Oetken's powerful truck-tractor cost a total of just $12,000 to construct. The IH semi's original twin-screw axles were replaced with a 100-ton Euclid rear end.

Fitting the tractor with dual wheels was one of the biggest challenges, say the Oetkens. They made wheel spacers out of 30-in. dia. natural gas pipe.

325 HP "TRACTOR" PULLS 32-FT. OFFSET DISK

Semi-Truck Converted To Low-Cost Farm Tractor

"With the price of grain the way it is, the average farmer can't justify spending $150,000 on a 300-hp. tractor. We built our own for much less and it works just as well as anything out of a factory," says Glen Oetken who helped his father, Gerald Oetken of Larned, Kan., convert a semi truck into a powerful farm tractor.

The completed rig weighs in at about 22,000 lbs., which Gerald figures is about right since he rates it at about 234 drawbar hp (325 flywheel hp). He regularly pulls a 32-ft. double-offset disk or a 38-ft. fallow plow with the tractor and it handles the big equipment with no problem.

The men started with a 1978 International 4300 which originally had a twin-screw rear end with a 325 hp. 855 Cummins engine and 10-speed Fuller transmission. They cut the frame off behind the cab and spliced in a shorter home-built frame made from 12-in. channel iron. It's fitted with a rear-end from a 1950's Euclid earth scraper. Glen says the 100-ton rear end's 13:1 gear ratio matched up perfectly with the semi's 10-speed transmission. The only thing they had to do to match them up was to make a new driveshaft.

The semi tractor is fitted with single flotation tires up front – "I think the mag wheels are a nice touch," says Glen – and dual 20.8 by R42 tires on back. Making the duals was one of the most difficult parts of the whole project. They made wheel spacers out of 30-in. dia. natural gas pipe.

They fitted the tractor with the 4-spool hydraulic system off a 4-WD Versatile tractor. The semi did not originally have power steering so the hydraulics provide that also.

The Cummins engine was completely rebuilt and the Oetkens installed a dual governor to maintain steady rpm's in the field. Glen says the governor is the same unit found on any farm tractor with a Cummins engine but notes that it's an expensive component to buy new. "You can save a lot of money if you can find a used one. The governor holds the tractor at about 1,800 rpm's in the field," he says.

Truck-tractor's short wheelbase and individual air brakes make the tractor easy to maneuver on headlands, say Gerald and Glen Oetken.

The tractor has forward speeds ranging from 1.5 mph in first gear to over 40 mph in tenth.

One of the most essential features of the truck-tractor is the air brake system. "We rigged up individual air brakes using the truck's original air system," notes Glen. "We can brake either side of the tractor individually or brake all four wheels at once. You have to be able to brake either side to make turns on headlands."

The completed tractor has a much shorter wheelbase than the original twin screw semi. It's about as long as a standard 2-WD tractor, which Glen and Gerald say makes it very maneuverable in the field.

One of the best things about the truck – besides the total cost of just $12,000 – is the comfortable ride. Glen says no tractor can match the home-built tractor's air ride suspension and great view.

Contact: FARM SHOW Followup, Gerald Oetken, RR1, Box 47, Larned, Kan. 67550 (ph 316 923-4550) or Glen Oetken, 1444 S. Wisconsin Ave., Racine, Wis. 53403 (ph 262 633-6878; E-mail: glenoetken@hotmail.com).

"My Kubota tractor goes so slow I can get off and clean up the trench on-the-go," says Del Bergeron about his home-built trencher. Trench is dug by an 18-in. dia. steel wheel.

Pto-Powered Trencher Uses Old Car Rear End

When Del Bergeron decided to install an underground sprinkler in his yard, he needed a ditcher to lay the pipe. He hit on a single do-it-yourself design using a 4-speed transmission off an old pickup and an automotive rear end.

"It makes a neat trench that's 8 in. deep and about 1 1/2 in. wide," says Bergeron, who pulls the trencher with his small Kubota tractor equipped with creeper gears.

He used 4-in. channel iron to build a frame to support the rear end and transmission. He welded one side of the axle in place so only the other side can turn. A homemade, 18-in. dia. steel wheel bolts to the wheel rim. The pto shaft drives the transmission, which in turn drives the rear end, rotating the wheel, which digs the trench as the tractor moves slowly forward. A pair of rubber wheels on back regulate digging depth.

"It isn't fancy but it works," says Bergeron. "The Kubota tractor goes so slow I can get off the tractor and clean up the trench on-the-go. The transmission's original gearshift lever is still in place so I can shift gears on it if I need to. However, most of the time I just keep the transmission in first gear.

"The transmission is off an IH pickup and the pto shaft is off an IH baler. To make the digging wheel, I welded a curved steel ring onto a series of flat steel plates that are welded to a wheel hub. I welded 1 1/4-in. wide lengths of angle iron at intervals onto the ring to make digging lugs. A large steel weight on back of the rig helps keep the wheel down in the ground."

Rig makes a neat trench that's 8 in. deep and about 1 1/2 in. wide. A pair of rubber wheels on back regulate digging depth.

For more information, contact: FARM SHOW Followup, Del Bergeron, Box 156, Assiniboia, Sask., Canada S0H 0B0 (ph 306 642-3291).