

POWERED BY A GAS ENGINE

They “Self-Propelled” A Stationary Steam Engine

“It gets a lot of attention at antique tractor shows,” says Paul Dotterer, Mill Hall, Pa., who, along with his friend Steve Grieb, converted a stationary 1923 Farquhar steam engine into a self-propelled model that rides on rubber tires and even has power steering.

The old steam engine was originally mounted on four steel wheels and had a hitch on front so it could be moved from place to place by horses. The boiler, powered by either wood or coal, drove a pair of big pulleys that were used to operate threshers, sawmills, etc.

To self-propel it they used the gas engine, rear axle and wheels, and drive components off an old self-propelled tomato harvester. It has 11.25 by 24 rear wheels. The front axle and 6.00 by 16 front wheels are off an old truck. They built an operator platform on back and mounted a steering wheel. Power steering is provided by an orbit motor connected to a hydraulic cylinder. The cylinder mounts under the front axle and controls a pair of steering rods on the front axle.

The biggest challenge was designing a way

to automatically keep the boiler level on hillsides. The problem was that the rig’s steam dome was mounted at the end of the boiler, not the center as on most other steam engines, so on hills the water often couldn’t get into the steam dome. They solved the problem by building a telescoping hydraulic cylinder that mounts under the boiler and uses the hydraulic control system off an old Deere sidehill combine to operate it. The hydraulic control system was originally mounted crosswise to keep the combine level on hillsides. They rotated it 90 degrees to face forward. A switch automatically activates an electric-controlled hydraulic valve which extends or retracts the cylinder to keep the boiler level.

“We take it to two or three antique tractor shows a year. Some people don’t realize what they’re looking at. Others who know their equipment can recognize that a lot of effort and thought went into building it. It has nine steam whistles on it. People often want to know if I can play them a tune on the whistles. I tell them that I will as soon as I can get the music written. I bought the steam whistles at



Steam engine was self-propelled by using a gas engine, rear axle and wheels, and drive components off an old self-propelled tomato harvester.

a sale. We also use it to belt-drive a sawmill at shows.

“It’ll go up to 5 mph which is faster than we want to drive it on the road. The first time I drove it was to a parade 5 miles away. I wasn’t used to driving it and was in a higher gear going down hill than I should’ve been. I was lucky that I didn’t upset it. It uses about 50 gallons of water per mile.

“I bought the steam engine 10 years ago. It was a big, heavy unit that required a good set of horses to pull it. The boiler has a 9 1/2-in. bore and 12-in. stroke. There’s a 2 1/2-in. dia. steam line going to the cylinder so it has a lot of power. We can feed either wood or

coal into the back end of the boiler. We store wood on top of the operator platform and put coal in a bin under the platform.

“It took a lot of engineering to get the drive system operating. A control lever is used to open or close a valve that leads to the hydraulic pump, which controls how fast we can go in each gear. It has four forward speeds and one reverse.”

Contact: FARM SHOW Followup, Paul Dotterer, Rt. 3, Box 467D, Mill Hall, Pa. 17751 (ph 717 726-6720 or 3946) or Steve Grieb, Dunkle & Grieb, Inc., RD 2, Box 14, Centre Hall, Pa. 16828 (ph 814 364-1421 or 9109).

NEBRASKAN PLANS TO PUT UP MORE THAN 125 WINDMILLS ON A 140 ACRE SITE

“World Class” Windmill Collection

Three years ago Henry Nuxoll began collecting and restoring old windmills on his ranch near Comstock, Neb. He has 17 restored windmills on hand so far and plans to put up more than 125 on a 140-acre site in the next two years.

That will make it one of the largest privately owned windmill collections in the world, he says.

Nuxoll calls his ranch “The Second Chance Ranch” and his collection “The Second Windmill Collection”. He has hired a full time man to repair and repaint the vintage rigs. He began collecting and restoring windmills when he saw that they were increasing in value fast. He already has more than 147 different windmills on his ranch ready to be worked on. Restoring 50 per year is a realistic goal, he says. Some of the windmills have white wooden blades with colorful red tips. The wheels on all the various models range from 5 to 20 ft. in diameter.

Nuxoll says there’s a lot of interest in windmills. “Nothing is prettier than a windmill. They’ve always had a sentimental value, but now they’re increasing in economic value, too,” he says. “Their price has doubled in the past year. That’s because there are less of them and more people looking for them. I think they’re a tremendous investment. They always say the West was won by the gun, but the truth is that windmills did it. Without windmills people couldn’t have established homesteads anywhere except on the banks of rivers and creeks.

“I buy all different windmill brands including Dempsters Aeromotors, Fairburys, Chal-

lengers, Monitors, etc. A lot of them are rare, and some of them are one of a kind. About half of them are wood and half are metal. The wooden ones are a vanishing species because the wood has rotted due to age. Many of the metal ones were melted down during World War II or thrown on the junk pile. On many of the wooden ones the rancher had to climb up every week or two to oil the gearboxes by hand. Then manufacturers started making models with oil-bathed gearboxes which required servicing only about once a year. They were replaced by submersible well models which are also vanishing.”

Nuxoll says that in the 1800’s there were more than 200 windmill manufacturers. “Now there are only two that I know of - Aeromotor and Dempster.”

He says his 1897 Aeromotor model is not only rare but one of the oldest windmills in his collection. His largest windmill, an Aeromotor with 20-ft. dia. metal blades and an 8-ft. high tail, is also his favorite. “Only two are still standing in Nebraska, although there are some others in Texas and Oklahoma.” One of his rarest is a twin wheel Dempster model equipped with counterbalance weights.

Besides restoring his own windmills, Nuxoll will also work on windmills for others.

To rebuild wooden windmills he uses Cyprus wood because it’s lightweight and weather resistant. After restoring the windmills he anchors them to cement pads, much the same as they were originally anchored. When he needs parts he buys them at sal-



At the Husker Harvest show last fall in Nebraska Nuxoll had a Pipe Raymond and a No. 3 Dempster (at back of trailer) for sale.



Dempster windmill with 10-ft. dia. wooden blades and wooden tank. It’s equipped with a vaneless counter balanced cast iron horse.

vage yards or has them made at a foundry.

Nuxoll recently converted his ranch house to a bed and breakfast which he calls the Dempster House. Surrounding the house will be 14 to 20 Dempster windmills, both wood and steel, of different sizes and eras. And in full view of the house will be over 100 different windmills. “We’re going to promote it as the only house in the world within view of 100 windmills,” he says.



Eclipse brand equipped with 10-ft. dia. wooden blades. It was built in Chicago, Ill.

He also established the “Windmill Water Company” so that he can sell bottled water pumped out of the ground by his windmills. The bottles will show a logo of a Dempster windmill and wooden tank.

Contact: FARM SHOW Followup, Henry Nuxoll, 2nd Chance Ranch, HCR 68, Box 19, Comstock, Neb. 68828 (ph 308 628-4369).