

**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.

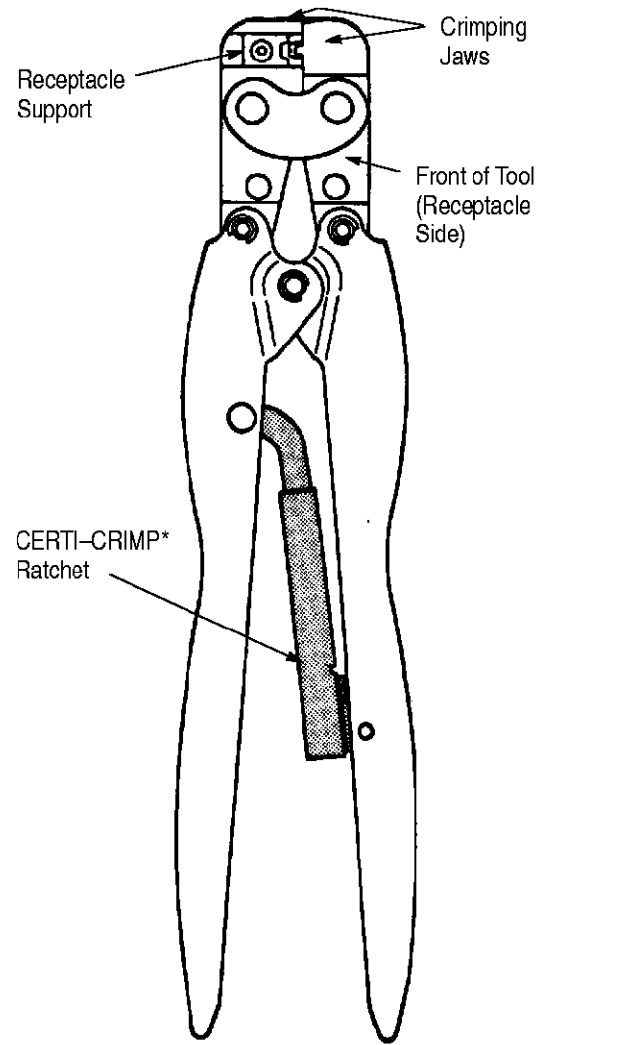


Figure 1

**1. INTRODUCTION**

AMP\* Hand Crimping Tool 90135-2 is designed to crimp the loose piece (LP) Pin Receptacle listed in Figure 2. Read these instructions thoroughly before crimping any receptacles.

**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.

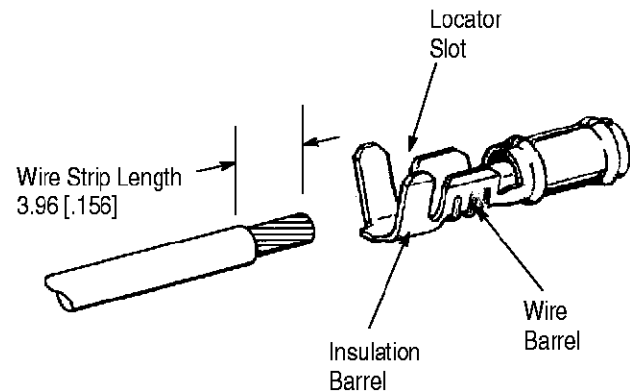
**2. DESCRIPTION**

This tool features a locator/insulation stop, a receptacle support, and a CERTI-CRIMP ratchet.

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

The receptacle support prevents the receptacle from bending during the crimping procedure.

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



WIRE		TERMINAL NO.		WIRE SIZE MARKING
SIZE (AWG)	INSULATION DIAMETER	LP	STRIP	
22 to 18	1.52 to 2.79 [.060 to .110]	61260	61138	22-18

Figure 2

**3. CRIMPING PROCEDURE**

Refer to the table in Figure 2 and select wire of the specified size and insulation diameter. 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. Looking straight into the back of the crimp section, insert the receptacle (insulation barrel first) into the front of the crimp section. Position the receptacle in the crimping jaws so that the locator enters the locator slot.

4. Hold the receptacle in place and squeeze the tool handles together just enough to hold the receptacle in place. Do NOT deform the insulation barrel or wire barrel.

5. Insert a properly stripped wire through the wire slot in the locator and into the wire barrel of the receptacle until the insulation butts against the locator/insulation stop.

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

7. Allow the tool handles to open FULLY and remove the crimped receptacle.

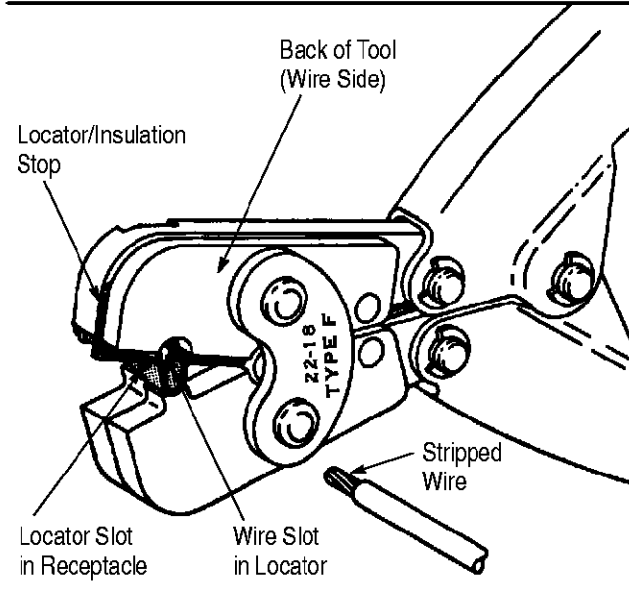


Figure 3

## 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:

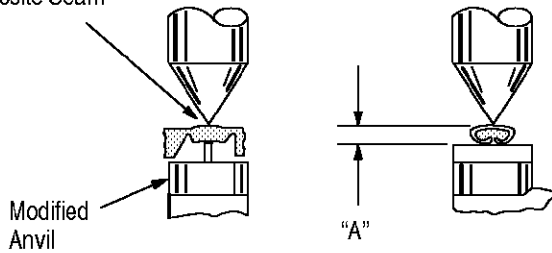
Shearer Industrial Supply Co. 20 North Penn Street York, PA 17401-1014	or	VALCO 1410 Stonewood Drive Bethlehem, PA 18017-3527
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Proceed as follows:

1. Select a receptacle and a wire (maximum size) from the table in Figure 4.
2. Refer to Section 3, CRIMPING PROCEDURE, and crimp the receptacle 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.

Position Point On  
Center of Wire Barrel  
Opposite Seam



RECEPTACLE NUMBER	WIRE SIZE (Max.)	CRIMP HEIGHT DIMENSION "A"
61260	18	1.09 (+0.02 -0.05) [.043 (+.001 -.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 receptacle and *maximum* size wire for the hand tool.
2. Position the receptacle and wire between the crimping jaws, as described in Section 3, CRIMPING PROCEDURE.

3. Holding receptacle 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:

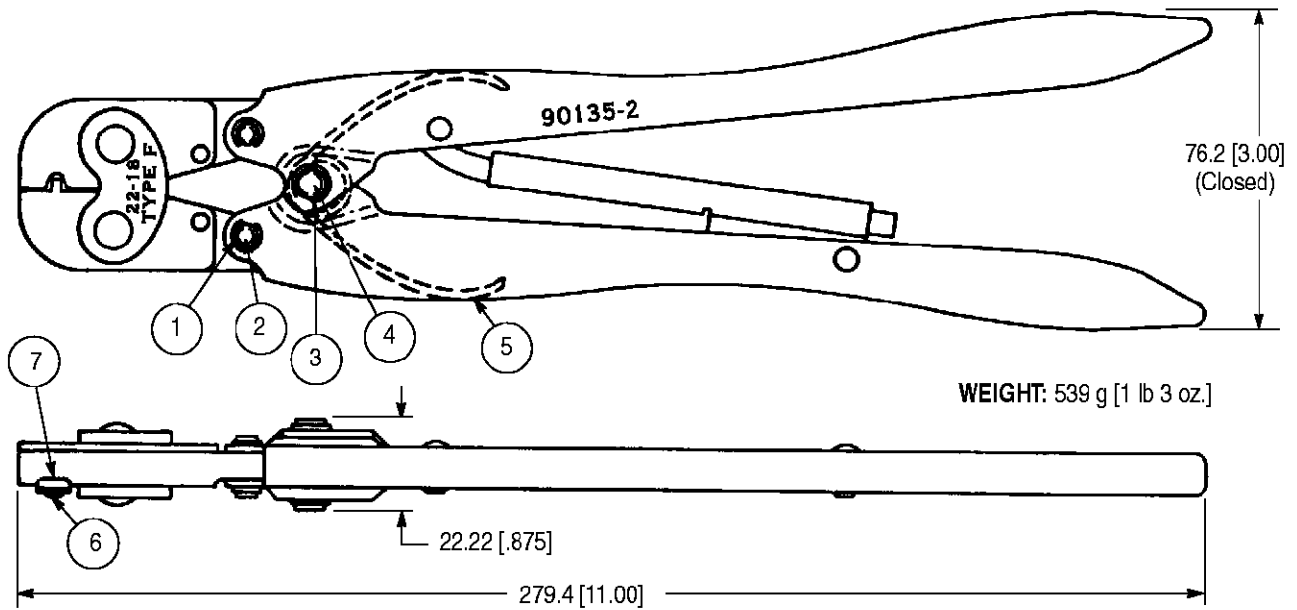
CUSTOMER SERVICE (38-35)  
TYCO ELECTRONICS CORPORATION  
P.O. BOX 3608  
HARRISBURG, PA 17105-3608

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



**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	1-59577-3	Screw	1
7	125408-6	Support, Receptacle	1

Figure 5