John Youngdahl put together this tractor-mounted splitter out of scavenged parts. "It's powered by an electric motor so it's quiet and produces no exhaust fumes," he says.

Motor shaft-drives a 2-stage hydraulic pump, with a lovejoy coupling used to couple the pump to the motor.

Electric-Powered Log Splitter Is Quiet, Powerful

John Youngdahl decided he needed a powerful, quiet, and reliable log splitter to ease the chore of making the firewood he burns every winter. So he put together a heavy duty, tractor-mounted splitter out of scavenged parts.

"It's powered by a 5 hp electric motor so it's quiet and produces no exhaust fumes. And it's fitted with a big 3 1/2-in. dia., 36-in. long cylinder so it's powerful and can split big logs up to 30 in. in diameter and 36 in. long," says Youngdahl.

The motor shaft-drives a 2-stage hydraulic pump. The cylinder pushes the log against a 1/2-in. thick end piece that fits onto the end of the beam. The cylinder is activated by pulling on a lever at the back of the tractor.

In order to use the electric log splitter away from his yard pole, he uses a heavy-duty 150-ft. electric cord. An enclosed motor starter is used to convert single phase electricity to 3-phase.

"It doesn't produce the noise or fumes of a gas engine, and there are no problems with fouled spark plugs, a busted starter rope, or contaminated fuel," says Youngdahl. "A lovejoy coupling is used to couple the pump to the motor. I took the motor apart and had a friend at a local machine shop cut the shaft off and turn it down to the size of the coupling. My friend also made a housing that allows coupling the pump to the motor.

"I bought the 5 hp electric motor for $25 and paid $130 for the pump. The hydraulic reservoir was salvaged from a scrapped forklift. By using quick couplers on the hoses, I can move the pumping unit separately from the main splitter and the electrical control panel, and keep the hose ends closed up and dirt-free.

"I recommend using a high speed, single phase, C-flange type electric motor. The C-flange makes it easy to bolt on the pump. A 5 hp electric motor outperforms a 5 hp gas engine by 30 to 40 percent, so the pump I use is actually designed for use with a 7 1/2 hp gas engine.

"The motor I use turns at 3,450 rpm's. It's important to use a high speed motor with rpm's that are close to the 3,600 rpm's that a gas engine runs at."

Youngdahl bought a suction strainer for the hydraulic system and made his own in-line filter. "The hydraulic oil tank that I use was salvaged from a forklift. It's made from light gauge metal and didn't lend itself to fitting the strainer so I made an in-line filter housing out of pipe fittings."

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Epps Biting Fly Trap uses no chemicals, bait or power to trap and kill biting flies.

Trap Kills Flies Without Chemicals

Mark Bonacquista liked the fly trap he bought for his cattle so much that he went back to the company and bought the rights to build and sell the trap. The Epps Biting Fly Trap uses no chemicals, bait or power to trap and kill biting flies. The flies do the job themselves when they drop into trays of water laced with dish soap.

"We had two black, thin-skinned mares, and biting flies were driving them crazy," explains Bonacquista. "The Epps Trap eliminated the problem."

When he heard the company was dropping the fly trap, Bonacquista contacted Alan Epp, the inventor, and obtained exclusive rights to manufacture and market it.

One trap will control biting flies over a 20-acre area, he says. The design uses black panels covered with clear plastic with room in between for the flies to fly in and land. As they circle what they think is a big warm-blooded animal, they hit clear plastic deflector arms between the two surfaces and fall into the catch trays.

"All the soap does is break the surface tension of the water so the flies quickly drown," says Bonacquista. "We scoop out about a pound of flies every other day from our trays. We had a call from one customer who filled three large coffee cans full after three days of use."

Bonacquista sells a permanent unit (5 by 7-ft.) that attaches to four T-posts and has two catch trays. It is priced at $295 plus shipping. A new portable model (4 by 6-ft.) comes with a stand and a single tray. It can be held in place with sand bags. It sells for $325 plus shipping. Both are wind rated to withstand 90 mph winds when properly installed.

"The portable stand is ideal for people who do rotational grazing or move horses from one pasture to another," says Bonacquista. "They wanted a fly trap they could pick up and move. You can throw it in the back of a pickup with some sand bags and set it up in a minute."

The black panels are made from heavy-duty cargo covers and are a one-time investment. However, the clear plastic panels do have to be replaced due to exposure to the sun. Replacement sheets are only $7.95, and Bonacquista says they can last for three to four years in northern states with a short biting fly season. They may have to be replaced once a year in the far South where the biting fly season is longer.

"I know people who are still using units they bought more than 10 years ago," says Bonacquista.

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Loy Robinson drilled his own well for $400, and sells a book that explains how you can drill a low-cost well, too.

Do-It-Yourself Well Driller

Like Loy Robinson, you can drill your own well. With luck, you may even be able to do it for $400 like he did. You can do the research and figure out how to fabricate a drill bit, rig a pole and boom, learn how to install screens, casing and other essentials. Or, you can buy his book, *Drill Your Own Water Well*, and just follow the instructions.

"For years, I dreamed of drilling my own well, studying every book and CD or internet source I could find on drilling a well," says Robinson. "Most of the rigs I priced ran from half to the full cost of what a professional would charge to dig the well."

Robinson needed cheap water for his greenhouse and nursery operation. What he discovered was a method called percussion drilling, a simple age-old system. He designed and built his own tools and even came up with a novel method using a cement mixer to power the lifting of the tools.

"The idea is a simple one," he explains. "You raise and drop a weighted chisel blade into a hole to which a few inches of water have been added. The chopping action breaks up and blends the earth into a slurry. Then you remove the chisel and lower a bailer tool that removes the slurry.

"I drilled two wells myself with this method," he says. "The first hit a natural spring at 17 ft., but I went down to 39 ft. My second well is at just 80 ft., but this method has been used to drill wells hundreds of feet deep. All you need is enough pipe, a leaf spring from an old automobile, rope, bolts, gasket material and a pulley."

Robinson has his book on a CD priced at $11.49 plus $3.50 shipping, or it can be downloaded from his website for $9.99.

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