

AMPAMP INCORPORATED
Harrisburg, Pa. 17105OPERATION AND MAINTENANCE
OF AMP★ PISTOL-GRIP
INSERTION TOOL 229373-4Instruction Sheet
IS 7596

RELEASED 3-29-85

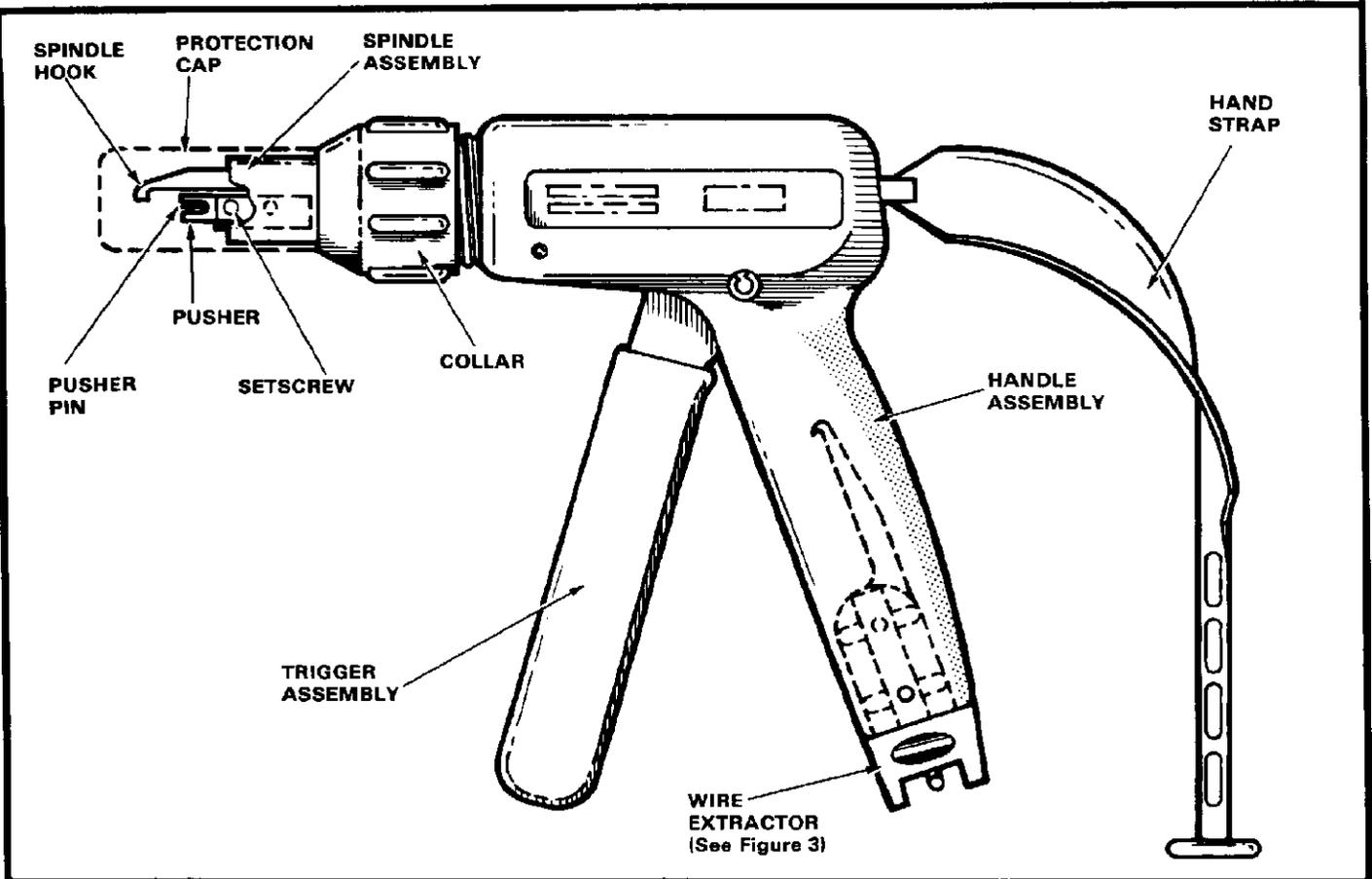


Fig. 1

1. INTRODUCTION

This instruction sheet (IS) covers the AMP Pistol-Grip Insertion Tool 229373-4. The tool is designed to insert individual wires (with maximum insulation diameters of .070 in.) into terminals in modular connecting block assemblies, line terminal blocks, data terminal assembly blocks, and free-standing versions in printed circuit boards.

Included in this instruction sheet are use of wire extractor, inspection procedures, troubleshooting, replacement of parts, and certification of the pistol-grip insertion tool. Read these instructions thoroughly before using the tool.

NOTE All dimensions on this instruction sheet are in inches.

2. DESCRIPTION (Figure 1)

The insertion tool consists of a handle assembly, pusher pin, pusher, spindle assembly (with spindle hook), collar, trigger assembly, hand strap, and wire extractor (stored in the handle assembly).

CAUTION

Do NOT attempt to disassemble the tool, other than removing the collar to replace the spindle assembly. To replace pusher pin, it is not necessary to remove collar.

The wire extractor is used to remove wires from terminals. By rotating the blade 180°, insulation scraps that stick in the terminal slots can be removed. Refer to Paragraph 4.

The protection cap should always be installed when the tool is not being used.

The spindle assembly may be rotated to any one of eight positions to adjust for terminal position and accessibility.

The hand strap is adjustable by hooking any one of the holes to the wire extractor.

3. WIRE INSERTION (Figure 2)

Refer to the instruction sheet packaged with the terminals or block assembly for wire and insulation diameter sizes. Proceed as follows:

1. Place wire in slot entrance of terminal so wire extends approximately one-half inch minimum beyond terminal cutter bar.
2. For convenience of operation and accessibility to the terminal, the spindle assembly can be set to any one of eight positions. To do so, lay tool on its right side (side with part number down), then loosen collar a maximum of four turns. Pull spindle assembly out and rotate to the desired position. Push spindle assembly in, so internal locators in the handle assembly enter notches in the mounting flange, then tighten collar.

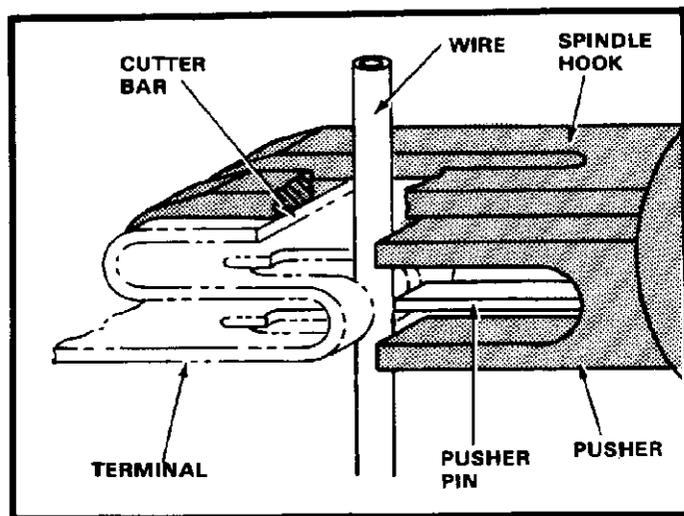


Fig. 2

3. Place the spindle hook over the terminal cutter bar while allowing the spindle hook to straddle the wire to be terminated. Maintain spindle hook in a vertical position with the terminal.
4. With pusher pin centered on slot in terminal, squeeze trigger assembly until it bottoms on the internal stop. This will extend the pusher to the correct distance to shear the wire and make the proper termination.

NOTE

If wire is not cut clean, refer to Paragraph 6, TROUBLESHOOTING, or Paragraph 9, TOOL CERTIFICATION.

5. Remove spindle hook from terminal and remove end of wire that was cut off. Visually inspect wire for proper termination, refer to Paragraph 5.

AMP PISTOL-GRIP INSERTION TOOL**4. WIRE EXTRACTION (Figure 3)**

Remove wire extractor from handle assembly and proceed as follows:

1. Hook extractor blade over wire between cutter bar and slot in terminal (1).
2. Pull extractor straight out to free wire from slot in terminal.
3. If necessary, hook blade of extractor on wire as close as possible to terminal (2), then perform Step 2.
4. Should insulation scrap remain in terminal slot after wire is extracted, rotate blade 180°, then slide "L"-shaped blade under insulation between wire retention slots and pull outward (3).

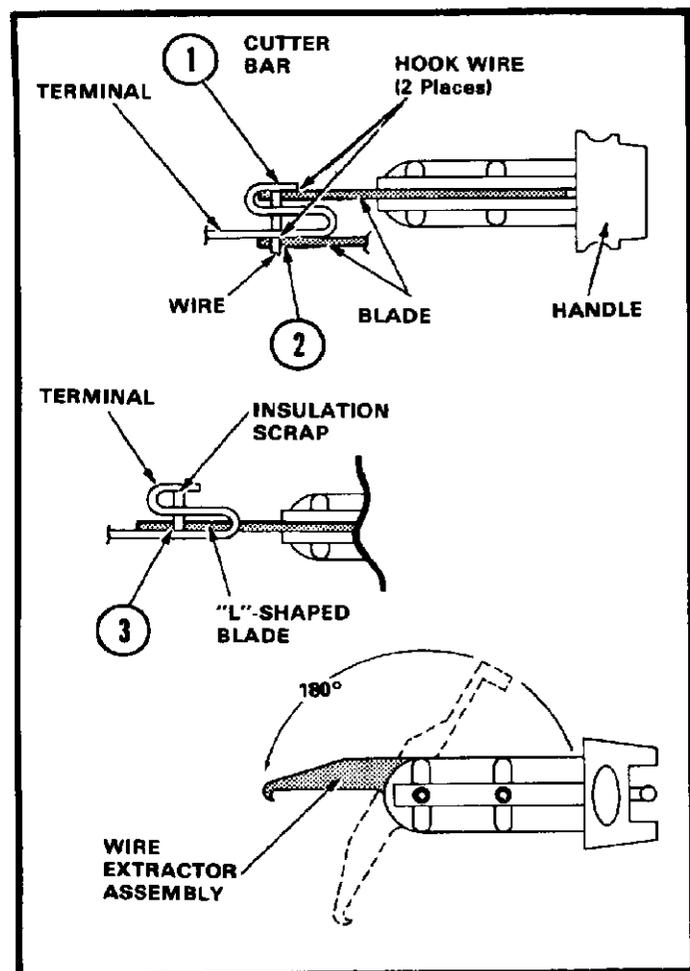


Fig. 3

5. INSPECTION OF TERMINATIONS

Inspect terminations for proper wire insertions. Wire and insulation should be located below edge of terminal cutter bar. Except for terminals with a feed-through slot in cutter bar, wire and insulation should be sheared completely during insertion. Occasionally the following conditions may occur:

1. Some types of soft insulation may not completely shear even though conductor is sheared. In this case, pull end of wire to break insulation not sheared. This will not affect the electrical connection.

2. Terminal cutter bar may be bent out of position through abuse or after having been used many times. If conductor is sheared and the unsheared insulation breaks easily by pulling end of wire, termination should perform satisfactorily.

6. TROUBLESHOOTING FAULTY TERMINATIONS

If faulty terminations appear, select probable cause and solution as follows:

1. *Conductor and insulation NOT sheared.* Trigger assembly was NOT squeezed enough to contact internal stop. Trigger assembly **MUST** be squeezed until it meets solid resistance against a stop. Under-insertion can be corrected by reinstalling the tool over the wire and squeezing the trigger assembly until it **BOTTOMS**. Also, refer to Paragraph 5.

2. *Tool has been damaged.* Check by placing spindle hook over an empty terminal, then squeezing trigger assembly to make sure tip of pusher passes edge of cutter bar. If this does not occur, the tool needs to be repaired. See Paragraph 10, REPAIR.

3. *Tip of pusher damaged.* Examine surface for nicks, grooves, or fractures. If any damage is evident, exchange tool for new one.

4. *Spindle hook bent or broken.* Replace with new spindle assembly, refer to Paragraph 7.

5. *Spindle assembly loose in tool.* Make sure spindle assembly is keyed in position, then tighten collar.

6. *Bent or broken pusher pin.* Replace with new pusher pin, refer to Paragraph 8.

7. SPINDLE ASSEMBLY REPLACEMENT

Replace spindle assembly as follows:

1. Hold tool with spindle assembly upward and carefully remove collar.

2. Note position of spindle assembly in relation to pusher, then remove spindle assembly.

3. Install new spindle assembly over pusher as noted in Step 2. Make sure notches in spindle assembly engage with locators in handle assembly.

4. Screw collar onto handle assembly to retain spindle in position.

8. PUSHER PIN REPLACEMENT

Replace pusher pin as follows:

1. Squeeze and **HOLD** trigger assembly to extend pusher.

2. Loosen setscrew in side of pusher, one or two turns.

3. Remove damaged pusher pin. Insert new pusher pin into pusher, while aligning the flat area on the pusher pin bushing with the setscrew. The end of the pin must be parallel with the cutting edge of the pusher. The end of the pin must be flush or below the end of the pusher to properly insert wire.

4. After making certain that pusher pin is **BOTTOMED**, secure with setscrew. Although setscrew **MUST** be below surface of pusher, do **NOT** overtighten — snug is sufficient.

5. Release trigger assembly, then operate tool several times to check for smooth operation.

9. TOOL CERTIFICATION

AMP Pistol-Grip Insertion Tool 229373-4 should be certified with the information provided in Figure 4. It is recommended that the tool be inspected immediately upon arrival at your facility and at regularly scheduled intervals, to ensure that the tool has not been damaged during handling.

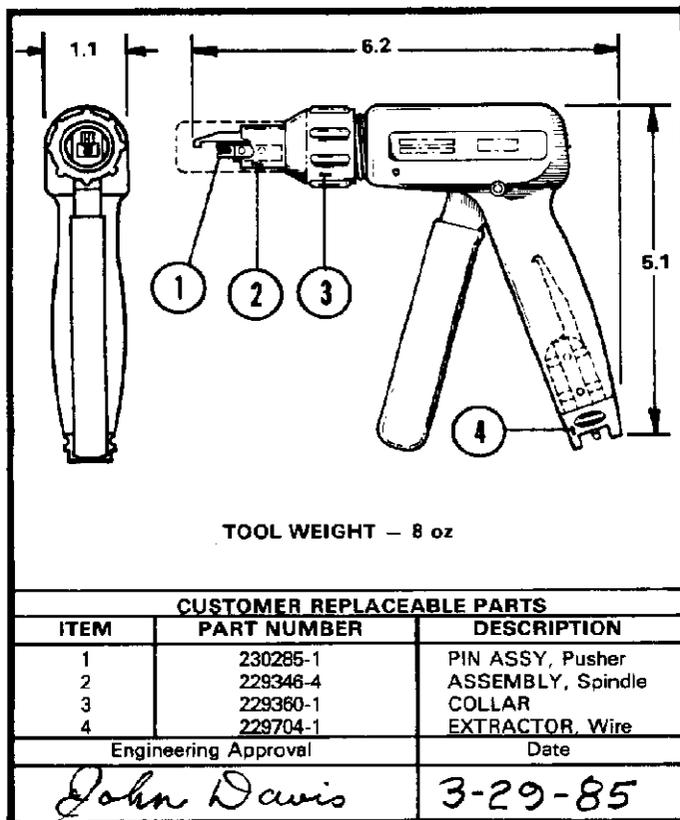


Fig. 4

A. Daily Maintenance and Inspection

Each operator of the tool should be made aware of — and responsible for — the following steps of tool maintenance and inspection:

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 sure pusher pin is in the correct position and not bent or broken.
3. Inspect spindle hook and tip of pusher for damage.
4. Check tool for smooth operation by squeezing and releasing trigger assembly.
5. Check that collar is screwed down tightly on spindle assembly.

B. Periodic Inspections

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:

1. Remove any accumulated film with a suitable cleaning agent that will NOT affect polycarbonate plastic material.
2. Check for chipped, cracked, worn or broken areas. If damage is evident, repair is necessary. See Paragraph 10, REPAIR.
3. Make sure all components are in place and properly secured. Make a few test terminations and inspect the termination in accordance with Paragraph 5, INSPECTION.

10. REPAIR

Customer replaceable parts are listed in Figure 4. A complete inventory should be stocked and controlled to prevent lost time when replacement is required.

Parts other than those specified in Figure 4 must be replaced by AMP to ensure certification of the tool. When repair is necessary, return the tool with a written description of the problem to:

AMP Incorporated
Tool Repair
3600 Gum Tree Road
Winston-Salem, NC 27107

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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