

GENERAL INFORMATION BULLETIN

DIVISION OR DEPARTMENT

TRANSMISSION AND DISTRIBUTION -
ELECTRIC OPERATIONS

RE LETTER OF SUBJECT

Use and Care of 0-5000 Volt
Rubber Protective Devices

TRANSMISSION AND DISTRIBUTION

BULLETIN No. 2-21

Effective January 1, 1969

DIVISION MANAGERS:

This Bulletin outlines instructions for the use and care of 0-5000 volt rubber protective devices. The instructions are restricted to work being performed on or near unprotected conductors or equipment energized from 0-5000 volts only.

GENERAL

As used in this Bulletin:

1. Unprotected conductors and equipment are those without a permanent electrical insulation capable of preventing electrical shock sensations when contacted by personnel.
2. De-energized unprotected conductors and equipment which are installed as part of the operable electrical system shall be considered energized except when they are properly grounded.
3. Phase-to-phase voltage reference is used in all cases.

All rubber protective devices shall be:

1. Inspected, tested, and accepted by the Material Control Shop Section, Central Stores Division, Purchasing and Stores Department, before they are used.
2. Inspected visually by the employee using them for cleanliness, corona cutting, bruises, holes, etc., at least once each day before use and at any time there is any doubt regarding their condition.

Inspection of rubber gloves shall be made ONLY as outlined in the Data Section, Page 15-A, "Visual and Air Test for Rubber Gloves," in the back of the Accident Prevention Rule Book.

It is each employee's responsibility to use rubber protective devices according to Company Accident Prevention Rules. All employees must know and observe all applicable safety rules for the use and care of 0-5000 volt rubber protective devices.

It is each supervisor's responsibility to know, and to make sure that all employees under his supervision know and observe, all applicable Accident Prevention Rules for the use and care of rubber protective devices.

DISPOSITION:

Transmission and Distribution Department Distribution List

IF TO BE FILED, SHOW FILE NUMBER HERE.

0-5000 volt rubber protective devices are provided to protect personnel against possible electric shocks when working on or near unprotected conductors and equipment. The rubber protective devices provided are used in two ways:

1. RUBBER GLOVES worn by personnel.
2. RUBBER PROTECTIVE COVERING placed on or over unprotected conductors and equipment.

RUBBER GLOVES

Rubber gloves provide an electrical insulation over the hands and forearms. They are worn to permit hand contact with, and manipulation of, unprotected conductors and equipment energized from 0-5000 volts.

The Company has approved two types of rubber gloves:

1. LINEMAN'S RUBBER GLOVES for all types of work on unprotected conductors and equipment energized from 0-5000 volts ONLY.
2. LOW VOLTAGE RUBBER GLOVES primarily for work on meters, underground cables, and unprotected conductors and equipment energized from 0-750 volts ONLY.

Under no circumstances shall low voltage rubber gloves be worn by employees while working on line conductors or equipment supported in elevated positions on poles or structures.

AN EMPLOYEE SHALL WEAR APPROVED RUBBER GLOVES AT ALL TIMES WHEN WORKING ON UNPROTECTED CONDUCTORS OR EQUIPMENT ENERGIZED FROM 300-5000 VOLTS.

An employee may wear approved rubber gloves to perform work on conductors or equipment energized from 0-300 volts when good judgment dictates that they should be worn to safely perform the work involved.

AN EMPLOYEE SHALL WEAR APPROVED LINEMAN'S RUBBER GLOVES:

1. Before he enters, during the time he is in, and until he is clear of the "contact area" of unprotected conductors and equipment energized from 300-5000 volts.

An employee is in the "contact area" when he can reach with any part of his body, or with any conducting object he may be holding closer than within one foot of any unprotected conductors or equipment energized from 300-5000 volts whether or not the conductors or equipment are temporarily covered.

If it should become necessary for an employee to remove his rubber glove or gloves for any reason when he is in the "contact area," he shall move out of the "contact area" before doing so.

When the work being performed requires two men to be in the "contact area," then the man who finds it necessary to remove his rubber glove or gloves shall inform his partner that he is moving out of the "contact area" and removing his rubber gloves. No work shall be performed by the partner on unprotected conductors or equipment energized from 300-5000 volts until the other man has put on his rubber glove or gloves and returned to his position.

2. When handling the butt of a pole being set or removed between or near conductors energized above 750 volts whether or not cant hooks, pole guards, or slings are used.
3. When stringing or removing wire near, over, or through unprotected conductors energized from 300-5000 volts.
4. Only with approved leather protector gloves.

LEATHER PROTECTOR GLOVES SHALL NOT BE ISSUED OR USED FOR ANY PURPOSE OTHER THAN PROTECTORS FOR APPROVED RUBBER GLOVES EXCEPT AS DESIGNATED BY THE MANAGER, TRANSMISSION AND DISTRIBUTION DEPARTMENT-ELECTRIC OPERATIONS.

An employee should not wear rubber gloves when working with live line tools except they shall be worn when performing such work in the "contact area" of 300-5000 volt circuits.

AN EMPLOYEE SHALL NOT WEAR APPROVED LINEMAN'S RUBBER GLOVES:

1. AS A SUBSTITUTE FOR USING LIVE LINE TOOLS TO PERFORM WORK ON CONDUCTORS, EQUIPMENT, BOND WIRES, OR HARDWARE ON CIRCUITS ABOVE 5000 VOLTS PHASE-TO-PHASE.
2. Inside out.

RUBBER PROTECTIVE COVERING, 0-5000 VOLTS

Rubber protective covering is used to temporarily insulate energized unprotected conductors or equipment and to temporarily cover adjacent grounded equipment to:

1. Protect an employee from accidental contact with energized unprotected conductors and equipment.
2. Permit an employee to work at reduced working distances when working in the vicinity of conductors and equipment energized from 300-5000 volts. However, when he is working at reduced working distances, intentional contact with 0-5000 volt rubber protective covering shall be made only with approved live line tools or approved rubber gloves worn by him while installing, adjusting, or removing the protective covering.
3. Protect equipment from electrical damage.

The Company has approved the following items of rubber protective covering for use on 0-5000 volt conductors and equipment:

1. Rubber blankets (36" x 36") used to cover irregular shaped equipment.
2. Rubber line hose (4 kv) used to cover conductors.
3. Rubber line hose connectors (4 kv) used to connect two sections of line hose.
4. Rubber insulator hoods (4 kv) used to cover pin type insulators.
5. Rubber dead-end protectors (4 kv) used to cover dead-end insulators.

Rubber blankets (36" x 36") can be used on unprotected conductors or equipment energized from 500-25000 volts when required.

All energized unprotected conductors or equipment, grounded conductors or equipment, guy wires, alleyarm braces, telephone cables, messengers, or any other grounded objects which an employee can reach with any part of his body shall be covered with rubber protective equipment when he is:

1. Working in the "contact area" of unprotected conductors or equipment energized from 300-5000 volts.
2. Working on unprotected conductors or equipment energized from 300-5000 volts, except for that part of the conductor or equipment on which he is working.

Approved 0-5000 volt rubber protective covering may be used when working on unprotected conductors or equipment energized from 0-300 volts when good judgment dictates it should be used to safely perform the work involved.

APPROVED 0-5000 VOLT RUBBER PROTECTIVE COVERING SHALL BE:

1. Installed and removed by an employee wearing approved rubber gloves or using other approved devices.
2. Installed and removed on overhead conductors and equipment from a position below the conductor or equipment being covered when possible.
3. Installed first and removed last from the closest conductor or piece of equipment at the lowest level. Covering shall proceed out on the lowest level to be covered, then up and out through successive levels to be covered. When removing protective covering, the reverse order shall be maintained.

APPROVED 0-5000 VOLT RUBBER PROTECTIVE COVERING SHALL NOT BE:

1. Leaned against, sat on, or stood on by employees, when being used to cover energized conductors or equipment.
2. Placed on energized lines and left overnight except with the approval of the field supervisor in charge. Rubber protective covering used on energized lines for periods of over eight hours shall be closely inspected for corona cutting, cracks, etc., when removed.
3. Used on the ground unless a protective mat is used to protect it from physical damage and moisture.

CARE AND CLEANING 0-5000 VOLT PROTECTIVE RUBBER DEVICES**A 0-5000 VOLT RUBBER PROTECTIVE DEVICE SHALL NOT BE:**

1. Used without a test date stamped on it, nor shall it be used without a current test date. Rubber protective devices are stamped with the month and year they are tested. The year following, prior to the end of the month stamped on the rubber protective device, it shall be returned to the Material Control Shops Section, Central Stores Division, Purchasing and Stores Department, for inspection and electrical test.

With the approval of the field supervisor in charge, a rubber protective device may be returned for inspection and electrical test at any time there is a question concerning its electrical insulating efficiency.

2. Used when known to be or suspected of being defective.
3. Used or stored where it can be damaged, punctured, or cut. Also, care should be taken that it does not come in contact with oil, grime, grease, or chemicals.
4. Folded, bent, rolled, or compressed in any way, except that blankets may be rolled.
5. Stressed or elongated when used or stored.
6. Cut, vulcanized, or patched in the field.
7. Used for any purpose other than for which it was designed.
8. Disposed of in the field. All rubber protective devices shall be returned to the Material Control Shops Section for disposal.

White King laundry detergent or equivalent may be used to wash rubber protective devices. Pure talc may be used with rubber gloves and rubber protective devices to reduce adhesion due to moisture. Odorless talc may be requisitioned in one pound cans as follows:

Odorless Talcum Powder (French Chalk) P. G. and E. Code 56-9131

STORAGE OF 0-5000 VOLT RUBBER PROTECTIVE DEVICES

0-5000 volt rubber protective devices shall be stored in a cool, dry place away from sunlight in such a manner as to insure protection from damage.

Rubber gloves shall not be stored inside out.

A protective glove bag shall be used to store rubber gloves and leather protector gloves. It is recommended that rubber gloves be stored in the glove bag with the gauntlet end in the bottom of the bag and the finger tips at top end of the bag. Also, the bag should be snapped closed and hung up.

SHIPMENT FOR PERIODIC SHOP TEST OF 0-5000 VOLT RUBBER PROTECTIVE DEVICES

Shipment of 0-5000 volt rubber gloves and rubber protective covering to the Material Control Shops Section for test shall be handled as outlined in Standard Practice 570-4.

It is each Division's responsibility to schedule shipment of 0-5000 volt rubber protective devices to Substore No. 3 for test to:

1. Provide rubber gloves and rubber protective covering for use by personnel which have been tested within established time intervals.
2. Establish an even flow of rubber devices through Substore No. 3 to provide a balanced work load in the test center.

It is suggested that each Division schedule the shipment of 1/12 of the rubber gloves and 1/12 of other rubber protective covering each month.

Care shall be taken when shipping 0-5000 volt rubber protective devices to prevent damage from sharp objects, oil, etc. Rubber protective devices which have oil smears or other grime shall be shipped in separate containers to prevent damage to other rubber protective devices.


H. J. STEFARETTI

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PACIFIC GAS AND ELECTRIC COMPANY

PGE + 245 MARKET STREET • SAN FRANCISCO, CALIFORNIA 94106 • (415) 781-4211

I. WAYLAND BONBRIGHT
MANAGER
INDUSTRIAL RELATIONS

January 14, 1969

Mr. Ronald T. Weakley, Business Manager
Local Union No. 1245, I.B.E.W., AFL-CIO
P. O. Box 584
Walnut Creek, California 94597

Dear Mr. Weakley:

During the discussion on safety at the meeting of September 4, 1968, it was brought to our attention that Linemen in certain instances were working on 12 KV while wearing rubber gloves.

At that time it was indicated that further instructions would be issued and a copy of such instructions would be forwarded to you.

Attached are two copies of the Transmission and Distribution Bulletin No. 2-21, effective January 1, 1969, on the use and care of 0-5000 volt rubber protective devices.

You will note that the restriction on the use of rubber gloves while performing work on circuits above 5000 volts is emphasized on Page 3 of the bulletin.

Further, it is my understanding that information contained in this bulletin has been disseminated through the Line Subforeman level.

Yours very truly,

I. W. Bonbright

DGC:RS
Attach.