Semi Truck Powers Wood Splitter

"It's not pretty but it splits wood fast and handles the biggest logs you can find," says George Young, Jr., Westminster, Mass., about the massive wood splitter he and his friend Joseph Morin built. It's powered by a 300 hp Mack semi truck.

The giant splitter is operated by a 47 gpm hydraulic pump that's powered by the semi truck's pto. A crane mounts on back of the semi truck and is powered by a smaller pump that operates off a double chain drive system, with a small double sprocket on the small pump and a larger double sprocket on the pto shaft. The crane has 3 boom sections and operates a hydraulic winch with 100 ft. of cable for pulling logs to the splitter table.

The entire setup mounts on a pair of welded-together 2 1/2-ft. wide, 1/2-in. thick H-beams off an old railroad trestle, and is supported by an axle and wheels on back. Threaded rod is welded onto the 2 beams at various places as a safety precaution. "There are nuts on the tie rod so if the 2 beams get loose or start to bend I can just tighten the nuts up," says Young.

The splitter's 3-ft. tall splitting wedge is welded to a 1/2-in. thick steel sleeve that fits down into an 8 by 8-in. hole cut all the way down through the splitter table.

The wedge attaches to a hydraulic cylinder that's used to raise or lower it up to 25 in., depending on the size of the log.

"I can pin 3 different cutters onto the sleeve. The cutters split the log into 2, 4, or 6 pieces. As a result, no matter the log's size I can always put the cross in the middle of the log and split it into equal pieces. I never have to pick up any big pieces and split them again," says Young.

"I run the push plate forward up to the wedge, and then I extend the cylinder on back of the wedge. The wedge pushes back on the top part of the log, while the push plate pushes forward on the bottom so splitting pressure is increased.

"The wedge is designed to withstand 20,000 lbs. of pressure, so no matter how hard the wood is the wedge won't bend or break. I haven't found a log that it won't split," he says. "Friends have brought over pieces of tough wood such as elm, oak, ironwood and maple they thought would be too much for my splitter to handle, but it handles them with no problem. And if the wedge ever did bend or break, I could quickly replace it since it's not welded onto the table."

"The truck's engine is pretty fuel efficient and burns only about 1 gal. of fuel per hour, so we could do 10 cords of wood on 5 gal. of fuel."

The splitter's push plate is driven by a 3-ft. long piston off a Hough 100 front-end loader and is hydraulically adjustable to produce 4 or 6 equal size pieces of wood.

The splitter uses 6,000-lb. hydraulic pressure hoses. As a safety precaution, Young installed fire hoses over all the hoses. "If a line burst with that much pressure it would cut a person's skin. If a hose breaks inside the fire hose it will catch the oil so it won't be a problem."

The crane is bolted to a steel plate that Young mounted on the semi truck's frame.

The splitter is operated by 4 spool valves off a Prentice self-loading log loader. The valves are used to operate log-loading racks on both sides of the splitter, to raise or lower the wedge, and to operate the push plate.

Young says he spent a total of about $2,500. "I already had most of the parts that I used or got them from friends," he notes.

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George Young, Jr., and his friend Joseph Morin built this massive wood splitter that's powered by a 300 hp Mack semi truck.

A 3-ft. tall splitting wedge is welded to a steel sleeve that fits down into a hole in splitter table. Wedge attaches to a hydraulic cylinder that raises or lowers wedge up to 25 in., depending on size of log.

Norman Zemlicka used the hydraulic pump from a garbage truck to build this wood splitter.

Garbage Truck Wood Splitter

Hydraulics from an old garbage truck work great to power a homebuilt wood splitter, according to Norman Zemlicka of Cobb, Wis. The family needed to upgrade 10 years ago when his son bought an outdoor stove that could handle 30-in. long blocks of wood.

On a trip to a salvage yard, a garbage truck hydraulic pump caught Zemlicka's attention and, at $50, the price was right. Later he purchased the 25-gal. reservoir tank and the rest of the hydraulic system.

"We mounted the reservoir tank on the rear half of an old wagon with an 8-in. I-beam for the splitter and put the hydraulic control on top of the tank," he explains. "The hydraulic pump from the truck is operated by the pto of the tractor. The cylinder we used has a 22-in. long stroke and 6-in. dia."

The 856 IH tractor's 1,000 rpm's are more than enough to run the heavy-duty hydraulics with plenty of power and speed. Zemlicka's son, Rick decided to make good use of that and welded 4-way and 6-way splitters out of heavy steel from an old plow. He can interchange them on the main splitter made of 1 by 8 by 22-in. steel.

The split wood falls onto a wood chute made out of steel pipes. The splinters and debris fall through, and helpers remove the split wood. Each year, the Zemlicka family splits wood to supplement heating fuel for three or four homes.

Pump is pto-driven by tractor.

The splitter works well, Zemlicka says, and has plenty of power to split the hardest oak and stringiest elm. If they ever decide to upgrade it, they might change the I-beam. Though it's adequate, the powerful garbage truck hydraulics could handle a heavier-duty beam.

The splitter cost about $300 to make.

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Self-propelled Bale Unroller unrolls hay to the left or right. The operator stands on a platform at the rear of the cart and uses joystick controls.

Compact Cart Unrolls Big Round Bales

Feeding hay in tight spaces is easier with the self-propelled Bale Unroller from Rissler TMR Mixers. The 4-roller system unrolls hay to the left or right and feeds to the side.

"Our customers tell us they prefer feeding to the side for most applications, rather than off the front or back like other carts," says Philip Rissler. "One large freestall operator says he prefers starting up our little 9 hp motor to starting up a large tractor and running a bale through a vertical mixer just to feed some hay."

Rissler says his customers range from small herds to large dairies with several hundred head that may buy multiple units. "Our most common customer has a 50 to 100-cow tie-stall dairy," he says. "At a 41-in. width and a maximum bale size of 4 by 4 ft., the smaller model 444 is designed to fit through most traditional barn doors. The 47-in. model 544 with a maximum bale size of 5 by 4 ft. has a width of 47 in. Both work great in freestalls and work with either dry or wet bales."

The operator stands on a platform to the rear of the cart and uses joystick controls. The 4 drive rollers have a speed range of 25 to 45 ft. per min. Both carts feature 16-in. tires with independent hydraulic drive powered by a 9 hp Honda engine.

"The Honda brand has helped us sell a lot of carts," says Rissler.

The 444 is priced at $7,200, and the 544 is priced at $7,400. Rissler also makes 3-pt. hitch and stationary versions with hydraulic drives. The 3-pt. 420 is priced at $4,100, while the larger 520 is priced at $4,300. The model 444S (stationary) is priced at $3,550, and the model 544S is priced at $3,770.

The carts are designed for primary use on hard surface areas. Rissler recommends the optional air-filled swivel tires for use on rougher terrain.

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