

Repairs & Maintenance Shortcuts

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equipment, here's a method I learned from an old mechanic years ago. Just heat the nuts until they're red hot and then apply a piece of bees wax. It will flame a little so be careful. You might have to repeat the process but keep applying till the wax no longer melts. Leave it set till it cools and the nut will then turn off easily. I've found that the wax penetrates the entire length of the bolt and acts as a lubricant, making it easy to turn off even badly rusted bolts."

George "Bing" Ribble, Hettick, Ill.: George has a large lathe in his farm shop and needed a way to change the chucks, which are heavy and awkward. What he did was to install a section of roller door track above the lathe. He then mounted a block and tackle on the door track to raise and lower the chucks. He lifts the chucks and moves them to a storage area.



Charles Henderson, Burt, N.Y.: "I made my own paint shaker by cutting the crankshaft and connecting rod off a lawn mower engine and mounting them on a wooden frame that sits on top of my workshop bench. A 1/4 hp electric motor belt-drives the connecting rod



which turns the crankshaft to give the paint can an oscillating, back-and-forth motion. The paint can mounts on a steel bracket that's connected to the crankshaft. The top and bottom of the bracket can be slid up or down via a series of holes, allowing it to hold 1-gal., 1/2-gal., or quart cans. By mounting an artificial hand on it I can even use it to shake spray cans. Friends and neighbors come over to have me shake their paint. My total cost was about \$5.00."

Bob Haddon, Belvidere, Tenn.: "I've found that pouring a little beer on a dull drill bit, before it starts smoking, will make it cut much faster. I have no idea why it works, but it does work, even when using beer from a can that's been open for several weeks."

Jerry Witzig, Tremont, Ill.: "I modified



a pair of locking pliers so that it's easier to install the master link on any roller chain where you can't make an adjustment between the rollers. I welded half of a No. 80 master link onto one side of the plier jaws and ground the other half down so that it will fit between the chain links. When I squeeze the pliers the master link will slip right in place."

Floyd E. Ver Ploeg, Lovila, Iowa: "I retired from Maytag as a journeyman machine repairman 12 years ago and now operate a welding and machine shop for local farmers. Over the years I've picked up a few ideas that may help others.

"If a nut, bolt, or pulley gets frozen by rust, just heat it real hot, then pour water on it until it's cool and it'll come loose. However, don't pour water on a cast iron part as the fast cooling will cause the cast iron to explode. Just heat it.

"I save quart oil bottles to make small parts bins. Most of the bottles are rectangular-shaped. I cut out one side of the bottle and put the cap back on, then after I have 50 or 60 bottles I use 1/4-in. thick wood to build a shelf box, leaving a little more space between the shelves than the bottle is thick. The bottle bins will hold bolts up to 5 in. long. If I need several bolts of the same size I can just take a bottle of bolts to the job.

"I save used oil and mix a quart or two of it 50-50 with gas to make the best penetrating oil anyone could ask for. I also use it as a cutting oil. Works great and costs little."

Landis Shelton, Webbers Falls, Okla.: "I read about the 'Weed Eater' line trimmer guide that lets Dennis Lenart of Waco, Texas, trim along fences or buildings (Vol. 21, No. 3). I made my own version by bending a length of 1/2-in. dia. conduit pipe into a semi-circle to form a guard and welding it to the Weed Eater shaft. The guard is offset so I can trim weeds a full 6 in. from the fence or right up to it. A pair of hose clamps connect an



arm on the guard to the Weed Eater shaft. I move the clamps up or down depending on the height I want to cut.

"When the bolt and bushing on the front spindle of my riding mower wore down, causing the spindle to flop around, I decided to fix the problem myself. I removed the bolt and bushing and used a 7/64-in. dia. drill bit to enlarge the bolt hole, then tapped it out and screwed in a 5/16-in. dia. bolt. Tightening up the bolt takes the slack out of the bushing and spindle. I also set a jamb nut on the bolt to keep it in place. It's a simple but effective idea that I've since used on 1/2-ton, 1-ton, and 2-ton trucks. I think the same idea could be used on almost any vehicle. It's not a permanent solution to the problem but it'll keep a vehicle going for quite a while. I mounted a bolt on a bell crank equipped with a worn-out woodruff key. I drilled a hole on the opposite side of the key and screwed in a bolt to take the play out of the key."

Gauge Tells When To Change Fuel Filters

If you've ever experienced a loss of power in a diesel tractor or truck due to a bad fuel filter, you'll be interested in this new gauge that monitors the filter and tells you when it needs changing.

The "Fuel Filter Minder" monitors the suction side fuel filter and indicates at a glance how much filter capacity has been used and how much remains. It's installed in-line at the filter outlet or, on Cummins engines, at the Compuchek port of the fuel pump. The gauge measures restriction through the fuel filter when the engine is operating at maximum rpm's and locks up at that point, so the remaining filter capacity can be read even after the engine is shut down.

As the filter becomes plugged, a bright yellow indicator rises inside a clear plastic sight gauge. When the indicator reaches the red zone, the filter is plugged and should be replaced. The company also makes an air filter gauge that measures air flow restriction. It installs on everything from larger truck and tractor engines to light duty cars and pickups.

"They take the guesswork out of knowing when to change the filters. Helps re-



duce costs by only replacing filters when it's really necessary," says Ron Kelderman, Engineered Products Co., Waterloo, Iowa.

Sells for \$34.95 not including fitting hardware. Air filter gauges sell for \$24.95.

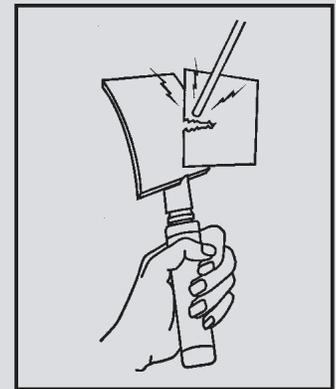
Contact: FARM SHOW Followup, Engineered Products Co., 2940 Airport Blvd., Box 598, Waterloo, Iowa 50704 (ph 319 234-0231; fax 8922).

"Welding Spoon" Makes Filling Cracks Easy

New "welding spoon" provides a bridge for the weld, making it easier to weld cracks and holes in metal or to weld two pieces of metal that don't fit well together, says Tahenh Machining & Fabricating, Delmont, S. Dak.

The "welding spoon" consists of a 1/8-in. thick, 2-in. wide by 3 1/2 in. long copper plate mounted on an aluminum handle with a rubber grip. You hold the plate behind the crack or gap as you weld. The plate pulls the heat away from the molten material and supports the weld so that a steady bead can be laid down along the length of the crack. The molten material doesn't adhere to the plate. After making one pass with the plate you can pull it away and further build up the bead.

"It eliminates having to always start and stop, waiting for the bead to cool off, as you build up the gap," says Steve Gundrum, spokesman for Tahenh Machining, manufacturer. "The spoon pulls the heat away and keeps the arc from burning through or warping light sheet metal behind the gap. It works a lot better than using a hunk of copper because the handle makes it much easier to use. It works on all types of welders - stick or wire-feed, and on coated or non-



coated wire."

Sells for \$14.95 plus S&H.

The company also offers welding spoons in other shapes and sizes for use in hard-to-reach areas and for use when welding thicker steel. A kit that includes three different spoons sells for \$21.95 plus S&H.

Contact: FARM SHOW Followup, Tahenh Machining & Fabricating, Box 216, Delmont, S. Dak. 57330 (ph 605 779-2121; fax 3321).

Adjustable Socket Fits Any Size Nut

This is the last socket tool you'll ever need, according to American International Tool Industries, Cranston, R.I.

The Multi-Socket is a one-size-fits-all socket. It handles all standard and metric nuts and bolts, stripped nuts and bolts, square nuts and bolts, thumb screws, eye bolts and wing nuts, the company says. The socket is filled with spring loaded square pins that fit tightly around any shape.

It fits a 3/8-in. dia. drive.

Sells for \$19.95 plus \$4.95 S&H. An 8-in. ratchet is also available.

Contact: FARM SHOW Followup, American International Tool Industries



Inc., 1140 Reservoir Ave., Suite L01, Cranston, R.I. 02920 (ph 800 932-5872 or 401 942-7855; fax 6120).