

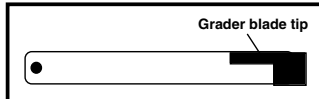
## Repairs & Maintenance Shortcuts

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U-joint knuckles on the rockshaft often break and new ones are no longer available. To solve the problem we remove the knuckles completely and put 3 by 8-in. hydraulic cylinders plumbed in series on each section. Works great.

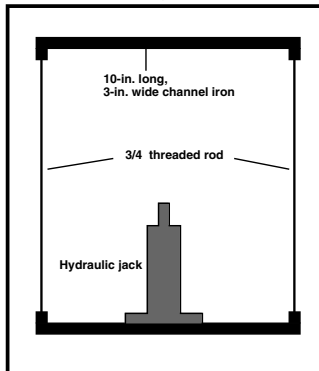
"My dad had trouble with the glow plug sensor on his 1988 GM Suburban equipped with a 6.2-liter diesel engine. After the dealer changed glow plugs and a sensor with no results I finally found the problem - a loose ground to the sensor. It cost \$225 to repair. It should have cost 25 cents at the most."

**T.J. Studer, Robstown, Texas:** "I use grader blades to beef up worn mower blades.



They outwear the original blade ends. I just used an L-shaped section of grader blade to the end of the blade."

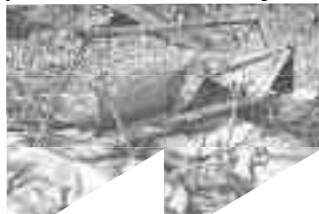
**Dan Jedlicka, Central City, Iowa:** "An inexpensive hydraulic press can be made using two 10-in. long, 3-in. wide channel irons and connecting them with two 2-ft.



long, 3/4-in. dia. threaded rods. Simply position it upright in a vise and put a bottle jack between the channel iron pieces. The rods make it easy to adjust for size as needed.

"My Ford 5-bar, 3-pt. pto-powered hay rake does a great job of raking hay but also makes a good tender for fluffing up rained-on windrows. Simply criss cross the drive belt which causes the bars to turn backward. It kicks hay just enough to open the smashed windrows."

**Wallace E. Keller, Mt. Horeb, Wis.:** "I have an 8-ft. long, 3-pt. blade that's quite heavy. To make it easier to mount I attach a pair of chains to each end and hang it from



a stand that I built from a length of pipe and steel rods. I put a car jack under the hitch arms to make it easy to hook up to my 3-pt."

**Leon Harbur, Kirksville, Mo.:** "You can fill a puncture hole in a tractor tire with black silicone to keep mud and water out. It works well and will last a long time. It also

works for weather cracks."

**Wade Hancock, Cullman, Ala.:** "The fuel line on my Ford 5600 tractor began leaking at the tank - the solder joint had cracked. Rather than removing the tank I simply drained it and fixed it with a product called JB Weld. It's like an epoxy glude and worked very well."

**Daniel Diener, Melrose Park, Ill.:** "B'Laster industrial-strength products have saved me a lot of headaches, time, and money for all my maintenance and repairs. The company makes penetrating catalysts, air-tool oil-conditioners, engine life extenders, silicone lubricants, citrus and aqueous degreasers, small engine tune-up products, etc. I like the products so well that I became a distributor (10620 Nevada Ave., Melrose Park, Ill. 60164).

**Galen Winger, St. Joseph, Mo.:** "When I built my shop I had to grade one side down 3 ft. in order to make it level. I poured a 4-ft. high concrete wall and welded several short lengths of 10 by 12-in. H-beam end to end about 20 ft. long, then cut them in half to make two 'T-beams'. I used 4 1/2-in. steel pipe for posts and spaced them 4 ft. apart. I placed the 'T-beams' on top of the wall and posts to make ramps that I use to service cars. I later doubled the width of one ramp to accommodate small and mid-size cars. Works great. I find that I service my cars more often now because they're so easy to service - I don't have to crawl under them."

**Paul Donley, Jr., Capron, Ill.:** "Old stainless steel bulk milk tanks make great cattle water tanks. They never rust and are double-walled to help keep water from freezing. Also, they're built strong. I have three of them on my farm.

"I mounted a 3-speed car transmission on my feeder wagon so that I can run it slow into my bunk feeder or fast for fenceline feeding."

## Stick-On Magnets Boost Oil Filter Performance

Putting magnets on oil filters to pull out metal filings seems like such a simple idea that you have to wonder why it has never caught on.

In recent months we've come across two companies that make stick-on magnets designed to boost oil filter performance.

Zoor Inc., Redmond, Wash., says its new "Super Magnaforce Oil Magnet" simply snaps onto the bottom of any filter. It can be reused every time you change oil.

Three sizes are available. Size A for light engines sells for \$21.95; size B for semi trucks and tractors sells for \$29.95, and size C for automatic transmissions and fuel tanks sells for \$11.95.

Contact: FARM SHOW Followup, Zoor Inc., 14572 N.E. 95th St., Redmond, Wash. 98052 (ph 206 861-8400).

Another approach is to attach new "rare-earth" super magnets to the sides of filters. TBO Advisor, an aircraft engine publication out of Wilton, CT, recommends attaching four magnets per filter. "They're small enough to fit onto the filter but powerful enough to suck ferrous wear particles out of the oil," says a company spokesman. "Conventional magnets are too weak to do the job - most of the magnetic field passes harmlessly into the filter's steel shell. Rare earth magnets are several times stronger than conventional magnets and are a relatively new development in the electronics industry. They're becoming widely used in stereo speakers and in reduced size electric motors.

"If you cut open the filter after magnets have been used on it you'll find a pasty, fine build-up of metal particles where the magnets were attached. The magnets can be reused every time you change filters. If you're concerned that the magnets might vibrate around and change position you can use masking tape to hold them down."



Zoor magnets snap onto the bottom of any filter.



Four TBO magnets are spaced evenly around filter housing.

A set of four magnets sells for \$30 plus \$5 S&H.

Contact: FARM SHOW Followup, TBO Advisor, Box 477, Wilton, CT 06897 (ph 800 707-4826 or 203-834-0330).

## Two New Tools For Making Deere Tractor Repairs

Mechanic and inventor Bruce Gamble, La Feria, Texas, designed and built a tool to repair the front casting on Deere MFWD tractors.

"It works fast and saves about \$1,000 per job," says Gamble.

The problem is that the front axle pivot pin wears through the bronze bushing and into the casting, thus "egg-shaping" the hole. If you try to put a new bushing in the hole, it won't hold.

Gamble's tool makes it possible to drill out the old hole to a larger diameter and then install a new bushing. The best part is you can make the repair right on the tractor.

His tool consists of a 1 1/2-in. dia., 25-in. long boring bar that attaches to a 1/2-in. electric drill, a guide assembly, and a drill press-type feeding mechanism. Gamble removes the front axle and weights and bolts a 16-in. sq., 3/4-in. thick steel plate onto the front of the frame to hold the drill in place. The guide assembly bolts to the plate to keep the boring bar aligned properly. He inserts the boring bar through a hole in the plate and into the worn-out casting and drills it out until it's round, cranking the handles on the tool as neces-



A 25-in. long boring bar attaches to a 1/2-in. electric drill and is used to drill out hole in casting to a larger diameter.

sary to slowly feed the bar into the casting. Then he drives a steel bushing into the hole to bring it back to its original size and reinserts the front axle.

"It takes only about two hours to install the tool and bore out the casting," says Gamble. "Otherwise, replacing the castings is a 20-hour job which can tie up your tractor for days. You have to remove the tractor's weights, fuel tank, hydraulic pump, oil reservoirs and, on some tractors, the side frames. The casting weighs about 1,000 lbs. so it's hard to handle and you can break bolts, hydraulic lines, etc."

Gamble sells the tool for \$2,000 plus S&H. Custom made bushings - depending on the size of the hole you have to drill - sell for \$50 apiece plus S&H.

Gamble also makes a specialty tool for repairing the hole in the wheel casting where the tie rod fits on Deere 2955 tractors. The problem is that the outside end of the tie rod works loose causing it to wear on the hole in the axle casting. The tie rod cannot then be tightened up because the hole is wallowed out. The only solution is to replace the axle casting at a cost of about \$850 per side plus seals and labor. The tool consists of a 1-in. thick steel plate that bolts onto the casting using the fender mounting holes. The plate has a bushing that fits over the hole and serves as a guide for a drill bit.

Gamble removes the tie rod and bolts the tool in place, then uses a 1/2-in. drill with a 1 1/4-in. bit to drill through the bushing and into the hole. Once it's drilled out, he presses a tapered bushing into the hole and reinserts the tie rod.

"It takes only about 20 minutes to repair the hole on each side of the axle," he says.

The tool sells for \$400 plus S&H. Bushings sell for \$30 apiece plus S&H.

Contact: FARM SHOW Followup, Bruce Gamble, Rt. 1, Box 173, La Feria, Texas 78559 (ph 210 797-2169)