



Zuni Safety and Injury Prevention Program

Safety and the Chainsaw

You should use all tools with caution. Chainsaws are no exception. They're powerful tools. A saw chain at full throttle moves at over 50 miles per hour and commands extra attention to safety.

There are several safety features you will commonly find on a homeowner-model saw. Some features below are available only on gas-powered saws:

- **Chain brake** - designed to stop the chain if kickback occurs.
- **Chain catcher** - helps reduce the risk of a broken or derailed chain striking the operator.
- **Low-kickback chain** - includes links designed to reduce the risk of kickback.
- **Low-kickback bar** - has a small tip radius to reduce the risk of kickback.
- **Bar tip guard** - covers the bar tip to keep the tip of the saw from touching the wood, reducing the risk of kickback.
- **Hand guard** - protects your hands from kickback.
- **Chain oiler** - provides lubricant to the bar and chain to prevent overheating and binding.
- **Antivibration features** - reduces stress to your joints and provides comfort.
- **Throttle lockout trigger** - prevents accidental activation of the throttle control; allows the motor to idle without engaging the chain.
- **Stop switch** - allows the operator to shut off the saw without releasing the saw.
- **Spark arrester** - helps prevent sparks from being expelled by the exhaust and becoming a fire hazard.
- **Bumper spikes** - help maintain the saw's position against the wood.

Safety and the Sawyer

Always follow the manufacturer's instructions for use, maintenance and safety, including safety gear. Consider taking a course in chainsaw use and safety.

Before you even think about cranking the saw and starting to cut, protect yourself. ALWAYS wear protective clothing and gear, including:

- **Leg protection** such as chaps or cut-resistant pants
- **Hard hat**
- **Gloves** with an enhanced gripping surface and cut resistance
- **Eye protection** with side shields
- **Hearing protection** such as earplugs or earmuffs
- **Boots or shoes** with steel toes and non-skid soles

Good to Know

Some hard hats include built-in hearing protection and a face shield.

Making the Cut



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- ❖ **Felling** is the act of cutting down (or dropping) a tree. Look and look again at what you're going to be cutting — especially where it will fall. Always determine the angle at which the tree will fall and make the correct cuts. Plan a safe place to stand as the tree falls. Falling trees tend to kick straight back. Make sure no one is within a distance of twice the height of the tree you plan to fell. Before you start cutting, plan a clear avenue to escape the falling tree, moving away from the trunk at an angle, not straight back. Clear away obstacles and debris that may cause you to trip.
- ❖ **Limbing** and **bucking** are what you do to the tree you just dropped. Just because the tree is down, don't let down your guard. Taking off the limbs (limbing) and cutting the tree into manageable pieces (bucking) still require caution. Always work on the uphill side when cutting. See how the tree is balanced and which way it will move if a supporting branch is cut.

Binding, kickback, pushback and pull-in are dangerous situations you face when cutting. In any of these situations the operator loses control of the saw.

- ❖ **Binding** (or pinching) occurs when the material you're cutting clamps down and stalls the cutting chain inside of the kerf (or cut). Binding can lead to kickback, pushback and pull-in. Be aware of how the weight of the branch or log can shift and bind the saw when you are cutting. Learn cutting techniques that help avoid binding. The proper use of appropriate felling and bucking wedges can also help prevent binding.
- ❖ **Kickback** occurs when the saw tip touches an object or when the branch or log you're cutting pinches the blade. This causes the reverse action of the guide bar, throwing the saw up and back towards the user. A saw cutting at full throttle can kick back in one-tenth of one second — faster than a person can react. To minimize kickback, never cut with the saw's tip. Always make sure you know the position of the saw tip and be aware that the upper part of the saw tip is the area most prone to creating kickback. Also consider how cutting the branch or log can cause the weight to shift, potentially pinching the saw.
- ❖ **Pushback** occurs when the chain at the top of the bar stops suddenly due to pinching or hitting a foreign object when cutting. Pushback instantly sends the saw back toward the user. Minimize pushback by being aware of possible shifts in weight of the material you're cutting that can bind the saw. Cut only one branch or log at a time. When undercutting, draw the blade out of the cut without twisting it.



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- ❖ **Pull-in** occurs when the chain at the bottom of the bar stops suddenly due to pinching or striking a foreign object, immediately drawing the saw forward. To help minimize pull-in, start your cut with bumper spikes set against the branch or log you're cutting and make sure you cut only when the saw is up to full speed. Be aware of weight shifts or situations that can bind the saw.

Caution

Be aware of the effects of gravity on the wood you are cutting. Gravity will cause a log to bend when it's cut, resulting in compression and tension. Compression can lead to binding of the saw and tension can cause the wood to spring out when released.

Chainsaw Dos and Don'ts

Above all, read the owner's manual carefully before operating a chainsaw. The following list is not all-inclusive, merely a reminder to keep safety first in your mind at all times.

Do

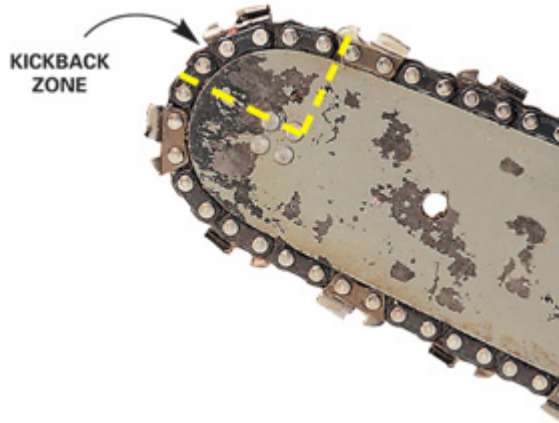
- Keep the cutting area clear of spectators and pets.
- Work with a partner if possible.
- Avoid overhead hazards, such as dead, hanging limbs that may fall and utility lines.
- Keep the chain clean, sharp and lubricated with the correct oil.
- Make sure the chain oil supply is full before starting the saw.
- Be careful of inclines and ground that is uneven.
- Stand to the side of what you're cutting.
- Cut at full throttle; bring the saw up to speed before starting cuts.
- Use a suitable cord when operating an electric saw. Follow the saw manufacturer's instructions for selecting a compatible cord.
- Keep both hands on the saw handles.
- Let the saw come to a complete stop before reaching for the chain or bar.
- Turn off the saw or activate the chain brake when carrying the saw.
- Carry the saw so that the bar is pointing behind you.

Do Not

- Do not wear loose clothing.
- Do not use an electric chainsaw in rain or in a wet or damp area.
- Do not use the tip to cut.
- Do not cut with a chainsaw above shoulder height.
- Do not refuel a hot saw.

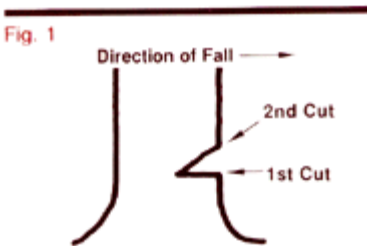


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Kickback zone on a chainsaw

Avoid cutting with the "kickback zone" of the chainsaw bar. It can cause the saw to kick back toward you



>5" Need to have a face cut!!!

Use *All* Personal Protective Equipment (PPE)



Never use alcohol and/or drugs before or while operating a chain saw

