

**Clayton Knippling, Chamberlain, S. Dak.:** "I converted an old gas tank stand into a scrap metal rack. Scrap metal is cut into pieces of usable length and then stacked on separate shelves I built into the stand. Long pieces go on top."

**Marge Newhart, Madison, Ohio:** "I spray bright orange paint on chains, binders, etc., to make them easy to spot if they ever fall off equipment."

**Scott Luckett, Junction, Ill.:** "We've used a Red Ball monitor on our sprayer for several years and it works well. One problem with it is that after a while the monitor tubes tend to get cloudy from sitting in the sun so that it's hard to see the balls. I discovered that diesel fuel will dissolve whatever it is that accumulates on them. They won't be exactly like new but they'll be a hundred times better."

**James B. Barbour, Hallstead, Penn.:** "The front universals wore out on my 6806 MFD Deutz because there was no way to grease them. New parts from a dealer would have cost more than \$900. Instead, I bought U-joints at an auto parts store and then had a machine shop make eight bushings to fit the worn castings on the tractor. The four new universals and eight bushings cost just \$230 and now I can grease them so it's really better than new."

"Another idea I had was making a cradle to fit my hydraulic floor jack to make it easier to change starters on cars or trucks. It's just a short piece of channel iron with a bolt down the center that fits into the lift plate on the jack. It holds the starter up so you can put wires on and then push it up into place."

**Ruth J. Riehle, Sunman, Ind.:** "Parts and repairs for older Massey Ferguson combines are costly and time consuming. We've bought several used junk combines at auctions to use as a source of replacement gears, bearings and belts. That's been a money-saver."

**Charles A. Starnes, Waldo, Ark.:** "I've gotten into the habit of using small ratchet cable come-alongs to help hook up heavy 3-pt. equipment. It saves a lot of effort, and is a good safety measure."

**Douglas Spotts, Hutchinson, Kan.:** "I install quick-disconnect fittings on all of my grease gun hoses. They act as swivels, making it much easier to get to fittings. It also

makes it easier to take the hose off the gun to save storage space.

"Some front wheel drive cars supposedly require machine shop service to replace the front wheel bearings. But that's not necessarily true. I use a short length of pipe and large flat washers to remove and install bearings. And I've installed cartridge type bearings into steering knuckles using finger pressure only by first putting the bearing into the freezer to shrink it a bit. Works great."

**Edwin Ruff, Moses Lake, Wash.:** "I mounted an automotive air conditioning compressor on the engine in my pickup, driven by V-belt off an extra pulley on the crankshaft. I mounted an air tank under the pickup between the frame to hold air and used a water tank pressure control to activate the compressor pump clutch as needed. I set it to keep about 70 psi in the tank. Comes in handy to have air in the field whenever I need it."

"I mounted the same air setup on my combine but I also put a 30-gal. water tank on the combine. Whenever I need water, I just put a little air pressure into the tank. I ran a 1/2-in. dia. pipe to the front of the combine and also put a faucet on the water tank. "One nice addition I made in my shop was to mount an inexpensive ceiling fan (\$20) over my workbench. Keeps me cool and it also has a light."

"To cut metal siding and roofing, I just turn an old skill saw blade backwards so it runs in reverse. It works good, although it leaves a somewhat rough edge but I just put that under the overlap."

"To clean out spray paint can nozzles, just take the nozzle off and squirt WD-40 through it. The squirt tube that comes with WD-40 fits right into a nozzle."

**Peter DeJong, Sebringville, Ontario:** DeJong cleans field drain tile as a sideline business.

"I'm one of only a handful of custom tile cleaners in North America. I use specially-designed equipment built in the Netherlands. My equipment consists of 800 ft. of hose, water pump and a 500 gal. tank mounted on back of my 1983 GM 1-ton truck. The rig was originally designed to mount on a tractor 3-pt. hitch, so I had to convert the pump to run off the truck's pto. The hose is fitted with a special nozzle that



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 farm 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.*

**Mark Newhall, Editor**



has 11 jets to blow water backward and one big jet in the middle to blow forward. The 11 backward jets pull the hose through the tile. It works on tile up to 12-in. dia. It also works well for cleaning milk house drains, manure pipes, even down spouts. I charge \$150 for the first hour and \$50 for each hour afterward. I'm at R.R. 1, Sebringville, Ontario, Canada NOK 1X0; ph 519 393-5774."

**Keith Cope, Tippecanoe, Ohio:** Keith restored a one-of-a-kind Ferguson tractor owned by Lee Mills of Kirtland, Ohio. It was an experimental 1953 model developed between the T030 and the 35, making it a sort of hybrid between the two models.

"It may have been the first tractor ever equipped with power steering," Keith says. "The steering column runs down through a spool that opens and closes a hydraulic valve mounted on the column when the wheel is turned. This forces fluid out one of two lines on either side of the tractor. Each side also has a fluid return line. The power steering pump mounts up front and runs off the tractor's timing gears."

**Robert Ruff, Monroe, Wis.:** "Moving 1,000-lb. big round bales with my early 1950's vintage Ford 8N loader tractor equipped with old Superior front end loader used to be a lot of work. The tractor had manual steering and the weight of the bales on the front end made it next to impossible to steer."

"I solved the problem by installing power steering on the tractor. I used two junked 3-in. cylinders, one off an old IH 503 combine and the other off an old IH 403 combine. These cylinders have control valves built right into them, making them ideal for using in the power steering unit I

patterned after that used on a Ford Jubilee. The cylinders anchor on each side of the tractor on radius arms down by the operator's feet. The opposite end had a ball swivel that I drilled out so it would fit over the tractor's tie rod end. I installed a flow control valve on the hydraulic pump driven off the crankshaft that supplies pressure for the steering and loader cylinders.

"The system works like a charm. You can almost spin the steering wheel with one finger, even when there's a bale on the loader."

**Al Rens, Hull, Iowa:** Here's a simple sure-fire way to remove square keys from drive shafts.

"You weld an 8 to 12-in. piece of flat iron to the key. Then you weld a second piece of flat iron at a right angle to the opposite end of the first piece. This provides a lip so you can simply tap the key straight out with a hammer. I've used this method for years and it works every time. It also works for well for pulling bearings."

**Terry Borgan, Auburn, Neb.:** "One of the neatest tricks I've ever come across to increase life of cutting wheels on angle grinders is this. With the cutting wheels running, apply bee's wax to both sides of the wheel. It makes a great lubricant and you can get it for little or nothing from any bee-keeper. A chunk of bee's wax will last a long time and applying it to your grinder's wheels will make them last three times longer. It's a real money saver that can be used on drill bits as well."

"Also, when preparing to weld galvanized metal, especially the old high quality stuff, take your torch and using nothing but acetylene, put a thick black layer of the stuff over the surface. It drastically cuts down on the hot zinc splatters that otherwise singe your hair and skin. I don't know why it works but it really does."

**Kenneth Hamilton, Hudson Bay, Sask.:** "I converted a CCL500 swather from an air-cooled Wisconsin engine to a water-cooled Chrysler slant six. It worked out great. The added weight stabilized the rear of the swather and fuel economy went up 30 to 40 percent. The cost was minimal."

"I took the slant six engine out of an old Case combine. I had to add an extension to



### Home-Built Rod & Pipe Bender

Roland Schild, Greenfield, Ill., got the idea for this pipe bender after seeing one in a machine shop.

It consists of a couple of Y-shaped metal frames made from heavy strap iron joined at a center hinge point by a heavy pin that can be fitted with different size belt pulleys that do the bending. Schild simply switches pulleys depending on what size bend is needed.

A pair of heavy bolts are inserted on either side of the pulley. A series of holes

along the frame lets you reposition them as needed to make various bends. The pipe or rod to be bent is laid alongside the bolts, and then the frame is pulled straight so the pulley moves inward.

Schild mounted the bender on a piece of I-beam mounted solid on a metal door post. The bender handles pipe or rod up to 1/2 in. dia.

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