

TOOL BOX TALKS

Ground Fault: Path-to-Ground

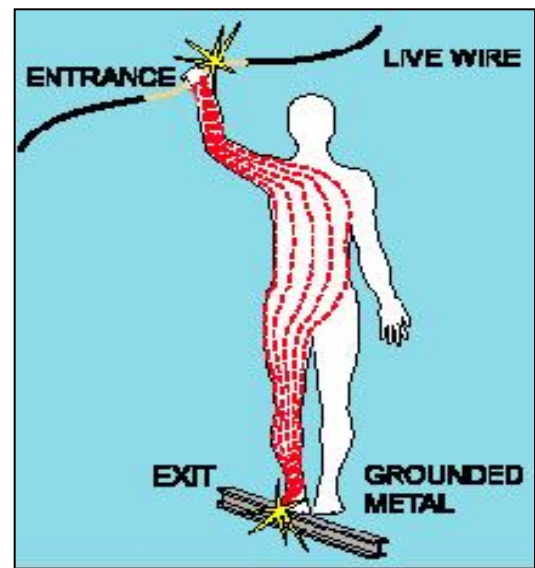
Over 6,000 work-related deaths occur each year in workplaces employing 11 workers or more. Six percent of the fatalities, or around 350 deaths, were the direct result of electrocutions at work. What makes these statistics more tragic is that, for the most part, these fatalities could have been easily avoided. Anyone working around electricity should understand path to ground, and how workers are electrocuted when their body contacts an energized conductor. Review the following safety tips:

WORKSAFE TIPS

REVIEWING PATH-TO-GROUND

- Electricity always flows along a path of least resistance to an earth ground.
- A “ground-fault” occurs when there is a break in the ground path from a tool or electrical system.
- Is the **MOST COMMON** electrical shock hazard.
- A result of “leaking” electricity.
- Occurs when an electrical current escapes from its intended path – like an electric tool malfunction.
- When the body becomes path to ground burns, injury and death can occur.
- Muscular contraction caused by electrical stimulation may not allow the victim to free themselves from the tool or circuit, and the increased duration of exposure increases the injury to the shock victim.
- When a person cannot release the tool, current continues to flow through the body, causing injuries.
- A person may suffer internal hemorrhages and destruction of tissues, nerves, and muscles.
- Secondary injuries can be fall, cuts, and broken bones.
- The most common shock-related injury is a burn.
- Electrical burns are the result of the electric current flowing through tissues or bone.
- Tissue damage is caused by the heat generated by the current flow through the body.
- Electrical burns are one of the most serious injuries you can receive and should be given immediate attention.
- Never remove the ground prong from an electrical cord or device of any kind.
- Never bypass grounding or circuit breaker protection as any time. Use GFCI devices in wet or damp areas.
- If you find any of the above has occurred, repair and/or report immediately.

INJURIES OCCUR WHEN ELECTRICITY PASSES THROUGH THE BODY TO EARTH GROUND.



ELECTRICAL INJURIES RESULT IN BURNS.

- A shock is felt when your body becomes path to ground.
- Currents at 10 mA (milliamps) - muscle freezing, a tighter grip on tools.
- The heart can stop at 4 amps. Tissue is burned at 5 amps.

Tool Box Talk

Date of Discussion _____

Instructor _____

Attendees:

1. _____
2. _____
3. _____
4. _____
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Follow-up Items
