

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.

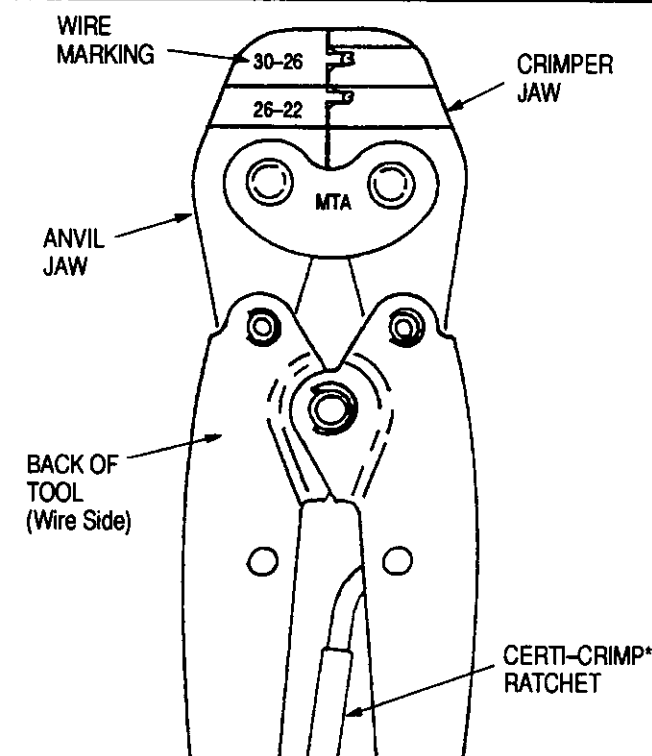


Figure 1

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1. INTRODUCTION

This instruction sheet covers the use of AMP Hand Crimping Tool 59836-1 (see Figure 1) which is designed to crimp AMP Mass Termination Assemblies (MTA) 100 Crimp Snap-In Contacts shown and listed in Figure 2. Read these instructions thoroughly before using the tool.

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

NOTE

Dimensions on this sheet are in millimeters [with inches in brackets].

2. DESCRIPTION

The tool (shown in Figure 1) features two sets of crimping dies (contained within the crimper and anvil jaws) and a CERTI-CRIMP ratchet.

One set of crimping dies is used to crimp contacts on wire sizes 30 to 26 AWG and the other set is used to crimp contacts on wire sizes 26 to 22 AWG. These wire size ranges are marked on the tool to identify each crimping section.

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

CAUTION

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

3. CRIMPING PROCEDURE

NOTE

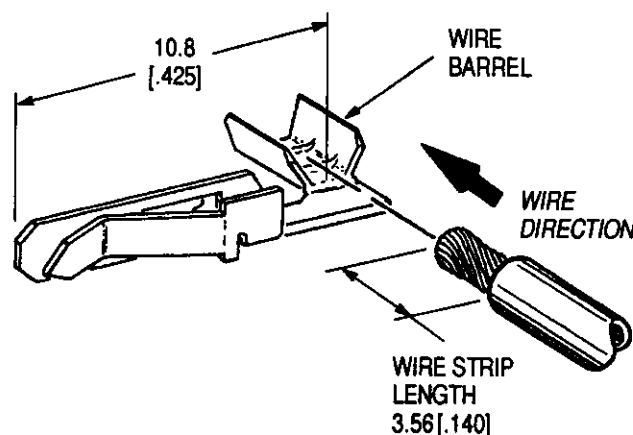
Each hand tool is coated with a preservative to prevent rust or corrosion. Wipe this preservative from the tool, particularly from the crimping jaws, before using the tool.

Refer to the chart in Figure 2 and select wire of desired size (within the range of the tool). Strip the wire to the length indicated. Do NOT cut or nick the wire strands.

Select the corresponding contact for the selected wire size and identify the appropriate crimp section (according to the wire size markings on back of tool).

Refer to Figure 3 and proceed as follows:

1. Hold tool so BACK (wire side) is facing you.



WIRE		LOOSE PIECE CONTACT NUMBER	CRIMP SECT (Wire Size Marking)
SIZE (AWG)	INSUL DIA		
30 to 26	1.52	640711-1	30 - 26
26 to 22	[.060]	640709-1	26 - 22

Figure 2

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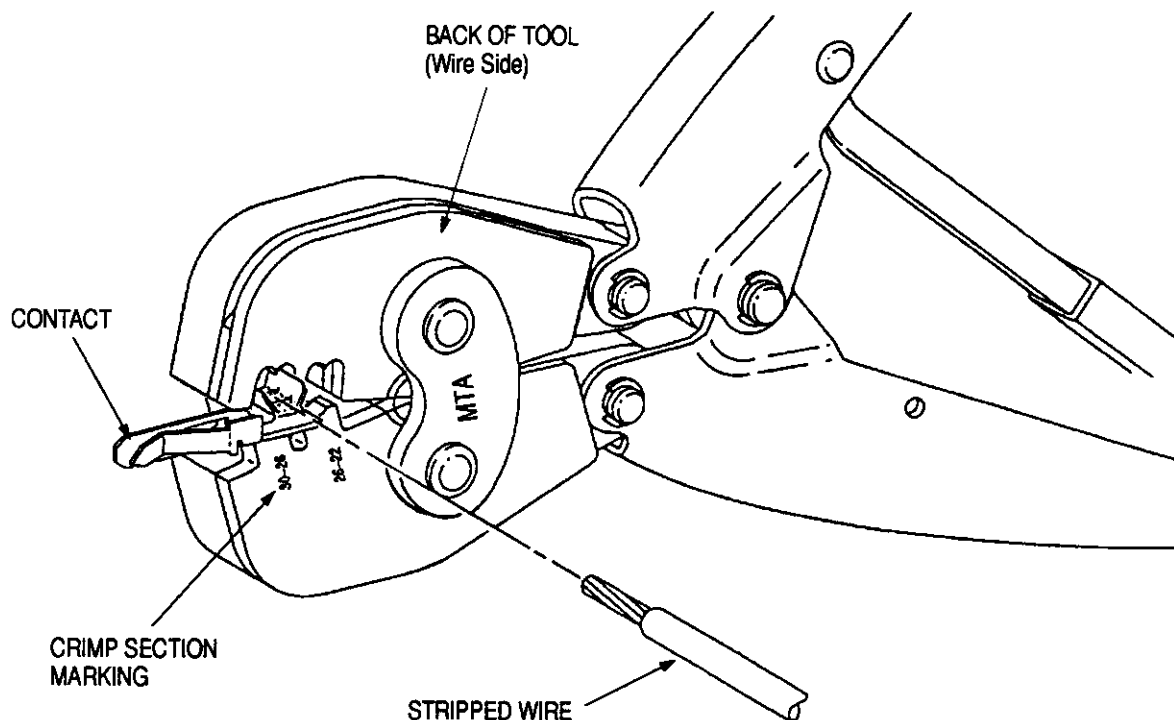


Figure 3

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2. Open the tool's jaws by squeezing the handles until the ratchet releases and then allow the handles to open FULLY.
3. Looking straight into BACK of appropriate crimp section, insert contact wire barrel into crimp section.
4. Hold contact in this position and close handles until the contact is held firmly in place. Do NOT deform contact wire barrel.
5. Insert stripped wire into contact wire barrel until it bottoms.

NOTE

Do not allow wire insulation to enter contact wire barrel.

6. Hold wire in place and close tool handles until ratchet releases. Allow handles to open fully and remove crimped contact.

4. MAINTENANCE AND INSPECTION PROCEDURE

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.

The hand tool is inspected before being shipped; however, AMP recommends that the tool be inspected immediately upon its arrival at your facility to ensure that the tool has not been damaged during shipment. Due to the precision design, it is important that no parts of these tools be interchanged except those replacement parts listed in Figure 5.

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. All pins, pivot points, and bearing surfaces should be protected with a thin coat of any good SAE No. 20 motor oil. Do not oil excessively.
4. 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 No. 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 area onto certain terminations may affect the electrical characteristics of the termination.

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 ratchet releases and then allow them to open freely. If they do not open quickly and fully, the spring is defective and must be replaced. See Section 5, REPLACEMENT AND REPAIR.
3. Inspect head assembly for worn, cracked, or broken dies. If damage is evident, return the tool to AMP for evaluation and repair. See Section 5, REPLACEMENT AND REPAIR.

4.4. Crimp Height Inspection

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

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

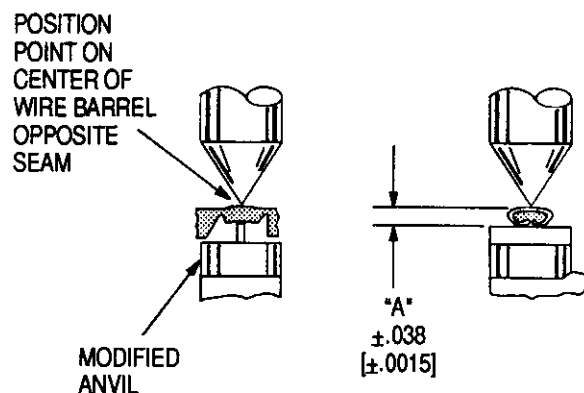
Proceed as follows:

1. Refer to the chart in Figure 4 and select a contact and a wire (maximum size) for each crimp section listed in the chart.
2. Refer to Section 3, CRIMPING PROCEDURE, and crimp the contact(s) accordingly.
3. Using a crimp height comparator, measure 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 (refer to Section 5, REPLACEMENT AND REPAIR).

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

4.5. CERTI-CRIMP Ratchet Inspection

The CERTI-CRIMP ratchet feature on AMP hand tools should be checked to ensure that the ratchet 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



CONTACT NUMBER (LP)	WIRE SIZE AWG (Max)	CRIMP SECT (Wire Size Marking)	CRIMP HEIGHT DIM. "A"
640711-1	26	30 - 26	.660 [.0260]
640709-1	22	26 - 222	.813 [.0320]

Figure 4

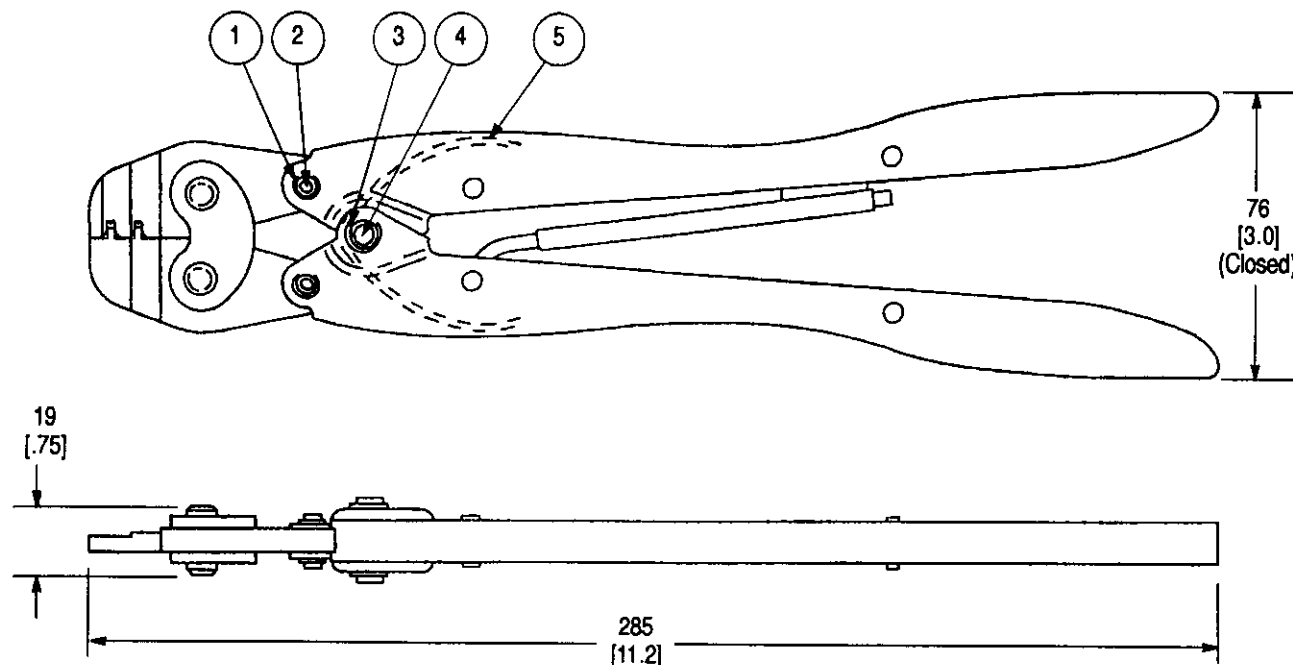
checking the clearance between the bottoming surfaces of the crimping dies. Proceed as follows:

1. Select the maximum size wire and strip it according to dimensions listed in Figure 2.
2. Select appropriate contact from Figure 2.
3. Position the contact and wire between the crimping dies, as described in Section 3, CRIMPING PROCEDURE.
4. Hold the contact and wire in place and squeeze the handles until the CERTI-CRIMP ratchet releases. Hold the handles in this position, maintaining just enough tension 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. 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



WEIGHT: Approx. 624 g [1 lb. 6 oz.]

REPLACEMENT PARTS			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	21045-3	RING, Retaining	1
2	1-23619-6	PIN, Retaining	1
3	21045-6	RING, Retaining	1
4	2-23620-9	PIN, Retaining	1
5	39364	SPRING	1

Figure 5

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For tool repair service or CERTI-CRIMP ratchet adjustment, return the tool, with a written description of the problem, to:

CUSTOMER REPAIR (01-12)
AMP INCORPORATED
1523 NORTH 4TH STREET
HARRISBURG, PA 17102-1604

6. REVISION SUMMARY

Since the previous release, the following changes and additions were made to this document:

Per EC 0150-4131-92:

- Changed part numbers of items 2 and 4 in Figure 5

Per EC 0990-0252-93:

- Updated format
- Added metric units

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