Tips on winching and using a snatch block

One of the greatest tools for a small-scale woodlot owner is a tractor-mounted winch. Once you've used one, you'll wonder how you ever managed without it. Suddenly it is almost easy to harvest your own trees.

There are several good tractor mounted winches on the market today. It will not be difficult to find one that suits your needs. However, it is important to carefully read the operating manual to ensure safety. One of the biggest dangers with machinery of this type is that we tend to forget the powerful forces involved. Here are a few tips that you should consider while logging in your woodlot.

The job of skidding logs is made much easier when felling is properly planned. Winching is much easier if you line up the logs (directional felling) with the skid path. If the tree is heavily branched, it should be felled away from the winch. The heavy branches are then cut 2/3 through at the crotch so that they will fold back while being pulled by the winch. (This will avoid damaging residual trees). If you want to leave the branches in the bush (the preferred method to best minimize damage to residual trees), fell the tree toward the winch.

Bench trees are felled perpendicular to the main felling directions. Other trees are then felled across the bench tree, allowing for a convenient height for climbing and an aid in overcoming inertia and initial friction.

Once the trees are felled you are ready to begin skidding. When choking the boles, make sure the needles go under the log towards the cable (12 to 16 inches back). Rotate the hook/ring to the backside of the log and pull to secure the choke. This encourages the log to roll over and in, when pulled, and again breaks inertia.

When winching multiple logs, first hook up to the log furthest away and work back to the tractor. This gives you a chance to check the area for possible obstructions (before you hit them with a load).

Snatch blocks are an invaluable tool for skidding. They allow you to change the direction of pull around or over obstacles. Self-releasing snatch blocks are the easiest to use because they reduce the amount of walking that you will have to do.

The snatch block is attached to an anchor tree with a nylon strap, which prevents damage to the tree. It automatically releases the winch cable when the keyhole slider reaches it and only works when the pulley is turned upside down (refer to Figure 1), which is when the release mechanism is facing the ground.

Self-releasing snatch blocks can be purchased at some forestry equipment suppliers. However, they aren't cheap. The Farmi TP14 self-releasing snatch block, with a load capacity of approximately 5 ½ to 6 tonnes, costs $285.00 (available from M+P Farm Supply, Carleton Place, ON, (613) 253-4957. Homemade snatch blocks are fairly simple to make and are less expensive. A machine shop can put one together for about $100.00 to $150.00. An example of a homemade snatch block is described in Figure 2.

Here are some more tips on winching and using a snatch block:

- Make sure that the sliders kick off the cable (not the clamps) since they will damage the sheave.
- Don't use a cheap strap to anchor the snatch block to the tree. They break easily and in the long run they will cost you more to keep

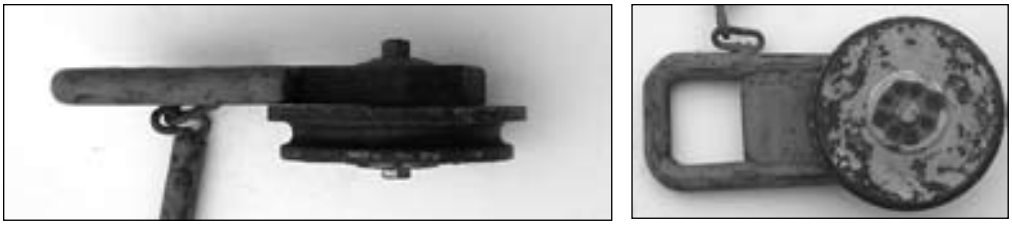

Figure 1. The cable is automatically released when the keyhole slider reaches it and only works when the pulley is turned upside down as demonstrated in the photograph on the left.

replacing them. Use a good quality strap that is a minimum of 3 inches wide, and keep in mind that the safe working load is greatly reduced when the strap is used choker style (i.e., anchoring the snatch block to a tree). For example, one manufacturer lists the safe working load of their polyester sling at 12,800 lbs. and that it is reduced to 4,800 lbs. when used choker style.

- Another option to consider (instead of using a nylon strap) is to attach the snatch block to the tree using a Kevlar rope (i.e., a ½-inch Kevlar rope, tied in a figure 8 loop or bowline on either end).
- The snatch block should always be anchored to a healthy tree (i.e., no dead branches), have a minimum diameter of 8 inches, and be located opposite the skid trail.
- When positioning your tractor (winch) and determining your line of pull, make sure you do not double back! If you do, you will be doubling the stress on everything (i.e., snatch block, anchor strap, and cable) except the winch.
- Winching at an angle greater then 30 degrees (to your line of pull) may cause your machine to tip. Either reposition your equipment or use a snatch block to prevent this unsafe operating condition.
- If you need to implement a minor change in direction to the pull, just choke the keyhole slider to a stump using a chain. Do not try to change the direction more than 15 degrees. This method is for occasional use. (If it is done too often, the cable will be cut by the slider yoke).

  If you notice that you are going through a lot of gloves while handling the winch cable, the cable is beginning to fray. Remember that it is only the last 10-20 feet that take the majority of the abuse. To solve this problem, simply reverse the cable as follows:
- Pay attention to the direction the cable comes off of the drum because it must be

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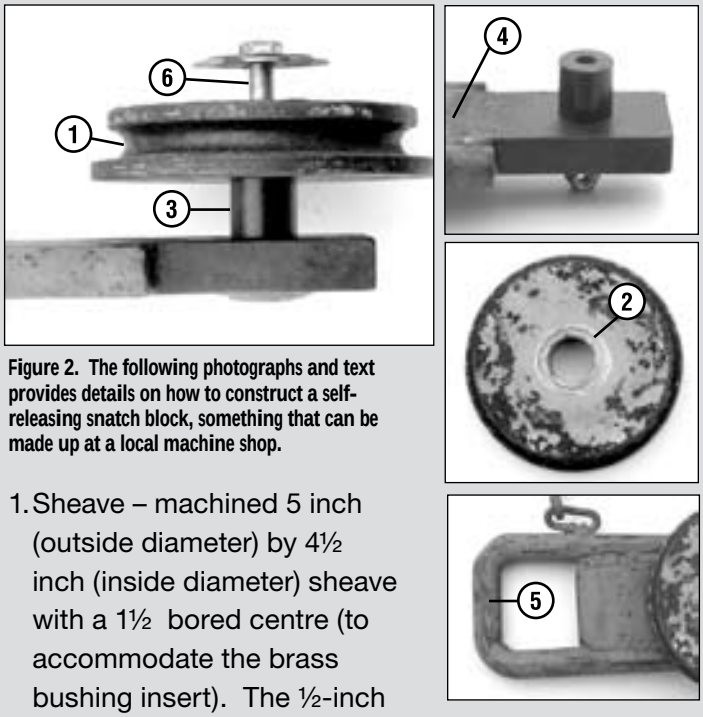

Figure 2. The following photographs and text provides details on how to construct a self-releasing snatch block, something that can be made up at a local machine shop.

1. Sheave – machined 5 inch (outside diameter) by 4½ inch (inside diameter) sheave with a 1½ bored centre (to accommodate the brass bushing insert). The ½-inch groove accommodates ⅜-inch cable.
2. Brass bushing – machined 1½- inch (diameter) brass bushing with a 1-inch bored centre (to accommodate the 1- inch steel stock).
3. Steel stock – 1 inch (diameter) by 2 inches (length) steel stock with a ⅜- inch bored centre with one end threaded (½ inch) to accommodate a ⅜-inch bolt. The round steel stock is inserted into the steel plate and welded into place.
4. Steel plate (body) – ½ inch (thick) by ¾ inch (width) by 6 inches (length) with a 1-inch bored centre (to accommodate the machined steel stock).
5. Steel rod (handle) – ½ inch (diameter) by 5 inches (length) by 4 ¾ inches (width). The steel rod is heated and formed into a “U” shape and welded to the steel plate.
6. Bolt and washer – ⅜-inch bolt (diameter) by 2 ¾ (length) with a 2-inch washer.

...Tips continued

rewound in the same direction. DO NOT COIL THE CABLE! Pull the cable out in a straight line; disconnect it from the drum (take note how it wraps and threads through the assembly).

- Remove the sliders, clamps etc. Now drive the tractor to the other end of the cable, rethread and re-clamp (with supplied clamp only) to the drum and winch in 4 to 6 wraps on the drum.
- Put the sliders and the other hardware back on the clean end. Attach the cable to a stump or other fixed object and winch the tractor to it. This assures that the cable rewraps tightly and unkinked. Once you have retightened all the clamps, you are ready to begin winching again.

Acknowledgement – this article was adapted from the article "From the Horses Mouth: Winching Tips" and information from the publications The Cutting Edge and Using a Farm Tractor to Produce Long-Length Logs.

News From the Canadian Federation of Woodlot Owners

Will young people be able to continue the tradition of woodlot ownership and management? By Peter deMarsh

Serious discussions about forest management issues these days are framed in terms of "sustainability". A big part of our job as woodlot owner associations is to explain the particular mix of financial and community circumstances necessary for sustaining healthy and productive family owned forests. It can be a tiresome job, insisting on the unique strengths and weaknesses of family forestry with people for whom the benchmark for all forestry issues is large-scale industrial forestry. One of the many differences between family forestry and industrial forestry is our concern about "who will own this land when I can no longer look after it". As the average age of Canadian woodlot owners approaches 60, this question is of acute interest to more and more of us. Nothing is more central to the notion of sustainability of family forests than is our ability to ensure a future for young people who want to own and manage woodlots.

The New Brunswick Federation of Woodlot Owners recently organized a workshop on this topic. The discussion boiled down to two issues: will young people be able to afford to own and manage woodlots, and even if they can, will they want to?

Much of the discussion on the first issue is quite straightforward:

- Do tax policies place a serious barrier in the way of intergenerational transfers? (We were told that many owners are not yet aware of the change in 2001 that allows for deferral of capital gains on transfers of managed woodlots.)
- Is adequate financing available for young people who want to purchase a woodlot? (Farm Credit Corp., a Federal government agency has policies intended to assist land purchase by accepting the land value as collateral and by tying repayment of principal to revenue from harvests with payments between harvests limited to interest.)
- Even if reasonable financing is available, will land prices justify long-term management? (A big concern is the effect of liquidation harvests on land values. If you're not prepared to liquidate, it's hard to compete with the people who do.)
- What are the prospects for forest product markets? (As our markets shrink, that's a growing worry. Biomass markets may well fill some of the gap, but only some. Another contributor to financial viability could be payments in some form for "environmental goods and services", clean water and so on, a topic that is finally emerging onto the public policy agenda in Canada. However, it will take awhile.)

Even if woodlot ownership and management makes financial sense, do young people have an interest in pursuing family forestry

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