



## Big Loader Tractor Works Great For Moving Snow

"I've made seven of these tractors and sold them all except for one that I still use," says Archie Smith, Mora, Minn., about his big home-built 4-WD loader tractor.

Smith designed the tractor specifically for loader work with the cab up front just behind the 9-ft. wide loader bucket for excellent visibility and with the engine at the rear to counterbalance the loader. Articulated steering makes for easy maneuverability and 4-WD gives it plenty of power and traction.

The tractor is powered by a 6-cyl. Chevrolet truck engine and 4-speed transmission coupled to a homemade transfer case. The two drive axles were both taken from WC Allis tractors. Smith says the WC axles work great because they're

designed so that the differentials can be pulled off. On most tractors the differential and transmission are in one unit.

Two hydraulic cylinders provide the articulated steering at a center pivot point, regulated by a hydraulic control valve on the steering wheel. The cab is heated for wintertime comfort and the tractor is equipped with floodlights for nighttime work. Smith did the sheet metal work around the engine and cab himself.

"It works great for moving snow because of the outstanding traction and visibility," he says, noting that the tractor moves down the road at up to 18 mph.

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## Home-Built 3-Wheel Sprayer

"Maneuverability and speed make this the handiest farm spot sprayer we've ever used," says Albert Helbig, Oakdale, Ill., who built his own 3-wheel sprayer from the ground up.

Helbig built the frame of the sprayer from 2 by 2-in. square tubing. The 3-speed transmission and differential were salvaged from an old IH Cub Cadet lawn mower. The sprayer's powered by an 8-hp. Briggs & Stratton motor.

Shafts extend out from the transmission to above the drive wheels where #40 chain drives the sprocket-equipped hubs (Helbig made the hubs himself). The transmission is engaged with a belt drive that's controlled by a foot clutch located above the left footrest. The 8.75 by 24-in. drive wheels were taken from a New Idea compicker.

The front "tricycle" steering wheel is a 4.5 by 13-in. car wheel. The steering wheel mounting bracket is equipped with

a sprocket that's turned by a chain connected to a sprocket on the steering wheel column. The motor throttle and sprayer controls are located just under the steering wheel.

The sprayer is equipped with a 50-gal. poly spray tank. Helbig says the sprayer could easily handle a 100-gal. tank but he doesn't need it.

The rig is fitted with a 30-ft. long boom with three independently-controlled 10-ft. sections that can be activated alone or together for spot spraying. The rig's 8-hp. engine also powers a 5-roller spray pump. Boom height can be adjusted by moving it up and down on its mounting brackets.

"This sprayer works great for spraying wild garlic in our wheat fields. The narrow wheels do minimal damage in a standing crop, unlike the bigger sprayers we used in the past that left wheel tracks we could still see at harvest time.

"We also spot spray beans and corn. It fits 40-in. spaced corn or 30-in. spaced beans and requires little room to turn on end rows.

"Our farms are 5 miles apart so I put a tow bar on the front wheel to pull behind a pickup, which carries chemical and water. Three gallons of gas and 500 gal. of water will cover about 100 acres per day, traveling at speeds from 3 to 9 miles per hour. In second gear it runs at about 5 mph, which is the speed we use for spraying," says Helbig, who is considering custom-building the sprayer.

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## "No Hydraulics" Post Driver

You'll like this home-built post driver that uses no hydraulics to drive posts up to 6 in. dia. Total weight of the 3-pt. mounted rig is 600 lbs. The up and down movement of the 3-pt. on any small tractor is all that's needed to power it.

"It has been in constant use on my farm for the past 10 years. The post is totally enclosed inside the unit for safety, and the weight of the driver self-aligns it in all directions so it always drives posts perfectly straight. It'll reach out over water, between trees, over rocks, and into other

places most post drivers can't reach," says farmer-inventor F.W. Craig.

Craig also uses the unit as a boom hoist, to split wood, to support a post hole auger, and even to break up concrete. "There are no cylinders or valves on the unit so there's nothing to wear out," says Craig, noting that he's trying to sell the idea to a manufacturer.

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## Heavy-Duty 4-WD Loader Tractor

Pierre Delorme, Sylvania, Sask., and his father Leo and brother Ray, built their own articulated 4-WD tractor from scratch using two rear ends from a pair of 2-ton Ford trucks, the transfer case from a 6-WD army truck, a 150 hp 6-cyl. flathead Chrysler engine removed from a cement mixer truck, and a 12-speed shuttle transmission.

The Delormes use the hydraulically steered rig to clean out manure from corrals, move snow and round bales, and dig rocks out of fields. The tractor's 7-ft. long, 2 1/2-ft. high bucket can be equipped with 20-in. long tines for digging out frozen manure along feed bunks. It can also be fitted with 3 1/2-ft. long tines for loading manure or a fork attachment for handling two round bales at a time. Delorme also uses the rig to move snow by slipping a steel panel over the 20-in. long tines.

"It's built heavier than most commercial loaders and cost only a fraction as much to build," says Delorme. "We've used the loader, which has a 6-ton lift capacity, to dig out rocks up to 6 ft. in dia. No commercial loader could do that. We built the frame from 10 by 3-in. channel iron, and the front-end loader arms from 8-in. I-beams. For added strength we welded plating into the sides of both I-beams. The bucket's short tines work great for digging out frozen manure along feed bunks. The tractor's short 12-ft. turning radius makes it handy for cleaning manure out of corrals. We can also use the bucket to move two round bales at a time by inserting a pair of 3 1/2-ft. long prongs into holders on each side of the bucket."

Delorme installed the rear ends facing each other and connected the shuttle transmission to a 2-speed transfer case which provides six forward and six reverse gears.



He borrowed the 16 by 16 tires from a Cockshutt 428 self-propelled combine. The tractor has five hydraulic cylinders - two 48 by 4 in. cylinders to lift the loader arms, two 20 by 4-in. cylinders to lift the

bucket, and one 20 by 4-in. steering cylinder.

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