Made It Myself

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Portable Power Unit Built From Car Engine

"I needed a way to pump liquid manure from my lagoon without tieing up a tractor," says Randall Morrison, Nahunta, Ga., who says he found the ideal solution by mounting an old car engine and transmission on the frame of a junked-out, pull-type tobacco harvester to make a portable power unit.

The mobile power unit can also be used to pto-drive any type of stationary equipment including grain augers, irrigation pumps, hammermills, etc.

Morrison bought a 1971 Ford LTD from a neighbor for \$150 and pulled out the car's 351 cu. in., 8-cylinder engine, automatic transmission, driveshaft, radiator, alternator, and gas tank. He shortened the driveshaft and welded a male pto spline (removed from an old fertilizer spreader) onto it so that he could connect it to a standard pto shaft. The spline is supported by a pillow block bearing. He mounted the fuel tank overhead. Fuel is delivered by gravity to the engine. An aftermarket key switch and manual throttle cable are mounted just below the fuel tank

"It completely eliminates the need for a tractor and cost little to build," says Morrison, who put the unit together three years ago for less than \$250 total. "I use it mainly to pump chicken manure out of my lagoon and into a truck. I haul manure three or four days a week, every week of the year, and the water-cooled engine will run all day long without getting hot. I had been using a 150 hp tractor to operate the pump, but I needed the tractor during hay and silage season and couldn't justify spending the money for another tractor. A commercial stationary diesel engine power unit with the same horsepower rating would probably cost \$3,000 to \$4,000 and would be difficult to use for other jobs.

"The car transmission operates in the opposite direction as the tractor pto so I have to put it in reverse to operate the pump. If the pump plugs up I can unplug it by simply putting the transmission in forward. I haven't had any problems with it at all. The rails of the tobacco harvester frame were almost the same width as the car so I was able to fasten the original motor mounts to it. I mounted a set of gauges on the frame to monitor oil pressure, water temperature, and alternator output."

The car's exhaust system was worn out so Morrison made his own dual exhaust system. To make the exhaust pipes go upward, he switched the exhaust manifolds around so they're on opposite sides, and then fitted them with muffler pipes that run up above the engine. He also mounted a cover over the unit to keep

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Hydraulic Jacks For 4-WD Tractors

A pair of portable hydraulic jacks that cost less than \$700 to build lets Allen Donarski, Argyle, Minn., jack up a 4-WD tractor in minutes.

Each jack consists of an 8-in. stroke hydraulic cylinder pinned to a steel frame with a 14 in. sq. base. The side arms, which support the load when the hydraulic cylinder is activated, are made from 2 1/2-in. dia. seamless steel pipe that's free to slide up and down inside the frame. Once the tractor has been raised off the ground, the jack can be converted to a stand by inserting a pin in each arm.

"It works great," says Donarski, a mechanic for a local farmer. "I had been using blocks and a 12-ton hand jack to raise the tractor. However, 4-WD tractors are so big that it takes a lot of blocks and you have to jack up both sides of the tractor. It used to take me a half hour to jack up a tractor. Now it takes only 3 minutes

The 100-lb. jack is equipped with a pair of wheels on one end so that it can be easily moved around. The wheels are hinged so they can be flipped up out of the way.

Donarski powers the lift cylinders either with the tractor's hydraulic system or by a portable hydraulic pump mounted on a pressure washer cart. The portable pump lets Donarski jack up the tractor by himself. When tractor hydraulics are used, another person has to be in the tractor cab or Donarski has to climb up into the cab several times

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Power Steering Added To AC Tractor

"It gives me fingertip control and I didn't have to alter the tractor in any way," says G.L. Woods, Pelzer, S.C., who added an automotive power steering pump and gear box to his Allis Chalmers D-17 tractor.

"I took the power steering from a 1973 Oldsmobile Toronado. The alternator on the tractor was driven by a double V pulley so I used one of the V's to drive the steering pump, which I mounted on a side bracket that bolts to the frame of the tractor. I installed the gear box inside a metal box alongside the pump. I simply

hooked the tractor tie rods to the gearbox output shaft and ran the steering shaft to the input side of the gearbox. If the power steering pump ever failed, I could quickly reconnect the original steering shaft and steer manually again.

"Power steering makes the tractor much easier to control and absorbs shocks to the wheels, reducing operator fatigue."

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Baler Works Better On Rough Ground

Alberta farmer Art Dechaine put a walking beam axle on his "early 80's" Vicon baler and also put a hydraulic lift arm on the hay pickup so he can adjust it on the go when working rough or soft ground.

Originally the baler had just one wheel on each side. Dechaine and his brother bolted a walking beam to the original axle and added a second wheel in back. The two spindles on the walking beams are spaced so wheel hubs are 40 in. apart. Because the beam, made out of 4 by 6-in. sq. tubing, just bolts to the original axle, it can be easily removed to convert back to a single-wheeled axle. The walking beam gives a better ride on rough ground while the second wheel provides better flotation over soft ground.

Dechaine added a hydraulic arm to the pickup on the baler. Allows him to change the height of pickup on the go depending on ground conditions.

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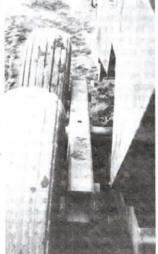


Photo courtesy Pembina Forage Association, Westlock

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