

Dispatch from the Saw Shack – The Most Important Crosscut Saw Tool – Wedges and an Axe

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A truism for crosscut saw work - it is not the saw; it is the sawyer. If the crosscut saw gets stuck by bind in a downed log you are trying to clear, it is on the sawyer. A successful crosscut sawyer for Wilderness trail work must be excellent with the use of wedges and an axe to overcome bind.

What is bind? Bind is compression in a log that squeezes and stops the saw. Bind, unless extreme, is overcome with wedges to keep the kerf open and the saw running freely. The kerf is the cut, or slot, created by the saw as wood fibers are removed. If the kerf closes due to bind, it will cause the saw to drag and can completely bind or stop the saw. Skilled crosscut sawyers always carry a wedge kit with an assortment of wedge types and a good single bit axe with a poll for driving wedges. As soon as the back of the crosscut saw is deep enough into the wood, the saw team sets a wedge. Even if the saw is running free with no sign of bind, a skilled sawyer always sets a wedge. As the cut advances, the wedge is driven deeper to open the kerf and keep the saw running free. Additional wedges are set and driven at the 10 and 2 o'clock positions and then at the 9 and 3 o'clock positions in a top cut log. These additional wedges mitigate side bind that may develop as the log is cut and help keep the saw running free in the kerf. Examples are below.

Caption below ↓ – Top, side and hanging wedges set in hemlock down to keep saw running free, Ramsey's Draft Wilderness, Virginia



Caption below ↓ – Wedges in large spruce log to keep log from dropping and allow the saw to run freely, Shining Rock Wilderness, North Carolina



Caption Below ↓ – Driving wedges to keep kerf open, Ramsey's Draft Wilderness, Virginia



Caption Below ↓ – Wedges set in large oak log to overcome top and side bind, aluminum wedges with additional plastic wedges were necessary to lift the log and keep kerf open for successful top cut, Three Ridges Wilderness, Virginia



The wedge kit for Wilderness trail maintenance needs to include at least one aluminum felling wedge, one or more hard head (steel) plastic felling wedges, and several plastic felling wedges. The aluminum wedge is necessary as the first wedge set in the top cut to drive the kerf open and lift the log. Plastic wedges cannot be driven hard and often fail to drive in hard, heavily top bound logs. The plastic wedges are good for holding kerf open and can be driven hard after an aluminum wedge or a hard head plastic wedge is set in the log.

The axe for Wilderness trail maintenance needs to be sharp and heavy enough to drive wedges in the size of down to be removed. If bind is so bad it cannot be overcome with wedges, the sawyer may need to chop out the bind with their axe. Some heavily end-bound or side bound log downs can only be removed with an axe. Axe skills, in addition to saw skills, are therefore essential.

Examples of wedge kits and axes for Wilderness trail work are below. The “light wedge kit and axe” are good for logs up to about 14-inch diameter. The “large log wedge kit” is good for all sizes of downs and uses a heavier axe (3.5 lbs or more axe head weight) to drive wedges.

Caption below ↓ – Light Wedge Kit and Axe for Wilderness Trail Maintenance, good for up to about 14-inch diameter logs, 2.5 lb. head axe



Caption below ↓ – Large Log Wedge Kit for Wilderness Trail Maintenance, 3.5 lb. plus head axe

