

**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.

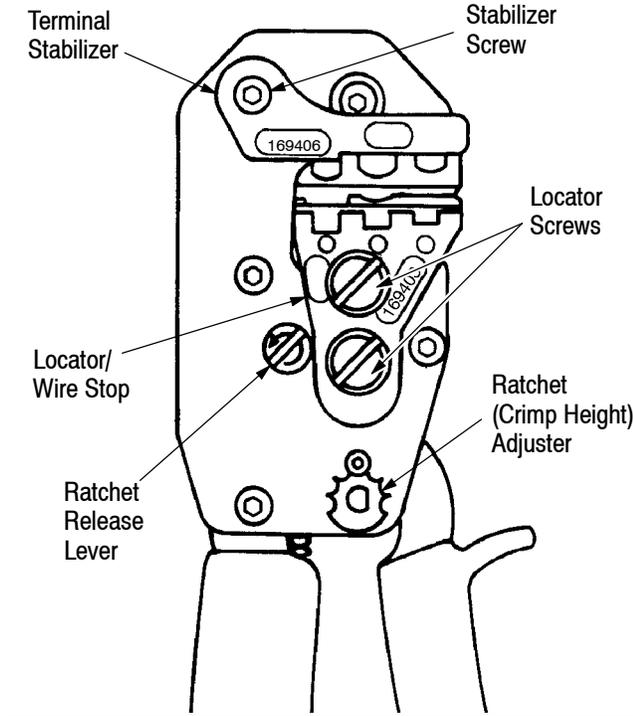
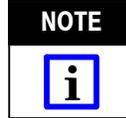


Figure 1

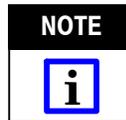


*Dimensions are in millimeters, with [inches in brackets]. Figures and illustrations are for reference only and are not drawn to scale.*

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

**2. DESCRIPTION** (Figure 1)

The tool features a ratchet, ratchet release lever, ratchet adjuster, locator/wire stop (hereafter referred to as “locator”), and a terminal stabilizer (hereafter referred to as “stabilizer”).



*The stabilizer and locator are specific to each die assembly used in the hand tool. When installing a die assembly, the accompanying stabilizer and locator must be installed on the tool for proper functioning.*

The ratchet release lever enables the tool operator to open the partially closed tool handles when necessary. During crimping, the locator correctly positions wire and product (terminal, splice, or contact), while the stabilizer (when used) prevents the product from bending.

The locator and product insulation are color-coded for a given wire range as listed in the instructions accompanying the die assembly. The product bearing the color-coded insulation is crimped in the matching color-coded crimping closure of the dies.

The ratchet adjuster is used to control the crimp height of the product’s wire/insulation barrel when a certain amount of wear has taken place on the ratchet mechanism or other internal parts of the tool. See Section 6, RATCHET INSPECTION AND ADJUSTMENT.

**1. INTRODUCTION**

CERTI-LOK Hand Tool Frame Assembly 169400 is designed to accept crimping die assemblies which crimp PIDG\* and PLASTI-GRIP\* terminals, PIDG “window” splices, SOLISTRAND\* terminals and splices, and Multimate Type III(+). Refer to the instructions packaged with the die sets for installation, selection data, crimping procedure, and die maintenance.

Documentation for the die sets includes the instruction sheets listed in Figure 2.

DIE ASSEMBLY PART NUMBER	PRODUCT APPLIED	INSTRUCTION SHEET
169404	PIDG and PLASTI-GRIP terminals, and PIDG “window” splices	408-6765●
169409	SOLISTRAND terminals and splices	408-6801
169414	Multimate Type III(+) contacts	408-6858

● **CAUTION:** This die set (169404) is not designed for “red” and “yellow” FASTON\* PIDG and PLASTI-GRIP receptacles. Attempts to use these products in this die set will break the stabilizer.

Figure 2

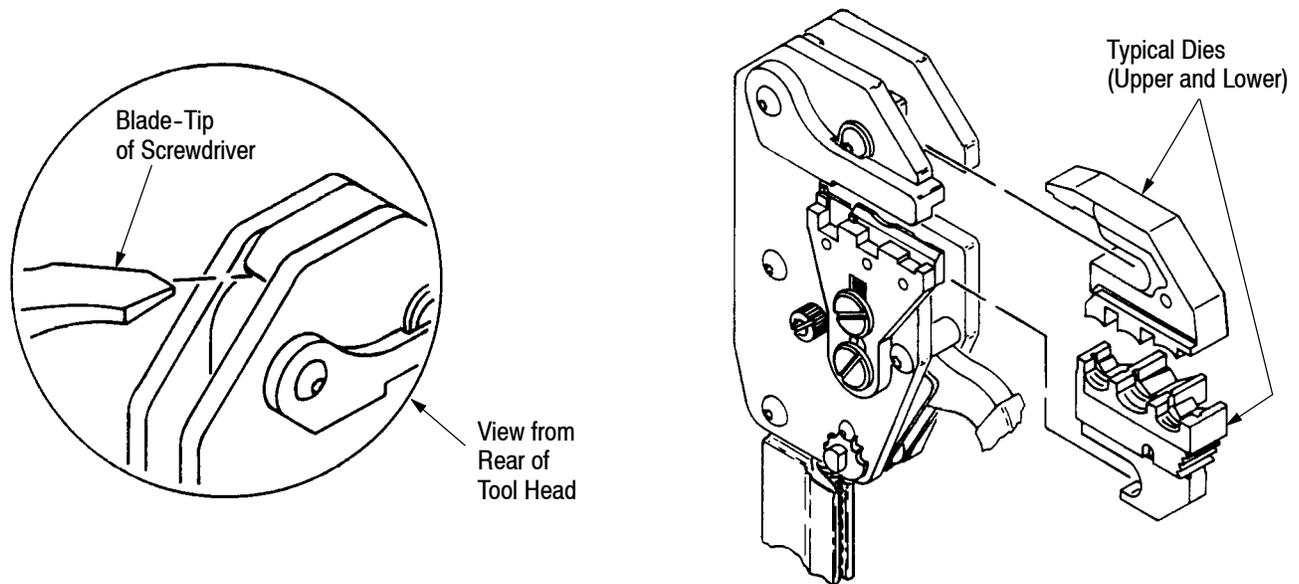


Figure 3

### 3. LOCATOR, STABILIZER, AND DIE ASSEMBLY INSTALLATION AND REMOVAL

When changing dies, first remove the locator and/or stabilizer and then remove the existing dies before installing the new dies by performing the following:

#### 3.1. Locator (Figure 1)

Loosen each of the locator screws (alternately, one turn at a time) until the locator can be removed.

#### 3.2. Stabilizer (Figure 1)

Remove the stabilizer by removing the stabilizer screw with the hex wrench supplied with the tool kit.

#### 3.3. Die Removal (Figure 3)

1. Remove upper die by positioning the blade tip of a screwdriver behind and under the die. Push die outward and apply a rocking action to the die while pushing it out of the tool frame head. See inset, Figure 3.

2. Remove lower die by pushing upwards with thumb and prying out of tool frame using screwdriver tip.

#### 3.4. Die Insertion (Figure 3)

1. Slide each die into the tool frame head as shown in Figure 3 until it “clicks” into position.

2. After installing dies, install locator and/ or stabilizer (as required) according to the instructions packaged with the die set.

### 4. CRIMPING PROCEDURE

Refer to the instructions packaged with the die assemblies for product selection, wire strip lengths, and correct positioning of product in the crimping dies. Crimping procedure is as follows:

1. Squeeze tool handles until the ratchet releases and allow them to open fully.
2. Place the product (terminal, splice, or contact) into the lower die and squeeze the tool handles together until the product is held by the dies but the wire barrel is not deformed.
3. Insert the stripped wire into the wire barrel of the product.
4. Squeeze the tool handles until the ratchet releases to complete the crimp.

#### NOTE



*In the event that the product is improperly positioned in the dies, or if the wrong die position was selected, release the ratchet by squeezing the tool handles slightly and turning the ratchet release counterclockwise (see Figure 1). Allow handles to open and then reposition product properly.*

### 5. MAINTENANCE/INSPECTION

#### 5.1. Maintenance

1. Remove dust, moisture, and other contaminants with a clean brush, or a clean, soft, lint-free cloth. Do not use objects that could damage the tool.
2. Make certain that all screws are in place and secured.

3. Lubricate all pins, pivot points, and bearing surfaces with a thin coat of SAE 20 motor oil.
4. When the tool is not in use, keep it in the tool kit and store in a clean, dry area.

## 5.2. Inspection

Regular inspections should be performed to ensure the quality and reliability of the tool. Though recommendations call for at least one inspection a month, the inspection frequency should be based upon amount of use, working conditions, operator training and skill, and established company standards. Inspect the tool as follows:

1. Remove all lubrication and accumulated film by immersing the tool (handles partially closed) in a suitable commercial degreaser that will not affect paint or plastic material.
2. Make certain that all screws are in place and secured.
3. Close tool handles until ratchet releases, then allow them to open freely. If they do not open quickly and fully, the spring is defective.
4. Inspect the head assembly for worn or broken components.

## 6. RATCHET INSPECTION AND ADJUSTMENT



*A die set must be installed in the tool for this procedure.*

Obtain a 0.025 mm [.001 in.]-thick shim that is suitable for checking the clearance between the bottoming surfaces of the crimping dies, and proceed as follows:

1. Select a product and wire (maximum size) appropriate for the dies.
2. Position the product and wire between the crimping dies, according to Section 4, CRIMPING PROCEDURE.
3. Squeeze the tool handles together until the ratchet releases. Hold the tool handles in this position, maintaining sufficient pressure to keep the dies closed.
4. Check the clearance between the bottoming surfaces of the crimping dies. If the clearance is 0.025 mm [.001 in.] or less, the ratchet is satisfactory. If the clearance exceeds 0.025 mm [.001 in.], the ratchet is out of adjustment and must be adjusted.

5. To adjust the ratchet, refer to Figure 4 and perform the following:
  - a. Remove the screw on the adjuster wheel from each side of the tool head.
  - b. With pliers, grip the knob on the locator and advance the wheel clockwise one notch.

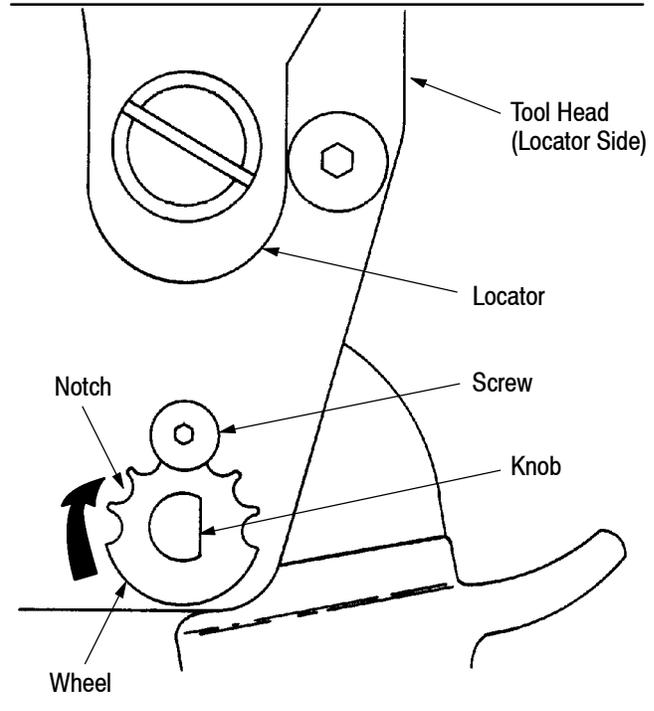


Figure 4

- c. Replace screws on adjuster wheel and repeat Steps 1 through 4. Repeat ratchet adjustment if necessary.

## 7. REPLACEMENT

Order replacement tools through your TE Connectivity 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 CORPORATION  
 P.O. BOX 3608  
 HARRISBURG, PA 17105-3608

For further replacement information, contact a TE Representative at 1-800-526-5136.

## 8. REVISION SUMMARY

Since the previous release of this sheet, the following changes were made:

- Updated document to corporate requirements
- New format