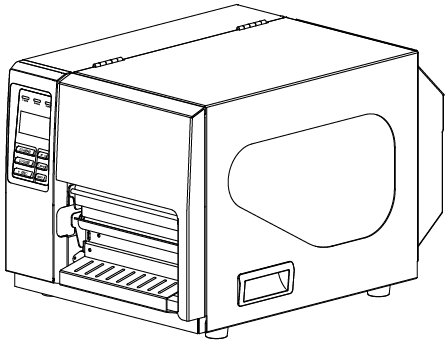
TTP-268M/ TTP-366M

THERMAL TRANSFER / DIRECT THERMAL BAR CODE PRINTER

SERVICE MANUAL



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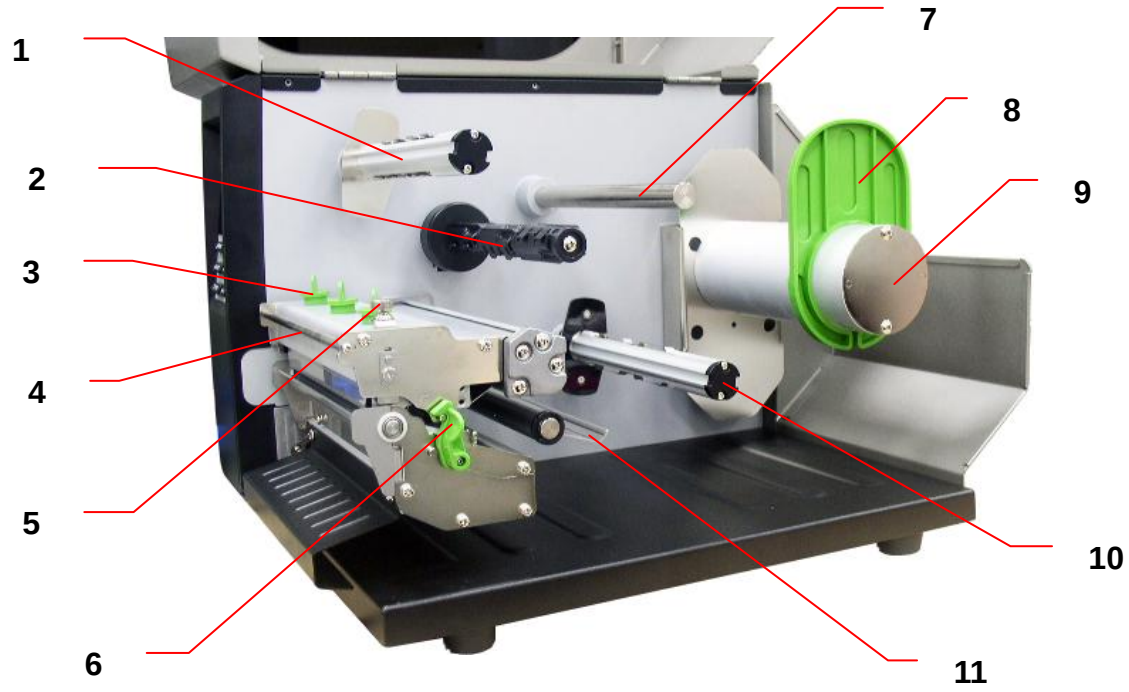
1. FUNDAMENTAL OF THE SYSTEM

1.1. Overview

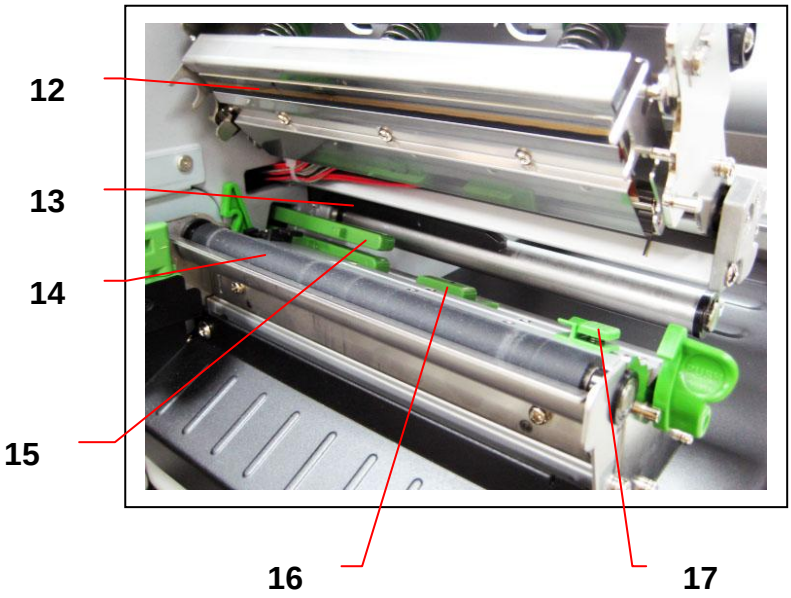
Front View

1. LED indicators
2. LCD display
3. Front panel buttons
4. Paper exit chute
5. Lower front cover
6. Media view window
7. Printer right side cover opener

Interior View



1. Ribbon rewind spindle
2. Ribbon supply spindle
3. Print head pressure adjustment knob
4. Ribbon guide bar
5. Z axis mechanism adjustment knob
6. Print head release lever
7. Media guide bar
8. Label roll guard
9. Label supply spindle
10. Internal rewind spindle (Optional)
11. Damper
12. Print head
13. Ribbon sensor
14. Platen roller
15. Gap sensor
16. Black mark sensor
17. Label guide



Rear View

1. Fan-fold paper entrance chute
2. Centronics interface (SPP mode)
3. USB interface (USB 2.0/ Full speed mode)
4. RS-232C interface (Max. 115,200 bps)
5. Power jack socket
6. GPIO interface (Factory option)

*7. SD card slot (Up to 4G)

8. Internal Ethernet interface (10/100 Mbps)
9. PS/2 keyboard interface
10. Power switch

Note:

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

*** Recommended SD card specification.**

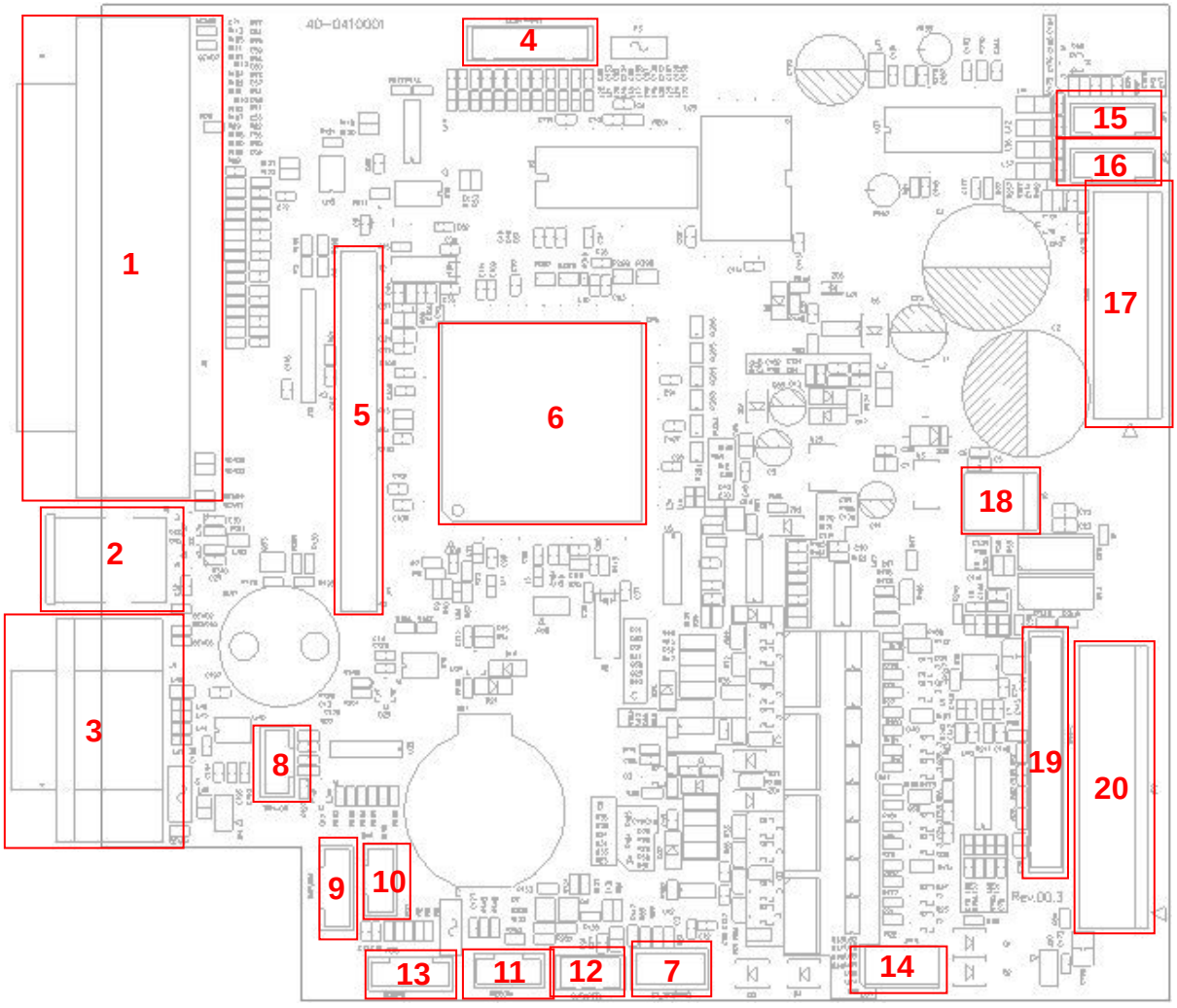
SD card spec	SD card capacity	Approved SD card manufacturer
V1.0, V1.1	128 MB	SanDisk, Transcend
V1.0, V1.1	256 MB	SanDisk, Transcend, Panasonic
V1.0, V1.1	512 MB	SanDisk, Transcend, Panasonic
V1.0, V1.1	1 GB	SanDisk, Transcend, Panasonic

V2.0 SDHC CLASS 4	4 GB	
V2.0 SDHC CLASS 6	4 GB	SanDisk, Transcend, Panasonic
V1.0, V1.1	microSD 128 MB	Transcend, Panasonic
V1.0, V1.1	microSD 256 MB	Transcend, Panasonic
V1.0, V1.1	microSD 512 MB	Panasonic
V1.0, V1.1	microSD 1 GB	Transcend, Panasonic
V2.0 SDHC CLASS 4	microSD 4 GB	Panasonic
V2.0 SDHC CLASS 6	microSD 4 GB	Transcend
V1.0, V1.1	miniSD 128 MB	Transcend, Panasonic
V1.0, V1.1	miniSD 256 MB	Transcend, Panasonic
V1.0, V1.1	miniSD 512 MB	Transcend, Panasonic
V1.0, V1.1	miniSD 1 GB	Transcend, Panasonic
V2.0 SDHC CLASS 4	miniSD 4 GB	Transcend
V2.0 SDHC CLASS 6	miniSD 4 GB	
- The DOS FAT file system is supported for the SD card. - Folders/files stored in the SD card should be in the 8.3 filename format. - The miniSD/microSD card adapter is required for SD card reader.		

2. ELECTRONICS

2.1 Summary of Board Connectors

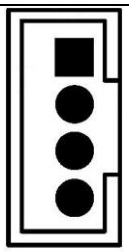
Main board



Connector	Description
1	Centronics port connector
2	USB connector
3	RS-232C connector
4	LCD panel connector
5	Multi-interface board connector/ GPIO interface board
6	Micro processor
7	RFID module connector

8

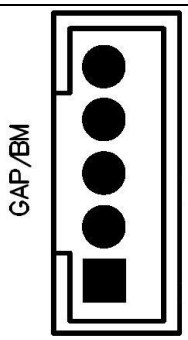
Head open sensor connector



Pin	Description	Voltage
1	Head open sensor emitter power pin	1.2~1.4V
2	GND	0V
3	Head open sensor receiver	0V: Head close 3.3V: Head open
4	GND	0V

9

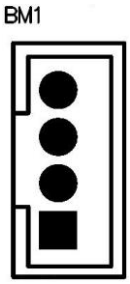
Gap sensor connector



Pin	Description	Voltage
1	Power	5V
2	Gap sensor emitter	4.0~4.1V: Emitter on 4.3~4.4V: Emitter off
3	Black mark sensor emitter	4.0~4.1V: Emitter on 4.3~4.4V: Emitter off
4	Gap sensor receiver	A/D: 0~3.3V
5	GND	0V

10

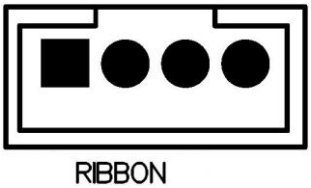
Black mark sensor connector



Pin	Description	Voltage
1	Black mark sensor receiver	A/D: 0~3.3V
2	Power	5V
3	GND	0V
4	Black mark sensor emitter	4.0~4.1V: Emitter on 4.3~4.4V: Emitter off

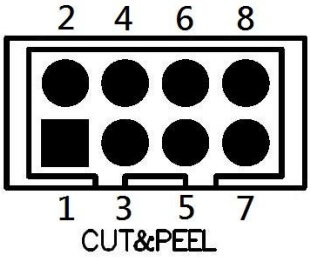
11

Ribbon sensor connector



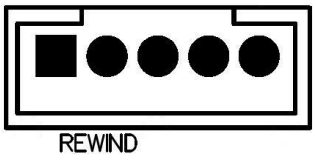
Pin	Description	Voltage
1	Ribbon sensor receiver	A/D: 0~3.3V
2	Ribbon sensor emitter power pin	5V
3	GND	0V
4	Ribbon sensor emitter	4.0~4.1V: Emitter on 4.3~4.4V: Emitter off

12 — 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	Peel sensor emitter	4.0~4.1V: Emitter on 4.3~4.4V: Emitter off
6	Logic power	5V
7	GND	0V
8	Cutter power	24V

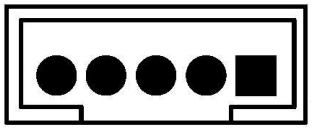
13 — Rewind module connector



Pin	Description	Voltage
1	Rewind motor power	24V
2	Rewind signal	3.3V
3	Rewind enable	3.3V
4	Rewind sensor receiver	A/D: 0~3.3V
5	GND	0V

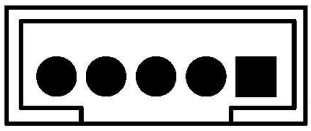
14 — Stepping motor connector

15 — Motor connector for ribbon rewind spindle



Pin	Description	Voltage
1	Logic power	5V
2	DC motor sensor receiver	A/D: 0~3.3V
3	GND	0V
4	Motor signal A	Motor power
5	Motor signal B	Motor power

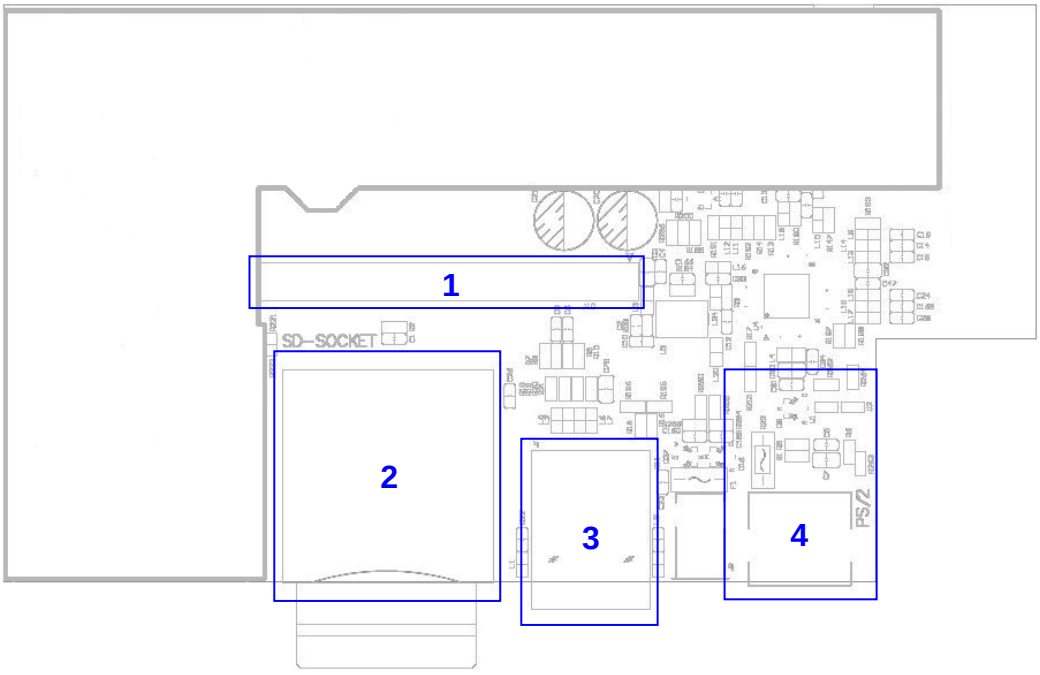
16 — Motor connector for ribbon supply spindle (Option)

Pin	Description	Voltage
1	Logic power	5V
2	DC motor sensor receiver	A/D: 0~3.3V
3	GND	0V
4	Motor signal A	Motor power
5	Motor signal B	Motor power

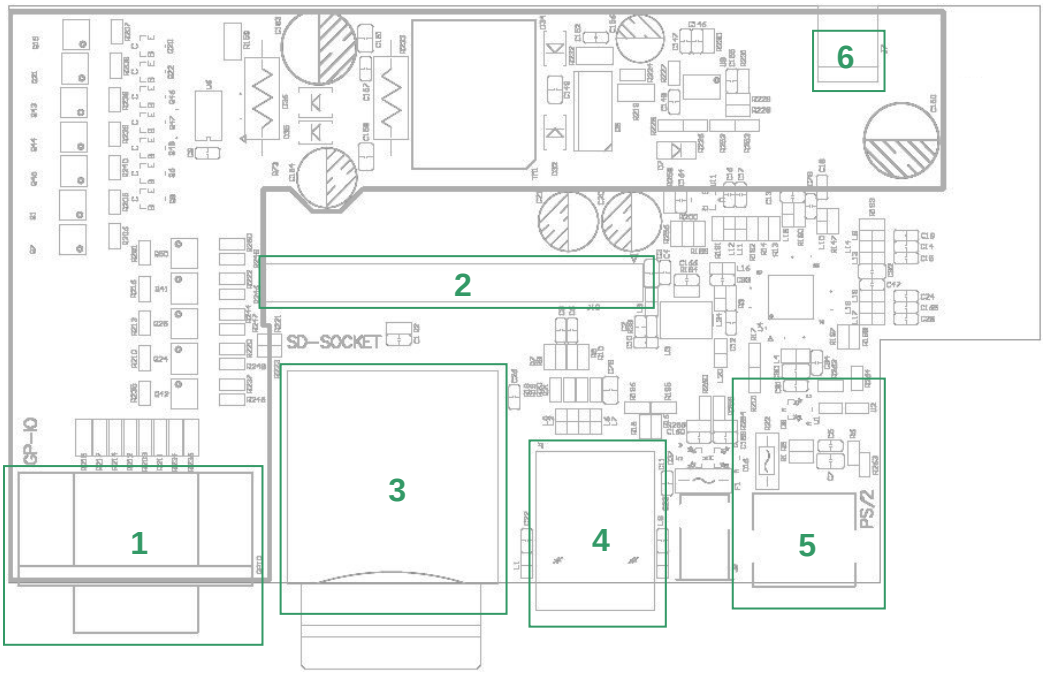
17	Power supply output (24V DC) connector
18	GPIO interface power (24V DC) connector
19	Print head signal connector
20	Print head power connector

Multi-interface board



Connector	Description	Remark
1	Main board connector	
2	SD card slot	
3	Ethernet RJ-45 connector	
4	PS/2 connector	

GPIO with multi-interface board



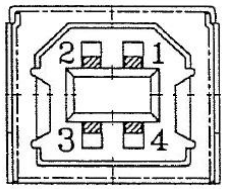
Connector	Description	Remark
1	GPIO connector	
2	Main board connector	
3	SD card slot	
4	Ethernet RJ-45 connector	
5	PS/2 connector	
6	GPIO power connector	

2.2 Pin Configuration

RS-232C

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

USB



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

Centronics

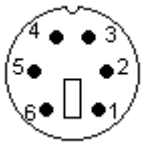
Pin	SPP Mode	Nibble	In/Out	Function
1	Strobe	N/A	In	A **low** on this line indicates that there are valid data at the host. When this pin is de-asserted, the +ve clock edge should be used to shift the data into the device.
2-9	Data 0-7	N/A	In	Data Bus. Single-directional.
10	Ack	N/A	Out	A **low** on this line indicates that there are valid data at the Device. When this pin is de-asserted, the +ve clock edge should be used to shift the data into the host.
11	Busy	N/A	Out	When in reverse direction, a **high** indicates data, while a **low** indicates a command cycle. In forward

				direction, it functions as PtrBusy.
12	Paper Out / End	N/A	Out	When **low**, device acknowledges reverse request.
13	Select	N/A	Out	Extensibility flag
14	Ground	N/A	GND	
15	No Defined	N/A	N/A	
16-17	Ground	N/A	GND	Ground
18	No Defined	N/A	N/A	
19-30	Ground	N/A	GND	Ground
31	No Defined	N/A	N/A	
32	Error / Fault	N/A	Out	A **low** set by the device indicates that the reverse data is available
33-35	Ground	N/A	GND	Ground
36	No Defined	N/A	N/A	

Ethernet

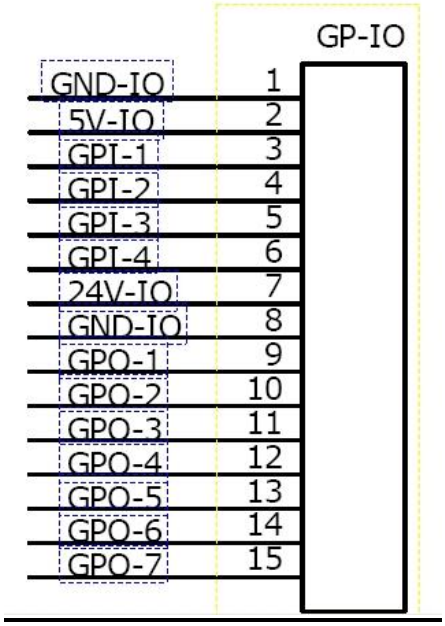
PIN	CONFIGURATION
1	**Tx+**
2	**Tx-**
3	**Rx+**
4	**N/C**
5	**N/C**
6	**Rx-**
7	**N/C**
8	**N/C**

PS/2



PIN	CONFIGURATION
1	**KBD Clock**
2	**GND**
3	**KBD Data**
4	**N/C**
5	**+5V(VCC)**
6	**N/C**

GPIO

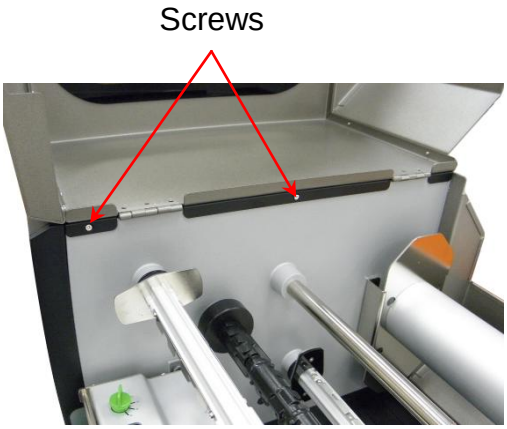

GP-IO
GND-IO 1
5V-IO 2
GPI-1 3
GPI-2 4
GPI-3 5
GPI-4 6
24V-IO 7
GND-IO 8
GPO-1 9
GPO-2 10
GPO-3 11
GPO-4 12
GPO-5 13
GPO-6 14
GPO-7 15

3. MECHANISM

3.1Remove Covers

1. Remove 4 screws from printer.

2. Open printer right side cover and remove 2 screws then close the cover.



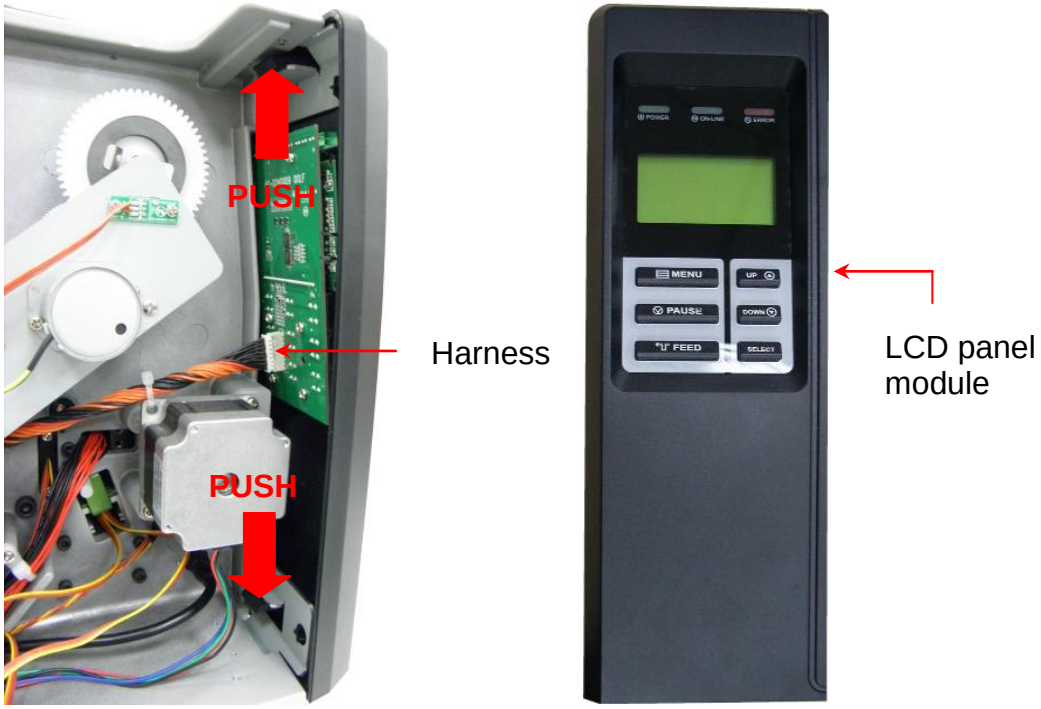
3. Remove the electronics cover.

4. Remove 3 screws from each hinge. Be careful the right side cover may fall out from the printer. Take out the right side cover from the printer.

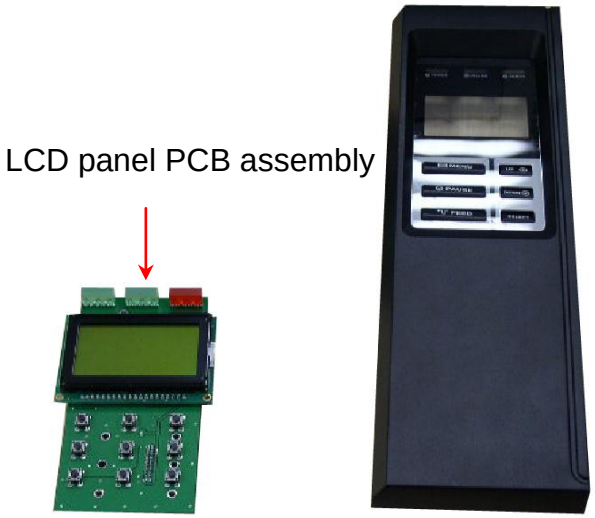
5. Reassemble the parts in the reverse procedures.

3.2 Replacing the LCD Panel Module

1. Refer to section 3.1 to remove the electronics cover.
2. Disconnect harness from the LCD panel module.
3. Push two tabs to remove/replace the LCD panel module.



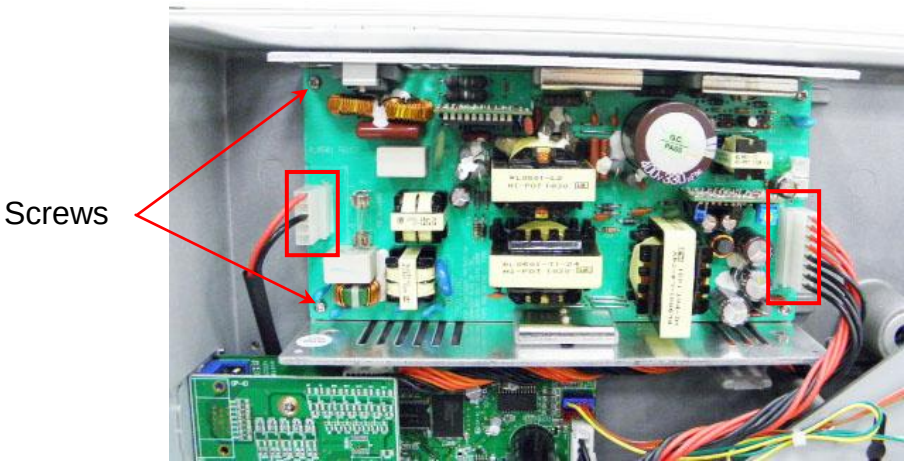
4. Remove 5 screws to replace LCD panel PCB ASS'Y and LCD panel ASS'Y.



5. Reassemble the parts in the reverse procedures.

3.3 Replacing the Power Supply Unit

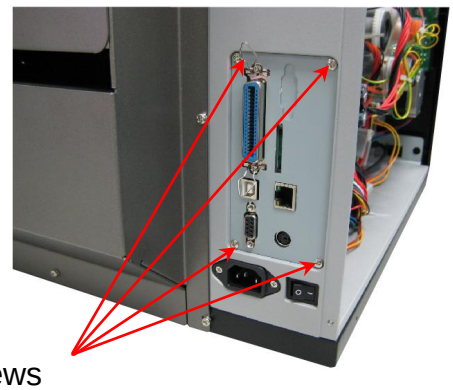
1. Refer to section 3.1 to remove the electronics cover.
2. Disconnect 2 connectors and remove 2 screws on the power supply unit.

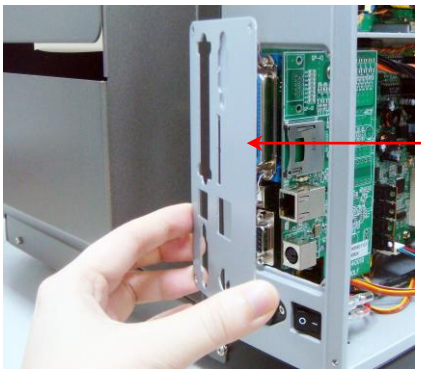


3. Replace the power supply unit.
4. Reassemble the parts in the reverse procedures.

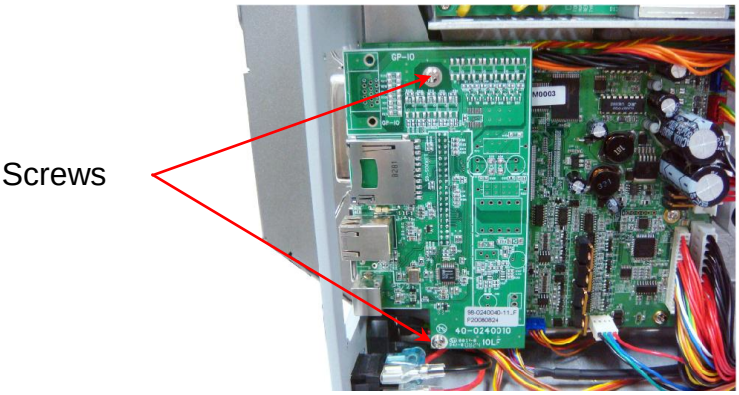
3.4 Replacing Multi-interface Board

1. Refer to section 3.1 to remove the electronics cover.
2. Remove 4 screws then take off the interface plate.

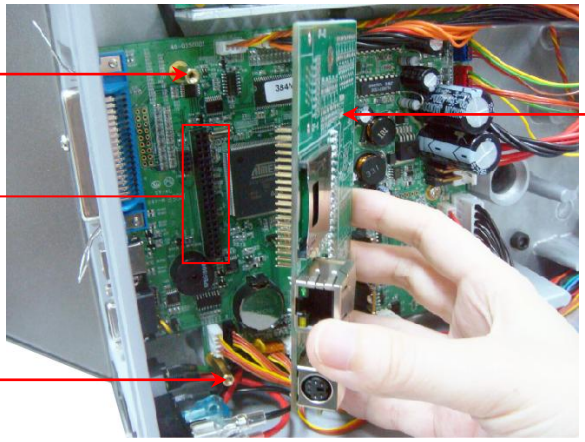




3. Remove 2 screws from multi-interface board.



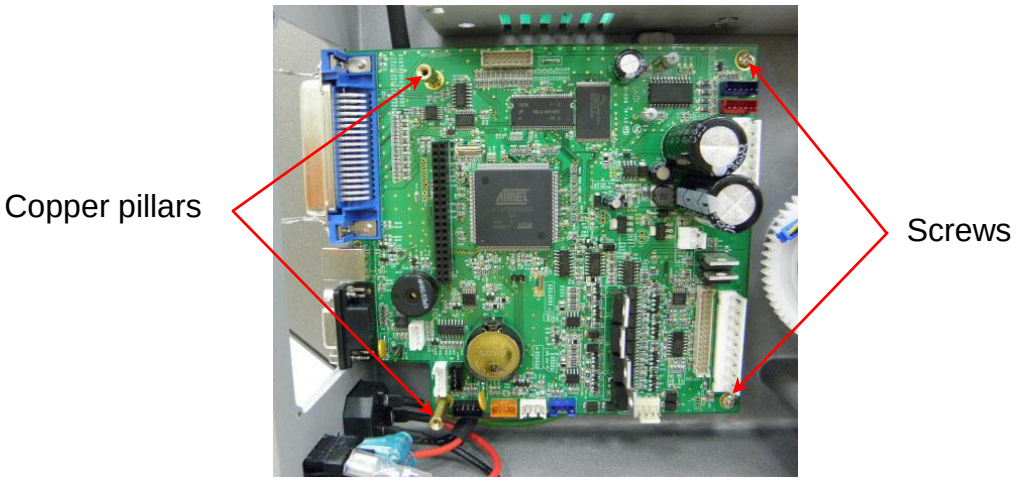
4. Replace the multi-interface board.



5. Reassemble the parts in the reverse procedures.

3.5 Replacing the Main Board

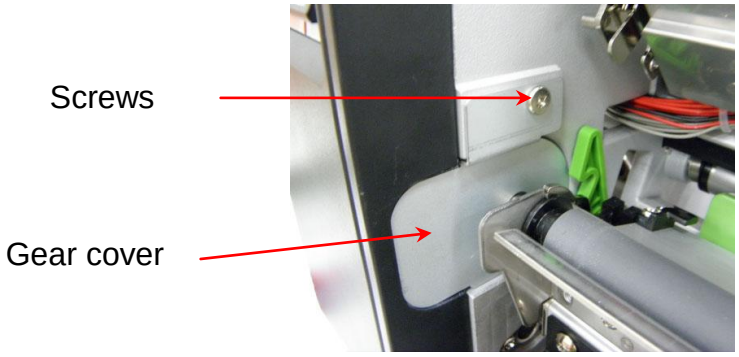
1. Refer to section 3.1 and 3.4 to remove electronics cover and multi-interface board.
2. Disconnect all connectors from the main board.
3. Remove 2 copper pillars and 2 screws.



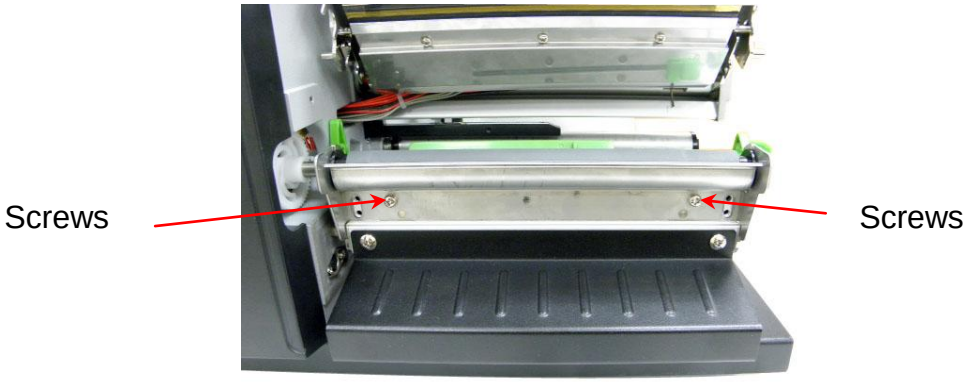
4. Replace the main board.
5. Reassemble the parts in the reverse procedures.

3.6 Replacing the Platen Roller Assembly

1. Open printer right side cover.
2. Disengage print head lift lever.
3. Remove the 1 screw to remove gear cover.



4. Remove 4 screws from the platen holder.

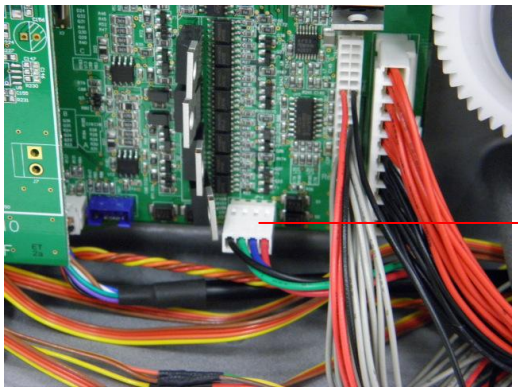


5. Take out the platen holder, platen roller assembly and replace a new platen roller assembly.

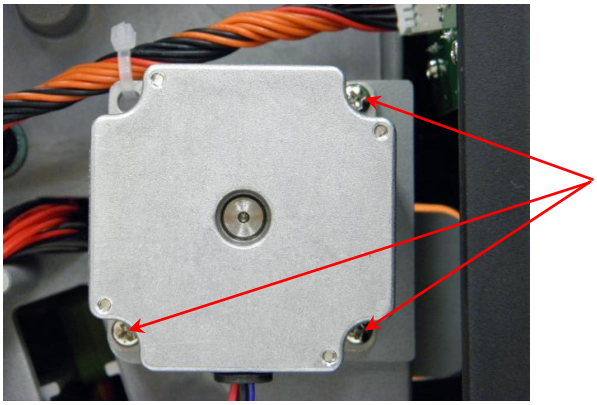
6. Reassemble the parts in the reverse procedures.

3.7 Replacing the Stepping Motor

1. Refer to section 3.1 to remove the electronics cover.
2. Disconnect the stepping motor connector from the main board.



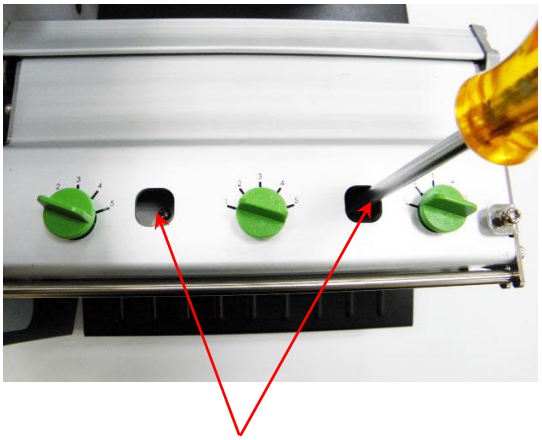
3. Remove 3 screws and 1 fixed tie on the stepping motor.



4. Replace the stepping motor.
5. Reassemble the parts in the reverse procedures.

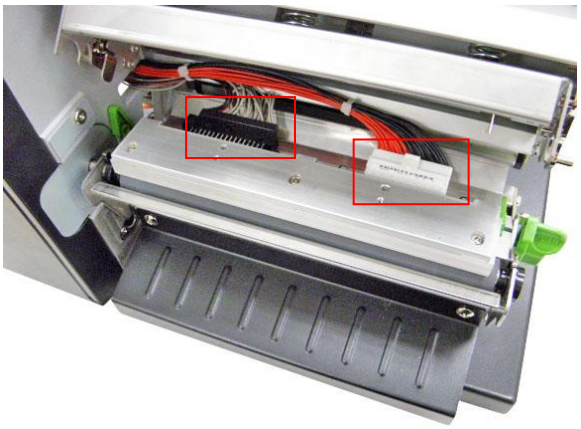
3.8 Replacing the Print head ASS'Y

1. Open the printer right side cover.
2. Remove 2 screws from the mechanism.

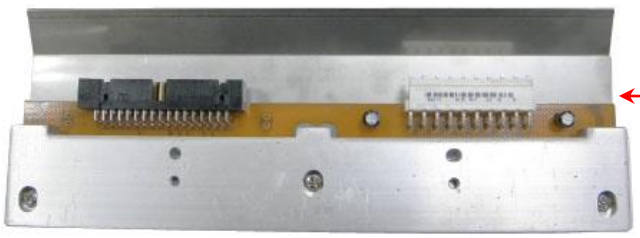


Screws

3. Disengage print head release lever.
4. Carefully disconnect 2 connectors from the print head ASS'Y.

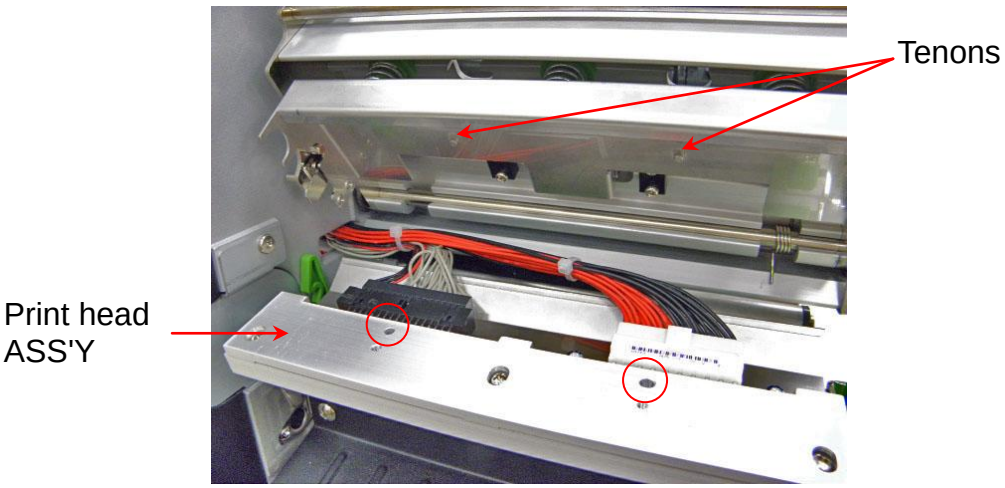


5. Replace the print head ASS'Y.



Print head ASS'Y

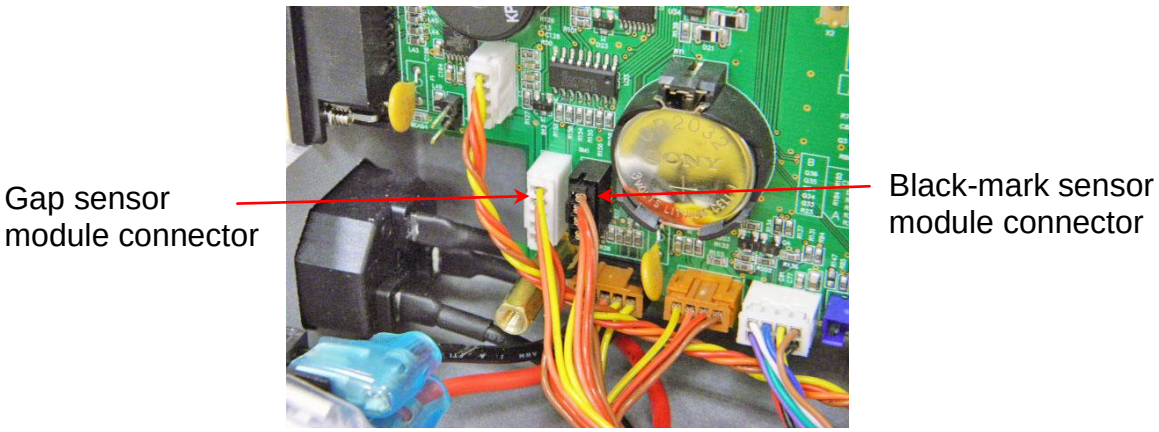
6. Connect the print head cable and carefully slide assembly into the print mechanism. The holes of print head assembly must align and then insert the tenons of print mechanism.



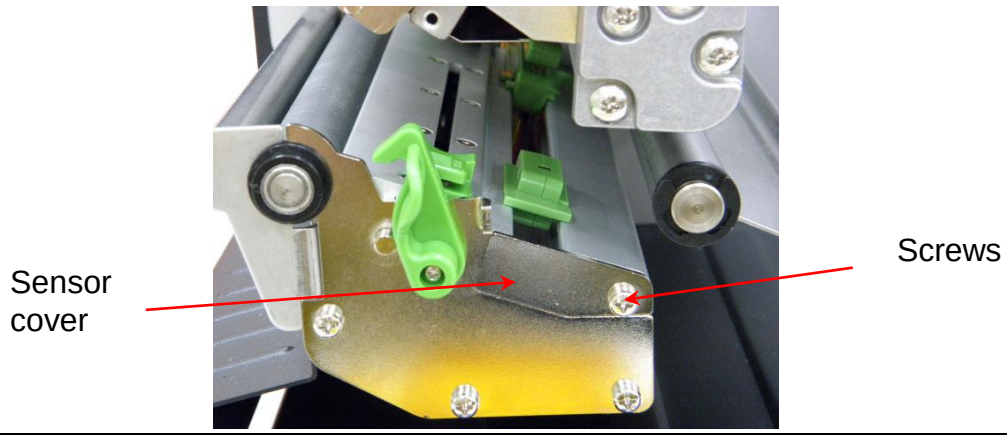
7. Reassemble the parts in the reverse procedures.

3.9 Replacing the Gap and Black-mark Sensor Module

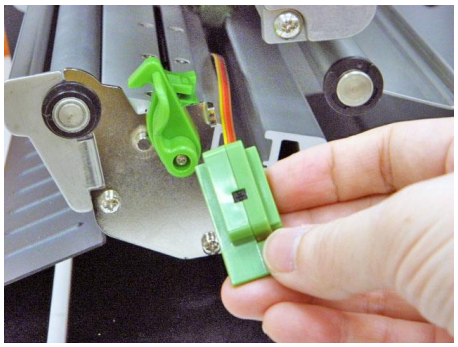
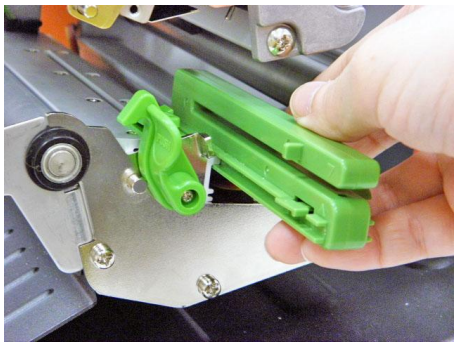
1. Open the printer right side cover.
2. Disengage print head release lever.
3. Refer to section 3.1 and 3.4 to remove electronics cover and multi-interface board.
4. Disconnect the gap and black-mark sensor connectors from the main board.



5. Remove 1 screw to take off the sensor cover from print head mechanism.



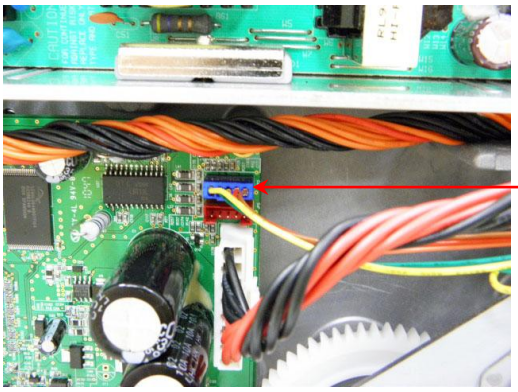
6. Replace the sensor module.

Black-mark sensor module	Gap sensor module
	

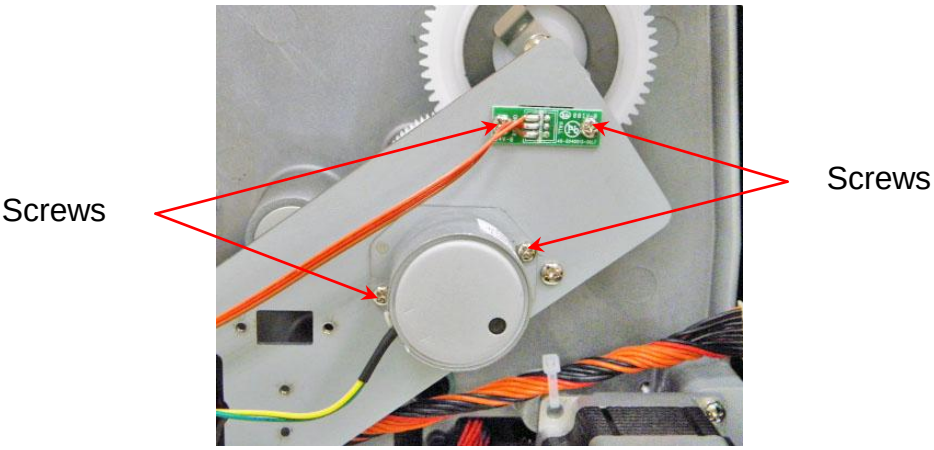
7. Reassemble the parts in the reverse procedures.

3.10 Replacing the DC Motor Module

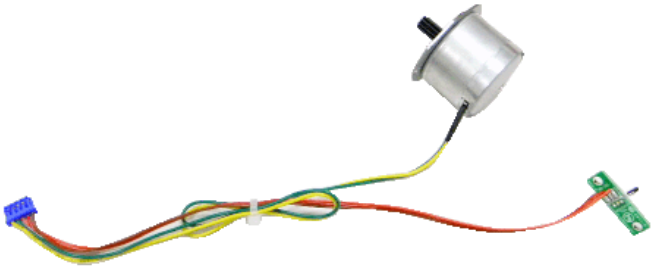
1. Refer to section 3.1 to remove the electronics cover.
2. Disconnect the DC motor module connector from the main board.



3. Remove 4 screws from DC motor fixed plate.



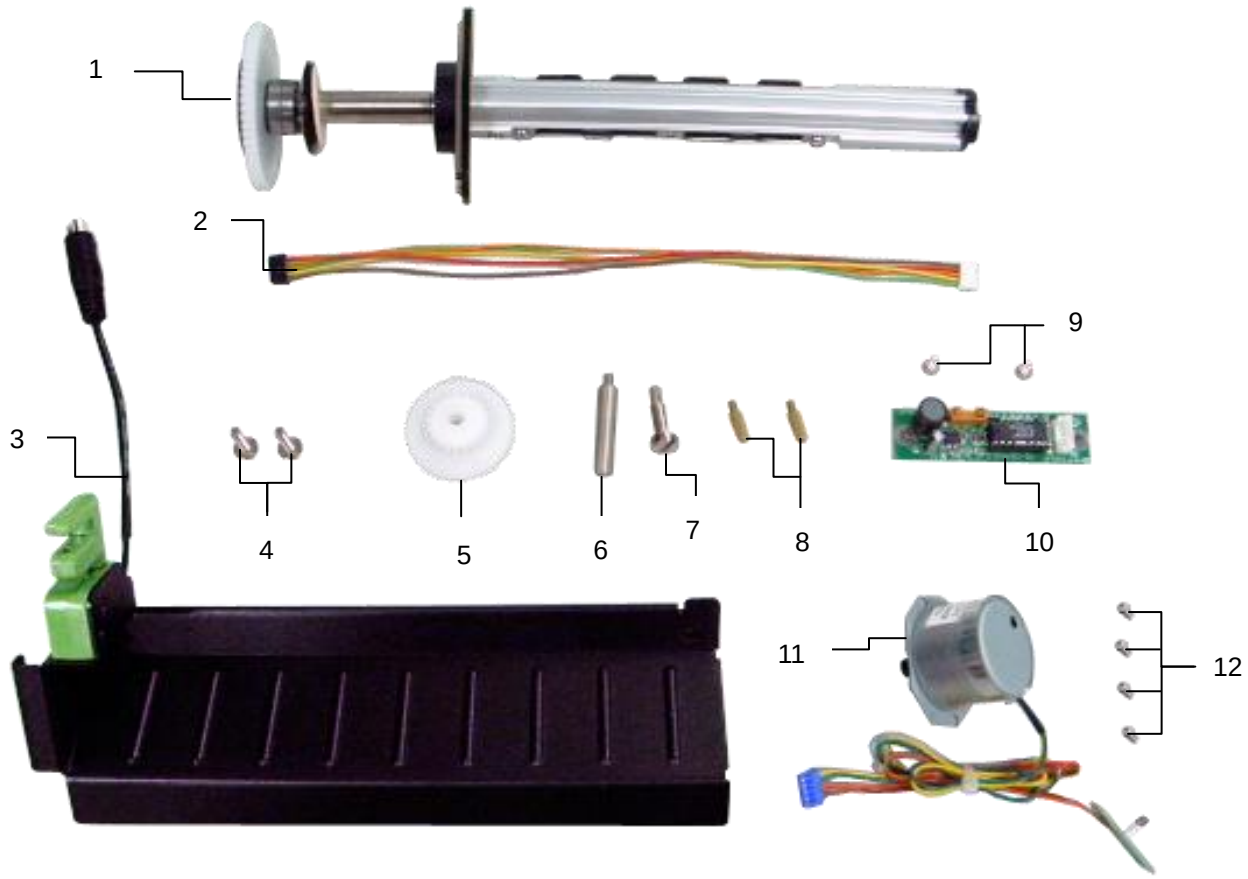
4. Replace the DC motor module. (Including ribbon near end senor.)



5. Reassemble the parts in the reverse procedures.

3.11 Peel-off Kit Installation (Option)

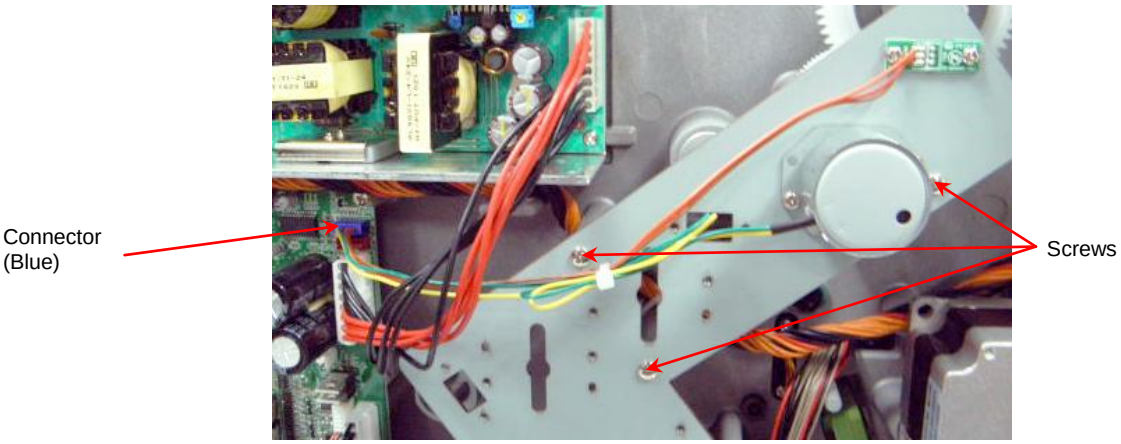
Peel-off kit parts list:



1. Internal rewinder spindle
2. Harness for DC motor control board
3. Peel-off cover (Including peel-off sensor assembly)
4. Screw # 1
5. Gear
6. Pillar
7. Screw # 2
8. Copper pillar
9. Screw # 3
10. DC motor control board assembly
11. DC motor kit (Including DC motor and sensor assembly)
12. Screw # 4

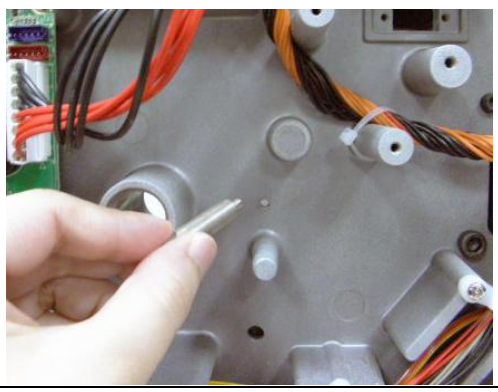
1. Refer to section 3.1 to remove the electronics cover.

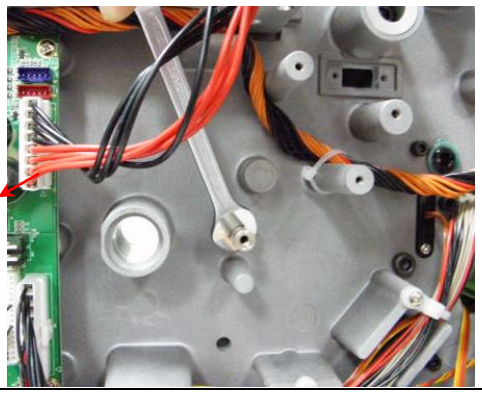
2. Remove 3 screws and 1 connector to remove the DC motor assembly. (DC motor fixing plate)



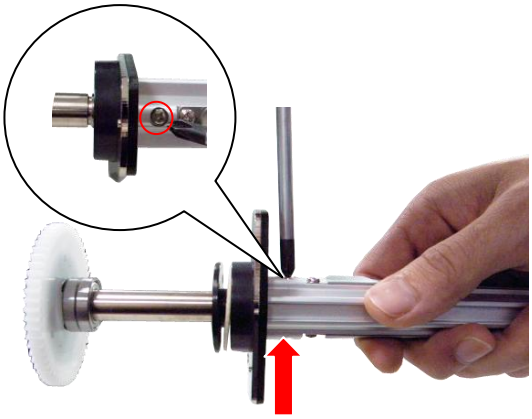
3. Open the right side printer cover. Remove the dustproof cover from internal rewinder spindle reserve hole.

4. Install the pillar to the printer. Please refer to the above fig. Use wrench (No. 7) to fasten the pillar.



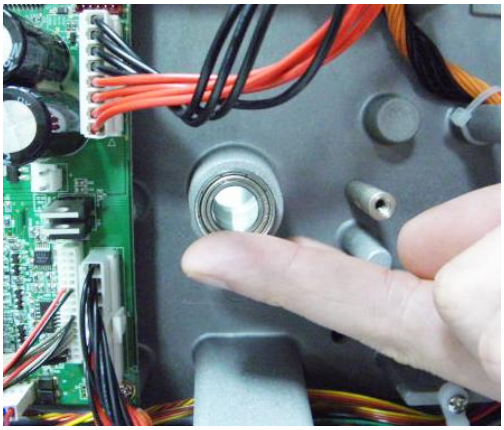


5. Remove 2 screws from the internal rewinder spindle.

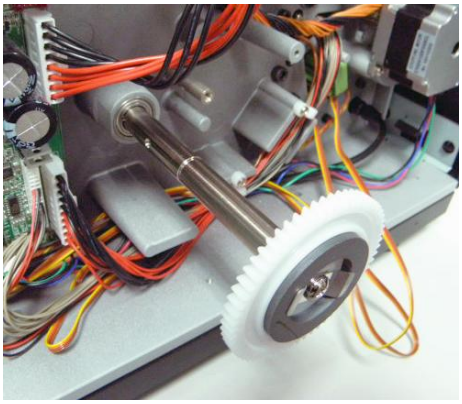


6. Separate the internal rewinder spindle and shaft as above picture.

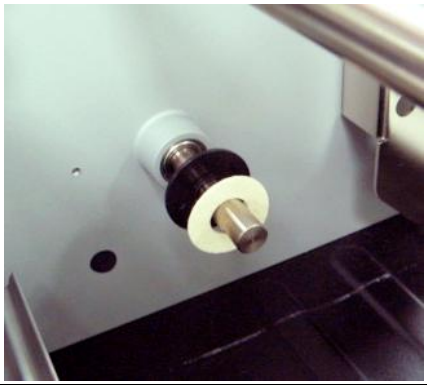
7. Put the bearing into the internal rewinder shaft hole. (Left side)



8. Insert the gear shaft into the internal rewinder shaft hole.

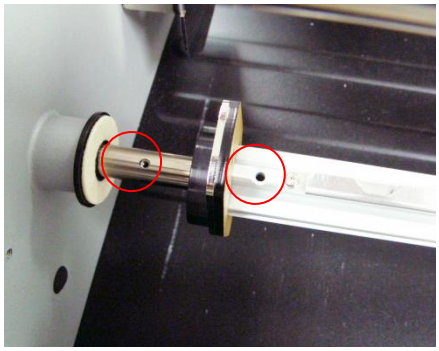


9. Put the bearing (right side), felt fabric and gasket onto the shaft.

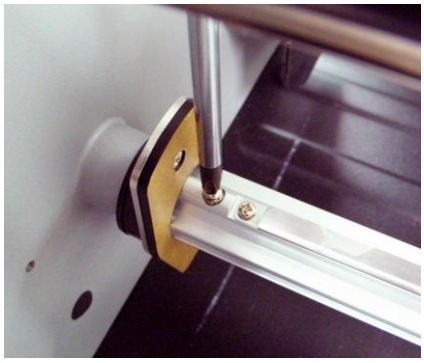


10. Insert the internal rewinder spindle to the shaft and fasten the screw.

Note: The spindle screw hole must be in alignment with the screw hole on rewinder shaft.

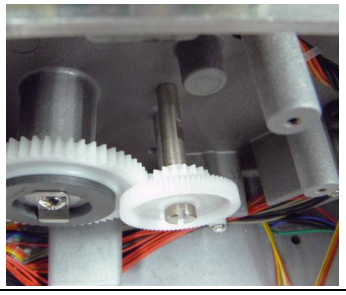


11. Rotate the spindle 180 degree and fasten the other screw at the internal rewinder spindle.

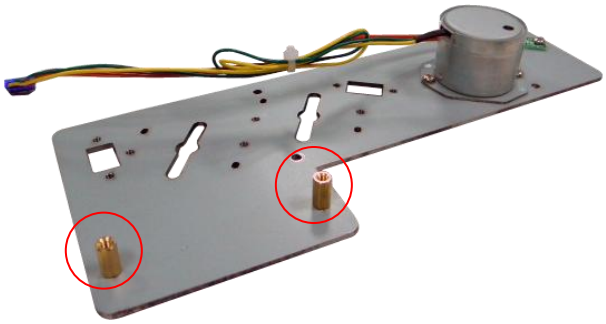


12. Use the screw (#2) to fasten the gear into the pillar by slotted screwdriver.

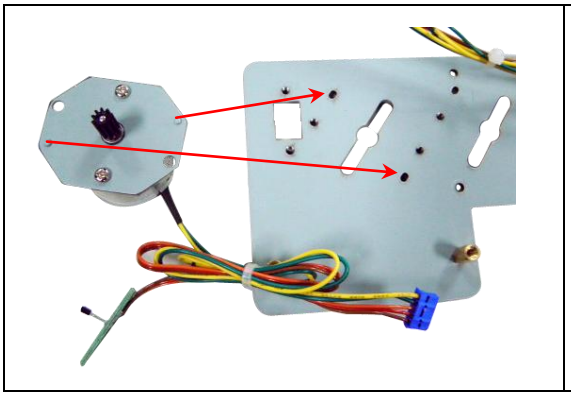
Note: Turn the gear to confirm that it works with internal rewinder gear.

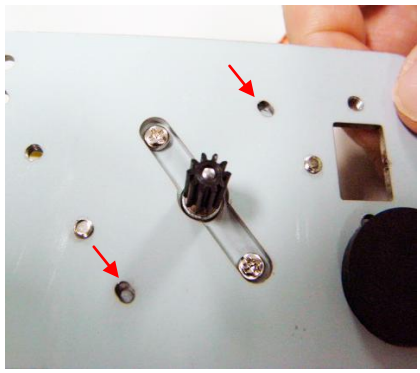


13. Install 2 copper pillars to the DC motor fixing plate.

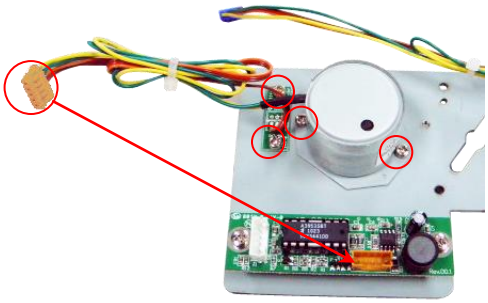


14. Place the two locating protrusions on the motor into the locating holes on the fixing plate. Make sure the protrusions at lower position of locating holes.

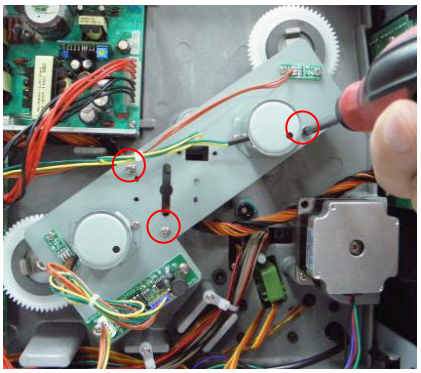




15. Use 4 screws (#4) to fix the DC motor and sensor board on the plate. Use 2 screws (#3) to fix the DC motor control board on the copper pillars. Plug the DC motor kit harness into the DC motor control board.

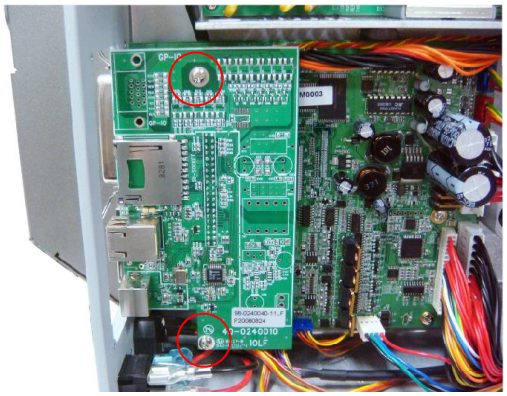


16. Use 3 screws to fasten the DC motor plate to the printer mechanism. Plug the DC motor control board harness into the DC motor control board. (White connector)

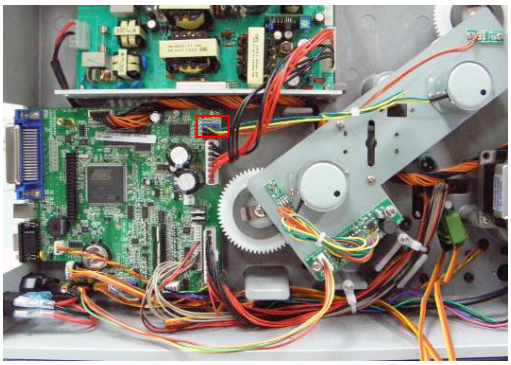


17. Remove 4 screws to take off the printer interface plate.

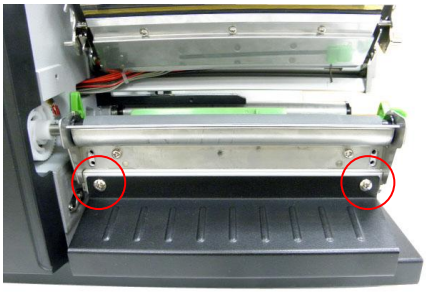
18. Remove 2 screws from multi-interface board to remove the multi-interface board.



19. Connect the DC motor harness and the DC motor control board harness to main board. Then, reassemble the parts in the reverse procedures.

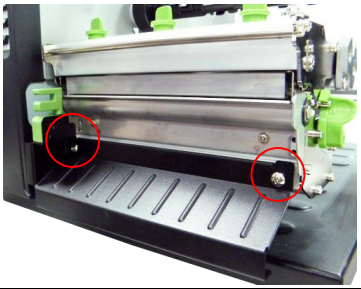


20. Remove 2 screws to take off the lower front panel.



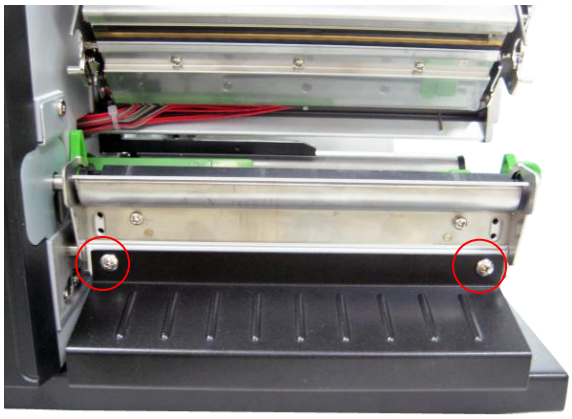
21. Plug the peel-off mini DIN cable connector into the peel-off/cutter connector and place the cable in the cable cavity. The triangle mark on the connector must be at the upper side.

22. Fasten 2 screws at the peel-off module to fix the peel-off module to the printer mechanism.

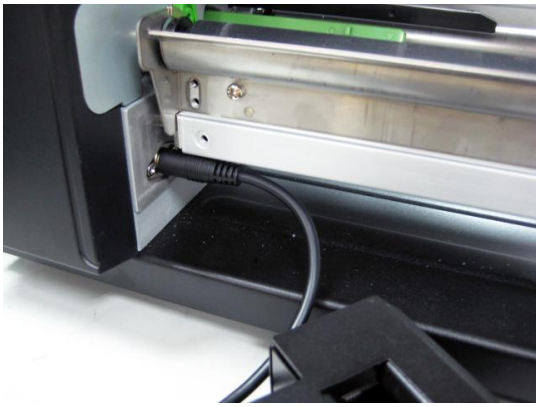


3.12 Cutter Module Installation (Option)

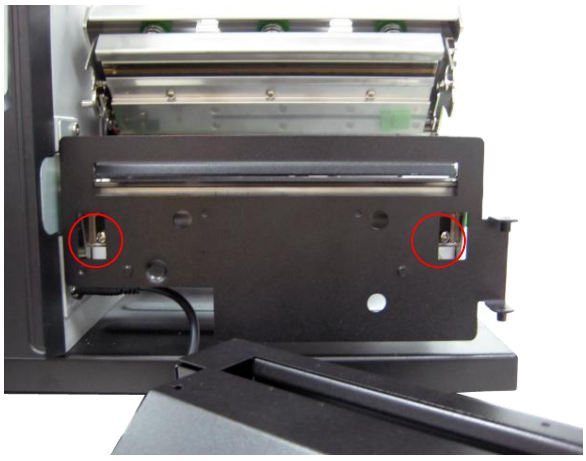
1. Open the printer right side cover.
2. Remove 2 screws to remove the lower front panel.



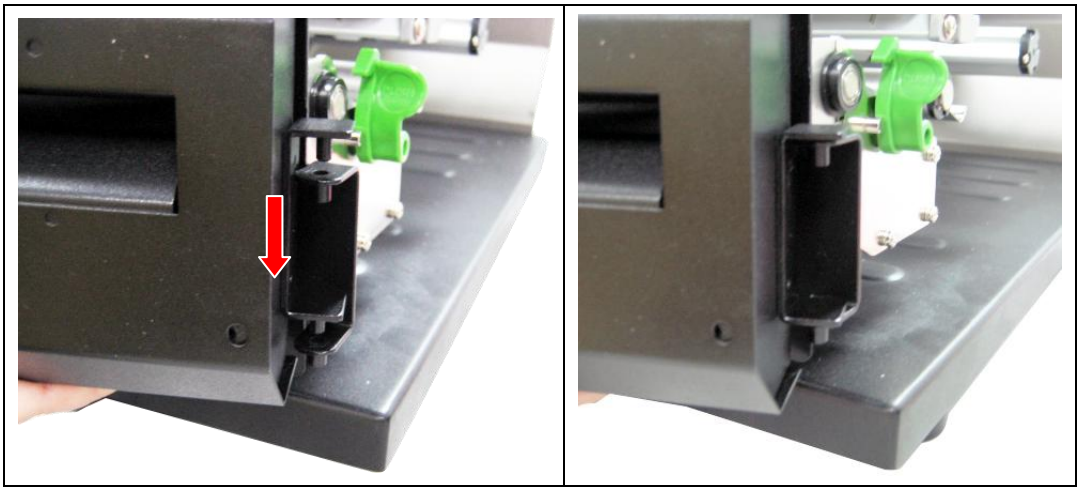
3. Plug the cutter mini DIN cable connector into the cutter/peel-off connector. The triangle mark on the connector must be at the upper side.



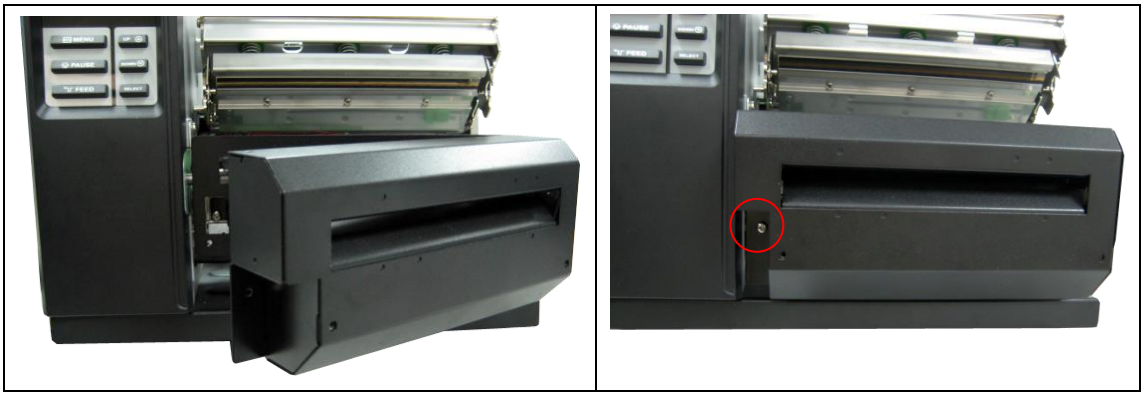
4. Use 2 screws to lock the cutter fixing plate onto the front printer.



5. Place the cutter module into the cutter fixing plate. Please refer to the following fig.



6. Fasten the 1 screw at the cutter bracket to fix the cutter module to the printer mechanism.



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.

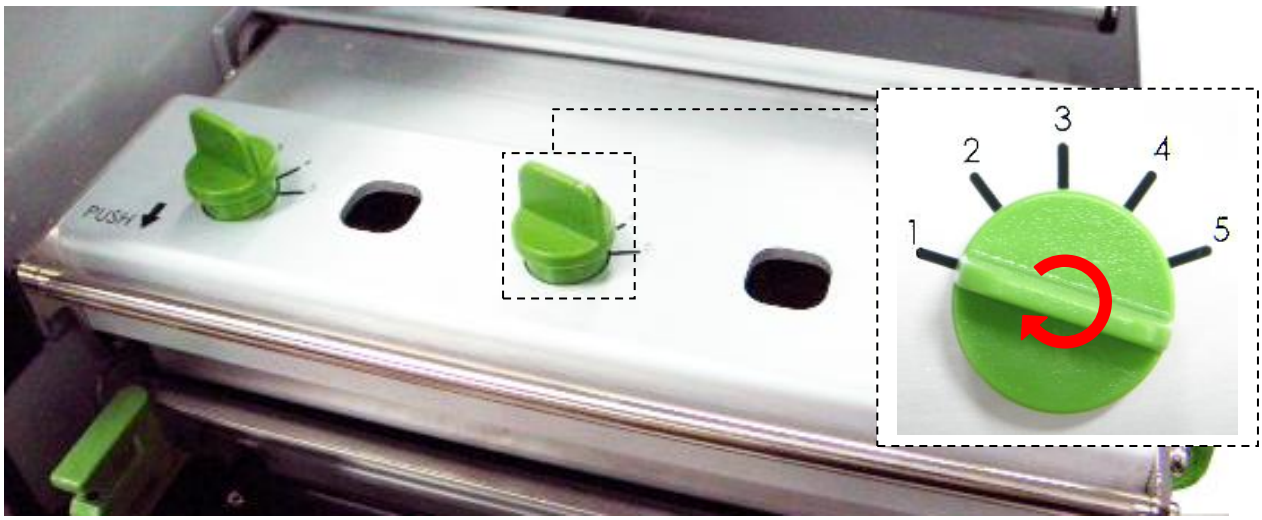
Problem	Possible Cause	Recovery Procedure
Power indicator does not illuminate	* The power cord is not properly connected.	* Plug the power cord in printer and outlet. * Switch the printer on.
Carriage Open	* The printer carriage is open.	* Please close the print carriage.
No Ribbon	* Running out of ribbon. * 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 gap/black-mark sensor. * Set label size correctly.
UP: Fwd. DOWN: Rev. MENU: Exit	* Cutter jam. * There is no cutter installed on the printer. * Cutter PCB is damaged.	* If the cutter module is installed, please press UP or DOWN key to rotate the cutter up or down to make the knife back to the right position. * Remove the label. * Make sure the thickness of label is less than 0.254 mm (10mil) * Replace a cutter PCB.

Not Printing	* Cable is not well connected to serial or USB interface or parallel port. * The serial port cable pin configuration is not pin to pin connected.	* Re-connect cable to interface. * If using serial cable, - Please replace the cable with pin to pin connected. - Check the baud rate setting. The default baud rate setting of printer is 9600,n,8,1. * If using the Ethernet cable, - Check if the Ethernet RJ-45 connector green LED is lit on.. - Check if the Ethernet RJ-45 connector amber LED is blinking. - Check if the printer gets the IP address when using DHCP mode. - Check if the IP address is correct when using the static IP address. - Wait a few seconds let the printer get the communication with the server then check the IP address setting again. * Chang a new cable. * Ribbon and media are not compatible. * Verify the ribbon-inked side. * Reload the ribbon again. * Clean the printhead. * The print density setting is incorrect. * Printhead's harness connector is not well connected with printheat. Turn off the printer and plug the connector again. * Check if the stepping motor is plugging in the right connector. * Check your program if there is a command PRINT at the end of the file and there must have CRLF at the end of each command line.
Memory full (FLASH / DRAM)	* The space of FLASH/DRAM is full.	* Delete unused files in the FLASH/DRAM. * The max. numbers of file of DRAM is 256 files. * The max. user addressable memory space of DRAM is 2048 KB. * The max. numbers of file of FLASH is 256 files. * The max. user addressable memory space of FLASH is 6656KB.
SD card is unable to use	* SD card is damaged. * SD card doesn't insert correctly. * Use the non-approved SD card manufacturer.	* Use the supported capacity SD card. * Insert the SD card again. * The supported SD card spec. - 128MB - 256MB - 512MB - 1GB - 4GB SDHC CLASS 6 * Approved SD card manufacturers; SanDisk, Transcend
PS/2 port does not work	* Did not turn off power prior to plug in the PS/2 keyboard. * PS/2 keyboard is damaged. * PS/2 keyboard doesn't plug-in correctly. * There is no BAS file in the printer.	* Turn off printer power prior to plug in the PS/2 keyboard . * Plug the PS/2 keyboard again. * Make sure the keyboard is fine. * Make sure if there is any BAS file downloaded into printer.

Poor Print Quality	* Ribbon and media is loaded incorrectly * Dust or adhesive accumulation on the printhead. * 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 printhead. * Clean the platen roller. * Adjust the print density and print speed. * Run printer self-test and check the printhead test pattern if there is dot missing in the pattern. * Change proper ribbon or proper label media. * Adjust the printhead pressure adjustment knob. - If the left side printout is too light, please adjust the left side pressure adjustment knob to the higher index (higher pressure). If the pressure adjustment knob has been adjust to index “5” and the poor print quality is still at the left side of the printout, please adjust the pressure adjustment knob to index “1” and use the Z-axis adjustment knob to fine tune the pressure. - If the right side printout is too light, please adjust the right side pressure adjustment knob to the higher index (higher pressure) to improve the print quality. * If the label thickness is more than 0.22 mm, the print quality might be not good enough, please adjust the heater line adjustment screw counter clockwise to get the best print quality. * 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.
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.

The left side printout position is incorrect	* Wrong label size setup. * The parameter Shift X in LCD menu is incorrect.	* Set the correct label size. * Press [MENU] → [SELECT] x 3 → [DOWN] x 5 → [SELECT] to fine tune the parameter of Shift X.
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.	* Make sure the label guide touch the edge of the media guide. * Make sure label, paper core and ribbon are set at the center of the spindle.
Gray line on the blank label	* The printhaed 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 Print Head Pressure Adjustment Knob



There are two conditions that will need to adjust the print head pressure.

1. Print with thick media
   If media thickness is larger than 0.19 mm, the larger pressure is required to get good quality printout.
2. Edge alignment media
   The media alignment is designed at the left edge of mechanism to keep the pressure balance between print head, media and ribbon.

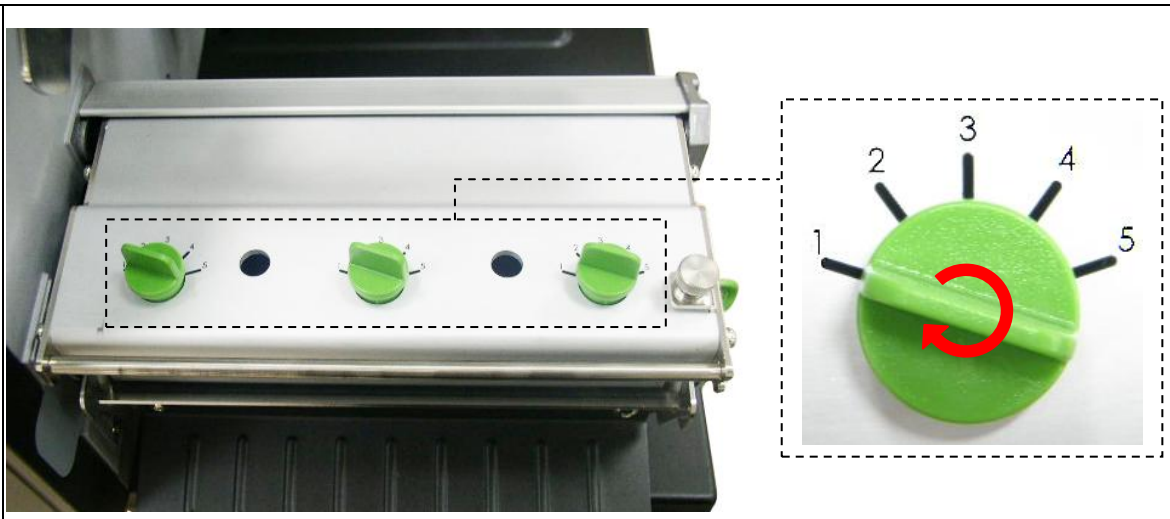
There are 5 levels of pressure for adjustment. Level 1 is the minimum pressure and level 5 is the maximum pressure.
For example, if the label width is 6”, adjust both print head pressure adjustment knobs to the same level. If the label is less than 2” wide, increase the left side print head pressure by rotating the adjustment knob clockwise and decrease the right side pressure by rotating the adjustment knob counter-clockwise to level 1. If the left side print head adjustment knob setting has been set to 5 (the highest pressure index) than increase the middle print head pressure.
Please refer to the following pressure knob adjustment recommendation.

6” width label		
Left index	Middle index	Right index
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5

2” width label		
Left index	Middle index	Right index
2	1	1
3	1	1
4	1	1
5	1	1
2	2	1
3	2	1
3	3	1
4	2	1
4	3	1
4	4	1
5	2	1
5	3	1
5	4	1
5	5	1

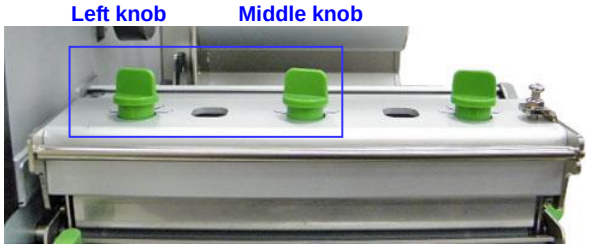
4.3 Mechanism Fine Adjustment to Avoid Ribbon Wrinkles

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 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"> 
</td></tr>
<tr><td>Symptom</td><td>1. Wrinkle happens from label lower left to upper right direction (“／”)</td><td>2. Wrinkle happens from label lower right to upper left direction (“＼”)</td></tr>
<tr><td>Wrinkle Example</td><td> 

Feed direction</td><td> 
</td></tr>
</table>

Adjust the print head pressure adjustment knob



The print head pressure adjustment knob has 5 levels of settings. Clockwise direction adjustment is to increase the print head pressure. Counter Clockwise adjustment can decrease the print head pressure.
If the wrinkle on the label starts from the lower left side to upper right side, please do following adjustment.

1. Decrease the right side print head pressure adjustment knob setting 1 level per each adjustment then print the label again to check if wrinkle is gone.
2. If the right side print head adjustment knob setting has been set to index 1 (the lowest pressure index), please increase the left side print head pressure.
3. If the left side print head adjustment knob setting has been set to 5 (the highest pressure index) the wrinkle can't be avoided, please increase the middle print head pressure knob.
4. If the wrinkle can't be avoided, please refer to next chapter to adjust the Z-axis mechanism adjustment knob.

Pressure knob adjustment reference:

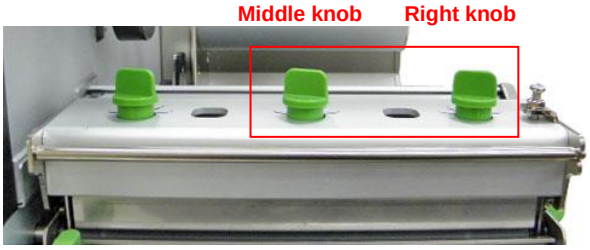
- 6" label

Left index	Middle index	Right index
2	1	1
3	1	1
4	1	1
5	1	1
5	2	1
5	3	1
5	4	1
5	5	1

- 3" label

Left index	Middle index	Right index
2	2	1
3	3	1
4	4	1
5	5	1

Adjust the print head pressure adjustment knob



The print head pressure adjustment knob has 5 levels of settings. Clockwise direction adjustment is to increase the print head pressure. Counter Clockwise adjustment can decrease the print head pressure.
If the wrinkle on the label starts from the lower right side to upper left side, please do following adjustment.

1. Decrease the left side print head pressure adjustment knob setting 1 level per each adjustment then print the label again to check if wrinkle is gone.
2. If the left side print head adjustment knob level has been set to index 1 (the lowest index), please increase the right side print head pressure.
3. If the right side print head adjustment knob setting has been set to 5 (the highest pressure index) the wrinkle can't be avoid, please increase the middle print head pressure knob.
4. If the wrinkle can't be avoided, please refer to next chapter to adjust the Z-axis mechanism adjustment knob.

Pressure knob adjustment reference:

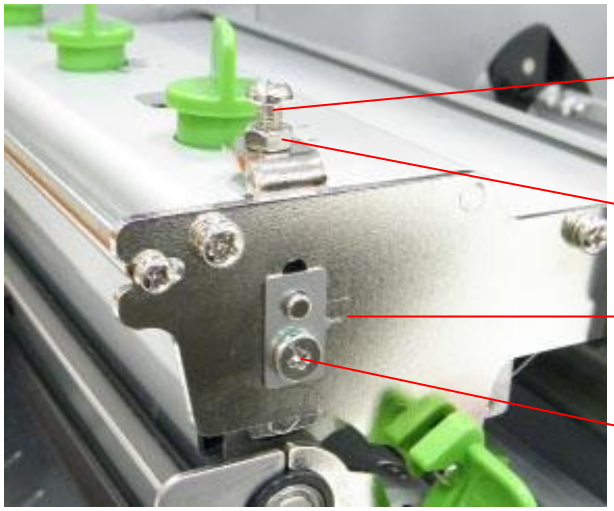
- 6" label

Left index	Middle index	Right index
1	1	2
1	1	3
1	1	4
1	1	5
1	2	5
1	3	5
1	4	5
1	5	5

- 3" label

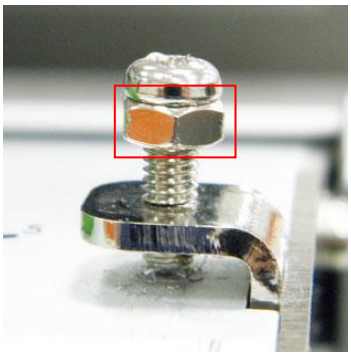
Left index	Middle index	Right index
1	2	2
1	3	3
1	4	4
1	5	5

4.4 Z-axis Mechanism Adjustment Knob

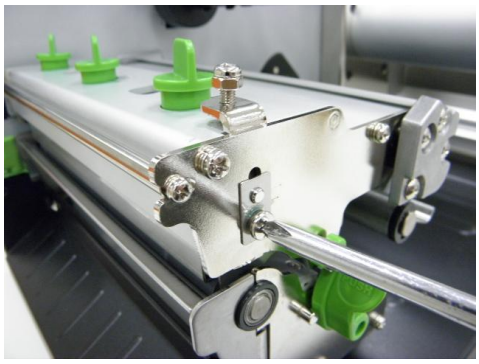


For narrow label, If the print head adjustment knob can't find the pressure to print correctly. Then, it may require to adjust the Z-axis mechanism adjustment knob to get your best print quality. This Z-axis mechanism adjustment knob is used to lift up the right side print head a little bit. Please adjust the pressure adjustment knob to index "1" and use the Z-axis adjustment knob to fine tune the pressure. Please refer to the adjust steps following,

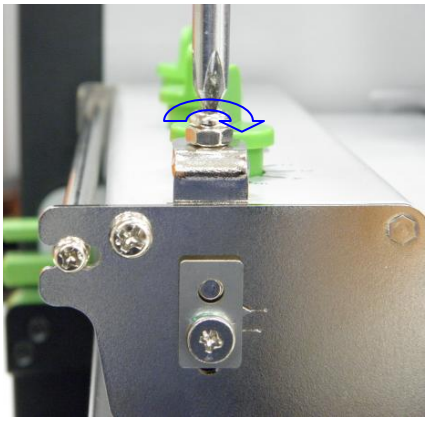
1. Loosen the fixing nut to the top of knob. (Move the nut only.)

Factory default	Loosen the nut to the top
	

2. Loosen the fixing screw.

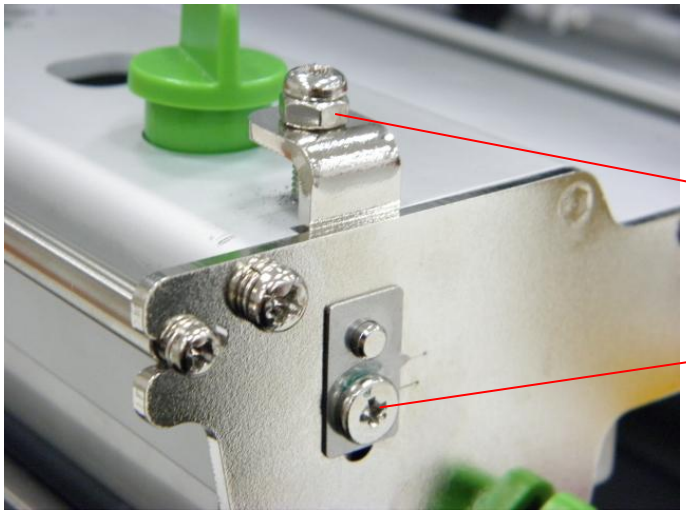


3. Rotate the Z-axis mechanism adjustment knob clockwise for a few degrees by screwdriver and print again for fine tune the print head pressure distribution. If the print quality is still poor, please turn the Z-axis mechanism adjustment knob clockwise about 1/4 circle each time for adjustment. (The best degrees are base on used label.)



Marker position	
Factory default position	**In Z-axis mechanism adjustment knob function position**
	

4. Screw the fixing nut and fixing screw for fixed this print head pressure.



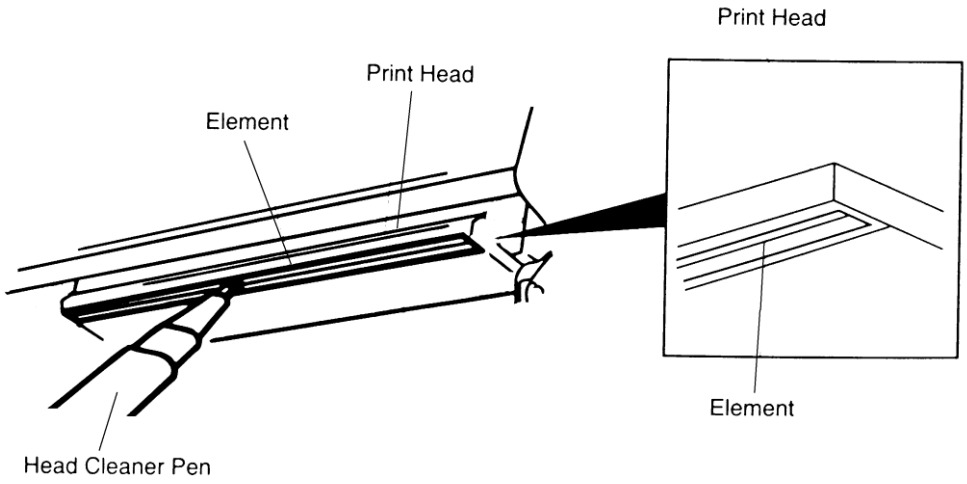
5. MAINTENANCE

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

<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 (Head cleaner pen) 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>Sensor</td><td>Compressed air or vacuum</td><td>Monthly</td></tr>
</table>

Exterior	Wipe it with water-dampened cloth	As needed
Interior	Brush or vacuum	As needed

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.

UPDATE HISTORY

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