



PHOTOS BY JIM PHILP

John Gifford and Raymond Clayton (left) edge a batch of boards.

The winter spot for their mill is against a sunny barn wall.

# TIMBER HARVESTER

## 30HT BANDMILL

**An older model Timber Harvester holds its edge through the years...and speaks well of the newer, improved model.**

Reviewed by Jim Philp

One of the things that I really like about my job is that I get to meet so many really wonderful people. On an unseasonably warm April morning for Maine, I was northbound along the shores of the Penobscot River. My destination was Lee, Maine and my purpose was to look at a Timber Harvester 30HT sawmill.

The sun was shining and most of the snow was

gone from the woods. Wild ducks seemed to be everywhere—even in the roadside ditches. It was a great day to be out. Although I didn't know it, the day was just going to keep getting better. I was about to encounter a pair of very interesting men and get a lesson in an alternative style of sawmill operation as a bonus.

When I arrived in Lee, John Gifford and his partner, Raymond Clayton, had the Timber Harvester in operation. They were edging a rather large supply of wane-edged boards they had accumulated. It turns out that they find edging to be less fun than sawing logs, so they had let the edging pile up a bit. Both John and Raymond place a high premium on enjoying their work.

As soon as they spotted me, they shut down the

mill. Talking to writers is more fun than edging, too. I soon learned that the two partners have quite a unique operation. They start with trees and end up with furnished buildings—that is what economists call vertical integration.

They own several woodlots between them. They also have a skidder, a log truck equipped with a hydraulic loader, the usual compliment of logging tools and a complete woodworking/cabinet shop. None of this has been acquired recently, but over the better part of their lives. All of the equipment is old and well used, but it's also very well maintained. Before they got their sawmill the two partners were cutting trees and selling logs.

They purchased their Timber Harvester 30HT new about three years ago.

Their entire operation now revolves around the sawmill—the speed of revolution being somewhat variable. John and Raymond are quick to emphasize that they are NOT running a business. What they have is a very large hobby, and they understand the difference. They do manage to generate enough cash flow to keep everything in tip-top shape and to keep their sights set on an edger and a small dry kiln. What they accomplish, simply for the joy of it, is amazing. They are two of the happiest people you could hope to meet.

Raymond and John do EVERYTHING themselves. They harvest trees from their woodlots and haul the logs to their mill. Hardwood is air dried for use in their woodworking shop, where they build anything from furniture to

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clocks. Softwood is sawed into construction lumber to use in building cabins on some shoreland lots they own. They are building the cabins themselves. They also do some custom sawing for neighbors, and they occasionally sell some lumber.

The result of such diversity of activity is that on any given day most of their equipment is idle. That's OK with them.

Both men describe themselves as "retired". By that they mean that they get to do whatever they want to do every day. Most folks would consider what they do a full day's work, or more. But they do it because they want to, not because they have to, so they are retired. They even go fishing when the mood strikes.

On the day I visited, the Timber Harvester mill was still in its winter position, on the east side of the big barn where they store most of their equipment. There, the morning sun helps take some of the chill off working during the winter. The winter had been a strange one, and keeping the mill level had been something of a problem with the coming and going of the frost. Today the frost was going, so some adjustment of the leveling jacks was needed.

The partners have poured a nice, level concrete mill floor on the west side of the barn to defeat the problem of ground movement. It is still piled full with lumber on sticks, and wants to have a shed roof built over it before moving the mill. Besides, sunlight on the workplace

isn't all that bad during a typical Maine April.

While I watched, John and Raymond finished edging their stockpile. They have devised a nice method in which they do about 20 boards at a time. This requires some sorting. At the end of each cut they resemble card sharks shuffling for the next deal. They position the saw in increments and turn each board that has been edged after each cut. When a board has been edged on both sides, it is removed to the appropriate pile. Pretty soon, all the boards have been edged and they start on the next batch.

I'm not sure how efficient their method really is, but it surely looked good. Still, they are aware that the incremental edging is costing them some yield and grade on hardwoods. They want to get an edger so they can increase lumber value and improve their

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**Timber Harvester makes it easy to keep track of board thickness with an easy-to-read dial.**



### TIMBERHARVESTER 30HT25 DATA SHEET

#### NAME & MODEL NUMBER

Timber Harvester 30HT25

#### MANUFACTURER & ADDRESS

Timber Harvester  
1310 Waterloo-Geneva Rd.  
Waterloo, NY 13165  
1-800-343-2969  
www.timberharvester.com

#### MILL OVERVIEW

Band or Circle Mill: Band

Stationary or Portable: Portable

Standard Equipment: Full hydraulics on sawhead advance/return, blade height adjustment, blade guide, log loader, log turner and 2 roller tapers. Board dragbacks.

Cutting Capacity: (diameter and length): 30-inch diameter and 20-foot length

Weight: 3,650 pounds

Length & Width: 31' x 7' 3"

#### FRAME & CARRIAGE

Size and Construction of Frame: 3 x 6 x 3/16 inch tubular steel

Tracks are Made of: Inverted V-steel

Are the Tracks Replaceable? Yes

Wheels are Made of: Steel

Carriage Bearings: 3/4 inch

Carriage Support System: 4-inch wheels

#### SAWING HEAD

Wheel Diameter: 25 inches

Wheel Face Width: 3/4 inches

Wheel Construction: Steel with V-belt

Wheel Shaft: 1 15/16 inches

Wheel Speed (RPM): 825

Saw Speed (SFPM): 5,200

Recommended Saw Blade: 1 1/4 x .042 inches x 15 feet 8 inches

#### GUIDES AND STRAIN SYSTEM

Type of Guides: Steel rollers

Strain System Used: Factory-set spring loads trained to indicator

#### NETWORKS

Method of Setwork Drive: Hydro-electric

Set Display: Large indicator dial

Automatic Sets: Optional

#### ALIGNMENT

How is Alignment Done at Factory?: Measurements

#### POWER PLANT

Standard: 24 HP Onan gas

#### LOG TURNER

Hydraulic

#### LOG LOADER

Hydraulic

#### LOG DOGS

Hydraulic

#### CARRIAGE FEED DRIVE

Type (hydraulic, electrical, mechanical, or manual): Hydraulic

Forward Speed: 0 to 120 feet per minute

Reverse Speed: 0 to 120 feet per minute

#### TOWING

Wheels and Trailer: Electric brakes, turning and tail lights, DOT approved axle and tires; 2-inch ball hitch

Towing Weight: 4,200 pounds

Tongue Weight: 235 pounds

#### GUARANTEE:

1 year on frame, 90 days on electrical parts, six months on moving parts. Engine warranties as specified by manufacturer

#### OPTIONS AVAILABLE

Automatic networks, automatic sharpener, crank setter, dial tooth setter, hydraulic in-line log debarker, saw head cover, third log post, bevel lap siding attachment, chain drive for sawhead, 1 1/2-inch blade package.

#### BASE PRICE

\$22,000

The mill specifications that appear with this article are for the newer model 30HT25, since the 30HT is no longer in production. However, the pictures and text of this review all refer to the 30HT.



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sawmill's efficiency.

With the edging finished, John and Raymond began sawing black cherry logs. They took a very light slab cut and then began sawing 1/4 inch stock that they would use for inlays in their wood shop. They don't do this with all their logs—just cherry and some of the figured maples. They even save sections of cherry burlwood for use as inlays.

When they finally began sawing full length, full thickness boards, I did some measuring with my dial caliper. The mill was easily holding a within-board tolerance of plus or minus 0.010 inch. That's about the thickness of five

pages of this magazine. John said that the mill doesn't always do that well, but it usually does. I was impressed. I was even more impressed by the small amount of size variation between boards. This is an area where many portable band mills have problems.

The Timber Harvester was holding a between-board tolerance of about 0.015 inch. There are two reasons for this accuracy.

First, the electric/hydraulic control that raises and lowers the saw is very smooth in operation. There is no jerkiness and it is easy to "bump" the control for slower motion. Second, the scale that shows the height of the blade above the bed is a large dial indi-



Raymond Clayton (top) adjusts a log on his mill. In the bottom photo, John Gifford mans the controls



cator. One inch of vertical elevation on the mill is represented by 2 1/2 inches on the dial. This magnification really lets you see where you are, and in combination with the smooth controls, permits very precise indexing.

That dial is a really neat feature. It has two pointers, one is fixed and indicates the height of the blade above the bed. The other is adjustable and points to the next set point. It is adjusted to the thickness of lumber that you are sawing and also accounts for saw kerf. It does the arithmetic for you.

The Timber Harvester mill has two more features I really liked. The first is the log turner. It is a chain type turner that is exactly

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like the turners found on most stationary mills (see photograph). This is a proven design that works very well. When the turner is in use, the hydraulically controlled log posts are placed in their extended position, so there is little chance of rolling the log off the mill.

This mill has two clamps (dogs, in conventional sawmill language) to hold the log in position. Many portable mills have only one, and some none. The clamps are hydraulically adjustable for height and work independently against the log, so irregularly shaped logs are automatically accommodated. The clamps are located opposite the three log posts, so the clamping action is very positive.

As was mentioned earlier, John and Raymond's Timber Harvester 30HT mill is three years old. That being the case, it is not the current model, having been superseded by the 30HT25 in January of 1996.

The manufacturer was somewhat dismayed when he learned that we were going to do a review of the "old" mill. But he shouldn't have worried—the old mill has stood the test of time. After three years of use the 30HT is still working like a fine watch and holding exceptionally fine cutting tolerances. This particular machine has been owned by people who pride themselves in taking good care of their equipment. They have had only one problem with the mill in the time they have owned it.



The chain-driven log turner has turnup/turndown capability.

There have been five major changes in the mill since 1995.

1) The four hydraulic joy sticks that control the loader, turner, taper attachment and log posts/clamps have been moved from the end of the mill to the log loading side.

2) The mill now has a board "drag back" attachment that makes it easier for one operator to run the mill.

3) The hydraulic flow control valve has been relocated from the moving saw carriage to the operator's position. (This valve was the single problem that John and Raymond had with their mill, and it has been changed).

4) The new model has 25 inch band wheels instead of the 19 inch wheels of the old mill. This is reported to double the life of a band.

NOTE: All else being equal, larger wheels give greater blade life because of less bending-induced fatigue. Blade thickness and blade tension also figure into the formula. Joe Denig wrote a good explanation of the relationships in the April/May 1998 issue of *IS&WM*.

5) The taper attachments have been changed to a roller topped design.

The Timber Harvester 30HT series are basically dual matched V-belt driven band saw mills that are operated by hydraulic and electric/hydraulic controls. The standard power plant is a 24 horsepower Onan gasoline engine. Air or liquid cooled diesel engines are options, as are two sizes of three-phase electric motors.

The main frame of the mill is constructed of 3 x 6 x 1/4 inch steel box tubing. It is 30 feet long. Fifteen cross-members are spaced at 26 inch intervals, providing good support for sawlogs. Each cross-member is topped with a replaceable log support that incorporates a fixed stop that is used in conjunction with the log clamps when sawing squared cants.

The mill is supported by eight adjustable legs. The trailer tongue jack is removable and can be positioned near each of the legs for leveling the mill. Care must be taken to position the inner legs to release tension from the springs on the two highway

## MANUFACTURER'S COMMENTS:

There are seven features that make the Timber Harvester portable Band Sawmill the most efficient one-man sawmill built in America today.

1. Board Drag Backs-Six steel fingers ride along the top of the log while the band is cutting and then drop down to engage and drag the board back to the operator as the head returns for the next cut.
  2. Semi-automatic Control Box-After the board has been returned, the operator immediately sets the blade to the level of the next cut. With the flip of a switch, the head advances through the log, making the next cut and freeing the operator to either stack or send the last board through the edger.
  3. One Power Source-All hydraulic functions operate through one pump which is energized by the same motor that powers the band wheels.
  4. Hydraulic Flow Control Value-The advance of the head through the log is regulated by a knob at the operator's station on the log loading side of the mill.
  5. Heavy-Duty Chain Driven Log Turner-In the round, the log can be rotated forward or backward, allowing the operator to select the exact position he wishes to start from.
  6. 25-inch Band Drive Wheels-The 6-inch increase in the diameter of the drive wheels has decreased the metal fatigue caused by stress of 19-inch wheels, expanding the life of the bands up to 70 percent.
  7. Double Rail System-gives greater stability to make each cut uniform in width and length.
- Timber Harvester builds four models with the options of gas, diesel, or three-phase power sources: 24 HP Onan gas engine, 21.5 HP Deutz Diesel air cooled, 30 HP water cooled Deutz diesel, 20 and 25 HP 3-phase electric motors.



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wheels, or some deflection of the frame can occur when a heavy log is loaded.

The sawmill will conveniently handle logs from 6 to 20 feet in length. Logs shorter than six feet require some finesse in the form of a plank to backup the log between the log posts. Most sawyers will not have to worry about such short logs, but John and Raymond often saw short lengths of figured maple. It's nice that they have figured out a simple way of doing it.

The band saw head is supported in a four post traveling unit, made from 2 x 2 x 1/4 inch steel box tubing, that rides on

angled rails atop the two main frame members. The saw head moves vertically on two lubricated brass sleeves traveling on two 1 1/4 inch stainless steel shafts. All of the moving elements are powered by hydraulic motors acting through roller chains.

The hydraulic pump is powered by the engine through a third, independent, V-belt. All of the electrical and hydraulic lines between the engine/pump and the operator's position are carried on an overhead cable.

The log loader, turner, log posts, log clamps and taper attachments are operated by hydraulic controls located on the right side of the mill.

Everything else (throttle, saw guides, saw position, power and carriage travel) is operated by electric over hydraulic switches contained in a portable box attached to a 25 foot electrical cable. This allows the sawyer to move around while still operating the mill. I kept thinking about how nice this feature would be if you did not have to contend with the cable. A wireless remote like the ones used for TVs would be really nice, and probably really expensive, too.

In conclusion, the Timber Harvester 30HT proved to be a very accurate bandsaw mill. It is capable of producing lumber that varies only about

0.015 inches, both within and between boards. This is an extraordinary level of accuracy for a portable bandmill.

The owners of the mill I inspected are much more interested in quality than in quantity of production. They have never tried to find out the mill's capacity. My educated guess is that the mill should be capable of over 1,000 board feet per day with two people—perhaps well over 1,000. ■

*Jim Philp is an Extension Wood Products Specialist at the University of Maine. Philp has built and operated a commercial hardwood sawmill, and has "played with" a number of the current crop of portable sawmills.*

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