

PROPER USE GUIDELINES

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

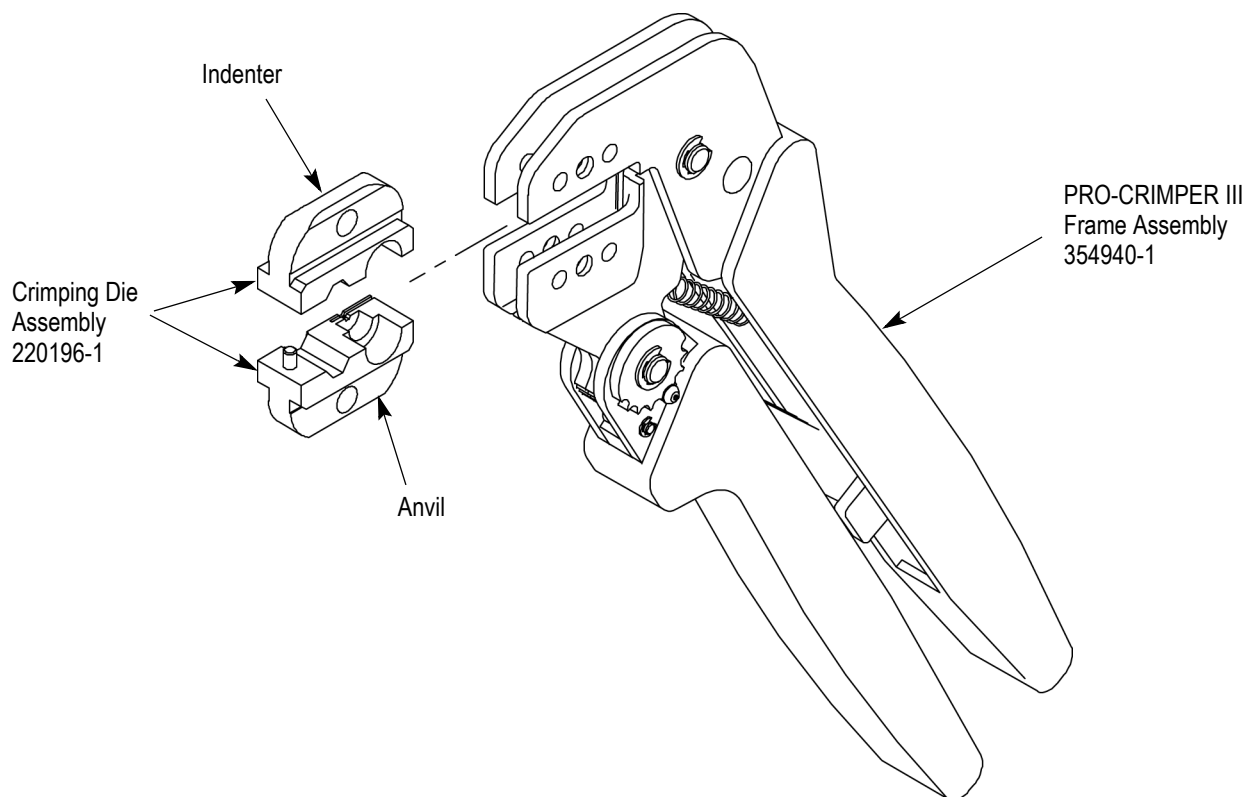


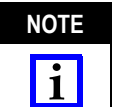
Figure 1

1. INTRODUCTION



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

This instruction sheet covers the use and maintenance of PRO-CRIMPER III Assembly 58506-3, which includes PRO-CRIMPER III Frame Assembly 354940-1 and Crimping Die Assembly 220196-1. The die assembly crimps AMP Miniature UHF Series Plug, Jack, and Bulkhead Jack connectors onto coaxial cable.



Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.


Reasons for reissue of this document are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION

Die Assembly 220196-1 consists of an indenter die and an anvil die, which when closed form two crimping chambers. The larger chamber crimps the ferrule of the connector onto the coaxial cable, and the smaller chamber crimps the center contact onto the center conductor of the cable. Each die is held in Frame Assembly 354940-1 by a single screw.


3. DIE INSTALLATION

1. Close the tool handles until the ratchet releases, then allow the handles to open fully.
2. Insert each die into the tool jaws and align retaining hole in each die with the associated hole in the tool frame.
3. Thread retaining screws into the holes, but do not tighten the screws.
4. Begin to close the tool handles, making sure that the dies align properly.


NOTE  Once the anvil has entered the indenter, place a copper bus bar (1.57 mm ±.050 mm [.062 in. ±.002 in.] diameter) into the center contact section of the die assembly.

5. Close the tool handles completely and hold the tool handles together.
6. Tighten the retaining screws with the appropriate hex wrench.


4. CRIMPING PROCEDURE

NOTE  This tool is provided with a crimp adjustment feature. However, the crimp should first be inspected according to the appropriate Application Specification. Refer to Section 5, MAINTENANCE / INSPECTION, to measure the die opening and, if necessary, adjust the ratchet before using the tool to crimp the desired connector to wire.

Each connector must be assembled on a properly stripped coaxial cable before terminating. Refer to Figure 2 for stripping dimensions.

NOTE  This tool will not provide a crimp conforming to military requirements.

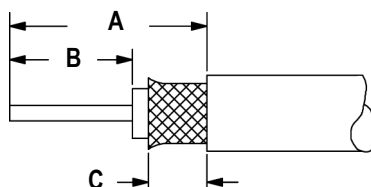
4.1. Plug Assembly

NOTE  The center contact can be crimped at two locations in the modified die.

A. Center Contact - Location A

Location A crimps the contact on the tip of the center conductor.

1. Slip ferrule over the cable as shown in Figure 3, Detail A.
2. Strip cable to the dimensions shown in Figure 2 and flair the braid.
3. Insert stripped center conductor into plug body until the cable dielectric butts against the dielectric inside the plug body. The braid fits over the support sleeve, as shown in Figure 3, Detail B.



NOTE: Not to Scale

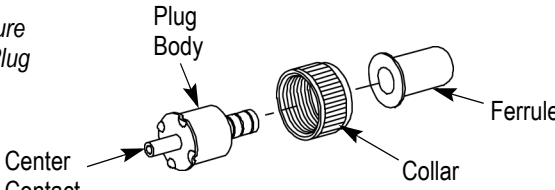
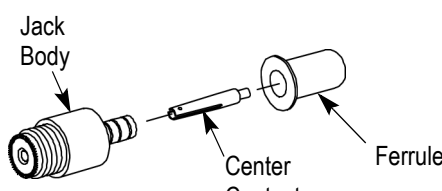
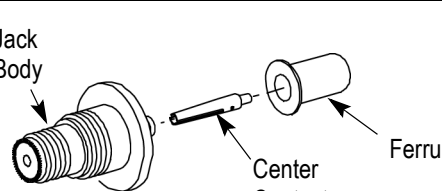
| RG/U CABLE SIZE | DESCRIPTION | CABLE STRIP DIMENSIONS | | |
|--------------------------------|---|------------------------|-----------------|----------------|
| | | A | B | C |
| 58, 58A, 58B, and 58C | Miniature UHF Plug  | 23.81 [.9375] | 15.09 [.594] | 7.54 [.297] |
| | Miniature UHF Jack  | 13.49 [.531] | 4.75 [.187] | 8.74 [.344] |
| | Miniature UHF Bulkhead Jack  | 11.51 [.453] | 4.75 [.187] | 6.76 [.266] |

Figure 2

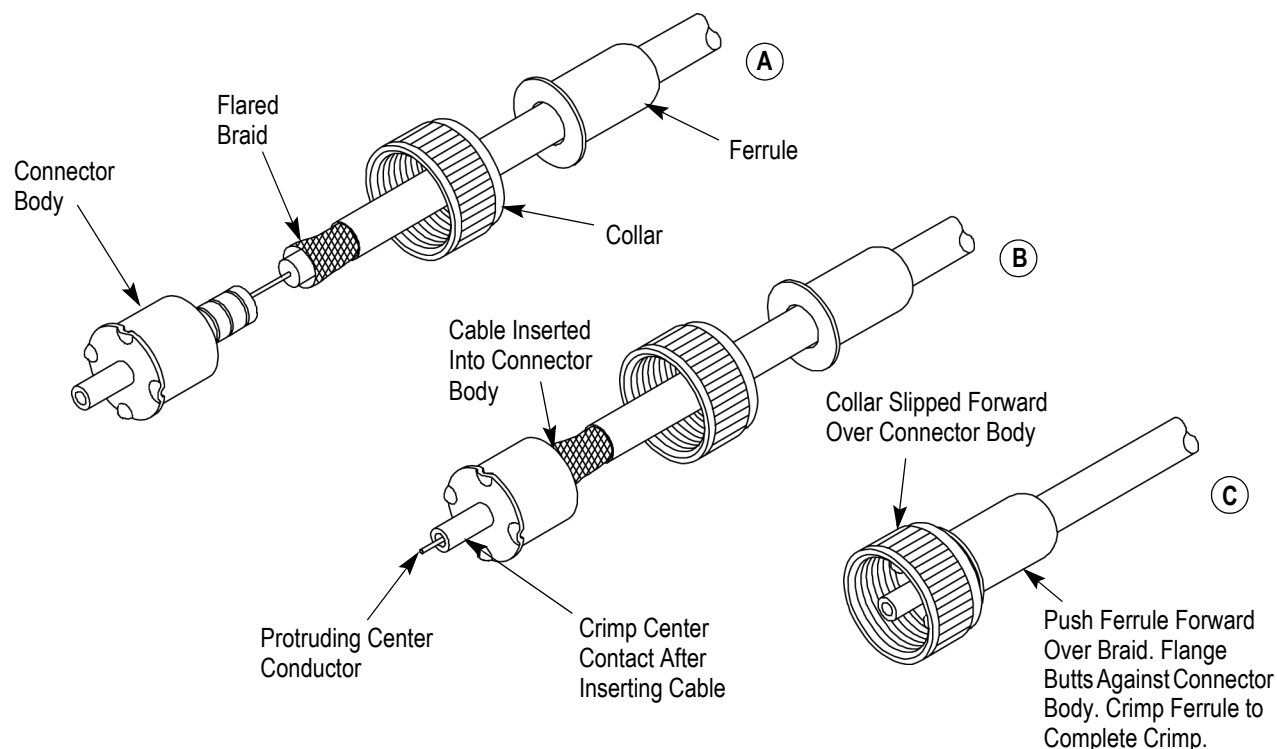


Figure 3

NOTE



The end of the center conductor will extend from the end of the center contact for inspection purposes. After the crimp is finished, the center conductor is trimmed flush with end of center contact.

4. Open the crimping dies by squeezing the handles until the ratchet releases.
5. Place center contact in open tool with face of connector against locator. See Figure 4. Detents on the face of the connector must span the locator.
6. Push in slightly on the cable and hold connector body in place while closing tool handles.
7. Close the handles until the ratchet releases, then allow the handles to open. Remove crimped assembly from tool.

B. Center Contact - Location B

Location B crimps the center contact next to the plug body flange.

1. Place the connector in the opposite side of the die.
2. Two small holes have been placed in the face of the tool to clear the two detents on the face of the plug body.
3. Hold the connector tight against the face of the die while crimping.

C. Ferrule

Before proceeding with the ferrule crimp, be sure that the center contact has been properly crimped onto the center conductor of the cable.

1. Slip collar over connector body.
2. Be sure that the cable's braided shield is flared away from the cable. Make sure that no strands of the braided shield enter the connector body.
3. Slide the ferrule up over the braided shield and onto the connector until the ferrule butts against the shoulder on the connector body. See Figure 3, Detail C.
4. Place the assembly in the tool as shown in Figure 5.
5. While holding the assembly together, begin to close the tool handles. Continue holding the assembly until the dies have closed enough to hold the assembly in place.
6. Continue to close the tool handles until the ratchet releases.
7. Allow the tool handles to open and remove the crimped connector from the dies.

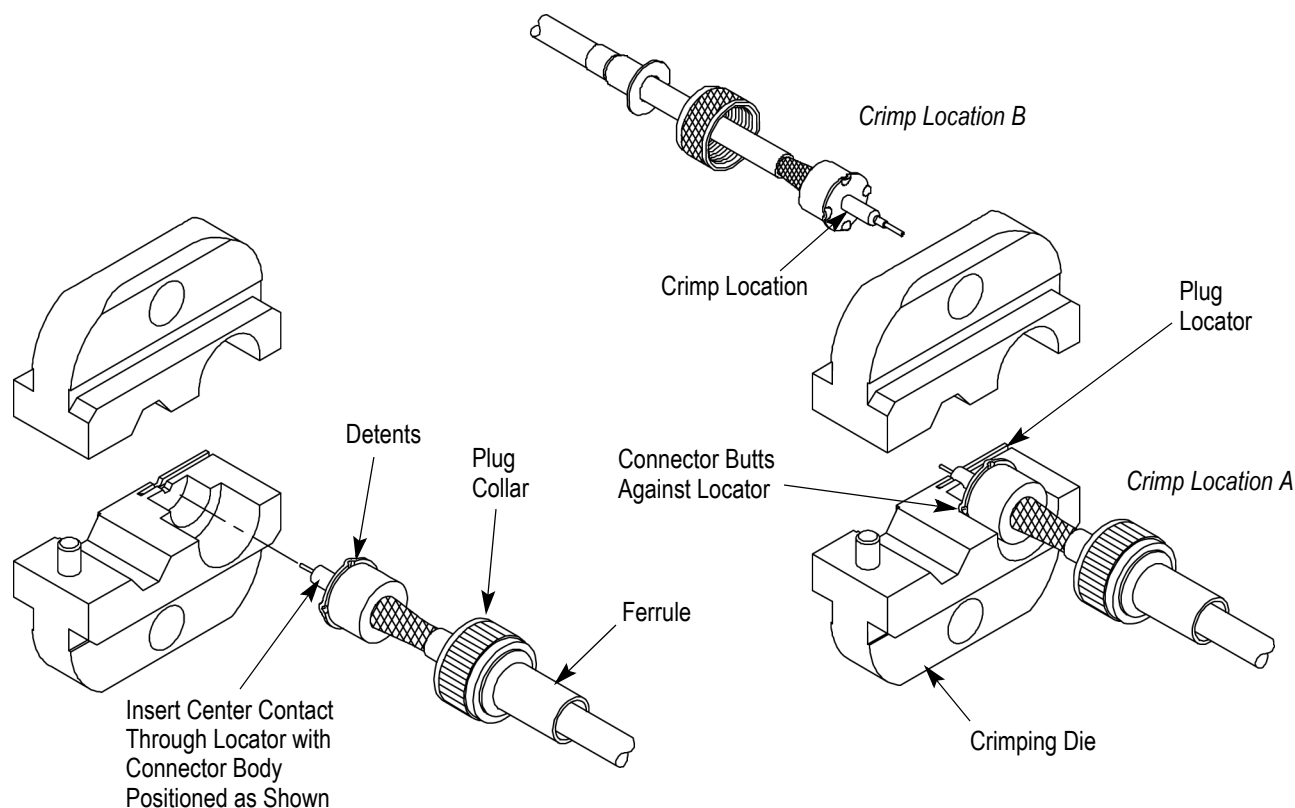


Figure 4

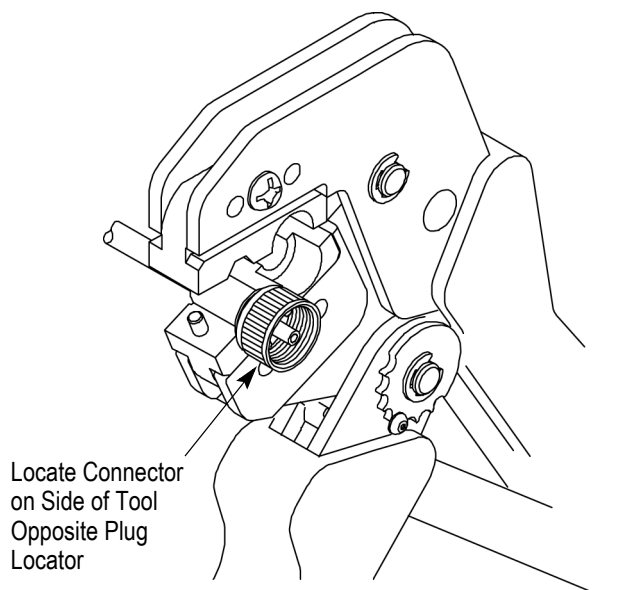


Figure 5

4.2. Jack Assembly

A. Center Contact

1. Slip the ferrule over the cable as shown in Figure 6, Detail A.
2. Strip cable to dimensions in Figure 2 and flair the braid.

3. Insert stripped cable into the center contact of the jack until cable dielectric butts against the contact. See Figure 6, Detail A.

4. Open the crimping dies by squeezing the handles until the ratchet releases.

5. Center the wire barrel portion of the center contact on the crimping die. See Figure 7.

6. Hold the contact in place while closing the tool handles until dies hold contact.

7. Push in slightly on the cable and close tool handles until the ratchet releases, then allow the handles to open. Remove the crimped contact from the tool.

B. Ferrule

Before proceeding with the ferrule crimp, be sure that the center contact has been properly crimped onto the center conductor of the cable.

1. Insert the crimped contact into the jack body until the cable dielectric butts against the dielectric inside the jack body. The braid fits over the support sleeve. See Figure 6, Detail B.

2. Slip the ferrule over the braid, butting the flange against the connector body as shown in Figure 6, Detail C.

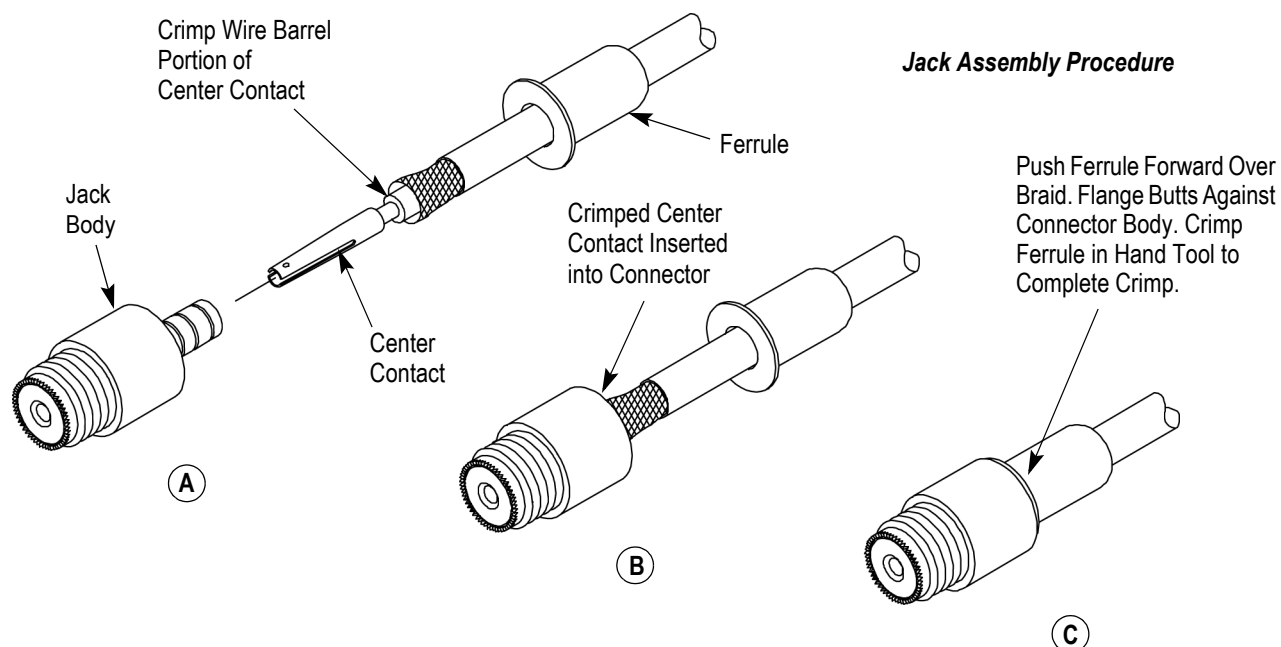


Figure 6

3. Place the assembly in the tool. Make sure the connector is located on the side of the tool opposite the locator for the plug. The cable should extend in the direction shown in Figure 7.

4. Close the tool handles until the ratchet releases, completing the crimp.

5. Allow the tool handle to open fully and remove the crimped connector from the dies.

5. MAINTENANCE / INSPECTION

5.1. 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 die retaining screws are properly secured.
3. When the tool is not in use, store it with handles closed in a clean, dry area.

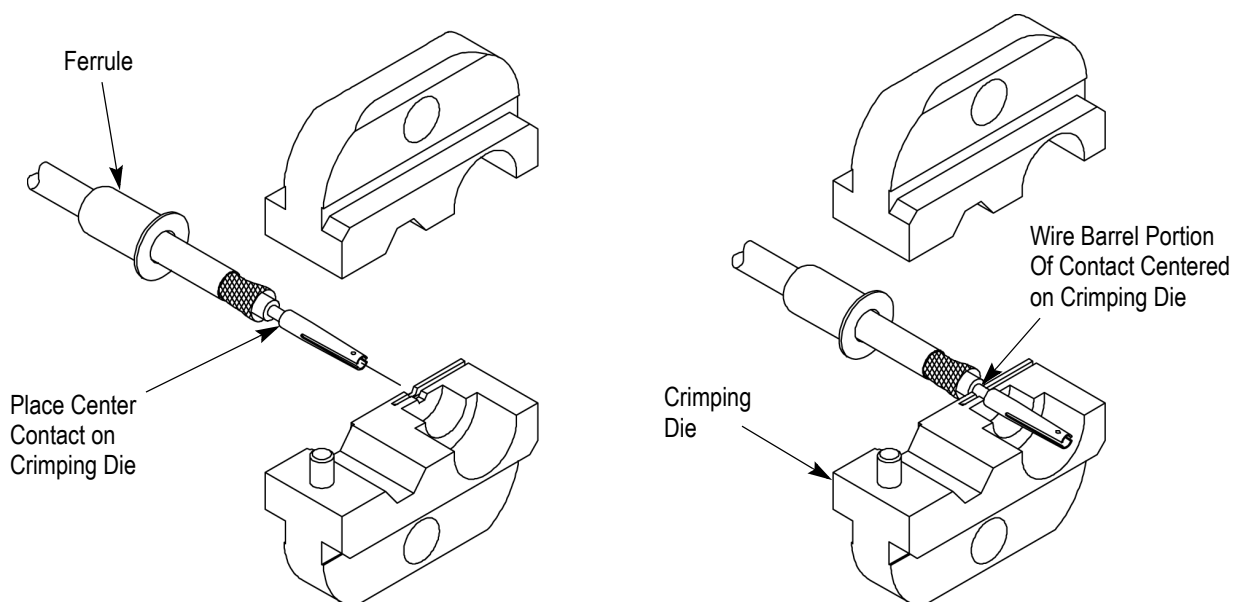
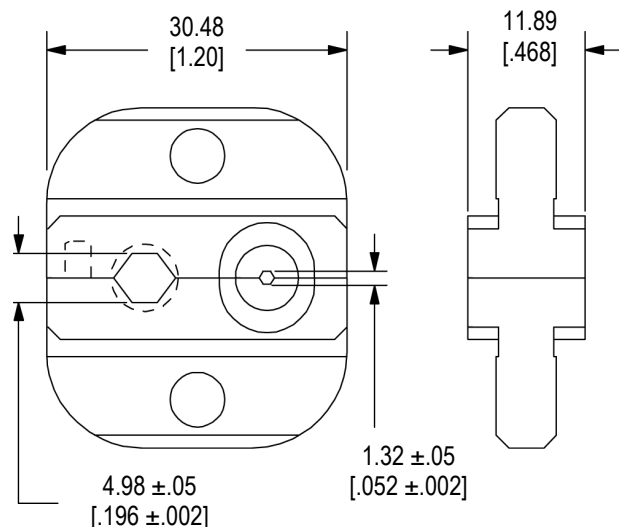


Figure 7



NOTE: Not to Scale

Figure 8

5.2. 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 6, REPLACEMENT.

5.3. 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 8 provides information on the die opening sizes.

5.4. Ratchet Adjustment (Figure 9)

The tool assembly crimp height can be adjusted. The adjustment wheel controls the amount of handle pressure exerted on the tool jaws and crimping dies during crimping. If the crimp is not acceptable, adjust the ratchet as follows:

1. Remove the screw at the ratchet adjustment wheel so that the wheel can be rotated above the post that engages the teeth in the wheel.
2. If the crimp is greater than recommended, turn the wheel counterclockwise to a higher setting. (For example, if the wheel is set at notch No. 5, move the wheel to notch No. 6.) If the crimp is less than

recommended, move the wheel clockwise to a lower setting.

3. Replace and tighten the screw at the ratchet adjustment wheel and crimp another center contact and connector ferrule onto a cable and check the crimps. If the crimp cannot be made to conform to the appropriate Application Specification, the tool and/or dies are defective and must be replaced.

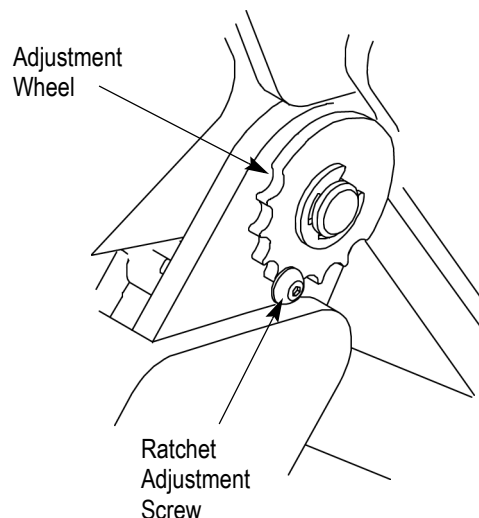


Figure 9

6. REPLACEMENT

Order replacements through your Tyco Electronics 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 (038-035)
TYCO ELECTRONICS CORPORATION
PO BOX 3608
HARRISBURG PA 17105-3608

7. REVISION SUMMARY

Since the previous release, the following changes and additions were made to this document:

- Updated document to corporate requirements.
- References to tool frame name revised.