

PHILIPS HEALTHCARE

Trainee Name:	
Trainee Signature:	
Date:	

Course Title	Local Course Code	Revision
Electrical Safety	GTS	N/A

By submitting this form, I agree that I have completed the required training for this course and understand the material and the impact on my job responsibility.

Signed by 3rd Party Contractor Training Representative:

_____ Date: _____

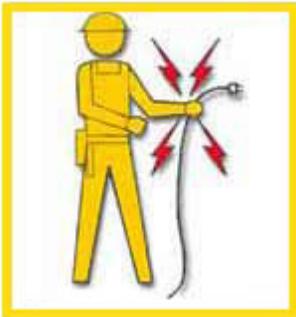
This form is to be kept as a formal training record by the 3rd Party Contractor Agency

OSHA

“Electricity”

Preventing Fatalities

Despite its high fatality rate, construction can be a safe occupation when workers are aware of the hazards, and use an effective Safety and Health Program. Electricity has become essential to modern life. Perhaps because it is such a familiar part of our surroundings, it often is not treated with the respect it deserves.



Did you know?

Approximately 350 electrical-related fatalities occur each year.

How Do I Avoid Hazards?

- Look for overhead power lines and buried power line indicators. Post warning signs.
- Contact utilities for buried power line locations.
- Stay at least 10 feet away from overhead power lines.
- Unless you know otherwise, assume that overhead lines are energized.
- De-energize and ground lines when working near them. Other protective measures include guarding or insulating the lines.

- Use non-conductive wood or fiberglass ladders when working near power lines.

1: Am I In Danger?

Due to the dynamic, rugged nature of construction work, normal use of electrical equipment at your site causes wear and tear that results in insulation breaks, short-circuits, and exposed wires [*for additional information, see Flexible Cords and Power Tools*]. If there is no ground-fault protection, these can cause a **ground-fault** that sends current through the worker's body, resulting in electrical burns, explosions, fire, or death.

How Do I Avoid Hazards?

- Use ground-fault circuit interrupters (GFCIs) on all 120-volt, single-phase, 15- and 20-ampere receptacles, *or* have an assured equipment grounding conductor program (AEGCP).
- Follow manufacturers' recommended testing procedure to insure GFCI is working correctly.
- Use **double-insulated** tools and equipment, distinctively marked.
- Use tools and equipment according to the instructions included in their listing, labeling or certification.
- Visually inspect all electrical equipment before use. Remove from service any equipment with frayed cords, missing ground prongs, cracked tool casings, etc. Apply a warning tag to any defective tool and do not use it until the problem has been corrected.

2: Am I In Danger?

If the power supply to the electrical equipment at your site is not **grounded** or the path has been broken, fault current may travel through a worker's body, causing electrical burns or death [*for additional information see, Flexible Cords and Power Tools*]. Even when the power system is properly grounded, electrical equipment can instantly change from safe to hazardous because of extreme conditions and rough treatment.

How Do I Avoid Hazards?

- Ground all power supply systems, electrical circuits, and electrical equipment.
- Frequently inspect electrical systems to insure that the path to ground is continuous.
- Visually inspect all electrical equipment before use. Take any defective equipment out of service.
- Do not remove ground prongs from cord- and plug-connected equipment or extension cords.

- Use double-insulated tools.
- Ground all exposed metal parts of equipment.
- Ground metal parts of the following non-electrical equipment, as specified by the OSHA standard:
 - Frames and tracks of electrically operated cranes.
 - Frames of non-electrically driven elevator cars to which electric conductors are attached.
 - Hand-operated metal shifting ropes or cables of electric elevators.
 - Metal partitions, grill work, and similar metal enclosures around equipment of over 1kV between conductors.

3: Am I In Danger?

If electrical equipment is used in ways for which it is not designed, you can no longer depend on safety features built in by the manufacturer. This may damage your equipment and cause employee injuries.

Common Examples of Misused Equipment

- Using multi-receptacle boxes designed to be mounted by fitting them with a power cord and placing them on the floor.
- Fabricating extension cords with ROMEX® wire.
- Using equipment outdoors that is labeled for use only in dry, indoor locations.
- Attaching ungrounded, two-prong adapter plugs to three-prong cords and tools.
- Using circuit breakers or fuses with the wrong rating for over-current protection, e.g. using a 30-amp breaker in a system with 15- or 20-amp receptacles. Protection is lost because it will not trip when the system's load has been exceeded.
- Using modified cords or tools, e.g., removing ground prongs, face plates, insulation, etc.
- Using cords or tools with worn insulation or exposed wires.

How Do I Avoid Hazards?

- Use only equipment that is approved to meet OSHA standards.
- Use all equipment according to the manufacturer's instructions.
- Do not modify cords or use them incorrectly.
- Be sure equipment that has been shop fabricated or altered is in compliance.

4: Am I In Danger?

The normal wear and tear on extension and flexible cords at your site can loosen or expose wires, creating hazardous conditions. Cords that are not 3-wire type, not designed for hard-usage, or that have been modified, increase your risk of contacting electrical current.

How Do I Avoid Hazards?

- Use factory-assembled cord sets.
- Use only extension cords that are 3-wire type.
- Use only extension cords that are marked with a designation code for hard or extra-hard usage.
- Use only cords, connection devices, and fittings that are equipped with strain relief.
- Remove cords from receptacles by pulling on the plugs, not the cords.
- Continually audit cords on-site. Any cords found not to be marked for hard or extra-hard use, or which have been modified, must be taken out of service immediately.

There are numerous hazards that can lead to serious injury in the construction industry. The hazards addressed in this eTool have been selected because statistics show they cause most construction-related fatalities. An effective **Safety and Health Program** should focus on these areas to help ensure that potentially fatal accidents are prevented.

Do the OSHA Construction Standards apply to me?

1. The standards apply to:
 - All contractors who enter into contracts which are for construction, alteration, and/or repair, including painting and decorating [29 CFR 1926.10(a)]
 - All subcontractors who agree to perform any part of the labor or material requirements of a contract [29 CFR 1926.13(c)].
 - All suppliers who furnish any supplies or materials, if the work involved is performed on or near a construction site, or if the supplier fabricates the goods or materials specifically for the construction project, and the work can be said to be a construction activity [29 CFR 1926.13(c)].

2. The controlling contractor assumes all obligations under the standards, whether or not he subcontracts any of the work [29 CFR 1926.16(b)].
3. To the extent that a subcontractor agrees to perform any part of the contract, he assumes responsibility for complying with the standards with respect to that part [29 CFR 1926.16(c)].
4. With respect to subcontracted work, the controlling contractor and any subcontractors are deemed to have joint responsibility [29 CFR 1926.16(d)].

Highlights of Standards

No employer who performs any part of a construction contract shall require any employee to work in surroundings or under conditions which are [29 CFR 1926.20(a)(1)]:

- Unsanitary, and/or
- Hazardous, and/or

Dangerous to health or safety.