

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.

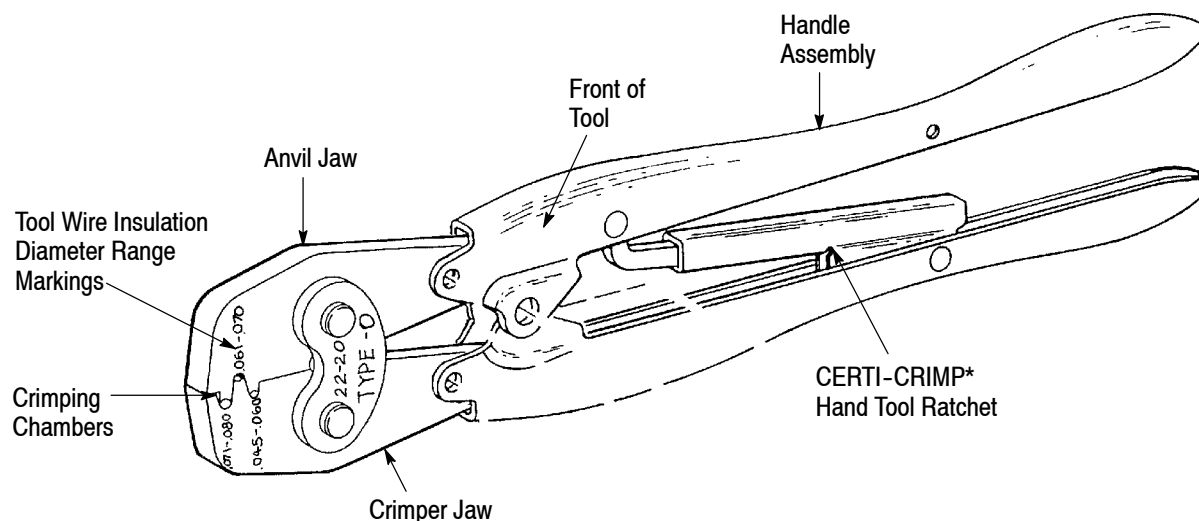


Figure 1

1. INTRODUCTION

Dual-Action Hand Crimping Tool 47150 (shown in Figure 1) crimps Series 53 Insulation Piercing Taper Pins 42004, 42004-1, 41506, 41676, and other taper pins onto *unstripped* wire sizes and insulation diameter ranges listed in Figure 2. Read these instructions completely before using the tool.

NOTE



Dimensions in this instruction sheet are in millimeters [with inches in brackets]. Figures are not drawn to scale.

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

2. DESCRIPTION (Figure 1)

The tool features three crimping chambers, each marked on the front side of the tool head with the wire insulation diameter range accepted. The jaws making up the head include an anvil on which the taper pin rests for crimping, and a crimper. The ratchet ensures a completed crimp by not releasing until the handles have been fully closed.

CAUTION

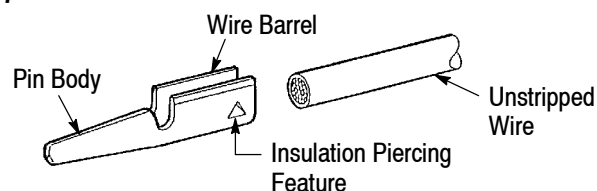


DO NOT adjust the ratchet. The ratchet is pre-set to release after the jaws have bottomed, ensuring maximum electrical and tensile performance of the crimped taper pin.

3. CRIMPING PROCEDURE

Select wire of the specified size or type and insulation diameter range shown in Figure 2.

Typical Insulation Piercing Taper Pin



Wire Size (AWG) or Type	Wire Insul Dia Range	Tool Crimping Chamber Marking
24-22	1.52 [.060] or Smaller	.045-.060
20	1.55-1.78 [.061-.070]	.061-.070
2049 Tinsel	1.30-1.93 [.051-.076]	
1895 Tinsel	1.78-2.03 [.070-.080]	.071-.080

Figure 2

Proceed as follows:

1. Hold tool with back (wire side) facing you. Squeeze handles together, fully releasing ratchet to open crimping jaws.

2. Center wire barrel of taper pin in the appropriate crimping chamber on the anvil jaw of the tool. See Figure 3.

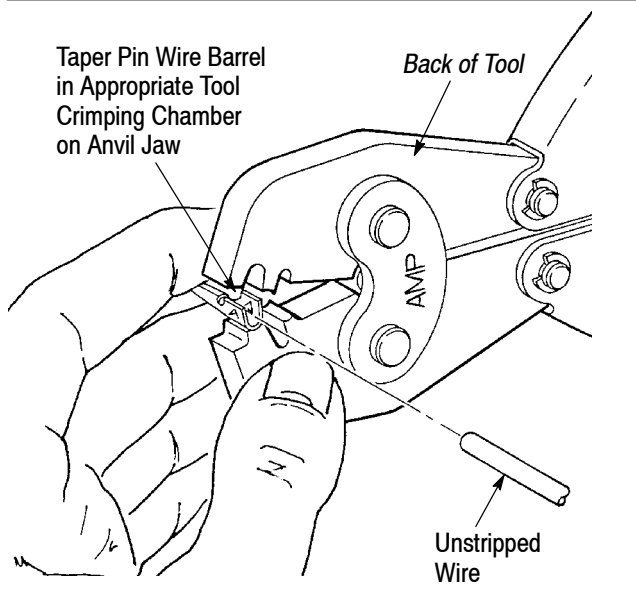


Figure 3

3. Hold taper pin in position, and close jaws just enough to hold the taper pin in place without deforming the wire barrel.
4. Insert wire into wire barrel so that its end is between the wire barrel and the pin body. Squeeze tool handles together until ratchet releases, and remove crimped taper pin.
5. Visually inspect the crimp according to the following:
 - Taper pin body is not damaged in any way
 - Wire barrel seam is completely closed with no evidence of loose wire stands
 - Wire insulation and conductor is visible between taper pin insulation barrel and wire barrel
 - Wire insulation is not cut or broken
 - End of wire is laying flat and extending through front end of wire barrel

4. MAINTENANCE AND INSPECTION

The procedures that follow have been established to ensure the quality and reliability of the tool.

4.1. Daily Maintenance and Cleaning

1. Clean foreign particles from tool using a soft, clean, lint-free cloth or brush. Make sure all pins and retaining rings are secured in their proper places.

2. Coat all pins, pivot points, and bearing surfaces with a THIN coat of any good SAE 20 motor oil. Do NOT oil excessively.

3. When not in use, store tool with handles closed in a clean, dry area.

4.2. Periodic Inspections

Tool should be inspected upon arrival and at regularly scheduled intervals, and results recorded, by quality control personnel. AMP recommends the following inspection procedures be performed once a month; work environment, company standards, or amount of tool use may dictate more frequent inspections.

A. Visually Inspect Tool

1. Remove all lubrication and accumulated film by immersing the tool in a commercial degreaser that will not damage paint or plastic.
2. Check for missing or defective pins or retaining rings. Replace as necessary (see Section 5, REPLACEMENT AND REPAIR).
3. Close handles until ratchet releases. With handles fully open, carefully inspect the ratchet assembly and crimping surfaces of jaws.



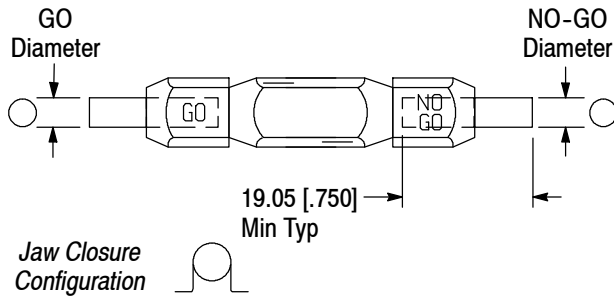
Worn, cracked, pitted, or chipped crimping surfaces, or other obvious wear or damage to the tool jaws or ratchet requires removal of the tool from service. For customer repair service, refer to Section 5, REPLACEMENT AND REPAIR.

B. Gaging the Crimping Chambers

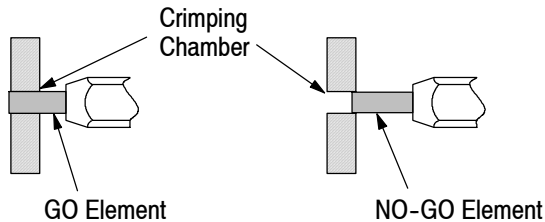
This inspection requires the use of a plug gage conforming to the dimensions provided in Figure 4. Tyco Electronics does not manufacture or market these gages. For further information on plug gages, refer to 408-7424.

To gage the crimping chamber, proceed as follows:

1. Remove traces of oil or dirt from the crimping chambers and plug gage.
2. Close tool handles until jaws are bottomed, and hold in this position. Do not force beyond initial contact.
3. Carefully insert 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 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.

Suggested Plug Gage Design

Tool Crimping Chamber Marking	Gage Element Diameter	
	GO	NO-GO
.045-.060	1.96 [.077]	2.11 [.083]
.061-.070	2.16 [.085]	2.31 [.091]
.071-.080	2.59 [.102]	2.74 [.108]

Inspection of Crimping Chamber

GO element must pass completely through the crimping chamber.

NO-GO element may enter partially, but must not pass completely through the crimping chamber.

Figure 4

If crimping chambers conform to 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 5, REPLACEMENT AND REPAIR for customer repair service.

C. Ratchet Inspection

The ratchet on CERTI-CRIMP hand tools should be checked to ensure that the ratchet does not release prematurely, allowing the crimping jaws 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 crimping jaws.

Proceed as follows:

1. Select a test wire and taper pin.
2. Insert shim between bottoming surfaces of jaws (not in crimping area), and hold the shim in position. Crimp the taper pin to the wire according to the instructions in Section 3; but instead of allowing tool handles to open, hold the handles closed, maintaining just enough pressure to keep the jaws bottomed.
3. Check clearance between jaw bottoming surfaces by attempting to remove the shim. If shim slides from between jaws, ratchet is out of adjustment, and must be repaired (see Section 5, REPLACEMENT AND REPAIR). If shim cannot be removed from jaws, ratchet is satisfactory. Lightly lubricate jaw surfaces using any good SAE 20 motor oil, and return the tool to service.

5. REPLACEMENT AND REPAIR

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 Tyco Electronics representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605, or write to:

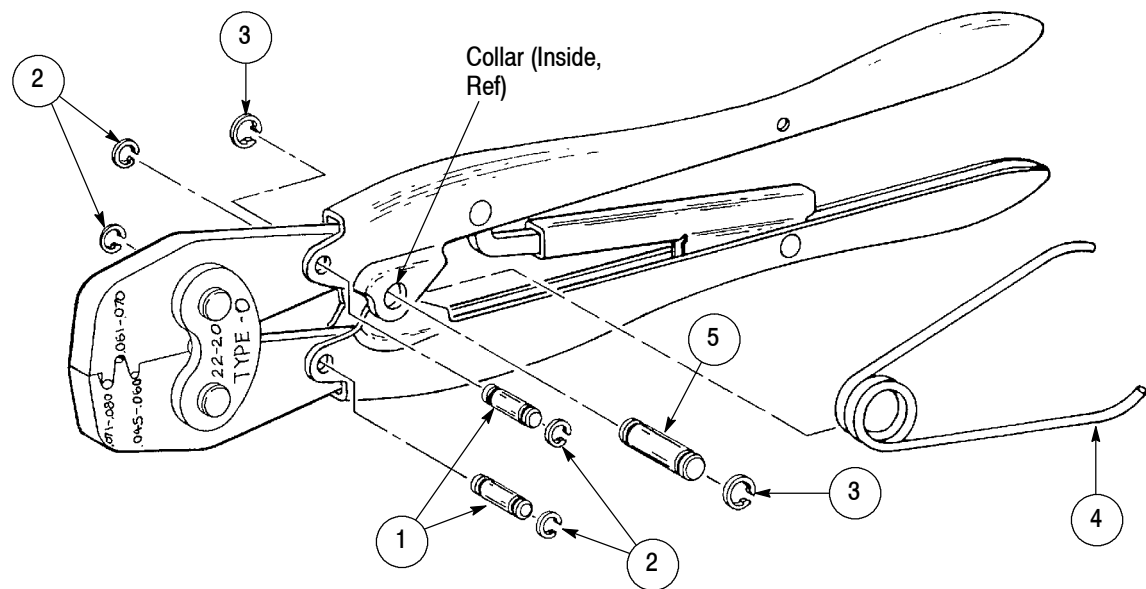
CUSTOMER SERVICE (038-035)
 TYCO ELECTRONICS
 PO BOX 3608
 HARRISBURG PA 17105-3608

For customer repair service, please contact 1-800-526-5136.

6. REVISION SUMMARY

Revisions to this instruction sheet include:

- Applied the TE logo;
- Updated the document requirements to the current corporate requirements.



Replacement Parts			
Item Number	Part Number	Description	Qty Per Tool
1	1-23619-6	PIN, Straight Grooved	2
2	21045-3	RING, Retaining	4
3	21045-6	RING, Retaining	2
4	39364	SPRING, Hold Down	1
5	2-23620-9	PIN, Straight Grooved	1

Figure 5

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[47150](#)