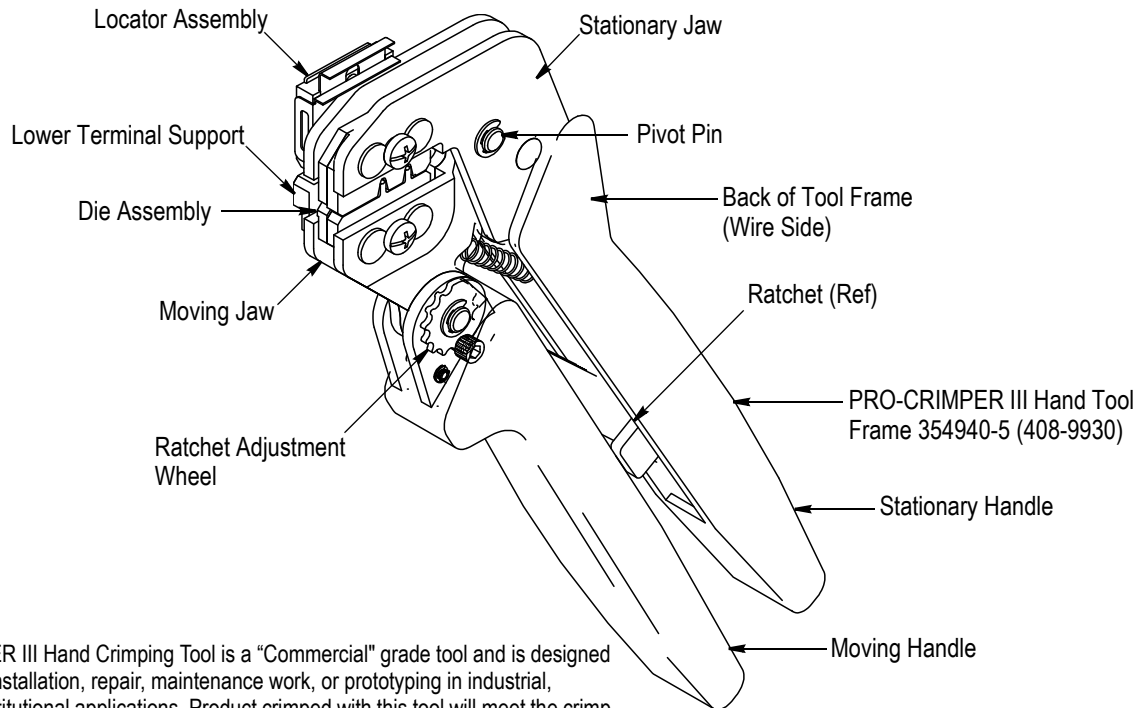


PROPER USE GUIDELINES

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	LOCATOR ASSEMBLY †	PRODUCT FAMILY ‡	WIRE		
			Size (AWG)	Maximum Insulation Diameter (mm [in.])	Strip Length (mm [in.])
91359-2	58515-1	Electronic Control Unit (ECU)-11 Generation II	18	2.36 [.093]	5.7 [.22]
			16 (Fluoropolymer)	2.62 [.103]	

† Supplied with Die Assembly; Also Available Separately

‡ Contact PRODUCT INFORMATION at the number at the bottom of this page for specific contact part numbers

Figure 1

1. INTRODUCTION

PRO-CRIMPER III Hand Tool Assembly 91359-1 consists of PRO-CRIMPER III Hand Tool Frame 354940-5 and Die Assembly 91359-2. The tool assembly is used to crimp the contacts onto the wire listed in Figure 1. Read these instructions thoroughly before using the tool assembly.

For additional information on the hand tool frame, refer to 408-9930.

Reasons for reissue of this instruction sheet are provided in Section 8, REVISION SUMMARY.

NOTE



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

2. DESCRIPTION (See Figure 1)

The tool consists of a tool frame with a stationary jaw, stationary handle, moving jaw, and moving handle and an adjustable ratchet that ensures full crimping. The tool features a lower terminal support for supporting the contact during crimping, and a ratchet adjustment wheel for adjusting the crimp height.

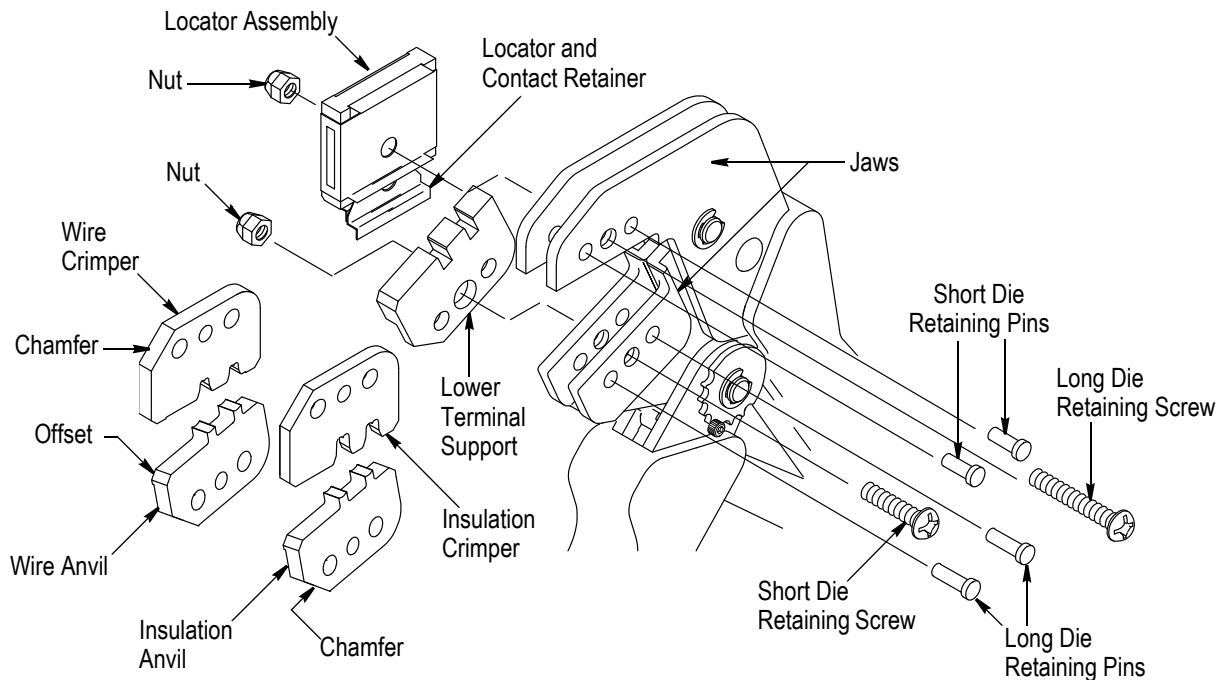


Figure 2

The tool frame holds a die assembly that consists of a wire anvil, insulation anvil, wire crimper, and insulation crimper. When closed, the dies form two crimping chambers. Die retaining pins and die retaining screws are used to position and secure the dies in the tool frame.

Attached to the outside of the frame is a locator assembly, which contains a locator and contact retainer. A nut is used on the upper die retaining screw to hold the locator assembly in place.

3. INSTALLATION AND REMOVAL OF DIE ASSEMBLY, LOCATOR ASSEMBLY, AND LOWER TERMINAL SUPPORT (See Figure 2)

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

6. Insert the two short die retaining pins through the holes in the tool frame.

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

8. 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.

9. 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.

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

11. Place the lower terminal support over the end of the short die retaining screw, and position the lower terminal support against the side of the tool jaw.

12. Place the nut onto the end of the short die retaining screw, and tighten.

13. To disassemble, close the tool handles until the ratchet releases, remove the nuts, the locator assembly, the lower terminal support, the two die retaining screws, and the four die retaining pins; then, slide the anvils and crimpers out of the tool jaws.

4. CRIMPING PROCEDURE

NOTE



This tool is provided with a contact support and a crimp adjustment feature. Initially, the contact support should be checked as specified in Paragraph 5.1, and the crimp and crimp height should be verified as specified in Paragraph 5.2, Ratchet Adjustment and Paragraph 6.3, Crimp Height Inspection, and before using the tool.

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 die assembly. Refer to Figure 3, and proceed as follows:

1. Squeeze the tool handles together and allow them to open fully.
2. Holding the contact by the mating end, insert the contact, insulation barrel first, through the front of the appropriate crimping chamber.
3. Position the contact so that the mating end of the contact is on the locator side of the tool and so that the open "U" of the wire barrel faces the top of the tool. Place the contact up into the nest of the die so that the locator drops into the wire stop slot in the contact. Refer to Figure 3. Butt the front end of the wire barrel against the locator. Make sure that the wire stop enters the contact wire stop slot between the wire barrel and contact shoulder.

CAUTION



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

4. Hold the contact in place, and squeeze the tool handles together until ratchet engages sufficiently to hold the contact in position. DO NOT deform insulation barrel or wire barrel.

5. Insert the stripped wire into the contact insulation barrel and wire barrel until it butts against the wire stop as shown in Figure 3.

CAUTION



DO NOT use defective or damaged products.

5. TOOL ADJUSTMENTS

5.1. Contact Support Adjustment

NOTE



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

Make a sample crimp and determine if the contact is straight. If the contact is bending upward or downward, make an adjustment as follows:

1. Loosen the screw that holds the contact support onto the locator assembly.

NOTE



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

2. Place a contact and wire into the proper nest, and close the tool handles until the ratchet reaches the sixth click or until the contact support touches the contact.
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, and close the handles until the ratchet releases.

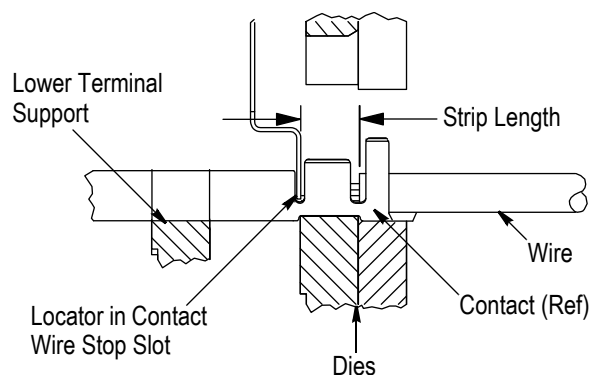
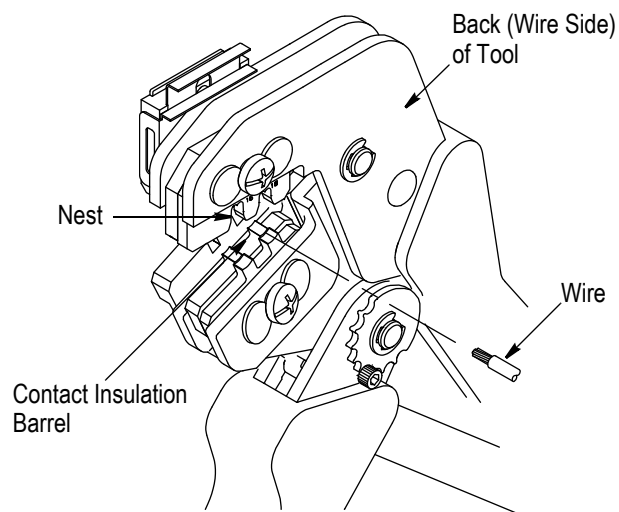


Figure 3

6. Remove and inspect the contact.
7. Make another sample crimp. If the contact is straight, tighten the contact support screw. If the contact is still being bent during crimping, repeat the adjustment procedure.

5.2. Ratchet Adjustment

The tool ratchet mechanism features an adjustment wheel with numbered settings. The adjustment wheel controls the amount of handle pressure exerted on the jaws during crimping. If the crimp is not acceptable, adjust the ratchet as follows:

1. Remove the lock screw from the ratchet adjustment wheel. Refer to Figure 4.
2. Using 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.

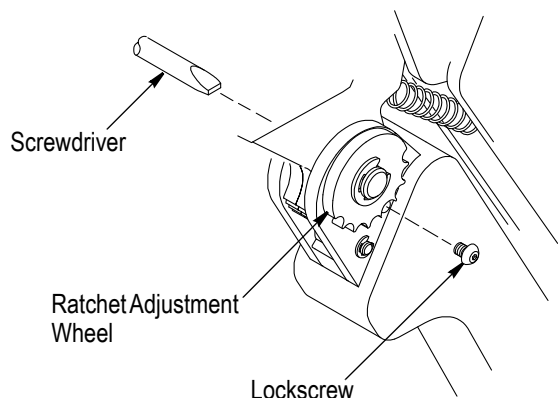


Figure 4

4. Re-install the lock screw.
5. Make a sample crimp. If the crimp is acceptable, the adjustment setting is correct. If the crimp is unacceptable, continue to adjust the ratchet, and again measure a sample crimp.

6. MAINTENANCE AND INSPECTION

6.1. 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.

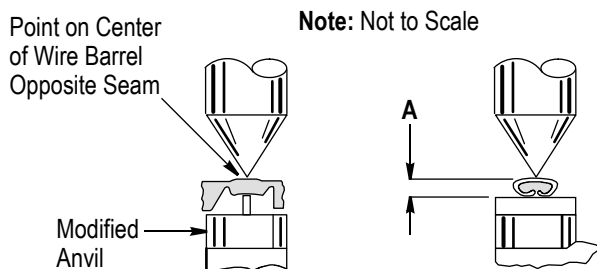
6.2. Visual Inspection

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 7, REPLACEMENT AND REPAIR.

6.3. Crimp Height Inspection

Crimp height inspection is performed through the use of a micrometer with a modified anvil, commonly referred to as a crimp height comparator. Refer to instruction sheet 408-7424 for detailed information on obtaining and using a crimp height comparator. Inspect the crimp height as follows:

1. Refer to Figure 5, and select a maximum size wire for each crimping chamber as listed.
2. Crimp the contact according to Section 3, CRIMPING PROCEDURE.
3. Using the crimp height comparator, measure the wire barrel crimp height as shown in Figure 5. If the crimp height conforms to the dimensions provided, the tool is considered dimensionally correct. If the crimp height does not conform to the dimensions provided, the tool must be adjusted. Refer to Paragraph 5.2, Ratchet Adjustment.



WIRE SIZE (AWG)	CRIMPING CHAMBER MARKING	CRIMP HEIGHT DIMENSION A ± 0.05 mm [± 0.002 in.] (mm [in.])
18	18	1.37 [.054]
16	16 (Fluoropolymer)	1.50 [.059]

Figure 5

7. REPLACEMENT AND REPAIR

Customer-replaceable parts are shown in Figure 1. 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 the repair kit, tool assembly, and die assembly 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

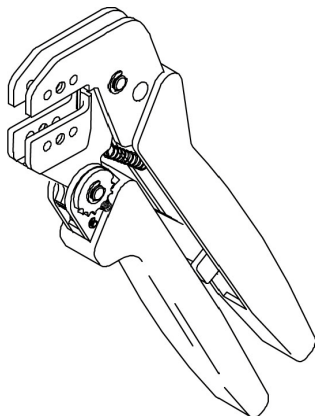
8. REVISION SUMMARY

Revisions to this instruction sheet include:

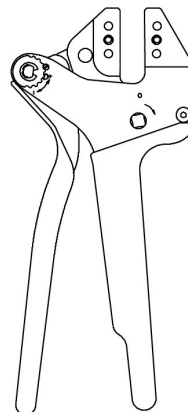
- Changed company name and logo
- Added ORIGINAL INSTRUCTIONS to first page
- Replaced trademark with general term in Figures 1 and 4
- Updated tool compatibility on last page

Tooling Compatible with Die Assembly 91359-2

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



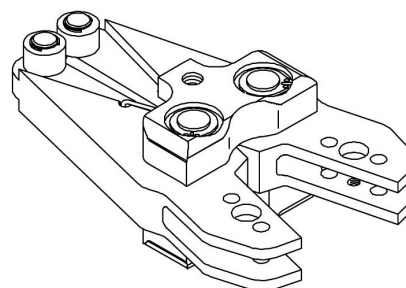
SDE-SA Hand Tool 9-1478240-0
(Instruction Sheet 408-8851)



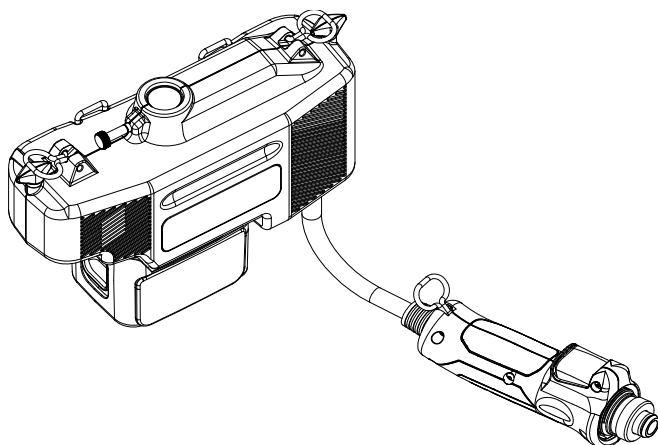
SDE Bench Terminator 1490076-2
(Customer Manual 409-10052)



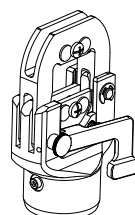
626 Adapter 679304-1
(Instruction Sheet 408-4070)



**Electro-Hydraulic (BT 3500 Battery-Hydraulic)
Hand Tool Kits 2031400-[]**
(Customer Manual 409-10095)



Closed Head Assembly 2031460-1
(Instruction Sheet 408-10312)



"C"-Head Assembly 2031450-1
(Instruction Sheet 408-10311)

