



"Bare Bones" Tractor Backhoe

One exhibit stood out from all the rest at the recent International Plowing Match near Woodstock, Ontario. Duane Wharram of Gowanstown, Ont., had a one-of-a-kind home-built tractor on display along with an exhibit of the field cultivators he manufactures.

"It's a bare bones machine but it gets the job done. It took me less than four days to build it and cost less than \$1,000. I wanted to show farmers that it's not that difficult to build your own tractor. Most farmers have more than enough skill to do what I did," says Wharram who also farms. He uses the tractor primarily for backhoe work. He mounted a home-built backhoe on the rear, complete with stabilizer legs to provide a firm digging base. The tractor is fitted with two seats. One faces forward and the other faces the rear-mounted backhoe controls.

The tractor is built low and long on a frame that consists of two 6 by 6-in. steel beams with a 1956 Ford 4 1/2-ton truck rear-end on back (along with a 5-speed transmission) and the front-end from the same Ford truck up front. The 350 cu. in. engine was salvaged from a junked Oldsmobile, as was the automatic transmission (using an automatic eliminated the need for an engine governor, notes Wharram). He installed an air cooler ahead of the up-front truck radiator for the transmission.

The engine, automatic transmission and driveshaft mount in line with the rear end. Three hydraulic motors mount on



the chassis side rails and are sprocket-driven directly off the driveshaft. They supply power to the backhoe, which is controlled by hydraulic motors that drive chains and sprockets.

To mount the tractor wheels on the rear-end, Wharram welded an adaptor plate to each of the truck hubs. About the only tractor component used on the home-built rig is a salvaged fuel tank from a Cockshutt 40 that mounts at the middle of the machine.

"Everything's out in the open so it's easy to work on. If any parts do break down it's easy to find more old parts to replace them. I don't use the tractor for field work but, if I did, I'd probably use a heavier rear end," says Wharram who has another home-built tractor on his farm which he uses for field work.

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"Swing Away" Cow Trainers

You can swing electric cow trainers out of the way while you milk, leaving a free, clear span in which to work, says Donald Lehmann, Hillman, Minn., who has designed new "swing away" cow trainer attachments.

"Conventional cow trainers are a big nuisance while you're milking," says Lehmann. "When you reach up to attach an air hose or pipeline, you're always banging your arms on the sharp points of the teeth. To get conventional trainers out of the way, you have to set them on top of stanchions or take them down off the wire they're attached to."

Lehmann is custom making a complete "swing away" cow trainer modification kit that makes use of your present cow trainers. You attach your cow trainers to a 1/2 in. dia. pipe (not furnished) that runs the length of your barn. Plastic

insulators at 8 ft. intervals hold the pipe against ceiling joists, yet allow it to swivel. Each trainer is attached to the barn-length pipe by a pair of short pipes welded together to form a "T". When you swing up a handle at one end of the pipe, the entire pipe swivels and all of the trainers swing up out of the way.

To use your present cow trainers, simply saw your trainers' mounting clips in half, then insert the trainer shaft into the "T" and fasten it with set screws.

Lehmann's kit, which sells for \$12 per cow, includes a "T", plastic insulator, handle, spring, and a short piece of cable. He says the modified trainers will work in any stanchion, tie or free-stall barn.

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School Bus Bale Hauler

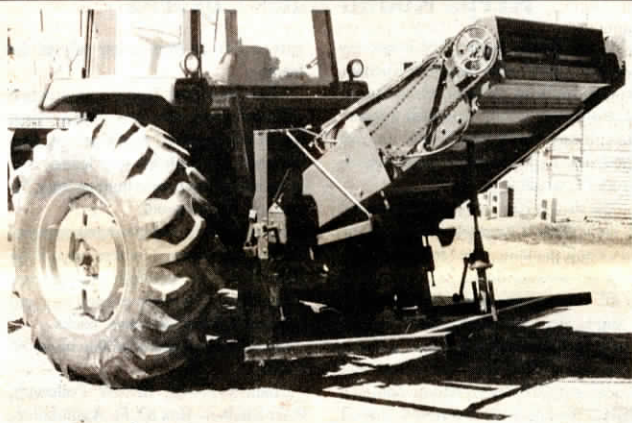
"Total out-of-pocket cost for this big bale hauler was \$1,600," says Barry Smith about the flatbed rig he fashioned from a salvaged school bus. It'll carry 11 big round bales (5-ft. dia.) or 200 square bales. The converted bus is also used to carry a 1,500 gal. water tank at various times of the year.

The first step in converting the 1968 Dodge 44 passenger bus was to cut away the body of the bus right behind the driver's seat. The front "cab" was then sealed off with sheet metal. "Then we built a 10 by 22-ft. wooden deck on back.

The only other thing we had to do was to rewire the rear taillights and give the cab a new paint job," says Smith.

The bale hauler is equipped with a 138 cu. in. motor and a 2-speed axle. It's licensed and fully equipped for road travel. "We've hauled hay from as far away as 25 miles driving 25 mph fully loaded. We've had little trouble with the unit for the five years we've used it," says Smith.

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Home-Built Header, Feederhouse Movers

"I made a great header mover using the feederhouse plate off an old combine," says Wallace Parrott, Lebanon, Kent., who says he built the mover (at right) so he could store headers closer together in storage and move them for wintertime repairs without starting up the combine.

"You simply cut or unbolt the plate from the combine framework and fit it with 3-pt. hookups. A little trial and error is required to get the right angle to mount on the tractor. It's a good idea to make it easy to change the pitch of the mover by installing an adjustable top link. One word of caution - make sure you've got a big enough tractor to handle the head you want to move."

Parrott also built a feederhouse mover that doubles as a repair stand. "It consists of an 'L'-shaped framework - made out of 3-in. sq. steel tubing and channel iron - that mounts on the tractor 3-pt. The upright part of the framework supports the front of the feederhouse. The lower, horizontal framework supports the throat of the feederhouse with the help of a single telescoping upright. To dismount from the combine, I simply drive up to the combine and maneuver the mover up against the feederhouse. The front mounting brackets adjust both



vertically and horizontally, and the telescoping support tube adjusts with a ratchet. When the mover is in position, I unfasten the hardware securing the feederhouse to the combine and then back away.

"I built it because I was tired of setting the feederhouse off on blocks. This works great for storing and repairs. I've never seen anything on the market like it. It cost me about \$100 for steel."

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