

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.

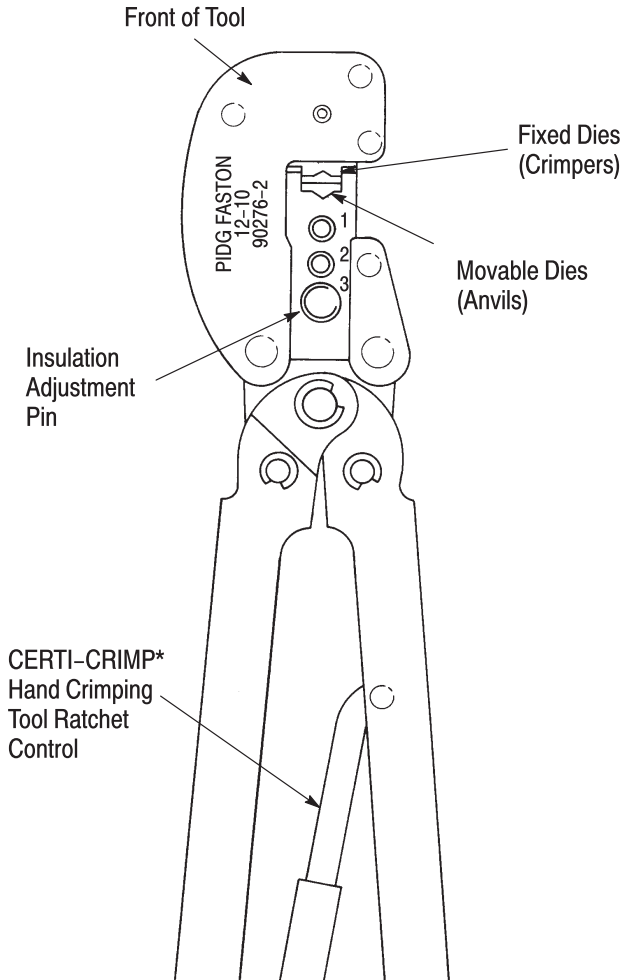


Figure 1

1. INTRODUCTION

Hand Crimping Tool 90276-2 is designed to crimp the PIDG* FASTON* receptacle terminal listed in Figure 2. Read these instructions thoroughly before crimping any contacts.

NOTE All dimensions in this document are in metric units [with U.S. customary units in brackets]. Figures and illustrations are for identification only and are not drawn to scale.

Reasons for reissue of this instruction sheet are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION (Figure 1)

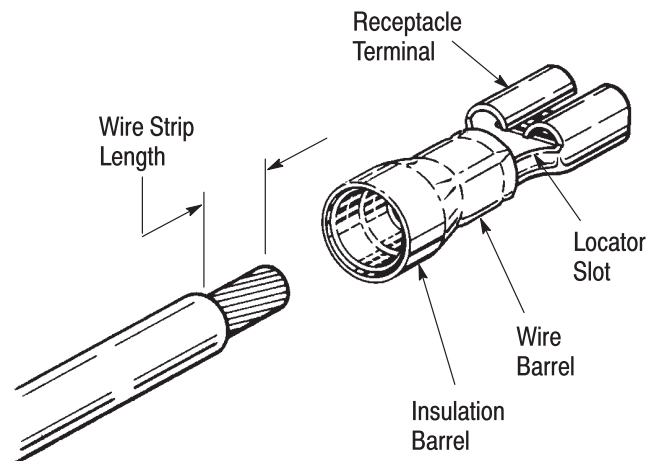
The *front* of the tool (terminal side), into which the terminal is inserted, has the tool number and wire range marked on it.

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

CAUTION The crimping dies bottom before the CERTI-CRIMP hand crimping tool ratchet control releases. This is a design feature that ensures maximum electrical and tensile performance of the crimp. Do NOT re-adjust the ratchet.



NOTE: Not to Scale

WIRE			LOOSE PIECE TERMINAL NUMBER
SIZE (AWG)	INSUL DIA (Max.)	STRIP LENGTH	
12 to 10	6.35 [.250]	7.14 [.281]	61198-2

Figure 2

3. CRIMPING PROCEDURE

Refer to 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.
2. Make sure that the ratchet is released. Squeeze the tool handles together and allow them to open fully.
3. Insert terminal (mating portion first) straight into *front* of crimp section. Push terminal mating portion into locator slot until wire barrel butts against locator.
4. Holding terminal in place, squeeze tool handles together until crimping dies close just enough to retain terminal. Do not deform insulation barrel or wire barrel.
5. Insert a properly stripped wire into terminal wire barrel until wire butts against locator.
6. While holding the wire in place, squeeze the tool handles together until the ratchet releases.
7. Allow the tool handles to open fully. Remove the crimped terminal from the tool.

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:

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 AND INSPECTION PROCEDURE

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.

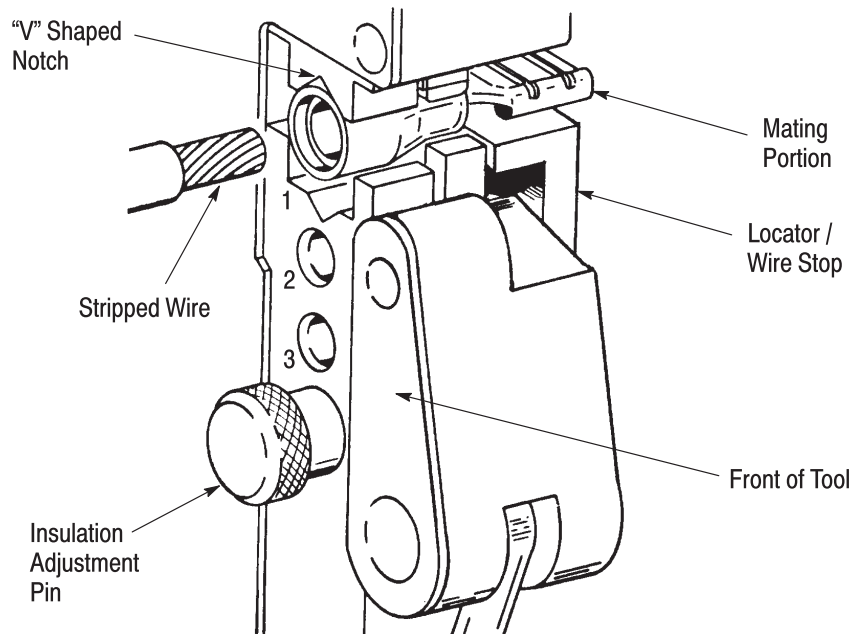


Figure 3

5.2. Periodic Inspection

Regular inspection 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

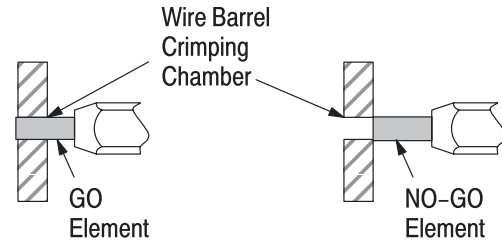
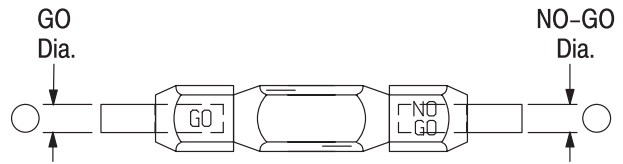
1. Remove all lubrication and accumulated film by immersing the tool (handles partially closed) into a suitable degreaser that will not affect paint or plastic material.
2. Make certain all retaining pins are in place and are secured with the proper retaining rings. If replacements are necessary, refer to Figure 5.
3. Close the tool handles until the ratchet releases, and then allow the handles to open freely. If they do not open quickly and fully, then the spring is defective and must be replaced (see Section 6, REPLACEMENT AND REPAIR).
4. Inspect the tool, with special emphasis on checking for worn, cracked, or broken crimping dies. If damage to any part of the head is evident, return the tool for evaluation and repair (see Section 6, REPLACEMENT AND REPAIR).

B. Gaging the Crimping Chamber

This inspection requires the use of plug gages conforming to the dimensions provided in Figure 4. Tyco Electronics does not manufacture or market these gages. To gage the crimping chamber, proceed as follows:

1. Remove traces of oil or dirt from the crimping chamber and plug gages.
2. Close the tool handles until it is evident that the jaws have bottomed; then hold in this position. Do NOT force the jaws beyond initial contact.
3. Align the GO element with the appropriate section of the crimping chamber. Push element straight into the crimping chamber without using force. The GO element must pass completely through the crimping chamber as shown in Figure 4.

Suggested Plug Gage Design



TERMINAL NUMBER (LP)	WIRE SIZE (Max)	ELEMENT DIAMETER	
		GO	NO-GO
61198-2	10	3.80 [.1495]	3.95 [.1555]

Figure 4

4. Align the NO-GO element and try to insert it straight into the same section of the crimping chamber. The NO-GO element may start entry, but must not pass completely through the crimping chamber. See Figure 4.

If the crimping chamber conforms to the gage inspection, the crimping chamber is considered dimensionally correct, and should be lubricated with a THIN coat of any good SAE 20 motor oil. If not, the tool must be returned to Tyco Electronics for further evaluation and repair. Refer to Section 6, REPLACEMENT AND REPAIR.

For additional information regarding the use of plug gages, refer to instruction sheet 408-7424.

C. CERTI-CRIMP Hand Crimping Tool Ratchet Control Inspection

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

1. Select a terminal and wire (maximum size) for the tool. See Figure 4.
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 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 [.001] or less, the ratchet is satisfactory. If the clearance exceeds 0.025 [.001], the ratchet is out of adjustment and must be repaired.

If the tool conforms to these inspection procedures, lubricate it with a thin coat of any good SAE 20 motor oil and return it to service.

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

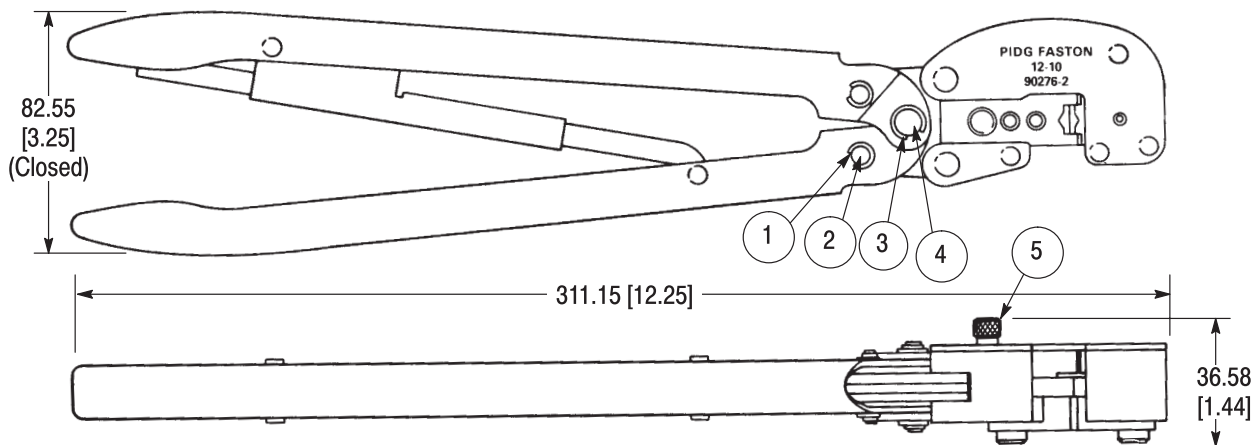
Tools may be returned for evaluation and repair. For tool repair service, contact a representative at 1-800-526-5136.



DO NOT re-use damaged or worn terminals. Instead, replace them with new terminals and discard the old ones.

7. REVISION SUMMARY

Since the previous release of this sheet, the logo was changed.



WEIGHT: 934 g [2 lb. 1 oz.]

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

Figure 5