



## Heavy Duty Trailer-Mounted Buzz Saw/Splitter Combo

"There's no log too big for it to handle," says Delbert Ecklund, Minnetonka, Minn., about his heavy-duty, home-built "wood processor" equipped with a buzz saw on one end and a log splitter on the other, as well as a rotating hydraulic boom and a winch with log tongs.

A Ford industrial 172 cu. in. gas engine provides power for both the splitter and the 36-in. dia. saw. The saw is powered by a direct drive off the clutch end of the engine and is engaged by a clutch lever. A 30 gal. oil reservoir provides oil for a Vickers double hydraulic pump. The pump runs off the engine's crankshaft and powers a pair of hydraulic cylinders on the splitter (6 in. dia. on bottom, 4 in. dia. on top). Each cylinder has 52 in. of stroke. An 18-in. wide, 18-in. high, 2-in. thick steel plate pushes the log against a steel cutting edge made from a front-end loader bucket. The double hydraulic pump powers a hydraulic cylinder that's used to raise and lower the boom and also powers the winch.

"When both hydraulic cylinders are used there's almost 100,000 lbs. of splitting pressure," says Ecklund. "I can run one or two cylinders depending on the amount of push required to split the wood. I use one cylinder most of the time because it's much faster than two. I can pull a pin out of the top cylinder and flip it over backward out of the way. The boom rotates 320 degrees and can lift loads up to 1,000 lbs. A 3-spool valve on the 20 gpm hydraulic pump lets me raise



and lower the boom, rotate it, and operate the winch. If I'm not using the boom or winch I can close the flow divider valve and divert all of the oil to the log splitter so it works faster. The cutting table on the buzz saw is hinged so that I can flip it up out of the way for over-the-road transport."

Ecklund built the log splitter frame from a 10-in. I-beam that's reinforced on both sides with 3/4-in. and 1/2-in. steel plates. The frame is supported by a 5,000-lb. torsion bar axle and a pair of 8-ply tires protected by fenders made from sheet metal. Torsion bar springs keep the trailer from tipping or twisting while the boom is being used. The trailer is equipped with lights and electric brakes for over-the-road travel.

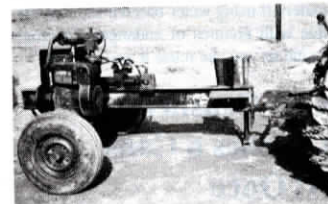
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## Splitter Made From Old Baler Parts

"After using several commercial splitters, I decided to build one where I wouldn't have to work on my knees or stand bent over," says Max Hoy, who used parts from an old New Holland 66 hay baler to build his splitter which rides on 15-in. auto wheels.

Using a 6 by 8-in. H-beam as a table for the splitter up to 27 in. off the ground, which Hoy says gives him a lot fewer backaches. The splitter features a "winged" splitting wedge. He says it splits easier and spreads the split chunks apart, making a cleaner cut, especially in hard woods like red or white oak. He made the wedge out of a bucket cutting edge off an industrial loader bucket flanked by two curved wings made out of scrapped grader blade. The straight cutting edge protrudes about 1 1/2 in. ahead of the curved wings.

The splitter is powered by a 2-cyl. 12-hp. Wisconsin engine salvaged from the New Holland baler. The fuel tank and other miscellaneous steel brackets and pieces also



came from the baler. He found a used hydraulic pump at a junkyard. A 4 by 24-in. hydraulic cylinder does the splitting. The cylinder and its controlling hydraulic valve are the only new parts on the splitter.

"We've used it to split more than 30 cords of wood a year with no problems at all. I've built a number of other splitters like it to sell to friends and neighbors. Everyone likes them. They sell for \$400 to \$600. I built one with a 32 in. cylinder for splitting longer wood for a heating stove," says Hoy.

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## "Fold-Down, Vertical-Split" Log Splitter

There's no need to lift big wood chunks with this heavy-duty, "vertical-split" splitter built by South Carolina farmer David Wannamaker.

The splitter's two-wheel transport frame was fashioned out of an old junked nurse tank trailer. The Wisconsin Robin engine and fuel tank were salvaged from an old trailer with independent dump. The big 2-way double valve splitting cylinder, hydraulic hoses and most of the steel was bought used. The splitting wedge is made out of 1/4-in. plate steel welded onto old worn-out bulldozer roller parts that are welded together back-to-back at the base of the wedge. They provide the leverage to open the wood up wide after it cracks. The wedge is fastened to a 1/2-in. steel plate that Wannamaker bent to a 90 degree angle to attach the wedge to the I-beam runner.

"I bought a new 2-stage Barnes 16 gpm hydraulic pump specifically designed for log splitters. A cylinder from a junked front-end loader lifts the splitter I-beam up vertically so you can split chunks without lifting them off the ground. You just roll them onto the splitting platform," says Wannamaker, noting that the splitter trailer has enough clearance to travel over rough, uneven terrain.

"I built the splitter after a bad wind storm blew over a bunch of trees that I didn't want



to split by hand. I hated to see the wood go to waste. The splitter turned out great - it made the cleanup job a lot easier," says Wannamaker. He's exploring the commercial possibilities of manufacturing the splitter or licensing it to an existing manufacturer.

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## "One Man" Saw Cuts, Loads Wood

"It lets one man cut and load firewood all in one operation," says Ed Keyowski, Canora, Sask., about his home-built saw that's mounted on a 2-wheel trailer and equipped with a conveyor that delivers wood into a 3/4-ton pickup.

The saw is equipped with a roller on back that supports the log, and a 4-ft. long, 6-in. wide moveable cradle that moves the log back and forth into the blade. Sawed wood drops onto a 15-ft. long, 16-in. wide conveyor that delivers wood into the pickup. The saw is powered by a 10 hp Briggs & Stratton engine removed from a grain auger. The conveyor is hinged in the middle so it can be folded back for transport.

"It's easy to operate and was relatively cheap to build," says Keyowski, who built the saw 10 years ago. "It takes the place of three men. I just hitch the saw up to the pickup and drive to the wood lot where I cut and load wood all by myself. I can saw logs

up to 25 ft. long and 16 in. in diameter. I put one end of the log on the roller and the other end on the cradle. I push the cradle back and forth to move the log into the blade. It cuts logs into chunks up to 30 in. long. If a log jams the blade and stops it, a spring pulls the engine back and allows a belt to slip. It keeps the engine from burning out."

Keyowski used scrap iron to build the trailer and salvaged the front spindles and tires from an old Chevrolet car. He used the 1-in. tubular steel frame, loader chain, and drive mechanism off an old bale elevator to build the conveyor. The conveyor is equipped with a stop that lets him control the loading angle. By using a jack on the hitch he can raise the conveyor high enough to load wood into a grain truck.

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