## Money-Saving Repairs & Maintenance Shortcuts

night, I came up with an idea for an air tank assembly to make this work better.

"I used industrial interchange couplings rather than automotive couplings. I took a ball valve, threaded female at both ends, threaded in two quick disconnect fittings, and plugged that assembly in to turn the valve off. I then plugged it into the supply tank, took an air hose and connected it to the other end of the assembly, and plugged it into the destination tank (a portable tank in this case). I opened the valve, and the air went to the destination tank."

Steve R. Gustafson, Cambridge, Ill.: "I bought a 12-gal. hydraulic reservoir and mounted it on legs with wheels. I plumbed a ball valve into the bottom port and had a welder friend cut a threaded 2-in. barrel bung into the top for filling purposes. The tank came with a 3/4-in. threaded breather, which is too slow for filling. I use this as a clean source of diesel fuel for cleaning parts."

**Doug Comden, Brethren, Mich.:** "I've found 150:1 or 200:1 2-stroke oil mix in 4-stroke small engines helps with the ethanol issue.

"Don't keep sharp machine tools (mills, taps, etc.) in piles in drawers. Keep them in original containers or split pieces of rubber hose.

"Always use cutting oil or coolant systems.

"50/50 mix used motor oil/used mineral spirits (from parts washer) for cutting oil on general machine work (drilling, milling, lathe)

"I always use Tap Magic for tapping and die work."

Steve Crouse, Patten, Maine: "Welding two identical profiles together, such as two pieces of 2-in. round pipe, is easy to line up if you have a 2 by 2 or 3 by 3 angle iron welded V down on the edge of your welding table attached at the upper level so that the angle iron is flush with the tabletop."

Gary Meeks, Verona, Va.: "Do you have a bathroom sink light with a pull chain that keeps wearing out? Replace the switch with a toggle switch—they're very durable."



John Rochester, Charlotte, N.C.: "This may seem strange, but it works. When working with a spring-loaded drive belt that keeps falling off its pulleys, use a strip of rubber and a boot lace to hang the belt under tension while removing/installing the alternator. This rubber strip is left over from having my blood pressure taken.



"When reassembling something that uses screws, pinning one corner helps hold parts in line until I get a few screws back in. This is a reused concrete form from a septic tank lid.



"I couldn't find a good electrical ground for my test light. So, I ran a long wire from the negative post on the battery back into the truck cab and clipped the test light to that. There are many uses on all kinds of equipment."



**Norm Sieting, Rapid City, Mich.:** "I have a CountyLine wood splitter from Tractor Supply. It works fine except for two problems.

"I've had trouble with small pieces getting caught between the splitting wedge and the frame. I welded two small blocks of steel to either side of the splitting edge, taking care of the problem.

"Another frustration was with the splitter stroke. The wedge always stopped about 2 in. short of the back plate. Any stringy wood hung together, requiring me to pull it apart or run it through again, but reversed.

"I found a simple fix by adding 2 in. of steel to the backplate. Now, the wedge stops just short. Problem fixed."



**David Simpler, Elkton, Md.:** "When the electric linear actuator that raised and lowered my disk stopped working, I found an alternative.

"I cut 4 in. out of the center of a top link, cut off a tubular ratchet binder at its largest diameter, and welded them together. I installed it in place of the actuator.

"It's a Rube Goldberg device, but it works. I have a nice ratcheting device for raising and lowering the disk."

Dale Mayol, Belleville, Mich.: "I haven't purchased chainsaw bar oil in 49 years. At the suggestion of a friend, I've been using engine drain oil for bar oil in my chainsaws. I filter it through a paint filter to make sure it's super clean. Over the years, I've done and still do a considerable amount of cutting. I've had no issues with the oiling of the bar or chain."

Larry Norris, Hollister, Calif.: "Safety is no accident. Before starting any task, take a few moments to lay out a plan. Then, before starting, ask yourself, 'What can go wrong?' Just a few moments can save injuries and maybe your life."



Bowen built his converter so he could use Bobcat style attachments with his Mustang skid

## **Shop-Built Skid Steer Quick-Attach Converter**

Charles Bowen's 30-year-old Mustang skid steer still works great, but it won't work with the broad array of Bobcat-style attachments. Mustang quick attachments have a single locking pin in the center instead of a locking lever on each side.

"I have a welding business and do a lot of repair work on skid steer buckets and other attachments," says Bowen. "I needed to be able to move them around the shop, and I couldn't do it with the Mustang. So, I decided to build a quick-attach conversion plate."

Bowen designed the conversion plate to slip over the top of the Mustang's quick-attach unit. He started with a 43-in. length of channel iron and welded tabs at either end and 1/2-in. flat plates to its front edge. A4-in. wide crossbar between the plates provides a mount for the Mustang's locking pin. It slips through a 2-in. hole in a square plate welded to the rear edge of the crossbar.

"I sized the flat plates for the Bobcat-style mounts, welding them in place to match yahoo.com).

standard Bobcat-style attachments," says Bowen. "The crossbar and mount for the Mustang locking pin were sized and located to match the Mustang plate. You could build a conversion plate for any brand this way."

Bowen admits the conversion plate is a "beast to lift on and off, but I can do it." He prefers overbuilt to what he sees on many attachments brought in for repair. At one time, he built buckets for Bobcat and has a lot of respect for how they're made.

"People with heavy-duty skid steers will go to a discount place and buy buckets at half the price of a Bobcat bucket and then have to get them repaired," says Bowen. "I have one customer who's brought his bucket in three times to have the mounts rebuilt."

Bowen isn't worried he'll have to rebuild his quick-attach conversion plate.

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## **Handy Mobile Workshop Goes Where The Work Is**

The Mule Mobile Workshop is a professionalgrade work cart with a fan, light, and power solution. It transforms any space into a workshop.

"We designed it as a portable fan and light solution on wheels, with a loading foot that will hold up to 300 lbs.," explains VP of Marketing Matt Willard. "Whether you're transporting project materials, feed or shavings, or other equipment/tools, we see it as a super convenient solution for bringing the things you often need wherever they're needed."

The Mule team was inspired when inconvenienced by the time it took to gather supplies when working together. They put the team's designers and engineers together to develop an all-in-one solution. Contractors and tradespeople understood the appeal immediately. "It's ideal for active DIYers, farm and agriculture enthusiasts, maintenance and ag enthusiasts, and light commercial users," says Willard.

The 5-in-1 Mobile Workshop has an integrated 3-speed fan, LED light, power strip with a 10-ft. cord, tool caddy and 300-lb. capacity hand truck. The adjustable 14-in., 3-speed, high-velocity fan with 2,500 CFM keeps you cool and reduces workspace dust and fumes. The integrated power strip has three 110V outlets and two USB 2.0 ports, while the adjustable LED light provides 1,100 lumens. Portability is ensured with 8-in. solid rubber tires that eliminate the risk of flats.



5-in-1 Mobile Workshop has an integrated 3-speed fan, LED light, power strip with a 10-ft. cord, tool caddy and 300-lb. capacity hand truck.

"There aren't really any competitors for the Mobile Workshop," Willard explains. "You might say that you can use a two-wheel dolly/hand truck and load a portable fan and a work light and power cords/power strip and strap it all together. Our solution has the fan, light, and power strip integrated."

The Workshop retails for \$299. Shipping is free for all orders over \$99. It's backed by a 3-year limited warranty.

Contact: FARM SHOW Followup, Mule (ph 877-289-8692; www.muleproducts.com).