

Technical Aspects of Rigging

Rigging for tree removal is more complicated than climbing and demands experience and an understanding of the effects on the rope with the various knots and hitches used. It is widely known that knots can significantly reduce rope strength and corresponds to a reduction in the work load limit recommended by a manufacturer. The rigging techniques and knots presented here are meant to give a general overview of the basic principles of rigging. Prior to beginning any tree work, it is important to thoroughly examine the tree for structural imperfection, faults or weaknesses that could compromise safety. This text is not a substitute for proper training.

One of the most potentially dangerous aspects of rigging is "chunking out" large trunk sections of wood that are rigged vertically upon themselves.

Safety, as always, is the primary concern. It is important when rigging to minimize shock-loads and manage friction efficiently. This is easiest to achieve when using arborist grade rigging blocks in conjunction with appropriate friction/lowering devices both of which have been tested and rated.

Excessive shock loading must always be considered when rigging. The rigging system should be constructed to withstand the maximum shock-load potential. Generally, maximum shock loads are experienced in a rigging system when the rigged piece is "snubbed off" and not gradually decelerated.

Avoid "snubbing off" whenever possible. Testing and research show the block and sling can experience more than double the shock-load force in this situation.

RUNNING BOWLINE WITH HALF HITCH

These knots are used in conjunction with one another to attach rigging lines to tree sections that are being rigged for removal. The running bowline is easily untied. It securely chokes the piece when steady pressure is applied. The half hitch increases safety and provides stability and holding power.

ADJUSTABLE SLINGS

Loopies or Whoopie Slings are an excellent alternative to the traditional timber hitch as they cannot come untied. The timber hitch can be used to attach a rigging block or a friction device to a tree to use as a lowering device to lower or hoist limbs. Tendency for the hitch to come untied can be minimized by tucking for a minimum of five wraps, spreading out the tucks over as much of the circumference of the trunk as possible, and ensuring that the hitch is loaded "against the bight" whenever possible.

