

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.

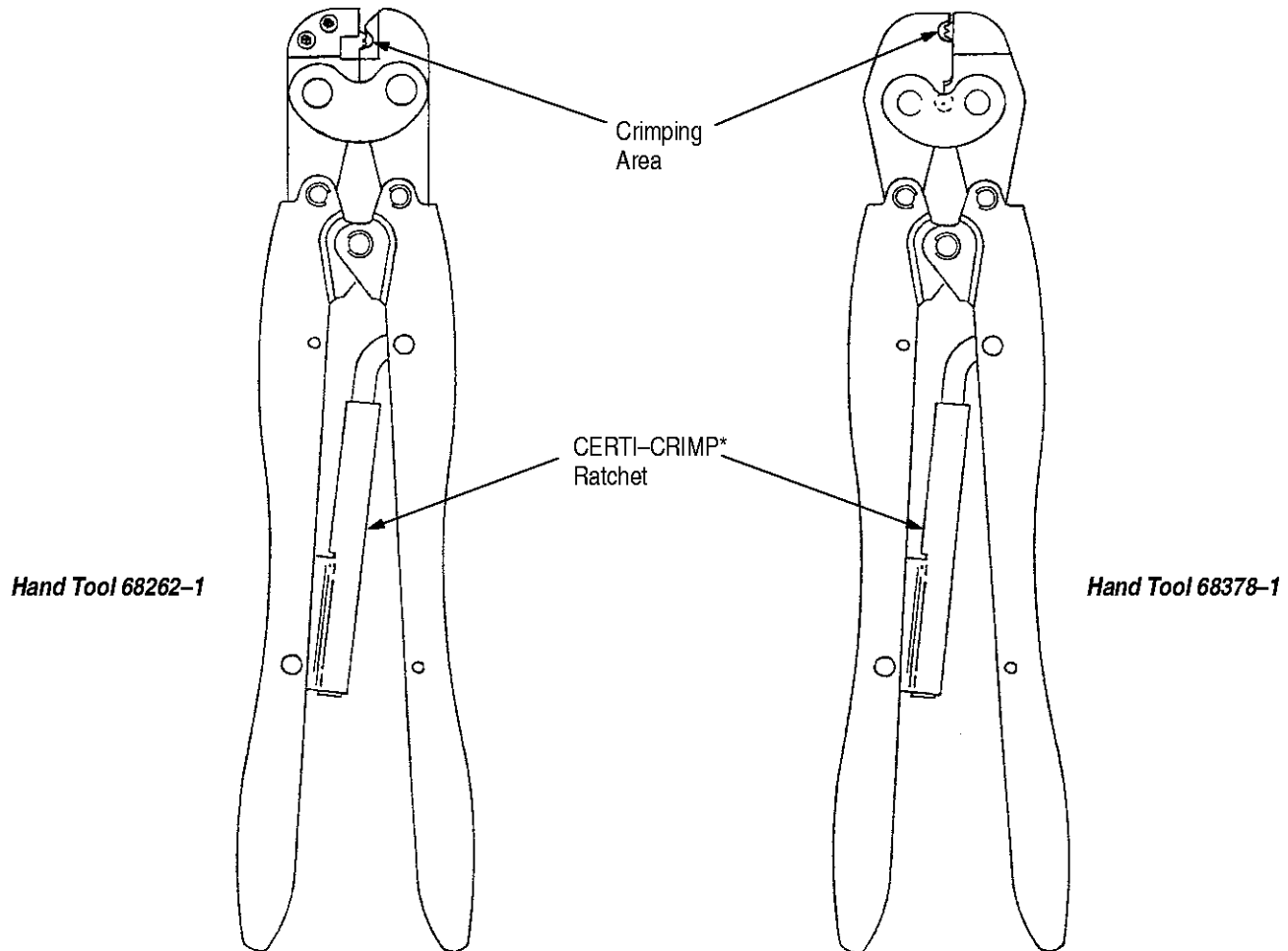


Figure 1

1. INTRODUCTION

These instructions cover the use of AMP* Hand Crimping Tools 68262-1 and 68378-1 (shown in Figure 1), which are used to crimp SOLISTRAND Relay Tabs (shown in Figure 2). Tool 68262-1 crimps relay tab 53889-1 to a 14 to 10 AWG wire range and tool 68378-1 crimps relay tab 52075-1 to a wire range of from 12 to 10 AWG. Read these instructions thoroughly before attempting to crimp the relay tabs.

NOTE

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

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

2. DESCRIPTION

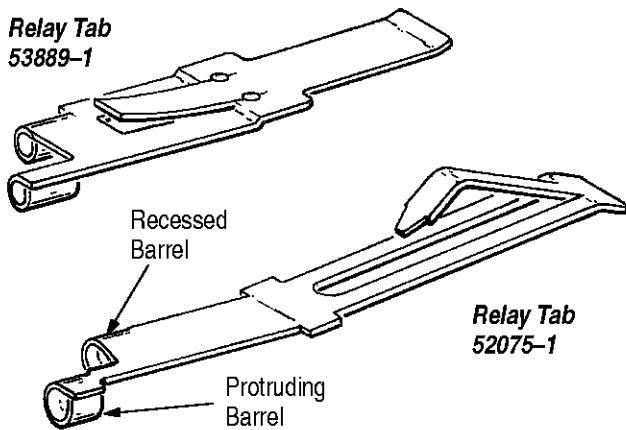
Each tool features a crimping area and a CERTI-CRIMP ratchet. The crimping area crimps both the protruding barrel of the relay tab and the recessed barrel during separate crimping cycles of the tool.

The CERTI-CRIMP ratchet ensures full crimping of the relay tab. Once engaged, the ratchet will not release until the tool handles have been FULLY closed.

NOTE

The crimping jaws 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.

**Relay Tab
53889-1**



**Relay Tab
52075-1**

PART NUMBER TAB	WIRE RANGE	WIRE STRIP LENGTH	
		MIN	MAX
52075-1	12-10	5.56	6.35
53889-1	14-10	[.219]	[.250]

Figure 2

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.

These procedures are applicable for both tools. When using tool 68262-1 for relay tab 53889-1, refer to Figure 3, or, when using tool 68378-1 for relay tab 52075-1, refer to Figure 4.

Refer to either Figure 3 or Figure 4 and proceed as follows:

- Strip wire to the dimensions listed in Figure 2.

NOTE Do NOT cut or nick conductor strands.

- Open the tool's jaws by squeezing the handles until the ratchet releases and then allow the handles to open FULLY.
- To perform the first crimp, position the relay tab in crimping jaw, as shown in either Figure 3A or Figure 4A.
- Close tool handles until tab wire barrel is held firmly in place. Do NOT deform wire barrel.
- Insert stripped wire into wire barrel until the end of the conductor is flush with or extends slightly beyond end of tab wire barrel.

NOTE If wire with thin wall insulation is used, do not allow insulation to enter wire barrel.

- While holding wire in place, close tool handles until ratchet releases. Allow handles to open fully and remove crimped tab.

- To perform second crimp, position the uncrimped wire barrel in the tool crimping jaws, as shown in either Figure 3B or Figure 4B. Then repeat Steps 4 through 6.

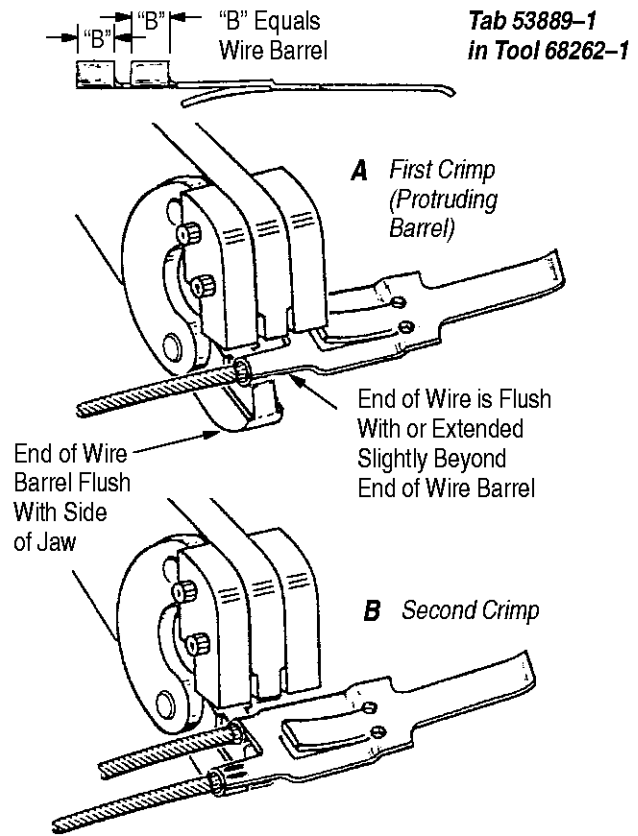


Figure 3

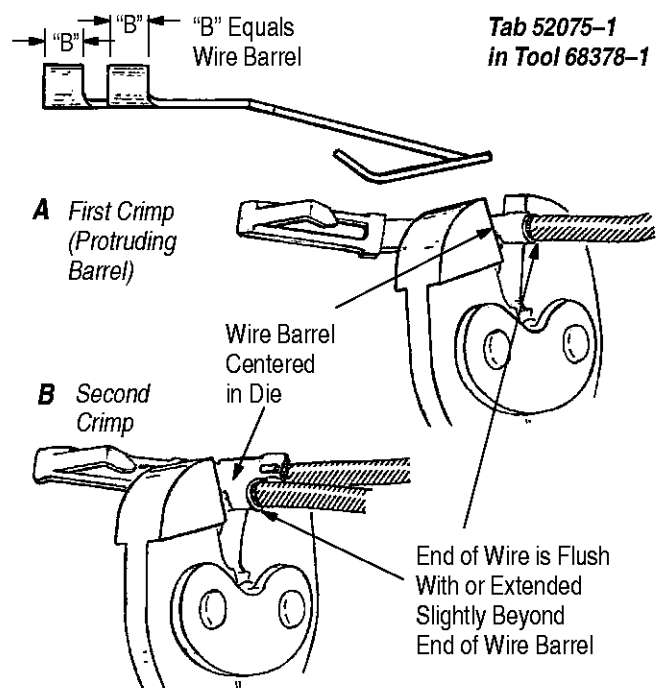


Figure 4

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 7.

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.

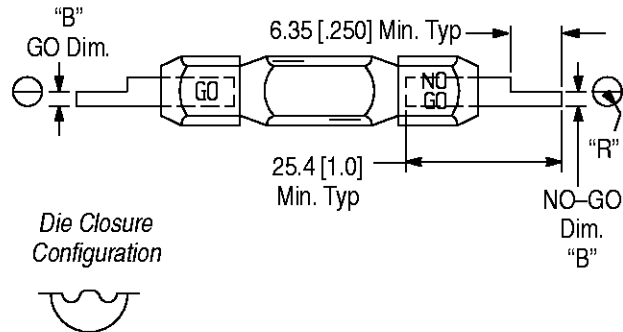
4.3. Periodic Inspection

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.

Suggested Plug Gage Design



TOOL NUMBER	GAGE ELEMENT DIM. "B"		RADIUS "R"
	GO	NO-GO	
68262-1	1.461 – 1.468 [.0575 – .0578]	1.610 – 1.613 [.0634 – .0635]	2.39 [.094]
68378-1	1.930 – 1.938 [.0760 – .0763]	2.080 – 2.083 [.0819 – .0820]	2.54 [.100]

Figure 5

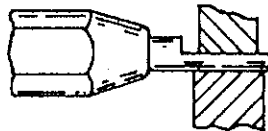
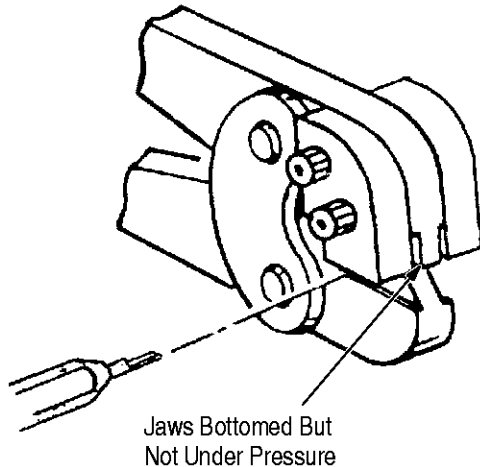
4.4. Crimping Die Closure Inspection

This inspection requires the use of plug gages conforming to the dimensions shown in Figure 5. AMP does not manufacture or market these gages.

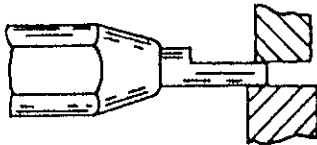
To gage die closure, refer to Figure 6 and proceed as follows:

1. Remove traces of oil or dirt from the crimping chamber and plug gage.
2. 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.
3. Align the GO element with the appropriate crimping chamber. Push element straight into the crimping chamber without using force. The GO element must pass completely through the crimping chamber, as shown in Figure 6.
4. Align the NO-GO element and try to insert it straight into the same crimping chamber. The NO-GO element may start entry, but must not pass completely through the crimping chamber, as shown in Figure 6.

Inspection of Wire Barrel Crimping Dies



GO gage must pass completely through the die closure.



NO-GO gage may enter partially, but must not pass completely through the die closure.

Figure 6

If die closure conforms to the gage inspections, the crimping chamber is considered dimensionally correct. If correct, the tool should be lubricated with a thin coat of any good SAE 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.

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 an appropriate relay tab and the maximum size wire.
2. Position the relay tab and wire in the crimping jaws, as described in Section 3, CRIMPING PROCEDURE, Steps 1 through 5.
3. Hold the wire in place and squeeze the tool handles until the ratchet releases. Hold the handles in this position, maintaining just enough tension to keep the jaws closed.
4. Check the clearance between the bottoming surfaces of the crimping jaws. 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.

5. REPLACEMENT AND REPAIR

Replacement parts are listed in Figure 7. Parts other than those listed in Figure 7 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.

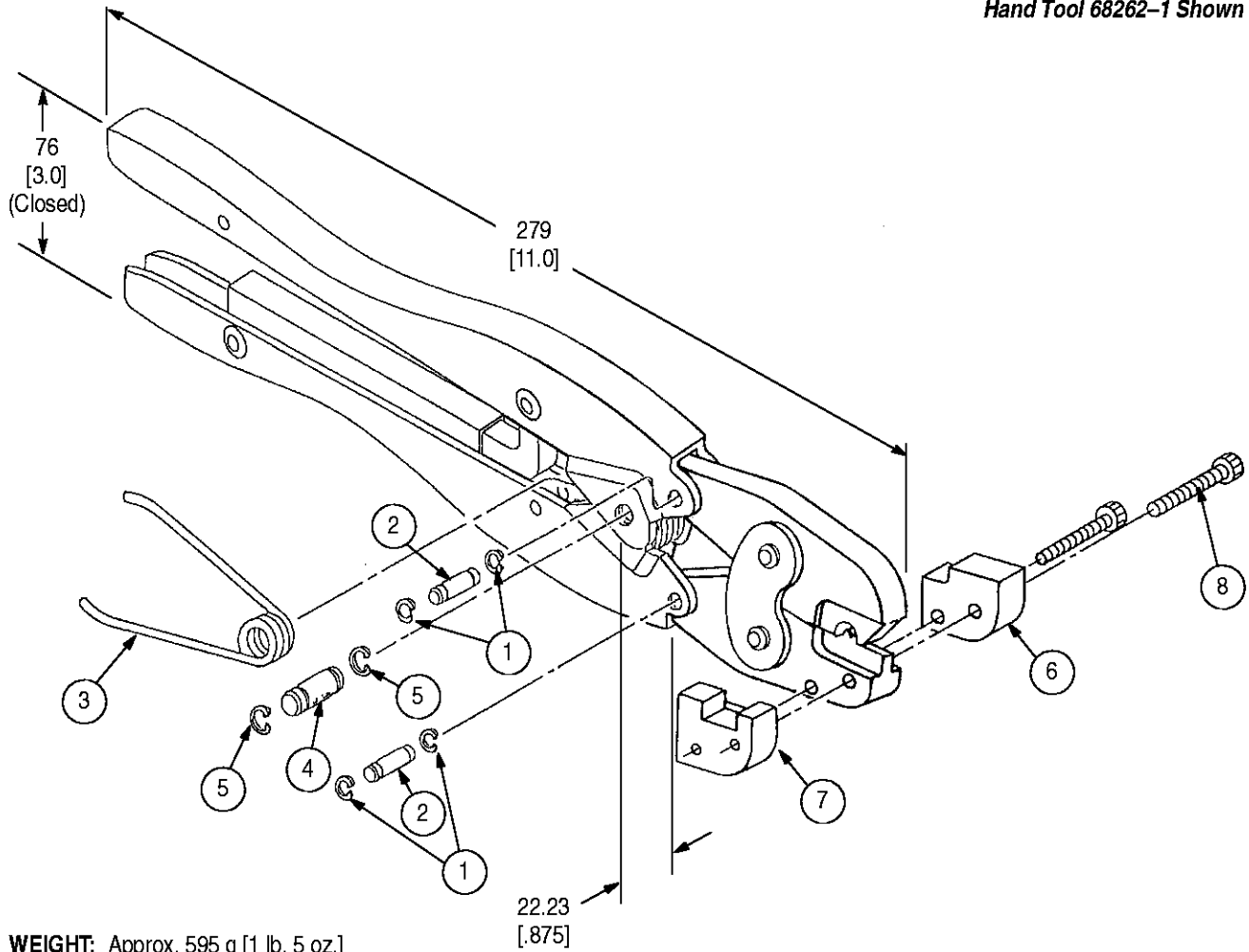
6. REVISION SUMMARY

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

Per EC 0990-0722-99

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

Hand Tool 68262-1 Shown



WEIGHT: Approx. 595 g [1 lb. 5 oz.]

REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY PER ASSY
1	21045-3	RING, Retaining	4
2	1-23619-6	PIN, Retaining	2
3	39364	SPRING, Handle	1
4	2-23620-9	PIN, Retaining	1
5	21045-6	RING, Retaining	2
6	313762-1 †	SUPPORT, Terminal	1
7	313761-1 †	SUPPORT, Wire	1
8	1-21000-6 †	SCREW, Skt Hd Cap, 4-40 x .62 L	2

† Applies to tool 68262-1 only

Figure 7