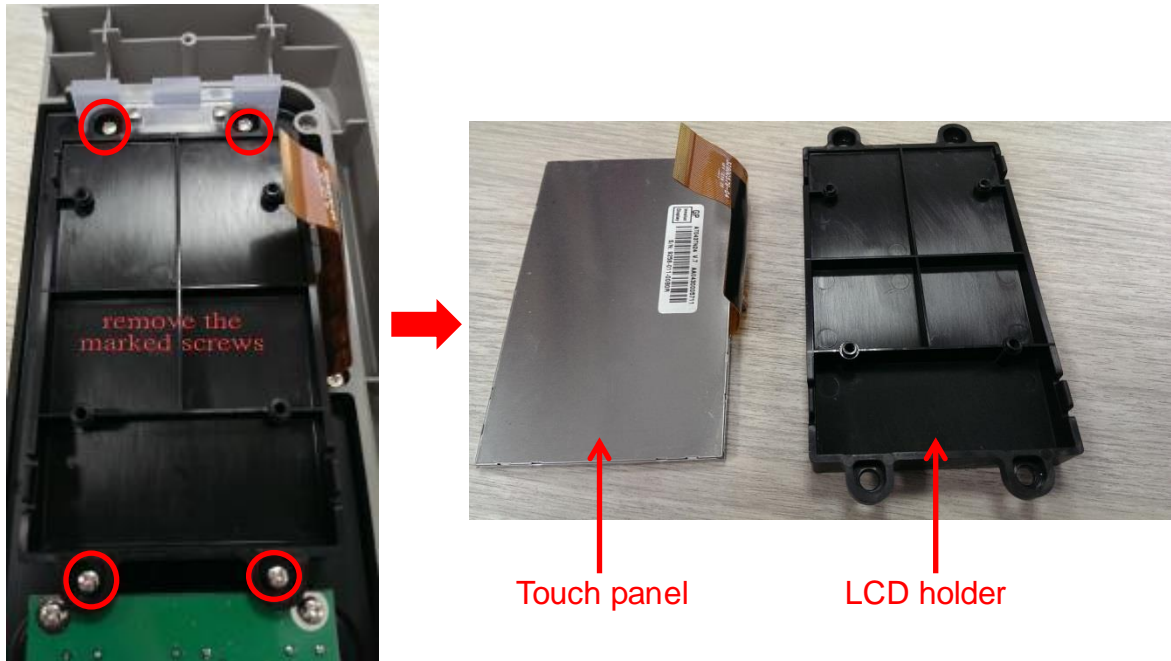


3. Remove the marked four fix screws from the LCD control board to take out LCD control board.



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4. Remove the four fix screws from the LCD holder, then you can take off the holder & touch panel.

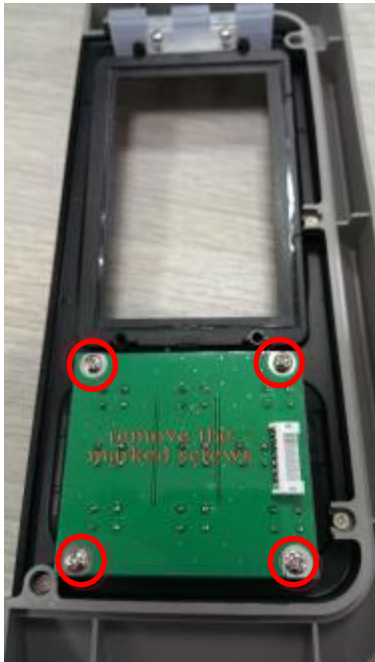


5. Reassemble the parts in the reverse procedures.

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3.8 Replacing the Front Panel Buttons Control Board

1. Remove the marked four fix screws from the buttons control board, then you can take off the button control board and buttons rubber pad.



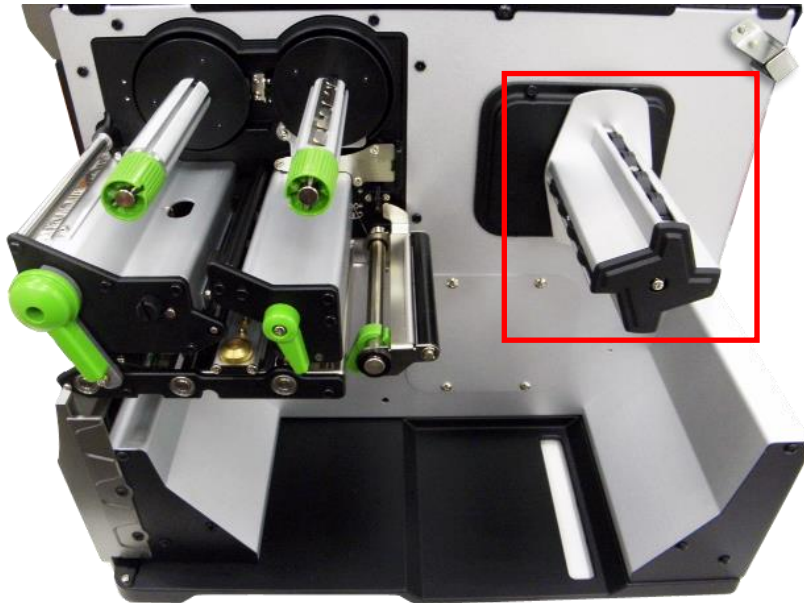
2. Reassemble the parts in the reverse procedures.

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3.9 Replacing the Label Supply Spindle

1. Remove the marked fix screw from the label supply spindle.
2. Draw out the label supply spindle for replacement.



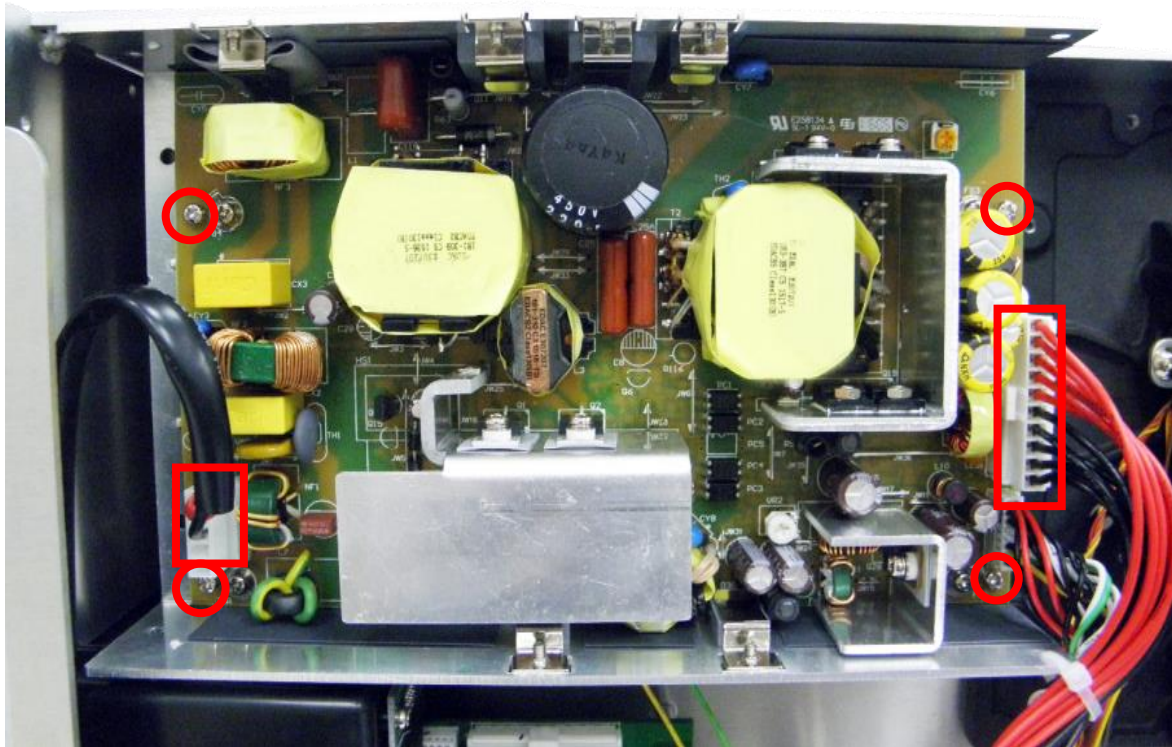
3. Reassemble the parts in the reverse procedures.

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3.10 Replacing the Power Supply Unit

1. Refer to section 3.2 to remove the electronics cover.
2. Remove 4 screws and 2 connectors.

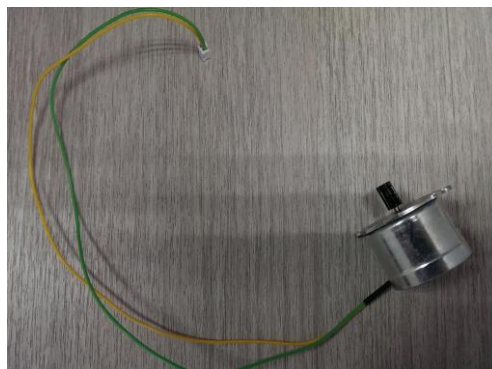


3. Remove/Replace the power supply unit.
4. Reassemble the parts in the reverse procedures.

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3.11 Replacing the Label Supply Spindle DC Motor

1. Please refer to the power supply change procedures (section 3.10) to remove the marked four fix screws & cable. Then you can see the DC motor.
2. Remove the marked fix two screws from the DC motor. Remove the DC motor cable connector from the main board.
3. Then you can remove the DC motor.



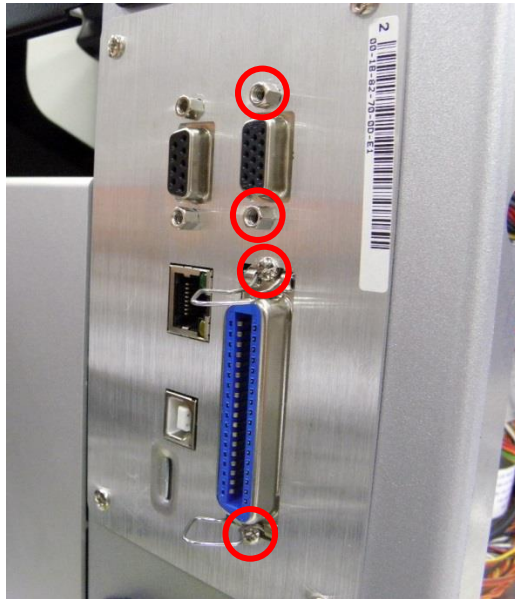
4. Reassemble the parts in the reverse procedures.

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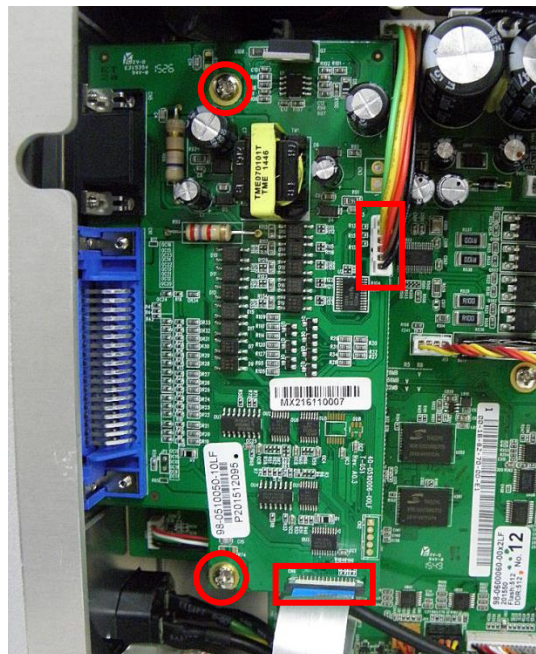
Bar Code Printer Service Manual

3.12 Replacing Multi-interface Board

1. Refer to section 3.1 to remove the electronics cover.
2. Remove 4 screws to loosen the parallel port and GPIO port.



3. Remove 2 screws and 2 connectors from the connector.



4. Remove/Replace the multi-interface board.
5. Reassemble the parts in the reverse procedures.

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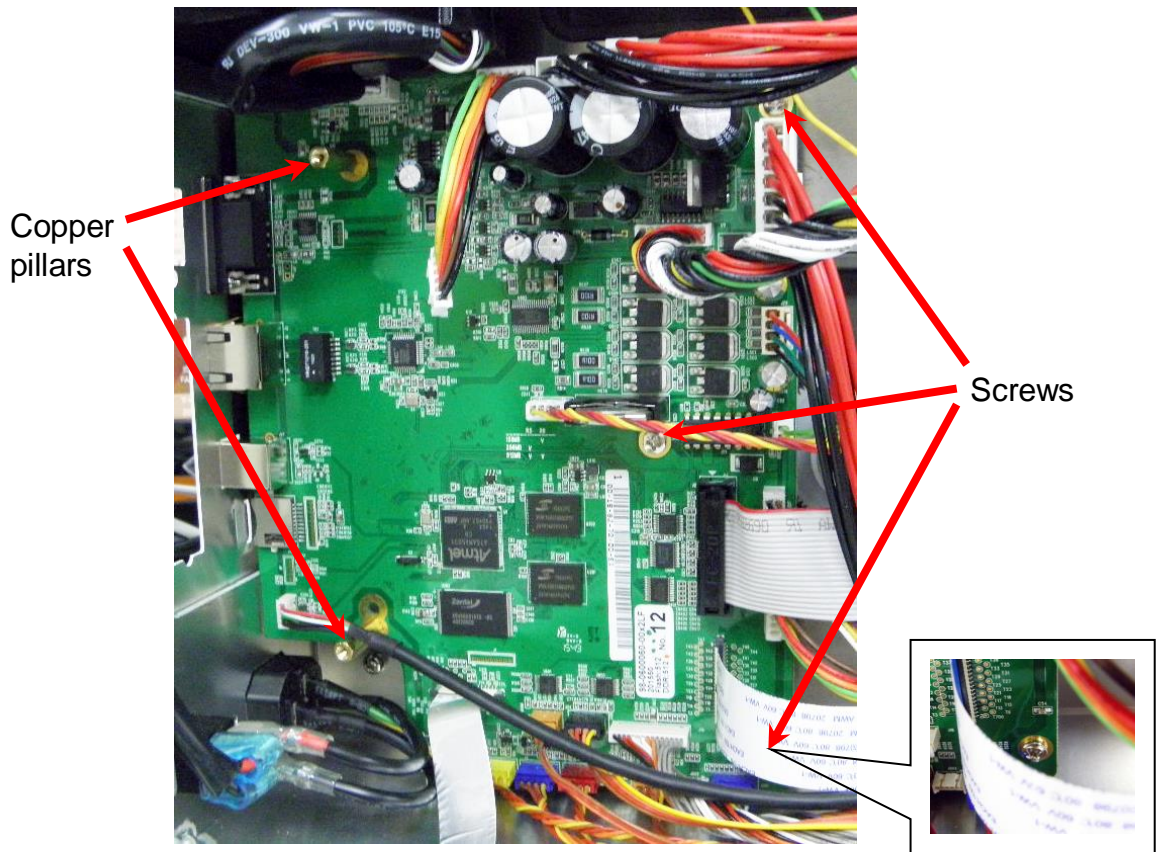
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3.13 Replacing the Main Board

1. Refer to section 3.1 to remove the electronics cover.
(Refer to section 3.12 to remove the multi-interface board.)
2. Remove 2 screws to loosen the serial port.



3. Remove 2 copper pillars, 3 screws, and all of the connectors from the main board.

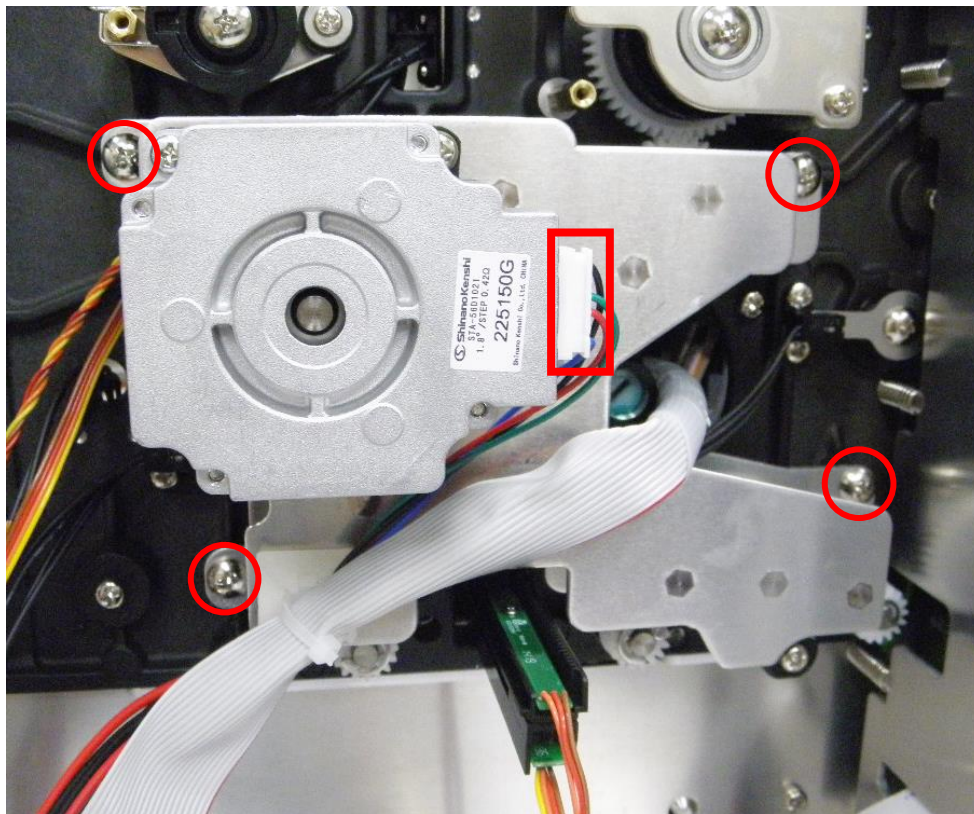


4. Remove/Replace the main board.
5. Reassemble the parts in the reverse procedures.

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3.14 Replacing the Stepping Motor Assembly

1. Refer to section 3.1 to remove the electronics cover.
2. Remove 4 screws and 1 connector on the stepping motor assembly.



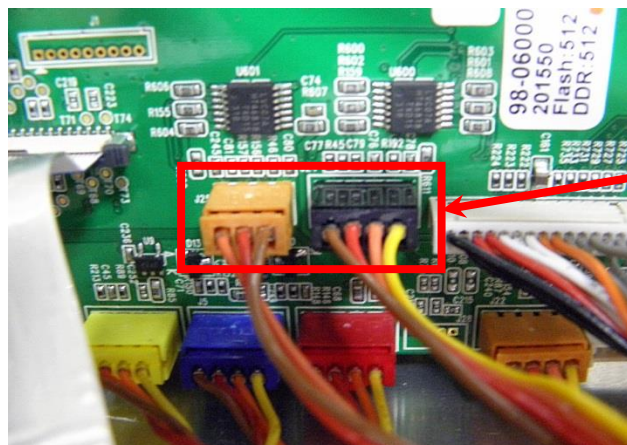
3. Remove/Replace the stepping motor assembly (including belt, gears, stepping motor)
4. Reassemble the parts in the reverse procedures.

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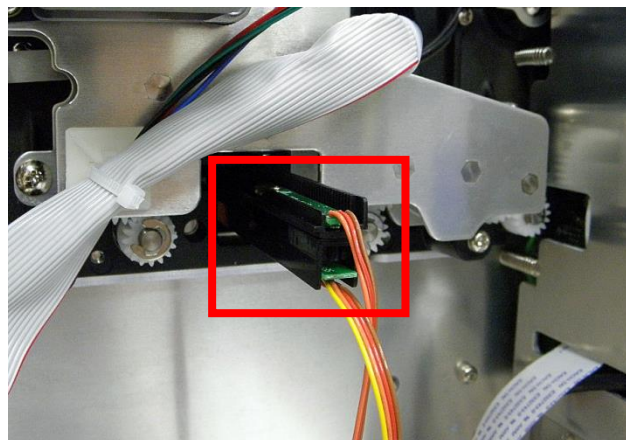
3.15 Replacing the Gap/Black Mark Sensor Module

1. Refer to section 3.1 to remove the electronics cover.
2. Disconnect the gap/black mark sensor connectors from the main board.



Gap/black mark sensor connector

3. Pull out the media sensor module.



4. Remove/Replace the gap/black mark sensor.



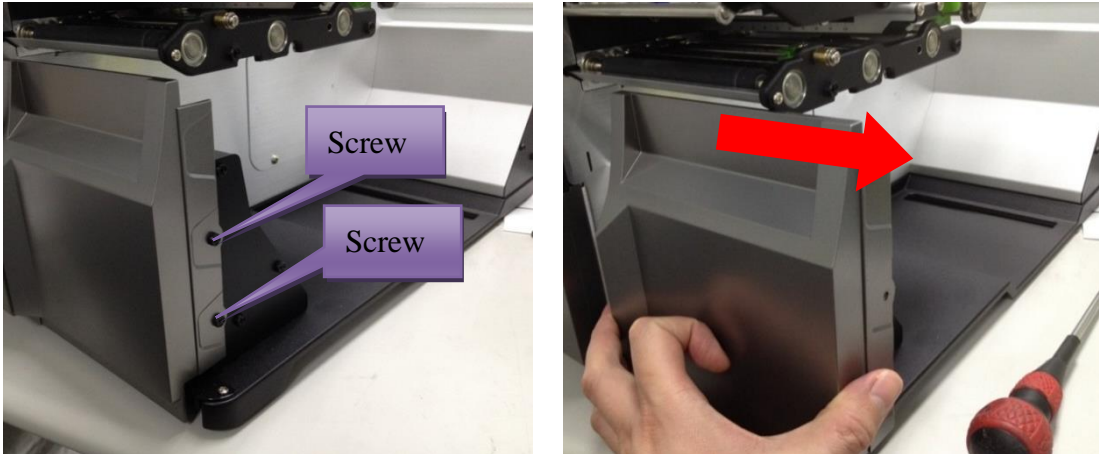
5. Reassemble the parts in the reverse procedures.

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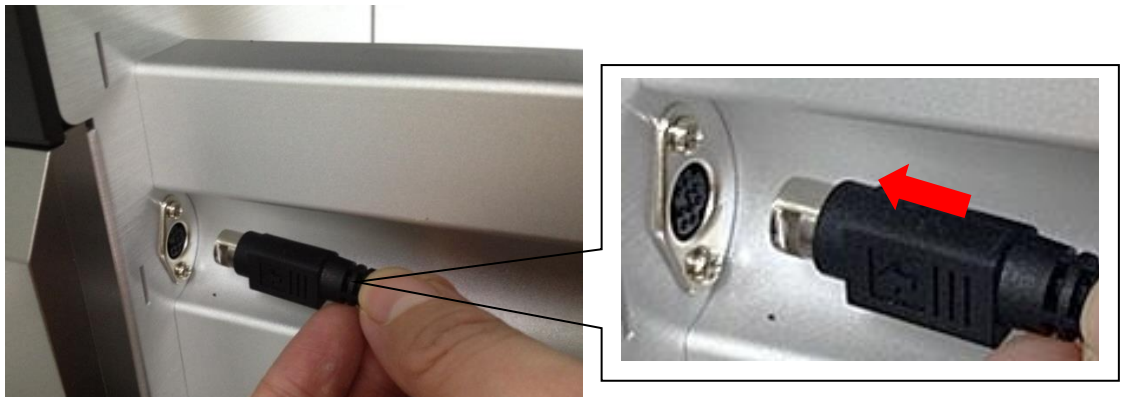
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3.16 Cutter Module Installation (Option)

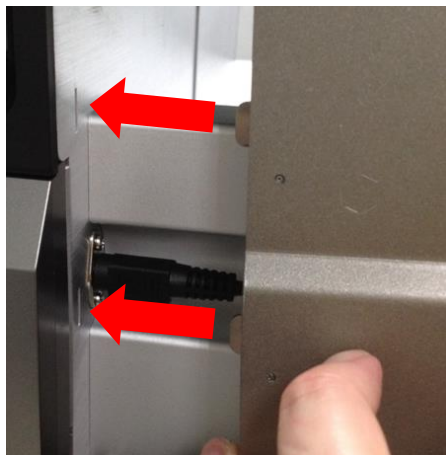
1. Loose 2 screws to take out the lower front panel in the right direction as red arrow indicated below.



2. Plug the cutter mini DIN cable connector into the cutter/peel-off connector. The triangle mark on the connector must be at the front side.



3. Put 2 locating protrusions into locating holes as red arrows indicated.



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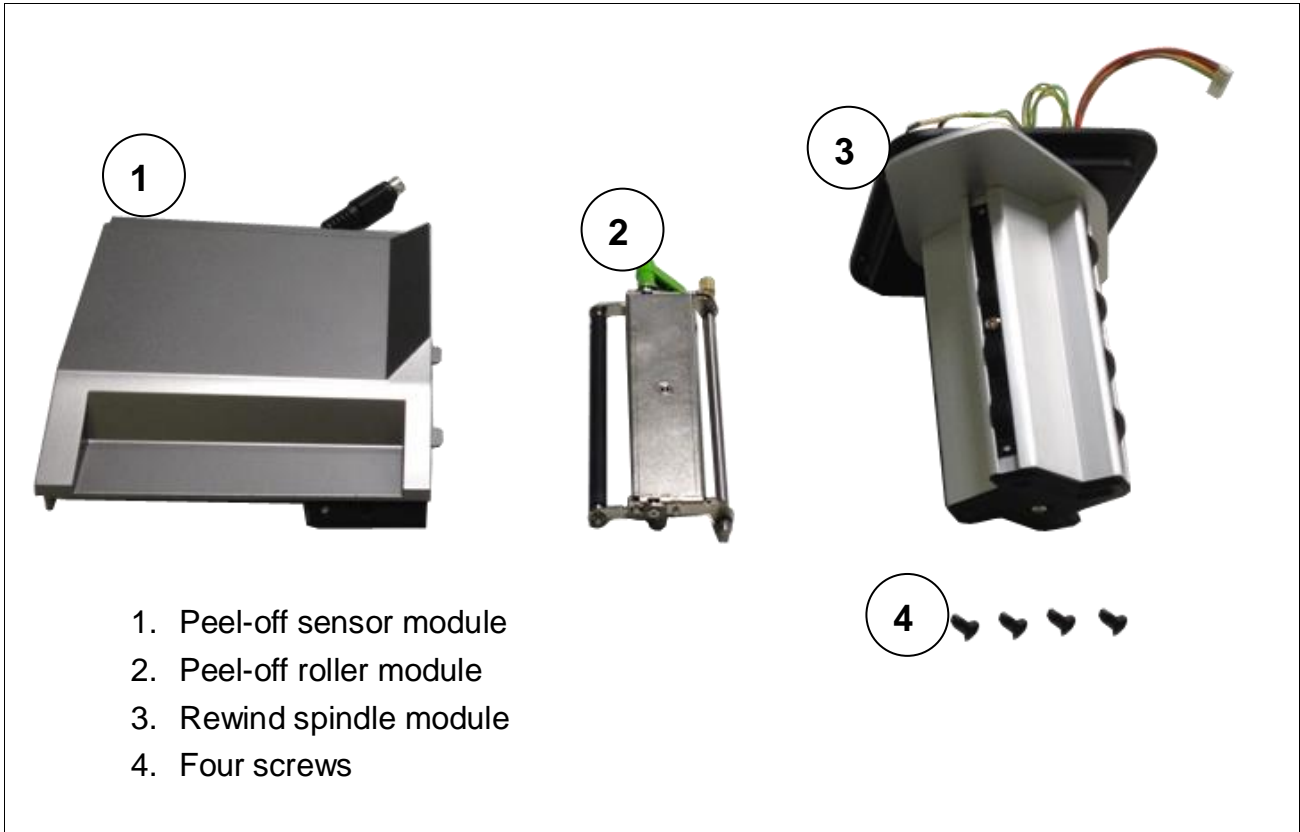
4. Fasten the 2 screws.



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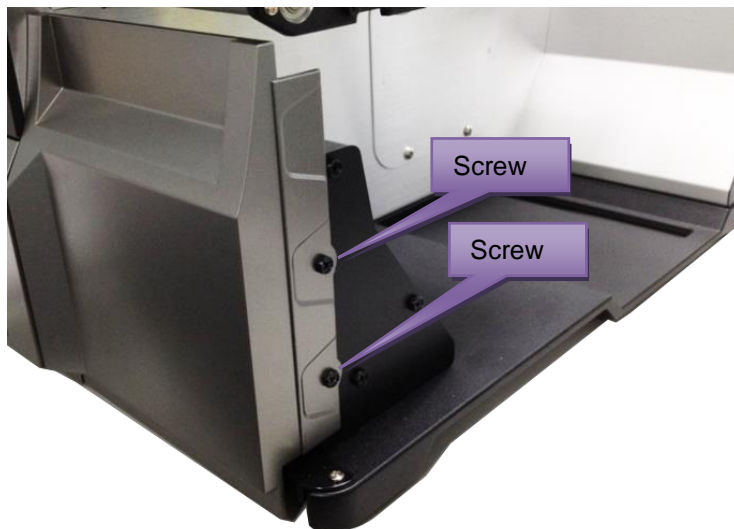
3.17 Peel-off Kit Installation (Option)

Peel-off Kit parts list:



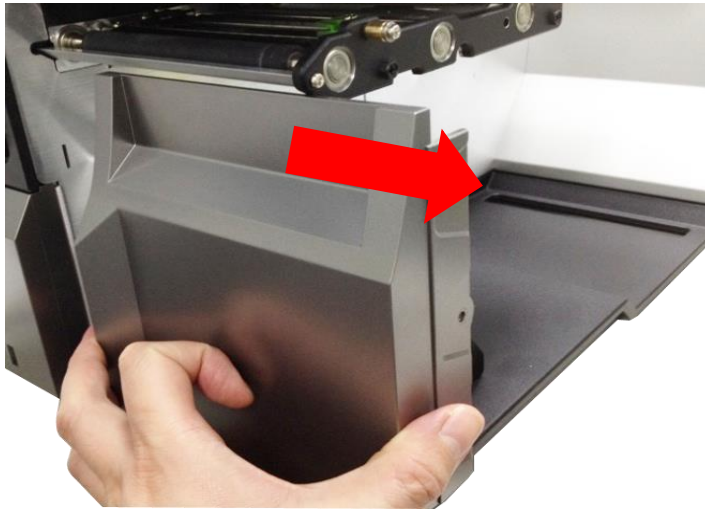
A. Peel-off Sensor Module Installation

1. Loosen 2 screws to take out the lower front panel.

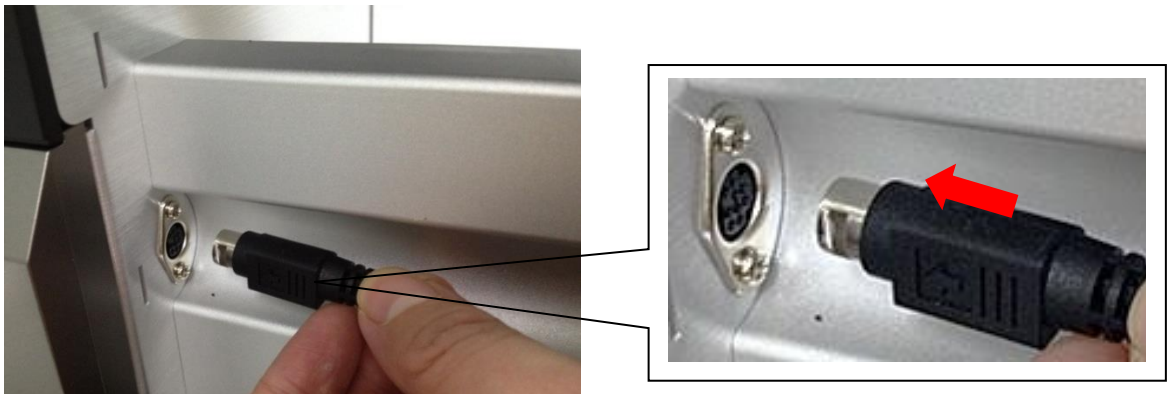


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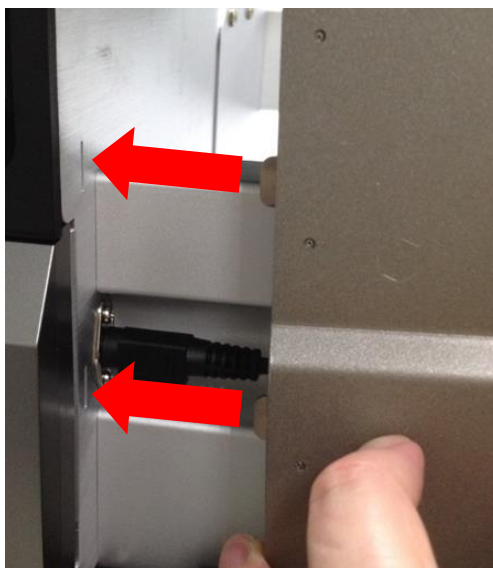
2. Take out the lower front panel in the right direction as red arrow indicated.



3. Plug the peel sensor mini DIN cable connector into the cutter/peel-off connector. The triangle mark on the connector must be at the front side.



4. Put 2 locating protrusions into locating holes as red arrows indicated.



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5. Fasten the 2 screws back into the fixing holes. Finished peel-off sensor module installation.



B. Peel-off Roller Module Installation

1. Turn the thumb screw on the peel-off roller module in the counterclockwise direction until taking out the screw.

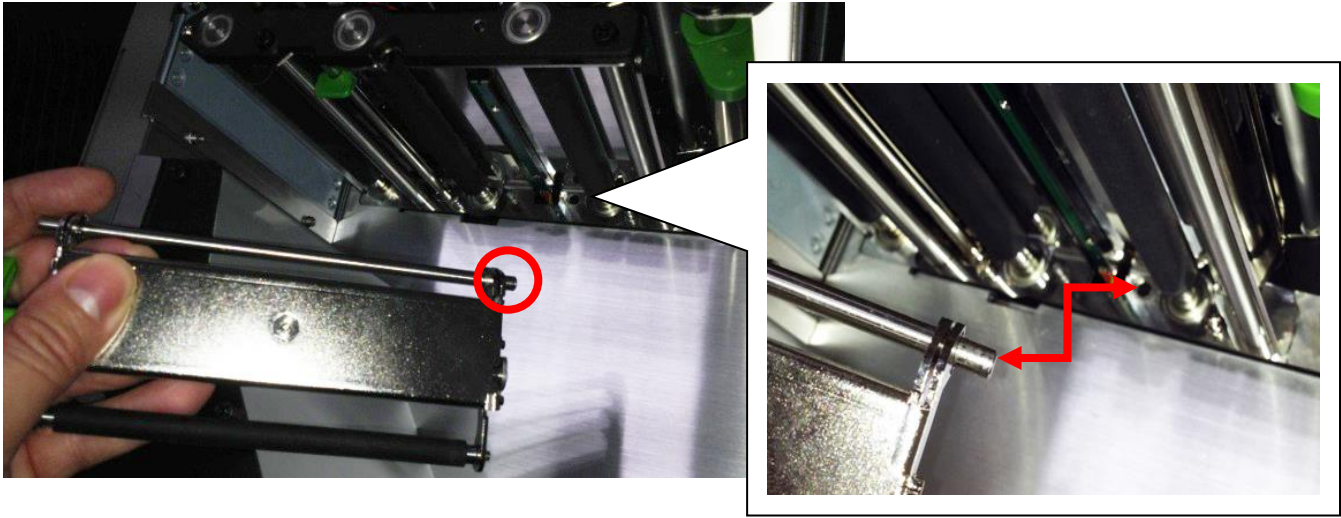


2. There is a locating hole between media sensor and rear paper-feed roller (most right one).

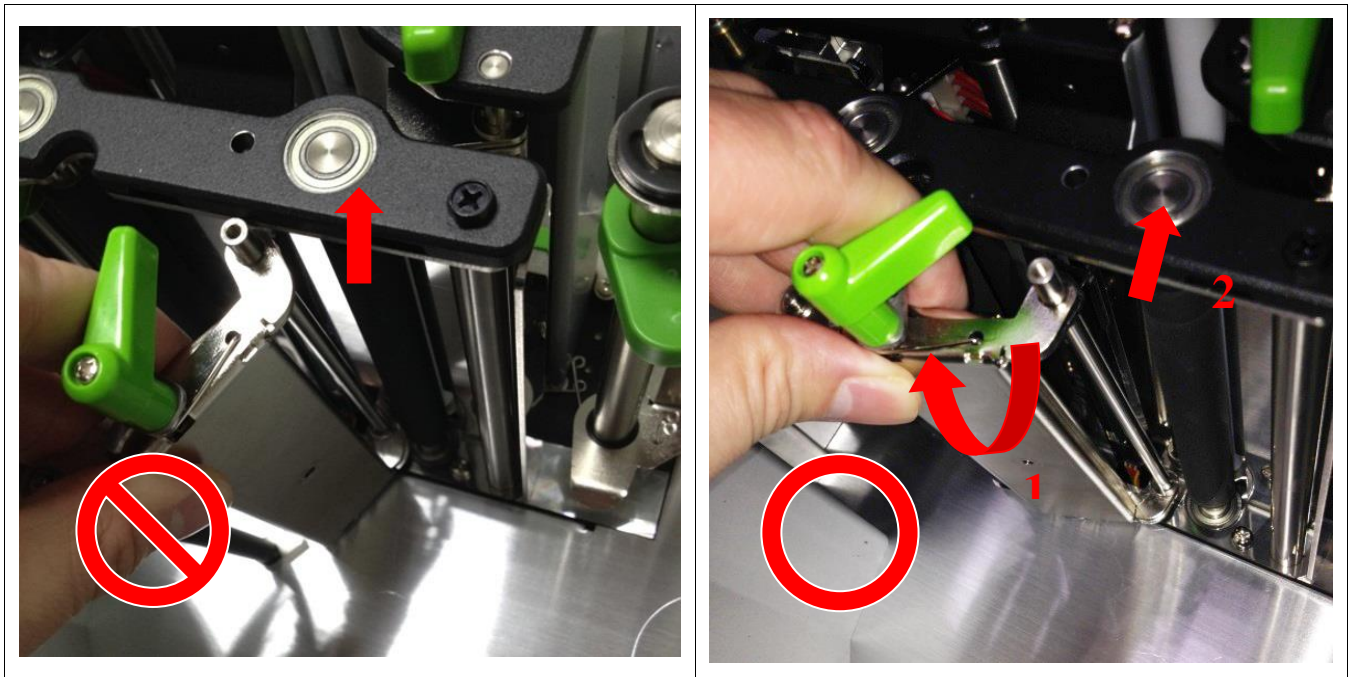


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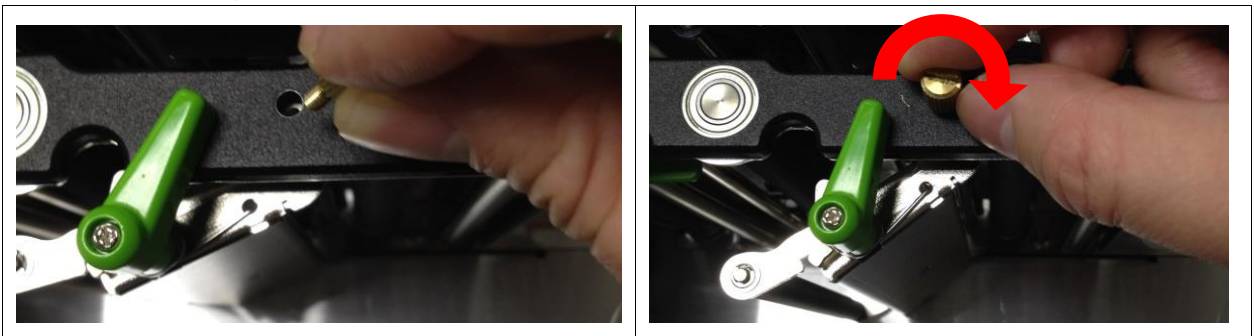
3. Put the shaft of the peel-off roller module into the locating hole.



4. After putting shaft into locating hole, at certain angle, the module would not be able to put inside. Please turn the module in the clockwise direct to put the module inside.

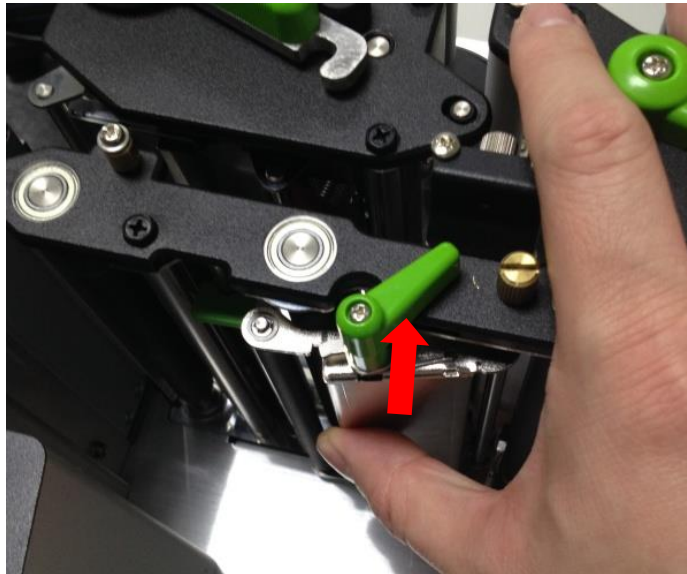


5. Put back the golden color screw, and turn it in the clockwise direction to fix the screw.



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6. Pushing the peel-off roller module upward.

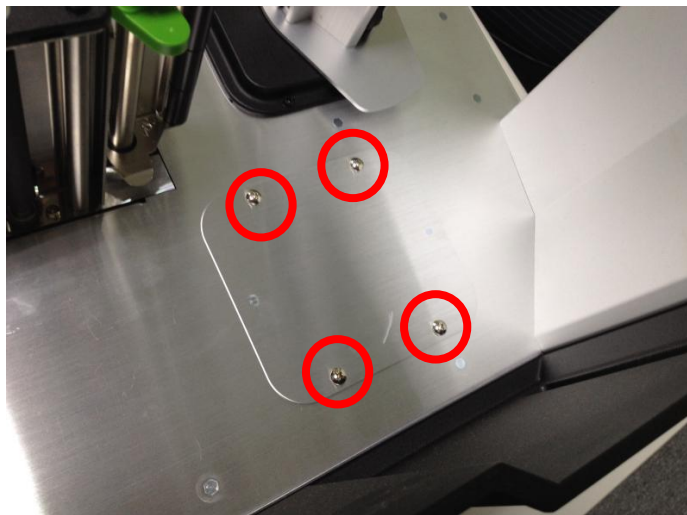


7. After hearing the click sound, the module is fixed to its position without dangling. Finished the installation of peel-off roller module.



C. Rewind Spindle Installation.

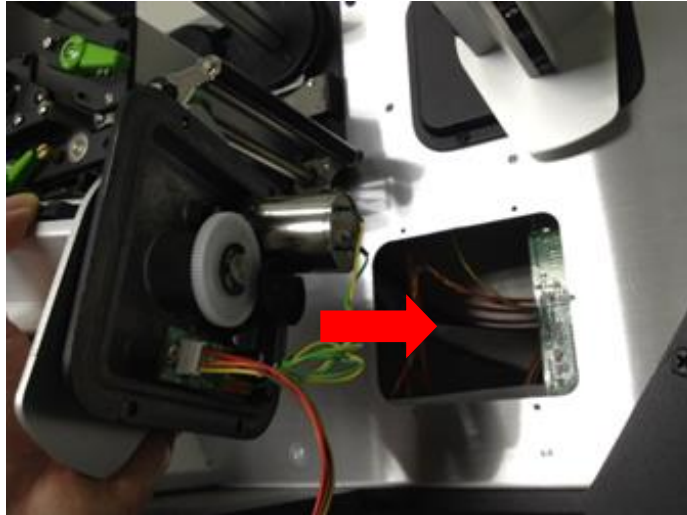
1. Remove 4 screws below the label supply spindle to take out the rewind spindle cover.



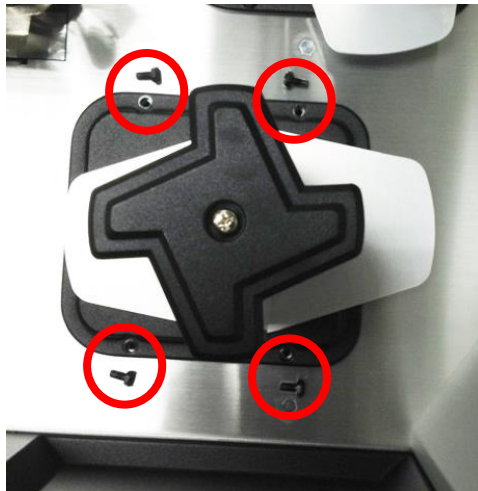
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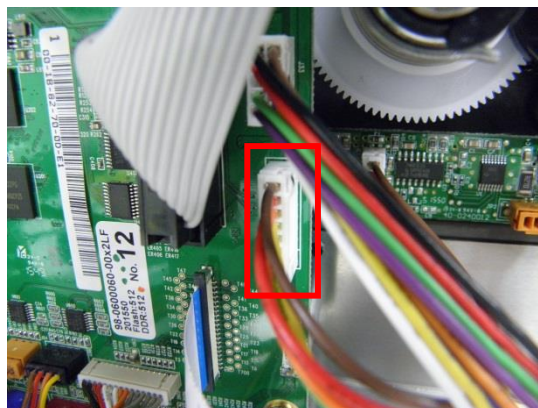
2. Put the whole rewind spindle module inside the hole after taking out the cover. Make sure the direction of the module is same with left side picture.(small PCB is on the bottom and the motor is on the top of module)



3. Using screws which come with module to fix the whole rewind spindle module.



4. Refer to section 3.2 to remove the electronics cover. Connect the 8-pins connector into main board socket. Reassemble the electronics cover.



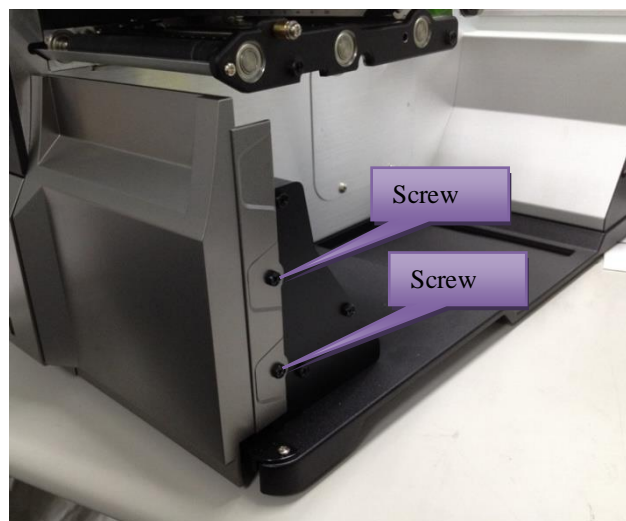
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3.18 Internal Rewinding Kit Installation (Option)

Internal rewinding kit parts list:



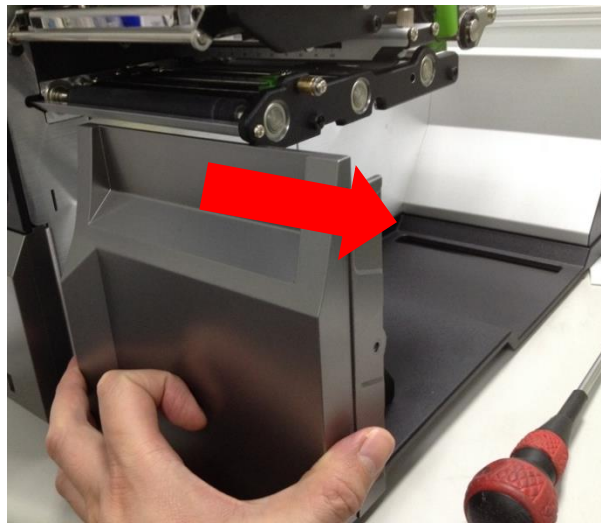
1. Loose 2 screws to take out the lower front panel.



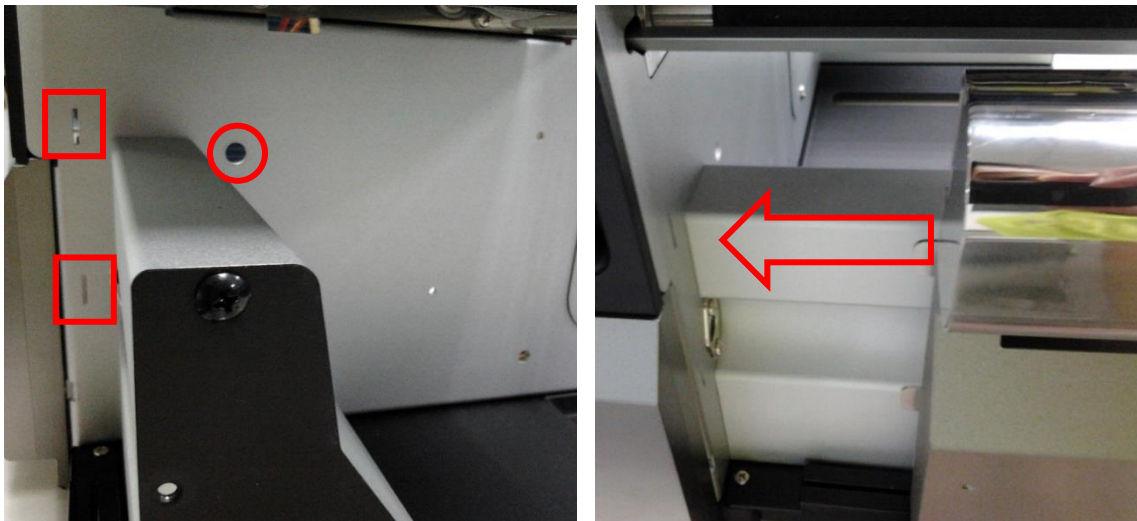
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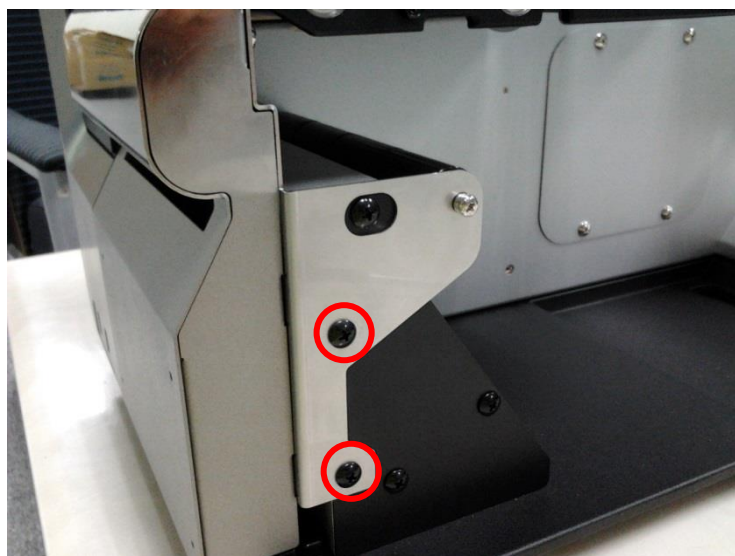
2. Take out the lower front panel in the right direction as red arrow indicated.



3. Put 3 locating protrusions into locating holes.

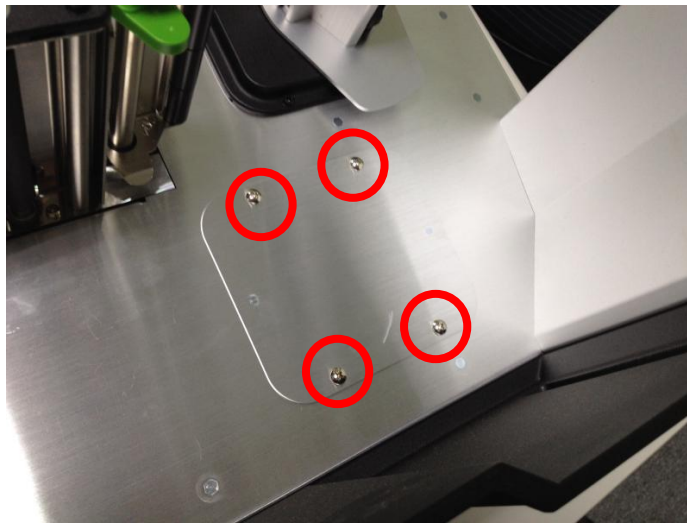


4. Fasten the 2 screws back into the fixing holes.

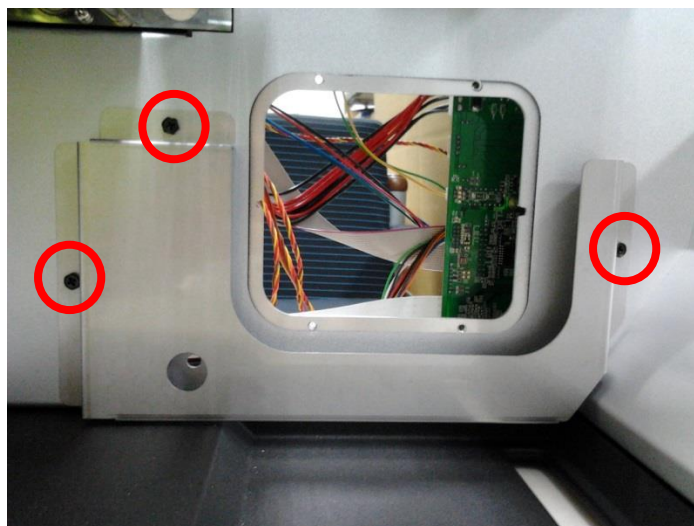


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5. Remove 4 screws below the label supply spindle to take out the rewind spindle cover.

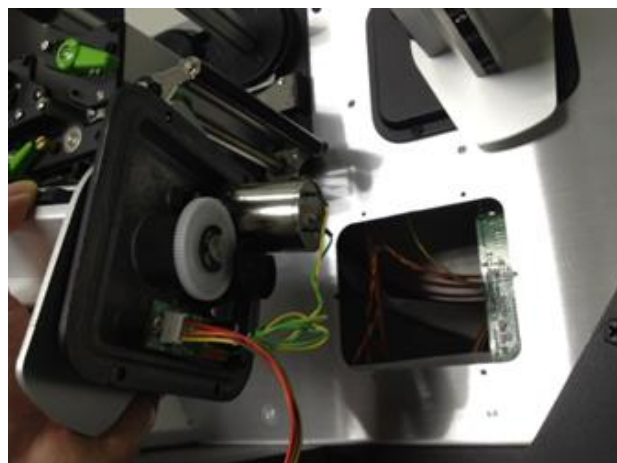


6. Fasten the 3 screws to fix the cover as below.



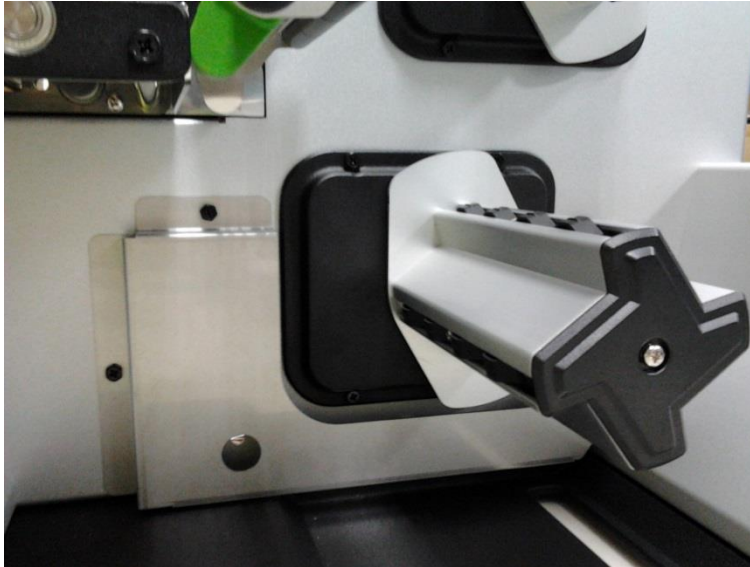
7. Put the whole rewind spindle module inside the hole.

Make sure the direction of the module is same as picture. (Small PCB is on the bottom and the motor is on the top of module)

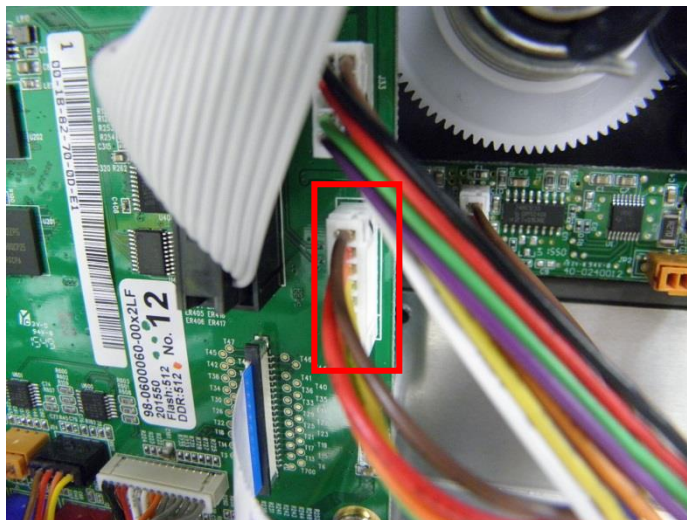


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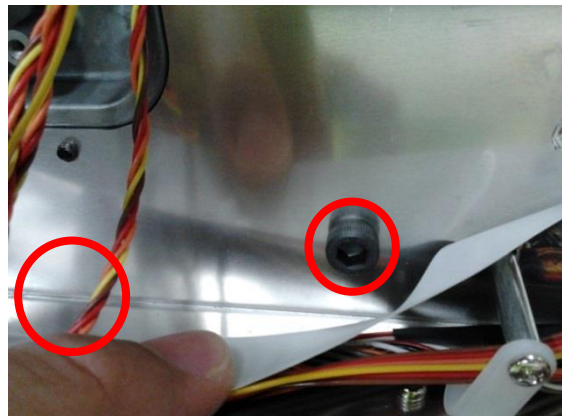
8. Using 4 screws which come with module to fix the whole rewind spindle module.



9. Refer to section 3.2 to remove the electronics cover. Connect the 8-pins connector into main board socket.



10. Install the rewind label guide to the hole as picture showing. Fix it by one screw. Reassemble the electronics cover.



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3.19 Replacing Slot-in Wireless Transfer Board

1. Refer to section 3.2 to remove the electronics cover.
2. Refer to section 3.4 to remove the multi-interface board.
3. Take off the housing cover by removing 2 screws on rear of printer.



4. Remove 2 screws on slot-in housing.



5. Disconnect the transfer board connector on the main board to replacing it. Reassemble the parts in the reverse procedures.



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4. TROUBLESHOOTING

4.1 Common Problems

The following guide lists the most common problems that might be encountered when operating this bar code printer. If the printer still does not function after all suggested solutions have been invoked, please contact the Customer Service Department of your purchased reseller or distributor for assistance.

Problem	Possible Cause	Recovery Procedure
Power indicator does not illuminate	<ul style="list-style-type: none"> * The power cord is not properly connected. 	<ul style="list-style-type: none"> * Plug the power cord in printer and outlet. * Switch the printer on.
Carriage Open	<ul style="list-style-type: none"> * The printer print head release lever or Rear paper feed roller release lever is not engaged. 	<ul style="list-style-type: none"> * Please engage the release levers.
No Ribbon	<ul style="list-style-type: none"> * Running out of ribbon. * The ribbon is installed incorrectly. 	<ul style="list-style-type: none"> * Supply a new ribbon roll. * Please refer to the steps in user's manual to reinstall the ribbon.
No Paper	<ul style="list-style-type: none"> * Running out of label. * The label is installed incorrectly. * Gap/black mark sensor is not calibrated. * Gap/black mark sensor is not on the media 	<ul style="list-style-type: none"> * Supply a new label roll. * Please refer to the steps in user's manual to reinstall the label roll. * Calibrate the gap/black mark sensor. * Align the media sensor on top of the media or black mark or notch.
Paper Jam	<ul style="list-style-type: none"> * Gap/black mark sensor is not set correctly for the media * Make sure media width and height are set exactly same as actual media width and height. * Labels may be stuck inside the printer mechanism or media sensor 	<ul style="list-style-type: none"> * Select the correct sensor for the media * Calibrate the gap/black mark sensor. * Set media width and height correctly. * Remove the stuck label inside the print mechanism or at the media sensor
Take Label	<ul style="list-style-type: none"> * Peel function is enabled. 	<ul style="list-style-type: none"> * If the peeler module is installed and function is enabled, please remove the peeled label. * If there is no peeler module installed, please switch off the printer and install it. * Check if the peeler module cable connector is plugged correctly.

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<p>UP: Fwd. DOWN: Rev. MENU: Exit</p>	<ul style="list-style-type: none"> * Cutter jammed. * There is no cutter installed on the printer. * Cutter PCB is damaged. 	<ul style="list-style-type: none"> * If the cutter module is installed, please press UP or DOWN key to rotate the cutter blade up (forward) or down (backward) to make the blade back to the right position. * Remove the label. * Make sure the thickness of label is less than 200 g/m2 (for regular cutter) or 300 g/m2 (for heavy duty cutter). * Replace a cutter PCB.
<p>Not Printing</p>	<ul style="list-style-type: none"> * Cable is not well connected to serial or USB interface or parallel port. * The serial port cable pin configuration is not pin to pin connected. 	<ul style="list-style-type: none"> * Re-connect cable to interface. * If using serial cable, <ul style="list-style-type: none"> - Please replace the cable with pin to pin connected. - Check the baud rate setting. The default baud rate setting of printer is 9600,n,8,1. * If using the Ethernet cable, <ul style="list-style-type: none"> - Check if the Ethernet RJ-45 connector green LED is lit on.. - Check if the Ethernet RJ-45 connector amber LED is blinking. - Check if the printer gets the IP address when using DHCP mode. - Check if the IP address is correct when using the static IP address. - Wait a few seconds let the printer get the communication with the server then check the IP address setting again. * Chang a new cable. * Ribbon and media are not compatible. * Verify the ribbon-inked side. * Reload the ribbon again. * Clean the printhead. * The print density setting is incorrect. * Printhead's harness connector is not well connected with printhead. Turn off the printer and plug the connector again. * Check if the stepping motor is plugging in the right connector. * Check your program if there is a command PRINT at the end of the file and there must have CRLF at the end of each command line.
<p>Memory full (FLASH / DRAM)</p>	<ul style="list-style-type: none"> * The space of FLASH/DRAM is full. 	<ul style="list-style-type: none"> * Delete unused files in the FLASH/DRAM. * The max. numbers of file of DRAM is 1024 files. * The max. user addressable memory space of DRAM is 8192 KB * The max. user addressable memory space of FLASH is 80 MB.
<p>SD card is unable to use</p>	<ul style="list-style-type: none"> * SD card is damaged. * SD card doesn't insert correctly. * Use the non-approved SD card manufacturer. 	<ul style="list-style-type: none"> * Use the supported capacity SD card. * Insert the SD card again. * The supported SD card spec are listed in section 1.1.

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<p>Poor Print Quality</p>	<ul style="list-style-type: none"> * Ribbon and media is loaded incorrectly * Dust or adhesive accumulation on the print head. * Print density is not set properly. * Print head element is damaged * Ribbon and media are incompatible. * The print head pressure is not set properly 	<ul style="list-style-type: none"> * Reload the supply. * Clean the print head. * Clean the platen roller. * Adjust the print density and print speed. * Run printer self-test and check the print head test pattern if there is dot missing in the pattern. * Change proper ribbon or proper label media. * Please refer to section 4.5 for avoiding the ribbon wrinkle * If the label thickness is more than 0.22 mm, the print quality might not be good enough, please adjust the heater line adjustment screw counter clockwise to get the best print quality. * The release lever does not latch the print head properly.
<p>LCD panel is dark and keys are not working.</p>	<ul style="list-style-type: none"> * The cable between main PCB and LCD panel is loose. 	<ul style="list-style-type: none"> * Check if the cable between main PCB and LCD is secured or not.
<p>LCD panel is dark but the LEDs are light.</p>	<ul style="list-style-type: none"> * The printer initialization is unsuccessful. 	<ul style="list-style-type: none"> * Turn OFF and ON the printer again. * Initialize the printer.
<p>LCD panel is dark and LEDs are lit on, but the label is feeding forward.</p>	<ul style="list-style-type: none"> * The LCD panel harness connector is loose. 	<ul style="list-style-type: none"> * The LCD panel harness connector is plugged upside down.
<p>Ribbon encoder sensor doesn't work.</p>	<ul style="list-style-type: none"> * The ribbon encoder sensor connector is loose. 	<ul style="list-style-type: none"> * Fasten the connector.
<p>Ribbon end sensor doesn't work.</p>	<ul style="list-style-type: none"> * The connector is loose. * The ribbon sensor hole is covered with dust. 	<ul style="list-style-type: none"> * Check the connector. * Clear the dust in the sensor hole by the blower.
<p>Peel sensor is not working.</p>	<ul style="list-style-type: none"> * Peel sensor is not located on the correct position. * The connector is loose. 	<ul style="list-style-type: none"> * Make sure that the media goes through the Peel sensor. * Plug the connect cable correctly.
<p>Cutter is not working.</p>	<ul style="list-style-type: none"> * The connector is loose. 	<ul style="list-style-type: none"> * Plug in the connect cable correctly.
<p>Label feeding is not stable (skew) when printing.</p>	<ul style="list-style-type: none"> * The media guide does not touch the edge of the media. 	<ul style="list-style-type: none"> * If the label is moving to the right side, please move the label guide to left. * If the label is moving to the left side, please move the label guide to right.
<p>Skip labels when printing.</p>	<ul style="list-style-type: none"> * Label size is not specified properly. * Sensor sensitivity is not set properly. * The media sensor is covered with dust. 	<ul style="list-style-type: none"> * Check if label size is setup correctly. * Calibrate the sensor by Auto Gap or Manual Gap options. * Clear the GAP/Black mark sensor by blower.
<p>Missing printing on the left or right side of label.</p>	<ul style="list-style-type: none"> * Wrong label size setup. 	<ul style="list-style-type: none"> * Set the correct label size.

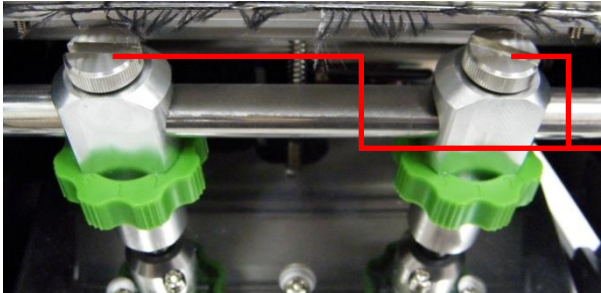
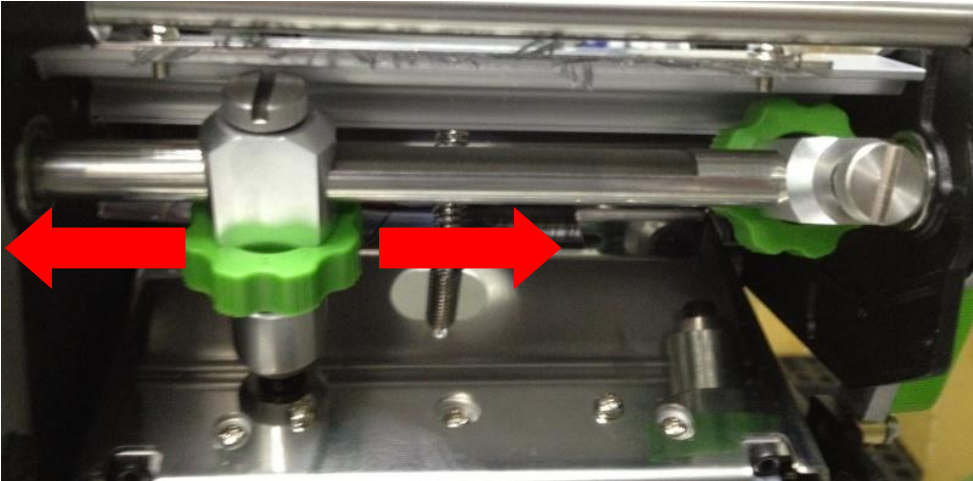
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RTC time is incorrect when reboot the printer.	* The battery has run down.	* Check if there is a battery on the main board.
Multi interface board doesn't work.	* The installation is incorrect.	* Check if the board is plugged in the right connector.
Power and Error LEDs are blinking fast.	* Power switch OFF and ON too fast.	* Turn off the printer and wait all LEDs are dark, and turn on the printer again.
Wrinkle Problem	* Printhead pressure is incorrect. * Ribbon installation is incorrect. * Media installation is incorrect. * Print density is incorrect. * Media feeding is incorrect.	* Please refer to the 5.2 chapter. * Please set the suitable density to have good print quality. * Make sure the label guide touch the edge of the media guide.
Gray line on the blank label	* The printhead is dirty. * The platen roller is dirty.	* Clean the printhead. * Clean the platen roller.
Irregular printing	* The printer is in Hex Dump mode. * The RS-232 setting is incorrect.	* Turn off and on the printer to skip the dump mode. * Re-set the Rs-232 setting.

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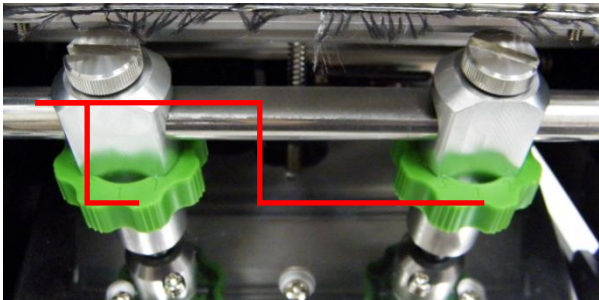



4.2 Mechanism Fine Adjustment to Avoid Ribbon Wrinkles

This printer has been fully tested before delivery. There should be no ribbon wrinkle presented on the media for general-purpose printing application. Ribbon wrinkle is related to the media width, thickness, print head pressure balance, ribbon film characteristics, print darkness setting...etc. In case the ribbon wrinkle happens, please follow the instructions below to adjust the printer parts.

Pressure position	<p>The pressure position can be adjusted by using a coin. Please use a coin to release the fixing screws as below show.</p>
	 <p>Fixing screws</p>
	<p>When using label its width is smaller than 2 inch. Please release the right side of pressure knob. Only use left side pressure and you may adjust the left side position, too. Once you find a position that has balance pressure on the label, the wrinkle will disappear.</p>
	

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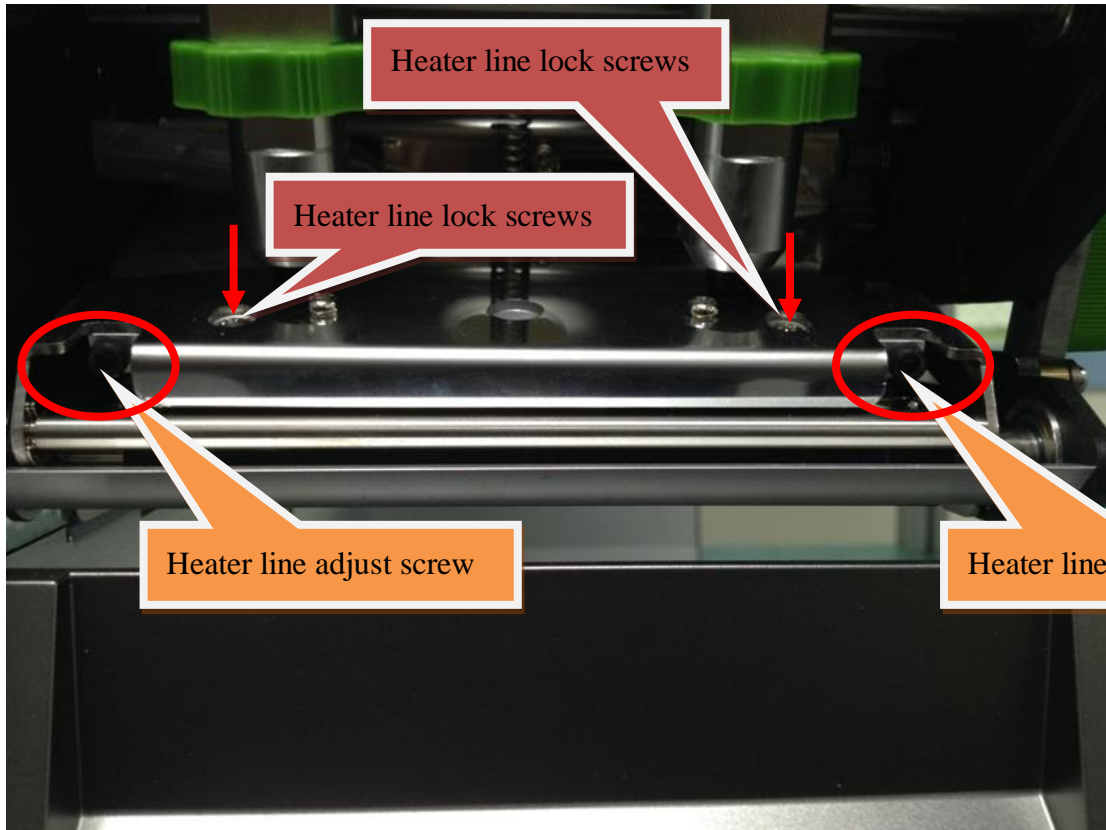
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<p>Pressure Volume</p>	<p>The print head pressure adjustment knob has 5 levels of settings. “1” is the lowest pressure and “5” is the maximum pressure. Clockwise direction adjustment is to increase the print head pressure. Please only turn the pressure knobs in clockwise direction.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">Print head pressure adjustment knobs</div>  </div>	
<p>Symptom</p>	<p>1. Wrinkle happens from label lower left to upper right direction (“ ´ ”)</p>	<p>2. Wrinkle happens from label lower right to upper left direction (“ ` ”)</p>
<p>Wrinkle Example</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">  </div> <div style="text-align: center;">  <p>Feed direction</p> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;">  </div> </div> <div style="display: flex;"> <div style="flex: 1; padding-right: 10px;"> <p>If the wrinkle on the label starts from the lower left side to upper right side, please do following adjustment.</p> <ol style="list-style-type: none"> 1. Decrease the right side print head pressure adjustment knob setting 1 level per each adjustment then print the label again to check if wrinkle is gone. 2. If the right side print head adjustment knob setting has been set to index 1 (the lowest pressure index), please increase the left side print head pressure. </div> <div style="flex: 1;"> <p>If the wrinkle on the label starts from the lower right side to upper left side, please do following adjustment.</p> <ol style="list-style-type: none"> 1. Decrease the left side print head pressure adjustment knob setting 1 level per each adjustment then print the label again to check if wrinkle is gone. 2. If the left side print head adjustment knob level has been set to index 1 (the lowest index), please increase the right side print head pressure. </div> </div>	

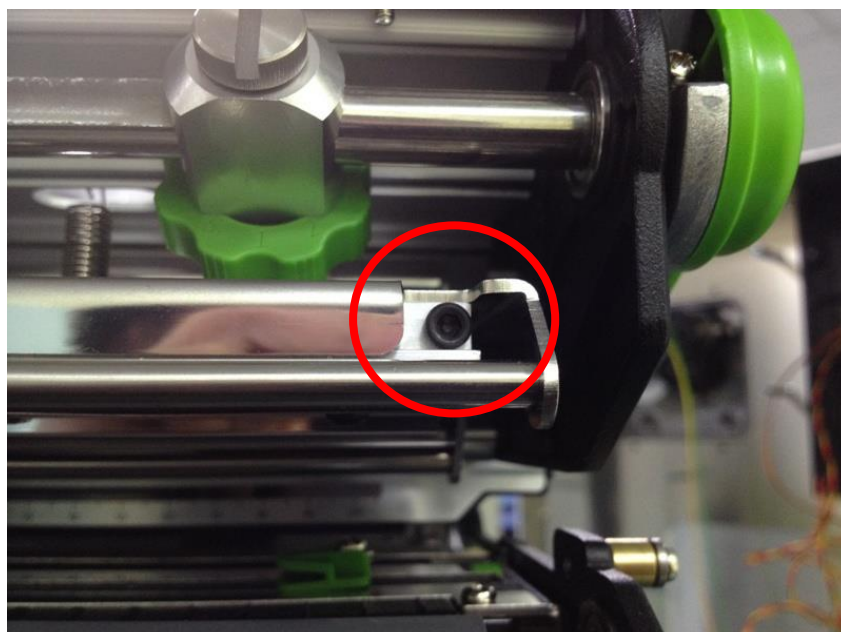
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4.3 Adjusting Heater Line

1. Release 2 lock screws before you start to adjusting heater line screws.



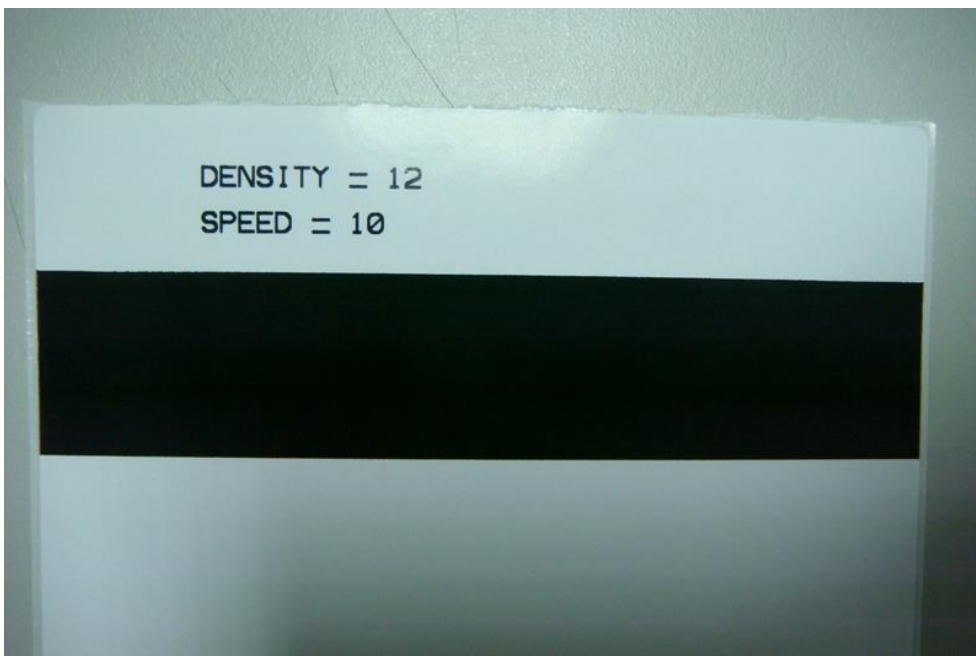
2. Adjust heater line by right-side and left-side heater-line adjusting screws.



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3. In our standard testing procedure, we use Fasson semi-gloss paper and print a black bar as below picture.



4. Please do not use too high density for adjusting heater line. Because it would not be easy seeing the uneven printing if using too high density to print the black bar.

For 200dpi printer, below is example command line for adjusting heater line.

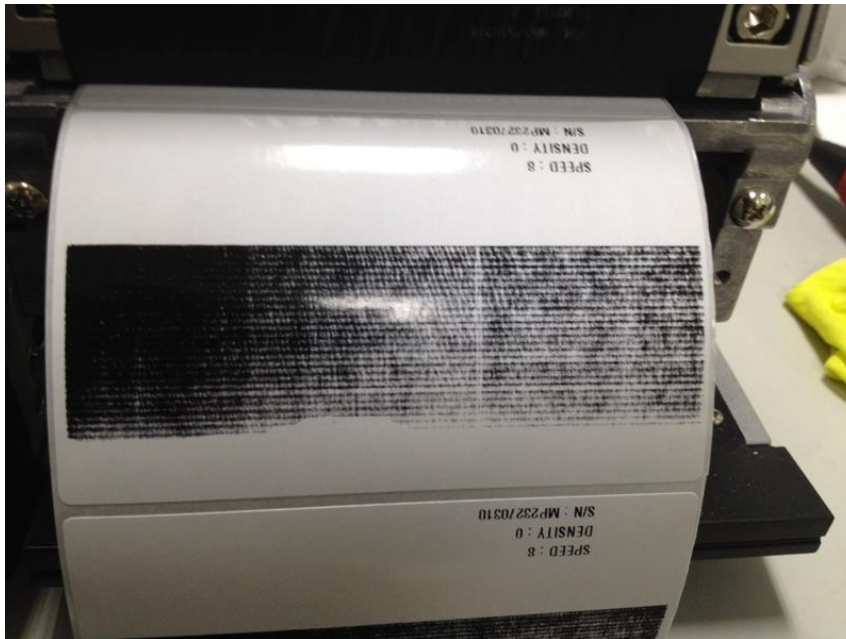
```
SIZE 102.5 mm, 63.5 mm
GAP 0.08,0
SPEED 8
DENSITY 0
REFERENCE 0,48
DIRECTION 0,0
SET TEAR ON
CLS
BAR 8,18,99*8,30*8
TEXT 142, 360, "ROMAN.TTF", 0, 8, 8, "SPEED : " +
GETSETTING$ ("CONFIG", "TSPL", "SPEED")
TEXT 142, 390, "ROMAN.TTF", 0, 8, 8, "DENSITY : " +
GETSETTING$ ("CONFIG", "TSPL", "DENSITY")
TEXT 142,420, "ROMAN.TTF",0,1,8,"S/N : " +
```


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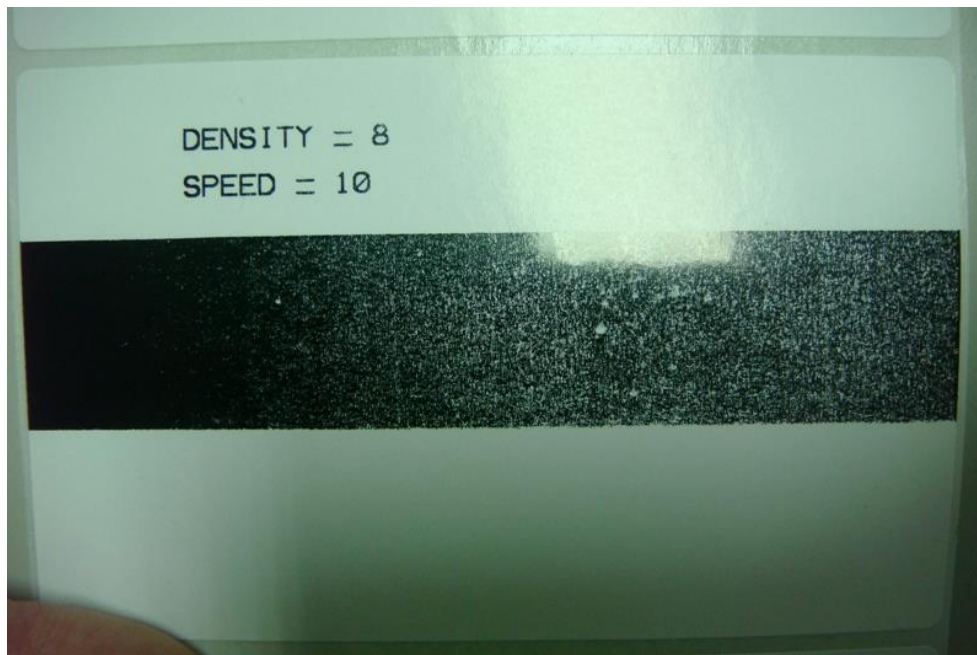
```
GETSETTING$ ("SYSTEM", "INFORMATION", "SERIAL")
```

```
PRINT 1
```

5. The lighter black bar may like left picture.



6. But sometime you can see one side has lighter density as below picture.

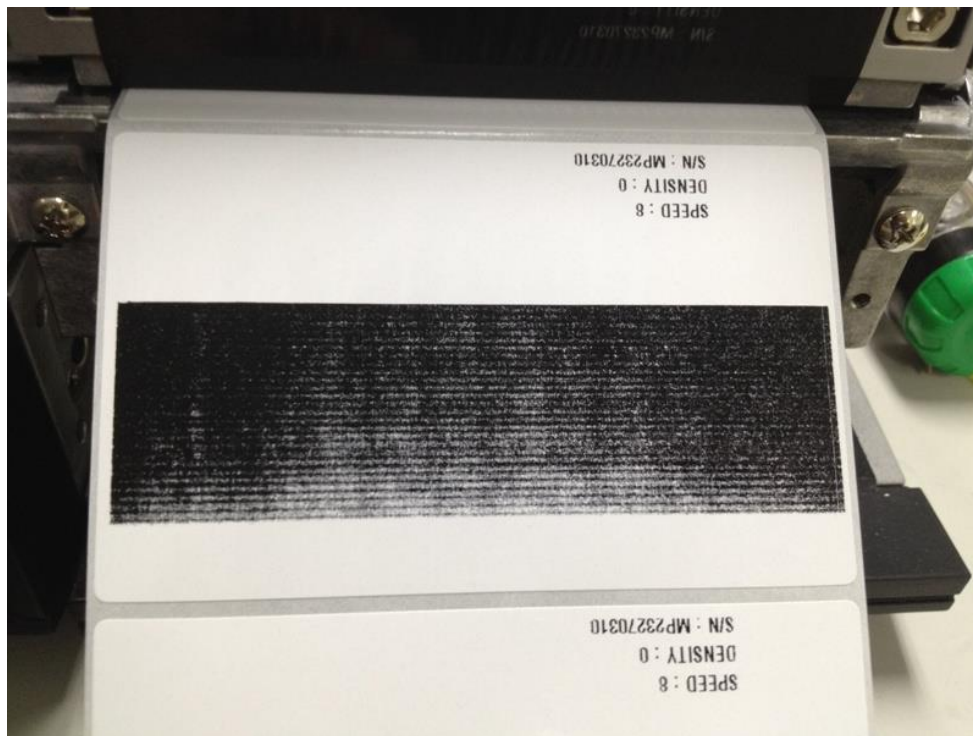


7. For this situation, please adjust right side heater line adjustment knob by clockwise direction until you see good density full average black.

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Sometimes when right side is ok, left size may become a little white. In this time you may need to adjust left side knob.

8. Until both side is full-average black , like the first one picture.
Or like left side picture.



9. If you keep turning the heater over the best position, it may look like below picture again:
Right side is lighter again.



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10. If this happens, please turn the heater line button in opposite direction. In the previous case, you may turn clockwise direction. Until you see the even picture I show you.

11. Then after adjusting it, lock the 2 locking screws to fix the heater line position.

PS:

- **For different thickness label, you may need to print out such pattern to see if this heater line is fit with this heat line position or not.**
- **If you find that even with the lowest speed and highest density, the density is still not enough, you can try to do this test to adjust heat line.**

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5. MAINTENANCE

This session presents the clean tools and methods to maintain your printer.

Please use one of following material to clean the printer.

- Cotton swab (Head cleaner pen)
- Lint-free cloth
- Vacuum / Blower brush
- 100% ethanol

2. The cleaning process is described as following

Printer Part	Method	Interval
<p>Print Head</p>	<ol style="list-style-type: none"> 1. Always turn off the printer before cleaning the print head. 2. Allow the print head to cool for a minimum of one minute. 3. Use a cotton swab (Head cleaner pen) and 100% ethanol to clean the print head surface. 	<p>Clean the print head when changing a new ribbon roll</p>
<p>The diagram illustrates the cleaning process of the print head. It shows a perspective view of the print head assembly with a 'Head Cleaner Pen' being used to clean the 'Print Head' surface. Labels include 'Element', 'Print Head', and 'Head Cleaner Pen'. An inset box provides a close-up view of the 'Print Head' with 'Element' labels pointing to the individual printing elements.</p>		
<p>Platen Roller</p>	<ol style="list-style-type: none"> 1. Turn the power off. 2. Rotate the platen roller and wipe it thoroughly with a cotton swab, or lint-free cloth soaked with clean water.. 	<p>Clean the platen roller when changing a new ribbon roll</p>
<p>Tear Bar/Peel</p>	<p>Use the lint-free cloth with 100%</p>	<p>As needed</p>

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Bar	ethanol to wipe it.	
Sensor	Compressed air blower or vacuum	Monthly
Exterior	Wipe it with water-dampened cloth	As needed
Interior	Brush or vacuum	As needed

Note:

- Do not touch printer head by bare hand. If you touch it careless, please use ethanol to clean it.
- Please use 100% Ethanol. DO NOT use medical alcohol, which may damage the printer head.
- Regularly clean the print head and supply sensors once change a new ribbon to keep printer performance and extend print head life.



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