

**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.

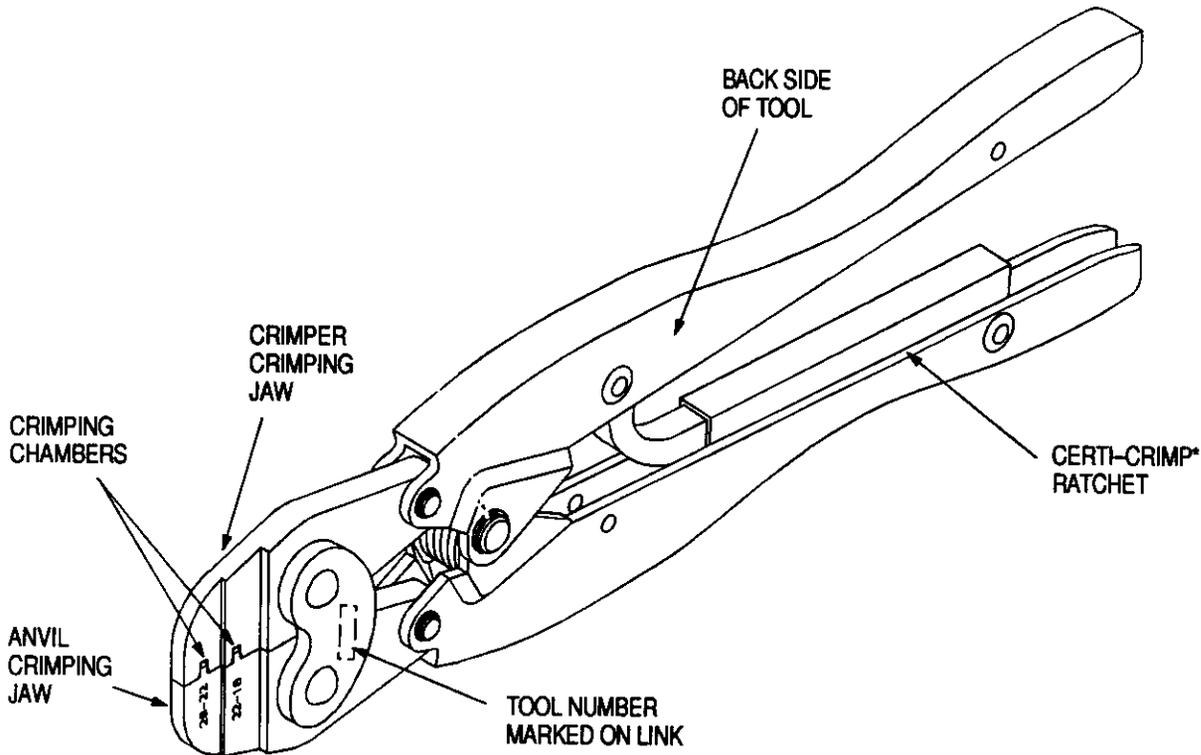


Figure 1

**1. INTRODUCTION**

AMP Hand Crimping Tool 59837-1 is designed to crimp AMP Mass Termination Assemblies (MTA) .156 Crimp Snap-In Contacts onto wire sizes No. 26-18 AWG. AMP Catalog 82056 provides a guide for wire-to-contact selection. For contacts not referenced in the catalog, contact AMP Product Engineering for recommendations. Read these instructions thoroughly before using the hand tool.

**NOTE**

Measurements are in millimeters [followed by inch equivalents in brackets]. Figures and illustrations are for identification only and are not drawn to scale.

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

**2. DESCRIPTION**

The hand tool features two crimping jaws: an anvil and a crimper; and a CERTI-CRIMP ratchet. When closed, the jaws form two crimping chambers, each marked on the BACK side of the tool with the wire

size range. The tool number is marked on the link. See Figure 1. The CERTI-CRIMP ratchet assures full crimping of the contact. Once engaged, the ratchet will not release until the tool handles have been FULLY closed.

**CAUTION**

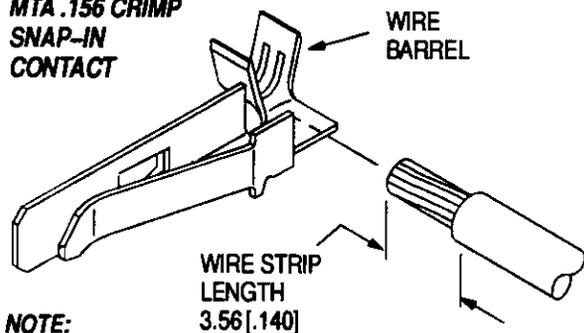
The crimping jaws bottom before the CERTI-CRIMP ratchet releases. This is a design feature that assures maximum electrical and tensile performance of the crimp. Do NOT re-adjust the ratchet.

**3. CRIMPING PROCEDURE**

Select the appropriate wire size and contact for the hand tool. The wire size and insulation diameter must be within the specified range for the contact. Strip the wire to the length indicated in Figure 2. Do NOT nick or cut the wire strands. Then, proceed as follows:

1. Hold tool so that the BACK side is facing you.
2. Open the crimping jaws by squeezing the tool handles together until the CERTI-CRIMP ratchet releases.

**MTA .156 CRIMP  
SNAP-IN  
CONTACT**



**NOTE:**  
NOT TO SCALE

Figure 2

3. Position contact wire barrel in the appropriate crimping chamber on the anvil crimping jaw. Make sure that it is flush with the edge of the jaw. See Figure 3.

4. Holding contact in place, squeeze tool handles together just enough to hold the contact in the crimping chamber.

**NOTE** Do NOT deform the wire barrel.

5. Insert stripped wire into contact wire barrel. The wire should extend slightly beyond the end of the wire barrel.

6. Holding wire in place, squeeze tool handles together until CERTI-CRIMP ratchet releases.

7. Allow tool handles to open FULLY and remove crimped contact from tool. Refer to Figure 4 for a properly crimped contact.

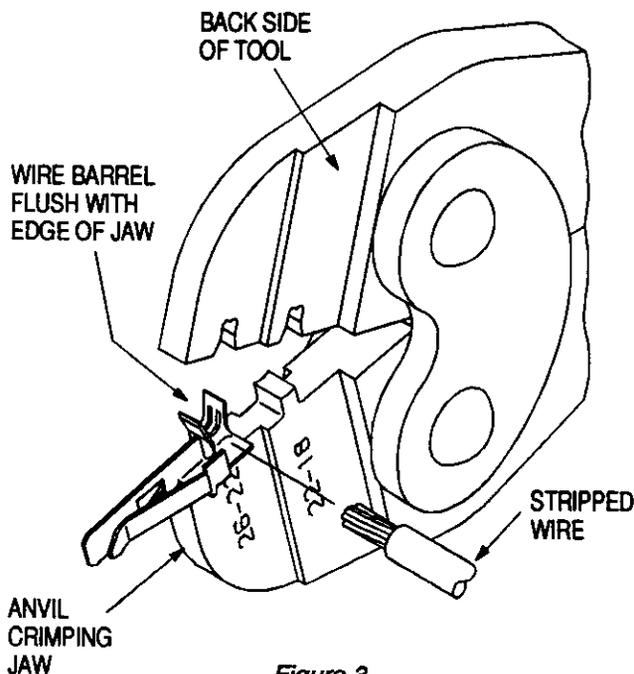


Figure 3

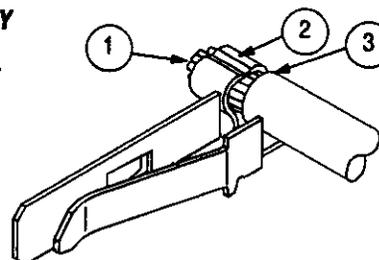
#### 4. MAINTENANCE AND INSPECTION PROCEDURE

AMP recommends that a maintenance and inspection program be performed periodically to ensure dependable and uniform terminations. Though recommendations call for at least one inspection a month, 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 arrival to ensure that the tool has not been damaged during shipment.

**PROPERLY  
CRIMPED  
CONTACT**



- ① Stripped wire is flush to or slightly beyond end of wire barrel.
- ② Crimp is centered.
- ③ Wire insulation does not enter wire barrel.

Figure 4

#### 4.1. Daily Maintenance

1. Hand tool should be immersed (handles partially closed) in a reliable commercial degreasing compound to remove accumulated dirt, grease, and foreign matter. When degreasing compound is not available, tool may be wiped clean with a soft, lint-free cloth. Do NOT use hard or abrasive 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 No. 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 jaws. Store the tool in a clean, dry area.

## 4.2. Periodic Inspection

### A. Lubrication

Lubricate all pins, pivot points, and bearing surfaces with SAE No. 20 motor oil as follows:

- Tool used in daily production – lubricate daily
- Tool used daily (occasional) – lubricate weekly
- Tool 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.

### B. Visual Inspection

1. 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.
2. Inspect head assembly for worn, cracked, or broken jaws. If damage is evident, return the tool to AMP for evaluation and repair. See Section 5, REPLACEMENT AND REPAIR.

### C. Crimp Height Inspection

This inspection requires the use of a modified micrometer with a modified anvil and spindle, as shown in Figure 5. AMP recommends the Crimp Height Comparator RS-1019-5LP which can be purchased from:

York Machinery & Supply Co.      VALCO  
20 North Penn Street      or      1410 Stonewood Drive  
York, PA 17401-1014      Bethlehem, PA 18017-3527

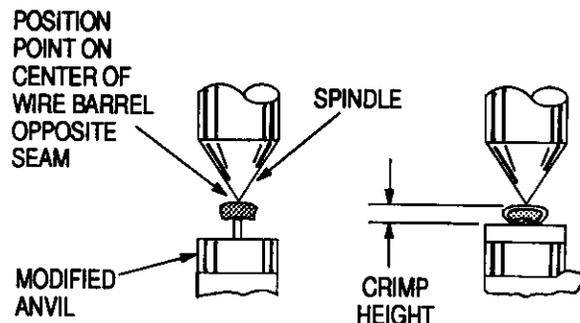
Proceed as follows:

1. Select a contact and **maximum** size wire for each crimping chamber.
2. Refer to Section 3, CRIMPING PROCEDURE, and crimp contact accordingly.
3. Using a crimp height comparator, measure the wire barrel crimp height as shown in Figure 5. If the crimp height conforms to that height, the tool is considered dimensionally correct. If not, the tool must be returned to AMP for evaluation and repair. See Section 5, REPLACEMENT AND REPAIR.

For additional information concerning the use of the crimp height comparator, refer to AMP instruction sheet 408-7424.

### D. CERTI-CRIMP Ratchet Inspection

The CERTI-CRIMP ratchet feature on AMP hand tools should be checked to ensure that the ratchet



WIRE SIZE (AWG) (Max)	CRIMP HEIGHT DIMENSION $\pm .051$ [ $\pm .002$ ]
22	.991 [.039]
18	1.22 [.048]

Figure 5

does not release prematurely, allowing the jaws to open before they have fully bottomed. Obtain a 0.025 [.001] shim that is suitable for checking the clearance between the bottoming surfaces of the crimping jaws and proceed as follows:

1. Select a contact and **maximum** size wire for the hand tool.
2. Position the contact and wire between the crimping jaws, as described in Section 3, CRIMPING PROCEDURE.
3. Holding the wire in place, squeeze the handles until the CERTI-CRIMP 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 [.001] or less, the ratchet is satisfactory. If clearance exceeds 0.025 [.001], the ratchet is out of adjustment and must be repaired. See Section 5, REPLACEMENT AND REPAIR.

## 5. REPLACEMENT AND REPAIR

The parts listed in Figure 6 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 717-986-7605, or write to:

CUSTOMER SERVICE (38-35)  
AMP INCORPORATED  
P.O. BOX 3608  
HARRISBURG, PA 17105-3608

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

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

Per EC A-3804-92:

- Changed retaining pin part number from 300449 to 2-23620-9

Per EC A-4068-92:

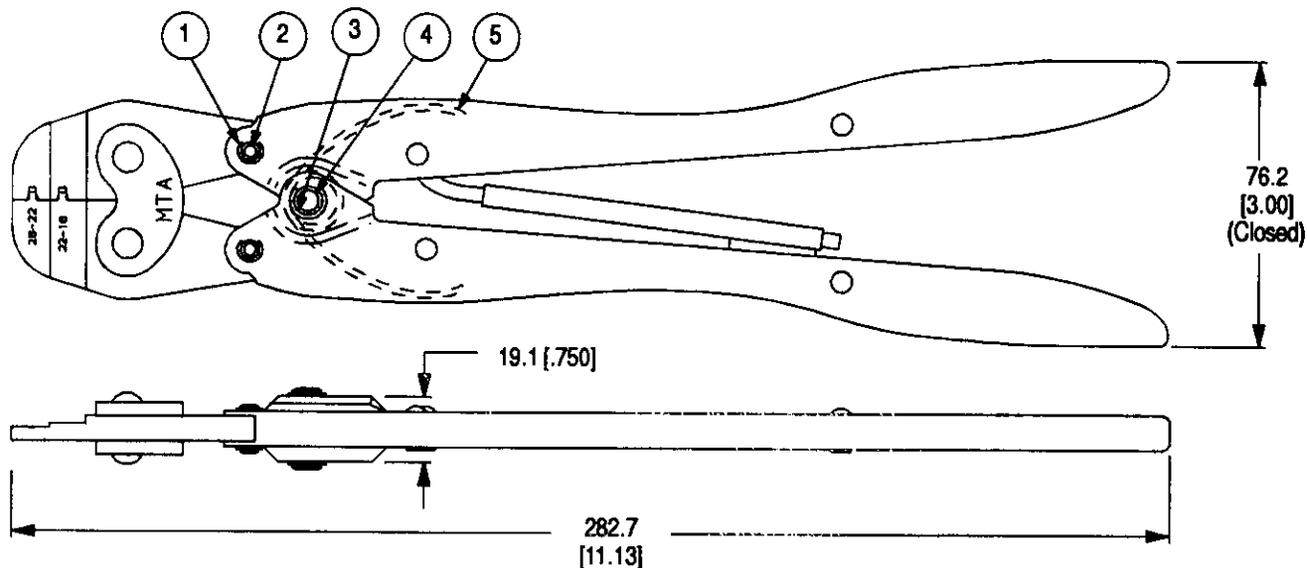
- Changed retaining pin part number from 300432 to 1-23619-6

Per EC 0990-0252-93:

- Updated format
- Added metric dimensions
- Added Section 6, REVISION SUMMARY

### 6. REVISION SUMMARY

Revisions to this document include:



**WEIGHT:** 624 g [1 lb 6 oz]

#### REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	21045-3	RING, External Crescent Retaining, .188 D Shaft	1
2	1-23619-6	PIN, Retaining, .187 D x .521 L	1
3	21045-6	RING, External Crescent Retaining, .250 D Shaft	1
4	2-23620-9	PIN, Retaining, .250 D x .838 L	1
5	39364	SPRING, Handle	1

Figure 6

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9