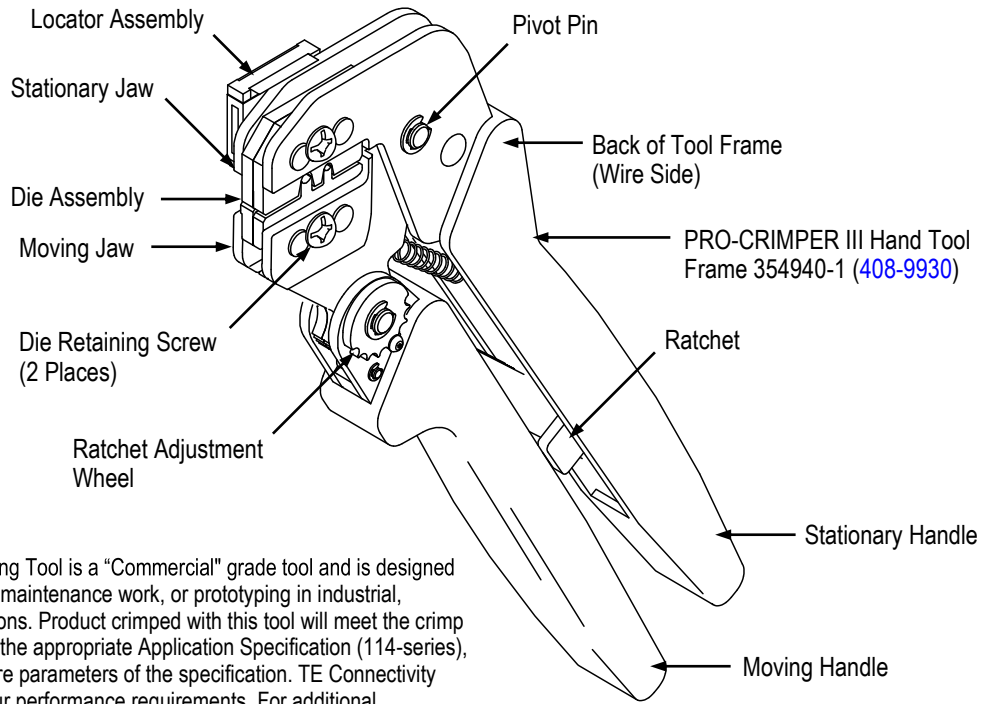


**PROPER USE GUIDELINES**

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 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 Application Specification (114-series), but may not comply with other feature parameters of the specification. TE Connectivity 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			WIRE SIZE		
PART NUMBER	LOCATOR ASSEMBLY†	PRODUCT FAMILY‡	SIZE (AWG)	INSULATION DIAMETER	STRIP LENGTH
90547-2	58515-1	Universal MATE-N-LOK* Contacts	20-18 16-14	3.30 to 5.08 [.130 to .200]	3.96 to 4.75 [.156 to .187]

† Supplied with die assembly. Also available separately.

‡ Call one of the numbers at the bottom of this page for contact part numbers.

Figure 1

**1. INTRODUCTION**

This tool assembly is used to crimp the contacts onto the wires listed in Figure 1.

**2. DESCRIPTION**

Tool features are shown in Figure 1.



**NOTE**

Dimensions in this instruction sheet are in millimeters [with inches in brackets]. Figures are not drawn to scale.

Reasons for re-issue of this instruction sheet are provided in Section 10, REVISION SUMMARY.

**3. INSTALLATION AND REMOVAL OF DIE ASSEMBLY**

1. Close the tool handles until the ratchet releases, then allow the handles to open fully.

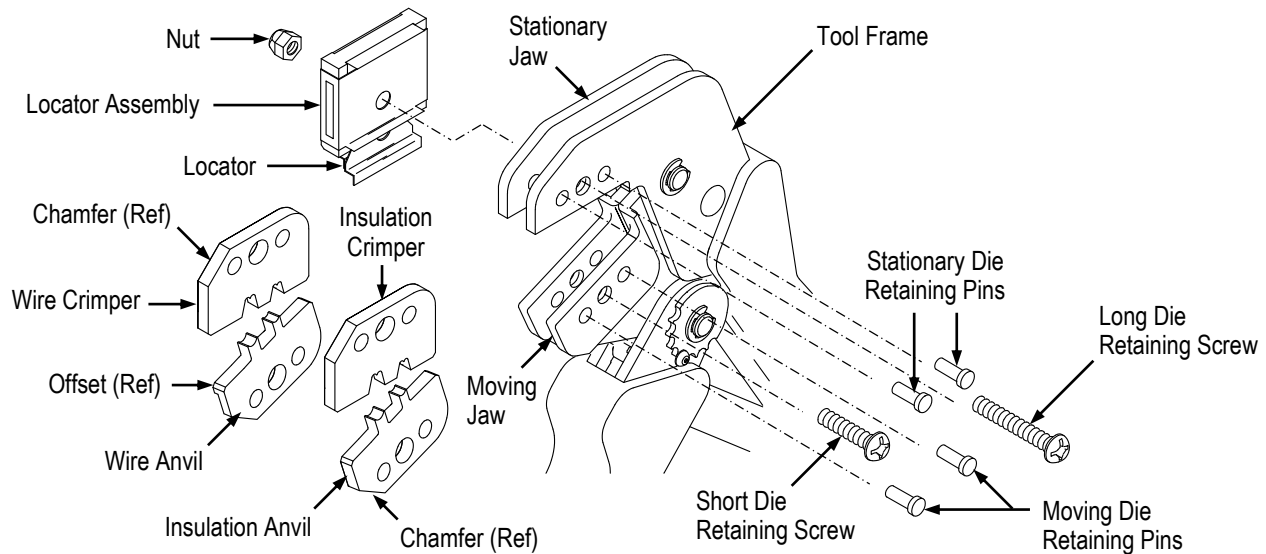


Figure 2

2. Remove the two die retaining screws from the tool jaws.
3. Place the wire anvil and insulation anvil in the moving jaw of the tool frame as shown in Figure 2.
4. Insert two die retaining pins into the moving jaw.
5. Insert the short die retaining screw through the jaw and through the anvils, and thread the screw just enough to hold the anvils in place. Do not tighten the screw at this time.
6. Place the wire crimper and insulation crimper in the stationary jaw of the tool frame as shown in Figure 2.
7. Insert two die retaining pins into the stationary jaw.
8. Insert the long die retaining screw through the jaw and through the crimpers, and thread the screw just enough to hold the crimpers in place. Do not tighten the screw at this time.
9. Carefully close the tool handles, making sure that the anvils and crimpers align properly. Continue closing the tool handles until the ratchet has engaged sufficiently to hold the anvils and crimpers in place, then tighten both die retaining screws.
10. Place the locator assembly over the end of the long die retaining screw, and position the locator assembly against the side of the tool jaw.
11. Place the nut onto the end of the screw, and tighten the nut enough to hold the locator assembly in place, while still allowing the locator to slide up and down.
12. To disassemble, close the tool handles until the ratchet releases, remove the nut, the locator assembly, die retaining screws, and die retaining pins, then slide the anvils and crimpers out of the tool jaws.

#### 4. CONTACT SUPPORT ADJUSTMENT



##### NOTE

The contact support is preset prior to shipment, but minor adjustment may be necessary.

1. Crimp a sample according to Section 5 and determine if the contact is straight, bending upward, or bending downward. If adjustment is required (contact is bent), loosen the screw that holds the contact support onto the locator assembly. Refer to Figure 3.
2. Place a contact with wire into the proper nest of the tool, and close the tool handles until the ratchet reaches the sixth click or until the contact support touches the contact.



##### NOTE

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

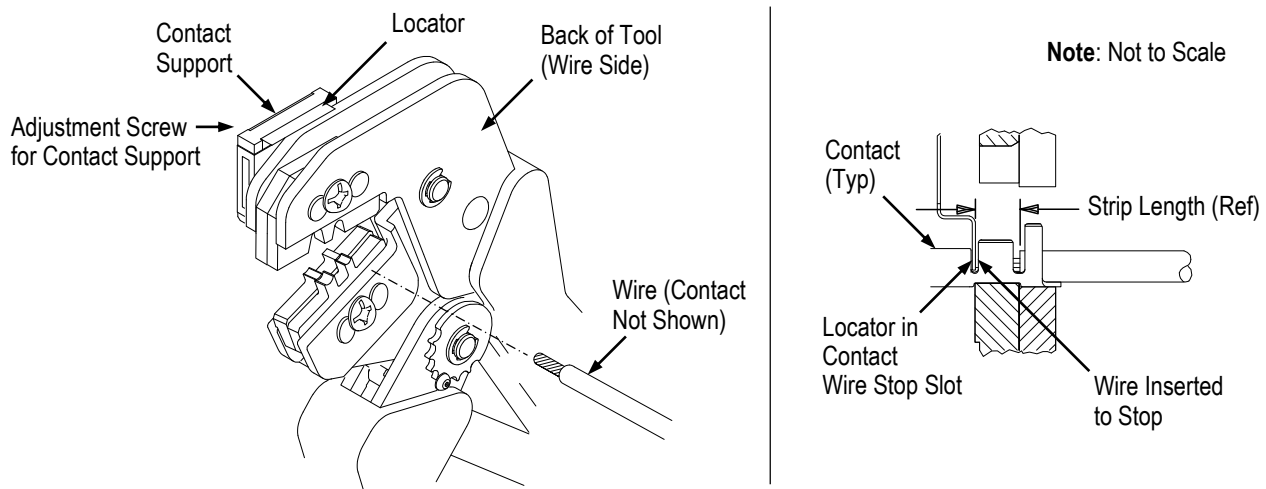


Figure 3

3. Slightly loosen the nut that holds the locator assembly onto the tool frame.
4. Move the contact support as required to eliminate the bending of the contact.
5. Tighten the nut, then close the tool handles until the ratchet releases.
6. Remove and inspect the contact.
7. Crimp another sample. If the contact is straight, tighten the contact support screw. If the contact is still being bent during crimping, repeat the adjustment procedure.

## 5. CRIMPING PROCEDURE



### NOTE

Before using the tool, the contact crimp height should be verified as described in Section 5.

1. Refer to Figure 1, and select a contact for the wire size being used. Strip the wire to the length indicated in Figure 1, taking care not to nick or cut wire strands. Identify the appropriate crimping chamber according to the wire size markings on the tool.
2. Close the tool handles until the ratchet releases, then allow the handles to open fully.
3. Holding the contact by the mating end and so that the open “U” of the wire barrel faces the top of the tool, insert the contact—insulation barrel first—into the appropriate crimping chamber from the front of the tool. Position the contact up into the nest so that the locator drops into the slot in the contact. See Figure 3. Move the front end of the wire barrel against the locator.



### CAUTION

Make sure that both sides of the insulation barrel are started evenly into the crimping chamber. Do not attempt to crimp an improperly positioned contact.

4. Hold the contact in position and squeeze the tool handles together until the ratchet engages sufficiently to hold the contact in position. Do not deform the wire barrel or insulation barrel.
5. Insert the stripped wire into the wire barrel until it butts against the wire stop as shown in Figure 3.
6. Holding the wire in place, squeeze the tool handles together until the ratchet releases, then allow the handles to open. Remove the crimped contact.



### NOTE

The crimped contact may stick in the crimping area, but the contact can be easily removed by pushing down on the top of the locator.

7. Check the contact crimp height as described in Section 6. If necessary, adjust the crimp height as described in Section 7.

## 6. CRIMP HEIGHT INSPECTION

1. Refer to Figure 4, and select a maximum size wire for each crimping chamber.
2. Crimp the contact(s).
3. Using a crimp height comparator, measure the crimp height as shown in Figure 4. If the crimp height conforms, the tool is considered dimensionally correct. If not, the tool must be adjusted. Refer to Section 7.



**NOTE**

Detailed information on obtaining and using crimp height comparators can be found in instruction sheet [408-7424](#).

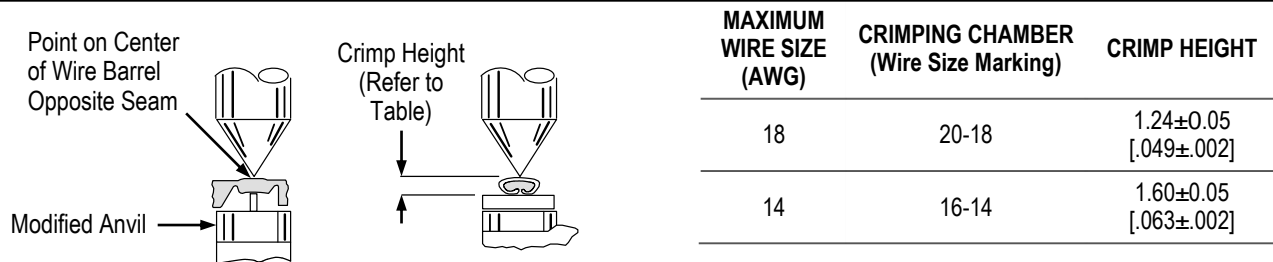


Figure 4

## 7. RATCHET ADJUSTMENT

1. Remove the lockscrew from the ratchet adjustment wheel. Refer to Figure 5.
2. Using a screwdriver, adjust the ratchet adjustment wheel. If a tighter crimp is required, rotate the wheel counterclockwise to a higher-numbered setting. If a looser crimp is required, rotate the wheel clockwise to a lower-numbered setting.
3. Re-install the lockscrew.
4. Make a sample crimp. If the crimp is acceptable, the adjustment setting is correct. If the crimp is unacceptable, continue to adjust the ratchet adjustment wheel and measure a sample crimp.

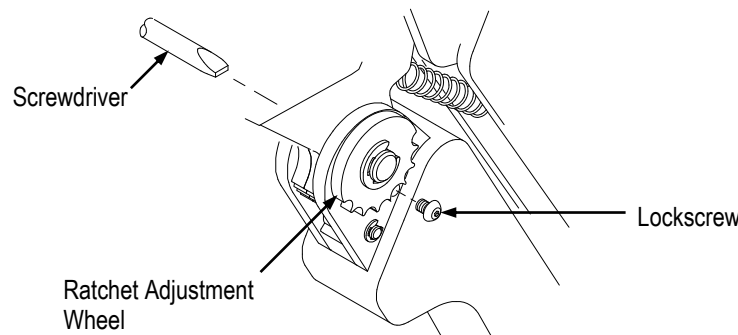


Figure 5

## 8. TOOL MAINTENANCE AND INSPECTION

### 8.1. Maintenance

1. Ensure that the tool frame 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 any components.
2. When not in use, keep tool handles closed to prevent objects from becoming lodged in the dies, and store in a clean, dry area.

3. Remove all lubrication and accumulated film from the dies by immersing the dies in a suitable commercial degreaser.

## 8.2. Visual Inspection

1. Inspection of the tool and dies should be made on a regular basis to ensure that they have not become worn or damaged.
2. Make sure that the proper die retaining screws are properly secured.
3. Inspect the crimping chambers of the die assembly for flattened, chipped, worn, or broken areas. If damage or abnormal wear is evident, the dies must be replaced. Refer to Section 9.

## 9. REPLACEMENT AND REPAIR

Available separately, 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 through your representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605, or write to:

CUSTOMER SERVICE (038-035)  
TYCO ELECTRONICS CORPORATION  
PO BOX 3608  
HARRISBURG PA 17105-3608

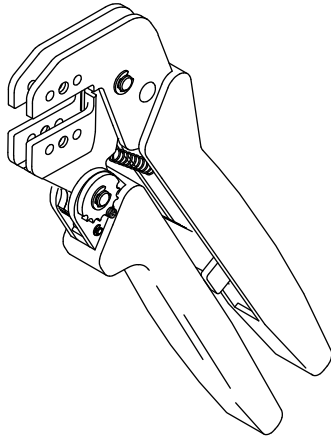
## 10. REVISION SUMMARY

Revisions to this instruction sheet include:

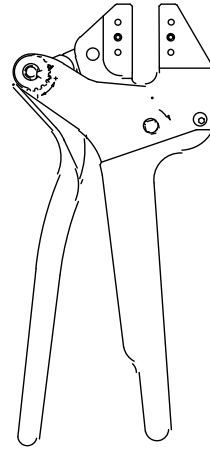
- Changed company name and logo

**Tooling Compatible with Die Assembly 90547-2**

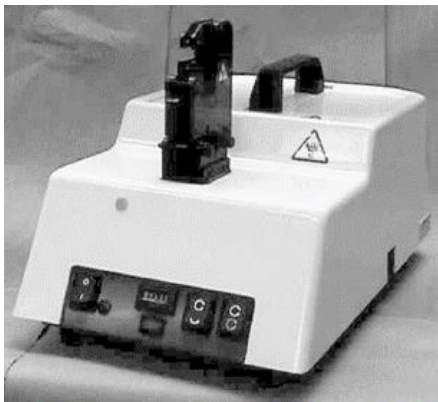
*PRO-CRIMPER III Hand Tool Frame 354940-1  
(Instruction Sheet 408-9930)*



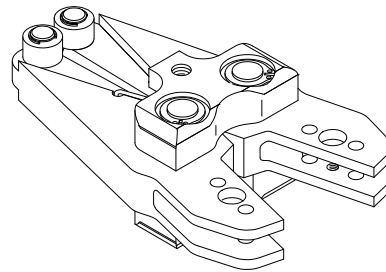
*SDE-SA Hand Tool 9-1478240-0  
(Instruction Sheet 408-8851)*



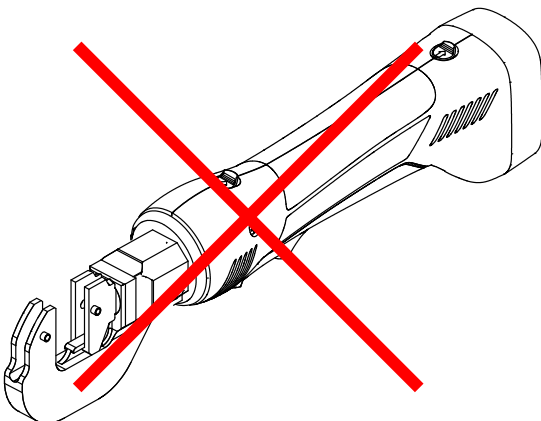
*SDE Bench Terminator 1490076-2  
(Customer Manual 409-10052)*



*626 Adapter 679304-1  
(Instruction Sheet 408-4070)*



*Battery Tool (Shouldered Die) 1725837-1 and -2  
(Customer Manual 409-10053)*



*Battery Tool (Pin Die) 1213890-1 and -2  
(Customer Manual 409-10065)*

