

Money-Saving Repairs & Maintenance Shortcuts

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friends and neighbors who have Cubs and Cub Cadets. With time and materials included, Bonner figures his tie-rod ends cost about \$50 to make.

He says they're not exactly easy to make with a regular lathe, but figures any competent machinist can do it. "If you had a CNC machine, you could make them even faster and for less money," he believes. He'd be happy to give advice or answer any questions others might have about making their own.

Contact: FARM SHOW Followup, Tom Bonner, 424 Rock City Road, Section, Ala. 35771 (ph 256 228-3204).

Otto Wenz, Wenz Service, Inc., 1606 L Street, Tekamah, Neb. 68061-1289 ph 800 808-7885 or 402 374-2202: "If your older IH tractor sometimes jumps out of gear or locks in gear, or if you're just frustrated with the way it shifts, we can probably help. We had some of the same problems with our own tractor and figured out a way to fix it that worked better than anything we could find at the time.

"We now offer complete kits to solve shifting problems for IH models from the 706 up to the 6788. Most of the problems with these tractors come from the gears in the transmission not being fully engaged. Different tractors need different parts, so while we do have complete repair kits, we'd prefer to sell only the parts needed. For this reason, farmers or their mechanics should call for parts and prices.

"All of our transmission repair parts are guaranteed. We guarantee the '06 series parts for the life of our business. As long as I'm around, we'll replace anything we've sold for them. Kits for most other models come with a 10 year guarantee.

"In addition to IH transmission repair parts, we also sell a number of new after-market parts for almost any make of tractor."



Samuel Wurz, Box 1060, Vulcan, Alberta, Canada T0L 2B0: "Fixing a flat truck tire can be a frustrating experience, because the sidewalls are so thick that you can't hold them open with your hands. To solve the problem, I came up with a hook system. I set the tire on top of a steel frame, then hook it in and pull the sidewalls apart so that you have enough space to work with a grinder or other power tools. It has a pair of steel hooks on one side and a handle on the other side. You set the hooks on one side of the wall and then pull the handle back over center until it locks in position.

"We always set the tire inside a steel cage to protect the operator in case the tire explodes. The cage was built from 1-in. solid steel rods.

"We came up with a portable scaffold that serves as a handy step ladder and folds up like a book for use in tight spaces or for storage. It mounts on four castor wheels so it can be rolled around wherever its needed. The scaffold measures 5 ft. long and 6 ft. high and is 2 1/2 ft. wide when folded all the way out. It folds to a width of only about 1 ft.

The stepladder is formed by hooking three metal steps between the sides. By



removing the steps and then grabbing hinged arms at the middle of the scaffold, you can collapse the sides in toward each other. The wheels are equipped with brakes.

"Works great for painting, working on ceiling lights, welding, etc."



Don McColl, Neidpath, Sask.: "I'm in the earth moving business and when the floor in my big earth-moving scraper got bent, I had to find a way to straighten the floor. I decided to make a giant press using big sections of channel iron from a demolished grain elevator and two 20-ton hydraulic jacks.

"It eliminated the need to do a lot of cutting with a torch, which would then have to be rewelded and reinforced. I used it only for this one job, but it's always there ready to be used again. The floor will eventually bend again.

"I used railroad ties to space the two pairs of channel irons about 2 ft. apart. A pair of heavy steel arms hold the two pairs of channel irons together. The scraper floor was positioned part way between the two sets of channel irons. A pair of hydraulic jacks were placed side by side on top of the floor. By raising the jacks up against the top channel irons I was able to exert downward pressure on the floor and straighten it out.

"It worked as well as I hoped it would. The main top channel iron was bending upward slightly so I chained another, shorter length of channel iron on top of it for extra strength."

Matt Throener, Matt's Ag Service, Carnegie, Okla.: Transmission and power take off repairs on tractors can be done faster and easier if the cab is removed, says Throener.

Many of the farm tractors that come into his shop for repairs are Deere, from the company's 30 through 60 series. "The cabs on these tractors all have lift pockets built

Carbureted Ford 351 Engine Converted To Fuel Injection

After 200,000-plus miles, the 351 engine in the 1990 Ford F-250 pickup on the Allspach Farm, Mt. Pulaski, Ill., needed a major overhaul.

A number of Allspach family members and employees depend on the pickup which, despite its age, is still in great condition.

Rather than trade it off, they bought a rebuilt 351 engine that came from an older truck. "It was built in 1976, so it didn't have electronic fuel injection like the one in our 1990 model," says George Allspach.

"While they changed the injection and ignition on the newer engines, Ford hadn't changed the block itself," he continues. "We were able to salvage the electronics from the worn-out engine and install everything on the older rebuilt engine. We just took the carburetor off the replacement engine. Then, from the 1990 engine, we installed the intake manifold, distributor, water pump, timing chain housing, starter gear, the counterbalanced pulley from the front of the crankshaft, the oil pan and the oil pump. We had to reposition the oil dipstick so it would clear the power brake cylinder. That was probably the trickiest part.

"Even though the replacement engine was 14 years older than the original, Ford evidently used existing mounting holes in the 351 block and heads when they switched over to electronic injection and ignition. We didn't have to do any machining on the block to fit the manifold and electronics to it," Allspach says.

The rebuilt 1976 engine runs just like the one that came in the truck. "In fact, it may be a little more fuel efficient than the original," he adds. "It saved us the time and trouble of rebuilding the engine ourselves, and the older rebuilt engine was less expensive than buying a newer rebuilt engine with all the electronics on it."

"Dad had heard about someone else who had done the same thing, so we were sure it could be done before we bought the engine," Allspach says. "Any competent mechanic could do it."

Contact: FARM SHOW Followup, George Allspach, Allspach Brothers Farm, 1300 50th St., Mt. Pulaski, Ill. 62548 (217 792-5231).

Mower Blade Sharpener

"It sharpens perfectly every time and the sharpened angle of the blade remains the same next time you sharpen it," says R.A. Wagner, Sumner, Ill., about his home-built mower blade sharpener designed to fit onto any 6 or 8-in. bench grinder.

It was made from several pieces of angle iron, a piece of pipe, and a steel rod. It bolts to the work bench with a single bolt.

The blade is held in place on the horizontally-mounted piece of angle iron by a C-clamp. It pivots in and out from the grinding wheel on a single bolt pivot. The entire assembly slides back and forth on a piece of steel rod, mounted horizontally just above the workbench. A short piece of pipe welds to the underside of a piece of angle iron at the base of the unit.

"You can adjust it to fit the cutting edge on any blade. You slide the blade back and forth until sharpening is complete, and then flip the blade end-for-end and repeat the process," says Wagner.

Contact: FARM SHOW Followup, R.A.



Sharpener is designed to fit onto any 6 or 8-in. bench grinder.

Wagner, Rt 2, Box 99, Sumner, Ill. 62466 (ph 618 936-2050).



into them, but they're only 1/2 in. wide," Throener says. "You can't pick them up with normal flat forks. You're supposed to buy a special tool to lift the cabs off these tractors, but it costs \$4,000 to \$5,000."

Throener decided to make forks to fit the pockets himself. He cut two 4-ft. lengths of 1/2 by 4-in. flat steel bar. "I had to machine 1/2 in. off the top edges on the front in order to make them fit into the lift pockets, but on the back ends, I left the forks 4 inches wide.

This makes a stop on the forks, so the cab can't slide back on them too far," he says.

He welded his forks to quick-tach brackets he made from 3-in. sq. steel tubing and angle iron. "To lift a cab off a tractor, I first put the forks into the pockets by hand. Then I move the loader into position under the forks and raise it up so the quick-tach brackets engage. Then I just lift up and back away," he says. "It takes about an hour to disconnect all the mountings and wiring from the cab.

"But having the cab out of the way can save eight or ten hours on a transmission or power take off repair because you're not trying to crawl in under the tractor all the time," he says. "It's safer this way, too. In the past we would split the transmission, block up the front end, and then roll the rear end back out of the way."