

# Talks **ZONE**

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T5110

## Power saws can cut a life short

All power saws, whether stationary or portable, have at least one thing in common (besides the power): a sharp, fast-moving blade that can slice easily through human tissue and bone or send particles of material into the eyes, nose and lungs.

That blade may be moving in a circle or up and down. In either case, it deserves all the respect, care and attention you can provide.

Before you even start working with a power saw, make sure you are wearing the proper protective gear: safety glasses, goggles or face shield, gloves, respirator if exposed to harmful or nuisance dusts, and hearing protection in noisy environments.

The blade must be appropriate for the job at hand, and sharp enough to do it efficiently. Sharp blades cut better and require less force, which helps avoid putting body parts in harm's way.

Never change a blade without first disconnecting the power source.

Here are some more general tips for the safe use of power saws:

- Blades should be set to go no further than .032 centimetres to .64 cm (1/8 inch to 1/4 inch) deeper than the material being cut.
- Do not wear loose clothing, jewellery, or dangling objects, including long hair, that might catch in rotating parts or accessories.
- Make sure the saw blade is not touching anything before you turn on a saw.
- Never look away from your work when operating a power saw.
- Let the saw reach full speed before cutting and support the work firmly so it won't shift.
- If the saw stalls, switch off the power and unplug the tool before trying to restart it.
- When working with metal, use



lubricants and secure the metal material with clamps or in a machinist's vise.

There are numerous types of power saws, each designed to perform specific tasks, so it's important to make sure you are using the correct one. Following is advice on how to use the more common ones safely:

### TABLE SAWS:

- Never use your hands to clear the scraps from a sawing worktable. Instead, use a long stick.
- Keep the body out of the way. Use a push stick when ripping narrow strips.
- Keep table saw tops clean and waxed to help your work run through smoothly.
- Never use a mitre gauge at the same time you are using a rip fence, as any binding will cause a kick-back.
- When making a very narrow cut, put the fence on the other side of the blade. This will also avoid a binding situation and give you more room to work.
- Lower the saw blade below the table top when work is finished.

### RADIAL ARM SAWS:

- When cross-cutting wood, lay the stock

solidly on the table and against the back guide. The saw blade should rotate downward as viewed by the operator. Pull the saw with one hand while the stock is held with the other hand.

- Never reach across the line of cut.
- When making mitre cuts, secure the locking devices to prevent the saw from changing angles or digging in.
- Return the saw to the rear position after completing a cut.

### SABRE SAWS

■ Select the proper blade for the job. Make sure it is sharp, undamaged and securely tightened in place.

■ Hold the saw firmly with one hand and steady the work with the other. Keep your hand and other objects clear of the blade.

■ Do not force the saw along or around a curve. Allow it to turn with ease.

### PORTABLE CIRCULAR SAWS

■ Use the correct blade. Does it have the proper size and shape arbor hole? Is the speed marked on the blade at least as high as the no-load RPM on the saw's nameplate?

■ Do not over-tighten the blade-locking nut.

■ Make sure the lower retractable blade guard is always working properly. Do not hold this guard in the open position.

■ Use two hands, one on the trigger switch and the other on the front knob handle.

■ Do not force the saw while it is cutting, and do not twist it to change, cut or check alignment.

■ Do not rip stock without using a wedge or guide clamped to the stock.

The material contained in this document has been prepared from sources believed to be accurate and reliable. Application of this information to a specific worksite should be reviewed by a safety professional. Anyone making use of the information set forth herein does so at their own risk and assumes any and all liability arising therefrom. Specific medical advice should be obtained through consultation with a physician or other trained health care practitioner.

## The Quiz

These questions are meant to help you remember what was discussed today — not to test your patience or challenge your intelligence. The answers are at the bottom of the page. Cover them up, and complete the quiz as quickly as you can.

1. Respirators are among items of personal protective equipment that might be necessary when using power saws.  
TRUE \_\_\_\_ FALSE \_\_\_\_
2. Is it always necessary to disconnect the power source when a power saw blade is being replaced?  
YES \_\_\_\_ NO \_\_\_\_
3. Which of these precautions help ensure safe use of a power saw:
  - A. Set the blade no more than .032 centimetres to .64 cm (1/8 inch to 1/4 inch) deeper than the material being cut.
  - B. Make sure the saw blade is not touching anything when you begin the cut.
  - C. Let the saw reach full speed before beginning the cut.
  - D. Use lubricants when cutting metal.
  - E. All of the above
4. It is sometimes acceptable to clear away scraps with your hands while using a table saw.  
TRUE \_\_\_\_ FALSE \_\_\_\_
5. When using a radial arm saw you should NOT:
  - A. Cut wet wood only.
  - B. Reach across the line of cut.
  - C. Pull the saw with one hand while holding the stock with the other.
  - D. Return the saw to the forward position when the cut is complete.
6. A sabre saw should have no problem being forced along or around a curve.  
TRUE \_\_\_\_ FALSE \_\_\_\_
7. Which of these is NOT a safe way to use a circular power saw:
  - A. Using a blade whose speed is rated at least as high as the no-load RPMs of the saw.
  - B. Over-tightening the blade locking nut.
  - C. Using two hands on the saw.
  - D. Making sure the lower retractable blade guard is working properly.
8. Are all the power saws in your workplace cleaned and serviced regularly?  
YES \_\_\_\_ NO \_\_\_\_ DON'T KNOW \_\_\_\_

**ANSWERS:** 1. True, 2. Yes, 3. E., 4. False, 5. D., 6. False, 7. B., 8. Your answer

## Hold These Thoughts

Power saws have become an indispensable part of many workplaces. They are many and varied, from the more familiar circular and table saw to the more specialized chop, mitre, crosscut and scroll saw.

They have the potential to maim and kill because of their power source — electricity — not just their sharp, fast-moving blades.

People are injured when they become part of the electrical circuit. There are four main types of injury: electrocution (fatal), electric shock, burns, and falls. These injuries can happen in various ways:

- Direct contact with the electrical energy. When electricity travels through our bodies, it can interfere with the normal electrical signals between the brain and our muscles (e.g., heart may stop beating properly, breathing may stop, or muscles may spasm).

- When the electricity arcs (jumps) through a gas (such as air) to a person who is grounded, providing an alternative route to the ground for the electricity.

Arc flashes result in intense heat (causing burns), intense light (can cause blindness), or ignition of other materials.

Arc blasts cause the same conditions as an arc flash, but are more intense and can also include a strong pressure wave. These pressure waves can damage machinery, throw a person, collapse a lung or rupture ear drums.

- Thermal burns including flash burns from heat generated by an electric arc, and flame burns from materials that catch on fire from heating or ignition by electrical currents.

- Muscle contractions, or a startle reaction, can cause a person to fall from a ladder, scaffold or aerial bucket. The fall can cause serious injuries.



## For the Record

Date of Meeting: \_\_\_\_\_

Topic: \_\_\_\_\_

Location: \_\_\_\_\_

Department: \_\_\_\_\_

Start Time: \_\_\_\_\_ Finish Time: \_\_\_\_\_

Meeting Leader: \_\_\_\_\_

In Attendance:


### It really happened...

A worker was using a chop saw when he saw a sliver of wood fall into the saw housing. Without locking out the saw, he opened the side door to remove the sliver. His hand contacted the rotating blade, resulting in three fingers being amputated and another partly amputated.

A young worker was trimming boards at a planer. Wanting to move one piece, he reached past the safeguard. His hand contacted the saw blade and was cut badly.

As an employee in a meat processing plant was cutting meat with a band saw, he lost the tip of one one finger when it contacted the blade.

These are but a few examples of the injuries, death and disfigurement that can result from improper use of power saws. In one Canadian province alone, there are more than 40 amputations and more than 200 serious cuts in the woodworking industry each year, most often involving unguarded table saws. Hundreds more saw-related injuries occur annually in that province's construction industry, as they do in many other regions.

Supervisors must ensure that safeguards are used as required and that workers follow their training. Workers must work in accordance with safety regulations, follow their training, and report any safety concerns to their supervisors.

**Note: *TalksZone* weekly safety meetings are not intended to take the place of your own safety procedures. Always consult and/or review your procedures before attempting any work.**