AMP INCORPORATED
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CUSTOMER HOTLINE
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# APPLICATION AND MAINTENANCE FOR AMP* HAND CRIMPING TOOL 68347-1 FOR CRIMPING LOOSE PIECE POWER LOCK CONTACTS

IS 2734

RELEASED
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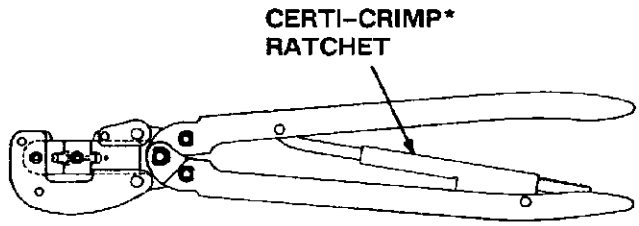


| CONTACT NUMBER | WIRE SIZE | MAXIMUM CRIMP HEIGHT | STRIP LENGTH | |
|---|---|---|---|---|
| | | | Min. | Max. |
| 53892-☐ | 12 | .113 | 7/32" | 1/4" |
| | 14 | .098 | | |
| | 16 | | | |

Fig. 1

## 1. INTRODUCTION

This instruction sheet (IS) provides application and maintenance procedures for Hand Crimping Tool 68347-1. The tool is used to crimp 30 series AMP Power Lock Contacts (loose piece only) with base part number 53892 onto stranded wire sizes 12, 14 and 16.

**NOTE**

*Crimp only precision cut loose piece version of contact in this tool. Do not attempt to crimp contacts cut from the strip version.*

Read these instructions carefully before crimping any contacts.

## 2. DIE POSITIONING

1. Open tool handles as far as they will go.

2. Remove die holder screw and moving die. See Figure 2A.

3. Position desired size anvil (wire size stamped under anvil) in alignment with stationary die. See Figure 2A.

4. Install die in tool. Be sure chamfers on die face the die holder as shown in Figure 2A.

5. Install and tighten die holding screw.

## 3. CABLE PREPARATION AND CRIMPING PROCEDURES

1. Strip wire to dimensions listed in Figure 1. Do not nick or cut conductor strands.

**NOTE**

*Do not exceed maximum strip length (1/4") or occasional contact insertion difficulty may occur (in connector housing) depending on how conductor ends flare after crimping.*

2. Close handles until CERTI-CRIMP ratchet releases, permitting crimping dies to open. See Figure 1. Note that once ratchet is engaged, handles cannot be opened until they are first fully closed.

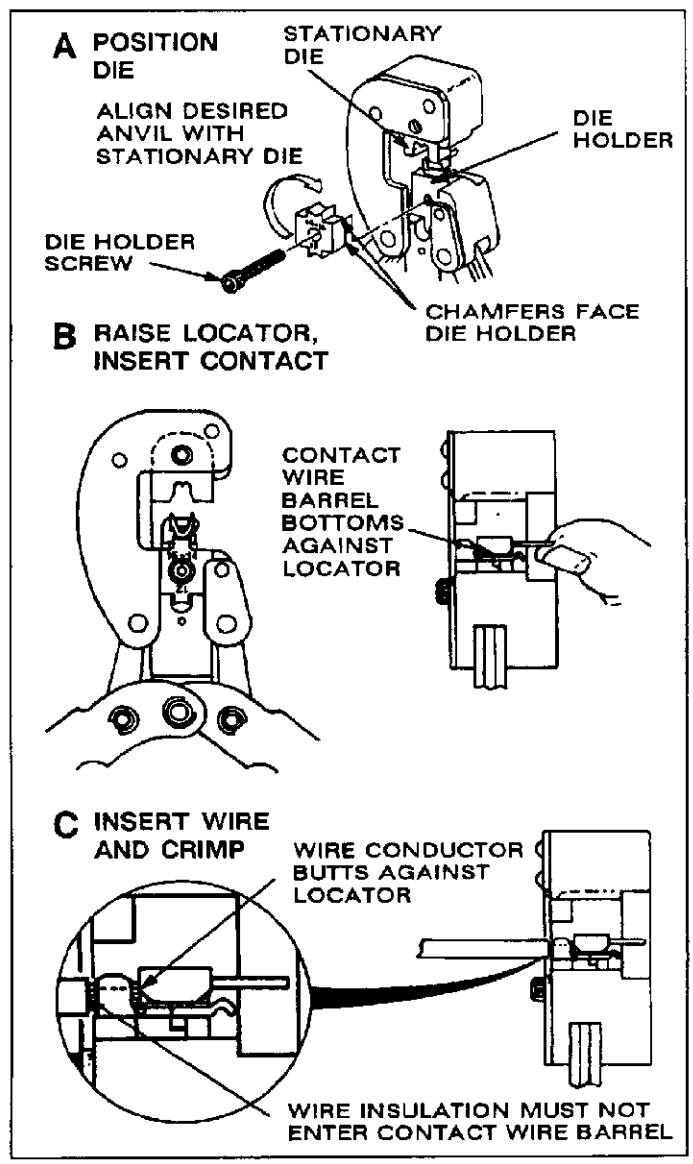


Fig. 2

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3. Lift locator and insert contact as far as it will go. See Figure 2B. Contact wire barrel must butt against side of locator as shown in Figure 2B. Locator will hold contact in position.

4. Insert stripped wire into wire barrel of contact until end of wire conductor butts against locator as shown in Figure 2C. Be sure wire insulation does not enter wire barrel of contact. See Figure 2C.

5. To complete crimp, close handles until CERTI-CRIMP ratchet releases. Handles will open automatically and crimped item may be removed.

**IMPORTANT: AVOID CONNECTOR FAILURES.** Refer to Section 4 for contact "crimp inspection" procedure.

## 4. CRIMP INSPECTION

Inspect crimped contacts by checking the features described in IS 2928.

"REJECT" contacts can be avoided by following instructions in Sections 2 and 3, and by performing regular tool maintenance as instructed in Section 5.

## 5. MAINTENANCE/INSPECTION PROCEDURES

AMP recommends that a maintenance/inspection program be performed periodically to ensure dependable and uniform terminations. Tool should be inspected at least once a month. Frequency of inspection may be adjusted to suit your requirements through experience. Frequency of inspection is dependent upon:

1. The care, amount of use, and handling of the tool.

2. The type and size of products crimped.

3. The degree of operator skill.

4. The presence of abnormal amounts of dust and dirt.

5. Your own established standards.

All tools are inspected and calibrated before packaging. Since there is a possibility of tool damage in shipment, new tools should be inspected in accordance with Section 5 when received in your plant. Due to the precision design, *it is important that no parts of these tools be interchanged except those replacement parts listed in Figure 5.*

### 5.1. Cleaning

The tool should be immersed (handles partially closed) in degreasing compound to remove accumulated dirt, grease and foreign matter. Remove remaining degreasing compound with a lint-free cloth. When degreasing compounds are not available, tool may be wiped clean with a lint-free cloth. Relubricate tool, as instructed in Paragraph 5.3, before placing it back in service.

### 5.2. Visual Inspection

1. Visually inspect tool for missing pins or retaining rings, then operate tool and note the return action of spring-loaded handles. If parts are missing or defective, refer to Figure 5 for customer replaceable parts.

2. Visually inspect die closure surfaces for broken, pitted or chipped conditions. Although dies may gage within permissible limits, worn or damaged die closure surfaces are objectionable and can affect the quality of the crimp. Examples of possible damaged die closure surfaces are shown in Figure 3.

### 5.3. Lubrication

Lubricate all pins, pivot points and bearing surfaces with a good SAE No. 20 non-detergent motor oil as follows:

Tools used in daily production — Lubricate daily

Tools used daily (occasional) — Lubricate weekly

Tools used weekly — Lubricate monthly

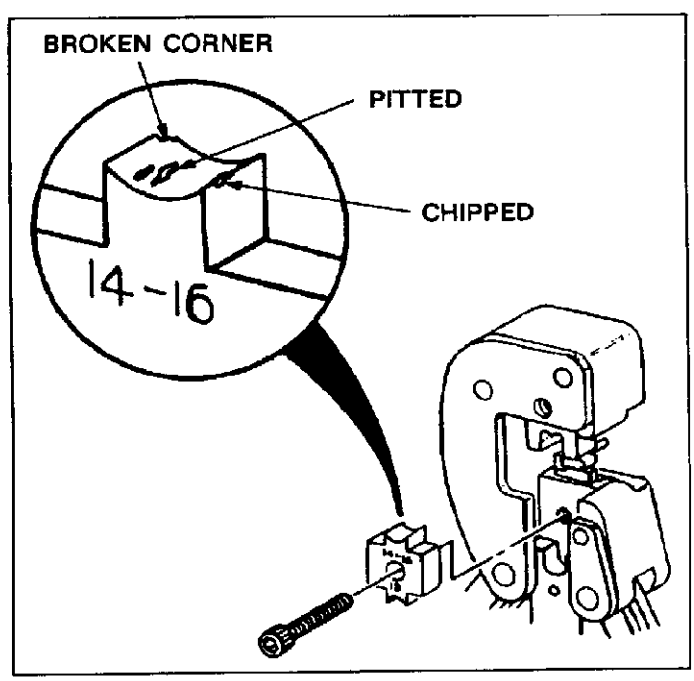
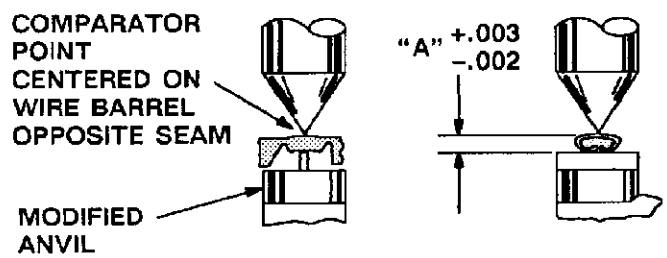



Fig. 3

Wipe excess oil from tool, particularly from crimping surfaces. Oil transferred from the crimping surfaces onto certain terminations may affect the electrical characteristics of an application.

CRIMP HEIGHT INSPECTION




| CONTACT NUMBER | WIRE SIZE MAX. | TOOL CRIMP SECTION | NOM. DIM. "A" |
|---|---|---|---|
| 53892-□ | 14-16 | 14-16 | .096 |
| | 12 | 12 | .111 |

Fig. 4

## 5.4. Crimp Height Inspection

The crimp height inspection requires the use of a micrometer, as shown in Figure 4. AMP recommends using the modified micrometer (Crimp Height Comparator) RS-1019-5L) which can be purchased from:

York Machinery & Supply Co.
20 North Penn Street
York, PA 17401-1014

or

VALCO
1410 Stonewood Drive
Bethlehem, PA 18017-3527

Proceed as follows:

1. Refer to the chart in Figure 4 and select a contact and the compatible cable.

2. Refer to Paragraph 3, (CABLE PREPARATION AND CRIMPING PROCEDURES) and crimp the contact(s) accordingly.

3. Using a crimp height comparator, measure the center contact barrel crimp height, as shown in Figure 4. If the crimp height conforms to that listed in Figure 4, the tool is considered dimensionally correct. If not, return the tool to AMP for evaluation and repair (see Paragraph 6, REPAIR).

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

## 5.5. CERTI-CRIMP Ratchet Inspection

Check the CERTI-CRIMP ratchet to ensure that ratchet does not release prematurely, allowing dies to open before they have fully bottomed.

To check ratchet feature:

1. Thoroughly clean bottoming surfaces of dies.

2. Perform a crimp using the maximum wire load, i.e., a No. 12 AWG wire in a contact. When this crimp is made, squeeze handles until ratchet is free; however, DO NOT RELAX PRESSURE ON TOOL HANDLES.

3. Bottoming is satisfactory if bottoming surfaces of dies make contact with each other or if clearance between bottoming surfaces is .001" or less.

4. If a .001" shim stock can be inserted completely between bottoming surfaces of dies, dies are considered as not bottoming. Contact your local AMP field representative.

## 6. REPAIR

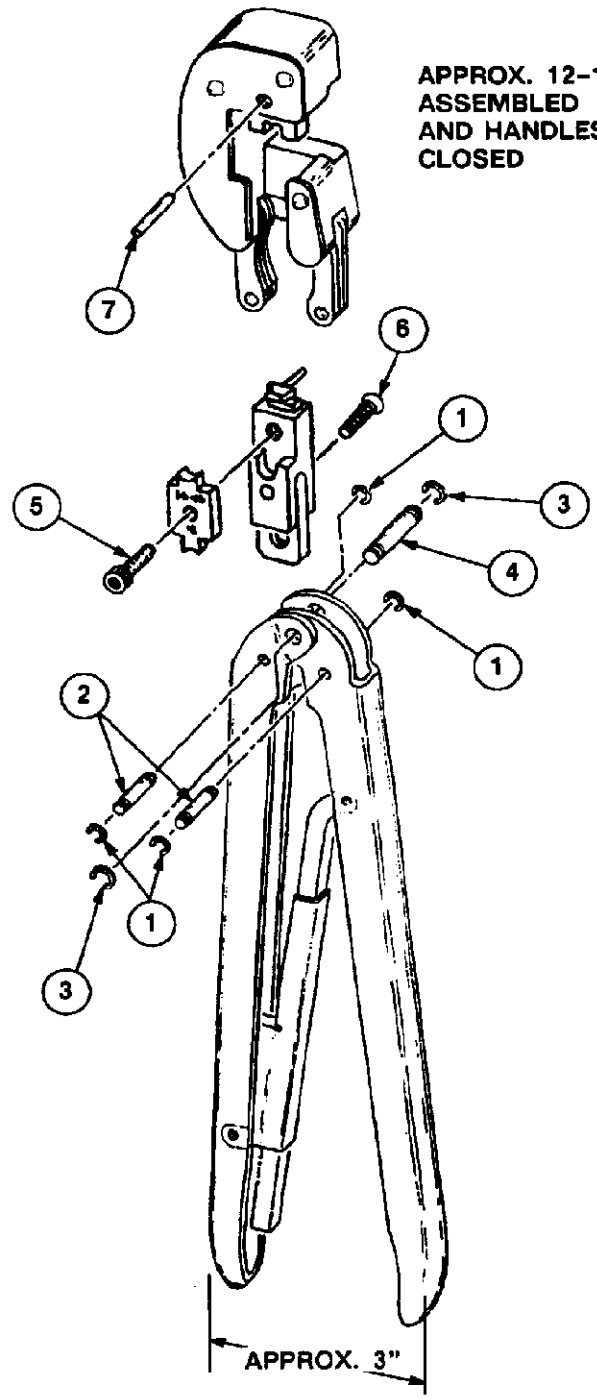
The parts listed in Figure 5 are customer replaceable. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. Parts may be ordered from:

AMP Incorporated
P.O. Box 3608
Harrisburg, PA 17105-3608

or a wholly owned subsidiary of AMP Incorporated.

The tool can be returned to AMP for evaluation and repair. Send the tool with a written description of the problem to:

AMP Incorporated
Customer Repair
1523 North 4th Street
Harrisburg, PA 17102-1604




TOOL NUMBER 68347-1

| ITEM NUMBER | PART NUMBER | QTY | DESCRIPTION | ITEM NUMBER | PART NUMBER | QTY | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 1 | 21045-3 | 4 | RING, RETAINING | 5 | 2-21000-9 | 1 | SCREW |
| 2 | 300388 | 2 | PIN, RETAINING | 6 | 2-21003-6 | 1 | SCREW |
| 3 | 21045-6 | 2 | RING, RETAINING | 7 | 5-21028-9 | 1 | PIN |
| 4 | 300389 | 1 | PIN, RETAINING | | | | |

Fig. 5