



# Tips for felling a tree keep



By Bill Kohlbrand

You've read the preceding "how-to" article about chainsaw sense and wood cutting and are familiar with the techniques. Now that you know about compression and tension, we'll talk about felling a tree.

To determine the "compression" side of the tree, we size it up using some criteria:

- Lean
- Limb placement
- Snow load
- Wind

Usually, these few factors will determine which way a tree wants to fall. These other factors will help determine the intended lay of a tree:

- Species (woods of different species vary in strength and bending ability)
  - Powerlines and other overhead hazards
  - Live or dead (as a rule, dead wood doesn't bend as well as live wood, so its hinge may be more brittle).
  - Other nearby trees
  - Branches of nearby trees
  - Stumps or rocks that can cause a tree to jump off of its stump
  - Tree defects such as rot, dead limbs, catfaces (blemishes in wood caused by a partly healed scar) and vertical cracks.
- If the weight of a tree

# you safe, the job easier

causes the tree to split vertically up the tree, a “barber chair” can occur. These can be quite violent and happen quite suddenly. Barber chairs can also occur when a tree starts to fall before the saw removes enough wood to form a hinge.

- Loose rocks that may become dislodged and roll toward you.
- Obstacles such as fences, homes, or vehicles.
- Plan ahead so you don't fall trees across each other.

Since you've determined which way the tree should fall, decide if it will work. There must be a clear path for the tree to fall through the tree canopy as well as a good place for the tree to land. In addition, you must have an escape route between 90 and 135 degrees away from the intended direction of fall. If it looks like the plan will work, clear the work area and escape route.

## **Make the Face Cut** Photos 1, 2, 3

Two cuts are needed to make a face cut (notch). A sloping cut and horizontal cut must meet perfectly to form a good hinge. If these cuts don't meet on the first

try, keep working until they do, but try not to get too deep. Notch the tree to the direction you want it to fall.

While cutting, I like to kneel on one knee so I can easily look up and escape falling objects if necessary. Use the gunning marks (see photographs on page 24) on the side of most saws. They act like a gun sight and help line things up. I make the angled part of the face cut first because I can then look into the kerf and make the cuts meet more easily. By looking into the kerf, I know my horizontal cut won't go too deep. Check the face cut, by placing the saw against the apex of the face cut, and make sure the tree is still aimed the way you want it to fall.

When you take the wedge of wood out, examine it for condition. Sound wood is needed to form a hinge.

## **Make the Backcut** Photos 4, 5, 6

The backcut should be a level cut to meet the face cut or a little higher. Leave a strip of uncut wood to form a hinge. The thickness of wood needed to form a hinge is dependent on the species and condition

of wood. You need sound wood to form a hinge. Place a wedge in the backcut when there is room. If planning on changing the lean with a wedge, remove bark where the wedge will be inserted. Wedges are more effective when they are lifting wood instead of pushing against bark. Watch the tree top as much as possible! You can make minor adjustments to the falling tree by taking a little extra holding wood off of one side or the other. If using the gunning sights, imagine you are steering the tree. The tree will pull to the side with thicker-holding wood. The top will move more than the saw kerf. Another way to detect tree movement is to watch a wedge. The back of the wedge will fall as the tree starts to fall. If the wedge starts to go up, the tree is setting back, and the wedge needs to be pushed in if possible. As the tree falls, cut a little more holding wood off, but don't cut it completely! All control of the tree is lost if you cut the holding wood off. Shout a warning, just in case someone wandered into the cutting area. Back away from the tree as it falls, but don't take your eyes off of it. It's best to retreat at

least 20 feet – better if it puts you behind a big, solid tree. Avoid using a snag for protection. After the tree falls, wait a few seconds to let things settle. Be sure to look up for any potential overhead hazards. Practice is the key. Start with low complexity trees, preferably smaller trees with plenty of open ground to fall them in, and work into more complex ones that require more precision. You can check your accuracy by painting a spot where you want the tree to fall, and see if you can hit it. Don't be complacent. Small trees can injure you as much as large ones. Take time, and pay attention to what you are doing. Once you understand compression and tension, and basic cuts and why they are used, you will be on your way to being an ace woodcutter.



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