

## Cheap Tractor Spindle Repair

Maurice Tack thought he was going to have to junk his mid-1970's vintage David Brown 1210 mechanical front wheel drive tractor. He'd broken a spindle on the front axle and the \$900 price the dealer quoted him for the new part would have been hard to justify.

It wasn't the first time he'd broken a spindle on it. "My dad bought the tractor new in 1976. It came with a Kramer front end. When that one broke, we hunted around and found the front end from a mid-1980s 1390 David Brown that would work.

"The spindles on these tractors are inherently weak," says the Valier, Montana farmer. "They're made of cast iron and have a groove cut in them all the way around where the bearing and seal are mounted."

Instead of buying a new spindle, he called Tim Nickol, who runs Precision Machine and Welding in nearby Conrad, Montana. "I asked him if he could weld the cast iron pieces back together," Tack recalls. "He said he could do better than that."

He started with a piece of solid steel, not cast, and made a piece that was identical to the one that broke off. He had to machine it from a solid round bar, heat-shrinking the metal, and finally, welding the new piece to the cast iron, he explains.

Tack recently broke the other spindle and

Nickol repaired that one, too.

Nickol says he used 4140 chrome-moly steel shaft to make the new spindles. "It has probably twice the hardness as the original cast material, so I don't think there's any way he's going to break these. But if he does, I can make him another one," he says.

Tack says Nickol's fix cost around \$450, or about half the price of the new part. He says there are hundreds of older David Brown mechanical front wheel drive tractors out there with problem spindles, and he figures a good machinist like Nickol can put a lot of them back to work.

"This is my back-up tractor now. It's only 68 hp, but I use it all the time for loader work, pounding fence posts, and gravel work. I move bales, clean corrals, and set up building trusses with it. It has about 12,000 hours on it and is still going," he says. "I want to keep this one going because it's hard to find a small loader tractor with front wheel assist for a reasonable price these days."

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## "Foot-Operated" Tire Changer

"It's simple but it works," says Richard Layden, Hoopeston, Ill., about the "foot-operated" tire changing lift support he made from a few pieces of 1-in. sq. tubing.

"When you're changing bigger tires, you often need more than two hands. I came up with this lift tool that you can use anywhere to make it easy to lift a tire to position it for putting on lug nuts.

"You can use it on dry or wet ground, level or unlevel."

The device is made of three pieces of hollow sq. tubing plus a piece of flat steel. It's welded into an "A" pattern, with the piece of flat steel at the top of the "A", which is the foot pad. The cross piece of the "A" is the pivot point.

To use, you slip the legs of the "A" under the tire and put a board under the pivot point. Pressing down on the foot pad raises the tire. You can add extra boards as needed to boost height.

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To use, you slip the legs of the A-shaped tool under the tire and put a board under the pivot point.



Lift tool makes it easy to lift a tire to position it for putting on lug bolts.



Ohler was going to retire this Ford tractor until he hit on a simple way to convert it from 6 volts to 12 volts.

## Change To 12-Volts Keeps Old Tractor Running

Neil Ohler's Ford Jubilee (9 NNA) tractor is 50 years old this year and still going strong. But Ohler nearly had to retire it for lack of a regulator.

"The regulator on the original 6-volt generator went bad and I couldn't find a new one," he says.

Then it came to him that he could convert the tractor to a 12-volt electrical system. "I simply removed the tractor's generator and replaced it with an old Delco 12-volt auto generator from a salvage yard," he says.

The 12-volt generator was no problem to mount on the tractor. He replaced the 6-volt battery with a new 12-volt one the same size and put on a new 12-volt regulator. Once he had the generator and battery in place, all he had to do was install a 12-volt condenser in the distributor. "Since 6-volt wiring is heavier than 12-volt, I didn't need to make any changes to the wiring or the starter," he says.

"I would have had to replace the light bulbs, except the lights on it quit working a long time ago," he notes.

"Alternators are easier to find these days than generators so that would probably be a better way to go," he notes. "And while replacing the generator was fairly simple, hooking in a single-wire alternator with a built-in regulator would have been even easier. The problem I had was the alternators I found didn't fit the mountings on the tractor. I was

able to find a generator that did, so it saved me from having to make a new mounting bracket."

Before he switched over to 12 volts, the tractor's old starter was a little slow, especially on cold days. "It starts better with 12-volts," he says. "Now, you just hit the switch and it's going."

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## Reworked 3-Pt. Control On Deere 3010

"The 3-pt. lift lever on my Deere 3010 mounts on the dash of the tractor so it's not too convenient to use when you're looking back at the hitch. When the control cable got corroded, I decided to make a change rather than just install a new cable," says Larry Schulze, Clifton, Texas.

He cut a 2 by 4-in. hole in the sheet metal housing that surrounds the 3-pt. controller valve arm just above the rear axle on the right side of the tractor. Then he bolted a 1-in. piece of flat iron to the control arm by tapping a 5/16-in. hole in the valve arm and using a 5/16 by 3/4-in. long bolt. He cut a slot in the bottom of the flat iron handle that's 5/16 in. by

Rust and dirt clogging the fuel line on your antique tractor or stationary engine?

"Most older engines have a settling bulb in the fuel line, but that only catches water and the largest sediment," says Bill Mossbach, Pocahontas, Arkansas. "A lot of old fuel tanks are loaded with years of dirt and rust so the fuel lines are bound to plug up."

But Mossbach has the solution. He devised a way to use an ordinary stainless steel sprayer filter to screen fuel as it leaves the tank. "I buy brass sprayer filter bodies - the kind with the brass retaining screw - and mount them on the top of the sediment bulb, where the bracket that holds it mounts to the fuel tank. Using JB Weld, I glue the filter body to a stem made of copper or steel tubing. Then I glue the other end of the stem into the fuel inlet at the top of the settling bulb bracket. That way, all fuel first goes through the screen before getting into the fuel line.

"I use 50 to 100-mesh filter screens on these. Any sediment that can pass through the screen will pass through the fuel line without clogging it," he says.

He recommends the stem on the filter be left long enough that the filter body is about 5/8 in. above the sediment bulb assembly.



An ordinary stainless steel sprayer filter is used to screen fuel as it leaves tank.

He says the size of the hole in the fuel inlet in the top of the sediment bulb assembly may require that it be drilled out to fit his filter assembly. "Or you may need a bushing to shim the hole if it's larger than the stem tube," he says.

While he uses JB Weld to put his filter together, he says any type of epoxy can be used.

Mossbach sells the complete fuel filter assembly for \$5.50, plus \$1.50 for shipping and handling. While he says installing the filter is not difficult, for a slight additional cost, plus return shipping, you can send him your sediment bulb bracket and he'll install the filter for you.

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1 1/4 in. so the bolt will not bind up when the handle is moved back and forth. The handle pivots on another 5/16-in. bolt a few inches above the valve, which is bolted to the sheet metal housing.

"Now the handle is just below and to the right of the seat. Very convenient and easy to operate. I wish I had made this change a long time ago," says Schulze.

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Schulze reworked the 3-pt. lift lever so that now it's just below and to the right of the seat, where it's easy to operate.

