

PROPER USE GUIDELINES

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

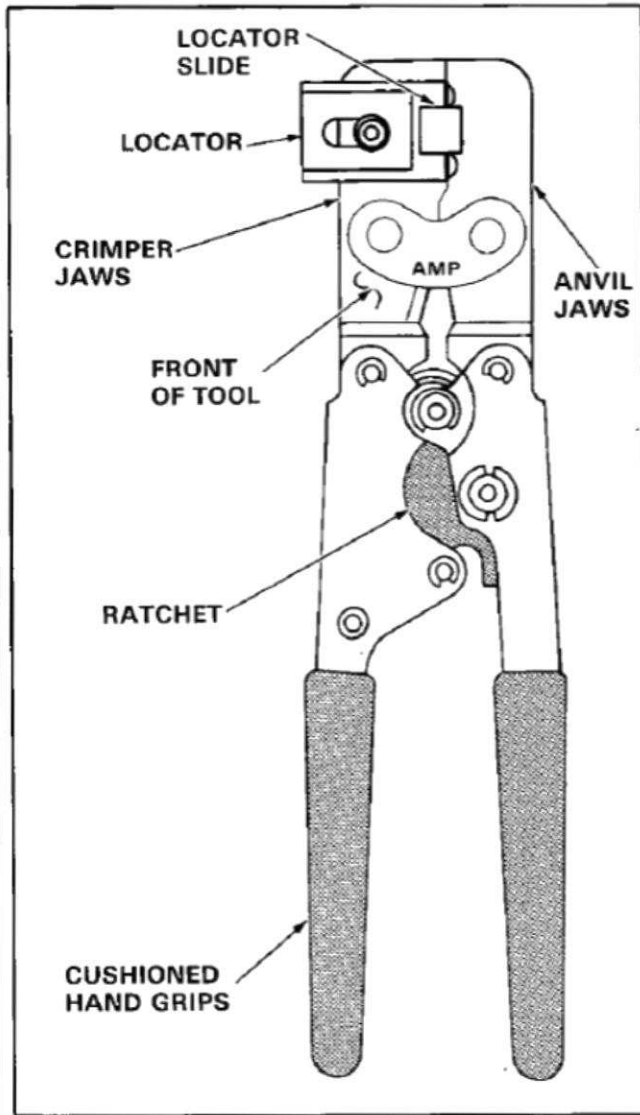


Fig. I-1

SECTION I APPLICATION

I-1. INTRODUCTION

AMP Hand Crimping Tool 90312-1 is designed for crimping the AMPLIMITE[®] precision formed size 20 loose-piece (LP) pin and socket contacts listed in Figure I-2. Read these instructions thoroughly before crimping any contacts. The tool is recommended for field repair use ONLY.

NOTE

All dimensions on this instruction sheet are in inches.

I-2. DESCRIPTION (Figures I-1 and I-2)

This tool features two crimper jaws, two anvil jaws, two crimp sections, a movable locator, a wire stop, a ratchet to ensure full contact crimping, and spring-actuated handles with cushioned hand grips. A color dot appears on the underside of the loose-piece contact wire barrel. The color dot — either red or blue — can be used to match the wire size of the contact with the correct crimping section (either 28-24 or 24-20). Refer to the chart in Figure I-2.

I-3. CRIMPING PROCEDURE

Refer to the chart in Figure I-2, and select wire of the specified size and insulation diameter. Strip the wire to the length indicated — do NOT cut or nick the wire strands.

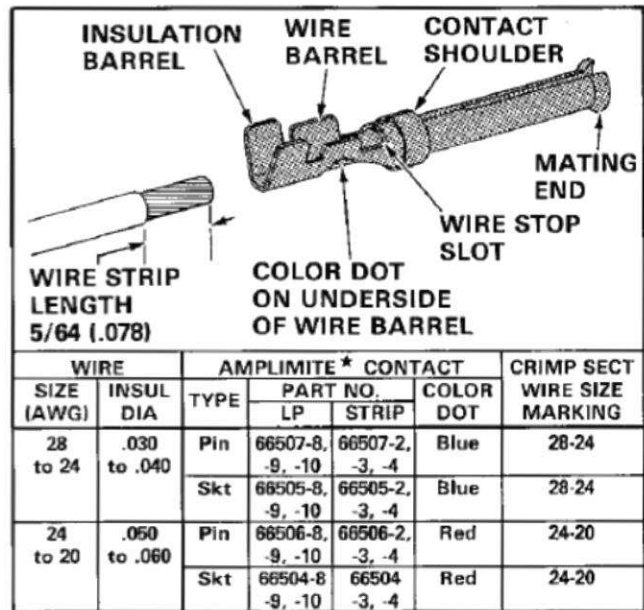


Fig. I-2

Select an applicable loose-piece contact and identify the appropriate crimp section (according to the wire size markings on the BACK of the tool). Refer to Figure I-3 and proceed as follows:

1. Hold tool so BACK (Wire Side) is facing you. Make sure ratchet is released — squeeze tool handles together and allow them to open fully.
2. Grasp locator and simultaneously move locator toward anvil jaws and push locator slide into crimper jaws. Spring tension will hold

locator in position against crimper jaws.

3. Insert contact mating end into appropriate hole in locator slide. Orient contact so wire barrel and insulation barrel are facing crimper jaws (wire size marking).

CAUTION Do NOT attempt to close tool handles when locator slide is positioned between crimping jaws — damage to the tool jaws and/or locator slide may result.

4. Pull locator slide out of crimping jaws. Spring tension will pull locator down and allow wire stop to enter the slot between wire barrel and contact shoulder.

NOTE Make sure both sides of the insulation barrel are started evenly into the crimper jaws — do NOT attempt to crimp an improperly positioned contact.

5. Squeeze tool handles together until ratchet engages — do NOT deform insulation barrel or wire barrel.

6. Insert a properly stripped wire into contact wire barrel until wire butts against wire stop.

7. Holding wire in place, squeeze tool handles together until ratchet releases. Allow tool handles to open FULLY. Move locator toward anvil jaws and remove crimped contact.

I-4. DAILY MAINTENANCE

Remove all foreign particles with a clean, soft brush, or a lint-free cloth. Make sure all pivot points and bearing surfaces are protected with a THIN coat of SAE No. 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 jaws, and store the tool in a clean, dry area.

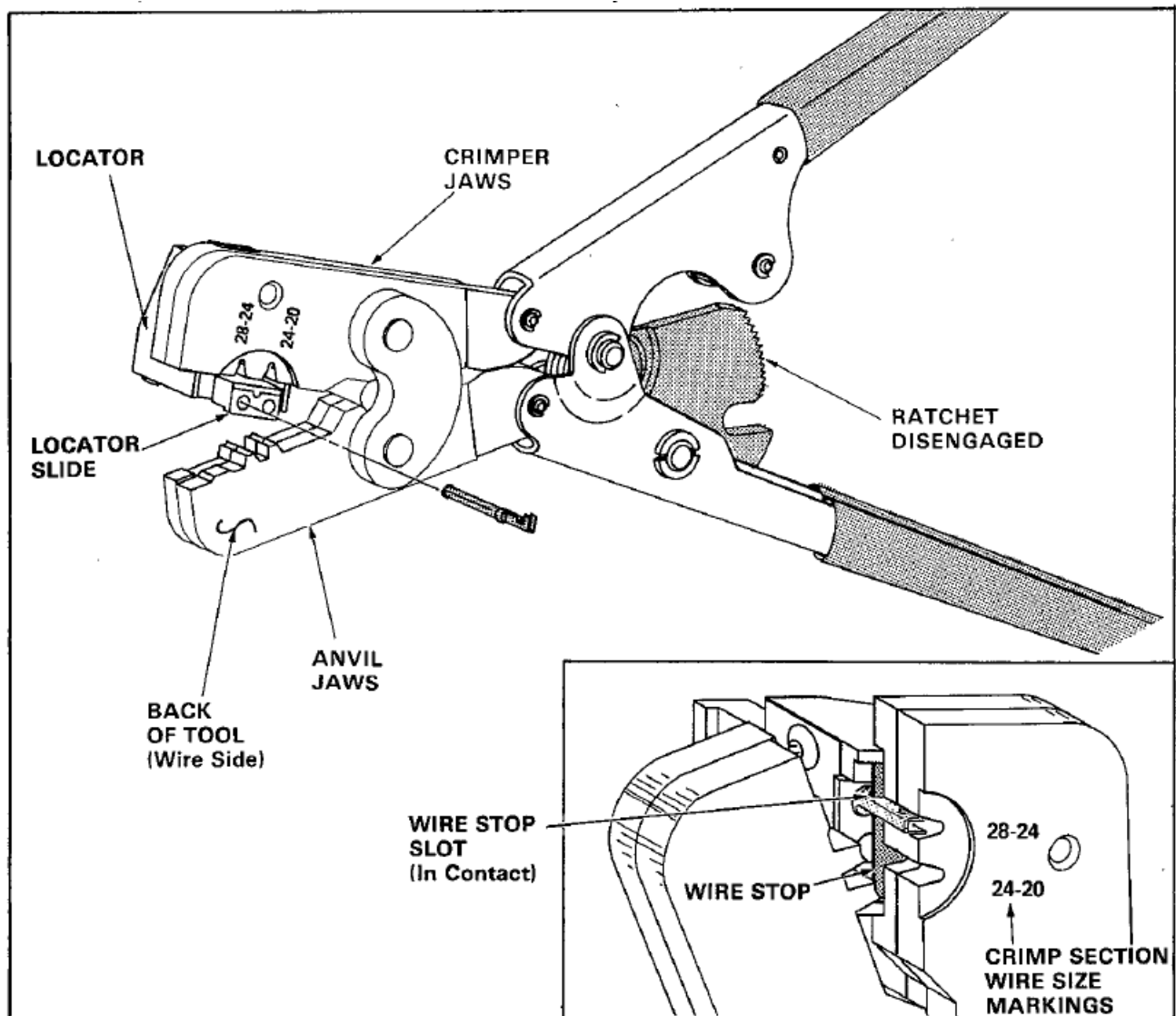
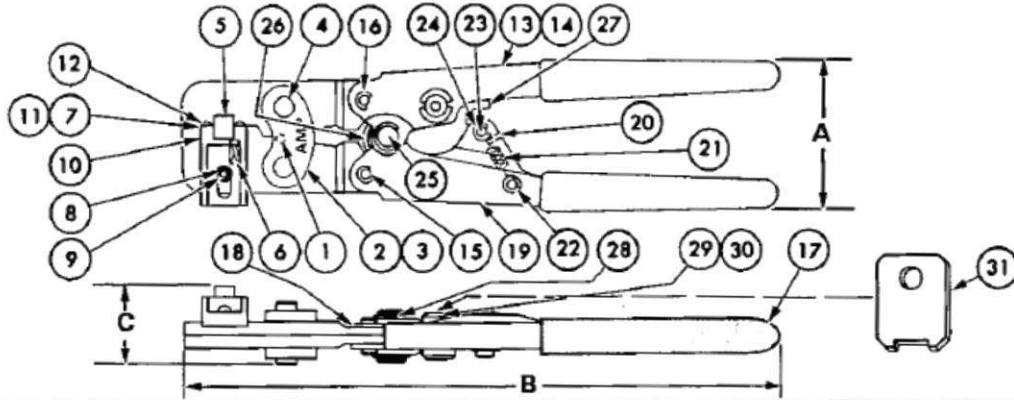


Fig. I-3



TOOL SPECIFICATIONS		REPLACEMENT PARTS								
DIMENSION	WEIGHT	ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY	
A	2.25	1 lb	1	127267-1	PIN	1	16	127290-1	RING, Retaining	4
B	9.00		2	127304-1	LINK	1	17	127254-1	GRIP	2
C	0.75		3	127283-1	LINK	1	18	127291-1	WASHER	4
			4	127301-1	RIVET	2	19	127256-1	HANDLE, Inside	1
			5	127284-1	LOCATOR	1	20	127251-1	PAWL	1
			6	127299-1	SPRING	1	21	127292-1	SPRING, Extension	1
			7	127285-1	WIRE STOP	1	22	127253-1	PIN, Spring	1
			8	127305-1	SCREW, 6-32 x 3/8 L	1	23	127255-1	PAWL, Pivot	1
			9	127308-1	BUSHING	1	24	127293-1	RING, Retaining	4
			10	127286-1	LOCATOR SLIDE	1	25	127294-1	PIN, Pivot	1
			11	127287-1	SLIDE PLATE	1	26	127295-1	SPRING, Torsion	1
			12	127288-1	SCREW, 4-40 x 3/16 L	2	27	127258-1	RATCHET	1
			13	127250-1	HANDLE ASSY	1	28	127296-1	RING, Retaining	2
			14	127257-1	HANDLE, Outside	1	29	127259-1	STUD, Eccentric	1
			15	127252-1	PIN	2	30	127297-1	NUT	1
							31	127298-1	SPANNER WRENCH	1*

* SPANNER WRENCH IS NOT SUPPLIED WITH TOOL.

Fig. II-1

SECTION II MAINTENANCE/INSPECTION

These instructions have been approved by AMP Design, Production, and Quality Control Engineers to provide documented maintenance and inspection procedures in accordance with AMP Corporate Policy No. 3-3. Through AMP test laboratories and the inspection of production assembly, the procedures described herein have been established to ensure quality and reliability of AMP hand crimping tools.

Customer replaceable parts are listed in Figure II-1. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary.

NOTE

Correspondence regarding this tool must include all identification marks, such as:

(Sample Part Number 99999-1-A)

Base number _____
 Dash number _____
 Modification or revision letter _____

II-1. INSPECTION PROCEDURES

A. Daily Maintenance

It is recommended that each operator of the tool be

made aware of — and responsible for — the following four steps of 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 sure the proper retaining pins are in place and secured with the proper retaining rings.
3. Make certain all pins, pivot points, and bearing surfaces are 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 the handles closed to prevent objects from becoming lodged in the crimping jaws and store the tool in a clean, dry area.

B. Periodic Inspection

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the tool and/or be supplied to 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:

B-1. Visual Inspection

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 all retaining pins are in place and secured with retaining rings. If replacements are necessary, refer to parts listed in Figure II-1.
3. Close the tool handles until the ratchet releases, then allow handles to open freely. If they do not open quickly and fully, the spring is defective and must be replaced (see Paragraph II-2, REPAIR).
4. Inspect the head assembly, with special emphasis on checking for worn, cracked, or broken jaws. If damage to any part of the head assembly is evident, the tool must be repaired (see Paragraph II-2, REPAIR).

B-2. Crimp Height Inspection

This inspection requires the use of a micrometer with a modified anvil as shown in Figure II-2. We recommend the modified micrometer (Crimp Height Comparator RS-1019-5L) which can be purchased from:

York Machinery & Supply Co. VALCO
 20 North Penn St. or 1410 Stonewood Dr.
 York, PA 17401 Bethlehem, PA 18017

Proceed as follows:

1. Refer to the chart in Figure II-2, and select a contact and a wire (maximum size) for each crimp section listed in the chart.
2. Refer to Paragraph I-3, CRIMPING PROCEDURE, and crimp the contact(s) accordingly.
3. Using a crimp height comparator, measure wire barrel crimp height as shown in Figure II-2. If the crimp height conforms to that shown in the chart, the tool is considered dimensionally correct. If not, the tool must be repaired (see Paragraph II-2, REPAIR).

For additional information concerning the use of the crimp height comparator, refer to AMP Instruction Sheet IS 7424.

B-3. Ratchet Inspection

Obtain a .001-in. shim that is suitable for checking the clearance between the bottoming surfaces of the crimping jaws.

Proceed as follows:

1. Select a contact and wire (maximum size) for the tool (see Figure II-2).

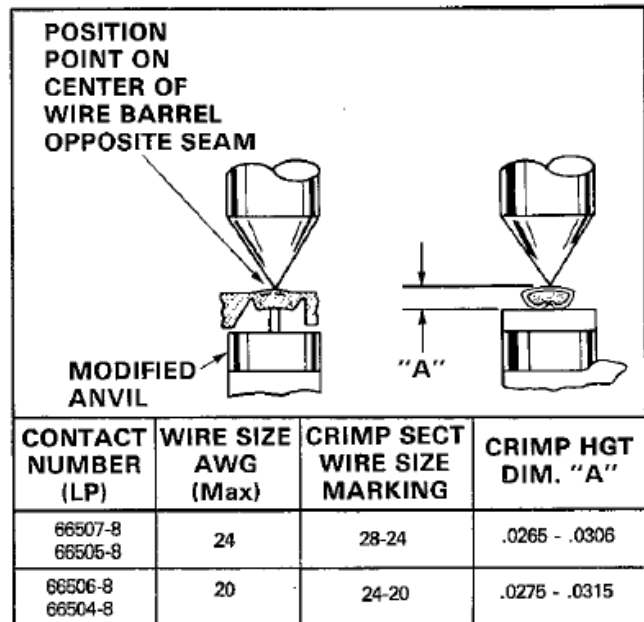


Fig. II-2

2. Position the contact and wire between the crimping jaws, according to Paragraph I-3, CRIMPING PROCEDURE (Steps 1 through 6). 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 jaws closed.
3. Check the clearance between the bottoming surfaces of the crimping jaws. If the clearance is .001 in. or less, the ratchet is satisfactory. If clearance exceeds .001 in., the ratchet is out of adjustment and must be adjusted (see Paragraph II-2, REPAIR).

If the tool conforms to these inspection procedures, lubricate it with a THIN coat of any good SAE No. 20 motor oil and return it to service.

II-2. REPAIR

All parts of the tool can be replaced. If parts that affect ratchet setting are replaced, the ratchet must be adjusted using the spanner wrench (see Figure II-1).

Proceed as follows:

1. Loosen the ratchet nut on the back of tool (side with wire size markings).
2. Check bottoming of tool jaws according to Paragraph B-3, Ratchet Inspection. Turn screw on front of tool CLOCKWISE to tighten ratchet or COUNTERCLOCKWISE to loosen ratchet.
3. When tool jaws bottom properly, retighten nut.

NOTE

It may be necessary to hold the ratchet screw while securing the ratchet nut.