INSULATING GLOVES

LEATHER PROTECTORS, FABRIC LINERS AND GLOVE BAG

1. GENERAL

1.01 This section covers the description, care and maintenance of insulating gloves provided for the protection of workmen against electric shock, and the precautions to be followed in their use. Information on Leather Protector Gloves, Fabric Liner Gloves and the B Glove Bag is also included.

1.02 This section has been reissued to include the D and E Insulating Gloves.

2. TYPES OF INSULATING GLOVES

2.01 All types of insulating gloves are of the gauntlet type and are made in four sizes: 9-1/2, 10, 11, and 12.

2.03 ***B Insulating Gloves,*** have been superseded by C and E Insulating Gloves, but will continue to be used until the supply has been exhausted. Protector gloves are required to be worn over these gloves to prevent mechanical damage.

2.04 ***C Insulating Gloves,*** formerly called C Rubber Gloves, are the same as B Insulating Gloves except that they are made of rubber of minimum thickness, consistent with desired dielectric strength, to permit maximum flexibility. Leather protector gloves are required to be worn over these gloves to prevent mechanical damage. ◗These Gloves have been superseded by the E Insulating Gloves.◖

2.05 ◗***D Insulating Gloves,*** while electrically identical to the Insulating Gloves which they supersede, are made of two plies of rubber: the outer ply black and the inner ply red. This change provides a more positive basis for determining the physical condition of the gloves. D Insulating Gloves are of sufficient thickness to eliminate the need for protector gloves. They are primarily intended for central office use.◖

2.06 ◗***E Insulating Gloves,*** while electrically identical to the B and C Insulating Gloves which they supersede, are made of two plies of rubber: the outer ply black and the inner ply red. These lightweight gloves must be used only with protector gloves and are intended for outside plant use.◖

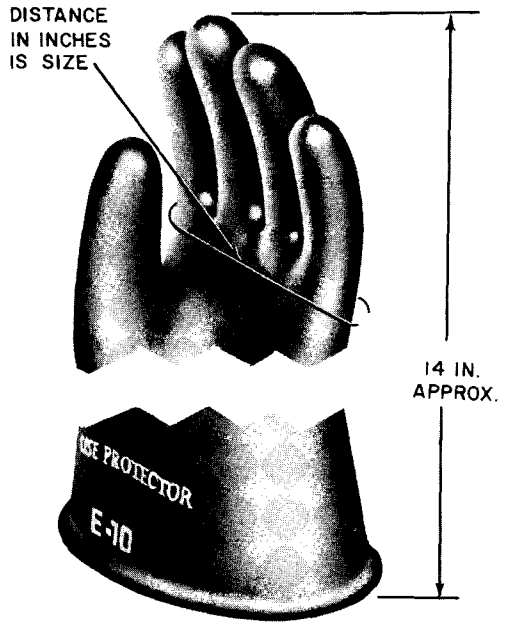

Fig. 1—E Insulating Glove

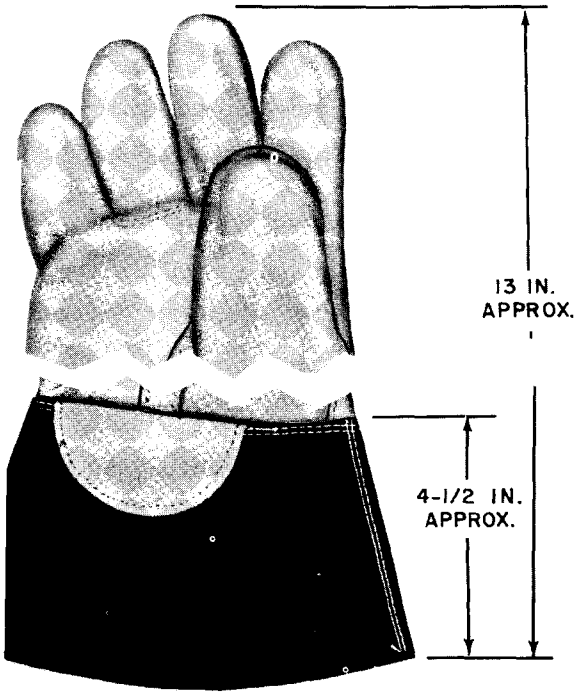

Fig. 2—Leather Protector Glove

3. LEATHER PROTECTOR GLOVES

3.01 B or C Leather Protector Gloves shall always be worn over B, C, or E Insulating Gloves to prevent mechanical damage to the insulating gloves. Leather protector gloves do not provide protection from electrical shock by themselves and shall never be worn except over insulating gloves. Neither shall they be worn as a substitute for work gloves.

3.02 B and C Leather Protector Gloves are of the gauntlet type. The over-all length is about 13 inches and the cuff is about 4-1/2 inches wide. Fig. 2, a C Leather Protector Glove, illustrates these dimensions.

3.03 ***B Leather Protector Gloves*** are made of 3 to 3-1/2 ounce horsehide with inseam construction (seams sewn inside at the back of the fingers and thumb). They are available in two sizes. Size 11 is for use over sizes 9-1/2 and 10, B, C, or E Insulating Gloves. Size 12 is for use over sizes 11 and 12, B, C, or E Insulating Gloves.

3.04 ***C Leather Protector Gloves*** are made of deerskin using the moccasin style outseam construction (seams sewn outside at back of the fingers and thumb). These gloves are somewhat more flexible and less bulky than the B type and are available in four sizes for use over B, C, or E Insulating Gloves of similar size designations.

3.05 Leather protector gloves shall be given reasonable care in their use. Oil, grease, paint, etc, on the palm and finger surfaces of the gloves will impair their usefulness for work operations. Such foreign matter should be immediately wiped off the gloves with a soft, dry cloth.

4. C FABRIC LINER GLOVES

4.01 C Fabric Liner Gloves are formfitting gloves made of lightweight interlock knit cotton cloth. They are equipped with 3-inch wide rubberized fabric gauntlets. The over-all length of the gloves is about 10-3/4 inches (Fig. 3).

4.02 C Fabric Liner Gloves are available in size 7 for insulating glove sizes 9-1/2 and 10, and in size 8 for insulating glove sizes 11 and 12.

4.03 C Fabric Liner Gloves may be worn inside all types of insulating gloves for warmth in cold weather and for absorbing perspiration in warm weather.

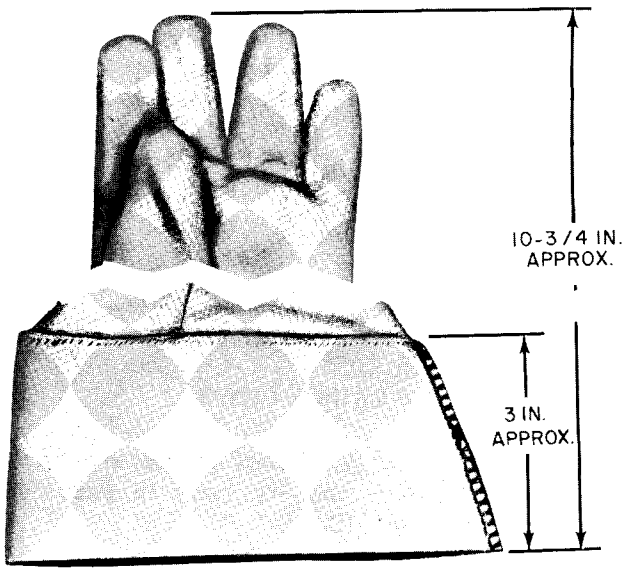

Fig. 3—Fabric Liner Glove

5. B GLOVE BAG

5.02 The B Glove Bag, Fig. 4, is made of cotton duck with a liner of polyethylene. A zipper is provided for opening the top of the bag. A web strap, terminated in a snap hook and a Dee ring and reinforced with leather at the point of maximum wear, is provided for suspending the bag from the body belt.

6. PRECAUTIONS

6.01 Except in emergencies such as to prevent serious injury or loss of life, telephone employees shall not handle electric light, power wires, or associated switches, and shall, therefore, arrange to have the necessary work required on these circuits performed by properly qualified employees of the electric company. Similarly, telephone employees shall not handle telephone wires that are known or suspected to be energized until the contact conditions have been cleared by the electric company.

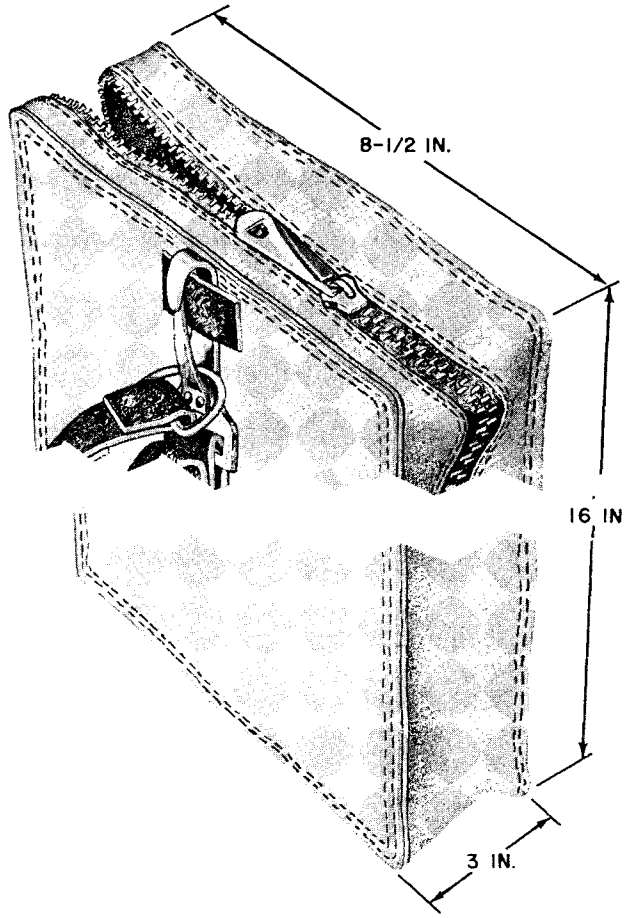

Fig. 4—B Glove Bag

6.03 Insulating gloves are inspected and subjected to an electrical test to ensure their insulating value when purchased from the manufacturer and periodically thereafter under the company's established routine. ***Workmen and storekeepers shall see that insulating gloves are returned for periodic electrical tests in accordance with the company's established routine.***

7. INSPECTION OF INSULATING GLOVES

7.01 Each employee shall at all times assume the responsibility for determining that his insulating gloves are in good condition. He shall see that their appearance indicates neither deterioration nor injury from an electrical or a mechanical standpoint. He shall see that they are being used within the specified electrical test period as indicated by the "Return for Test" date stamped on the back side of the gauntlet.

7.02 Each employee shall inspect his insulating gloves in accordance with Part 7 and 8 as follows:

(a) At the time he receives the gloves

(b) Each time before using them

(c) Each time after using them

(d) A minimum of once each month

7.03 The supervisor shall inspect the insulating gloves periodically and shall see that all instructions are followed.

7.04 A visual inspection of insulating gloves shall be made to determine their condition. If any of the following conditions are found to exist or if the condition of the gloves is such that there is any doubt as to their safety, they shall be exchanged at once for a pair in good condition in accordance with the locally established routine. Inspections under (a) and (b) shall be made on both the inner and outer surfaces of the insulating gloves.

(a) Cracks, cuts, or nicks that would tend to cause the glove to tear. Such injuries within **one inch of the open end of the gauntlet may be disregarded if of a minor nature.**

(b) Deterioration or ozone cracking. This is caused by a reaction between the gloves and ozone in the atmosphere. This reaction causes fine surface cracks in the glove and these are best detected by rolling the surface to be inspected between the thumb and forefinger. Such cracking within one inch of the open end of the gauntlet may be disregarded if of a minor nature.

(c) Glove worn sufficiently to affect its mechanical strength. This is best detected by stretching the glove. Grasp gauntlet end of glove with one hand and pull on each finger of glove with the other hand. Pull glove by grasping at both sides. Pull between fingers of glove. Worn spots will be indicated by undue stretching or, in severe cases, by tearing of the glove.

(d) Date (imprint of a rubber stamp) of next periodic electrical test to determine that the specified date has not been passed.

7.05 ▶When performing the above tests with the two color D or E Insulating Gloves, the appearance of one color showing through the other means that the glove is defective and not safe to use. It shall be discarded in accordance with local routine

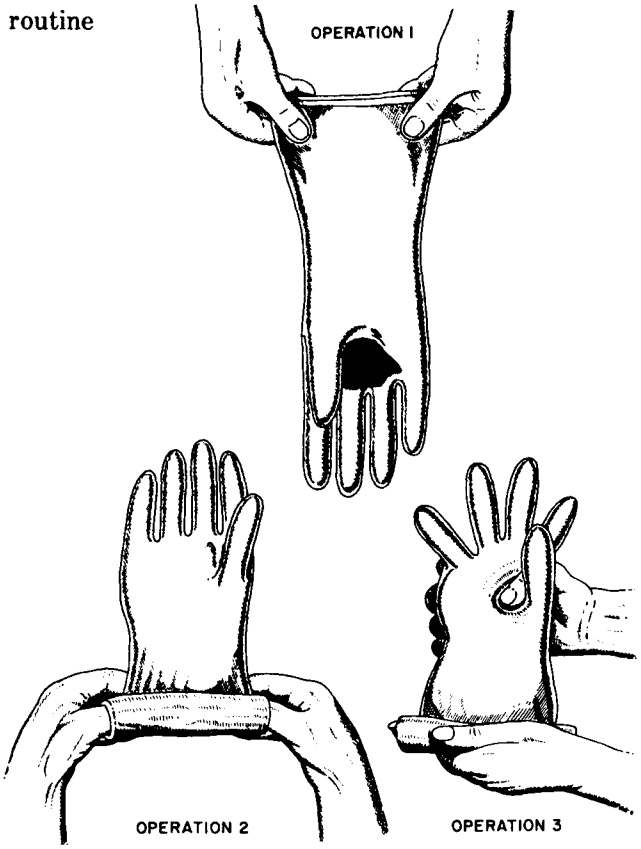

Fig. 5—Air Test Operations 1-2-3

8. AIR TEST OF INSULATING GLOVES

8.01 This test shall be made on insulating gloves only when the conditions listed under 7.04 are satisfactory. Make this test as follows: (See Fig. 5.)

(a) Hold the glove at each side of the edge of the gauntlet.

(b) Revolve it about the edge of the gauntlet as an axis, thus rolling it toward the palm and confining the air in the palm and fingers.

(c) Hold the rolled-up gauntlet tightly in one hand.

(d) Squeeze the palm of the glove with the other hand to put the confined air under pressure.

8.02 If any puncture exists, it will be indicated by escaping air and the hole in the glove should be evident.

8.03 If a puncture is found or if the condition of the gloves is such that there is any doubt as to their safety, they shall be exchanged at once for a pair in good condition in accordance with the company's established routine.

9. CLEANING OF INSULATING GLOVES

9.01 Insulating gloves shall be cleaned when they become wet from perspiration or when the gloves are subjected to contact with dirt, mud, paint, creosote, or other foreign matter. Perspiration, mud, dirt, and other foreign matter that does not adhere firmly to the glove shall be removed with clear water. Paint and creosote shall be removed as soon as practical, as some oils, if allowed to remain on the glove, will have an injurious effect.

(a) Clean the entire glove thoroughly with a cloth moistened with KS-14356 Cleaner (dry cleaning fluid), KS-7860 Petroleum Spirits, or KS-19578 L1 Cleaner (Trichloroethane). Do not use an excessive amount of the cleaning fluid and do not wipe over "Return for Test" date. ***This cleaning shall be done in a well-ventilated location, as these materials are either flammable or their vapors constitute a health hazard. As soon as each glove has been cleaned, it should be wiped thoroughly dry with a dry, clean cloth. Do not use gasoline,*** cleaning fluid or petroleum spirits, which have a much higher flash point.

9.03 After insulating gloves are used, they should be thoroughly dried so the moisture from the hands will not become entrapped and cause the glove to deteriorate. Each time after use, gloves should be turned inside out and placed flat to dry. After the gloves have been dried, they shall be turned right side out and placed in the containers ready for use.

10. STORAGE

10.02 Fabric liner gloves and leather protector gloves shall be separated from the insulating gloves before being stored.

10.03 Insulating gloves deteriorate even when not in use. This deterioration is caused by ozone in the atmosphere reacting with the glove material to produce fine surface cracks. Ozone deterioration will be materially reduced if the gloves are laid out flat without bends or folds, right side out, and protected from light, from edged tools, and from pressure due to heavy objects. Do not store insulating gloves in unventilated rooms containing ozone-producing apparatus or equipment such as commutator-type electric motors and generators. Never place insulating gloves near steam pipes, radiators, or in places where they will be subject to heat, as heat will impair the strength of the glove material. For maximum protection of the gloves, one of the following methods of storage shall be employed:

(a) On motor vehicles, insulating gloves and associated leather protector and fabric liner gloves shall be kept in the glove bag, tightly zippered and stored in locations suitable for that purpose.

(b) With tool bags, insulating gloves and associated leather protector and fabric liner gloves shall be kept tightly zippered in the glove bag, which should be attached to the tool bag.

Note: Care should be taken to attach the glove bag so it will be flat against that side of the tool bag which is away from the body when the tool bag is carried in the usual way.

(c) When kept in cable splicing trailers, insulating gloves and associated leather protector and fabric liner gloves shall be kept in the glove bag, tightly zippered and stored to avoid contact with edged tools and pressure from heavy objects.

(d) When the insulating gloves and associated leather protector and fabric liner gloves are being carried for use intermittently they shall be kept tightly zippered in the glove bag, attached to the body belt.

(e) If they are stored in lockers, desks, or offices, insulating gloves shall be kept in the chipboard container in which they are supplied by the manufacturer, or in which they are returned from the routine electrical test. This container affords reasonable protection against ozone deterioration because of restricted air circulation and the fact that a reaction between ozone and cellulose decomposes the former into a less active oxygen.

11. DISPOSITION OF INSULATING GLOVES REQUIRING ELECTRICAL TEST

11.01 Storekeepers are responsible for insulating gloves in the storerooms and workmen are responsible for insulating gloves which they have in the field. The dates of return for tests are stamped upon the backs of the gloves and in the space on the boxes provided for that purpose.

11.02 Workmen shall see that gloves in the field are returned to the storeroom or office prior to the "Return for Test" date. Replacement gloves shall be available before returning the gloves to be tested.

11.03 Storekeepers shall see that all gloves in their possession are returned for inspection on the dates indicated to the Western Electric Branch House or other authorized inspection agency. If, however, gloves are held beyond this date, they shall not be used or issued until retested.

11.04 All insulating gloves, before being returned to the Western Electric Company or other authorized agent, shall be given a careful inspection in accordance with Part 7 and a careful test in accordance with Part 8. Gloves with obvious defects shall be junked in accordance with Part 12.

12. DISPOSITION OF DEFECTIVE INSULATING GLOVES

12.01 Gloves with obvious defects should have the front cut open from the fingers to the top of the gauntlet and should be disposed of as junk in accordance with the locally established routine.