



of Great Britain Ltd

**AMP DOUBLE ACTION HAND TOOL  
PART NUMBER 180319 FOR CRIMPING  
FLAG FASTON AND FLAG FASTIN-ON**

INSTRUCTION SHEET

**411-3231**

RELEASED: 27/07/98

REVISED: 03/02/98

REVISION: A

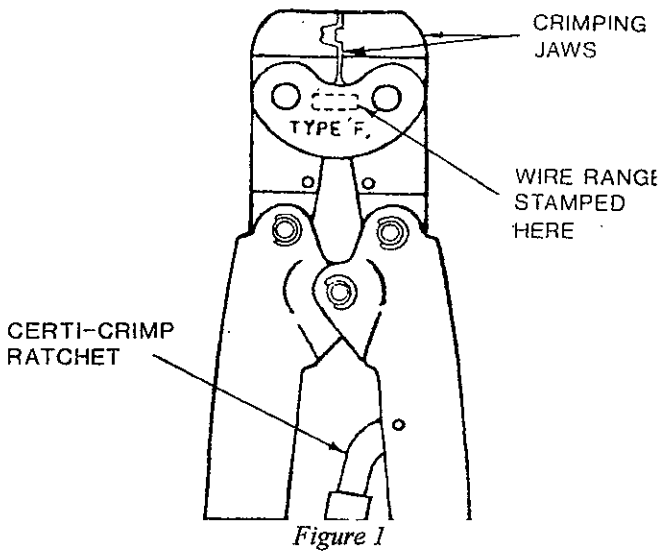


Figure 1

**1. INTRODUCTION**

AMP\* Hand Crimping Tool 180319 is designed to crimp Flag Faston and Flag Fastin Faston listed in Figure 2.

**NOTE** Dimensions on this sheet are in millimetres (with inches in brackets). Figures are not drawn to scale.

Reasons for reissue of this instruction sheet are provided in Section 6, REVISION SUMMARY.

WIRE SIZE mm <sup>2</sup>	INSULATION SIZE mm	TERMINAL PIN		WIRE	
		LOOSE PIECE	STRIP	TYPE	STRIP LENGTH
1-2,5	3,05 - 4,32	180429	180397	SOLID OR STRANDED	4mm
1-2,5	3,05 - 4,32	180431	180372	SOLID OR STRANDED	4mm
1-2,5	3,05 - 4,32	180433	180398	SOLID OR STRANDED	4mm
1-2,5	3,05 - 4,32	180434	180371	SOLID OR STRANDED	4mm

Figure 2

\*Trademark

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**2. DESCRIPTION**

This double-action hand tool features two crimping jaws (anvil and crimper) and a CERTI-CRIMP ratchet. When closed, the jaws form one crimping chamber which crimps the terminal wire barrel and insulation barrel simultaneously. The CERTI-CRIMP ratchet ensures full crimping of the terminal. 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 design feature ensures maximum electrical and tensile performance of the crimp. Do NOT re-adjust the ratchet.

**3. CRIMPING PROCEDURE**

Refer to Figure 2 and select wire of the appropriate size and insulation diameter. Strip the wire to the dimension indicated, taking care not to nick or cut the conductors.

Proceed as follows:

1. Squeeze the tool handles until the ratchet releases and allow the handles to open fully.
2. Insert terminal into the crimping chamber with the "U" shape of the insulation barrel facing the crimper jaw. Centre the insulation barrel and wire barrel on the crimpers, ensuring the terminal is positioned against the terminal stop. Refer to Figure 3.
3. Hold the terminal in position and close the tool handles until the jaws close just enough to hold the terminal in place without deforming the insulation barrel and wire barrel.



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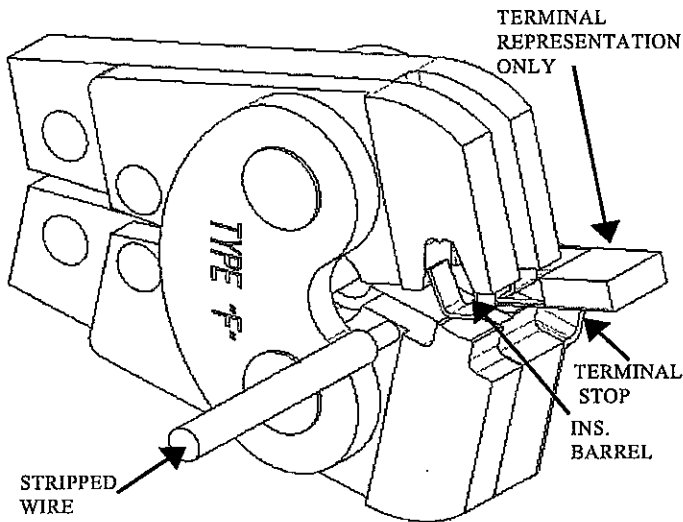


Figure 3

4. Insert the stripped wire into the insulation barrel and squeeze the tool handles until the ratchet releases.

5. Allow tool handles to open FULLY and remove crimped terminal from tool.

#### 4. MAINTENANCE AND INSPECTION

##### 4.1. Daily Maintenance

1. Remove dust, moisture and other contaminants with a clean brush or a clean, soft, lint-free cloth. Do not use objects which could damage the tool.
2. Make sure that the proper retaining pins are in place and that they are secured with the proper retaining pins.
3. Make certain that all pins pivot points and bearing surfaces are 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 the handles closed to prevent objects from becoming lodged in the crimping jaws and store it in a clean, dry area.

##### 4.2. Visual Inspection

Regular inspections should be performed by quality control personnel with a record of scheduled

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inspections remaining with the tool or supplied to supervisory personnel responsible for it. Though a monthly inspection is recommended, the inspection frequency should be based upon amount of use, working conditions, operator training and skill and established company standards. These inspection should be performed in the follow sequence:

1. Remove all lubrication and accumulated film by immersing the tool (handles partially closed) in a suitable commercial degreaser that will not affect paint or plastic material.

2. Make certain that all retaining pins are in place and secured with retaining rings.

3. Close the tools handles until the ratchet releases, then allow the handles 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.

4. Inspect the head assembly, placing special emphasis on checking for worn, cracked or broken jaws. If damage to any part of the head assembly is evident, return the tool to AMP for evaluation and repair. See section 5, REPLACEMENT AND REPAIR.

##### 4.3. Certi-Crimp Ratchet Inspection

Obtain a 0.025 [.001] shim that is suitable for checking the clearance between the bottoming surfaces of the crimping jaws. Proceed as follows:

1. Select a terminal and maximum size wire for the tool.
2. Position the terminal and wire between the crimping jaws, according to Section 3, CRIMPING PROCEDURE. Holding the wire in place, squeeze the tool handles together until the CERTI-CRIMP ratchet releases. Hold the tool handles in this position, maintaining just enough pressure to keep the jaws closed.



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3. 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.

## 4.4 Crimp Height Inspection

This inspection requires the use of a micrometer with a modified anvil as shown in Figure 4, AMP recommends the modified micrometer (Crimp Height Comparator Mitutoyo ref. Number 342-431-30) which may be purchased from:

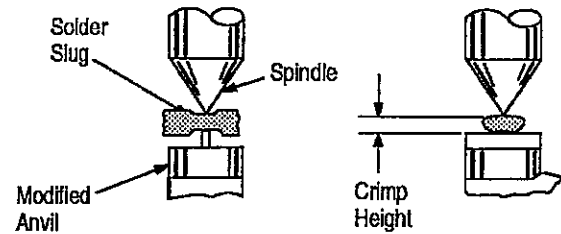
Bideford Tool Ltd  
Brunswick House  
Torridge Hill  
Bideford  
North Devon  
EX39 2BB

or

Mitutoyo Corp.  
Andover  
Hampshire

Proceed as follows:

1. Crimp terminal as listed in Figure 2, using the correct wire size, according to Section 3, CRIMPING PROCEDURE.
2. Centre the most compressed area of the crimped terminal on the anvil and rotate the movable handle until the spindle tip touches the slug. Do NOT go beyond initial contact as this could cause a depression and result in an inaccurate reading.



Wire Size (mm <sup>2</sup> )	Wire Barrel Crimp Height (mm)	Insulation Barrel Crimp Height (mm)
1 - 2.5	1.829 +/- 0.05 (0.072" +/- 0.002")	2.667 +/- 0.2 (0.105" +/- 0.008")

Figure 4

3. Check the height of the crimped terminal against the crimp height dimensions shown in Figure 4.

If the crimp height conforms to that shown, the tool is considered dimensionally correct. Lubricate the tool with a thin coat of any good SAE 20 motor oil and return it to service.

## 5. REPLACEMENT AND REPAIR

Customer-replaceable parts are provided in Figure 5. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your AMP representative or call 0800 8344601 or send a facsimile of your purchase order to 0181 420 8029 or write to:

Customer Services  
AMP of G.B. Ltd  
Merrion Avenue  
Stanmore  
Middlesex  
HA7 4RS



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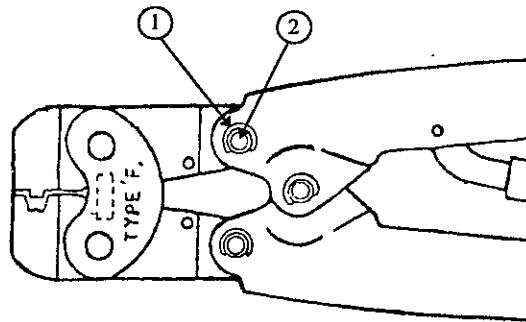
Tools may be returned to AMP for evaluation and repair. For repairs, send tool, with a written description of the problems to:

Hand Tool Repair  
AMP of G.B. Ltd  
Barton Tors  
Bideford  
North Devon  
EX39 4HE

**6. REVISION SUMMARY**

Revision O - Released for production.

Revision A - Figure 3 updated to reflect product location change.



**REPLACEMENT PARTS**

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
1	21045-3	RING, Retaining	4
2	1-23619-6	Pin, Retaining	2

Figure 5