



Loyal Smoke uses a converted school bus to haul three tractors to antique tractor shows, and he also stores them in it at home.

## “School Bus” Tractor Hauler

“It makes good, cheap transportation for hauling my antique tractors and works great for storing them, too,” says Loyal Smoke, Limon, Colo., who converted a 1986 GM 65-passenger schoolbus.

He raised the roof 18 in. and equipped it with a big ramp on back that’s raised and lowered by an electric winch. Smoke uses the bus to haul three tractors to antique tractor shows, and he also stores them in it at home.

He cut off the top of the bus half way down the window frames. Then he rotated the top 180 degrees and remounted it onto pieces of 1-in. sq. tubing mounted on the body of the bus. He filled in the sides with sheet metal, leaving two windows on each side. He made a square frame on back to support the ramp,

which doubles as a door.

He painted the bus white with green stripes on each side.

“It makes perfect storage for my antique tractors, and the back door can be locked up if I’m at a show for some time,” says Smoke. “People can’t believe that I can get three tractors in it, but I can as long as two of them have tricycle front ends. I back one tractor into the front end of the bus, then run another tractor alongside it at an angle.

“I bought the bus from a local school district for \$750. My total cost was only \$1,650.”

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Bale hauler can be pulled by a small pickup or mini van. Bale is held at a 45 degree angle during transport.

## “No Hydraulics” Bale Hauler

“It lets me haul big round or square bales without a tractor. It can be pulled by a small pickup or mini van,” says Paul Patton, Philo, Ill., about his “no hydraulics” bale handler.

The E-Z Hay Hauler will transport a 1,500-lb. bale yet put no more than 150 lbs. on the vehicle’s bumper. “The axles and extra wide 10-in. tires are rated for 2,000 lbs.,” says Patton.

The unit comes with a 48-in. bale spear and two 26-in. stabilizing spears that mount on a hinged frame. A hand-operated, 8-ton jack, with a 19 3/4-in. stroke, is used to tip the hinged frame forward or backward. The bale is held at a 45 degree angle during transport.

To haul a bale, you use U-clamps to adjust the 48-in. spear to the correct height, which is the center of the bale height. For example, if the bale is 5 ft. tall the spear should be set at 2 1/2 ft. from the ground before you back the trailer in to the bale. The bale is then tipped up using the jack, and then the jack is locked into place using a pin that goes through a vertical bracket. To unload a bale, you pull the pin, let the pressure off the jack, and then pull away.

“It’s built rugged and is extremely easy to operate - even my 6-year-old son can jack the bale up,” says Patton. “It takes less than one minute to jack the bale all the way up. The 8-ton jack has a double piston so you’re pumping on both the up and down stroke.

“Most of the bale’s weight sets dead center on the axle, or just a little bit toward the front, so you’re putting very little weight on the vehicle’s bumper. I use my Chevy S-10 pickup to pull it with no problems. Everything that I used to build it I bought out of a Northern Equipment catalog. The frame, in-



Transporting a 1,500-lb. bale puts no more than 150 lbs. on vehicle’s bumper.



Hand-operated, 8-ton jack is used to tip the hinged frame forward or back.

cluding the axle, is made from 3-in. sq. tubing with 1 1/4-in. axle stubs. I could have saved money by building cheaper, but I like to overbuild things.”

Patton has built three other units. “I think this bale hauler is ideal for farmers with small acreages who feed only a few dozen bales per year. I’m willing to build them for others for \$1,250. I’m also willing to sell CAD drawings and plans.”

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## Mini Windmills Make It Easy To Try Wind Power

With all the interest in putting up giant windmills, Mike Goss is promoting an alternative. His Mallard 800 only puts out 800 watts and, at \$475, it sells for a fraction of the cost of giant rotors on wind farms.

“These aren’t made for tie-in to the grid, but for off-grid use,” explains Goss. “I have shipped them all over the world. Farmers use them to power heating coils in stock tanks in the winter. Most are being used for residential needs. Some customers have solar, but need a little extra power.”

His \$475 price includes everything that sits on top of the tower. Each unit comes with six carbon blades, a permanent magnet alternator remanufactured from a General Motors alternator, and a fixed galvanized tail. When assembled, the blades and hub have a 59-in. diameter. Goss keeps the electronics to a minimum for reduced maintenance. The unit mounts to any 1 1/2-in. pipe.

“Unlike most windmills, it’s not designed to disengage in high winds,” he says. “It has been tested in winds from as low as 8 mph up to 100 mph.”

Goss offers both 12/24 and 24/48 systems to charge either 12- or 24-volt systems. The package does not include tower, wire, batteries or accessories. It does include a diversion regulator to divert excess power from batteries to prevent overcharging.

“Some people wire it to a light bar or 12 volt water heating coils to heat water...anything to use up the power,” explains Goss.

Blades, tails and alternators are all offered separately, and Goss suggests international buyers use the dimensions he provides to build their own tails. It is one more way he



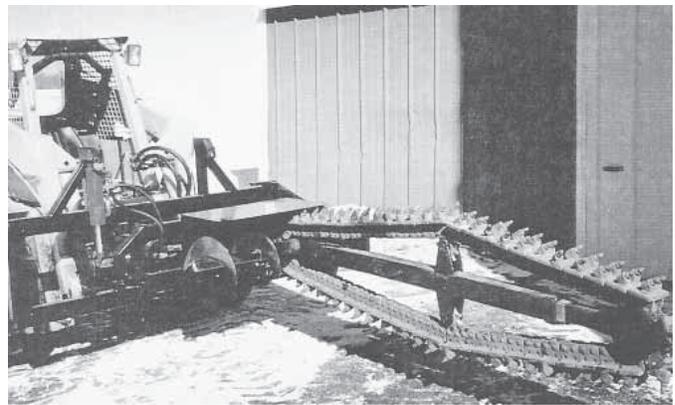
Windmill comes with six carbon blades. It sells for a fraction of the cost of giant rotors on wind farms.



Permanent magnet alternator is remanufactured from a GM alternator.

attempts to hold down shipping costs for his customers.

Contact: FARM SHOW Followup, Mike’s Windmill Shop, 1391 Branch Lane, Show Low, Arizona 85901 (ph 928 532-1607; gossmj@wmonline.com; www.wmonline.com).



Trencher digs a 6-in. wide slot 6 to 7 ft. deep around the outside of basement walls to relieve the inward pressure on buckled basement walls.

## Trenching Machine Helps Straighten Basements

When Gary Resch, St. Cloud, Minn., developed a system for straightening buckled basement walls (Vol. 29, No. 4), he needed a way to dig a narrow trench around the outside of basement walls to relieve the inward pressure.

“There was no ditcher on the market that would do what we needed, so we built our own,” says Resch. His trencher digs a 6-in. wide trench 6 to 7 ft. deep, a foot or two away from the wall. The carbide teeth can cut through rocks and frozen soil, so it can be used any time of year. “It lets you move as little dirt as possible so you don’t have any settling problems against the wall after the job is done.”

The trencher mounts on a Gehl 5625 skid steer with high-flow hydraulics and rubber

tracks, so it does minimal damage to lawns. It can be switched from one side to the other to make a left or right hand machine. A short length of auger moves dirt away from the trench. The digger can also be used to trench in water lines or drain tile.

“In more than 10 years of hard use, the only repair required has been replacement of a main shaft bronze bushing,” says Resch, who is now building the trenchers for \$15,000. He also sells his basement straightening and waterproofing systems to people who want to get into the business.

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