

## ELECTRIC CHAIN 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.



An electric chain saw can be used to cut down small trees, trim and prune unwanted limbs and brush, and resize firewood and lumber. Chain saws require strict adherence to important safety practices. Battery powered chain saws are considered electric chain saws.

### Good Personal Safety is a Must

Following good safety practices when using power tools is a must. Make a habit of including safety in all your activities.

- Wear overalls, long pants or chaps that contain pads of cut-retardant material. Wear sturdy boots with non-slip soles. Wear heavy-duty non-slip work gloves.
- Further protective equipment for head, hands, legs and feet is recommended.
- Keep proper footing and balance. Clear away debris and watch for hidden obstacles. Be cautious on slopes and uneven ground. Bystanders should not be allowed in the area. Never alter a safety device or use the tool with a safety device missing. Be sure all safety devices are in place and working properly before each use. Do not defeat safety devices.
- Always hold the chain saw with your right hand on the rear handle and your left hand on the front handle.

### Choose the Right Tool and Accessory

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 only bars and chains specifically recommended for your tool in the operator's manual.
- Keep your chain sharp and clean from buildup of pitch or sap on the surface, which increases chain thickness and excessive chain friction.

### Know your Workpiece

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

- Don't use to cut plastics, masonry, metals or other non-wood building materials, as this may result in personal injury or damage to the tool. Cut wood and wood products only. Avoid cutting small pieces of material which cannot be properly secured. Injury could result from small pieces being thrown back at the operator if the chain pinches and binds.
- Be very cautious of workpieces that are pitchy, knotty or warped. These are most likely to create pinching conditions and possible kickback.
- Know what is behind a workpiece before you do the job. Operate only under good visibility in daylight conditions. Never cut near power lines.

### Before Cutting...

Before cutting with a chain saw, make sure the tool and its accessories are in proper working order. Failure to do so may increase your risk of injury and may result in kickback, chain pinching, binding or stalling, and loss of control. These situations may cause the saw to jump back at the operator and can result in a serious injury.

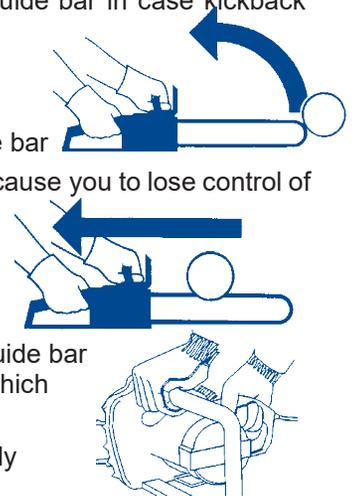
- Unplug/remove battery when not in use, before servicing, and when changing accessories and attachments, such as the saw chain.

- Do not use an electric chain saw if the switch does not turn the saw on and off. Be sure the chain stops moving when the switch is released or the chain brake (lever) is pushed forward.
- Do not operate an electric chain saw that is damaged, improperly adjusted, or is not completely and securely assembled. A handle, guard or other part that is damaged should be properly repaired or replaced by an authorized service center.
- Do not attempt to disable the chain brake. If kickback occurs, the chain brake will stop the chain immediately, and may reduce the risk of personal injury. The chain brake is engaged manually when the handle guard is pushed forward. Periodically test the brake. If the chain brake doesn't stop the chain immediately, the brake needs to be repaired by an authorized service center.
- Before use, check for the misalignment, binding or breakage of moving parts, improper saw chain tension and mounting, and any other conditions that may affect saw operation. Too much tension in the saw chain will burn the guide bar and damage the chain. Too little tension in the saw chain will allow the chain to leave the guide bar, and may cause personal injury. A new chain will stretch when used and will require readjustments later.
- Keep handles dry, clean, and free from oil and grease. Greasy, oily handles are slippery and will cause a loss of control.
- Before starting an electric chain saw, make sure the saw chain is not contacting anything. Do not cut until you have a clear work area, secure footing and a planned retreat path, if cutting down a tree.
- Do not operate a chain saw while in a tree unless specifically trained to do so. Improper operation of a chain saw may result in personal injury.

## While Cutting ...

Concentrate on what you are doing and be aware of kickback (a sudden reaction to a pinched, bound or jammed chain). Kickback can cause an uncontrolled tool to rotate the bar toward the operator or push or pull the tool, depending on the location along the periphery of the guide bar where the jamming of the chain occurs. Kickback is the result of incorrect operating procedures or conditions. Take these specific precautions to help prevent kickback when using a chain saw:

- Be alert to the possibility of the pinching and kickback occurring.
- Firmly control the chain saw when the motor is running. Do not stand in line with the guide bar in case kickback occurs.
- Be aware of rotational kickback, which may occur when the rotating chain at the upper quadrant of the nose or tip of the guide bar touches an object. This action frequently causes a fast reverse reaction, kicking the guide bar up and back, essentially rotating the chain saw towards the operator. This reaction may cause you to lose control of the saw, which could result in serious injury.
- Linear or "pinch" kickback may occur when the wood closes in and pinches the chain in the cut. Pinching the chain along the top of the guide bar may push the guide bar rapidly back toward the operator. Pinching the chain along the bottom of the guide bar may pull the guide bar rapidly away from the operator. This reaction may cause you to lose control of the saw, which could result in serious injury.
- Maintain a firm grip with thumbs and fingers around the chain saw handles, and your body and arms positioned to resist kickback forces.
- NEVER overreach and do not cut above shoulder height! Keep proper footing and balance at all times. Always keep proper footing and operate the chainsaw only when standing on fixed, secure, and level surface.
- Use devices such as low kickback chains, guide bar nose guards, chain brakes and special guide bars that reduce the risks associated with kickback.
- Never remove the saw from a cut while the chain is rotating. When making a partial cut, or if power is interrupted, release the trigger immediately and don't remove the saw from the workpiece until the chain has come to a complete stop. A chain link could grab the workpiece, causing a loss of control.
- Never reach under the chain saw or workpiece. The chain is exposed under the workpiece and the saw guard cannot protect your body here.
- Release the switch immediately if the chain binds or the saw stalls.



- Turn the tool off after a cut is completed, and keep the saw away from your body until the chain stops.
- Do not force a saw chain into the material being cut. Allow the saw to reach full speed, then use a controlled motion while making the cut.
- Use extreme caution when cutting small size brush and saplings. The slender material may catch the saw chain and be whipped toward you or pull you off balance. When cutting a limb that is under tension, be alert for spring back so that you will not be struck when the wood fibers release.

### **When Done...**

When storing or transporting an electric chain saw, use a scabbard or carrying case to cover the guide bar and saw chain. Unplug or remove the battery.

### **Always Remember...**

Do not operate an electric chain saw when you are tired. Be alert at all times, especially during repetitive operations. Don't be tempted into carelessness due to a false sense of security.

## **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.