



Gooseneck Grain Trailer

Ron Homan, Larchwood, Iowa, built this gooseneck trailer in his farm shop to cut down hauling time between the combine and bin.

The dual-wheel axle was salvaged from a 50-series Chevrolet truck. The frame is 3/16 by 2 by 8-in. channel iron reinforced in the corners with 1/4-in. steel plate. The trailer is wired

with lights and has vacuum-over-hydraulic brakes.

Homan says the gooseneck hitch makes the wagon much easier to move into narrow spaces, or to back into storage buildings, than four-wheel trailers. The extra hitch on the back is used to pull empty wagons to the field to save an extra trip.

Home-Built Air Compressor

Lonnie Wallace, who runs a tractor and combine repair shop in Jerico Springs, Mo., needed an air compressor to run an impact wrench and other air tools, but couldn't justify the cost of a big compressor.

"The cheapest I could find was \$350 so I decided to build my own. I took an old pressure tank and mounted a GM air conditioning compressor on it, together with a 1-hp. electric motor. I mounted the motor so the compressor turns the same direction it turned on a car engine. That's important because there's a small oil pump in the compressor that lubricates the compressor and, if you run it in reverse it'll burn out. I welded fittings and brackets onto the tank.

"I bought a commercial air compressor switch with a release valve, hose outlet, and air gauge. I filled the compressor with SAE 30 oil and dropped some oil down the suction hose. Whenever the compressor gets noisy, I just add more oil.

"The compressor pumps to 400 psi, but I set it to come on at 100 psi and go off at 150 psi. I also use it to vacuum air conditioning systems. To keep the compressor from free-wheeling, I had to spot weld the clutch shut.

"The total cost was \$130 for the motor and \$32 for the pressure switches. The compressor came from a junk yard and I used the original compressor manifold with hoses.

Towrope Shield For Tractors

North Dakota farmer Robert Green, of St. Thomas, made a heavy, protective metal shield to help protect against flying metal if something should snap while pulling another implement with a nylon towrope.

Green, whose safety idea was entered in the recent "Sugar Beet Growers Idea Contest," made the shield from a 4 by 8 ft. sheet of heavy expanded metal and angle iron framing. The shield mounts on the 3 pt. of his 4830 Deere tractor and is used when pulling with a nylon rope.

Green painted the shield black to make it easier for the operator to see through it. The widest part of the mesh has openings that run horizontally, which also aids driver vision.

Green notes that, fortunately, he's never had the shield "tested" by a mishap but feels it reduces the risk of possible injury to the driver if a hook or clevis on the far end of the nylon rope should break and "slingshot" back towards the pulling tractor.

Feed Grinder Converted Into Liquid Manure Pump

Don Kumm, Osmond, Neb., pumps out his hog manure pit with a pump he made from an old feed grinder.

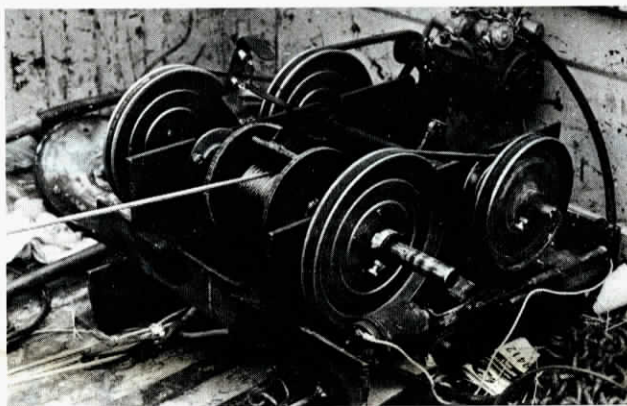
He runs the tractor at 1,000 rpm, or about 270 rpm on the power take-off. "At this speed, the rig will pump out 1,000 gal. of liquid manure in just under 3 min., or about 350 gal. per minute," says Kumm. "The pump is capable of more, but the plastic pipe can't withstand the pressure."

The parts used for the pump are a cast iron blower from a John Deere hammermill; 6 ft. of 6-in. steel pipe with 1/2-in. walls;

a 45° angle 4-in. steel pipe elbow; 15 ft. of 4-in. plastic sewer pipe with a 90° angle on the end; a 90° gear box from an old combine; a PTO shaft; and some pipe and angle iron.

Most of this was bought from an iron salvage yard. Total cost was around \$150. "The pump is a piece of equipment that could be made in most farm shops," says Kumm. "We leave the pump in the pit all the time. It doesn't seem to get damaged by rust."

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Home-Made Pickup Winch

"I was tired of getting out of my pickup in the cold winds of winter to ratchet round bales onto the truck with a come-along. I checked electric winches but, at the time, they weren't built for everyday use so I decided to make my own truck winch," says Kansas farmer Darrell Dowell, of Clyde.

Dowell started with an electric platform lift from an old Baldwin combine. He mounted the motor and pulleys toward the front of the truck bed on an angle iron framework bolted to the truck frame.

The bale lift is a 3-pt. type for

tractors that hinges off the back of the truck. It has two teeth that slide under the bale rather than stabbing it. For hauling bales, Dowell says he picks the bale up to about a 45° angle so it's about 8 in. off the ground. For road travel, he lifts the bale and winch to a 90° angle.

Power for the motor is from four electric solenoids which are protected from the elements under a wooden box. Controls for the winch are in the cab. The 30 ft. long, 5/16 in. cable goes through a 4-part block and tackle.

