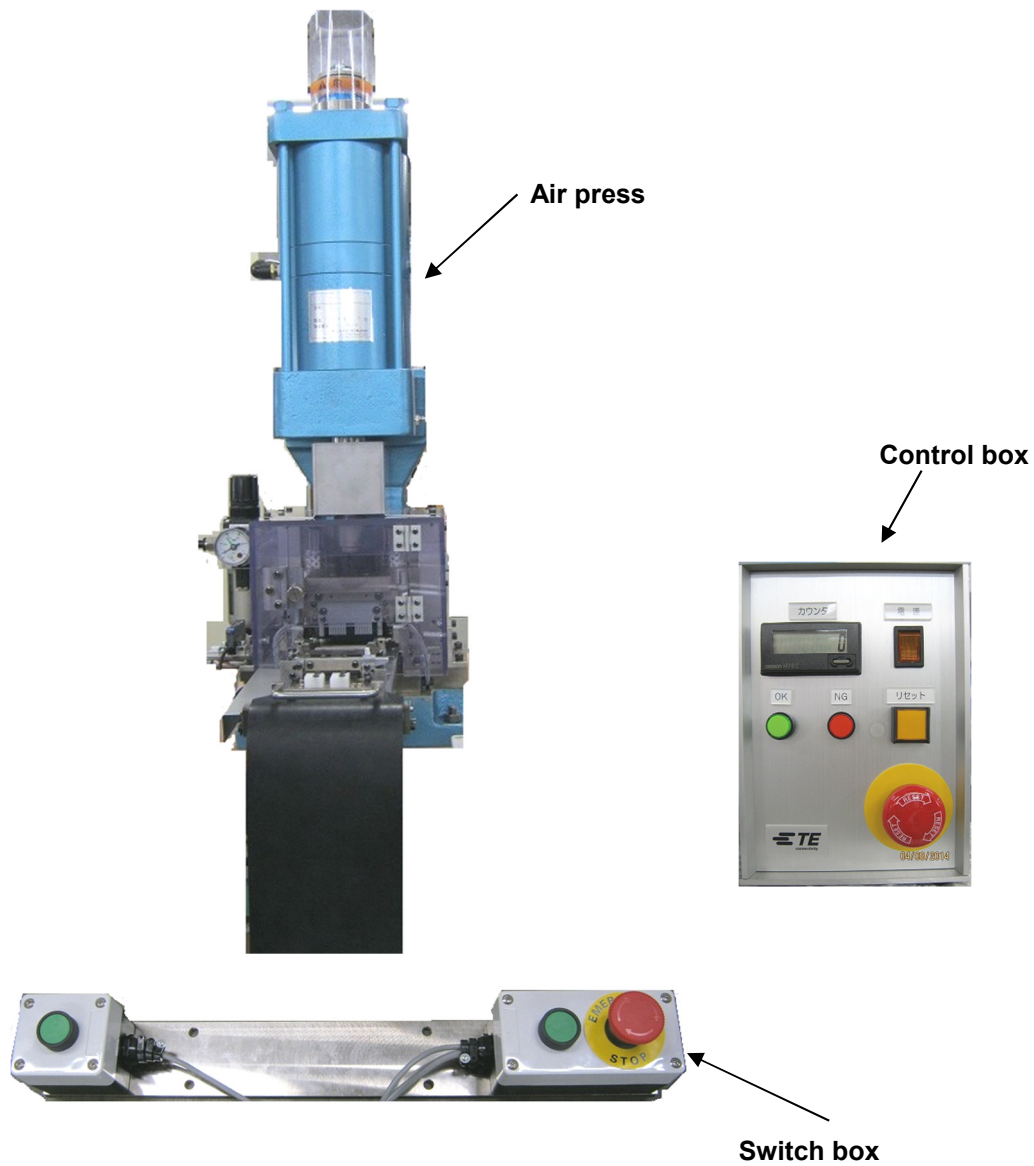


**0.64 IDC AIR BENCH PRESS, LAMINATE HARNESS  
P/N 1891355-5**



**Fig.-1**

## 1. Introduction

This instruction manual describes how to use the air press which does the insulation displacement crimping of a laminated wire to 0.64 IDC connector. Please read this manual before using it. In addition, please read the applicable standards; 114 – 5276-5.

### Danger

**Please never remove a cover in case of installation and work. And, when replacing or adjusting a part, be sure to disconnect power and air.**

### Note

Tools illustrated on this manual are different from actual dimensions for easy understanding.

## 2. Specification

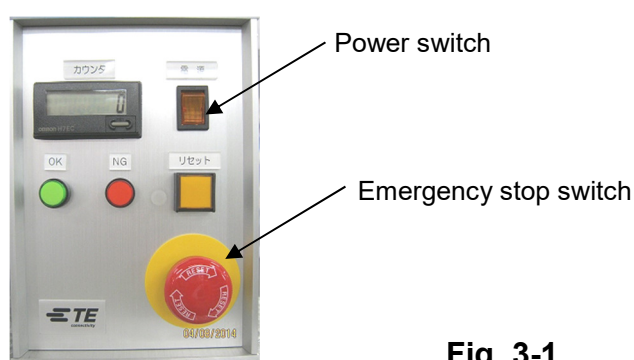
- [1] Applicable connector : P/N 1318690-1 025 IDC CONN. (8P) x 2
- [2] Applicable wire : CAVS 0.3sq discrete wire
- [3] Appearance dimensions : Press : 780(H) × 300(W) × 610(D) mm  
Control box : 175(H) × 150(W) × 230(D) mm
- [4] Weight:
  - Press : Approximately 95Kg
  - Control box : Approximately 2kg
  - Switch box(with plate) : Approximately 0.8Kg
- [5] Power supply : 100VAC-240VAC 50/60Hz 1A
- [6] Air pressure : The air pressure used range  
Please use the pressure of the machine within 0.45MPa - 0.55MPa.
- [7] Press power : 1,000Kg
- [8] Function : Wire float detection function

### 3. Installation

- (1) Install the unit on the flat surface.
- (2) Supply the power and air.
- (3) Press the power switch on the control box.

**Caution** Do not put any dangerous object nearby so that there is no obstacle to your work.

**Note** When emergency stop switch is pressed, a power supply doesn't turn on.  
 After turning emergency stop switch to the right side and releasing the switch, press the power switch once again.  
 Emergency stop switch is also installed in the switch box side.

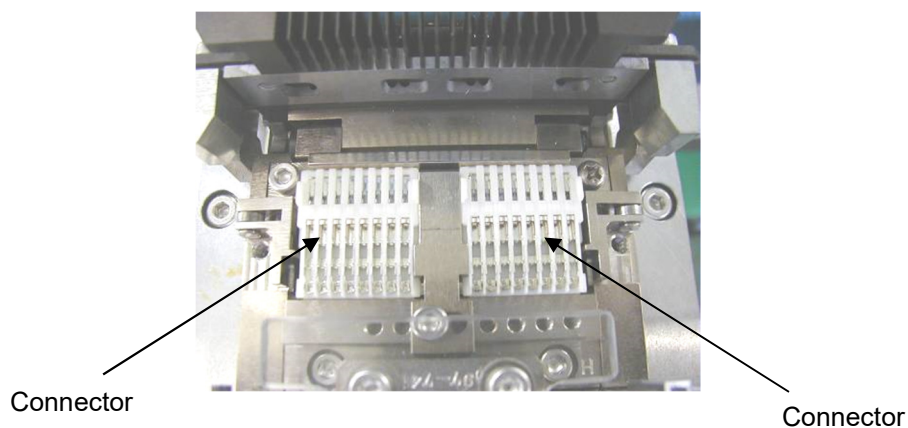


**Fig. 3-1**

**Control box**

### 4. Operation

- (1) Set two connectors. <Fig. 4-1>



**Fig. 4-1**

(2) Pressing down the comb, clamp the wire. <Fig. 4-2>

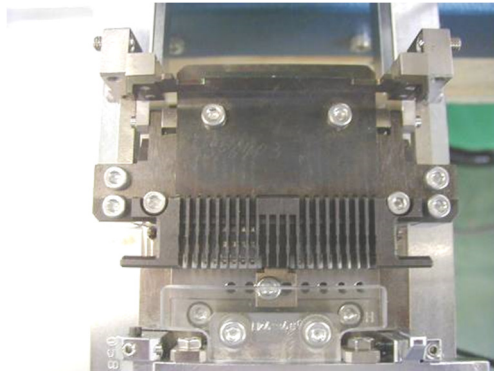


Fig. 4-2

(3) Set the laminated wire in the comb, and clamp it. <Fig. 4-3>

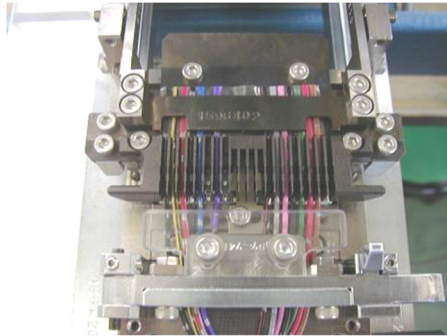


Fig. 4-3

(4) Press in the back of the table to hit the stopper, and press the start switch at the same time with both hands. <Fig. 4-4>

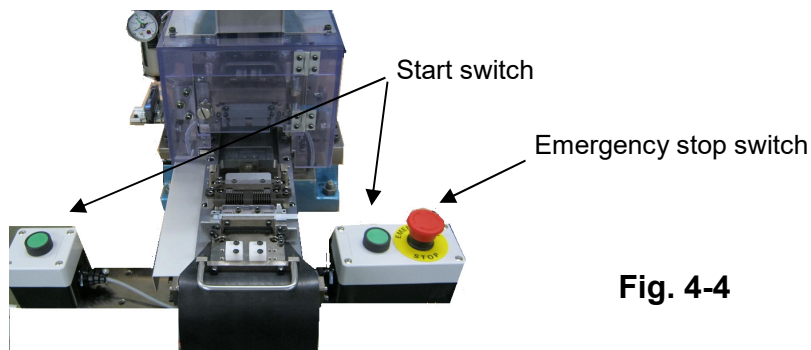


Fig. 4-4

(5) Automatically run insulation displacement crimping. After the press rise, pull the table in front.

**付記**

If an alarm occurs during operation, NG lamp of operation box front is lit, and buzzer will sound. Turn off the buzzer sound by pressing the RESET switch.

(6) Turn off power switch on the control box at the time of the work end.

## 5. Control box and Switch box

### Control box

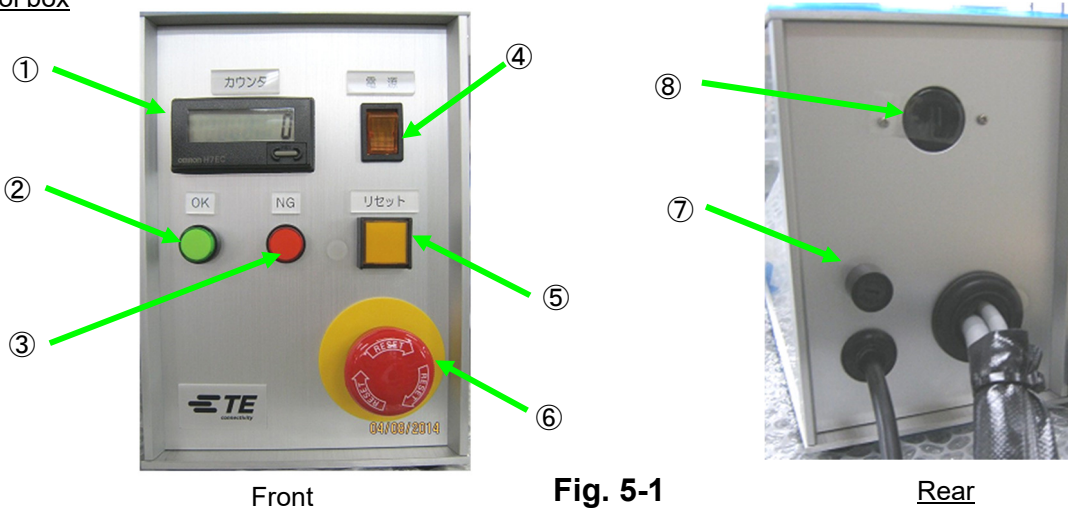


Fig. 5-1

- ① Counter : When insulation displacement crimping has been normally completed, 1 count is added.
- ② OK lamp : When insulation displacement crimping is completed normally, the lamp turns on, and the lamp turns off the light when you push the Start switch.
- ③ NG lamp : When an alarm occurs, the lamp is lit or flashing, it is turned off by pressing the RESET switch.
  - ☆ Press bottom dead point NG : 1.0 seconds clock blinking
  - ☆ Air pressure Abnormal : 0.1 seconds clock blinking
  - ☆ There is the float of the wire : 0.6secondsclock once blinking
  - ☆ A table is not set correctly. : 0.6secondsclock twice blinking
  - ☆ Wire float detection sensor Abnormal : 0.6secondsclock three times blinking
  - ☆ Wire float detection timing sensor Abnormal : 0.6secondsclock four times blinking
- ④ Power switch : The on/off switch for the power supply.
- ⑤ RESET switch : The switch for alarm release.
- ⑥ Emergency stop switch : When this switch is pressed, a power supply isn't supplied.
- ⑦ Fuse holder : 1.5A fuse
- ⑧ Buzzer : When alarm occurred, it sounds.

### Switch box

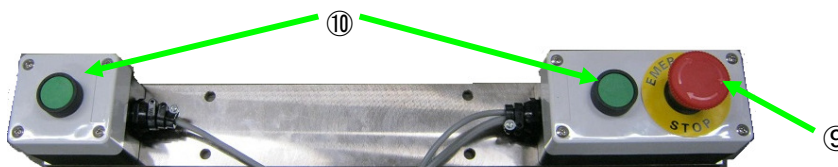


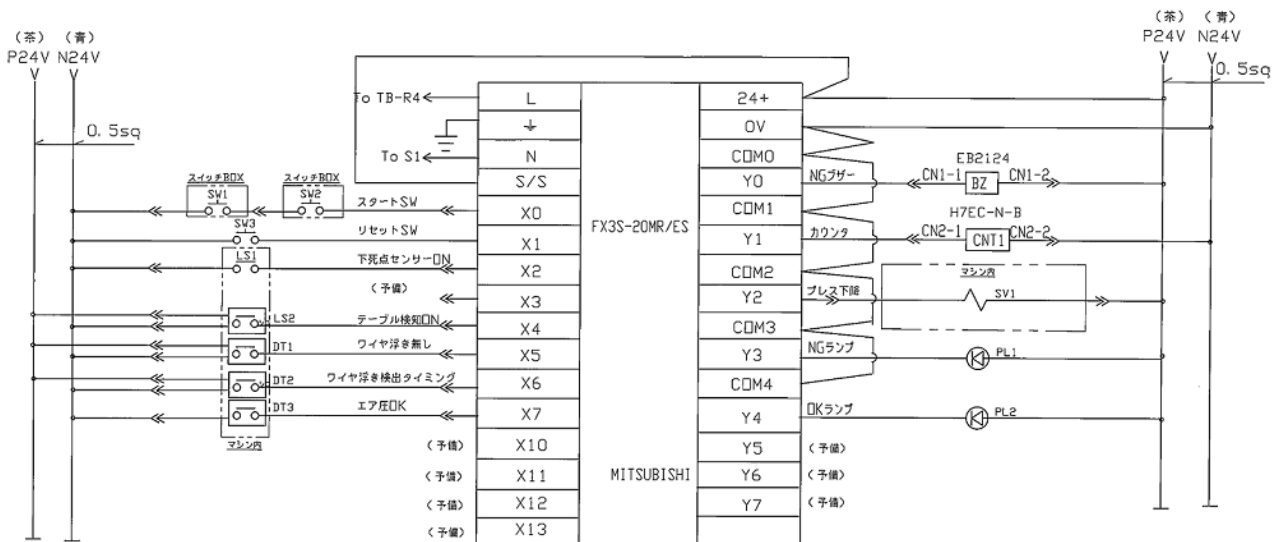
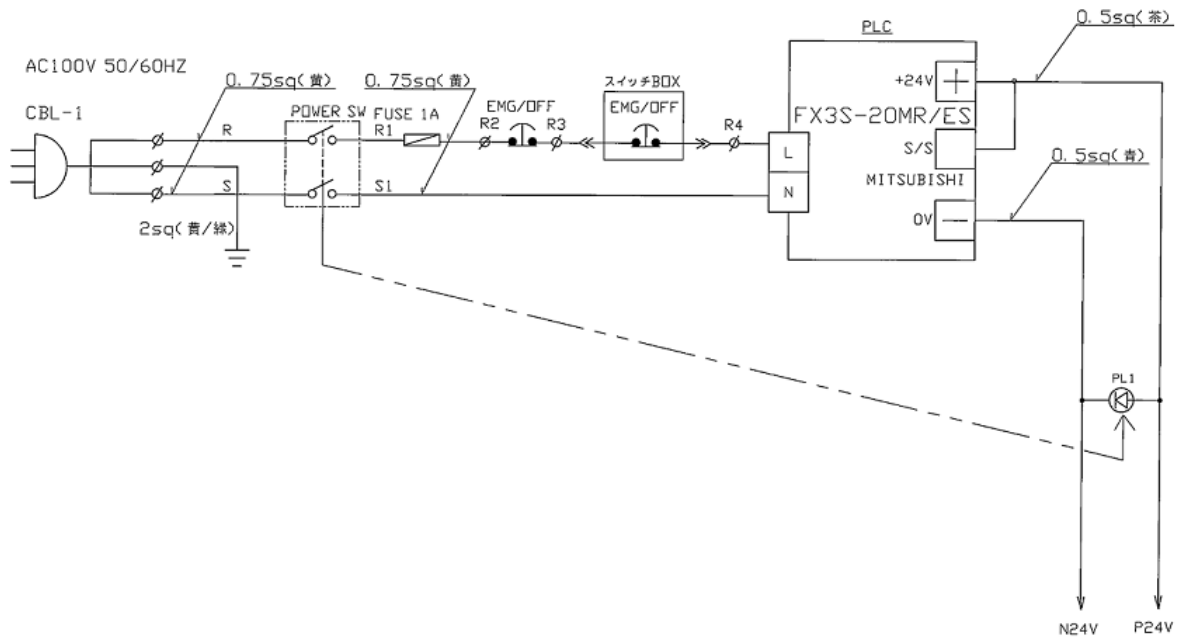
Fig. 5-2

- ⑨ Start switch : When press the switch at the same time with both hands, insulation displacement crimping starts.
- ⑩ Emergency stop switch : When this switch is pressed, a power supply isn't supplied.

**6.Trouble-shooting**

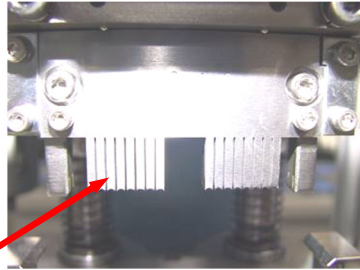
No.	The NG lamp number of blinking	Error	Discription
1	1.0 seconds clock blinking - continuation	Press bottom dead point NG	1) When you pushed the start switch after the able insertion, a bottom dead point sensor(X0002) does ON. 2) Even if it passes for more than 3 seconds from press starting, a bottom dead point sensor doesn't turn on.
2	0.1 seconds clock blinking - continuation	Air pressure Abnormal	When pressing the start switch, or in the press is running, air pressure is out of the set range.
3	0.6 seconds clock once blinking Interval: 1 second	There is the float of the wire	While the wire float detection timing sensor(X006) is ON, the wire float detection sensor(X005) is ON.
4	0.6seconds clock twice blinking Interval: 1 second	A table is not set surely.	When you press the start switch, the table is not set correctly. (A table detection sensor(X004) does not turn ON.)
5	0.6seconds clock three times blinking Interval: 1 second	Wire float detection sensor Abnormal	1) When the power supply is ON, Wire float detection sensor(X005) turns on already. 2) When setting the table and pressing Start switch, the sensor turns on.
6	0.6seconds clock four times blinking Interval: 1 second	Wire float detection timing sensor Abnormal	1) When the power supply is ON, Wire float detection timing sensor(X006) turns on already. 2) When setting the table and pressing Start switch, the sensor turns on.

### 7. Electrical schematic



**8. SPARE PARTS**

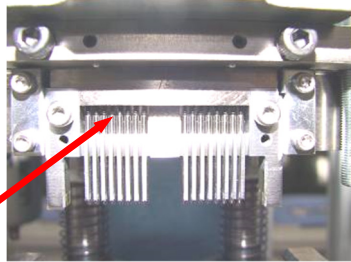
- (1) Crimper  
: P/N 1891497-1 <Fig. 8-1>



Crimper

**Fig. 8-1**

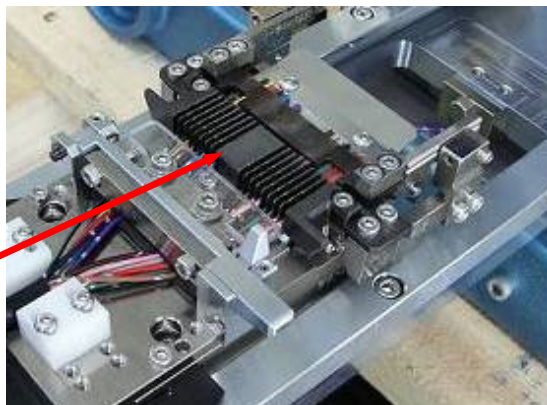
- (2) Stuffer  
: P/N 1891498-1 <Fig. 8-2>



Stuffer

**Fig. 8-2**

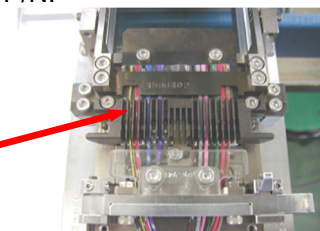
- (3) Comb  
: P/N 1891499-3 ( or P/N1891499-1) <Fig. 8-3>



Comb

**Fig. 8-3**

Note) As for the comb of P/N1366304-3 , replacement is possible to this P/N. (P/N 1366304-3)

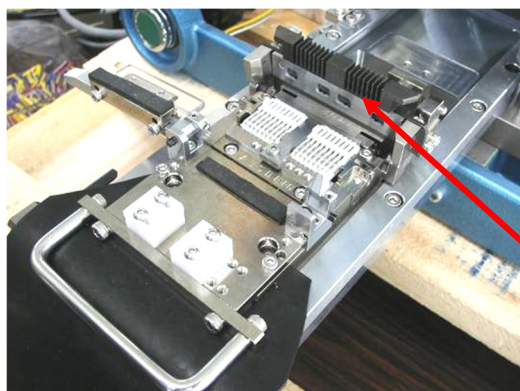


Comb



(4) Cut blade lower

: P/N 2047628-1 <Fig. 8-4>



Cut blade lower

**Fig. 8-4**

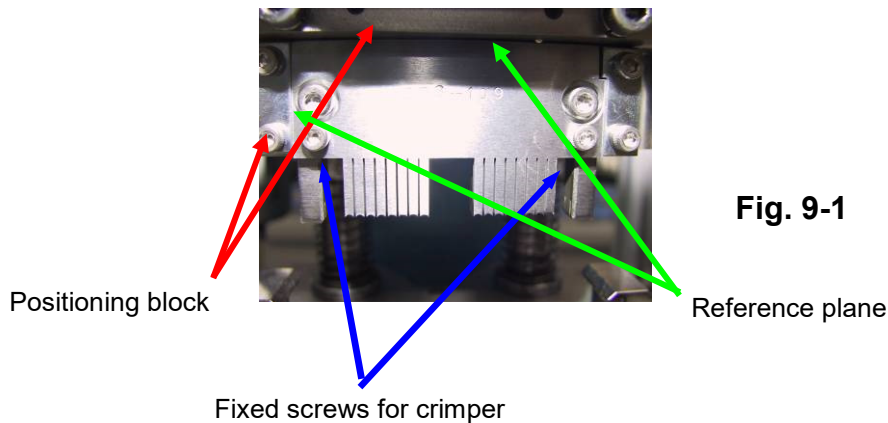
**9. Replacement of Spare parts**

**Danger**

**When replace or adjust the part, be sure to disconnect power and air.**

(1) Replacement of Crimper (P/N 1891497-1) <Fig. 9-1>

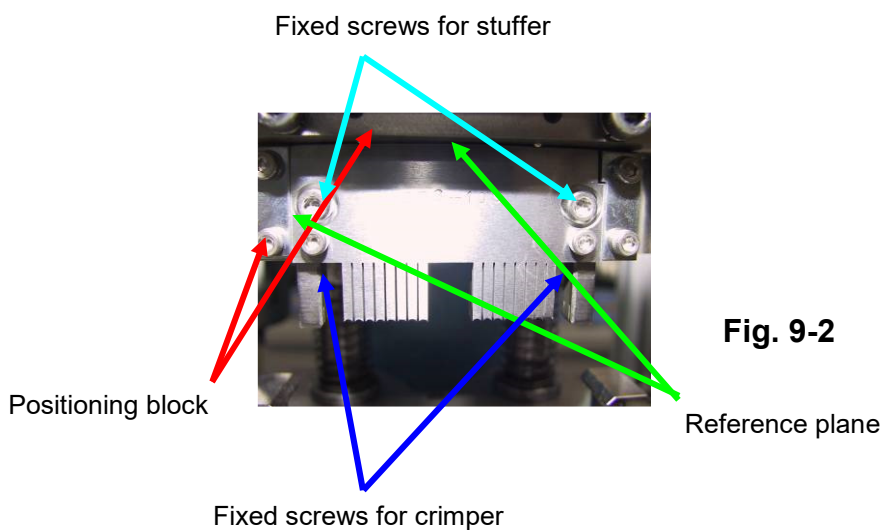
- ① Remove the crimper mounting screws.



- ② Attach the new crimper.
- ③ While pressed against the top and left direction the crimper, tighten the crimper fixing screws.
- ④ Lower the press by hand, make sure that there is no interference with the comb.
- ⑤ The crimp height is measured, and make sure that there is no problem with the application specification 114-5276-5.

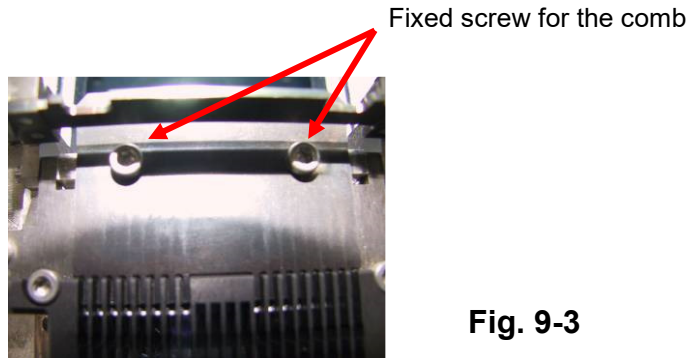
(2) Replacement of Stuffer (P/N 1891498-1) <Fig. 9-2>

- ① Remove the crimper mounting screws.
- ② Remove the fixed screws for stuffer after remove the crimper.
- ③ Attach the new stuffer.
- ④ While pressed against the top and left direction the stuffer, tighten the stuffer fixing screws.
- ⑤ While pressed against the top and left direction the crimper, tighten the crimper fixing screws.
- ⑥ Lower the press by hand, make sure that there is no interference with the comb.
- ⑦ Make sure that there is no problem with the application specification 114-5276-5 to IDC sample.

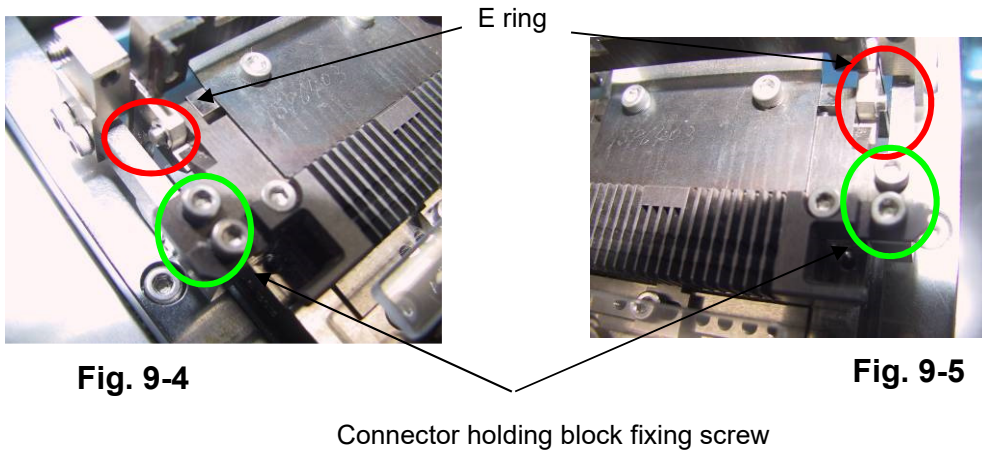


(3) Replacement of Comb (P/N 1891499-3) <Fig. 9-3>  
 Note) P/N1891499-1 can also be used.

- ① Raise a chip plate and remove the screw fixing a comb.



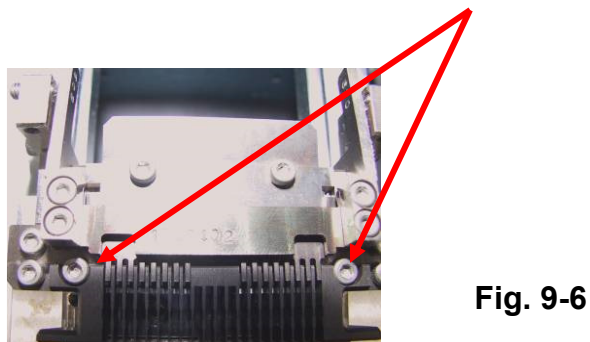
- ② Remove the E ring of the shaft for mounting the comb. <Fig. 9-4> <Fig. 9-5>



- ③ Remove the connector holding block fixing screws.
- ④ Attach the new comb.
- ⑤ Lower the press by hand, make sure that there is no interference with the comb.
- ⑥ Make sure that there is no problem with the application specification 114-5276-5 to IDC sample.

(4) Replacement of Cut blade lower (P/N 2047628-1) <Fig. 9-6>

- ① Remove the fixed screws for lower blade. Cut blade lower mounting screw



- ② Attach the new cut blade lower and tighten the fixing screws.

**10. Adjustment method of IDC(Insulation displacement Crimping) depth and Crimp Height**

**Danger** When adjust the press, be sure to disconnect power and air.

10.1 Adjustment of IDC depth

**Caution** When you adjust the IDC depth, in order to change the stopper of the whole machine, also change crimp height. Refer to clause 9-2 about the adjustment of crimp height.

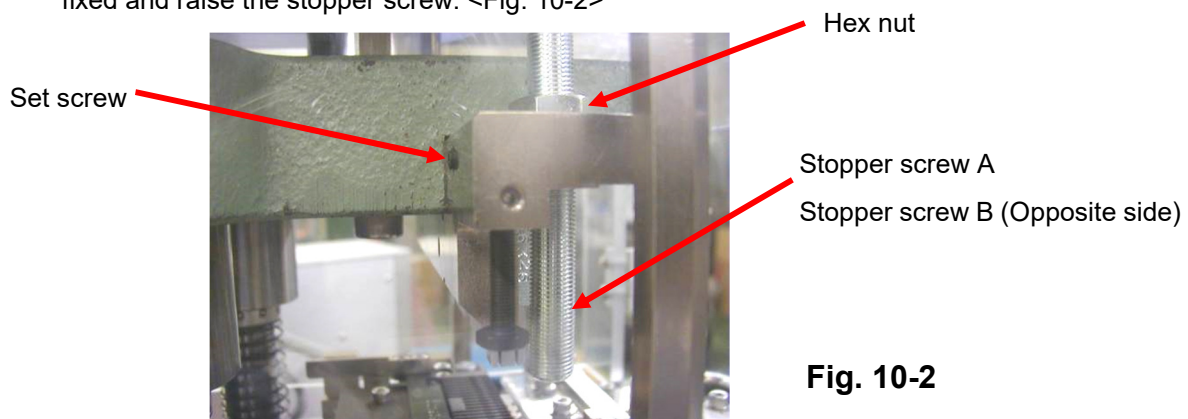
(1) Case to be set deeper than the current IDC the depth

- ① Loosen the fixed screw of press body and raise the stopper in the upward direction. <Fig. 10-1>



**Fig. 10-1**

- ② Loosen the set screw on which bottom dead point stopper screw A in a one side on the table is being fixed and raise the stopper screw. <Fig. 10-2>



**Fig. 10-2**

- ③ Lower the press body by a valve.

**Danger** Be careful not to pinch your hand

- ④ Put a shim of the same thickness as the size you'd like to lower in and lower it until the stopper screw A hits the shim.
- ⑤ Fixed with hexagon nut and tighten the set screw.
- ⑥ Raise press and remove the shim.
- ⑦ After loosening the stopper screw B opposite, raise it.
- ⑧ Lower the press main body again.

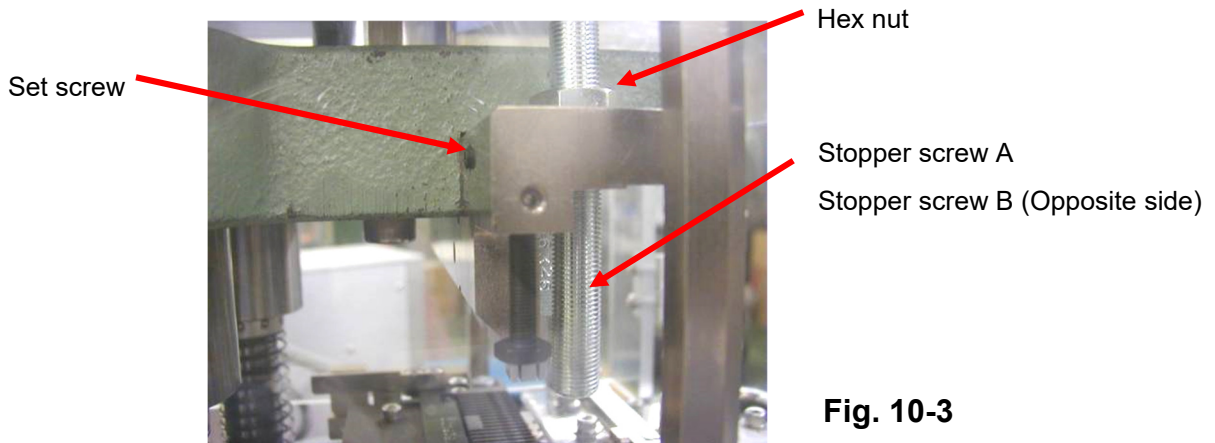
- ⑨ The stopper screw B is lowered until it hits the stopper and fixed with hexagon nut, tighten the set screw.
- ⑩ Lower the stopper until the stopper of the main body of press hits the undersurface and tighten the fixed screw.
- ⑪ Stopper screw A,B in both sides is used as support of the body stopper, be fixed again in a state in which floated again about 0.2 ~ 0.3mm.
- ⑫ After the adjustment, make sure that there is no problem with the application specification 114-5276-5 to IDC sample.

(2) Case to be set shallower than the current IDC the depth

- ① Put a shim of the same thickness as the size you'd like to lower in between the stopper and bottom dead point stopper screw A in a one side of the table and lower the press main body.

**Danger** Be careful not to pinch your hand

- ② After loosening the stopper screw B opposite, lower the stopper screw B until the stopper of the main body of press hits the undersurface. <Fig. 10-3>



- ③ Raise press and remove the shim.
- ④ Lower the press body by a valve again.
- ⑤ The stopper screw A is lowered until it hits the stopper and fixed with hexagon nut, tighten the set screw
- ⑥ Loosen the stopper fixing screw of main body of the press and lower the stopper until the stopper hits the undersurface.
- ⑦ Stopper screw A,B in both sides is used as support of the body stopper, be fixed again in a state in which floated again about 0.2 ~ 0.3mm. <Fig. 10-4>



- ⑧ After the adjustment, make sure that there is no problem with the application specification 114-5276-5 to IDC sample.

10.2 Adjustment of Crimp Height <Fig. 10-5>

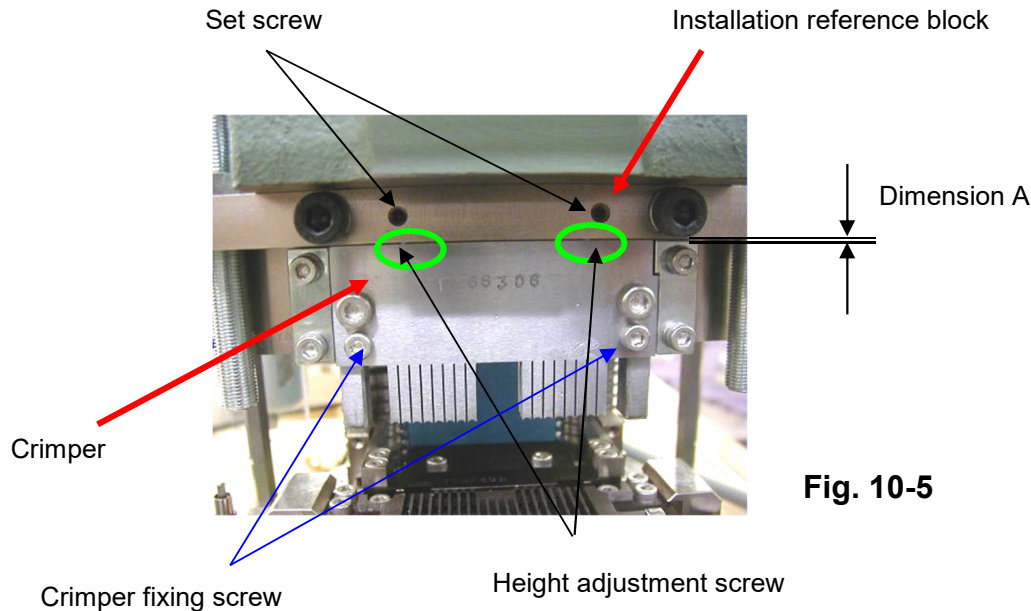


Fig. 10-5

- ① Measure a crimper and dimensions of gap A of the installation reference block with a shim.
- ② Loosen the set screw to the fixing screw for height adjustment.
- ③ Do not come out the height adjustment screw from installation reference block.
- ④ Loosen the crimper fixing screw .
- ⑤ If you want to deeply crimp depth, put the shim of (Dimension A + Request dimension ) between the crimper and the installation reference block, while pushing the crimper in the upward direction, fix the crimper.
- ⑥ If you want to shallow crimp depth, put the shim of (Dimension A - Request dimension ) between the crimper and the installation reference block, while pushing the crimper in the upward direction, fix the crimper.
- ⑦ Remove the shim and lower the height adjustment screw stopper until it hits the crimper.
- ⑧ Tighten the set screw.
- ⑨ After the adjustment, make sure that there is no problem with the application specification 114-5276-5 to IDC sample.

## 11. Maintenance

We recommend that the maintenance management program is carried out regularly to ensure the quality and reliability of tools. The frequency of the check should be adjusted respectively depending on your experience, in accordance with standards below:

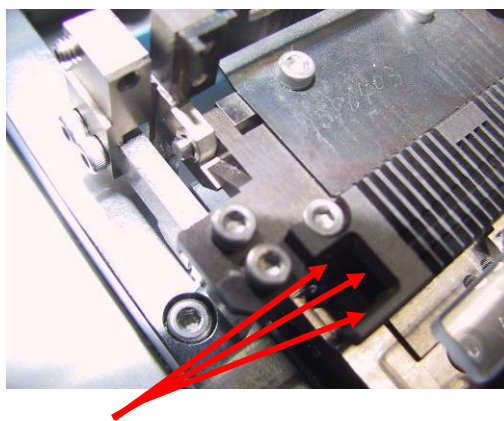
1. Repair, usage, and tools handling
2. Amount of accumulated waste and presence of dirt
3. Skill level of operator
4. Your standard for working

Tools have been checked before shipping. However, we recommend that tools should be checked for damages occurring in shipping just after receiving them.

### 11.1 Daily maintenance

The worker should carry out the maintenance on his/her own responsibility while recognizing following:

1. Always clean tools by removing dust, damp, and dirt. Use a clean and soft brush or cloth without nap for cleaning; otherwise, damage on tools.  
When storing tools, cover them with cloth for dirt protection.
2. Before daily work, check that any damage, abnormal sound, and malfunction does not exist.
3. Apply the lubricant (Mobil: PLEX#47 or equivalent) to a part of the following figure at the time of starting or ending of the work with the comb (P/N 1891499-3). <Fig. 11-1>



Apply grease to the inside of the ditch  
(in the other side)

**Fig. 11-1**

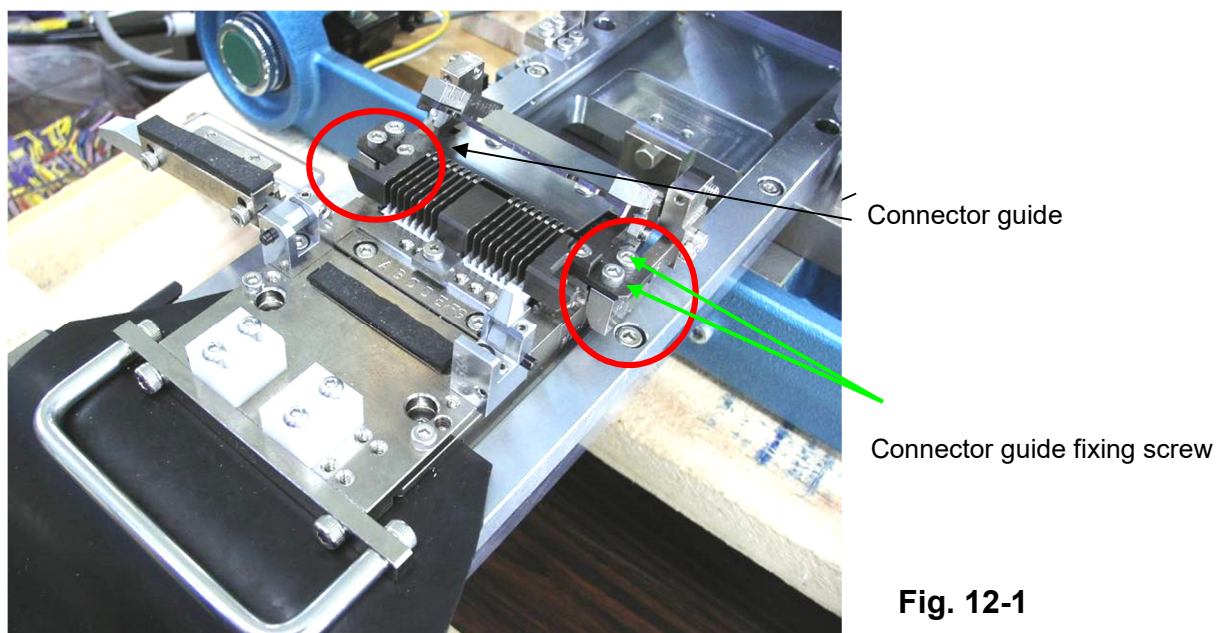
### 11.2 Regular inspection

1. Check that all components are fixed in the proper positions. In addition, visually check the wear and damage on tools. If damage exists, refer to "Parts replacement".
2. Apply the lubricant (Kure Engineering: CRC5-56 or equivalent) to the moving parts once a month.

## 12. Reference documents

12.1 The adjustment method in the case of the crimping of the wire insulation barrel is only one

- 1) Set a connector.
- 2) Down the comb.
- 3) When you touch the connector, check whether there is a backlash.  
If there is a backlash, Loosen the connector guide fixing screws of the following figure, and tighten the screws while pressing on the inside. <Fig. 12-1>



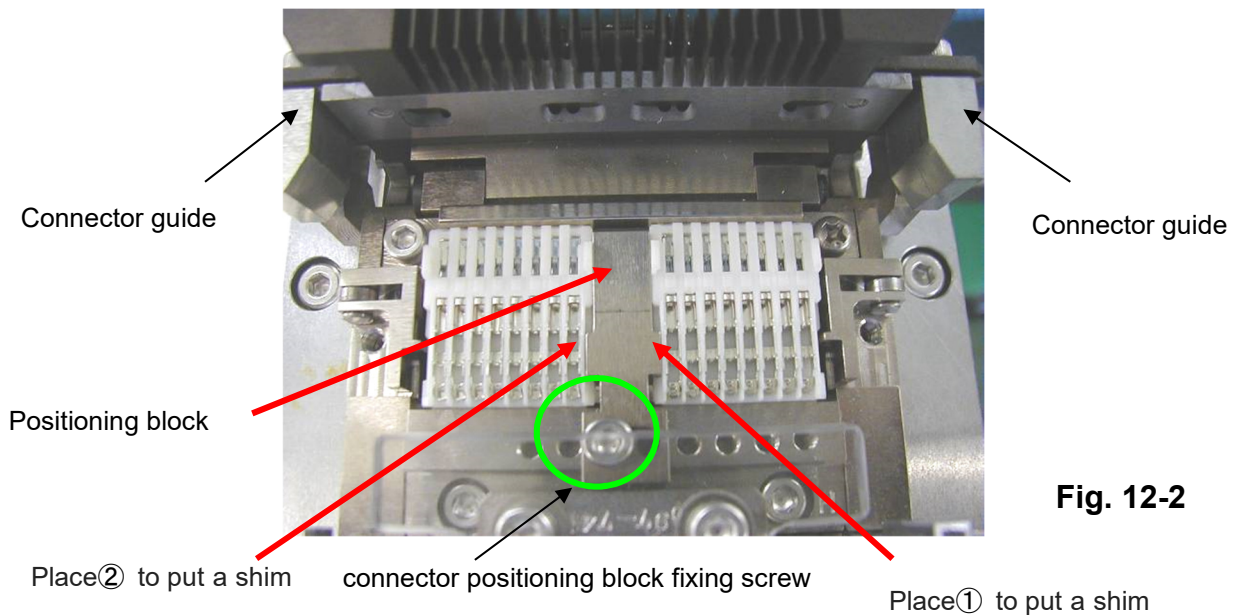
**Fig. 12-1**

- 4) If there is not a backlash, adjust the location of the whole connector.
  - ① Set a connector.
  - ② Put a shim of the same thickness as the size you'd like to shift in "Place ① to put a shim" or "Place ② to put a shim".

☆ Case the right side barrel of non-crimping occurs <Fig. 12-2>

- a. Put the shim in place ① to put a shim.
- b. Loosen the connector guide left side fixing screws and down the comb.
- c. Tighten a screw while pressing a left connector guide inside. (That there are no backlash of a connector)
- d. Open the comb, loosen the fixed screw of the positioning block for connector and remove the shim.
- e. Loosen the right connector guide fixing screw and down the comb.
- f. Tighten a connector guide fixing screw while pressing a right side connector. (That there are no backlash of a connector)
- g. Loosen the connector positioning block fixing screw.





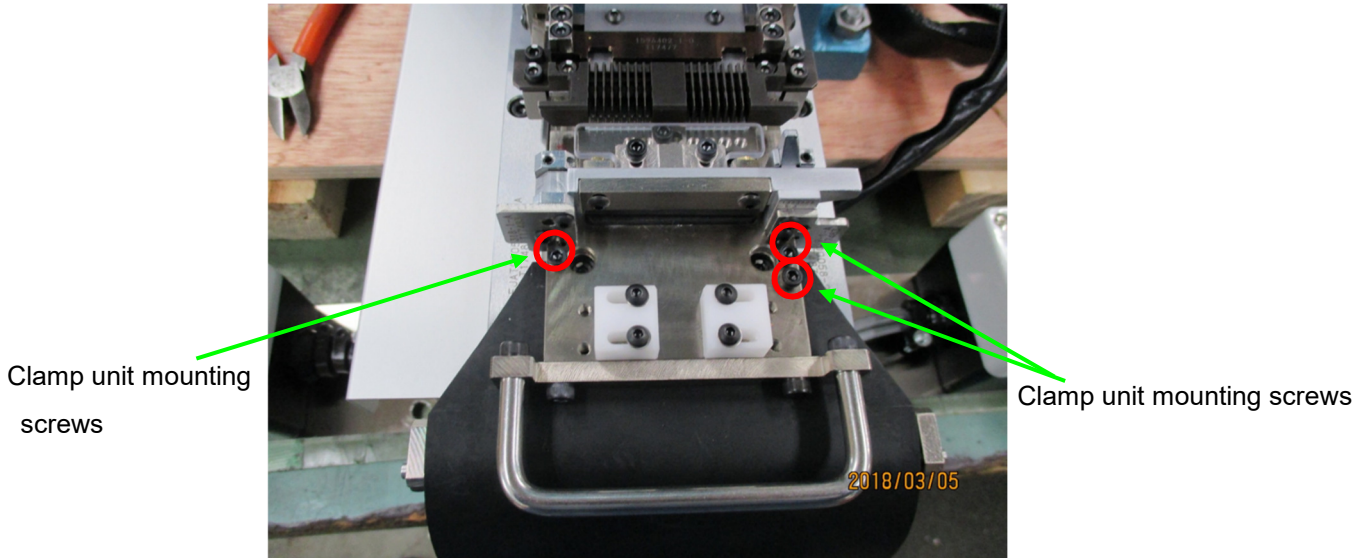
☆Case the left side barrel of non-crimping occurs <Fig. 12-2>

- a. Put the shim in place① to put a shim.
- b. Loosen the connector guide right side fixing screws and down the comb.
- c. Tighten a screw while pressing a right connector guide inside. (That there are no backlash of a connector)
- d. Open the comb, loosen the fixed screw of the positioning block for connector and remove the shim.
- e. Loosen the left connector guide fixing screw and down the comb.
- f. Tighten a connector guide fixing screw while pressing a left side connector. (That there are no backlash of a connector)
- g. Loosen the connector positioning block fixing screw.

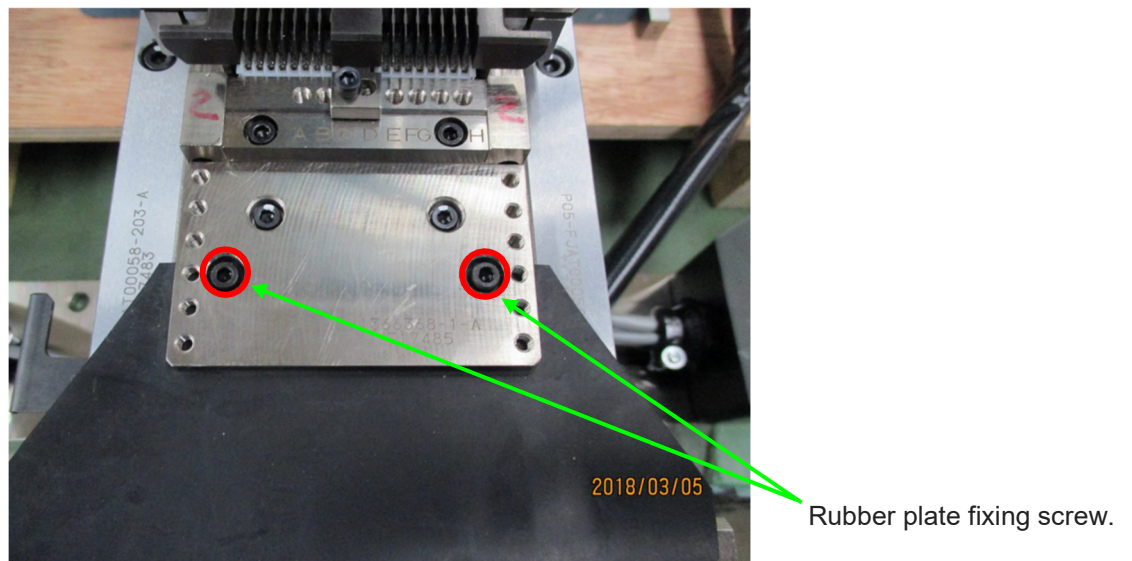
### 12.2 How to adjust the position of the table sensor.

1) Adjust position of the stopper bolt.

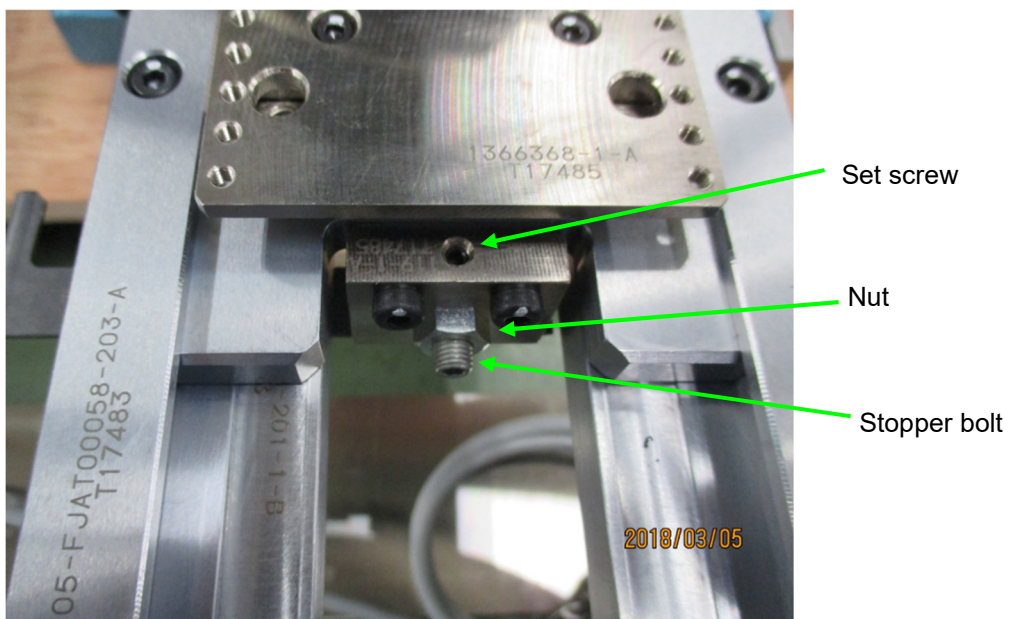
① Remove 3 of M3 screws, and remove clamp unit.



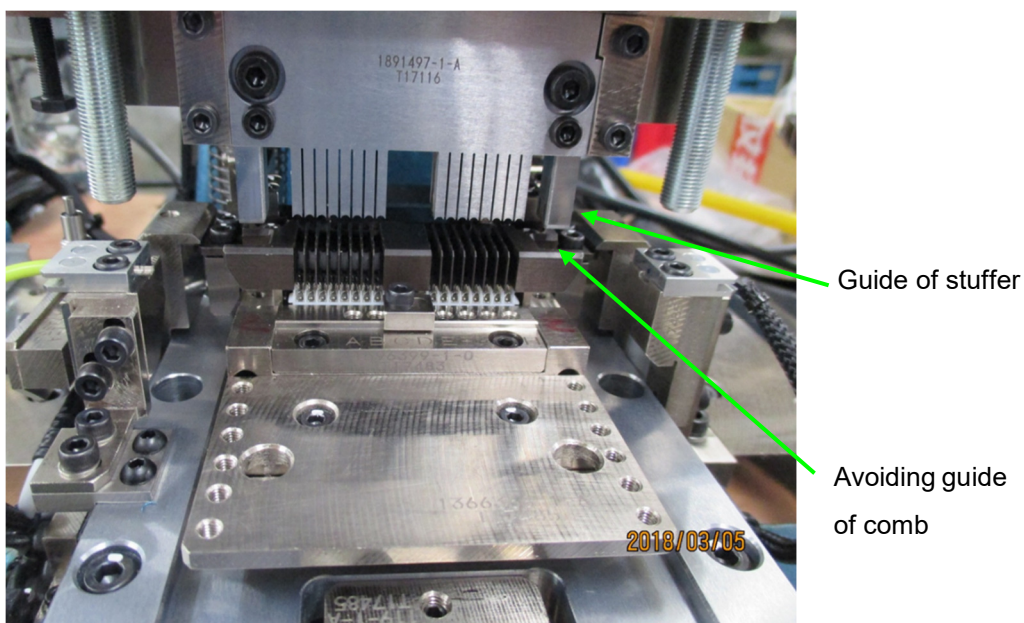
② Remove 2 of M3 screws, and remove Rubber plate.



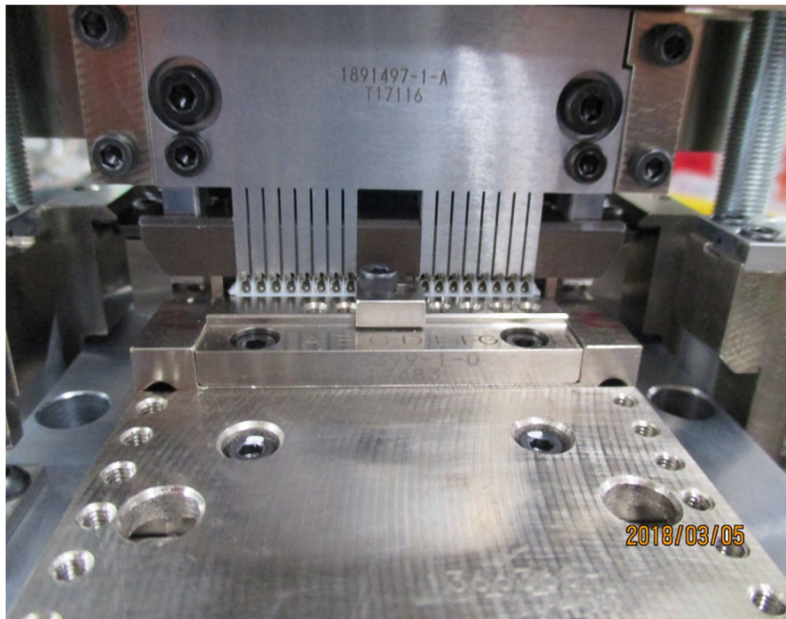
③ Loosen the set screw and nut, then loosen the stopper bolt.



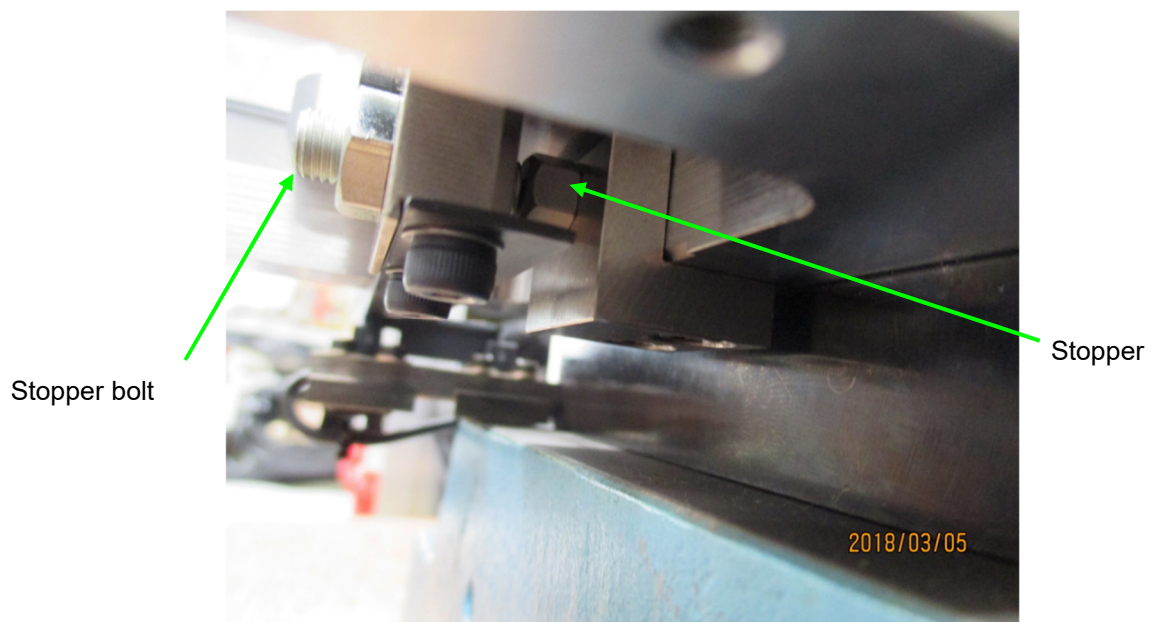
④ Move the side table and visually combine the guide of stuffer and Avoiding guide of comb.



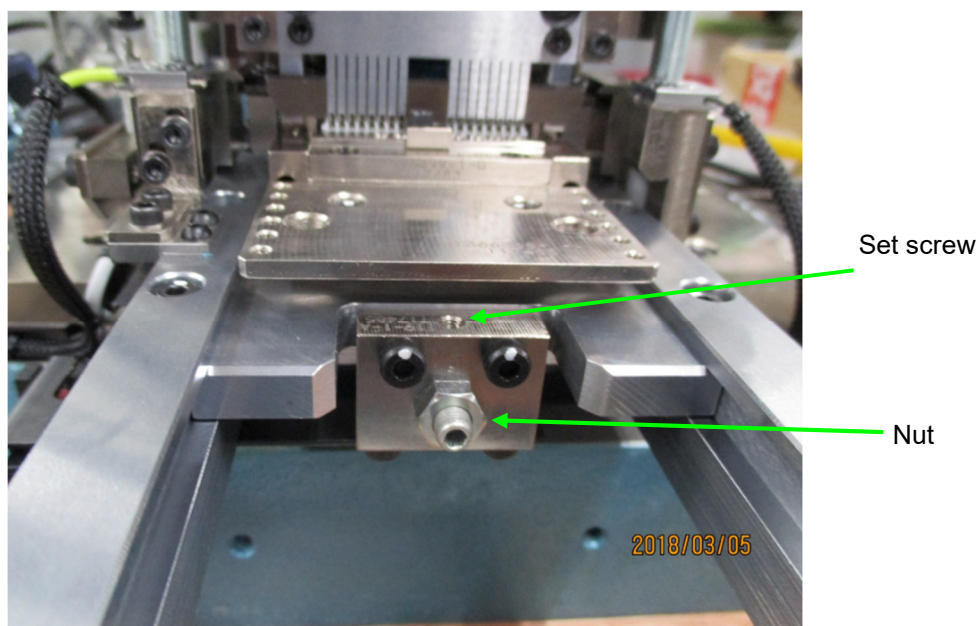
⑤ Pull down the upper die set until combine A and B



⑥ Hit the stopper bolt against the stopper.



⑦ Tighten and secure the setscrew in this position, then tighten the nut.



2) Adjust the table sensor position.

① Remove 2 of M4 screws and remove side cover.



② Turn on power switch and adjust the table sensor.

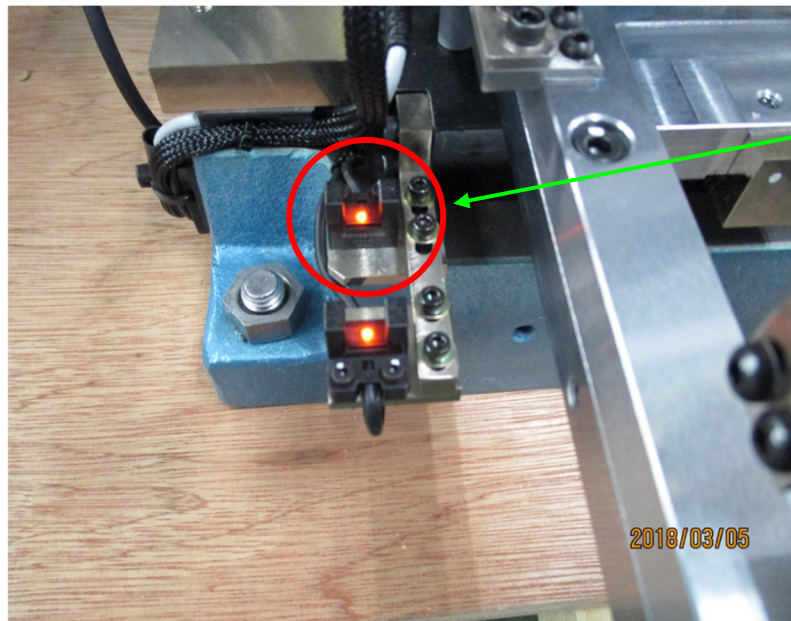
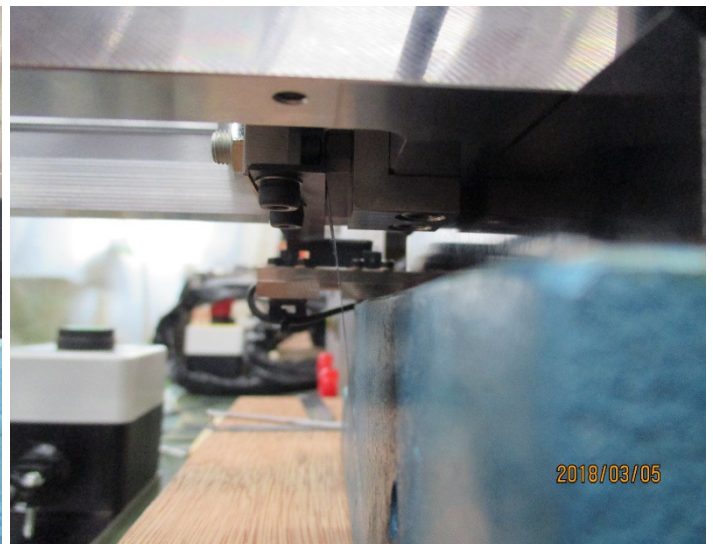


Table sensor

\*If there is a target, the lamp on the table sensor turns on.

If there is no target, the lamp on the table sensor goes out.

\*Adjust the sensor position so that when you insert a 0.1 mm shim between the stopper and the stopper bolt, the lamp lights up and goes out when there is nothing.



- ③ Adjust sensor position, then tighten and secure the screw.



12.3 Main spare parts list

No.	TYPE	MFR	USE
1	FS-V21	KEYENCE	Amplifier for wire float detection
2	FU-52TZ	KEYENCE	Fiber sensor for wire float detection
3	PM-L24	SUNX	Table forward end detection Sensor for wire float detection timing
4	N-MSTKG-B	MISUMI	Press bottom dead point detection
5	FX3S-20MR	mitsubishi	PLC
6	H7EC-N-B	OMRON	COUNTER
7	GP46-10-01L5-X201	SMC	AIR PRESSURE SWITCH

Revision summary

Revision	Date	Contents
A	30 MAR 16	Released
B	13 APR 16	Revised 2 page Applicable revised
C	05 MAR 18	Revised 18 page Table sensor adjustment method added