

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.

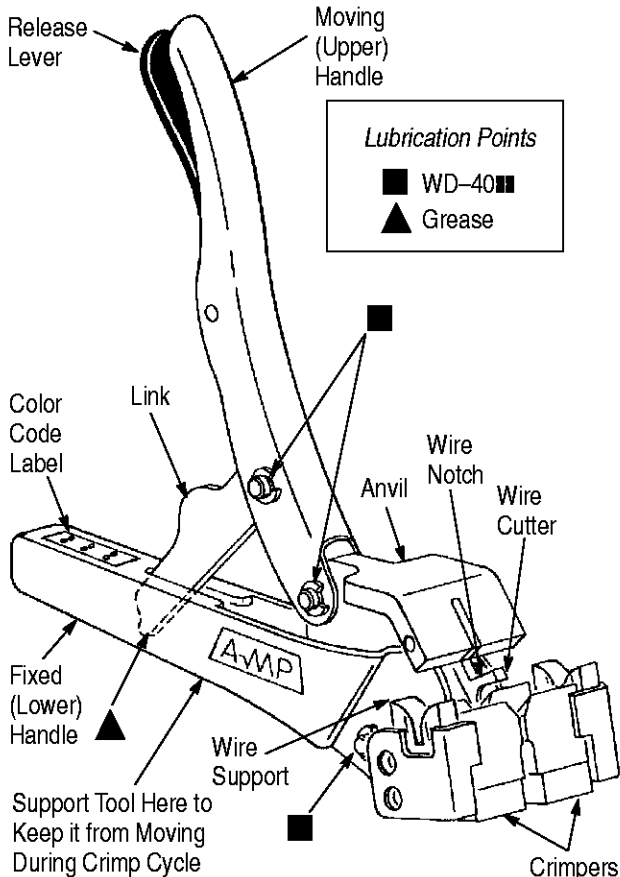


Figure 1

1. INTRODUCTION

AMP® Model MR-1M Hand Crimping Tool 251101-4 (Figure 1) is designed to crimp AMP PICABOND Mini-Connectors in through, tapping, and bridging operations. The tool can be hand-held or it can be used in the AMP Tool Holder 251852-1 with or without the AMP Frame Adapter 229175-1. Read the instructions packaged with these accessories.

NOTE

All dimensions on this document are in metric units [with U.S. customary units in brackets].

Reasons for reissue of this sheet are provided in Section 11, REVISION SUMMARY.

2. DESCRIPTION

The tool features two wire supports, a set of dies (anvils and crimpers), a wire cutter, and a handle

assembly. The wire range and connector color code are marked on the color code label inside the tool handle. Refer to Figure 1.

NOTE

*Notice that the release lever of the handle is black. This indicates that the tool is designed to crimp **only** mini-connectors.*

In use, the wire supports hold and position the wires in the crimpers. As the tool is cycled, the wire cutter cuts off excess wire, then the crimping dies crimp the connector to the wires. Continuous pressure applied to the moving handle forces the link to snap the tool handles closed, thus completing the crimp cycle. After the cycle is completed, depress the release lever to open the handles and remove the crimped connector.

3. CONNECTOR SELECTION

Determine the wire gage and combination of conductors to be joined. Then refer to Figure 2 for the correct connector. Note that the mini-connectors can be used for 28 through 19 AWG copper conductors that are insulated with plastic, paper, or pulp materials.

WIRE RANGE (AWG)	CONNECTOR DESCRIPTION	
	NUMBER	COLOR
28 – 24	552466	Pink
26 – 22	552041	Blue
24 – 19	552043	Brown

Figure 2

4. CABLE PREPARATION

Open and prepare the cable in the usual manner. There is no special procedure required when using the Model MR-1M hand crimping tool.

5. WIRE PLACEMENT

PICABOND mini-connectors are designed for in-line splicing operations only. Insert the wires for in-line splicing as follows:

NOTE

Always start with the cable units to the REAR of the cable opening.

1. Take a pair (tip and ring) of wires from one side of the cable opening and separate them far enough that one wire can be inserted into the wire support.

2. Holding the tool in one hand, lace the wire into the wire support and out between the crimpers. Make sure the wire has sufficient slack, then bottom it in the wire support.
3. Repeat Steps 1 and 2 using a pair of wires from the other side of the cable opening. *Be sure to match tip to tip or ring to ring.*
4. Insert the connector into the tool making sure the wire cutter enters the slots in the middle of the connector. See Figure 3. Crimp the connector as described in Section 6, CRIMPING PROCEDURE.

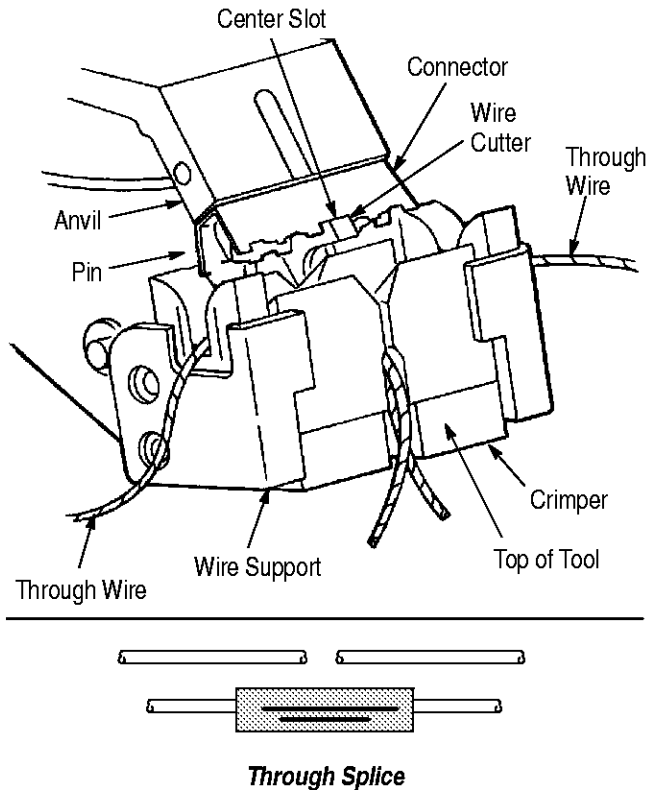


Figure 3

6. CRIMPING PROCEDURE

After placing the wires and the connector in the tool, crimp the connector as follows:

CAUTION

There must be sufficient slack in the wires, and the tool must be held steady during the crimping procedure. Otherwise, the wires could pull out of the connector during crimp cycle.

1. Grasp the front portion of the fixed (lower) handle with one hand and use the other hand to close the moving (upper) handle. See Figure 4.
2. Squeeze the tool handles together until they snap over the center, then depress the release lever and remove the crimped connector.

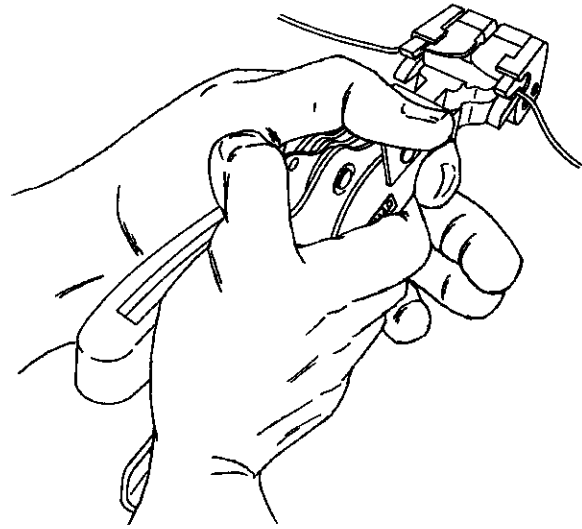


Figure 4

7. SPLICE BUILD-UP

During the splicing you should arrange groups of finished connectors along the splice opening in order to build a uniform, compact splice. To do this, move the tool along the splice opening about 31.750 mm [1.25 in.] after crimping every 25 to 50 pairs, or as local practice dictates. Alternate the direction in which the tool is moved, first to one side of center, then to the other.

8. INSPECTION

The tools are inspected before shipment, and should be inspected immediately upon arrival at your facility to be sure tools have not been damaged in transit. A record of scheduled inspections should remain with each tool. Though recommendations call for at least one inspection a month, the frequency should be based on:

- Care, amount of use, and handling of tool
- The degree of operator training and skill
- The ambient working conditions (abnormal amounts of dust, dirt, and temperature changes will necessitate more frequent inspection)
- Your established company standards

Make the following inspections after the first connection, and again after the last connection made during a shift, or according to local practices.

8.1. Gaging

Use a crimp gage within a short time of crimping the mini-PICABOND connector to check the connector.

1. Select the proper gage end. The color dots on the end of the gage must match the color of the connector you are gaging. See Figure 5.

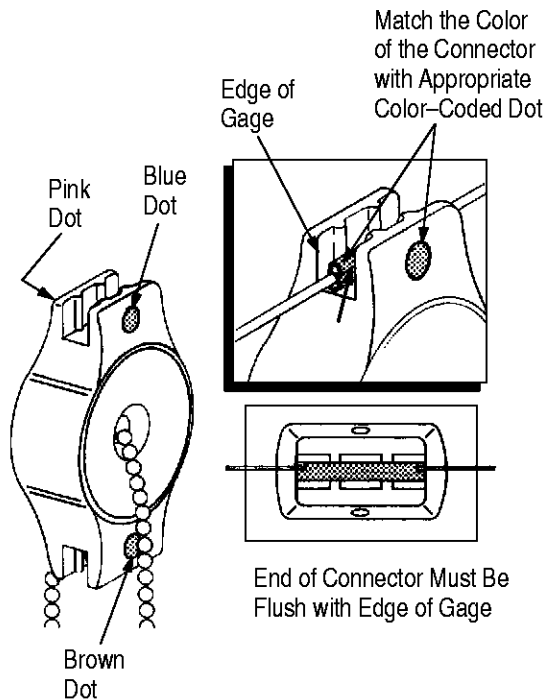


Figure 5

2. Insert the connector into the gage. Make sure both ends of the connector are flush with the edges of the gage.

3. Hold the wire and slide the gage off the connector—little or no drag should be noticed. If the connector sticks in the gage, make two sample crimps with scrap wire. Gage them immediately. If they stick, return the tool to your supervisor.

8.2. Visual Inspection (Figure 6)

1. Check for wire protruding from the center of the connector. If you find any, replace the connection. If this problem occurs frequently, return the tool to your supervisor.

2. Check insulation for cuts or score marks. If any are present, look for foreign matter or burrs on the anvils and crimpers. If possible, remove foreign matter and continue using tool. If foreign matter can NOT be removed, or if burrs are present, return the tool to your supervisor. Replace all damaged connections.

3. Check to see if the corner of the insulation has been peeled back as shown in Figure 6. If you find this condition, replace the connector. This condition can be caused by too much slack between wire supports and cable, or, it can be the result of the tool moving during the crimp cycle.

4. If untucked insulation is apparent, check the wire supports and adjust them if necessary. Continue to crimp connectors, but if untucked

insulation persists, return the tool to your supervisor. Replace all defective connectors.

5. Check for crushed or distorted connectors. If any are present, look for proper connector placement, foreign matter or burrs on the anvils and crimpers. If possible, remove foreign matter and continue using tool. If matter can NOT be removed, or if burrs are present, return the tool to your supervisor.

6. Check the plastic wire support brackets. If they are damaged, replace them using AMP Repair Kit 229188-2 and instructions packaged with the kit.

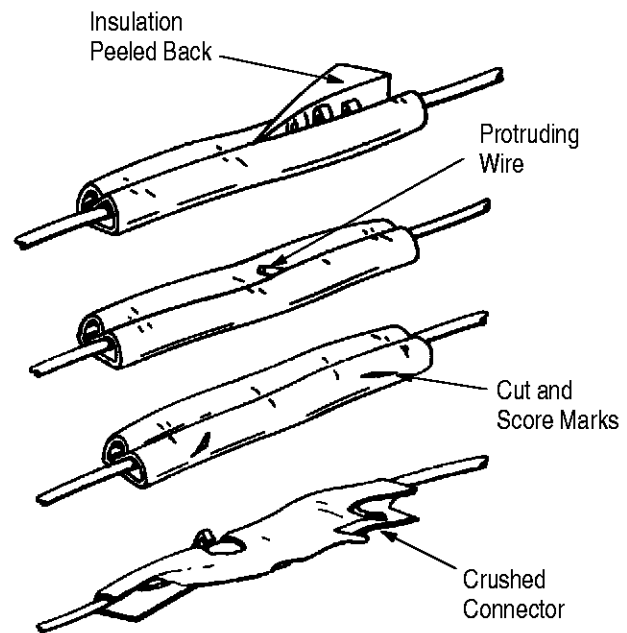


Figure 6

9. MAINTENANCE AND CLEANING

AMP recommends Cleaning Kit 229333-1 for cleaning this tool. This kit consists of: (1) a bristle brush for general purpose cleaning, (2) a tube cleaner for cleaning the crimping dies, (3) a tube brush for cleaning inside the tool, (4) an extractor for removing scrap wire and plastic particles from inside the crimping dies, and (5) extractor case. If you do not have this kit, it can be purchased from AMP Incorporated.

NOTE

A lubricant, WD-40, which can be purchased locally, is recommended for loosening dirt and lubricating the tooling.

NOTE

A spray solvent/cleaner, which can be purchased from Orb Industries, Upland, PA (215-874-2537), under part number 590, is recommended for removing accumulated film.

Remove all loose dirt with a clean bristle brush. Then liberally spray the tool with solvent/cleaner and allow it to dry. Remove any particles that you have loosened. Lubricate the tool with WD-40 lubricant and all purpose grease. See Figure 1 for lubrication points.

As the operator of the tool, you should: (1) clean and lubricate the tool regularly, (2) inspect the crimped connectors, and (3) use the tool in accordance with these instructions. If you find a defect in the tool's operation, return it to your supervisor.

10. ORDERING INFORMATION AND REPAIR

Order additional tools 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

Tools may be returned to AMP for evaluation and repair. For tool repair service, please contact an AMP representative at: 1-800-526-5136.

In Canada, send the tool to:

AMP OF CANADA LTD.
20 ESNA PARK DRIVE
MARKHAM, ONTARIO
CANADA, L3R 1E1
ATTENTION: PICABOND TOOL REPAIR

11. REVISION SUMMARY

Since the previous release of this sheet, the following changes were made per EC 0990-0572-99:

- Added Tool Repair Service Phone Number (1-800-526-5136)
- Added Canadian Tool Repair Address
- Added Revision Summary