DCS & Labelling Worldwide

EZ Manual CL4xxe

- Electric Checks and Adjustments
- Ribbon Clutch Adjustment
- Print Head Position Alignment
- Print Head Balance Adjustment

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Electric Checks and Adjustments

This explains how to check levels of DC power supply, I-mark sensor and gap sensor. Ensure that printer power is off. Remove the LH cover and then perform the following steps.

Additional equipment required
TP Test Module
Digital Multimeter

STEPS

1 Attach the connector from the TP Test Module to the test port on the MAIN PCB. Note correct positioning of connector. Nibs on the connector are placed down on the PCB in the forward position.

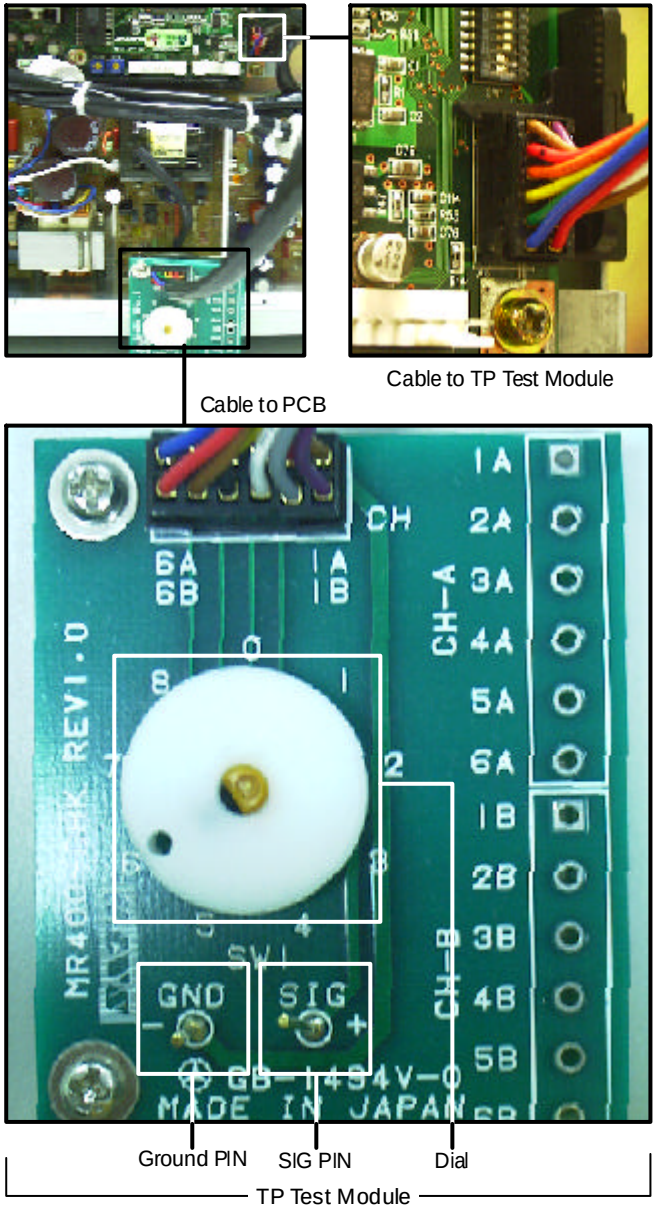
2 Attach the ground probe of the Digital Multimeter to the TP Test Module ground pin (GND PIN).

3 Attach positive probe of the Multimeter to the + SIG PIN on the TP Test Module terminal.

4 Turn printer power on and rotate the dial to a position 0-5 on the TP Test Module by referring to the diagram on the next page. Record the values from the Multimeter.

5 Confirm the recorded voltages are within the voltage range. If not, replace parts or adjust sensor level. Refer to Check and Adjustment chart.

6 After performing test, put the LH cover back to the printer.



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Electric Checks and Adjustments

Chart 1

TP TEST POINT CHART

Dial test point	Comment	Voltage	Voltage Range	Check pin on TP Test Module and Main PCB	Adjustment to VR
0	DC power Supply	+5.0 VDC	+4.8V to +5.2V	CH3A(+5.0V) - CH1A(GND)	N/A
1		+2.0 VDC	+1.9V to +2.1V	CH4A(+2.0V) - CH1A(GND)	N/A
2		+3.3 VDC	+3.1V to +3.5V	CH5A(+3.3V) - CH1A(GND)	N/A
3		+24.0 VDC	+23.5V to +24.5V	CH6A(+24.0V) - CH1A(GND)	N/A
4	I-Mark Sensor Level	Low level (Set the blank area on the sensor) = A		CH1B(+8.4V) - CH1A(GND)	VR5
		High level (Set the I-mark on the sensor) = B			
		High level - Low level = A - B = more than +0.9V			
5	Gap sensor Level	Low level (Set the label backing liner or the centre hole [in case of the centre hole tag] on the sensor) = C		CH2B - CH1A(GND)	VR4
		High level (Set the label or tag on the sensor) = D			
		High level - Low level = C - D = more than +0.9V			

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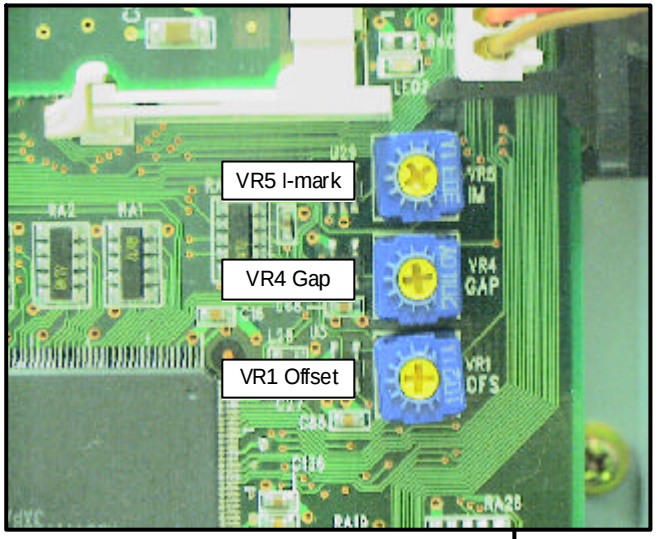
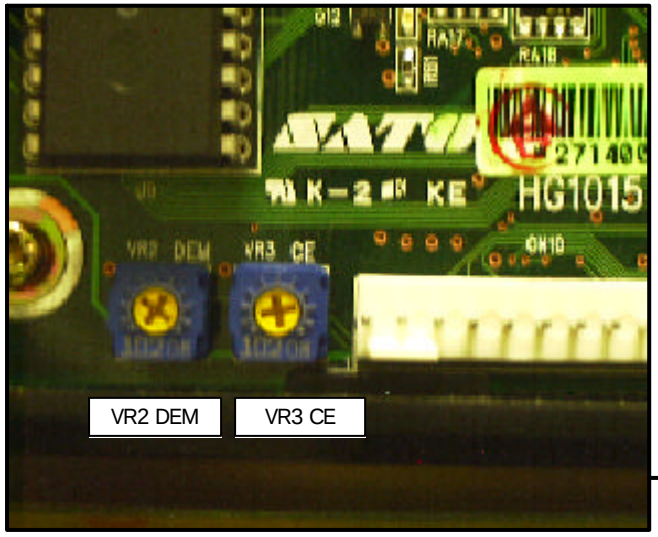
Electric Checks and Adjustments

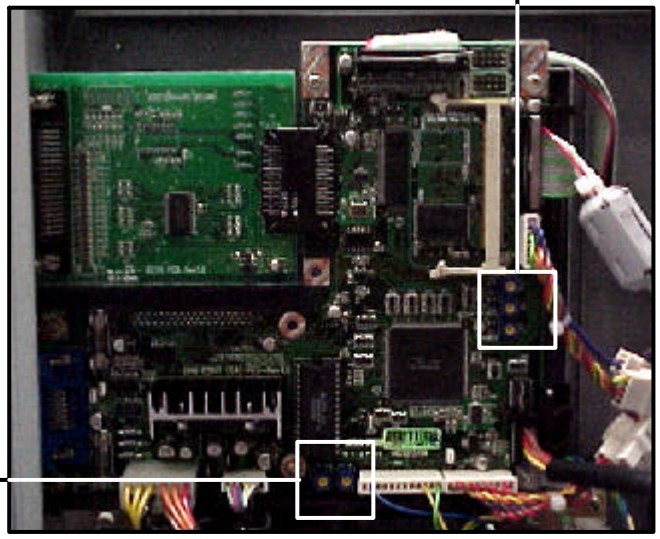
Chart 2

Potentiometers are located on MAIN PCB.

Adjustment VR	Function
VR1(OFS)	Pitch Offset Adjustment
VR2(DEM)	Not used
VR3(CE)	Not used
VR4(GAP)	Gap Sensor Level Adjustment
VR5(IM)	I-Mark Sensor Level Adjustment







MAIN PCB

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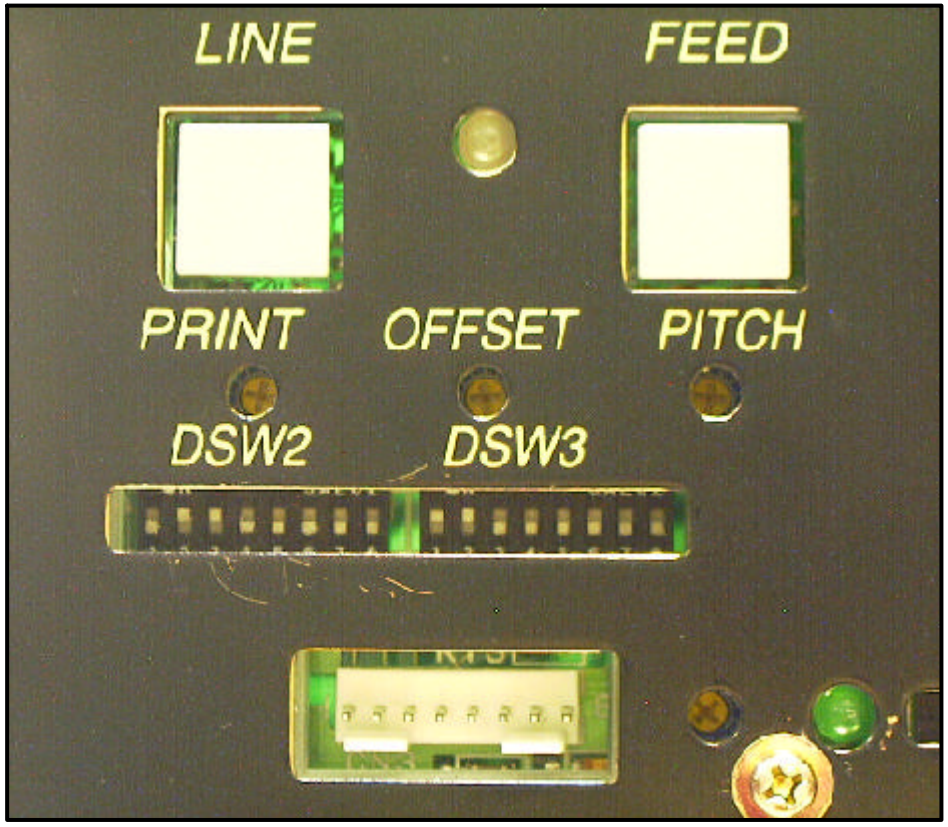
Potentiometers are located on FRONT PANEL

Adjustment VR	Function
PRINT (VR1)	Print Darkness Adjustment
OFFSET (VR2)	Label Stop Position Adjustment
PITCH (VR3)	Print Position Adjustment
Label Take Sensor	Dispenser Level Adjustment



Electric Checks and Adjustments

Chart 3

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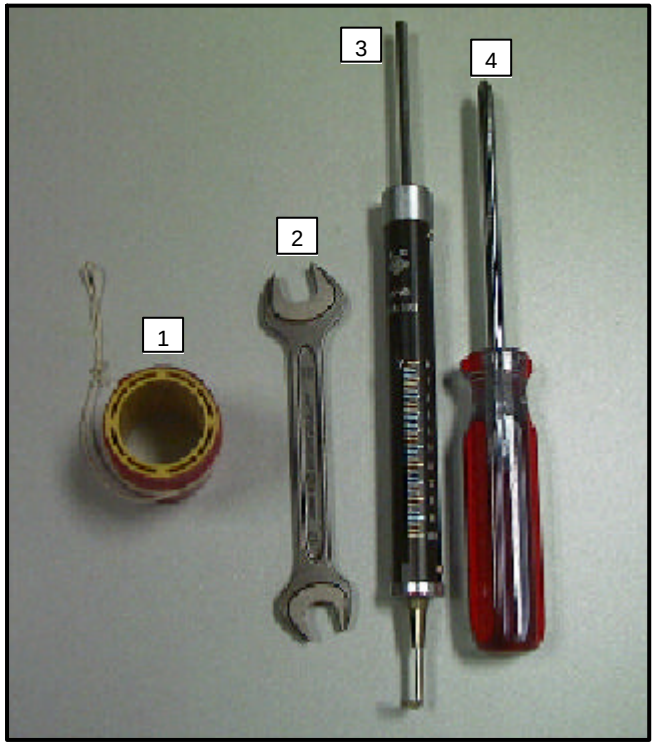
Ribbon Clutch Adjustment

Excessive ribbon unwind and rewind tension will result in variable motion and could be the cause of print quality problems.

Ensure the ribbon rewind and unwind tensions are within specifications or adjustment of either clutch is necessary.

Required equipment

1 Empty Ribbon Core and String
2 12mm Wrench
3 2kg Tension Gauge
4 “+” Screwdriver (JIS No.2 equivalent)



STEPS

1 Switch the printer OFF and disconnect the power cable.

2 Open the top and front access door. Remove the ribbon and label stock if installed.

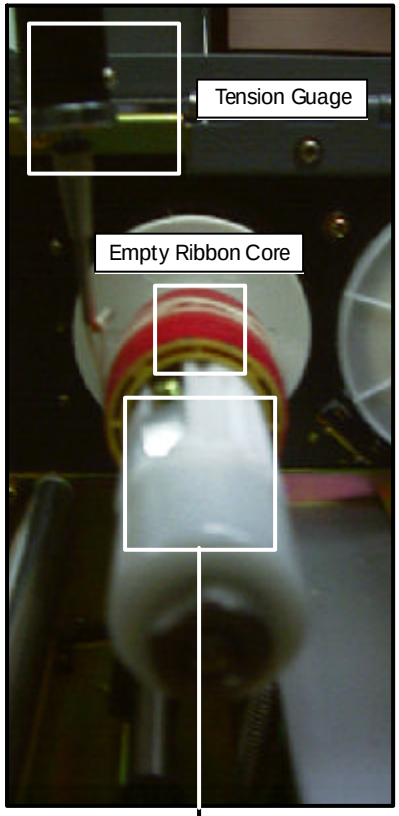
3 Attach string to an empty ribbon core and place on the Ribbon Spindle. Wind the string tightly around the ribbon core in single layer and in clockwise direction. Attach the end of the string to the tension gauge.

4 Gradually lift the tension gauge and pull the string, unwinding it from the core. Once the spindle starts to move, the gauge should indicate 950 to 1050 grams of tension for ribbon rewind, and 450 to 550 grams of tension for ribbon unwind. Refer to pictures on the next page.

5 To adjust the clutch, loosen the locking screw and move the adjust nut CW for more tension and CCW for less tension. Tighten the locking screw and repeat steps 3 and 4 until the correct tension is achieved.

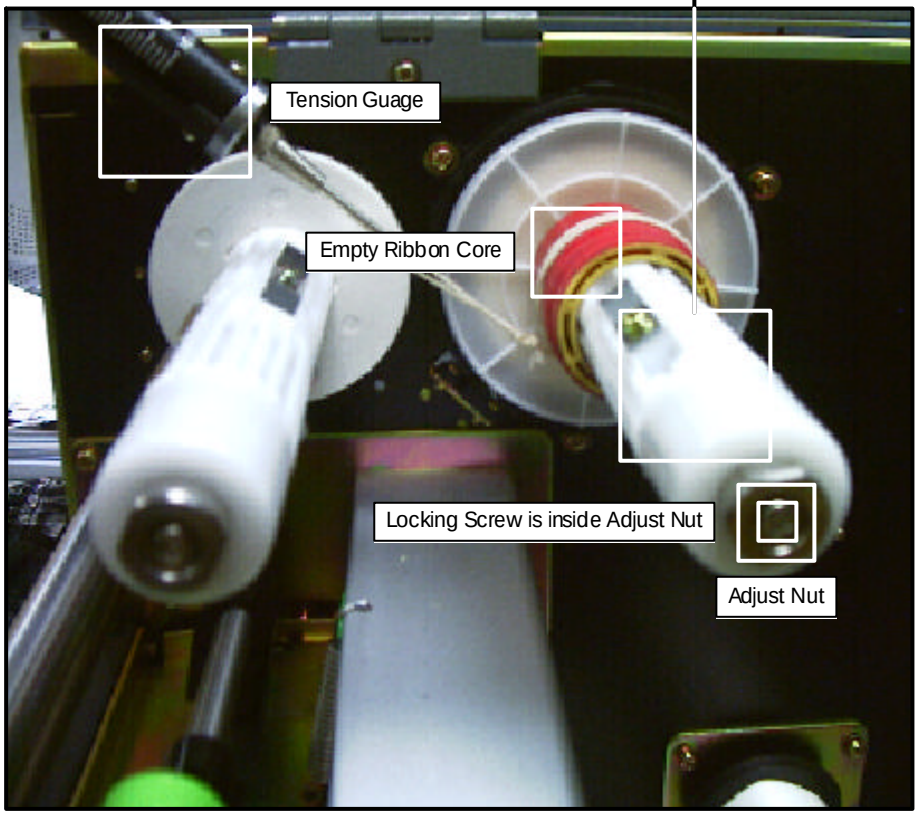
Ribbon Clutch Adjustment continued

Ribbon Rewind Clutch



950g-1050g Rewind

450g-550g Unwind



Ribbon Unwind Clutch

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Print Head Position Alignment

Minor Adjustment

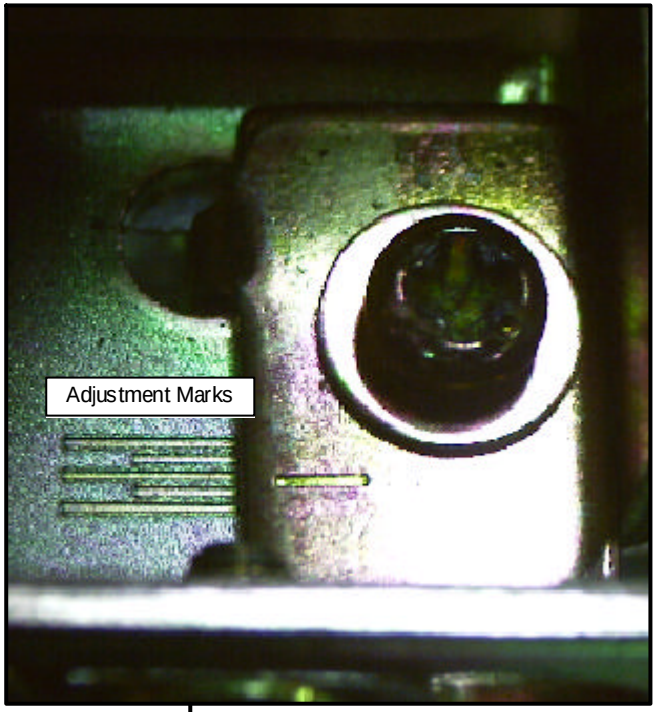
Required equipment
10mm Open End Wrench
"+" Screwdriver (JIS No.2 equivalent)

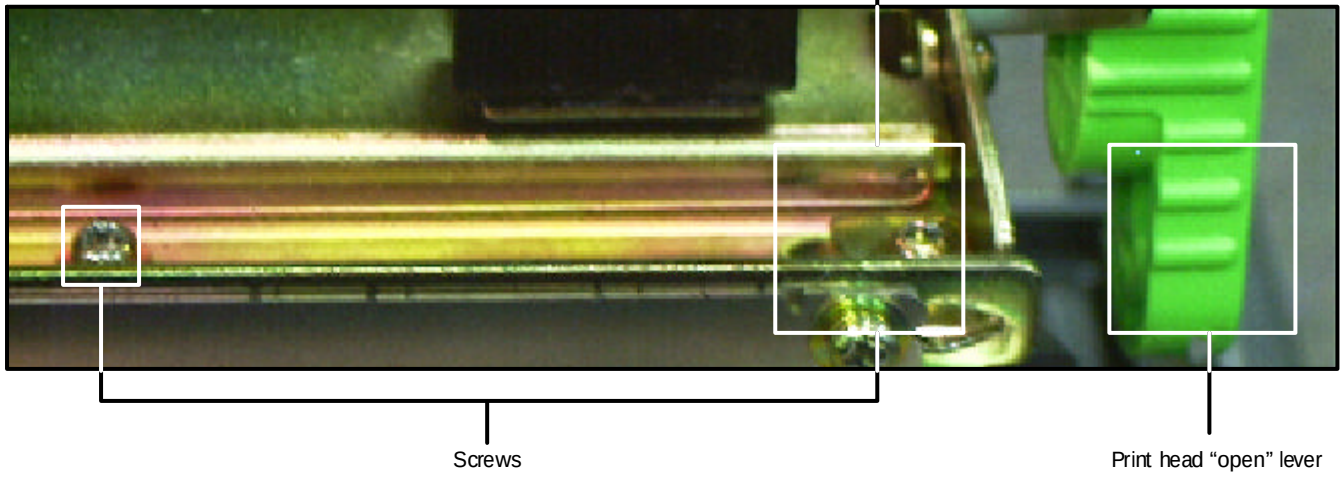
To adjust the print head alignment and ensure consistent quality across label, perform the following steps:

STEPS

1 Loosen the screws on the head plate. Print user test pattern. Realign the print head by prying the adjust plate forward or backward with flat blade screwdriver. Refer to illustrations and note adjustment marks.

2 Tighten the screws.





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Print Head Position Alignment continued

Major Adjustment

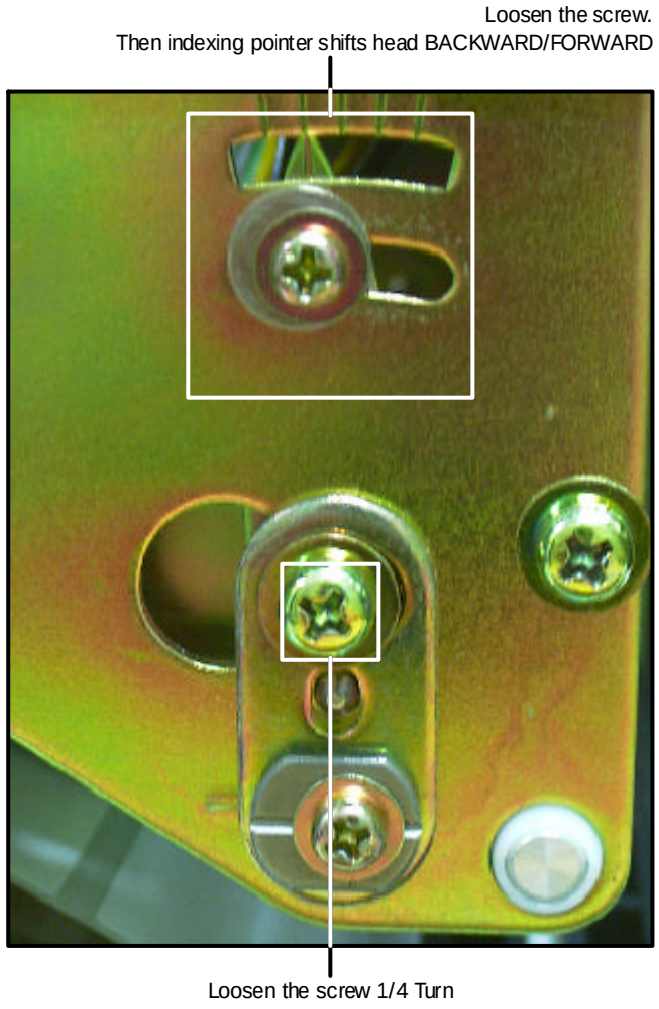
Required equipment
"+" Screwdriver (JIS No.2 equivalent)

To further optimize print quality, especially when using thick label stock, additional adjustments are possible. Perform the following steps using head pattern as a guide.

STEPS

1 Load the ribbon and label stock into the printer.

2 Loosen and adjust screw along slot to move indexing pointer for maximum print quality.



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Print Head Balance Adjustment

Minor Adjustment

Required equipment
10mm Wrench
"+" Screwdriver (JIS No.2 equivalent)

To optimize print quality, perform the following steps to adjust the Print Head Balance using Factory Test Print.

STEPS

1 Load the ribbon and label stock into the printer.

2 Loosen the screws by 1/4 turn. Please refer to picture.

3 Adjust color by rotating CW or CCW.

4 Tighten screw to secure eccentric nut in place.

5 Loosen and adjust screw along slot to move indexing pointer maximum print quality.