

PROPER USE GUIDELINES

Cumulative Trauma Disorders can result from the prolonged use of manually powered hand tools. Hand tools are intended for occasional use and low volume applications. A wide selection of powered application equipment for extended-use, production operations is available.

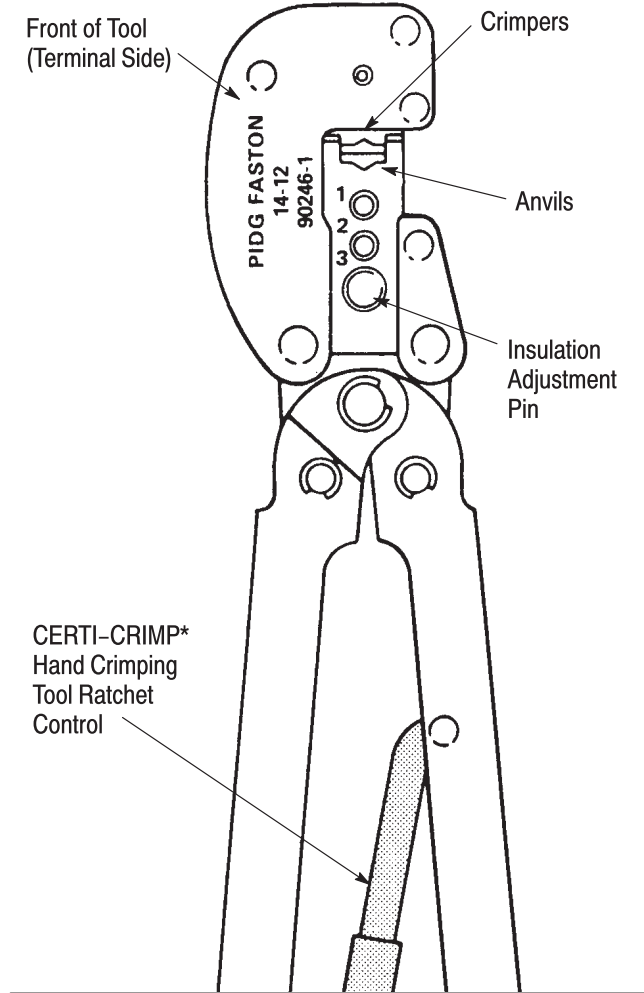


Figure 1

1. INTRODUCTION

Hand Crimping Tool 90246-1 is designed to crimp the PIDG* FASTON* receptacle terminal listed in Figure 2. Read these instructions thoroughly before crimping any terminals.



Dimensions on this sheet are in metric units [with U.S. customary units in brackets]. Figures and illustrations are for reference only and are not drawn to scale.

Reasons for reissue are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION (Figure 1)

This tool features two fixed dies (crimpers), two movable dies (anvils), an insulation adjustment pin, a locator/wire stop, and a CERTI-CRIMP hand crimping tool ratchet control.

The insulation adjustment pin is used to regulate the crimp height of the terminal insulation barrel. Refer to Section 4, INSULATION CRIMP ADJUSTMENT.

The locator/wire stop has two functions. First, it positions the terminal between the crimping dies, and second, it aids in locating the wire in the terminal (see Figure 3).

The CERTI-CRIMP hand crimping tool ratchet control ensures full crimping of the terminal. Once engaged, the ratchet will not release until the handles have been fully closed.

3. CRIMPING PROCEDURE

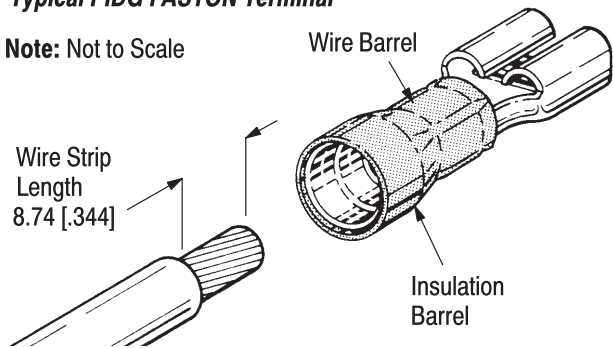
Refer to the table in Figure 2 and select a wire of the specified size and insulation diameter. Strip the wire to the length indicated – do NOT cut or nick the wire strands.

Select an applicable loose-piece terminal. Refer to Figure 3 and proceed as follows:

1. Hold the tool so that the front (terminal side) is facing you.

Typical PIDG FASTON Terminal

Note: Not to Scale



WIRE		TERMINAL NO.	
SIZE (AWG)	INSULATION DIAMETER	LP	STRIP
14 to 12	6.35 [.250] Max.	42844	60544

Figure 2

2. Squeeze the tool handles together until the ratchet releases – then open the tool handles fully.
3. Insert the terminal (mating portion first) straight into the front of the crimp section. Push the terminal mating portion into the locator slot until the wire barrel butts against the locator/wire stop.
4. Holding the terminal in place, squeeze the tool handles together just enough to hold the terminal in the crimping chamber. Do NOT deform the insulation barrel or wire barrel.
5. Insert a properly stripped wire into the terminal wire barrel until the wire butts against the locator/wire stop.
6. Holding the wire in place, squeeze the tool handles together until the ratchet releases.
7. Open the tool handles fully and remove the crimped terminal from the tool.

1. Place adjustment pin in No. 3 position. Insert terminal into tool according to Section 3, CRIMPING PROCEDURE, Steps 1 through 4.
2. Insert an UNSTRIPPED wire into terminal insulation barrel. Crimp terminal and remove from tool.
3. Check insulation crimp by bending wire back and forth one time. If wire pulls out, place adjustment pin in next smaller position and repeat these procedures. Crimp should hold wire insulation firmly without cutting into it.

5. MAINTENANCE/INSPECTION

5.1. Daily Maintenance

Remove all foreign particles with a clean, soft brush or a clean, soft, lint-free cloth. Make sure the proper retaining pins are in place and are secured with the proper retaining rings. If foreign matter cannot be removed easily, or if the proper replacement parts are not available, return the tool to your supervisor.

Make sure all pivot points and bearing surfaces are protected with a thin coat of any good SAE 20 motor oil. Do NOT oil excessively. When the tool is not in use, keep the handles closed to prevent objects from becoming lodged between the dies, and store the tool in a clean, dry area.

5.2. Periodic Inspection

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the tool and/or be supplied to the supervisory personnel responsible for the tool. Though recommendations call for at least one inspection a month, the inspection frequency should be based on the amount of use, ambient working conditions, operator training and skill, and established company standards. These inspections should be performed in the following sequence:

A. Visual Inspection

1. Remove all lubrication and accumulated film by immersing the tool (handles partially closed) into a suitable degreaser that will not affect paint or plastic material.
2. Make certain all retaining pins are in place and are secured with the proper retaining rings. If replacements are necessary, refer to Figure 5.
3. Inspect the head assembly, with special emphasis on checking for worn, cracked, or broken dies. If damage to any part of the head is evident, return the tool for evaluation and repair (see Section 6, REPLACEMENT AND REPAIR).

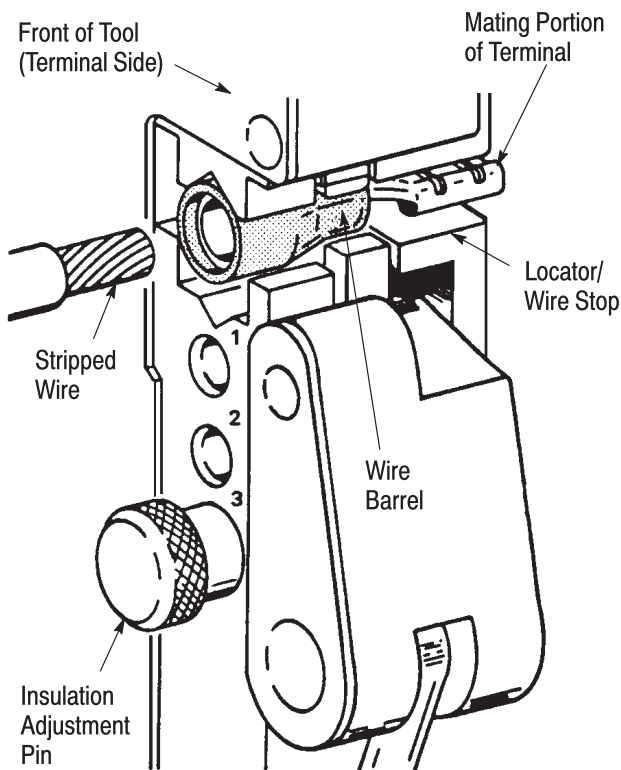


Figure 3

4. INSULATION CRIMP ADJUSTMENT

The insulation barrel crimp height is regulated by placing the insulation adjustment pin in one of three positions: (1) small, (2) medium, or (3) large.

Determine the proper setting as follows:

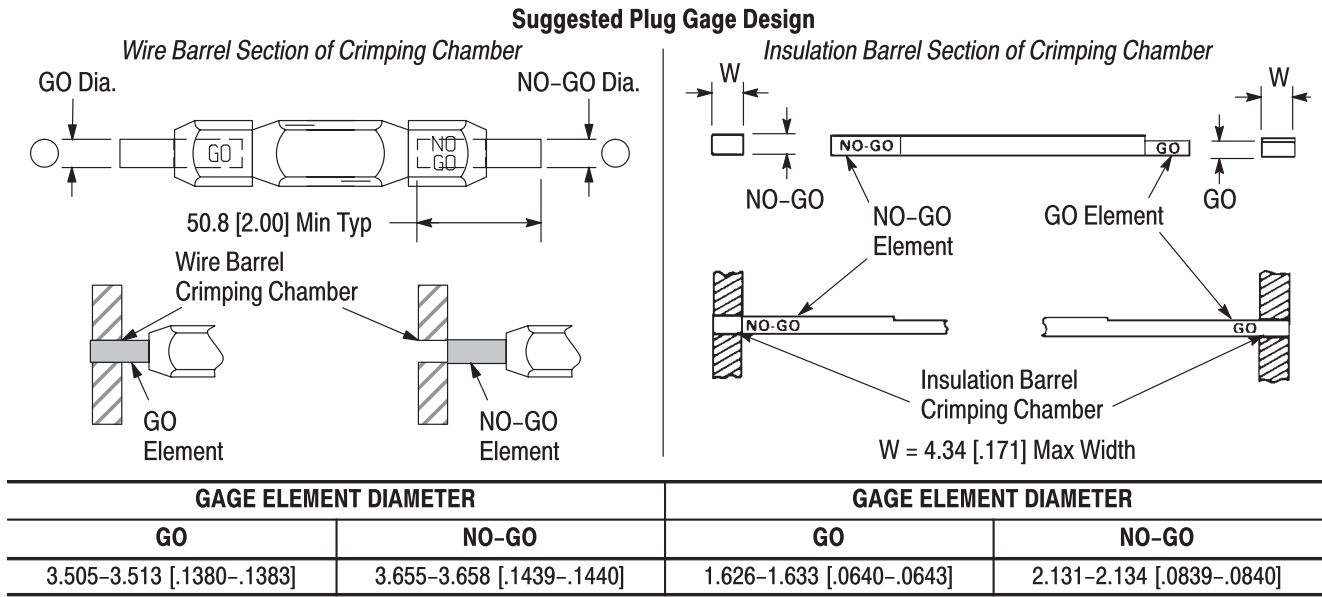


Figure 4

B. Gaging the Crimping Chamber

This inspection requires the use of a plug gage conforming to the dimensions in Figure 4. To gage the crimping chamber, proceed as follows:

1. Remove traces of oil or dirt from the crimping chamber and the plug gage.
2. Close the tool handles until the dies have bottomed and hold in this position. Do not force the dies beyond initial contact.
3. Carefully insert the GO element into the crimping chamber; do not force it. The GO element must pass completely through the crimping chamber. See Figure 4.
4. In the same manner, try to insert the NO-GO element into the same crimping chamber. The NO-GO element may begin entry, but may not pass through the crimping chamber. See Figure 4.

If the crimping chamber conforms to the gage inspection, the tool is considered dimensionally correct, and should be lubricated with a THIN coat of any good SAE 20 motor oil. If not, refer to Section 6, REPLACEMENT AND REPAIR.

For additional information concerning the use of the plug gage, refer to Instruction Sheet 408-7424.

C. CERTI-CRIMP Hand Crimping Tool Ratchet Control Inspection

Obtain a 0.025 mm [.001 in.] shim that is suitable for checking the clearance between the bottoming surfaces of the crimping jaws. Proceed as follows:

1. Refer to the table in Figure 4 and select a terminal (LP) and *maximum* size wire for the hand tool.

2. Position the terminal and wire between the crimping dies, as described in Section 3, CRIMPING PROCEDURE.

3. Holding the wire in place, squeeze the tool handles together until the CERTI-CRIMP hand crimping tool ratchet control releases. Hold the handles in this position, maintaining just enough tension to keep the dies closed.

4. Check the clearance between the bottoming surfaces of the crimping dies. If the clearance is 0.025 mm [.001 in.] or less, the ratchet is satisfactory. If the clearance exceeds 0.025 mm [.001 in.], the ratchet is out of adjustment and needs repair.

6. REPLACEMENT AND REPAIR

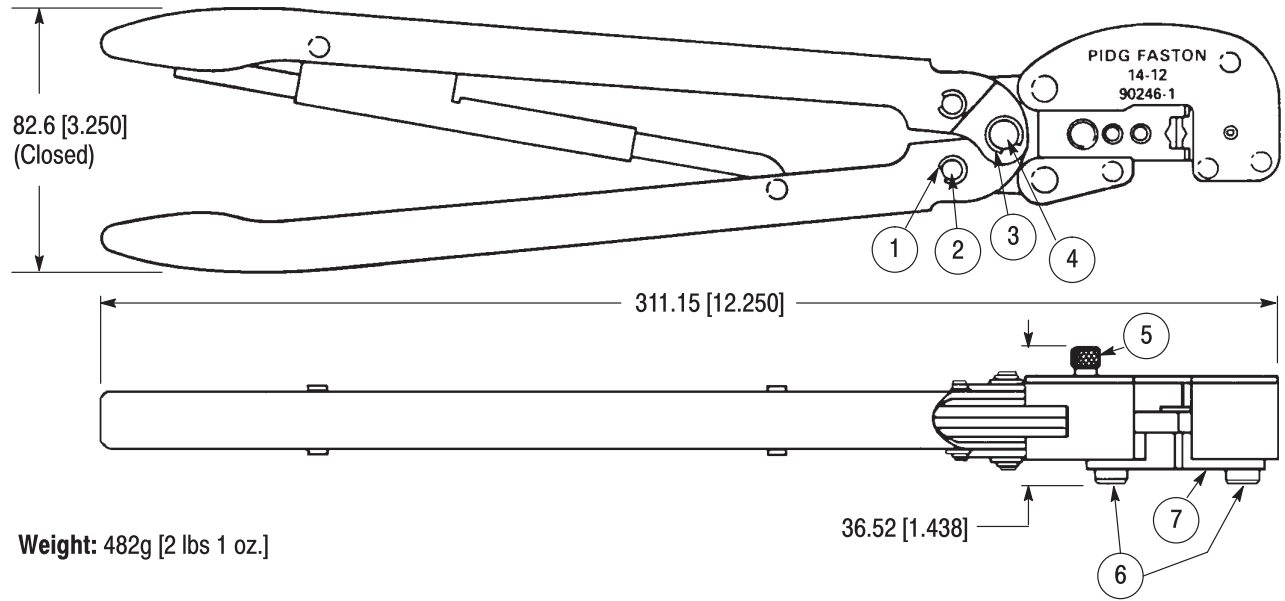
The parts listed in Figure 5 are customer-replaceable. A complete inventory can be stocked and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your Tyco Electronics Representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 1-717-986-7605, or write to:

CUSTOMER SERVICE (38-35)
 TYCO ELECTRONICS CORPORATION
 P.O. BOX 3608
 HARRISBURG, PA 17105-3608

Tools may also be returned for evaluation and repair. For tool repair service, contact a Tyco Electronics Representative at 1-800-526-5136.

7. REVISION SUMMARY

- Updated document to corporate requirements
- Changed gage information in Figure 4.



REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
1	21045-3	Ring, Retaining	4
2	300388	Pin, Retaining	2
3	21045-6	Ring, Retaining	2
4	300389	Pin, Retaining	1
5	303848-2	Pin, Adjustment	1
6	1-22353-8	Screw, Shoulder, No. 10-32	2
7	125732-1	Locator	1

Figure 5