a. Remove insulation from wire to be connected to pin of connector 1 3/4 inch (1.750 inch) back from end using wire stripper.

b. Insert stripped end of wire into the tip of the wire wrapping tool until insulation prevents further insertion. Bend wire into the slot in the tip of the wire wrapping tool (Figure 4-53).

c. Place the tip of the wire wrapping tool over the terminal to be wrapped. Orient the tool so that the wire is facing the direction required.

d. Depress and instantly release the trigger of the wire wrapping tool. The pressure needed and the time that the trigger must be depressed is comparable to firing a single round from a rifle.

e. Remove the wire wrapping tool from the terminal. Observe that the wire has a minimum wrap of seven turns with the insulated part having one wrap for a satisfactory connection.

4.15 BOLTED ELECTRICAL CONNECTIONS.

Bolted electrical connections shall not depend upon wiring, terminals, lugs, etc. clamped between a metallic member and an insulating material of other than a ceramic or vitric nature. Make these connections using two metal members, such as two nuts, two washers, etc. (Figure 4-55).

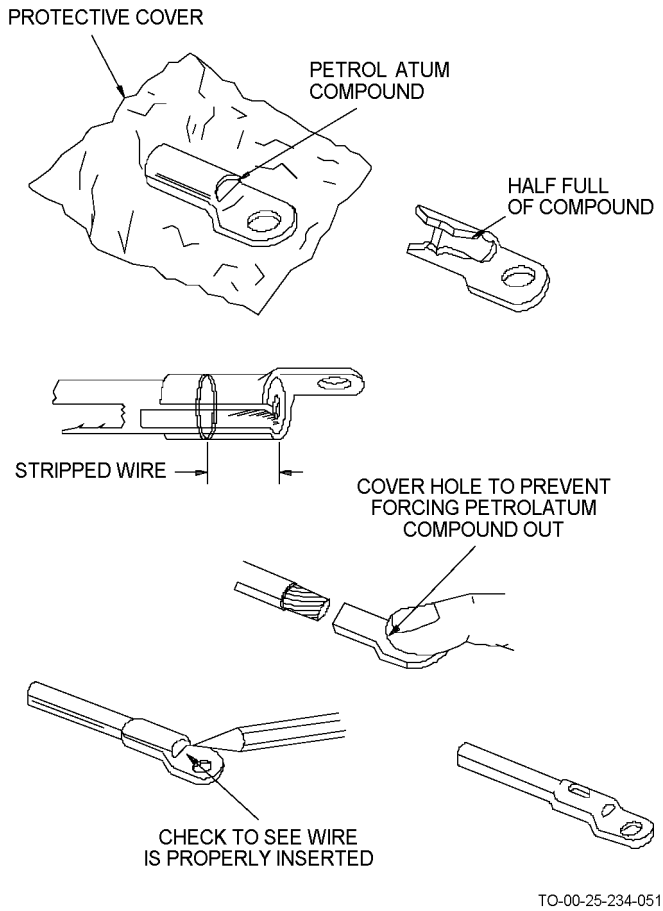


Figure 4-48. Inserting Aluminum Wire Into Aluminum Terminal Lugs

4.16 INSULATING MATERIALS.

Insulating materials shall provide adequate dielectric strength and sufficient leakage resistance to assure acceptable performance of the equipments under service conditions. Impregnating materials shall not cause deterioration of the properties of the material being impregnated, either initially or after aging. Impregnating or potting compounds shall not crack at temperatures of -85 °F (-65 °F) and above, nor flow at temperature of +221 °F (+105 °C) and below. Impregnating or potting compounds contained in a qualified products list shall be assumed to meet these specifications.

4.16.1 Coatings. Information on coatings is given in Chapter 6.

4.16.2 Standard Insulation Tubing. Use flexible tubing on conductors provided the tubing length is sufficiently long or fit is sufficiently tight to prevent slippage. Use only noncombustible or slow burning type flexible tubing entirely appropriate for the specific application.

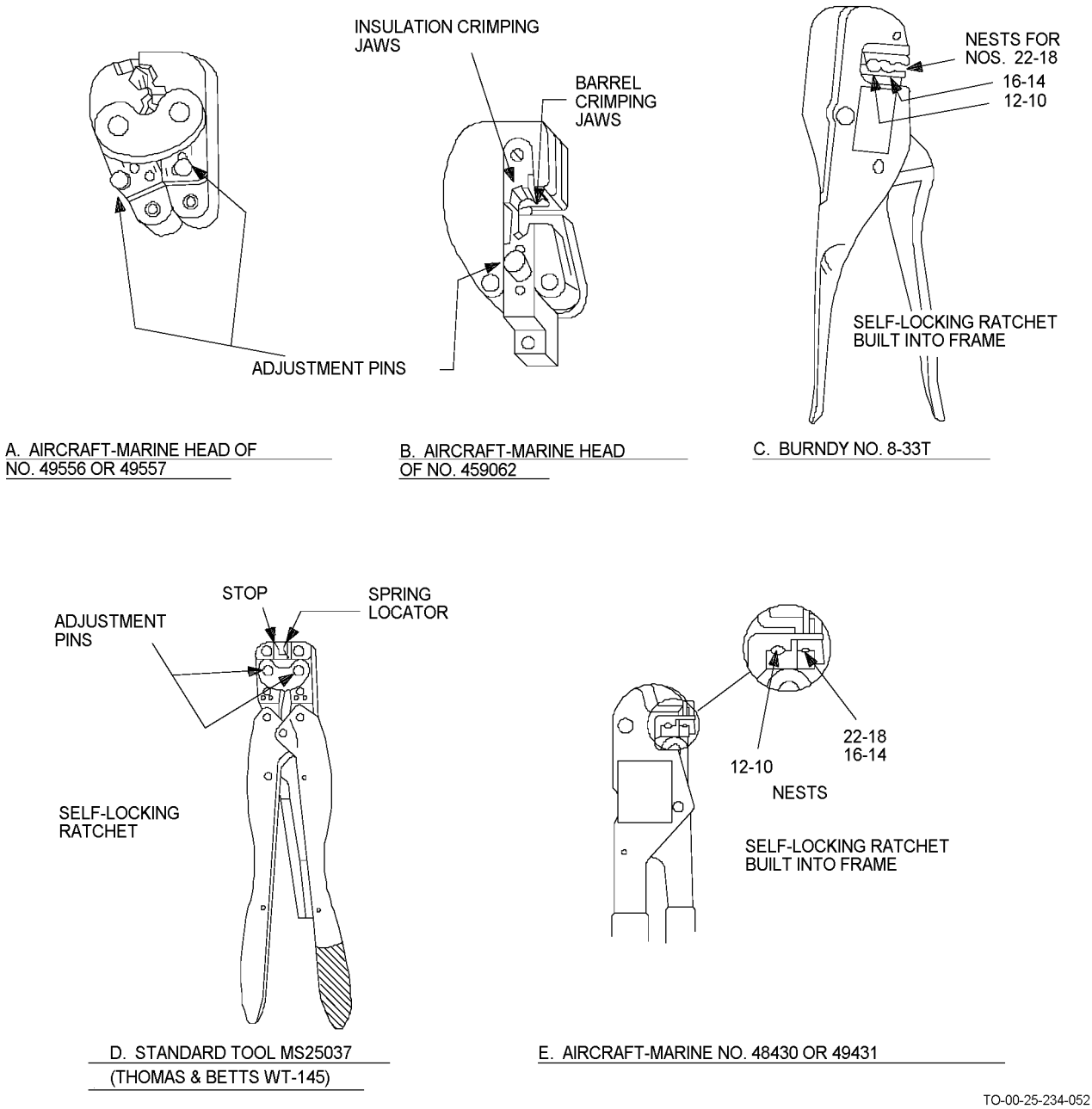


Figure 4-49. Hand Crimping Tools for Pre-Insulated Terminals

4.16.3 Heat-Shrinkable Tubing. Polyethylene tubing, which is shrunk to the desired size by the application of dry heat, may be used to protect single wires or wire groups where they break out from wire bundles or harnesses. The installation procedure is as follows:

a. Select from Table 4-6 tubing of an ID that can be slipped easily over the wire or wire group.

b. Use a hot-air gun (Figure 4-56) as a heat source. Hold the heat source four to five inches away from the wire, and apply a heat of 275 °F to 300 °F (135 °C to 149 °C) for approximately 30 seconds. Rotate the wire while applying the heat, so that the heat is evenly distributed.