

Ronald Adams, Louisville, Miss.: "I had a bearing on the end of a shaft go bad. The dealer said the machine had to be completely torn down to press it off. Instead, I welded a piece of pipe to the bearing and then welded a flat bar across the end of the pipe. I then used two bottle jacks to pull the bearing off. Took me only about two hours."

"One handy tool in my shop is an old child's swingset. A chain fall is attached to it to pick up the front end of my riding mower when I need to sharpen the blades. Also makes it easy to pull the deck off."

James Sheets, Marengo, Ohio: To keep the adjusting screws on carburetors from vibrating out of adjustment, Sheets suggests locking them in place with a nut instead of the springs that are normally used.

John Porter, Albion, Mich.: "Don't throw old socks away. Fill them with sawdust, tie off the ends, and put them in a plastic bucket. When you want to chink up a cold draft at a door or window - or if you need to soak up a big water or oil spill - you'll be ready."

Chad Travis, Drasco, Ark.: "A common problem with front tractor wheel rims is that the lips can get bent, allowing dirt to get under the bead. I use my tractor in the woods to pull logs and also to run a homemade rock picker. So it gets used hard."

"To keep the rim from bending, I take the tire off the rim and then weld a 3/8-in. metal rod inside the lip. I weld one end in place and then bend and hammer on it as needed to fit it into place around the rim, welding as I go. This works well and can be done on most all sizes of wheels. I use a piece of string to measure how long a rod is needed."

"I had a problem with tubeless tires leaking at the bead. I solved the problem by applying bin sealer - normally used to seal feed bins where the metal sections overlap - on the bead before inflating the tire. The sealer squeezes out when inflating the tire, so any excess material can be peeled off with a putty knife and reused. I've used this method several times with good results."

Mark Snider, Cle Elum, Wash.: To adjust nuts on long all-thread bolts, Mark cuts deep sockets in half and welds the two parts of the socket to either end of a piece of heavy-wall pipe. Then he can use an air gun to turn the homemade tool. "We use tools from Harbor Freight for this because they're cheap. We also buy their wrenches to cut up and bend to make tools for special applications," says Snider.

Dan Miles, Dalton, Neb.: "I use small, high-quality pallets from computer equipment shipments to make wheeled dollies for my shop. I buy castor wheels, attach them to the corners, and put all kinds of things on wheels in my shop. It's much easier to clean

and it's easier to move things around in a packed shop."

Howard L. Marolf, Montrose, Co.: "I'm retired but work on restoring tractors in my shop. I added an extension to the side of my farm shop to work on tractors in the winter. The walls are made from corrugated fiberglass to let lots of light in and solar heat. It's a nice work space."

Neal Darsby, Red Level, Alabama: "I took a large poultry house fan and built a frame on wheels for it that lets me wheel it around the farm. It provides great ventilation in the summer when working on equipment in the shop, and I also use it in the barn when flies are bad. The horses love it."

James Turner, Rector, Ark.: "I came up with a way to keep water from getting into a padlock and freezing during cold weather. I cover the padlock with a sandwich bag, zip-ping the bag shut as far as I can."



Duwayne Bakker, Riverton, Wyoming: "Those crank jacks everyone uses take forever to raise. Here's a way to crank up a jack quickly and easily. I weld a 1/2-in. drive socket to the jack and use an electric drill to crank it up."

Al Smith, Springfield, Vt.: "I came up with a way to fix the 4-WD gearshift lever on my 1995 Ford F-150 pickup. One day the lever wouldn't move so I pushed it with my foot and unfortunately broke the aluminum metal plate around it. So I bolted the rod and transmission lever to a 1/4-in. thick steel plate. Works great and now the lever never pops out of 4-WD, even in rough 4-wheeling conditions."

Michael G. Scott, Junction, Texas: "When the engine went out on my 1980 Chevy 1-ton dually pickup, I replaced it with the engine and transmission out of a wrecked 1990 Chevy 3/4-ton. It fit perfect. Later I stripped the wrecked pickup all down for parts. I even made a trailer out of the bed for small jobs."

"Sometimes I need to weld at the other end of my shop, so I made a 100-ft. long, 220-volt extension cord. I keep the cord coiled



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

up inside a 5-gal. bucket for easy storage. I just plug the cord in and take the other end to my welder or wherever I need it.

"I use old freezers and refrigerators as storage units in my shed. Each model has a specific use - electrical, plumbing, welding, surveying, fencing, truck parts, tractor parts, pesticides and herbicides. The freezers and refrigerators are air tight and clean, and they make it easy to find whatever I need."

Joe Pozsgai, Capac, Mich.: "I had a piece of machinery in which the articulation pin would often seize up because the grease zerk was hard to reach. To solve the problem I ran a grease gun hose to the fitting, installing a coupler to keep the hose in place. It stays there permanently. Now I can grease the articulation joint standing up instead of having to crawl underneath."

"Another thing I did to make greasing easier was to buy a Lincoln electric grease gun. It really works well and makes greasing zerk a much easier job."

Phil Fleming, Sarasota, Florida: "To stop fuel theft, install a 'P' trap inside the fill line on large tanks. It prevents anyone from using a pump to enter the tank."

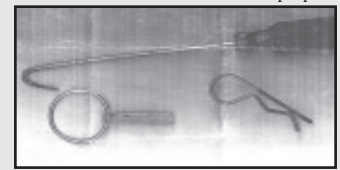
John W. McClain, Panguitch, Utah: "I have degenerative spine disease as well as asthma and arthritis so my strength and stamina are very limited. I converted a hydraulic engine hoist, using two small wheels and a 2-ton winch, to do all my heavy lifting."

Glenn Sethre, Longview, Wash.: "I first became aware of Teflon thread seal tape in the early 1960's when it became widely used in the oil fields of western North Dakota and eastern Montana. Since then, I've used it in all sorts of applications such as propane and natural gas lines, high and low pressure water fittings - any place there's a joint."

"Some people say this tape doesn't work, but I think it's just a case of not knowing how to use the product. It has to be wrapped in the right direction on the male thread. Wrap the tape in the direction that you turn the female on to the male - the same as a nut on a bolt. On plastic or brass, it's hard to start the tape on the slippery threads. To solve the problem, I use a hacksaw blade to scratch the threads at a right angle with the teeth of the blade. I do this around the male thread three or four times on most fittings or on pipe. The

slight marks left by the blade give the tape something to grip."

Buck Trimble, Mt. Sterling, Ky.: "I have arthritis so my hands don't work as well as they used to. To help remove clip pins from the tractor drawbar, I came up with a little tool that works great when changing implements. It's especially handy when I'm working with gloves on. The tool is a slim, long neck screwdriver. I used a small propane



torch to heat the blade in my vise so I could bend it into a hook.

"The screwdriver I used happened to have a rubber handle so it really works good. The screwdriver's long stem really comes in handy if I have to reach under the drawbar. I mounted a small I-hook on my tractor's rear fender so I can keep this tool with the tractor all the time. Most of the time when I pull a clip pin out it stays on the screwdriver. If I drop the pin on the ground I can just reach down and hook it without having to remove my gloves."

"Another idea - I mounted a plastic no. 3 coffee can on one of the tractor's rear fenders, where I keep extra pins and bushings for Cat. I drawbars when I change to different implements. I drilled several 3/8-in. dia. holes in the bottom of the can to let any water drain out. This way I always have the pins and bushings handy and don't have to look for them when I need them."

W. A. Gibbs, Elmwood, Tenn.: "The points and condenser on my gas-powered dozer always used to have a short life. To solve the problem I installed a solid state ignition module sold by a company in California (Pertronix Performance Products; ph 909 599-5955; www.pertronix.com). It's designed to greatly increase spark plug voltage. Now the dozer starts and runs like new."

Is Your GM Diesel Hard To Start?

If you've got a GMC or Chevy Duramax diesel pickup that tends to stall or is difficult to start, chances are the fuel filter adapter is defective. Replacing it with a new one can cost \$450 to \$750 - and that doesn't include the cost of a diagnostic analysis. Instead, you can save money by having the filter adapter completely rebuilt, says Dale Grose, Dmaxwrenchkit.com, Wenatchee, Wash.

His company rebuilds fuel filter adapters for Duramax 6.6-liter diesel engines found on 2001 to 2008 Chevy 2500HD, 3500HD, and C4500 Topkick and Kodiak Duramax models.

"The problem is the fuel filter adapters on these engines were badly engineered, and they all fail eventually," says Grose. "The filter adapter begins to leak air which results in a compromised fuel delivery system. Part of the problem is that GM put their filter adapter on the market before ultra low sulfur diesel fuel came on the market, not realizing

that the new fuel can cause the adapter to fail.

"Also, to protect the injectors, GM changed the fuel filter to a dual element filter from a single element, which unfortunately increased fuel restriction. The company has never solved the problem so any replacement part you buy, whether it's from a dealer or a junk yard, will eventually fail because it will have the same design problems."

"I have five years of experience with Duramax diesels and 15 years of experience with diesel and biodiesel fuel systems, so I know exactly what the problems are with these filter adapters and how to fix them."

Grose charges \$250 to have the fuel filter adapter rebuilt and provides a limited lifetime warranty.

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