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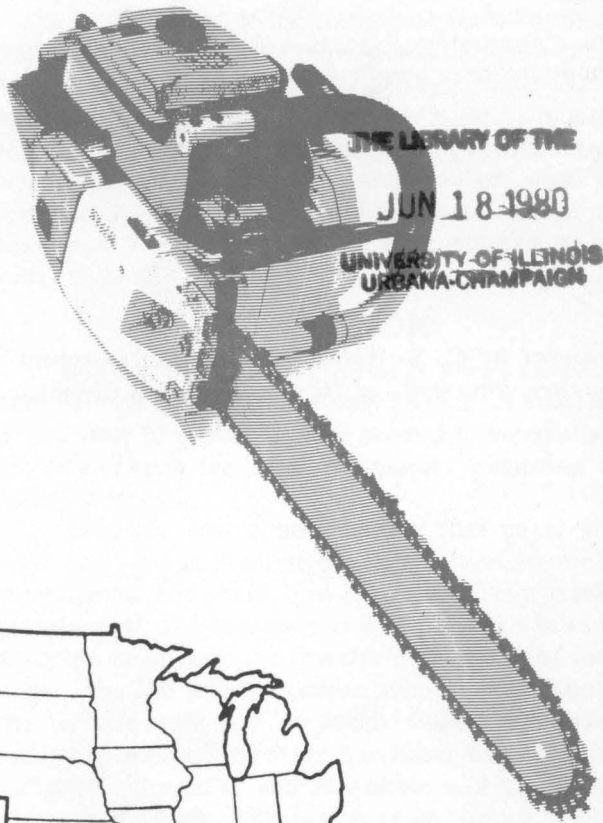
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Chain Saw Safety Tips

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So you now own a power chain saw! When you bought it, you not only acquired a very useful tool, but you also acquired the safety hazard that accompanies its operation. Here are some suggestions for safely using the chain saw at home as well as in the woods. Although the suggestions concern the power chain saw, other cutting tools, such as axes and splitting mauls, are needed to harvest timber, and they, too, must be used with caution.

Do not be afraid of the tools; just learn to master them and use them with caution and common sense. And please remember that these suggestions are no substitute for *experience*. You may want to practice with your new saw, felling and bucking (crosscutting) or pruning only smaller trees until you get some experience. It is safer to use both hands to operate the chain saw — even if yours is light enough to use with one hand.

PREPARATION

1. Be sure to check with the landowner as to which trees may be cut and what stump heights are required. If you plan to cut on private property, especially in the city, check the local ordinances regarding the felling of trees.

2. Read the instruction manual that came with your saw. Your manual describes how to mount the guide bar and chain, how to mix the fuel and lubricate the saw, and how to start it. Most chain saws are designed to operate the throttle with the *right* index finger; the left-handed person who tries to control the throttle with the *left* index finger will have a limited amount of the front handlebar to grasp comfortably and safely, and the chain will be running closer to the body. This is a more hazardous position for inexperienced operators.

Some models have a hand guard that also operates a chain brake, a safety feature that promptly stops the chain from running when the mechanism is tripped. Learn how to shut off the saw instinctively without looking for the switch. You can ask the dealer about these points. Ask him to demonstrate the saw.

Electric-powered chain saws are rarely used in the woods; they are practical around the home, where they are used to fell, buck, limb, and prune trees. Special safety tips for electric-powered chain saws are listed at the end of this circular.

PRECAUTIONS

Protective Clothing

A hard hat is recommended, and goggles will protect your eyes against flying splinters and chips. Because a power saw is noisy, you should wear hearing protectors. Leather gloves, hard-toe shoes, and timber chaps would help protect limbs that might come into contact with the chain. Do not wear slippery shoes or baggy clothing that could catch in the brush and cause you to fall; always watch your footing while working in the woods.



Refueling

Taking the same precautions that you would with your gasoline-powered lawnmower, stop the engine and do not smoke when refueling your chain saw. Do not spill gas on a hot engine. Use a filtering funnel or a gas can with a flexible hose to fill the fuel tank. Do not start the saw where you refuel it, and be extra cautious of fire during dry weather.

Carrying the Saw

Shut off the saw when carrying it from one tree to the next if working conditions are hazardous — heavy brush, slippery ground surface, or steep slopes. Carry the saw with the guide bar pointing to the rear, or point the bar to the front if you are going downhill.

First Aid

Even if you do not need an assistant, someone should be with you in case of an accident. Have the telephone number and address of the nearest emergency unit, and always carry a first-aid kit when you work in the woods. If someone is cut, cover the wound with a clean cloth and press hard to stop the flow of blood. Get the injured person to a doctor or hospital *immediately*.

HOW TO FELL A TREE

Preparation and Positioning

1. You can fell large trees with the small, lightweight saws that homeowners usually buy, but it is a risky job for inexperienced, nonprofessional workers and demands extra caution. First, remove any wire or nails that are in the wood you plan to cut. Determine where you want the tree to fall. Look at the top. Is it unbalanced with heavy limbs on one side? How much wind is blowing? What about other trees, buildings, or power lines in the area? If these hazards exist, perhaps you should hire an experienced worker to do the felling while you limit your work to limbing and bucking the down tree. Examine the top to see whether there are any “widow makers” (dead limbs or branches) that may fall while you are cutting the tree.

2. Clear all brush, snow, and rocks from around the tree that might interfere with the use of the saw, or that might block your way to a safe retreat when the tree starts to fall.

3. Pick a safe place where you plan to stand when the tree falls. Remember that a gust of wind or a rotten place in the trunk may cause the tree to fall in the wrong direction. The tree may bounce, kick backwards, or roll when it hits the ground. You usually are safe standing behind a larger tree off to the side and away from the tree you are cutting. When trees are cut on a hillside, the saw operator must stand on the uphill side of the tree. (The same recommendation also applies to limbing the down tree or bucking the trunk into firewood or logs.)

Method

1. Assuming that the tree stands straight and has a balanced top, and that there is little or no wind, oil the chain, fully open the throttle, and undercut (notch) the tree on the side in the direction of fall (Figure 1). Cut the notch to a depth of about one-fourth to one-third the diameter of the tree.

2. Stand beside the tree with your feet well braced and comfortably spread for good balance. Put in the "back cut" opposite the notch (Figure 2). The back cut should be an inch or so higher than the bottom of the notch, square with the trunk, and parallel to the bottom of the notch. Then place the bumper spikes near the engine firmly against the trunk, and start cutting. Pivot the saw about the bumper spikes and into the trunk, using a fanlike motion and moderate pressure to feed the chain into the wood. It is not necessary to move the saw in a sawing motion: the powered chain provides the cutting action. Pivot the saw, then move the bumper spikes to a new location and continue feeding the chain into the cut. Draw the saw out of the cut slowly and with the chain running. If you must cut without the bumper spikes in contact with the tree, or if the saw does not have spikes, be careful that the saw does not jerk and throw you off-balance when the chain contacts the bark or wood.

Fig. 1

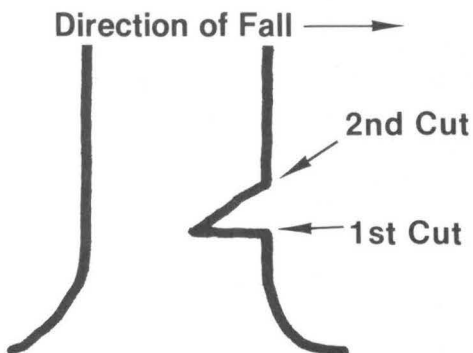


Fig. 2

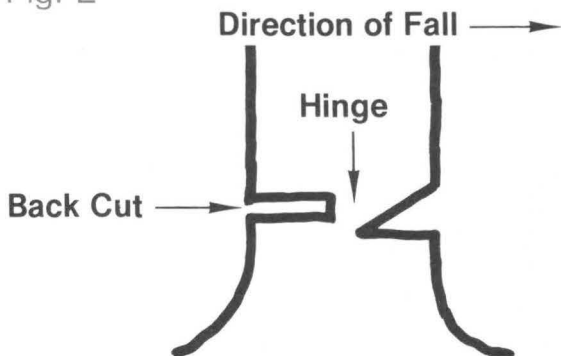
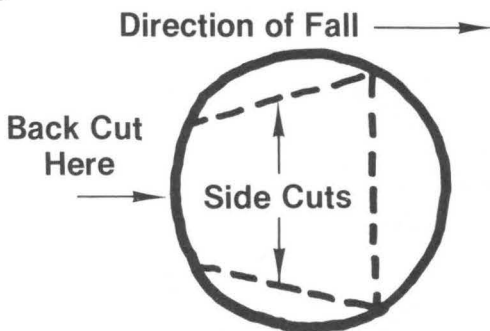


Fig. 3



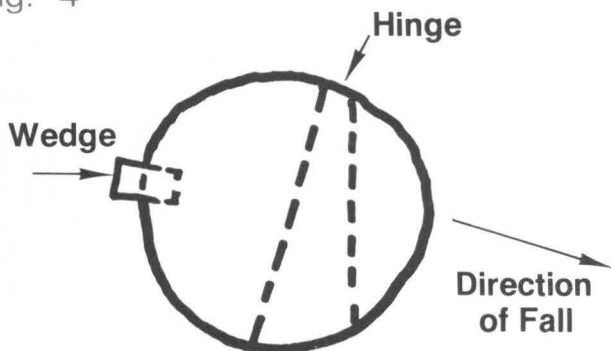
On trees 16 inches or larger in diameter, you should make two extra side cuts to prevent splitting of the butt log (Figure 3).

3. Do not cut through to the under cut; be sure to leave a hinge (Figures 2 and 4). As the saw approaches the notch, slow down and carefully control the rate of cut. You should have your wedges and maul handy because you may need to drive a wedge behind the saw to prevent pinching of the cutter bar. Wood or plastic wedges should be used if there is danger that the wedge tip may hit the chain. Wedges also may be needed to adjust the direction of fall by "swinging" the falling tree to one side or the other. Leave some "holding wood" (hinge) that is thicker at one side of the back cut than the other (Figure 4).

4. If the tree is small enough (6 to 8 inches) that an assistant can push it, you will not need a wedge. Both persons must be alert, however, and plan to leave the area without stumbling over each other as the tree starts to fall.

Caution: Always make a last-minute check to see that other persons are out of danger before completing the back cut. Yell "Timber!" when the tree starts to fall. Then stop the saw, quickly set it on the ground away from the stump, and retreat to your preselected place of safety behind a larger tree. Be alert to the possibility of kickbacks or bounces when the trunk hits the ground. Watch for falling limbs!

Fig. 4



Lodged Tree

If the tree lodges in a nearby standing tree, its removal is a dangerous job. Proceed with extreme caution! First, consider the hazards involved. Has the lodged tree been cut free from the stump? If not, then free it with the saw or an axe. A pry pole, bar, cant hook, or peavey can be used to roll the tree off the stump and out of the standing tree. Sometimes the tree can be pulled free with a long cable or chain and a tractor. Be sure that no harm will come to the tractor driver or the equipment as the tree comes free. Be careful that the cable does not snap as it is pulled and hit the driver or a nearby worker.

As a last resort, a third tree may be fallen across the lodged tree, or the tree supporting the lodged tree may be cut. The latter alternative is a very dangerous job that requires experience; you probably should get professional help.

TRIMMING AND BUCKING

Positioning

1. Do not work too close to your helpers.
2. Do not hold the saw higher than your waist.
3. Trim the limbs from the fallen trunk while standing on the opposite side of the trunk. If the down tree is on a hillside, or if the trunk is likely to roll when some of the limbs are cut, stand on the "uphill" side.

Method

1. Start cutting the limbs from the down tree at the butt end and work towards the top. Limbs that are bent over and supporting the down tree should be cut first on the *under* (compression) side, then on the top side; otherwise they may split lengthwise as the tension is released and spring back to injure you. If you are cutting the tree into firewood¹, start at the tips of the branches and move towards the trunk, cutting the limbs into lengths of 16 to 18 inches. The branches will be flexible — be careful that they do not whip about as the chain comes into contact with them.

¹ Single copies of "Firewood for Fireplaces" can be obtained from the Extension Forester, 211 Mumford Hall, Urbana, Illinois 61801.

2. When the branches have been removed, start bucking the trunk into firewood or logs. Be alert to the possibility that the saw may pinch and kick back to throw you off-balance. To help prevent pinching, start sawing partway through the trunk (or limb) from the bottom, then finish the cut from the top side, or use a wedge. See that you have a safe place to stand while bucking the trunk and limbs, particularly when they are likely to roll or shift position.

3. Do not run the saw into the soil! It dulls the chain. Keeping your tools sharp and in good working order is part of your safety program.

PRUNING

Caution

We recommend that you do *not* stand on a rickety ladder to prune a standing tree with any kind of saw. Pruning a standing tree from a ladder is very dangerous. Use a pole saw and stand on the ground to reach high branches. (If you must use a ladder, see that it is stable and well braced. Work without over-reaching to the side. Use a hand saw for cutting smaller limbs, and use the other hand to maintain your balance on the ladder.) Hire an experienced worker to prune any larger limbs that may require a power saw.

Method

To prune low limbs of standing trees, stand on the opposite side of the trunk from the limb being pruned. Make the first cut with the power saw on the under side of the larger limbs about 6 inches away from the trunk, then complete the removal with a cut on the top side, starting a little farther out on the limb. This method will prevent stripping of the bark from the tree, which is especially important in the spring of the year when the bark cells are starting to grow. Finally, cut the stub close to the trunk. The smaller branches can be cut close to the trunk with one cut, starting from the bottom side.

SAFETY TIPS

1. Follow steps in the instruction manual for operation and maintenance of your saw.
2. Wear protective clothing; have a first-aid kit handy.
3. Observe precautions in refueling and carrying the saw.
4. Remove nails, wire, etc. from the trunk.
5. Check the top of the tree for "widow makers."
6. Determine where the tree will fall — be sure that no buildings, power lines, or other trees will be hit.
7. Select a safe place to stand when the tree falls.
8. Clear debris from around the tree.
9. Notch the tree on the side in direction of fall, then make corner cuts and back cut.
10. Yell "Timber!" as the tree falls.

Safety Tips for Electric-Powered Chain Saws

1. Read the manual supplied with your saw.
2. Use a heavy-duty, 3-wire, outdoor extension cord for power tools.
3. Be careful not to trip on the cord; disconnect it while going from one tree to the next.
4. Do not cut through the cord.
5. Do not use while standing in a wet area.