



**Central Office
Electrical Safety**

Purpose

This section provides Electrical Safety guidelines to protect field personnel from potential electrical shock. Field personnel are at risk of shock while in direct contact with electrical circuits or equipment. However, they are also at risk of indirect shock through tools or equipment. This section applies only to DC power; at no time shall field personnel perform work on live AC power.

Note: Only trained and authorized personnel can perform Electrical Hot Work, and only trained and authorized personnel can work or enter into areas where there is danger of being shocked by exposed electrical circuits.

Always work with a partner while conducting Electrical Hot Work.

Responsibility

It is the responsibility of all field personnel to understand the specifics and importance of Electrical Safety. All affected personnel shall recognize when Electrical Hot Work is being performed. Only trained personnel who know how to effectively execute site-specific procedures are permitted to perform Electrical Hot Work.

Electrical Safety

Field personnel shall be trained in proper Electrical Safety, safety procedures, and other safety requirements that pertain to their respective job tasks. Personnel shall not work in areas where they are likely to be exposed to electrical hazards unless they have been previously trained to recognize and avoid electrical hazards. In addition, field personnel shall remove all jewelry and conductive clothing where there is the possibility of contact with energized equipment.

Only properly insulated tools, are authorized at any field location. All electrical hazards, that are likely to endanger personnel, shall be well marked using the proper safety signs and caution tape.

Field personnel shall never use a wooden ladder while working with or near live electrical equipment. Only non-conductive fiberglass ladders will be used to conduct electrical work. In addition, only non-conductive fiberglass ladders will be used for any reason in any field location that has live energized equipment.

Power Bay Activities

The site management shall obtain the Customer's power bay operating guidelines prior to performing any installation activities on the power bay.

Cords, Plugs and Grounding

Prior to beginning any work, inspect all electrical drop cords and power tool cords prior to each use. Never remove the ground on a 3-prong plug. Never raise or lower power tools from or to an elevated surface using the attached cord. Doing so could damage the equipment resulting in an electrical shock hazard.

Remove any damaged, repaired or altered cords from use immediately. This includes any power tool that has a damaged, repaired or altered power cord.

Only Ground Fault Circuit Interrupter (GFCI) electrical drop cords will be used in conjunction with any power tools. All GFCIs shall be inspected at the beginning of each shift to ensure they are working correctly. Test the GFCI to see if it is working by pressing the “test” and “reset” buttons. If either of these buttons does not work then remove the drop cord from service.

When using temporary electrical wiring a GFCI is required. This prevents electrical shock if a ground fault situation occurs. Temporary wiring will not be substituted for permanent wiring and shall never be permanently affixed to the building or used in excess of 90 days.

Training

All field personnel will receive appropriate electrical safety training including:

- safe work practices
- use of safety equipment
- safeguards for personal protection
- skills and techniques to distinguish live parts from other parts of electrical equipment
- skills and techniques necessary to determine the voltage of exposed live parts
- proper clearance distances from overhead lines

Electrical Hot Work Summary

- Remove all jewelry and conductive clothing prior to conducting any electrical work.
- Attempt to isolate the energy source following proper Lockout/Tagout procedures.

Note: Only trained and authorized personnel can perform Electrical Hot Work, and only trained and authorized personnel can work or enter into areas where there is danger of being shocked by exposed electrical circuits.

Always work with a partner while conducting Electrical Hot Work.

Site Management

Site Management is responsible for:

- acquiring site-specific Electrical Safety procedures for each location from the customer (Customer procedures for Electrical Hot Work shall be acquired for each location's power bays and equipment.)
- supervising Electrical Hot Work and ensuring that all personnel are conducting proper Electrical Safety
- ensuring that all customer and site-specific Electrical Safety procedures are being followed

Field Technicians

Field Technicians are responsible for:

- ensuring that all of their personnel are properly trained in Electrical Hot Work prior to conducting any electrical work
- ensuring that all of their subcontractors are informed and trained in Electrical Safety

Electrical Safety

When working around electrical circuits that are energized there must be appropriate work practices and safeguards implemented to protect field personnel from injury.

All attempts must be made to lockout/tagout power to the equipment and circuits prior to any field personnel working on energized equipment and circuits.

Field personnel shall always properly insulate the power bay from any potential ground locations and all live power sources. Never work on a live power bay without the proper insulated tools, and without properly insulating the bus bars and potential ground points.

Field personnel shall not reach blindly into areas that may contain energized parts or enter work areas with energized parts unless there is proper lighting. In addition, field personnel working at an elevated position near energized overhead lines that are not guarded, isolated, or insulated will maintain at least a 10 ft. safe distance from the overhead lines.

Field personnel shall never use a wooden ladder while working with or near live electrical equipment. Only non-conductive fiberglass ladders will be used to conduct electrical work. In addition, only non-conductive fiberglass ladders will be used for any reason in any field location that has live energized equipment.

Power Bay Activities

Prior to beginning any power bay installation activities Site management shall also obtain the Customer's power bay operating guidelines prior to performing any installation activities on the power bay.

Site management and the customer should determine whether the power to the power bay can be isolated without effecting service. If there is no service associated to the power bay than the procedure should step through how to isolate the power to this power bay using the appropriate Lockout/Tagout process.

Caution: Do not forget about the back-up battery power.

If service will be affected site management must complete detailed work instructions for the live electrical work.

At least two field personnel are required to work when conducting any electrical installation activities, site management shall supervise all Electrical Hot Work installation activities.

Regardless if the power is isolated or not, insulate all exposed bus bars and any potential grounds that may be exposed in the power bay.

Once the installation activities are completed, notify all personnel the power is being returned to service.

Test Equipment

Test instruments and equipment shall be inspected for defects and damage before each shift.

Defective items shall be tagged and removed from service immediately. Test instruments, equipment, and accessories shall be rated for the circuits and equipment to which they will be used.

Appropriate test instruments shall have a calibration sticker. These instruments shall be inspected periodically for validity.

Site-Specific Instructions

A copy of the site-specific and customer Electrical Hot Work procedures must be obtained.

If no site-specific or customer procedures for Electrical Hot Work are provided, Site management shall supervise and periodically inspect all Electrical Hot Work.