

Industrial Barcode Printer

# MB240 Series

*Thermal Transfer • Direct Thermal*

## Series Models

MB240/MB340

MB240T/MB340T



Service Manual

# Copyright Information

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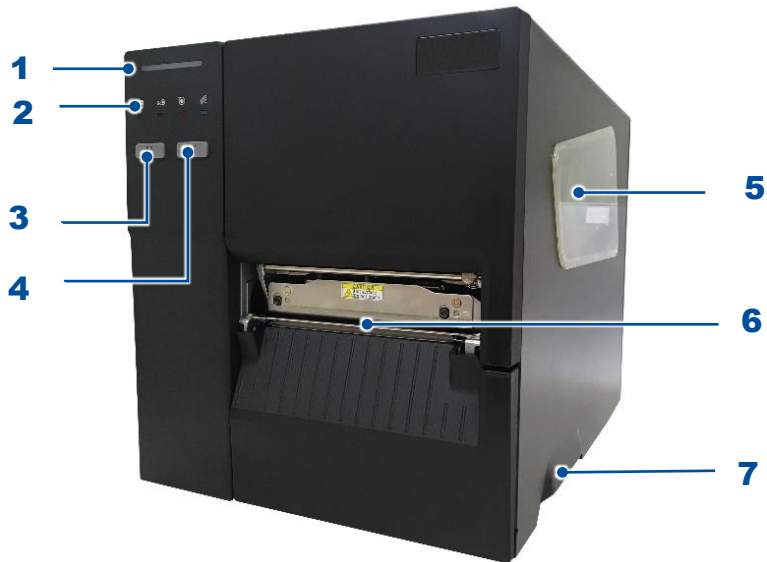
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# 1. Fundamental of the System

## 1.1 Printer Overview

### Front View

#### MB240/MB240T Series

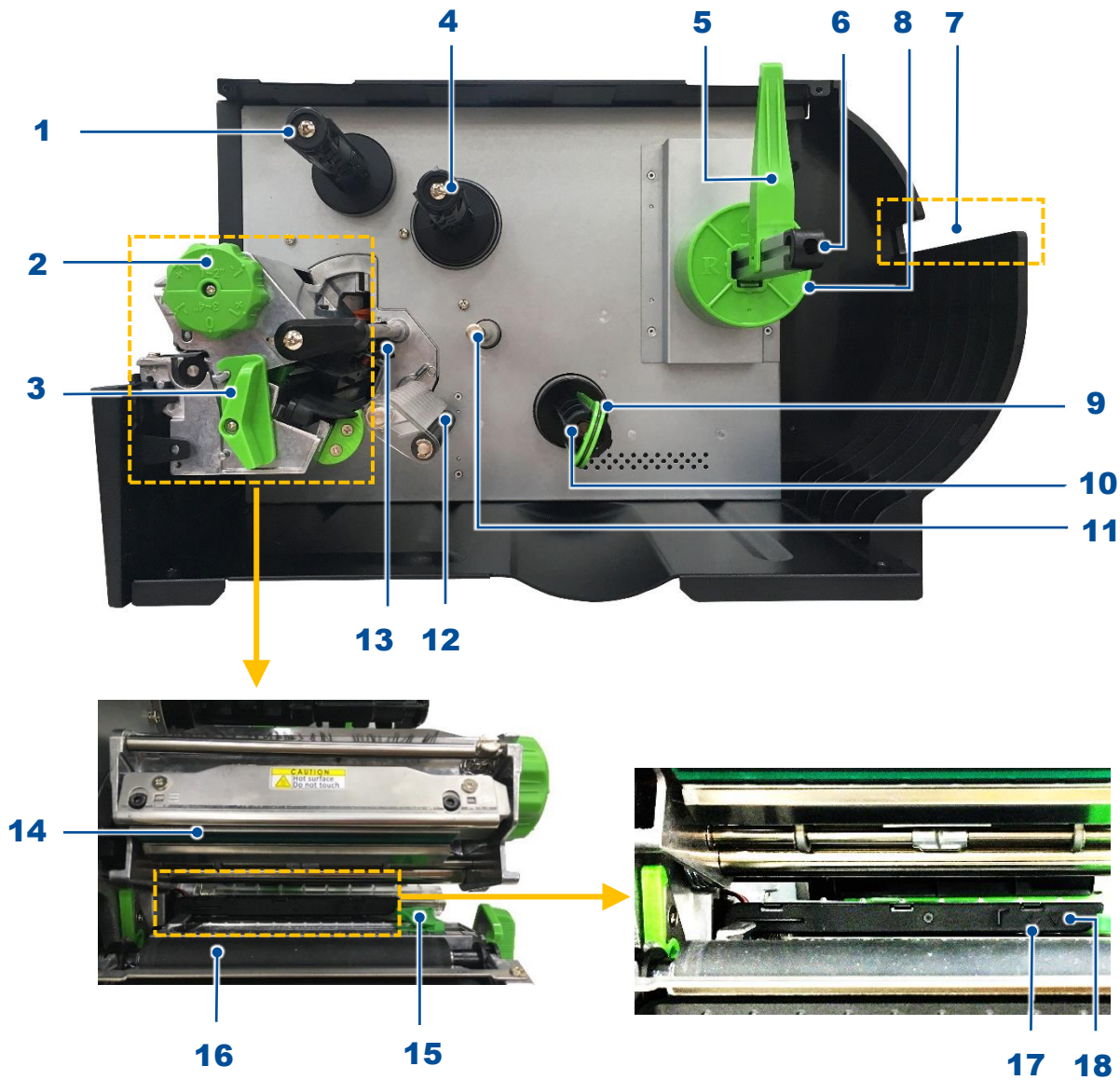


1. LED indicator
2. Icons and LED indicators
3. Pause button
4. Feed button
5. Media view window
6. Paper exit chute
7. Media cover handle



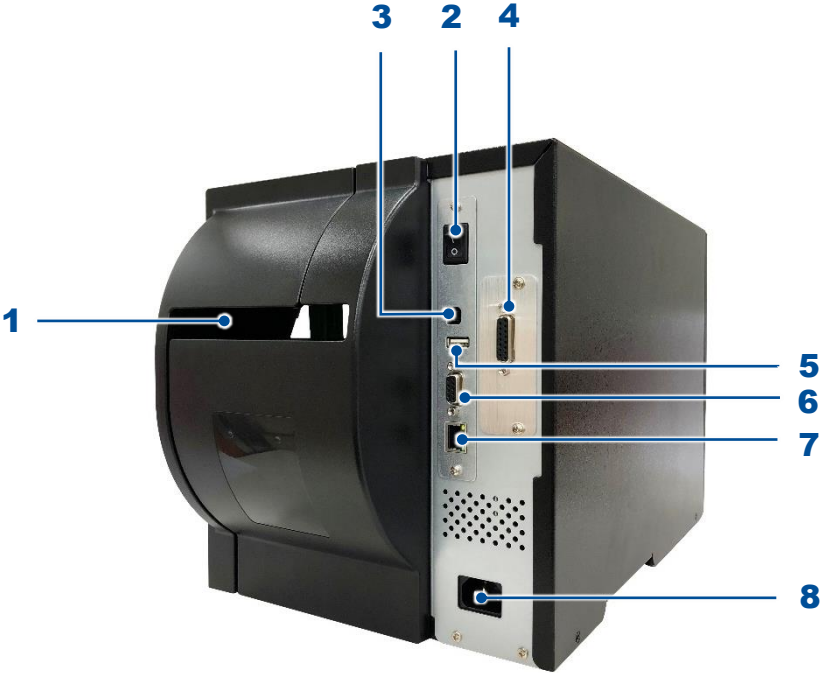
1. LED indicator
2. LCD touch display
3. Front panel buttons
4. Media view window
5. Paper exit chute
6. Media cover handle

# Interior View



- 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



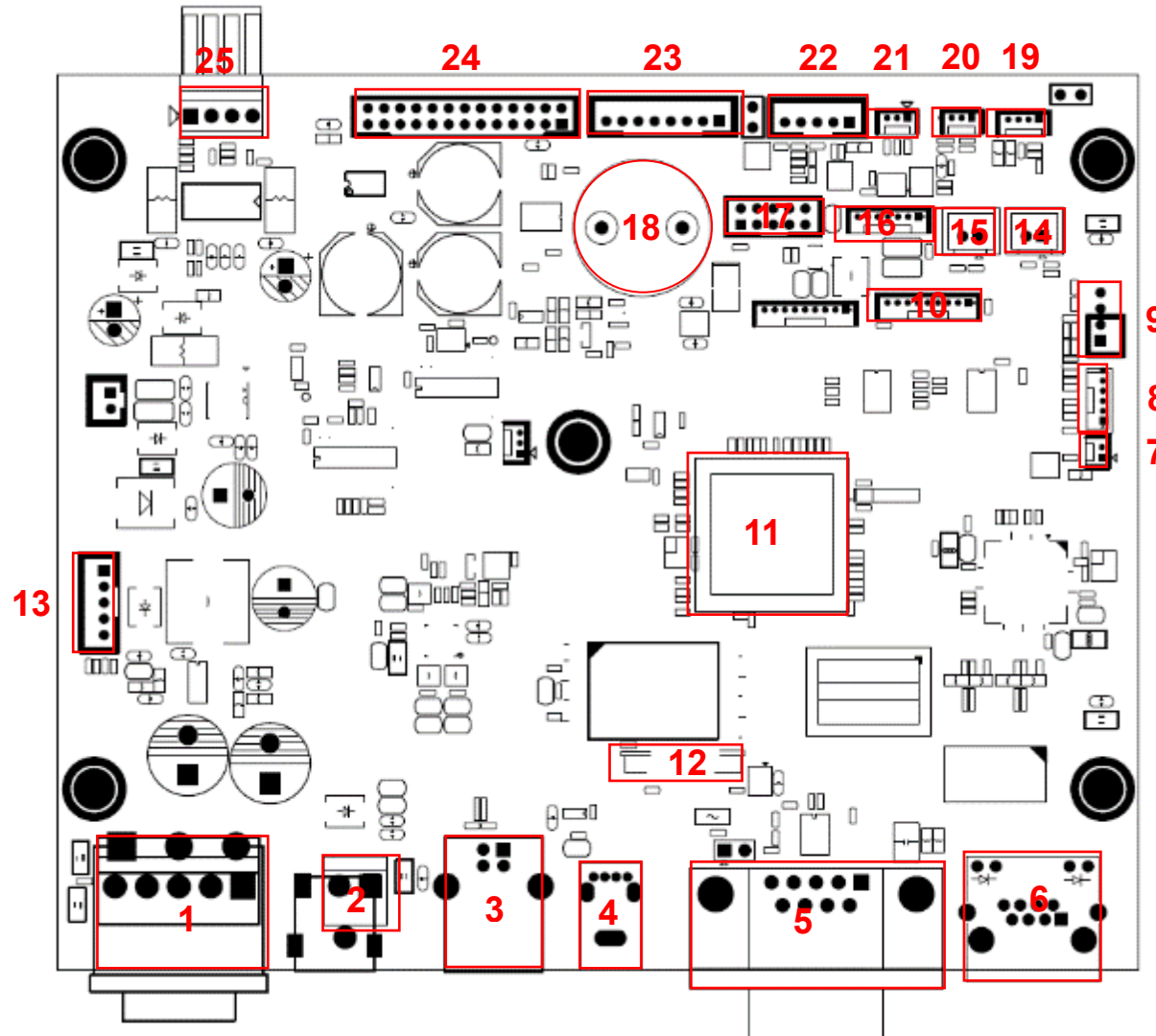
- 1. External label entrance chute
- 2. Power switch
- 3. USB interface (High speed mode)
- 4. Slot-in Wi-Fi or GPIO interface (Option)
- 5. USB host
- 6. RS-232C interface
- 7. Ethernet interface
- 8. Power cord socket

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

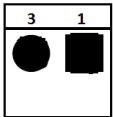
## 2. Electronics

### 2.1 Summary of the Board Connectors

*Main board for MB240/ MB240T Series*





Connector	Description	Remark						
1	Power switch connector	SW1						
2	Power supply (24V DC) connector  <table border="1" data-bbox="869 240 1507 443"> <thead> <tr> <th>Pin name</th> <th>CONFIGURATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+24V</td> </tr> <tr> <td>3</td> <td>GND</td> </tr> </tbody> </table>	Pin name	CONFIGURATION	1	+24V	3	GND	DCIN2
Pin name	CONFIGURATION							
1	+24V							
3	GND							
3	USB client connector	USB1						
4	USB host connector	USB2						
5	RS-232C connector	RS1						
6	Ethernet connector	LAN1						
7	RTC battery connector	BT1						
8	LED & key & touch-function connector	CON19						
9	Head open sensor connector	CON1						
10	LCD panel (Interface 1, SPI LCD) connector	CON23						
11	Micro processor	-						
12	LCD panel (Interface 2, parallel LCD) connector	CON9						
13	Liner rewinder connector	CON26						
14	Gap receiver sensor connector	CON5						
15	Gap emitter sensor connector	CON20						
16	RFID connector	CON8						
17	Wi-Fi / Bluetooth connector	CON13						
18	Buzzer	BZ1						
19	Ribbon end sensor connector	CON11						
20	Ribbon encoder sensor connector	CON12						
21	Black mark sensor connector	CON21						

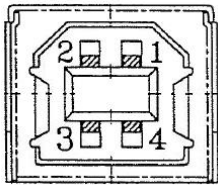
Connector	Description	Remark
22	Peel-off sensor connector	CON10
23	Cutter connector	CON6
24	Print head connector	CON24
25	Stepping motor connector	CON16

## 2.2 Interface Pin Configuration

### RS-232C

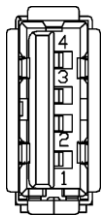
PIN	CONFIGURATION
1	+5 V
2	TXD
3	RXD
4	CTS
5	GND
6	RTS
7	N/C
8	RTS
9	N/C

### USB Device



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

### USB Host

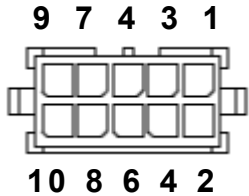


PIN	CONFIGURATION
1	5V
2	D-
3	D+
4	GND

## Ethernet

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

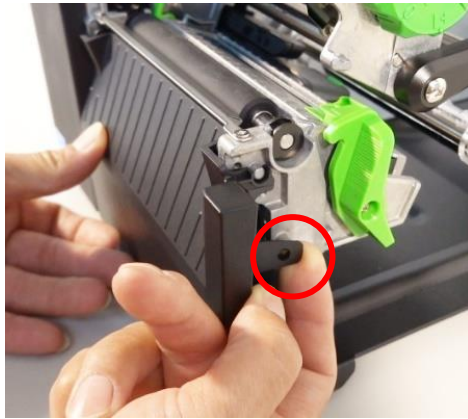
## Cutter/peel-off Sensor Connector

	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

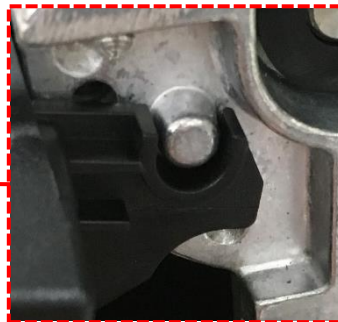
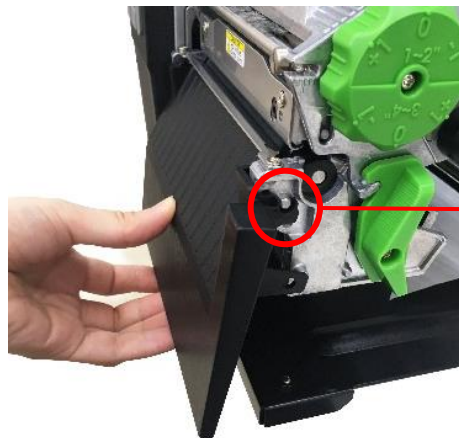
1. Open the media cover.
2. Move the tab outward then pull the panel inward to remove the lower front panel.



Lower front panel

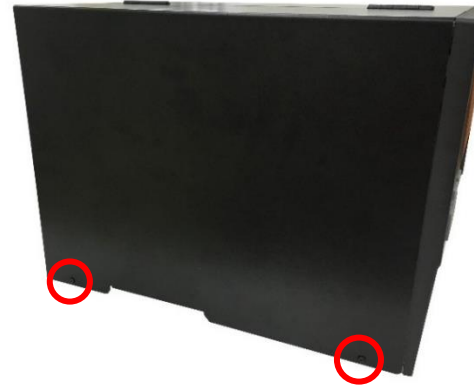
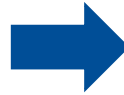
3. Reassemble the parts in the reverse procedures.

**Note:** When install the lower front panel, please attach the hook along the protrusion of print head mechanism.

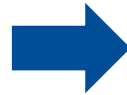


## 3.2 Remove the Electronics Cover

1. Open the printer right side cover and remove 2 screws (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) on the electronic cover as indicated.
2. Turn the printer to left side and remove 2 screws (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) on the electronic cover.



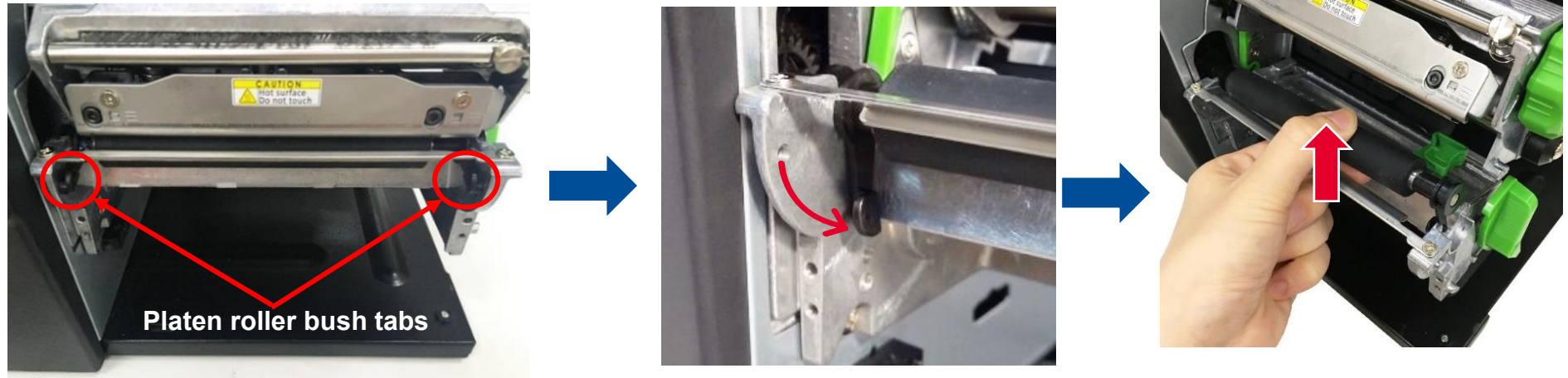
3. Remove the electronic cover.



4. Reassemble the parts in the reverse procedures.

### 3.3 Replacing the Platen Roller Assembly

1. Refer to [Remove the Lower Front Panel](#) to remove the lower front panel.
2. Release the platen roller bush tabs then push it to the end of mechanism on both sides as indicated.



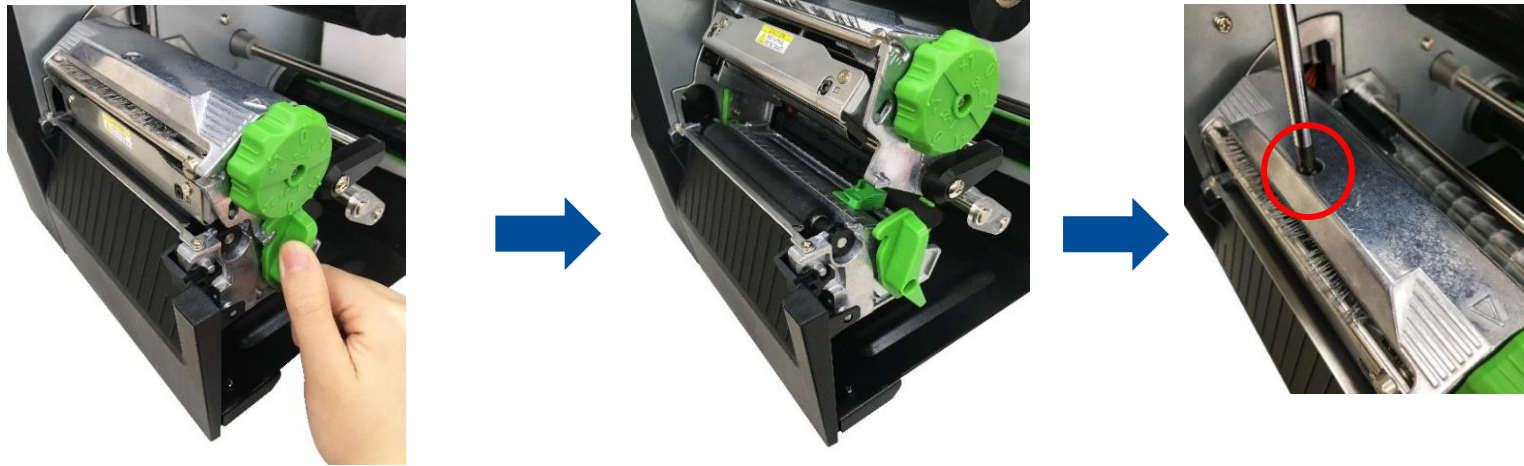
3. Pull up and remove platen roller assembly.



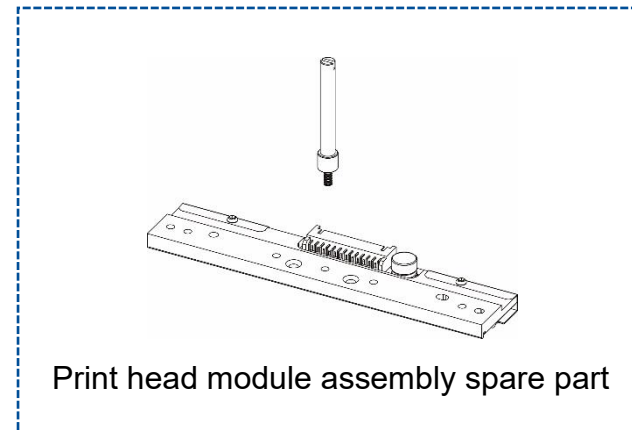
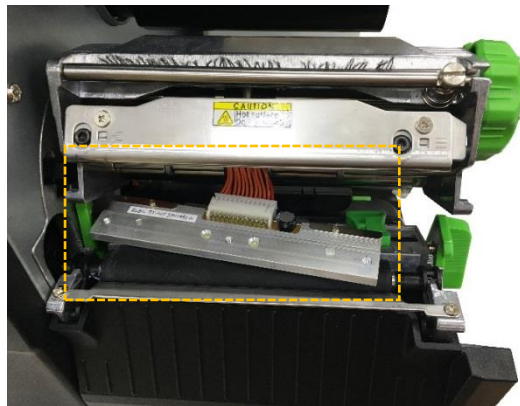
4. Remove/Replace the platen roller assembly.
5. Reassemble the parts in the reverse procedures.

## 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 1 screw (fastened by  $5\text{ kg}\pm 15\% \text{ kg-cm}$ ) as indicated.



4. Remove/Replace the print head assembly.

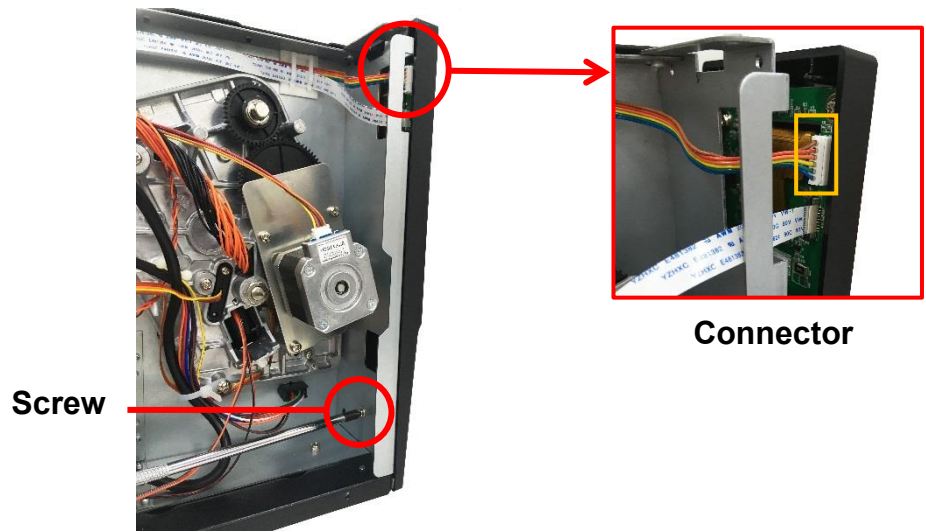


5. Reassemble the parts in the reverse procedures.



### 3.5 Replacing the LCD Panel Cover Assembly

1. Refer to [Remove the Electronics Cover](#) to remove the electronics cover.
2. Remove 1 screw (fastened by 5 kg±15% kg-cm) on left front panel cover and disconnect 2 connectors on LCD panel.
3. Remove the screws (touch panel: fastened by 3.5 kg±15% kg-cm; LED panel: fastened by 3.5 kg±15% kg-cm) and 1 contact spring connected on LCD panel.



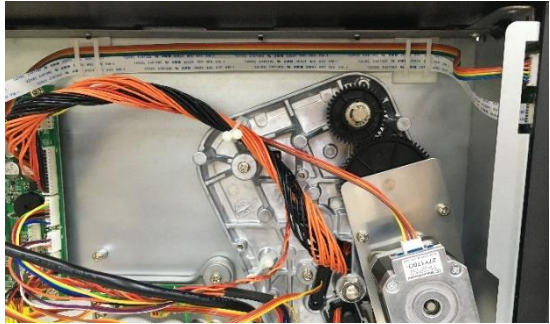
**MB240T Series**  
(Touch panel)



**MB240 Series**  
(LED panel)

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 indicated.

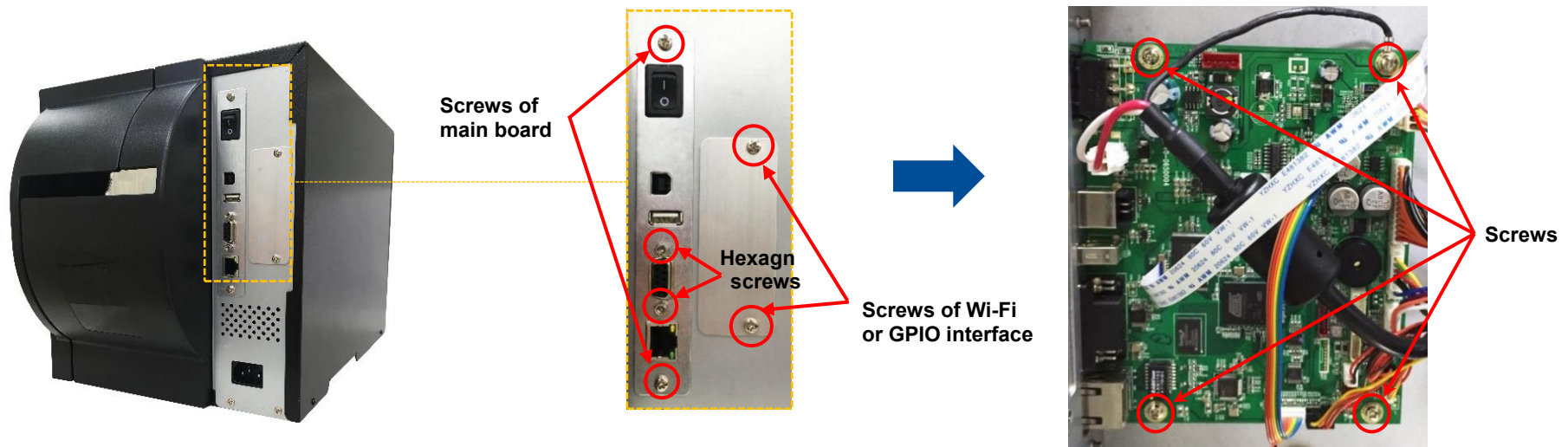


## 3.6 Replacing the Label Supply Spindle

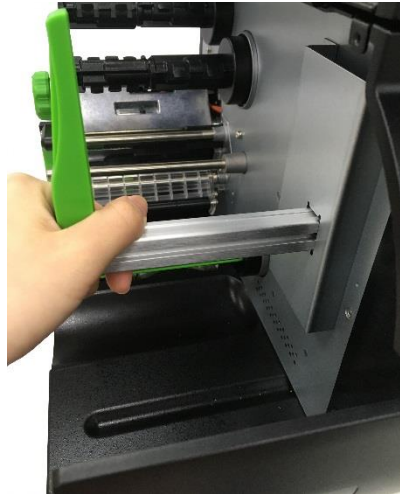
1. Refer to [Remove the Electronics Cover](#) to remove the electronics cover.



2. Remove the 2 screws (fastened by 7.5 kg±15% kg-cm) and 2 hexagon screws (fastened by 7.5 kg±15% kg-cm) on interface board; Remove the 2 screws on slot-in Wi-Fi/ GPIO interface board (if module installed).
3. Remove 4 screws (fastened by 7.5 kg±15% kg-cm) and all connectors on the main board.



4. After removing the main board, loosen the 2 screws (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) as indicated.
5. Remove/Replace the label supply spindle.



Label supply spindle

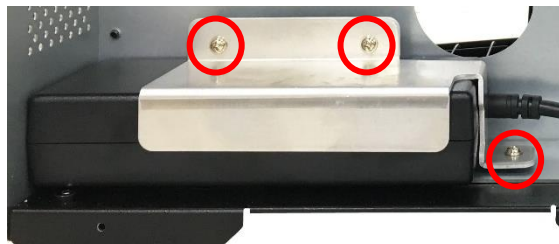
6. Reassemble the parts in the reverse procedures.

## 3.7 Replacing the Power Supply Unit

1. Refer to [Remove the Electronics Cover](#) to remove the electronics cover.



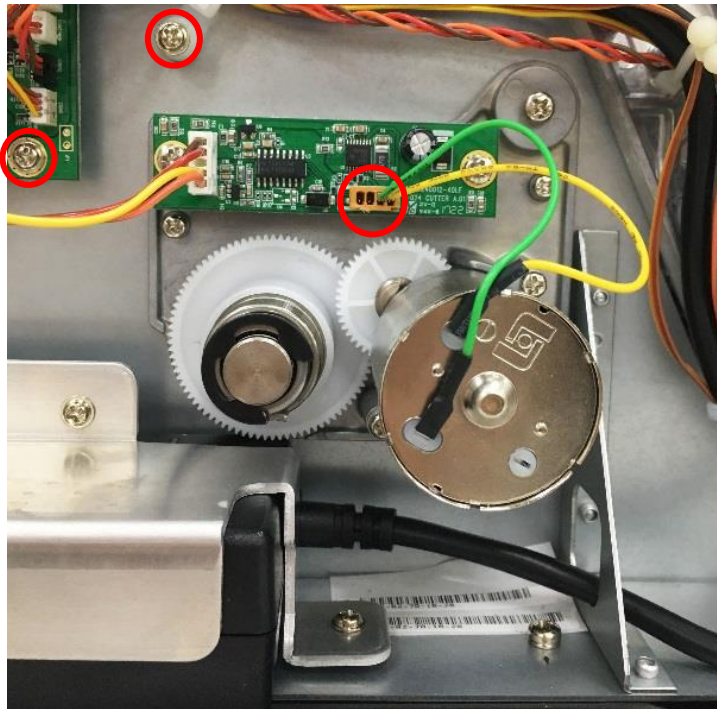
2. Remove 3 screws (fastened by 7.5 kg±15% kg-cm) as indicated below.
3. Remove 1 screw (fastened by 7.5 kg±15% kg-cm) on main board as indicated to remove power supply unit.
4. Remove/Replace the power supply unit.



5. Reassemble the parts in the reverse procedures.

### 3.8 Replacing the Internal Rewinder DC Motor

1. Refer to [Remove the Electronics Cover](#) to remove the electronics cover.
2. Remove 2 screws (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) and 1 cable connector on rewinder board as indicated.
3. Remove/Replace the DC motor module.

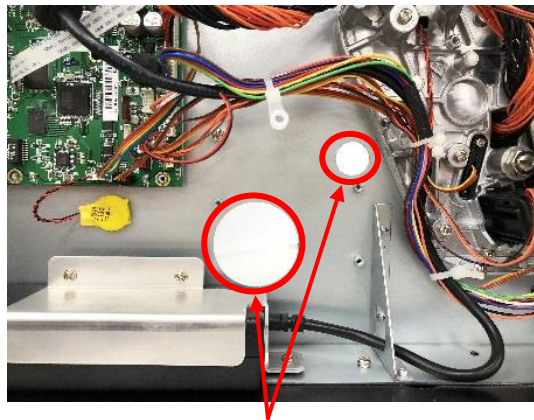


DC motor module

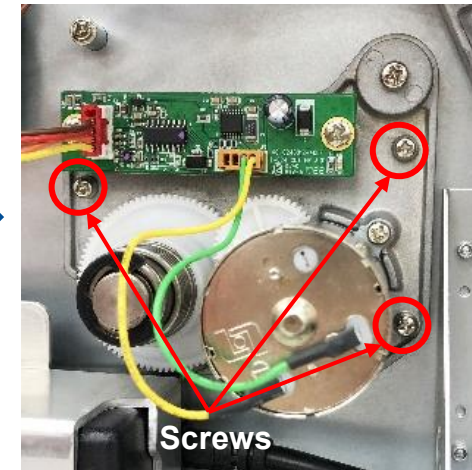
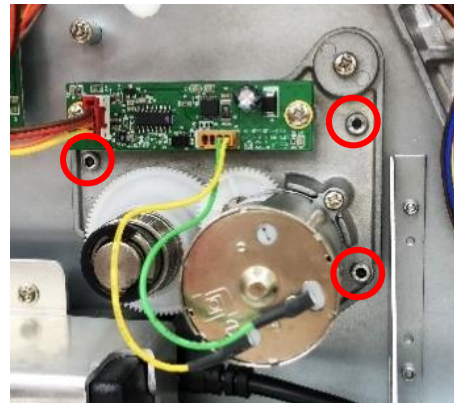
4. Reassemble the parts in the reverse procedures.

### 3.9 Replacing the Internal Full Rewinder Kit (Option)

1. Refer to [Remove the Electronics Cover](#) to remove the electronics cover.
2. Install the internal full rewriter module on the positioning holes and fix the module by fasten 3 screws (fastened by 10.5 kg± 15% kg-cm) as indicated.

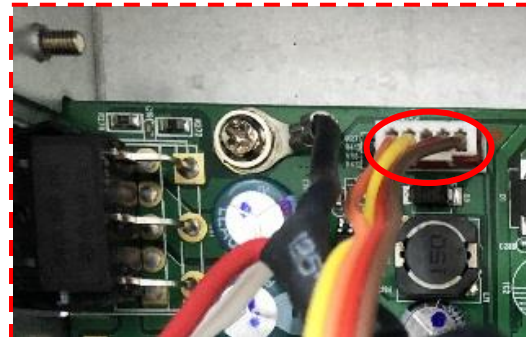


**Positioning holes**

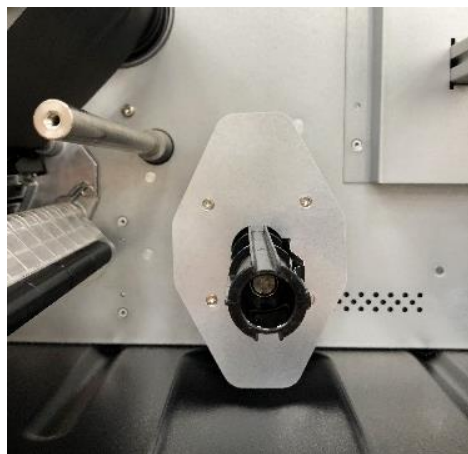


**Screws**

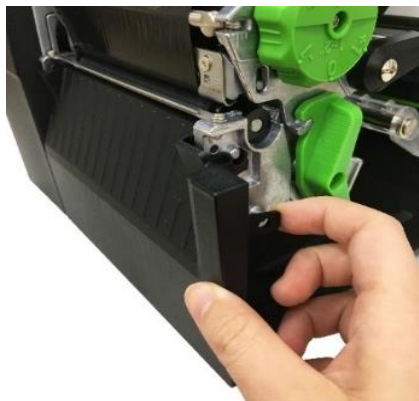
3. Install the internal full rewriter module cable on the main board cable socket as indicated.



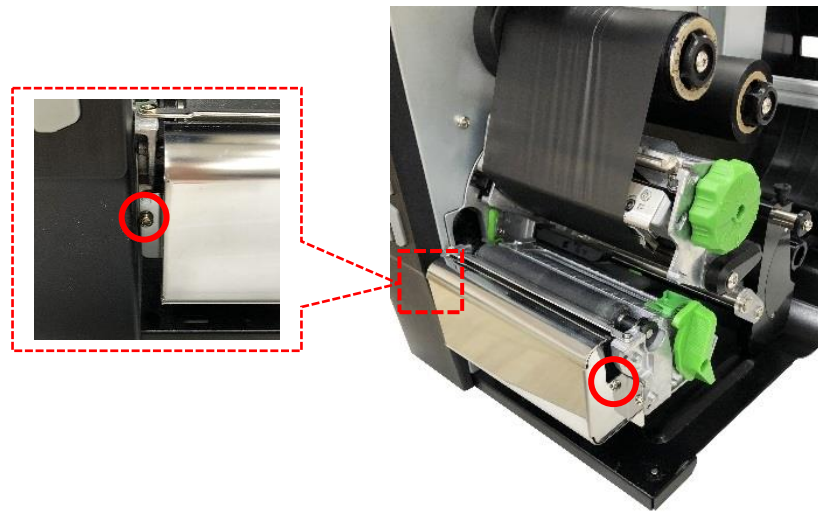
4. Reassemble the electronics cover.
5. Open the media cover and install the rewinder spindle guard.
6. Install the media guard kit.



7. Remove the lower front panel.



8. Install and fix the lower front panel for internal rewinder by fasten 2 screws (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) as indicated.



9. Complete the installation of internal full rewinder kit.

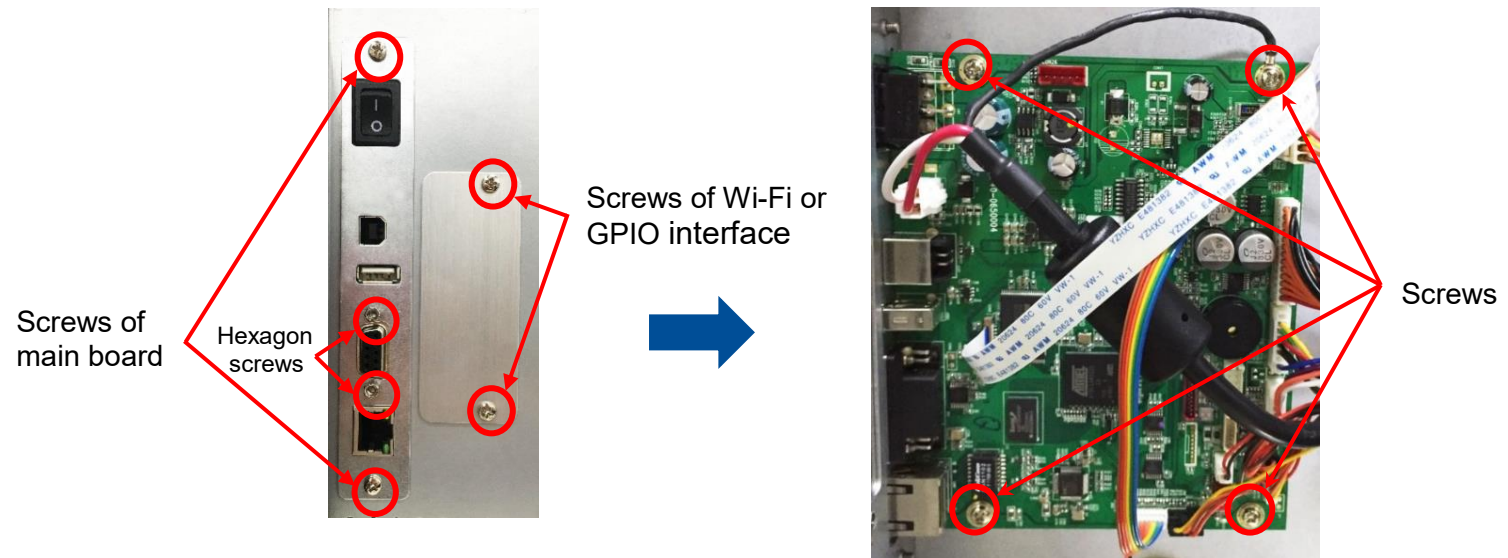


10. Reassemble the parts in the reverse procedures.



## 3.10 Replacing the Main Board

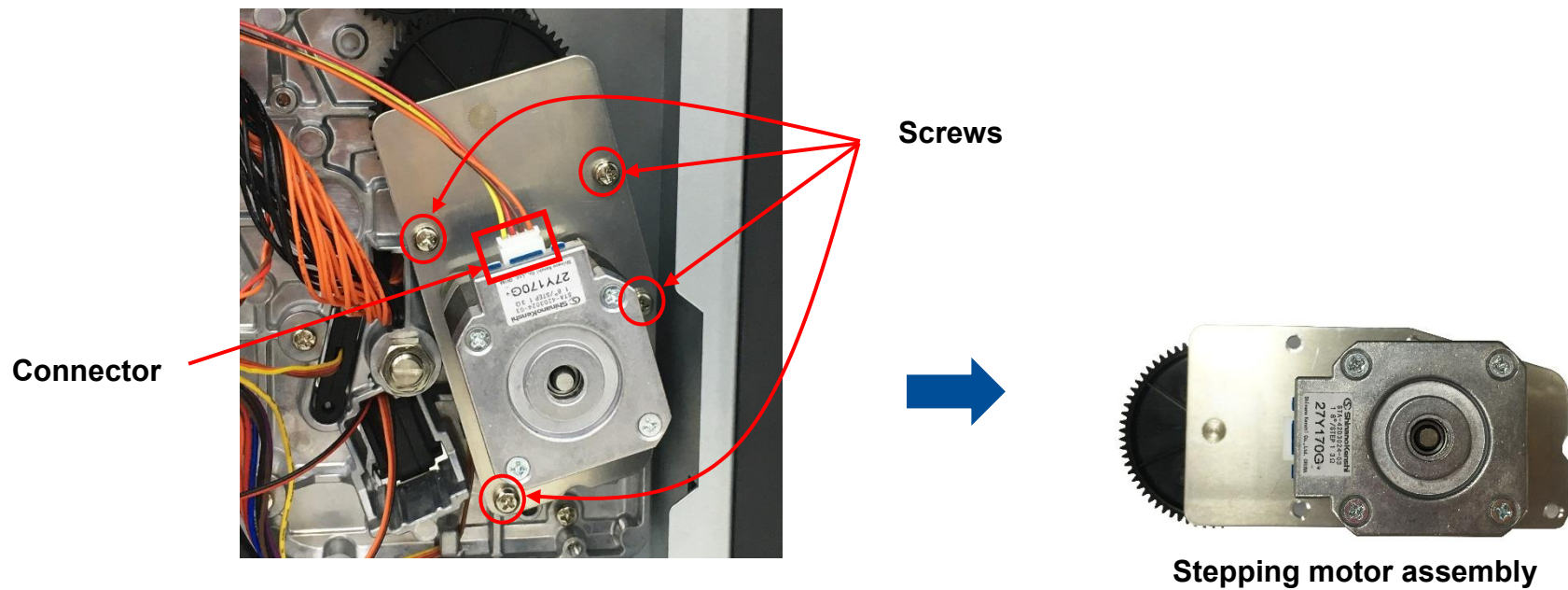
1. Refer to [Remove the Electronics Cover](#) to remove the electronics cover.
2. Remove 2 screws (fastened by 5.5 kg±15% kg-cm) on slot-in Wi-Fi/ GPIO interface board (if module installed).
3. Remove 2 screws (fastened by 5.5 kg±15% kg-cm) and 2 hexagon screws (fastened by 7.5 kg±15% kg-cm) on interface board.
4. Remove 4 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

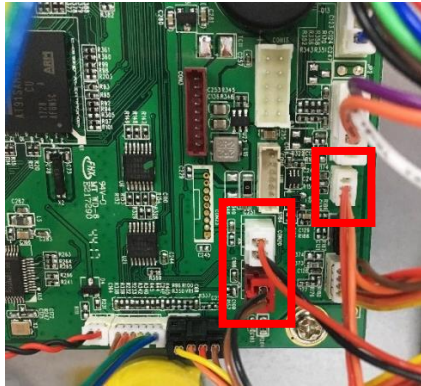
1. Refer to [Remove the Electronics Cover](#) to remove the electronics cover.
2. Remove 4 screws (fastened by 10.5 kg±15% kg-cm) and 1 connector on the stepping motor assembly.
3. Remove/Replace the stepping motor assembly (including gears and stepping motor).



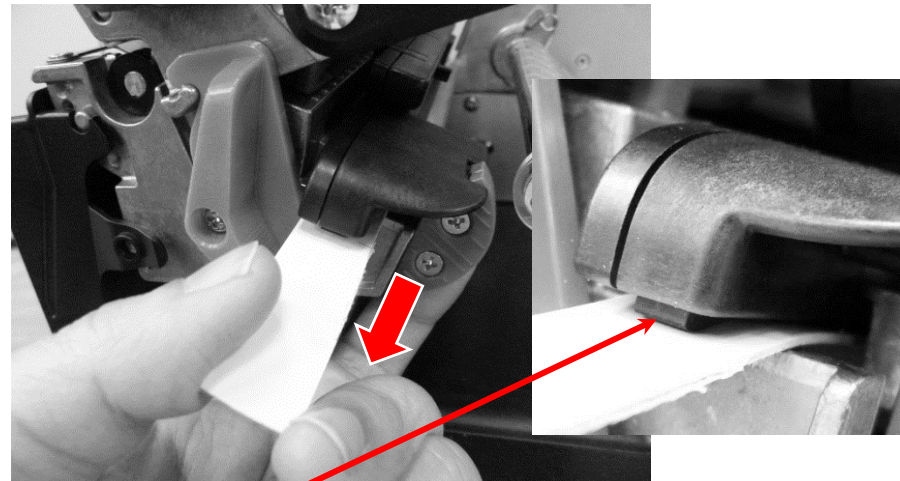
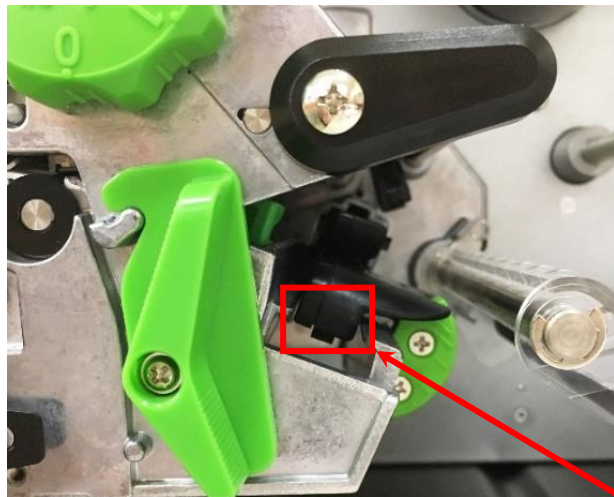
4. Reassemble the parts in the reverse procedures.

## 3.12 Replacing the Gap/Black Mark Sensor Module

1. Refer to [Remove the Electronics Cover](#) 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.



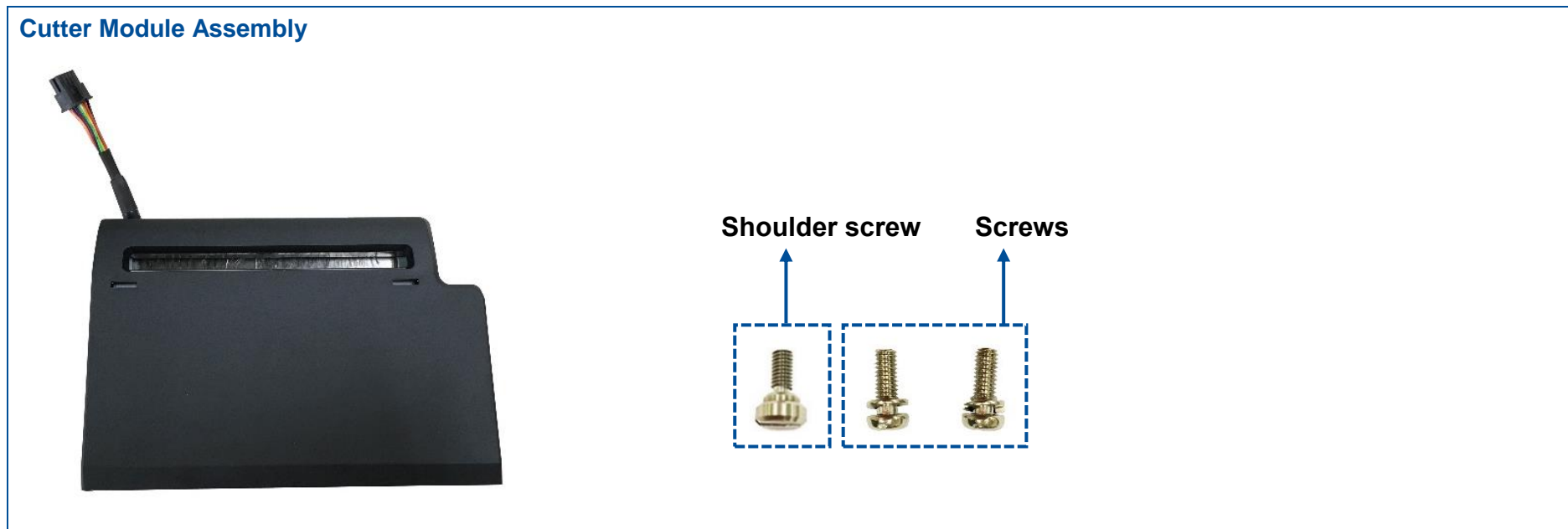
Plastic tab

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

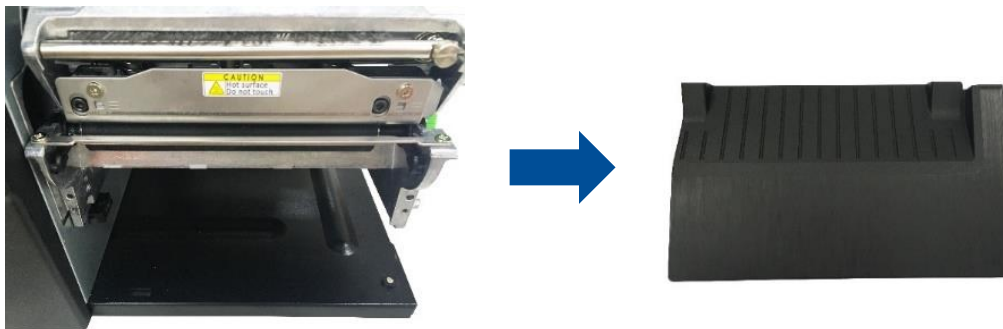


5. Reassemble the parts in the reverse procedures.

### 3.13 Cutter Module Installation (Option)



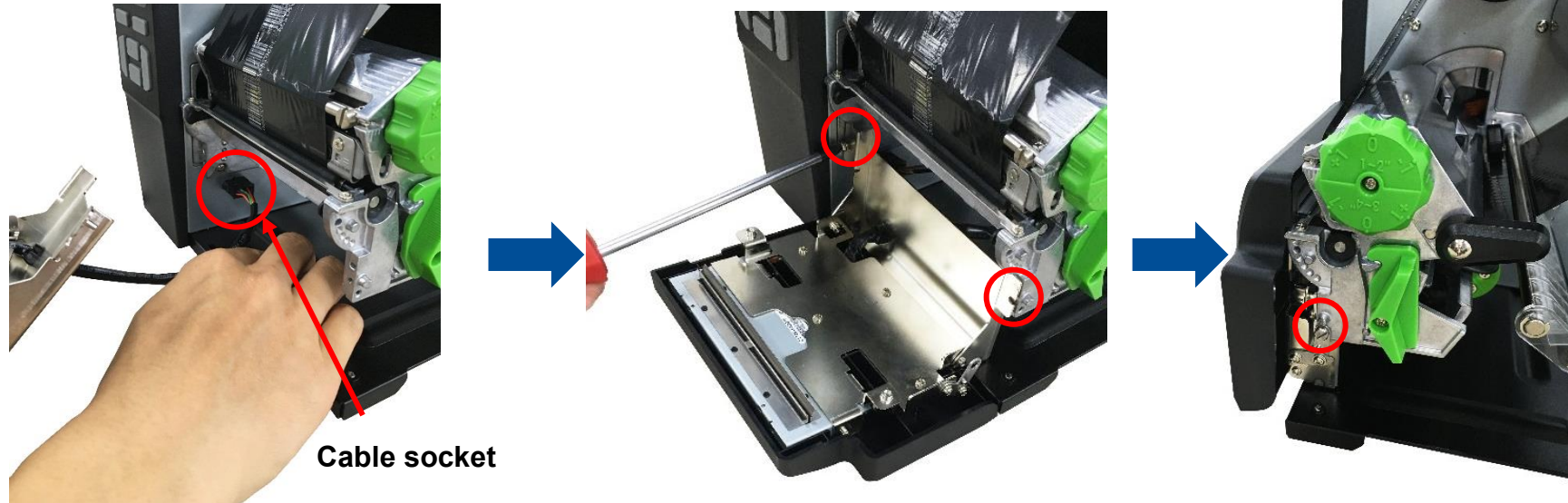
1. Refer to [Remove the Lower Front Panel](#) to remove the lower front panel.



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

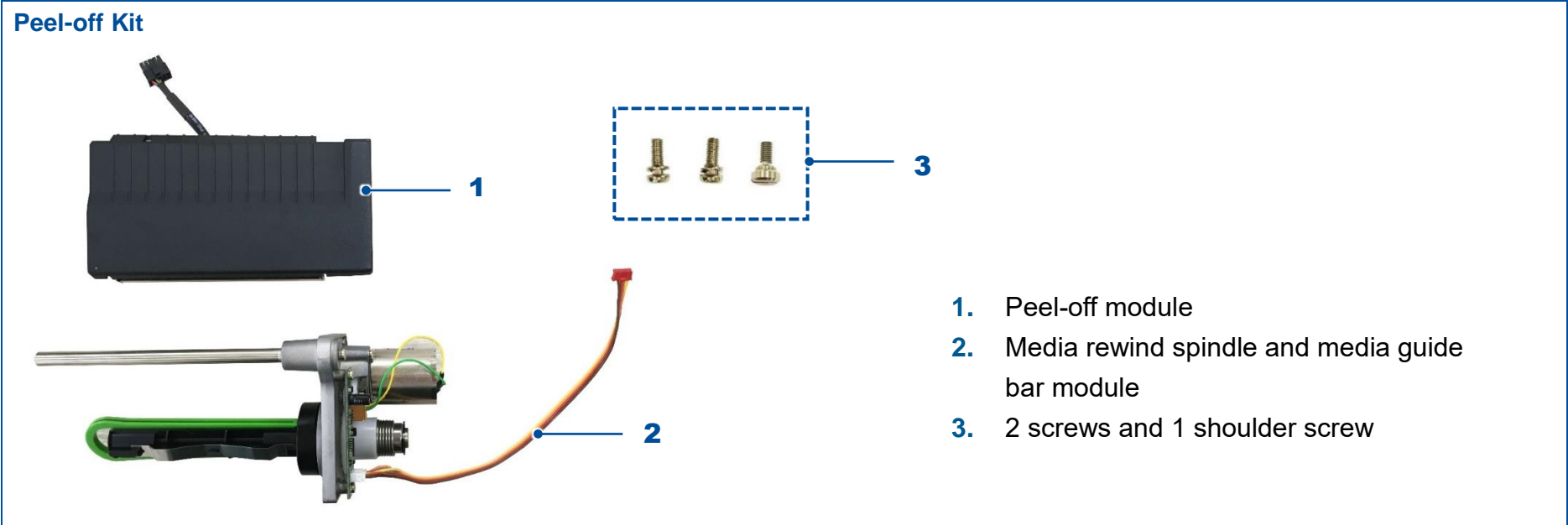
3. Fasten the 2 screws (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) on printer mechanism as indicated.
4. Close cutter module and fasten 1 shoulder screw (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) to fix hinge

**Note:** Please make sure shoulder screw did not interfere with hinge.



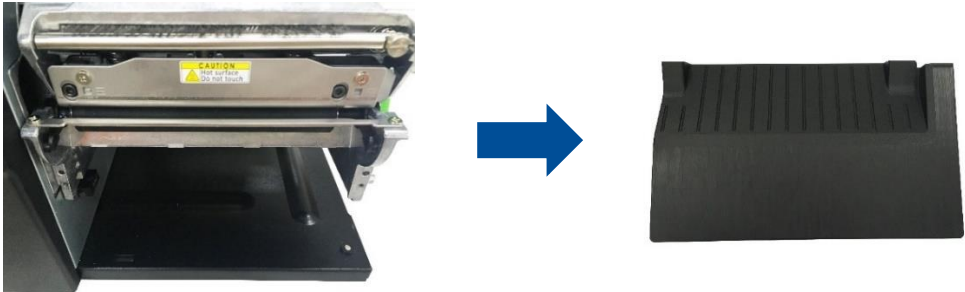
5. Remove/Replace the cutter module.
6. Reassemble the parts in the reverse procedures.

### 3.14 Peel-off Kit Installation (Option)



#### ■ Peel-off Sensor Module Installation

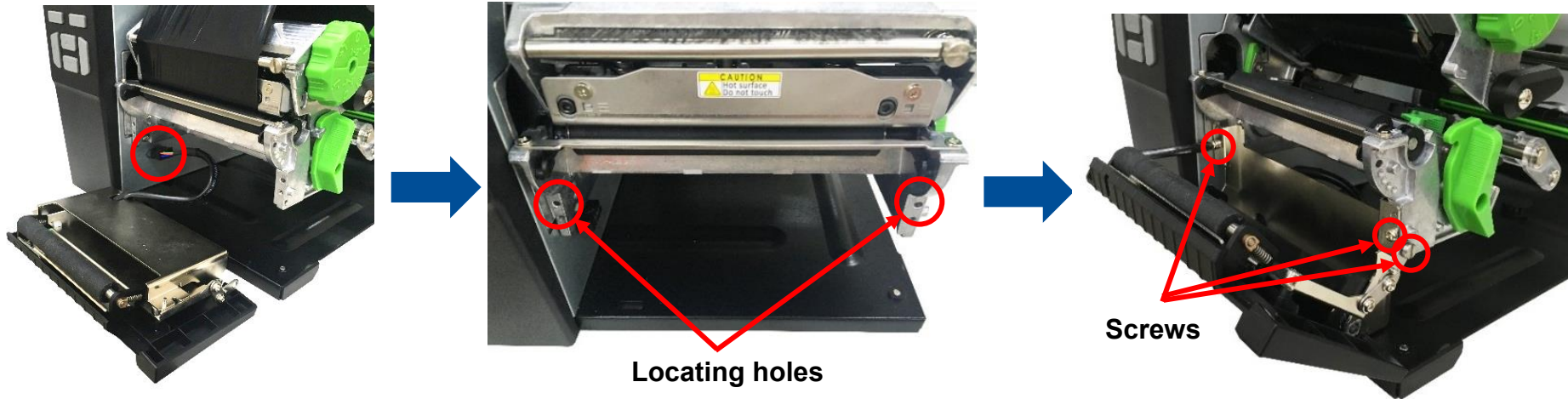
1. Refer to [Remove the Lower Front Panel](#) to remove the lower front panel.



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.

Place the peel-off sensor module on locating holes and fix 2 screws (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) and 1 shoulder screw (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) as indicated.



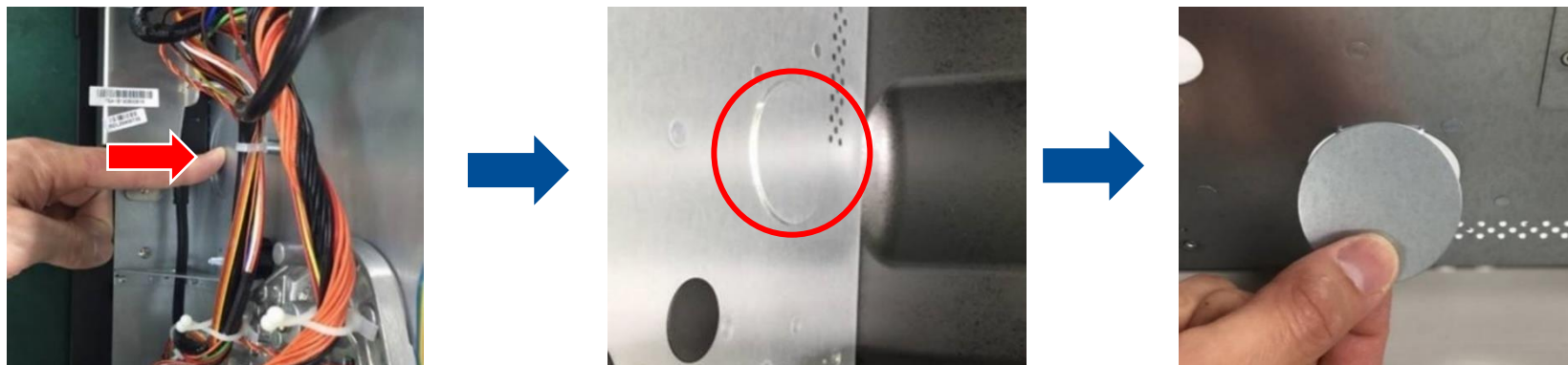
3. Close the peel-off sensor module and complete installation.
4. Remove/Replace the peel-off sensor module by the above reverse procedures.

### ■ Rewind Spindle and Media Guide Bar Installation

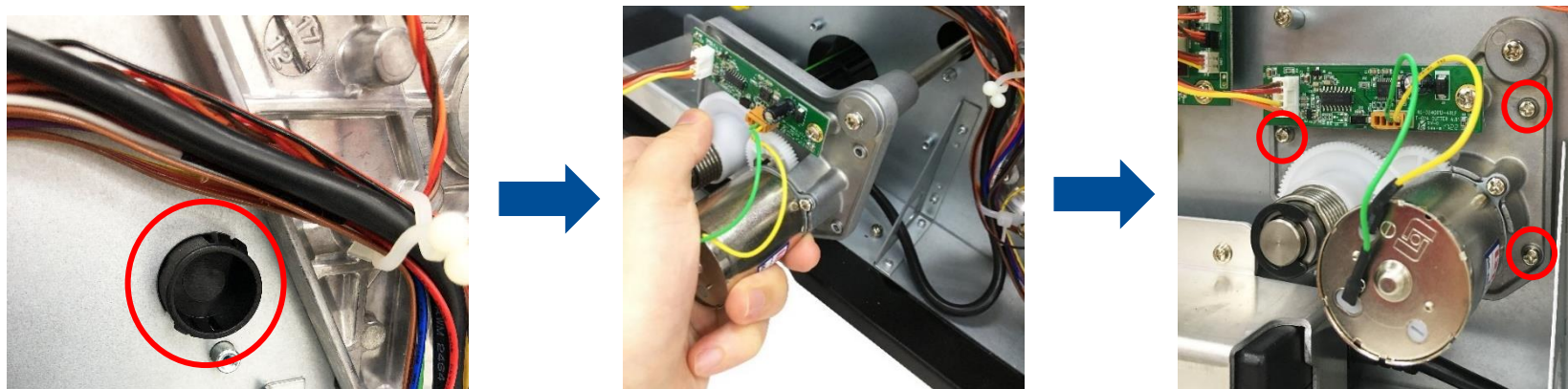
1. Refer to [Remove the Electronics Cover](#) to remove the electronic cover.
2. Push the media guide bar cover by 3kg ~ 5kg strength on the printer electronic side as indicated
3. Media Guide Bar Cover will be partially released on the printer middle plate.



4. Remove the media guide bar cover by hand.



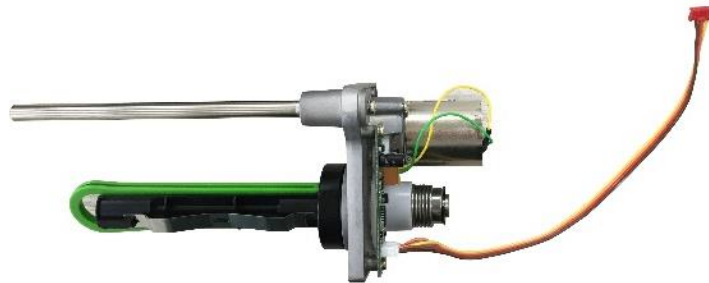
5. Remove the black plastic cover by push both sides of cover as indicated.  
Install the rewind spindle and media guide bar on electronic side.  
Fasten three screws (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) on rewind spindle and media guide bar module as indicated.



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



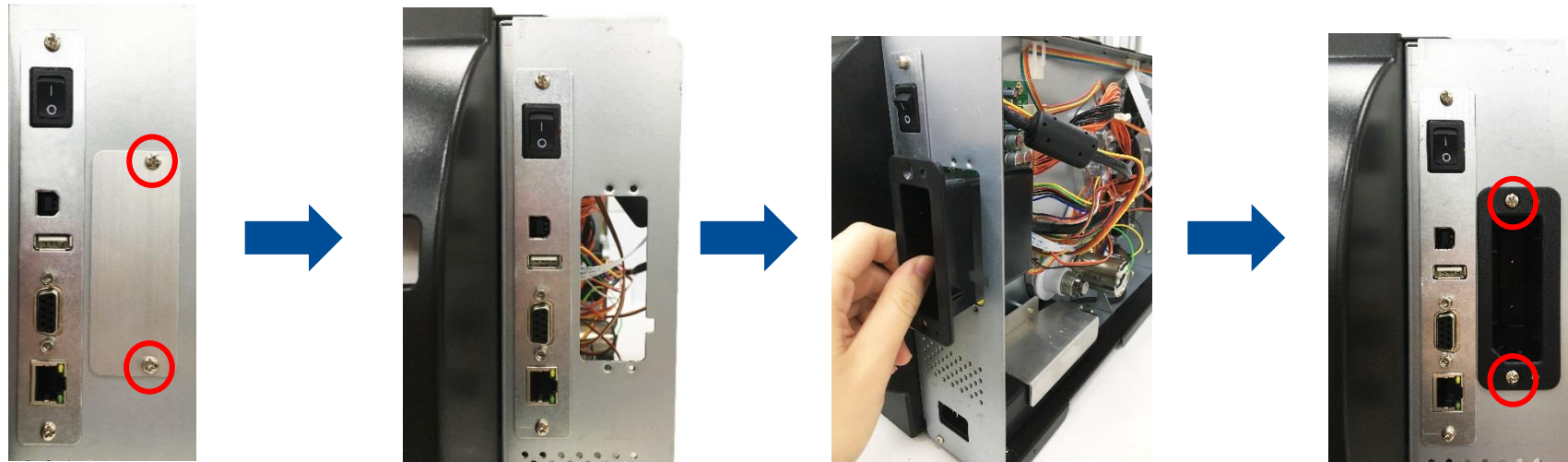
7. Complete the installation of rewind spindle and media guide bar module.



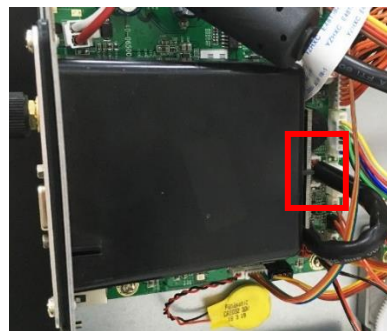
8. Reassemble the parts in the reverse procedures.

### 3.15 Slot-in Wireless Housing Installation (Option)

1. Refer to [Remove the Electronics Cover](#) to remove the electronic cover.
2. Take off the slot-in wireless interface board by removing 2 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 2 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.



5. Reassemble the parts in the reverse procedures.

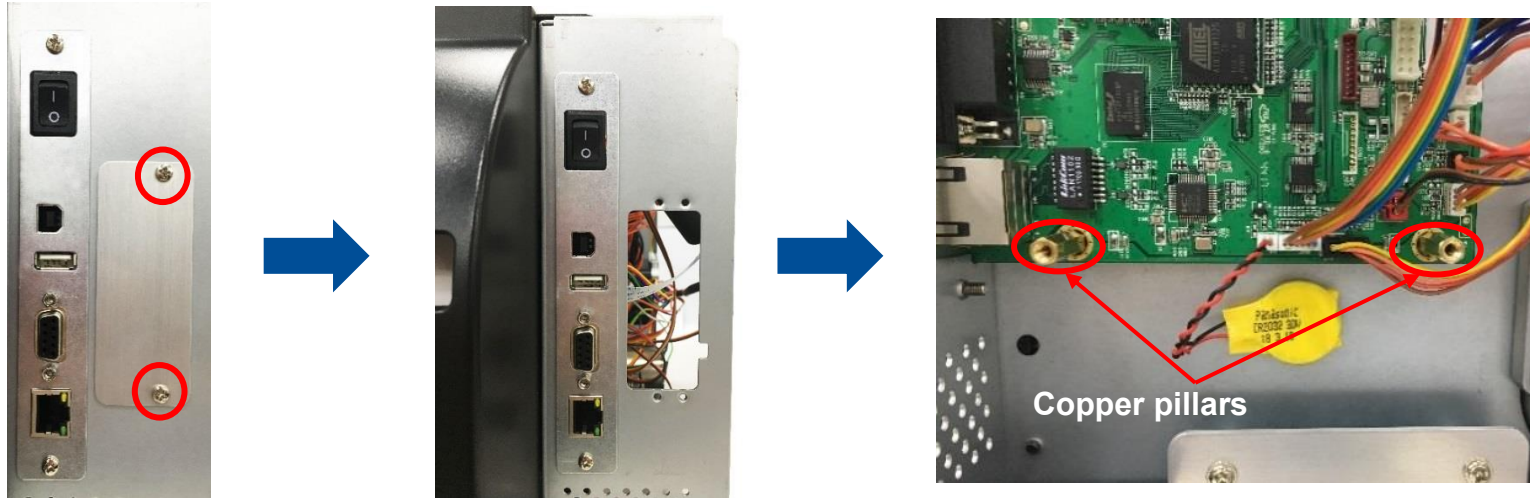
# 3.16 GPIO Interface Assembly Installation (Option)

**GPIO Interface Assembly**

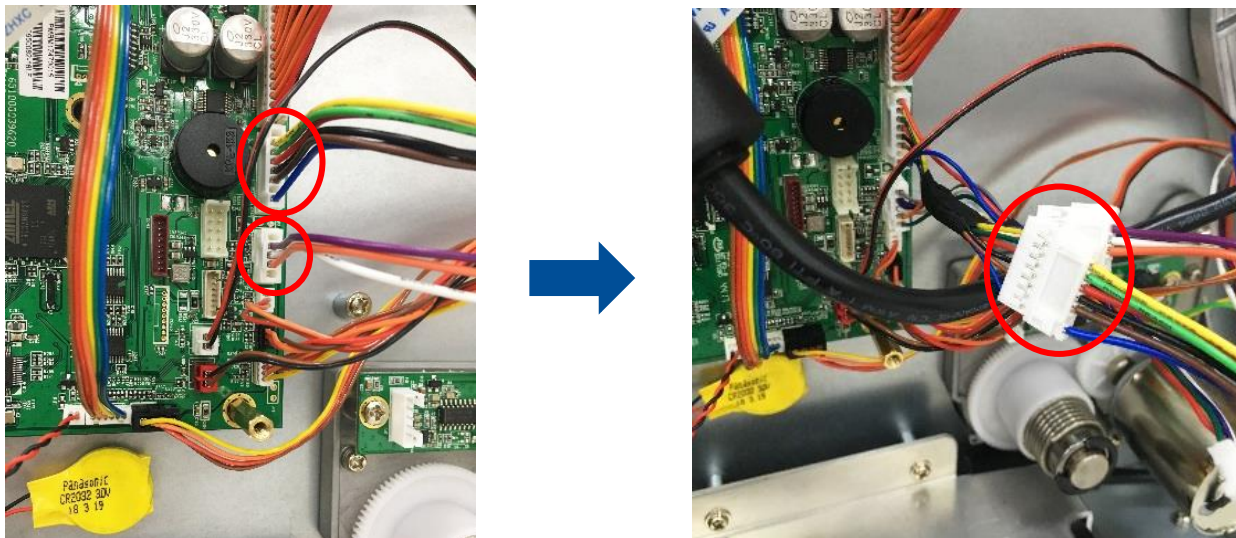
The diagram illustrates the components for the GPIO Interface Assembly. It includes a metal interface board (1), a larger metal fix board (5), a green GPIO interface board (7), a multi-colored transfer cable (6), two hexagonal screws (2), two standard screws (3), and two copper pillars (4). Blue lines connect the numbered callouts to their respective parts in the assembly.

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

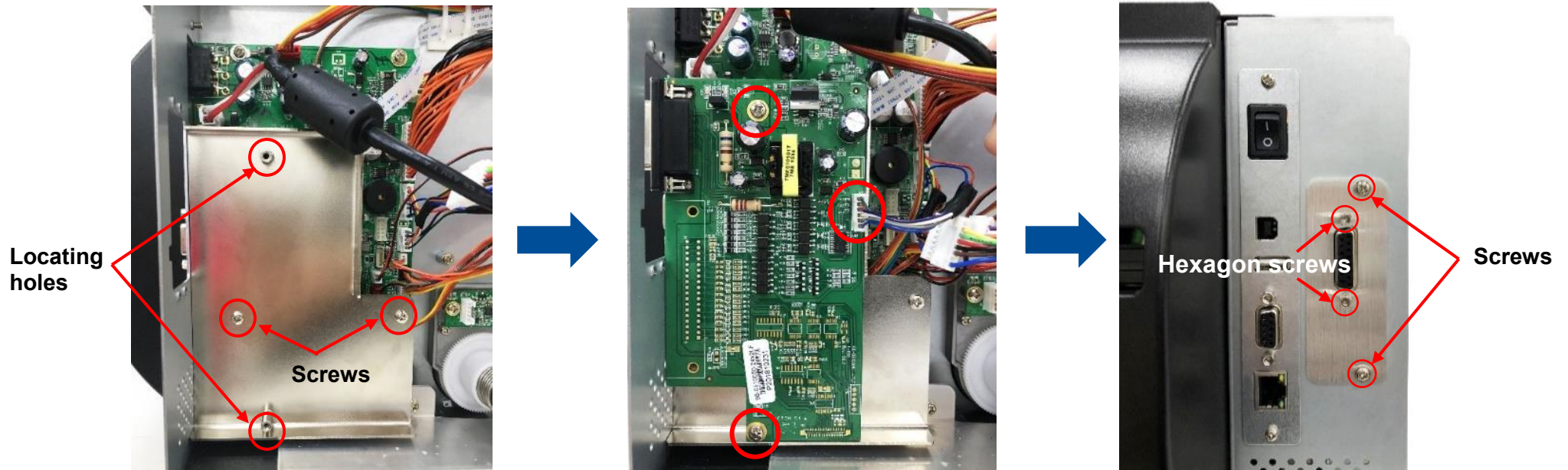
1. Refer to [Remove the Electronics Cover](#) to remove the electronic cover.
2. Take off the slot-in wireless interface board by removing 2 screws (fastened by  $5.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) on rear of printer. Install 2 copper pillars (fastened by  $7.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) on main board.



3. Remove 2 cable connectors from the main board and insert GPIO transfer cables, then connect 2 removed cables to GPIO transfer connectors as indicated.



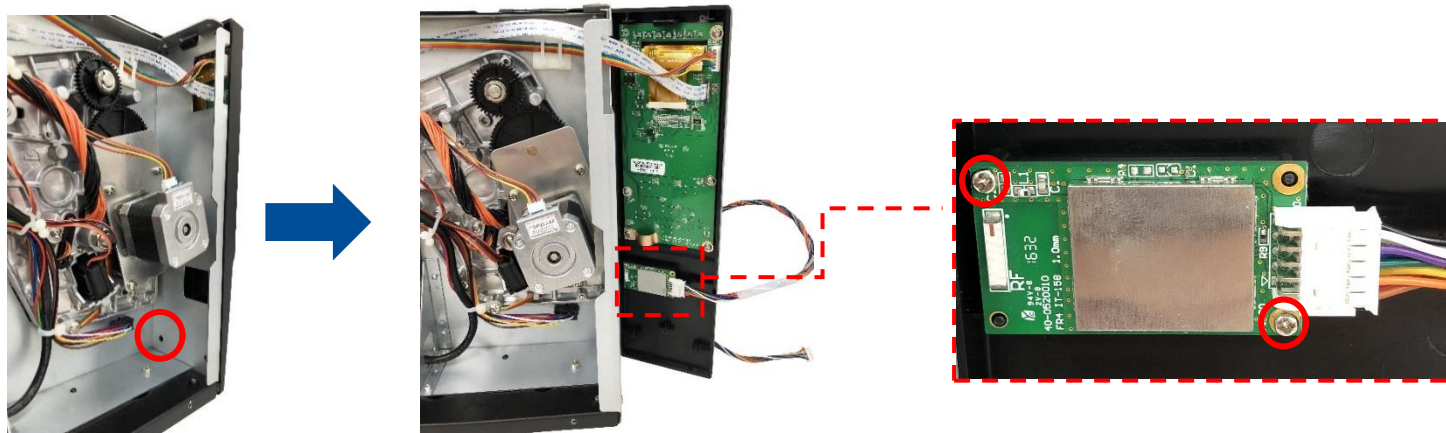
4. Fasten 2 screws (fastened by  $5.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) on GPIO fix board first. Then, aligning the GPIO board to the 2 locating holes on GPIO fix board and fasten another 2 screws (fastened by  $5.5 \text{ kg} \pm 15\% \text{ kg-cm}$ ) as indicated.
5. Insert the rest connector of GPIO transfer cable to GPIO board.



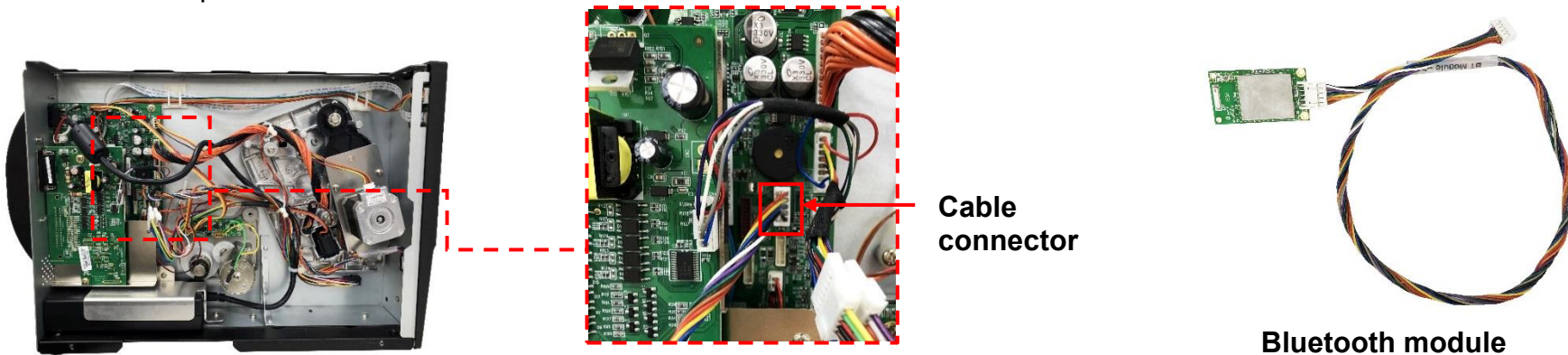
6. Reassemble the parts in the reverse procedures.

### 3.17 Bluetooth Module Installation (Option)

1. Refer to [Remove the Electronics Cover](#) to remove the electronic cover.
2. Remove 1 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 2 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.



6. Reassemble the parts in the reverse procedures.

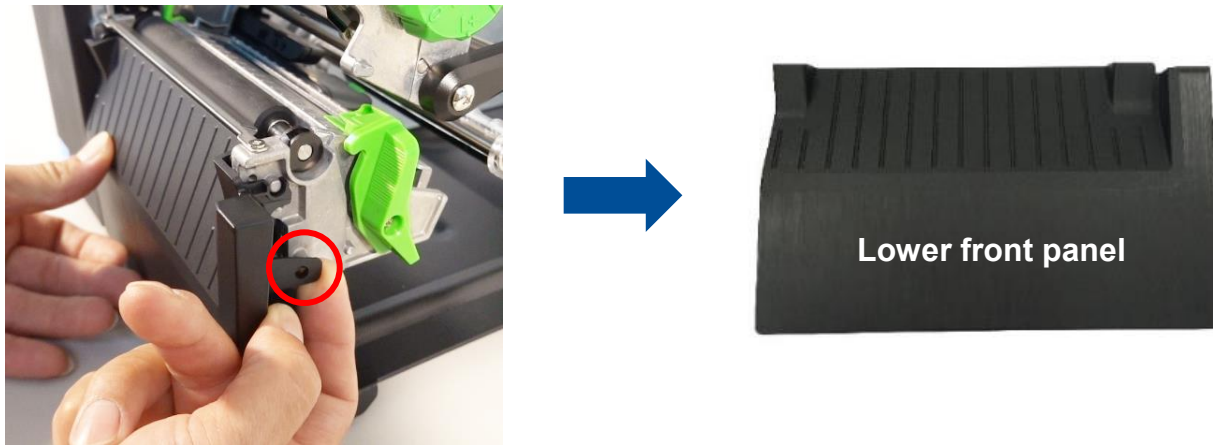
### 3.18 Linerless Kit Installation (Option)

**Tear / Cutter linerless kit**

1. Linerless tear / Linerless cutter
2. Linerless damper
3. Linerless pads\*2
4. Rubber handle
5. Self-tapping screw\*2 (TP3\*9)
6. Turning screws\*2 (M3\*4L)
7. Machine screws\*1 (M3\*6L)
8. Rubber cover
9. Linerless pad
10. Linerless roller
11. Cutter tray (Linerless cutter kit only)



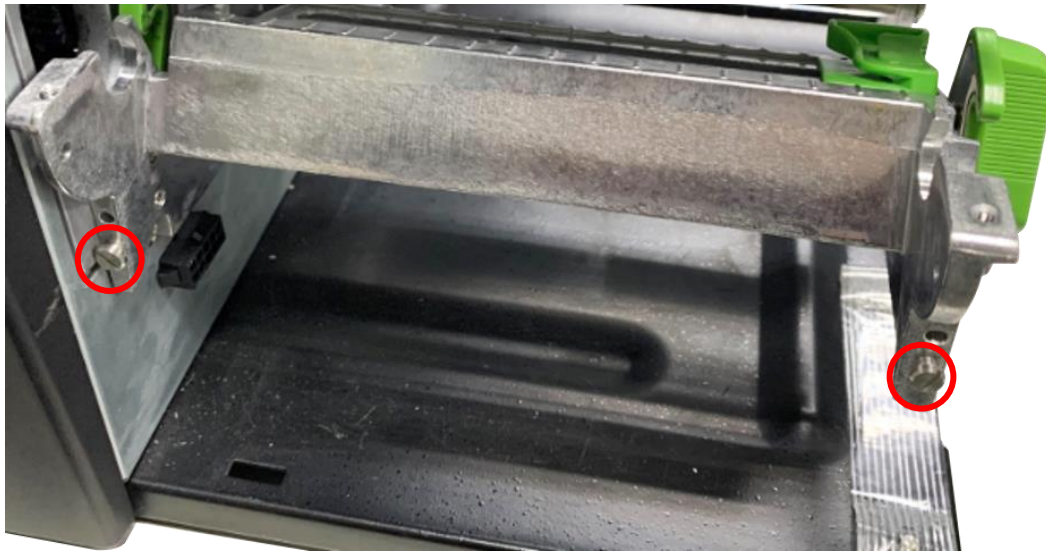
1. Move the tab outward then pull the panel inward to remove the lower front panel.



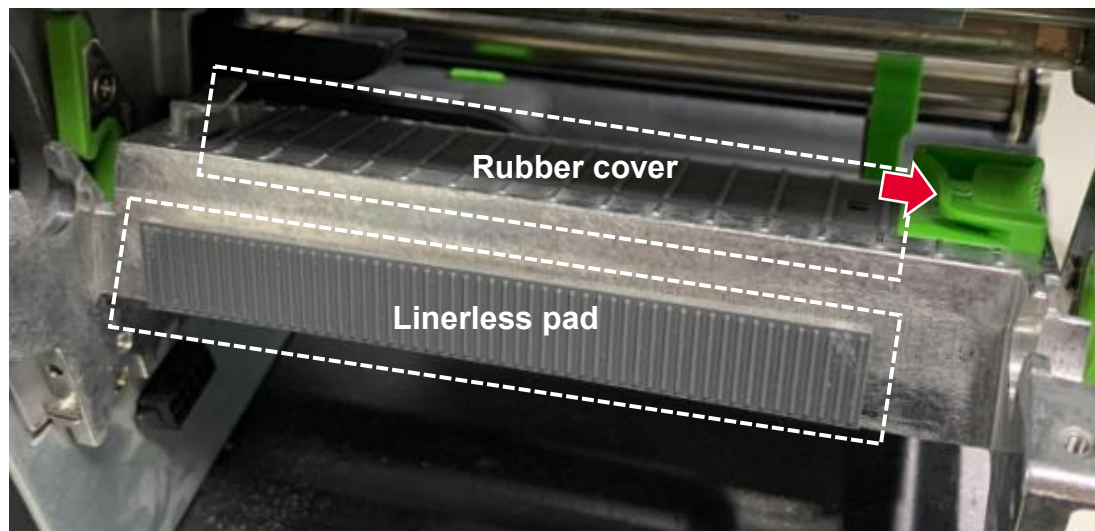
2. Refer to [Replacing the Platen Roller Assembly](#) to remove the platen roller (black) and remove the 2 screws to remove the tear bar.



3. Fasten the 2 turning screws (M3\*4L; provided in the kit/ fastened by 7.5 kg±15% kg-cm) on printer mechanism as indicated.



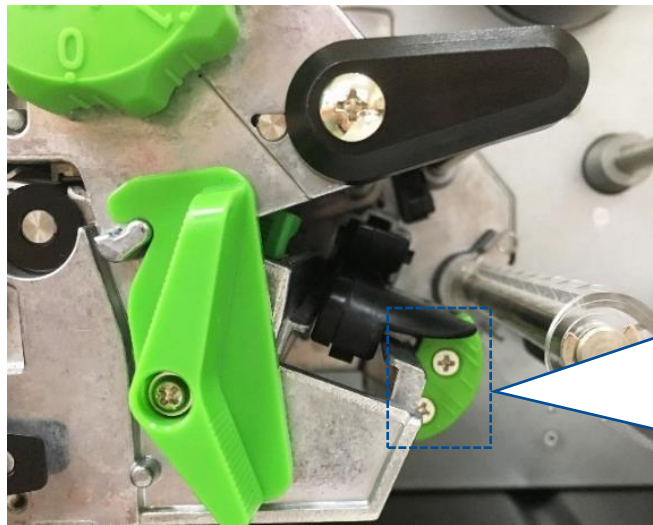
4. Move the label guide (green) to the outermost side to install the rubber cover and stick the linerless pad on the lower base.



5. Install the linerless roller.



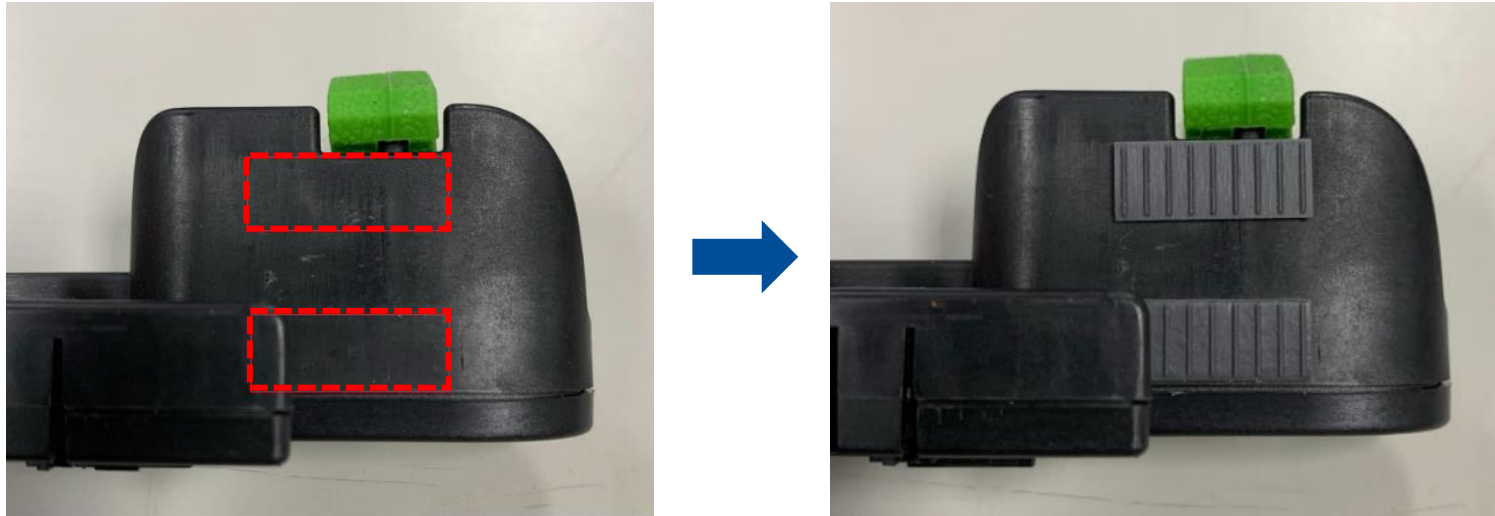
6. Remove the 2 screws and replace the cover (green) from plastic to rubber.



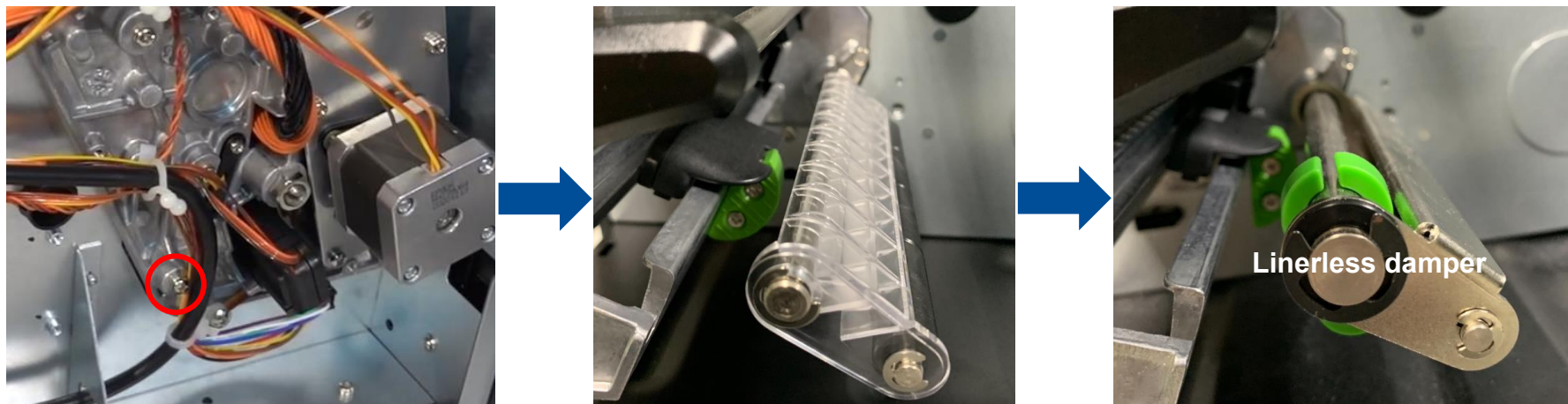
If you have the sensor bar in the linerless kit (Serial number before C24014AD0001), please refer to [Replacing the Gap/Black Mark Sensor Module](#) to replace whole sensor module. (Ignore steps 6 and 7)



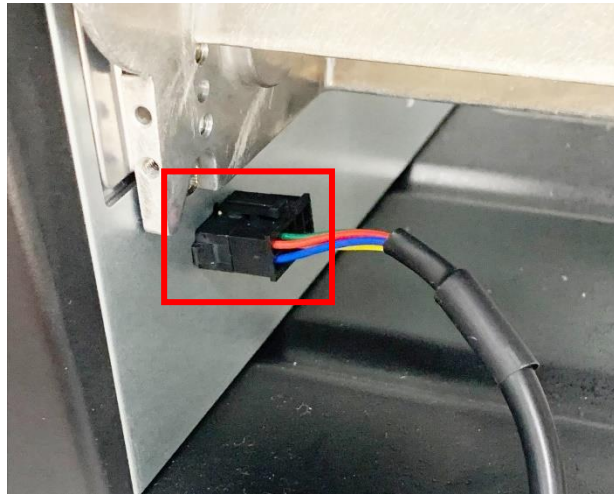
7. Stick the 2 linerless pads on the sensor module as shown.



8. Refer to [Remove the Electronics Cover](#) to remove the electronic cover. Remove one screw to replace the linerless damper.



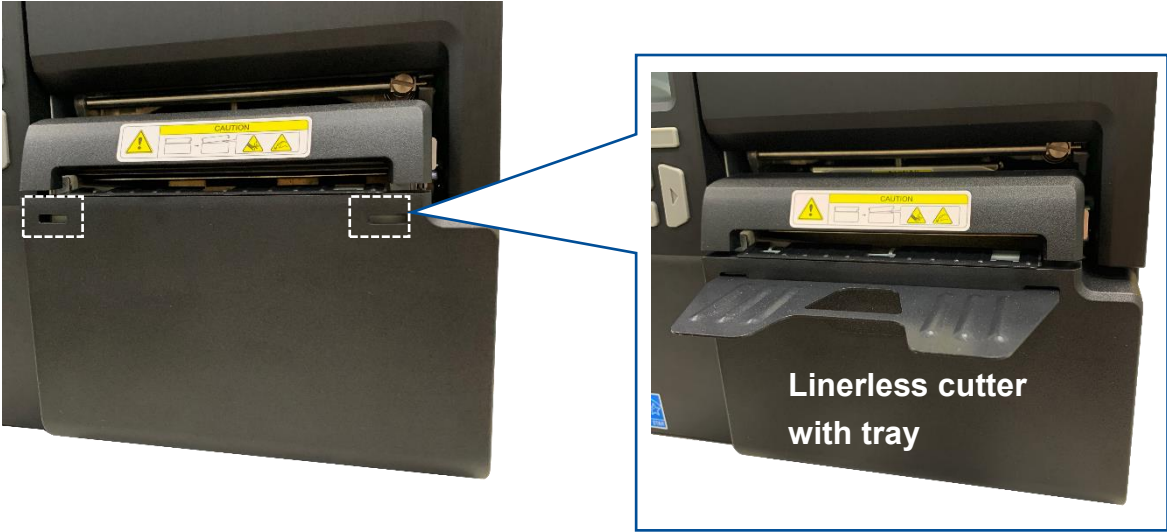
9. Plug the tear (or cutter) module mini DIN cable connector into the printer receptacle.



10. Place the tear (or cutter) module in position and use the 1 machine screw (M3\*6L/ fastened by 7.5 kg±15% kg-cm) provided in the kit to install the tear (or cutter) module on the lower support assembly.



11. For the linerless cutter module, the cutter tray is mounted on the cutter panel as required.



# 4. Troubleshooting

## 4.1 Common Issues

Problem	Possible Cause	Recovery Procedure
<b>Power indicator does not illuminate</b>	<ul style="list-style-type: none"> <li>■ The power cord is not properly connected.</li> <li>■ The power switch is closed.</li> </ul>	<ul style="list-style-type: none"> <li>■ Plug the power cord in printer and outlet.</li> <li>■ Switch the printer on.</li> </ul>
<b>Carriage Open</b>	<ul style="list-style-type: none"> <li>■ The printer carriage is open.</li> </ul>	<ul style="list-style-type: none"> <li>■ Close the print carriage.</li> </ul>
<b>Not Printing</b>	<ul style="list-style-type: none"> <li>■ Check if interface cable is well connected.</li> <li>■ Check if wireless or Bluetooth device is well connected.</li> <li>■ The port in the Windows driver is not correct.</li> </ul>	<ul style="list-style-type: none"> <li>■ Re-connect cable to interface or change a new cable.</li> <li>■ Reset the wireless device setting.</li> <li>■ Select the correct printer port in the driver.</li> <li>■ Clean the printhead.</li> <li>■ Printhead's harness connector is not well connected with printhead. Turn off the printer and plug the connector again.</li> <li>■ 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.</li> </ul>
<b>No print on the label</b>	<ul style="list-style-type: none"> <li>■ Label or ribbon is loaded not correctly.</li> <li>■ Use wrong type paper or ribbon</li> </ul>	<ul style="list-style-type: none"> <li>■ Follow the instructions in loading the media and ribbon.</li> <li>■ Ribbon and media are not compatible.</li> <li>■ Verify the ribbon-inked side.</li> <li>■ The print density setting is incorrect.</li> </ul>
<b>No Ribbon</b>	<ul style="list-style-type: none"> <li>■ Running out of ribbon.</li> <li>■ The ribbon is installed incorrectly.</li> </ul>	<ul style="list-style-type: none"> <li>■ Supply a new ribbon roll.</li> <li>■ Refer to user's manual to reinstall the ribbon.</li> </ul>
<b>No Paper</b>	<ul style="list-style-type: none"> <li>■ Running out of label.</li> <li>■ The label is installed incorrectly.</li> <li>■ Gap/black mark sensor is not calibrated.</li> </ul>	<ul style="list-style-type: none"> <li>■ Supply a new label roll.</li> <li>■ Refer to user's manual to reinstall the label roll.</li> <li>■ Calibrate the gap/black mark sensor.</li> </ul>
<b>Paper Jam</b>	<ul style="list-style-type: none"> <li>■ Gap/black mark sensor is not set properly.</li> <li>■ Make sure label size is set properly.</li> <li>■ Labels may be stuck inside the printer mechanism.</li> </ul>	<ul style="list-style-type: none"> <li>■ Calibrate the media sensor.</li> <li>■ Set media size correctly.</li> <li>■ Remove the stuck label inside the printer mechanism.</li> </ul>
<b>Take Label</b>	<ul style="list-style-type: none"> <li>■ Peel function is enabled.</li> </ul>	<ul style="list-style-type: none"> <li>■ If peeler module is installed, please remove the label.</li> <li>■ If there is no peeler module in front of the printer, please switch off the printer and install it.</li> <li>■ Check if the connector is plugging correctly.</li> </ul>
<b>Can't downloading the file to memory (FLASH / DRAM/CARD)</b>	<ul style="list-style-type: none"> <li>■ The space of memory is full.</li> </ul>	<ul style="list-style-type: none"> <li>■ Delete unused files in the memory.</li> </ul>

Problem	Possible Cause	Recovery Procedure
<b>Poor Print Quality</b>	<ul style="list-style-type: none"> <li>■ Ribbon and media is loaded incorrectly.</li> <li>■ Dust or adhesive accumulation on the print head.</li> <li>■ Print density is not set properly.</li> <li>■ Printhead element is damaged.</li> <li>■ Ribbon and media are incompatible.</li> <li>■ The printhead pressure is not set properly.</li> </ul>	<ul style="list-style-type: none"> <li>■ Reload the supply.</li> <li>■ Clean the print head.</li> <li>■ Clean the platen roller.</li> <li>■ Adjust the print density and print speed.</li> <li>■ Run printer self-test and check the print head test pattern if there is dot missing in the pattern.</li> <li>■ Change proper ribbon or proper label media.</li> <li>■ Adjust the printhead pressure adjustment knob.</li> <li>■ The release lever does not latch the printhead properly.</li> </ul>
<b>Missing printing on the left or right side of label</b>	<ul style="list-style-type: none"> <li>■ Wrong label size setup.</li> </ul>	<ul style="list-style-type: none"> <li>■ Set the correct label size.</li> </ul>
<b>Gray line on the blank label</b>	<ul style="list-style-type: none"> <li>■ The print head is dirty.</li> <li>■ The platen roller is dirty.</li> </ul>	<ul style="list-style-type: none"> <li>■ Clean the print head.</li> <li>■ Clean the platen roller.</li> </ul>
<b>Irregular printing</b>	<ul style="list-style-type: none"> <li>■ The printer is in Hex Dump mode.</li> <li>■ The RS-232 setting is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>■ Turn off and on the printer to skip the dump mode.</li> <li>■ Re-set the RS-232 setting.</li> </ul>
<b>Label feeding is not stable (skew) when printing</b>	<ul style="list-style-type: none"> <li>■ The media guide does not touch the edge of the media.</li> </ul>	<ul style="list-style-type: none"> <li>■ If the label is moving to the right side, please move the label guide to left.</li> <li>■ If the label is moving to the left side, please move the label guide to right.</li> </ul>
<b>Skip labels when printing</b>	<ul style="list-style-type: none"> <li>■ Label size is not specified properly.</li> <li>■ Sensor sensitivity is not set properly.</li> <li>■ The media sensor is covered with dust.</li> </ul>	<ul style="list-style-type: none"> <li>■ Check if label size is setup correctly.</li> <li>■ Calibrate the sensor by Auto Gap or Manual Gap options.</li> <li>■ Clear the GAP/Black mark sensor by blower.</li> </ul>
<b>Wrinkle Problem</b>	<ul style="list-style-type: none"> <li>■ Printhead pressure is incorrect.</li> <li>■ Ribbon installation is incorrect.</li> <li>■ Media installation is incorrect.</li> <li>■ Print density is incorrect.</li> <li>■ Media feeding is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>■ Please refer to the chapter 4.</li> <li>■ Please set the suitable density to have good print quality.</li> <li>■ Make sure the label guide touch the edge of the media guide.</li> </ul>
<b>RTC time is incorrect when reboot the printer</b>	<ul style="list-style-type: none"> <li>■ The battery has run down.</li> </ul>	<ul style="list-style-type: none"> <li>■ Check if there is a battery on the main board.</li> </ul>
<b>The left side printout position is incorrect</b>	<ul style="list-style-type: none"> <li>■ Wrong label size setup.</li> <li>■ The parameter Shift X in LCD menu is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>■ Set the correct label size.</li> <li>■ Press [Menu] → [Setting] → [Shift X] to fine tune the parameter of Shift X.</li> </ul>
<b>The printing position of small label is incorrect</b>	<ul style="list-style-type: none"> <li>■ Media sensor sensitivity is not set properly.</li> <li>■ Label size is incorrect.</li> <li>■ The parameter Shift Y in the LCD menu is incorrect.</li> <li>■ The vertical offset setting in the driver is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>■ Calibrate the sensor sensitivity again.</li> <li>■ Set the correct label size and gap size.</li> <li>■ Press [Menu] → [Setting] → [Shift Y] → to fine tune the parameter of Shift Y.</li> <li>■ Set the vertical offset in the driver if you're using BarTender.</li> </ul>



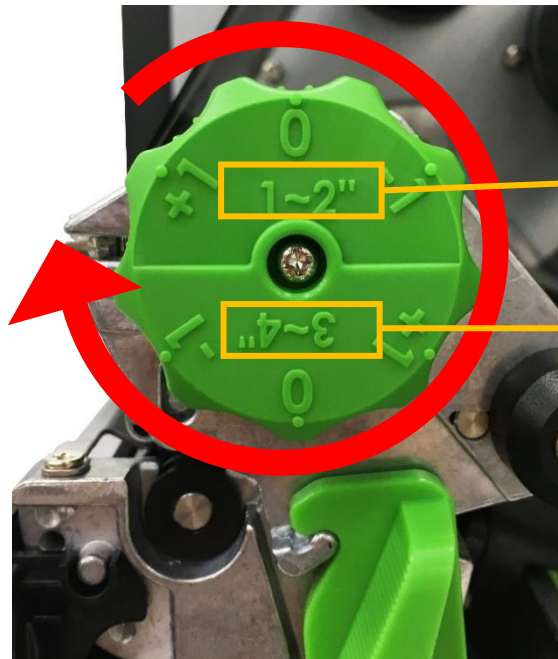
Problem	Possible Cause	Recovery Procedure
<b>LCD panel is dark and keys are not working</b>	<ul style="list-style-type: none"> <li>■ The cable between main PCB and LCD panel is loose.</li> </ul>	<ul style="list-style-type: none"> <li>■ Check if the cable between main PCB and LCD is secured or not.</li> </ul>
<b>LCD panel is dark but the LEDs are light</b>	<ul style="list-style-type: none"> <li>■ The printer initialization is unsuccessful.</li> </ul>	<ul style="list-style-type: none"> <li>■ Turn OFF and ON the printer again.</li> <li>■ Initialize the printer.</li> </ul>
<b>Ribbon encoder sensor doesn't work</b>	<ul style="list-style-type: none"> <li>■ The ribbon encoder sensor connector is loose.</li> </ul>	<ul style="list-style-type: none"> <li>■ Fasten the connector.</li> </ul>
<b>Ribbon end sensor doesn't work</b>	<ul style="list-style-type: none"> <li>■ The connector is loose.</li> <li>■ The ribbon sensor hole is covered with dust.</li> </ul>	<ul style="list-style-type: none"> <li>■ Check the connector.</li> <li>■ Clear the dust in the sensor hole by the blower.</li> </ul>
<b>Cutter is not working</b>	<ul style="list-style-type: none"> <li>■ The connector is loose.</li> </ul>	<ul style="list-style-type: none"> <li>■ Plug in the connect cable correctly.</li> </ul>

## 4.2 Knob Adjustment

### 4.2.1 Print head Pressure Adjustment Knob

**Print head Pressure Adjustment Knob** has 6 levels' adjustment for 1~2" and 3~4" width media.

Different number means different pressure to the media. Due to printer's paper alignment is on left side of the mechanism, different media width requires the different pressure. Users can try which level can meet their expectation.



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

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

- **0** means regular media thickness (0.14-0.16mm) pressure setting.
- **-1** means lower pressure for thin paper media
- **+1** means higher pressure for thick media

## 4.2.2 Ribbon Tension Adjustment Knob

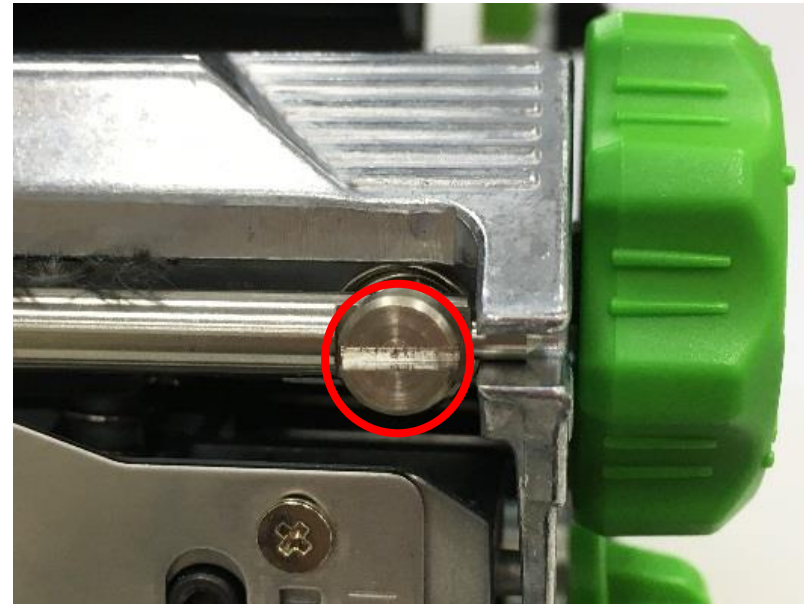
**Ribbon Tension Adjustment Knob** has 5 positions for adjustment. Due to the ribbon is aligned to the inbound of print mechanism, different width of ribbon may need to adjust the tension adjustment knob to avoid the ribbon wrinkle and get the best print quality.



### 4.2.3 Mechanism Fine Adjustment to Avoid Ribbon Wrinkles

**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.

Ribbon Tension Adjustment Knob has 5 indexes for adjustment. Use flat screw driver to change the ribbon tension.

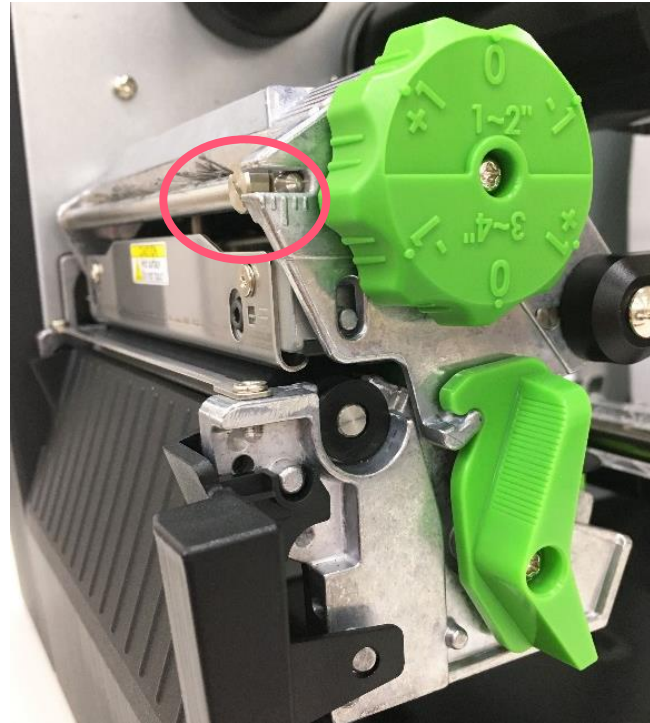
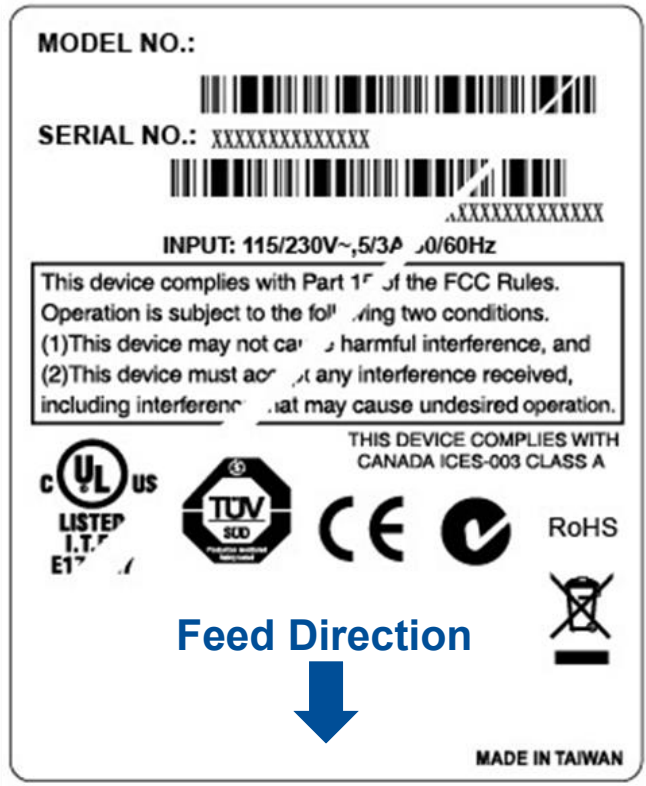


## Wrinkle happens from label lower right to upper left direction



- Make sure the Print head Pressure Adjustment Knob is in correct position for the current media. Ex: 1~2", 3~4"
- Turn the screw clockwise per level and print to see if the wrinkle has g1.
- If the ribbon tension adjustment knob has positioned on the level of innermost side but doesn't improve the ribbon wrinkle, please switch the print head pressure at 1 level and print the label again to check if the wrinkle is g1.
- If the wrinkle can't be avoided, please contact the Customer Service Department of your purchased reseller or distributor for service.

## Wrinkle happens from label lower left to upper right direction



- Make sure the Print head Pressure Adjustment Knob is in correct position for the current media. Ex: 1~2", 3~4"
- Turn the screw counterclockwise per level and print to see if the wrinkle has g1.
- If the ribbon tension adjustment knob has positioned on the level of outermost side but doesn't improve the ribbon wrinkle, please switch the print head pressure at 1 level and print the label again to check if the wrinkle is g1.
- 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 the printer.

## ■ For Cleaning

Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the print head and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

## ■ For Disinfecting

Sanitize your printer to protect yourself and others and can help prevent the spread of viruses.

## ■ Important

- Set the printer power switch to O (Off) prior to performing any cleaning or disinfecting tasks. Leave the power cord connected to keep the printer grounded and to reduce the risk of electrostatic damage.
- Do not wear rings or other metallic objects while cleaning any interior area of the printer.
- Use only the cleaning agents recommended in this document. Use of other agents may damage the printer and void its warranty.
- Do not spray or drip liquid cleaning solutions directly into the printer. Apply the solution on a clean lint-free cloth and then apply the dampened cloth to the printer.
- Do not use canned air in the interior of the printer as it can blow dust and debris onto sensors and other critical components.
- Only use a vacuum cleaner with a nozzle and hose that are conductive and grounded to drain off static build up.
- All reference in these procedures for use of isopropyl alcohol requires that a 99% or greater isopropyl alcohol content be used to reduce the risk of moisture corrosion to the printhead.
- Do not touch printhead by hand. If you touch it carelessly, please use 99% Isopropyl alcohol to clean it.
- Always taking personal precaution when using any cleaning agent.


## Cleaning Tools

- Cotton swab
- Lint-free cloth
- Brush with soft non-metallic bristles
- Vacuum cleaner
- 75% Ethanol (for disinfecting)
- 99% Isopropyl alcohol (for printhead and platen roller cleaning)
- Genuine printhead cleaning pen
- Mild detergent (without chlorine)

## Cleaning Process:

Printer Part	Method	Interval
<b>Print Head</b>	<ol style="list-style-type: none"> <li>I. Always turn off the printer before cleaning the printhead.</li> <li>II. Allow the printhead to cool for at least one minute.</li> <li>III. Use a cotton swab and 99% Isopropyl Alcohol or genuine print head cleaning pen to clean the print head surface.</li> </ol>	Clean the print head when changing a new label roll.
<b>Platen Roller</b>	<ol style="list-style-type: none"> <li>I. Turn off the printer.</li> <li>II. Rotate the platen roller and wipe it thoroughly with the lint-free 99% Isopropyl Alcohol.</li> </ol>	Clean the platen roller when changing a new label roll
<b>Peel Bar</b>	Use the lint-free cloth with 99% Isopropyl Alcohol to wipe it.	As needed
<b>Sensor</b>	Use brush with soft non-metallic bristles or a vacuum cleaner, to remove paper dust. Clean upper and lower media sensors to ensure reliable Top of Form and Paper Out sensing.	Monthly
<b>Exterior</b>	Clean the exterior surfaces with a clean, lint-free cloth (water-dampened cloth). If necessary, use a mild detergent or desktop cleaning solution then use the 75% Ethanol to wipe it.	As needed
<b>Interior</b>	Clean the interior of the printer by removing any dirt and lint with a vacuum cleaner, as described above, or use a brush with soft non-metallic bristles then use the 75% Ethanol to wipe it.	As needed



<b>Linerless Printer</b>	Please refer to <a href="#">Linerless Cleaning Kit User Manual</a> for more information. 	<ul style="list-style-type: none"><li>◆ Clean as needed or after printing every 1 km.</li><li>◆ Please determine the maintenance intervals based on actual usage.</li></ul>
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# Revision History

<b>Date</b>	<b>Content</b>	<b>Editor</b>
2023/5/3	Added ch. Linerless Kit Installation	Camille
2023/5/8	Added Linerless cutter tray	Camille
2023/6/28	Added ch. Cleaning the Printer after Linerless Printing	Camille
2023/12/15	Updated the template	Camille
2024/1/09	Updated ch. Linerless Kit Installation	Camille
2024/3/8	Updated the Maintenance section	Camille



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