OSHA CONSTRUCTION eTOOL

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Power Tools

Because power tools are so common in construction, workers are constantly exposed to a variety of hazards. The very tool that makes their job easy and efficient may one day be the cause of a tragic accident. It is good to be reminded of common-sense safety practices.

Tool Safety Tips

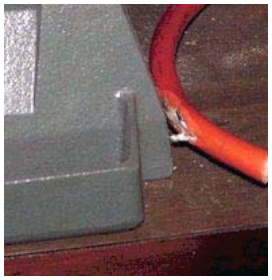
- Never carry a tool by the cord.
- Never yank the cord to disconnect it from the receptacle.
- Keep cords away from heat, oil, and sharp edges (including the cutting surface of a power saw or drill).
- Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits, etc.
- Avoid accidental starting. Do not hold fingers on the switch button while carrying a plugged-in tool.
- Use gloves and appropriate safety footwear when using electric tools.
- Store electric tools in a dry place when not in use.
- Do not use electric tools in damp or wet locations unless they are approved for that purpose.
- Keep work areas well lighted when operating electric tools.
- Ensure that cords from electric tools do not present a tripping hazard.
- Remove all damaged portable electric tools from use and tag them: "Do Not Use."
- Use Double-Insulated Tools.

Specific Examples:

Double-Insulated Tools

- Hand-held tools manufactured with non-metallic cases are called *double-insulated*. If approved, they do not require grounding under the National Electrical Code. Although this design method reduces the risk of grounding deficiencies, a shock hazard can still exist.
- Such tools are often used in areas where there is considerable moisture or wetness. Although the user is *insulated* from the electrical wiring components, water can still enter the tool's housing. Ordinary water is a conductor of electricity. If water contacts the energized parts inside the housing, it provides a path to the outside, bypassing the double insulation. When a person holding a hand tool under these conditions contacts another conductive surface, an electric shock occurs.
- If a power tool, even when double-insulated, is dropped into water, the employee should resist the initial human response to grab for the equipment without first disconnecting the power source.

Portable Tool Use with Extension Cords



- Another potential hazard is using extension cords with portable tools. In construction, these cords suffer a lot of wear and tear. Often, the damage is only to the insulation, exposing energized conductors. When a person handling the damaged cord contacts the exposed wires while holding a metal tool case or contacting a conductive surface, serious electrical shock can result, causing a fall, physical injury, or death.
- Since neither *insulation* nor *grounding* protects you from these conditions, use other protective measures. One acceptable method is a *ground-fault circuit interrupter* (GFCI).

Additional Information:

- 29 CFR 1926 Subpart I, Tools - hand and power. OSHA Standard.
  - 1926.302, Power-operated hand tools
    - 1926.302(a)
- Electrical Safety: Safety and Health for Electrical Trades Student Manual. US Department of Health and Human Services (DHHS), National Institute for Occupational Safety and Health (NIOSH) Publication No. 2002-123, (2002, January).

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