

### PROPER USE GUIDELINES

Cumulative Trauma Disorders can result from the prolonged use of manually powered hand tools. AMP hand tools are intended for occasional use and low volume applications. AMP offers a wide selection of powered application equipment for extended-use, production operations.

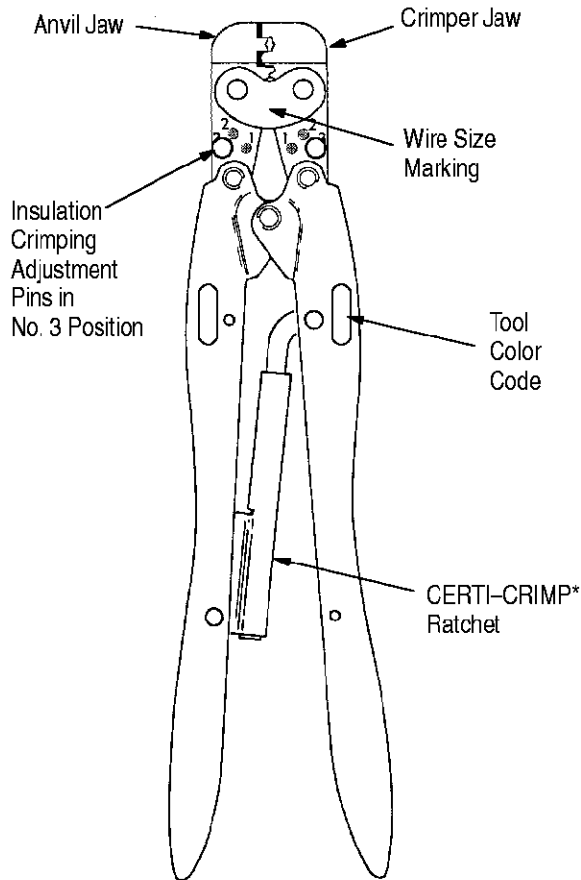


Figure 1

### 1. INTRODUCTION

This instruction sheet covers the use of AMP\* Hand Crimping Tools 69256, 69257, and 69258 (see Figure 1), which are designed to crimp PIDG LANCELOK terminals shown in Figure 2. See AMP catalog 82018 or 82027 for detailed selection information. Read these instructions thoroughly before using the tool.

#### NOTE

*Dimensions on this sheet are in millimeters [with inches in brackets].*

Reasons for reissue are provided in Section 6, REVISION SUMMARY.

### 2. DESCRIPTION

The tool (shown in Figure 1) is a double action hand tool in that both the crimper and anvil jaws open and close with the movement of the tool's handles. The

tool features two sets of crimping dies (contained within the crimper and anvil jaws) and a CERTI-CRIMP ratchet.

One set of crimping dies is used to crimp the insulation barrel of the terminal and the other set is used to crimp the wire barrel of the terminal.

The CERTI-CRIMP ratchet assures full crimping of the terminal. Once engaged, the ratchet will not release until the handles have FULLY closed.

#### CAUTION

*The crimping dies bottom before the CERTI-CRIMP ratchet releases. This design feature ensures maximum electrical and tensile performance of the crimp. Do NOT re-adjust the ratchet.*

Tool 69256, which has yellow-colored labels on its handles, is used to crimp yellow-colored terminals on wire sizes 24 through 22 AWG; tool 69257, which has white-colored labels on its handles, is used to crimp white-colored terminals on wire sizes 20 through 18 AWG; and tool 69258, which has no labels (all black handles), is used to crimp black-colored terminals on wire size 16 AWG. Thus, the terminal and tool handles are color coded for a given wire size range as listed in Figure 2. Additionally, each tool will impress a dot code on the terminal, when the terminal is crimped properly. A yellow color-coded tool impresses one dot, a white color-coded tool impresses two dots, and a black color-coded tool impresses one dot.

### 3. CRIMPING PROCEDURE

#### NOTE

*Each hand tool is coated with a preservative to prevent rust or corrosion. Wipe this preservative from the tool, particularly from the crimping jaws, before using the tool.*

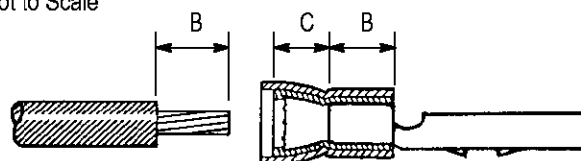
Refer to the table in Figure 2 and select wire of desired size (within the range of the tool being used). Strip the wire to the length indicated. Do NOT cut or nick the wire strands.

Select corresponding terminal from chart in Figure 2.

Refer to Figure 3 and proceed as follows:

1. Open the tool's jaws by squeezing the handles until the ratchet releases and then allow the handles to open FULLY.
2. Place terminal in crimping jaws by slipping end of terminal through crimping area and onto locator pin until it seats against inside of locator. (Side of terminal containing lance must face locator screw.)

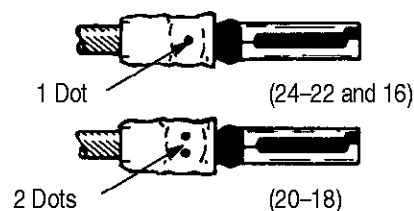
**NOTE:** Not to Scale



"B" Equals Wire Strip Length

"C" Equals Insulation Grip

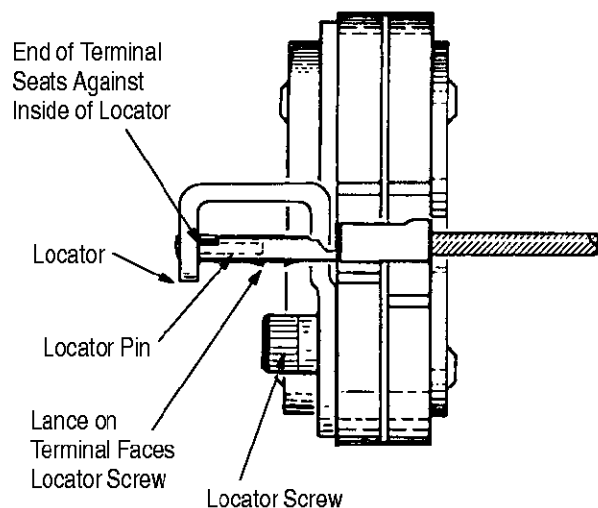
*Finished Crimps*



TOOL NUMBER	WIRE		LOOSE PIECE TERMINAL	COLOR AND DOT CODES	WIRE STRIP LENGTH	
	SIZE (AWG)	INSUL. DIA (Max.)			MIN.	MAX.
69256	24 - 22	1.02 - 2.03 [.040 - .080]	329317	YELLOW 1 DOT	5.08 [.20]	5.84 [.23]
69257	20 - 18	1.52 - 2.29 [.060 - .090]	329334	WHITE ● 2 DOTS		
69258	16	2.03 - 2.79 [.080 - .110]	329335	BLACK 1 DOT	5.84 [.23]	6.86 [.27]

● Natural Color of Sleeve

*Figure 2*



*Figure 3*

3. Close handles until the terminal is held firmly in place. Do not deform terminal barrel.
4. Insert stripped wire into terminal wire barrel.
5. To complete crimp, close handles until ratchet releases. Handles will open automatically and crimped terminal may be removed. Crimped terminal should appear as shown in Figure 2.

#### 4. MAINTENANCE AND INSPECTION PROCEDURE

AMP recommends that a maintenance and inspection program be performed periodically to ensure dependable and uniform terminations. Frequency of inspection depends on:

1. The care, amount of use, and handling of the hand tool.
2. The presence of abnormal amounts of dust and dirt.
3. The degree of operator skill.
4. Your own established standards.

The hand tool is inspected before being shipped; however, AMP recommends that the tool be inspected immediately upon its arrival at your facility to ensure that the tool has not been damaged during shipment. Due to the precision design, it is important that no parts of these tools be interchanged except those replacement parts listed in Figure 6.

##### 4.1. Daily Maintenance

1. Remove dust, moisture, and other contaminants with a clean brush, or a soft, lint-free cloth. Do NOT use objects that could damage the tool.
2. Make certain that the retaining pins are in place and that they are secured with retaining rings.
3. All pins, pivot points, and bearing surfaces should be protected with a thin coat of any good SAE 20 motor oil. Do not oil excessively.
4. When the tool is not in use, keep handles closed to prevent objects from becoming lodged in the crimping dies. Store the tool in a clean, dry area.

##### 4.2. Lubrication

Lubricate all pins, pivot points, and bearing surfaces with SAE 20 motor oil as follows:

- Tools used in daily production – lubricate daily
- Tools used daily (occasional) – lubricate weekly
- Tools used weekly – lubricate monthly

Wipe excess oil from tool, particularly from crimping area. Oil transferred from the crimping area onto certain terminations may affect the electrical characteristics of an application.

#### 4.3. Periodic Inspection

1. Hand tool should be immersed (handles partially closed) in a reliable commercial degreasing compound to remove accumulated dirt, grease, and foreign matter.
2. Close tool handles until ratchet releases and then allow them to open freely. If they do not open quickly and fully, the spring is defective and must be replaced. See Section 5, REPLACEMENT AND REPAIR.
3. Inspect head assembly for worn, cracked, or broken dies. If damage is evident, return the tool to AMP for evaluation and repair. See Section 5, REPLACEMENT AND REPAIR.

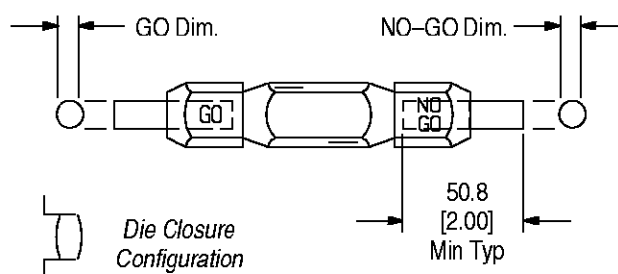
#### 4.4. Crimping Die Closure Inspection

This inspection requires the use of plug gages conforming to the dimensions shown in Figure 4. AMP does not manufacture or market these gages.

To gage die closure, refer to Figure 5 and proceed as follows:

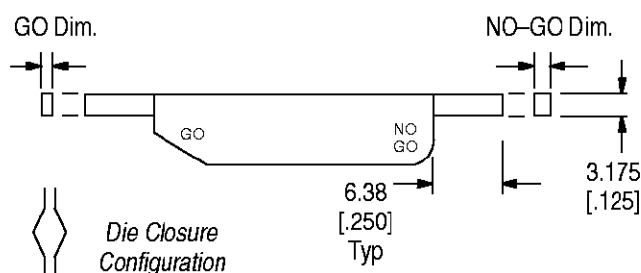
1. Remove locator assembly from tool.
2. Remove traces of oil or dirt from the crimping chambers and plug gage.
3. Close the tool handles until it is evident that the jaws have bottomed; then hold in this position. Do NOT force the jaws beyond initial contact.
4. Align the GO element with the wire barrel crimping chamber. Push element straight into the crimping chamber without using force. The GO element must pass completely through the crimping chamber. See Detail A of Figure 5.
5. Check the wire barrel crimping chamber with the NO GO gage in the same manner as step 4. The NO GO element may start entry, but must not pass completely through the crimping chamber.
6. Re-install locator assembly on tool.
7. Insert tool insulation adjustment pins in the No. 1 positions.
8. Check the insulation dies for GO and NO GO conditions, using the proper plug gage, in the same manner as steps 4 and 5. See Detail B of Figure 5.

#### Suggested Plug Gage Design for Wire Barrel Crimp



TOOL NUMBER	GAGE ELEMENT DIMENSIONS	
	GO	NO-GO
69256	1.727 – 1.735 [.0680 – .0683]	1.826 – 1.829 [.0719 – .0720]
69257	1.803 – 1.811 [.0710 – .0713]	1.953 – 1.956 [.0769 – .0770]
69258	2.108 – 2.116 [.0830 – .0833]	2.258 – 2.261 [.0889 – .0890]

#### Suggested Plug Gage Design for Insulation Crimp



TOOL NUMBER	GAGE ELEMENT DIMENSIONS	
	GO	NO-GO
69256	.762 – .769 [.0300 – .0303]	1.267 – 1.270 [.0499 – .0500]
69257	.762 – .769 [.0300 – .0303]	1.267 – 1.270 [.0499 – .0500]
69258	1.168 – 1.176 [.0460 – .0463]	1.674 – 1.676 [.0659 – .0660]

Figure 4

If both wire barrel and insulation dies conform to the gage inspection, the crimping chambers are considered dimensionally correct. If correct, the tool should be lubricated with a thin coat of any good SAE No. 20 motor oil and returned to service. If not correct, the tool must be returned to AMP for further evaluation and repair. Refer to Section 5, REPLACEMENT AND REPAIR.

For additional information regarding the use of a plug gage, refer to AMP instruction sheet 408-7424.

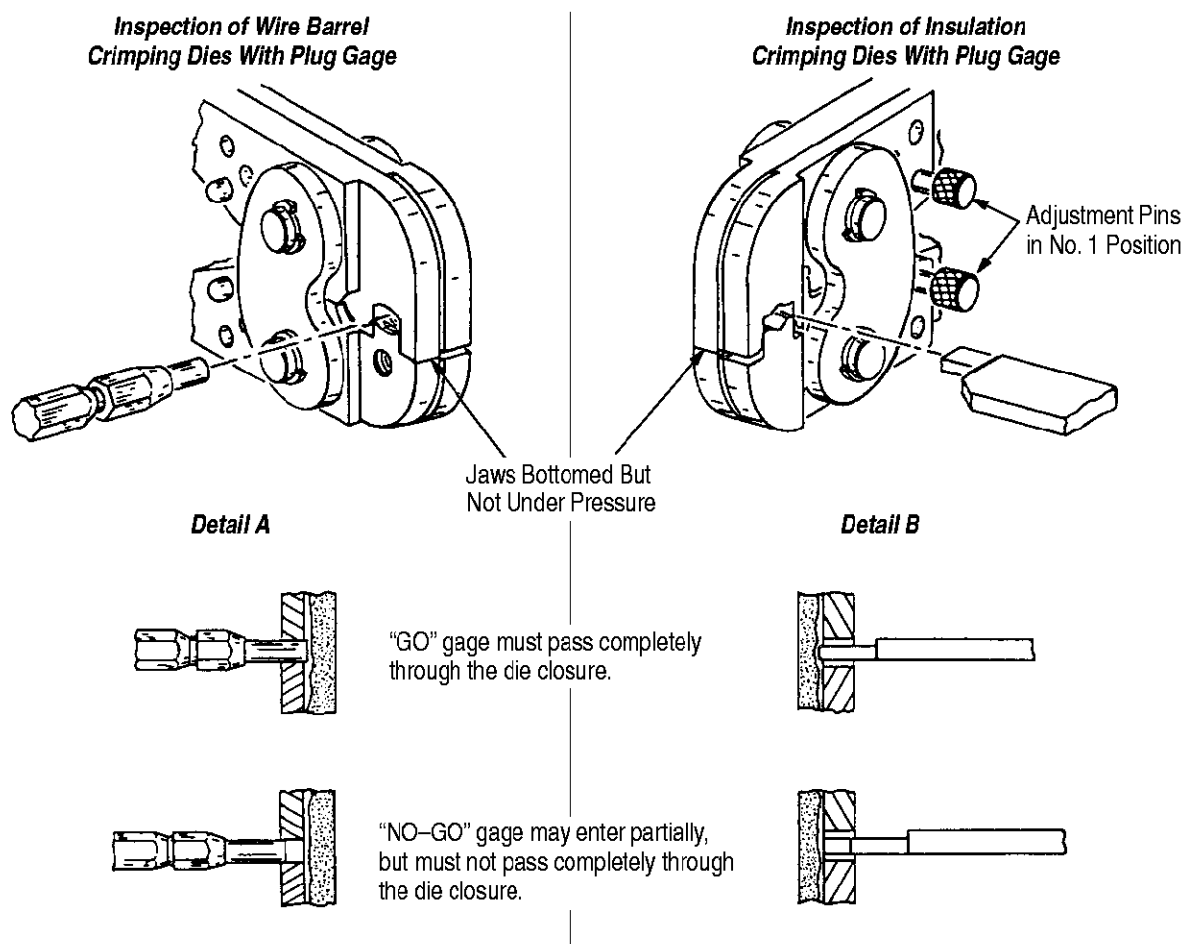


Figure 5

#### 4.5. CERTI-CRIMP Ratchet Inspection

The CERTI-CRIMP ratchet feature on AMP hand tools should be checked to ensure that the ratchet does not release prematurely, allowing the crimping dies to open before they have fully bottomed. Obtain a 0.025-mm [.001-in.] shim that is suitable for checking the clearance between the bottoming surfaces of the crimping dies. Proceed as follows:

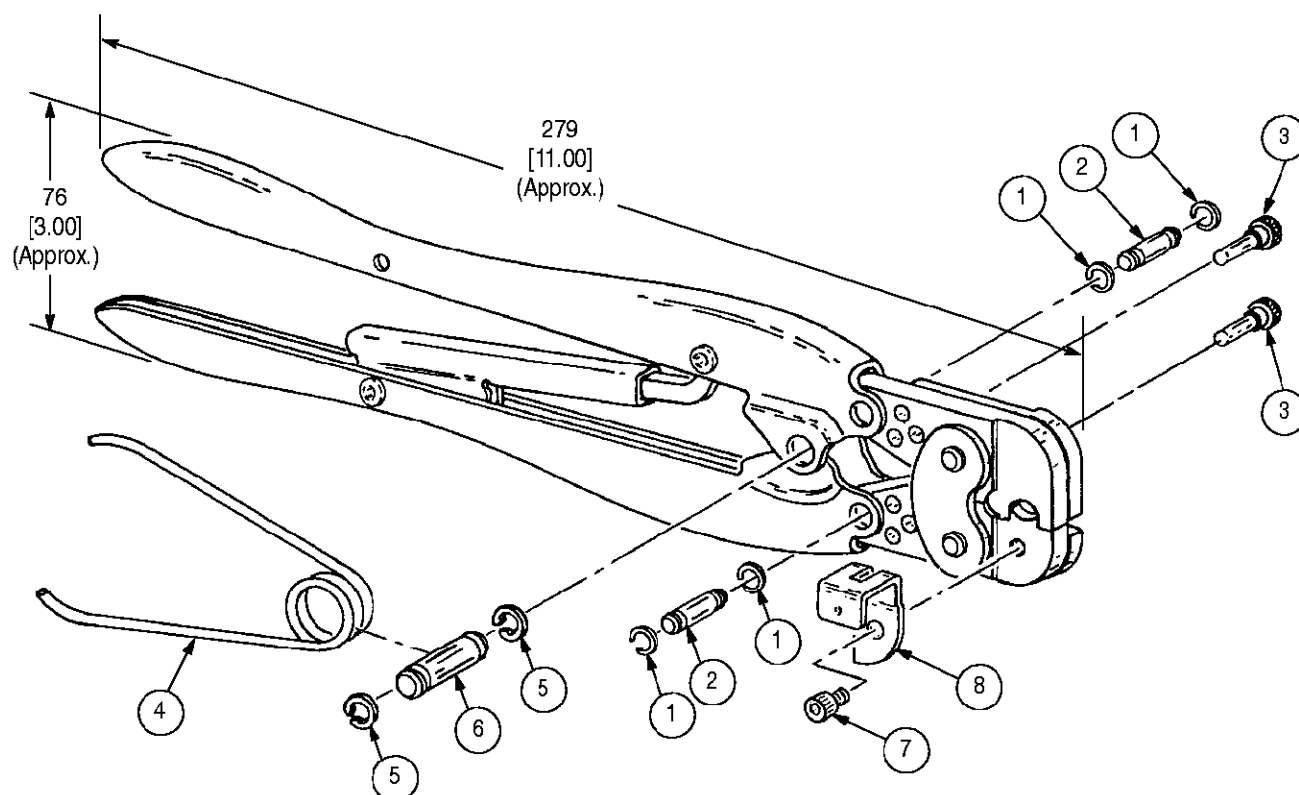
1. Select the maximum size wire and strip it according to dimensions listed in Figure 2.
2. Select terminal corresponding to the selected wire size (refer to Figure 2).
3. Position the terminal and wire between the crimping dies, as described in Section 3, CRIMPING PROCEDURE.
4. Hold the terminal and wire in place and squeeze the handles until the CERTI-CRIMP ratchet releases. Hold the handles in this position,

maintaining just enough tension to keep the dies closed.

5. 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 clearance exceeds 0.025 mm [.001 in.], the ratchet is out of adjustment and must be repaired. See Section 5, REPLACEMENT AND REPAIR.

#### 4.6. Insulation Crimp Adjustment

The insulation barrel crimp height is controlled by the positioning of the insulation crimping adjustment pins shown in Figure 1. To determine the proper setting, test crimp a terminal using the setting which approximates the insulation size (1—small, 2—medium, 3—large). For all settings, the pins must be in the same numbered position; i.e., for setting 3, both pins must be in position 3. If the crimped insulation barrel is too tight or too loose, change the setting accordingly. The crimp should hold the insulation firmly without cutting into it.



ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL	ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
1	21045-3	RING, Retaining	4	5	21045-6	RING, Retaining	2
2	1-23619-6	PIN, Retaining	2	6	2-23620-9	PIN, Retaining	1
3	39207	PIN, Adjustment	2	7	5-306131-8	SCREW	1
4	39364	SPRING	1	8	307043-1	LOCATOR	1

**NOTE:** Replacement parts listed apply to all tools — 69256, 69257, and 69258

Figure 6

## 5. REPLACEMENT AND REPAIR

Replacement parts are listed in Figure 6. Parts other than those listed in Figure 6 should be replaced by AMP to ensure quality and reliability of the tool. 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

For tool repair service, please contact an AMP representative at 1-800-526-5136.

## 6. REVISION SUMMARY

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

Per EC 0990-1104-99

- Updated document to corporate requirements
- Changed tool repair service information in Section 5, REPLACEMENT AND REPAIR
- Changed document title

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