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Etiketten Thermotransferfolien Hard- und Software
IDENTTECHNIK
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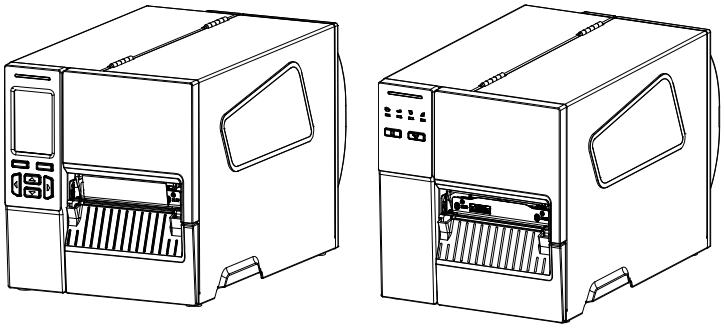
MB240/MB340/MB240T/MB340T Series

THERMAL TRANSFER / DIRECT THERMAL BAR CODE PRINTER

SERVICE MANUAL



MB240/MB340/MB240T/MB340T Series
Bar Code Printer Service Manual

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1. FUNDAMENTAL OF THE SYSTEM

1.1. Overview

Front View

For MB240 Series

1. Printer status LED indicator
2. Icons and LED indicators (Print head/ Ribbon/ Label/ RF status)
3. Front panel buttons (Pause/ Feed)
4. Media view window
5. Paper exit chute
6. Media cover handle

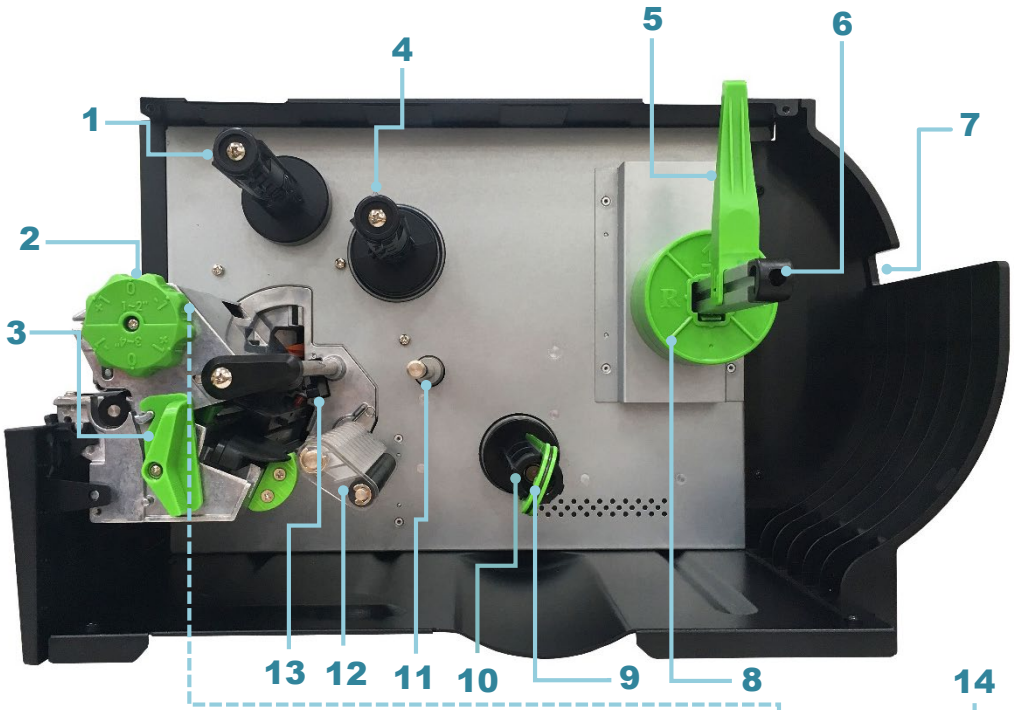
For MB240T Series

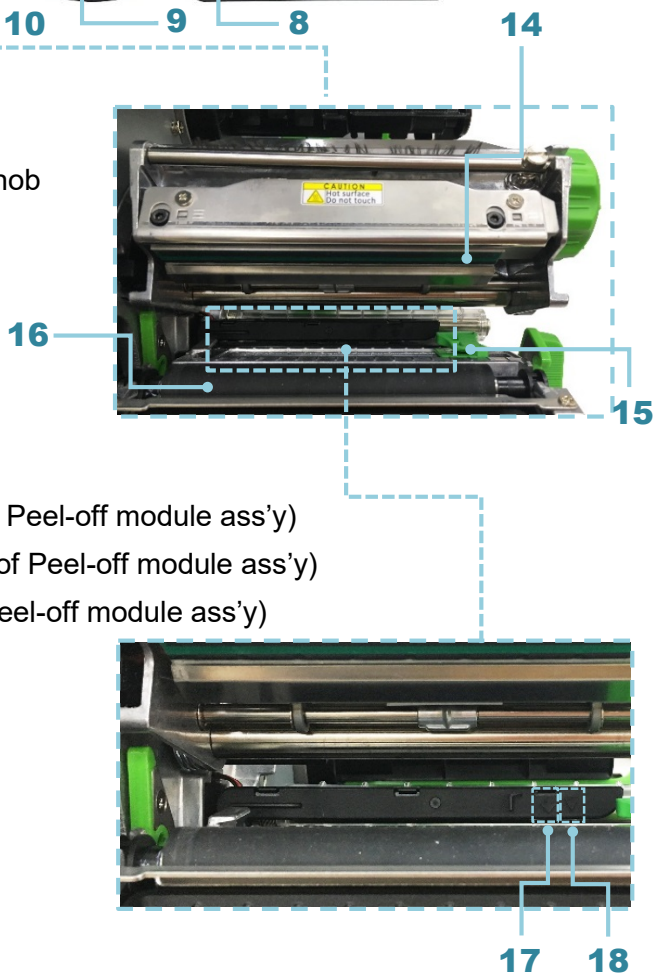
1. Printer status LED indicator
2. LCD touch panel display
3. Select and navigational keys (refer to description as below)
4. Media view window
5. Paper exit chute
6. Media cover handle

Keys	Function
Select keys	The labels on the footer of the UI will explain the function for left and right soft key. Check the labels on the footer of the UI screen. The meaning of the select keys will vary.
Navigational keys	Used to select icons, menu selection and navigation in the UI.

Interior View

For MB240 & MB240T Series





1. Ribbon rewind spindle
2. Print head pressure adjustment knob
3. Print head release lever
4. Ribbon supply spindle
5. Label roll guard
6. Label supply spindle
7. External label entrance chute
8. 3” core adapter
9. Liner securing clip (Optional kit of Peel-off module ass’y)
10. Liner rewind spindle (Optional kit of Peel-off module ass’y)
11. Media guide bar (Optional kit of Peel-off module ass’y)
12. Damper
13. Ribbon end sensor
14. Print head
15. Front label guide
16. Platen roller
17. Black mark sensor (shown as ↓)
18. Gap sensor (shown as ▽)

Rear View

For MB240 & MB240T Series

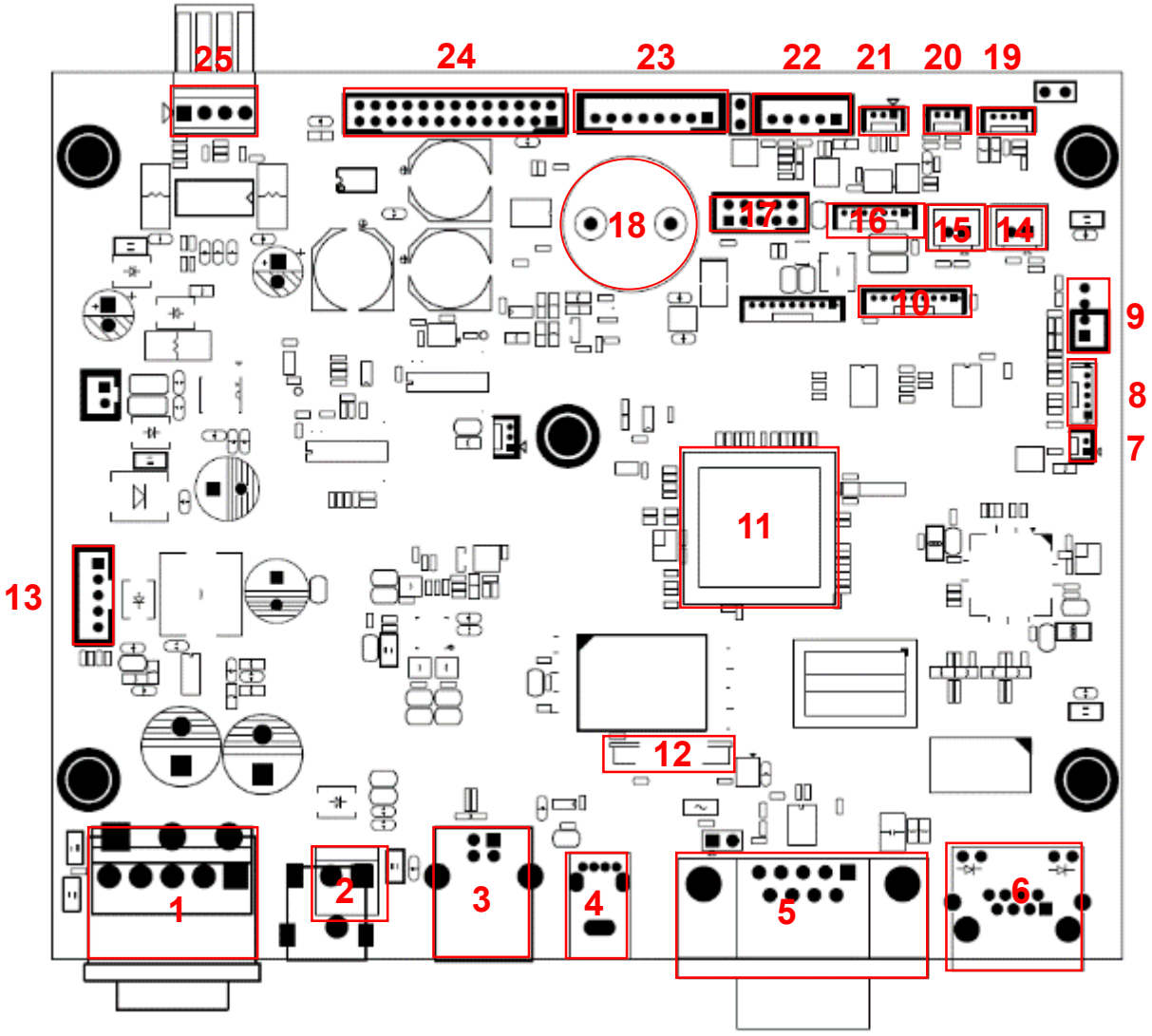
1. External label entrance chute
2. Power switch
3. USB client interface (High speed mode)
4. USB host interface
5. RS-232C interface
6. Slot-in Wi-Fi or GPIO interface (Option)
7. Ethernet interface
8. Power cord socket

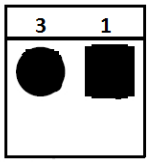
Note:
The interface picture here is for reference only. Please refer to the product specification for the interfaces availability.

2. ELECTRONICS

2.1 Summary of Board Connectors

Main board for MB240/ MB240T Series



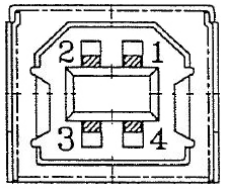
<table>
<tr><th>Connector</th><th>Description</th><th>Remark</th></tr>
<tr><td>1</td><td>Power switch connector</td><td>SW1</td></tr>
<tr><td>2</td><td>Power supply (24V DC) connector
<table>
<tr><td> 
</td><td>Pin name</td><td>CONFIGURATION</td></tr>
<tr><td></td><td>1</td><td>+24V</td></tr>
<tr><td></td><td>3</td><td>GND</td></tr>
</table></td><td>DCIN2</td></tr>
<tr><td>3</td><td>USB client connector</td><td>USB1</td></tr>
<tr><td>4</td><td>USB host connector</td><td>USB2</td></tr>
<tr><td>5</td><td>RS-232C connector</td><td>RS1</td></tr>
<tr><td>6</td><td>Ethernet connector</td><td>LAN1</td></tr>
<tr><td>7</td><td>RTC battery connector</td><td>BT1</td></tr>
<tr><td>8</td><td>LED & key & touch-function connector</td><td>CON19</td></tr>
<tr><td>9</td><td>Head open sensor connector</td><td>CON1</td></tr>
<tr><td>10</td><td>LCD panel (Interface 1, SPI LCD) connector</td><td>CON23</td></tr>
<tr><td>11</td><td>Micro processor</td><td>-</td></tr>
<tr><td>12</td><td>LCD panel (Interface 2, parallel LCD) connector</td><td>CON9</td></tr>
<tr><td>13</td><td>Liner rewinder connector</td><td>CON26</td></tr>
<tr><td>14</td><td>Gap receiver sensor connector</td><td>CON5</td></tr>
<tr><td>15</td><td>Gap emitter sensor connector</td><td>CON20</td></tr>
<tr><td>16</td><td>RFID connector</td><td>CON8</td></tr>
<tr><td>17</td><td>Wi-Fi / Bluetooth connector</td><td>CON13</td></tr>
<tr><td>18</td><td>Buzzer</td><td>BZ1</td></tr>
<tr><td>19</td><td>Ribbon end sensor connector</td><td>CON11</td></tr>
<tr><td>20</td><td>Ribbon encoder sensor connector</td><td>CON12</td></tr>
<tr><td>21</td><td>Black mark sensor connector</td><td>CON21</td></tr>
<tr><td>22</td><td>Peel-off sensor connector</td><td>CON10</td></tr>
<tr><td>23</td><td>Cutter connector</td><td>CON6</td></tr>
<tr><td>24</td><td>Print head connector</td><td>CON24</td></tr>
<tr><td>25</td><td>Stepping motor connector</td><td>CON16</td></tr>
</table>

2.2 Interface Pin Configuration

RS-232C

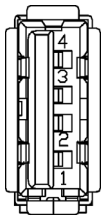
PIN	CONFIGURATION
1	+5 V
2	TXD
3	RXD
4	CTS
5	GND
6	RTS
7	N/C
8	RTS
9	N/C

USB Device



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

USB Host

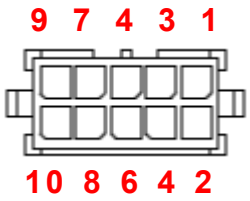


PIN	CONFIGURATION
1	5V
2	D-
3	D+
4	GND

Ethernet

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

Cutter/peel-off Sensor Connector

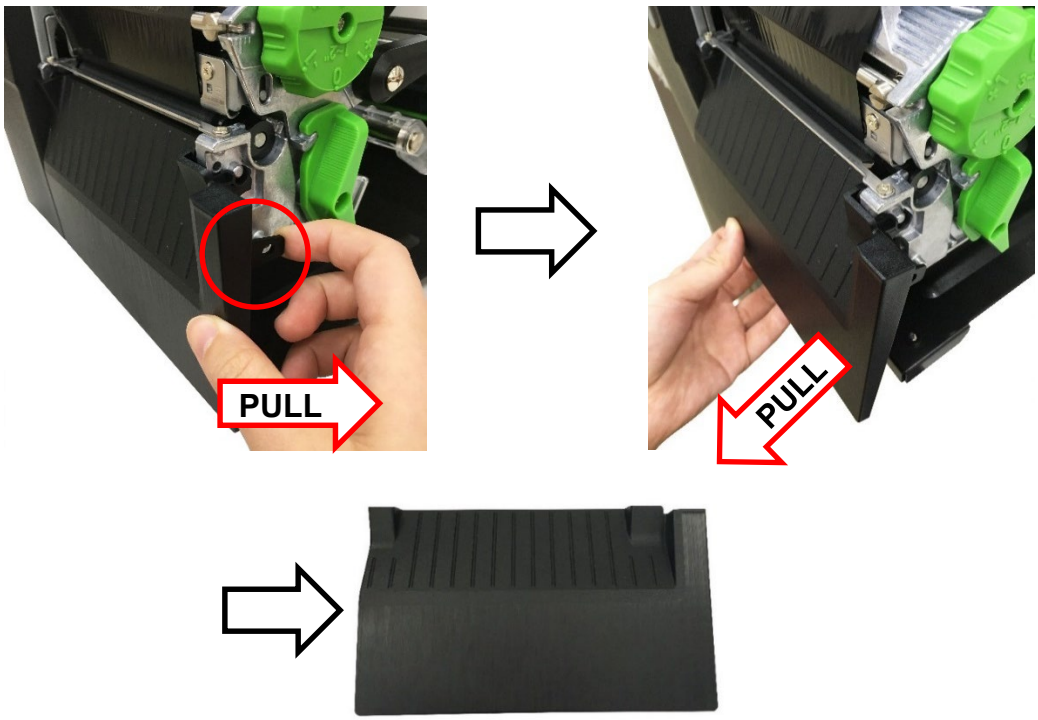


Pin	Description	Voltage
1	Cutter enable	0V: Cutter work 5V: Cutter stop
2	Cutter direction	0V: Cutter positive cut 5V: Cutter negative cut
3	Cutter position sensor switch	0V: Cutter stop 3.3V: Cutter work
4	Peel sensor receiver	A/D: 0~3.3V
5	N/A	N/A
6	Logic power	5V
7	GND	0V
8	Cutter power	24V
9	I2C SCL signal	
10	I2C SDA signal	

3. MECHANISM

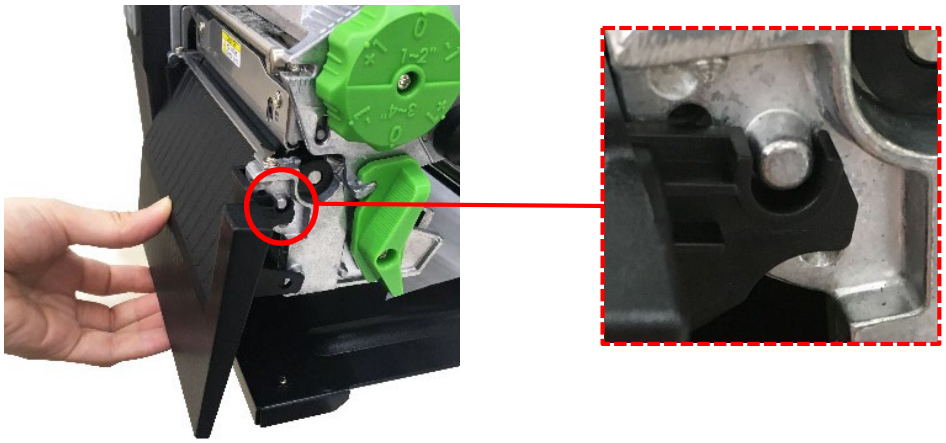
3.1 Remove the Lower Front Panel

1. Open the media cover.
2. Move the tab outward then pull the panel inward to remove the lower front panel.



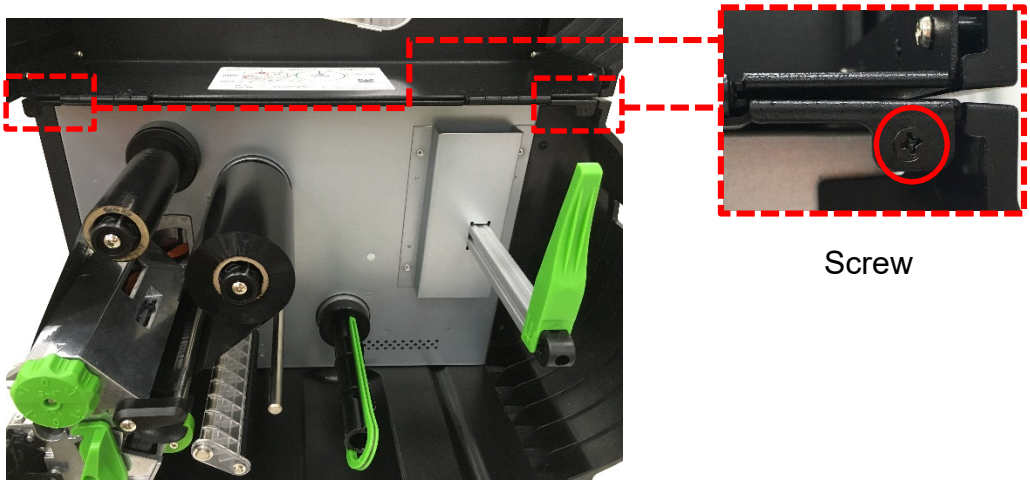
Lower front panel

3. Reassemble the parts in the reverse procedures.
   Note: When install the lower front panel, please attach the hook along the protrusion of print head mechanism.

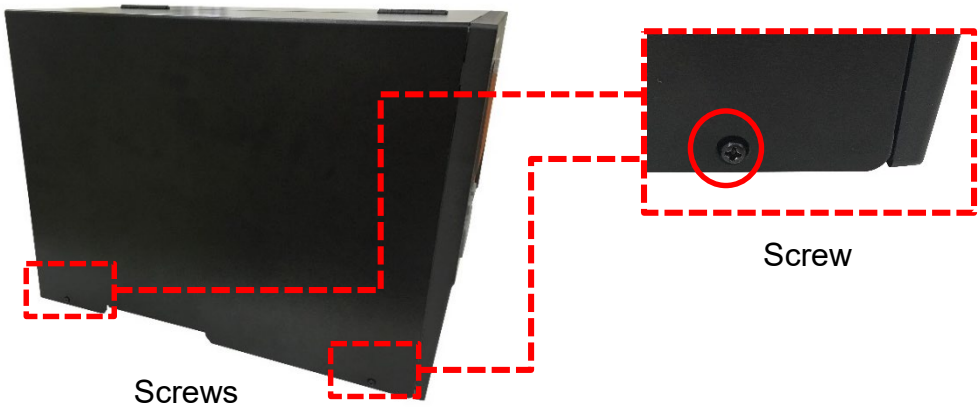


3.2 Remove the Electronics Cover

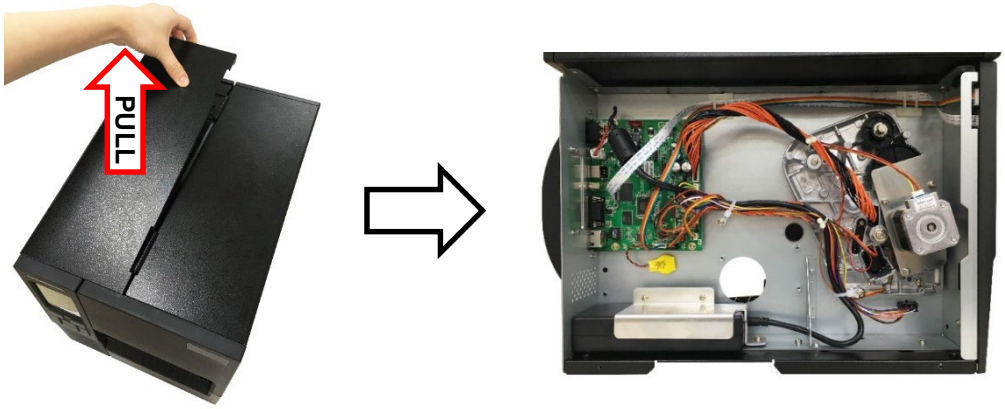
1. Open the printer right side cover and remove two screws (fastened by 7.5 kg±15% kg-cm) on the electronic cover as indicated.



2. Turn the printer to left side and remove two screws (fastened by 7.5 kg±15% kg-cm) on the electronic cover.



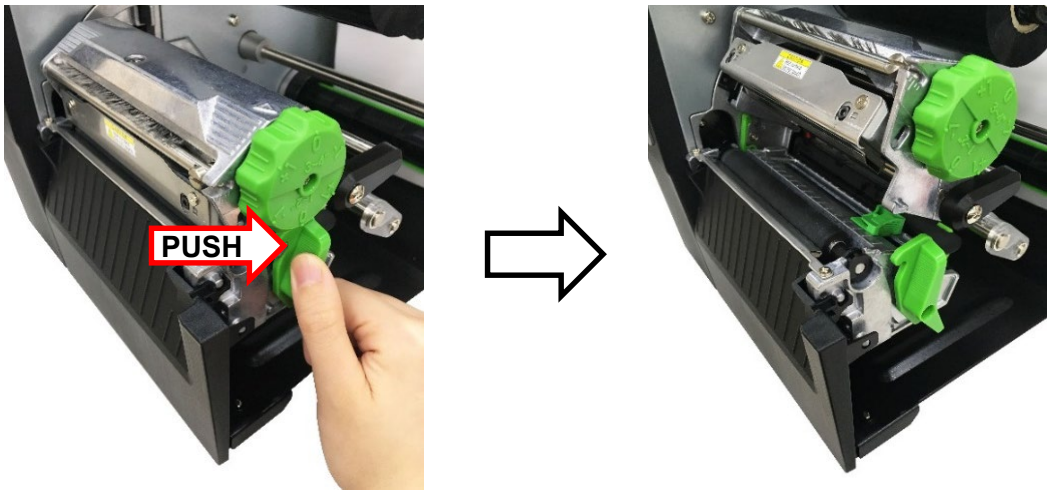
3. Remove the electronic cover.



4. Reassemble the parts in the reverse procedures.

3.3 Replacing the Platen Roller Assembly

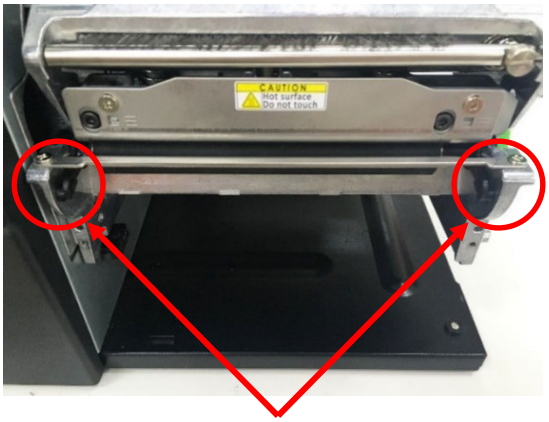
1. Open the media cover.
2. Push the print head release lever to open the print head mechanism.



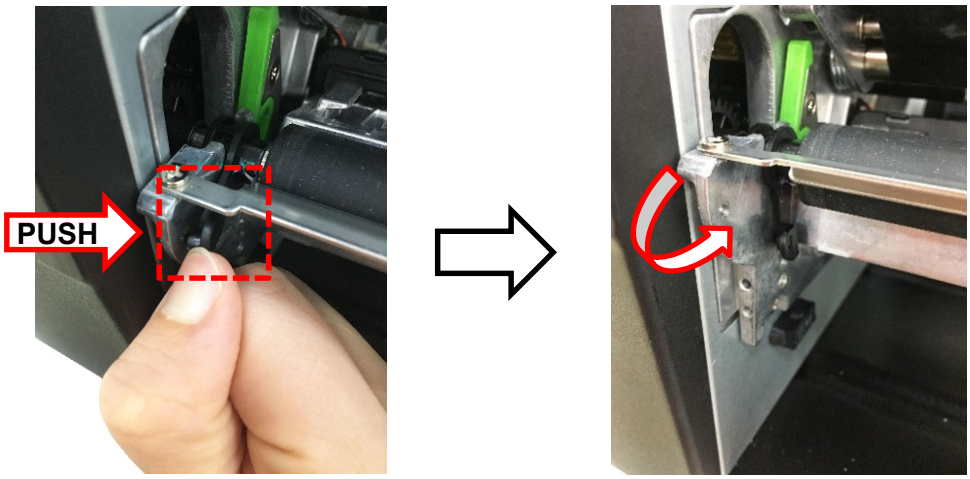
3. Refer to section 3.1 to remove the lower front panel.

Lower front panel

4. Release the platen roller bush tabs then push it to the end of mechanism on both sides as indicated.



Platen roller bush tabs



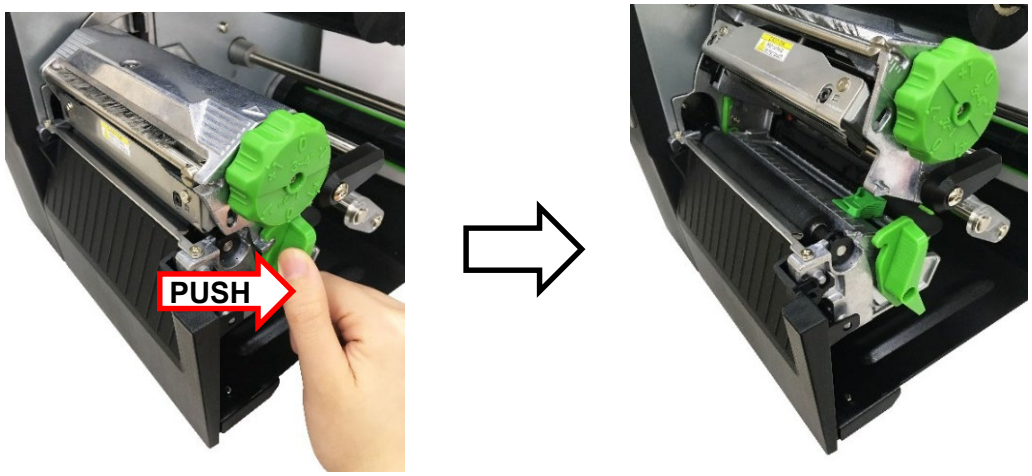
5. Pull up and remove platen roller assembly.

Platen roller assembly

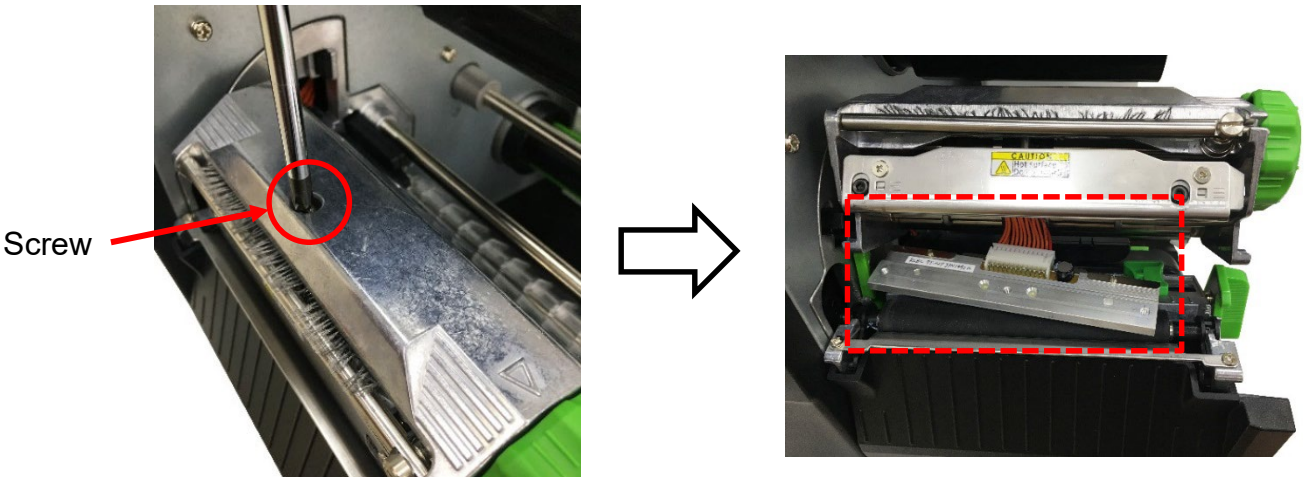
6. Remove/Replace the platen roller assembly.
7. Reassemble the parts in the reverse procedures.

3.4 Replacing the Print head ASS'Y

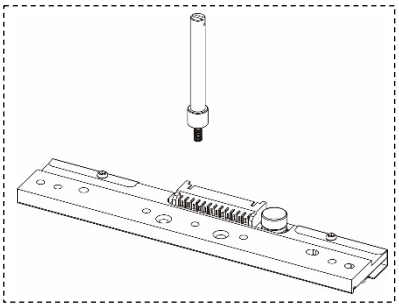
1. Open the media cover.
2. Push the print head release lever to open the print head mechanism.



3. Release the print head assembly by removing one screw (fastened by 5 kg±15% kg-cm) as indicated.



4. Remove/Replace the print head assembly.

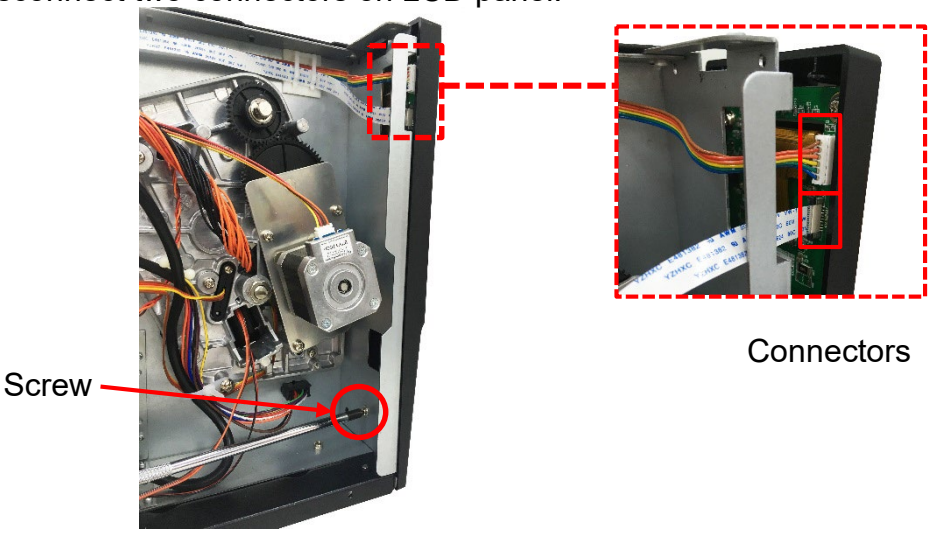


Print head module assembly spare part

5. Reassemble the parts in the reverse procedures.

3.5 Replacing the LCD Panel Cover Assembly

1. Refer to section 3.2 to remove the electronics cover.
2. Remove one screw (fastened by 5 kg±15% kg-cm) on left front panel cover and disconnect two connectors on LCD panel.



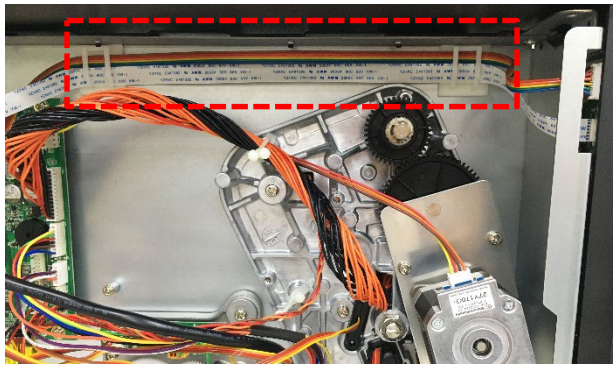
3. Remove the six screws (touch panel: fastened by 3.5 kg±15% kg-cm; LED panel: fastened by 3.5 kg±15% kg-cm) and one contact spring connected on LCD panel.

MB240T Series
(Touch panel)

MB240 Series
(LED panel with four screws)

4. Remove/Replace the LCD panel cover assembly.

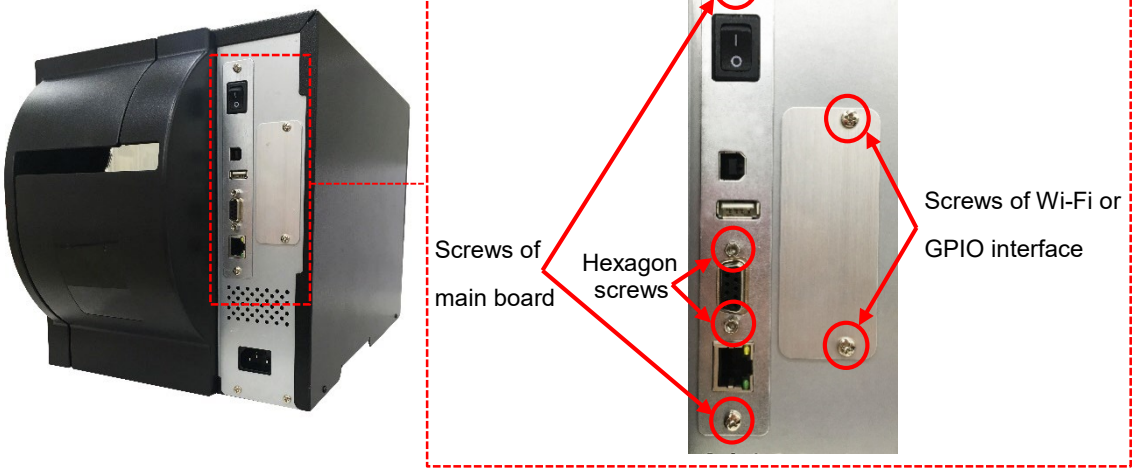
5. Reassemble the parts in the reverse procedures.
   Note: When reassemble the parts, please install the cables through the loading path as below.



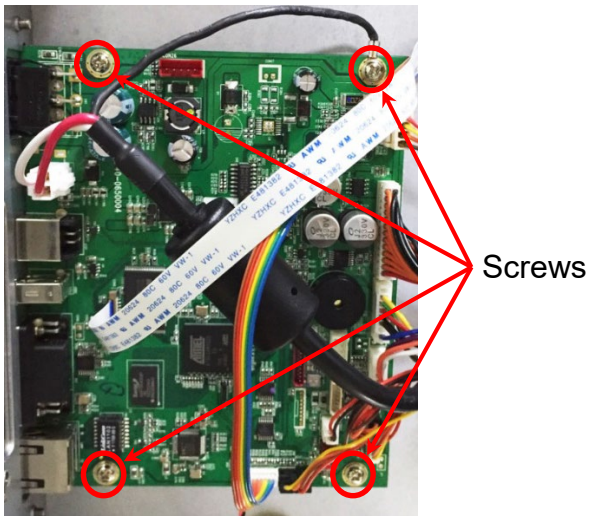
3.6 Replacing the Label Supply Spindle

1. Refer to section 3.2 to remove the electronics cover.

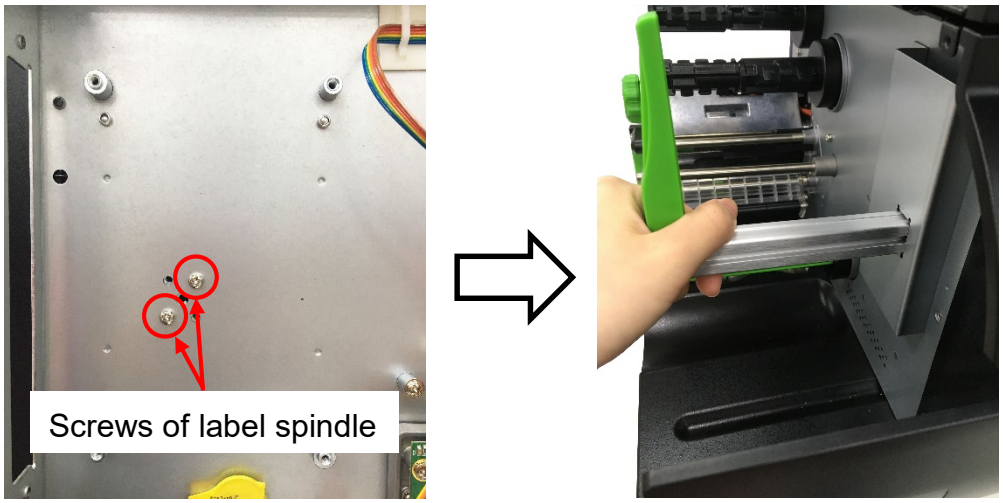
2. Remove the two screws on slot-in Wi-Fi/ GPIO interface board (if module installed).
3. Remove the two screws (fastened by 7.5 kg±15% kg-cm) and two hexagon screws (fastened by 7.5 kg±15% kg-cm) on interface board.



4. Remove four screws (fastened by 7.5 kg±15% kg-cm) and all connectors on the main board.



5. After removed the main board, please loosen the two screws (fastened by 7.5 kg± 15% kg-cm) as indicated to release label supply spindle.



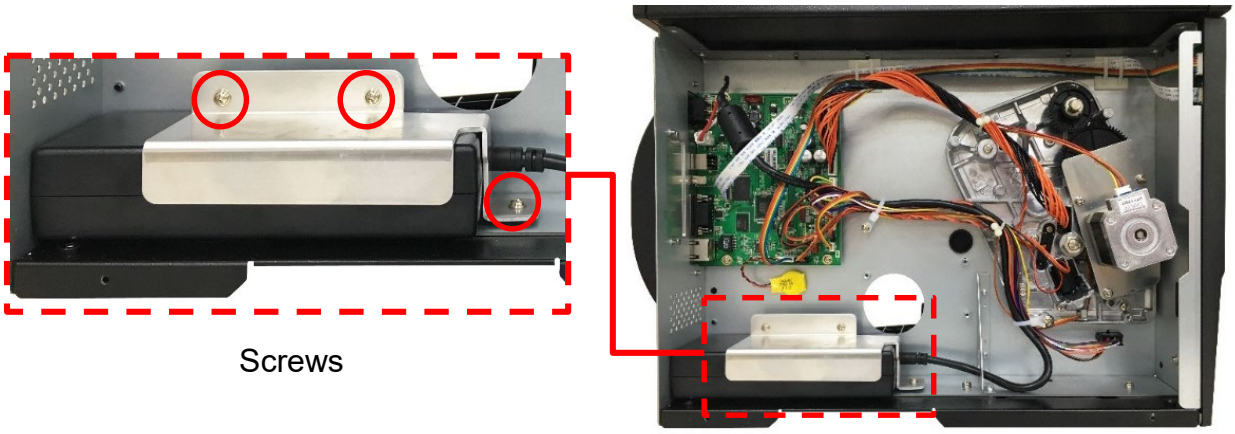
6. Remove/Replace the label supply spindle.

Label supply spindle

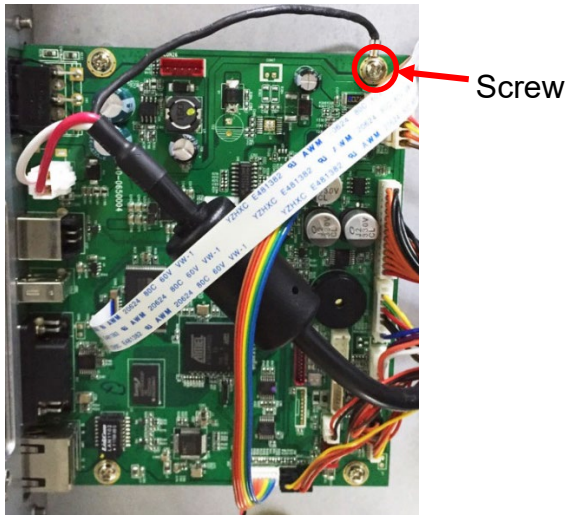
7. Reassemble the parts in the reverse procedures.

3.7 Replacing the Power Supply Unit

1. Refer to section 3.2 to remove the electronics cover.
2. Remove three screws (fastened by 7.5 kg±15% kg-cm) as indicated below.



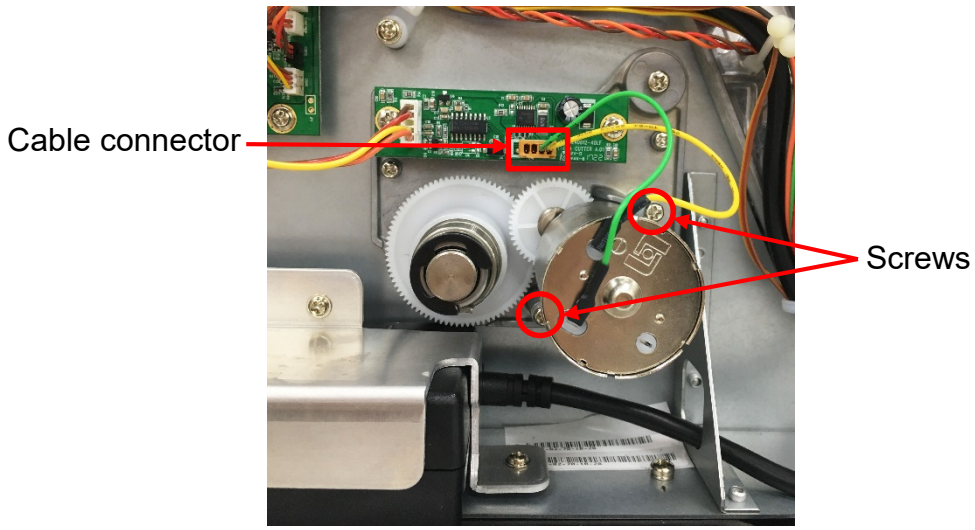
3. Remove one screw (fastened by 7.5 kg±15% kg-cm) on main board as indicated to remove power supply unit.



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

3.8 Replacing the Internal Rewinder DC Motor

1. Refer to section 3.2 to remove the electronics cover.
2. Remove two screws (fastened by 7.5 kg±15% kg-cm) and one cable connector on rewinder board as indicated.

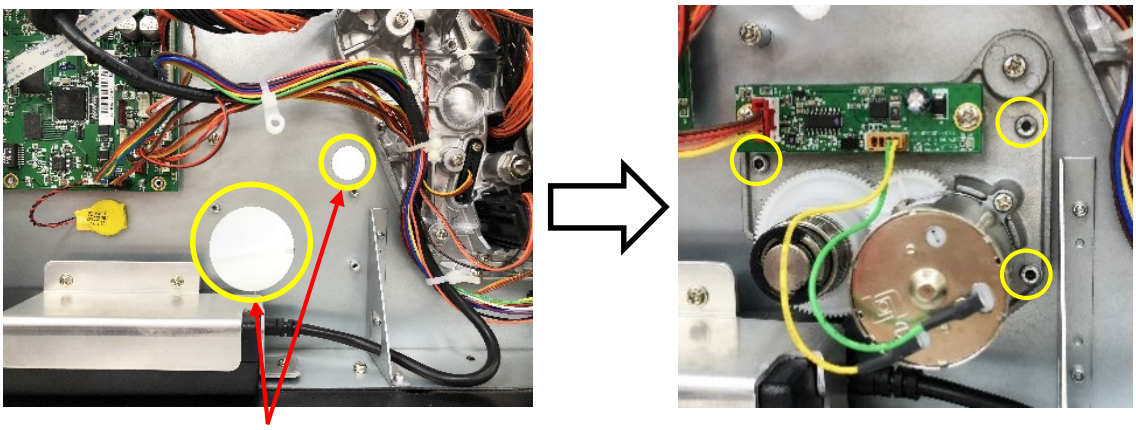


DC motor module

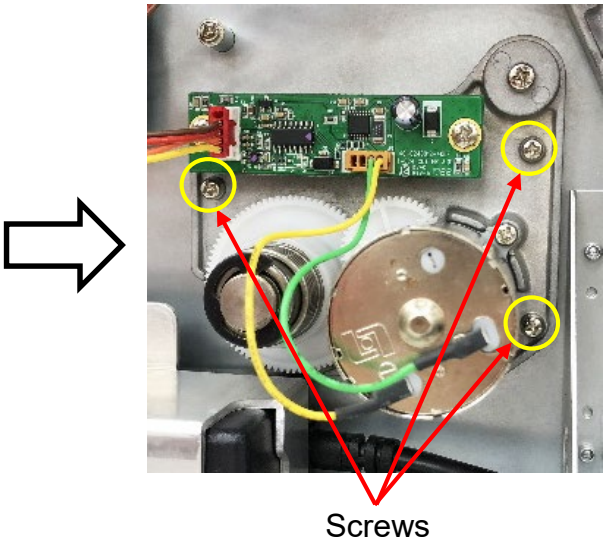
3. Remove/Replace the DC motor module.
4. Reassemble the parts in the reverse procedures.

3.9 Replacing the Internal Full Rewinder Kit (Option)

1. Refer to section 3.2 to remove the electronics cover.
2. Install the internal full rewinder module on the positioning holes and fix the module by fasten three screws (fastened by 10.5 kg±15% kg-cm) as indicated.

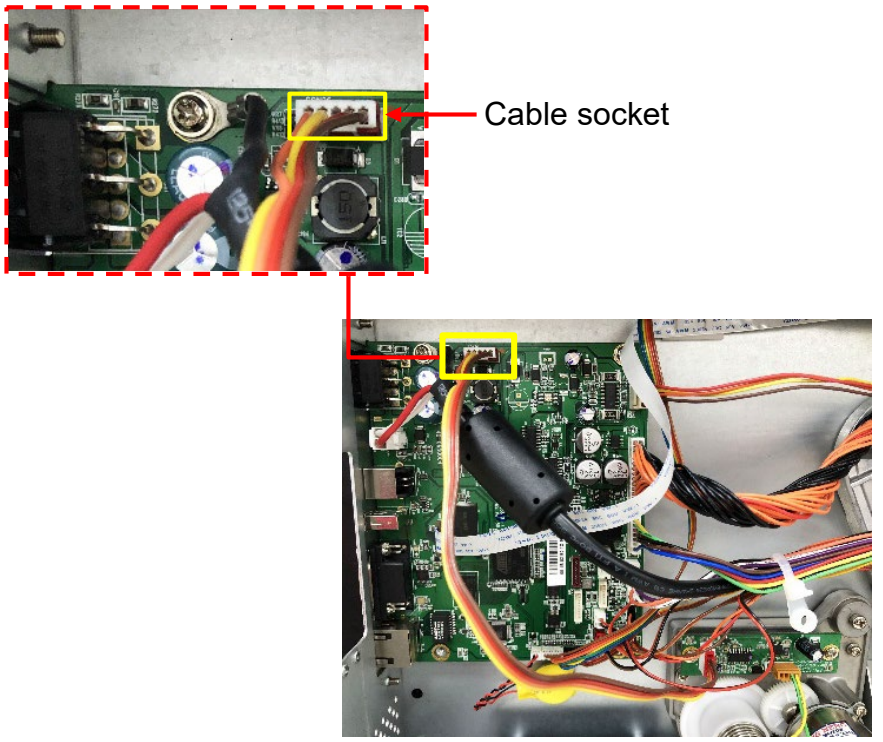


Positioning holes

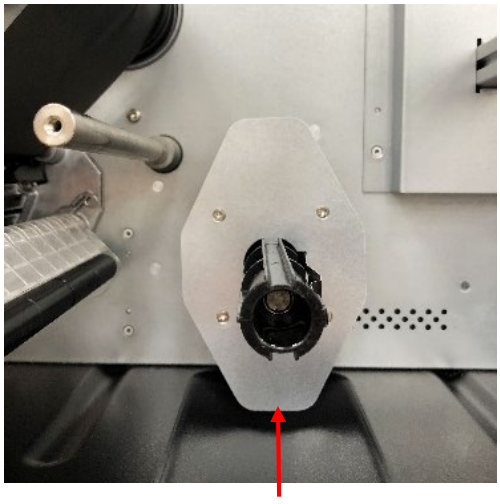


Screws

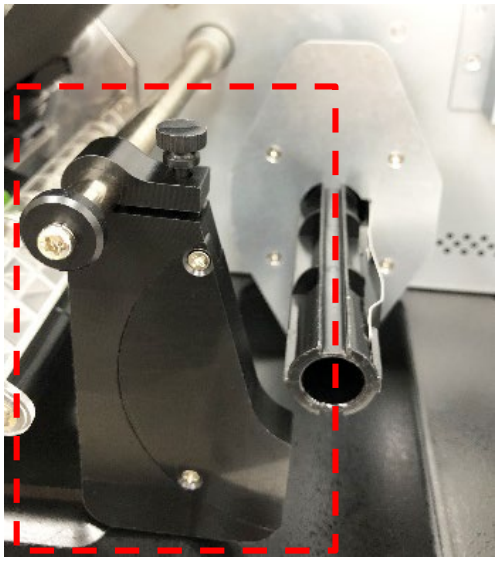
3. Install the internal full rewinder module cable on the main board cable socket as indicated.



4. Reassemble the electronics cover.
5. Open the media cover and install the rewinder spindle guard.

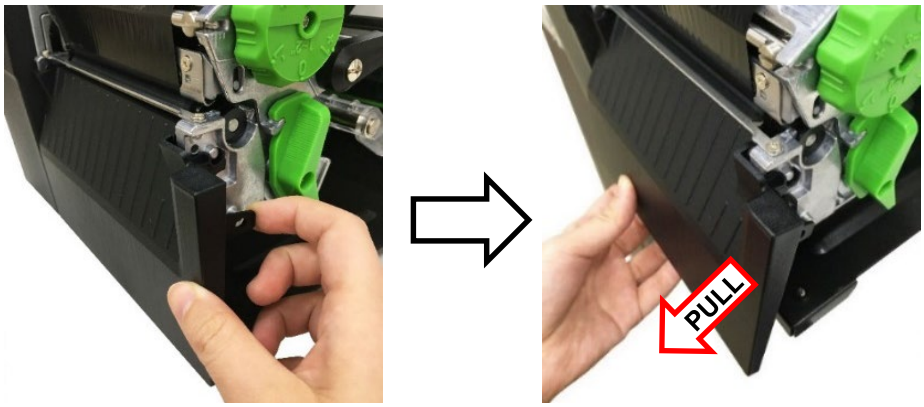


6. Install the media guard kit.

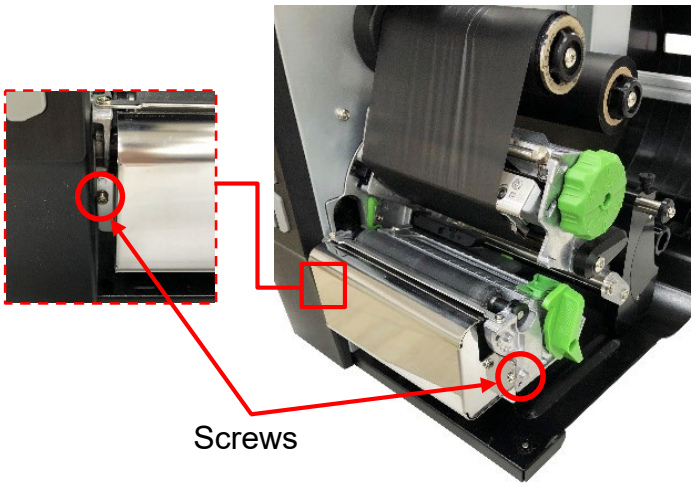


Media guard kit

7. Remove the lower front panel.



8. Install and fix the lower front panel for internal rewinder by fasten two screws (fastened by 7.5 kg±15% kg-cm) as indicated.

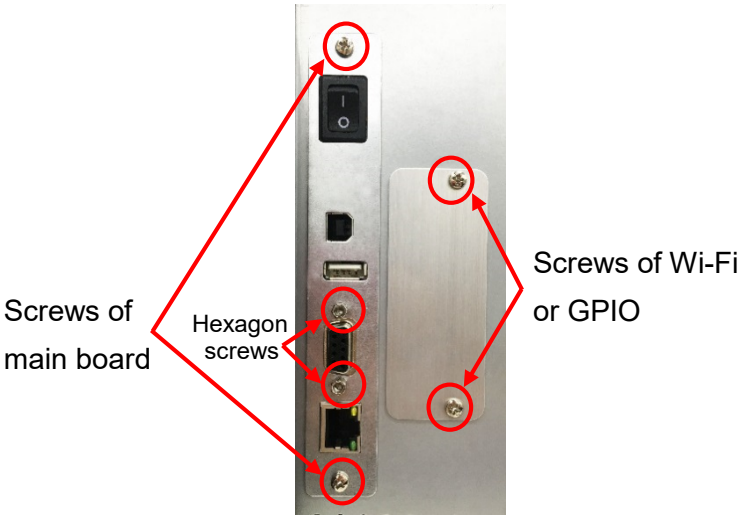


9. Complete the installation of internal full rewinder kit.

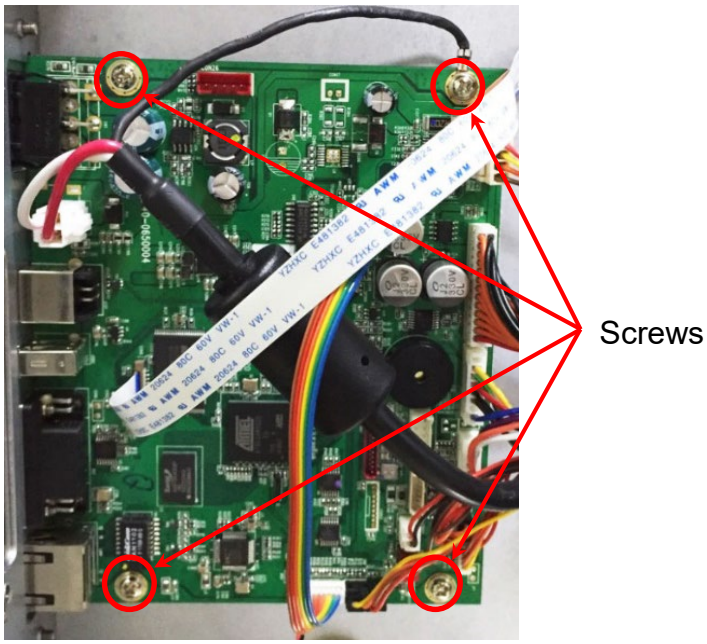
10. Reassemble the parts in the reverse procedures.

3.10 Replacing the Main Board

1. Refer to section 3.2 to remove the electronics cover.
2. Remove the two screws (fastened by 5.5 kg±15% kg-cm) on slot-in Wi-Fi/ GPIO interface board (if module installed).
3. Remove the two screws (fastened by 5.5 kg±15% kg-cm) and two hexagon screws (fastened by 7.5 kg±15% kg-cm) on interface board.



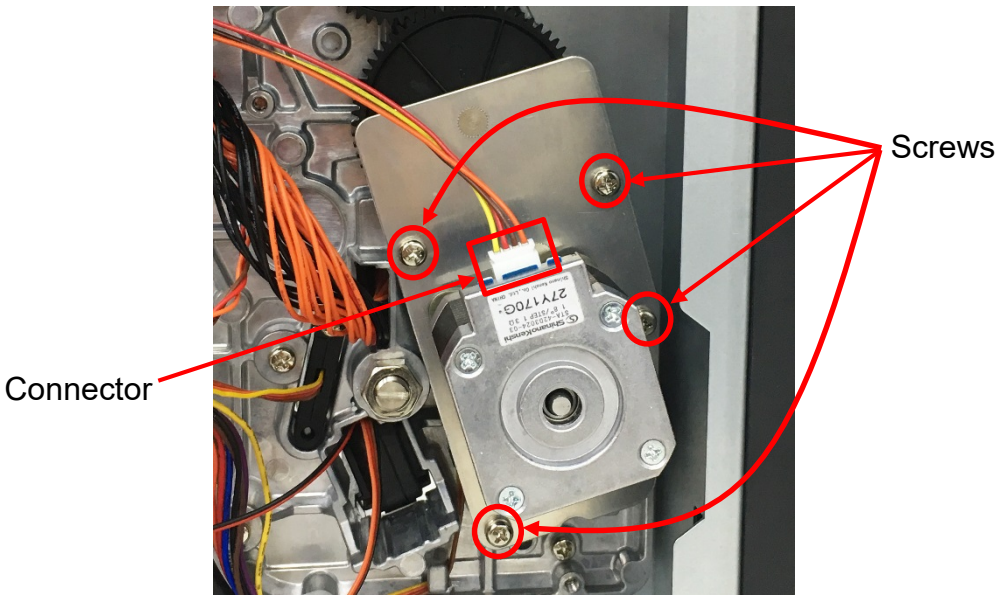
4. Remove four screws (fastened by 7.5 kg±15% kg-cm) and all connectors from the main board.



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

3.11 Replacing the Stepping Motor Assembly

1. Refer to section 3.2 to remove the electronics cover.
2. Remove four screws (fastened by 10.5 kg±15% kg-cm) and one connector on the stepping motor assembly.



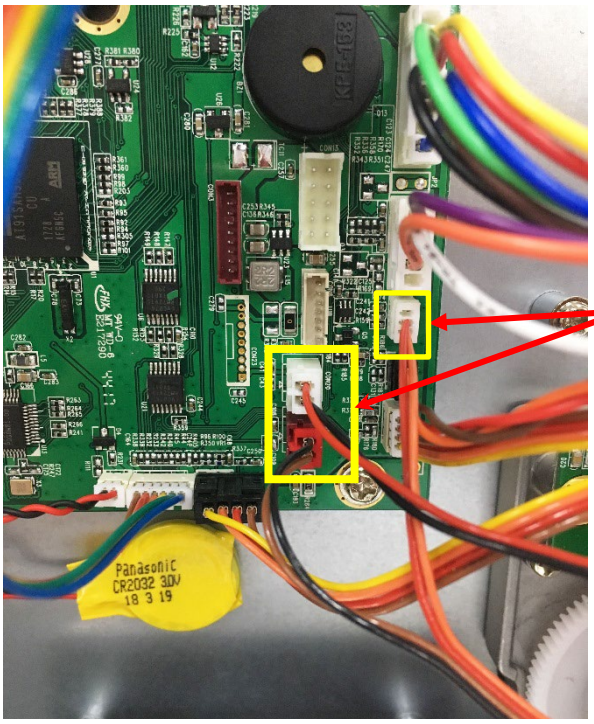
3. Remove/Replace the stepping motor assembly (including gears and stepping motor).

Stepping motor assembly

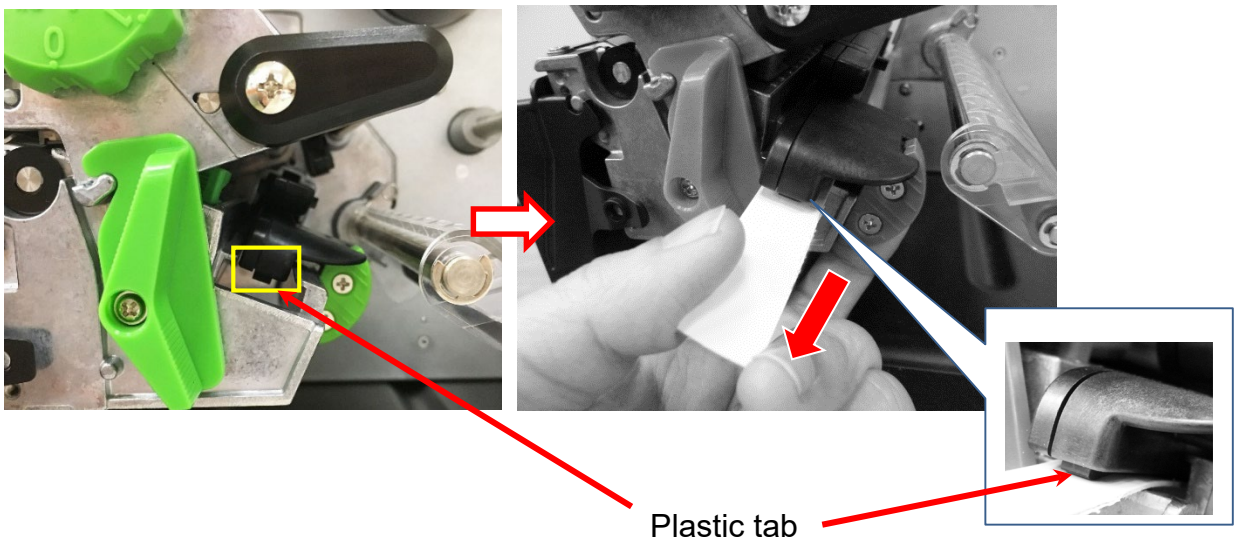
4. Reassemble the parts in the reverse procedures.

3.12 Replacing the Gap/Black Mark Sensor Module

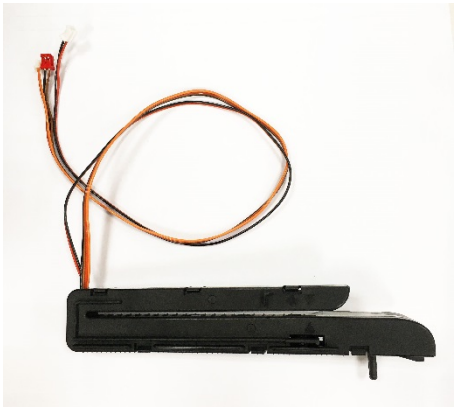
1. Refer to section 3.2 to remove the electronics cover.
2. Disconnect the gap/black mark sensor connectors from the main board.



3. Open the media cover. At the bottom of the gap/black mark sensor module, there is a plastic tab to latch the sensor assembly to the mechanism. Use a piece of paper (thick stiff paper) to make it through the slot and put the paper under the tab. Pull the media sensor assembly out of the mechanism.



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



Media sensor module assembly

5. Reassemble the parts in the reverse procedures.

3.13 Cutter Module Installation (Option)

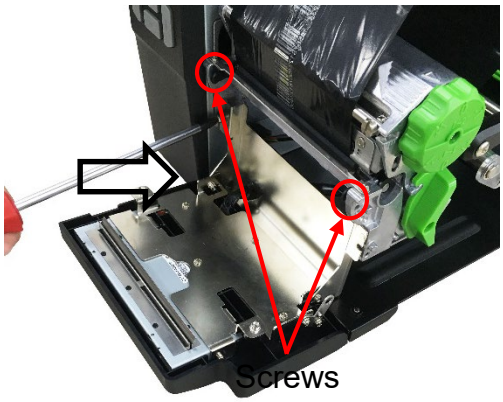
1. Refer to section 3.1 to remove the lower front panel.

Lower front panel

2. Install cutter module cable on printer cable socket as indicated.

Cable socket

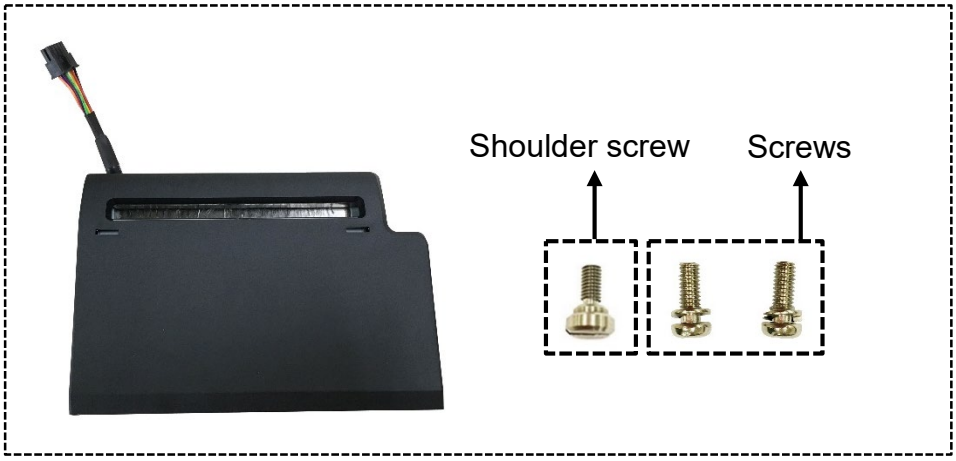
3. Fasten the two screws (fastened by 7.5 kg±15% kg-cm) on printer mechanism as indicated.



Screws

4. Close cutter module and fasten one shoulder screw (fastened by 7.5 kg±15% kg-cm) to fix hinge.
   Note: Please make sure shoulder screw did not interfere with hinge.

5. Remove/Replace the cutter module.
6. Reassemble the parts in the reverse procedures.



Cutter module assembly

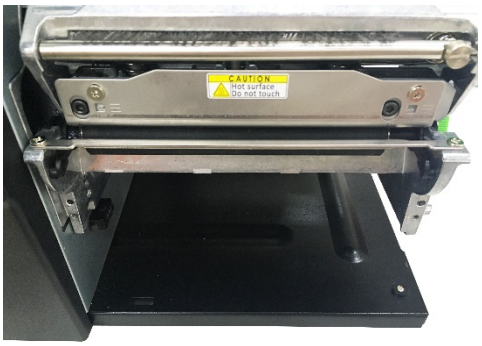
3.14 Peel-off Kit Installation (Option)

Peel-off Kit parts list:

1. Peel-off module
2. Media rewind spindle and media guide bar module
3. Two screws and one shoulder screw

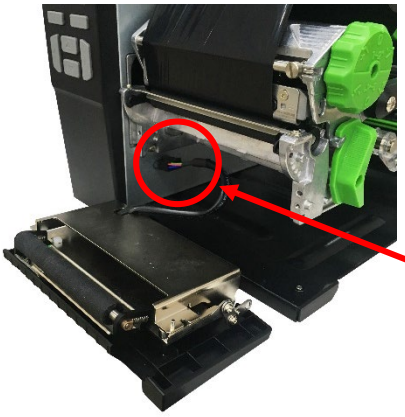
A. Peel-off Sensor Module Installation

1. Refer to section 3.1 to remove the lower front panel.



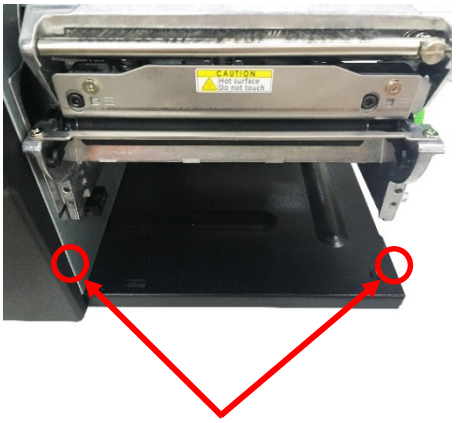
Lower front panel

2. Install peel-off sensor module cable on printer connector as indicated.
   Note: Please push the cable to bottom side to prevent media stuck when peeling the label.

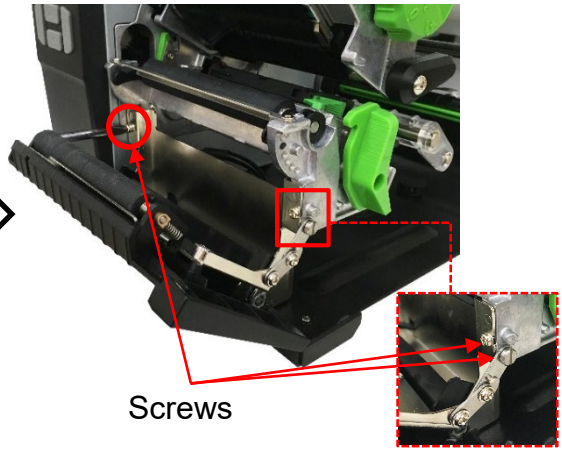


Connector

3. Place the peel-off sensor module on locating holes and fix two screws (fastened by 7.5 kg±15% kg-cm) and one shoulder screw (fastened by 7.5 kg±15% kg-cm) as indicated.



Locating holes



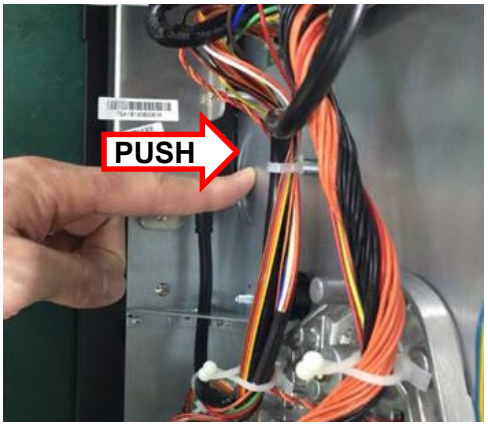
Screws

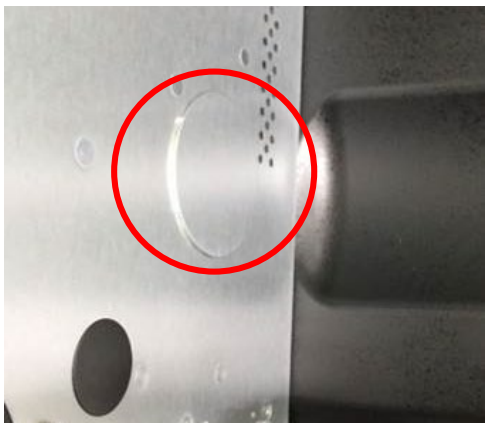
4. Close the peel-off sensor module and complete installation.

5. Remove/Replace the peel-off sensor module by the above reverse procedures.

B. Rewind Spindle and Media Guide Bar Installation

1. Refer to section 3.2 to remove the electronic cover.
2. Push the media guide bar cover by 3kg ~ 5kg strength on the printer electronic side as indicated.

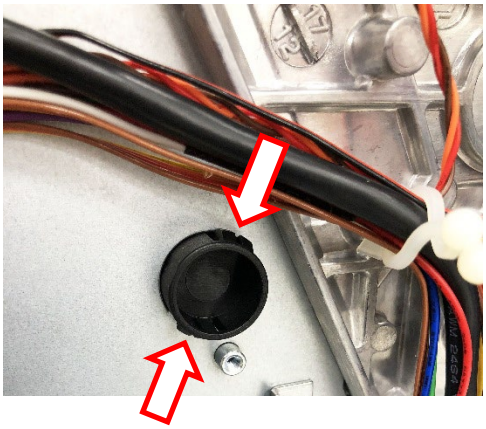




Media Guide Bar Cover will be partially released on the printer middle plate.

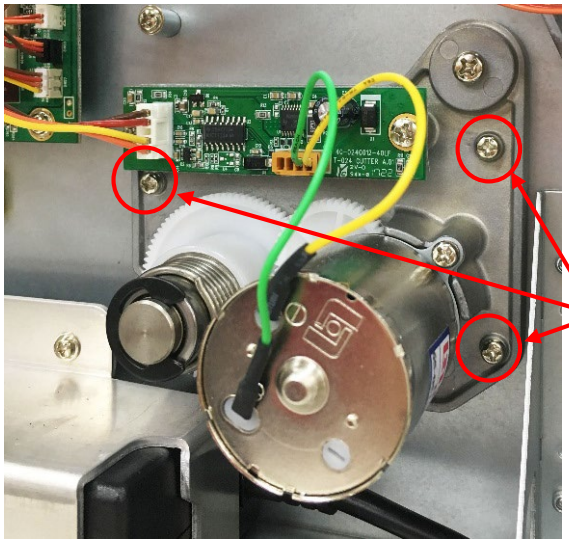
3. Remove the media guide bar cover by hand.

4. Remove the black plastic cover by push both sides of cover as indicated.

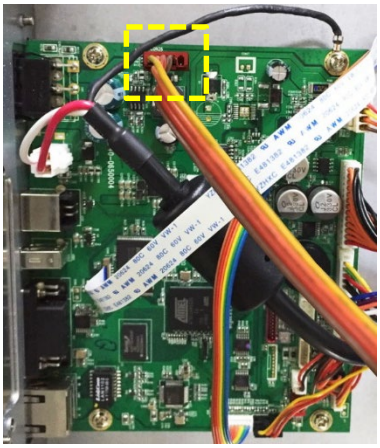


5. Install the rewind spindle and media guide bar on electronic side.

6. Fasten three screws (fastened by 7.5 kg±15% kg-cm) on rewind spindle and media guide bar module as indicated.



7. Disconnect the power cord than insert the rewinder power cable to the main board socket as indicated.



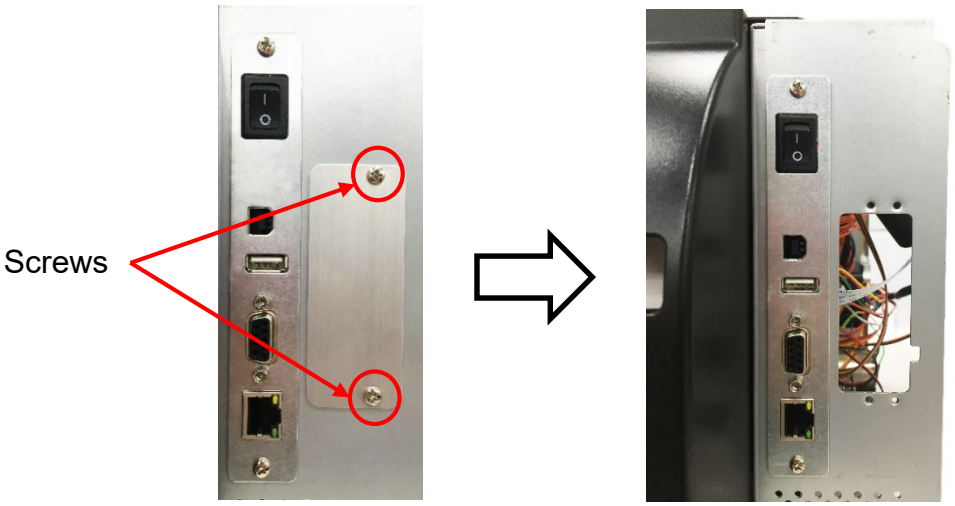
8. Remove/Replace the rewind spindle and media guide bar module.

Rewind Spindle and Media Guide bar module

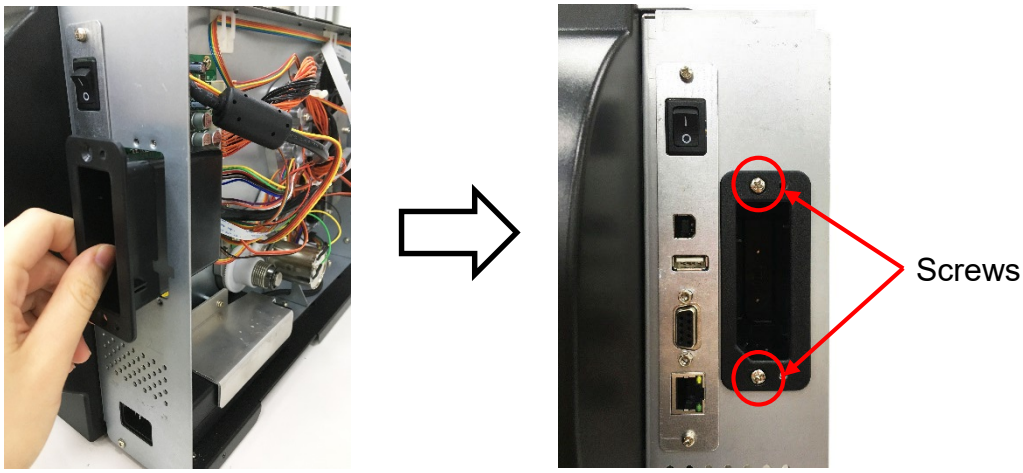
9. Reassemble the parts in the reverse procedures.

3.15 Slot-in Wireless Housing Installation (Option)

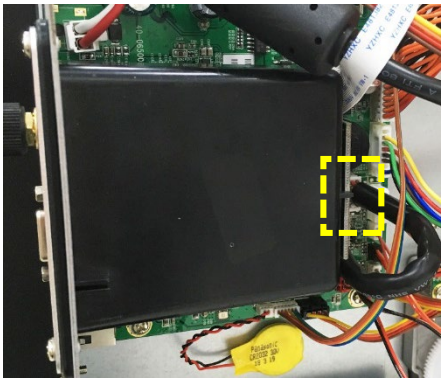
1. Refer to section 3.2 to remove the electronic cover.
2. Take off the slot-in wireless interface board by removing two screws (fastened by 5.5 kg±15% kg-cm) on rear of printer.



3. Install the slot-in wireless housing on the rear of the printer and fix two screws (5.5 kg±15% kg-cm) as indicated.



4. Connect the slot-in wireless transfer module housing board cable to the main board as indicated.

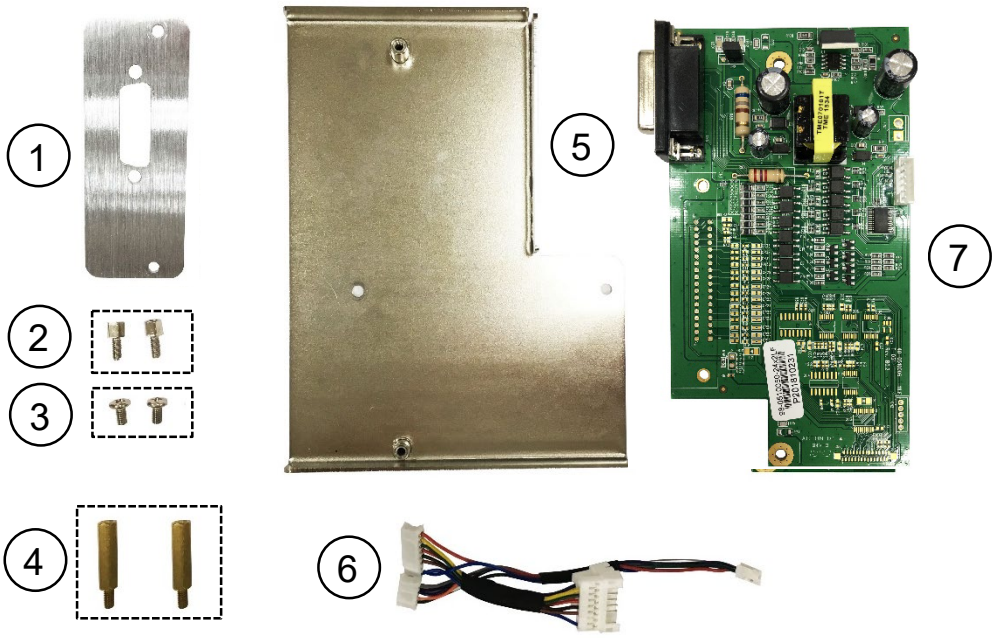


Slot-in Wi-Fi module with antenna and transfer board

5. Remove/Replace the Slot-in Wi-Fi module.
6. Reassemble the parts in the reverse procedures.

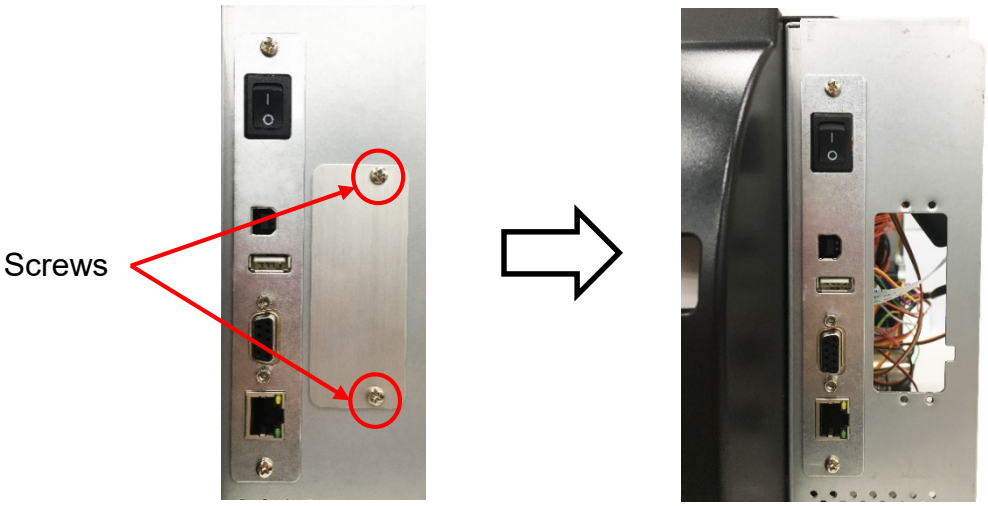
3.16 GPIO Interface Assembly Installation (Option)

GPIO Interface Assembly Parts list:

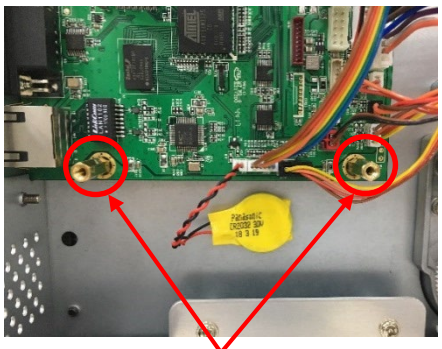


1. One GPIO interface board
2. Two hexagon screws
3. Two screws
4. Two copper pillars
5. One GPIO fix board
6. One GPIO transfer cable
7. One GPIO board

1. Refer to section 3.2 to remove the electronic cover.
2. Take off the slot-in wireless interface board by removing two screws (fastened by 5.5 kg±15% kg-cm) on rear of printer.

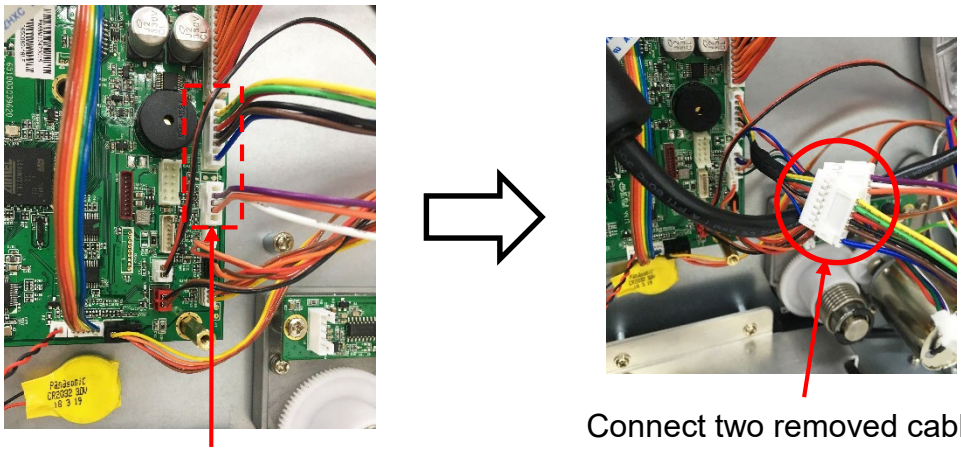


3. Install two copper pillars (fastened by 7.5 kg±15% kg-cm) on main board.



Copper pillars

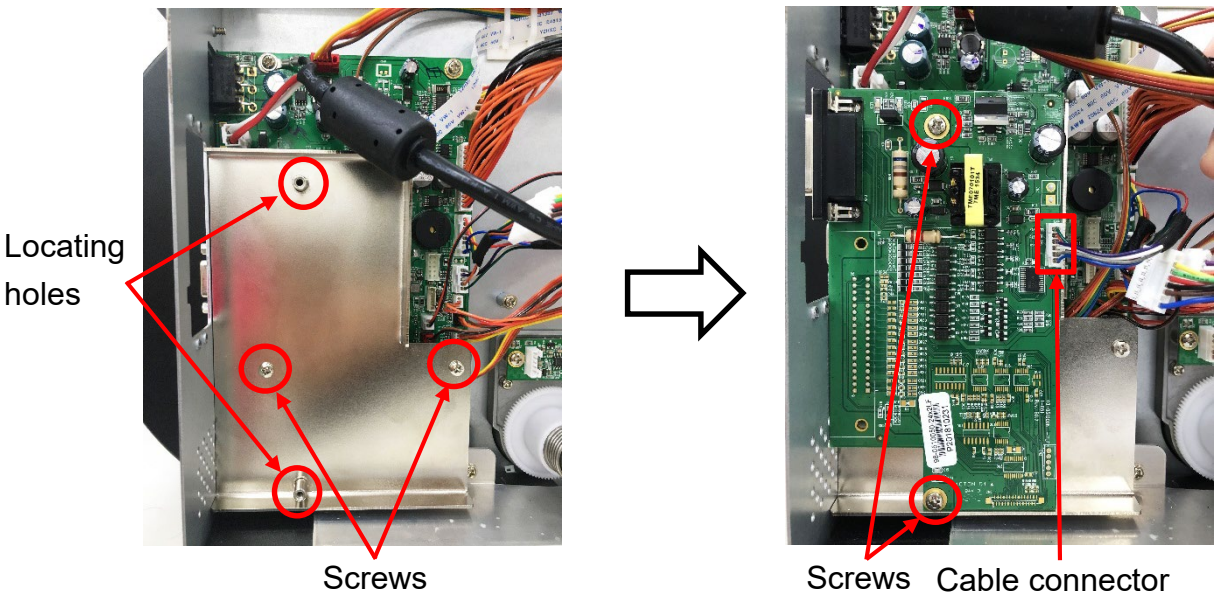
4. Remove two cable connectors from the main board and insert GPIO transfer cables, then connect two removed cables to GPIO transfer connectors as indicated.



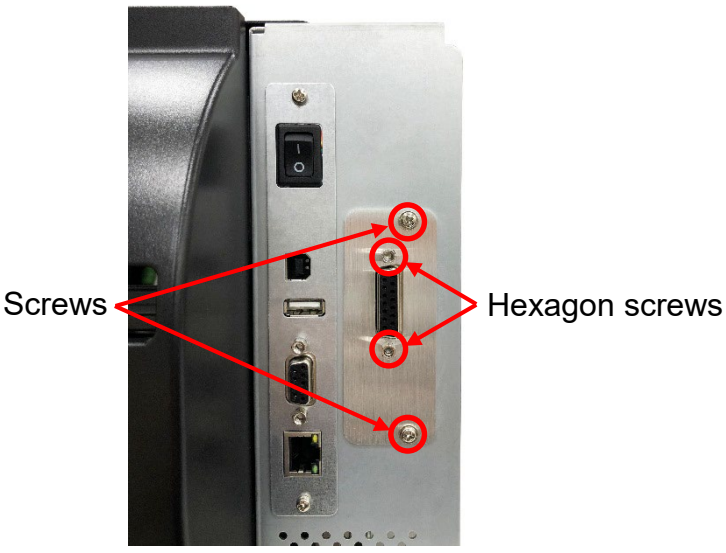
Cable connectors

Connect two removed cables to GPIO transfer connectors

5. Fasten two screws (fastened by 5.5 kg±15% kg-cm) on GPIO fix board first. Then, aligning the GPIO board to the two locating holes on GPIO fix board and fasten another two screws (fastened by 5.5 kg±15% kg-cm) as indicated.
6. Insert the rest connector of GPIO transfer cable to GPIO board.



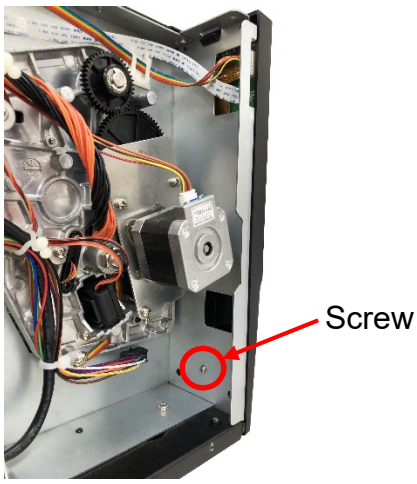
7. Fix two screws and two hexagon screws (fastened by 5.5 kg±15% kg-cm) on GPIO interface board to complete installation.



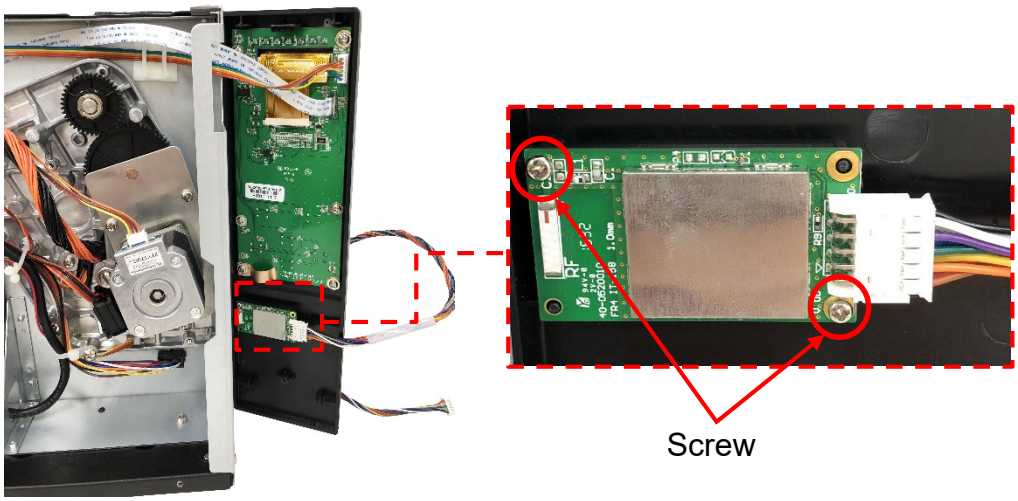
8. Reassemble the parts in the reverse procedures.

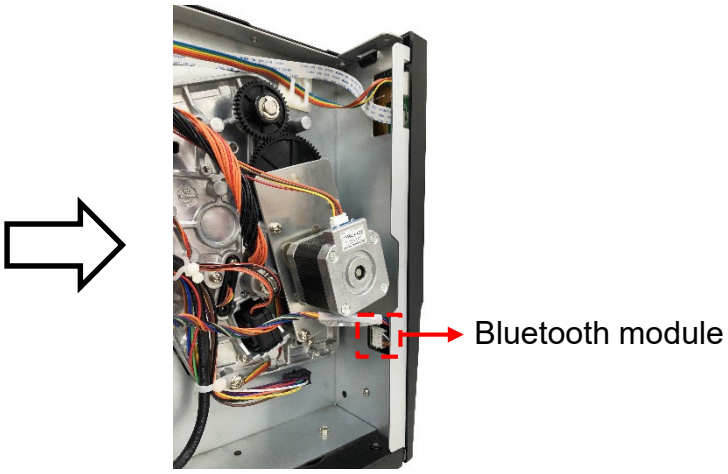
3.17 Bluetooth Module Installation (Option)

1. Refer to section 3.2 to remove the electronic cover.
2. Remove one screw (fastened by 5 kg±15% kg-cm) on the panel assembly as indicated.

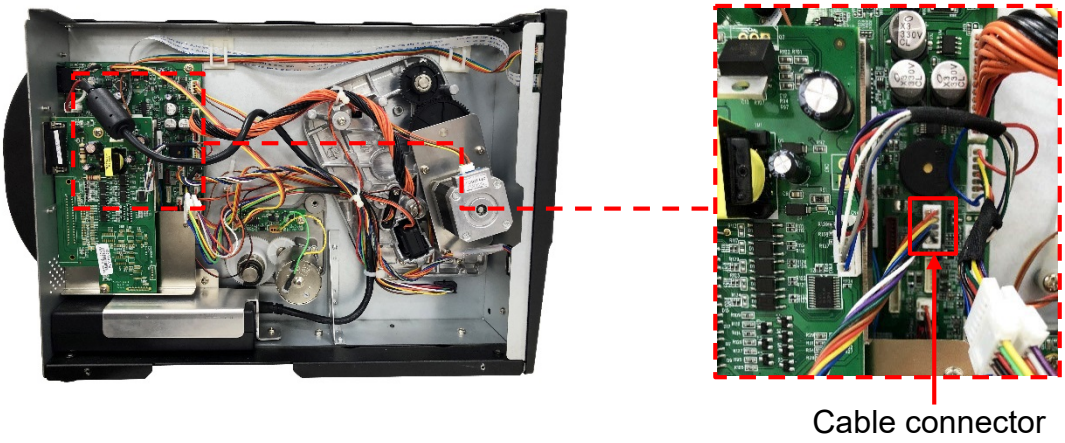


3. Open the panel assembly and Install the Bluetooth module by fix the two screws (fastened by 3.5 kg±15% kg-cm) as indicated. Next, close the panel assembly.

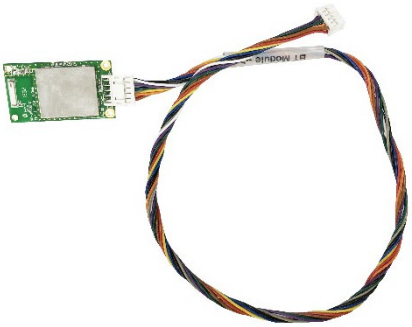




4. Connect the Bluetooth module cable on the main board as indicated.



5. Remove/Replace the Bluetooth module.



Bluetooth module

6. Reassemble the parts in the reverse procedures.

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.

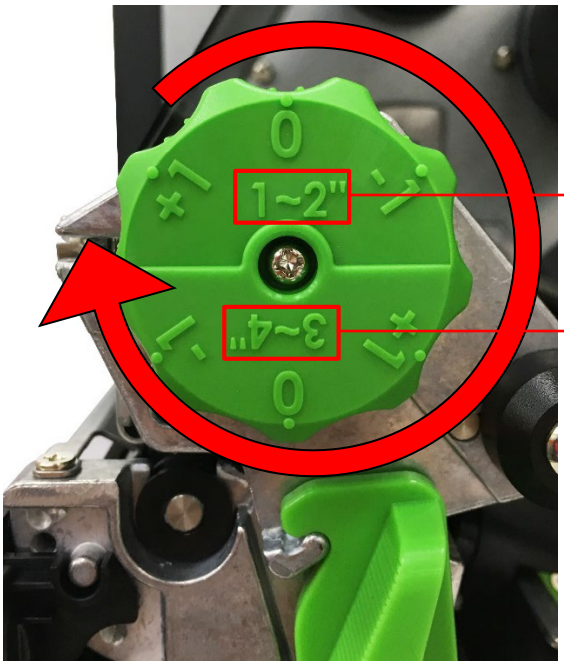
Problem	Possible Cause	Recovery Procedure
Power indicator does not illuminate	* The power cord is not properly connected. * The power switch is closed.	* Plug the power cord in printer and outlet. * Switch the printer on.
`Carriage Open`	* The printer carriage is open.	* Please engage the release levers.
`No Ribbon`	* Running out of ribbon. * The ribbon is installed incorrectly.	* Supply a new ribbon roll. * Please refer to the steps in user's manual to reinstall the ribbon.
`No Paper`	* Running out of label. * The label is installed incorrectly. * Gap/black mark sensor is not calibrated.	* 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.
`Paper Jam`	* Gap/black mark sensor is not set properly. * Make sure label size is set properly. * Labels may be stuck inside the printer mechanism.	* Calibrate the media sensor. * Set media size correctly. * Remove the stuck label inside the printer mechanism.
`Take Label`	* Peel function is enabled.	* If the peeler module is installed, please remove the label. * If there is no peeler module in front of the printer, please switch off the printer and install it. * Check if the connector is plugging correctly.

Not Printing	* Check if interface cable is well connected to the interface connector. * Check if wireless or Bluetooth device is well connected between host and printer. * The port specified in the Windows driver is not correct.	* Re-connect cable to interface or change a new cable. * Please reset the wireless device setting. * Select the correct printer port in the driver. * Clean the printhead. * Printhead's harness connector is not well connected with printhead. Turn off the printer and plug the connector again. * 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.
Memory full (FLASH / DRAM)	* The space of memory is full.	* Delete unused files in the memory.
Poor Print Quality	* Ribbon and media is loaded incorrectly * Dust or adhesive accumulation on the print head. * Print density is not set properly. * Printhead element is damaged. * Ribbon and media are incompatible. * The printhead pressure is not set properly.	* 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. * Adjust the printhead pressure adjustment knob. * The release lever does not latch the printhead properly.
LCD panel is dark and keys are not working.	* The cable between main PCB and LCD panel is loose.	* Check if the cable between main PCB and LCD is secured or not.
LCD panel is dark but the LEDs are light.	* The printer initialization is unsuccessful.	* Turn OFF and ON the printer again. * Initialize the printer.
LCD panel is dark and LEDs are lit on, but the label is feeding forward.	* The LCD panel harness connector is loose.	* The LCD panel harness connector is plugged upside down.
Ribbon encoder sensor doesn't work.	* The ribbon encoder sensor connector is loose.	* Fasten the connector.
Ribbon end sensor doesn't work.	* The connector is loose. * The ribbon sensor hole is covered with dust.	* Check the connector. * Clear the dust in the sensor hole by the blower.
Peel sensor is not working.	* Peel sensor is not located on the correct position. * The connector is loose.	* Make sure that the media goes through the Peel sensor. * Plug the connect cable correctly.
Cutter is not working.	* The connector is loose.	* Plug in the connect cable correctly.
Label feeding is not stable (skew) when printing.	* The media guide does not touch the edge of the media.	* 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.

Skip labels when printing.	* Label size is not specified properly. * Sensor sensitivity is not set properly. * The media sensor is covered with dust.	* 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.
Missing printing on the left or right side of label.	* Wrong label size setup.	* Set the correct label size.
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 chapter 4.2. * 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.

4.2 Mechanism Fine Adjustment to Avoid Ribbon Wrinkles

4.2.1 Print Head Pressure Adjustment Knob



Print Head Pressure Adjustment range of 1~2" media width

Print Head Pressure Adjustment range of 3~4" media width

The print head pressure adjustment knob has 6 levels of adjustment for 1~2" and 3~4" media widths. Because the printer's paper alignment is to the left side of mechanism, different media widths require the different pressure to print the label correctly. Therefore, it may require adjusting pressure to get the best print quality.

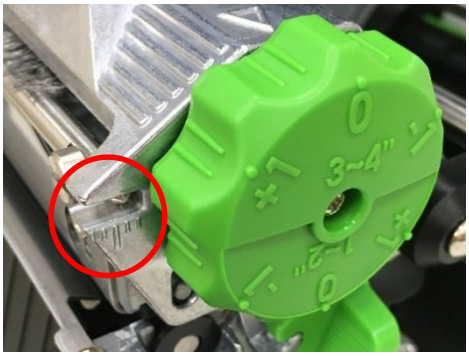
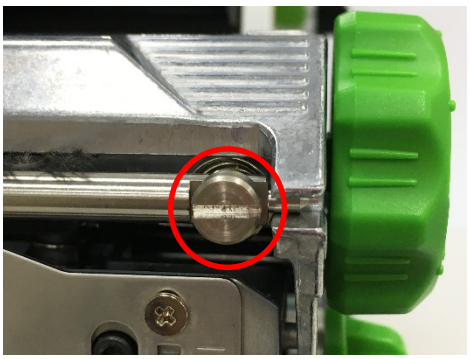
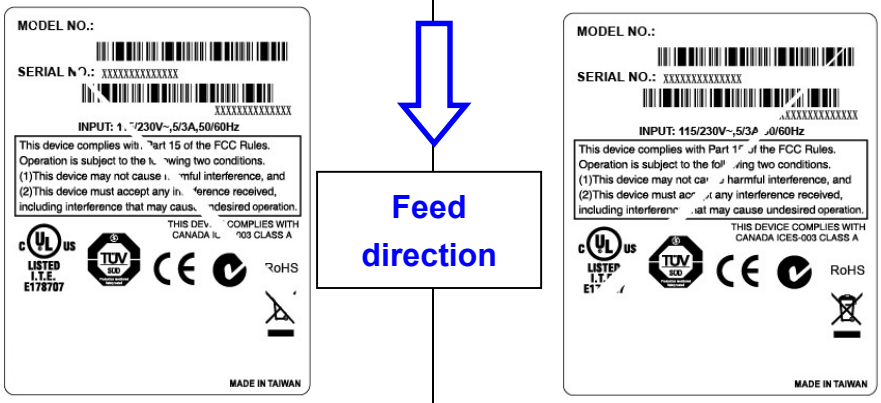
4.2.2 Use Ribbon Tension Adjustment Knob Module to avoid Ribbon Wrinkles

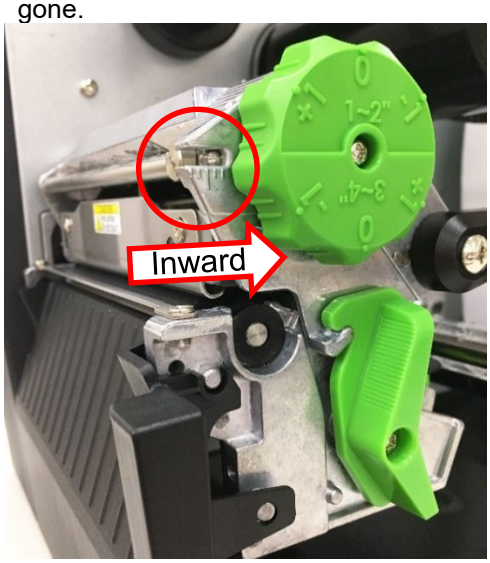
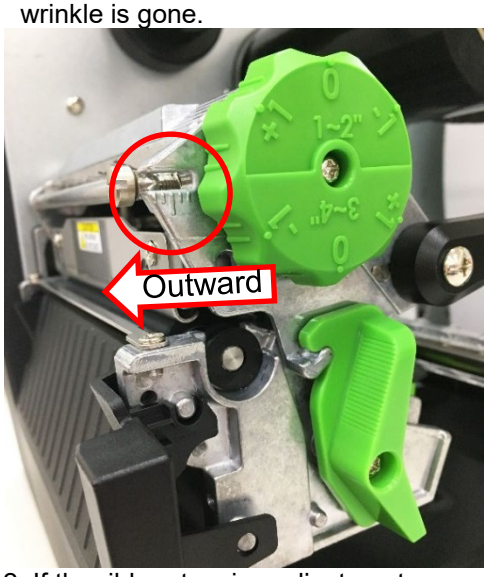
Ribbon Tension Adjustment Knob has five positions for adjustment. Because the printer's ribbon alignment is to the left side of mechanism, different ribbon or media widths require different ribbon tension to print correctly. Therefore, it may require to adjust the ribbon tension adjustment knob to avoid wrinkle and get your best print quality.

Ribbon Tension Adjustment Knob

4.2.3 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.

<table>
<tr><td>Adjustable Printer Parts</td><td colspan="2">Ribbon Tension Adjustment Knob has 5 positions for adjustment. Use flat blade driver to change the ribbon tension position.
 
Ribbon Tension Adjustment scales
 
Ribbon Tension Adjustment Knob</td></tr>
<tr><td>Symptom</td><td>1. Wrinkle happens from label lower right to upper left direction (“ ` ”)</td><td>2. Wrinkle happens from label lower left to upper right direction (“ ´ ”)</td></tr>
<tr><td>Wrinkle Example</td><td colspan="2"> 
</td></tr>
</table>

	If the wrinkle on the label starts from the lower right side to upper left side, please do following adjustment. 1. Switch the ribbon tension adjustment knob clockwise per 1 level and print the label again to check if the wrinkle is gone.  2. If the ribbon tension adjustment knob has positioned on the level of innermost side but didn't improve the ribbon wrinkle, please switch the print head pressure adjustment knob per 1 level and print the label again to check if the wrinkle is gone. 3. If the wrinkle can't be avoided, please contact the Customer Service Department of your purchased reseller or distributor for service.	If the wrinkle on the label starts from the lower left side to upper right side, please do following adjustment. 1. Switch the ribbon tension adjustment knob counterclockwise per 1 level and print the label again to check if the wrinkle is gone.  2. If the ribbon tension adjustment knob has positioned on the level of outermost side but didn't improve the ribbon wrinkle, please switch the print head pressure adjustment knob per 1 level and print the label again to check if the wrinkle is gone. 3. If the wrinkle can't be avoided, please contact the Customer Service Department of your purchased reseller or distributor for service.

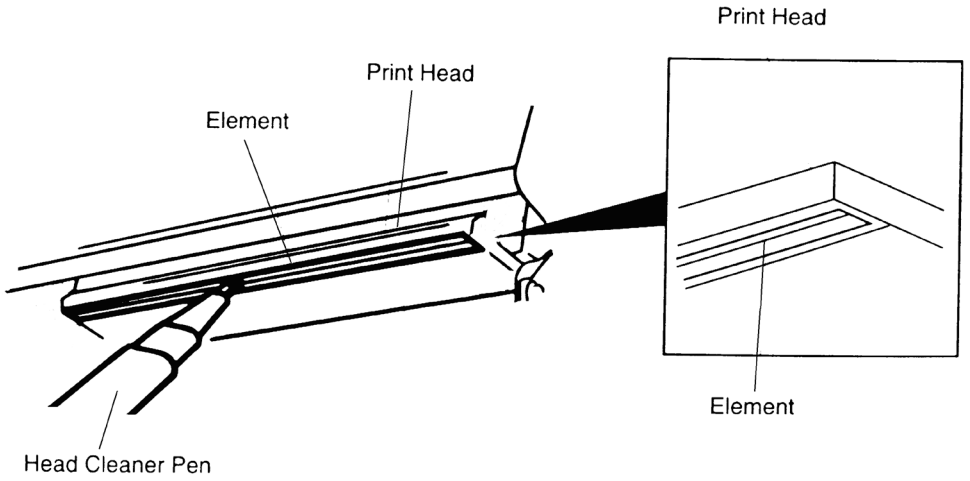
5. MAINTENANCE

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

1. 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
Print Head	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.	Clean the print head when changing a new ribbon roll.
		
Platen Roller	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.	Clean the platen roller when changing a new ribbon roll.
Tear Bar/Peel Bar	Use the lint-free cloth with 100% ethanol to wipe it.	As needed

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.

UPDATE HISTORY

Date	Content	Editor
2018/12/14	Revise Ch. 4.1 Common Problems	Kate
2019/2/11	Revise 3.4 Replacing the Print head ASS'Y Print head module assembly spare part diagram Add Ch.3.15 GPIO Interface Assembly Installation (Option)	Kate
2019/2/19	Revise Ch.3.15 GPIO Interface Assembly Installation (Option)	Kate
2019/10/4	Revise Ch.3.13 Peel-off Kit Installation (Option) Add Ch.3.16 Bluetooth Module Installation (Option)	Kate
2019/10/23	Add Ch.3.9 Replacing the Internal Full Rewinder Kit (Option)	Kate
2019/12/10	Revise Ch.3.14 Peel-off Kit Installation (Option) section B. Rewind Spindle and Media Guide Bar Installation	Kate
2019/12/30	Add the torque value of the screws	Kate
2020/2/19	Modify Ch. 3.12 Replacing the Gap/Black Mark Sensor Module	Camille
2020/3/4	Add Cutter/peel-off Sensor Connector pin info on Ch. 2.2	Camille

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