

**AMP**AMP INCORPORATED  
Harrisburg, Pa. 17105APPLICATION AND MAINTENANCE  
FOR AMP ★ HAND CRIMPING TOOLS  
58342-1 AND 58342-2Instruction Sheet  
**IS 9407**

RELEASED

4-6-88

CUSTOMER HOTLINE 1 800 722-1111

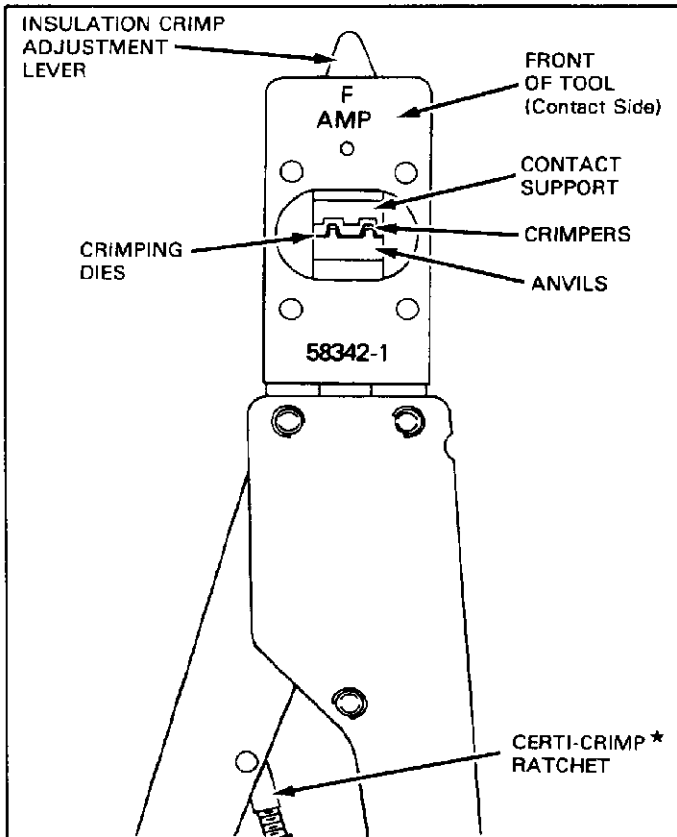
*Section I of this instruction sheet provides application procedures for AMP hand crimping tools.**Section II provides maintenance and inspection procedures for AMP hand crimping tools.*

Fig. I-1

**SECTION I APPLICATION****I-1. INTRODUCTION**

AMP Hand Crimping Tools 58342-1 and 58342-2 are designed for crimping the loose-piece contacts listed in Figure I-2. Read these instructions thoroughly before starting.

**NOTE**

All dimensions on this instruction sheet are in inches.

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

The FRONT of the 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 contact description (pin or receptacle) marked above each crimp section.

Each tool features two fixed dies (crimpers), two movable dies (anvils), an insulation crimp adjustment lever, a locator/insulation stop, an ejector, and a

CERTI-CRIMP ratchet. Tool 58342-1 has an inner and an outer contact support; tool 58342-2 has only the outer contact support. The contact support prevents the contact from bending during the crimping operation.

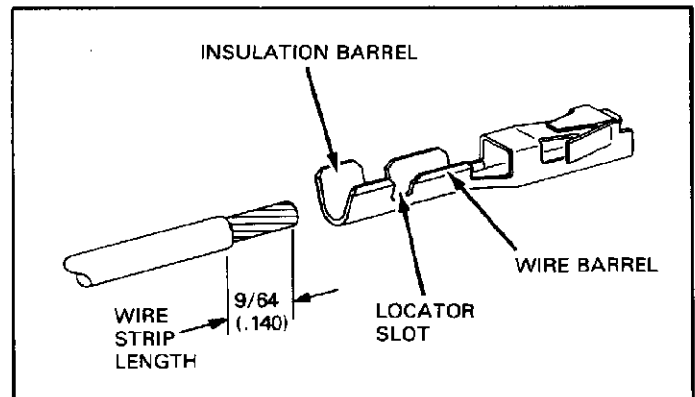
The insulation crimp adjustment lever is used to control the crimp height of the contact insulation barrel. It can be set at any of three positions: (1) small, (2) medium, or (3) large. The locator/insulation stop has two functions. First, it positions the contact between the crimping dies, and second, 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 readjust the ratchet.



TOOL		CONTACT			
PART NO.	CRIMP SECT	PART NO. LOOSE PIECE	DESCRIPTION	WIRE SIZE (AWG)	INSUL DIA RANGE
58342-1	Pin	103897	AMP MODU MTE Pin	22-26	.036 to .054
	Rcpt	530151	Tandem Spring Receptacle		
	Rcpt	530653	Mini Tandem Spring Rcpt		
	Rcpt	531215	Mini Tandem Spring Rcpt		
	Rcpt	531224	Mini Tandem Spring Rcpt		
58342-2	Pin	104047	AMP MODU MTE Pin	28-32	.025 to .054
	Rcpt	103358	Tandem Spring Receptacle		
	Rcpt	530901	Mini Tandem Spring Rcpt		
	Rcpt	531215	Mini Tandem Spring Rcpt		
	Rcpt	531225	Mini Tandem Spring Rcpt		

Fig. 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.

Select an applicable loose-piece contact, and identify the appropriate crimp section (according to the contact description markings on the BACK of the tool). Proceed as follows:

1. Hold tool so BACK side (wire side) faces you. See Figure I-3.
2. Ensure that tool ratchet is released by squeezing tool handles and allowing 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. Push contact in until wire barrel butts against locator/insulation stop.
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 back side wire slot in locator and into wire barrel of contact until insulation butts against locator/insulation stop.

6. Hold wire in place and 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 crimp adjustment is controlled by the insulation adjustment lever. To determine the right setting, crimp a few contacts using each of the three settings: (1) small, (2) medium, and (3) large. Check the insulation crimp after each crimp is made. The crimp should be tight enough to 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, 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 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.

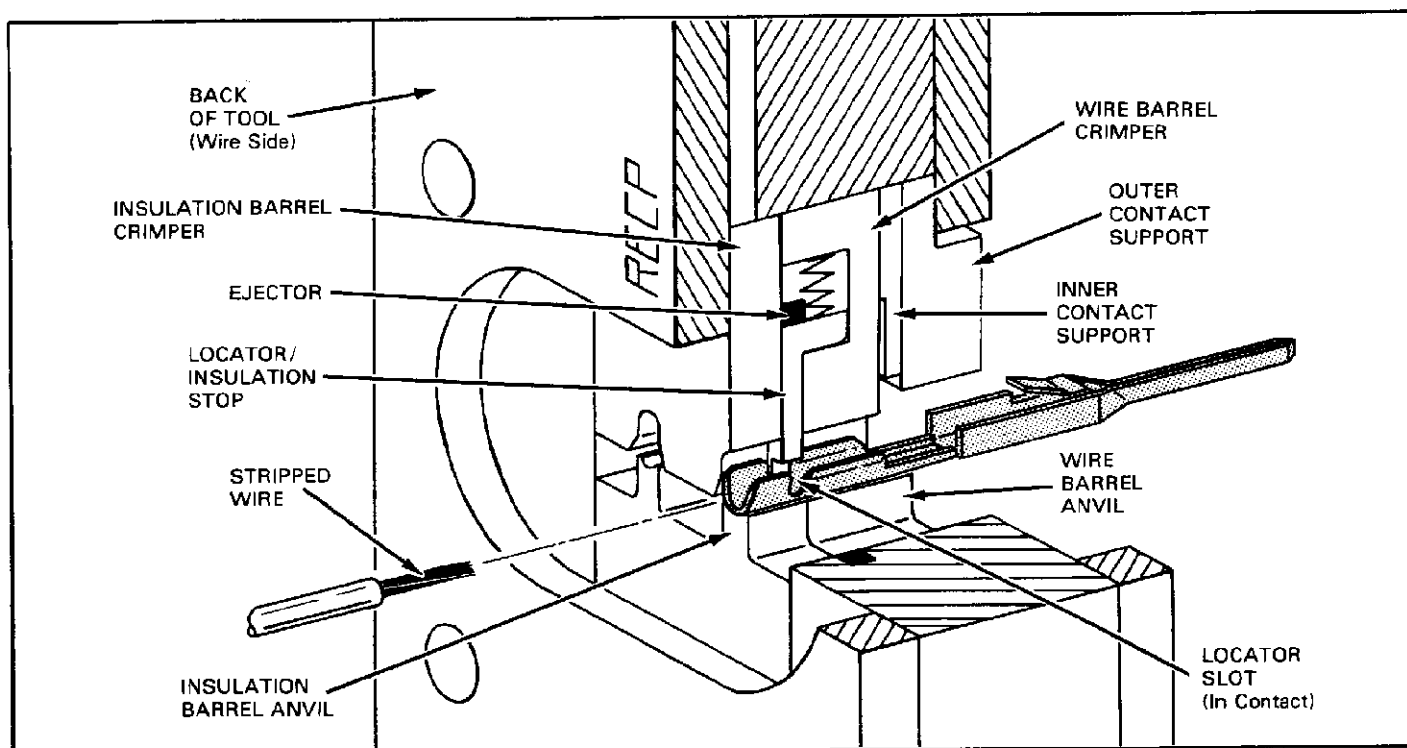


Fig. I-3

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

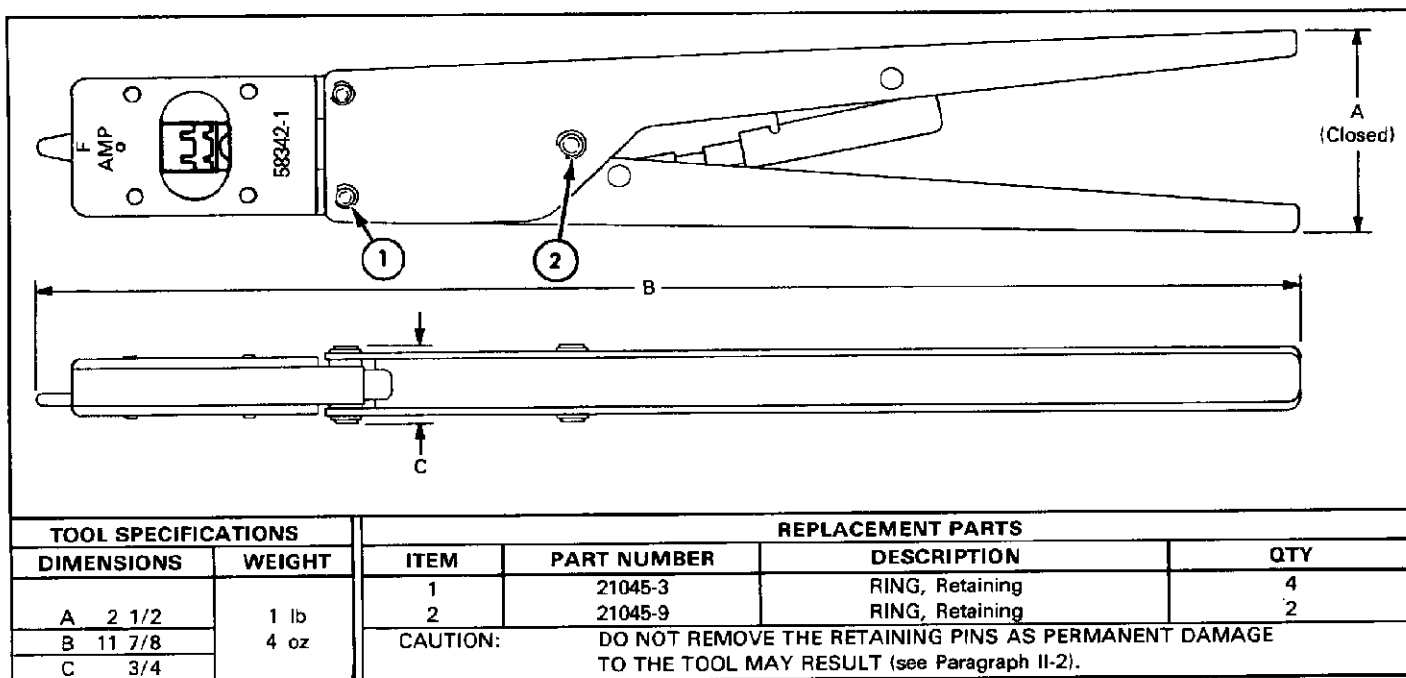


Fig. II-1

**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. When parts are needed, order by part number and description.

**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.

4. When the tool is not in use, keep the handles closed to prevent objects from being 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 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 tool 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 dies. If damage to any part of the head assembly is evident, return the tool to AMP for evaluation and repair (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 and Supply Co.      VALCO  
 20 North Penn Street                      or      1410 Stonewood Drive  
 York, PA 17401-1014                      Bethlehem, PA 18017-3527

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, return the tool to AMP for evaluation and repair (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. CERTI-CRIMP Ratchet Inspection**

Obtain a .001-in. shim that is suitable for checking the clearance between the bottoming surfaces of the crimping dies. Proceed as follows:

1. Select a contact, wire (maximum size), and the designated crimp section for the contact you are using (see Figure II-2).
2. Position the contact and wire between the crimping dies, according to Paragraph I-3, CRIMPING PROCEDURE. 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 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-2, REPAIR).

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

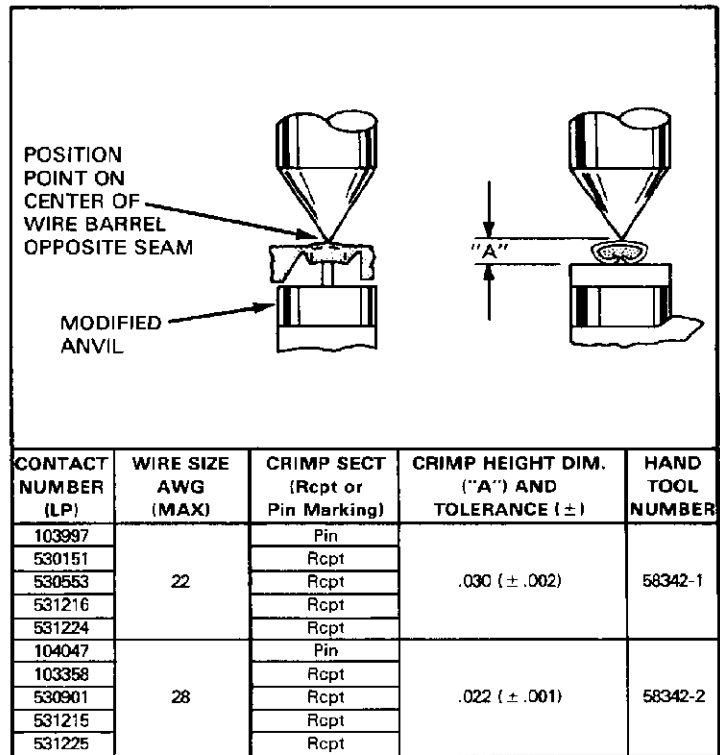


Fig. II-2

**II-2. REPAIR**

Parts other than those specified in Figure II-1 must be replaced by AMP to ensure quality and reliability 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, PA 17102-1604

or a wholly owned subsidiary of AMP Incorporated.