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### 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.

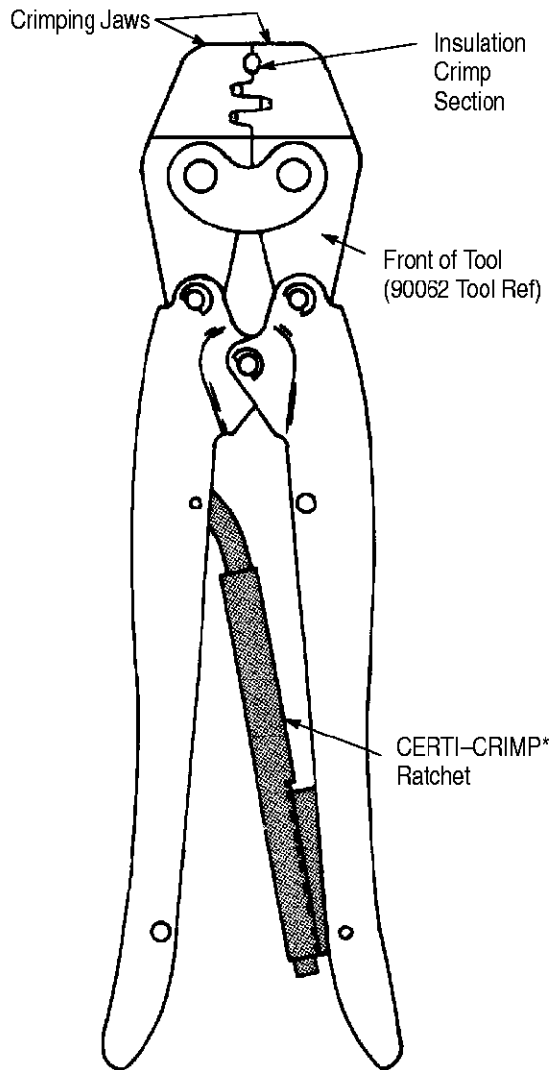


Figure 1

### 1. INTRODUCTION

AMP\* Hand Crimping Tools 46564 and 90062 are designed for crimping the Ring Tongue, Spade Tongue, Taper Pin, and Taper Tab Receptacle 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 (Figures 1 and 3)

The back side of the tool (wire side), into which the wire is inserted, has the wire size marked near the crimp section and also has the wire range marked on the link.

These tools feature two crimping jaws and four crimping sections, which include an insulation crimping area. The 90062 hand tool also features a CERTI-CRIMP ratchet.

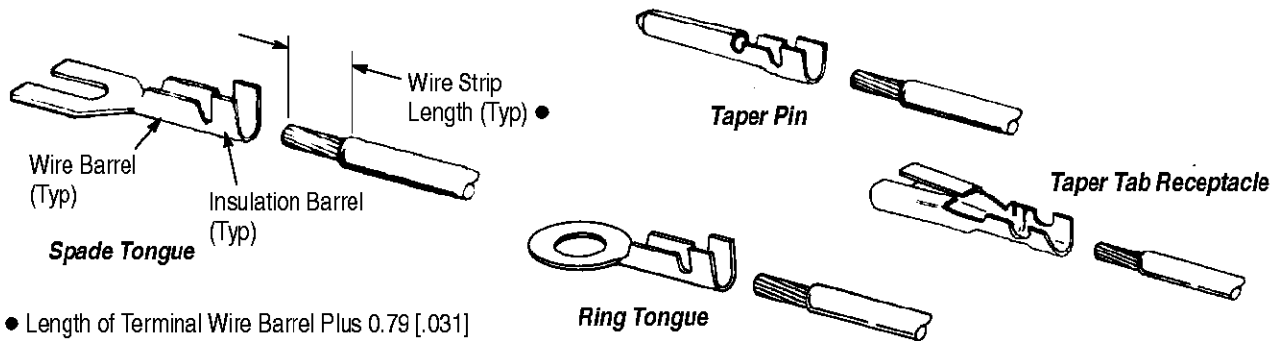
The CERTI-CRIMP ratchet ensures full crimping of the terminal. Once engaged, the ratchet will not release until the handles have been fully closed.

### 3. CRIMPING PROCEDURE (Figure 3)

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

Select an applicable loose piece terminal and proceed as follows:

1. Hold the tool so that the back (wire side) of the tool is facing you.
2. Make sure the ratchet on the 90062 hand tool is released. Squeeze the tool handles together and allow them to open fully.
3. Looking straight into back of crimp section, insert terminal (insulation barrel first) into front of crimp section. Center wire barrel of terminal in proper crimp section.
4. Hold terminal in this position and squeeze tool handles together until terminal is engaged in jaws. Do NOT deform insulation barrel or wire barrel.
5. Insert stripped wire into wire barrel. The insulation should not enter the wire barrel.
6. Hold wire in place and close tool handles.
  - a. For hand tool 46564, squeeze tool handles together until jaws bottom on each other.
  - b. For hand tool 90062, squeeze tool handles together until ratchet releases.
7. Allow tool handles to open fully and remove crimped terminal. Center insulation barrel of terminal in insulation crimp section (INS) on tool.



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

WIRE		TERMINAL PART NUMBER		CRIMP SECTION MARKING
SIZE (AWG)	INSULATION DIAMETER	LOOSE PIECE	STRIP	
24	2.03 – 2.79 [.080 – .110]	42396	42257	.090
24 to 20	2.03 – 3.05 [.080 – .120]	60731	42554	.080
22 to 18	2.03 – 2.79 [.080 – .110]	42691-1	40897	.090
22 to 18		42691-2	41077	
20 to 18		42676-1	42036	
20 to 18		42676-2	42037	
18 to 14	—	42679-1	34812	.110
18 to 14	—	42679-2	40594	.110

Figure 2

8. Hold terminal in place and close handles.

a. For hand tool 46564, squeeze tool handles together until insulation barrel wraps around wire insulation and grips it firmly without cutting into insulation.

b. For hand tool 90062, squeeze tool handles together until ratchet releases.

9. Allow tool handles to open FULLY and remove crimped terminal.

**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.

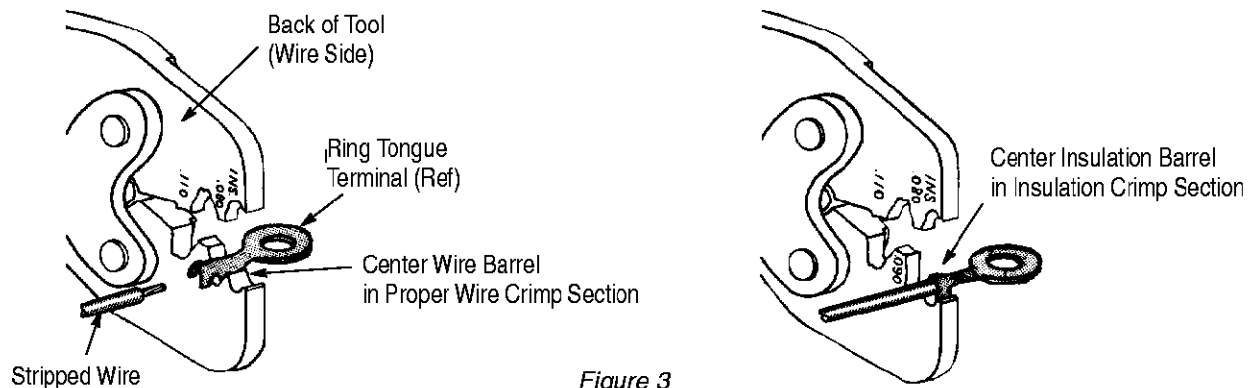


Figure 3

**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**

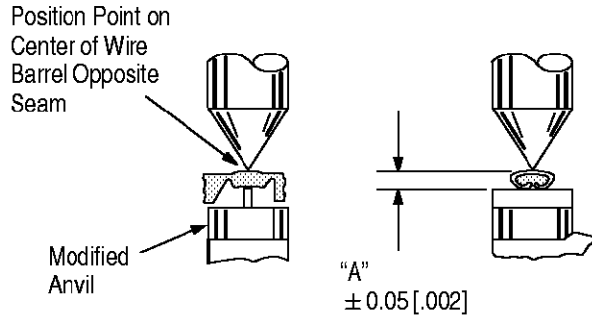
This inspection requires the use of a micrometer, with a modified anvil, as shown in Figure 4. The Crimp Height Comparator RS-1019-5LP is recommended and is available from:

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

Proceed as follows:

1. Refer to the chart in Figure 4 and select a terminal and a wire (maximum size) for each crimp section of 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.



TERMINAL NO. (LP)	WIRE SIZE AWG (Max)	CRIMP SECT MARKING	CRIMP HEIGHT DIM. "A"
42396	24	.090	1.37 [054]
42676-1	18		
42676-2			
42691-1			
42691-2			
42679-1	14	.110	1.52 [060]
42679-2	14	.110	1.52 [060]
60731	20	.080	1.02 [040]

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:

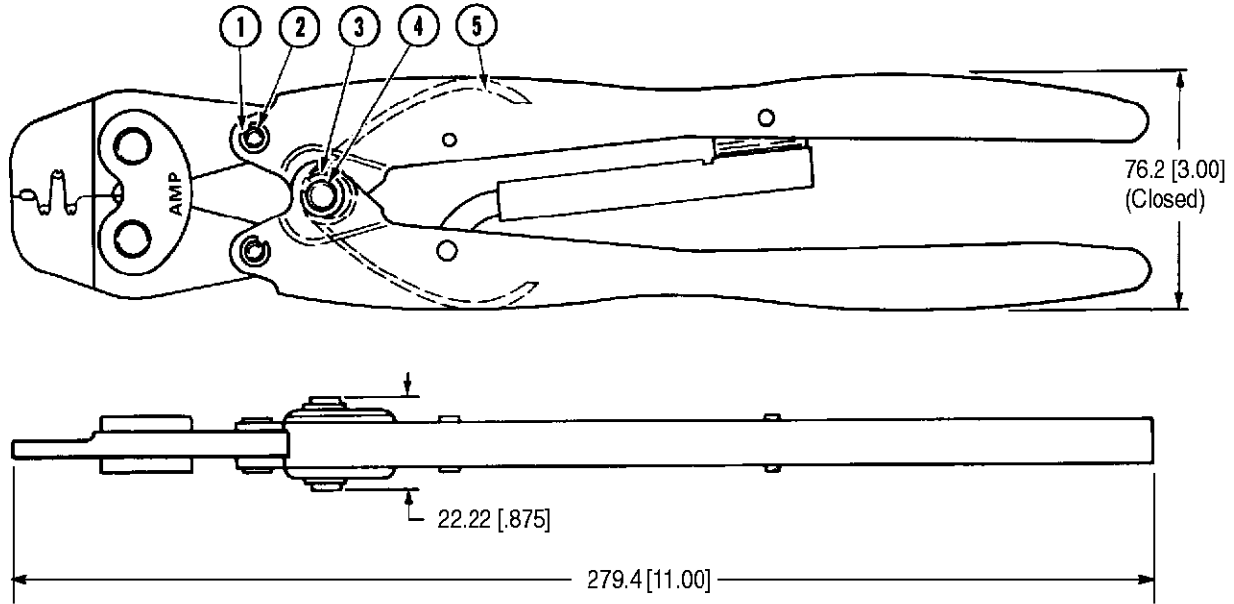
CUSTOMER SERVICE (38-35)  
 TYCO ELECTRONICS CORPORATION  
 P.O. BOX 3608  
 HARRISBURG, PA 17105-3608

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:** 539 g [1 lb 3 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