

“Double G” Gets Double Takes

This articulated “double G” Allis Chalmers tractor is a real eye catcher at shows. It was built by Steve Pope of Salisbury, Penn. and John Mrotek of Luray, Va.

The tractor has two engines and transmissions and was built from the back ends of two early 1950’s Allis Chalmers G tractors. It’s equipped with dual wheels all the way around and has a hydraulically-operated steering system.

The engine on the G tractor is normally located behind the steering wheel. The two men removed the front wheels and axles and bolted the rear halves of the tractors together so they face each other.

Pope did most of the engineering and mechanical work while Mrotek did the cleanup and painting.

“There’s an engine on front and back, but it’s hard to tell if the tractor is going forward or backward,” says John. “We turned the ring gear over on the tractor in front so they work together in the same direction.”

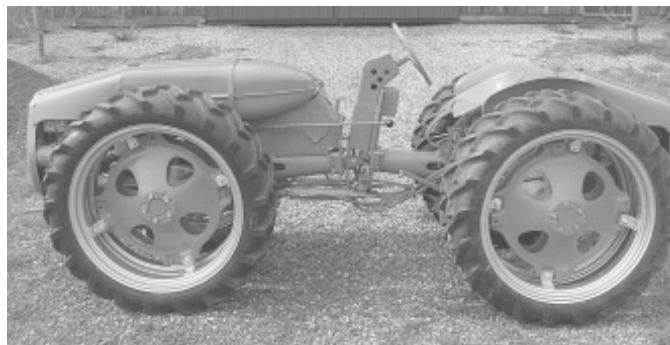
The two tractors are bolted together at the middle where they pivot on a front wheel spindle off an Allis Chalmers D-14 tractor. The steering column is located above the spindle and was taken off an old combine.

One clutch pedal disengages both clutches. “With just one clutch pedal, we can power the tractor with either engine or both at once,” says Mrotek.

The rear tractors’ original final drive was replaced with a shorter 12-in. long final drive, which Mrotek bought on eBay. Spacers were made in a machine shop so that dual wheels could be mounted. To make room for a gas tank on back, the gas tank on the rear tractor was replaced by the tank off an Allis C/A tractor. The sheet metal from the tank to the radiator on the front tractor was made in a machine shop with bends in it that take on the shape of the G hood.

One of the tractor’s generators was replaced by a hydraulic pump, which operates the steering system. The hydraulic oil reservoir is located behind the seat and in front of the radiator.

Both tractors still have their original transmission shift levers. “We can pull the tractors with just one engine without having to shift the transmission on the other one. At shows, I keep both engines running. One engine operates the generator which charges the battery, and the rear engine operates the hydraulic pump,” says Mrotek.



Articulated “Double G” Allis Chalmers tractor has two engines and transmissions. It was built from the back ends of two early 1950’s Allis Chalmers G tractors.

“We chose the G model because both Steve and I collect these tractors. In fact, I own the very first G that was ever made. G tractors were made from 1948 to 1955.”

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Eye-Catching New Windmill Designs

A variety of innovative new windmill designs will soon be available, for use in the city and on the farm. Here’s a roundup of some of the most interesting new designs, courtesy the Australian magazine ReNew (www.ata.org.au).



Loopwing

Twice the torque at half the rpm of conventional three-bladed horizontal axis machines. The self limiting turbine starts at a lower speed and produces less noise. It is just under 5 ft. long, produces 438 watts in 26.8 mph wind, and is priced at \$12,700. Two kW and five kW models are being introduced. www.loopwing.co.jp



Solwind

Vertical blade and axis, quiet running wind turbines in 4 kW and 6 kW models designed for use close to homes. Aluminum, fiberglass and stainless steel components in the blades provide durability, while a new alternator with magnetic bearings reduces maintenance. www.solwind.co.nz

Quiet Revolution

Spiral, Darrieus style rotor with tapered blades that start easily and run quietly. Rated at 6kW, the 16 ft., 4-in. high rotor is priced at more than \$50,000.

www.quietrevolution.co.uk



Aerotechure

This Savonius style, drag type, spiral rotor will be available in vertical and horizontal models. The unique turbine is designed to be mounted on top of buildings and across the peaks of roofs. www.aerotechure.com

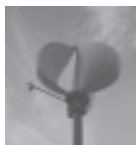
Cleanfield

Currently available in North America, the vertical axis, straight-blade turbine produces 3.5 kW at 28 mph. Reinforced fiberglass blades are mounted on a rotor 9-ft. in diameter by 9-ft. 10 in. high. www.cleanfieldenergy.com



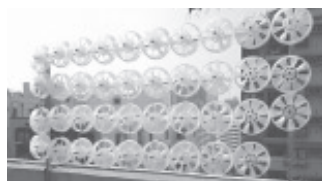
Alternative Energie

Rigid cup-type “blades”, low speed, vertical axis windmill is designed to be low noise and safe to birds and people. www.aes-energie.de



Mag-Wind

The MW-1100 turbine is designed to be mounted on a roof to capture the increased wind caused as the roof funnels it upwards. The low speed turbine is only 4 ft. tall by 4 ft. at the base, yet rated at 1100kW/month in a 9 mph wind. It can handle speeds of up to 100 mph and low temperatures. www.mag-wind.com



Motorwind

These wind farm panels of small turbines are clustered in sets of 8 (50w) or 20 (170w) with each set driving a single small generator. The plastic bladed turbines are designed for low-cost production and easy installation. www.motorwavegroup.com/new/motorwind

Windside

Savonius type spiral vane, vertical turbines start up at speeds as low as 2 1/4 mph, yet continue to safely produce electricity at wind speeds of or as high as 135 mph. www.windside.com



Aerojoule

Low speed, drag type turbine looks like an old-style windmill but is updated with microprocessor controls. Available in sizes from 1.5 to 65kW. www.aerojoule.com



Ropatec

Available in multiple sizes, this vertical axis design with large rigid blades is designed to produce energy during storm gusts, yet starts up at winds of less than 7 mph. www.ropatec.com