

Winching Techniques, Tips & Safety



Common sense, proper equipment and a little bit of know-how will make your winching successful and safe.

Having installed the winches, we were ready to take some of the world's best four-bys to the next level of terrain busting. Designed to let you tear through terrain, winches are the desired hardware for persuading the world into giving up its last hiding places. But, as with any power tool, safety comes from sometimes surprising considerations and should always be your first concern when winching. The proper accessories not only increase the safety factor, but when used correctly, will maximize winch performance and prolong use. Knowing proper winching techniques is critical as well.

1. Our first recommendation is to remain calm. Having your senses translates into clear-thinking and combined with a winches' capabilities should get you out of just about any situation.
2. Keep in the back of your mind that winching is a slow process, but still much quicker than walking 10 miles back for help.
3. Know your quads' weight plus the riders' weight and any gear you're carrying. Choose a winch with a single line rating at least 1-1/2 times greater than this figure. The idea is that the winch should be able to pull the quad's weight plus overcome the added resistance caused by whatever the quad is stuck in. For almost any quad application, the 2,000 pound single-line capacity is more than enough.
4. Remember that all winches are designed to work most efficiently when retrieving the first layer of cable onto the spool. For maximum pull and the most torque, always free-spool or power out the entire cable, even if you only need to pull yourself a few feet. Use a snatch block if necessary. This short table shows the different performance characteristics per layers of cable on the spool of a 2,000 pound capacity winch:

Pulling Capacities for a 2,000 pound capacity winch per layer of cable on spool

Cable Layer	Max. Pulling Capacity (pounds)
1	2,000
2	1,650
3	1,375
4	1,200
5	1,050
6	945

Rolling Load Capacities for a 2,000 pound capacity winch

Slope	10% (6 degrees)	20% (11 degrees)	30% (17 degrees)	100% (45 degrees)

Pounds	10,050	6,800	5,225	2,575
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2. Ratings assume a 10% coefficient of friction.

R A 10% slope is a rise of one foot in ten feet.

R All loads shown are for single-line operation. Double-line operation with optional pulley block approximately doubles capacity of winch.

5. Never tow another quad with the winch cable, as it asserts tremendous stress on the internal braking components. And always use a tree sling when anchoring to trees.

6. Tremendous forces are on the cable when winching. Don't step over, and try not to be in direct line when the cable has tension on it. It can snap and act like a steel rubber band. Be alert at all times. Smart ATVers lay a jacket, [towel](#) or heavy-material over the cable when winching. This won't prevent a snap, but will slow down a wiping cable.

7. When powering-in, don't allow the cable to pile up high on one side of the drum. If this happens you'll feel a momentary "slip" because the cable just slid off the top layer and laid itself closer to the spool while also causing a small fray in the cable. Should you find the cable not winding evenly back and forth on the spool, back it out and start over. A four-way fairlead is a must. Any frayed or barbed cable should be replaced.

8. Keep cable tightly wound around spool. Do not allow winch motor to overheat. If the motor gets uncomfortably hot to the touch, it's overheating and should be stopped and allowed to cool. A general rule of thumb is to rest a motor after 1.5 minutes of continuous quad pulling. The pull required to start a load is much greater than the pull required to keep it moving so avoid frequent stops.

9. Keep your quads' motor running for optimum winch performance. The electric draw from the winch will soon run your battery out of power if your motor isn't running.

Standard Nylon Straps

Standard Recovery Straps with nylon webbing absorb the shock of heavy pulls, while the elastic rebound energy aids in quick recovery. Our Super-winch tree sling allowed us to use a tree (a live tree, not a dead one) as a safe, stable winch anchor, and also protected the tree from damage.

Snatch Block and Shackle

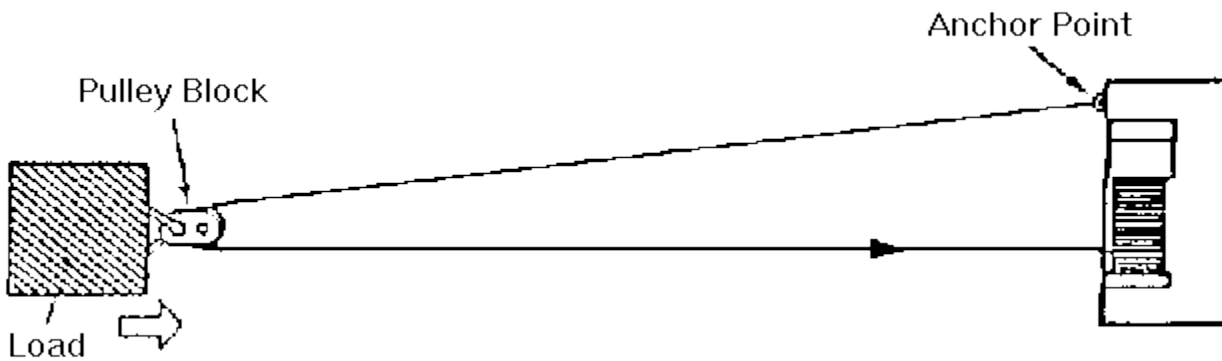
The Snatch Block will almost double the rate of pulling capacity, reducing the motor heat build up and amp draw. The shackle is essential for winch rigging. Use as a connection between straps and snatch blocks. We installed shackles on our quads hitch platforms for secure lowering of the quads.

**A few tips and pointers
for getting the most out of
your winch and accessories**

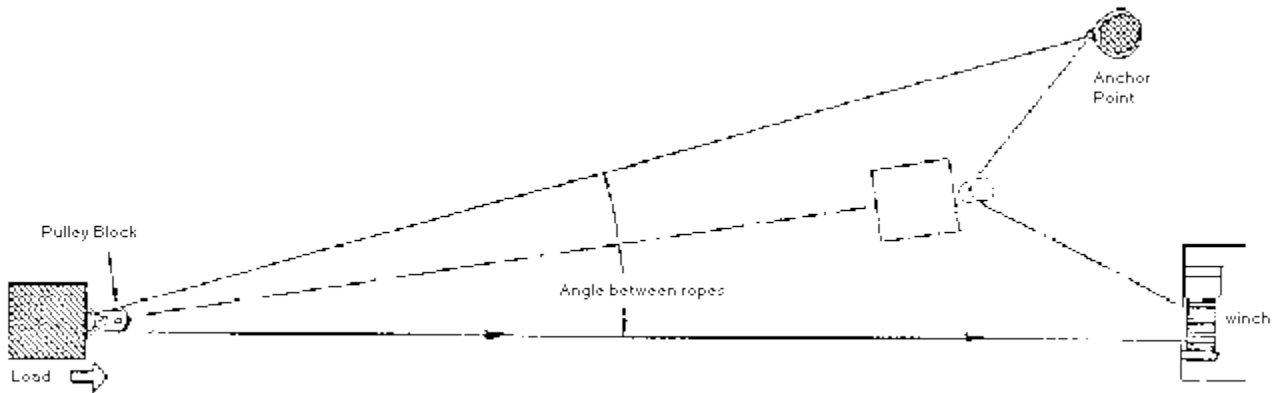
Next to the winch itself, the most important item to have on board is a pulley block. Pulley blocks can be used for doubling the power of your winch, and can be used for self-recovery, direct pulling and indirect pulling. All are shown in the following illustrations.



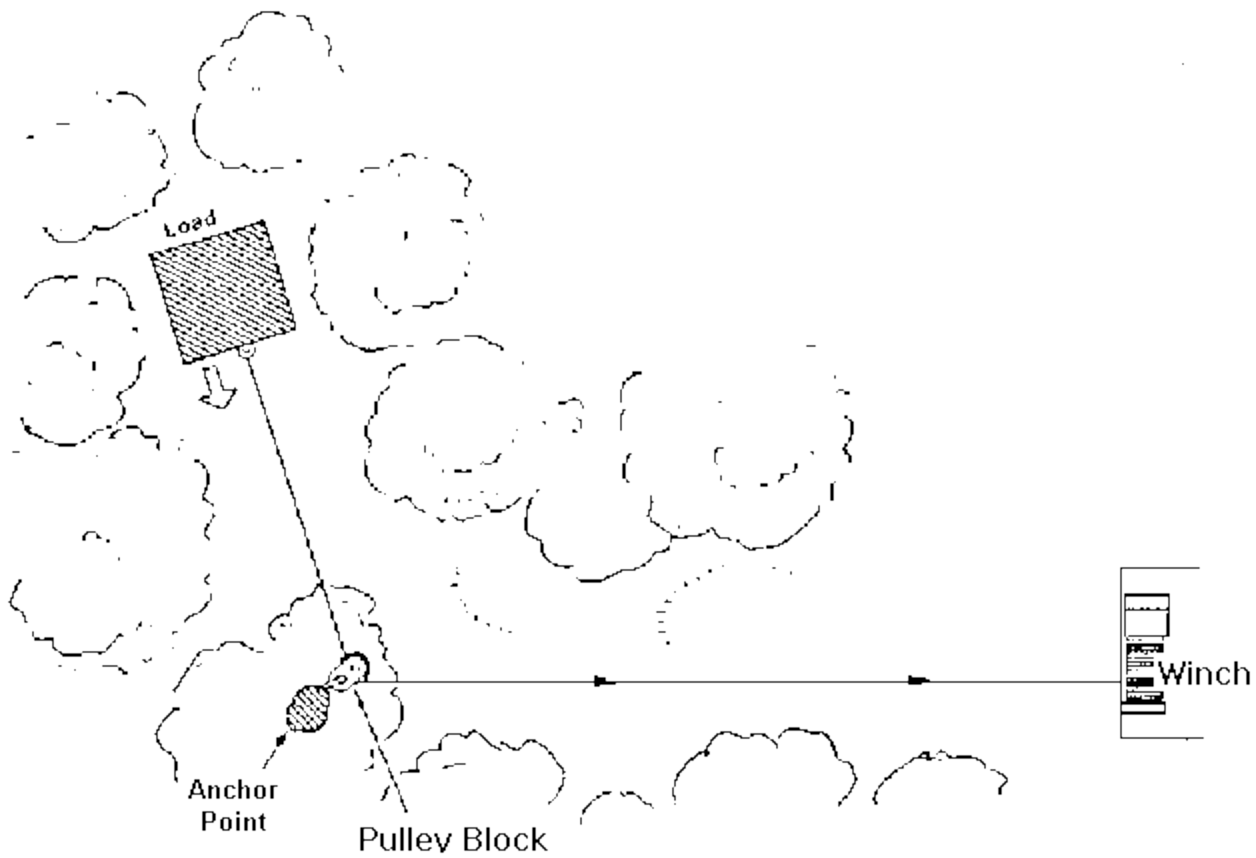
The anchor point (when used) must be a secure one such as a tree (a live tree, not a dead one), another quad or other firm object. For direct quad recovery, attach the pulley block to the anchor point via tree sling and nylon recovery strap. Then feed the wire rope out from the winch, through the block and back to an appropriate point of attachment on the quad such as the frame. This will effectively double your pulling capacity and greatly reduce the effort of the winch to get the quad recovered.



Direct load pulling of loads (or other quad) using your quad as the anchor point and attaching the pulley block to the load.

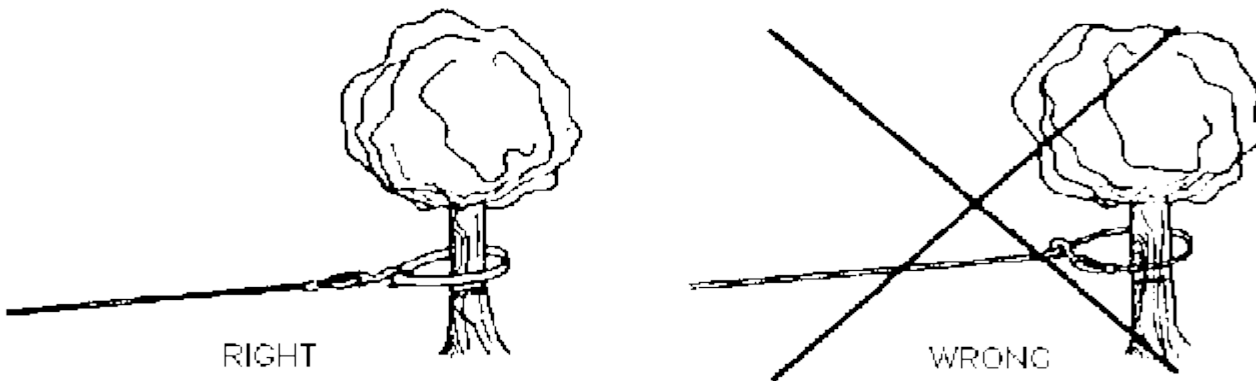


Indirect pulling may be required because of obstacles or unappeasable surfaces. The pulley block is attached to the load and the wire rope is attached to an anchor point offset from the direction in which the load is to be moved. Note that this procedure is not recommended unless necessary as winch pulling power and line speed will decrease as angle between the wire ropes increases.



Using a single-line winch capacity of 2000lbs., the capacity of the winch is effectively doubled using the double-line methods shown in figures 1-3. Winch capacity in figure above remains at 2000lbs. as this is still a single line application.

“NEVER” attach the winch cable back onto itself as shown below. Use of a nylon sling and shackle is strongly recommended to avoid damaging you wire rope and the tree



Use of heavy gloves while handling the wire rope will greatly reduce risk of cuts and scratches from burrs or sliver caused by broken strands of your wire rope.