



Callies's compost turner was built out of a New Holland Hydroswing Haybine frame.

Compost Turner Built From Mower Conditioner

If Brad Callies had gone out to buy a compost turning machine, he would've had to spend about \$20,000 to buy what he wanted from a manufacturer. Instead, he built his own machine for about \$3,000.

He started with a New Holland hydroswing Haybine frame. "I bought the frame, minus the mower conditioner components, from a machinery junk yard for \$850, which included the hydraulic pump and motor. I widened the frame 3 ft. so the composter could handle a 12-ft. windrow. I then had to reposition the wheels and extend the arms that the wheels pivot on. I added two lift cylinders off an old tractor loader."

The rotor drum was fashioned from a heavy steel drainage pipe that's 12 ft. long, 9 in. in diameter, and 1/2 in. thick. "I bought the pipe at well below cost from a local steel job shop," says Callies. He took the rotor to a machine shop to get the 2 5/16-in. dia. shafts centered and welded in. Rigid flails weld to the rotor at an angle that directs material toward the center, throwing it back into a mound. The final drive from the motor to the pump consists of two different sized gears and chains (size 80 and 100 chains). He added large side panels, which are 1/2-in. steel plate.

"I wanted a hydraulic-driven machine to keep it simple. It works absolutely great," says Callies. "It'll handle a pile of manure/compost that's 4 1/2 ft. high by 12 ft. wide. I can now make good compost from dairy manure in about seven or eight weeks. One minor drawback is that on the first pass through the pile I may have to lift the



Rotor drum was fashioned from a heavy steel drainage pipe, with rigid flails welded to it at an angle.



Unit will handle a pile of compost that's 4 1/2 ft. high by 12 ft. wide.

composter up a few inches to a foot off the ground. On occasion the hydraulic motor will slow and stop because of the packed load. But once I get through the pile it's aerated and looser. I use a 105 hp bi-directional tractor, but an 80 hp tractor could probably handle this machine as long as it had a hydrostatic transmission."

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He widened the frame 3 ft., repositioned the wheels, and extended the arms that the wheels pivot on.



Dave Honderich converted the front end of an old IH truck into a portable power unit for pto work. He uses it to operate his silo blower and a manure pump.

Cut-Down Truck Makes Great PTO Power Unit

"I built it because I wanted to free up a tractor. It's a cheap source of power," says Dave Honderich, New Hamburg, Ontario, who converted the front end of an old International truck into a portable power unit for pto work. He uses it to operate his silo blower and a manure pump.

The cut-down truck has a hitch at each end so Honderich can pull it around the yard with a tractor. There's a pto hookup at the front and a jack under the back to support it when parked.

The 1982 International truck was equipped with a 466 cu. in. diesel engine and 5-speed transmission. Honderich chopped the frame off behind the transmission and also cut off the cab. He couldn't run the pto shaft directly off the transmission because it turned the wrong way. So he reversed direction of the shaft by fitting it with a pulley and belt-driving another shaft which runs up to the front of the truck.

"I used it last summer to blow haylage into my 20 by 70-ft. silo and plan to use it to blow high moisture corn into another silo. I also used it to operate a manure pump and a water pump," says Honderich. "It worked great. One of my neighbors even borrowed it to fill his silo. I had been using a 50 hp tractor to operate the blower. The truck puts out about 150 hp which makes a big difference. I didn't plug the blower pipe at all last summer until the silo overfilled. The hitch on front of the truck helps keep the blower stationary.

"I could've had a special gearbox made to reverse the rotation of the truck's driveshaft, but that would've been very expensive.

"The truck still has its original clutch, gearshift lever, and throttle. To operate the pto, I stand behind the steering wheel on a plywood platform that I mounted above both shafts. I usually run the transmission in third gear. I use the truck's throttle to operate the engine at about 1,800 rpm's so the pto runs at 540 rpm's. If I need more power, I switch to second gear or if I want to operate something smaller, like a water pump, I switch to fourth gear. I mounted PVC pipe over both shafts to serve as safety shields.

"I spent a total of about \$3,500, which I feel is cheap considering how much power it has. It's inexpensive to maintain.

"I attached a 4-ft. high steel pipe to the truck's exhaust pipe in order to draw heat away from the belts. I also locked the truck's wheels in place so the rig tows straight. I just clamped a U-bolt over each of the front springs and radial steering arms.

"I use the truck's power steering unit to power a hydraulic pump on front of the truck. A hydraulic hose runs from the pump to the valves on my manure pump, allowing me to switch from agitating manure to loading it into a truck."

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Cut-down truck has a hitch at each end and a jack under the back to support it when parked.