



ALABAMA MUNICIPAL INSURANCE CORPORATION MUNICIPAL WORKERS COMPENSATION FUND, INC.



Loss Control Division

Electrical Safety

Date: _____ Time: _____ Department: _____ Person Conducting: _____

Meeting Objective: To familiarize employees with common electrical hazards in the workplace and review electrical safety procedures.

Electrocution is one of the leading causes of death in the workplace. More than half of these deaths are caused by two things:

1. Defective electrical equipment.
2. Failure to follow safe procedures.

Even if an electric shock does not kill you, it can still cause serious injuries such as burns; damage to muscles and internal organs; and heart attack. A shock can also be powerful enough to knock you down, causing an injury from falling.

Electricity always flows along the path of least resistance. The human body poses little resistance to electric current. Hazards are created when there are opportunities for electric current to flow into the human body. Some hazards to watch out for include:

1. Electrical cords that are damaged or have broken insulation.
2. Loose electrical connections.
3. Electric cords or connections near water or other liquids.
4. Electric tools that spark, shock, or smoke because they are damaged.
5. Failure to use ground fault circuit interrupter protection.
6. Loss of grounding by using a three-pronged plug in a two-pronged outlet.

Electric shock is not the only hazard associated with electricity. As a power source, electricity can create conditions resulting in fires, explosions, and the unwanted start-up of equipment. Creating a safe work environment includes safe work practices and identifying common hazards. The following procedures provide an effective way of reducing electrical accidents.

1. Avoid work around electrical sources when you, your surroundings, tools or clothing are wet.
2. Keep a towel or rag handy for drying your hands.
3. Stop outdoor electrical work when it begins to rain.
4. Ventilate the work area to reduce atmospheric hazards like dust, flammable vapors, or excess oxygen.
5. Arrange tools and equipment neatly, returning everything to its proper place after each use.
6. All electrically powered hand tools should be double insulated and/or grounded.
7. Keep the work area free of rags, trash, and other debris.
8. Clean up spills promptly, and keep floors completely dry.
9. All extension cords must be inspected before use. Damaged cords should not be used. They should be taken out of service and reported to your supervisor.
10. Use waterproof cords outdoors.
11. Avoid using electrical cords near heat, water, and flammable or explosive materials.
12. Do not use extension cords in place of permanent wiring.
13. Never use an extension cord with damaged insulation.
14. Never remove the ground pin from a 3 prong, grounded plug.
15. Protect extension cords and wiring from damage by being run-over, sharp corners, and pinching.
16. Do not wear metal or conductive hard hats when working near exposed electrical wiring and components.

Safety should be foremost in your mind when working with electrical equipment. You face hazards from the tools themselves and the electricity that powers them. The following procedures should be followed when working with electrical equipment.

1. Always use lockout/tag out procedures before working on electrical circuits and equipment.
2. Be sure your electrical equipment is maintained properly. Regularly inspect tools, grounds, and accessories. Arrange to have damaged equipment repaired or replaced immediately.
3. Inspect power cords and switches for cuts, frayed insulation, exposed terminals and loose connections.
4. Be sure you use safety features like three prong plugs, double-insulated tools, and safety switches. Be sure machine guards are in place and that you always follow proper procedures.
5. Keep electric cables and cords clean and free from kinks. Never carry equipment by its cords.
6. Never remove the grounding post from a three-pronged plug to make it fit into a two-plug wall socket.
7. Do not overload wall plugs or extension cords.
8. Make sure extension cords are the right size or rating for the tool being used.
9. Use extension cords only when flexibility is necessary.
 - A. Never use them as a substitute for fixed wiring
 - B. Never run them through holes in walls, ceilings, floors, doorways, or windows.
 - C. Never use them where they are concealed behind walls, ceilings, or floors.
10. Remember, when working with electricity, if you are not absolutely, positively sure about what you are doing, you should not be doing it. Stop immediately and ask a supervisor for guidance.

If there is an accident involving electricity, there are some basic rules on what to do and not to do:

1. Do not touch someone who has received an electric shock, the current may still be present and could flow into you. Turn off the power if possible. If not, move the victim from the source of the current with a *non-conducting* object and summon medical help.
2. Electrical fires are especially dangerous. Never fight them with water or attempt to touch the burning object. The proper response is to call trained firefighters, turn off power, and smother the blaze if possible.
3. Electrical burns can be more serious than they might appear. Cover the burn with a sterile dressing and get medical help.

Ask workers about accidents or near misses they might have had with electricity and what can be done to prevent similar problems in the future. Explain how some of the machines or tools in your area are grounded. Demonstrate how to move a victim of electric shock away from an energized source of current by using a non-conducting object.

SIGNATURES OF ALL THOSE IN ATTENDANCE

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NOTE: This document is not intended to be legal advice. It does not identify all the issues surrounding the particular topic. Public agencies are encouraged to review their procedures with an expert or an attorney who is knowledgeable about the topic. Reliance on this information is at the sole risk of the user.