

Built-From-Scratch Garden Tractor “Belly Grader”

Carl Kirkman likes to buy and repair old Wheel Horse garden tractors. But the Alma, Ill., man took things in a different direction when he recently built a Wheel Horse “belly grader” from scratch.

He started with the frame and steering wheel off a junked 1968 Wheel Horse garden tractor and equipped it with a 4-ft. grader blade that rotates on a circular steel platform. The blade is hydraulically-raised and lowered using the hydraulic mower deck lift mechanism off another Wheel Horse tractor. A spring-loaded handle is used to manually angle the blade left or right.

“It works great for grading my driveway. I can angle the blade left, right or straight across, and with hydrostatic drive I have precise control,” says Kirkman. “The tractor is powered by a small 7 hp Briggs & Stratton engine. However, I don’t need much power for grading and I don’t need to go very fast so it works fine.”

After assembling the tractor he salvaged the subframe off another Wheel Horse tractor and bolted it on upside down under the tractor’s frame. He welded a 2-ft. dia., 3/8-in. thick circular steel panel onto the frame, then made another 2-ft. dia. panel and welded two 4-ft. grader blades back to back on it. Then he bolted the 2 panels together and ran a big pivot pin through the center of both panels. He also cut 3 notches into the bottom panel to accommodate different blade positions.

“It’s built heavy and pulls from the front of the tractor where it’s solidly mounted. I added a pair of 55-lb. weights on back of the tractor for extra traction. The hydrostatic drive makes it easy to control the tractor’s speed, and the hydraulic deck lift provides just the right down pressure,” says Kirkman.

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Wheel Horse “belly grader” is equipped with a 4-ft. grader blade that rotates on a circular steel platform and is hydraulically raised and lowered.

Giant Air Horn Blows Folks Away

Dave Dam is known for turning old artillery shells of various sizes into amazing steam whistles (Vol. 34, No. 5).

The Eau Claire, Wis., whistle expert recently turned a giant, 2-ft. long cast aluminum air horn made by the Westinghouse Air Brake Company into an attraction at antique engine shows. The flared end of the horn measures 10 in. in diameter.

“This air horn was originally designed to be used in trains and factories. I found it at a surplus store for \$15,” says Dam. “The round end piece that contains the baffle - which causes the vibration that makes the sound - was missing so I made a new one out of aluminum. I also made a 5-in. baffle from stainless steel. I installed a pipe thread in the baffle and hooked a nipple up to it so I could attach an air hose.

“Sometimes I take my air horn to antique engine shows, where I hook it up to an air compressor tank in the back of my pickup. It sounds like a riverboat or a foghorn. I use a 100-lb. propane tank for an air tank and usually keep the pressure at 125 lbs. Any more pressure than that causes it to make a screaming sound that’s almost unbearable.”

Dam’s collection of artillery shell steam whistles has about doubled in size since FARM SHOW’S first report. He now has about 45 in his collection, and has another



Dave Dam turned this giant, 2-ft. long cast aluminum air horn into an attraction at antique engine shows.

half dozen 21-in. tall, 105 mm Howitzer shells on hand. The biggest whistles can be heard a couple of miles away. He takes them to antique engine shows to blow for the noon whistle.

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Make Your Own “Aerosol” Spray Cans

Why buy spray cans filled with ounces of material when a bulk jug often sells for about the same as one can? It didn’t make sense to Preston Smidt when he was rebuilding a tractor. Cans of carburetor spray were costing a lot of money.

“The idea of building my own air-charged spray can popped into my head,” says Smidt. “I’ve used these homemade cans for carburetor cleaner, weed killer, lubricant, household cleaners and more.”

Smidt’s rechargeable can is constructed using pvc pipe, a valve stem air valve, a brass plug, and a few simple tools. The spray buttons, valve and stems are taken from existing spray cans.

Smidt offers plans on the do-it-yourselfer website GIZMO Plans. The plans sell for \$6. He estimates parts cost around \$12 and will



Preston Smidt makes his own rechargeable “aerosol” spray cans.

last through many refills.

“I’ve used mine many times,” says Smidt. “The air valve and the plug screw right into the slightly smaller holes I drill in the pvc pipe cap. I’ve had no problem taking the jug out for refills and replacing it.”



Cover adapts to different size filters. Rotating nozzle applies even pressure to filter element, reducing damage compared to hand-held air nozzles.

Air Filter Cleaner Fitted With Rotating Nozzle

“Dirty air filters on diesel combines, tractors and trucks cost machine owners thousands of dollars every year,” say Shawn Peterson and Al Westendorf, inventors of the Diesel Air Filter Cleaner, a new device that thoroughly cleans any size diesel air filter using a conventional air compressor.

The cleaner consists of a 29-in. long metal tube that slips through the center of a round cover that’s placed on the top of a filter. A standard 3/8-in. air chuck connects to the top end of the tube and blows compressed air out the bottom through a rotary brass nozzle with three curved arms. As the tube is pushed up and down inside the filter, the air nozzles rotate and blow dust out of the filter membrane.

Peterson says the design of the nozzle is the key reason that the invention works so well. “Using three nozzle arms creates a centrifugal action that blows air uniformly through the filter membrane without harming it like a single hand-held nozzle,” Peterson says. “That uniform air distribution thoroughly cleans a filter without damaging the membrane like it might be from extreme high pressure with hand-held nozzles.” The brass nozzle has three curved output tubes and rotates on a machined shaft. Peterson says the input pressure should not exceed 130 psi so the output at the nozzles will be 30 to 40 psi.

The Diesel Air Filter Cleaner, which has a patent pending, works on filters with an inside diameter of 3 to 8 in. Nozzle extensions can be easily added to the brass discharge arms for larger filters.

The round cover is designed to fit any diameter filter. The bottom of the cover



You simply insert rotary nozzle into filter with cover on top, and then slide it up and down to clean entire filter.

is shaped like an inverted pyramid with hard edges on four progressively smaller concentric circles. This design prevents dust from re-entering the filter because the cover seals tightly to the top of the filter being cleaned.

Peterson says the filter cleaner will easily pay for itself after a few hours of use. “We know for a fact that running a combine or tractor with a plugged air filter requires 3 to 5 gal. more fuel an hour than running it with a clean filter,” he says. “Using this cleaner every day for a few minutes, sometimes twice a day in extremely dusty conditions, saves fuel, saves money, assures good engine performance and reduces maintenance.”

The Diesel Air Filter Cleaner sells for \$350 plus shipping and handling. It’s available by calling the company or from their website.

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Safety is always a concern when working with anything under pressure. The design calls for a safety release valve. Smidt recommends using an air compressor with a regulator valve to keep air pressure less than 110 psi. His is set from 80 to 110 psi.

Visit www.farmshow.com for a link to a

video showing the rechargeable spray can in use.

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