

Electrical Prevention and PPE

Electrical Shock Prevention Guidelines

The following are some guidelines that will help prevent receiving a serious electrical shock.

- Whenever you work on or near any energized equipment, you must wear electrical insulating gloves.
- Jewelry will not be worn when performing work. Keys, chains and wristwatches shall be removed from your body while working on or near electrical circuits. Any metal object can provide a path to your body if you come in contact with an exposed electrical conductor.
- Never reach inside a piece of equipment to the point that you lose sight of your hand. If you cannot see your hand, you do not know if your hand is coming close to an energized component or exposed conductor.
- Never drill into a wall without checking for electrical wires in the wall and on the opposite side of the wall to be drilled.
- Stand or squat when performing work. You should not kneel or lie down. These positions reduce your resistance to ground.

If you discover someone is being electrically shocked and are unable to separate themselves from the electrical source due to involuntary muscular contraction, **DO NOT** attempt to touch the victim. Your first step is to locate and disconnect the power source. If this is not possible, put on your insulating gloves and use a non-conductive object (e.g. wood beam, fiberglass stick; dry rope) to separate the victim from the energy source. The power company should disconnect the power supply.

If you witness someone working from a bucket truck and they make contact with an energized line, stay away from the vehicle and **DO NOT** attempt to lower the person with the remote bucket controls on the vehicle. Wait for the power company to de-energize the line or equipment.

Electrical Hazard - Burns

Burns occur from current flow and from electrical arcs (flash burns) and arcs can reach temperatures of 43,000 °F.

Protection:

- Safety glasses
- Fire retardant (cotton-fiber) clothing

Prevention:

- Follow company work rules
- Do not wear metal (jewelry) when working on energized circuits

Personal Protective Equipment (PPE)

The following PPE has been issued to provide protection against energized sources that may be encountered during routine and non-routine work conditions. It is imperative that each employee understands the proper use, function and testing of the following equipment:

- Hardhat
- Safety glasses
- Insulating class "00" gloves/leather protectors
- Voltage/Ohm/Ammeter (VOM) Meter
- Voltage detector (Tic Tracer)
- Approved footwear

Hard Hat and Safety Glasses (Electrical Safety)

Your hardhat and safety glasses are PPE that can prevent/minimize an injury due to accident contact with an energized source. This PPE should always be worn together while working outdoors or indoor if the potential of being struck by or against an object exists (including an energized source). The following tasks listed below will include, but not be limited to, the use of hardhat and eye protection.

- Drilling
- Snaking Cable
- Disconnecting/Reconnecting Tap
- Working in a bucket
- Working on the power supplies
- Working on a pole/ladder
- Working inside confined area

Insulating Gloves

The Class "00" rubber-insulating safety gloves and leather protector must be worn at the onset of any job or task that has a potential energy source. This includes all active and passive equipment such as:

- All pole work
- Grounding at a house
- Work on a power supply
- Plant maintenance (splicing feeder/trunk)
- Any location where there is a difference in exposed electrical potential
- The gloves must be worn until all potential energized components are tested and found de-energized.
- Drop connection at ground point
- Drop removal and disconnection
- During storm restoration
- Aerial and underground construction
- Work on an amplifier that have voltages

Apparel: Clothing

Connect/One approved clothing/uniform will be worn while performing all job related assignments. Under no circumstance will clothing made of man-made fabric be worn. These fabrics can melt during electrical arc condition causing severe burns. Because of this, the following protocol must be followed:

- Man-made fiber such as polyester and/or rayon must never be worn around exposed energized parts.

Only natural fibers such as cotton and/or wool are to be worn when working on an energized or potential energized source, around an open flame.

Apparel: Conductive (Jewelry)

When work is performed within reaching distance of exposed energized parts, all conductive apparel such as keys, chains, rings, wristwatches, earrings and/or metallic bands must be removed.

Under no circumstances shall any conductive apparel, such as rings and/or bracelets, be worn. It is policy that all conductive apparel is removed prior to starting work.