FUJITSU

FUJITSU Component Connector

Instruction Manual for Hand Crimping Tool

FUJITSU COMPONENT LIMITED

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Safety Cautions

Caution level	Category	Statements
Warning	Injury	- Do not touch nor insert fingers to the punch, the cutter part especially during operation. You may have serious injury such as cutting hands, fingers. - Put and place the tool on to stable working table considering its weight otherwise you may have serious injury by the tool dropping, fallen instruments.
Caution	Injury	- Use the tool for intended purpose only otherwise you may have injury.
	Fatigue	- Avoid long time continuous operation nor operation in bad health otherwise you may get ill. Take rest for 10 to 15 min. every one hour.

1. General

Hand crimping tool is a manual tool to connect wire cable to connector contact. Handling and operation of the tool is easy and it makes sure to have uniform quality connection. In order to keep such characteristics, it is necessary to do crimping work under proper conditions. Lack of work control may cause unexpected defect.

For crimping work, prepare stripped wire besides contact and set this wire portion into predefined position of the tool. For each wire size and contacts, dedicated hand crimping tools are available.

Safety caution for health
Long time, continuous operation nor operation in fatigued state is not favorable to health. Get a proper amount of rest, and relax, then start operation.

2. Structure, dimension, designation

Unit: mm

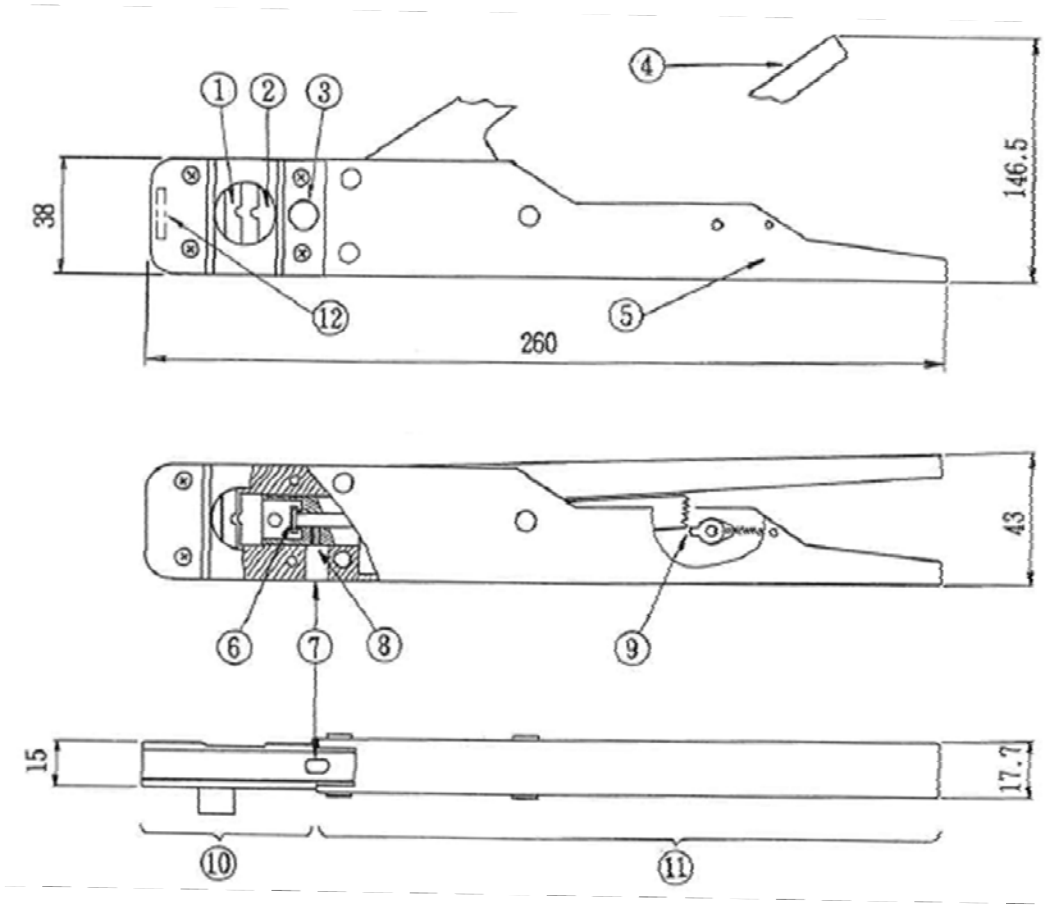
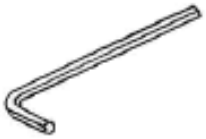


Fig.-1

① Female die
② Male die
③ Die position adjustment opening
④ Movable arm
⑤ Fixed arm
⑥ Die position adjustment screw
⑦ Locking screw opening
⑧ Locking screw
⑨ Ratchet
⑩ Head
⑪ Main body
⑫ Part number

Appended goods

① Hexagonal wrench



② Fixing block

3. Crimping Procedure

The hand crimping tools, when delivered, have been already adjusted for use with the specified contacts and asterisked (*) wires listed in Table-1 (page 9). If further adjustment is required, refer to this procedure, item 4 (page 7). Before operation and/or adjustment, confirm the tool moves smoothly by operating the arm for 2 or 3 times without inserting the contact

1) Contact loading (Fig.-2)

Fully open the arm, hold center portion of the tool by left hand and insert the contact into the hole behind the male die

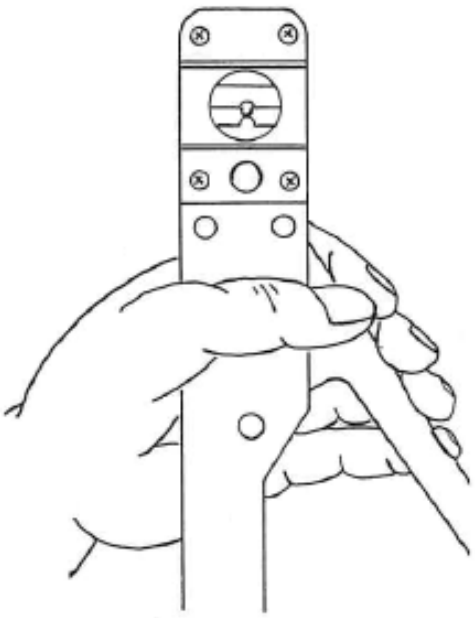


Fig.-2

2) Wire insertion (Fig.-3)

Insert a stripped wire into the contact until the insulation butts against the wire insulation stopper and maintain the wire.

Take care of the wire insertion depth. In case the depth is deep or shalow, it might be a cause of conduction error, lower cable retention and so on.

3) Wire half-crimping

While holding the wire in place, close the arm by left hand.

Even closed amount is not enough, it is not cared since purpose of this process is to retain the wire in the contact.

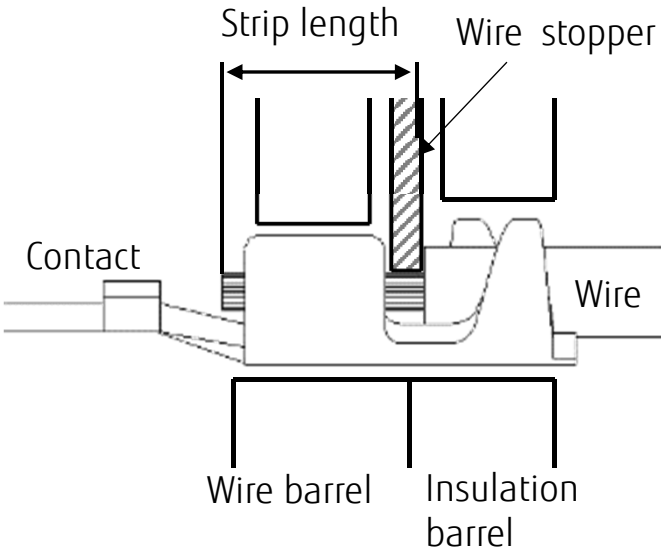


Fig.-3

4) Crimping (Fig.4)

While the wire is retained in place, squeeze the arm completely by both hands.

Loosing the hands allows the arm to open automatically and the wire crimping is completed. In case the arm does not open, close the arm again since crimping work was insufficient.

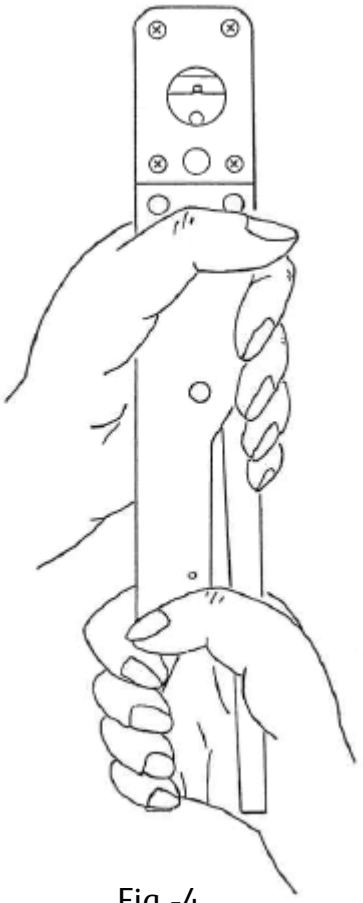


Fig.-4

5) Contact taking off

Remove the crimped contact by pulling on the wire carefully. Pulling in a high-handed manner might cause deformation of the contact.

6) Appearance, crimp height check (Fig.-5)

(1) Check appearance of the crimped contact to see the wire is crimped correctly.

(2) It is best that bell mouth is made at the both ends uniformly. Even no bell mouth at both ends, it is good crimped contact. Take care of much bell mouth contrary, that might be a cause of breaking wire, lower cable retention.

(3) Check crimp height. Do it even at moments during operation

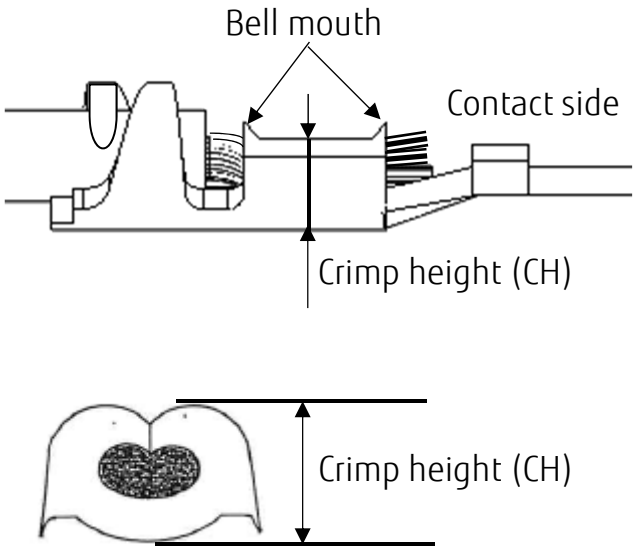


Fig.-5

Note: Refer to Table-1 (page 9) for proper crimp height.

4. Tool adjustment

User should only adjust the hand crimping tool by himself when:

① The arm does not move smoothly
② The crimp height is not correct and required to be adjusted

1) Lubrication

The arm and the dies are engaged though toggle and link mechanism.
Before starting the crimping work, close and open the arm several times with no contact loaded. If it does not move smoothly, lubricate the sliding parts carefully.

(1) Oil

Ordinary machine oils are available for lubrication. However, avoid the use of high viscosity lubricants such as grease.

(2) Amount of oil

Take care not to apply too much oil. Only several drops are needed.
Much oil would contaminate the hands and also saturate to the crimping dies, that might affect crimping performance, crimp height and crimped contact characteristics.

2) Crimp height adjustment

Make adjustment carefully since it would affect crimping performance directly

(1) Lock loosing (Fig.-6)

Close the arm until the locking screw becomes visible through the opening.
Then loosen the screw with a hexagonal wrench. It should be loosened by no more than 1/2 to 1 turn.

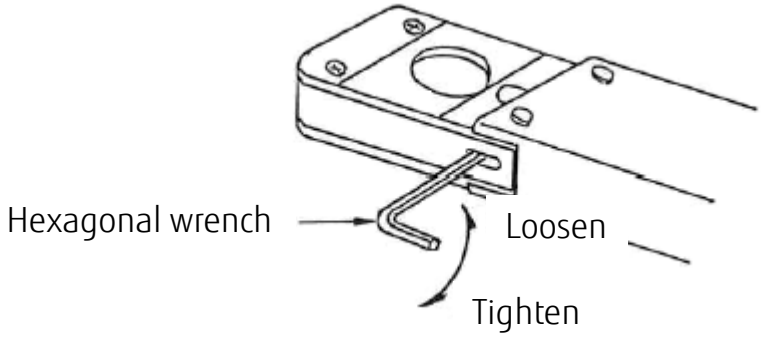


Fig.-6

(2) Crimp height adjustment (Fig.-7)

Turn to adjust the die position adjusting screw.

Turning right raises the die, turning left lowers it.

Then crimp the contact and check the crimp height conforms to that shown in Table 1 (page 9).

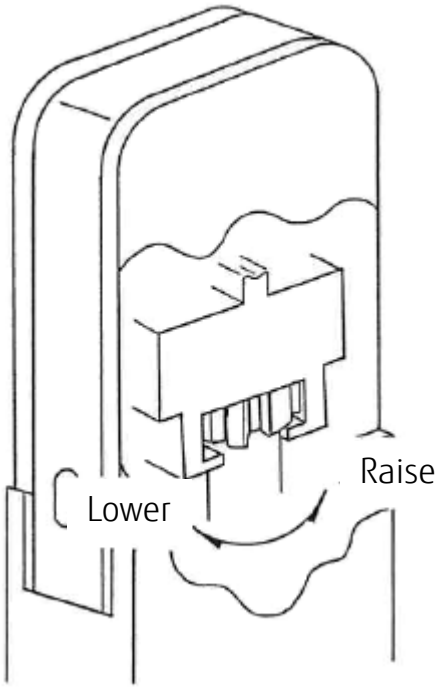


Fig.-7

(3) Fixing block (Fig.-8)

Attachment of the fixing block to the tool makes it possible to avoid crimp height fluctuation by the lock screw loose

Match convex part of the block and concave part of the die adjustment screw, then put it there and fix with the front cover.

(4) Lock tightening

After the dies are properly located in place , firmly tighten the locking screw mentioned in item (1)

(5) Check

Finally confirm below.

a) The are and the dies move smoothly.

b) The dies position are completely adjusted. The dies hit each other at body part, not at crimp part

c) Crimp height

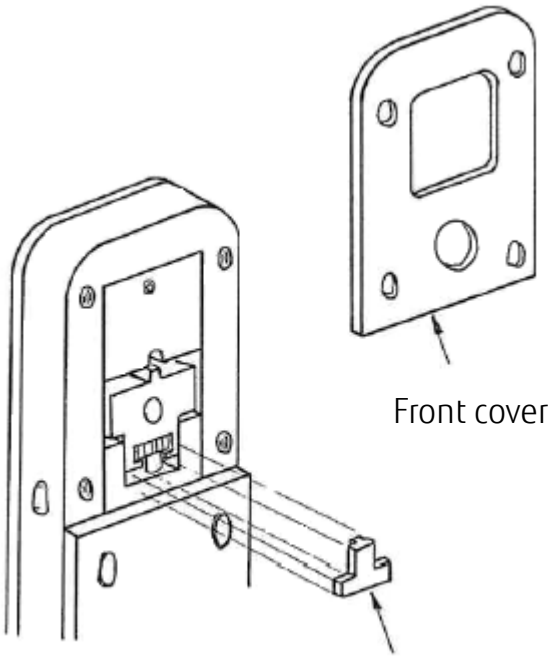


Fig.-8

5. List of Tool, Wire, Crimp height

Table-1

Hand crimping tool part number	Contact part number	Crimp height (mm)	Wire size (AWG#)	Section area (mm2)	Strip length (mm)	Outer diameter (ϕ)
FCN-363T-T005/H (for standard wire)	FCN-363J-AU	1.25～1.30 1.20～1.25 1.15～1.20	#24 #26 * #28	0.20～0.24 0.13～0.16 0.088～0.096	3.0～4.0	1.2
FCN-363T-T011/H (for thick wire)	FCN-363J-AU/S	0.85～0.95 0.75～0.85 0.73～0.81 0.66～0.74	#22 #24 #26 * #28	0.30～0.40 0.20～0.24 0.13～0.16 0.088～0.096	3.0～4.0	1.0～1.6

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