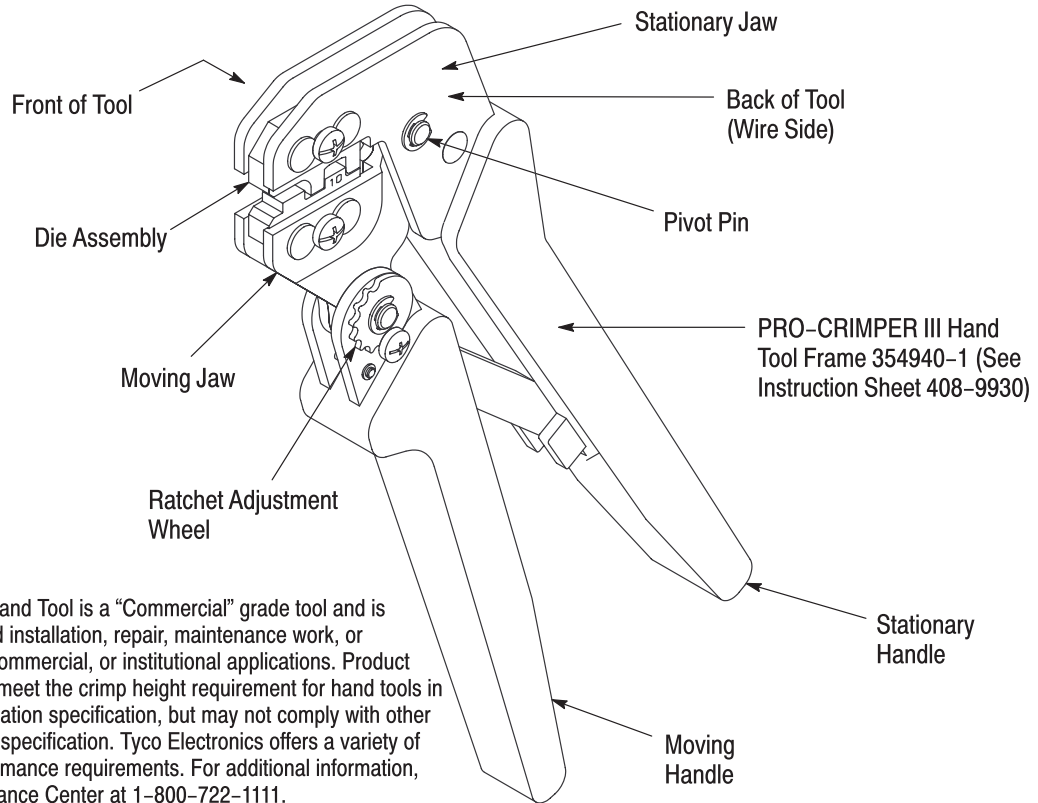


**PROPER USE GUIDELINES**

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.



The PRO-CRIMPER III Hand 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 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.

DIE ASSEMBLY PART NUMBER	PRODUCT FAMILY‡	WIRE		
		SIZE (AWG)	INSULATION DIA MAX	STRIP LENGTH
58630-2	Ultra-Fast FASTON* Straight Receptacle	12	8.13	7.92±0.41
		10	[.320]	[.312±.016]

‡ Contact the Tooling Assistance Center at the number listed at the bottom of this page for specific receptacle part numbers.

Figure 1

**1. INTRODUCTION**

PRO-CRIMPER III Hand Tool Assembly 58630-1 consists of Die Assembly 58630-2 and PRO-CRIMPER III Hand Tool Frame 354940-1. The tool is used to crimp the receptacles onto the wire sizes listed in Figure 1. Read these instructions thoroughly before crimping any receptacles.

**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 crimping. The tool frame holds a die assembly with two crimping chambers.



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

The die assembly features an anvil die and a crimper die. Die retaining pins and die retaining screws are used to position and secure the dies in the tool frame.

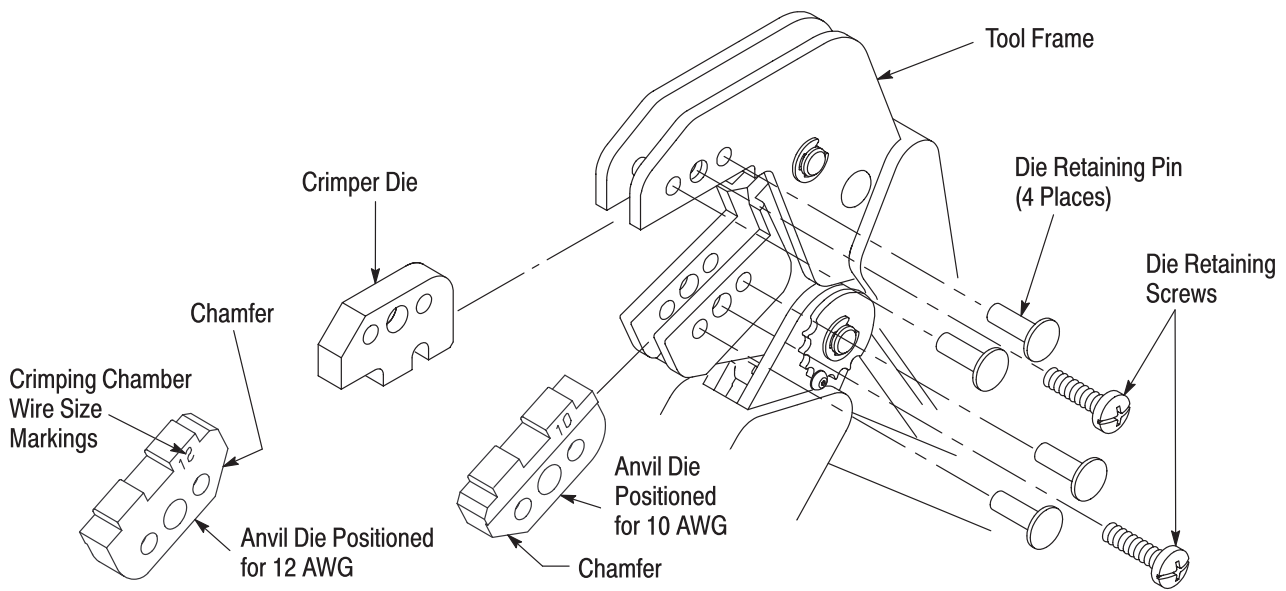


Figure 2

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

1. Open the tool handles and remove the two die retaining screws from the tool jaws.
2. Place the anvil die in the moving jaw of the tool frame. The rear crimping chamber is used to crimp the receptacle—make sure that the wire anvil is positioned so that the applicable wire size marking on the die is located at the inside of the frame.



*The anvil die is reversible to accommodate wire size 12 or 10 AWG.*

3. Insert die retaining screw and two die retaining pins through the jaw and into the die. Tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely at this time.
4. Place the crimper die in the stationary jaw of the tool frame. Make sure that the chamfered edge of the die faces outward.
5. Insert die retaining screw and two die retaining pins through the jaw and into the die. Tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely at this time.
6. Carefully close the tool handles, making sure that the anvil and crimper dies align properly. Continue closing the tool handles until the tool frame ratchet has engaged sufficiently to hold the dies in place, then tighten both die retaining screws.
7. To disassemble, open the tool handles, remove the two die retaining screws and four die retaining pins, and slide the dies out of the tool jaws.

**4. CRIMPING PROCEDURE**



*Initially, the crimping chambers and tool ratchet should be inspected as specified in Section 5, CRIMP HEIGHT INSPECTION, and Section 6, CRIMP HEIGHT ADJUSTMENT, to verify reliability before using the tool.*

Refer to Figure 1 and select wire of the specified size. Strip the wire to the length indicated, taking care not to nick or cut wire strands. Select an applicable receptacle and identify the appropriate crimping chamber according to the wire size markings on the anvil die. Refer to Figure 3 and proceed as follows:

1. Squeeze tool handles together until the ratchet releases and then allow the tool jaws to open fully.
2. Insert the receptacle (mating end first) into the BACK of the tool in the rear crimping chamber so that the flat side of the receptacle faces the anvil die. Make sure that the wire barrel is centered in the crimping chamber.
3. Hold the receptacle in position and squeeze the tool handles together until ratchet engages sufficiently to hold the receptacle in position. Do NOT deform the wire barrel.
4. Insert the stripped wire into the wire barrel of the receptacle.
5. Holding the wire in place, squeeze tool handles together until ratchet releases. Allow tool handles to open and remove crimped receptacle.
6. Inspect the crimped receptacle to ensure that the crimp is centered on the wire barrel and the wire is fully inserted. Check the receptacle crimp height as described in Section 5. If necessary, adjust the crimp height as described in Section 6.

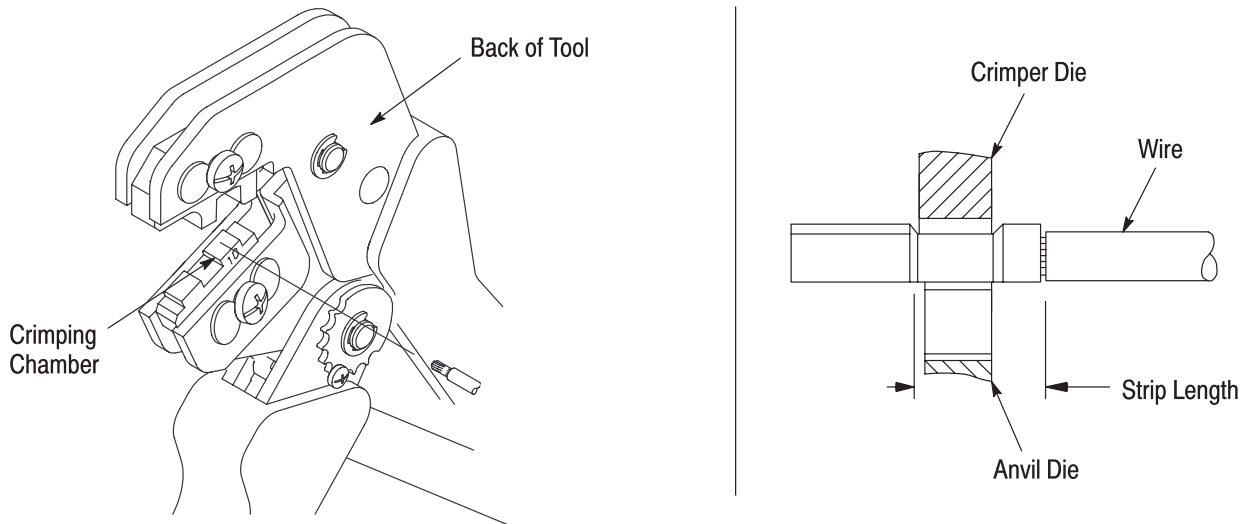


Figure 3

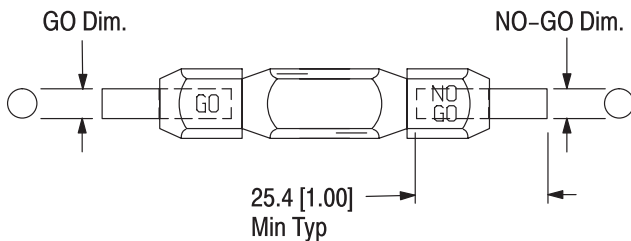
**5. CRIMP HEIGHT INSPECTION**

This inspection requires the use of a plug gage conforming to the dimensions provided in Figure 4. Tyco Electronics does not manufacture or market these gages. To gage the crimping chambers, proceed as follows:

1. Remove traces of oil or dirt from crimping chambers and plug gages.

2. Close the tool handles until it is evident that the dies have bottomed; hold the tool in this position. Do NOT force the dies beyond initial contact.
3. Carefully insert GO element straight into the corresponding crimping chamber; do not force it. The GO element must pass completely through the crimping chamber. See Figure 4.
4. In the same manner, try to insert the NO-GO element into the same crimping chamber. The NO-GO element may start entry, but must not pass completely through the crimping chamber.

**Suggested Plug Gage Design**



If the crimping chambers conform to the gage inspection, they are considered dimensionally correct, and should be lubricated with a THIN coat of any good SAE 20 motor oil. If not, the tool must be adjusted according to Section 6, CRIMP HEIGHT ADJUSTMENT.

For additional information concerning the use of plug gages, refer to Instruction Sheet 408-7424.

CRIMPING CHAMBER	GAGE ELEMENT DIMENSIONS (mm [in.])	
	GO	NO-GO
12	2.3622-2.3698 [.0930-.0933]	2.4613-2.4638 [.0969-.0970]
10	2.4892-2.4968 [.0980-.0983]	2.5883-2.5908 [.1019-.1020]

**NOTE:** The die anvil must be rotated 180° to gage the opposite nest.

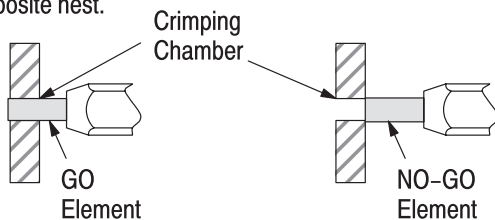


Figure 4

**6. CRIMP HEIGHT ADJUSTMENT (Figure 5)**

1. Remove the lockscrew from the ratchet adjustment wheel.
2. With a screwdriver, adjust the ratchet wheel from the front 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.
4. Re-assemble the lockscrew.

5. Make a sample crimp and measure the crimp height. If the dimension is acceptable, the adjustment setting is correct. If the dimension is unacceptable, continue to adjust the ratchet, and again measure a sample crimp.

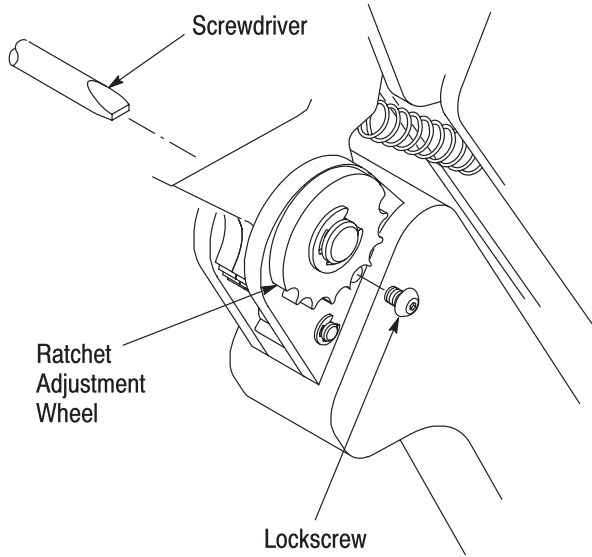


Figure 5

**7. MAINTENANCE AND INSPECTION**

**7.1. 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.

**7.2. Visual Inspection**

The crimping dies should be inspected on a regular basis to ensure that they have not become worn or damaged. Inspect the crimping sections for flattened, chipped, worn, or broken areas. If damage or abnormal wear is evident, the tool must be replaced. See Section 8, REPLACEMENT.

**8. REPLACEMENT**

Customer-replaceable parts are shown in Figure 1. Available separately, PRO-CRIMPER III 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 717-986-7605, or write to:

CUSTOMER SERVICE (38-35)  
 TYCO ELECTRONICS CORPORATION  
 PO BOX 3608  
 HARRISBURG, PA 17105-3608

**9. REVISION SUMMARY**

- Updated document to corporate requirements
- Changed die artwork in Figures 1, 2, and 3
- Added callouts to Figure 2
- Added NOTE to Figure 4

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