



Hand Crimping Tool 90272-1

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.

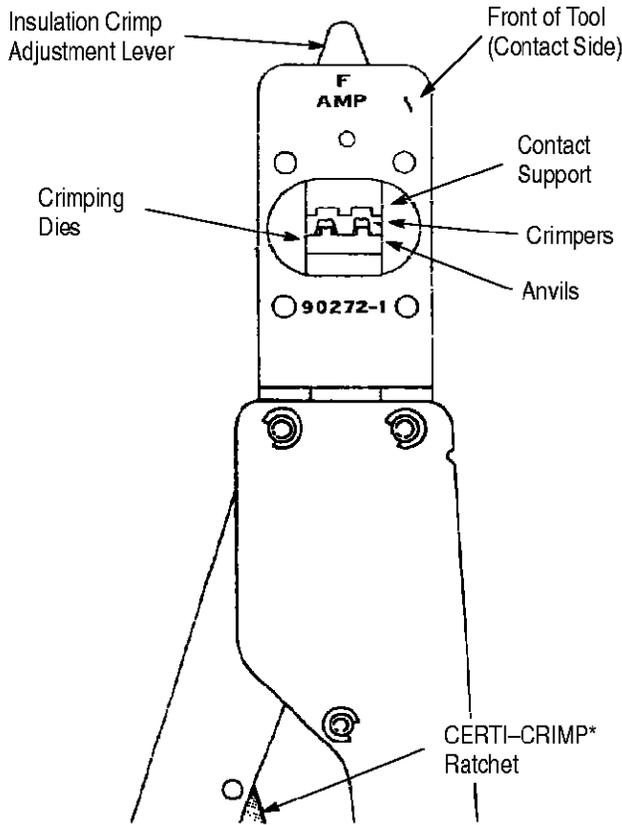


Figure 1

This tool contains two fixed dies (crimpers), two movable dies (anvils), an insulation crimp adjustment lever, a locator/insulation stop, a contact support, an ejector, two color code dots, and a CERTI-CRIMP ratchet.

The insulation adjustment lever is used to control the crimp height of the contact insulation barrel. It can be set at any of three positions: (1) Small; (2) Medium; or (3) Large.

The locator/insulation stop positions the contact between the crimping dies. In addition, the locator/insulation stop aids in locating the wire in the contact. In use, it is positioned in the contact locator slot.

The contact support prevents the contact from bending during the crimping procedure.

The ejector (Figure 4) pulls the locator down and ejects the crimped contact when the tool handles are fully opened.

The two green color dots on the back of the tool indicate the combined wire range (24-20) of the tool crimp sections. The applicable loose piece contacts contain a green color code dot, as shown in Figure 2.

1. INTRODUCTION

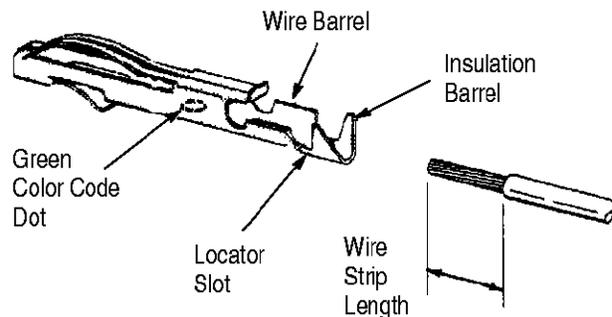
AMP* Hand Crimping Tool 90272-1 is designed to crimp AMP Twin Leaf loose piece (LP) contacts listed in Figure 2. Read these instructions before using the tool.

NOTE Dimensions are in millimeters [with inch equivalents in brackets]. Figures are for identification only and are not drawn to scale.

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

2. DESCRIPTION (Figure 1)

The tool number is marked on the front of tool (contact side). This is the side into which the contact is inserted. The wire size is marked above the crimp section on the back of the tool (wire side). This is the side of the tool into which the wire is inserted.



WIRE			CONTACT	
WIRE STRIP LENGTH	INSUL DIA	WIRE RANGE (AWG)	LP	STRIP
3.56 [.140]	1.22 - 2.03 [.048 - .080]	24 to 22	583853-4	583853-2 583853-7
		20	583853-5 583853-9 1-583853-1	583853-3 583853-8 1-583853-0

Figure 2

The CERTI-CRIMP ratchet assures that a full crimp is applied to the contact. Once engaged, the ratchet will not release until the tool 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 CERTI-CRIMP ratchet.*

3. CRIMPING PROCEDURE

1. Refer to the table in Figure 2, select a wire of the specified size and strip the wire to the dimension provided. Do NOT nick or cut the wire strands.
2. Select a contact with the applicable color code dot and identify the appropriate crimp section according to the markings on the back of the tool. See Figure 3.
3. Hold the tool so that the back (wire side) of the tool is facing you. See Figure 3.
4. Make sure that the ratchet is released. Squeeze the tool handles together and allow them to open fully.
5. Looking straight into the back of the appropriate crimp section, insert the contact (insulation barrel first) into the front of the crimp section.

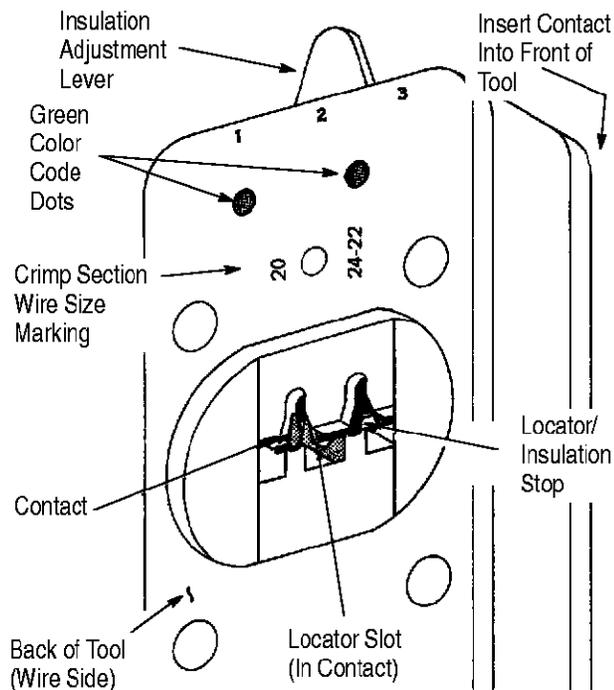


Figure 3

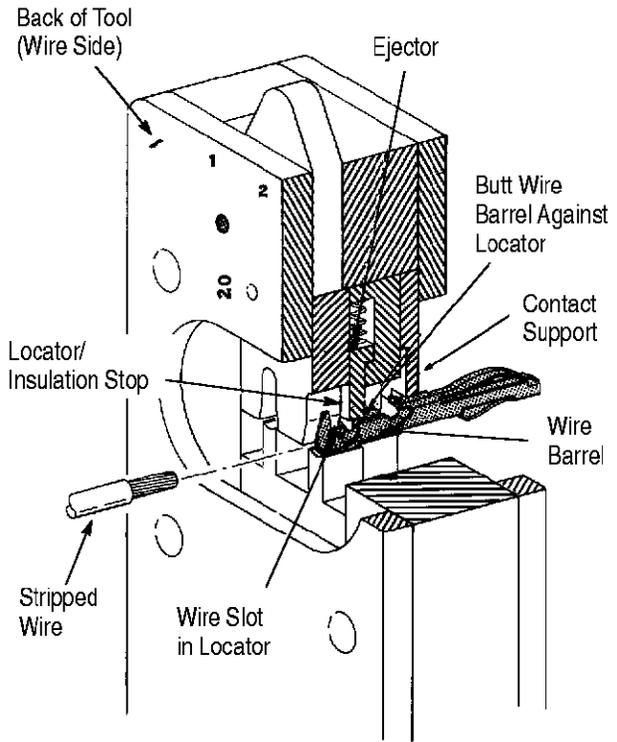


Figure 4

6. Position the contact in the crimpers so that the locator enters the locator slot of the contact. Push the contact in until the wire barrel butts against the locator/insulation stop. See Figure 4.
7. Hold the contact in position and squeeze the tool handles together until the insulation anvil begins entry into the insulation crimper. Do NOT deform the insulation barrel or wire barrel.
8. Insert a properly-stripped wire into the wire slot in the locator and into the wire barrel of the terminal until it butts against the locator/insulation stop. See Figure 4.
9. Hold the wire in place and squeeze the tool handles together until the ratchet releases.
10. Allow the tool handles to open fully and remove the crimped contact

4. MAINTENANCE/INSPECTION

4.1. Insulation Crimp Adjustment

The Insulation barrel crimp height is controlled by the insulation adjustment lever (Figure 3). To determine the proper setting, test crimp a contact using the setting which approximates the insulation size (1-small, 2-medium, or 3-large). If the crimped insulation barrel is too tight or too loose, change the setting accordingly. The crimp should hold the insulation firmly without cutting it.

4.2. Daily Maintenance

Remove all foreign particles with a clean, soft brush or a clean, soft, lint-free cloth. Make sure the proper retaining pins are in place and are secured with the proper retaining rings. If foreign matter cannot be removed easily, or if the proper replacement parts are not available, return the tool to your supervisor.

Make sure all pivot points and bearing surfaces are protected with a thin coat of any good SAE 20 motor oil. Do NOT oil excessively. When the tool is not in use, keep the handles closed to prevent objects from becoming lodged between the dies, and store the tool in a clean, dry area.

4.3. Periodic Inspection

Regular inspection should be performed by quality control personnel. A record of scheduled inspections should remain with the tool and/or be supplied to the supervisory personnel responsible for the tool. Though recommendations call for at least one inspection a month, the inspection frequency should be based on the amount of use, ambient working conditions, operator training and skill, and established company standards. These inspections should be performed in the following sequence:

A. Visual Inspection

1. Remove all lubrication and accumulated film by immersing the tool (handles partially closed) into a suitable degreaser that will not affect paint or plastic material.
2. Make certain all retaining pins are in place and are secured with the proper retaining rings. If replacement retaining rings are necessary, refer to Figure 6.
3. Close the tool handles until the ratchet releases, and then allow the handles to open freely. If they do not open quickly and fully, then the spring is defective and must be replaced (see Section 5, REPLACEMENT AND REPAIR).
4. Inspect the tool, with special emphasis on checking for worn, cracked, or broken crimping dies. If damage to any part of the head is evident, return the tool to AMP for evaluation and repair (see Section 5, REPLACEMENT AND REPAIR).

B. Crimp Height Inspection

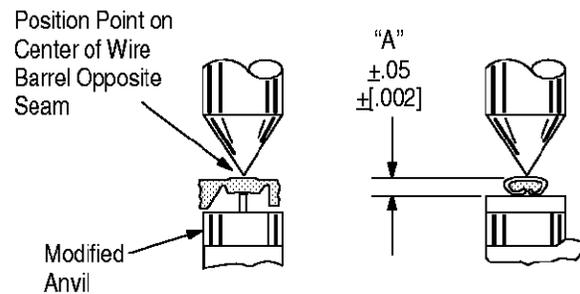
This inspection requires the use of a micrometer, with modified anvil, as shown in Figure 5. AMP recommends the modified micrometer (Crimp Height Comparator RS-1019-5LP) available from:

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

To measure the crimp height:

1. Refer to Figure 5, select a contact and a wire (maximum size) for each crimp section listed in the table.
2. Crimp the contact(s) according to the procedures provided in Section 3, CRIMPING PROCEDURE.
3. Using the crimp height comparator, measure the wire barrel crimp height as shown in Figure 5. If the crimp height conforms to the dimensions provided in Figure 5, then the tool is considered dimensionally correct. If the crimp height does not conform to the dimensions provided, 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.



CONTACTS NUMBER (LP)	WIRE SIZE AWG (Max)	CRIMP SECTION (Wire Size Marking)	CRIMP HEIGHT DIMENSION "A"
583853-4 583853-5 583853-9	22	22-24	.84 [.033]
1-583853-1	20	20	.99 [.039]

Figure 5

C. CERTI-CRIMP Ratchet Inspection

Obtain a 0.025-mm [.001-in.] shim that is suitable for checking the clearance between the bottoming surfaces of the crimping dies. To inspect the ratchet, proceed as follows:

1. Select a contact, wire (maximum size), and locate the proper crimp section of the tool.
2. Position the contact in the tool, as described in Section 3, CRIMPING PROCEDURE. While 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 dies closed.

3. Check the clearance between the bottoming surfaces of the dies. If the clearance is 0.025 mm [.001 in.] or less, then the ratchet is satisfactory. If the clearance exceeds 0.025 mm [.001 in.], the ratchet is out of adjustment and must be repaired.

If the tool conforms to these inspection procedures, lubricate it with a THIN coat of any good SAE 20 motor oil and return it to service.

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. 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

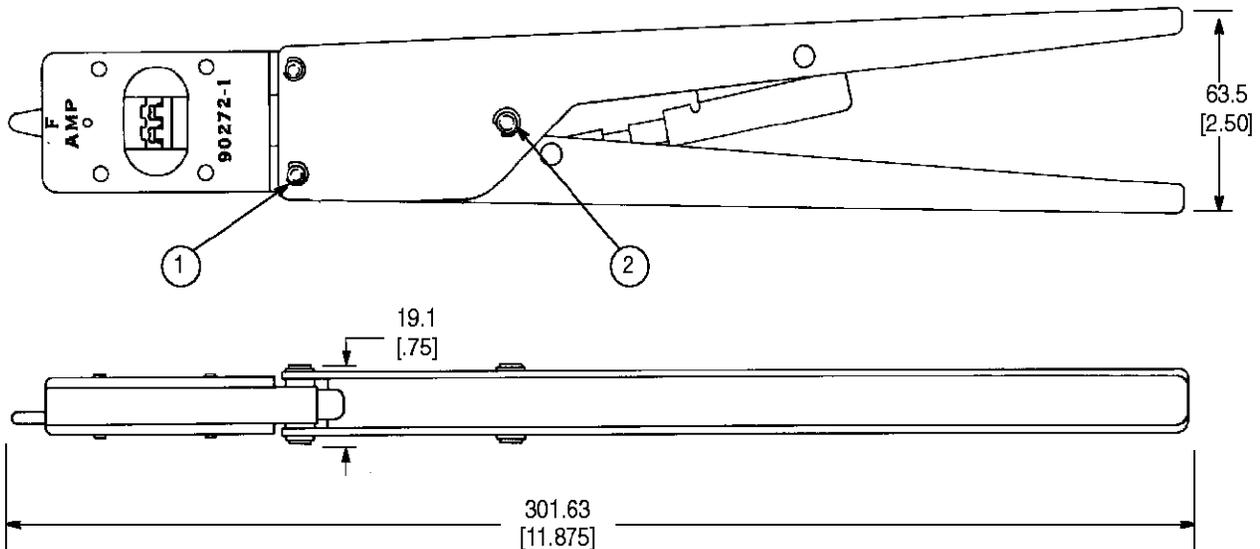
Tools may be returned to AMP for evaluation and repair. For tool repair service, contact an AMP representative at 1-800-526-5136.

6. REVISION SUMMARY

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

Per EC 0990-0864-99

- Changed tool repair service information in Section 5, REPLACEMENT AND REPAIR
- Removed obsolete product part numbers
- Revised the title
- Updated document format



WEIGHT: 567 g [1 lb. 4 oz.]

CAUTION Do not remove the retaining pins or permanent damage to the tool may result.

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

Figure 6