Self-propelled log splitter is built around the back end of a 1949 Allis Chalmers tractor.

Self-Propelled Splitter Carries Wood Home

You'll like this nifty self-propelled log splitter built by Glenn Neiheisel of Columbiana, Ohio.

He built the unique splitting rig with help from his sons James, Timothy and Ryan. Glenn is a machinist and James is an engineering student at Youngstown State University.

The one-of-a-kind machine is built around the complete back end of a 1949 Allis Chalmers C tractor, including the rear end, axle, transmission, final drive, pinion gears, and differential as well as the seat. The rig rides on the tractor 's original rear wheels with new 20-in. wheels on a home-built front axle. Power is provided by a Powertrain 13 hp engine on back. The engine belt-drives a pulley on the tractor's pto shaft. The pto shaft, in turn, belt-drives a hydraulic pump which operates all the rig's cylinders.

A hopper with flared sides on front is used to hold split wood, and there's a 7-ft. long splitter beam assembly on back built out of an 8 by 8-in. H-beam. Wood is split with the splitter in the vertical position. When the splitter isn't in use it drops hydraulically into a horizontal position for storage.

The cart is supported by a frame made from 2 by 3-in. rectangular tubing.

"This machine actually makes it fun to go out and split wood," says Neiheisel. "It lets us go into the woods and split wood with just one machine. There's no need for a separate tractor and wagon. It'll hold more than half a pickup load of wood.

"We came up with the idea because our family heats with wood, and we cut most of our firewood several miles from our home. In the past, we would haul our chain saws, homemade log splitter, tractor, and wagon along with us, but that got old real quick. So when the engine on our splitter gave out, we decided to build a new one from the ground up."

The men removed the pto unit from the rear of the tractor's pinion housing, machined a custom cover plate, and inputed the engine power through the pto shaft from the rear of the tractor instead of through the front of the transmission. "This worked fine except that now everything ran in reverse. We solved the problem by flipping the differential gear from the left side of the pinion to the right side, reversing everything," says Neiheisel.

The engine is belt-driven through a twin A-belt system with two custom machined pulleys. A belt clutch is used for shifting.

"The pump that we used is a Haldex 16 gpm two-stage splitter pump. From the pump, fluid enters the inlet port of a Prince 3-spool control valve," says Neiheisel.

A 3-spool valve mounts next to the operator and is used to control most operations. One valve operates a cylinder that steers the front wheels, one operates the splitter itself, and one is used to raise and lower the splitter beam assembly. A separate valve on back is used to operate the splitter.

"Using a spool valve to steer is a lot easier than operating a steering gear and eliminates the need for a steering shaft, which would get in the way of the wood cargo area. I just move the lever forward or backward to steer left or right," says Neiheisel.

"The splitting beam uses a customized hydraulic steering cylinder off a Caterpillar front-end loader and has a 2-in. dia. rod, 5-in. dia. piston, and 31-in. stroke. The wedge is a custom designed, double angle weldment, and the foot is made from 1-in. T-1 steel plate."

The machine didn't cost much to build. "We already had the Allis Chalmers tractor, which we had been keeping for parts. We bought the engine at an auction for $200," notes Neiheisel.

Contact: FARM SHOW Followup, Jamkes Neiheisel, 44864 Metz Road, Columbiana, Ohio 44408 (ph 330 831-8801; jmneiheisel@student.ysu.edu; www.arboristsite.com).

There's a 7-ft. long splitter beam assembly on back built out of an 8 by 8-in. H-beam. Wood is split with the splitter in the vertical position.

When splitter isn't in use it drops hydraulically into a horizontal position for storage.

Boost ATV Traction, Stability With Clamp-On Duals

Install Clic Dual wheels on your ATV and you'll enjoy vastly improved traction, stability and flotation, says Dave King, Dual Concepts, Inc. Once the system has been installed the first time, they can be removed or reinstalled in about five seconds with no tools.

"We distribute them for a company in Switzerland that has been making duals for about 30 years," says King. "They specialize in quick release dual wheels. They use a lot of clamp-on dual wheels because of vehicle width restrictions on their roads."

Although the Clic Duals were originally designed for ATV's, King says they've also installed them on skid steers, SUV's, pickups and industrial equipment like chippers and shredders. They're not recommended for speeds over 20 mph.

"A lot of our customers use the duals for work, such as mowing or spraying side hills," says King. "They help prevent roll overs. We also sell a lot of them to guys in Canada working in mining and construction. The duals help them drive across muskeg or marshy ground."

Clic Duals deserve their name. Once installed, tires can be removed by driving the inside tire over a block, so the dual is off the ground an inch or two. Simply unlock the levers on the drum, twist the tire toward the front and pull it off. To reinstall, twist the levers to the locked position, and position the center pin in the center hole with the dual wheel pushed against the inside wheel. Twist the dual wheel against the direction of forward travel until it clicks into place.

A kit for one axle sells for $695 plus $50 shipping. Everything is included except the tires. King notes that most customers want to match tires with what is already on the vehicle, whether lug, turf or other style.

Contact: FARM SHOW Followup, Dual Concepts, Inc., 2414 NW School Street, Ankeny, Iowa 50023 (ph 515 306-1028; fax 515 964-7969; info@dual-concepts.com; www.dual-concepts.com).

Clic Dual wheels improve vehicle's traction, stability and flotation. Once the system has been installed the first time, the wheels can be removed or reinstalled in about five seconds with no tools.