

# customer manual

<b>SAFETY PRECAUTIONS — READ THIS FIRST!</b> .....	<b>2</b>
<b>SAFETY PRECAUTIONS — AVOID INJURY — READ THIS FIRST!</b> .....	<b>3</b>
<b>1. INTRODUCTION</b> .....	<b>4</b>
<b>2. INSPECTION AND MAINTENANCE</b> .....	<b>5</b>
2.1.Head Visual Inspection .....	5
2.2.Hose Inspection .....	5
<b>3. CRIMPING HEAD INSTALLATION</b> .....	<b>6</b>
<b>4. DIE INSTALLATION AND REMOVAL</b> .....	<b>6</b>
4.1.Shank Dies .....	6
4.2.U-Dies .....	7
<b>5. CRIMPING PROCEDURE</b> .....	<b>8</b>
<b>6. REPLACEMENT AND REPAIR</b> .....	<b>8</b>
<b>7. REVISION SUMMARY</b> .....	<b>8</b>

ORIGINAL INSTRUCTIONS

## SAFETY PRECAUTIONS — READ THIS FIRST!

### IMPORTANT SAFETY INFORMATION



**NOTE**

Keep all decals clean and legible, and replace them when necessary.

---



**DANGER**

**ELECTRIC SHOCK HAZARD**

This tool is not insulated. When using this unit near energized electrical lines, use proper personal protective equipment.



Failure to observe this warning could result in severe injury or death.

---



**DANGER**

**SKIN INJECTION HAZARD**

Do not use hands to check for oil leaks. Highly pressurized oil will puncture the skin causing serious injury, gangrene, or death. If injured, seek medical help immediately to remove the oil.



**DANGER**

**FIRE HAZARD**

Do not use solvents or flammable liquids to clean the crimping tool. Solvents or flammable liquids could ignite and cause serious injury or property damage.



Failure to heed these warnings could result in severe injury from harmful fumes or burns from flying debris.

---



**DANGER**

Inspect the tool and jaws/dies before each use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel.

Failure to observe this warning could result in severe injury or death.

---



**CAUTION**

— Do not place the tool in a vise. The crimping tool is designed for hand-held operation.

— Protect the crimping tool from rain and moisture. Water will damage the crimping tool and battery.

Failure to observe these precautions may result in injury or property damage.

---



**CAUTION**

— Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result.

Failure to observe these precautions may result in injury or property damage.

---

## SAFETY PRECAUTIONS — AVOID INJURY — READ THIS FIRST!

Safeguards are designed into this application equipment to protect operators and maintenance personnel from most hazards during equipment operation. However, certain safety precautions must be taken by the operator and repair personnel to avoid personal injury, as well as damage to the equipment. For best results, application equipment must be operated in a dry, dust-free environment. Do not operate equipment in a gaseous or hazardous environment.

Carefully observe the following safety precautions before and during operation of the equipment:



*Always wear approved eye protection while operating equipment.*



*Never insert hands into installed equipment.  
Never wear loose clothing or jewelry that may catch in moving parts of the equipment.*



*Always wear appropriate ear protection while using equipment.*



*Never alter, modify, or misuse the equipment.*



*Moving parts can crush and cut. Always keep guard(s) in place during normal operation.*



*Do not operate equipment if the guards are removed.*



*Electrical shock hazard.*



*Read and understand this entire document before using equipment.*



*Always turn off the main power switch and disconnect the electrical cord from the power source when performing repair or maintenance on the equipment.*

## SUPPORT CENTER

**CALL TOLL FREE 1-800-522-6752 (CONTINENTAL UNITED STATES AND PUERTO RICO ONLY)**

*Canada: 1.800.522.6752*

*China: +86.400.820.6015*

*Mexico: +52.55.1106.0800*

*Latin/S. America +54.11.4733.2200*

*Germany: +49.6151.607.1999*

*UK: +44.0800.267666*

*France: +33.1.34.20.8686*

*Netherlands: +31.73.624.6999*

The **Support Center** offers a means of providing technical assistance when required. In addition, Field Service Specialists are available to provide assistance with the adjustment or repair of the application equipment when problems arise which your maintenance personnel are unable to correct.

### INFORMATION REQUIRED WHEN CONTACTING THE SUPPORT CENTER

When calling the Support Center regarding service to equipment, it is suggested that a person familiar with the device be present with a copy of the manual (and drawings) to receive instructions. Many difficulties can be avoided in this manner.

When calling the Support Center, be ready with the following information:

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Customer Name</li> <li>2. Customer Address</li> <li>3. Person to contact (name, title, telephone number, and extension)</li> <li>4. Person Calling</li> <li>5. Equipment number (and serial number if applicable)</li> </ol> | <ol style="list-style-type: none"> <li>6. Product part number (and serial number if applicable)</li> <li>7. Urgency of request</li> <li>8. Nature of problem</li> <li>9. Description of inoperative component(s)</li> <li>10. Additional information/comments that may be helpful</li> </ol> |
|--|--|



8,200 PSI [565 Bar] Hydraulic Heads		10,000 PSI [689 Bar] Hydraulic Heads	
Part Number	Instruction Sheet	Part Number	Instruction Sheet
58445-1	408-9598	1752877-1	408-8956
69066	408-2453	1752786-1	408-8958
69082	408-2456	1752787-1	408-8914
58422-1	408-9535	1752868-1	408-8959
69099	408-2458	1490745-1	408-10111
69051	408-2450	1490746-1	408-10112
69065	408-2452	1490747-1	408-8715
69067	408-2454	1976230-1	408-10145
69069	408-1745	1673672-1	408-8910
2844530-1	408-35004	1752788-1	408-8915
2161730-1	408-9535	----	----

8,200 PSI [565 Bar] Hydraulic Pumps		10,000 PSI [689 Bar] Hydraulic Pumps	
Part Number	Customer Manual	Part Number	Customer Manual
69120-[ ]	409-1950	1804700-[ ]	409-10081

Figure 1

## 1. INTRODUCTION

This Customer Manual provides general application, inspection and maintenance, and crimping procedures for powered TE Connectivity (TE) Hydraulic Crimping Systems.



### **DANGER**

To avoid injury when using hydraulic equipment, observe the following precautions:

- ◆ DO NOT modify the crimping equipment in any way.
- ◆ USE ONLY dies, terminals, and wire specified for the head.
- ◆ DO NOT perform repairs other than those specified in the instructional material supplied with the equipment.

**Warning:** To avoid personal injury and potential damage to the crimp head, TE Connectivity (TE) requires the crimp head to operate at the listed pressure. TE recommends using the 8,200 PSI [565 bar] or 10,000 PSI [689 bar] (whichever is applicable) *TE Hydraulic Pump* as other manufacturers' pumps may apply insufficient pressure (resulting in an inadequate crimp) or excessive pressure (resulting in failure of the head). Additionally, the TE pump must be used to maintain CE certification; if using other manufacturers' pumps, the user is responsible for self-certification.

Reasons for reissue of this Customer Manual are provided in Section 7; REVISION SUMMARY.

Please refer to individual head and pump instruction sheets for specific information.

Refer to instructions packaged with die sets for compatible products, wire ranges, strip dimensions, and application procedures.

When reading this manual, pay particular attention to DANGER, CAUTION, and NOTE statements.



**DANGER**  
Denotes an imminent hazard that may result in moderate or severe injury.



**CAUTION**  
Denotes a condition that may result in product or equipment damage.



**NOTE**  
Highlights special or important information.



**NOTE**  
Dimensions in this customer manual are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.

## 2. INSPECTION AND MAINTENANCE

At intervals of once a year or every 7,500 cycles, whichever comes first, the hydraulic head should be returned to TE Connectivity for magnetic particle inspection. Additionally, inspect and service the head per the applicable Instruction Sheet every month or every 1,000 cycles, whichever comes first.

### 2.1. Head Visual Inspection

1. With hydraulic pressure released, inspect the assembled head for nicks, scratches, and cracks. Inspect for cracks especially at the corners of the yoke and around the top of the cylinder.
2. Inspect pin holes and retaining pins for wear if applicable. Replace parts, as needed.
3. If head shows evidence of galling, cracks, oil leakage, or rough cycling, return the crimping head to TE for repairs.

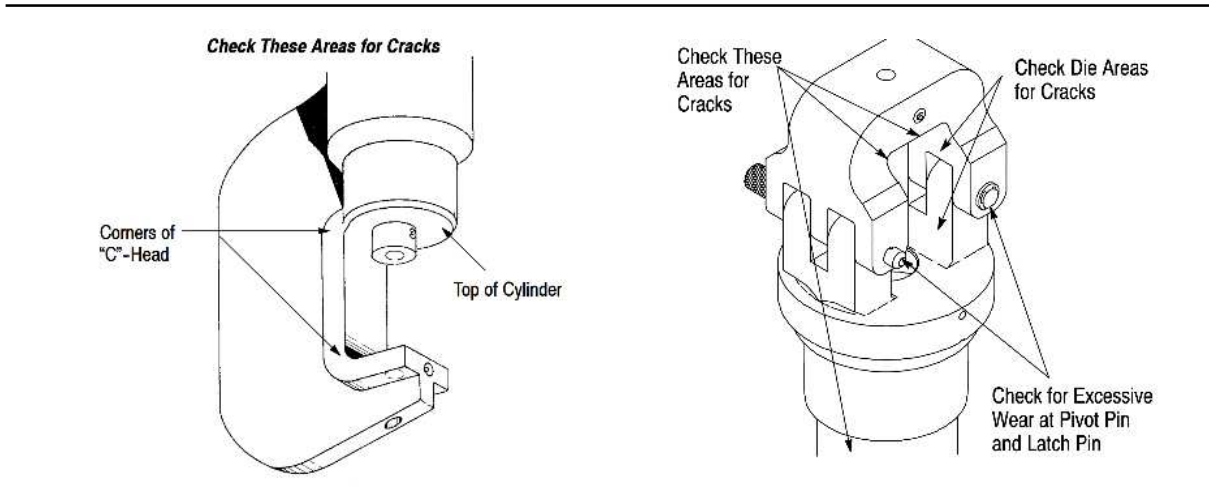


Figure 2

### 2.2. Hose Inspection



**NOTE**  
The date of manufacture of the hose is marked on the hose in the format MM-YYYY. MM represents the month of manufacture and YYYY represents the year. The hose should be replaced after five years.

Inspect the hydraulic hose for signs of wear after every eight hours of use. If necessary, replace the hose. Do not use a damaged hose.

### 3. CRIMPING HEAD INSTALLATION

Each Crimping Head is shipped with a coating of lubricating oil to prevent rust and corrosion. Wipe off the oil before installing the Crimping Head on the power unit. To install Crimping Head, proceed as follows:



**DANGER**

Make sure the hydraulic pressure to hose or handle is released and that power supply is disconnected to electric power unit, if applicable.

1. Thoroughly clean coupling area of handle control or hose assembly and crimping head.
2. Remove protective dust caps from both quick connect/disconnect couplers.
3. Hold hose or handle control in vertical position to prevent oil spillage. Attach hose or handle control to coupling section on head. Thread properly and tighten securely.



**CAUTION**

Oil flow must be unobstructed between power unit and Crimping Head. Make sure all couplers are fully mated and tightened.



**CAUTION**

If crimping head must be removed after being in production, pressure must first be released in the hydraulic system. – If using hydraulic power unit PN 69120-[ ] or 1804700-[ ], DISCONNECT POWER UNIT FROM POWER SUPPLY.

### 4. DIE INSTALLATION AND REMOVAL



**DANGER**

Avoid personal injury. When using power unit, exercise caution to avoid accidentally depressing foot pedal or handle control when installing or changing dies.



**CAUTION**

Be sure Moving and Stationary die are seated flat in tool.



**NOTE**

Refer to the instruction sheet provided with the die set.

#### 4.1. Shank Dies

##### A. Die Installation

1. Remove latch pin and open yoke on crimping head, if applicable.
2. Loosen top (yoke) setscrew. Refer to die set instructions and insert stationary (upper) die which includes the nest area, into top of tool. Ensure “flat” on die shank is facing the set screw, if applicable. Tighten setscrew.

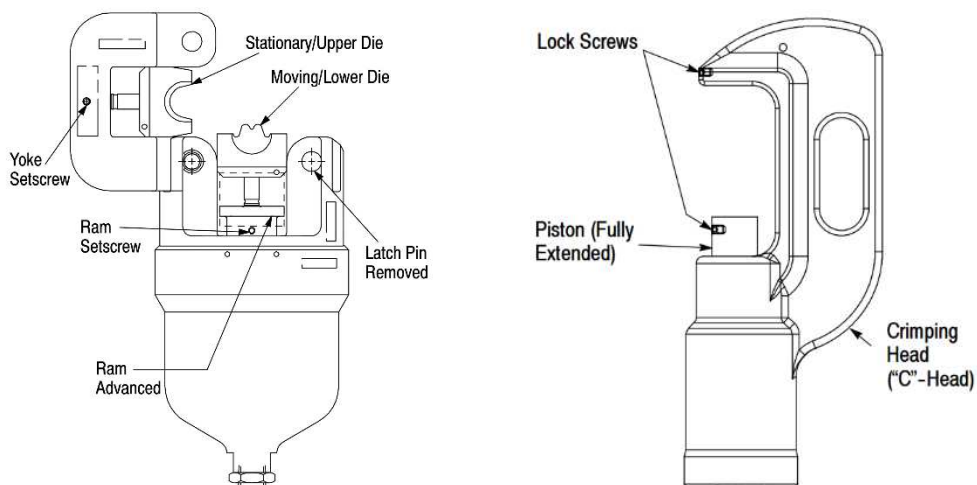


Figure 3

3. Activate power unit to advance ram until setscrew is visible. Loosen setscrew.
4. Insert moving (lower) die, which serves as the indenter, into bottom of tool, making sure that moving die is properly oriented to mate with stationary die. Ensure "flat" on die shank is facing the set screw, if applicable. Tighten setscrew.
5. Close yoke and secure with latch pin, if applicable.
6. Slowly close dies to ensure proper alignment.
7. Complete the cycle and return the ram to the DOWN position.

**B. Die Removal**

1. Remove latch pin and open yoke on crimping head, if applicable.
2. Activate power unit to advance ram slightly to gain access to the ram setscrew which secures the moving die. Loosen the setscrew and remove the moving die.
3. Loosen top setscrew and remove the stationary die

**4.2. U-Dies**

**A. Die Installation**

1. Depress the upper die release button located in the "C"-head.
2. Slide the nest into place in "C"-head.

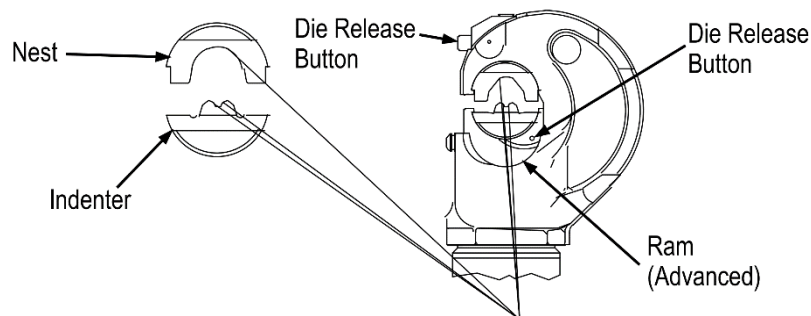


Figure 4

3. Release the button and rock the die back and forth until the nest snaps into position.
4. Activate the power unit until the lower die release button located in the ram is exposed.
5. Depress the release button.
6. Slide the indenter into position in the ram.
7. Release the button and rock the indenter back and forth until the die snaps into position.
8. Return ram to the down position

**B. Die Removal**

1. Depress the upper release button located in the "C"-head and slide the nest out of the head.
2. Activate the power unit until the lower die release button (located in the ram) is exposed.
3. Depress the die release button and slide the indenter out of the ram.



## 5. CRIMPING PROCEDURE

To crimp a terminal or splice, proceed as follows:

1. Plug the power cord of the pump into a properly grounded outlet.

**DANGER**

*NEVER use an ungrounded power supply for the pump.*

**DANGER**

*Stay clear of the crimping dies during the crimping process.*

2. Strip the wire(s) per the instructions included with the crimping head, die assembly, or application specification.
3. Depress the RESET switch, then depress the RUN switch momentarily to partially extend the cylinder of the crimping head (the dies will partially close). The switches are marked on the handle control and on the foot control.
4. Place the terminal or splice in the dies per the instructions included with the die assembly.
5. Depress the RUN switch again to close the dies just enough to hold the terminal or splice in place. Then release the switch. The dies will only remain partially closed long enough for the wire(s) to be inserted into the wire barrel of the terminal or splice.

**CAUTION**

*If the RUN switch is depressed too long, the dies will fully close and crush the terminal or splice before the wire(s) can be inserted.*

- a. If the dies fully close before the wire(s) is inserted, depress the DUMP switch. The dies will return to their initial positions.

Remove and discard the deformed terminal.

6. Insert the stripped wire(s) into the wire barrel of the terminal or splice.

**NOTE**

*If possible, insert the wires into both ends of a splice for the first crimp. If the first crimp is made with only the first wire inserted, the wire for the second crimp may be more difficult to insert due to partial deformation of the wire barrel. Wire with rectangular conductors should be oriented so that the crimping pressure is applied to the flat side of the conductors.*

7. Depress the RUN switch until a cycle completes - fully extend (dies close) and retract (dies open) the cylinder.
8. Remove the crimped terminal or splice from the dies. Note that the trigger or pedal may be depressed, but the pump will not start. Before the next crimp can be made, the RESET switch must be depressed.

## 6. REPLACEMENT AND REPAIR

Replacement parts (reference the applicable 408 series Instruction Sheet) can be ordered or service arranged through your TE 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)  
TE CONNECTIVITY CORPORATION  
PO BOX 3608  
HARRISBURG PA 17105-3608

## 7. REVISION SUMMARY

Initial Release