AMP

Hand Crimping Tool 90088

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.

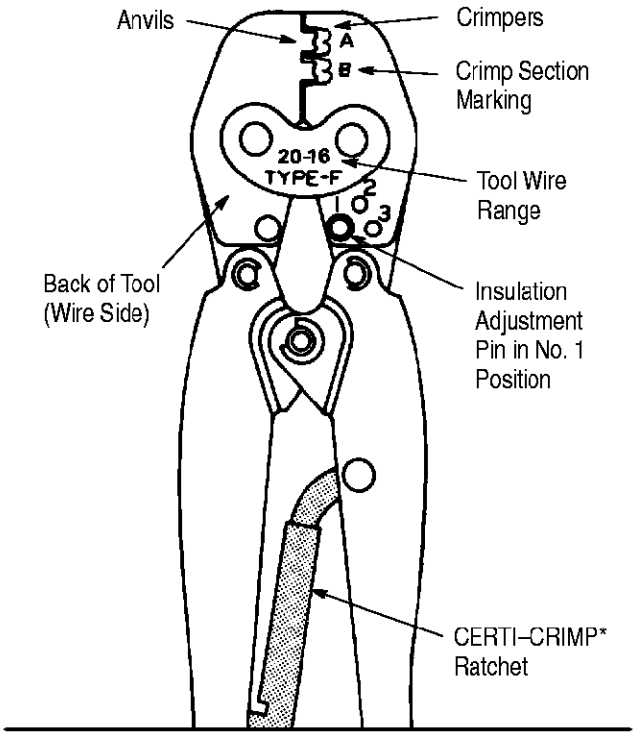


Figure 1

1. INTRODUCTION

AMP* Hand Crimping Tool 90088 is designed for crimping the FASTON* loose piece terminals listed in Figure 2. Read these instructions thoroughly before crimping any terminals.

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 7, REVISION SUMMARY.

2. DESCRIPTION

The Front of Tool has the "AMP" marking on the link. The Back of Tool (Wire Side), into which the wire is inserted, has the tool wire range marked on the link.

The tool features two crimper jaws, two anvil jaws, a terminal locator/insulation stop, an insulation adjustment pin, and a CERTI–CRIMP ratchet.

The locator/insulation stop has two functions. First, it positions the terminal between the crimping jaws, and second, it aids in locating the wire in the terminal. In use, it rests in the terminal locator slot (see Figures 2 and 3).

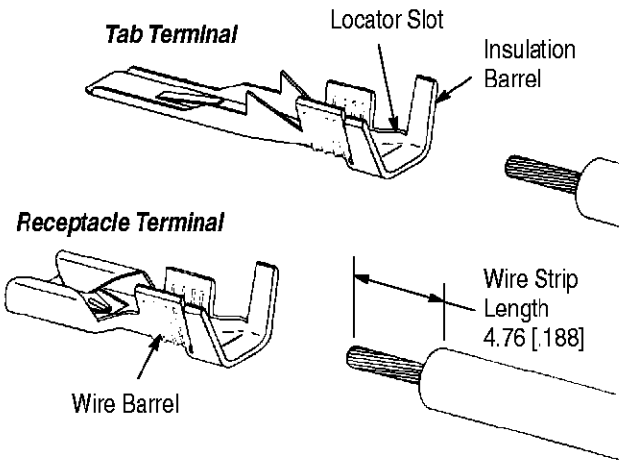
The insulation adjustment pin is used to regulate the crimp height of the terminal insulation barrel. Refer to Section 4, INSULATION CRIMP ADJUSTMENT.

The CERTI–CRIMP ratchet 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 wire(s) within 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 and identify the appropriate crimp section (according to the crimp section markings on the back of the tool).



WIRE		TERMINAL			CRIMP SECT MKG
SIZE (AWG)	INSUL DIA	TYPE	LOOSE PIECE	STRIP	
20, 18, or (2) 20	2.29 to 3.30 [.090 to .130] Single Wire or 2.79 [.110] Max. Two Wires	Tab	60519	60434	B
		Rcpt	60520	60435	A
16	2.29 to 3.30 [.090 to .130]	Tab	60519	60434	B
16	2.29 to 3.30 [.090 to .130]	Rcpt	60520	60435	B

Figure 2

Refer to Figure 3 and proceed as follows:

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

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

3. Looking straight into back of appropriate crimp section, insert terminal (insulation barrel first) into front of crimp section. Position terminal in crimpers so locator enters locator slot in terminal.

4. Hold terminal in this position and squeeze tool handles together until jaws close just enough to retain terminal. Do NOT deform wire barrel or insulation barrel.

5. Insert a properly stripped wire (or wires) through wire slot in locator and into wire barrel of terminal until insulation butts against locator/insulation stop.

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

7. Allow tool handles to open fully and remove crimped terminal from tool.

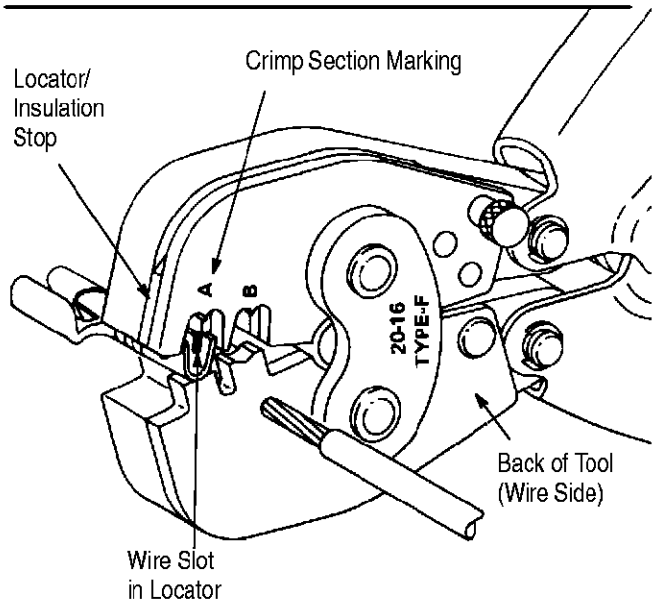


Figure 3

4. INSULATION CRIMP ADJUSTMENT

The insulation barrel crimp height is regulated by the insulation–adjustment pin. To determine the proper setting, test–crimp a terminal using the setting that approximates the insulation size (1 for small, 2 for medium, and 3 for large). If the crimped insulation barrel is too tight or too loose, change the setting accordingly. The crimp should hold the insulation firmly without cutting int the insulation material.

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. 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

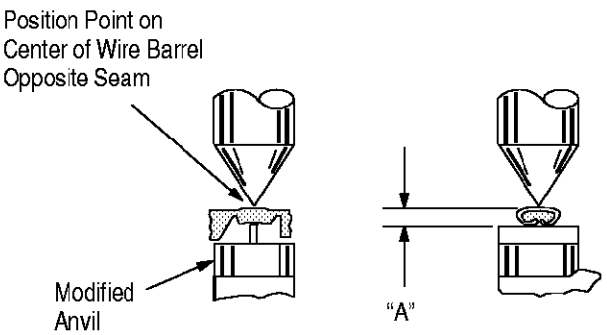
Proceed as follows:

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.



WIRE SIZE (Max.)	TERMINAL NUMBER (LP)	CRIMP SECTION MARKING	CRIMP HEIGHT DIMENSION "A"
16	60519 60520	B	1.435 ± 0.064 [.0565 ± .0025]
(2) 20	60520	A	1.25 ± 0.05 [.049 ± .002]

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.

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

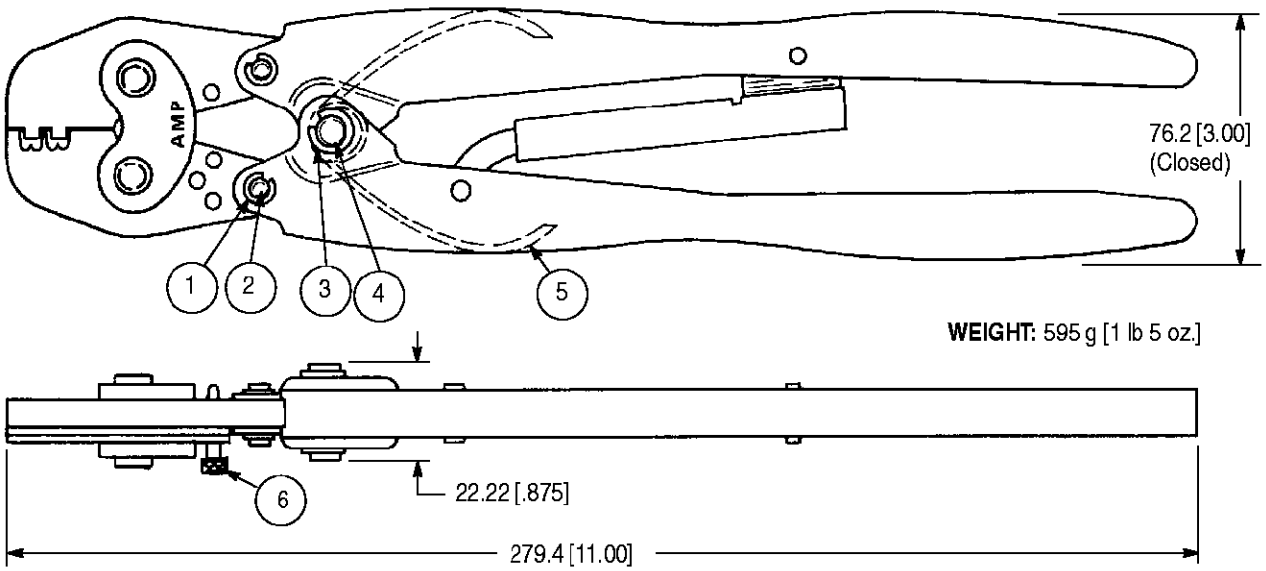
CUSTOMER SERVICE (38–35)
TYCO ELECTRONICS CORPORATION
P.O. BOX 3608
HARRISBURG, PA 17105–3608

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

7. REVISION SUMMARY

Per EC 0990–0761–99:

- Changed tool repair service information in Section 6, REPLACEMENT AND REPAIR
- Updated document format



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
6	39207	Pin, Adjustment	1

Figure 5