

Pickup Converted To Self-Propelled Splitter

Richard Thompson spits out 4-ft. log sections for his outside furnace with his “get and split” pickup-mounted splitter. A hydraulic-powered crane pulls logs to the pickup and loads them for splitting. A sliding table even moves a half log from the first split out of the way until the other half has been split again.

“I built the splitter for a trailer, but as my old Datsun pickup body rusted away, I decided to convert it to a self-propelled splitter,” says Thompson.

What made the Datsun ideal was the open driveshaft between the transmission and transfer case. Thompson pulled the driveshaft off and mounted a specially machined sprocket on it. The sprocket turns a jackshaft that in turn powers two hydraulic pumps, one for the rear-mounted crane and the other for the splitter.

“The engine has no governor on it, so I can set the idle at 1,500 to 1,700 rpm’s,” says Thompson. “I put the transfer case in neutral and run the transmission in fifth gear. The sprocket drives the pumps at 3,500 rpm’s, which provides plenty of power for both pumps.”

Thompson replaced the rusted out bed with rectangular beams that serve as both a base for the splitter and as a splitting table. The crane mounts opposite the splitter. The 50-ft. cable runs from the arm down to a hydraulic motor-powered spool centered under a vertical pipe. The pipe is mounted on a 14-in. sprocket connected to a second hydraulic motor with a #40 sprocket chain.

“The spool motor retrieves and lifts the log, while the other motor turns the arm as needed toward a log and places the log on

the bed for splitting,” explains Thompson. “I can run one or the other, but not both at the same time, since they run off the same pump. I have a variable control on the pump for cable speed.”

To make room for the splitter, Thompson cut away half the cab, including part of the passenger side dash. To fit the pickup, he designed the splitter to pull the wedge into the log section. He attached the 5-in. bore cylinder to the butt plate at the rear of the splitter.

“I made the 12-in. high wedge out of three staggered sections of leaf spring,” explains Thompson. “The bottom section extends out two inches ahead of the second, which is two inches ahead of the top section.”

By staggering the sections of wedge, the initial pressure is concentrated on a small portion of the log to be split, forcing it apart. As the second and third sections contact the log, each of them becomes in turn the focal point for pressure.

“It takes less total pressure to split a log this way,” says Thompson. “The spring leaves really keep an edge, too. I’ve only sharpened them once since I built the splitter.”

Thompson says a bad back makes the pickup bed height of the splitter and splitting table especially handy. To further aid in log handling, he mounted a 4-ft. carriage to the operator’s side of the H-beams. As a log splits, half falls on the carriage and the other half falls back on the table.

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Richard Thompson converted an old Datsun pickup into this self-propelled splitter. He uses it to make 4-ft. log sections for his outside furnace.



Splitter pulls wedge into log section (left). A hydraulic-powered crane pulls logs to the pickup and loads them for splitting. Note spool motor under vertical pipe.



Rear view of Clayton Otwell's self-propelled log splitter shows firewood stacking bed that makes it easy to haul wood back home.

Self-Propelled Log Splitter

Clayton Otwell calls his self-propelled log splitter the “Split & Git”. He drives it to the field, splits the wood, and hauls it back home to stack. His Nissan 4 by 4 light truck chassis with a 318-cu. in. V-8 and a front clip from a Chrysler Fifth Avenue has plenty of power to get the job done.

“I have yet to take it out of second gear,” he says. “I wouldn’t want to know how fast it could go.”

The Nissan had been left behind by a previous property owner when Otwell bought his property. He stripped it down to the frame, axles and drive train and installed the 318 engine and transmission. An upright 2-in. pipe welded to the front frame served as a mount for various components like the radiator and lights. The front end of the frame had to be narrowed to match the Chrysler A-frame.

“I cut cross sections into the frame so I could ‘weasel’ the two together,” says Otwell. “Then I pad-welded the sliced-up frame with steel plate to reinforce it.”

While Otwell was working on the vehicle part of the project, his father Jim, a former boilermaker by trade, was working on the splitter. The younger Otwell trusted his dad do a better job on the precise welding needed.

“The splitter has a 4-in. cylinder with a 24-in. stroke,” says Otwell. “The splitter wedge

is a 14-in. wide, 1-in. thick steel plate welded on edge to an I-beam. The push plate is also 1-in. plate.”

The push plate rides on an I-beam base boxed in at the bottom with angle iron for reinforcement. “This is the second one he has built, and he knows how much the I-beam can twist when splitting,” says Otwell. “We used all new hydraulics and powered it with a 16 gpm hydraulic pump on an 18 hp Briggs & Stratton.”

Otwell had planned to run the hydraulic pump off the 318, but discovered the cost of a clutch drive was excessive for what he wanted to spend. Instead, he extended the frame at the front of the engine with steel pipe to hold the Briggs & Stratton.

At the rear and alongside the splitter, Otwell installed a stacking bed. “The splitting blade has wedge sides, so half the chunk falls onto the bed,” says Otwell. “I can catch the other half and toss it into the stack.”

Otwell estimates he has around \$1,000 invested in the rig and is fast getting his money’s worth out of it. He has even driven it in a local parade.

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Larry Zenz's 3-pt. mounted splitter is free to swivel 360 degrees under a 7-ft. long, 3-in. I-beam arm. It allows him to split logs no matter what direction they're laying.

Upside Down Splitter Rotates 360°

“I’m 83 years old and can’t lift big, heavy chunks of wood any more. So I designed and built a ‘rotating’ log splitter that lets me split logs right on the ground without ever having to move the wood at all,” says Larry Zenz, Parks, Ark.

His 3-pt. mounted splitter runs off tractor hydraulics and can handle logs up to 3 ft. long and 2 ft. in dia. The splitter itself works much like a conventional model. It consists of a 5-ft. long, 6-in. I-beam equipped with a wedge attached to a 2-ft. long, 4-in. dia. hydraulic cylinder. A 3/4-in. thick, high tensile steel plate is welded to the far end of the splitter.

What makes the splitter unique is that it’s free to swivel 360 degrees underneath a 7-ft. long, 3-in. I-beam arm. It allows Zenz to split logs no matter what direction they’re laying. The swivel mechanism is attached to a pair of rollers mounted on the arm, allowing the splitter to be moved anywhere along the beam.

A homemade, 3-pt. mounting bracket supports both the splitter and the arm. A short length of pipe on the arm fits over a vertical pipe on the 3-pt. bracket. By pulling

a pin from the two pipes, Zenz can manually swing the splitter up to 180 degrees from side to side.

To split a log, he uses the tractor’s 3-pt. to lower the splitter down over the log. A remote control can be used to operate the splitter hydraulics from behind the tractor.

“No matter where the chunk of wood is laying, or what position it’s in, I can split it without having to move it,” says Zenz. “I came up with the idea because I have some old pine, oak, cedar and oak logs that are almost 3 ft. in diameter. I usually cut them into 2-ft. lengths. If I have a bunch of these 2-ft. long wood chunks scattered out behind the tractor I don’t have to move them at all. Instead, I can swing the arm over to the wood and then roll the splitter along the arm until it’s over the log. Then I can use the swivel mechanism to rotate the splitter and line it up with the wood.”

“I built a mechanism on the arm to balance the splitter so it always stays horizontal to the ground.”

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