



**Edward Miller, Batavia, N.Y.:** "This is the handiest tool I've ever built for around the farm. I mounted a new compact air compressor on a 2-wheel hand truck and bought a new hose reel to mount above it. I can take it anywhere and run the hose out as needed. I've also got a hook on back to hold a grease gun."

**Robert Brickler, LaFayette, Ind.:** "To remove rust from chrome or stainless – or to take tar residue off auto glass – spray it with WD-40 or some kind of penetrating oil and let it soak. Use steel wool (no. 000 or 0000) to scrub the area – might take 2 to 3 applications. Will not scratch chrome or glass. Use only the lightest steel wool. Then wash with a soapy solution and apply wax."

**Jerril Andres, Shafer, Minn.:** "When I have trouble getting a good bead seal on a tractor tire, I cut a 3-in. band of rubber from an old inner tube and stretch it over the edge of the rim in the bead area. I've had good results getting a tight seal. Simple but it works."



**Ken Brading, Atascadero, Calif.:** "In your last issue, a reader told how he bends thin wall tubing by filling it with sand and plugging both ends to keep it from collapsing."

"I once had to replumb the exhaust tube on an air compressor. The space was too tight to bend a simple elbow and still get the necessary insertion into the compression fittings on both ends. To get flexibility through length, I coiled a length of aluminum tubing as shown in the photo. I crimped one end of the tube closed, packed it full of extremely fine grain sand by tapping the crimped end on a bench vise, and then crimped the other end so the tube was tightly packed with sand. Wearing insulated gloves, I heated the packed tube with a propane torch and slowly fashioned it into a coil. The extra length in the coil gave enough flexibility to hook it up."

**Rod Rhoades, North Star, Alta:** "Removing bad sealed bearings can be a difficult, slow process. So-called grease needles don't work well or at all on shielded bearings. To grease sealed bearings I use a quality bit in a dremel-type tool to drill a 1/16-in. dia. hole in the shield. Then I use a pointed nozzle to inject synthetic grease and cover the hole with more grease. If I do that the bearings seem to run fine for years."

## Filter System Purifies Oil On-The-Go

A bypass oil filtration system from Oil Purification Systems (OPS), filters out and also vaporizes contaminants. The company says Eco-Pur system will pay for itself in reduced oil changes alone. Add extended engine life and reduced downtime for maintenance and it all adds up to increased return on assets and a rapid payback on the product, says Greg Slawson, OPS.

"We've sold more than 25,000 systems for industrial use in transportation, oil and gas, sanitation, mining and agriculture," says Slawson. "It's designed to work best on larger diesel engines performing in tough environments."

The unit mounts on the engine and diverts 5 percent of the oil through a pleated, microglass filter. The filter is 94 percent efficient at capturing three-micron particulates and effectively removes the 5 to 10-micron particles that cause most engine wear. It also removes water, fuel, acids and other liquids that can cause oxidation, corrosion, sludge and lubricity loss. Removing them keeps gaskets and other components from premature failure.

Once contaminants have been captured, they "flow" across the surface of the filter to a heated plate. The electronically charged plate vaporizes contaminants. Any vapors are vented out of the filter chamber, leaving clean oil to return to the reservoir.

The constant filtering of 5 percent of the flow maintains the oil at a high quality, eliminating the need for normally scheduled oil changes. Slawson recommends using the normal oil-drain schedule to replace Eco-Pur filters and to draw a sample of engine oil for testing. Since even clean oil won't last forever, OPS advises using their own True-Test program for oil samples.

"It has a retail price of only \$22.50,



**Bypass system filters out and also vaporizes contaminants in oil, extending engine life and reducing maintenance downtime.**

is performed by a third party laboratory, and provides a comprehensive diagnostic and preventative maintenance tool," says Slawson. "Simply change the oil when the sample results indicate the oil has reached the end of its useful life."

Eco-Pur Systems are sized by make and model of engine. Suggested retail price for the basic unit is \$595.

"The Eco-Pur typically pays for itself in less than 12 months," says Slawson.

OPS sells Eco-Pur systems directly, as well as through approved distributors and installers.

To see how an Eco-Pur customer installed a unit on his Volvo tractor, visit [www.farmshow.com](http://www.farmshow.com).

Contact: FARM SHOW Followup, Oil Purification Systems, Inc., 2176 Thomaston Ave., Waterbury, Conn. 06704 (ph 866 645-7873; [info@ops-1.com](mailto:info@ops-1.com); [www.ops-1.com](http://www.ops-1.com)).

# 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](mailto:editor@farmshow.com).

Mark Newhall, Editor



**Bill Reeks, Cromwell, Ky.:** "I used 2-in. angle iron to build a 'push frame' on front of my Sears Craftsman garden tractor. Metal braces extend from the top of the frame down at a 45 degree angle to the tractor frame. I attached a 1 7/8-in. ball hitch to it that lets me push small trailers around without having to look backward, which helps a lot because I have arthritis in my shoulders and neck. In fact, I've mounted push frame-mounted ball hitches on several garden tractors."

"I also attached an eye-bolt on top of the push frame so I can lift the tractor with a



chain hoist from the trusses in my pole barn. It's really handy for sharpening the mower's blades. I place a safety stand under the deck and then let the tractor down until it rests on the stand. Then I can sit in a chair and sharpen the blades without having to remove the deck or bend over.



"I remove the hood from every garden tractor I own as soon as I get it home and never put it back on. To me the tractor hood is just a nuisance. I use the open space in

the engine compartment to store stuff that I want to bring with me, such as tools or an umbrella.

"I used a short length of wire to connect the chuck on my air compressor with the blow nozzle. That way the nozzle is always there when I need it. It's really handy when blowing dust out of tractors or sweeping a floor."

**Mike Halbirt, Silverton, Ore.:** "I used to have trouble getting the cap off the valve stem on the inner wheel of tractor duals. To solve the problem, I started using an 8-in. length of rubber hose with a slit in it. I slip it over the cap and twist. The hose holds onto the cap."

"Frozen nuts on bolts can be hard to remove. One way is to use a torch to heat and loosen the nut up. When heating a nut this way, heat only one side of the nut because you want to obtain an elliptical shape. You'll hear a little 'tick' as soon as the nut breaks loose."



**Rex Gogerty, Hubbard, Iowa:** "Discarded tracks from an old crawler tractor, screwed to the floor of a flatbed trailer, can provide extra traction for loading 4-wheelers, garden tractors and skid loaders. My son found the tracks in a junk yard."

**Mark Schneck, Hooper, Neb.:** "Nebraska state law requires using a red flag for cargo extending past the pickup bed. But cloth flags take a beating at highway speeds. So I put a roll of high visibility marking ribbon in my glovebox. The pink day-glow color is highly visible, and I can throw the ribbon away once I reach my destination."

"To pour small amounts of liquid from a new 5-gal. bucket, lay the bucket on its side with the opening at 12 o'clock. After