AMP INCORPORATED
Harrisburg, Pa. 17105

APPLICATION AND MAINTENANCE FOR AMP★ HAND CRIMPING TOOL 90087

Instruction Sheet
IS 7106
RELEASED 9-6-79

Section I of this instruction sheet provides application procedures for AMP hand crimping tools. *Section II provides maintenance and inspection procedures for AMP hand crimping tools.*

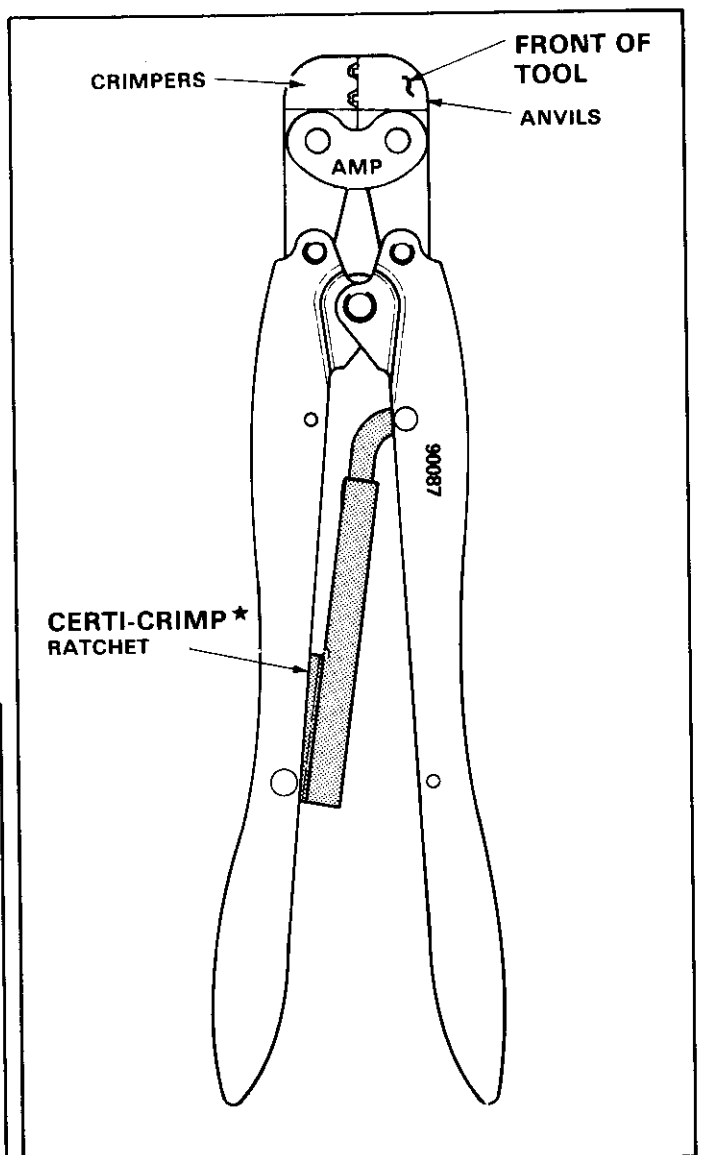


Fig. I-1

SECTION I APPLICATION

I-1. INTRODUCTION

AMP Hand Crimping Tool 90087 is designed for crimping the AMP FASTON★ terminals listed in Figure I-2. Read these instructions thoroughly before crimping any terminals.

NOTE *All dimensions presented on this instruction sheet are in inches, unless otherwise stated.*

I-2. DESCRIPTION (Figures I-1 and I-3)

The FRONT OF TOOL has the AMP marking on the link. The BACK OF TOOL (wire side), into which the wire is inserted, has the wire size marked above each crimp section. The tool features two anvil jaws and two crimper jaws.

The crimp section marked "18-17" is designed to crimp two (2) No. 20 AWG wires, or one (1) No. 18 wire. The crimp section marked "22-20" is designed to crimp one (1) No. 22 wire or one (1) No. 20 wire.

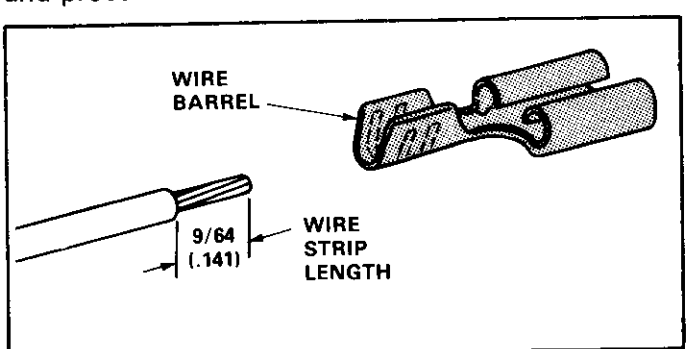
The CERTI-CRIMP ratchet assures full crimping of the terminal. Once engaged, the ratchet will not release until the tool handles have been FULLY closed.

CAUTION *The crimping jaws bottom before the CERTI-CRIMP ratchet releases. This is a design feature that assures maximum electrical and tensile performance of the crimp. Do NOT re-adjust the ratchet.*

I-3. CRIMPING PROCEDURE

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

Select an applicable terminal 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:



WIRE SIZE (AWG)	TERMINAL NO.		CRIMP SECT (Wire Size Marking)
	LP	STRIP	
(2) 20 or 18	60310 60170 60036 60035	60296 42398 42399 42795	18-17
22 to 20	60310 60170 60036 60035	60296 42398 42399 42795	22-20

Fig. I-2

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

2. Make sure ratchet is released — squeeze tool handles together and allow them to open FULLY.

3. Insert terminal (wire barrel first) into FRONT of tool. Position wire barrel on anvil of proper crimp section.

4. Hold terminal in place and squeeze tool handles together until crimping jaws close just enough to retain terminal. Do NOT deform wire barrel.

5. Insert properly stripped wire(s) into wire barrel of terminal. Wire(s) should extend approximately 1/64 in. beyond end of wire barrel.

NOTE *If using two wires, position one above the other on insertion. Then, rotate them 90° so they will be crimped side-by-side.*

6. Holding wire(s) in place, squeeze tool handles together until ratchet releases.

7. Allow tool handles to open FULLY and remove crimped terminal from tool.

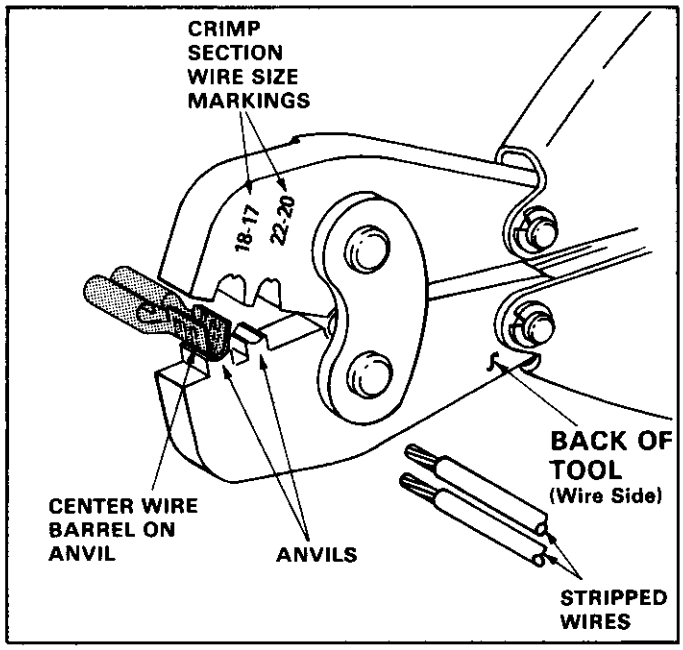


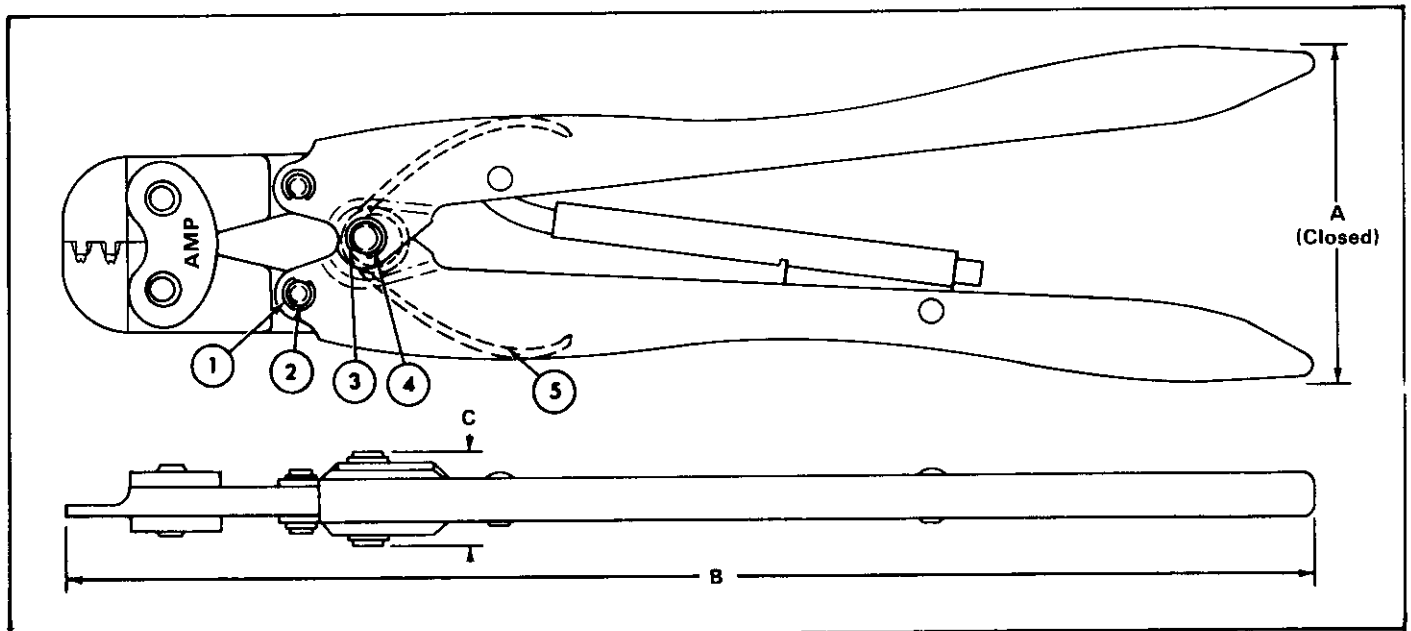
Fig. I-3

I-4. 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 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 certain all pivot points and bearing surfaces are protected with a THIN coat of any good 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 crimping jaws and store the tool in a clean, dry area.

Section I of this instruction sheet provides application procedures for AMP hand crimping tools. *Section II provides maintenance and inspection procedures for AMP hand crimping tools.*



TOOL SPECIFICATIONS		
DIMENSION (Max)		WEIGHT
A	3	1 lb 3 oz
B	11	
C	7/8	
Engineering Approval		Date
		9/6/79

REPLACEMENT PARTS KIT 125218-4			
ITEM	PART NUMBER	DESCRIPTION	QTY PER KIT
1	21045-3	RING, Retaining	120 to 130
2	300432	PIN, Retaining, .187 Dia x .521 L	15
3	21045-6	RING, Retaining	25 to 30
4	300449	PIN, Retaining, .250 Dia x .838 L	10
5	39364	SPRING, Handle	10

Fig. II-1

SECTION II MAINTENANCE/INSPECTION

II-1. TOOL CERTIFICATION

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. When kit items are needed, order replacement kit part number.

II-2. 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-3, 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, return the tool to AMP for evaluation and repair (see Paragraph II-3, 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.
20 North Penn St.
York, PA 17401

or

VALCO
1410 Stonewood Dr.
Bethlehem, PA 18017

Proceed as follows:

1. Refer to the chart in Figure II-2, and select a terminal and a wire (maximum size) for each crimp section listed in the chart.

2. Refer to Paragraph I-3, CRIMPING PROCEDURE, and crimp the terminal(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, return the tool to AMP for evaluation and repair (see Paragraph II-3, REPAIR).

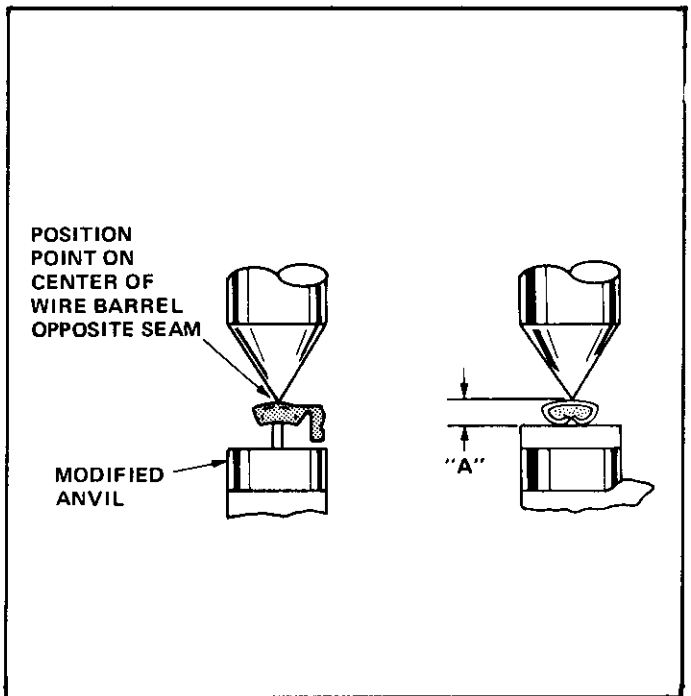
For additional information concerning the use of the crimp height comparator, refer to AMP Instruction Sheet IS 7424.

B-3. CERTI-CRIMP 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 terminal and wire (maximum size) for the tool (see Figure II-2).



TERMINAL NUMBER (LP)	WIRE SIZE AWG (Max)	CRIMP SECT (Wire Size Marking)	CRIMP HGT DIM. "A"
60310 60170 60036 60035	(2) 20	18-17	.050 ± .003
	20	22-20	.041 ± .002

Fig. II-2

2. Position the terminal and wire between the crimping jaws, according to Paragraph I-3, CRIMPING PROCEDURE (Steps 1 through 5). 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 .001 in. or less, the ratchet is satisfactory. If clearance exceeds .001 in., the ratchet is out of adjustment and must be repaired (see Paragraph II-3, 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-3. REPAIR

Parts other than those specified in Figure II-1 must be replaced by AMP to ensure certification of the tool. When repair is necessary, return the tool with a written description of the problem to:

AMP Incorporated
Customer Repair
1523 North 4th Street
Harrisburg, Pennsylvania 17105

or a wholly owned subsidiary of AMP Incorporated.