Regier repowered his 1978 Ford F-350 1-ton pickup with a 429 cu. in., V-8, 368 hp gas engine. He uses it to pull a 36-ft. long gooseneck trailer that has an extra 8-ft. deck over the gooseneck and an 8-ft. hydraulic-operated dovetail ramp on back.

368 HP GAS ENGINE GIVES 1-TON PICKUP THE POWER TO PULL A 40,000-LB. LOAD

Repowered Pickup Pulls 36-Ft. Gooseneck Trailer

"It has as much power as a 2-ton truck but costs less to maintain because parts for it are less expensive. Also, when I'm not using it to haul hay we use it like a car. That's how comfortable it rides," says Nathaniel Regier, Newton, Kan., who repowered his 1978 Ford F-350 1-ton pickup by replacing the original 351 cu. in. engine with a 429 cu. in., V-8, 368 hp gas engine.

Regier, who runs a custom hay hauling business, uses the extended cab, 4-door pickup to pull a rebuilt 36-ft. long gooseneck trailer. The trailer has an extra 8-ft. deck over the gooseneck and an 8-ft. hydraulic-operated dovetail ramp on back. The deck is reinforced by a pair of 10-in. steel I-beams and supported by heavy duty triple axles.

"When fully loaded the trailer holds 355 to 400 small square bales and has a gross weight of about 40,000 lbs. I deliver hay as far away as Missouri and Nebraska so I also mounted a pickup cab sleeper on it behind the cab."

Regier salvaged the engine from a 1971 Mercury Grand Marquis car which he got free from his great grandfather. "I chose the 1971 model because that was the last year that pollution control equipment wasn't required on cars. The equipment robs about 100 hp from this engine," says Regier. He modified the engine to boost power, reworking the valves, redoing the heads, and installing a different cam for improved low end torque.

He removed the pickup's original 4-speed transmission and used the 3-speed automatic transmission that came with the new engine. He rebuilt the transmission, and added an auxilliary manual "over-under" transmission to the automatic transmission. It provides three ranges for each gear on the automatic transmission for a total of 9 different speeds. He replaced the original 3:73 rear end with a lower ratio 4:10 rear end and converted the original single rear wheels to dual wheels. He also replaced the original 14-gal. fuel tank with a 105-gal. one, and reworked the hood so it tilts forward.

The 8-year-old 20-ft. gooseneck trailer was originally equipped with two 3,000-lb. axles. He removed the axles and replaced them with three 7,000-lb. rubber torsion axles that are equipped with electronic brakes and 14 ply radial tires. He built an 8-ft. sq. deck that goes over the gooseneck hitch and also built the dovetail ramp on back, which lets him drive tractors or other machinery up onto the trailer.

"I spent a total of $5,200 on the pickup and $2,700 on the trailer. I bought the axles from a local company that builds trailers.

"Even with the big engine the pickup has to work a little when the trailer is fully loaded. The engine gets about 5 mpg with a fully-loaded trailer which is about the same as I'd get with a 2-ton truck or semi. However, the tires, brakes, and driveline accessories for my 1-ton pickup cost much less than parts for a 2-ton truck or semi. And with a crew cab and four doors my entire family can ride comfortably in it.

"There are two things that I wish I'd done different. First, I'd keep the original 4-speed transmission. You lose too much power and slip and heat with an automatic transmission. Second, I'd install vacuum-over-hydraulic brakes on the trailer instead of electric brakes for more stopping power.

"I reworked the wheel well fenders inside the pickup bed so the duals don't stick out. I also installed new gauges for the engine and transmission oil temperature, engine vacuum, and fuel tank."

A hydraulic pump off an old Deere 45 combine operates a pair of hydraulic cylinders that are used to raise or lower the dovetail ramp. The pump is belt-driven by an electric starter motor and generator combination. The motor, mounted under the trailer deck, is powered by a self-contained, 12-volt battery and is started by turning a key. The battery is wired to the pickup's alternator to keep it charged.

The trailer's top deck has a wood floor while the lower deck has a floor made out of diamond plate steel with rebar across it to reduce the weight. The lengths of rebar serve as lugs so that the tires have something to grab onto.

Contact: FARM SHOW Followup, Nathaniel Regier, 11633 N.W. 170th St., Newton, Kan. 67114 (ph 316 799-1025).

Pipes lead from each bin back to the distributor which is located near the farm's feed mill.

FEED GOES THROUGH BLOWER PIPES TO BINS

Computerized System Blows Feed To Bulk Bins

"It saved us a lot of money and works as well as any commercial-built system," says Joel Waldner, Lethbridge, Alberta, about the home-built feed distributor and blower system that his Hutterite colony built for feeding livestock on their farm.

The colony raises hogs, chickens, and ducks in a number of large buildings. A total of 20 hopper bottom feed bins supply feed. A system of 4-in. dia. pipes leads from each bin back to the distributor which is located near the farm's feed mill.

At the distributor building, the pipes come together in a circle. A movable "arm" on the distributor is connected to a buried flexible hose that leads to the feed mill located a few feet away.

Each bin is equipped with a sensor that sends a signal to a computer at the mill when it runs low, which automatically selects the proper ingredients for that building. The computer automatically rotates the feed distributor "arm" that connects to the proper pipe. A blower then pushes the feed through the pipe to the bin.

"It's completely automatic and saves a lot of labor. All we do is make sure the ingredient bins are full," says Waldner. "We've used it for two years with no problems. Commercial feed distributors like this sell for about $10,000 and blower pipes of the length we used would've cost thousands so we saved a lot of money. We bought 20-ft. lengths of drill stem pipe and sandblasted them and painted them white, then clamped them together. We also made a machine to bend the pipes 90 degrees where they go down into the distributor. The pipes are 1/4 in. thick so they'll never wear through.

"The largest blower pipe is 800 ft. long so it took a lot of pipe. However, it isn't a problem because the electric-powered blower is designed to blow feed up to 1,000 ft. away.

At the home-built feed distributor the pipes come together in a circle. Computer automatically rotates movable "arm" on distributor to connect it to the proper pipe. Close-up of distributor (below) shows electrical contacts that control the system.

We used steel tubing to support the blower pipes about 20 ft. off the ground and mounted them in cement footings.

"The rest of the system, including the grinder, feed ingredient bins, and blower, are all commercial units."

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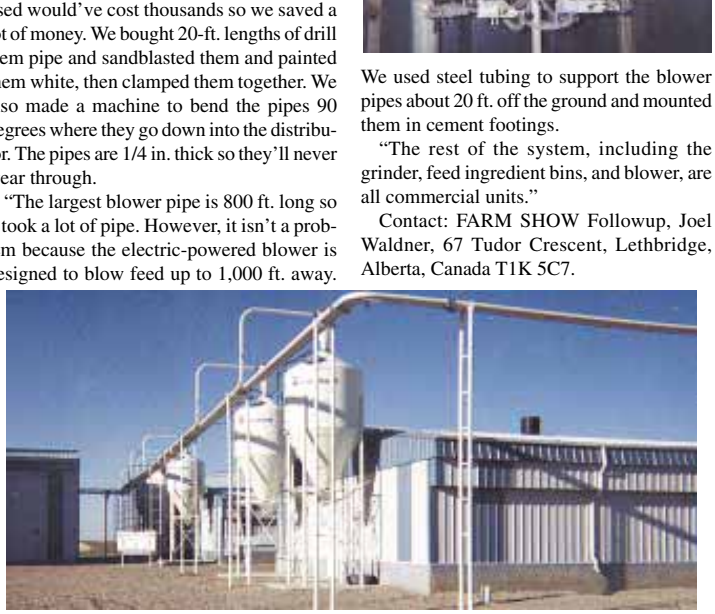

To make the blower pipes they bought 20-ft. lengths of drill stem pipe, sandblasted them and painted them white, then clamped them together.