Portable Power Tool Safety

Portable power tools assist employees in many jobs. However, if used improperly, power tools can cause injury. Power tools present more hazards than hand tools due to the speeds at which they operate.

It is especially important to wear eye protection when using power tools. Drills, saws, grinders, sanders, routers and other tools operate at high speeds and can propel small particles very quickly over considerable distances and with great force.

Certain power tools may require the use of a face shield in addition to glasses or goggles. For example, due to the amount of hot metal particles a grinder generates, a face shield would be warranted.

Standard cotton or leather work gloves can prevent minor scrapes and cuts from the handling of material. Cut-resistant gloves, however, are not designed for or even capable of protection against a moving blade or bit. Hands must be kept on the tools’ handles with guards in place.

Safety shoes with a nonslip, insulated sole and steel toe protects against dropped objects and misdirected electricity.

The higher sound levels generated by some power tools—especially if used over extended periods of time—may require the use of earplugs or earmuffs to protect the user’s hearing.

The use of a dust respirator may be necessary in sanding and cutting operations.

The following is a listing of safety rules common to all power tools:

- Read the owner’s manual to understand the tool’s proper applications, limitations, operation and hazards.
- Do not use power tools around wet environments or flammable vapors or dusts.
- Protect yourself from electric shock by ensuring the tool is properly grounded. Use a ground fault circuit interrupter (GFCI) for corded tools. Always check for hidden wires that may contact your tool’s blade.
- Only use the tool for the task it is designed to do. Only use attachments specifically recommended for your power tool and ensure their proper installation.
- Inspect the tool for any damage, including the cord, presence of guards, correct alignment, binding of components or any condition that would affect the operation of the tool. If an unsafe condition is present or develops while in use, have the tool serviced.
- Avoid excessive force to make the tool cut faster. Feed material only as fast as the tool is designed to accept to prevent excessive wear and decreased control.
- Keep others away from the work area or provide shields to stop flying debris and other distractions.
- Always keep control of the tool by maintaining your balance. Do not overreach and tightly grip the tool.
- Verify tool is unplugged or power removed when changing blades, providing maintenance or when not in use.