Evaluating the Portable Winch

Winches are valuable for reaching into a timber stand and extracting wood with minimal damage to trees and soil.

Having used and experimented with many portable and tractor-mounted winches, I have been intrigued with the Honda-powered Portable Winch (PW). Since there were no equipment reviews of this tool, the Portable Winch Co. was kind enough to lend me one to try.

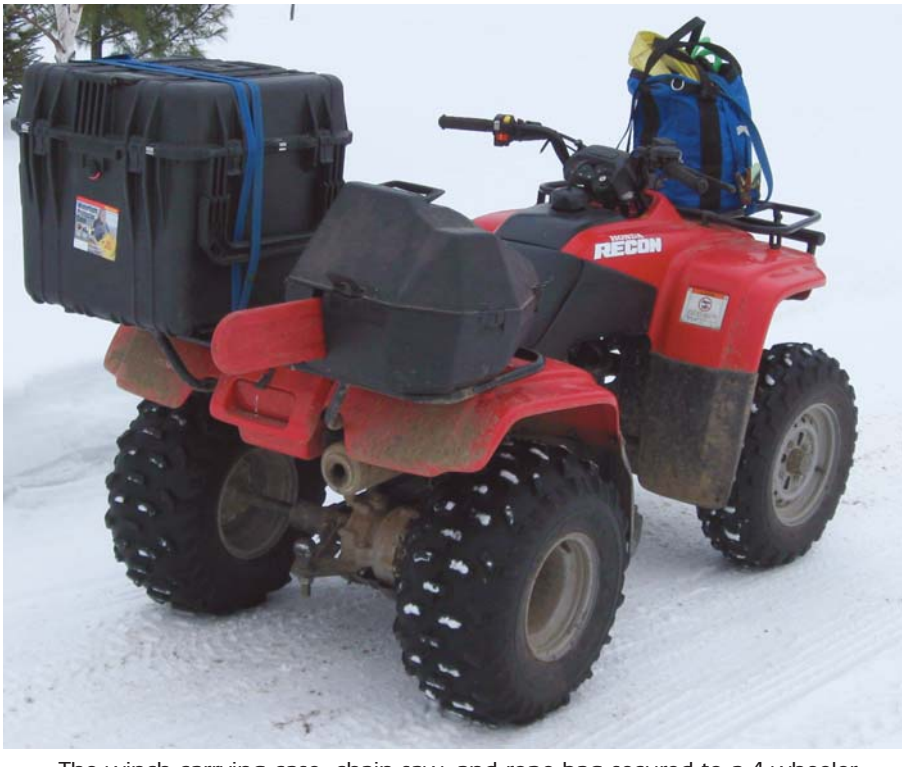
The PW and its well-made accessories are part of a well-engineered SYSTEM, and I stress the term system. The winch itself is a useful tool, but a number of accessories greatly enhance its productive and safe use. Many years ago, I tried unsuccessfully to acquire a Swedish radio-controlled winch and visited the designer at his factory. His reason for not selling to the American market was, "I have not sold winches in your country because Americans tend to buy equipment and use it without reading the instructions. Then, when the machine does not perform as expected, they blame the manufacturer. I do not want to ruin the reputation of my winch." This same sentiment was also echoed by the FARMI distributor.

Two of us tried the PW in a dense northern cedar stand that we had worked the previous year. We were cutting barn poles, fence posts, and fence rails and utilized trees of all sizes, well into the tops. In our first cutting we had tried to cut individual trees, but could not get them to fall because of the dense crown canopy. Lacking a winch, we had to use several long chains to pull them down with a tractor. This time we laid out winching corridors and cut all trees in each corridor in a manner that would permit us to winch them to our tractor trail. We still could not get the trees to fall, so we cut them off at the stump and winched them down and to the trail.

Accessories

The manufacturer's rugged carrying case for the winch held most of the accessories and we made good use of it. My ATV had a chain saw case secured to one side of the carrying rack and we strapped the winch case to the other side. The case (shown open in top photo, and strapped to ATV bottom) held the winch, several blocks, four nylon straps, and an optional, higher-speed capstan. On the front rack we strapped a nylon bag containing 150 feet of polyester rope and chokers.

At the logging site we located a substantial tree that was well positioned to reach our winching corridors. One accessory we lacked was a tree/pole mount for securing the winch to a tree, so after removing the winch and its accessories from the case, we secured it to the tree and rested it on top of the carrying case. It's not necessary to do so but it is nice to have the winch sit on something stable. We winched several trees with the standard capstan, which easily handled the largest (12-inch, 40-foot) cedar stems, but it was too slow. We quickly replaced it with the larger



The winch carrying case, chain saw, and rope bag secured to a 4-wheeler for transport into the woods.

drum that has speeds up to 60 feet per minute, a desirable rate for productive winching. It easily handled the largest cedars, even at moderate engine speeds.

One valuable accessory is an open snatch-block and a ferrule (below) for forming a knot in the winch line. Our winching corridors entered the skid trail at an angle, so we needed to turn each tree and pull it into a pile. The winch was tethered at one location, pulling logs along the center line of the trail, and did not need to be moved. At each corridor, we selected a tree opposite its center line

The open snatch-block with the ferrule about to reach it and pop the line out and change the direction of pull.

and hung the snatch-block about head high with a nylon strap. As the rope was pulled out to the wood, we hung it in the block. After attaching a choker to the rope, the ferrule was used to act as a knot in the rope about 10 feet ahead of the choker. As the load was winched in, the knot hit the block, the rope popped out, and the direction of pull was changed toward a bunch for the tractor. As soon as one corridor was completed, the snatch-block was moved to the next. Each subsequent load was pulled parallel to the first until a full skid load was formed.

To move the winch or clean up, the winch rope was easily piled in the rope bag, ready to be moved. In fact, we never used more than 100 feet of rope, leaving the rest in the bag rather than strewn all over the work area.

Thinning a Maple Sugar Bush

In another test, two men thinned a maple sugar bush. The ground conditions—consisting of very wet soils with numerous boulders and windthrow mounds—limited machinery to a very short access trail. They used the PW to bunch tree lengths where they could be reached with a farm tractor and 3-point-hitch winch. Trees varied from 8 to 18 inches in butt diameter and 60–70 feet tall. On some large trees, it was necessary to use the smaller, slower capstan drum.

Though this stand was not as dense as the cedar stand, preventing damage to the large crowns on sugar trees meant that directional falling was often impractical. Because of the tight canopy, many trees hung in others and had to be winched down. With the winch and snatch-block, trees could be felled in any direction, then pulled to the trail, turned, and pulled into a bunch for the tractor winch.

Being able to carry the lightweight PW (right) to any point in the stand was a big plus. The operators were impressed with its compact size, light weight, lack of vibration, and quiet Honda motor.

The PW is extremely portable. One man can easily carry the winch, rope, and accessories into the stand.

Rigging the PW for a Cable Operation

A third test was rigging the PW for cable operation. Since it uses a capstan instead of winding cable on a drum, it is possible to tie the rope ends together to form a continuous loop, and then use the "haulback" portion to pull a load in, as well as pull the mainline back into the woods. The key to this is three blocks—a double block to elevate the main and haulback lines, a single one to anchor the rope to the tail tree, and an open snatch-block near the landing to separate the two lines but permit loads on the haulback to be pulled into the bunch at the landing. The ends of the rope are simply tied together to make an endless loop and any extra rope is coiled down at the landing as it comes off the capstan.

We only encountered one problem with the winch, and it was easily solved. Inattention by the operator allowed too many winds on the capstan, jamming the rope on the spool. Removing the capstan drum with a T-handled Allen wrench (included with the winch) permitted quick removal of the single screw holding the spool; the capstan was pried off and the jam freed.

The Portable Winch

PULLING CAPACITY	**Single Line**	**Double Line (w/snatch block)**
	1,000 kg (2,200 lb.)	2,000 kg (4,400 lb.)
GEAR BOX	Aluminum alloy; Gear ratio 110:1	
UNIT WEIGHT (dry)	16 kg. (35 lb.)	
ENGINE	4-stroke Honda GXH-50 cc	
DIMENSIONS (overall)	33 cm (13 in.) wide x 36 cm (14 in.) high x 38 cm (15 in.) deep	
WARRANTY	5 years (Honda warranty on engine)	
ROPE (low stretch double-braided polyester)	Min. 10 mm (3/8 in.) Max. 16 mm (5/8 in.)	
PERFORMANCE	**Standard Drum 57 mm (2-1/4 in.)**	**Optional Drum 85 mm (3-3/8 in.)**
Max. line speed	12 m/min. (40 ft./min.)	18 m/min. (60 ft./min.)
Max. line pull	1,000 kg (2,200 lb.)	635 kg (1,400 lb.)

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The Portable Winch Company also provided us with a fiberglass cone, which was not used in any of the tests because we winched single stems over short distances with the block elevated to prevent snagging on stumps and rocks. In snow or when working with multiple stems, I would definitely use the cone, and in a later operation, we used it to load logs onto our wood trailer.

All in all, the three of us who worked with the PW were very impressed, so much so, that I bought the winch. It is not only a useful tool in the woods, but I have used it to load and unload heavy equipment onto a trailer. ■

Ben Hoffman is a forester with 28 years experience in state, federal, and private forestry and 17 years in academia. Ben is retired as a Maine Licensed Forester, and Vermont Land Surveyor.