

PROPER USE GUIDELINES

Cumulative Trauma Disorders can result from the prolonged use of manually powered hand tools. AMP hand tools are intended for occasional use and low volume applications. AMP offers a wide selection of powered application equipment for extended-use, production operations.

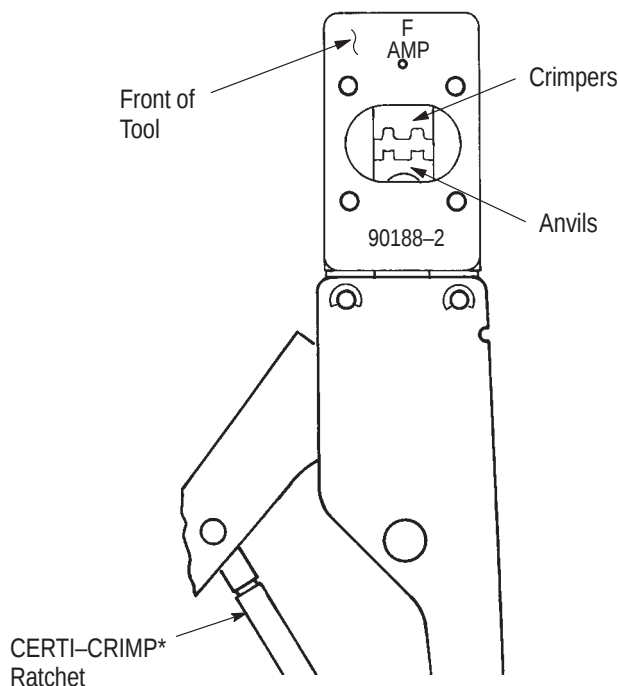


Figure 1

1. INTRODUCTION

This instruction sheet covers application and maintenance for AMP* Hand Crimping Tool 90188-2, which is designed to crimp quick-disconnect-type terminals having open wire and insulation barrels. A typical terminal is shown in Figure 2. Read these instructions carefully before applying any terminals.

NOTE

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

Reasons for reissue are provided in Section 6, REVISION SUMMARY.

2. DESCRIPTION (Figures 1 and 2)

This tool features two fixed dies (crimpers), two movable dies (anvils), a locator/insulation stop, and a CERTI-CRIMP ratchet.

The locator/insulation stop positions the terminal between the crimping dies and aids in locating the wire in the terminal. In use, it rests in the terminal's locator slot.

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

CAUTION

The crimping dies bottom before the CERTI-CRIMP ratchet releases. This is a design feature that assures maximum electrical and tensile performance of the crimp. Do NOT re-adjust the ratchet.

3. CRIMPING PROCEDURE

Select an applicable terminal and a wire of appropriate size and insulation diameter. Strip the wire to the length indicated in Figure 2. Do NOT cut or nick the wire strands.

1. Hold the tool so the BACK of it is facing you.
2. Make certain that the ratchet is released by squeezing the tool handles and allowing them to open FULLY.
3. Looking straight into the crimping dies from the BACK of the tool, insert a terminal (insulation barrel first) into the FRONT of the appropriate crimping section.
4. Position the terminal in the crimpers so that the locator/insulation stop enters the terminal locator slot.
5. Hold the terminal in this position and squeeze the tool handles until the insulation anvil starts entry into the insulation crimper. Do NOT deform the insulation barrel or wire barrel.

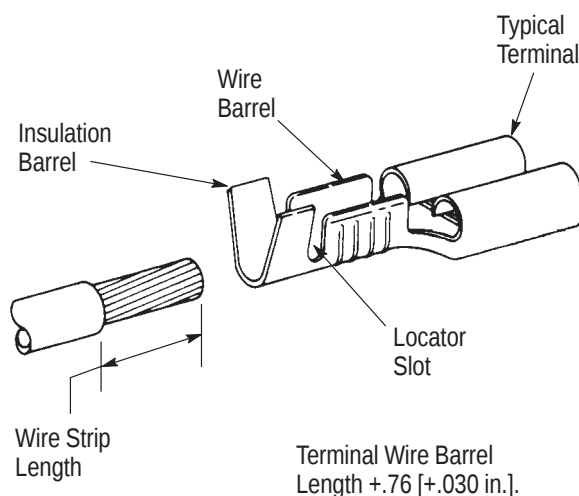


Figure 2

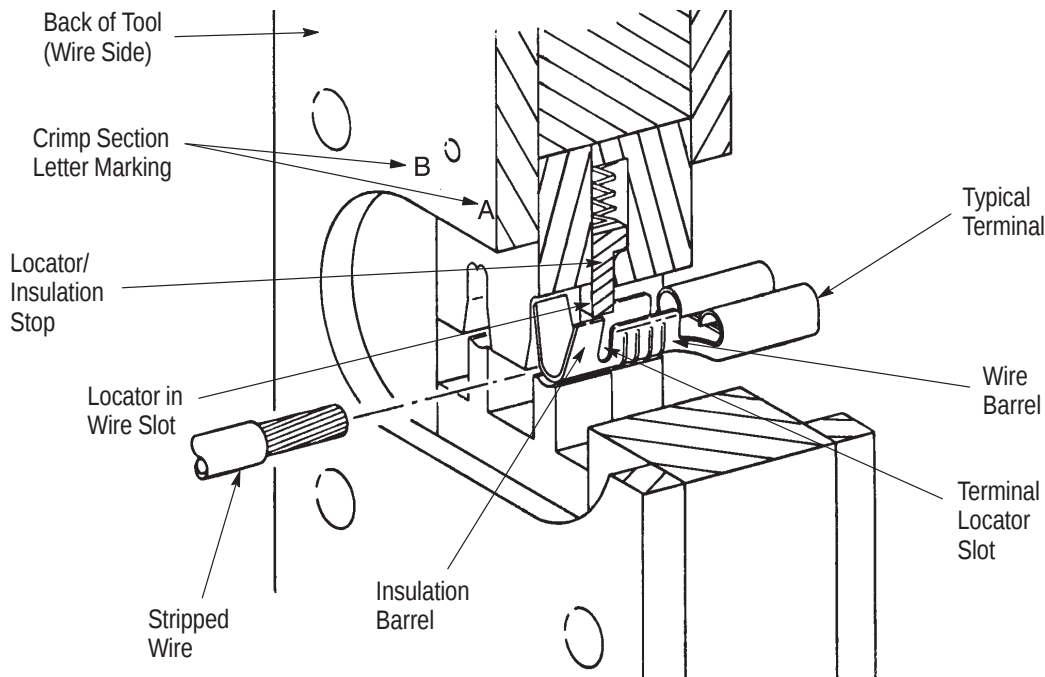


Figure 3

6. Insert a properly stripped wire through the locator wire slot and into the wire barrel of the terminal until the insulation butts against the locator/insulation stop.
7. Hold the wire in place and squeeze the tool handles until the ratchet releases.
8. Allow the tool handles to open FULLY and remove the crimped terminal.

4. MAINTENANCE/INSPECTION

AMP recommends that a maintenance and inspection program be performed periodically to ensure dependable and uniform terminations. Frequency of inspection depends on:

1. The care, amount of use, and handling of the hand tool.
2. The presence of abnormal amounts of dust and dirt.
3. The degree of operator skill.
4. Your own established standards.

4.1. Daily Maintenance

1. Remove dust, moisture, and other contaminants with a clean brush, or a soft, lint-free cloth. Do NOT use objects that could damage the tool.

2. Make certain that the retaining pins are in place and that they are secured with retaining rings.
3. When the tool is not in use, keep handles closed to prevent objects from becoming lodged in the crimping dies. Store the tool in a clean, dry area.

4.2. 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 (occasional)—lubricate weekly

Tools used weekly—lubricate monthly

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

4.3. Periodic Inspection

1. Hand tool should be immersed (handles partially closed) in a reliable commercial degreasing compound to remove accumulated dirt, grease, and foreign matter.
2. Close tool handles until the CERTI-CRIMP ratchet releases and then allow them to open fully. If the handles do not open quickly and fully, the spring is defective and must be replaced. Refer to Section 5, REPLACEMENT AND REPAIR.

3. Inspect tool head for worn, cracked, or broken dies. If damage is evident, return tool to AMP for evaluation and repair. See Section 5, REPLACEMENT AND REPAIR.

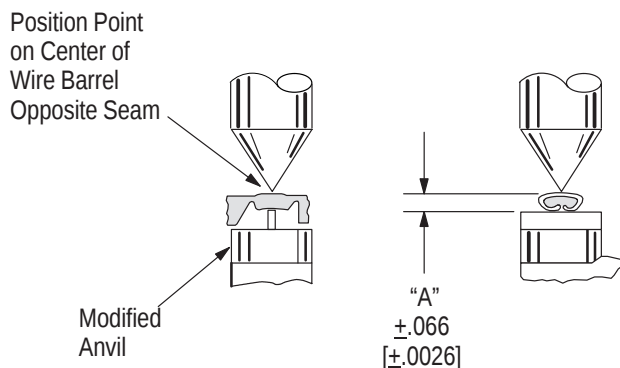
4.4. Crimp Height Inspection

This inspection requires the use of a micrometer with a modified anvil, as shown in Figure 4. AMP recommends the use of a modified micrometer (Crimp Height Comparator RS-1019-5LP) which can be purchased from:

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

1. Refer to the table in Figure 4 and select wire (maximum size) for each crimp section listed in the chart.
2. Refer to Section 3, CRIMPING PROCEDURE, and crimp the contact 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 to AMP for evaluation and repair (see Section 5, REPLACEMENT AND REPAIR).

For additional information concerning the use of the crimp height comparator, refer to AMP instruction sheet 408-7424.



TERMINAL NUMBER (STRIP)	WIRE (MAX)		CRIMP SECTION LETTER MARKING	CRIMP HEIGHT DIM. "A"
	SIZE (AWG)	INSUL DIA		
60295	18	2.54 [.100]	A	1.06 [.0416]
60413	18	3.18 [.125]	B	1.06 [.0416]

Figure 4

4.5. CERTI-CRIMP Ratchet Inspection

The CERTI-CRIMP ratchet feature on the hand tool should be checked to ensure it does not release prematurely, allowing the crimping dies to open before they have fully bottomed. Obtain a 0.025-mm [.001-in.] shim that is suitable for checking the clearance between the bottoming surfaces of the crimping dies. Proceed as follows:

1. Select the maximum size wire and strip it according to the dimensions listed in Figure 2.
2. Select the appropriate crimp section. See Figure 2.
3. Position contact and wire between the crimping dies, as described in Section 3, CRIMPING PROCEDURE.
4. Hold wire in place and squeeze tool handles together until the CERTI-CRIMP ratchet releases. Hold tool handles in this position, maintaining just enough tension on the handles to keep the dies closed.
5. Check the clearance between the bottoming surfaces of the crimping dies. If the clearance is 0.025 mm [.001 in.] or less, the ratchet is satisfactory. If clearance exceeds 0.025 mm [.001 in.], the ratchet is out of adjustment and must be repaired. See Section 5, REPLACEMENT AND REPAIR.

5. REPLACEMENT AND REPAIR

Replacement parts are listed in Figure 5. Parts other than those listed in Figure 5 should be replaced by AMP to ensure quality and reliability of the tool.

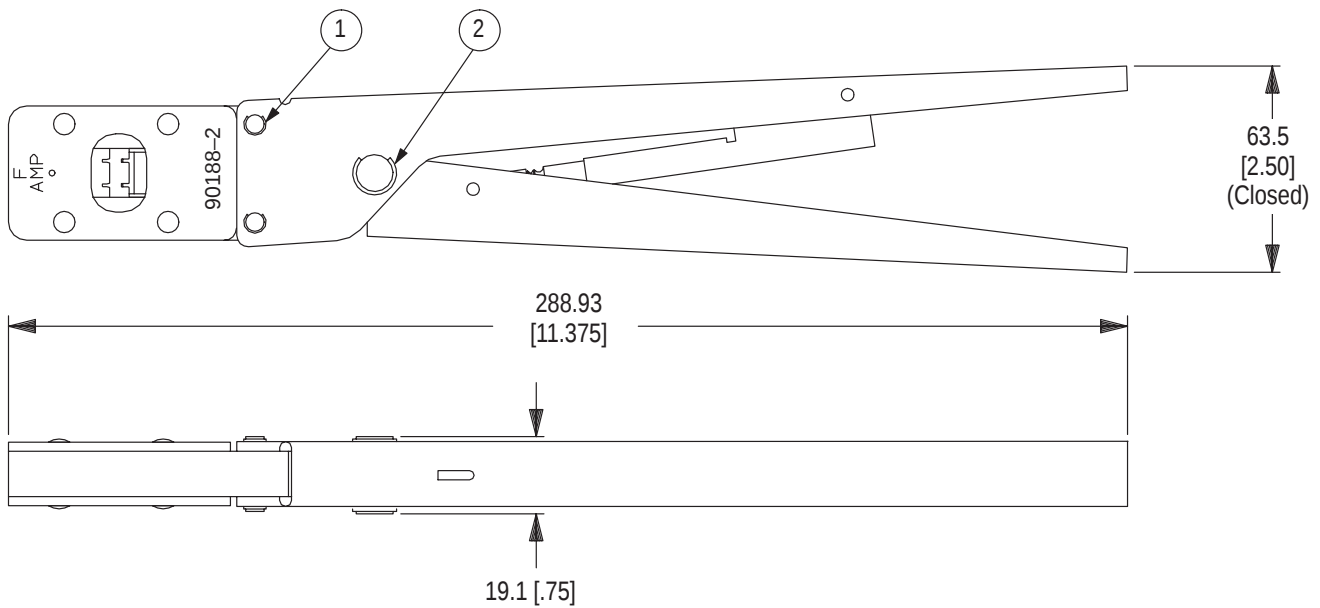
CAUTION

Do NOT remove the retaining pins or permanent damage will result to the tool.

Order replacement parts through your AMP 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)
AMP INCORPORATED
P.O. BOX 3608
HARRISBURG, PA 17105-3608

Tools may be returned to AMP for evaluation and repair. For tool repair service, contact an AMP representative at 1-800-526-5136.



Weight: Approximately 567 g [1 lb. 4 oz.]

REPLACEMENT PARTS			
ITEM	PART NUMBER	DESCRIPTION	QTY PER ASSY
1	21045-3	RING, Retaining	4
2	21045-9	RING, Retaining	2

Figure 5

6. REVISION SUMMARY

The following changes were made since the previous release of this sheet:

Per EC 0990-1016-99:

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