

Reverse Steering Kit For Compact Tractors

Reverse steering is available in some of the largest and most expensive tractors on the market. What many don't realize is you can get reverse steering on smaller utility and larger compact tractors, too. The RS1300 Reverse Steering package from Edwards Equipment lets you "reverse" older and newer model tractors for handling forklifts, snowplows, snowblowers and other implements.

"Farmers are turning more to front-mounted equipment," notes Alan Serle, Edwards Equipment. "With reverse steering, they get many of the same benefits, with higher lift capacity and greater traction."

Rear axles are built to carry the greatest load. Pto and hydraulic remotes are already in place. With Edwards Reverse Steering installed, proper steering orientation,

clutch and brake pedals are in normal operating position. No learning curve is needed for new operators. Controls, including hydraulic valves, are placed conveniently for the operator with optional foot throttle available.

Installation requires no permanent modification of the tractor. It can be carried out by a customer with mechanical ability, says Serle. However, using a trained mechanic may be a good idea for many, he adds.

"When this system was first introduced, customers would put it on for seasonal use and remove it for the rest of the year," says Serle. "Today our customers are more likely to install it on an older tractor and leave it on permanently."

Reverse station units are customized for the intended tractors and priced around \$3,000.



Reverse steering kit lets you "reverse" older and newer model tractors for handling forklifts, snowplows, snowblowers, and other implements.

Contact: FARM SHOW Followup, toll free 800 452-5151; fax 509 248-9721; Edwards Equipment Co., 4312 Main St., sales@edwards-equip.com; www.edwards-union Gap, Wash. 98903 (ph 509 248-1770; equip.com).

He Turns Wood Into Electricity

When the wind doesn't blow and the sun doesn't shine, Dan Bartmann has another method for charging up the batteries that let him live off the grid in Fort Collins, Colorado. He burns wood in a 1940 boiler that powers a 1903 CB&H 6 hp steam engine that spins an alternator.

"Running the engine requires constant attention, and the efficiency is only about 5 percent compared to 20 percent from my diesel generator," says Bartmann, who offers Homebrew Wind Power Seminars and manufactures and sells alternator and wind turbine parts and kits. "But it's fun, and it does burn free fuel," he notes. Steam engines have always fascinated him, and he felt fortunate to buy the old steam engine at an auction for \$150. Bartmann read books, had his boiler tested, and got advice from steam engine experts. He shopped for eBay bargains for the governor, lubricators, steam gauges and valves he needed.

To accommodate the 200-rpm engine he built an alternator, modeled after the alternators he builds for wind turbines. It has the capacity to churn out 2,000 watts in the form of 3-phase alternating current at about 90 percent efficiency. The current is converted into direct current for battery charging through a 3-phase rectifier.

Bartmann notes that it isn't practical to expect to produce 600 kilowatt-hours/month to meet his electrical needs, just from the steam engine. But, it has its place.

"An interesting way to look at it is that if I wanted to live solely off steam, it comes down to 20 kWh per day," he explains. "To keep up with that, I'd have to run the engine 10 hours a day to meet my energy needs. But, if I'm conserving to just keep the refrigerator, a couple of lights and the radio running, I'm down to 2 kWh/day. Then it's just one hour a day. So I can get by."

Insulating the unit and using a larger boiler would make the machine less labor intensive. Bartmann needs to feed his current boiler with pine every 10 minutes. Coal lasts about 30 minutes before needing replenishing.

Because it requires so much labor and nearly constant attention, Bartmann doesn't see it replacing his wind, solar and diesel-powered generator. But he has the satisfaction that he built it and it works. And he likes getting energy from free wood, and he likes how it sounds - especially the whistle.

Bartmann's website includes photos of how he put his steam-powered generator together. He also sells alternators and parts, and has a new book, "Homebrew Wind Power," which goes into detail about wind energy, and build-



Normally, Dan Bartman uses the wind or the sun to charge up the batteries that let him live off the grid in Fort Collins, Colorado. But if he wants, he can burn wood to power a 1903 CB&H 6 hp steam engine that spins an alternator.

ing efficient low rpm alternators from scratch. West Vine, Fort Collins, Colo. 80521 (ph Contact: FARM SHOW Followup, Dan 877 944-6247; danb@otherpower.com; Bartmann, Other Power/Forcefield, 2606 www.otherpower.com).

Covers Protect Good Compost

Compostex covers keep compost from getting too wet from excess rainfall.

"I primarily use this cover to protect finished compost," says Steven Wisbaum, U.S. distributor for the Canadian-made product.

Wisbaum also provides custom composting services to farms and businesses in northern and central Vermont, and makes and sells premium manure-based compost and topsoil products. About a decade ago, while managing an on-farm compost demonstration project, he realized that it was going to be difficult to compost the wet dairy manure without dealing with the excess moisture problem. The aerobic process of composting turns to an undesirable anaerobic process when there is too much moisture.

"We needed a way to make sure no additional water was added, and I was told about these covers that had just been introduced in North America," Wisbaum explains. "Once I saw how cost effective they were, I realized very quickly it was something more composters needed to know about."

Compostex feels and looks similar to felt. Once the cover is saturated with wa-

ter, excess water wicks from fiber to fiber through capillary action to the bottom edge of the cover.

Wisbaum emphasizes the simple technology relies on gravity, which means it has to be used on a surface with a curved top - the natural shape of most compost piles.

When customers call, he asks questions about their compost operation to make sure that they really need covers. They're usually not cost effective in dry areas or for farmers who use the finished compost in the fall.

"Most people I sell covers to are selling the finished product, or are serious about making high quality compost for their own use," Wisbaum says. "Finished compost is more susceptible to becoming saturated because it's cooler." Too much water makes the compost wet and heavy, clumpy and foul smelling.

Compostex covers sell for \$2.10 per square yard and typically remain usable 4 to 10 years or more. Wisbaum has used his own covers for a decade for 6 to 8 months at a time. When not needed, the covers are rolled up and stored.

Compostex covers protect finished compost from getting too wet from excess rainfall, says distributor Steven Wisbaum. Once the cover is saturated with water, excess water wicks from fiber to fiber through capillary action to bottom edge of cover.



Compostex is about the thickness of a nickel and provides enough insulation to increase the internal pile temperature about 10 to 15 degrees. Compostex comes in 12, 15 and 18-ft. widths. Because it's breathable, it stays down and doesn't blow around in the wind like plastic tarps.

"I like to use truck tire sidewalls on the

four corners and 15 to 30 ft. apart along the lengths," Wisbaum says.

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