

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.



All numerical values in this instruction sheet are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Figures are not drawn to scale.

1. INTRODUCTION

CERTI-CRIMP Straight Action Hand Tool 90720-1 crimps NG Multimate contacts onto wire sizes 18 through 14 AWG. Read these instructions carefully before using the hand tool.

Reasons for reissue of this instruction sheet are provided in Section 6, REVISION SUMMARY.

2. DESCRIPTION (Figure 1)

This tool features a stationary die (crimper), a movable die (anvil), a locator/insulation stop, and a ratchet.

The locator/insulation stop positions the contact between the dies and aids in locating the wire in the contact. In use, it rests in the contact locator slot.

The ratchet ensures full crimping of the contact. Once engaged, the ratchet will not release until the handles have been FULLY closed.



The dies bottom before the ratchet releases. This feature ensures maximum electrical and tensile performance of the crimp. DO NOT re-adjust the ratchet.

3. CRIMPING PROCEDURE

Select an applicable contact and a wire of appropriate size and insulation diameter. Strip the wire to the length indicated in Figure 2. DO NOT cut or nick the wire strands.

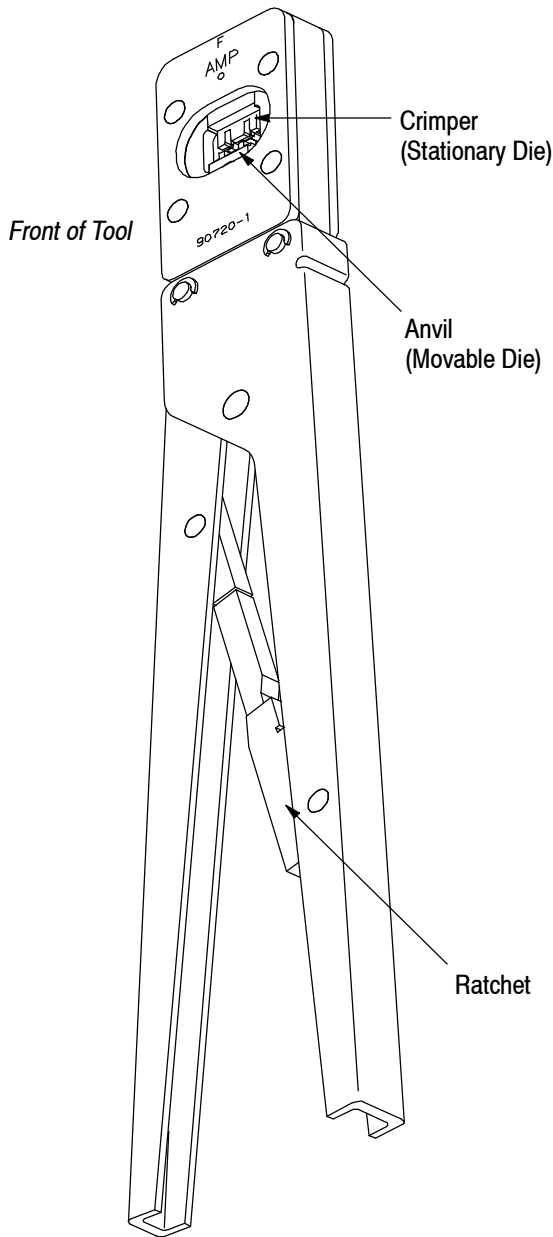


Figure 1

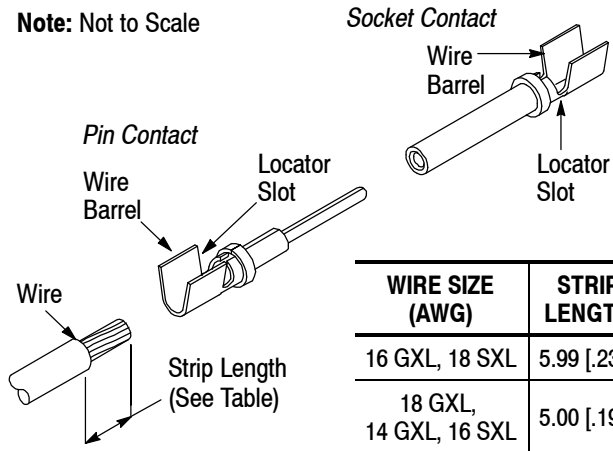


Figure 2

1. Hold the tool so the BACK is facing you.
2. Make certain that the ratchet is released by squeezing the tool handles and allowing them to open FULLY.
3. Looking straight into the dies from the BACK of the tool, and insert a contact into the FRONT of the appropriate crimping chamber. See Figure 3.
4. Position the wire barrel on the crimper so that the locator/insulation stop enters the contact locator slot.
5. Hold the contact in position and squeeze the tool handles until the anvil starts entry into the crimper. DO NOT deform the wire barrel.
6. Insert a properly stripped wire through the locator wire slot and into the wire barrel of the contact until the insulation butts against the locator/insulation stop.
7. Hold the wire in place and squeeze the tool handles until the ratchet releases.
8. Allow the tool handles to open FULLY and remove the crimped contact.

4. MAINTENANCE AND INSPECTION

It is recommended that a maintenance and inspection program be performed periodically to ensure

dependable and uniform terminations. Frequency of inspection depends on:

1. The care, amount of use, and handling of the hand tool.
2. The presence of abnormal amounts of dust and dirt.
3. The degree of operator skill.
4. Your own established standards.

4.1. Daily Maintenance

1. Remove dust, moisture, and other contaminants with a clean brush, or a soft, lint-free cloth. DO NOT use objects that could damage the tool.
2. Make certain that the retaining pins are in place and that they are secured with retaining rings.
3. When the tool is not in use, keep handles closed to prevent objects from becoming lodged in the dies. Store the tool in a clean, dry area.

4.2. Lubrication

Lubricate all pins, pivot points, and bearing surfaces with SAE 20 motor oil as follows:

- Tools used in daily production—lubricate daily
- Tools used daily (occasional)—lubricate weekly
- Tools used weekly—lubricate monthly

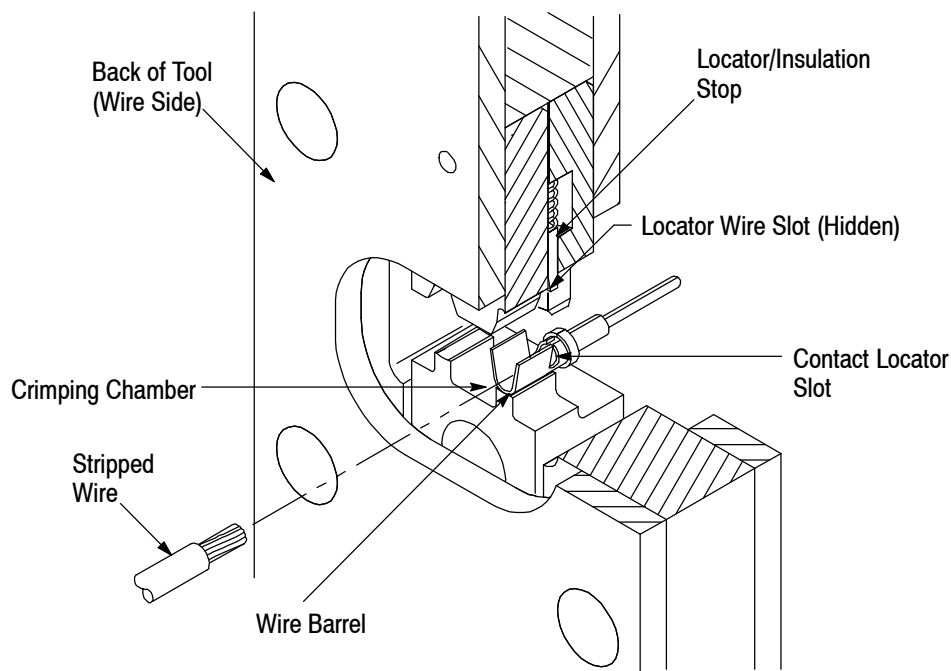


Figure 3

SAE is a trademark of SAE International Corporation.

Wipe excess oil from tool, particularly from the crimping area. Oil transferred from the crimping chambers onto certain terminations may affect the electrical characteristics of an application.

4.3. Periodic Inspection

1. Hand tool should be immersed (handles partially closed) in a reliable commercial degreasing compound to remove accumulated dirt, grease, and foreign matter.
2. Close tool handles until the ratchet releases and then allow them to open fully. If the handles do not open quickly and fully, the spring is defective and must be replaced. Refer to Section 5, REPLACEMENT AND REPAIR.
3. Inspect tool head for worn, cracked, or broken dies. If damage is evident, return the tool for evaluation and repair. See Section 5, REPLACEMENT AND REPAIR.

4.4. Crimp Height Inspection

This inspection requires the use of a micrometer with a modified anvil as shown in Figure 4. Crimp Height Comparator RS-1019-5LP is recommended.

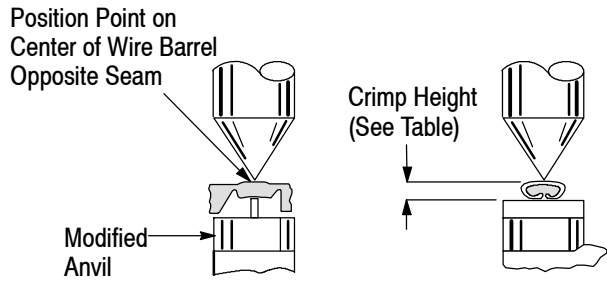
1. Refer to Figure 4 and select a maximum size wire for each crimping chamber.
2. Refer to Section 3, CRIMPING PROCEDURE, and crimp the contact accordingly.
3. Measure the wire barrel crimp height as shown in Figure 4. If the crimp height conforms, the tool is considered dimensionally correct. If not, return the tool for evaluation and repair (see Section 5, REPLACEMENT AND REPAIR).

For additional information concerning the use of the micrometer, refer to instruction sheet 408-7424.

4.5. Ratchet Inspection

The ratchet of the hand tool should be checked to ensure it does not release prematurely, allowing the dies to open before they have fully bottomed. Obtain a 0.025 [.001] shim that is suitable for checking the clearance between the bottoming surfaces of the dies. Proceed as follows:

1. Select the maximum size wire for the tool and strip it to the dimension given in Figure 2.
2. Select the appropriate crimping chamber.
3. Position the contact and wire between the dies as described in Section 3, CRIMPING PROCEDURE.
4. Hold the wire in place and squeeze the tool handles together until the ratchet releases. Hold the tool handles in this position, maintaining just



CONTACT	WIRE		CRIMPING CHAMBER MARKING	CRIMP HEIGHT ±0.05 [±.002]
	SIZE (AWG)	INSULATION DIAMETER		
Socket 638090-1 or Pin 638112-1	18	2.26-3.18 [.089-.125]	18	1.37 [.054]
	16-14		16-14	1.55 [.061]

Figure 4

enough tension on the handles to keep the dies closed.

5. Check the clearance between the bottoming surfaces of the dies. If the clearance is 0.025 [.001] or less, the ratchet is satisfactory. If clearance exceeds 0.025 [.001], the ratchet is out of adjustment and must be repaired. See Section 5, REPLACEMENT AND REPAIR.

5. REPLACEMENT AND REPAIR



DO NOT remove the retaining pins; otherwise, permanent damage will result to the tool.

Customer-replaceable parts are listed in Figure 5. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. Parts other than those listed should be replaced by Tyco Electronics to ensure quality and reliability. Order replacement parts through your representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605, or write to:

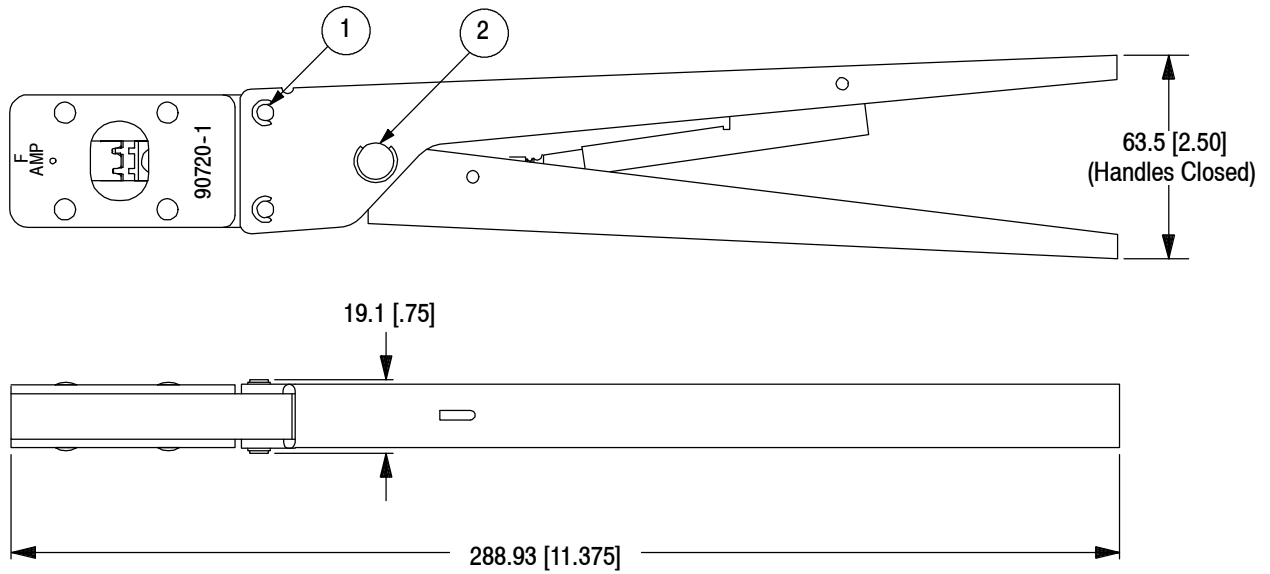
CUSTOMER SERVICE (038-035)
 TYCO ELECTRONICS CORPORATION
 PO BOX 3608
 HARRISBURG PA 17105-3608

For customer repair service, call 1-800-526-5136.

6. REVISION SUMMARY

Revisions to this instruction sheet include:

- Updated instruction sheet to corporate requirements



Weight: Approximately 567 g [1 lb 4 oz]

REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
1	21045-3	RING, Retaining	4
2	21045-9	RING, Retaining	2

Figure 5