

**Applicable Crimp Head Adapters:**

- Straight Action Crimper 217200-1
- Heavy-Head Pneumatic Adapter 318453-1
- Modular Plug Adapter 318510-1
- Straight Action Crimp Head Adapter 217201-1
- “T”-HEAD\* Pneumatic Adapter 217202-1
- C-Head Pneumatic Adapter 318161-1

Figure 1

**1. INTRODUCTION**

Pneumatic CERTI-CRIMP Tool Holder 356304-1 is used in conjunction with 626 Pneumatic Tooling Assemblies 189721-1 or 189722-1 to crimp various types of connectors. The tool holder is designed to accept interchangeable crimp head adapters (listed in Figure 1) which hold various crimping die assemblies. For questions concerning the setup and operation of the pneumatic tools, refer to Customer Manual 409-5862.

Read these instructions thoroughly before installing the crimp head adapters and using the tool holder.

**NOTE** *Dimensions are in millimeters [with inch equivalents in brackets]. Figures and illustrations are for identification only and are not drawn to scale.*

Reasons for reissue of this sheet are provided in Section 7, REVISION SUMMARY.

**2. DESCRIPTION** (Figure 1)

The tool holder consists of a tool holder body, cam, cam setscrew, adjustable eccentric, pivot pins, and ratchet pawl with emergency release. The ratchet ensures that the tool completes the crimp cycle.

**3. INSTALLATION PROCEDURE**

**3.1. Tool Holder Installation**

**NOTE** *Previously installed cams and tool holders must be removed before installing different ones. Removal is the reverse of installation.*



*Air pressure must be removed from the tool while head or tool holder is detached.*

If the piston is not extended, it must first be extended to allow installation of the cam. To extend the piston, firmly grasp the piston with piston pliers and pull away from the body of the tool. Piston pliers are provided with the power unit.

A strip of adhesive-backed safety labels, printed in various languages, is packaged with the tool holder. Remove the appropriate language label from the strip and attach it to the tool holder body.



*Be sure to use the correct combination of cam and tool holder. If incorrect combination is used, system will not operate properly.*

Proceed as follows:

1. If cam setscrew is not installed in cam, thread setscrew into cam two to three turns. See Figure 2.
2. Place cam (with setscrew) onto piston rod. The cam should butt against the piston rod face. If not, turn cam setscrew *counterclockwise* until cam fits on piston rod properly.
3. Tighten cam setscrew, then pull on cam to ensure that it is firmly attached.

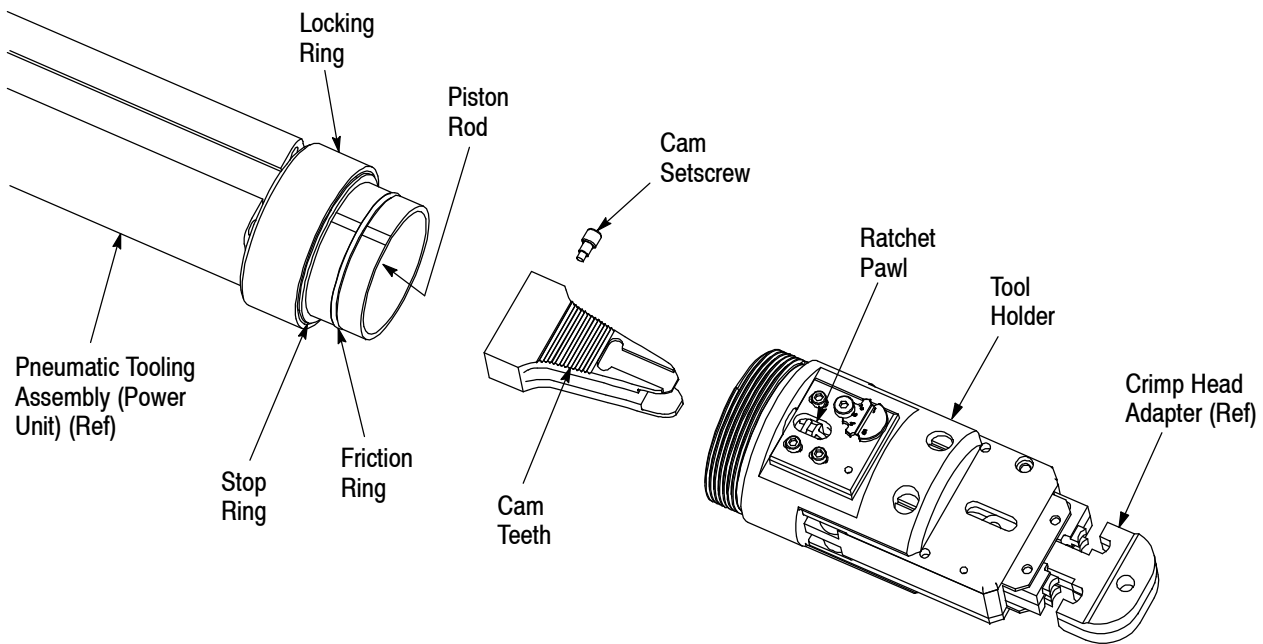


Figure 2



**CAUTION** Over-tightening the cam setscrew may damage the setscrew or cam.

4. Properly align tool holder ratchet pawl with the cam teeth and push tool holder onto power unit so that it passes over the friction ring on the power unit piston. See Figure 2.

5. Slide power unit locking ring toward tool holder until it butts against the stop ring on the power unit. Then turn ring clockwise to engage threads on the bottom of the tool holder. Tighten locking ring to fully secure the tool holder.



**NOTE** When tool holder is properly installed, the locking ring should be butted against the stop ring, and threads of the tool holder should not be visible. If not properly installed, check that correct combination of cam and tool holder is used and that they are aligned properly.

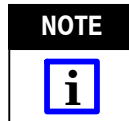
6. Rotate the tool holder one full turn in each direction and note that the power unit locking ring rotates with the tool holder.



**DANGER** To avoid personal injury, periodically check that locking ring is tightly securing the tool holder.



**DANGER** After installation, ALWAYS ensure that the tool holder pivot pins are fully tightened to avoid personal injury or damage to the tool.



**NOTE** Removal is the reverse of installation.

### 3.2. Crimp Head Adapter and Crimping Die Installation

Refer to the instruction sheet packaged with the crimp head adapter for the particular product to be crimped.

### 4. CRIMP HEIGHT ADJUSTMENT

The tool holder features an adjustable eccentric and a ratchet mechanism with a range of settings. The position of the pawl ensures that the tool completes the cycle. The eccentric controls the amount of cam pressure exerted on the crimping dies during the crimping procedure. Although the ratchet is preset prior to shipment, it is important that you verify the crimp height. Also, general use and subsequent wear may cause the tool to go out of adjustment. It is recommended that the crimp height be inspected, and adjusted, if necessary, on a regular basis by quality control personnel.

1. Connect pneumatic tooling to an adequate air supply between 620–690 kPa [90–100 psi]. For specific information on air line requirements and air hose installation, refer to the instructions packaged with the pneumatic tooling assembly.
2. Place a contact in the crimp nest and place a properly prepared wire of the correct size into the wire barrel.
3. Place a .025-mm [.001-in.] shim between the crimping dies where the dies bottom against each other.

4. Slowly crimp the contact onto the wire until the crimping dies bottom on the shim. Check that the ratchet releases after the dies bottom.

**DANGER**

*Before adjusting the ratchet pawl position, DISCONNECT THE TOOL FROM THE AIR SUPPLY. After the adjustment, ALWAYS ensure that the tool holder pivot pins are fully tightened to avoid personal injury or damage to the tool.*

5. If the ratchet releases before the dies bottom, loosen the three securing screws, remove the eccentric adjustment screw (refer to Figure 1) and rotate the eccentric *clockwise* to a higher setting. Tighten the securing screws. Repeat as required.

**NOTE**

*If the ratchet does not release and the tool will not return, slowly actuate the tool until the force of the cam teeth is off the pawl, then push on the pawl with a small screwdriver until the pawl is released from the teeth, release the tool switch and allow the tool to return. See Figure 3.*

### Ratchet Pawl with Emergency Release

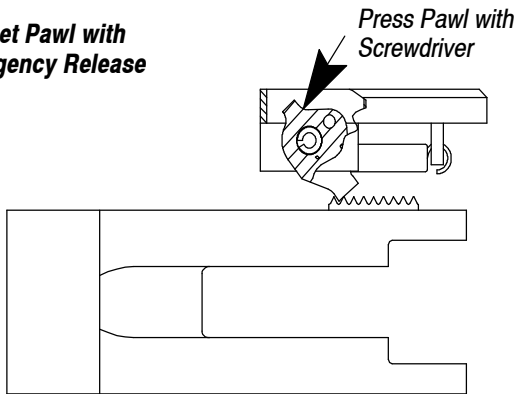


Figure 3

6. If the ratchet does not release after the crimping dies bottom, loosen the three securing screws, remove the eccentric adjustment screw and rotate the eccentric *counterclockwise* to a lower setting. Tighten the securing screws. Repeat as required.

7. If the crimp cannot be made to conform to the dimensions provided in the appropriate application specification, the crimp head adapter and/or crimping dies are defective and must be replaced.

## 5. MAINTENANCE AND INSPECTION

**DANGER**

*To avoid injury, DISCONNECT TOOL FROM AIR SUPPLY before performing any maintenance or inspection procedures.*

Tyco Electronics recommends that a maintenance and inspection program be performed periodically to

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ensure dependable and uniform terminations. The tool holder should be inspected once a week. Frequency of inspection should be adjusted to suit your requirements through experience, and depends on:

- Care, amount of use, and handling of tool holder
- Type and size of the products crimped
- Degree of operator skill
- Presence of abnormal amounts of dust and dirt
- Your own established standards.

The tool holder is thoroughly inspected before packaging. Since there is the possibility of damage during shipment, the tool holder should be inspected immediately upon arrival at your facility.

### 5.1. Maintenance

#### A. Cleaning

Remove dust, moisture, and other contaminants with a clean, soft brush, or a soft, lint-free cloth. Do NOT use objects that could damage the tool. Lubricate tool holder as instructed in Paragraph 5.1,B, Lubrication, before placing it back into service.

#### B. Lubrication

Lubricate all pins, pivot points, and bearing surfaces with a high quality grease. Tyco Electronics recommends the use of Molykote<sup>■</sup> grease, which is a commercially available lubricant. Lubricate according to the following schedule:

- Holder used in daily production—lubricate daily
- Holder used daily (occasional)—lubricate weekly
- Holder used weekly—lubricate monthly

Wipe excess grease from tool holder, particularly from die closure areas. Grease transferred from the die closure area onto certain terminations may affect the electrical characteristics of an application.

### 5.2. Periodic Inspection

Regular inspections of the tool holder should be performed by quality control personnel. A record of scheduled inspections should remain with the tool holder or be supplied to supervisory personnel responsible for the tool holder. Inspection frequency should be based upon amount of use, working conditions, operator training and skill, and established company standards.

1. Inspect the tool holder for missing pins or parts. If parts are missing or defective, replace them by referring to Figure 4.
2. Check all bearing surfaces for wear. Replace any worn parts.
3. Inspect crimping dies for flattened, chipped, or broken areas. Worn or damaged surfaces are objectionable and will affect the quality of the crimp.

4. When the tool holder is not in use, store in a clean, dry area.

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**6. REPLACEMENT AND REPAIR**

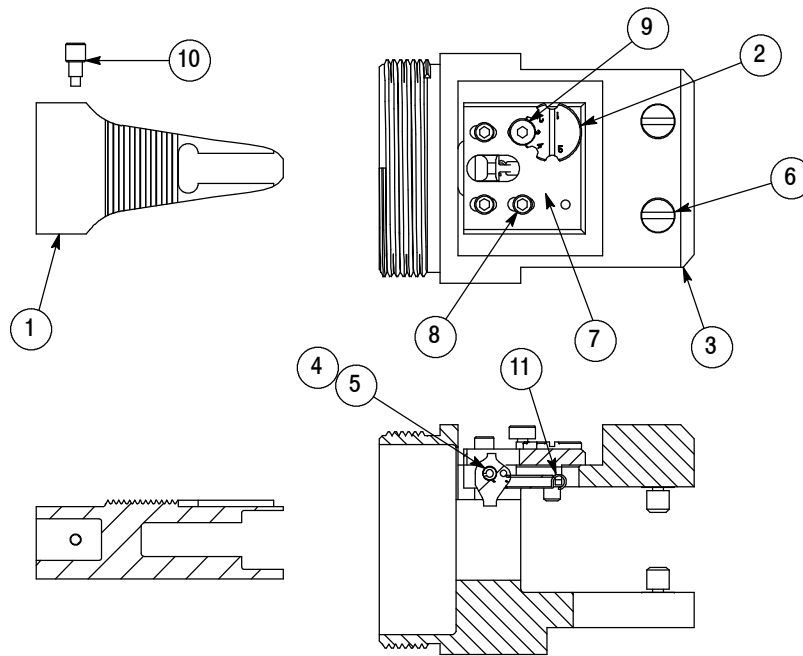
Replacement parts and recommended spares are listed in Figure 4. The recommended spares should be stocked for immediate replacement. Order replacement parts through your Tyco Electronics Representative or call 1-800-526-5142, or send a facsimile of your purchase order to 1-717-986-7605, or write to:

Tools may also be returned to Tyco Electronics for evaluation and repair. For tool repair service, contact a Tyco Electronics Representative at: 1-800-526-5136.

**7. REVISION SUMMARY**

The following changes were made since the previous release of this sheet:

- Updated document to corporate requirements
- Added ORIGINAL INSTRUCTIONS



**REPLACEMENT PARTS AND RECOMMENDED SPARE PARTS-**

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL HOLDER
1	356623-1	CAM	1
2	356439-1	ECCENTRIC	1
3	356624-1	TOOL HOLDER BODY	1
4	356441-1	PAWL, Ratchet	1
5	4-21028-9	PIN, Slotted Spring, .125 x .375	1
6	354425-1	PIN, Pivot	4
7	356437-1	PLATE, Eccentric Adjustment	1
8	9-21000-0	SCREW, Socket Head Cap, 4-40 x .31	3
9	21989-3	SCREW, Socket Head Shoulder, .125 x .25	1
10	189765-1	SETSCREW, Special	1
11	37887	SPRING	1

Figure 4