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Etiketten Thermotransferfolien Hard- und Software
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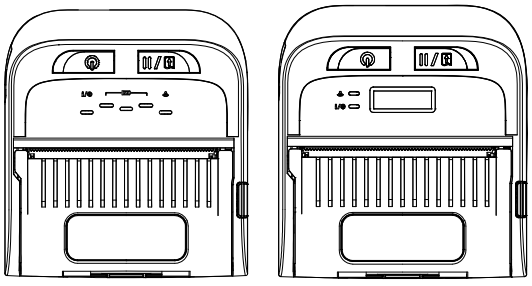
TDM-30

Direct Thermal Portable Printer

SERVICE MANUAL



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1.1 Overview

Front View

For LED version

1. Power on/off button
2. Feed/stop button
3. LED indicators
4. Media cover
5. Media cover window
6. Media cover release button

For LCD version

1. Power on/off button
2. Feed/stop button
3. LED indicators & LCD screen
4. Media cover
5. Media cover window
6. Media cover release button

Interior View

1. Tear edge
2. Print head
3. Platen roller
4. Black mark sensor

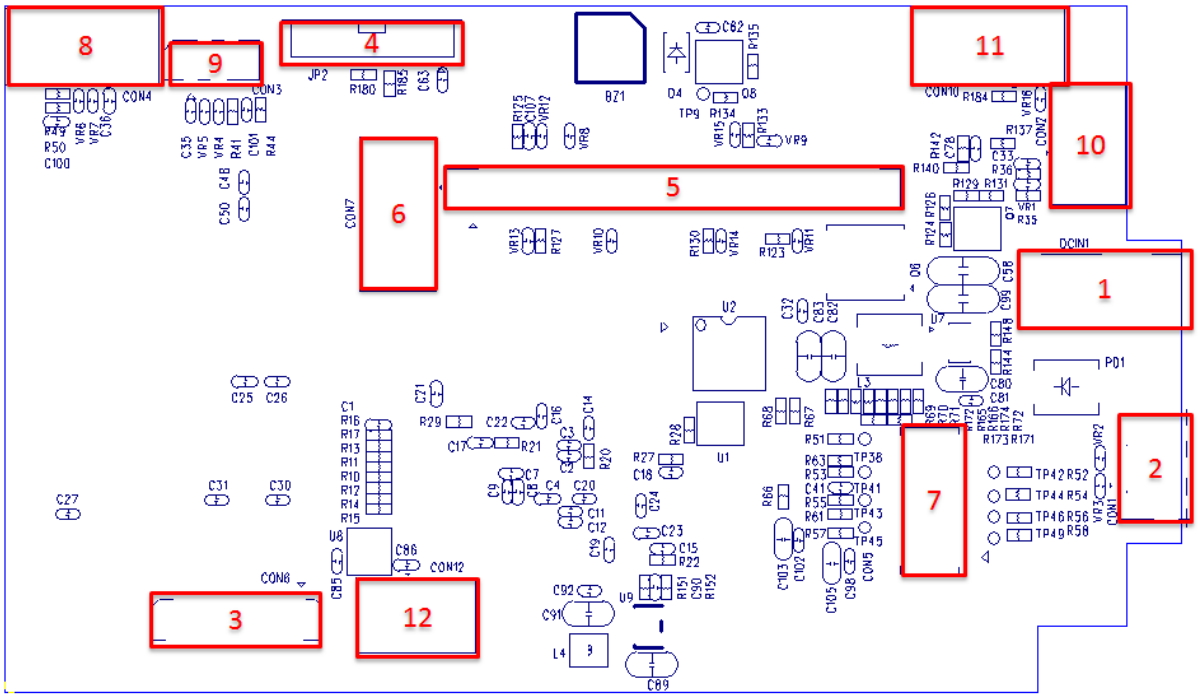
Rear View

1. Li-ion Battery
2. Battery open clasp
3. Interface cover
4. Power jack
5. USB interface

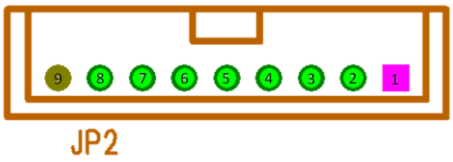
2. ELECTRONICS

2.1 Summary of Board Connectors

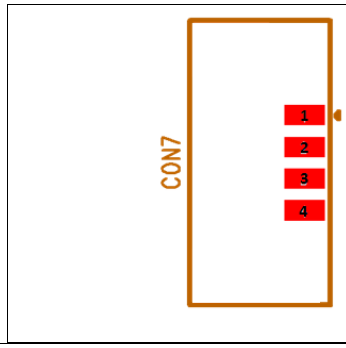
Main board top



Connector	Description
1	12V DC IN
2	Micro USB Connector
3	LED/LCD and Key Board Connector
4	Download F/W Connector



Pin	Description
1	3.3V
2	MCI0_DA0
3	MCI0_DA1
4	MCI0_DA2
5	MCI0_DA3
6	MCI0_CK
7	MCI0_CDA
8	No Connection
9	GND

<table>
<tr><td>5</td><td>TPH Connector</td></tr>
<tr><td>6</td><td>Stepping Motor Connector


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<tr><td>1</td><td>AOUT1</td></tr>
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<tr><td>3</td><td>BOUT2</td></tr>
<tr><td>4</td><td>BOUT1</td></tr>
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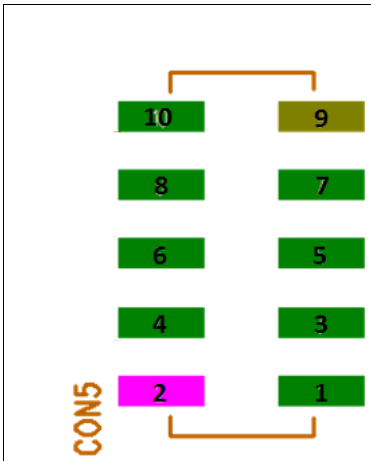
<tr><td>7</td><td>WiFi Module Connector


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<tr><th>Pin</th><th>Description</th></tr>
<tr><td>1</td><td>RESET</td></tr>
<tr><td>2</td><td>3.3V</td></tr>
<tr><td>3</td><td>RTS</td></tr>
<tr><td>4</td><td>MISO</td></tr>
<tr><td>5</td><td>CTS</td></tr>
<tr><td>6</td><td>MOSI</td></tr>
<tr><td>7</td><td>CLK</td></tr>
<tr><td>8</td><td>Interrupt</td></tr>
<tr><td>9</td><td>WB GPIO</td></tr>
<tr><td>10</td><td>GND</td></tr>
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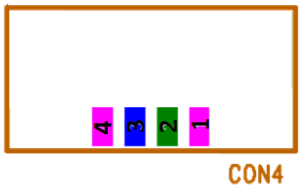
<tr><td>8</td><td>Black Mark Sensor


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<tr><td>1</td><td>3.3V</td></tr>
<tr><td>2</td><td>BM_E</td></tr>
<tr><td>3</td><td>BM_R</td></tr>
<tr><td>4</td><td>3.3V</td></tr>
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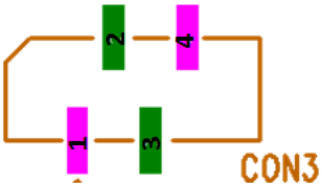
<tr><td>9</td><td>Gap Sensor


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<tr><td>2</td><td>BM_E</td></tr>
<tr><td>3</td><td>BM_R</td></tr>
<tr><td>4</td><td>3.3V</td></tr>
</table></td></tr>
<tr><td>10</td><td>Head Open Sensor
<table>
<tr><th>Pin</th><th>Description</th></tr>
<tr><td>1</td><td>HEAD</td></tr>
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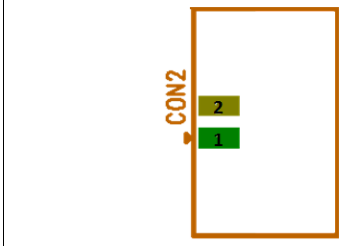
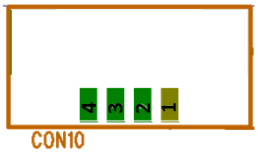
<tr><td></td><td></td><td> 
</td><td>2</td><td>GND</td></tr>
<tr><td>11</td><td colspan="3">Cradle Connector
 

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<tr><td>2</td><td>Charge Status</td></tr>
<tr><td>3</td><td>ISET</td></tr>
<tr><td>4</td><td>GND</td></tr>
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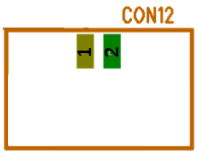
<tr><td>12</td><td colspan="3">RTC Battery
 

<table>
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<tr><td>1</td><td>VDDBU</td></tr>
<tr><td>2</td><td>GND</td></tr>
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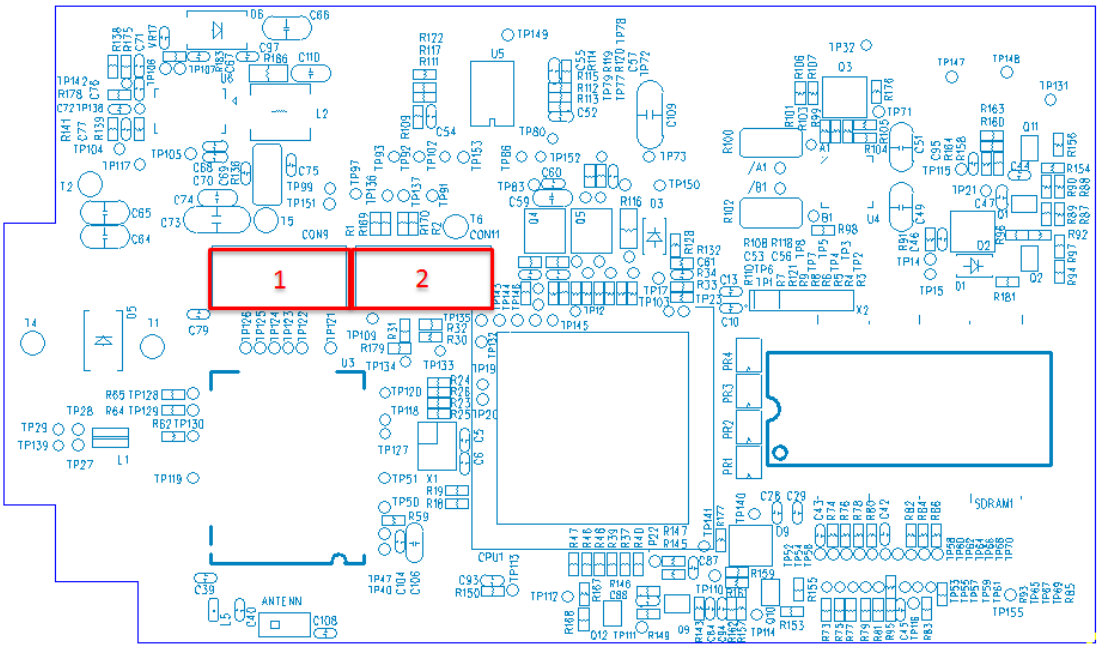
Main board bottom



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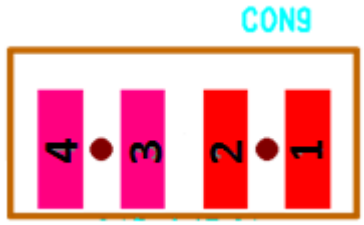

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<tr><td>1</td><td>NTC</td></tr>
<tr><td>2</td><td>NTC</td></tr>
<tr><td>3</td><td>+</td></tr>
<tr><td>4</td><td>+</td></tr>
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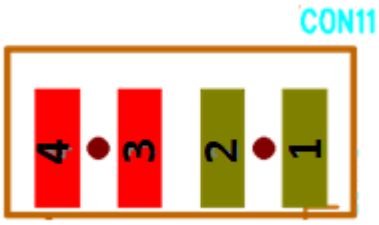
<tr><td>2</td><td>Battery connector Negative Electrode


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<tr><th>Pin</th><th>Description</th></tr>
<tr><td>1</td><td>-</td></tr>
<tr><td>2</td><td>-</td></tr>
<tr><td>3</td><td>Smart BAT SCL</td></tr>
<tr><td>4</td><td>Smart BAT SDA</td></tr>
</table></td></tr>
</table>

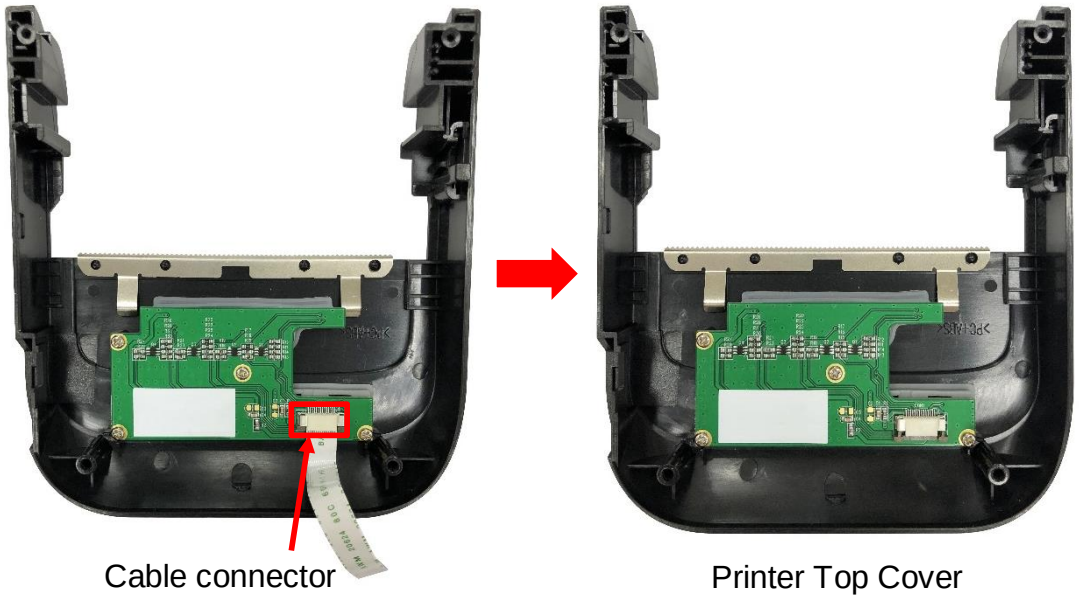
3. MECHANISM

3.1 Replacing the Printer Top Cover (with Keys Control Board)

1. Remove four screws from the back of the printer as indicated.

Screws

2. Remove the cable on cable connector and take out the printer top cover (with keys control board).



Cable connector

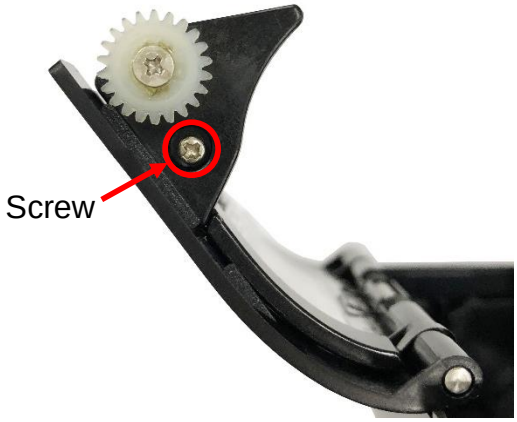
Printer Top Cover
(with Keys Control Board)

3. Reassemble the parts in the reverse procedures.

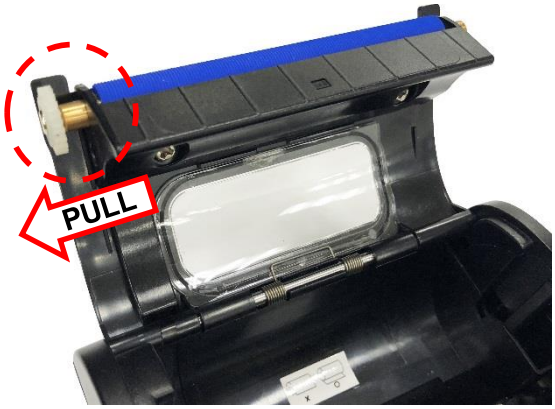
3.2 Replacing the Linerless Platen Roller Assembly (Option)

1. Open the printer cover by pressing the media release button.

2. Remove one screw on the linerless platen roller assembly as indicated.



3. Pull out and remove the linerless platen roller assembly as indicated.



4. Remove/Replace the linerless platen roller assembly.

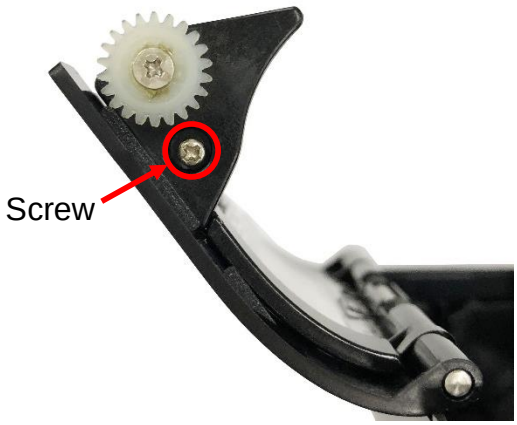
Linerless Platen Roller Assembly

5. Reassemble the parts in the reverse procedures.

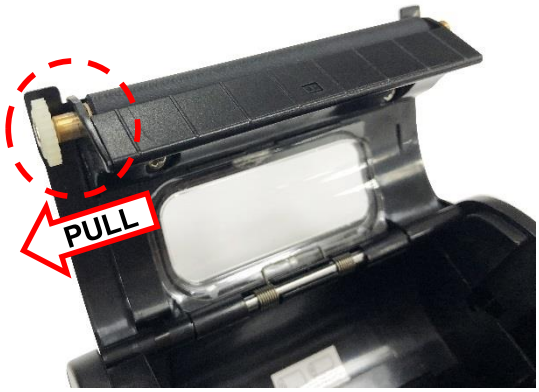
3.3 Replacing the Platen Roller

1. Open the media cover by pressing the media cover release button.

2. Remove one screw on the platen roller assembly as indicated.



3. Pull out and remove the platen roller assembly as indicated.



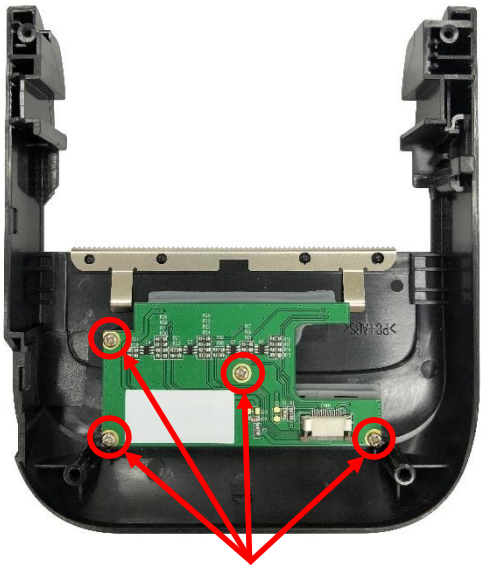
4. Remove/Replace the platen roller assembly.

Platen Roller Assembly

5. Reassemble the parts in the reverse procedures.

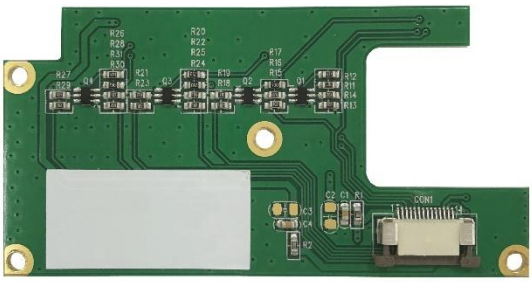
3.4 Replacing the Keys Control Board

1. Refer to section 3.1 to remove the printer top cover (with keys control board).
2. Remove four screws on the keys control board as indicated.



Screws

3. Remove/Replace the keys control board.

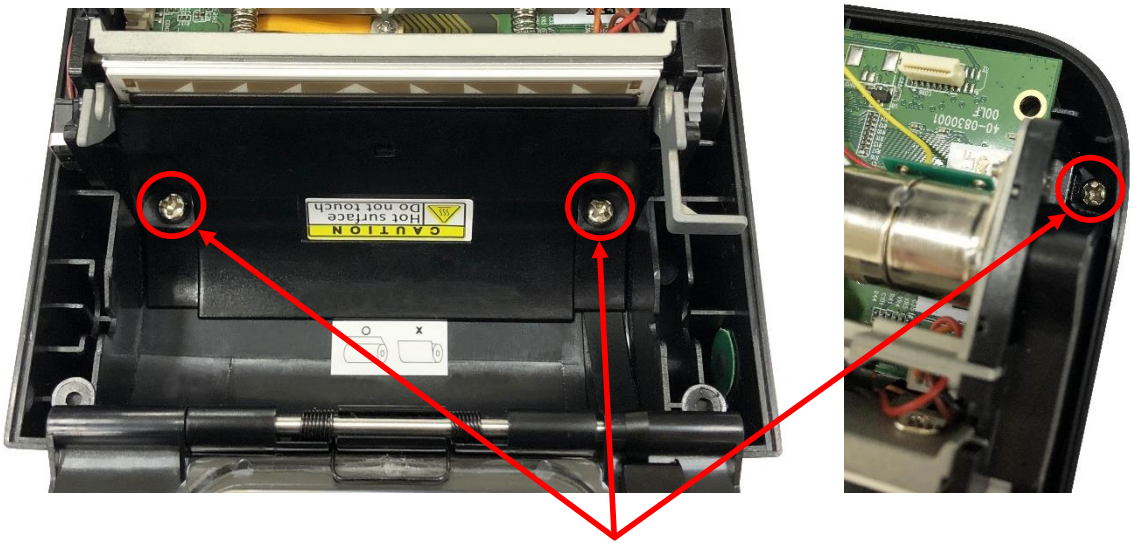


Keys Control Board

4. Reassemble the parts in the reverse procedures.

3.5 Replacing the Main Board Assembly

1. Refer to section 3.1 to remove the printer top cover (with keys control board).
2. Remove three screws on interior mechanism and disconnect all the connectors on the main board assembly as indicated.

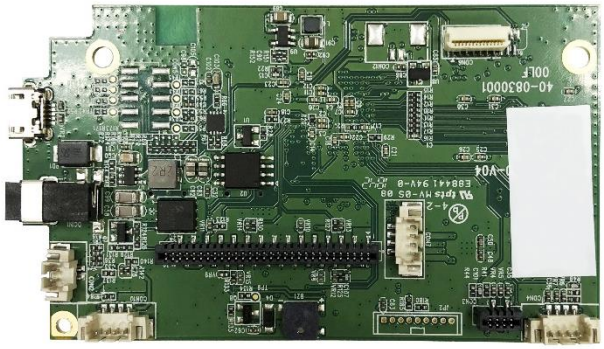


Screws

3. Remove one screw on main board as indicated.

Screw

4. Remove/Replace the main board assembly.

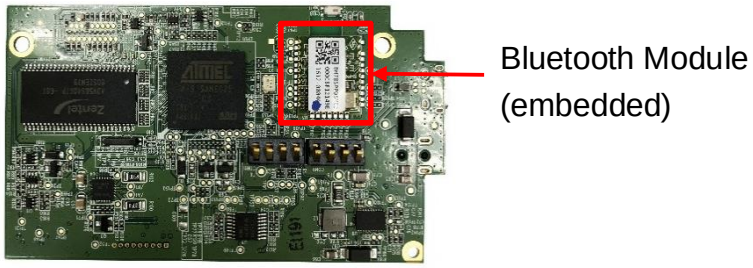


Keys Control Board

5. Reassemble the parts in the reverse procedures.

3.6 Replacing the Bluetooth Module (Option)

1. Refer to section 3.1 and 3.4 to remove the Printer Top Cover (with Keys Control Board) and the Main Board Assembly.
2. Turn to the rear side of main board assembly. The Bluetooth module was embedded in main board as indicated.

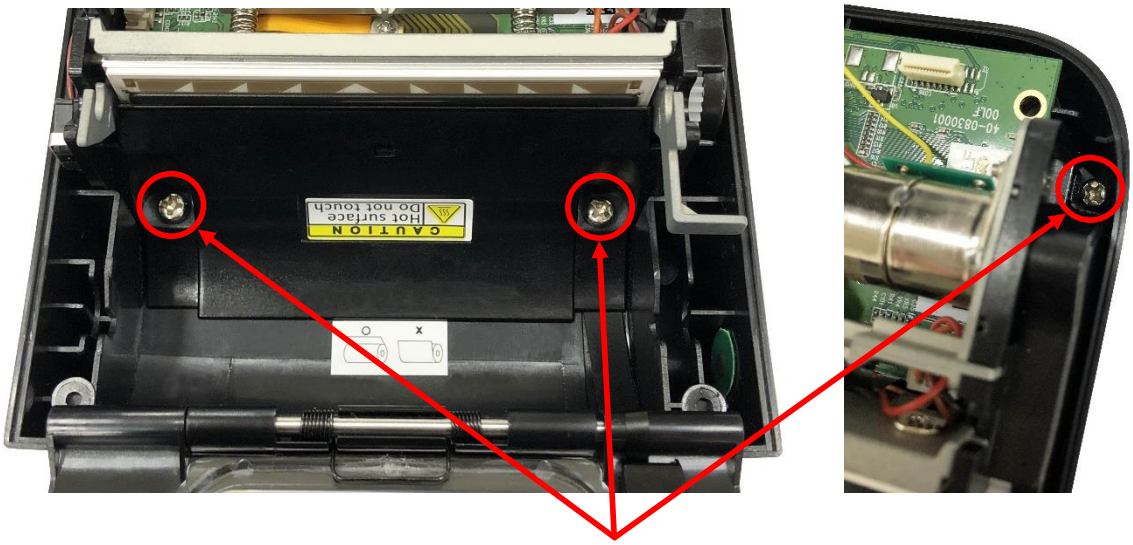


Bluetooth Module (Option)

3. Remove/Replace the Bluetooth module, which embedded in main board assembly.
4. Reassemble the parts in the reverse procedures.

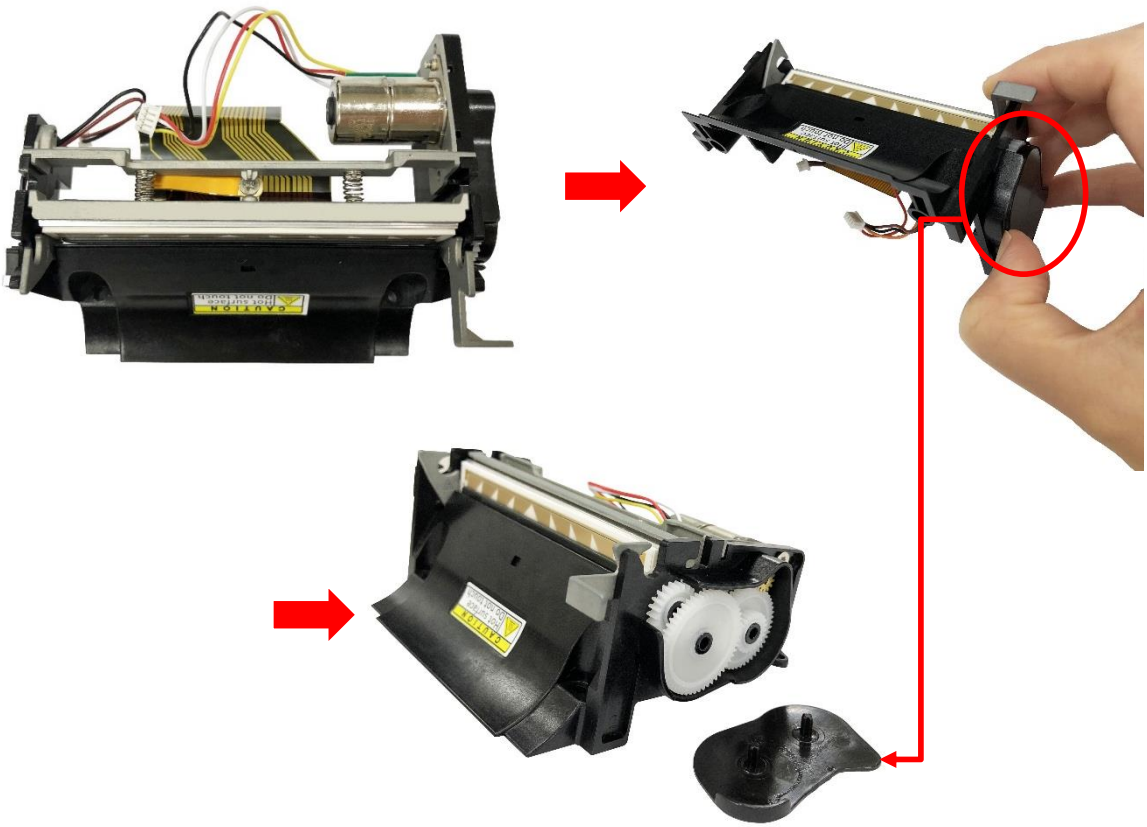
3.7 Replacing the Gear Assembly & Stepping Motor

1. Refer to section 3.1 to remove the Printer Top Cover (with Keys Control Board).
2. Remove three screws on interior mechanism and disconnect all the connectors on the main board assembly as indicated.



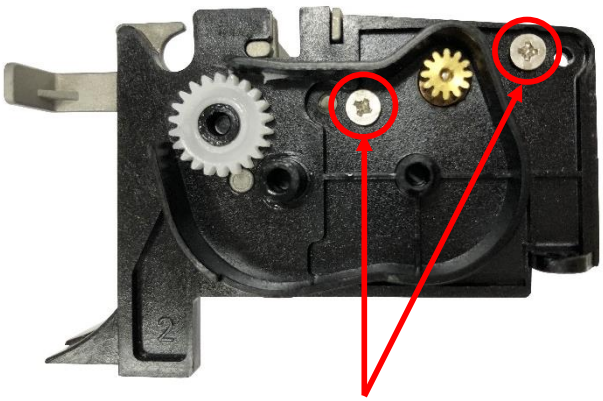
Screws

3. Turn the print mechanism to right side than open the gear assembly cover as indicated.



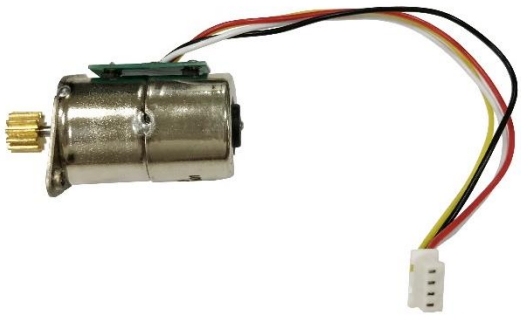
Gear assembly cover

4. Remove the gears and release two screws as indicated.



Screws

5. Remove/Replace the stepping motor assembly.

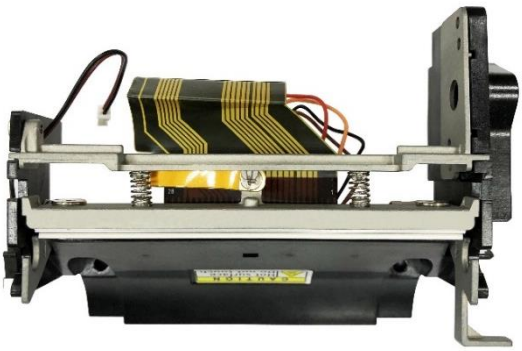


Stepping Motor Assembly

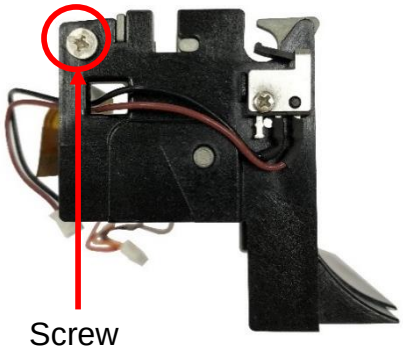
6. Reassemble the parts in the reverse procedures.

3.8 Replacing the Print Head Assembly

1. Refer to section 3.1 and 3.6 to remove the Printer Top Cover (with Keys Control Board), Gear Assembly, and Stepping Motor.

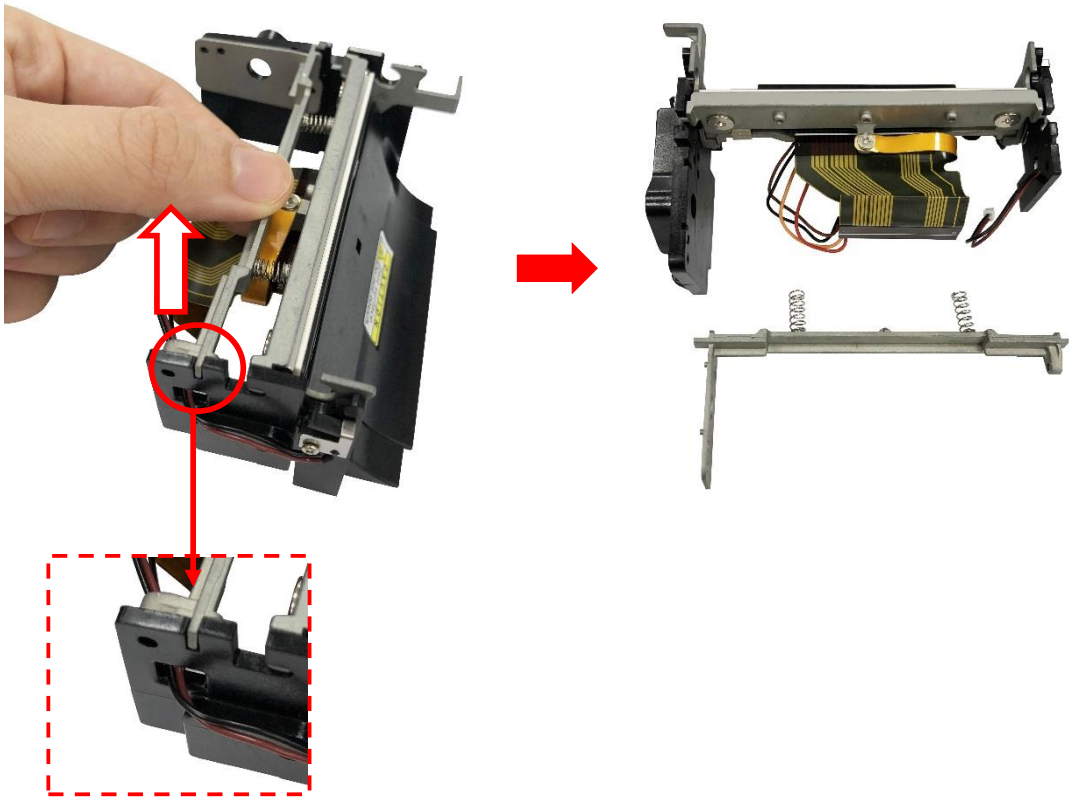


2. Turn the print mechanism to left side than remove one screw fixed on print head fixed bar.

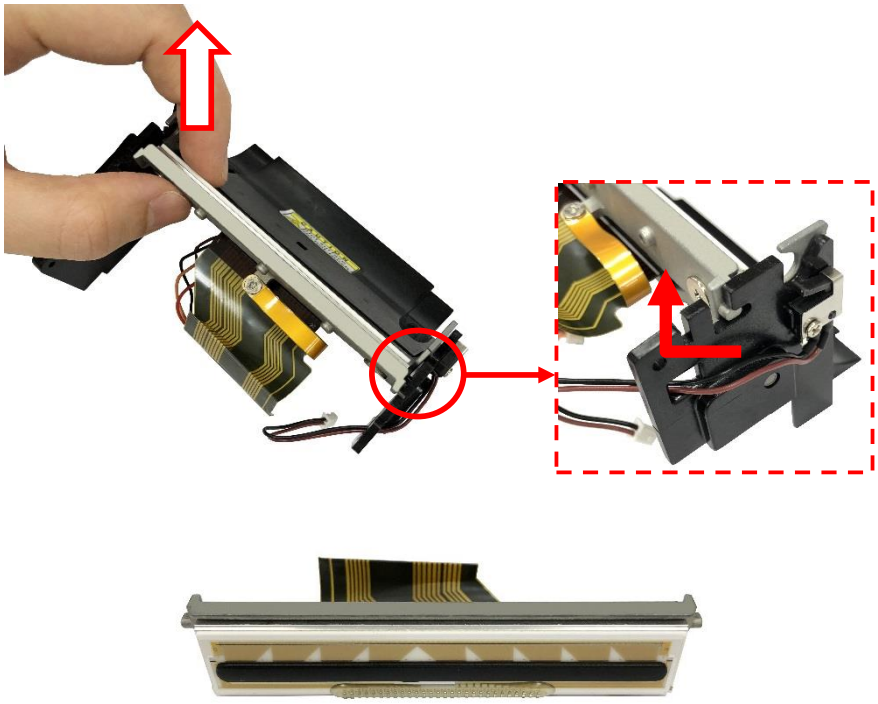


Screw

3. Pull upward and remove the print head fixed bar as indicated.



4. Remove/Replace the print head assembly along the path as indicated.

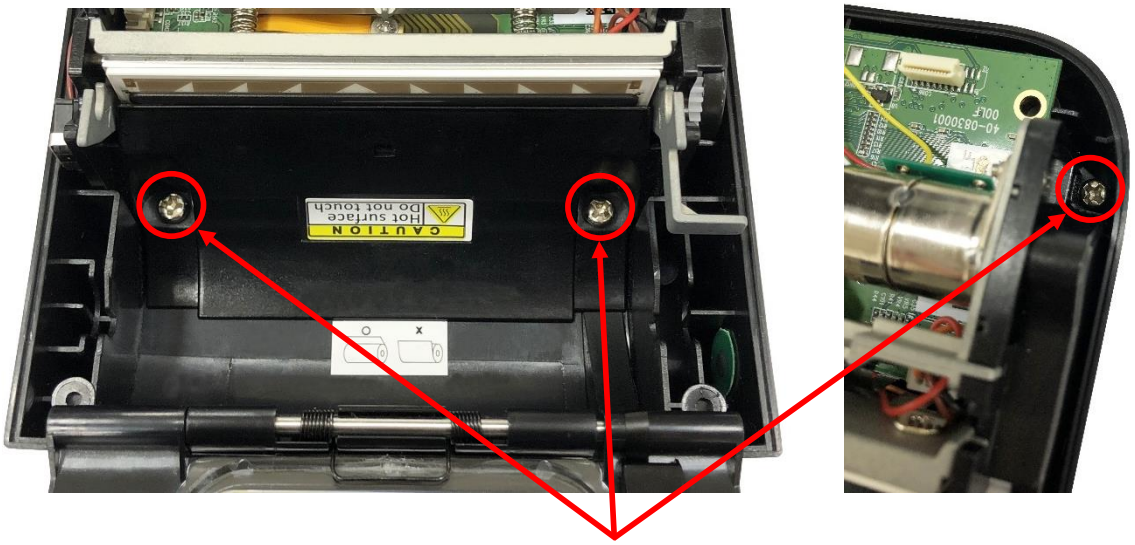


Print Head Assembly

5. Reassemble the parts in the reverse procedures.

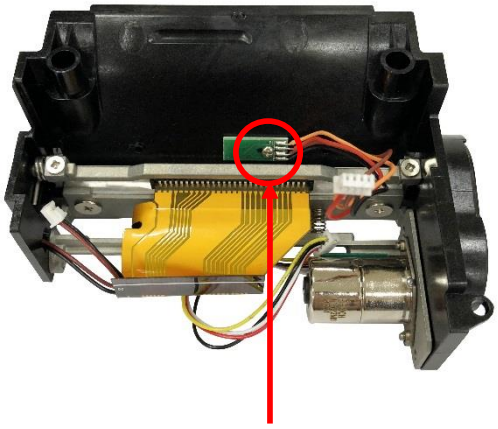
3.9 Replacing the Black Mark Sensor Assembly

1. Refer to section 3.1 to remove the Printer Top Cover (with Keys Control Board).
2. Remove three screws on interior mechanism and disconnect all the connectors on the main board assembly as indicated.



Screws

3. Remove a screw and replace the black mark sensor.

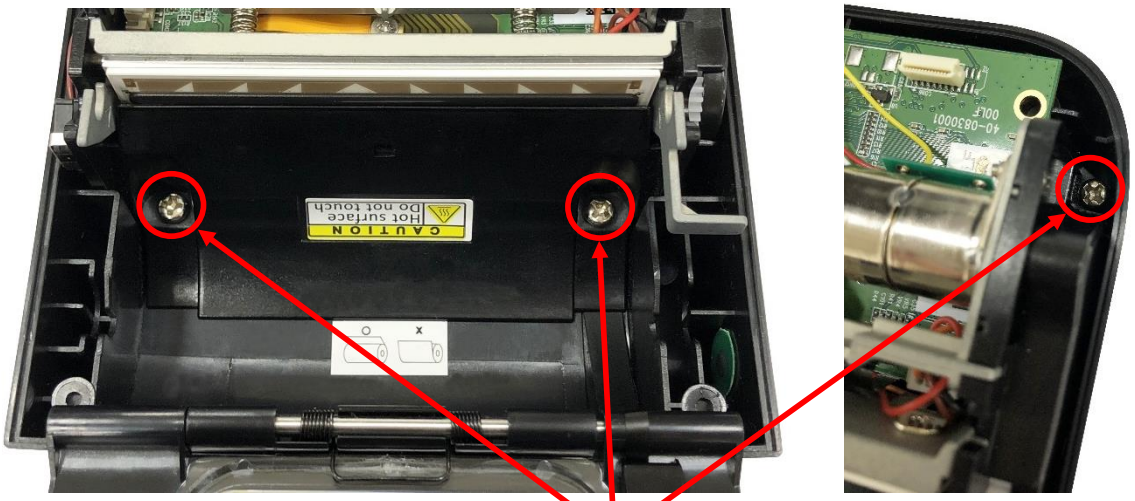


Screw

4. Reassemble the parts in the reverse procedures.

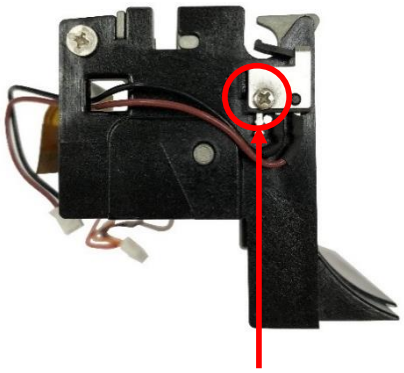
3.10 Replacing the Open Sensor

1. Refer to section 3.1 to remove the Printer Top Cover (with Keys Control Board).
2. Remove three screws on interior mechanism and disconnect all the connectors on the main board assembly as indicated.



Screws

3. Turn the print mechanism to left side than remove one screw on the open sensor.



Screw

4. Reassemble the parts in the reverse procedures.

4. TROUBLESHOOTING

4.1 Common Problems

The following guide lists the most common problems that may 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 battery is not properly installed. * The battery is dead.	* Reinstall the battery. * Switch the printer on. * Charge the battery.
The printer status from DiagTool shows "**Head Open**".	* The printer carriage is open.	* Please close the print carriage.
The printer status from DiagTool shows "**Out of Paper**"..	* Running out of media roll. * The media is installed incorrectly. * Black mark sensor is not calibrated.	* Supply a new media roll. * Please refer to the section 3.4 on User's manual to reinstall the media roll. * Calibrate the black mark sensor.
The printer status from DiagTool shows "**Paper Jam**".	* Black mark sensor is not set properly. * Make sure media size is set properly. * Media may be stuck inside the printer mechanism.	* Calibrate the black mark sensor. * Set media size correctly.
Memory full (FLASH / DRAM)	* The space of FLASH/DRAM is full.	* Delete unused files in the FLASH/DRAM.
Poor Print Quality	* Media is loaded incorrectly * Dust or adhesive accumulation on the print head. * Print density is not set properly. * Printhead element is damaged.	* 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 media roll.
Missing printing on the left or right side of label	* Wrong label size setup.	* Set the correct label size.
Gray line on the blank label	* The print head is dirty. * The platen roller is dirty.	* Clean the print head. * Clean the platen roller.
Irregular printing	* The printer is in Hex Dump mode.	* Turn off and on the printer to skip the dump mode.

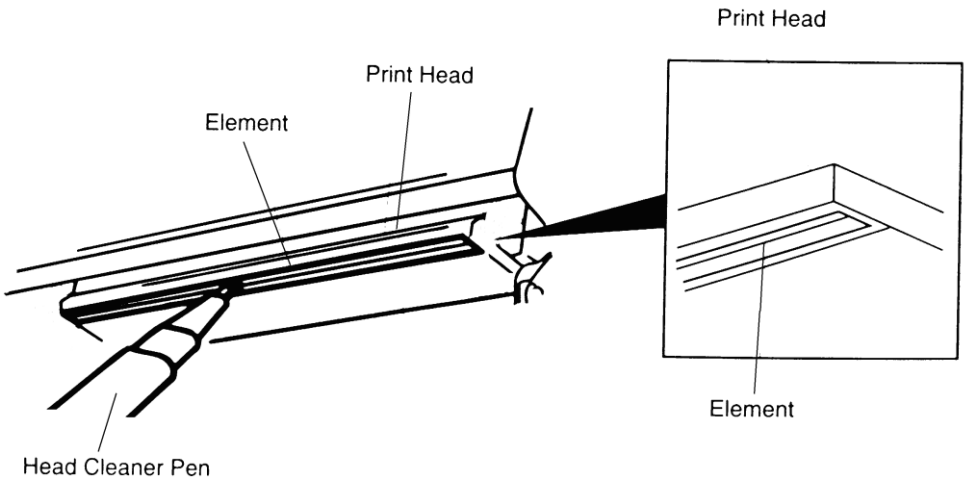
5. Maintenance

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
- Lint-free cloth
- Vacuum / Blower brush
- 100% ethanol

2. The cleaning process is described as following,

<table>
<tr><th>Printer Part</th><th>Method</th><th>Interval</th></tr>
<tr><td rowspan="2">Print Head</td><td>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 and 100% ethanol to clean the print head surface.</td><td>Clean the print head when changing a new label roll</td></tr>
<tr><td colspan="2"> 
</td></tr>
<tr><td>Platen Roller</td><td>1. Turn the power off.
2. Rotate the platen roller and wipe it thoroughly with 100% ethanol and a cotton swab, or lint-free cloth.</td><td>Clean the platen roller when changing a new label roll</td></tr>
<tr><td>Tear Bar/Peel Bar</td><td>Use the lint-free cloth with 100% ethanol to wipe it.</td><td>As needed</td></tr>
<tr><td>Sensor</td><td>Compressed air or vacuum</td><td>Monthly</td></tr>
<tr><td>Exterior</td><td>Wipe it with water-dampened cloth</td><td>As needed</td></tr>
<tr><td>Interior</td><td>Brush or vacuum</td><td>As needed</td></tr>
</table>

Note:

- Do not touch printer head by hand. If you touch it careless, please use ethanol to clean it.
- Please use 100% Ethenol. 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 printer life.

Revise History

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