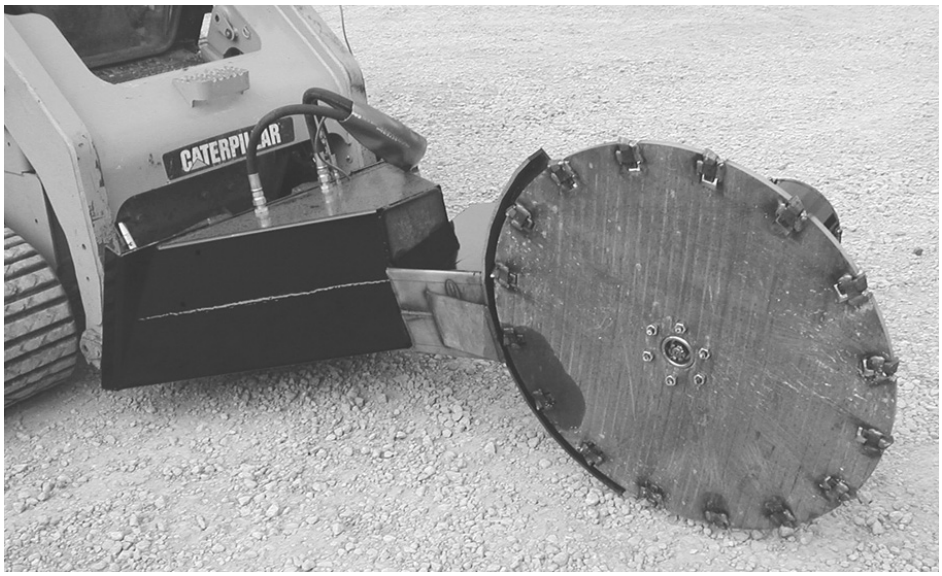
Rotary Tree And Brush Saw

About nine years ago, Leroy Hicks, owner of Hicks Fabrication, Berryton, Kansas, designed a hydraulically powered rotary tree saw that fits skid steer loaders or on three-point hitches.

He says most other brush and tree cutters work by pushing a triangular serrated cutting blade through the trunk. The blade on Hicks' rotary saw is made from 1/2 in. steel plate, cut into a 28 in. diameter circle. Rather than having teeth cut into the blade, Hicks cut 12 equally spaced notches around the outer edge of the steel plate where he mounted replaceable carbide steel cutting teeth. Because of the way the saw is made, individual teeth can be replaced as needed.

He says the teeth have a long lifetime. "Custom operators who use their saws heavily are replacing them every three or four months, but most people replace them less than once a year," he says.

A hydraulic motor, requiring a minimum flow rate of 15 gal. per minute, turns the blade. The higher the capacity of the hydraulic system, the faster the saw works, up to a maximum of 40 gal. per minute at 2,500 psi.



Hydraulically-powered rotary tree saw fits skid loaders or can be 3-pt. mounted.

Hicks built the cutter to fit the mounting brackets on most skid steer loaders. Or, with a hydroslide adapter, it can mount on a tractor's 3-pt. hitch.

"It cuts faster than most of the push-type cutters I've seen," he says. "It will cut through a 12-in. tree in one pass. I've cut trees with trunk diameters up to 3 ft. And it will cut through soil and even rocks in order to cut trees off below the soil surface. With this cutter blade, once you've cut off the tree, you can angle the blade and grind the stump out with it."

Contact: FARM SHOW Followup, Leroy Hicks, Hicks Fabrication, 4749 SE 61st, Berryton, Kan. 66409 (ph 785 231-7593). **Reader Inquiry No. 83**

Welding Table Pivots On Bowling Ball

James Muhs built a tilting welding table by using a bowling ball for a pivot point. He got the idea from an adjustable mirror he saw in a jewelry store.

"Once I got the idea of an adjustable welding table, using a bowling ball for the pivot point just came to me," says Muhs. "I just let the pressure off a little, tilt or rotate the table to suit, and then lock it down again."

Steel for most of the table came from his scrap pile. Two old brake rotors used to sandwich the bowling ball came from a salvage yard, while the old ball was given to him by an area bowling center.

Muhs built the table from the ground up, starting with feet made from 36-in. long, 2 by 3-in., 5/16-in. steel tubing. A 26-in. long crossbeam of 4 by 4-in., 1/4-in. thick steel tubing is centered on the feet.

The crossbeam serves as the base for the jack that locks the table in position. It also is the base for the four, 27-in. long legs made from 3/16-in. thick, 1 1/2-in. square tubing.

The legs are spaced to allow the brake rotor ring that supports the bowling ball free movement. A piece of pipe welded to the bottom of the rotor, fits over the head of the hydraulic jack's ram.

The top rotor is bolted to pieces of angle iron that are in turn welded to the tops of the 4 legs. When the jack ram is extended, the lower rotor pushes the bowling ball against the upper rotor, locking the table into place.

"Initially, I drilled a hole through the thumb hole and halfway into the bowling ball for a 3/4-in. shaft butt welded to the table," recalls Muhs. "It didn't work as planned. When I took pressure off the ball to turn the table, the shaft would spin in the ball."

Muhs solved the problem by drilling a 1/4-in. hole beside the original shaft hole. He then welded a 1/4-in. rod to the shaft.

"I put J-B Weld around the shaft and put it back together with the ball," says Muhs. "Now it works like I wanted."

Muhs added 2 foot pedal controls to make operating the table even easier. A 3 by 4-in. pedal is welded to the end of a length of pipe that fits into the jack's piston assembly socket. The purchased spring retains the pipe in the raised position.

He also welded 2 rectangular plates to a round steel plate. The plate is welded to the end of a 1/2-in. pipe slotted to fit over the release screw on the jack. An L-shaped steel strap supports the pipe.

"I simply step down on one of the steel plates to loosen or tighten the release screw," says Muhs. "To tighten the table in place, I step on the spring-retained foot pedal to jack the ball up."

Bowling ball serves as a pivot point, allowing welding table to be easily tilted or rotated.

Contact: FARM SHOW Followup, James Muhs, 4962 N. Oak Tree Rd., Claremont, Ill. 62421 (jmuhs11@hotmail.com).