B VOLTAGE TESTER
DESCRIPTION, USE AND MAINTENANCE

CONTENTS

1. GENERAL

1.01 This practice has been renumbered from Section 620-105-905SN which is hereby cancelled. It will also be used instead of the AT&T practice of the same number.

1.02 The B Voltage Tester is used to (1) pre-test vertical power ground wires and conduit prior to climbing the pole, (2) pre-test electric street lamp fixtures prior to working on joint use poles supporting such fixtures, and (3) pre-test power company ground rods, ground wires and conduit prior to inter-connection with telephone company grounded plant at station locations.

Note: The "B" shunting capacitor is no longer used in the testing of street light fixtures or the draining of static charges, except in some rural areas with paralleling open wire or multiple line wire. Catalog changes have been made to provide the "B" voltage kit without the shunting capacitor. However, the capacitor is available as a separate item.

1.03 The B Voltage Tester should be used only to test those specific items of power company plant specified in present Bell System or S.N.E.T. practices. No unauthorized use of the B Voltage Tester should be attempted.

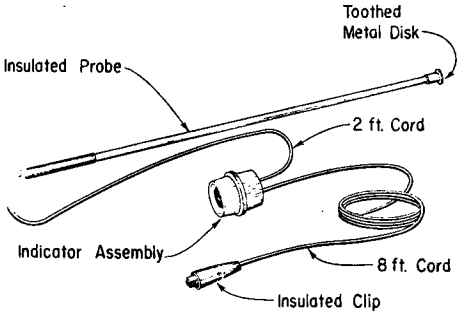
1.04 If any voltage test indicates that the power company ground wire, metal conduit or street lamp fixture is energized, stop the work operation immediately and notify your supervisor, construction clerk or test bureau. Work at the location will be discontinued until the power company corrects the situation.

1.05 RUBBER GLOVES MUST BE WORN WHENEVER THE B VOLTAGE TESTER IS USED.

2. DESCRIPTION OF B VOLTAGE TESTER AND VOLTAGE PLUG

2.01 The B Voltage Test is issued as part of a kit that includes (1) Voltage Tester, (2) Temporary Bond, (3) Canvas carrying bag and (4) voltage tester plug. The B Temporary Bond is used, in general, as a 5 ft. temporary inter-connection or extension cord. The voltage tester plug, provided with each kit and installed at centralized test locations, is used to facilitate B Voltage Tester pre-testing.

2.02 The B Voltage Tester is designed to detect the presence of voltages from 60 volts to 7600 volts. It consists of an indicator assembly which contains a small neon glow unit and reflector, and a plastic insulated probe equipped with a toothed metal disk on one end for making contact with the conductor, conduit or street light fixture to be tested. The probe is designed to limit the amount of current which can pass through the device. The probe, indicator assembly and an insulated clip are connected by insulated cord as illustrated.

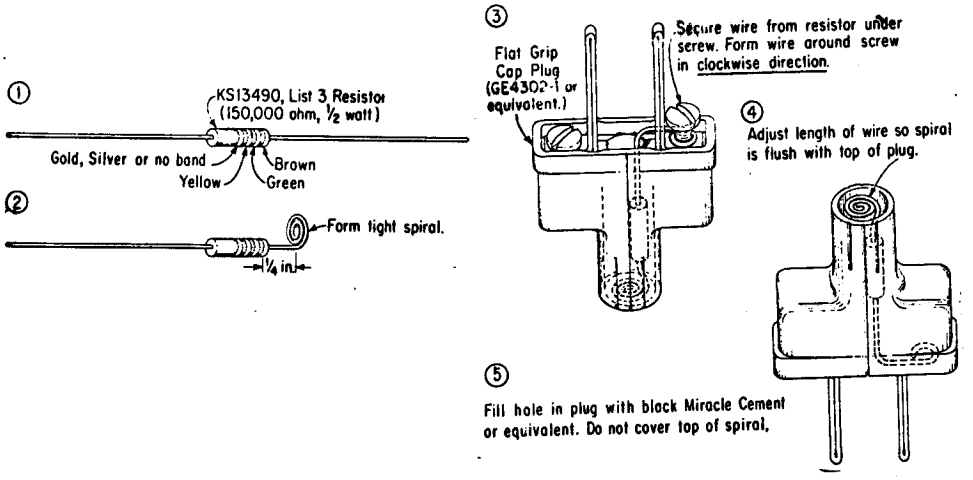


B VOLTAGE TESTER

2.03 At 60 to 70 volts the indicator of the B Voltage Tester glows dimly. Higher voltages will produce a brigher glow. Because the higher voltages can damage the tester if left connected. (7200 volts will burn it out in approximately one minute) it should be touched to the facility being tested only long enough to determine whether or not the indicator glows.

3. PRE-TESTING OPERATION OF THE B VOLTAGE TESTER

3.01 A voltage plug, provided in the canvas bag, made up as illustrated on the next page, is designed to provide a safe and convenient means of pre-testing the operation of the B Voltage Tester. When plugged into any standard 110-120 volt power outlet, it provides a source of voltage in series with a current limiting resistor. As illustrated, the resistor is connected to only one prong of the plug and this prong must be plugged into the "hot" side of the outlet. When the hot side of the outlet is questionable, reverse the voltage plug if no glow occurs and repeat the test as indcated on Page 3.



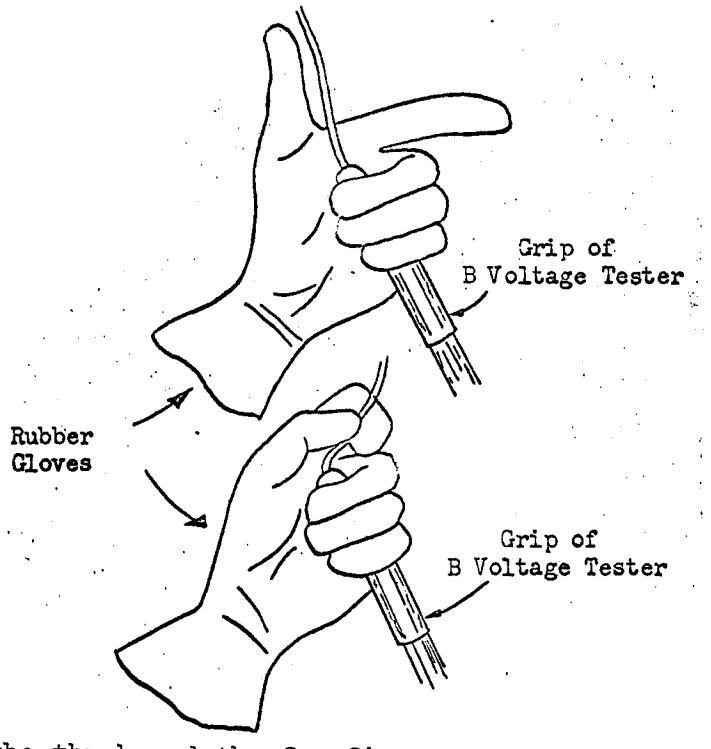
3.02 The B Voltage Tester should be tested weekly to ensure that it is operating satisfactorily as follows:

(a) Utilize the standard B Voltage Tester Test Station located in the company garage or any 110-120 volt electric outlet which is convenient.

(b) Wear RUBBER GLOVES during the testing operation. At a test location other than the test location in company garages, insert the voltage plug included in the kit, and described in Paragraph 3.01 above, into the outlet.

(c) Attach the insulated clip of the voltage tester to a ground such as the standard ground at Test Station, a water pipe, radiator, metallic power conduit etc. If none of these are available, lay the B temporary bond (extension cord), uncoiled, on the floor and attach to one of its clips.

(d) Grasp the grip of the voltage tester with the palm of the hand so the end of the grip extends almost to the forefinger with the wire passing between the thumb and the forefinger (see illustration).



With the thumb and the forefinger bent, pinch the wire firmly. Hold the grip as firmly as possible with the three fingers, and while keeping the wire firmly pinched, straighten the thumb and forefinger, thus putting tension on the wire. Do not use both hands and pull or jerk the wire since even a normal cord may be damaged or broken if it is subject to violent pulling.

(e) Briefly (no more than a few seconds) touch the toothed metal disk of the probe to the metal spiral of the voltage plug. The indicator should glow faintly. If the indicator does not glow, release the tension on the wire and again briefly touch the metal spiral on the voltage plug with the toothed metal disk.

If the indicator glows after the tension has been released, the wire is broken under the insulation and the tester should be disposed of in the routine manner and replaced prior to testing any further. If the tester glows under both conditions, slack and under tension, the tester can be considered operational. If the indicator does not glow under both conditions, slack or tension, then reverse the plugs and repeat the entire test to insure that the "hot" side of the plug is connected to the "hot" side of the power line.

WEAR RUBBER GLOVES WHERE SPECIFIED IN THIS SECTION

4. CONDITIONS UNDER WHICH TESTS ARE REQUIRED AT POLES

4.01 Examine the pole for poential hazards such as a vertical power ground wire, vertical metallic power conduit, or a street light fixture. Also observe the pole for such hazards as improver clearances from power conductors or equipment, dangling power wires, etc. If none of these are present, the pole may be climbed in accordance with safe climbing practices.

4.02 Make a voltage test of the vertical ground wire in accordance with Part 5 before climbing or working on the pole, if one of the following conditions exist:

(a) The power ground wire is bonded to a multiple line wire support wire or

(b) If the power ground wire moulding or insulation is missing or in any way damaged.

4.03 If a vertical metallic power conduit is present, make a voltage test in accordance with Part 5 before climbing or working at the pole unless it can be clearly seen that the conduit is bonded to the telephone cable strand.

4.04 If a street light fixture is present, make a voltage test on the pole in accordance with Part 6, only if the pole also carries paralleling open wire or multiple line wire.

4.05 Poles carrying street light fixtures may be worked on without making a voltage test under any of the following conditions:

(a) The fixture is located in power space, or

(b) The fixture is located ABOVE telephone attachments and it can be clearly seen that it is bonded to the telephone cable strand, or

(c) The fixture is located BELOW telephone cable and it can be clearly seen that it is bonded to the telephone cable strand. However, in this case RUBBER GLOVES SHALL be WORN in climbing the pole unless the wiring through and below telephone space is either 40 inches out from the pole surface or is otherwise made inaccessible.

4.06 If the street light fixture is present in the telephone space on a pole carrying multiple line wire or isolated cable (i.e., messenger ground not continous back to Central Office), RUBBER GLOVES should be worn during all work operations and extreme caution should be exercised during the work operation to avoid contact with the fixture and its wiring. The support wire of a multiple line wire does not provide an adequate grounding medium for grounding street light fixtures as does the cable strand and sheath. Therefore, even though the fixture has been voltage tested, it is not possible to place a temporary bond to an effective ground.

5. VOLTAGE TESTS - VERTICAL POWER GROUND WIRES OR METALLIC POWER CONDUIT

5.01 When a voltage test is required by Paragraph 4.02 or 4.03, proceed as follows before climbing or working on the pole. WITH RUBBER GLOVES ON:

(a) Attach the insulated clip of the voltage tester to one of the following:

(1) A guy rod or telephone anchor guy. (Do not attach to an anchor rod that carries an uninsulated guy which is bonded to the power vertical ground wire).

(2) A fire hydrant, a projection on a manhole cover, or a metallic curb box.

(3) A 5-inch screwdriver blade pushed into the earth about 5 feet from the pole.

(4) A substantial metal object such as a piece of lead sleeving, a metal crossarm brace, or a half-pound bar of D Seam Solder, etc., laid on the ground or pavement about 5 feet from the pole.

(b) Where insulated or wood moulding covered down leads require voltage tests as indicated in Paragraph 4.02, draw the moulding away from the pole using the 5 inch plastic handle screwdriver. In some instances this will not be necessary if the ground wire is visible at the base of the pole. Now proceed as follows:

(1) If the ground wire is bare, push the toothed metal disk of the tester firmly against the ground wire and promptly look into the open end of the indicator assembly.

(2) If the ground wire is insulated use lineman's pliers to remove a small section of insulation, then push the toothed metal disk of the tester firmly against the ground wire and promptly look into the open end of the indicator assembly.

(c) IF THE INDICATOR GLOWS, THE GROUND WIRE OR METAL CONDUIT IS ENERGIZED. Immediately remove the probe from contact with the ground wire or metal conduit and notify your supervisor. DO NOT CLIMB OR CONTACT THE POLE IF THE INDICATOR GLOWS.

5.02 If the voltage tester DOES NOT GLOW in making the test described in Paragraph 5.01, poles carrying vertical power ground wires and telephone cable may be climbed in accordance with safe climbing practices. Care should be exercised to avoid simultaneous contact between power ground wires and telephone cable or guys as a small voltage (60 volts or less) may be present. This is recommended to avoid the possibility of surprise shock which might

(under some circumstances) cause a fall from the pole.

5.03 After making the voltage test on a pole carrying vertical metallic power conduit and telephone cable, leave on RUBBER GLOVES, climb the pole and place a B temporary bond as follows. FIRST ATTACH THE SMALL CLIP TO THE TELEPHONE STRAND: Then attach the large clip to the conduit (or conduit fastening if the conduit is too large). LEAVE THE BOND IN PLACE UNTIL ALL WORK OPERATIONS AT THIS POLE HAVE BEEN COMPLETED FOR THE DAY. If the bond starts to smoke, put on RUBBER GLOVES and descend the pole. Avoid contact with the bond or the conduit and notify your supervisor.

5.04 On completion of work operations on the pole, remove the bond as follows:

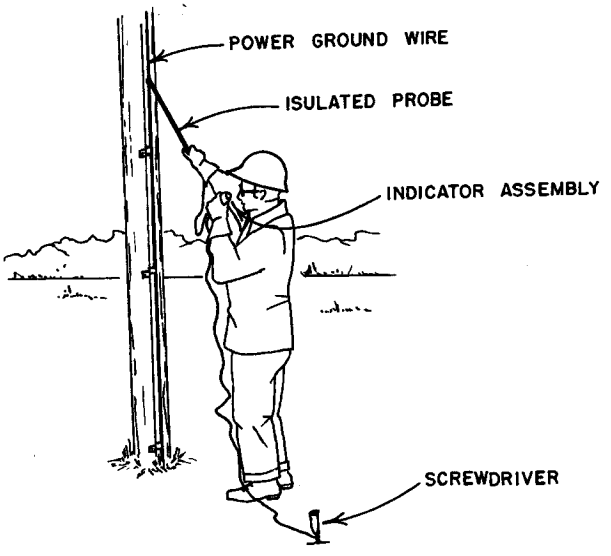
(a) Put on RUBBER GLOVES

(b) Remove the clip from the conduit. Remove this clip FIRST.

(c) Remove the other clip from the strand.

(d) If a spark is observed in removing the bond, notify your supervisor.

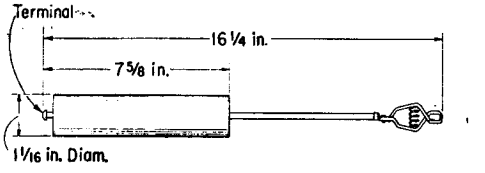
5.05 If a shock is experienced as a result of simultaneous contact between the ground wire or conduit and grounded objects such as telephone cable, strand, guy, etc., descend the pole at once and report the matter to your supervisor immediately.



6. VOLTAGE TESTS AND SAFEGUARDS - POLES WITH STREET LIGHT FIXTURES

6.01 The "B" shunting capacitor is required under certain conditions (Par. 6.02 (d) in testing street light fixtures, in order to eliminate the possibility of a false indication.

Note: The "B" shunting capacitor is no longer used in the testing of street light fixtures or the draining of static charges, except in some rural areas with paralleling open wire or multiple line wire. Catalog changes have been made to provide the "B" voltage kit without the shunting capacitor. However, the capacitor is available as a separate item.



B SHUNTING CAPACITOR

6.02 Where a voltage test is required under conditions of Section 4, proceed to test and safeguard the street light fixture as follows:

(a) Attach B Voltage Tester bag containing test equipment to body belt.

(b) Put on RUBBER GLOVES and climb to a convenient height to make the test. AVOID CONTACTING THE LIGHT FIXTURE OR ITS WIRING.

(c) In the case of aerial cable, attach the insulated clip of the "B" voltage tester to the cable suspension strand or the support bracket of multiple line wire. Push the toothed metal disk firmly against the street light fixture and promptly look into the open end of the indicator assembly.

(d) If the insulated clip of the voltage tester is attached to the cable suspension strand and the indicator glows, immediately remove the probe from contact with the fixture, then remove the insulated clip from its attachment. Proceed to make a test with the B shunting capacitor as described in subparagraphs (h), (i), and (j).

If the insulated clip of the voltage tester is attached to the support wire or bracket of multiple line wire and the indicator glows, immediately remove the probe from contact with the fixture, then remove the insulated

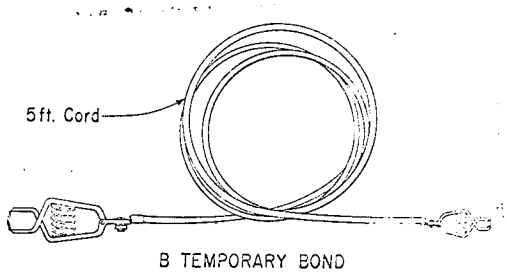
WEAR RUBBER GLOVES WHERE SPECIFIED IN THIS SECTION

clip from its attachment. Descend the pole and notify your supervisor, Construction Clerk, or Test Bureau of the energized fixture. Avoid contact with the fixture and its wiring.

(e) If the insulated clip of the voltage tester is attached to the cable suspension strand and the indicator does not glow, contact the fixture with the probe again to be sure that good contact has been made. If the indicator still does not glow, place a temporary bond as described in subparagraph (f).

If the insulated clip of the voltage tester is attached to the support wire or bracket of multiple line wire and the indicator does not glow, contact the fixture with the probe again to be sure that good contact has been made. If the indicator still does not glow, proceed with the work operation. Since a temporary bond cannot be placed, assume that the fixture may become energized during the work operation and therefore, RUBBER GLOVES should be worn and caution exercised.

(f) Attach the small clip of the B temporary bond to the cable suspension strand so as not to be in the way of work operations. DO THIS FIRST. Then attach the other clip of the bond wire to the street light fixture. (DO NOT BOND to the support bracket of multiple line wire or the suspension strand of ISOLATED cable). Temporary Bond cannot be made to 109 support wire or strand of isolated cable.



B TEMPORARY BOND

DO NOT ATTACH TO THE STREET LIGHT WIRES OR TERMINALS TO WHICH THEY ARE ATTACHED. NEVER ATTACH THE CLIP TO A FIXTURE WHICH CAUSES THE INDICATOR TO GLOW.

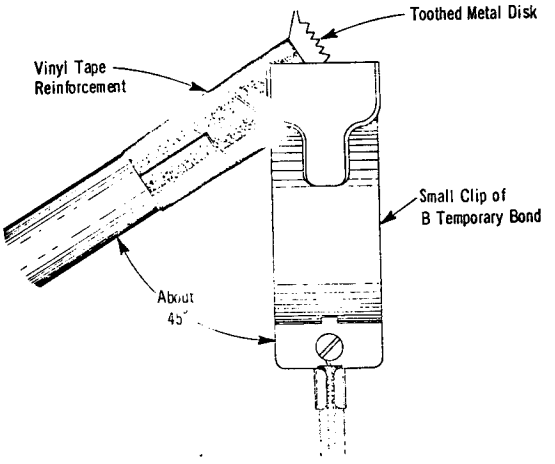
(g) The RUBBER GLOVES may be removed ONLY AFTER the temporary bond is in place, and then only if other protection requirements permit. LEAVE THE B TEMPORARY BOND IN PLACE UNTIL ALL WORK OPERATIONS HAVE BEEN COMPLETED AT THIS POLE FOR THE DAY. If the bond starts smoking, put on RUBBER GLOVES and descend the pole immediately. Avoid contact with the bond, the fixture or its wiring. Notify your supervisor.

(h) With the B shunting capacitor, under the circumstances described in Subparagraph (d) preceding, make a second test as follows:

(1) Attach the clip of the voltage tester and the clip of the shunting capacitor to the cable suspension strand or to the bare power vertical ground wire.

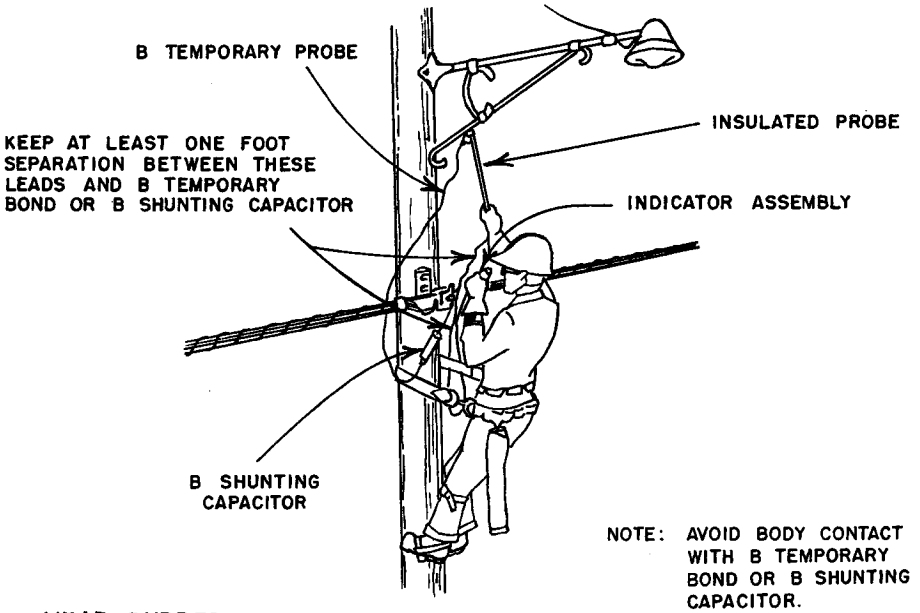
(2) Attach the small clip of the temporary bond to the metal terminal of the capacitor and the other clip to the metal cap behind the disk of the insulated probe.

If the metal cap or ferrule of the B Voltage Tester has been tape reinforced, attach the large clip of the temporary bond to the metal terminal of the capacitor; attach the small clip to the toothed metal disk of the B Voltage Tester as shown below.



(3) MAKE ATTACHMENTS IN (1) AND (2) SO THAT AT LEAST 1-FOOT SEPARATION IS MAINTAINED BETWEEN THE LEADS OF THE VOLTAGE TESTER AND THE TEMPORARY BOND OR SHUNTING CAPACITOR.

(4) Touch the toothed metal disk to the street light fixture and promptly look into the open end of the indicator assembly. (See Sketch) AVOID BODY CONTACT WITH TEMPORARY BOND OR CAPACITOR DURING TEST.



WEAR RUBBER GLOVES WHERE SPECIFIED IN THIS SECTION

(i) IF THE INDICATOR GLOWS, THE FIXTURE IS ENERGIZED. Immediately remove the probe from contact with the fixture, replace testing equipment in the carrying case, descend the pole and notify your supervisor. AVOID CONTACT WITH THE FIXTURE OR ITS WIRING.

(j) If the indicator does not glow, contact the fixture with the probe again to be sure that good contact has been made. If the indicator still does not glow, place a temporary bond as described in Subparagraphs (f) and (g) preceding.

6.03 On completion of work operations on a pole, remove the B temporary bond as follows:

(a) Put on RUBBER GLOVES.

(b) Remove the clip attached to street light fixture. REMOVE THIS CLIP FIRST.

(c) Remove the other clip from its attachment. If a spark is noticed on removing the bond, descend the pole immediately and notify your supervisor.

6.04 Street lamp fixtures on joint use poles supporting only drop wire cannot be voltage tested because of the lack of any ground near the telephone gain and the lack of a standard extension cord to reach the earth. Therefore care should be exercised when working within proximity of a street light fixture where only drop wire is present.

7. VOLTAGE TESTS - POWER GROUND RODS, CONDUIT AND POWER GROUND WIRES AT STATION LOCATION

7.01 Where a voltage test is required at a station location, as stated in other Plant Practices, it shall be made as follows WITH RUBBER GLOVES ON:

(a) Attach the insulated clip of the voltage tester to one of the following:

(1) Metallic cold water system (public or private)

(2) A 5 inch screwdriver blade pushed into the earth about 5 feet from the object to be tested.

(3) A substantial metal object such as a ground rod, piece of lead sleeve, or half pound bar of D seam solder etc., and lay the object on the ground or pavement about 5 feet from the object to be tested.

(b) Standing about 3 feet from the object to be tested, and with RUBBER GLOVES on, grasp the insulated probe in one hand and the indicator assembly in the other. Touch the toothed metal disk at the end of the probe to the ground rod, conduit or wire being tested, and promptly look into the open end of the indicator assembly.

(c) If the indicator glows, the ground rod, conduit or wire is energized. Immediately, remove the probe from the contact with the ground rod, conduit or wire and notify your supervisor or test bureau. Do not make any interconnection if the indicator glows.

(d) If the voltage tester does not glow in making the test as described above, the ground rod, conduit or wire may be interconnected with the telephone ground.

(e) The B Temporary Bond, included with the kit, may be used as an extension wire where required.

8. VOLTAGE TESTS - AT TERMINALS AND PROTECTORS

8.01 When checking the binding posts of terminals containing working lines, which normally carry -48 volts D.C. on the ring side, A.C. of approximately 20 volts RMS would be enough to make the indicator light glow. Induction of 20 volts or higher is quite common in M.G.N. areas. When the indicator glows under these conditions, further tests will be necessary to determine the cause. The following procedure is suggested in an effort to minimize false alarms.

8.02 While wearing rubber gloves, use the "B" voltage tester to check all items or plant in the normal manner. If a light is experienced from the ring side of a working line, call the C.O. from another location. Mention the possibility of a voltage condition, then ask to have the heat coils removed. Request the use of rubber gloves by C.O. personnel when removing the heat coils. With the heat coils removed check the suspected protector location. If the indicator no longer glows, the line is safe to work on. If the light remains lit, indicating the presence of over 60 volts A.C., proceed no further. Notify your supervisor or test bureau immediately, and discontinue work at the location until the power company corrects the trouble.

(a) EXPLANATION: The ring-side -48 volts D.C. and the negative half cycle of the 20 volts become additive. Ten volts RMS (negative half cycle) has a peak volume of 14 volts. This 14 volts when superimposed on the -48 volts D.C. is equal to 62 volts, enough to cause the indicator light to glow. With the heat coils removed the A.C. induction is no longer superimposed on a -48 volt D.C. reference and will not be enough to make the indicator light glow.

8.03 When testing a protector where there is an indication of AC voltage on the line the following procedure is to be followed:

Note: Any indication of foreign AC voltage on a circuit should always be assumed to be high voltage. Avoid all body contact with anything which is to be tested.

(a) Attach the insulated clip of the voltage tester to one of the acceptable grounds covered in Paragraph 7.01

(b) Standing about 3 feet from the object to be tested, and with RUBBER GLOVES on, grasp the insulated probe in one hand and the indicator assembly in the other. Touch the toothed metal disk at the end of the probe to both the tip and ring connections on the line side of the protector and look into the open end of the indicator assembly.

(c) If the indicator doesn't light this is not a sufficient indication that there is an absence of foreign voltage. A well grounded system will give the appearance of no foreign voltage if there is no difference in potential. To eliminate this ground, remove the drop loop from the protector and re-test both sides of the drop loop. If the indicator now lights remove the B Voltage Tester probe and notify your supervisor or the test bureau immediately.

(d) If the indicator light doesn't glow when testing the drop loop, remove the station wiring from the protector and test to see if the foreign voltage is originating from within the subscriber's premise. If it is not, have the test board re-test the circuit to see if the trouble has been cleared.

(e) Never connect a test set across a line suspect of having foreign voltage until you have made all of the previous tests and the line has been cleared of foreign voltage.

(f) In all situations where the B-Voltage indicator glows immediately remove the probe and notify your supervisor or the test bureau.

Note: Do not continue any additional test after the indicator has proven the presence of foreign voltage.

9. FIELD REPAIR OF B VOLTAGE TESTER

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

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

WIRE INSULATION BREAKS NEAR THE PROBE

9.03 Testers issued after January 1960, should not normally require this type of repair. However, 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.

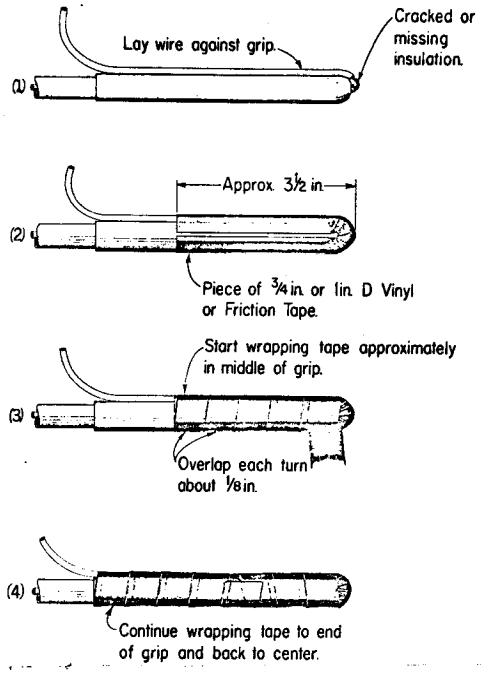
9.04 Clean the grip with a cloth (moistened if necessary with soap and water) to remove mud, grease and other foreign matter; dry it thoroughly before proceeding with repairs.

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

(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).

9.05 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 make this type of repair unnecessary.

WIRE SPLICES

9.06 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 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.

WEAR RUBBER GLOVES WHERE SPECIFIED IN THIS SECTION

9.07 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.

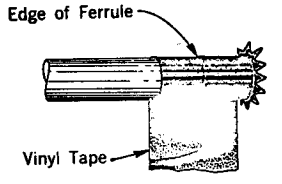
(b) Clean the insulation of the wire adjacent to the break for a distance of at least an inch to remove mud, grease, etc.

(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.

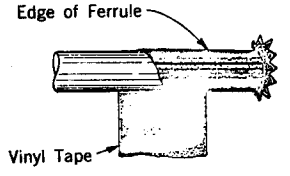
(d) Tape the joint with 3/4-inch D Vinyl or friction tape. Start the tape at about a 45 degree angle beginning at the knot and continue until about 1/2 inch of the rubber insulation has been covered. Continue taping until the splice has two layers, ending the tape in the middle of the splice.

REINFORCEMENT OF FERRULE JOINT

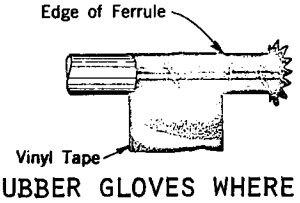
9.08 This procedure applies only to testers manufactured prior to October 1963. (The date is stamped in the plastic wand just above the red grip). Testers manufactured prior to that date can also be readily identified by the lack of indentations on the brass ferrule at the end of the plastic probe. Reinforcement of the ferrule joint is not necessary if the ferrule has three equally spaced indentations. Testers which do not have these indentations shall be reinforced unless the ferrule has become loose. Testers with loose ferrules shall be disposed of in accordance with local instructions. The method of reinforcing is shown below.



(1) Make 1½ wraps with 100% overlap keeping one edge of tape abutting toothed metal disk.



(2) Make one wrap gradually reducing overlap until edge of tape is just past edge of ferrule.

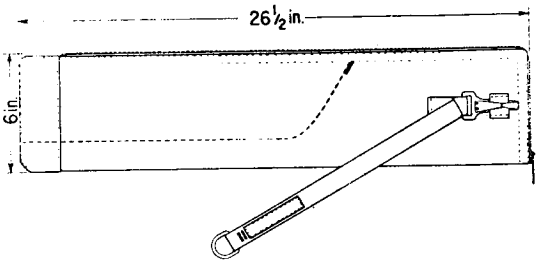


(3) Follow step (2) with 2 wraps, keeping the edge of the tape parallel with and just past the edge of the ferrule.

WEAR RUBBER GLOVES WHERE SPECIFIED IN THIS SECTION

10. CARE AND STORAGE

10.01 A canvas bag has been provided to carry and store the B Voltage Tester, B temporary bond, B shunting capacitor and test date card when not in use. A web strap with dee ring and snap hook is provided to attach the bag to the body belt. In placing the tester in the bag, the toothed metal disk first. The capacitor and bond should be carried in lower pocket of bag. The test date card is carried in the plastic pocket provided for the purpose.



B VOLTAGE TESTER BAG

10.02 The B Voltage Tester should be handled and stored with reasonable care. Remove any dampness or dirt with a clean cloth before using or storing. Keep the instrument free of grease or oil to prevent deterioration of insulation.

10.03 Avoid exposing the instrument to excessive heat such as may be encountered near radiators, etc., as the plastic rod may deform under these temperatures.

10.04 The instrument should be CARRIED DOWN OR LOWERED from poles, NOT DROPPED, as the impact may short-circuit the elements in the neon glow unit of the indicator.

WEAR RUBBER GLOVES WHERE SPECIFIED IN THIS SECTION

11. VOLTAGE TEST - DAMAGED CABLE CLOSURE USED IN JOINT-BURIED PLANT

11.01 When a telephone or power pedestal closure (this applies to all closures used in joint buried plant whether standing along or mounted back-to-back with power) has been damaged or disturbed, e.g., knocked over or driven into the earth by a motor vehicle or a trouble condition involving power is suspected, both telephone and power representatives shall be present before performing any type of maintenance work. Any power work shall be performed first.

11.02 After the power company has completed its work, the pedestal shall be tested with the B voltage tester before any bodily contact is made with it. To guard against the possibility of serious injury WEAR INSULATING GLOVES and EYE PROTECTION; then using B voltage tester, check the cable closure as follows:

(a) Attach the insulated clip of the voltage tester to a suitable ground no closer than 5 feet to the closure being tested. A screwdriver with a 5-inch or longer blade driven into the earth can be used as a ground. Standing approximately 3 feet from the closure, grasp the insulated probe in one hand and the indicator assembly in the other hand. Push the toothed metal disk of the probe firmly against the closure while looking into the indicator assembly. If the indicator glows the closure is energized. Immediately remove the probe from contact with the closure and report the condition at once in accordance with local instruction. No attempt shall be made to correct the condition or proceed with any telephone work. It shall be the responsibility of the power company to clear the trouble. Telephone employees shall not work on the telephone plant until the power company has completed repairs.

(b) If the indicator assembly of the voltage tester does not glow in making the test described in (a), remove the cover from the closure and visually inspect the cable sheath ground. If the cable sheath ground is not intact or is loose, test the cable sheath with the voltage tester as described in (a) before doing any maintenance work.

(c) If for any reason it becomes necessary to open the bond between telephone facilities and power, or across cable sheath openings, a temporary bond strap must be placed before the bond is opened. If due to physical conditions the temporary bond cannot be placed, consult with the power company representative. It may be necessary to de-energize the power briefly for repair operations. When temporary or permanent bonds are placed or removed, insulating gloves and eye protection must be worn.

Warning: Electrical continuity of all bonds, including cable shield bonds in closures or at splice locations must be preserved during the repair process. Until the permanent bond is installed, maintain continuity using a temporary bond strap.

WEAR RUBBER GLOVES WHERE SPECIFIED IN THIS SECTION