

Bill Sardone, Old Bridge, N.J.: "I cut the top off the battery compartment on my Belarus tractor and put a piano hinge on it. Now I don't have to lift it out for maintenance. I just lift up the lid and - voila - there's the battery."

"I put mirrors on all four corners of my tractors. It greatly helps when doing hydraulic repairs and you want to see what's going on on the other side."

Gordon Brietzke, Spirit River, Alberta: "I built a ramp in my farm shop using heavy planks to make it easier to do service work under vehicles. Saves a lot of time."

"One thing I've discovered about the Perkins diesel engine in one of my tractors - it starts a lot easier since I started using the hand primer on the primary pump before starting."

Harry D. Byrd, Hazlehurst, Ga.: "Constant leaks in the hydraulic oil cooler on my Allis Chalmers 200 tractor were causing down time, wasting oil, and making the tractor dirty. I replaced the small factory cooler with a larger, heavier unit from a salvaged MF 2705. It works great."

"I had another problem with the AC 200. The outer piece of the harmonic balancer slipped rearward and rubbed a hole in the front engine cover. A new balancer was \$600 or a used one \$300. I pressed the balancer back into position and welded 3 small steel straps to the outer sheave and bolted them to the tapped puller holes. This prevents the outer sheave from moving back anymore. The hole in the engine front cover was mended with Marine-Tex. Total cost of the repair was around \$50. I was concerned about upsetting the engine's balance, but the mass of the small straps I added is insignificant compared to the mass of the balancer. While doing this repair, I discovered that fuel injection static timing was set at 18° before TDC but my manual called for it to be set at 12° before TDC. I reset it and the engine now cranks and runs better and smokes less at idle."

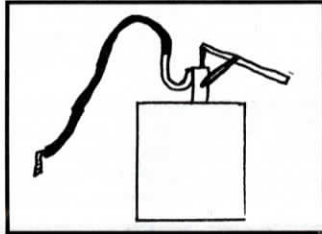
"One other idea I had was to use the upper portion of burned-out round hog feeders for burn barrels around my farm. They keep trash corralled and the lid keeps it dry."

Mark Stupfel, St. Paul, Ore.: "We had trouble fixing a leaking head gasket on an International 340 tractor. After an International dealer refused to 'stand behind it' with a complete overhaul, I placed a thin coat of hi-temp silicone sealer on both sides of the head gasket and that stopped 99 percent of the leakage. I weld hard surfacing rod onto the land side pieces of my mold-board plow. It's cheaper than new ones and they last longer."

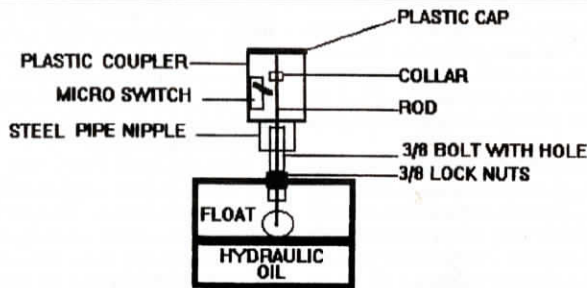
George Lewis, Atalizza, Iowa: "I use two open-ended 55-gal. steel barrels, mounted at about a 25° angle, to hold scrap iron. They rotate by hand, turning on lawn mower wheels mounted around the barrels. Rotation stirs the pieces up. Helps to find the right piece you need."

Howard W. Smith, Millsboro, Del.: "I made a flap door in the hood of my Cub Cadet tractors to make it easier to service the engine. I simply made three cuts, providing a hole big enough to get your hand in. The flap simply folds up when I need to get at the engine."

Dan Timm, Greenwood, Neb.: "I made an 80-90 wt. gear lube pump out of an old pump off a 5-gal. bucket that was



designed for filling grease guns. I took the grease gun fitting off and put a hose barbed fitting in its place, then put a 7 1/2 ft. by 1/2 in. hose on the pump, fitted with a 90° barbed fitting."



Homemade Low Hydraulic Fluid Sensor

"I built a low hydraulic fluid sender unit for my 1470 I.H. combine out of parts from a local electronics store, hobby shop, junk yard, and hardware store. It lets me know immediately if there's a sudden drop in fluid level, such as when a hydraulic line breaks," says Dwight Alley of Wasco, Ore. "For about \$27 in materials, I've got a system that works so well I plan to put one on my new 9150 Case-IH tractor."

He first drills a 3/8-in. dia. hole in the top of the hydraulic reservoir. Then he welds two lock nuts to the hole and inserts a hollowed out 3/8-in. bolt. A small steel rod with a gas tank float on the lower end extends up through the bolt and into a housing made out of PVC coupler. (The coupler screws into a steel pipe nipple that welds to the bolt). A small microswitch

mounts inside the housing and is triggered by a collar on the steel rod that rises and falls with the level of fluid in the reservoir.

When oil level in the reservoir drops, it activates the normally open micro-switch. This closes the contacts on the switch and activates the warning light and buzzer inside the combine cab.

"When the light comes on and the buzzer rings, it gives me plenty of time to stop the combine before I run the reservoir completely out of fluid, saving hundreds of dollars on repairs from severe wear on pumps and valves," Alley says.

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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 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

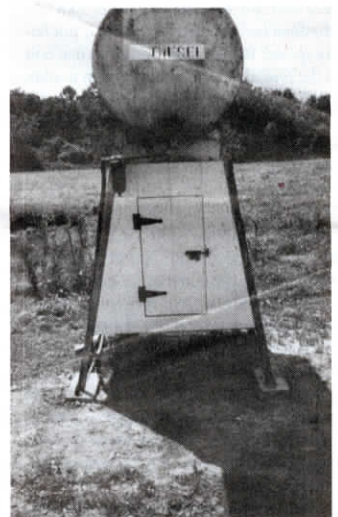
"This little 5-gal. lube pump works great because it fits under most trucks, tractors and pickups. It's very portable and when it's empty, you can fill it out of your bulk oil barrel, thus you don't have to buy the expensive 2 1/2 gal. jugs. Also, if you clean out the bucket or use a different one, it can be used to pump engine or hydraulic oil."

"The cost of this was next to nothing because the bucket and pump were laying in a pile of junk. Just hose and fittings."

James R. Warren, Flint, Mich.: "I've discovered an easy way to keep rope ends from fraying and unraveling. I dip the end of the rope in a can of Rustoleum metal paint, let it dry, then repeat the process. I used this technique last summer on three or four ropes that I use with gravity wagon tarps. I had tried cutting off the end of the rope and wrapping tape around it, but the tape wouldn't stick. Tying knots in the rope won't work because the knots are too big to go through the loopholes in the tarp. Any kind of paint would probably work as well as Rustoleum."

"I also found an easy way to keep my hands free of oil whenever I change vertically mounted oil filters on cars and pickups. The problem is that as soon as you loosen up the filter, oil starts running down the sides of the filter and onto your hand. I use an oil filter changing tool to break the filter loose until I can turn it by hand. At that point oil hasn't started coming out yet. Then I place an old wheel bearing grease container or a 16-oz. cottage cheese carton up against the bottom of the filter and squeeze the container and filter together while turning them. The wider top portion of the container catches oil as it runs down the sides of the filter."

Jack Curtis, Beech Grove, Tenn.: Jack found a way to make use of storage space beneath his diesel fuel storage tank by building a storage compartment underneath to hold oils, grease, funnels and other miscellaneous service supplies. The compartment fills the entire area under the tank. There's a small access door on one end. The main floor inside is made from 2 by 6's and there's a partial second floor above. The outside of the housing is plywood.



Curtis says it's a handy spot to store all the various lubrications needed for servicing trucks, cars, tractors, and other equipment.

Eugene Sellers, Trout Run, Penn.: "In the last issue of FARM SHOW, you described a new exhaust brake for truck or tractor engines. I bought an exhaust brake for a Ford diesel schoolbus two years ago from a company called Pacbrake Engine Brake located in British Columbia. I would advise your readers not to waste their money unless the company will guarantee this unit to keep working. Mine worked only about a month, after which the bearings on the flapper, or valve, became contaminated from the exhaust and started sticking closed. I finally gave up on ever making it work for any length of time."

Rod Slotten, Verona, Wis.: "I've discovered that rubber plumber's caps work great if you lose a bearing dust cap on a tractor, combine, trailer or other equipment. I got the idea when a bearing race broke on an older Case 530 tractor, destroying the seal. Unfortunately, this particular tractor was manufactured with three different style axles and so when I'd go to buy a cap, I'd