

Vance W. Jones, Iron Mountain, Mich.: "When working on my tractors, I discovered that when I'm putting tightly-fitted parts back together, it helps if I put a bit of wax paper between the parts. They come apart a lot easier next time I have to take them apart. After a bit of use, I retighten the bolts and they'll stay tight."

Martin Gutzmer, Cambridge, Ill.: "I used to get a lot of flats in my garden tractor tires. I came up with a permanent fix using 'Fill N Seal' triple expanding insulation foam. I lift the tire on a jack, rotate it so the valve stem is at the top, and remove the valve stem. Then I fill the tire with foam, and allow it to harden for 2 to 3 days. Then you're ready to roll."

"Another useful idea I had is adding a 'through the wall' air line from my compressor. It runs outside the shop to make it easier to air up tires without having to pull into the shop."

Urie Miller, Middlebury, Ind.: "I had a broken casting on an old McCormick corn binder and no replacement part was available. So I welded it with a newer smooth-welding nickel electrode, pre-heating the cast iron before welding and peening the weld as it cooled. It's still holding up after a lot of use."

Larry Bultman, Okawville, Ill.: "I buy all sizes of freezer zip lock plastic bags to store miscellaneous parts in my shop area, and in toolboxes on trucks and tractors. Keeps them clean and you can always see what's inside."

Chris Haynes, Tuscaloosa, Ala.: "I keep all my fuel and fluid funnels, measuring cups, and graduated cylinders for measuring diesel, gas, hydraulic fluid, etc., in a 5-gal. plastic bucket with a lid. This keeps out dust and dirt and keeps insects from building nests in the funnels. They're always clean and ready to use."

"My equipment sheds have dirt floors which create lots of dust on equipment. I buy cheap oil dry clay absorbent and spread it on the floor. Keeps the dust much lower and is easy to rake clean."

Byron Clayton, Van Wert, Ohio: "To save room in a small shop, I mounted two grinders on one pedestal back-to-back. We took a large plate, mounted it on a pipe, and mounted the pipe in a large junk tractor hub. One grinder is fitted with a grinder stone and the other a buffer. We put it in a corner with a lock so you can swivel it to use either machine."

Robert Fitch, Metropolis, Ill.: "I use a small cement mixer to clean rust out of old tractor fuel tanks. Simply attach the tank with wire to the open end of the mixer and then add soap and water and about a dozen nuts,

then let it tumble. It'll clean the tank as bright as new on the inside."

Joe Germuga, Jr., Rochester, N.Y.: "I bought a kerosene-fired Protemp shop heater to use in the winter. It works great, but one thing I don't like is that it uses the fuel tank



as a base to stand on. I didn't want to drag it around or let it set on the concrete floor, so I decided to use some shop scrap and a pair of wheels to make a rolling base for the heater. Makes it easy to move around just where you need it without damaging the tank."

Howard Neitzke, Brethren, Mich.: "Putting small parts in zip lock bags can be difficult. To hold a zip lock-type bag open, just turn the top edge inside out and flatten out the bottom. It'll stand right up. Check it out!"

Debbie Satterfield, Camden, Tenn.: "If you've got door seals that stick in the winter, just spray Pam cooking oil on the seals. They'll never stick and it helps preserve them."

Connor Bishop, Guilford, Conn.: "I was tired of getting the cables tangled while welding, so I laid the power and ground cables out on the ground side by side and zip-tied them together every 3 to 5 ft. I left a couple extra feet loose on the end so they're free to move around the work area. No more twisted cables."

Wes Koebrick, Charles City, Iowa: "Here's a simple shop air filter idea that works well for me. I built a rack over the



top of my welding bench that holds 4 cheap 20-in. fans, lying facedown over the top of 4

FARM SHOW®

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

furnace filters. The fans draw air up through the filters, keeping air – and the walls of my shop – clean. You can tell how well the idea works by looking at the filter lying at one end of the rack that doesn't have a fan on top of it. That filter stays white."

Andrew Sewell, North Yorkshire, England: "A friend of mine needed a

any obstructions or dents I had missed, but found none.

"So I put it back together, started the engine, and engaged the drive belt. The auger vibrated so much I thought it was going to fly apart. Now I was really stumped. I started asking around at other repair shops, friends, and anyone else I could think of as to why this auger was vibrating so badly.

"I finally pulled the auger fighting out one more time and really looked it over carefully, thinking that maybe I had overlooked something obvious the first time. I still found nothing, so I put it all back together again. I even put new bearings, races and seals in the gearbox.

"I was at the end of my rope. I had put more than 15 hrs. of my time into this project but still hadn't figured it out. I finally had to tell the customer to come and get it. I've been doing welding and repair work for more than 40 years but had never run across anything like this.

"Well, the customer took the auger to a nearby competitor's repair shop. He removed the auger fighting and made new welds between all the existing welds along the entire length of the auger. I asked myself, 'Why would you do that?' when it was clearly evident that sufficient welds were already there. And I thought if those welds were necessary, why didn't the factory weld it that way?

"He told the customer that based on his experience, this welding procedure takes care of such vibration problems. Vibration like this is especially bad on big swing augers. He does this welding trick, and it takes care of the problem every time.

"Well, that was a new one to me. I would never have thought of doing that. So now those welds are spaced every 6 in. on both sides the entire length of the auger, instead of 12 in. I'm still in denial, and can't believe this welding job did the trick. But the auger doesn't vibrate any more and the problem is solved. I'm dumbfounded and hope I don't run into my competitor any time soon because he'll certainly rub it in. These are the kind of repair problems that keep one humble."

Ron Cole, Clive, Alberta: "When we put up silage in late summer there's always a lot of chaff blowing around that plugs up the radiator on our truck, making it difficult to keep the truck's engine cool.



decent-sized tractor to power a pto-powered mobile dryer, but he didn't have one to spare. However, he had an old unused truck with plenty of power, but no pto output. So he cut the back out of the differential and attached a pto shaft. The only problem is that the truck radiator gets clogged up with dirt, causing overheating."

Roger Gutschmidt, Gackle, N. Dak.: "A customer brought me a 7-in. dia. by 35-ft. Brandt grain auger equipped with a Honda gas engine. He said the auger vibrated a lot and that after running empty for 10 min. or so it would lock up and kill the engine.

"I figured the problem had to be with either the auger fighting, the bearings on the top shaft, the drive chain, or the gearbox.

"The first thing I did was take the gearbox apart. I thought for sure I'd find a broken gear or a bad bearing, but when I drained the oil and examined everything it all looked fine. Then I removed the auger fighting, pulling all 35 ft. out of the tube. I examined the entire length of the auger on my hands and knees, expecting to find broken welds and loose auger fighting, but everything looked good. Then I rolled the tube on a nice, flat surface to check for any bends, but it was perfectly straight.

"I also used a flashlight to look inside the auger tube from both ends to see if there were

Power Steering Repair

Minnesota handyman Ken Sprick did a double take when he heard that repairing the power steering pump on his 35-year-old 990 David Brown tractor would cost \$500 or more. "That was way more than I wanted to spend," says Sprick. "So instead I figured out a way to repair the hydrostatic pump with off-the-shelf parts."

Sprick bought a hydraulic pump from a local retailer and built brackets to mount it on the tractor. "It worked for awhile," Sprick said, "but it wasn't supplying enough oil to the orbital valve." Sprick then replaced the orbital valve with a new one that he bought at another retailer. "Plumbing it in wasn't the easiest job in the world," Sprick says, "especially since it needed a small oil storage tank."

Instead of purchasing a new tank, Sprick used an existing stainless steel tank from a small submersible water pump that he bought at an auction. "I welded some fittings on the tank, plumbed it to the valve, and it worked really well," says Sprick.



Ken Sprick used off-the-shelf parts to repair the power steering pump on his David Brown tractor.

"The whole set up cost me only about \$200, so I thought it was a very economical repair. I've probably got the only stainless steel oil reservoir in the country," Sprick says.

When he mounted the homemade system on his tractor he used a spring-loaded idler pulley on the belt that drives the pump.

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