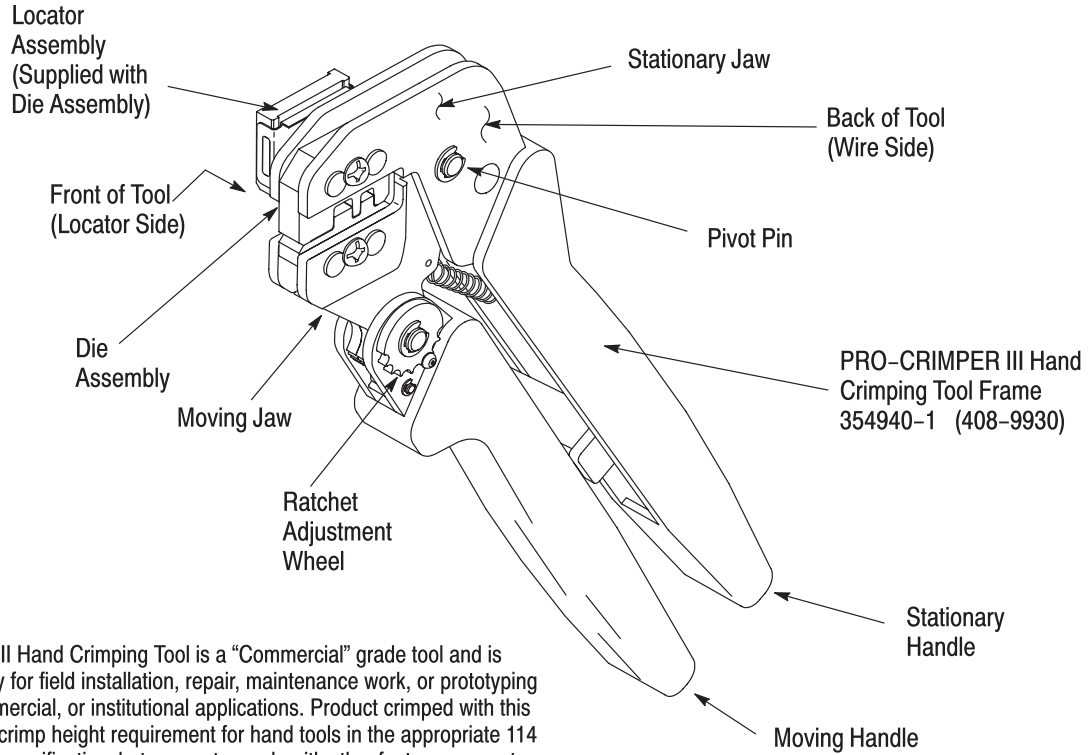


**PROPER USE GUIDELINES**

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.



PRO-CRIMPER III Hand Crimping Tool is a “Commercial” grade tool and is designed primarily for field installation, repair, maintenance work, or prototyping in industrial, commercial, or institutional applications. Product crimped with this tool will meet the crimp height requirement for hand tools in the appropriate 114 series application specification, but may not comply with other feature parameters of the specification. 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.

TE Die Assembly	TE Locator Assembly <sup>†</sup>	Connector Family <sup>‡</sup>	Cable		
			Size (AWG)	Insulation Diameter	Shield Type
224933-2	58515-1	INFOPORT* Series III Shield Kit	28-32	3.43 to 3.81 mm [.135 to .150 in.]	Small
				5.72 x 3.68 mm [.225 x .145 in.] OVAL	Large

<sup>†</sup> Supplied with die assembly. Also available separately.

<sup>‡</sup> Contact the Tooling Assistance Center or Product Information Center (below) for specific shield part numbers.

Figure 1

**1. INTRODUCTION**

PRO-CRIMPER III Hand Crimping Tool Assembly 224933-1 consists of Die Assembly 224933-2 and PRO-CRIMPER III Hand Crimping Tool Frame 354940-1. The die assembly consists of crimping dies and a locator assembly.

Read these instructions thoroughly before crimping.



*Dimensions on this instruction sheet are in millimeters [with inch equivalents provided in brackets]. Figures and illustrations are for identification only and are not drawn to scale.*

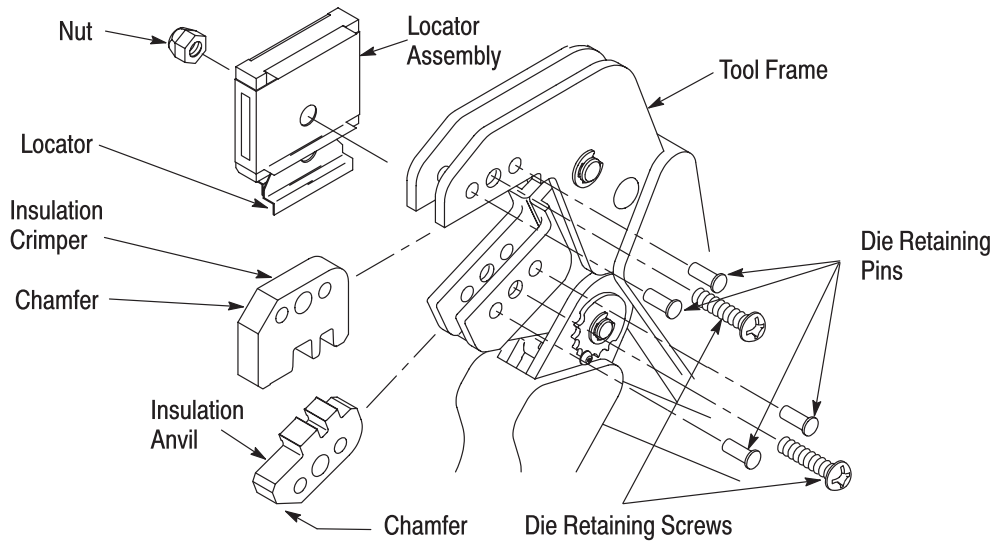


Figure 2

**2. DESCRIPTION** (Figures 1 and 2)

The tool features a tool frame with a stationary jaw and handle, a moving jaw, a moving handle, and an adjustable ratchet that ensures full contact crimping. The tool frame holds a die assembly with two crimping sections.

The die assembly features an insulation anvil and an insulation crimper.

Attached to the outside of the frame is a locator assembly, which contains a locator, a spring retainer, and a shield support.

Die retaining pins and die retaining screws are used to position and secure the dies in the tool frame. A nut is used on the upper die retaining screw to hold the locator assembly in place.

**3. INSTALLATION AND REMOVAL OF DIE SET AND LOCATOR ASSEMBLY** (Figure 2)

1. Open the tool handles and remove the two die retaining screws from the tool jaws.
2. Place the insulation anvil so that the chamfered side faces outward, when mounted in the moving jaw of the tool frame.
3. Insert the two die retaining pins.
4. Insert the short die retaining screw through the jaw and anvil, and tighten the screw just enough to hold the anvil in place. Do *not* tighten the screw completely at this time.
5. Place the insulation crimper so that the chamfered side faces outward, when mounted in the stationary jaw of the tool frame.

6. Insert the two die retaining pins.

7. Insert the long die retaining screw through the jaw and through the crimper die, and tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely at this time.

8. Carefully close the tool handles, making sure that the anvil and crimper align properly. Continue closing the tool handles until the ratchet in the tool frame has engaged sufficiently to hold the anvil and crimper in place, then tighten both die retaining screws.

9. Place the locator assembly over the end of the long screw, and position the locator assembly against the side of the tool jaw.

10. Place the nut onto the end of the long screw and tighten the nut enough to hold the locator assembly in place, while still allowing the locator to slide up and down.

11. To disassemble, close the tool handles until the ratchet releases, remove the nut, the locator assembly, the two die retaining screws, and the four die retaining pins, and slide the anvil and crimper out of the tool jaws.

**4. SHIELD SUPPORT ADJUSTMENT** (Figure 3)

**NOTE** *The shield support is preset prior to shipment, but minor adjustment may be necessary.*

1. Make a sample crimp and determine if the shield is straight, bending upward, or bending downward.

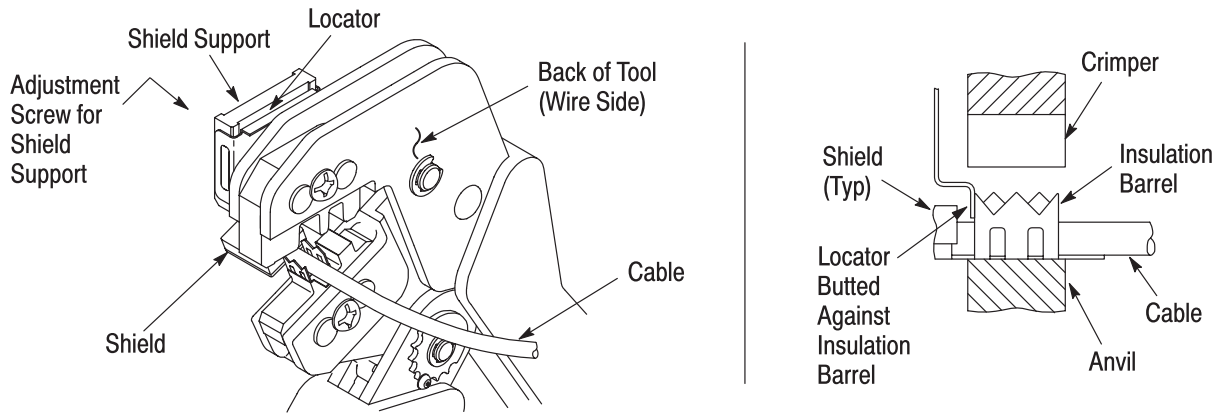


Figure 3

2. If adjustment is required, loosen the screw that holds the shield support onto the locator assembly.



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

3. Place a shield with wire into the proper nest and close the tool handles until the ratchet reaches the sixth click, or until the shield support touches the shield.

4. Slightly loosen the nut that holds the locator assembly onto the tool frame.

5. Move the shield support as required to eliminate the bending of the shield.

6. Tighten the nut and close the handles until the ratchet releases.

7. Remove and inspect the shield.

8. Make another sample crimp. If the shield is straight, tighten the shield support screw. If the shield is still being bent during crimping, repeat the adjustment procedure.

**5. CRIMPING PROCEDURE**



*This tool is provided with a crimp adjustment feature. Initially, the crimp height should be verified as specified in Figure 4. Refer to Section 6, CRIMP HEIGHT INSPECTION, and Section 7, CRIMP HEIGHT ADJUSTMENT, to verify crimp height before using the tool to crimp desired shields and wire sizes.*

Prepare the cable, connector, and shields in accordance with the instructions contained in the applicable Application Specification. Ensure that cable drain wire(s) is positioned between the cable insulation jacket and the insulation crimping barrel of the lower shield. Refer to the table in Figure 1 to determine if the shield type (small or large) is

compatible with the cable size and insulation diameter. Then identify the appropriate crimp section according to the wire size markings on the tool. Refer to Figure 3 and proceed as follows:

1. Hold the tool so that the back (wire side) is facing you. Squeeze tool handles together and allow them to open fully.

2. Holding the shield by the mating end, insert the shield — insulation barrel first — through the front of the tool and into the appropriate crimp section.

3. Position the shield so that the mating end of the shield is on the locator side of the tool, and so that the open “U” of the insulation barrel faces the top of the tool. Place the shield up into the nest so that the movable locator butts against the front end of the insulation barrel. Refer to Figure 3.



*Make sure that both sides of the insulation barrel are started evenly into the crimping section. Do NOT attempt to crimp an improperly positioned shield.*

4. Hold the shield in position and squeeze the tool handles together until ratchet releases.

5. Allow tool handles to open and remove crimped shield.



*The crimped shield may stick in the crimping area, but the shield can be easily removed by pushing downward on the top of the locator (see Figure 3).*

6. Check the shield’s crimp height as described in Section 6, CRIMP HEIGHT INSPECTION. If necessary, adjust the crimp height as described in Section 7, CRIMP HEIGHT ADJUSTMENT.

**6. CRIMP HEIGHT INSPECTION**

This inspection requires the use of a micrometer with a modified anvil.

**NOTE** Tyco Electronics does not manufacture or market these gages. However TE recommends the modified micrometer (Crimp Height Comparator RS-1019-5LP) or the digital Mitutoyo micrometer.

Proceed as follows:

1. Refer to Figure 4 and select a cable (maximum size) for each crimp section listed.
2. Refer to Section 5, CRIMPING PROCEDURE, and crimp the shield(s) accordingly.
3. Using a crimp height comparator, measure the insulation barrel crimp height as shown in Figure 4. If the crimp height conforms to that shown in the table, the tool is considered dimensionally correct. If not, the tool must be adjusted. Refer to Section 7, CRIMP HEIGHT ADJUSTMENT.

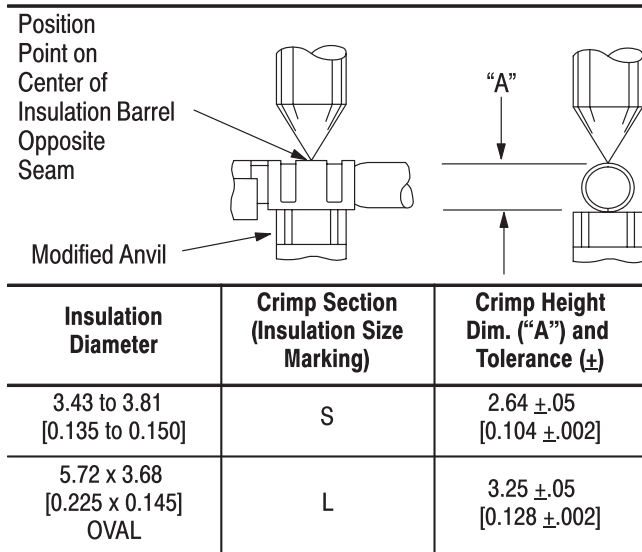


Figure 4

**7. RATCHET (Crimp Height) ADJUSTMENT** (Figure 5)

1. Remove the lock screw from the ratchet adjustment wheel.
2. With a screwdriver, adjust the ratchet wheel from the locator side of the tool.
3. Observe the ratchet adjustment wheel. If a tighter crimp is required, rotate the adjustment wheel COUNTERCLOCKWISE to a higher-numbered setting. If a looser crimp is required, rotate the adjustment wheel CLOCKWISE to a lower-numbered setting.

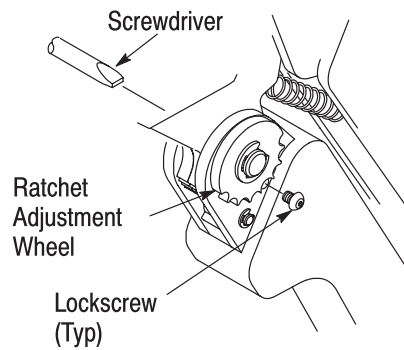


Figure 5

4. Replace the lock screw.
5. Make a sample crimp and measure the crimp height. If the dimension is acceptable, replace and secure the lock screw. If the dimension is unacceptable, continue to adjust the ratchet, and again measure a sample crimp.

**8. MAINTENANCE**

Ensure that the tool and dies are clean by wiping them with a clean, soft cloth. Remove any debris with a clean, soft brush. Do not use objects that could damage the tool. When not in use, keep handles closed to prevent objects from becoming lodged in the crimping dies, and store in a clean, dry area.

**9. VISUAL INSPECTION**

The crimping dies should be inspected on a regular basis to ensure that they have not become worn or damaged. Inspect the crimp sections for flattened, chipped, worn, or broken areas. If damage or abnormal wear is evident, the tool must be replaced. See Section 10, REPLACEMENT.

**10. REPLACEMENT**

Customer-replaceable parts are shown in Figure 1. Available separately, PRO-CRIMPER III Hand Crimping Tool Repair Kit 679221-1 includes a replacement nut and a variety of pins, rings, screws, and springs. If the dies are damaged or worn excessively, they must be replaced. Order the repair kit and replaceable parts 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 (38-35)  
 TYCO ELECTRONICS  
 PO BOX 3608  
 HARRISBURG PA 17105-3608

**11. REVISION SUMMARY**

Since the previous release of this instruction sheet:

- The TE logo has been applied; and
- The format has been updated.