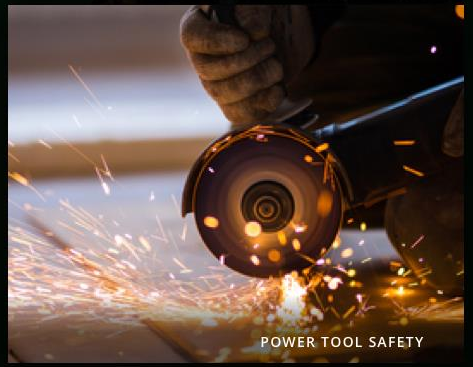
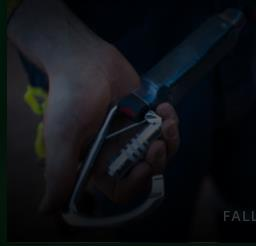




LORNE DAVIES, CRSP

ASK ME ANYTHING:

Power Tool Safety

Disclaimer

- This session is only for awareness and discussion purposes only
- This session **WILL NOT** qualify you to operate powered hand tools or any other type of power tools
- Participants are encouraged to take specific power tool training that meets the Occupational Health and Safety Regulation requirements and other legal requirements

Internal Responsibility System

The **internal responsibility** system is the underlying philosophy of the occupational health and safety legislation in all Canadian jurisdictions. Its foundation is that everyone in the workplace—both employees and employers—is **responsible** for his or her own safety and for the safety of co-workers.

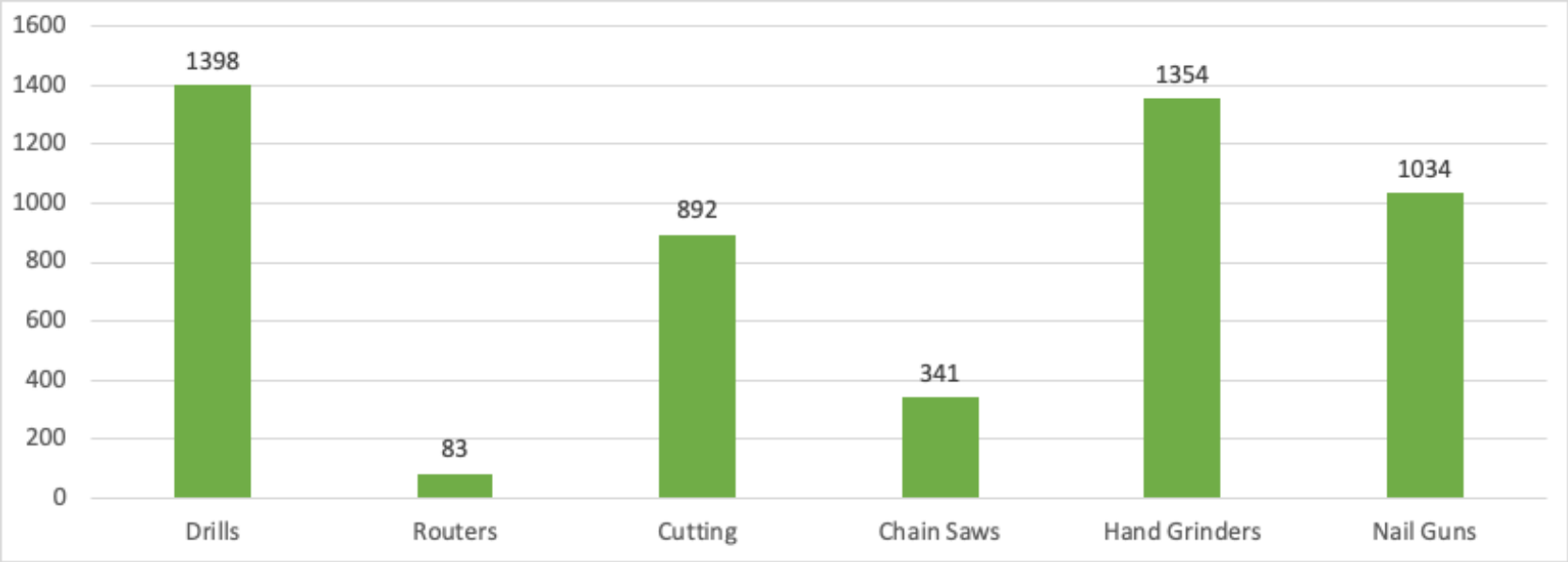
– CCOHS

General Requirement to Inspect

Every employer must ensure that regular inspections are made of all workplaces, including buildings, structures, grounds, excavations, tools, equipment, machinery and work methods and practices, at intervals that will prevent the development of unsafe working conditions.

—Occupational Health and Safety Regulation section 3.5

Powered Hand Tool Claims 2017-2021



Hazards Of Powered Hand Tools

The force generated by power tools is substantial and is often underestimated by unfamiliar workers.

Powered tools are designed to quickly machine materials much stronger than human flesh.

Improper operations can lead to loss of control of the power tool and possible life changing injuries.

Losing focus on a task can lead to the loss of control of the power tool in operation, and possible contact with the cutting tool.

Wear The Right PPE

Drills

Things to watch for

All drills have the ability to jam while in operation. When it jams, the force that the tool uses to drill will instead transfer to the user, and the drill will attempt to spin out of your hands, or cause the object being drilled to spin—causing possible injury.

A drill bit can easily drill through the material it is meant to drill through... and into the objects behind it, such as a hand holding two parts together.

Routers

Things to watch for

- Routers turn at > 20,000 rpm so they can throw chips (or other debris) a long distance, so always wear PPE.
- Large bits (1-1/2 diameter) are designed for use where the router is mounted in a table or jig. Holding the router by hand can lead to loss of control.
- Bearing guided bits, help to reduce the possible depth of cut but must be monitored.

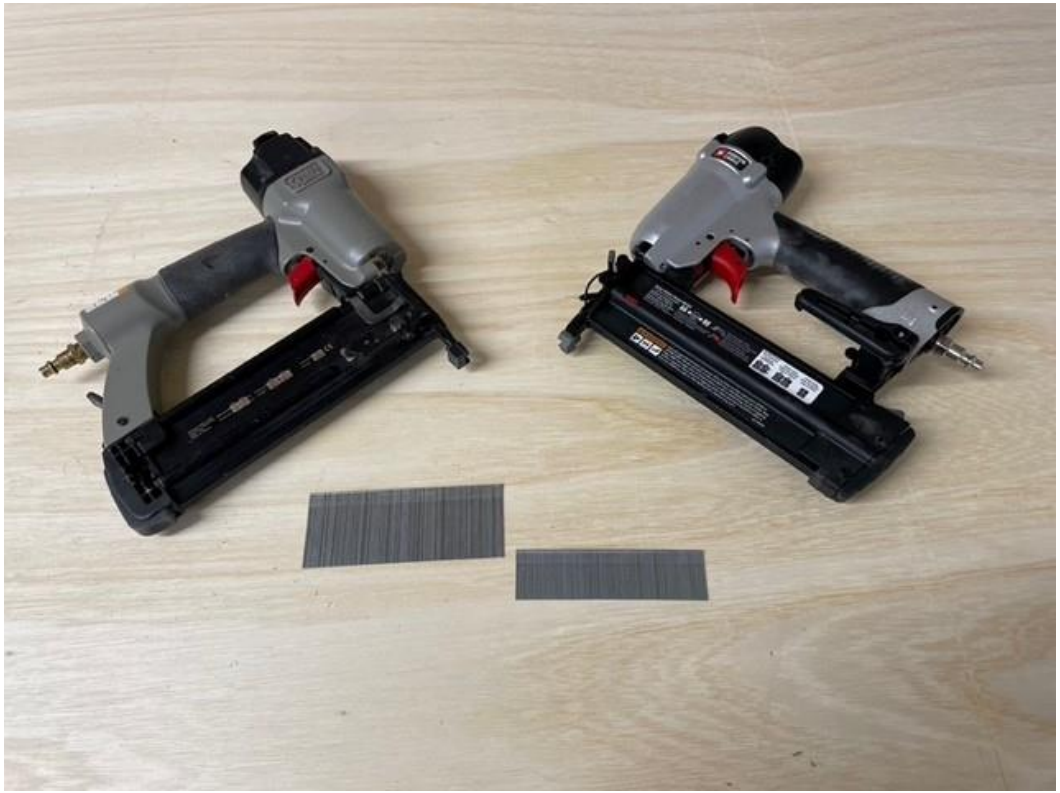
Saws

Things to watch for

Powered hand saws should cut at a consistent rate, if the tool slows down do not increase load or add additional force, ease up and allow the tool to return to its normal speed.

Be aware of your body position. Set it up so that you can cut along the desired direction without having to reposition yourself while cutting or push tool sideways.

Nail Guns



Things to watch for

Ensure that the nails you are using to fasten something to another does not protrude through to the other side of the pieces.

Understand that if the nail can be redirected outward or back towards you if it strikes a knot, screw, or other high-density object (e.g., a piece of mounting hardware).

Wear safety glasses!

Blades and Cutters

Things to watch for

If a powered saw is not cutting effectively, it is often either because the blade is dull, or the wrong blade is being used for the task.

A blade or cutting bit that cannot clear the material waste from the cutting operation, will slow down, overheat, activate the circuit breaker, or kick the work piece or the saw back towards the operator.

Hand Grinder

Things to watch for

The guard on hand grinders protects the user from flying debris when and if the wheel shatters. It also prevents you from installing the wrong size wheel. So keep it on!

Hand grinder wheels will break for several reasons:

- Horizontal pressure during a vertical cut
- Vertical pressure on a horizontal grind, improper wheel for material or improper wheel for grinder RPM
- Improper wheel for material
- Improper wheel for grinder RPM

RPM Rating of 4-1/2” Grinder

Labelled RPM for grinder

Prior to using a hand grinder, you should always confirm that the RPM rating for the wheel exceeds the labelled RPM speed for the grinder. Perform a "ring test" on a wheel before installing it to ensure it is not defective.

As wheels increase in size the rated RPM speed decreases, so a wheel being used at twice it’s rated RPM is more susceptible to breaking.

RPM rating of 4-½" disc

Labelled RPM for grinding wheel

In this case this grinding wheel is rated for 13,300 RPM and is designed for cutting aluminum.

Cutting aluminum with a wheel designed to cut steel will cause the pores to fill with soft aluminum which will impair cutting. If the operator increases pressure to try to get the grinder to "work better," the wheel will shatter.

Stay out of the "Line of Fire"

"Line of Fire" is a term that refers to when workers place themselves in harm's way.

Be aware of your position relative to the cutting tool, if it cuts faster than anticipated will it contact your hand? If the blade breaks will the tool strike you? If it kicks back will it hit you? If it contacts a nail will it throw pieces of it into your face or eyes?

Follow Manufacturer's Instructions

Use the right tool for the right job.

Follow manufacturer’s instructions for the installation of approved accessories, inspection, testing, repair, and maintenance of any tool. Keep the manufacturer’s instructions (owner's manual) handy for workers to access. Include Manufacturer’s specific instructions in safe work procedures for job specific situations and materials.

Call To Action

Right to Refuse Unsafe Work

Remember, if you are asked to operate a power tool that you not familiar with, ask your supervisor for training.

Do not attempt to “wing it.”

Being injured is not good for anyone.

Additional Resources

- Toolbox Talks | Angle grinder, Bench grinder, Drill press, Hand drills, etc.
- Hazard Identification Training | Online, virtual, or instructor led
- PPE selection-Reach out to a Safety Advisor for specific concerns, and suppliers

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manufacturing
Safety Alliance of BC

Q&A