

Figure 1

### 1. INTRODUCTION (Figure 1)

This instruction sheet covers operation and maintenance of AMP CHAMP SYSTEM 5 Terminating Head 58585-1 for use in AMP Pistol Grip Manual Handle Assembly 58074-1. Read this instruction sheet thoroughly before using the heads. Refer to the instruction sheet 408-6790 packaged with the pistol grip handle assembly for head installation and removal.

**NOTE**

All dimensions on this document are in metric units [with U.S. customary units in brackets].

### 2. DESCRIPTION

This head is used to terminate multipair System 5 cables (24 or 26 AWG) in 50 position AMP CHAMP SYSTEM 5 connectors 558693-1 and 558896-1. See Figure 2.

WIRE SIZE	CONNECTORS
24 AWG	558693-1
26 AWG	558896-1

Figure 2

The head, which is inserted into the pistol grip handle assembly, along with the index slide, serves as a guide and support for the connector during termination. The head will shear and terminate two

wires during a normal stroke. Features of the head (shown in Figure 1) and their functions are as follows:

**Wire Inserter**— is one side of the shearing surfaces that cuts the wire at the proper dimension for insertion and guides the wire into the wire slot.

**Adjuster (Insertion Rod)**— is the piston for the wire inserter and regulates wire insertion travel.

**Detent**— engages groove in index slide which aligns connector in proper position for wire insertion.

**Shear**— serves both to locate the connector at the proper depth location and as the other shearing surface for the wire.

**Index Slide**— serves to contain the connector and hold cable in respect to the connector during termination.

**Cable Clamp**— attaches to the index slide and together hold the System 5 cable in place.

**NOTE**

The shear has been designed so that it can be rotated 180° in place to extend the usable life.

### 3. SETUP ADJUSTMENTS AND TEST

The adjuster (insertion rod) of the wire inserter is preset for wire sizes 24 through 26 AWG. If the wire is being inserted too deeply or not deeply enough inside the contact, it may be necessary to adjust the depth of the wire inserter.

**3.1. For Pistol Grip Manual Handle Assembly**

1. Select a connector and a piece of prepared cable. See Figures 2 and 4.
2. Place connector in index slide and secure the prepared cable with the cable clamp.
3. Load index slide with connector and cable into the tool and make a test termination using procedure described in Section 4, TERMINATING PROCEDURE, Steps 1 through 12.

**NOTE** Connector can be loaded and indexed (manually) from either side of the tool.

4. Remove terminated connector.
5. Inspect termination in accordance with Section 5, INSPECTION.

If you determine that the wire insertion depth is incorrect, proceed to Paragraph 3.2, Wire Insertion Depth Adjustment.

**3.2. Wire Insertion Depth Adjustment**

*Wire Too Deep in Wire Contact Slot*— If the wire is inserted too deeply, remove the head and turn the adjuster; 1/6 revolution **CLOCKWISE** (see Figure 3) will reduce the wire insertion depth by approximately .41 mm [.016 in.]. Repeat Steps 2, 3, and 4 of Paragraph 3.1 for Pistol Grip Manual Handle Assembly.

*Wire Not Deep Enough in Wire Contact Slot*— If the wire is not inserted deeply enough in the contact slot, remove the head and turn the adjuster; 1/6 revolution **COUNTERCLOCKWISE** (see Figure 3) will increase the wire insertion depth by approximately .41 mm [.016 in.]. Repeat Steps 2, 3, and 4 of Paragraph 3.1.

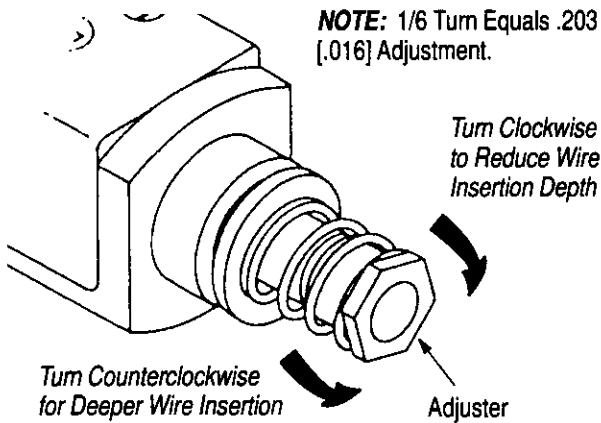


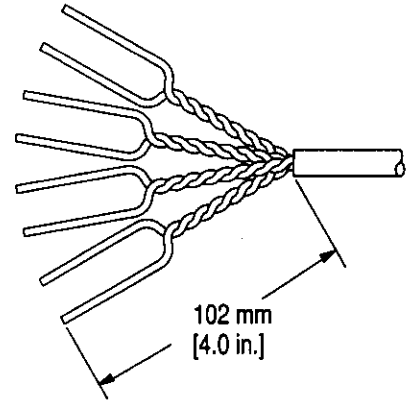
Figure 3

95-207

**4. TERMINATING PROCEDURE**

Multipair System 5 cable must be prepared as shown. The required dimensions for stripping the jacket and untwisting the individual conductors are shown in Figure 4.

**Cable Preparation**



**NOTE:** Untwist as Required at Each Termination.

Figure 4

1. Select appropriate AMP CHAMP SYSTEM 5 connector and cable.
2. Position connector into the index slide.
3. Position cable onto index slide and secure with cable clamp.
4. Insert index slide containing connector and cable into the head from either side and position so that the appropriate terminal pair is aligned under the two wire slots. See Figure 5.

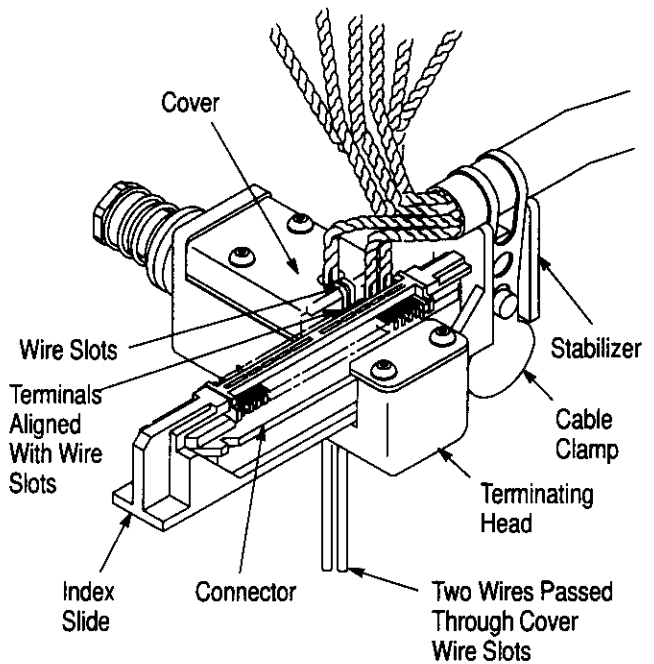


Figure 5

**NOTE**

Since the connector must be terminated from both sides, you can select to start with either side first. You also may elect to start with the positions that align with the wire slots first and feed the index slide into the tool until the entire side is complete. Or you can slide the index slide all the way into the tool and index the connector out.

**NOTE**

Because the tool will terminate two wires at the same time and the connector must be manually located and advanced, care must be taken to ensure that the proper terminal pair is located under the wire slots.

5. Select proper wire pair and insert both wires into the wire slot corresponding with the proper color code until the twist of the wire pair is up against the cover.

**NOTE**

Wire ends must be visible from the back of the tool to ensure that there will be enough material to shear.

6. Squeeze the cam handle of the pistol grip handle assembly until the ratchet releases. This will shear the wires and insert them into the wire slots of the connector.
7. Discard the sheared ends of the wire.
8. Release the cam handle. The inserter will retract.
9. Manually reposition the connector to the next terminals to be terminated.
10. Repeat Steps 4 through 9 until all terminations are made.
11. Remove connector from the tool.
12. Inspect each termination according to the procedure in Section 5, INSPECTION.

### 5. INSPECTION

Inspect all terminations to ensure that they meet the examples shown in Figure 6.

### 6. TOOL MAINTENANCE

The procedures described in the following text have been established to assure quality and reliability of AMP terminating tools. A brief check should be made daily, and a more detailed inspection should be scheduled by your quality control group.

#### 6.1. Daily Maintenance

Each operator should be aware of and responsible for the following:

#### Inspection Requirements

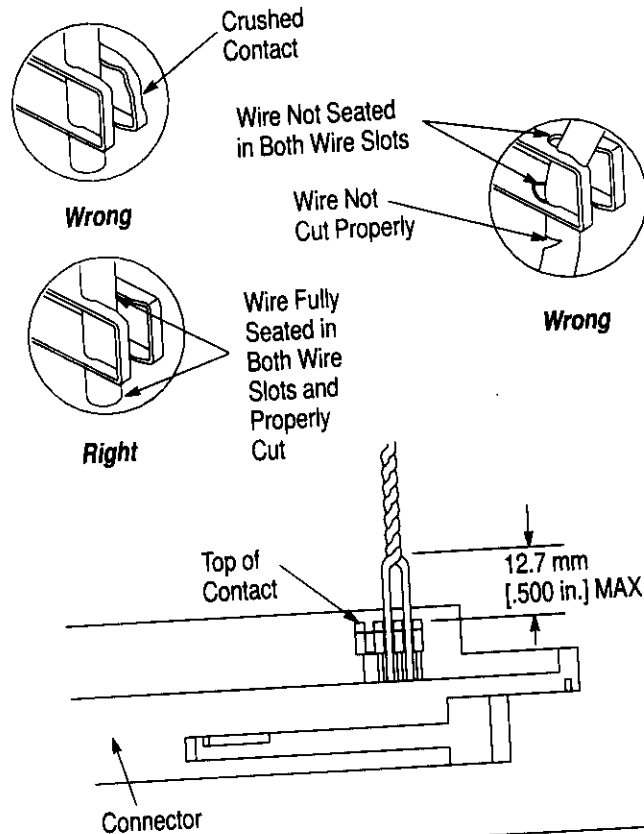


Figure 6

1. Remove dust, moisture, and other contaminants with a clean brush, or soft, lint-free cloth. Do NOT use objects that could damage the tool.
2. Make sure all components are in place and properly secured. If NOT, return the tool to your supervisor.
3. Actuate handle assembly to ensure mechanisms inside head move smoothly.

#### 6.2. Periodic Maintenance

Regular inspections should be performed by your quality control personnel with a record of these control inspections remaining with the personnel responsible for the tool. We recommend one inspection a month; however, operator training and skill, amount of use, ambient working conditions, and your company's established standards are all factors in establishing frequency of inspections.

These inspections should be done in the following sequence:

1. Remove any accumulated film with a suitable cleaning agent that will NOT affect plastic material.
2. Make sure all components are in place and properly secured. See Figure 7.

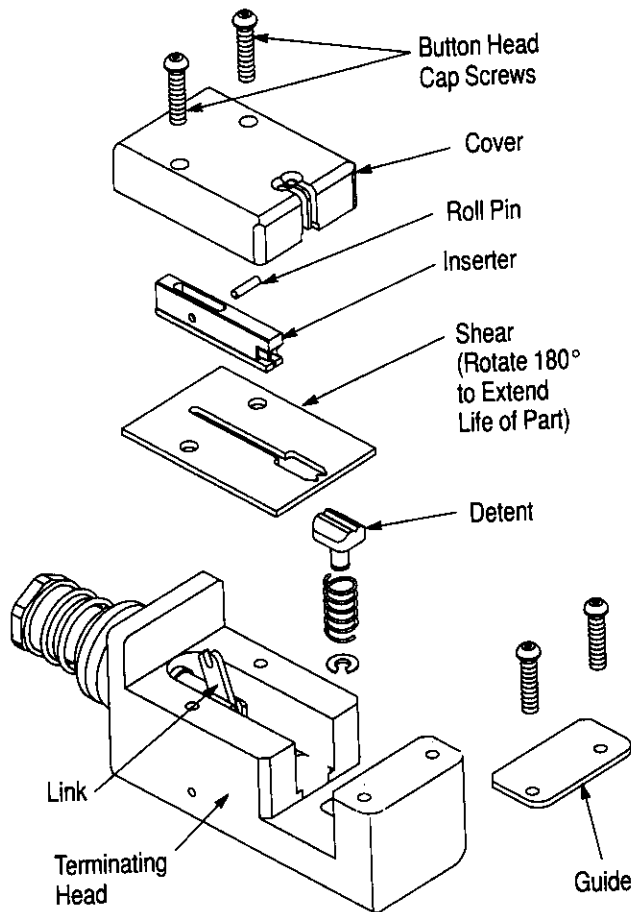


Figure 7

3. Make a few test terminations and inspect the terminations in accordance with Section 5, INSPECTION.

4. Check for chipped, cracked, worn, or broken areas. If damage is evident, repair is necessary. See Section 7, REPLACEMENT AND REPAIR.

### 6.3. Occasional Maintenance

Because this tool shears wires before insertion, wear of the shearing surfaces can be expected as a normal operating condition. Since wire size, insulation diameter, and hardness are all variables, a reasonable life expectancy of the shearing edges can not be determined.

Shearing occurs along the edge where the inserter rides against the shear. When the operator of the tool

starts to notice wire ends that are not cleanly cut, or if excessive force necessary, it is time to change or replace the two components that do the shearing. See Figure 8.

1. Remove the cover by taking off the two 4-40 button head cap screws that hold it in place, and carefully lifting it off.
2. Lift off the inserter.
3. Lift off the shear, rotate 180° so that the surface that was facing down is now facing up, and set the shear back in place.
4. Replace the inserter.

#### NOTE

Make sure that the roll pin going through the inserter is engaged in the slot of the link.

5. Replace the cover, align the edges of the frame, shear, and cover, and tighten the two 4-40 button head cap screws.

This procedure can only be done one time for the shear. When this second shearing edge becomes dull, replacement of the shear will be required.

#### CAUTION

Attempts to sharpen the inserter or shear might cause the inserter to be out of position during wire insertion and cause damage to the connector or tool.

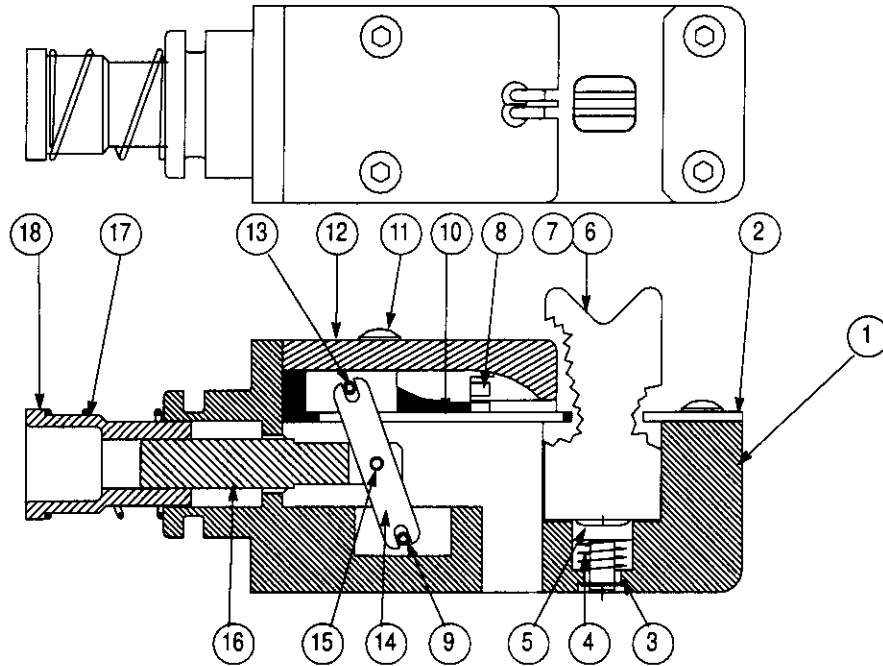
## 7. REPLACEMENT AND REPAIR

The parts listed in Figure 8 are customer-replaceable. A complete inventory can be stocked and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your AMP 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)  
AMP INCORPORATED  
P.O. BOX 3608  
HARRISBURG, PA 17105-3608

Tools may be returned to AMP for evaluation and repair. For repairs, send tool, with a written description of the problem to:

CUSTOMER REPAIR (01-12)  
AMP INCORPORATED  
1523 NORTH 4TH STREET  
HARRISBURG, PA, 17102-1604



**CUSTOMER REPLACEABLE PARTS**

ITEM	PART NUMBER	DESCRIPTION	QTY PER ASSEMBLY
1	318243-1	FRAME	1
2	318248-1	GUIDE	1
3	22173-1	RING, Retaining	1
4	22279-2	SPRING, Compression	1
5	318244-1	DETENT	1
6	229621-1	SLIDE, Index	1
7	229622-1	CLAMP, Cable	1
8	318245-1	INSERTER	1
9	1-21028-2	PIN, Slotted Spring, .062 x .88	1
10	318246-1	SHEAR	1
11	23513-2	SCREW, But Hd Cap 4-40 x .38	4
12	318247-1	COVER	1
13	8-21028-7	PIN, Slotted Spring, .062 x .12	1
14	189084-1	LINK	1
15	21028-1	PIN, Slotted Spring, .062 x .19	1
16	189085-1	ROD, Inserter	1
17	22488-5	SPRING, Compression	1
18	312149-1	ROD, Inserter Adjust	1

Figure 8