

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.

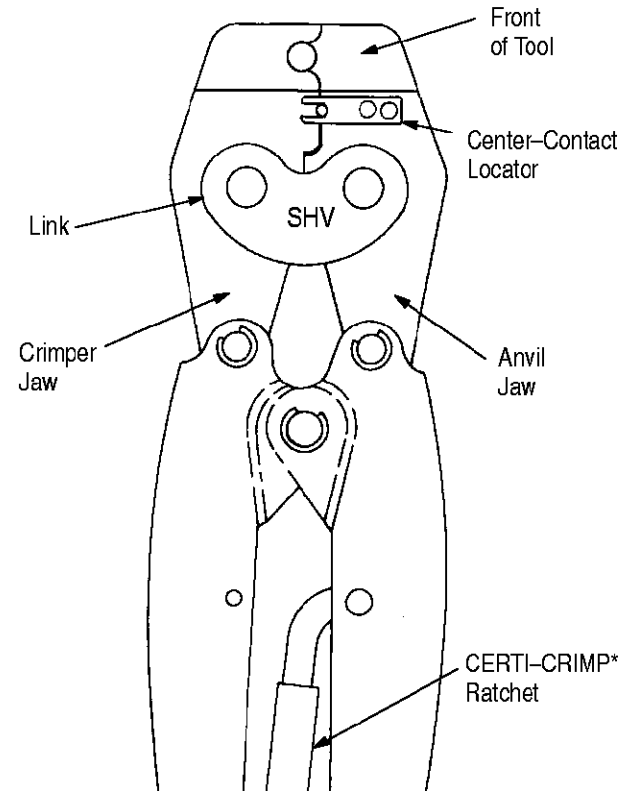


Figure 1

1. INTRODUCTION

AMP* Hand Crimping Tool 220022-1 crimps Standard High Voltage COAXICON* connectors listed in Figure 2. Read these instructions thoroughly before using the tool.

NOTE *Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.*

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

2. DESCRIPTION

The front of the tool into which the center contacts and ferrules are inserted, has the SHV (Standard High Voltage) letter markings on the link. The tool features two sets of crimping chambers (contained within the crimper and anvil jaws), a center-contact locator, and a CERTI-CRIMP ratchet. See Figure 1.

One set of crimping chambers is used to crimp the ferrule and the other set is used to crimp the center contact.

The center-contact locator aids in positioning the center contact in the crimping dies.

Full crimping of the connector is assured by the CERTI-CRIMP ratchet. Once engaged, the ratchet does not release until the tool handles have been FULLY closed.

CAUTION *The crimping jaws bottom before the CERTI-CRIMP ratchet releases. This design feature ensures 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.*

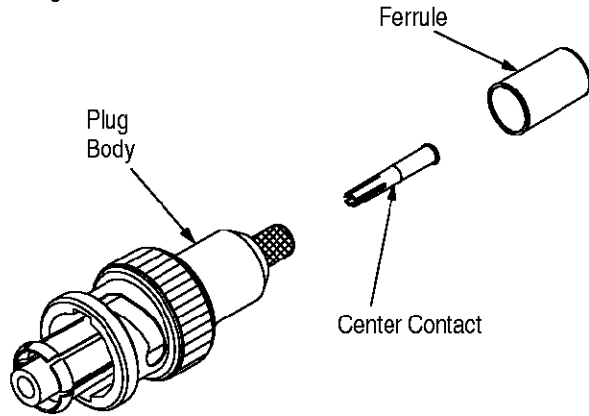
The crimping procedure requires two separate crimps. First, the center contact must be crimped to the center conductor of the cable; then the ferrule is crimped to the cable and connector.

3.1. Crimping the Center Contact

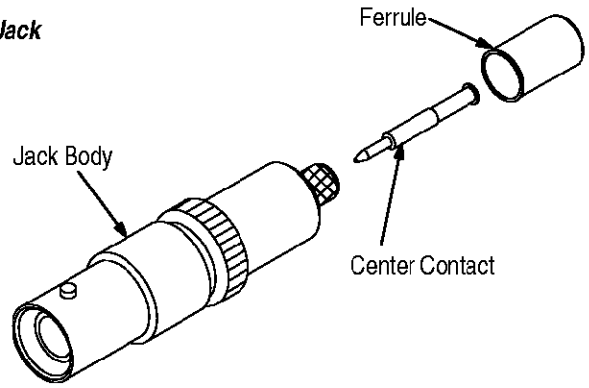
Refer to Figure 2 and select the appropriate cable and connector for the hand tool. Proceed as follows:

1. Slip ferrule on cable, then strip the cable to the dimensions specified in Figure 2.
2. Open the crimping jaws by squeezing the tool handles together until the ratchet releases and then allow the handles to open FULLY.
3. Insert the center contact into the locator through the FRONT of tool as shown in Figure 3.
4. Slowly close tool handles until the center contact is held firmly in place. Do not deform the wire barrel of the center contact.
5. Insert center conductor of cable into center-contact wire barrel until cable dielectric butts against contact.
6. While holding cable in place, close tool handles until ratchet releases. Allow handles to open fully and remove crimped contact.

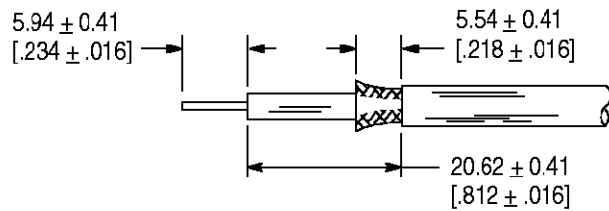
Plug



Jack



Cable Strip Dimensions



RG/U CABLE	CONNECTOR	
	TYPE	PART NUMBER
58A	Crimp-Type Plug	51426-1 and -4
58C	Crimp-Type Jack	225087-4

Figure 2

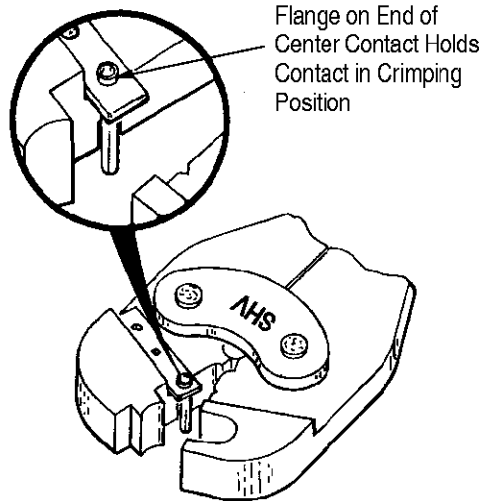


Figure 3

2. Position ferrule over braid and against the connector.
3. Place ferrule in the ferrule crimping chamber of the tool. The shoulder on the connector must rest against the crimping jaw.
4. Holding ferrule in place, squeeze tool handles together until ratchet releases. Allow handles to open fully and remove the crimped connector.

3.2. Crimping Ferrule

Refer to Figure 4 and proceed as follows:

1. Insert crimped center contact into appropriate contact body until cable dielectric bottoms against dielectric inside contact body. Braid should fit over braid support sleeve of connector body.

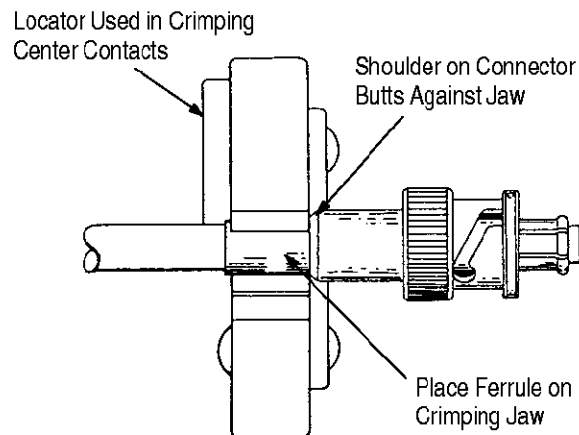


Figure 4

4. MAINTENANCE AND INSPECTION PROCEDURE

AMP recommends that a maintenance and inspection program be performed periodically to ensure dependable and uniform terminations. Though recommendations call for at least one inspection a month, 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 arrival to ensure that the tool has not been damaged during shipment.

4.1. Daily Maintenance

1. Hand tool should be immersed (handles partially closed) in a reliable commercial degreasing compound to remove accumulated dirt, grease, and foreign matter. When degreasing compound is not available, tool may be wiped clean with a soft, lint-free cloth. Do NOT use hard or abrasive 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 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 jaws. Store the tool in a clean, dry area.

4.2. Periodic Inspection

A. Lubrication

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

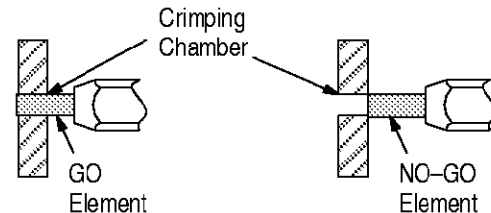
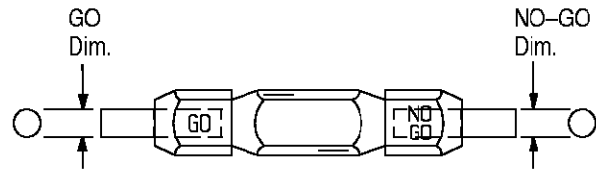
- Tools used in daily production—lubricate daily
- Tools used daily (occasional)—lubricate weekly
- Tools used weekly—lubricate monthly

Wipe excess oil from tool, particularly from crimping area. Oil transferred from the crimping area onto certain terminations may affect the electrical characteristics of 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 spring is defective and must be replaced.

Suggested Plug Gage Design



CRIMPING CHAMBER	GAGE ELEMENT DIMENSION	
	GO	NO-GO
Center Contact	1.65 [.065]	1.75 [.069]
Ferrule	5.49 [.216]	5.64 [.222]

Figure 5

2. Inspect head assembly for worn, cracked, or broken jaws. If damage is evident, return the tool to AMP for evaluation and repair. See Section 5.

C. Gaging the Crimping Chambers

This inspection requires the use of plug gages conforming to the dimensions provided in Figure 5. AMP does not manufacture or market these gages. To gage the crimping chambers, proceed as follows:

1. Remove traces of oil or dirt from crimping chambers and plug gages.
2. Close the tool handles until the jaws have bottomed; then hold in this position. Do not force the jaws beyond initial contact.
3. Carefully insert GO element straight into the corresponding crimping chamber; do not force it. The GO element must pass completely through the crimping chamber. See Figure 5.
4. In the same manner, try to insert the NO-GO element into the same crimping chamber. The NO-GO element may start entry, but must not pass completely through the crimping chamber.

If the crimping chambers conform to the gage inspection, they are considered dimensionally correct, and should be lubricated with a THIN coat of any good SAE 20 motor oil. If not, return the tool to AMP for further evaluation and repair. See Section 5.

For additional information concerning the use of a plug gage, refer to instruction sheet 408-7424.

D. 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 jaws to open before they have fully bottomed. 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. Assemble an appropriate center contact and cable.
2. Position the center contact and cable between the crimping jaws, as described in Section 3.1, Crimping the Center Contact.
3. Holding the center contact and cable 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 6 are customer-replaceable. A complete inventory can be stocked and controlled to prevent lost time when replacement of parts is necessary. Parts other than those listed 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 717-986-7605, or write to:

CUSTOMER SERVICE (38-35)
 AMP INCORPORATED
 PO BOX 3608
 HARRISBURG PA 17105-3608

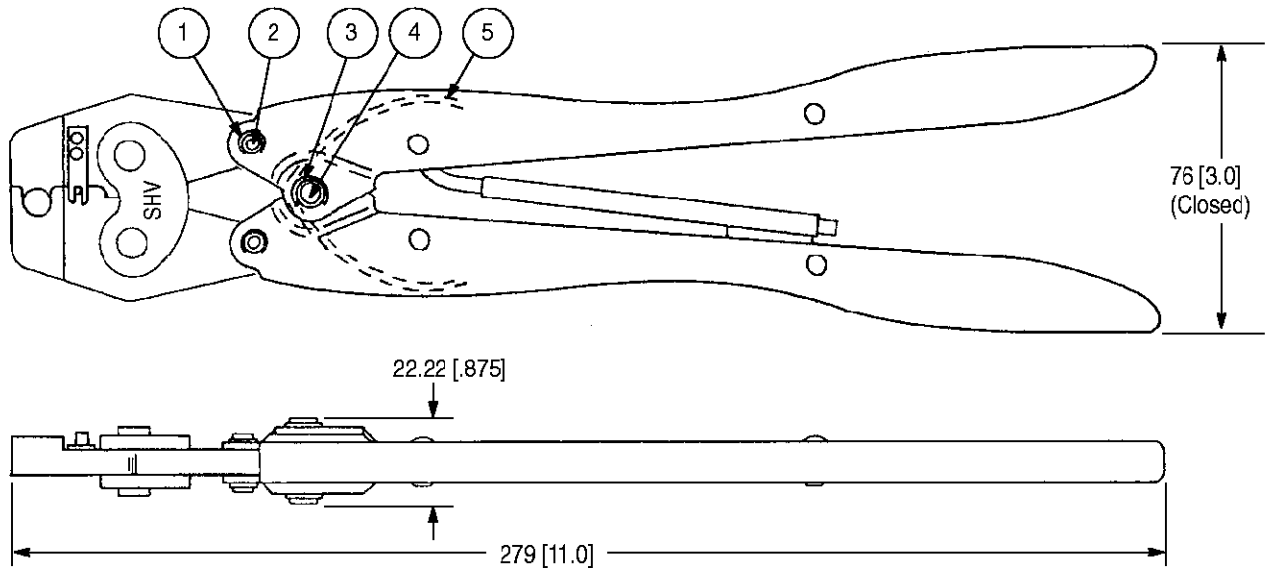
Tools may also be returned to AMP for evaluation and repair. For tool repair service, contact an AMP representative at 1-800-526-5136.

6. REVISION SUMMARY

Revisions to this document include:

Per EC 0990-0760-99:

- 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	1-23619-6	Pin, Retaining	2
3	21045-6	Ring, Retaining	2
4	2-23620-9	Pin, Retaining	1
5	39364	Spring, Handle	1

Figure 6