

### PROPER USE GUIDELINES

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

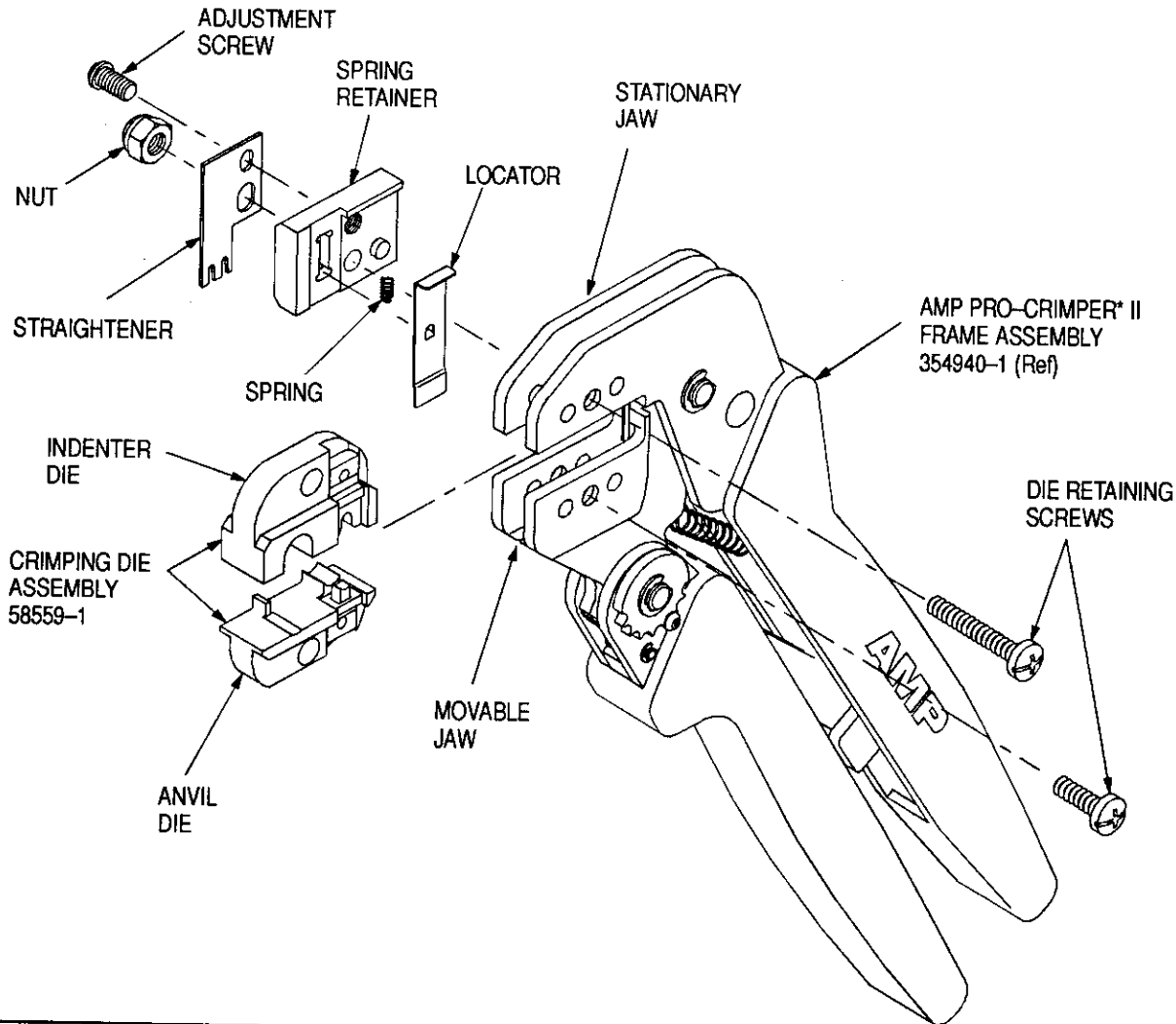


Figure 1

## 1. INTRODUCTION

AMP Crimping Die Assembly 58559-1 is designed to crimp AMP Consumer RF Series BNC Plug Connectors when used in AMP PRO-CRIMPER II Frame Assembly 354940-1. Read these instructions thoroughly before using the die assembly.

### NOTE

*This tool is designed primarily for field installation, repair, maintenance work, or prototyping in industrial, commercial, or institutional applications. AMP offers a variety of tools to satisfy your performance requirements. For additional information, contact the Technical Assistance Center at 1-800-722-1111.*

AMP Catalog 82074 provides a guide for cable-to-connector selection. For connectors not referenced in the catalog, contact AMP Product Engineering for recommendations.

## 2. DESCRIPTION (Figure 1)

The die assembly consists of an indenter die and an anvil die, which when mated form two crimping chambers. The small crimping chamber crimps the center contact onto the center conductor of the coaxial cable and the large crimping chamber crimps the ferrule of the connector onto the coaxial cable. The ferrule crimping chamber actually places two different size crimps on the ferrule; one crimp in the

connector support sleeve area, and another crimp in the cable insulation area directly behind the cable braid. The die assembly features a locator and straightener assembly which properly positions and holds the connector center contact during the crimping procedure. Each die is held in the tool jaws by a single screw.

### 3. INSTALLATION AND REMOVAL OF DIE SET AND LOCATOR AND STRAIGHTENER ASSEMBLY (Figure 1)

1. Close the tool handles until the ratchet releases, then allow the handles to open fully.
2. Remove the two die retaining screws from the tool jaws.
3. Install the anvil die in the movable jaw of the tool frame. Insert the short die retaining screw through the retaining hole in the jaw and through the anvil die. Tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely at this time.
4. Install the indenter die in the stationary jaw of the tool frame. Insert the long die retaining screw through the retaining hole in the jaw and through the indenter die. Tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely at this time.
5. Carefully close the tool handles, making sure that the dies align properly. Continue closing the tool handles until the ratchet in the tool frame has engaged sufficiently to hold the dies in place, then tighten both die retaining screws.

**NOTE** *The ratchet has detents that create audible clicks as the tool handles are closed.*

6. Attach the straightener onto the spring retainer with the adjustment screw. Insert the spring into

the spring retainer and place the locator over the spring.

7. While holding the locator against the spring retainer, place the screw hole in the spring retainer over the end of the long die retaining screw. The locator should be against the side of the tool jaw.
8. Place the nut onto the end of the long die retaining screw and tighten the nut enough to hold the locator and straightener assembly in place, but still allowing the locator to slide up and down.
9. To remove the die assembly, close the tool handles until the ratchet releases. Remove the nut, the locator and straightener assembly, and the two die retaining screws. Slide the anvil and indenter out of the tool jaws.

### 4. CRIMPING PROCEDURE

#### NOTE

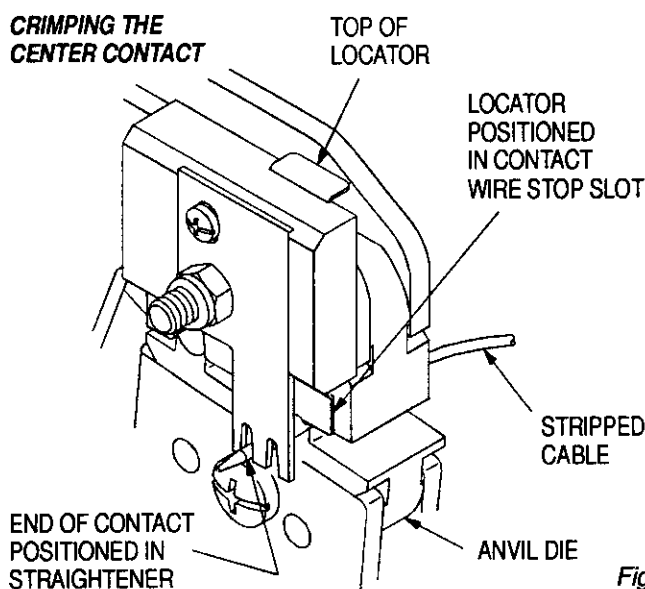
*This tool is provided with a feature to adjust the connector retention force. Initially, the retention force should be verified as specified in Section 6, RETENTION FORCE ADJUSTMENT, before using the tool.*

For detailed information on cable strip lengths and proper assembly of the connector, refer to the instructions packaged with the connector. Make sure that the connector ferrule has been placed onto the cable, and that the cable's braided shield is flared away from the cable. Then proceed as follows:

#### 4.1. Crimping the Center Contact (Figure 2)

1. Holding the center contact by the mating end, insert the contact through the front of the tool and into its crimping chamber of the anvil die.
2. Close the tool handles so that the dies partially close. Position the contact so that the locator drops into the contact wire stop slot and the end of the contact is inside the groove in the straightener. See cross-sectional view in Figure 2.

#### CRIMPING THE CENTER CONTACT



#### CROSS-SECTIONAL VIEW

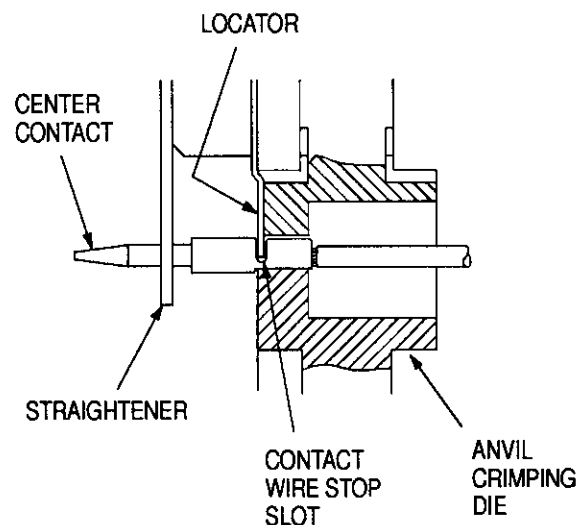


Figure 2

3. Hold the contact in place and squeeze the tool handles together until the ratchet engages just enough to hold the contact in place. Do not deform the contact wire barrel.

4. Insert stripped cable into contact wire barrel until it is butted against the locator. See cross-sectional view in Figure 2.

5. Holding the cable in position, close the tool handles until the ratchet releases. Allow the tool handles to open fully and remove the crimped center contact from the dies.

**NOTE**

*The crimped center contact may stick in the crimping area, but the contact can be easily removed by pushing downward on the top of the locator (see Figure 2).*

**4.2. Crimping the Ferrule (Figure 3)**

1. Insert the crimped center contact into the connector body until the cable dielectric butts against the dielectric inside the connector body or until the center contact is securely positioned within the connector. Make sure that the braided shield is over the support sleeve of the connector body and that no strands from the shield enter the connector body.

2. Slide the ferrule up over the braided shield and onto the connector until the ferrule butts against the shoulder on the connector body.

3. Place the ferrule in its crimping chamber of the anvil die so that the shoulder on the connector body butts against the edge of the die.

4. While holding the assembly together, begin to close the tool handles. Keep holding the assembly until the dies have closed enough to hold the assembly in place.

**CAUTION**

*Make sure that both sides of the ferrule are started evenly into the crimping chamber. Do NOT attempt to crimp an improperly positioned ferrule.*

5. Carefully close the tool handles until the ratchet releases.

6. Allow the tool handles to open fully and remove the crimped connector from the dies.

**5. CENTER CONTACT SUPPORT ADJUSTMENT**

Make a sample crimp and determine if the center contact is bending upward, bending downward, or bending from side to side. If the contact is bent, adjustment is required.

1. Loosen the adjustment screw.

2. Place a contact with cable into the proper crimping chamber and close the tool handles until the locator and straightener assembly is holding the contact in position.

3. Move the straightener up or down, as required, to eliminate the bending of the center contact.

4. Tighten the adjustment screw and close the handles until the ratchet releases.

5. Remove and inspect the center contact.

6. Make another sample crimp. If the contact is still being bent during crimping, repeat the adjustment procedure.

**6. RETENTION FORCE ADJUSTMENT (Figure 4)**

The tool frame assembly ratchet mechanism features an adjustment wheel with numbered settings. If the retention force is not acceptable, adjust the ratchet as follows:

**NOTE**

*Refer to the appropriate AMP Application Specification for the required retention force for a specific connector.*

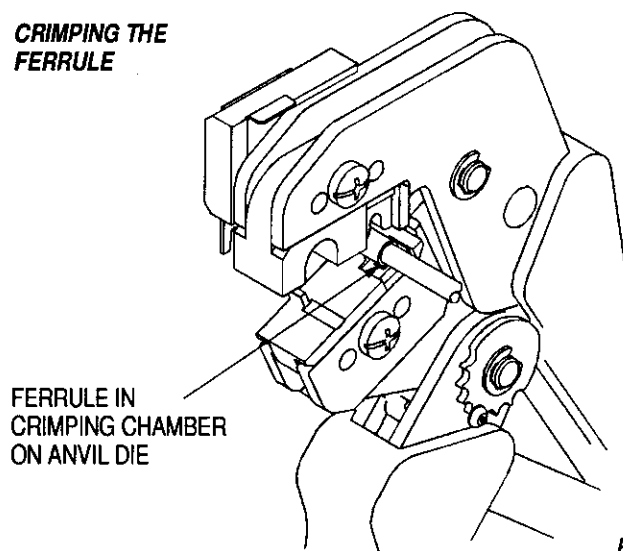
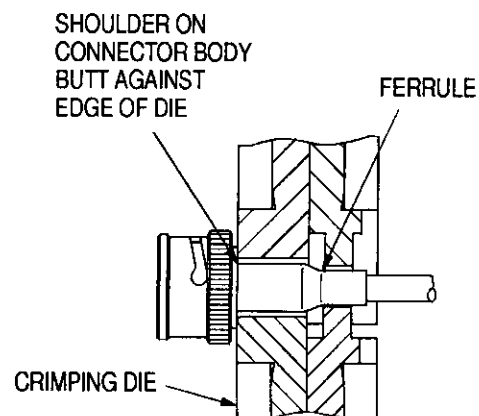
**CRIMPING THE FERRULE****CROSS-SECTIONAL VIEW**

Figure 3

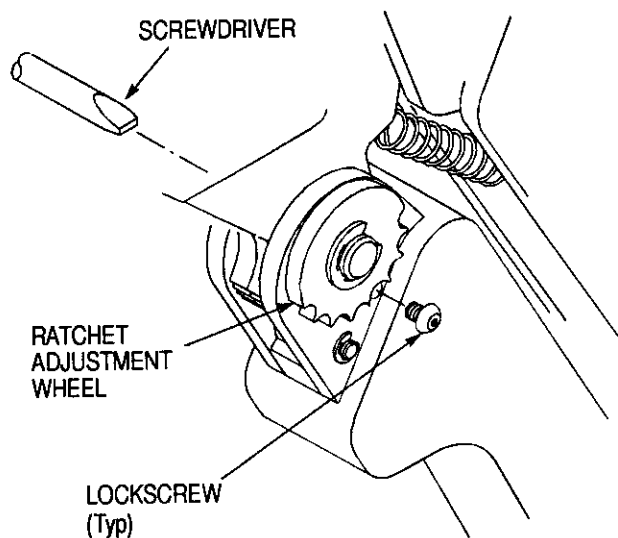


Figure 4

1. Remove the lock screw from the ratchet adjustment wheel.
2. With a screwdriver, adjust the ratchet wheel from the opposite side of the tool.
3. Observe the ratchet adjustment wheel. If a tighter retention is required, rotate the adjustment wheel **COUNTERCLOCKWISE** to a higher-numbered setting. If a looser retention is allowed, rotate the adjustment wheel **CLOCKWISE** to a lower-numbered setting.
4. Replace the lock screw.
5. Make a sample crimp and measure the retention force with a pull force tester. If the retention force is acceptable, secure the lock screw. If the retention force is unacceptable, remove lock screw and continue to adjust the ratchet, and again measure a sample crimp.

**7. MAINTENANCE AND INSPECTION**

**7.1. Maintenance**

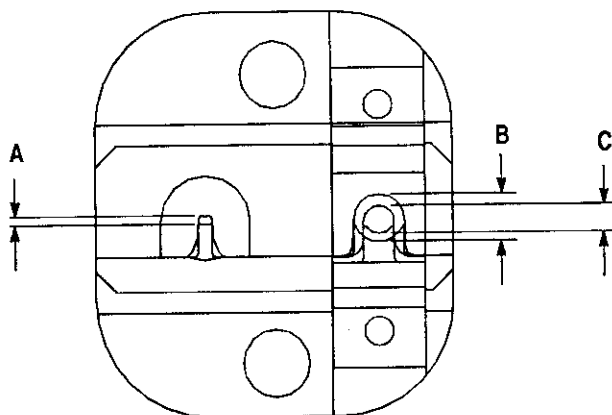
1. Remove dust, moisture, and other contaminants with a clean, soft brush, or a clean, soft, lint-free cloth. Do **NOT** use any objects that could damage the dies or tool.
2. Make sure that the proper die retaining screws are properly secured.
3. When the dies are not in use, mate and store them in a clean, dry area.
4. Store the tool with the tool handles closed to prevent objects from becoming lodged within the jaws.

**7.2. Inspection**

1. Remove all lubrication and accumulated film from the dies by immersing the dies in a suitable commercial degreaser.
2. Make certain that all die retaining screws and die components are properly secured.
3. Inspect the crimping surfaces for flattened, chipped, worn, or cracked areas. If damage is evident, the dies must be replaced. Refer to Section 8, **REPLACEMENT**.

**7.3. Measuring Die Opening**

The die assembly will perform correctly as long as: (1) the product specified is correct for the application, (2) the specific die assembly is used, (3) the die assembly has been measured to ensure that the openings are correct, and (4) the tool has been adjusted correctly. Figure 5 provides information on die opening sizes.



**NOTE: NOT TO SCALE**

DIE CLOSURE DIMENSIONS (mm [in.])		
A	B	C
±0.05 [±.002]	±0.10 [±.004]	±0.10 [±.004]
0.66 [.026]	2.64 [.104]	4.32 [.170]

Figure 5

**8. REPLACEMENT**

AMP Crimping Die Assembly 58559-1 is inspected before shipment. AMP recommends that the dies be inspected immediately upon arrival at your facility to ensure that the dies have not been damaged during shipment.

Order replacements through your local AMP representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 1-717-986-7605, or write to:

CUSTOMER SERVICE (38-35)  
 AMP INCORPORATED  
 P.O. BOX 3608  
 HARRISBURG, PA 17105-3608