

# COM<sup>®</sup> JEZ II Series

Tabletop model automatic taping machine

## MAINTENANCE MANUAL



TAIYO SEIKI CO., LTD.



## Introduction

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This Maintenance Manual explains how to replace and adjust the major components of the Automatic Taping Machine when required in daily operation.

Placing emphasis on enabling users to identify the causes of problems during actual use, this Manual presents typical problems that may occur, and concisely explains how to identify their causes and how to solve them.

We hope that this Manual will be of assistance to you as servicing guidelines in the inspection, adjustment, disassembly and assembly of the Taping Machine.

The specifications of the Automatic Taping Machine may be changed for improvement. Please note that there may be difference between machine description in this Manual and the design of your machine.

## TAIYO SEIKI CO.,LTD.



### Warnings

**Always when performing the replacement or adjustment of parts, unplug the power cord from the main body.**

**Perform maintenance carefully to avoid machine trouble or injury.**

**Before servicing components near the heater, check that the heater temperature is sufficiently low to avoid burns.**

**Taiyo Seiki is not liable for any accidents or injury incurred during the maintenance of this machine.**



### Cautions

**This Maintenance Manual is not intended to include every detail concerning maintenance. Persons who do not have general knowledge and skills regarding machine maintenance are not allowed to inspect, adjust, disassemble or assemble this machine. For servicing, refer to both this Maintenance Manual and the Instruction Manual.**

## Explanation of machine operation

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For machine maintenance, please be sure to fully understand the operation of the machine. By doing so, any issues can be localized and tackled more securely.

The JEZII automatic taping machine performs taping based on tape a setting in the arched guide.

The place where the tape is set in the arched guide is the home position.

When the start switch is pressed or the automatic sensor is activated, the taping operation starts; after the tape winds around a workpiece, the heater performs a bonding operation to complete the taping.



Home position

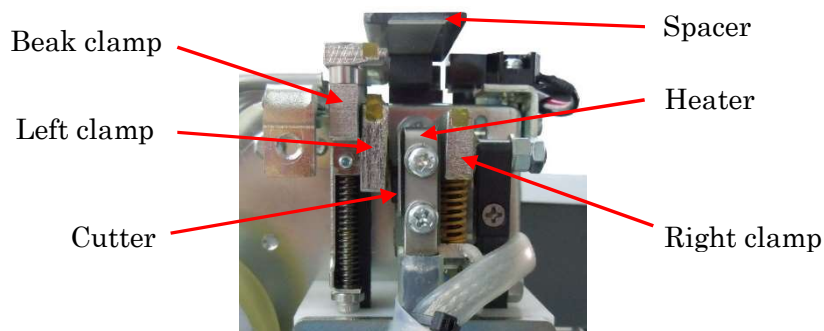
Next, when the workpiece is removed, the automatic sensor is activated, and the machine returns to the home position where the tape is set in the arched guide so that it is ready for the next operation.

The moment the taping starts from the home position, the beak clamp catches the tape (the end of the tape).

Then, the roller tightens the tape. After the tape winds around a workpiece, the tape is first caught by the right clamp and then by the left clamp so that the tape is taut. Next, the cutter cuts the tape and the heater bonds the tape, simultaneously.

Then, the spacer present between the workpiece and the tape drops and displaces from the gap, which completes the taping.

When the workpiece is removed, the automatic sensor is activated. Then, the spacer moves to the original position, and the roller feeds the tape so that the machine returns to the home position.



Names of heater / clamp parts

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## 1. List of error displays and descriptions

If “Err.” (error) is shown on the display, the following failures are indicated.

- “Err.1” The thermocouple is disconnected, the heater transformer is broken, or the heater is disconnected.  
Refer to P.17 “Replacement of thermocouple”; replace the thermocouple with a new one.
- “Err.2” The cam motor is not working properly.  
Contact the dealer or manufacturer.
- “Err.3” The setting data is corrupted.  
Refer to the instruction manual P.16 “Abnormal displays, error displays, and descriptions” and initialize the setting data.
- “Err.4” An alarm is generated from the servomotor.  
Contact the dealer or manufacturer.
- “Err.5” The spacer is not back at the home position.  
Refer to P.8 “Preparation for maintenance” “1. Removing the back table”:  
Remove the back table and investigate the cause of the spacer not being back in position.  
There may be some damage to the spacer spring or warpage of the spacer.  
In such a case, replace it with a new part.

## 2. Troubleshooting

The failures of JEZII can be classified into the following three major categories:

- 1) Tape bonding failure
- 2) Tape cutting failure
- 3) Tape feeding failure

As the trouble items are specified in descending order of frequency, check them in that order.

Replacement and adjustment of each part are described later.

Check the movement and position of each part thoroughly before you start operation.

### 2-1. Tape bonding failure

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#### **2-1-1. The front side of the tape cannot be bonded because of the warpage of the spacer.**

Replace the spacer with a new one or bend the spacer into the inverse warping direction.

#### **2-1-2. The tape cannot be bonded because of heater angle failure.**

In the case where the heater angle has changed because of the biting of a tape, etc., correct the heater to the correct angle.

Refer to P.12 “Adjustment of heater angle.”

#### **2-1-3. The tape cannot be bonded because of the deterioration of the silicone sheet on the back of the spacer.**

The silicone sheet of the spacer cannot be separately replaced.

Replace the spacer with a new one.

#### **2-1-4. The tape cannot be bonded because the beak clamp does not catch the end of the tape at the time of taping due to the breakage of the beak clamp spring, causing the tape to slip out.**

Replace the beak clamp spring with a new one.

Refer to P.14 “Replacement of beak clamp spring / left clamp spring.”

## 2-2. Tape cutting failure

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### 2-2-1. The tape cannot be cut because of the breakage of the right clamp spring (yellow) or the left clamp spring (blue).

Replace the clamp spring with a new one.

Refer to P.13 “Replacement of the right clamp spring.”

Refer to P.14 “Replacement of the beak clamp spring / left clamp spring.”

### 2-2-2. The tape cannot be cut because of the abrasion of the cutter.

Replace the cutter with a new one.

Refer to P.16 “Replacement of the cutter.”

## 2-3. Tape feeding failure

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### 2-3-1. The tape cannot be fed because of the adhesive tape that is holding the end of the tape when the tape is new.

In the case where a tape is folded in a bellows shape and gets clogged at the rubber roller, there is a possibility that a sticky material is attached to the roller, insertion guide, or lower part of the clamp plate.

Scrape and remove the sticky material using a metal ruler or perform a similar activity.

Then, clean the parts with a thinner, alcohol, or a similar cleaning agent.



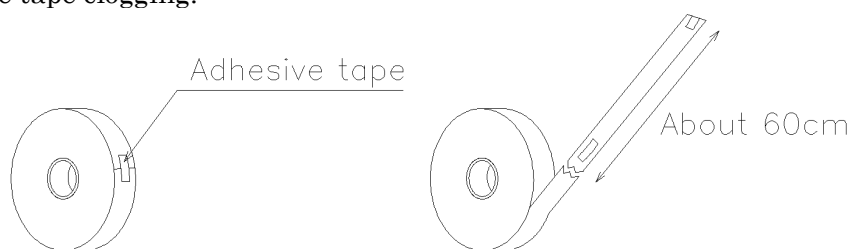
\*Regarding failures caused by the adhesive tape

A new tape has its end glued with an adhesive tape to prevent it from breaking loose.

When using a new tape, make sure to cut the arrow portion (approx. 60 cm).

If a tape is used as it is without cutting the arrow part, the adhesive tape may stick to the roller, clamp part, etc.,

which may cause tape clogging.



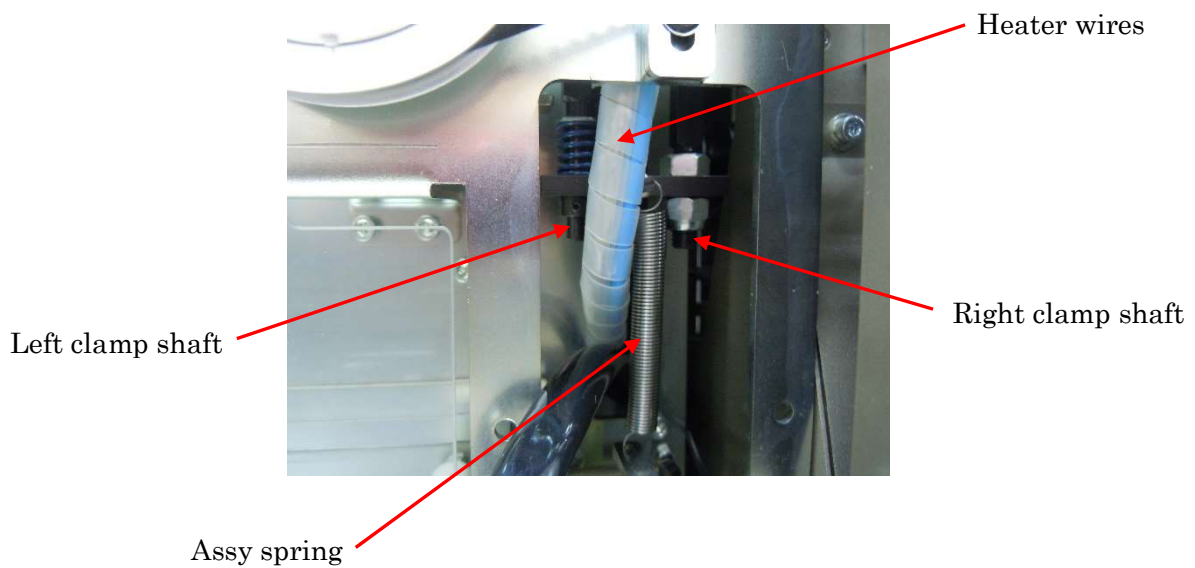
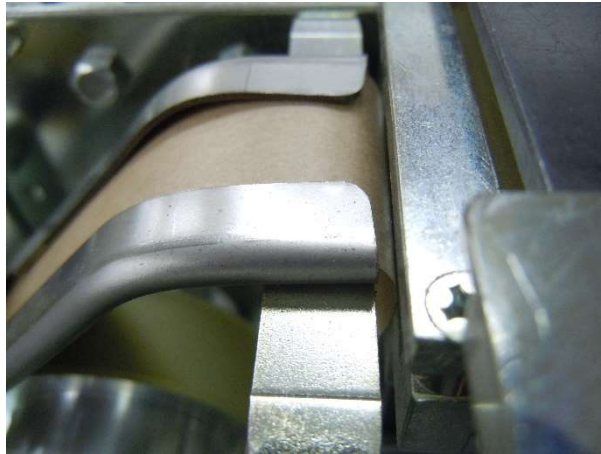


**2-3-2. The tape cannot be fed because the heater assembly part does not return to the lowest point.**

Remove dirt from the right and left clamp shaft so that they can move smoothly.

In the case where the heater assembly part does not return to the lowest point because of an interference of the heater's lead wire, lay out the wiring properly.

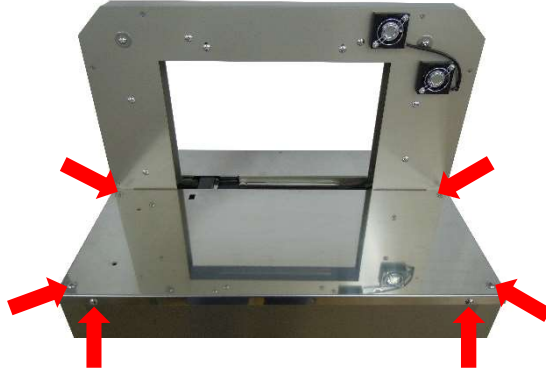
In the case where the assembly spring is broken, replace it with a new one.



### 3. Preparation for maintenance

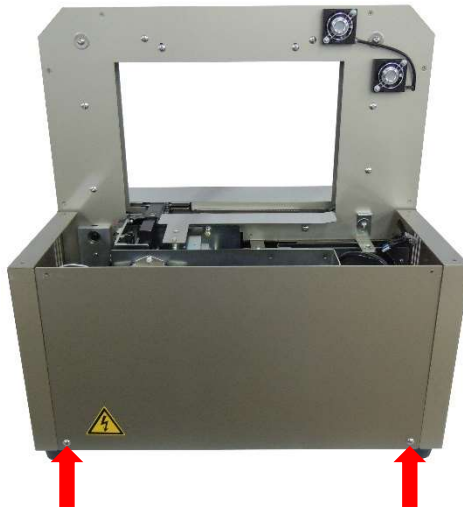
#### 3-1. Removing the back table

Remove the six screws indicated by the arrows that are holding the back table (top side, back side).



#### 3-2. Removing the back cover

Remove the two screws indicated by the arrows that are holding the back cover (back side).



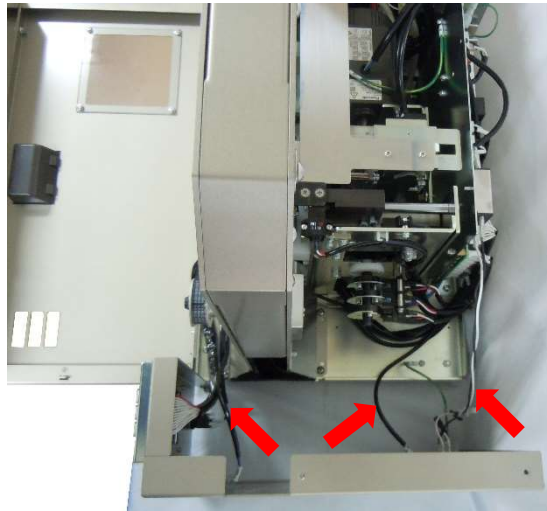
#### 3-3. Removing the right cover

Open the front door and remove the three screws indicated by the arrows that are holding the right cover (front side, lateral side).



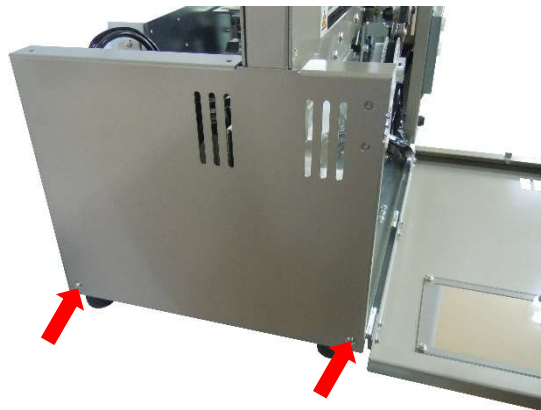
\*Note for the removal of the right cover

Note that if the right cover is pulled forcibly, the wiring may get disconnected.



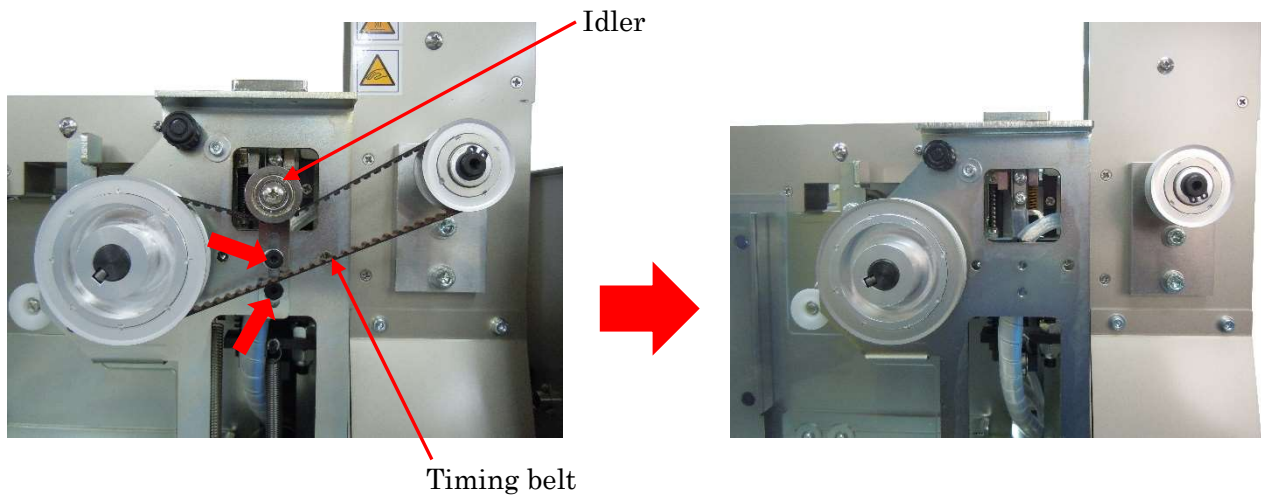
**3-4. Removing the left cover**

Remove the two screws indicated by the arrows that are holding the left cover (lateral side).

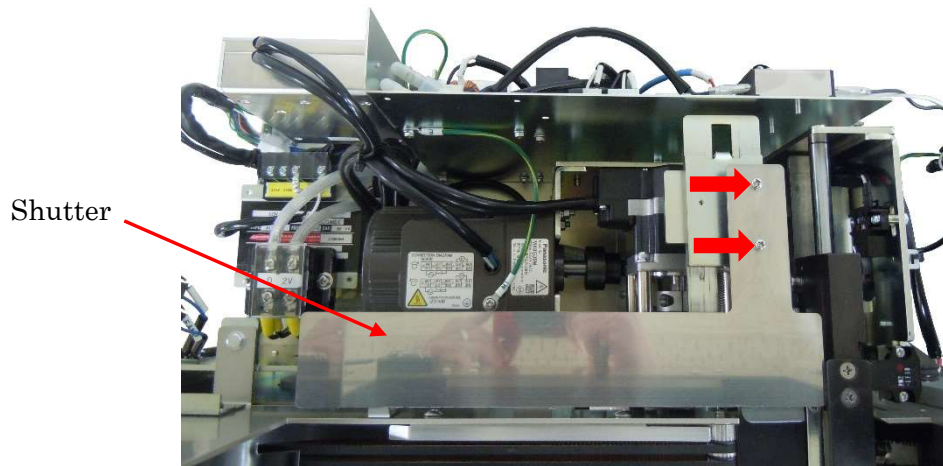


### 3-5. Removing the arched guide

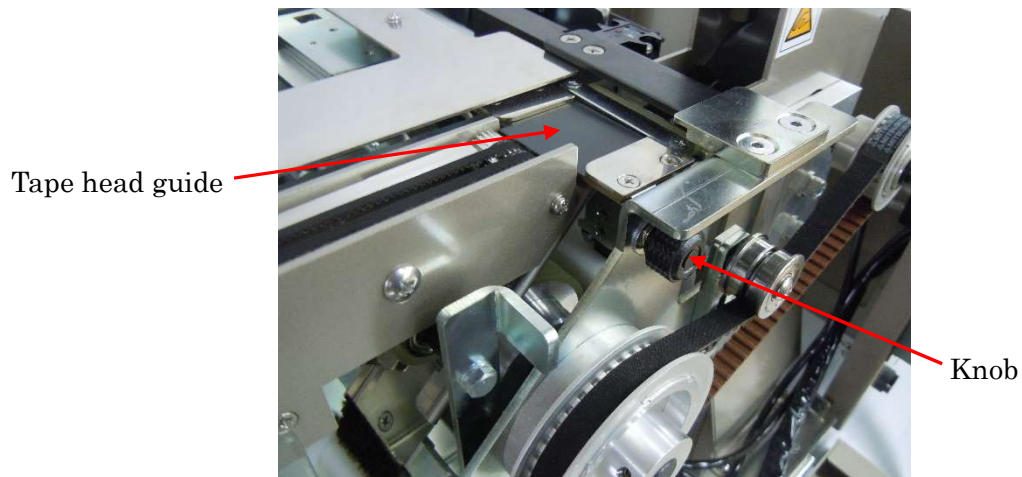
3-5-1. Remove the two screws indicated by the arrows, then remove the idler, and next remove the timing belt.



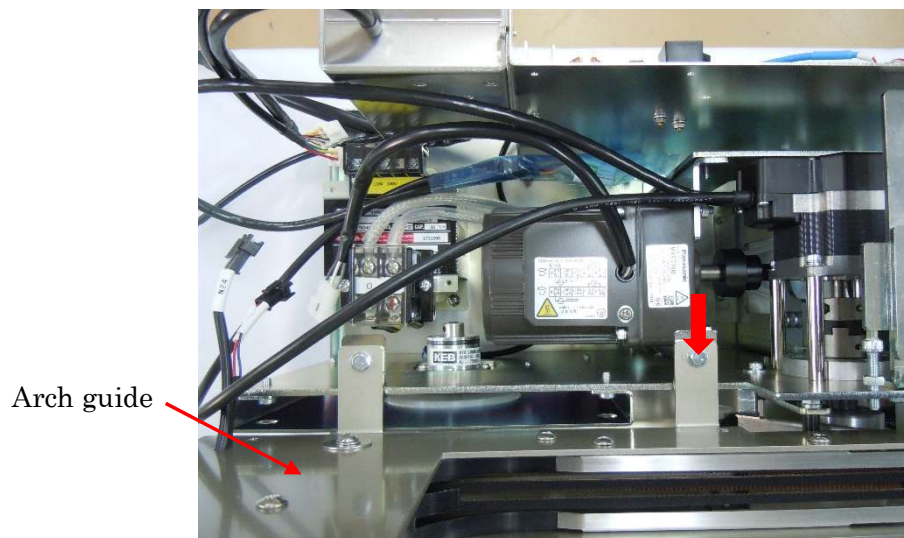
3-5-2. Remove the two screws indicated by the arrows and then remove the shutter.



3-5-3. Release the knob and remove the tape receiving part.



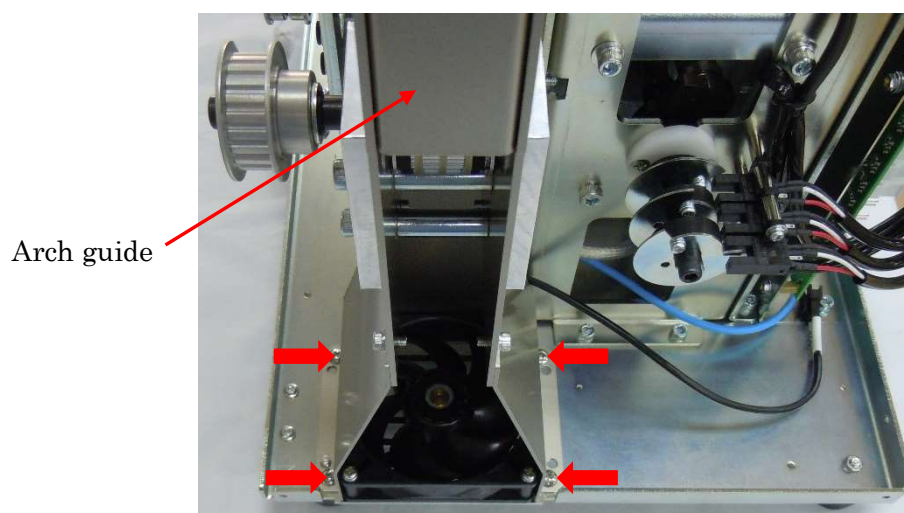
3-5-4. Remove the two screws indicated by the arrows of the arched guide (back of the left side).



3-5-5. Remove the four screws indicated by the arrows of the arched guide (right side) and then remove the arched guide.

\*When taking out the arched guide, pull out gently, not forcibly.

The wiring may get disconnected.



#### 4. Adjustment of heater angle

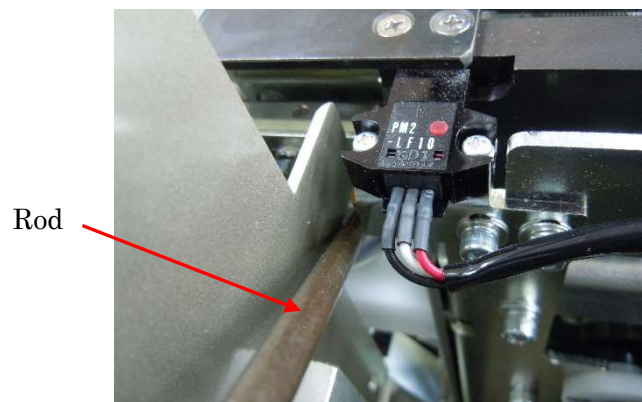
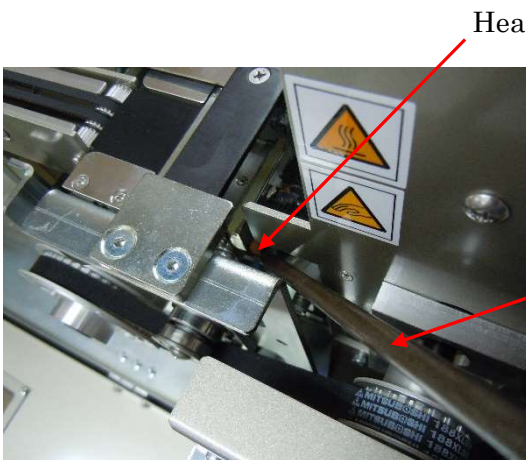
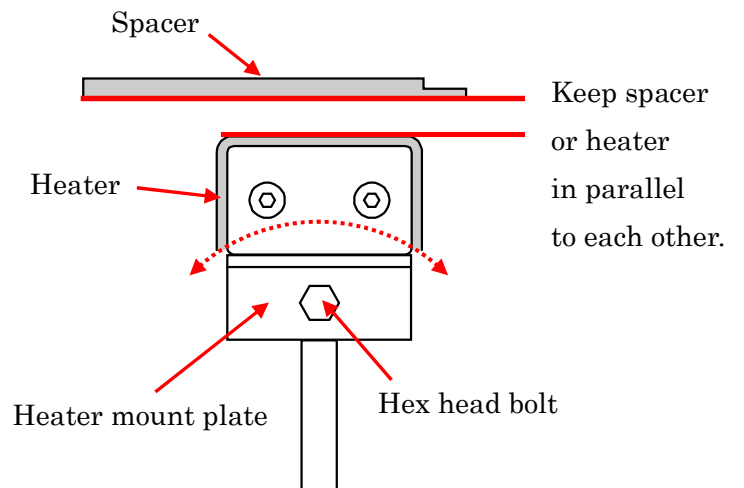
1. Press the start switch in the home position,  
and with the spacer pulled backward (in the state that it is hidden in the back table),  
turn off the main power-supply switch.

2. Place a long, thin stick on the heater mount base and lightly hit it with a hammer to  
adjust the heater angle.

Hit the opposite side where the tape is not attached and adjust so that the heater and the  
spacer become parallel.

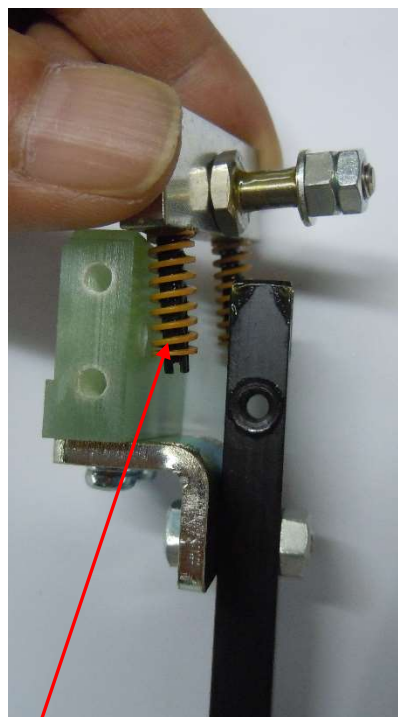
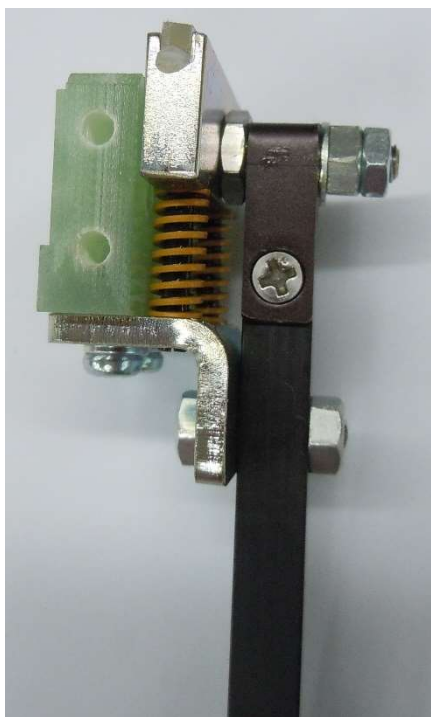
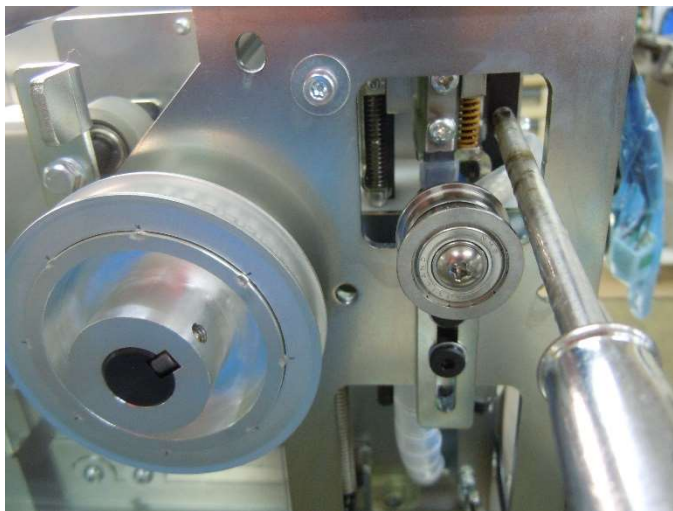
**\*Do not hit hard.**

**\*Do not hit the heater body.**



## 5. Replacement of the right clamp spring

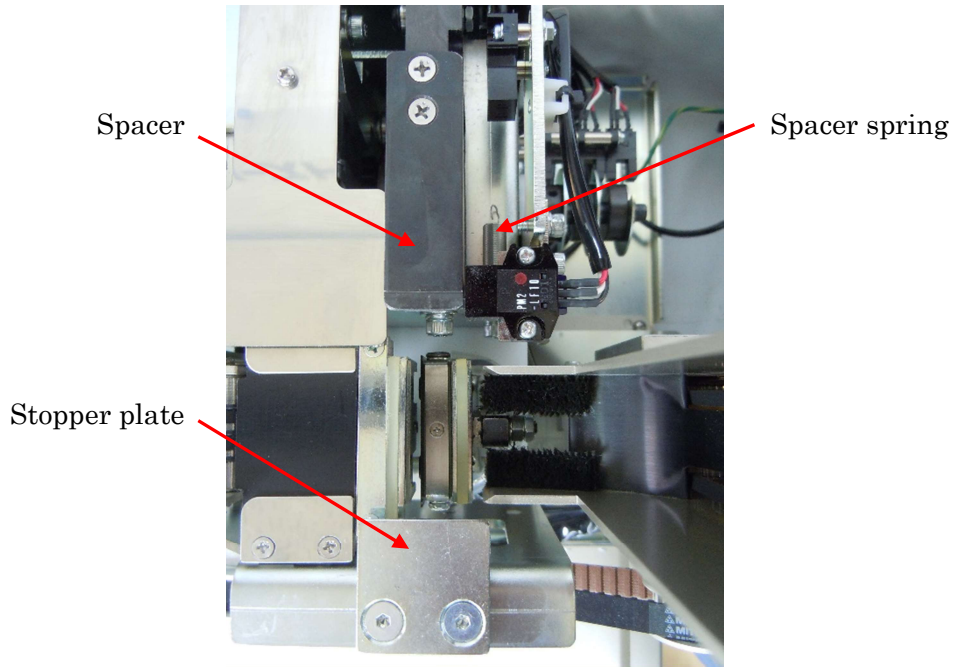
Open the front door, remove the screw indicated by the arrow, and replace the right clamp spring. If the work is difficult, refer to the procedure 3 on P.16 “Replacement of cutter” and lift up the tape guide to perform the operation.



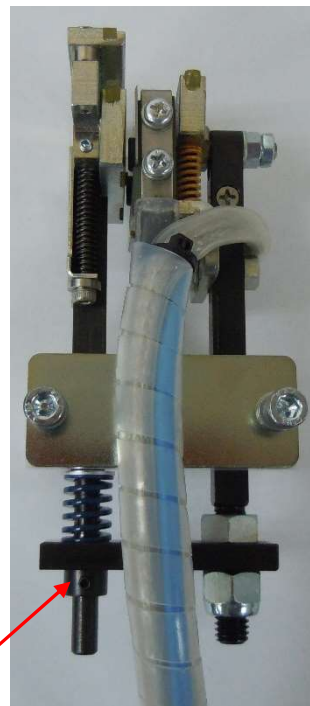
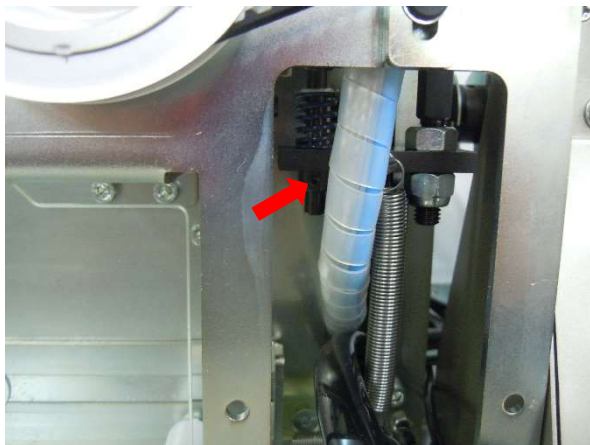
Right clamp spring

## 6. Replacement of the beak clamp spring / left clamp spring

1. Refer to P.8 “Preparation for maintenance” and remove the back table and right cover.
2. Remove the spacer spring, move the spacer backward, and then release the claw.



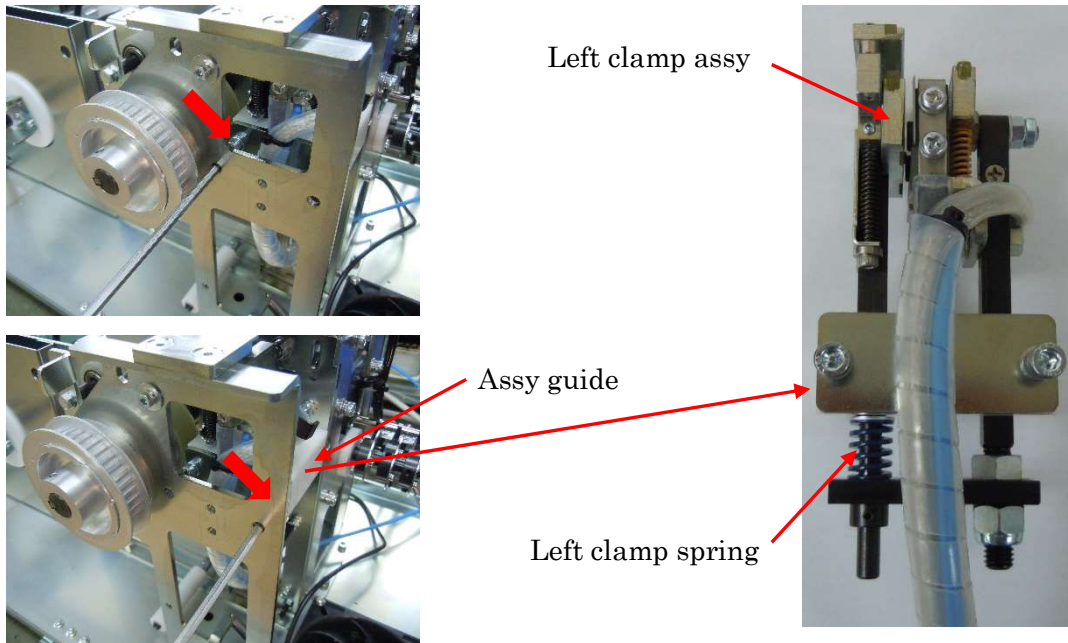
3. Loosen the screw indicated by the arrow and remove the collar under the left clamp shaft.



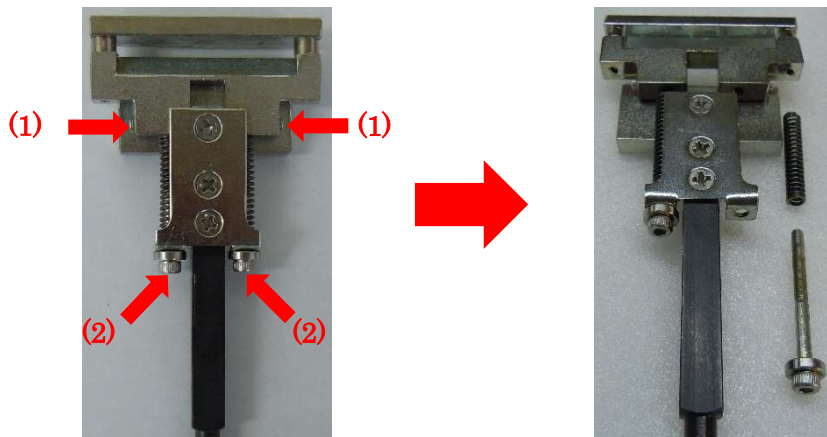
Left clamp shaft collar  
(lower)



4. Remove the screw indicated by the arrow, remove the assembly guide, and then remove the left clamp assembly upward.

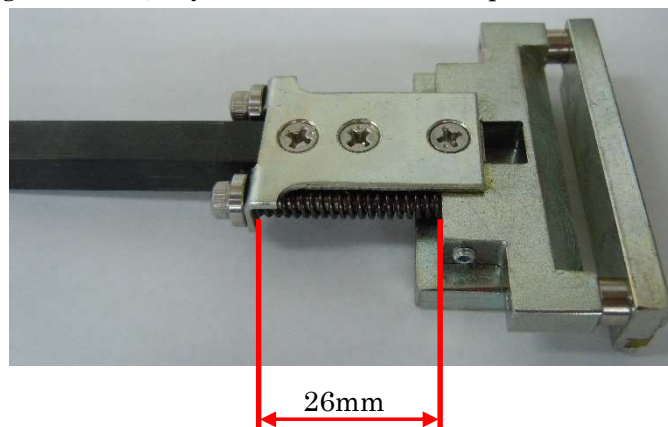


5. Loosen the two hollow set screws indicated by the arrow (1) and remove the two cap bolts indicated by the arrow (2).



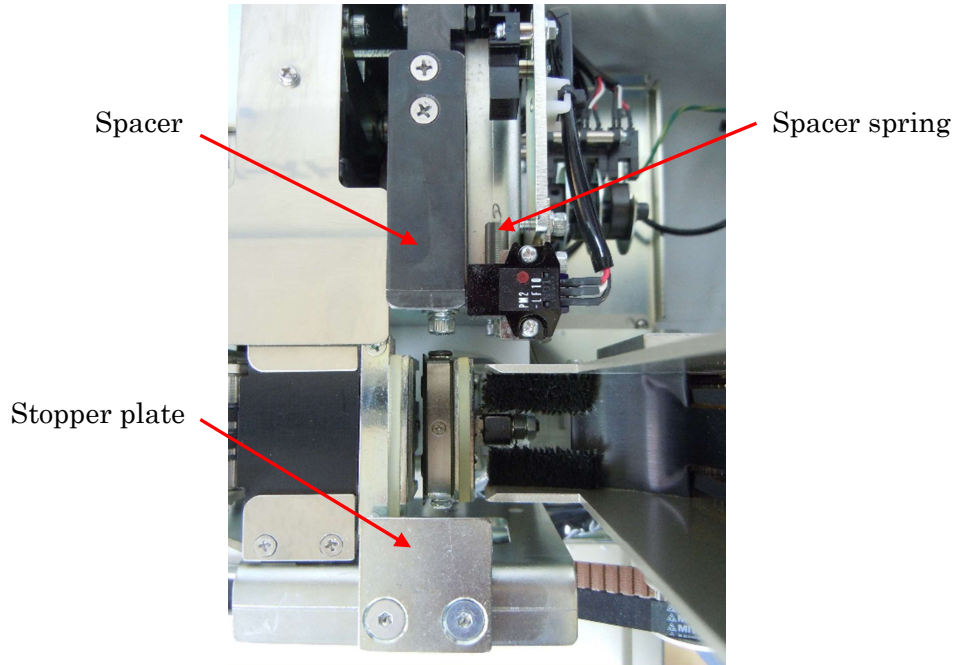
6. Remove the beak guide pin and then replace the beak clamp spring.

\*When tightening the screw, adjust it so that it is at a position of 26 mm as shown below.



## 7. Replacement of cutter

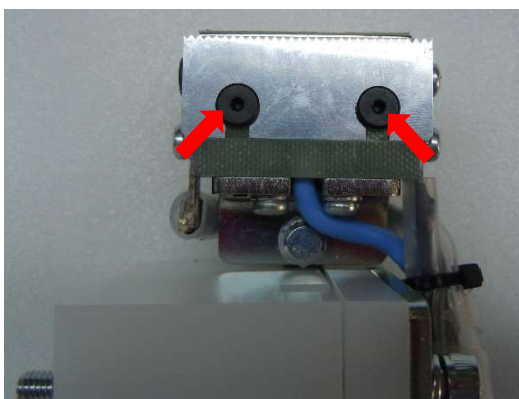
1. Refer to P.8 “Preparation for maintenance” and remove the back table and right cover.
2. Remove the spacer spring, move the spacer backward, and then release the claw.



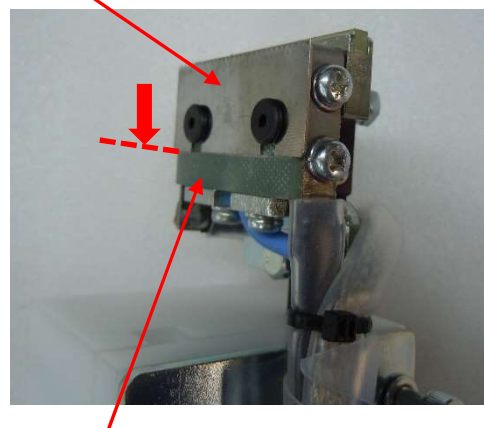
3. Refer to the procedures 3 and 4 on P.14 “Replacement of beak clamp spring / left clamp spring” and remove the left clamp assembly.

4. Loosen the two screws indicated by the arrows and replace the cutter.

\*Fix the underside of the cutter at a position where it is pressed on the step of the heat insulation board.



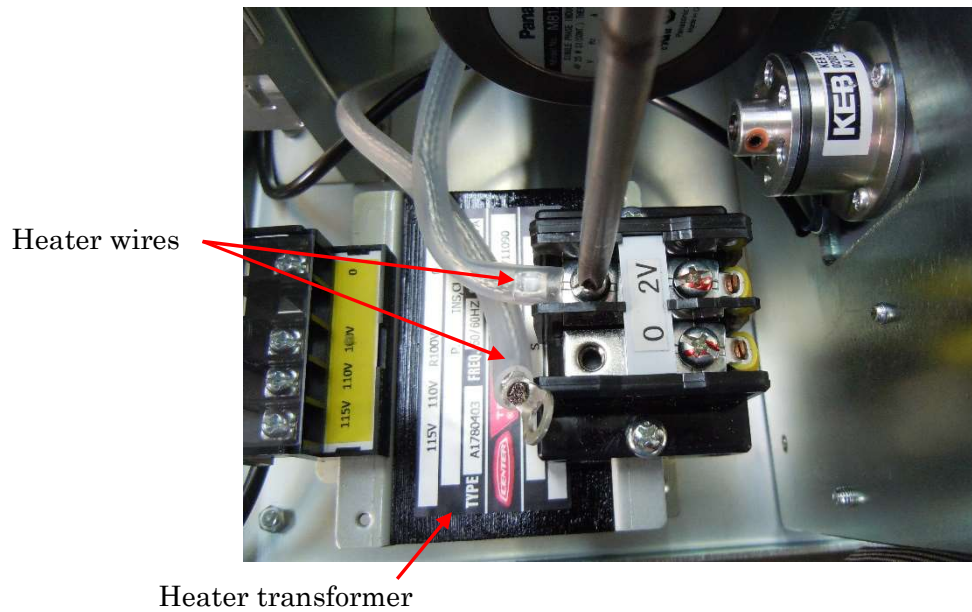
Cutter blade



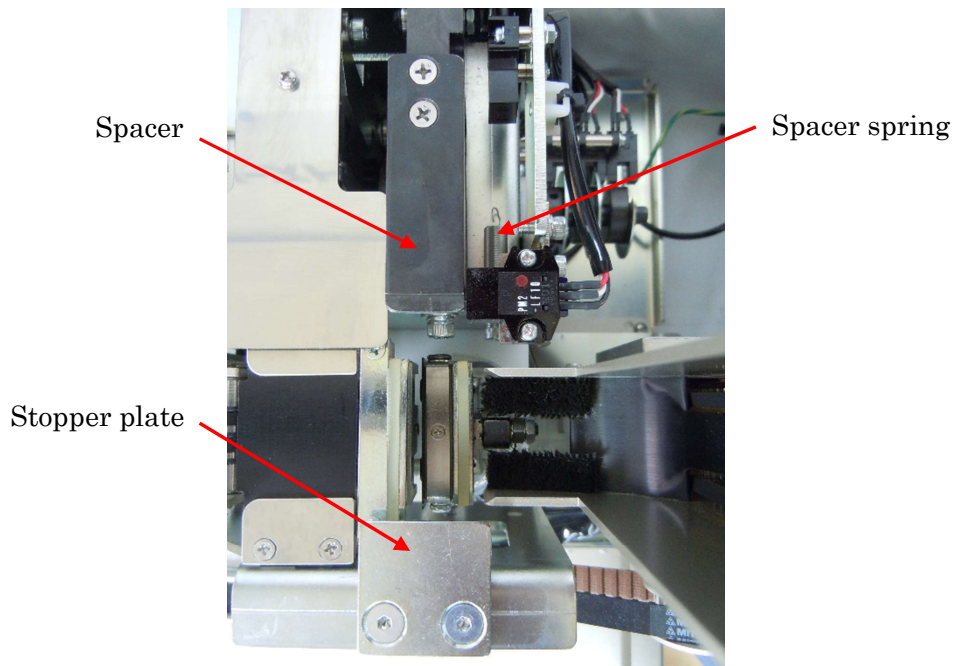
Heat insulating plate

## 8. Replacement of the thermocouple

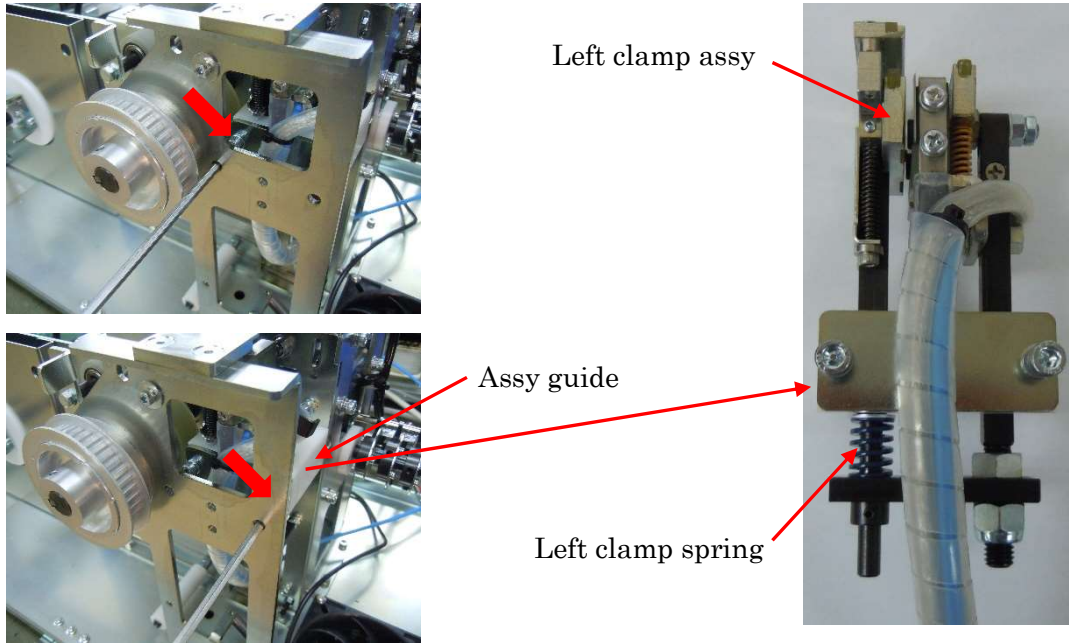
1. Refer to P.8 “Preparation for maintenance” and remove the back table, right cover, left cover, and arched guide.
2. Remove the heater wire from the heater transformer and then remove the connector of the thermocouple from the board.



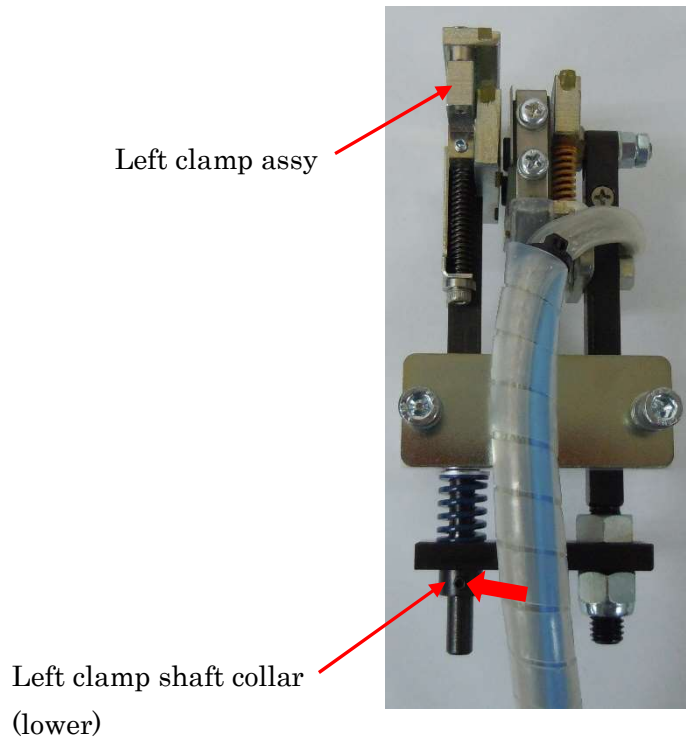
3. Remove the spacer spring, move the spacer backward, and then release the claw.



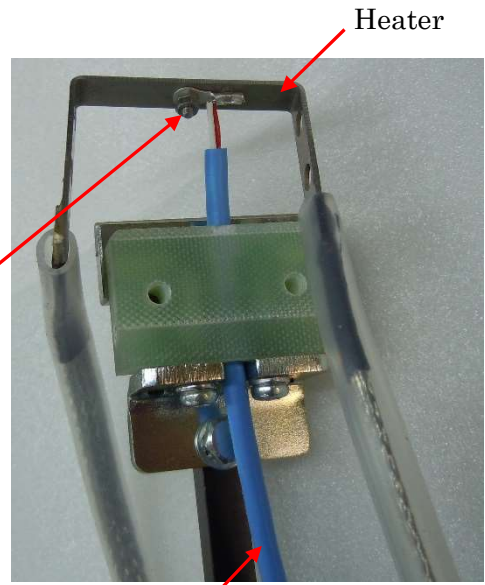
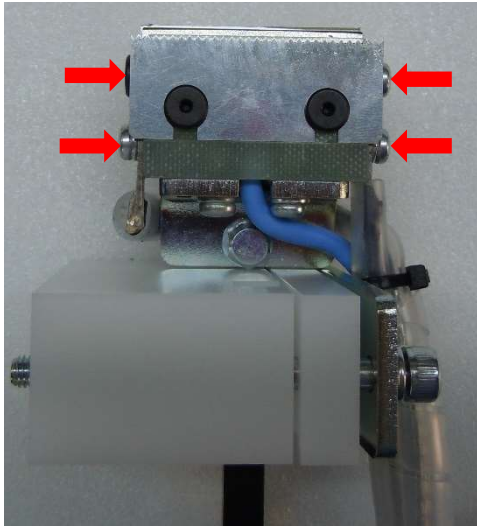
4. Remove the two screws indicated by the arrows and then remove the assembly guide.



5. Loosen the screw indicated by the arrow, remove the collar under the left clamp shaft, and then remove the left clamp assembly.



6. Remove the four screws indicated by the arrows and then lift the heater upward.



7. Remove the double nut and then replace the thermocouple with a new one.





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