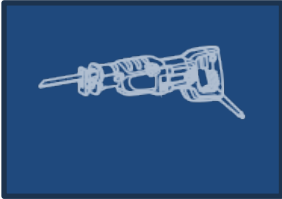
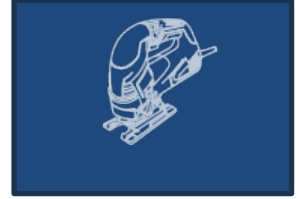


RECIPROCATING (SABER) SAWS & JIG SAWS

Power tools require operator respect in specific ways. They must be used carefully and kept in safe operating condition, whether they are in the hands of a professional tradesman, an amateur do-it-yourselfer, or a vocational student. *The demands of safety apply to all.* The material presented here is a compilation of carefully selected safe use precautions as they relate to specific electric power tool CAUTIONS, WARNINGS and DANGERS. The purpose is to highlight the safe use of specific tools that have a potential of causing injury if ignored. The warnings and instructions on the power tool and in its operator's manual provide the best source of safety information for the tool. Read and understand the contents and follow the advisements of operator's manuals on each specific power tool and all related accessories. This is considered essential to the safe operation of any power tool. Review PTI's *Safety is Specific* publication for general power tool safety.



The reciprocating saw (also known as saber saw) and jig saw can be used to cut metal, pipe, wood, nail-embedded wood and other materials.



Good Personal Safety is a Must

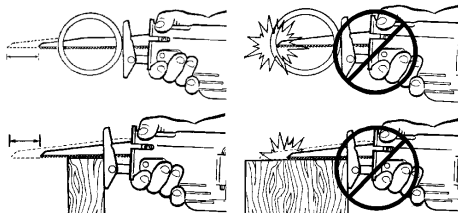
Following good safety practices when using reciprocating saws and jig saws is a must. Make a habit of including safety in all your activities.

- Never alter a guard or use the tool with a guard missing. Be sure all guards are in place and working properly before each use. Do not defeat guards.

Choose the Right Tool and Blade

Choosing the correct tool and the proper accessory for your application can help to reduce the risk of serious injury. When used according to the manufacturer's instructions, the proper tool and accessory will make the job safer and faster.

- Use sharp blades. Dull blades can produce excessive heat, make cutting difficult, result in forcing the saw, and possibly cause an accident.
- When changing blades, be sure the spindle and blade clamp areas are clean. Metal chips and sawdust may prevent the blade from being held securely.
- Blades can break. Use the blade and accessories recommended for the job being done. Check your operator's manual carefully about this.
- To minimize blade flexing and provide a smooth cut, use the shortest blade that will do the job but will extend beyond the workpiece throughout the stroke. Blades may shatter if they impact the work or shoe. Do not use the saw without the shoe to avoid damage to the tool and blade.
- When cutting metal, choose a blade that will allow for at least three blade teeth to be in the material at all times. Less than three teeth will result in teeth snagging and breakage. However, using blades with too fine a tooth will slow your cut.



- Use clean saw blades. A buildup of pitch or sap on the surface of the saw blade increases blade thickness and blade friction.

Know your Workpiece

Take time to review your work and make sure that all necessary precautions have been taken before making a cut.

- Know what is behind a workpiece before you do the job. Be sure that no hidden water or gas pipes, hazardous objects of any kind are not in the path of the cut. Water pipes must be drained and capped. Call the local natural gas utility to help locate gas lines and shut them off prior to cutting into area. Avoid cutting small pieces of material which can't be properly secured, and workpiece on which the base of the saw (shoe) cannot properly rest. Injury could result from small pieces being thrown at the operator if the blade pinches and binds.
- Be very cautious of stock which is pitchy, knotty or warped. These are most likely to create pinching conditions.
- Support large workpieces so they will not pinch the blade. Use a straight edge as a guide for ripping. Always place the workpiece securely in a vise or clamp when making cuts. Never make freehand cuts.
- Holding the workpiece by hand is unstable and may lead to loss of control.
- Never try to remove or clamp the workpiece while the blade is moving.

Before Cutting...

Before cutting with a reciprocating saw or jig saw, make sure the tool and its accessories are in proper working order. Failure to do so may increase your risk of injury, blade pinching, binding or stalling, and loss of control. These situations may result in an injury.

Check blades carefully before each use for proper alignment and possible defects. Never use a bent, broken or warped saw blade.

- Never attempt to cut materials larger than the rated capacity listed in the jig saw operator's manual, as this may result in personal injury.
- Never unplug the tool or remove battery from the tool with the trigger locked on. Before plugging in the tool, be sure the "lock-on" switch is off. Accidental start-ups could cause injury.
- If the "lock-on" switch cannot be turned off with the trigger while the tool is running, unplug it (or remove battery) and have it repaired by a qualified service technician.
- Be sure all guards are in place and working properly before each use. Do not defeat guards.
- Be sure all adjusting screws (knobs) and the blade clamp are tight before making a cut. Loose adjusting screws and blade clamps can cause the saw or blade to slip and loss of control may result.
- Make sure the blade has adequate blade set. Blade set provides clearance between the sides of the blade and the workpiece, thus minimizing binding. Some saw blades have hollow ground sides instead of blade set to provide clearance.



While Cutting

Concentrate on what you are doing and be aware of kickback (a sudden reaction to a pinched, bound or misaligned blade). Kickback can cause an uncontrolled tool to lift up and out of the workpiece toward the operator and is the result of tool misuse and/or incorrect operating procedures or conditions. Take these specific precautions to help prevent kickback when using a jig saw:

- Always hold the tool by the insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- Position yourself to maintain full control of the saw. When possible, avoid cutting above shoulder height.
- Keep your hands away from the blade, shoe, and all moving parts. Never place your fingers in line with the blade.
- Keep hands away from blade and shoe.
- Clamp work pieces securely. Check frequently to be sure clamps remain secure. A moving workpiece can cause loss of control and result in injury.
- Never hold a workpiece in your hand or across your leg when sawing.
- Before starting, be sure the power cord and extension cord are out of the blade path and are long enough to freely complete the cut. A sudden jerk or pull on the cord can cause loss of control of the saw and a serious accident.
- When starting the cut, firmly position the saw plate/shoe on the workpiece before turning on the tool. Always keep firm contact between the plate/shoe and the workpiece. Small or thin material may flex or vibrate with the blade, causing loss of control.

- Allow the blade to reach the desired speed before contacting the workpiece. The saw can chatter or vibrate if blade speed is too slow at beginning of the cut and kickback may occur.
- NEVER overreach! For maximum control, hold the saw firmly with both hands after securing the work piece.
- Be alert to the possibility of the blade binding and kickback occurring.
- Always hold the shoe of the saw firmly against the work to prevent operator injury and blade breakage. Striking the blade end against the workpiece can cause damage to the saw.
- Never remove the saw from a cut while the blade is moving. When making a partial cut, or if power is interrupted, release the trigger immediately and don't remove the saw from the work piece until the blade has come to a complete stop. A saw tooth could grab the work piece, causing loss of control.
- Never reach under the saw or workpiece. The blade is exposed under the work piece and the saw guard cannot protect your body here.
- Release the trigger immediately if the blade binds or the saw stalls.
- Overheating a saw blade can cause it to warp and result in kickback. Buildup of sap on the blades, insufficient blade set, dullness, and unguided cuts, can cause an overheated blade and kickback.
- Keep your hands away from all cutting edges and moving parts. Never place your fingers in line with the blade.
- When plunge (pocket) cutting, use a blade designed for that purpose and follow the manufacturer's instructions.
- Maintain firm contact between the saw's shoe and the workpiece.
- Lower the blade into the workpiece using the shoe as a pivot.
- Once the shoe/base is flat against the workpiece, begin the desired cut.
- Do not plunge cut into a metal workpiece. Instead, using a drill or chisel, make a pilot hole larger than the widest portion of the blade. Insert the blade, placing the shoe flat against the workpiece, and begin the desired cut.
- When plunge (pocket) cutting use a blade designed for that purpose and follow the manufacturer's instructions.
- Pinch Points! Keep hands from between the gear housing and saw blade clamp (plunger). The reciprocating blade clamp (blade plunger) can pinch your fingers.
- Switch the tool off after a cut is completed, and completed and keep the saw away from your body until the blade stops. The blade may coast for a time, posing the risk of serious cuts.

When Done Cutting...

- Remember that the blade and blade clamp may be hot immediately after cutting. Avoid contact until they have cooled.
- Unplug or remove the battery, clean and store the tool in a safe, dry place after use.

Always Remember...

- Be alert at all times, especially during repetitive operations. Don't be tempted into carelessness due to a false sense of security. Blades are extremely unforgiving.
- To reduce the risk of injury, always unplug the saw or remove the battery from the saw when moving from a workstation.

NOTICE

The contents are not meant to be, nor should they be considered, an absolute or complete presentation of the safety measures and procedures that relate to using the power tools covered. Obviously every possible application cannot be foreseen. This brochure's purpose is to highlight only some important safety and safety related information compiled from the experience of Institute members and other reliable safety oriented sources. Individual manufacturers' tool operator's manuals, shipped with tools and accessories, are recommended as a final source for proper procedures for specific tool usage.