

Fig. 1

1. INTRODUCTION

AMP Hand Crimping Tool Assembly 90273-5 is designed to crimp the contacts listed in Figure 2 to Flexible Flat Cable (FFC) having conductors on .100-in. centers. This tool is used to apply contacts to the cable end.

Read these instructions thoroughly before using the tool.

NOTE

For information regarding the application of contacts to conductive ink circuitry, FFC, and Flexible Etched Circuitry (FEC), refer to AMP Application Specification AS 114-16015.

NOTE

All dimensions on this sheet are in inches. Figures and illustrations are for identification only and are not drawn to scale.

2. DESCRIPTION (Figure 1)

The assembly consists of a hand crimping tool, an indexer, and a tool base.

The hand crimping tool features a moving die (crimper), a stationary die (anvil), two spacer plates (mounted under the anvil), a tool frame, a tool handle, a lifter, a contact guide, two cable stops, and a CERTI-CRIMP ratchet.

The indexer features a slide and cable clamp assembly, an adjustable cable stop, and an index knob.

3. CRIMPING PROCEDURE

Refer to the chart in Figure 2 and select FFC that conforms to the dimensions listed. Determine the specific application and select the appropriate contact.

To apply the contacts, proceed as follows:

1. Face the FRONT of the tool and push on the adjustable cable stop until it butts against the

TYPICAL CONTACTS				
SOLDER TAB	PIN	RECEPTACLE	PCB EDGE CONNECTOR	
CONTACT DESCRIPTION		FFC DIMENSIONS		
NUMBER	TYPE	CABLE THICKNESS	WIDTH	CONDUCTOR THICKNESS
487884	Solder Tab	.015 Max.	.047 Min.	.002 to .005 Between Centers†
487885	Receptacle			
487886	.025 Sq Pin			
487887	.025 Sq Pin			
487888	PCB Edge			
487889	Splice			

† Non-accumulative over entire width of cable

Fig. 2

mounting block. Loosen, but do NOT remove, the two cable clamp screws and rotate the clamp away from the tool. Refer to Figure 3.

2. Position the cable on the slide and return the clamp to the original position. Do NOT tighten the clamp screws.

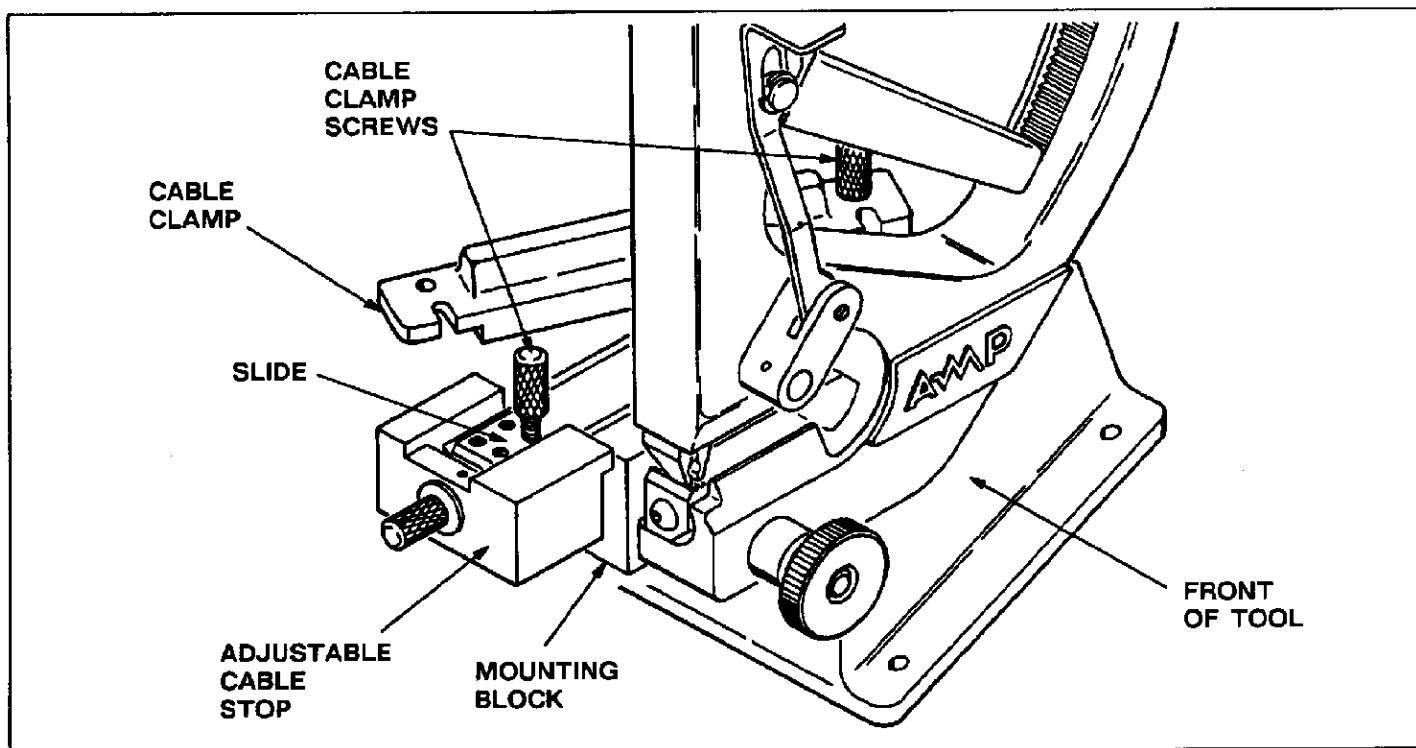


Fig. 3

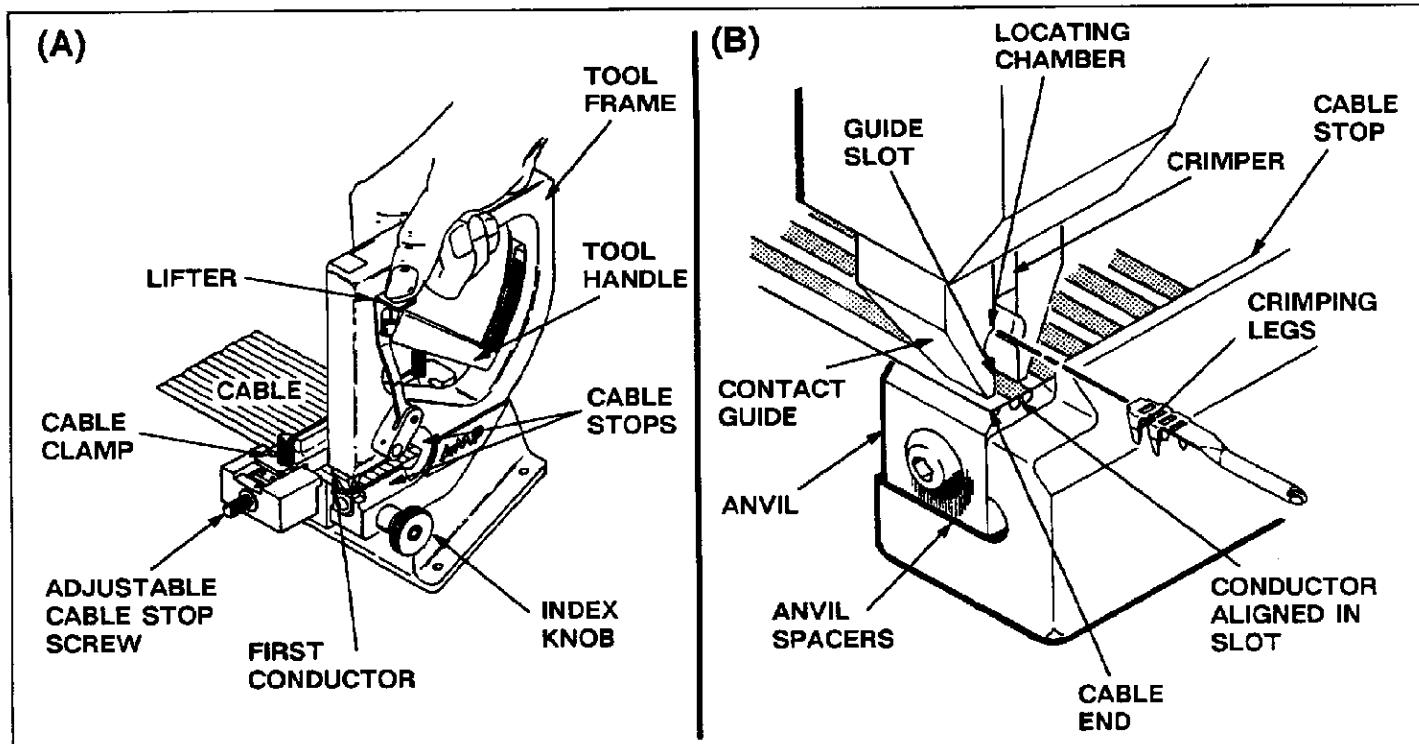


Fig. 4

3. Grip the tool frame as shown in Figure 4(A); do NOT grip the tool handle.
4. Raise the contact guide by depressing the lifter with your thumb. HOLD the lifter in this position. Butt the cable end against the cable stops on the crimping tool, and butt the cable side against the adjustable cable stop on the indexer. Align the first conductor with the guide slot by turning the adjustable cable stop screw and moving the cable accordingly. Refer to Figure 4(A).
5. Hold the cable in position and release the lifter to lower the contact guide onto the cable. Make sure the conductor is centered in the guide slot, then tighten the two clamp screws.
6. Align the contact with the locating chamber as shown in Figure 4(B). Insert the contact straight into the guide until it bottoms.

NOTE

It may be necessary to use a small pair of needle-nose pliers or tweezers to position small contacts in the contact guide.

7. Hold the contact in position and squeeze the tool handle until the contact starts into the guide slot. Check to be sure that both crimping legs have entered the guide slot. Squeeze the tool handle until the ratchet disengages, then HOLD

the handle in this position. Depress and hold the lifter with your thumb to remove the crimped contact from the guide slot. Release the handle and allow it to swing open. Do NOT release the lifter.

8. With the lifter still depressed, carefully turn the index knob COUNTERCLOCKWISE until the slide advances to the next position (one click, or .100). Lower the contact guide and check that the next conductor is centered in the guide slot as shown in Figure 4(B).

9. Repeat Steps 6 through 8 until all conductors have been crimped, then loosen the two cable clamp screws and rotate the slotted end of the clamp away from the tool. Depress the lifter and remove the cable from the tool.

4. INSPECTION/MAINTENANCE

4.1. Daily Maintenance

Remove all foreign particles with a clean, soft brush, or a clean, soft, lint-free cloth. Make sure the proper retaining pins are in place, and secured with the proper retaining rings.

Make certain all pivot points and bearing surfaces are protected with a THIN coat of any good SAE No. 20 motor oil. Do NOT oil excessively. When the tool is not in use, store it in a clean, dry area.

4.2. Periodic Inspection

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the tool and/or be supplied to supervisory personnel responsible for the tool. Though recommendations call for at least one inspection a month, the inspection frequency should be based on the amount of use, ambient working conditions, operator training and skill, and established company standards. These inspections should be performed in the following sequence:

A. Visual Inspection

1. Remove all lubrication and accumulated film by immersing the tool (handle partially closed) in a suitable commercial de-greaser that will not affect paint or plastic material.
2. Make certain the retaining pin, retaining rings, and thumb screws are in place. If replacements are necessary, refer to the parts list in Figure 5.
3. Close the tool handle until the ratchet releases, then allow the handle to open freely. If it does not open quickly and fully, the spring is defective and must be replaced (refer to Section 5, REPAIR/REPLACEMENT).

4. Inspect the crimping dies for flattened, chipped, cracked, worn, or broken areas. If damage is evident, return the tool to AMP for evaluation and repair.

B. Crimp Height Inspection

This inspection incorporates the use of a micrometer as shown in Figure 5. To inspect the contact, proceed as follows:

1. Refer to the chart in Figure 2 and select a sample cable strip and one sample contact from each contact type.
2. Refer to Section 3, CRIMPING PROCEDURE, and crimp the contacts accordingly.
3. Cut all insulation away from the crimped contact, as indicated in Figure 5.
4. Using a micrometer, measure each wire barrel crimp height as shown in Figure 5. For the correct crimp-height dimensions, refer to AMP Application Specification AS 114-16015. If the crimp height ("A") conforms to the dimensions provided, then the tool is considered dimensionally correct. If not, return the tool to AMP for evaluation and repair (refer to Section 5, REPAIR/REPLACEMENT).

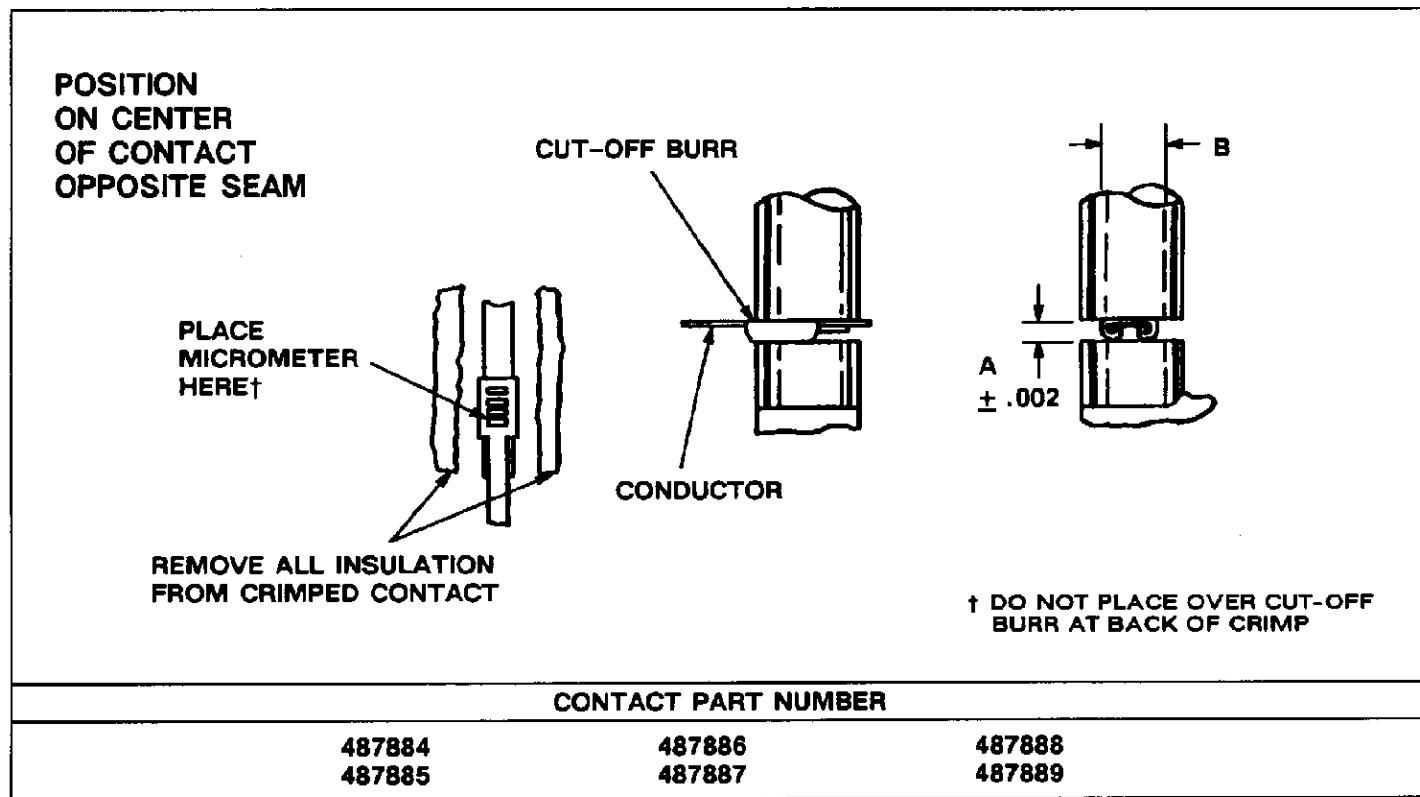


Fig. 5

NOTE

Tool 90273-5 is shipped with two (2) .0020-in. spacers mounted under the anvil, providing a total crimp height of .034 in. The crimp height can be increased by .0020 in. or .0040 in. by removing one or both of these spacers, respectively. Refer to the appropriate AMP Specification for the specific crimp-height requirement for the contact being applied.

NOTE

Refer to AMP Specifications 102-16050 and 114-16015 for additional inspection procedures.

When parts are needed, order by part number and description. Parts can be ordered from:

AMP Incorporated
P.O. Box 3608
Harrisburg, PA 17011-3608

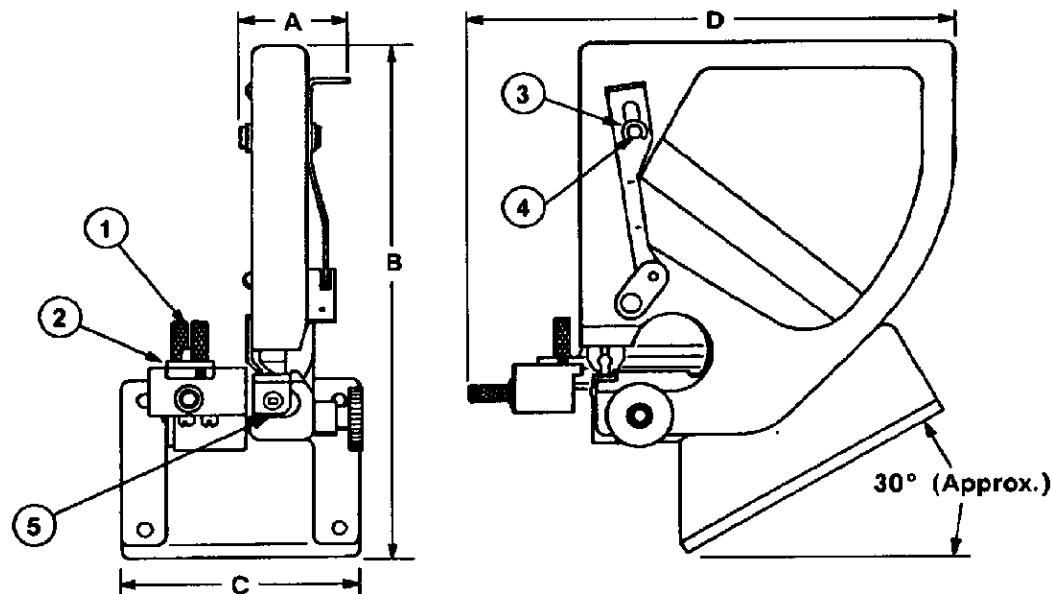
or a wholly owned subsidiary of AMP Incorporated.

Parts other than those specified in Figure 6 must be replaced by AMP to ensure correct operation of the tool. When repair is necessary, return the tool with a written description of the problem to:

AMP Incorporated
Customer Repair
1523 North 4th Street
Harrisburg, PA 17102-1604

5. REPAIR/REPLACEMENT

Replaceable parts are listed in Figure 6. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary.



TOOL SPECIFICATION		REPLACEMENT PARTS				
DIMENSION		WEIGHT	ITEM	DESCRIPTION	PART NUMBER	QTY
A	1 9/16	2 lb 8 oz	1	Thumb Screw	2-22346-8	2
B	7 1/2		2	Cable Clamp	125993-1	1
C	3 3/4		3	Retaining Ring	1-21986-4	2
D	6 1/2		4	Retaining Pin	306055-5	1
			5	Spacer	314499-1	2

Fig. 6

Mouser Electronics

Authorized Distributor

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[TE Connectivity:](#)

[90273-5](#)