AMP

Hand Crimping Tools 47093 and 47689

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.

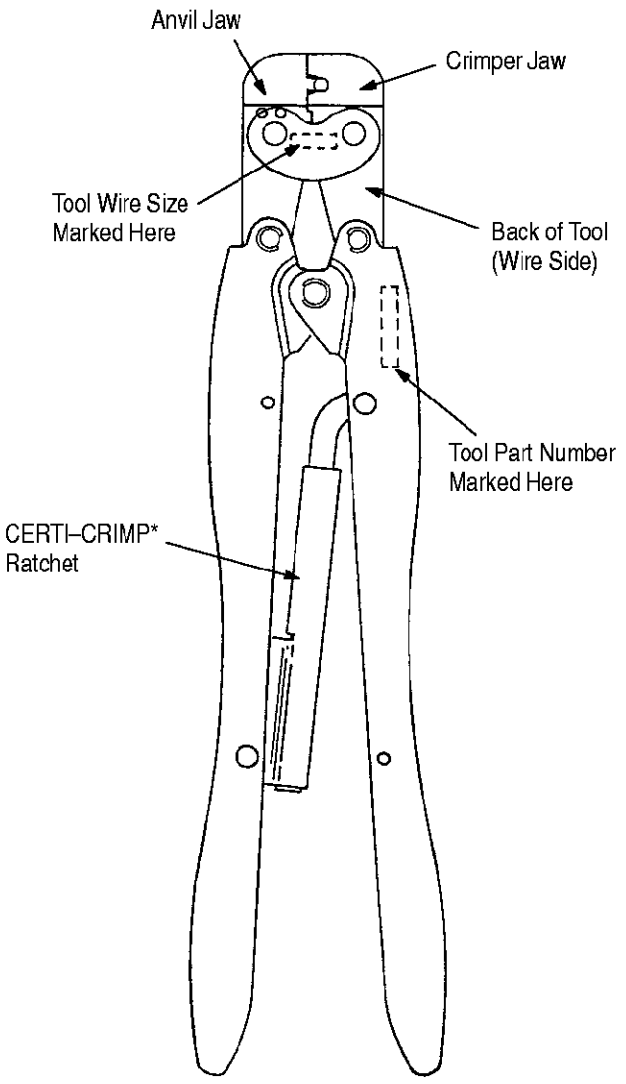


Figure 1

1. INTRODUCTION

AMP* Hand Crimping Tools 47093 and 47689 are designed for crimping the Taper Pin terminals listed in Figure 2. Read these instructions thoroughly before using the tools.

NOTE

All dimensions on 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.

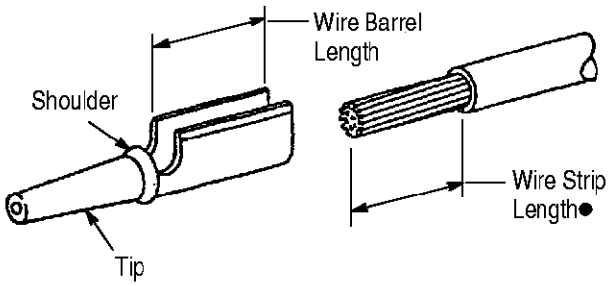
Reasons for reissue of this instruction sheet are provided in Section 6, REVISION SUMMARY.

2. DESCRIPTION

Each tool features a crimper jaw, an anvil jaw, a terminal locator, and a CERTI–CRIMP ratchet.

The terminal locator aids in positioning the terminal on the anvil jaw.

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



● Length of Terminal Wire Barrel Plus 0.79 [.031]

WIRE SIZE (AWG)	TERMINAL PART NO.		HAND TOOL PART NO.
	LOOSE PIECE	STRIP	
20 to 16	41670	41653	47093
	41671	41654	
	41672	41655	
	42377	42682	
14 to 12	42279	42107	47689

Figure 2

3. CRIMPING PROCEDURE

Refer to the chart in Figure 2 and check the selected wire, terminal, and crimping tool for compatibility. Strip the wire to the length indicated – do NOT cut or nick the wire strands.

Refer to Figure 3 and proceed as follows:

1. Hold the tool so that the back (wire side) of the tool is facing you.

2. Make sure that the ratchet is released. Squeeze the tool handles together and allow them to open fully.

3. Insert taper pin tip through hole in locator until terminal shoulder bottoms and wire barrel is positioned on anvil jaw.

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4. Hold terminal in place and squeeze tool handles together until crimper jaw closes just enough to retain terminal. Do NOT deform wire barrel.

5. Insert a properly stripped wire into terminal wire barrel. Wire should extend approximately 0.40 [.016] beyond end of wire barrel.

6. Holding wire in place, squeeze tool handles together until ratchet releases.

7. Allow tool handles to open FULLY and remove crimped terminal from crimping jaws.

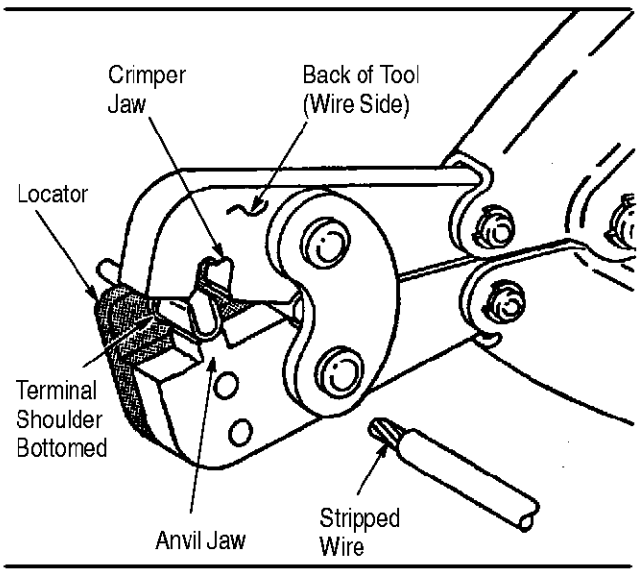


Figure 3

4. MAINTENANCE/INSPECTION

4.1. 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.

4.2. 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. 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 5, REPLACEMENT AND REPAIR).

4. Inspect the head assembly, 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 5, REPLACEMENT AND REPAIR).

B. Crimp Height Inspection

This inspection requires the use of micrometer, with a modified anvil, as shown in Figure 4. The Crimp Height Comparator RS–1019–5LP is recommended and is available from:

Shearer Industrial Supply Co. 20 North Penn Street York, PA 17401–1014	or	VALCO 1410 Stonewood Drive Bethlehem, PA 18017–3527

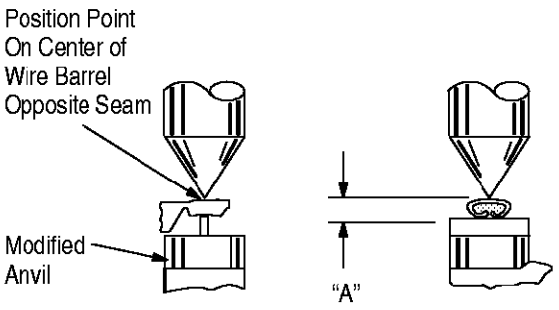
Proceed as follows:

1. Check the part number of the hand crimping tool to be used. Then, refer to the chart in Figure 4 and select a terminal and a wire (maximum size) for the tool.

2. Refer to Section 3, CRIMPING PROCEDURE, and crimp the terminal(s) accordingly.

3. Using a crimp height comparator, measure the wire barrel crimp height as shown in Figure 4. If the crimp height conforms to that shown in the chart, the tool is considered dimensionally correct. If not, return the tool for evaluation and repair (refer to Section 5, REPLACEMENT AND REPAIR).

For additional information concerning the use of the crimp height comparator, refer to Instruction Sheet 408–7424.



HAND TOOL PART NO.	TERMINAL NO. (LP)	WIRE SIZE AWG (Max)	CRIMP HEIGHT DIMENSION "A"
47093	41670	16	1.58 ± 0.10 [.062 ± .004]
	41671		
	41672		
	42377		
47689	42279	12	2.79 ± 0.13 [.110 ± .005]

Figure 4

C. CERTI–CRIMP Ratchet Inspection

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 terminal and *maximum* size wire for the hand tool.

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

3. Holding terminal in place, squeeze the tool handles together until the CERTI–CRIMP ratchet releases. Hold the handles in this position, maintaining just enough tension to keep the jaws closed.

4. Check the clearance between the bottoming surfaces of the crimping jaws. 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.

5. 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 representative, or call 1–800–526–5142, or send a facsimile of your purchase order to 1–717–986–7605, or write to:

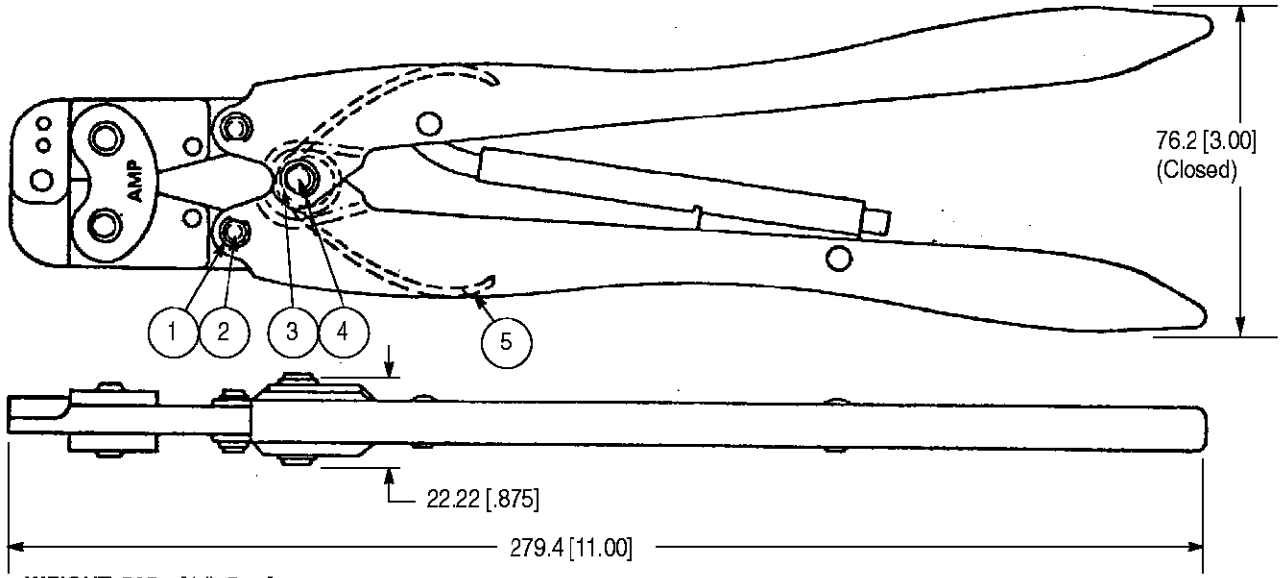
CUSTOMER SERVICE (38–35)
TYCO ELECTRONICS CORPORATION
P.O. BOX 3608
HARRISBURG, PA 17105–3608

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

6. REVISION SUMMARY

Per EC 0990–0761–99:

- Changed tool repair service information in Section 5, REPLACEMENT AND REPAIR
- Updated document format



WEIGHT: 595 g [1 lb 5 oz]

REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
1	21045–3	Ring, Retaining	4
2	300432	Pin, Retaining, .187 Dia X .521 L	2
3	21045–6	Ring, Retaining	2
4	300449	Pin, Retaining, .250 Dia X .838 L	1
5	39364	Spring, Handle	1

Figure 5