



Logger Safety Initiative Quarterly Training

Why am I receiving this LSI Safety Training Packet?

As an LSI participant, you are required to annually attend approved LSI Employer Logger Safety program training. There are two parts to the required training: Formal Training and Safety Training (see the attached LSI Training Requirements for more details). This packet satisfies one of the four required Safety Trainings. You must also ensure that all of your workers receive four LSI required trainings per year.

How do I provide the training to my employees?

You and your delegated supervisors, if delegated, and all employees engaged in manual logging operations must participate in at least four LSI trainings on an annual basis. If you have employees that do ground operations, even if only occasionally, review the “In the Clear Rigging” safety training (found on our website) materials in detail and discuss the scenarios with employees.

What documentation is required?

You will need to document that the training took place as part of your safety minutes. Be sure staff has signed the safety meeting sign-in sheet. The completion of the training will be assessed at the annual DOSH LSI Consultation.

Quarter 2 2019 Timber Cutter Training

In August 2015, a timber cutter owner and an employee moved into a strip to begin working. The employee had three years of experience timber falling. The owner observed the cutter as he felled an alder snag. Satisfied that the cutter understood the day's plan, the owner left to join a third cutter because there was not enough room for three cutters in the strip.

The employee cutter attempted to fell an alder that was leaning heavily. The cutter made the face and back cut in the alder, but the tree failed to go over because the top became entangled with an adjacent alder. The cutter then moved to begin cutting the adjacent alder, which was also heavily leaning. The cutter put the face cut in, moved around to put the back cut in, and started to saw. He heard a pop, started to saw faster to keep the tree from splitting and sever the tree from the stump. However, the tree still split, and as the tree started to fall, it barber chaired, broke off, and the tree stem pivoted. As the cutter ran away via his escape route, he slipped on wet ground, fell backwards and was pinned with his saw under the tree.

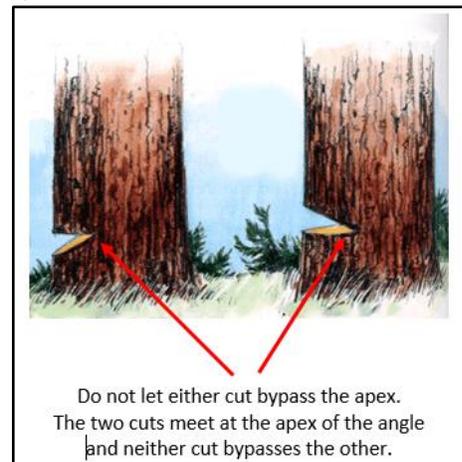
It was determined that because the timber faller didn't want to risk looking on the other side of the tree after it popped, he didn't see how much holding wood was left on the stump. There was about an inch on the near side of him and about thirteen inches on the far side of the stump.

This training reviews different undercuts, Dutchman and the importance of proper hinge wood. This training will not discuss overcoming falling difficulties as it relates to these topics.

Before you start cutting

As in any timber cutting situation, you must first address safety. Become aware of your situation and look for any possible hazards, then move through a mental checklist of falling the tree.

- Determine the direction you want the tree to fall.
- Look for overhead hazards such as dead limbs or tops, loose bark, power lines, etc.
- Make sure the entire area is clear of falling hazards.
- Plan and clear your escape route.
- Check the wind conditions. Wind can cause a tree to fall prematurely or fall in another direction.
- Verify no one is in the cutting area.
- Make sure you have outfitted yourself in all of the required personal protective equipment. (Head, eye, leg and ear protection.)
- Before you start, ensure your saw has been inspected and is in good working order.



The undercut

You will know if you have executed a quality undercut because the tree will fall in your intended direction. A proper undercut should be one-fourth to one-third of the tree's diameter.

Undercut openings must be wide enough that the tree is committed to fall properly. The face opening of the undercut should be no less than one-fifth the diameter of the tree. The horizontal part of the undercut must be level, except when using an open face undercut. The two cuts that form the undercut must not cross where

they meet, except where a Dutchman (Intentional Dutchman or swing cut) is required on either side of the cut. The undercut must not be made while other workers are in an area into which the tree could fall.

Different Notch Style Guide

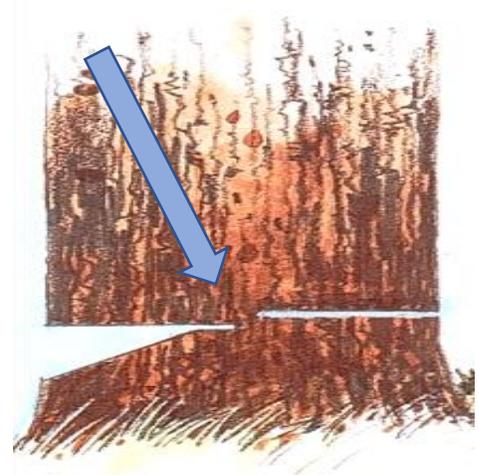


Total angle	ideally 90 degrees; at least 70 degrees	45 degrees	45 degrees
Top Cut	angled downward 70 degrees	angled downward 45 degrees	flat horizontal
Bottom Cut	angled upward 20 degrees	flat horizontal	angled upward 45 degrees
Back Cut	horizontal; at the same height as the corner of the notch	horizontal; at least 1 inch above the bottom cut	horizontal; at least 1 inch above the top cut
Depth	1/4 - 1/3 of tree diameter	1/4 - 1/3 of tree diameter	1/4 - 1/3 of tree diameter
Point of notch closure	just before tree hits ground	middle of fall	middle of fall
Degree of safety	high	medium	medium
Advantages	greater accuracy of felling into target area hinge stays intact until tree hits ground less danger of kickback and other out-of-control movement	familiar to many loggers	saves slightly more wood familiar to many loggers
Disadvantages	hinge may have to be cut off	hinge breaks early	hinge breaks early

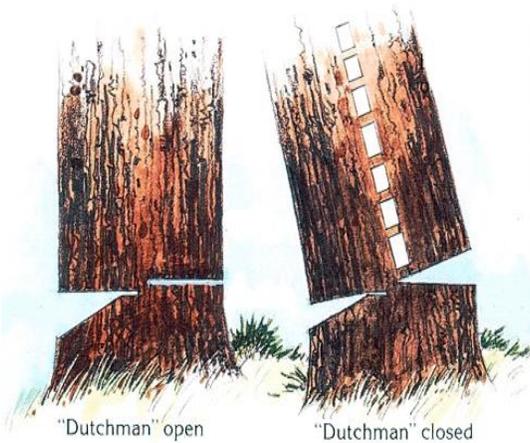
A “Dutchman” is one of the main causes of injuries and fatalities

An unintentional Dutchman is created when the horizontal cut extends past the sloping cut. The result of unintentional Dutchman is that, as the tree starts to fall, the Dutchman closes, usually breaking the holding wood and forcing the tree away from its intended direction of fall.

Shelf of wood called a “Dutchman”



A “Dutchman” acts like a splitting wedge, which causes a “Barber Chair.”



The hinge

The purpose of the hinge is to provide sufficient wood to hold the tree to the stump during the majority of the tree's fall and to guide the tree in the intended direction. The position of the hinge will affect the direction of fall. The size of the hinge is important to prevent splitting, fiber pull, barber chairs, and other undesirable and unsafe actions.

- The length of the hinge should be 80% of the diameter of the stump.
Example: For a 12-inch diameter tree the hinge should be 9.6 inches long (12 inches \times 0.8).
- The width of the hinge should be 10% of the diameter of the tree at stump.
Example: For a 12-inch diameter tree the hinge should be 1.2 inches wide (12 inches \times 0.1).
- The hinge on a tree with no side lean should be perpendicular to the intended direction of fall.



Long-term evidence

Stumps will tell the story of how the tree was cut and the evidence stays there for a long time. You can evaluate your own work by looking at the stump. Anyone can cut a tree down if they cut on it long enough but doing it safe means following the correct procedures.

