

All power tools can be dangerous if both general and tool specific safety instructions are not followed carefully. General safety instructions apply to all power tools, both corded and cordless.

## Start with a Safe Work Area



Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.



Do not operate power tools in explosive atmospheres, near flammable liquids, gases, or dust. Power tools create sparks, which may ignite the dust or fumes.

- Keep bystanders, children, and visitors away when using a power tool. Distractions can cause you to lose control.



## Electricity can be Dangerous

Grounded tools (three pronged cords) must be plugged into a properly grounded installed outlet. Never remove or cut off the grounding prong or modify the plug in any way. Do not use any adapter plugs.



Double Insulated tools have a polarized plug (one blade is wider than the other.) This plug will fit into an outlet only one way. Do not change the plug in any way.



Do not use AC only rated tools with a DC power supply.



Store battery packs away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects. These things can make a connection from one terminal to the other, shorting the battery terminals together and causing burns or fire.



- When using a power tool, don't touch grounded surfaces such as pipes, radiators, ranges and refrigerators. There is a higher risk of electric shock if your body is grounded.

## GFCI

In damp locations, only plug your tool into a Ground Fault Circuit Interrupter (GFCI). If the work area does not have a permanent GFCI on the outlet, use a plug-in GFCI. Wear rubber gloves and footwear.



Don't use or leave power tools in the rain or wet conditions.



Do not abuse the cord, carry the tool by its cord, or pull the cord to unplug it. Keep the cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.



Always hold the tool by the insulated gripping surfaces. Contact with hidden wiring or its own cord will make exposed metal parts of the tool "live" and shock the operator.

## Rules about Extension Cords

- When using a power tool outside, use an extension cord marked for outdoor use with "W-A" or "W". These cords are made for outdoor use.
- Extension cords with 3-prong grounding plugs must be plugged into 3-prong outlets when using grounded tools.
- Replace damaged or worn cords immediately.

## Amps

The wire gauge and length of the extension cord must be able to handle the amps of the tool. Find the Amps (A) on the tool's nameplate and use the chart to determine the necessary wire gauge for your extension cord length.

Nameplate Amps	Extension Cord Gauge			
	Cord Length in Feet			
	25'	50'	100'	150'
0-6	18	16	16	14
6-10	18	16	14	12
10-12	16	16	14	12
12-16	14	12	Not Recommended	

## Good Personal Safety is a Must

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



Always read and understand the tool's operator's manual, tool markings and the instructions packaged with the accessory before starting any work.

- Stay alert, watch what you are doing and use common sense when using a power tool.



Do not use tools when you are tired or under the influence of drugs, alcohol, or medication.

- Dress right. Do not wear gloves, loose clothes or jewelry. Contain long hair. Loose clothes, gloves, jewelry, or long hair can be caught in moving parts.
- Keep handles dry, clean and free from oil and grease.
- Be sure the power tool's switch is OFF before plugging it in or inserting a battery pack. Do not carry tools with your finger on the switch.



Remove adjusting keys and wrenches before turning the tool ON.

- Always keep a firm footing when using power tools. Be sure you have balance and control before you start the job.



Use safety equipment. Always wear eye protection. A dust mask, non-skid safety shoes, hard hat, or hearing protection must be used when needed. The reference to “safety goggles” or “safety glasses” in product specific sections provides potential options - always refer to the tool’s operator’s manual for the specific eye protection recommended, which should be marked as complying with current national standards.

- Unplug tool/remove battery before changing accessories.



Keep hands away from rotating or moving parts.

### Do the Job Safely

- Use the power tool accessories only for the jobs for which they were designed.



Secure and support the workpiece. Use clamps and a stable work surface. Do not hold the work by hand or against your body.

- Keep guards in place and working properly.
- Do not force the tool. Use the right tool for your job. It will do the job better and safer.
- Use only accessories recommended by the tool manufacturer. Accessories that may be suitable for one tool may become hazardous when used on another tool.



Do not touch the drill bit, blade, cutter or the workpiece immediately after operation; they may be very hot and may burn you.

- If a method of dust collection is available with the power tool, it should be used to reduce the risk of dust-related hazards.

### Maintenance Keeps Tools Working Safely and Effectively

- Do not use a tool if the switch does not turn it on and off. It must be repaired.



Look at the tool before using it. Are moving parts misaligned or binding? Is anything broken? Damaged tools must be fixed before using them. Develop a maintenance schedule for your tool.

- Maintain accessories carefully. Keep blades and bits sharp and clean.
- Take your tool to be serviced by qualified repair people. Service or maintenance performed by unqualified personnel could result in a risk of injury. For example: internal wires may be misplaced or pinched, safety guard return springs may be improperly mounted.
- When servicing a tool, use only identical replacement parts. Follow instructions regarding maintenance in the tool’s operator’s manual. Use of unauthorized parts or failure to follow the maintenance instructions may create a risk of electric shock or injury.
- Clean and lubricate a tool only as directed in its operator’s manuals. Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.
- Maintain labels and nameplates. These carry important information. If unreadable or missing, contact the manufacturer for a replacement.

### When Done, Store the Tools out of Harm’s Way



To avoid accidental starting, unplug the cord, remove batteries or lock off the switch when the tool is not being used, when changing accessories, and when adjusting or cleaning tools.

- Keep tools out of the reach of children and people unfamiliar with the tools.

## Electric Chain Saws

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.

### 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.



Always read and understand the tool's operator's manual, tool markings and the instructions packaged with the accessory before starting any work.



Always wear safety goggles or safety glasses with side shields complying with current national standards, and a full face shield when needed.



Use the appropriate mask or respirator in dusty work conditions.

Wear proper hearing protection, as needed.

- Dress right. Do not wear gloves, loose clothes or jewelry. Contain long hair. Loose clothes, gloves, jewelry, or long hair can be caught in moving parts.
- Crowded, cluttered work areas that can cause tripping or loss of balance are particularly dangerous.
- 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.

### 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 do the job safer and faster.

- Use only 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 an electric chain saw for cutting 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 can not 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. Do not cut into existing walls or other blind areas where electrical wiring may exist. If this situation is unavoidable, disconnect all fuses or circuit breakers feeding this work site.

### 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 electric chain saws when not in use, before servicing, and when changing accessories and attachments, such as the saw chain and guard.

- 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 brake guard (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 an electric chain saw while in a tree unless specifically trained to do so. Improper operation of a chain saw may result in personal injury.

- Maintain a firm grip with thumbs and fingers around the chain saw handles, and your body and arms positioned to resist kickback forces. Do not cut above shoulder height.



- NEVER overreach! Keep proper footing and balance at all times.
- 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.

## 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 an electric chain saw:

- Be alert to the possibility of the blade binding 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 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.



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.

## 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. Saw chains are extremely unforgiving.