



Log splitter is powered by a 5 hp, 3-phase electric motor so it's quiet and produces no exhaust fumes.



A boom fitted with an electric winch swings log onto splitter from any direction.

Electric-Powered Log Splitter

"I know you've run a lot of log splitters but I think mine is unique," says Paul Malloy, Mims, Fla., who built a big electric log splitter out of scavenged parts.

It's powered by a 5 hp, 3-phase electric motor so it's quiet and produces no exhaust fumes. It's fitted with a pair of 3 1/2 in. dia., 36-in. long cylinders, so it's powerful and can split big logs up to 28 in. in diameter and 36 in. long. It's also easy on the back thanks to a boom fitted with an electric winch that swings the log onto the splitter from any direction.

The motor hooks up to a static 3-phase con-

verter so it can be used with single phase electricity. The motor shaft drives a variable displacement hydraulic pump off a Jacobson riding mower. The cylinders push the log against a 1-in. thick end piece that's reinforced by a length of 3 by 6-in. channel iron. The cylinders can be activated from either side of the splitter, either by pulling on a lever or by stepping on a pedal (a shaft connecting the lever and pedal runs across the back of the trailer).

The boom pivots on a wheel hub that's bolted to the splitter.

The trailer frame is made from two old boat trailers, cut up and welded back together. The splitter's main beam is a length of 12-in. steel I-beam salvaged from a building that had been damaged by a tornado.

"I bought the 5 hp electric motor at a garage sale for \$20 and paid \$24 for the wedge at Northern Tool," says Malloy. "The cylinders were donated by a friend. I had to buy a new hydraulic reservoir after the one off the mower started to leak. I paid \$100 for the tank. I usually plug the electric motor into the dryer outlet in our house, or into a welder.

"By using a variable displacement pump I can precisely control the cylinders' speed. I can extend the cylinders very slowly, yet still have full power as I split the log.

"I was told the wheel motor pump wouldn't work, but I figured out a way by adding a valve that lets me dump excess fluid back to the tank whenever the cylinders are retracted."

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Horse Owners Scoop Up New Manure Vac

As David Oberhofer watched a girl carry a heavy bucket and shovel to clean up horse manure in a paddock, he started wondering if he couldn't come up with an easier way to do the job.

The Australian created a business, Greystone Vacuums, and started manufacturing and selling his Paddock Vacs less than two years ago in Australia. Sales were so strong that Oberhofer came to the U.S. to set up a second plant in Las Vegas. The first Paddock Vacs just came off the U.S. line this spring.

Horse owners must regularly clean up manure because it harbors parasites and worms that can infect horses and because it kills the grass.

Oberhofer says 80 percent of his customers are female between 35 and 55 years old, who have been cleaning up after their horses for a long time and now have more disposable income.

"This is her toy for the farm," Oberhofer says. "It gives her time back."

Paddock Vacs are sold through agents

across the country. Agents take a new vacuum to potential customers and demonstrate how it works. In most cases the agents leave without the vacuum, having made a sale, Oberhofer says.

One lady recently bought two, he notes, one for herself and one for the veterinarian who saved one of her expensive horses from a parasitic illness.

The vacuums are simple to use, he notes. A riding lawn mower, ATV or small tractor pulls the vacuum. The operator pulls up to the area with manure, takes the 5-in. hose in both hands, places it over the manure and sucks into the unit. Paddock Vacs come in two sizes; the smallest holds about three wheelbarrow loads and the largest five to six wheelbarrow loads. When it's full the vacuum is parked near a manure pile, unlatched, tipped and dumped.

The vacuum works on dry or wet manure, and it doesn't pick up small surface items such as rocks, Oberhofer says. The long hose can also be used to clean out a stall. The unit can be cleaned by vacuuming water through



Paddock Vac vacuum works on dry or wet manure and doesn't pick up small surface items such as rocks.

it from a water tank.

Cost for the Paddock Vac with a 45cc engine is \$2,990. The larger Maxi Vac, an 80cc model, sells for \$3,990. All units come with a one-year warranty.

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Propane-Powered Riding Mower

With soaring gas prices, timing for a propane-powered lawn mower is perfect, says Jeremy Hahne, director of marketing with ONYX Environmental Solutions.

The company patented the technology a few years ago and introduced mowers for lawn care professionals in 2005. ONYX has been doing propane conversions for 15 years on all kinds of equipment.

"Propane not only lowers fuel costs and emissions, but also lowers maintenance costs because it burns cleaner and there is less engine buildup," Hahne says. Oil doesn't need to be changed as often.

"What we did is add our system to Encore commercial mowers," Hahne says. "They're built like a tank."

ONYX's propane-powered mowers put out 60 percent less emissions and 80 percent less toxic emissions.

Fuel costs are also reduced. On average,

propane costs 30 percent less than gas or diesel. The mowers have two 33-lb. tanks, enough to run the mowers for 14 to 15 hours. In a year, the fuel savings offset the cost of the mowers, which are about 10 percent higher than conventional mowers, Hahne says.

The city of Austin, Texas, purchased some of the first mowers to use on city property and have not had any problems, Hahne notes. Other states are also beginning to enforce regulations that require using equipment that puts out fewer emissions, especially on government property.

"We are seeing a spiked interest this year," Hahne says, as more people hear about the propane option. "Landscapers are switching over their fleets."

The company plans to introduce a homeowner product line in 2008.

Commercial EnviroGard mowers start at

"Propane not only lowers fuel costs and emissions, but also lowers maintenance costs because it burns cleaner and there's less engine buildup," says ONYX Environmental Solutions about its propane-powered riding mower.



\$4,300 for a 36-in. walk behind model with a 15 hp Kawasaki engine, and top out at \$13,500 for a 61-in. zero turn model with a 31 hp Briggs & Stratton engine. Engines have a 3-yr. warranty on parts, and the mower deck has a 10-yr. warranty.

The company is also seeking established

dealers throughout the U.S., Hahne says.

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