

ELECTRICAL SAFETY IN THE WORKPLACE



UNDERSTAND ELECTRICITY FACTS

Electricity travels over conductors. Conductors are anything that allows electricity to flow. Electricity always tries to reach the ground. Excellent conductors include people, water, damp floors, or metal. An “insulator” is the opposite of a conductor. Electricity cannot flow easily through insulators like plastic, rubber boots, dry wood, or glass.

ELECTRICAL HAZARDS

Electric wiring, fixtures, equipment and machinery can be hazardous. They can cause fires and explosions. Wood, paper, and some chemicals can catch fire from just a spark. Depending on the strength of the shock, electricity can burn, shock or even kill you. Also, when you are shocked, your muscles can contract violently, causing serious falls or other injuries. Another hazard is when electric equipment is not turned off after use, the next person to use it may not know the power is on and could be injured.



PRACTICE ELECTRICAL SAFETY AT WORK

Protect yourself by following these important rules for electrical safety

1. Don't use any appliance or machinery while you are touching metal or anything wet.
2. Unplug machinery and appliances before cleaning, inspecting, repairing or removing anything from them
3. Keep electrical equipment, machinery and work areas clean. Oil, dust, waste, and water can be fire hazards around electricity
4. Keep access to panels and junction boxes clear
5. Move flammable materials away from electric heat sources and lights
6. Know the location of fuses and circuit breakers
7. If you are not trained to work in high voltage areas, do not enter them, even in an emergency
8. Make sure all electrical equipment is properly grounded
9. Plug power tools into grounded outlets installed with Ground Fault Circuit Interrupters (GFCI's)
10. Check with your local utility before you dig or work near suspended power lines. A “live” line is very dangerous
11. If someone has been shocked, separate the victim from the current *before* doing first aid. If you can't turn off electricity easily, use rope, wood, or other insulator to pull the victim away.
12. Use “C” rated extinguishers for electrical fires and never use water

REPORT UNSAFE CONDITIONS

- Shocking, sparking, overheating or smoking machinery;
- Corroded outlets, switches and junction boxes;
- Extension cords in permanent use;
- Exposed wiring; broken plugs, outlets, or walls; missing box covers or faceplates;
- Outlets in damp areas without GFCI's.

LOCK OUT/TAG OUT

When its time for maintenance, repairs, or machine set up, simply unplugging the machine being worked on is not enough. Many serious accidents happen when someone thought a machine or electricity was safely off. Lockout/Tagout is a way to protect yourself and others.



TAKE 7 STEPS FOR LOCKOUT/TAGOUT

1. *Think, plan and check.* Think through the entire procedure. Identify *all* parts that need to be shutdown. Determine what switches, equipment, and people will be involved. Carefully plan restarting procedures.
2. *Communicate.* Let all those who need to know that a lockout/tagout procedure is taking place know.
3. *Identify all appropriate power sources,* whether near or far from the jobsite.
4. *Neutralize all appropriate power* at the source.
5. *Lockout all power sources.* Each worker should have a personal lock, labeled with his or her name and department.
6. *Tagout all power sources and machines.* Tags should explain the reason for the lockout, your name, how to reach you, and the date and time of tagging.
7. *Do a complete test.* Double check all steps above. Do a personal check. Push start buttons, test circuits, and operate valves to test the system.