**BELL SYSTEM PRACTICES**
**Outside Plant Construction and Maintenance**

**SECTION G10.306.2**
**Issue 1, July, 1960**
**AT&TCo Standard**

# FIELD REPAIR OF B VOLTAGE TESTER

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## 1. GENERAL

1.01 This section describes procedures to be used in making certain limited field repairs to the B Voltage Tester.

1.02 Testers which cannot be repaired by using the methods described in this section should be disposed of in accordance with local instructions.

## 2. WIRE INSULATION BREAKS NEAR THE PROBE

2.01 Experience has shown that after extensive use under certain conditions, the insulation of the wire coming out of the probe handle or grip of the B Voltage Tester, may crack and expose the bare wire. This is not dangerous, but because the wire will tend to bend much more sharply at the point where the wire is exposed, it will eventually break at this point. The following procedure is designed to prevent wire breakage at this point.

2.02 Clean the grip with a cloth (moistened if necessary with soap and water) to remove mud, grease and other foreign matter; dry it thoroughly before proceeding with repairs.

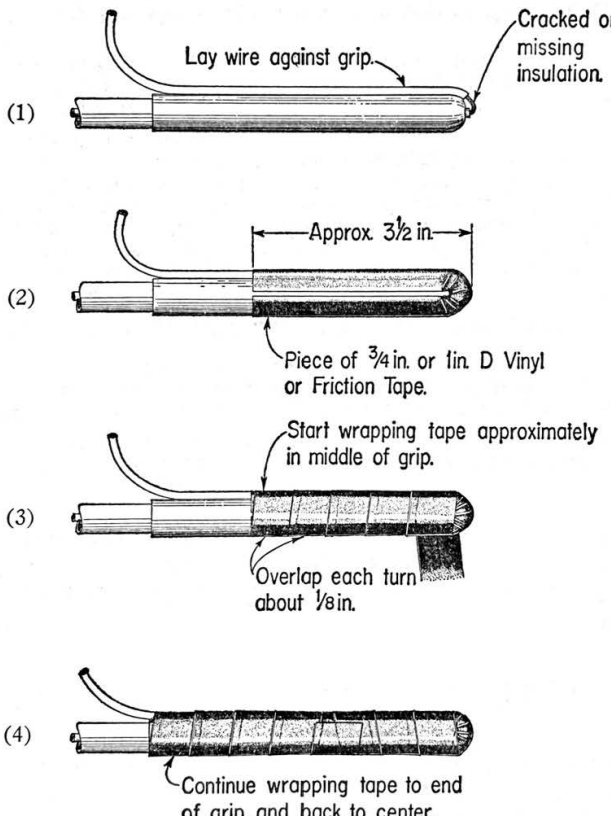
(a) Lay the wire snugly against the grip as shown in (1).

(b) Apply a 7-inch length of 3/4-inch (or 1-inch) D Vinyl Tape or friction tape along the grip and over the wire as shown in (2).

(c) Starting at the middle of the grip, wrap tape around the wire and grip lapping each turn about 1/8 inch over the preceding turn. Continue the wrapping to the end of the grip and back to the other end of the grip, finally ending at the middle. This will result in a double layer of tape from one end of the grip to the other. The completed repair is shown in (4).

2.03 The preceding repair should not be made, however, if the wire between the probe and the indicator assembly has previously been field spliced, or is broken, as the wire will be too short.

**Note:** Testers issued after January 1960 are equipped with a piece of plastic tubing over the wire where it emerges from the grip which should render this type of repair unnecessary.



## 3. WIRE SPLICES

3.01 The wire or cord of the B Voltage Tester may be spliced under the following conditions:

(a) Between the probe and the indicator assembly, a maximum of two splices are permitted unless it is also necessary to tape the wire to the grip in which case no splices are permitted in this piece of cord. Do not attempt to splice wire if the break is within 4 inches of either the indicator assembly or the grip of the probe.

(b) Between the indicator assembly and the grounding clip, a maximum of three splices are permitted except that no attempt should be made to splice wire breaks within 4 inches of the indicator assembly, and no attempt should be made to splice wire breaks if the over-all length of the cord between the clip and the indicator assembly will be less than 7 feet 6 inches. Each splice will reduce the length of the cord about 2 inches.

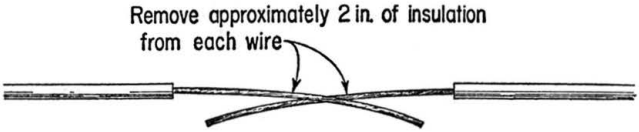
3.02 Broken cords shall be spliced as follows:

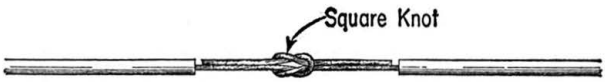
(a) Strip 2 inches of insulation from the wire on each side of the break using the wire stripping hole of the standard 6-inch diagonal pliers.

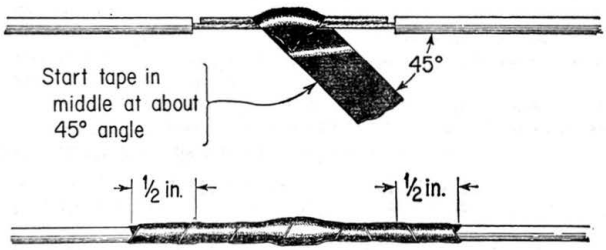
(b) Clean the insulation of the wire adjacent to the break for a distance of at least an inch to remove mud, grease, etc.

(c) Tie a square knot in the middle of the exposed wire so that the ends will lie parallel and extend approximately to the beginning of the insulation.

(d) Tape the joint with 3/4-inch D Vinyl or friction tape. Start the tape at about a 45-degree angle beginning at the knot and continue until about 1/2 inch of the rubber insulation has been covered. Continue taping until the splice has two layers, ending the tape in the middle of the splice.




Tape splice with D Vinyl or friction tape
Tape to extend approximately ½ in. beyond
end of insulation.