

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.

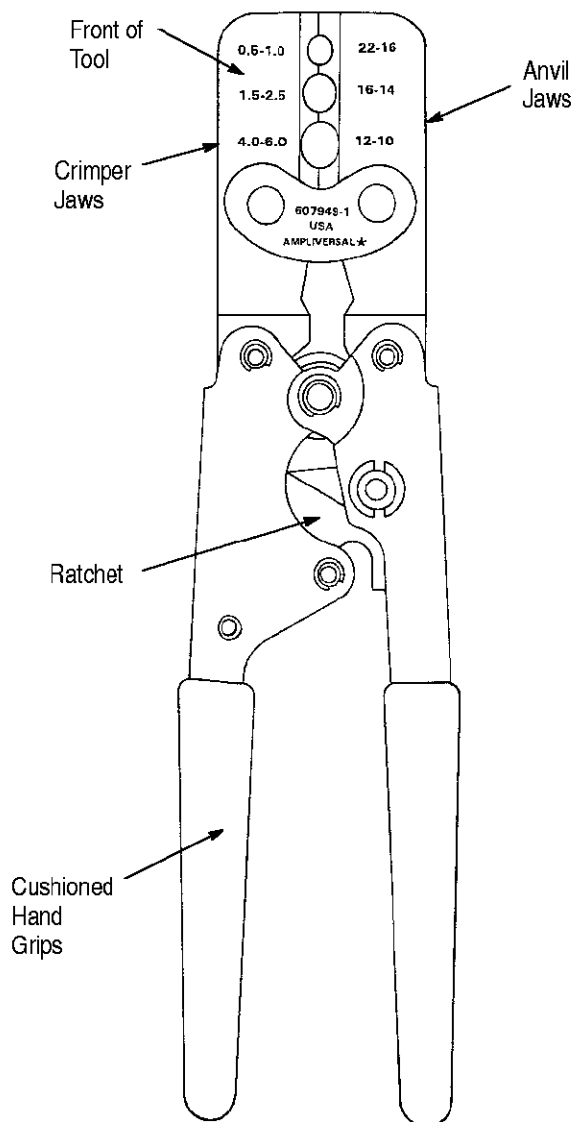


Figure 1

1. INTRODUCTION

AMP Hand Crimping Tool 607949-1, a three-cavity, two-jaw AMPLIVERSAL* Crimping Tool designed to crimp the conductor portion of insulated heat-shrink splices in the following range of wire sizes:

RED – Wire sizes 22 to 16 AWG, outer cavity.
BLUE – Wire sizes 16 to 14 AWG, middle cavity.
YELLOW – Wire sizes 12 to 10 AWG, inner cavity.

Read these instructions thoroughly before crimping any contacts.

NOTE

All dimensions on this document are in metric units [with U.S. customary units in brackets].

Reasons for reissue of this instruction sheet are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION

The tool features crimper and anvil jaws, color coded wire size marking, spring actuated handles with cushioned hand grips, and a ratchet mechanism which will not release until the tool handles have been FULLY closed, thus ensuring a reliable crimp termination.

NOTE

If the ratchet should need adjustment, refer to Paragraph 4.2.C.

3. CRIMPING PROCEDURES (Figure 2)

1. Close the tool handles until the ratchet releases, then allow the tool handles to open fully.
2. Select the appropriate cavity for the splice being crimped.
3. Align conductor portion of terminal in the cavity as shown in Figure 2.
4. Close the tool carefully until the jaws grip the terminal lightly and hold it in place without distortion.
5. Insert a properly stripped wire (Figure 2) into the terminal until it bottoms.
6. To crimp, hold the wire in place, squeeze the handles until the ratchet releases, allow the jaws to open FULLY, and remove crimped splice.

4. MAINTENANCE/INSPECTION

4.1. Daily Maintenance

Maintenance and inspection should be performed regularly. Tool should be wiped clean with special emphasis on the crimping cavities.

4.2. Periodic Inspection

Hand tool should be immersed (handles partially closed) in a reliable commercial degreasing compound which does not attack paint or plastic

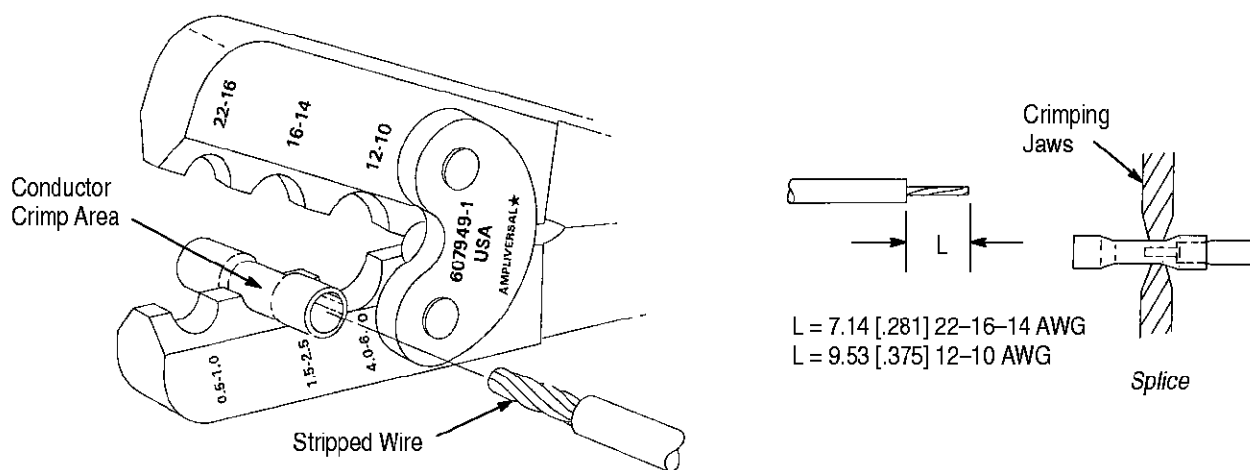


Figure 2

material, to remove accumulated dirt, grease, and foreign matter. The tool should be re-lubricated after cleaning. The tool may then be wiped clean with a soft, lint-free cloth. Do NOT use hard or abrasive objects that could damage the tool. Ensure that the tool conforms to the information in Figure 6.

A. Lubrication

Lubricate all pins, pivot points, and bearing surfaces with SAE 20 motor oil as follows:

Tools used in daily production – lubricate daily
Tools used daily (occasionally) – lubricate weekly
Tools used weekly – lubricate monthly

Wipe excess oil from tool, particularly from crimping area. Oil transferred from the crimping area onto certain terminations may affect the electrical characteristics of an application.

B. Visual Inspection

1. Close tool handles until ratchet releases and then allow them to open freely. If they do not open quickly and fully, the tool is defective and must be replaced. See Section 6, REPLACEMENT.
2. Inspect jaws for worn, cracked, or broken areas. If damage is evident, the tool must be replaced. See Section 6, REPLACEMENT.

C. Gaging the Crimping Chamber

This inspection requires the use of plug gages conforming to the dimensions in Figure 3. Tyco Electronics does not manufacture or market these gages. To gage the crimping chamber, proceed as follows:

1. Remove traces of oil or dirt from crimping chamber and plug gages.

2. Close the tool handles until it is evident that the jaws have bottomed, then HOLD in this position. Do NOT force the jaws beyond initial contact.
3. Align the GO element with the crimping chamber. Push element straight into the crimping chamber without using force. The GO element must pass completely through. Refer to Figure 3.
4. Now align the NO-GO element and try to insert it straight into the same crimping chamber. The NO-GO element may start entry but must not pass completely through as shown in Figure 3.

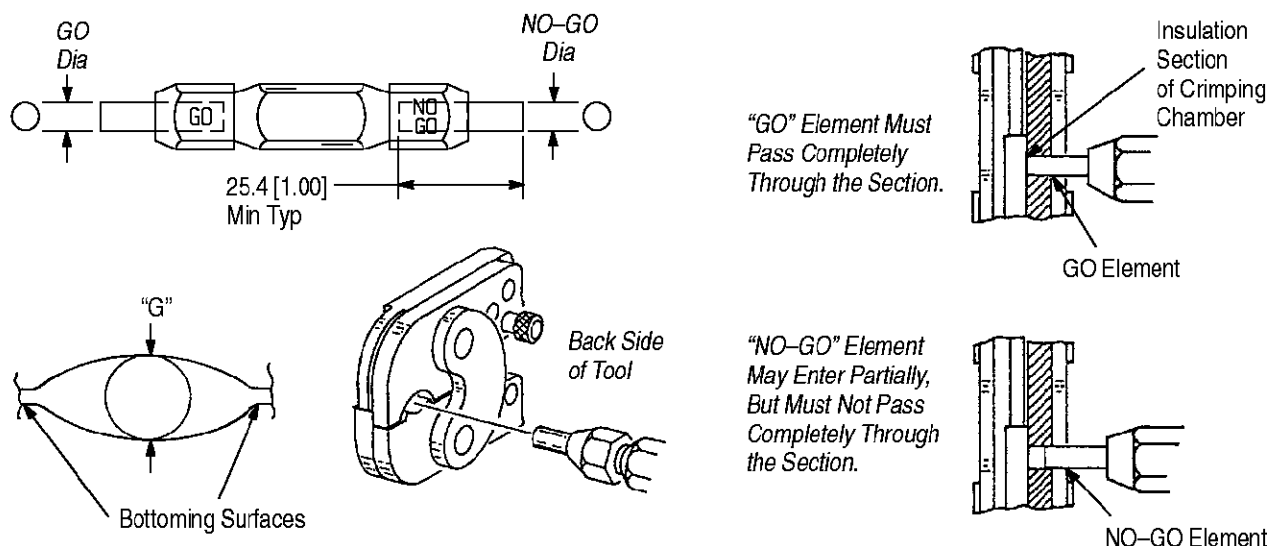
If the crimping chamber conforms to the gage inspection, it is considered dimensionally correct and should be lubricated with a THIN coat of any good SAE 20 motor oil. If not, the tool must be replaced. See Section 6, REPLACEMENT.

D. Ratchet Inspection

Obtain a .025 [.001] shim that is suitable for checking the clearance between the bottoming surfaces of the crimping jaws. (See Figure 3).

Proceed as follows:

1. Select a contact and wire (maximum size) for the tool (see Figure 3).
2. Position the contact and wire between the crimping jaws, according to Section 3, CRIMPING PROCEDURE (Steps 1 through 6). Holding the wire in place, squeeze the tool handles together until the ratchet releases. Hold the tool handles in this position, maintaining just enough pressure to keep the jaws closed.
3. Check the clearance between the bottoming surfaces of the crimping jaws. If the clearance .025 [.001], or less, the ratchet is satisfactory. If clearance exceeds .025 [.001] the ratchet is out of adjustment and must be adjusted (see Section 5, TOOL ADJUSTMENT).



Gage dimension "G" with handles closed to ratchet stop.

NEST DIMENSION "G"		
WIRE SIZE (AWG)	GO DIAMETER	NO-GO DIAMETER
22 - 16	2.29 [.090]	2.39 [.094]
16 - 14	2.65 [.1045]	2.78 [.1095]
12 - 10	3.68 [.145]	3.84 [.151]

Figure 3

E. Tool Force Values

1. Apply force as shown until ratchet releases. The force at a point 44.45 [1.75] from handle ends should be 35 to 45 pounds. See Figure 4.

2. To adjust the tool to obtain the proper force values, open the handles and loosen the locknut with Spanner Wrench 127298-1 (available from Tyco Electronics). See Section 5, TOOL ADJUSTMENT

3. On the opposite side of the tool, turn the eccentric stud CLOCKWISE to increase the handle

load; or COUNTERCLOCKWISE to decrease the handle load. Tighten locknut, measure force and continue to adjust if necessary.

5. TOOL ADJUSTMENT (Figure 5)

If the ratchet must be adjusted, use the spanner wrench, and proceed as follows:

1. Loosen the ratchet locknut on the back of the tool (side with wire size markings).
2. Check bottoming of tool jaws according to Paragraph 4.2.C. Turn screw on front of tool

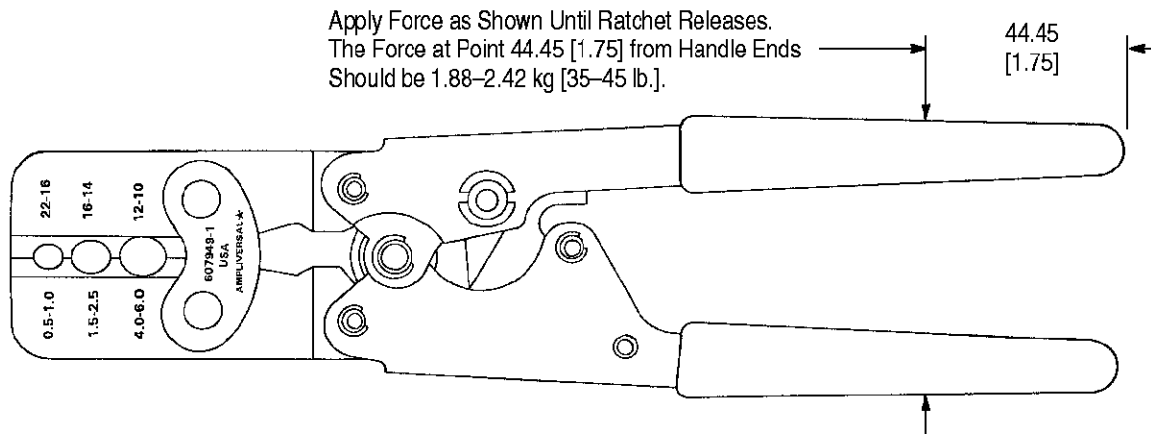


Figure 4

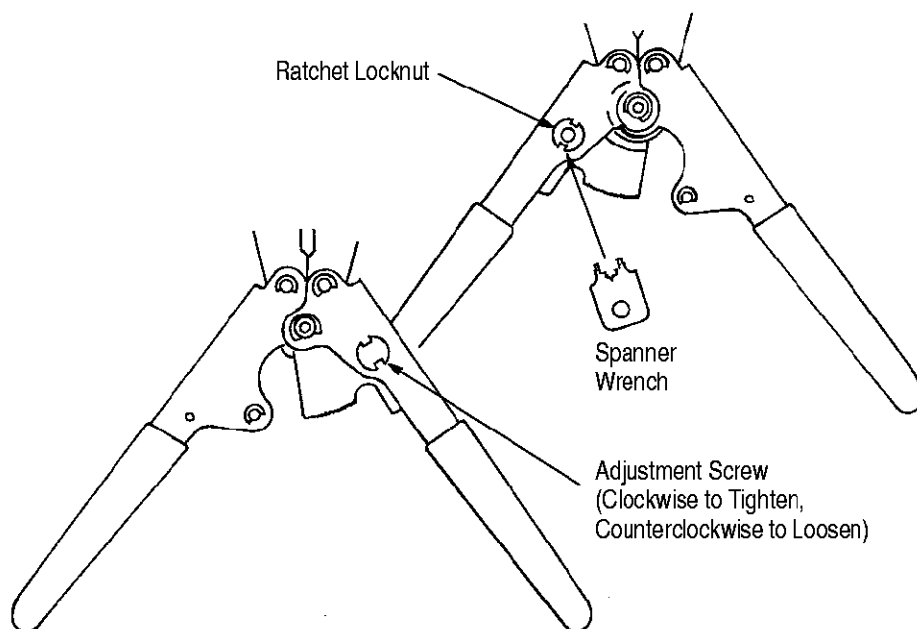


Figure 5

CLOCKWISE to tighten ratchet (must reduce crimp height) or COUNTERCLOCKWISE to loosen ratchet (may increase crimp height).

3. When tool jaws bottom properly, retighten the nut.

NOTE

It may be necessary to hold the ratchet screw while securing the ratchet locknut.

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

7. REVISION SUMMARY

Revisions to this document include:

Per EC 0990-1642-01

- Updated document to corporate requirements
- Changed part number on tool illustration in Figure 2

6. REPLACEMENT

This tool is not repairable and a spare should be stocked to prevent lost time when replacement of tools is necessary. Order replacement tools through your representative, or call 1-800-526-5142, or send

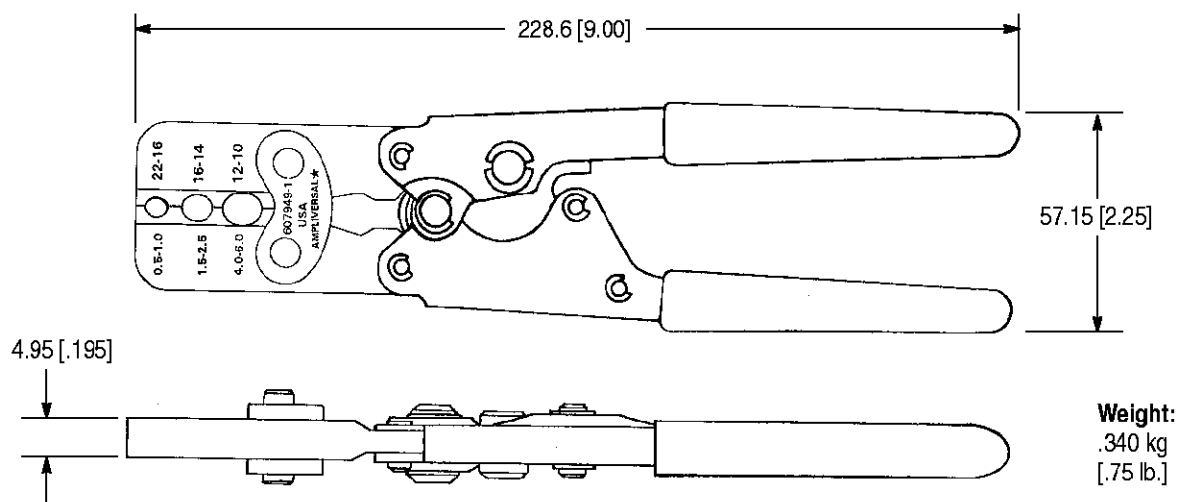


Figure 6

Weight:
.340 kg
[.75 lb.]