



Powered by an electric winch, expanded metal steps slide up or down lengths of channel iron that bolt to tractor frame. Winch is operated by a simple up-and-down control switch that mounts on cab door.

Steps Move On Nifty Tractor Lift

If you or someone in your family has trouble climbing into tractor or combine cabs, you'll be interested in this simple 12-volt winch operated lift designed and built by Yutan, Nebraska, farmer Charles Zaugg.

"I've had my hip replaced twice in the past few months and have been advised not to climb. So I built this lift for my International 5088 tractor," says Zaugg.

Powered by a standard electric winch, it consists of a pair of expanded metal steps, spaced 7 1/2 in. apart, that slide up or down on a pair of channel irons that bolt onto the tractor frame in place of the original steps. The winch mounts under the cab and operates off the tractor's battery. Roller bearings inside the channel irons make for easy, smooth rolling up and down the channel irons.

The winch cable is fitted with a hook that

simply attaches to a bracket on the bottom step. The winch is operated with a simple up-and-down control switch that mounts on the cab door. It raises and lowers the steps at the same controlled speed.

"The tractor doesn't need to be running since the lift runs off the battery," says Zaugg. "I had to build two steps in order to get the winch down low enough to hook onto. The steps raise up high enough so they're out of the way when traveling on the road. I paid \$400 for the winch so my total cost was less than \$500," says Zaugg, who notes that he also built a similar lift system for his International 1066 tractor.

Contact: FARM SHOW Followup, Charles Zaugg, Rt. 1, Yutan, Neb. 68073 (ph 402 625-2439; E-mail: fmz@alltel.net).



Utility tractor is powered by either a 36 or 48-volt battery pack. There's no gas or oil in the tractor, and no engine, transmission, belts or pulleys.

Electric-Powered Garden Tractor

You can mow your yard in near silence with the Electric Ox garden tractor. It's the only electric-powered utility tractor on the market as far as we know.

The 790-lb. tractor is powered by either a 36 or 48-volt battery pack. The 36-volt tractor (\$7,350 U.S.) is equivalent to an 18 to 20 hp tractor and will run 5 hours on a charge. The 48-volt tractor (\$8,250 U.S.) increases overall speed and power by about 30 percent.

There's no gas or oil in the tractor, and no engine, transmission, belts or pulleys. ADC power unit is controlled by a single pedal. "Regenerative braking" captures the energy

used to stop the tractor, eliminating the need for traditional brakes.

The 44-in. mower deck (\$1,495) is powered by three separate electric motors. Other options include a snowblower, rotary sweeper, and dozer blade. Optional 900 or 1,500-watt inverters allow the Electric Ox to act as a stand-alone power source for 120-volt power tools, pumps, lighting and motors.

Contact: FARM SHOW Followup, Electric Tractor Corporation, 123 Snyder's Road East, Baden, Ontario N0B 1G0 Canada (ph 877 533-4333; Website: www.electrictractor.com).



Sensor consists of a fluid-filled 1-in. dia. rubber bulb attached to a pressure transducer by a high-pressure hose. Specially-designed drill bit is used to insert bulb into soil.

Simple Sensor Measures Compaction

Canadian engineers have developed an easy-to-use sensor to detect excess soil compaction. The Ground Pressure Sensor can be used to help farmers decide when to start field work in the spring or when to return to a field after rain, says Reed Turner, Ag Tech Centre engineer, Lethbridge, Ontario.

"Hopefully we can reduce the risk of soil compaction by giving producers tools to quickly measure soil compactability," says Turner, lead developer of the sensor.

The sensor consists simply of a fluid-filled 1-in. dia. rubber bulb attached to a pressure transducer by a short high-pressure hose. A specially-designed drill bit is used to insert the bulb into the soil. Pressure on the bulb is read by either an electronic sensor or a simple dial pressure gauge.

Placed ahead of a piece of equipment, readings can provide a "time history" as the equipment moves over the sensor. Peak pressures can be used to judge the compaction force, while residual pressure (the net pressure remaining on the sensor after the vehicle has passed by) indicates compactability and net compaction of the soil.

Sensor readings can compare the impact of different wheel configurations, lug patterns or tire surfaces. Turner estimates that two



people can log 10 to 20 separate readings in as little as 20 to 30 minutes.

In the past, soil compaction measurement has been complex and time consuming, forcing farmers to rely on experience or rule of thumb. The researchers hope the new tool will aid farmers and serve as a teaching tool for dealing with compaction issues.

Contact: FARM SHOW Followup, Reed Turner, Agricultural Technology Centre, 3000 College Drive South, Lethbridge, Alberta, Canada T1K 1L6 (ph 403 329-1212; fax 403 328-5562).

Spring-Loaded Post Driver

Anybody who has ever driven T-posts by hand knows how tired your arms get after lifting a post driver into the air a thousand times. Jack Sheperson figured there had to be a better way, and he found it.

"By putting a spring in the driver, it's like bouncing a basketball," he says. "No lifting, just pull it back down."

Sheperson started out with a standard post driver. He installed a spring with a plate on the end of it for striking the post. As the driver descends on the post, the spring collapses down around a pin. After the strike, the compressed spring is released, bouncing the driver back into position for the next blow.

"When you lift a standard driver back up for the next blow, you have to be careful not to lift it too high so it comes off the post," points out the inventor. "With this driver, it automatically bounces back to the starting position."

Sheperson says the full force of every blow is delivered to the post. The collapsing spring merely takes some of the work out of the job and allows the person doing the work to concentrate on bringing all possible force



Unit has a spring-loaded plate that strikes post. After it hits, the compressed spring bounces the driver back up for the next blow.

down.

Sheperson and his wife sell their T-post driver direct as well as through Tractor Supply stores. It weighs about 20 lbs. and sells for \$29.99 plus shipping.

Contact FARM SHOW Followup, Shep's Mfg., 205 Rollertown Rd., Gravel Switch, Ky. 40328 (ph 270-692-6024).