

Handy Portable "Shop Cart"

Francis Peroutka, New Prague, Minn., built a handy portable shop cart that lets him put his pto-driven emergency electrical generator to use even when there's no power outage but yet keeps the cart ready for emergency use whenever needed.

The generator powers a 180-amp welder, a 3/4-hp. electric motor that runs a flexible power shaft fitted with an emery stone, as well as any electric-powered hand tool. The shop cart also carries a gas welding unit, a portable 2 1/2 by 3 1/2-ft. plate for welding on the ground.

A work table mounted above the generator is made from 4 1/2 by 6 1/2-ft, plate steel and is fitted with a pipe vise and a jaw vise mounted at either end. Brackets are fitted to a sidewall to hang C-clamps, vise grips, welding helmet, fire extinguisher, and 4-in. dia. tubes to hold welding rods. Welding tips are stored in a small cabinet on top



along with wire brushes and spare gloves.

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Pressurized "Uphill" Fuel Fill System

"I had trouble filling the fuel tank on my combine because it's mounted higher than my 300-gal. fuel storage tanks. I solved the problem by pressurizing the tanks so I could pump 'uphill'," says John Bode, Hanska, Minn.

"I removed the 2-in. dia. filling cap on top of the storage tank and replaced it with a 2-in. dia. plastic plug. I drilled and tapped the plug and fitted it with a 3/8-in. dia. elbow attached to a 6-ft. long 3/8-in. dia. fuel line. The fuel line hangs down the side of the tank so I can reach it from the ground. I used a

hose clamp to put a tire valve stem in the end of the hose.

"Iput approximately 2 pounds of pressure in the tank to push gasoline up into the combine. When the combine tank is full, I just remove the valve stem so the storage tank is vented until next time. To fill the tank, I just remove the plastic plug. Works great."

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Tractor "Hub Caps"

"When we set our rear tractor wheels on 60in. centers, about 1 ft. of axle extends out past the tire sidewall. I wanted a way to cover the axles to allow me to mow close to fences and crops without causing damage," says Edward A. Dittmer, Liberty, Ill., who fashioned "hub caps" out of the ends of imperfect pressure tank ends he found in a scrap pile at a local manufacturing firm.

"I welded a short piece of pipe inside them that fits over the axle and can be clamped tight. The metal in the caps is about 1/4-in. thick so they can stand up to lots of abuse.

"I especially need the caps when pulling my rear-mounted rotary mower. It keeps me from knocking down posts or standing corn. They also keep people from walking into the axles when the tractor is parked. To my knowledge, there's nothing like these hub caps on the market. I've used them for about five years."



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Potatoe Vine Killer Uses Anhydrous To "Freeze" Plants

Freezing potato vines to death is a lot cheaper than using chemicals to kill them, according to North Dakota farmer-inventor Dean Meberg.

Vines must be killed before potatoes can be dug out of the ground. "Chemicals keep getting more expensive and don't always get the job done in one pass. One fall we had an early frost and I liked the way it killed the vines. That's when I set out to build a machine that would do the freezing for us," says Meberg, noting that the idea has been tried in the past. "It never caught on because at the time anhydrous was much more expensive than chemicals. Now chemicals or acids cost \$12 to \$25 per acre to apply while the cost for anhydrous is only about \$5."

The vine freezer mounts on a 4 by 4-in. toolbar. Sealed 4 1/2 ft. long chambers over each row are formed out of 1 1/2-in. sq. tubing. "Gas is forced into the vines near the ground so that as the gas rises it has to go up through the leaves of the plant. The gas freezes the cells in the leaves, causing them to rupture and drawing moisture out of the plant. The shock of the cold and the sudden moisture loss kills the plant," explains Meberg.

Anhydrous feeds into the chambers via hoses mounted on the lower trailing edge of the front shields, that guide vines into the machines. Meberg uses regular anhydroustype 3/8-in, clear plastic hose with a nylon splice at the end to add extra pressure for better penetration.

"We apply 50 lbs. of anhydrous to the acre at speeds of about 4.5 mph. We can do 10



acres an hour with our 6-row machine. We had excellent results in 1987, the first year we used it. We had some trouble in 1988 because the plants were not as tall and there was less moisture in the plants due to the drought," says Meberg, who'd like to find a manufacturer to build the machine. "Some companies have told me they're afraid of liability problems because the machine uses anhydrous. But it's safe to operate if you take precautions. We wear a mask at all times when operating it in case the wind changes or there's a hose break. Ordinarily gas is sealed in the unit. If you see any coming out of the front end of the unit, you're applying too much gas."

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