

Mark Vimont, Independence, Ore.: "I was doing a job where I needed both ends of my flarenut wrench at once. Buying another wrench would have cost \$19. So I just cut the wrench in two and then slid pieces of steel tubing onto the stubs. Worked great."

Mahlon Martin, Greencastle, Penn.: "I came up with a quick way to repair belts on my Deere 435 round baler. When I find a cut in the belt, I use a cordless drill to bore 3 small holes above and below the cut. Then I double up a length of nylon mason cord and thread it back and forth through the holes several times and then tie a knot. The mason cord I use is the kind used to plug leaks in car tires (www.tractorsupplycompany.com).

"This fix will last a long time. It works a lot faster than cutting a belt in two and splicing in a new belt section. It's a quick, economical way to keep on baling."

Cyril Cernohous, Hudson, Wis.: "When welding or working under a piece of machinery that requires laying on the ground, I've found that a scoop shovel laid upside down makes a great shoulder or head rest."

Mike Cenkus, St. Clairsville, Ohio: "I recently restored an early 1970's Graveley 816S garden tractor that had been in storage for more than 21 years.



"The tractor was completely disassembled and every part was sand blasted and painted before reassembly. The forward and reverse clutches were replaced as well as the bushings and bearings in the front axle and the rear axle hubs. The 16 hp Briggs & Stratton engine was beyond repair. I ended up installing a 20 hp Honda V-twin engine purchased from Northern Tool, which required only minimal modifications. The new engine runs smooth, and the extra

horsepower it provides now makes this an exceptional tractor. In fact, it now looks and runs better than new."



Larry Webb, Park Hills, Mo.: "I installed a Chevy 350 cu. in. engine in an English-made 1963 Fordson Major tractor, and also made several other modifications that worked out quite well. I put an electric fuel pump on to be able to fit the tractor frame. The tractor has a Case power steering system, a Deere combine governor, and a Pontiac electric fan. I used stainless steel pipe to make new mufflers for the tractor, turning the stock manifolds upside down. I also used 1 1/8-in. flat steel to make an adapter plate for the transmission. I used a lot of stainless steel polished bolts for this project."

Gearhead Café (ph 208 860-4694; www.gearheadcafe.com): This company offers a new line of automotive manuals on CD Rom for Ford, GM, and Chrysler cars. The manuals make it easy to print out clean pages to work from so there's no concern about getting valuable factory manuals greasy.

The company offers CD manuals for most GM, Ford and Chrysler cars from 1909 to 1981. The manuals are reproduced from the original books, with an easy-to-use menu-driven format that includes all the original illustrations. The company also offers parts locator books and directories of places to buy obsolete or hard-to-find parts for classic or antique cars.

Cole Vehicle Products, 20 Old Colony Ave., Boston, Mass. 02127 (ph 617 268-2100; www.colehersee.com): Cole offers a low voltage disconnect switch, a device that warns users of low batteries. The voltage-sensing relay and timer has the ability to shut off battery loads when voltages drop.

Drill Press Made From Car Parts

After more than 60 years, Forrest Spindler's homemade drill press still works great. His father Joseph made it while Spindler was serving in World War II. When he got home and took over the family car repair business, he got the drill press, too.

"What parts he couldn't adapt from car parts directly, like the pulleys and hand tightener knobs, he cast from old pistons he melted down," recalls Spindler. "Other pieces like the Morris taper for the chuck were turned on his lathe. The only things he didn't make were the Jacobs chuck, fan belt and electric motor."

The base is an old flywheel, and the upright column is a piece of drive shaft. The housing for the drill press head is from parts of an old car frame, cut and welded together. The press table is also made from a flywheel. It is attached to the column with a clamp from a shackle for springs. Loosening the hand cast knob on the clamp lets Spindler move the table up and down to accommodate larger work pieces.

The spindle assembly itself is made from a torque tube from an old truck. A piece of sprocket from a starter drive attached to it controls vertical movement within the shaft assembly. The shaft handle turns a ring gear that turns into the straightened out sprocket.

A double set of ball bearings top and bottom in the shaft assembly hold the spindle in



Forrest Spindler's father made this drill press more than 60 years ago, largely out of car parts. It still works great.

place. Exactly how the spindle is constructed is a mystery to Spindler, as it is encased in the drill head housing and he has never taken it apart.

"It had been set aside for many years," says Spindler. "A few years ago, I dusted it off, and it started right up. It still works great."

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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 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

According to the company, many times when a vehicle is left idling with onboard loads remaining powered, a battery can become depleted to the point that it can't serve the starting circuit. The "FlexMod" switch alerts the operator when starting voltages are low and then temporarily cuts off any nonessential electrical loads, conserving amps to start the vehicle.

The solid-state accessory measures 4 by 3 by 1 in. and has a service life of more than a million on-off cycles. It's rated at 10 amps and can handle loads from direct circuits. Or it can drive solenoids and relays for higher-current accessories.

Bruce L. Olp, Minocqua, Wis.: "I solved a problem with the battery and charger for my Sears Craftsman 18-volt cordless drill. The charger has 3 lights – yellow, green and red. Normally when you plug the battery into the charger, the red light comes on. Once the battery is fully charged the green light comes on.

"The problem was that sometimes when the battery was put into the charger, the yellow and green light would come on and the battery wouldn't charge. Yellow and green lights indicate a defective battery. I found that by plugging and unplugging the power cord about 6 times, the red light would come on and the unit would charge the battery."



Merl Stangl, Atlantic, Iowa: "When using my table saw, instead of pushing the wood being cut with my hand I use a homemade wooden block that's designed to

fit over the saw's guide bar. The handle off an old crosscut saw is screwed and glued into the block, which is made from 3/4-in. thick plywood and painted white. A side board extends down on each side of the block to the table saw's surface."



Chad Travis, Drasco, Ark.: "I mounted a standard, off-the-shelf 14-in. long toolbox on the hitch of my Kuhn 3-pt. mounted, 8-ft. rotary hay mower. I used angle iron and flat steel to make a mounting bracket for the toolbox that welds to the hitch frame. The toolbox bolts to the bracket.

"I use the toolbox to store mower blades and the wrenches that I use to install them. It eliminates a lot of extra clutter on my tractor. I call it 'point-of-use' tooling.

"I also installed an extra guard on top of the bar on which the rotary blades are mounted. Sometimes it's possible for a



rotary blade to bend downward into the mower bar, causing the blade to cut into the gearbox which then loses oil. The extra guards prevent that from happening. I used 3/16-in. thick steel plate to make the guards, mounting one guard between each set of rotor blades.

"After reading in Farm Show about grooving cylinder heads (Vol. 35, No. 4), I decided to try the idea on a Briggs & Stratton 5 1/2 hp engine and found that it worked and was fairly easy to do. I use the engine to operate a water pump for my livestock and it cut fuel use by 20 percent. The photo shows a white mark that looks