



General Tool Safety

Though tools differ in their function, power source, and size general safety rules apply to the use of all tools.

General Hazards of Tool Use

There are a variety of hazards associated with improper tool use and faulty tools. Some of these hazards are unique to the tool while others are common for many types of tools. Examples of hazards and associated injuries include the following:

- Being struck by a tool, moving machine, or moving part can cause bone fractures, concussions, and internal organ damage.
- Rotating blades, drills, and other cutting tools can cut and puncture tissue.
- Objects can fly off from many tool operations. Depending on an object's size, shape, speed, and material, it can cause a variety of injuries to various body parts. Small flying objects are a particular hazard to the eyes.
- Body parts can get caught in gears, belts, shafts, etc. This can crush bones and tissues.
- The power source of a tool may present a hazard on its own. For example, electricity can cause burns and shocks. Electric shocks can paralyze the nerve centers, stop breathing, and stop the heart. Heat from the electric current can burn the skin and damage internal organs. Other power sources like gasoline can combust and start fires.

Tools can create noise hazards and hearing damage. Depending on the material being cut, shaped, or sanded harmful air contaminants can be produced. Tools can also become very hot or cold, causing burns.

General Safety Practices

General safety rules apply to both stationary and portable power tools. The following job site safety rules apply to many of the tools that you use:

The Work Area

- Your work area shall be kept clean! Oily rags, dust, and paper are fire hazards and can damage your tools. Place scrap materials in appropriate containers.
- Keep your work area well lit. If you can't see your work, then you can't see a hazard.
- Keep your area dry. Wet floors and work surfaces can cause slips. Water serves as an excellent electric conductor between the ground, and you.

- Before working with tools that can produce sparks, make sure that the surrounding area is free from ignitable materials.
- Know the locations of fire extinguishers. Know where the proper exit route is for your work area.

Personal Protective Equipment

- Use protective equipment when necessary including safety glasses.
- Noise produced by power tools can drown out other sounds in the shop. Stay alert to your surroundings.

Clothing

- Never wear loose clothing or jewelry that can entangle in power tools. Hand jewelry can serve as a conductor of electricity.
- Tie back long hair.
- Do not wear any kind of ties or scarves while working around machinery.

Tools

- Always use the right tool for the job! Forcing a small tool to do a big job causes the tool to strain. Strained tools can kickback or break, causing injury.
- Never use a tool that you are unfamiliar with. Get proper training before using any new tool.
- Before each use, inspect your tools. Check the alignment of moving parts, breakage of parts, and cracks.
- When you're tired, your attention span is reduced. Attention to your work is very important when working on the job.
- Disconnect the power source when performing maintenance, cleaning, or changing blades and bits.
- Be wary of dropping tools. Don't rest a tool on the edge of the work area. Secure tools when working at heights.
- When using both portable and stationary tools, grip the tool or material being worked- on firmly. Hold tools only by insulated grasping surfaces. The material being worked- on should be well secured.
- Make sure that you are well balanced when operating a tool. Sometimes, a "kickback" from a tool can throw the operator off balance, causing injury. Don't work in an awkward position. You may not have complete control of the tool or the material you are working on.
- Never lock a tool in the ON position if you are working under conditions that require you to stop the tool quickly.
- Guarding is one of the best ways to minimize a hazard. Make sure that machine guards are in place on large and small equipment.