

## Money-Saving Repairs & Maintenance Shortcuts

Have you come up with any unusual money-saving repair methods for fixing farm equipment? What maintenance shortcuts have you found? Have you had any equipment recalled by the factory? Name a particularly tough mechanical problem you've had with a piece of equipment and how you solved it.

These are a few of the questions we asked randomly selected FARM SHOW readers. If you have a repair tip, maintenance shortcut, or other mechanical experience you'd like to share, send details to: FARM SHOW, P.O. Box 1029, Lakeville, Minn. 55044 or email us at: [editor@farmshow.com](mailto:editor@farmshow.com).

Mark Newhall, Editor



**Andy Nelson, Webster, Minn.:** "I wanted a handy place to store chains on my Allis Chalmers 170 loader tractor, so I bolted an angle iron bracket onto one of the loader arm uprights and then bolted an 18-in. long, 2-in. wide metal strap vertically onto it. I just drop chains into a small gap between the strap and upright so they hang down from the angle iron. Works great."

**LeRoy Carroll, Northwood, N. Dak.:** "Before winter I disconnect the terminals on all my batteries and use a wire brush to clean them. Then I reconnect the terminals and coat them with Vaseline. It prevents corrosion and keeps my batteries cranking all winter long. Vaseline also works great to keep flashlight batteries from corroding."



**William Greyerbiehl, Bad Axe, Mich.:** "Old stainless steel swimming pool ladders, the kind used in many portable pools, work great to do maintenance work around my farm. The ladder sets over the top of the pool and has rungs on each side to climb up or down. People often get rid of these pools when the liner goes bad and sometimes sell the ladders cheap at garage sales."

"I often use the ladder with my Case backhoe tractor to do maintenance work and to fill it up with fuel. I place a 2-ft. long 2 by 12 across the top rungs to make a stable platform. The legs curve out at the bottom and have rubber tips so the ladder isn't likely to tip over as I stand on it."



"I also bolted a pair of chain hooks on back of the loader bucket, which I use with a chain to drag logs out of the woods. I drilled holes in the mounting brackets that support the bucket cylinder, then slipped each hook over the top of the bracket and inserted a bolt."

**Grant England, Gales Creek, Oregon:** "I had several 5-gal. buckets that had been stacked inside each other. I tried to separate them but couldn't. The buckets had been left outside all winter and were full of water that had seeped down into the lowest bucket, creating a vacuum that made it all but impossible to pull the buckets apart."

"I used my air compressor to blast air into all the places where the buckets came together, and they came apart easily."



**Keith Bleicher, Shushan, N.Y.:** "I'm a licensed master electrician and overhead crane technician, and also a backyard welder and mechanical designer. Since I often have to work alone, I've come up with some handy ideas for storing small tools and parts."



"One idea is to use the cardboard cartons that hold new spools of MIG welding wire. The boxes are about 14 in. square, and by splitting them in half and flipping them upside down, you have 2 instant bins that will fit neatly into cabinet drawers. Plastic margarine containers or baby wipe containers can be placed inside them."

"I also take a 1/2-gal. cardboard milk container and cut one side open to make small bins. The waxy material that coats the containers keeps oil and other lubricants from leaking out."

**Tom Smith, Sturgis, Sask.:** "I recently tried to dislodge a sink drain blockage, but the blockage extended just beyond the reach of my 25-ft. long snake auger. Instead of calling a plumber, I bought a length of 1/2-in. dia. plastic tubing longer than 25 ft. I made an angled cut at the leading edge of the tubing and then pushed it through the blockage and into the sewer line from a floor access opening. From this point, I could either connect a hot water hose or an air compressor to the tubing, and then slowly move the tubing back out of the blockage to clear the sewer line."

"This idea eliminates the need to mess with chemicals and degreasers. I paid less than \$15 for the plastic tubing."



**Donald Chapman, Billings, Mo.:** "I mounted a 4-ft. long by 20-in. wire rack on my shop wall to make a handy air tool storage rack. I cut up lengths of pvc electric conduit in order to make customized tool holders that are supported by pvc conduit hangers. I also cut notches into each holder to make room for the tool's handle."

"I use the rack to store everything from straight die and air grinders to grinding wheels, sheet metal shears, impact hammers, impact wrenches, and so forth."

"I also hang small metal hooks on the rack to hang my welding helmet and other welding supplies."

**Michael Antonellini, Keysville, Va.:** "A seal was leaking grease because it had worn a groove into a shaft on one of my machines. I mixed up some J-B Weld and filled in the groove. I let it set 24 hrs. and then used some emery cloth strips to sand down the J-B Weld until it was even with the shaft. No more leaking."



**James Henson, Union Mills, N.C.:** "After pouring oil out of a 1-quart plastic bottle, there's always a little left in it. I came up with an easy way to collect it. I cut the centers out of two 1-quart bottle caps, and also cut the center out of a Gatorade bottle cap that has an inside diameter the same as the outside diameter of the oil bottle caps. I place the oil bottle caps back to back and used J-B Weld to connect them. Then I slide the Gatorade cap over the place where the oil bottle caps are glued together, and used J-B Weld to hold it in place."

"All I do then is screw a bottle onto each oil bottle cap and let oil drip through from one bottle to the other. It takes only about one minute for all the oil to drain out of the bottle."

## 4020 Fitted With Heavier 5010 Front End

Lynden Jenkins says his brother-in-law was frequently breaking spindles on his Deere 4020 loader tractor, so he replaced the OEM spindles with the larger front end from a Deere 5010. Jenkins says fitting the heavier axles required reworking that his brother-in-law was able to do with a mechanic's help.

Long-time tractor mechanic Hank Wittrok says it's fair to assume the 4020 spindles were breaking because the operator was using a bucket and loader that were too large for the tractor. Deere specifications call for mounting a Deere 148 loader capable of lifting 3,100 lbs. or a 158 capable of lifting 3,800 lbs. on a 4020. The breakout force of those loaders is 4,700 to 5,000 lbs. Wittrok says it isn't uncommon to mount a larger loader with more breakout and lifting force that could easily crack or break the spindles.

A Deere 4020, listed at 80 hp., had standard spindles 15.125-in. long with a 1.50-in. shaft and 1.687-in. dia. wheel mount. The 5010 is a 120 hp. tractor built on a much heavier frame and weighing almost 4,000 lbs. more than a 4020. Standard 5010 spindles are 2 in.



**Spindles on this Deere 4020 loader tractor were replaced with the heavier front end from a Deere 5010.**

thick. Wittrok says finding a 5010 front end nowadays can be like searching for a needle in a haystack because fewer than 10,600 of those tractors were built. In the early 2000's mechanic Ed Beem of Iowa rebuilt Deere axles and adapted other models to 40 series tractors. He passed away in 2009 and it's not known if anyone currently does rebuilds like those Beem did.

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