Hand & Portable Power Tools Safety Talk



WHAT’S AT STAKE?

Hand and power tools are a common part of our everyday lives and are present in nearly every industry. These tools help us to easily perform tasks that otherwise would be difficult or impossible. However, these simple tools can be hazardous and have the potential for causing severe injuries when used or maintained improperly. Special attention toward hand and power tool safety is necessary in order to reduce or eliminate these hazards.

WHAT’S THE DANGER?

Hand Tools

Hand tools are tools that are powered manually. Hand tools include anything from axes to wrenches. The greatest hazards posed by hand tools result from misuse and improper maintenance.

Electric Tools

Employees using electric tools must be aware of several dangers. Among the most serious hazards are electrical burns and shocks.

Portable Abrasive Wheel Tools

Portable abrasive grinding, cutting, polishing, and wire buffing wheels create special safety problems because they may throw off flying fragments. Abrasive wheel tools must be equipped with guards that: (1) cover the spindle end, nut, and flange projections; (2) maintain proper alignment with the wheel; and (3) do not exceed the strength of the fastenings.

Pneumatic Tools

Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders.

There are several dangers associated with the use of pneumatic tools. First and foremost is the danger of getting hit by one of the tool’s attachments or by some kind of fastener the worker is using with the tool.

Liquid Fuel Tools

Fuel-powered tools are usually operated with gasoline. The most serious hazard associated with the use of fuel-powered tools comes from fuel vapors that can burn or explode and also give off dangerous exhaust fumes. The worker must be careful to handle, transport, and store gas or fuel only in approved flammable liquid containers, according to proper procedures for flammable liquids.

Powder-Actuated Tools

Powder-actuated tools operate like a loaded gun and must be treated with extreme caution. In fact, they are so dangerous that they must be operated only by specially trained employees.

Hydraulic Power Tools

The fluid used in hydraulic power tools must be an approved fire-resistant fluid and must retain its operating characteristics at the most extreme temperatures to which it will be exposed. The exception to fire-resistant fluid involves all hydraulic fluids used for the insulated sections of derrick trucks, aerial lifts, and hydraulic tools that are used on or around energized lines. This hydraulic fluid shall be of the insulating type.

HOW TO PROTECT YOURSELF

Here are 10 quick and easy tips for safely working with hand and power tools.

1. **Inspect Your Tools**. Never issue or use a damaged or defective hand or power tool. Always make sure they are in good working order before and after each use.
2. **Pick The Right Tool.** Make sure you are using the correct tool for the task at hand. This also means using the right sized bits, blades and accessories on your power tools.
3. **Wear Your PPE**. Issue personal protective equipment to your employees and make sure they wear them properly. This comprises of items like safety goggles, hard hats, etc.
4. **DON’T ALTER YOUR TOOLS.** Never remove guards or disable safety devices on power tools. Don’t paint or cover up your tools as this could prevent you from noticing chips or cracks.
5. **Handle With Care.** Tools are not toys. Never throw or toss a tool in the direction of or directly to a coworker. Never use electrical cords to lower or lift a tool to get it to a workspace.
6. **Keep Your Distance.** When working with hand and power tools be sure you have enough room to safely operate without coming into contact with other objects or coworkers.
7. **Pick Up After Yourself**. Don’t leave idle hand tools lying around the job site. They can lead to tripping or be accidentally knocking on someone’s head.
8. **Unplug And Disconnect.** Don’t leave electric power tools plugged in when not in use, when making adjustments such as replacing blades and bits, or loading fasteners.
9. **Keep Your Workspace Clean.** A cluttered floor can lead to accidental trips or falls which can be extremely dangerous when working with hand and power tools.

10. **Get Trained Up.** Make sure you and your employees are thoroughly trained on the proper use of hand and power tools required for the task at hand.

Safety Tips For Specific Power Tools

1. **Portable Power Tools and Equipment**

Portable power tools are designed for a wide variety of uses. Circular saws, jigsaws, drills, hammer-drills, sanders, grinders, routers and numerous other power tools, save time and effort on the job. The increased use of power tools heightens the need for awareness of the hazards they present if not operated properly.

- Do not operate power tools or equipment unless you have been authorized to do so.
- Inspect tools daily to ensure that they are in proper working order. Do not use damaged or defective tools.
- Use tools for their intended purpose and in the manner intended.
- All power tools and electrical devices must be properly grounded.
- Keep guards and protective devices in place at all times. Never use equipment or tools from which guards have been removed.
- Do not use electric power tools and equipment when standing in water.
- Only qualified persons are to repair electric tools or equipment.
- All extension cords must be the 3-pronged type and made for hard use. (Designation types S, ST, STO, SJ, SJO, SJT, and SJTO.)

2. **Electric**

- Keep floors dry and clean to avoid slipping while working with or around dangerous tools.
- Keep cords from presenting a tripping hazard.
- Never carry a power tool by its cord.
- Use tools that are double-insulated or have a three-pronged cord and are plugged into a grounded receptacle.
- Do not use electric tools in wet conditions unless they are approved for that use.
- Use a ground fault circuit interrupter (GFCI) or an assured grounding program.
- Use appropriate PPE.

3. **Pneumatic**

- Verify that all parts of the tool are fastened securely before use.
- Never point a compressed air gun at yourself or another person.
- When you are finished using the tool, make sure that the pressure is released before you break the hose connections.
- Use a safety clip or retainer to prevent attachments from being ejected during operation, and use a chip guard when using high-pressure compressed air for cleaning. Be sure to limit the nozzle pressure to 30 pounds per square inch.

4. **Powder-Actuated**

- Do not use a tool in an explosive or flammable atmosphere.
- Inspect the tool before using it to determine that it is clean, that all moving parts operate freely, and that the barrel is free from obstructions

and has the proper shield, guard, and attachments recommended by the manufacturer.
- Do not load the tool unless it is to be used immediately.
- Do not leave a loaded tool unattended, especially where it would be available to unauthorized persons.
- Keep hands clear of the barrel end.
- Never point the tool at anyone.

FINAL WORD

Hand and Power Tools are taken for granted today in our workplaces and in the Homefront. Life and work in general is much easier with these tools. At the same time, these powerful tools come with a cost!!! The potential for causing life debilitating injuries abound when these tools are not used or maintained properly.