



## Training notes from the woods & the classroom

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# Proper Method of Bore Cutting Revisited

*By Lee Schauman*

Experience has shown us that the bore cut or plunge cut is best suited for staying in control of the tree instead of the tree controlling the sawyer. It also makes directional felling much more predictable and generally produces better quality butt logs because of the reduction of stump pull, fracturing, and side scarring.

To use this technique however, it is strongly suggested that professional training be a prerequisite. Without proper training, understanding the physics of this technique might be vague and/or totally misinterpreted.

One of the first items that must be mastered is to know the reactive forces to the bar and chain. Understanding that bore cutting done incorrectly can provide severe kickback potential, it is imperative that knowing how to prevent kickback during the bore cut is critical. Knowing the reactive forces of the bar and chain is the first step in that process. Remember that the tip of the bar is always used to start the bore cut, and that using the bottom half of the tip of the bar (attack corner) will help prevent kickback, while using the top half of the tip of the bar (the kickback corner) will almost always result in kickback, or the potential for kickback.

That being said, properly performed, the safety and quality aspects of bore cutting cannot be overstated. Safe because of the ability to control the tree, both in its release and its direction of fall, and quality because of the ability to reduce stump pull, side scarring, and barber chairing.

Basically, the bore cut technique starts with using the open face notch, which was discussed in earlier articles. Then, starting with the bottom of the tip of the bar, (the attack corner) penetrate the trunk of the tree at the same level as the notch cut apex (where the two notch cuts meet) and far enough behind the notch to ensure enough hinge wood. While performing the bore cut, be sure the saw is running at maximum rpms and is sharpened properly – this will allow the saw to bore smoothly into the trunk of the tree. Always be sure the travel of the bar during the bore cut is AWAY from the hinge so the hinge will not be cut off or cut too thin. The size of the hinge is determined by a simple formula. The thickness of the hinge should be approximately 10% of the tree's DBH, while the length of the hinge should be a minimum of 80% of the tree's DBH. The thickness can vary from 10% to something less depending on the lean of the tree and the requirement to control its direction. As the sawyer gains experience in this technique, he/she will make those adjustments, but the beginner should always use this formula.

As the bar exits the opposite side of the trunk of the tree, the sawyer can come forward toward the notch to set the proper thickness of the hinge. Once that process is complete, the sawyer can cut back towards the back of the tree, and depending on the lean of the tree, and by which technique the sawyer feels comfortable with, the tree can then be released by pulling the saw out of the cut after establishing holding wood or trigger wood, or by continuing the bore cut completely through the back of the tree. If trigger wood is established it should be approximately two times the thickness of the hinge wood, to be sure the tree is secure prior to its release. If continuing the bore cut is the technique used, the sawyer should stop momentarily to look around to be sure no one is in the danger zone prior to cutting the trigger wood from the inside out.

To prevent side scarring during the felling technique, cutting the sides of the hinge deep enough to sever the last 5 years of tree growth, (generally no more than one inch on either side of the hinge,) will allow the hinge to control direction and release without side scarring.

Remember, using the boring technique is a specialized felling technique which normally requires professional training. Attempting this technique without proper training can create severe kickback of the saw and possible injury.

Next month, we will discuss using the boring technique to cut large trees.

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