

# Turbo Gladiator

**B**ig logs are a challenge for most sawyers. For those running band saws or conventional circle saws, the log must be maneuvered onto the bunks and clamped down. Many of us who have pushed the limits of our saws have had to climb up on the log and trim it with a chain saw just to get through it. Those first slabs can weigh over 100 pounds, and turning the log requires a Herculean effort (especially on a manual mill). Swingblade mills are designed to ease the workload, but have their own limitations in the maximum depth of cut.

For Ed Lambert, about 40 miles northeast of Birmingham, Alabama, a swingblade mill looked like just what he needed for cutting the 40-inch+ logs accumulating in his yard. After researching the options, he purchased a TurboSaw Gladiator, manufactured in Tauranga, New Zealand. “Looking at some

videos, I was really intrigued the way the Turbo worked,” he said. Ed liked the Gladiator’s single rail and triangular frame. Not only does the frame provide a rigid platform for the gearbox and sawhead, but it also makes setup quick and easy, since there is only one beam to level. Another factor in favor of the Turbo Gladiator was that its 33-inch-diameter blade allows a 12-inch-deep cut—the biggest of any commercially available swingblade mill. “I really wanted to be able to cut a 12 x 12 cant,” Ed said. “I understand that it will double-cut for a 24-inch by 12-inch cant, but I haven’t tried it yet.” Ed also noted that the 46-horsepower Kubota diesel engine was another feature that he liked, since he has found Kubota diesels to be a reliable power source on his other equipment.

The Gladiator has been available in New Zealand for several years, but has only recently been exported to the U.S. In fact, Ed is one of the first to own a Gladiator. “I knew I was a guinea pig going into the

Jake Peterson stands ready to demonstrate the TurboSaw at the 2017 Paul Bunyan show.



deal,” Ed said. “My neighbor thought I was crazy, because I bought the sawmill sight unseen out of New Zealand, but every now and then you have to roll the dice and see what happens.” To make sure everything was set up and running smoothly, Jake Peterson came from the home office. They tested the mill on a 44-inch-diameter by 14-foot-long red oak log. “It came from a friend who was moving a house. The tree had to come down, and he was glad to get it out of the way,” Ed said. “He brought it on a lowboy trailer and I was only able to pick up one end with my 6,000-pound-capacity Bobcat to get it into position. Once the log was in place, we didn’t have to move it again. The saw did the rest. We sawed 2 x 12s, and it worked perfectly.” With each board weighing roughly 140 pounds, Ed noted that he still needed the Bobcat to offload the boards. “You need a plan when cutting boards that size,” he said, “but it turned out well.”

So far, Ed says, the mill is working well, though he admits he is still learning to use it efficiently. “It’s a learning experience,” he says, “but it’s not difficult.” One of Ed’s “learning experiences” occurred when he neglected to set the limit switch that instructs the blade to pivot from horizontal to vertical after it has cleared the log at the far end of the cut. The head tried to pivot with the blade still in the log (and spinning). “I had to shut everything down real quick, but it didn’t hurt anything,” Ed recalled.

Ed says he is impressed with both the design and the quality of the Gladiator. “I would say that it is a very well-designed piece of machinery. A lot of ingenuity went into putting this thing together. The 46-horsepower Kubota diesel on it does great. You couldn’t ask for a better power source, in my opinion.”

Three V-belts connect the engine to the heavy-duty gearbox that lets the blade swing from vertical to horizontal while keeping the tip in the same place so the two cuts match up perfectly. A hydraulic pump provides hydraulics to swing the blade, carriage feed, and board return. The sawhead and gearbox ride on a triangular box beam which provides a rigid support for the sawhead with X-Y-Z gantry movement. “It is a very precise system,” he noted, “accurate to the nearest millimeter.”

The user interface is straightforward. A lever activates the feed in both directions. Buttons allow the sawyer to program the computer for specific dimensions or manually jog the sawhead vertically or horizontally to the nearest millimeter. The blade swing at the far end of the travel is activated by a limit switch that kicks a hydraulic valve that swings the blade from horizontal to vertical for the return. The blade normally travels horizontally away from the sawyer, hits the limit switch, then returns vertically, but the sawyer can manually control the blade pivot function to get any combination of horizontal and vertical cuts desired.

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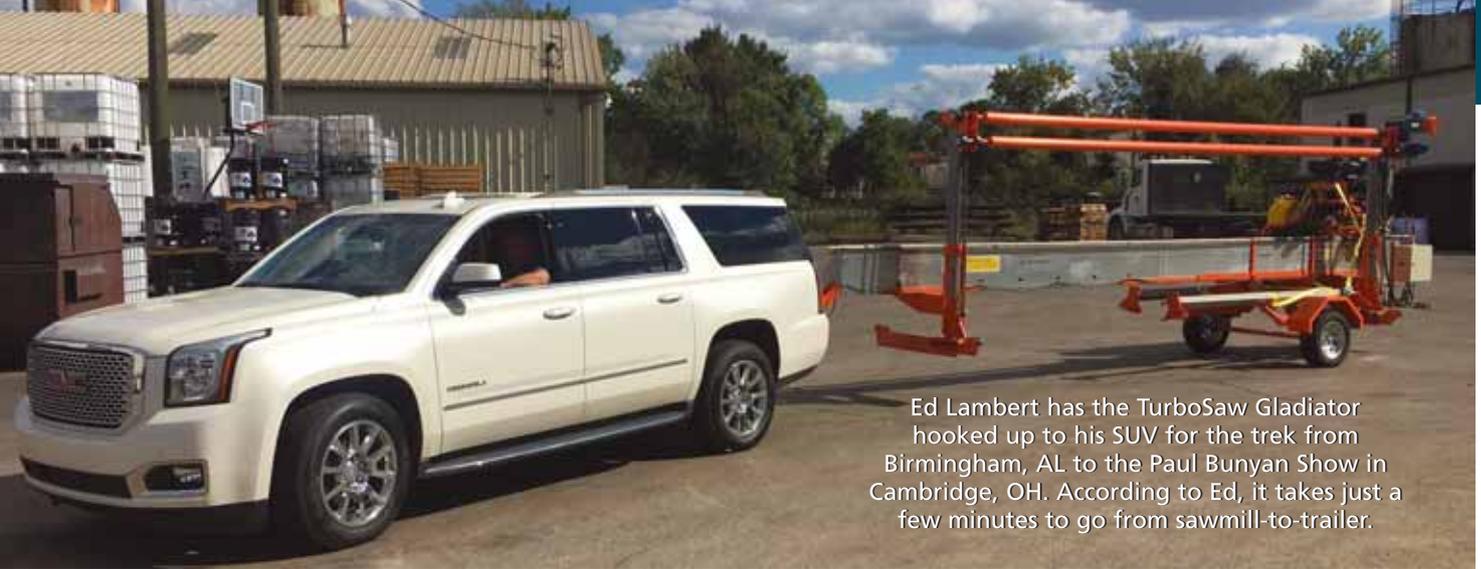


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Ed Lambert has the TurboSaw Gladiator hooked up to his SUV for the trek from Birmingham, AL to the Paul Bunyan Show in Cambridge, OH. According to Ed, it takes just a few minutes to go from sawmill-to-trailer.

The computer and control motors require a source of 240-volt electricity (the standard in New Zealand). While he normally uses the mill where he has access to 240 volts, Ed has a small generator for milling in remote locations.

As an owner of a hydraulic band saw (which he still uses for smaller logs), Ed says transitioning from the band saw to the swingblade was easy. “The Turbo, in some ways, is more user-friendly than a band saw,” he explained. “For one thing, the slabs come off in pieces, so you don’t have such heavy pieces to offload.” He also noted that the mill cuts one board at a time with each pass down and back. There is no need for edging, and he can stack it as he goes. “Once you get the waste off of the log, cutting happens pretty fast with the Turbo. You just cut one after another, as fast as you can go.”

The 33-inch-diameter, 6-tooth blade takes a 9/32-inch kerf. Ed noted that the teeth have a big gullet that cuts a curl of wood 2 or 3 inches long. Even though it makes a rougher cut than his band saw mill, some of Ed’s customers like the rustic appearance of curved saw marks in the wood. Sharpening the blade is a quick job that can be done while on the mill. The inserted teeth can be changed quickly if a tip is damaged or otherwise needs replacing. Ed keeps an extra set of teeth so that he can keep working while having the other set being re-tipped.

The stock Gladiator has the ability to cut up to 4-foot-diameter, 20-foot-long logs, but can be modified to handle larger logs, and track extensions are available for longer cuts. Ed says that it has more than met his expectations. “This mill is for sawing big logs,” he explained. “It is going to end up as a niche business, cutting logs that no one else can handle.”

For its ability to cut logs that size, the Gladiator is surprisingly mobile. Ed brought it up to the 2017 Paul Bunyan Logging Exposition in Cambridge, Ohio, and found that the 3,000-pound machine towed well behind his SUV. It only took about 30 minutes to put into the trailer configuration. “It trailers very nicely,” he said. “The beam itself is the backbone of the trail-



With a 33-inch-diameter blade and a 46-hp Kubota diesel engine, the TurboSaw Gladiator can take on logs of nearly any diameter. The single rail provides a rigid support for the sawhead, and avoids any issues with the log fitting inside a frame.



# SPECS

## Turbo Gladiator

Type of mill.....	swingblade
Power .....	46-h.p. Kubota diesel
Weight .....	3,086 lbs.
Max log length .....	20 ft.
Max log diameter .....	4 ft.*
Blade diameter .....	33 in.
Max depth of cut.....	12 in.
Blade feed/board return .....	hydraulic
Blade swing .....	hydraulic
Double cut .....	yes
Towing package .....	standard
Options .....	beam extensions, slabber planer blade
*Can be adapted to cut larger logs.	

**Manufacturer** ....TurboSawmill, Tauranga, New Zealand  
**Website**.....www.turbosawmill.com



The TurboSawmill Gladiator takes a bite out of a log. With a 12-inch cutting depth and a 46-hp Kubota diesel engine, it can not only handle large logs but produce wide boards and beams up to 12 inches by 24 inches (by using the double-cut technique).

er, and it is very rigid.” This is a big advantage in those situations where it is easier to take the sawmill to the log, he noted. Once there, Ed demonstrated it on some big logs.

Like many sawyers, Ed is exploring markets. Among other products, he builds timber frame type pavilions. “I built one for myself, then I built another for a friend, and others have asked me to build them, so it could work into a business. I am trying to get

more retired, but it doesn’t seem to be working out that way,” he said, laughing. On down the line, Ed says he would like to get the chain saw slabbing attachment, which has a 60-inch-wide capacity. “But it is one step at a time,” he said. “I’ve got to get the swingblade milling worked out first.” ■

*Dave Boyt has a BS degree in Forest Management and an MS in Wood Technology. He manages a tree farm (2006 Missouri Tree Farm of the Year), and operates a band saw sawmill.*

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