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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.

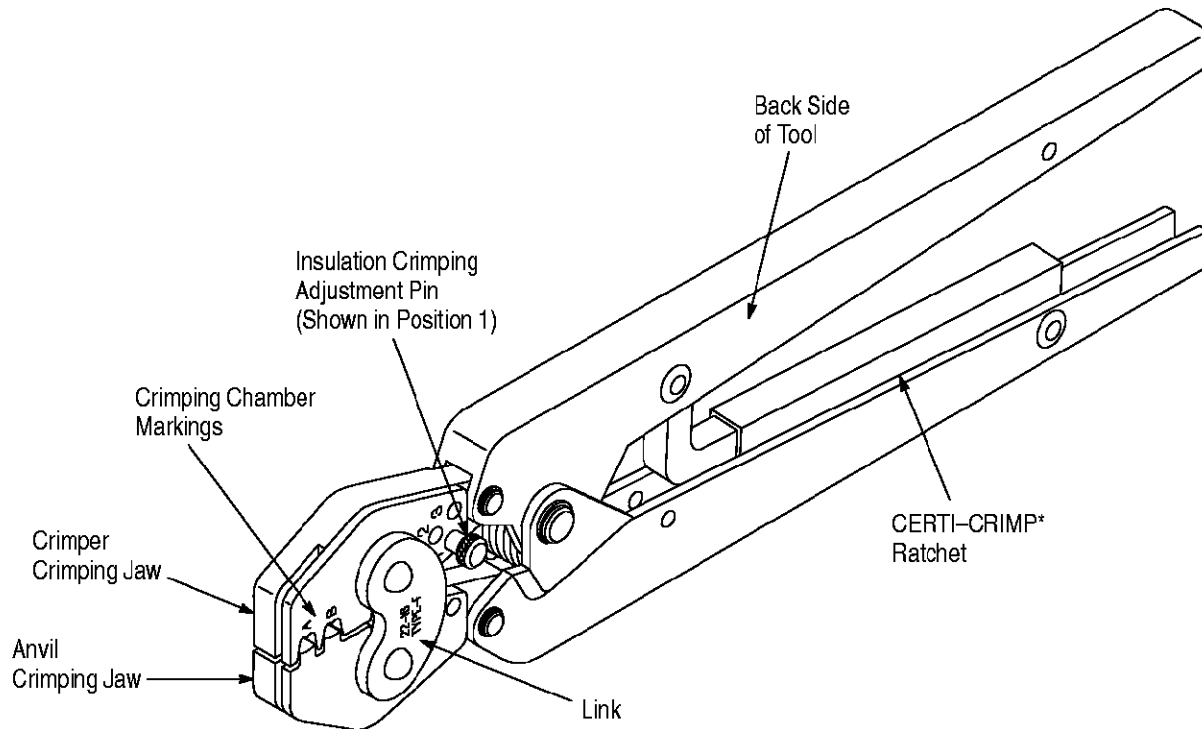


Figure 1

1. INTRODUCTION

AMP* Hand Crimping Tool 47995 is designed to crimp AMP FASTON* 250 Series terminals onto wire sizes 22 to 16 AWG with an insulation diameter range of 2.29 mm to 3.56 mm [.090 in. to .140 in.].

NOTE

A complete list of current terminal part numbers cannot be maintained on this document. For part numbers and their description, refer to AMP Catalog 82004 or contact Product Information at the number at the bottom of this page.

NOTE

Dimensions on this sheet are in millimeters [with inches in brackets]. Figures are not drawn to scale.

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

2. DESCRIPTION (Figure 1)

This double-action hand tool features two crimping jaws (anvil and crimper), an insulation crimping adjustment pin, and a CERTI-CRIMP ratchet. When closed, the jaws form two crimping chambers which

crimp the terminal wire barrel and insulation barrel simultaneously. The chambers are each marked on the BACK side of the tool with "A" for wire sizes 22 through 18 AWG, and "B" for wire size 16 AWG. The tool wire size range is marked on the link.

The insulation crimping adjustment pin is used to regulate the crimp height of the terminal insulation barrel. The CERTI-CRIMP ratchet ensures full crimping of the terminal. Once engaged, the ratchet will not release until the tool handles have been FULLY closed.

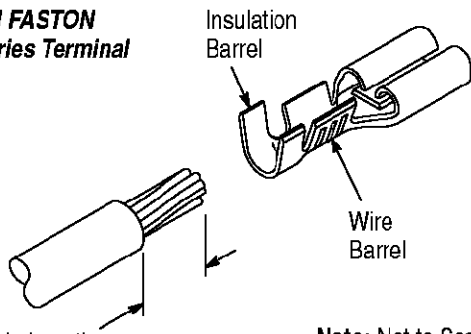
CAUTION

The crimping jaws bottom before the ratchet releases. This design feature ensures maximum electrical and tensile performance of the crimp. Do NOT re-adjust the ratchet.

3. CRIMPING PROCEDURE

Refer to Figure 2, and select wire of the appropriate size and insulation diameter. Strip the wire to the dimension indicated, taking care not to nick or cut the conductors.

**Typical FASTON
250 Series Terminal**



Note: Not to Scale

WIRE		CRIMPING CHAMBER (Marking)
SIZE (AWG)	INSULATION DIAMETER	
22-18	2.29-3.30 [.090-.130]	A
16	3.05-3.56 [.120-.140]	B

Figure 2

Proceed as follows:

1. Squeeze the tool handles until the ratchet releases, and allow the handles to open fully.
2. Insert terminal into the appropriate crimping chamber with the "U" shape of the insulation barrel facing the crimper jaw. Center the insulation barrel on the anvil jaw. Refer to Figure 3.
3. Hold the terminal in position, and close the tool handles until the jaws close just enough to hold the terminal in place without deforming the insulation barrel and wire barrel.

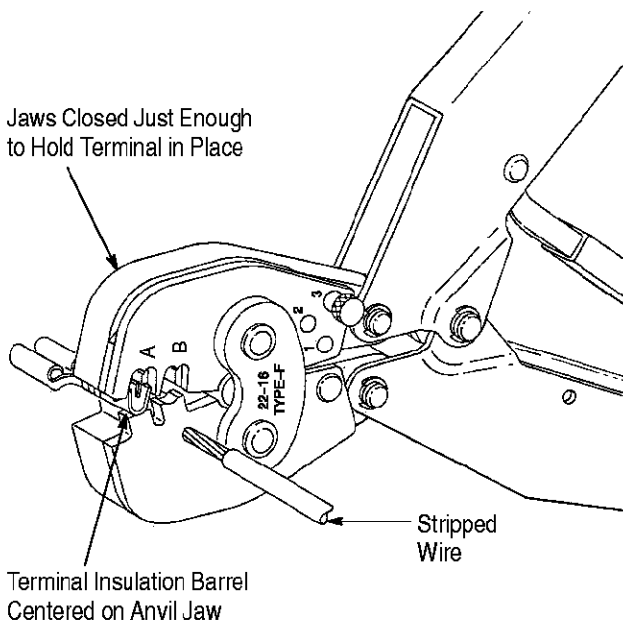


Figure 3

4. Insert the stripped wire into the insulation barrel and squeeze the tool handles until the ratchet releases.
5. Allow tool handles to open FULLY and remove crimped terminal from tool.
6. Inspect crimp according to Figure 4.

Properly Crimped Terminal

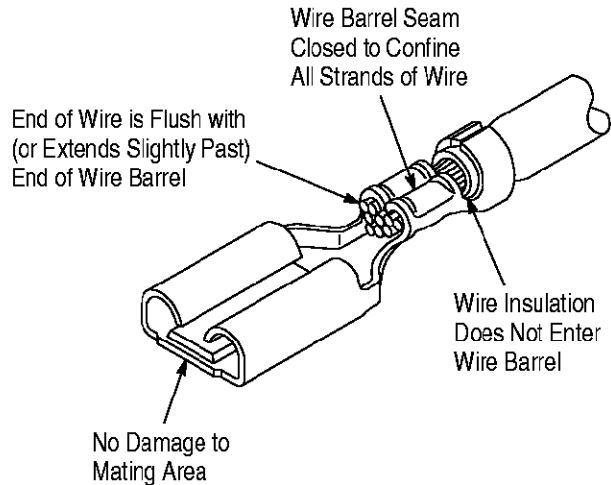


Figure 4

4. INSULATION CRIMPING ADJUSTMENT

The tool has three insulation crimping adjustment positions to adjust the wire insulation grip: 1—Tight, 2—Medium, and 3—Loose. To determine the proper insulation crimp setting, proceed as follows:

1. Insert adjustment pin into Position 3 as shown in Figure 3.
2. Position terminal into crimping jaws as described in Section 3, CRIMPING PROCEDURE.
3. Insert UNSTRIPPED wire into just the terminal insulation barrel. Crimp terminal and remove from crimping jaws.
4. Check the insulation support by bending the wire back and forth once. The insulation barrel should retain grip on the wire insulation. If the wire pulls out, move the insulation crimping adjustment pin to the next tighter position and perform another test crimp. If the wire does not pull out, the pin is properly adjusted and the tool is ready for crimping. Do not use a tighter crimp than necessary.

NOTE

Adjust pin as necessary until the desired insulation grip is obtained. Crimp should hold wire insulation firmly without cutting into it.

5. MAINTENANCE AND INSPECTION

5.1. Daily Maintenance

1. Remove dust, moisture, and other contaminants with a clean brush or a clean, soft, lint-free cloth. Do not use objects which could damage the tool.
2. Make sure that the proper retaining pins are in place and that they are secured with the proper retaining rings.
3. Make certain that all pins, pivot points, and bearing surfaces are protected with a thin coat of any good SAE 20 motor oil. Do NOT oil excessively.
4. When the tool is not in use, keep the handles closed to prevent objects from becoming lodged in the crimping jaws and store it in a clean, dry area.

5.2. Visual Inspection

Regular inspections should be performed by quality control personnel with a record of scheduled inspections remaining with the tool or supplied to supervisory personnel responsible for it. Though a monthly inspection is recommended, the inspection frequency should be based upon amount of use, working conditions, operator training and skill, and established company standards. These inspections should be performed in the following sequence:

1. Remove all lubrication and accumulated film by immersing the tool (handles partially closed) in a suitable commercial degreaser that will not affect paint or plastic material.
2. Make certain that all retaining pins are in place and secured with retaining rings.
3. Close the tool handles until the ratchet releases, then allow the handles to open freely. If they do not open quickly and fully, the spring is defective and must be replaced. See Section 6, REPLACEMENT AND REPAIR.
4. Inspect the head assembly, placing special emphasis on checking for worn, cracked, or broken jaws. If damage to any part of the head assembly is evident, return the tool to AMP for evaluation and repair. See Section 6, REPLACEMENT AND REPAIR.

5.3. 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 tool.

2. Position the terminal and wire between the crimping jaws, according to Section 3, CRIMPING PROCEDURE. Holding the wire in place, squeeze the tool handles together until the CERTI-CRIMP 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 is 0.025 [.001] or less, the ratchet is satisfactory. If clearance exceeds 0.025 [.001], the ratchet is out of adjustment and must be repaired. See Section 6, REPLACEMENT AND REPAIR.

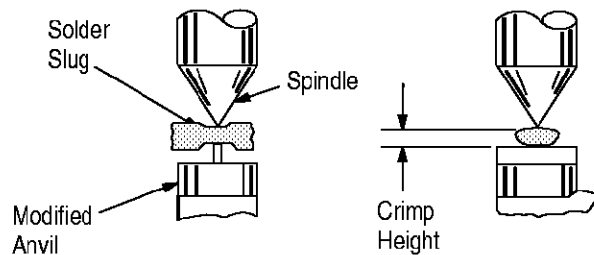
5.4. Crimp Height Inspection

This inspection requires the use of a micrometer with a modified anvil as shown in Figure 5. AMP recommends the modified micrometer (Crimp Height Comparator RS-1019-5LP) which may be purchased 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. Crimp a piece of solid-core solder according to Section 3, CRIMPING PROCEDURE. Solder with a ratio of 60% tin to 40% lead is recommended for this inspection.
2. Center the most compressed area of the solder slug on the anvil and rotate the movable handle until the spindle tip touches the slug. Do NOT go beyond initial contact as this could cause a depression and result in an inaccurate reading.



WIRE SIZE (AWG)	CRIMPING CHAMBER (Marking)	WIRE BARREL CRIMP HEIGHT (±0.05 [±.002])	INSULATION BARREL CRIMP HEIGHT (±0.10 [±.004]) FOR TOOL SETTING		
			1	2	3
18	A	1.32 [.052]	2.72 [.107]	2.97 [.117]	3.23 [.127]
16	B	1.63 [.064]	3.23 [.127]	3.48 [.137]	3.73 [.147]

Figure 5

3. Check the height of the crimped solder against the crimp height dimensions shown in Figure 5.

CAUTION *DO NOT apply crimp height dimensions directly to the terminal. This practice will over-crimp the terminal, cracking the wire barrel, and possibly causing damage to the tooling.*

If the crimp height conforms to that shown, the tool is considered dimensionally correct. Lubricate the tool with a thin coat of any good SAE 20 motor oil and return it to service.

6. REPLACEMENT AND REPAIR

Customer-replaceable parts are provided in Figure 6. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your AMP representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605 or write to:

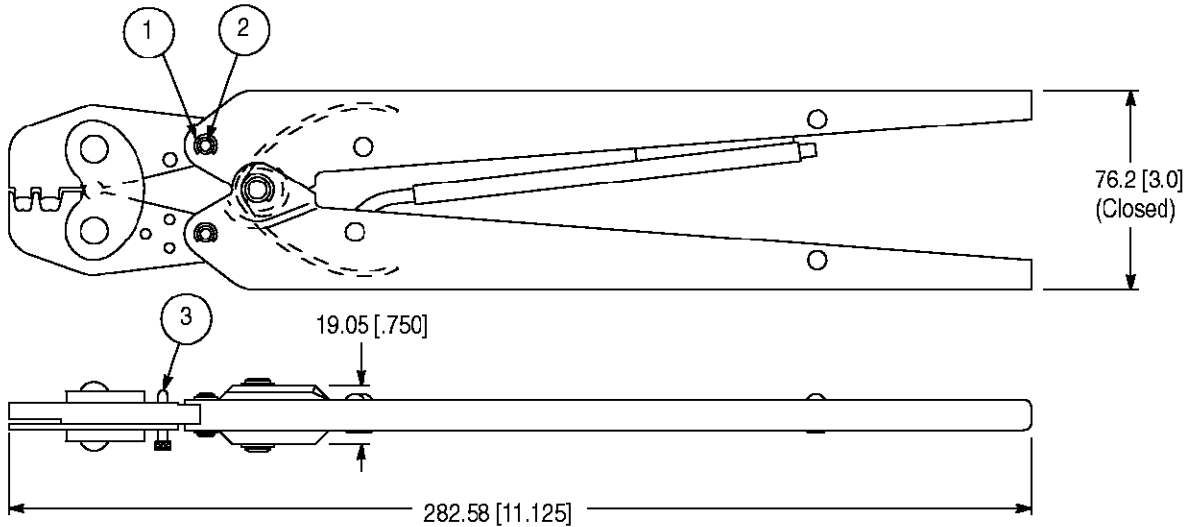
CUSTOMER SERVICE (038-035)
 AMP INCORPORATED
 PO BOX 3608
 HARRISBURG PA 17105-3608

For customer repair service, please contact an AMP representative at 1-800-526-5136.

7. REVISION SUMMARY

Revisions to this instruction sheet per EC 0990-0690-99 include:

- Replaced customer repair address with phone number



Weight: 624 g [1 lb, 6 oz]

REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
1	21045-3	RING, Retaining	4
2	8-59558-2	PIN, Retaining	2
3	39207	PIN, Adjustment	1

Figure 6