SAFETY TALK
NORTH DAKOTA LOCAL TECHNICAL ASSISTANCE PROGRAM-UPPER GREAT PLAINS TRANSPORTATION INSTITUTE-NDSU

By STEVE CHASE-CIRCUIT RIDER

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).

Content Source: Occupational Safety and Health Administration (OSHA)