

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.

Mark Newhall, Editor

Alvin Francis, Evansville, Wis.: "For the second time in 20 years, the rear axle on my Case IH 60 Series combine broke. It must be a common problem because our local dealer has a skid loader attachment designed to lift the rear end of the machine to replace a broken axle with a heavier one in about 3 hrs."

Murray Schrader, Adrian, N. Dak.: "We use anti-sieze compound when replacing bearings. Then the next time we have to replace them we don't have to cut them off."

Phillip Taylor, Haleyville, Ala.: "You can make worn and rusty files like new by soaking them in white vinegar inside a glass gallon jug. Put the jug in a window so the sun warms the vinegar, causing it to bubble. Leave it for at least 5 days. Then wash them off and you'll have files that are sharp and look brand new."

Marge Simpson, Macon, Ga.: "You can sharpen old files by soaking them in sulfuric acid for several hours. It cleans them to like new condition and sharpens the edges."

Ken Siroky, Roy, Mont.: "I couldn't see whether or not the twine was moving on my Vermeer 554 XL round baler so I wasn't sure if the tying cycle was engaged or not. To solve the problem, I looped the twine around a small wheel that's painted half white so you can easily see when it's turning."

Doug Clark, Ilderton, Ontario: "I was reading my copy of your "Great Shop Ideas - Volume III" and came across an idea from a fellow who suggested adding a couple gallons of gas to the fuel tank of a worn-out diesel engine to reduce smoke and misfiring."

"I think almost any mechanic would agree that there is almost always a good

solution to problems with old engines that does not include gasoline. After millions of revolutions, the cogs on timing gears tend to wear enough to slow down injection timing. Late fuel injection causes poor starting, lack of power, and excess smoke. Injector pumps are normally mounted on 3 studs and have elongated curved slots that enable simple timing adjustment. Just loosen the 3 nuts on the pump mounting flange, start the engine at idle, and slowly turn the pump forward 2 to 3 degrees. At idle the engine will speed up a little as you advance the timing. Then check the engine under load at higher rpm's. It should smoke less, produce more torque, and stop misfiring."

D.S. Lindsay, Val Caron, Ontario: "I regularly fill old flat tires with expanding foam designed for insulating cracks in buildings. It works great on the right tires. You don't use it on high-speed car or truck tires. But for tires used around the farm, it's a money-saver."

Ron Byelich, Higgins Lake, Mich.: "My best advice to anyone when it comes to maintaining equipment is to look, listen, and keep things greased."

"The best additions to my shop are steel-top work tables. They're great to work on and you don't have to worry about damaging them or burning them up."

Don Holzerland, Waubay, S. Dak.: "I drill holes in wheel bearing caps to install grease zerks. Lets me grease bearings quickly and easily whenever I want. Haven't replaced a bearing in a long time."

Bob Moty, Crystal Lake, Ill.: "I was a welder for 35 years and always kept a bottle of Vitamin E cream in my toolbox. Everyone in the shop would use it because it worked so well on burns and even cuts. I've seen burns that would be considered second degree and

the skin didn't even blister. When applied immediately, the pain will go away in a matter of minutes and it'll heal in half the time. You can buy cream online or at a health food store, or break open Vitain E liquid capsules."

Tony Ryba, Johnstown, Penn.: "I have a 2016 Ford F150 XL truck. Sometimes, when backing up, I'll open the door and look behind me. The warning chime goes off and the warning lights come on telling me the transmission is not in park, the door ajar, and more. To get rid of the annoyance, I removed the door panel and unplugged the electrical connector to the door latch, placing a jumper wire across the two terminals to fool the computer into thinking the door is shut. A switch and two wires in place of the jumper wire gives use of the dome light. As an added bonus, the parking lights stay off when I leave the truck."

Carl Jolley, Monroe Twp., N.J.: "When filing a chainsaw chain, I mark the link I start on with chalk. Makes it easy to know when I've sharpened the entire chain."

Allen Pederson, Nashua, Iowa: "You left out a crucial piece of information in your blurb in the last issue about how I attach a microwave magnet to a 3-ft. chain in order to pick up nails in the driveway and around my yard. The key to this idea is that I attach the chain to my dog. It doesn't seem to slow him down and, as he runs around the yard, lots of nails and other small objects stick to the magnet. Works great."

Martin E. Matousek, Lake Geneva, Wis.: "After working on vehicle brake systems, I smear chassis grease on the brake bleeder screws and over the threads on steel brake lines and hoses. It seals them to keep

out road salt and water. Next time you have to work on them, just wipe off the grease."

"I made a transmission jack out of an old engine hoist to use under my car lift. A transmission cradle from Harbor Freight mounts on the end of a hand-pumped hydraulic cylinder off an engine hoist. It's U-bolted to an upright mast welded to the top of the rolling base off the engine hoist stand. It works great."



Frank Brossart, Rugby, N. Dak.: "I converted an old gas grill that didn't work any more into a portable table saw stand. I replaced the grill with a piece of 1/2-in. thick plywood and set the saw on top of it."

"The grill's side shelves are level with the top of the table. The plywood fits into the grill opening nice and solid. The nice thing about this table saw stand is that I can roll it around my shop with ease."

Paul Moore, Batavia, Ohio: "I had a problem with rust forming on the hydraulic cylinder on my moldboard plow. The cylinder is used to raise and lower the moldboard bottoms, and the chromed rod was exposed to dirt and rocks. I solved the problem by flipping the cylinder upside down so that the rod end of the cylinder stays up out of the dirt."

"Oil began forming on the brake pads on my 1955 Minneapolis Moline 435 Mini Mo tractor. Roller bearings on both sides of the brakes were worn, which knocked out the seal between the transmission and brake shoes and allowed oil to escape onto the shoes. Normally I would have had to split the tractor, remove the gearbox, and pull out a shaft so I could pull the seal out from the inside. Instead, I used an auto body dent puller to remove the seal from the outside. I drilled a hole in the seal and then used the dent puller to pull the seal to the outside. It popped right out. I then used a homemade

Portable plasma cutting table was built out of a bathtub and some old bandsaw blades cut up into 18-in. lengths.



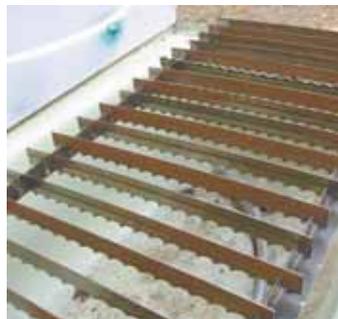
"Poor Man's" Plasma Cutting Table

The cost of an expensive plasma table prompted Michael Merrigan of Hampton, Nova Scotia, to build his own out of a bathtub and some old bandsaw blades. The bathtub is screwed onto a 4-legged wooden stand with wheels at one end so he can easily move it around.

"I built it for almost nothing. Commercial plasma tables sell for \$500 or more," says Merrigan. "Those tables come with a slotted angle iron frame and have expandable 1/8-in. by 1-in. flat bar pieces spaced 2 in. apart that serve as the work surface. I added the tub, an idea that's used on CNC plasma tables, as a spark catcher."

He started with a 5-ft. long, 32-in. wide tub. He cut up a 1-in. angle iron bed frame and welded it together at the corners to make a frame, which friction fits to the top of the bathtub. He used a 14-in. abrasive chop saw to cut a series of 3/16-in. wide, 1/2-in. deep slots into the frame, spacing them 2 in. apart. Then he cut up an old bandsaw blade into 18-in. lengths and inserted them - cutting edges down, into the slots to form the table's working surface.

"It works as good as I hoped it would," says Merrigan. "The stand sets on 4 by 4 wood legs and places the bathtub at a comfortable



Merrigan inserted blades with their cutting edges down into slots in an angle iron frame to form table's working surface.

32-in. working height. Water in the tub catches the sparks from my cutting torch so I don't have to worry about anything catching on fire.

"I already had all the materials, so my only cost was a couple hours of my time. The blades came off my bandsaw mill."

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