

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.

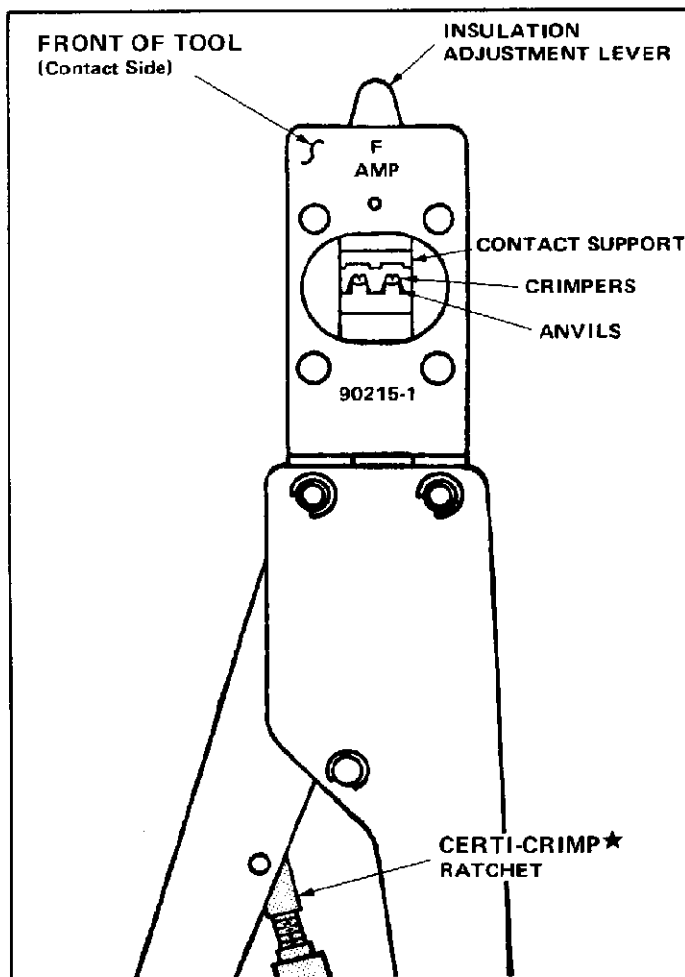


Fig. I-1

## SECTION I APPLICATION

### I-1. INTRODUCTION

AMP Hand Crimping Tool 90215-1 is designed for crimping the AMP Modified Fork loose piece contacts listed in Figure I-2. Read these instructions thoroughly before crimping any contacts.

**NOTE**

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

### I-2. DESCRIPTION (see Figure I-1)

The FRONT OF TOOL (Contact Side), into which the contact is inserted, has the tool number marked on it. The BACK OF TOOL (Wire Side), into which the wire is inserted has the wire size marked above each crimp section.

This tool features two fixed dies (crimpers), two moveable dies (anvils), an insulation adjustment lever, a contact support, a locator/insulation stop, an ejector, and a CERTI-CRIMP ratchet.

The insulation adjustment lever is used to regulate the crimp height of the contact insulation barrel. Refer to Paragraph I-4, INSULATION CRIMP ADJUSTMENT.

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

The locator/insulation stop has two functions. First, it positions the contact between the crimping dies, and second, it aids in locating the wire in the contact. In use, it rests in the locator slot of the contact (see Figures I-2 and I-3).

The ejector pulls the locator down and ejects the crimped contact when the tool handles are FULLY opened.

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

### I-3. CRIMPING PROCEDURE

Refer to the chart in Figure I-2 and select a 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 loose piece contact and identify the appropriate crimp section (according to the wire size markings on the BACK of the tool).

WIRE		CONTACT NO.		CRIMP SECT WIRE SIZE MARKING
SIZE (AWG)	INSUL DIA	LP	STRIP	
24 to 20	.050 to .090	583261	583259	24-20
20 to 18	.070 to .110	583363	583362	20-18

Fig. I-2

Refer to Figure I-3 and proceed as follows:

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. Looking straight into BACK of appropriate crimp section, insert contact (insulation barrel first) into FRONT of crimp section. Position contact in crimpers so locator enters locator slot in contact. *Now, push contact in until wire barrel butts against locator.*
4. Hold contact in this position and squeeze tool handles together until insulation anvil starts entry into insulation crimper. Do NOT deform insulation barrel or wire barrel.
5. Insert a properly stripped wire through wire slot in locator and into wire barrel of contact until insulation butts against locator/insulation stop.
6. Holding wire in place, squeeze tool handles together until ratchet releases.
7. Allow tool handles to open FULLY so ejector can push contact out of crimpers. Remove crimped contact from tool.

#### I-4. INSULATION CRIMP ADJUSTMENT

The insulation barrel crimp height is regulated by the insulation adjustment lever. 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 into it.

#### I-5. 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 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 dies, and store the tool in a clean, dry area.

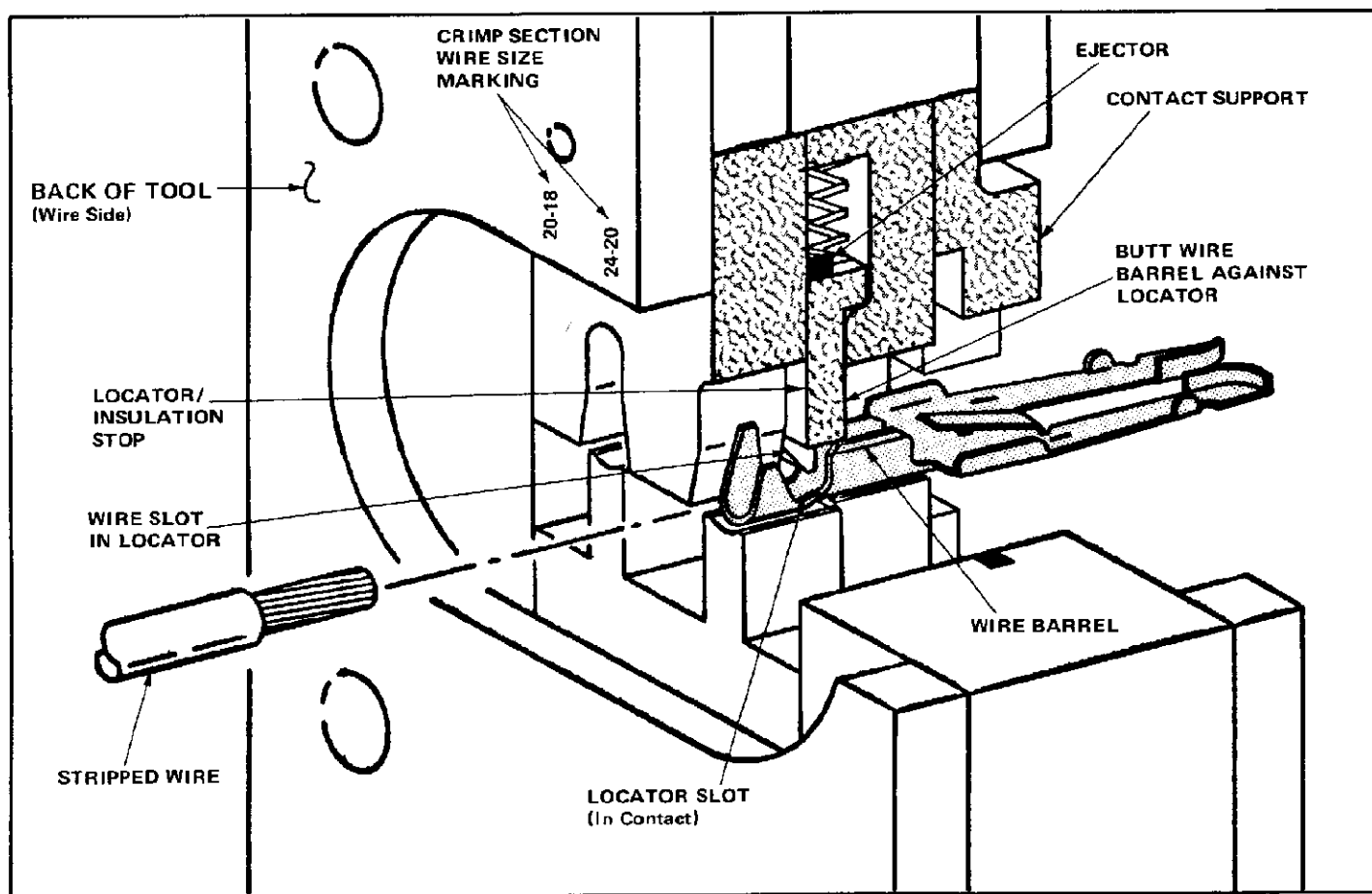


Fig. I-3

Section I of this instruction sheet provides application procedures for AMP hand crimping tools.

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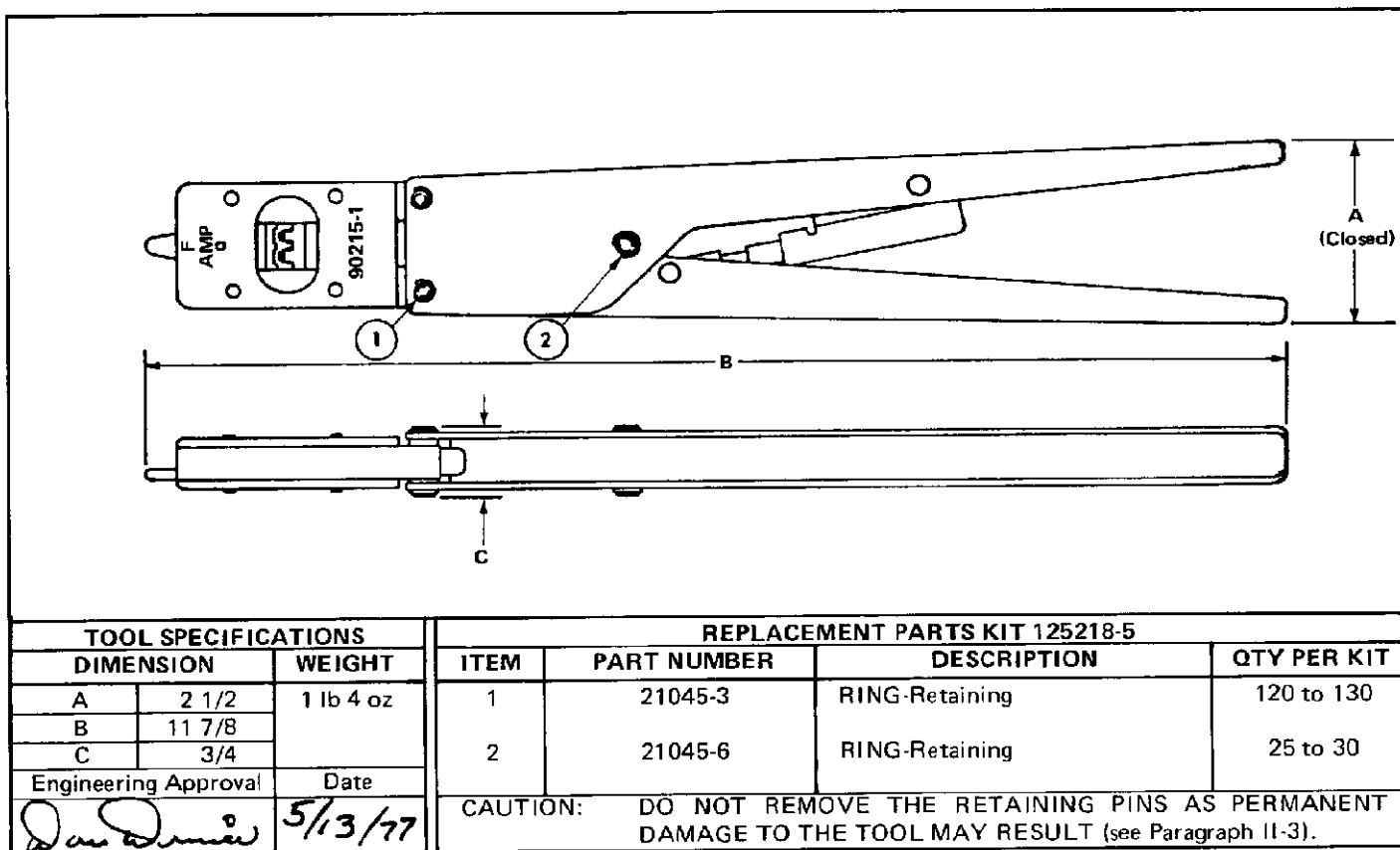


Fig. II-1

## 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 Number 3-3. Through AMP test laboratories and the inspection of production assembly, the procedures described herein have been established to assure 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 deemed necessary. When ordering, order the replacement parts kit listed in Figure II-1.

### 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 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 dies 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 effect 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 dies. 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 incorporates 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 wire (maximum size) and a contact (LP) for each crimp section.
2. Refer to Paragraph I-3, CRIMPING PROCEDURE, and crimp the contacts accordingly.
3. Using a crimp height comparator, measure each 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). 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 dies.

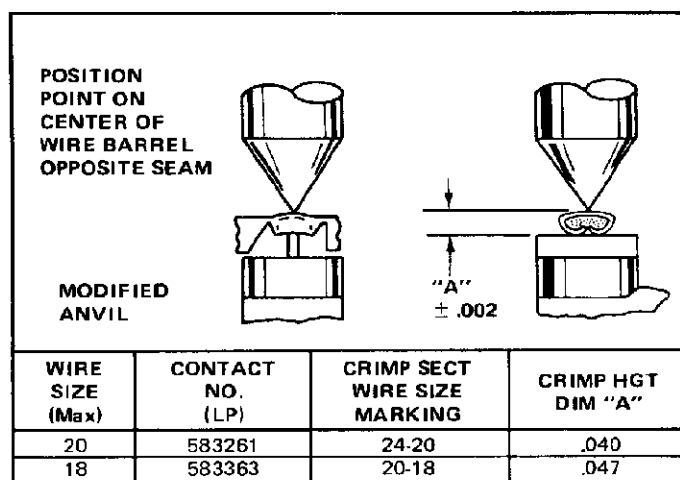


Fig. II-2

Proceed as follows:

1. Select a wire (maximum size) and a contact (LP) for the tool (see Figure II-2).
2. Position the contact and wire between the crimping dies, according to Paragraph I-3, CRIMPING PROCEDURE (Steps 1 through 5). Holding the wire in place, squeeze the tool handles until the CERTI-CRIMP ratchet releases. HOLD the tool handles in this position, maintaining just enough tension to keep the dies closed.
3. Check the clearance between the bottoming surfaces of the crimping dies. 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 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 insure 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.