

Skid Loader-Mounted Tree Shear

Mark Majerus can use his home-built, skid loader-mounted tree shear to easily cut a tree into firewood-sized pieces; reach high to trim large branches; or reach over fences and other obstacles. It can cut up to 22 ft. high and rotates on its side to cut vertically. Rectangular steel tubing is welded to a quick-attach mounting plate that keeps limbs from falling on him.

"I use it on my Case 1835B skid loader. It's built heavy and is a piece of equipment that I'll be able to use for years and years," says Majerus.

The tree shear is equipped with 2 fixed blades of 1-in. thick T100 steel. It can cut multiple trees at once or a single tree up to 9 in. in diameter. The blades are sandwiched between two bolted-together, 3/4-in. thick steel plates and pivot on a pair of 1 1/2-in. dia. greaseable bolts. A 5 1/2-in. dia. hydraulic cylinder moves the blades back and forth.

The back side of the tree shear is bolted to a 5-in. dia. tube that fits inside a 6-in. dia. tube. "The telescoping tubes allow me to reach out another 2 ft. I cut 2 rows of holes in the smaller tube; by pulling a pin I can either

extend the smaller tube another 2 ft. or rotate it to cut vertically.

"The shear is too heavy to rotate the tube by hand so I use the skid loader. I pull the pin from the tube, then put one edge of the shear against a tree and drop the loader arms until the shear is rotated to a vertical position.

"I like how it turned out. My friend Dick Johnson helped me cut out the blades using a cutting table that I helped him build.

"One problem is that the tree shear weighs close to 400 lbs. and is so heavy that I had to add about 640 lbs. of weights on back of the skid loader. I probably used too much steel to support the blades. If I could do it over, I'd use 5/8-in. thick steel instead of 3/4-in. and use heavier weight schedule 80 steel for the tubes. I drilled a pair of large holes in two of the blade support plates so I can attach a nylon strap to lift the shears over my welding table."

Contact: FARM SHOW Followup, Mark Majerus, 1731 230th St. E., Farmington, Minn. 55024 (ph 651 463-7084; markmajerus46@hotmail.com).



"It's built heavy so I'll be able to use it for years and years," says Mark Majerus about his skid loader-mounted tree shear. It's equipped with 2 fixed blades of 1-in. thick T100 steel.



Skid loader-mounted chainsaw operates off the machine's hydraulics. It lets 93-year-old James Walsh still cut firewood even though he doesn't have the balance and strength to run a chainsaw.

Airbags Give Oliver A Smooth Ride

C. Roger Podoll doesn't bounce around any more when he takes his 770 Oliver out to the woods, thanks to its air ride seat. Podoll works on trucks and semi tractors in his shop, giving him easy access to used suspension bladders. When an airbag on one side of a truck goes bad, the other is also replaced, even if it is still fine.

"I usually have a couple bags sitting around," says Podoll. "It took less than an hour to install one on my tractor."

Suspension air bags are essentially a rubberized fabric bellows set between two metal blocks. Podoll attached threaded rods to the blocks to mount the air bags between the pto shield and the seat.

Podoll fitted the airbags with a Schrader air valve to pump them up to 10 lbs. pressure.

"I let out air until it felt right," says Podoll. "The air does leak out after a couple of weeks but I can quickly pump them back up. If you used a new one, leaks would be no problem. But why buy new if you can make it for nothing or next to nothing?"

Podoll says the used suspension units have found lots of new uses. "I know one guy who uses an airbag for a tensioner on his baler," he adds.

Contact: FARM SHOW Followup, Roger Podoll, W8772 State Rd. 21, Wautoma, Wis. 54982 (ph 920 295-2357).



C. Roger Podoll made an air ride seat for his Oliver 770 using the airbag off a truck. It's mounted between tractor's pto shield and seat.

Buried Belts Keep Water Off Lightly Traveled Roads

Used conveyor belts make great surface water diverters on low traffic, gravel and dirt roads. Snowmelt and rain running down wheel tracks can cut ruts and erode away the surface. Anchored to buried, treated lumber, the belts can be driven over and then spring back into position.

Damon Carson at Repurposed Materials (www.repurposedmaterials.com) brought the idea to our attention.

A Penn State bulletin recommends cutting a length of 1/2 by 15-in. used conveyor belt that's long enough to extend at a 30-degree angle across the intended roadway and slightly beyond at each end. If the diversion

length is 20 ft., lay out two 10-ft., 2 by 6-in. treated boards end to end. Lay the belt over the boards so about 8 in. extends above them. Overlap the joint of the long boards with a four-ft. length of treated 2 by 6-in. board. Start at one end and drill 3/8-in. holes through the belts and the boards at about 2-ft. intervals.

Secure the belt to the boards with 3/8-in. bolts and nuts with washers on both sides.

When the belt and anchoring boards are complete, dig a trench across the road at the 30-degree angle. It should have a minimum of 1 percent continuous slope toward the outlet side. The trench should be deep enough to

provide 3 to 4 in. of backfilled road material over the anchoring boards and against about 4 in. of conveyor belt. This should leave about 4 in. of belt above the road surface. Place some large stones or gravel at the outlet end of the belt to control erosion as the water leaves the road surface.

Depending on the grade of the road, stability of surface material and the amount of expected flow, multiple diversions may be needed. If properly installed, the diversion can stand up to heavy hauling and has a long life expectancy with low maintenance.

Contact: FARM SHOW Followup, Center for Dirt & Gravel Roads Studies, Penn State



A length of rubber conveyor belt is bolted to 2 by 6-in. treated boards, that are then buried in the ground. The belting diverts water from road surface.

University, 207 Research Unit D, University Park, Penn. 16802 (toll free 866 668-6683; dirtandgravel@psu.edu).