

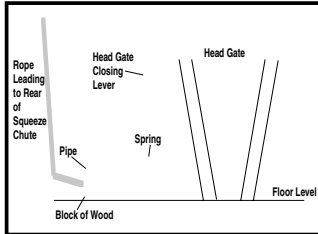
Bryan Parker, Jerome, Mo.: Bryan sells kits that convert any Caterpillar engine equipped with a pony motor to electric start.

"The trouble with those old pony motors is that they're expensive to repair, providing you can even find someone willing to work on them. I've been selling these kits, which are available for both 12 and 24-volt electric systems, for four years. They install in as little as a couple hours or as much as a half day depending on the machine. The cost is as little as \$575 or as much as \$800 depending on which options you choose with the kit."

Contact: FARM SHOW Followup, Bryan Parker, 22775 Pearl St., Jerome, Mo. 65529 (ph 573 762-2280).

Robert Strommen, New England, N. Dak.: "I converted the head gate on my squeeze chute to one-man operation with a few odds and ends. It saves a lot of time and labor when working cattle.

"I drilled a hole in the end of the head gate closing lever and screwed in a hook. I



attached one end of a 1 1/4-in. dia., 2-ft. long door spring to the hook and wired the other end to the bottom of the chute's frame. I adjust the tension on the spring by feel. I prop a 3 1/2-ft. long, 1/2-in. dia. pipe underneath the closing lever on top of a 6 in. sq. piece of 2 by 6. I tied a piece of rope around the pipe and ran it back to the rear of the squeeze chute. By simply pulling the rope, I'm able to activate the head gate closing lever myself. It makes handling cattle the one-man job instead of a two-man job. The only real expense was \$3 or \$4 for the door spring."

Dan Gingell, Lapeer, Mich.: If you've seen the tractor repair videos FARM SHOW sells, you're already familiar with Dan's work on older tractors. He says he's also had a lot of interest in his method of boosting power on later model Deere 4020 diesels. He increases horsepower from 90 to as much as 150 so the repowered rigs are roughly equivalent to a 4440.

"We first install a turbocharger on the 4020. I use only M&W T-34 turbocharger kits because of the unit's reliability and the company's reputation for customer service.

These kits can be installed on any Deere 4020, Serial No. 250,000 or higher, which indicates the tractor has the C.A.V. fuel pump for which this kit is designed. You have to remove the original exhaust manifold to install the kit, a simple procedure if you follow the instructions provided.

"If you go by the book, you'll have no trouble attaining a 20 to 30 percent increase in power, up to about 125 hp. Installation takes as little as a half hour.

"If you want to spend another half-day of very careful fuel pump adjustment, you can coax even more power out of the unit, although you'll void the warranty on the unit by doing so. However, we've discovered that the 4020 can easily handle the increased power placed on it by this method.

"First, follow the company's guidelines on adjusting the fuel pump. Instead of tightening or loosening the screw opposite the notch in the fuel adjustment ring 1/16 of an inch, you can actually turn it closer to 1/8 of an inch to get a boost in power of up to 150 hp. That takes some doing and very close attention to how black the exhaust smoke is. If smoke is really black, you'll have to back down the adjustment screw a bit.

"A word of caution: Installing the kit and making this fuel pump adjustment puts a good deal of additional stress on the rear end of the tractor so don't go out, put on duals and expect to pull huge loads you couldn't before. If you do, you'll simply tear up the ring and pinion gear. But if you just use the tractor the way you did before, you'll enjoy the extra power and ease of handling without doing any damage."

M&W turbo kits retail for \$1,760. For the dealer nearest you, contact: Herschel-Adams, 1301 North 14th St., Indianola, Iowa 50125 (ph 800 247-2167 or 515 961-7481).

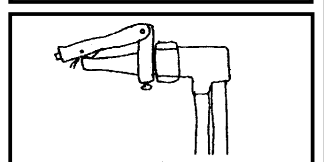
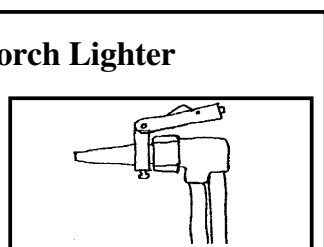
Ward Maude, Caputa, S. Dak.: "I reduced the four lower speeds on my 12-speed drill press by more than half, allowing me to use bigger drill bits and keeping me from burning up bits so fast.

"Instead of turning at about 150 rpm's,



I estimate it now runs at around 50 rpm's, so I can use bits up to 1 1/4-in. in dia.

"I made a short shaft and mounted it on



Dale Guinn, Safety Light, Inc., P.O. Box 344, Cleveland, Okla. 74020 (ph 918 358-2796).

Hands-Free Torch Lighter

Lighting a torch is as easy as flicking the end of it back and forth to strike the flint in "Safety Light" striker that clips onto the end of any torch.

It mounts permanently on the end of the torch. The striker flops back and forth when the end of the torch flicked, sparking a flint that lights the torch.

You never have to look for a hand held striker or match, and there's no danger of burning your hand during lighting.

"With one flick of your wrist, the torch is lit," says Dale Guinn, inventor and manufacturer.

Fits over medium and large size torch nozzles. Not small. Sells for \$19.95 plus \$2.00 shipping and handling.

Contact: FARM SHOW Followup,

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 farm 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.

Mark Newhall, Editor

top of the motor cone pulley and put a 1 1/2 to 2-in. V-pulley on top of the cone drive pulley. I mounted a hub on top of the cone pulley and mounted a 5 1/2 to 6-in. V-pulley on that to reduce center pulley speed. I used a longer belt for the speed reducer.

"I had to move the hood over about 1/2 in. in order to close it over the pulleys. We've used the drill press like this for several years and like it so much we don't even bother to change belts for switching back to the original, higher speeds anymore."

David Baade, Victoria, B.C.: An Arctic acoustic researcher with the Canadian government, David knows too well the ravages sub-zero weather wreaks on cordless power drills.

"At 40 degrees below zero, you can



hardly put in one screw before they need recharging. To make our cordless drills more reliable in cold weather, we convert them to run off remote car or truck batteries. We use Black & Decker drills, but this will work on any 12-volt drill. You cut apart the battery pack that comes with the drill, dispose of the batteries, and solder wires from one end of a 20-ft., low temperature-rated cable to the terminals. Then, pour the bottom of the battery pack full of epoxy to help hold the cable in place and reassemble the battery pack applying resin to the seams. Use alligator clips to connect the cable to a truck or car battery. You can work all day in even the coldest weather without running short on power and having to recharge your drill. The only expense is approximately \$1 per ft. for the cable."

Richard Gingerich, Augres, Mich.: "When replacing U-joints the needle bearings sometimes slip out of place or fall out. To get them back into place in the cup of the U-joint, I simply put a dab of wheel bear-

ing grease on a screwdriver, pick the needle bearings up one by one and apply the grease, then put the bearings back in place. The extra grease keeps the bearings in place as I put them back in. Works a lot faster than using a finger and can be done on any equipment with U-joints such as pto shafts and drive shafts on vehicles."

Dale Spoerl, Elizabeth, Ill.: "When the brakes on my International 560 tractor wore out I came up with a quick, inexpensive way to solve the problem - I made a stainless steel shim that takes up the wear in the brake bands. The brake drum has three bands that hold the discs in place and keep them centered. The bands are about 3/4 in. wide and stand about 1 1/2 in. outside the housing. The lower band was wearing especially bad. Whenever I put the brakes on they grabbed hard and sometimes wouldn't release unless I backed up.

"I made the shim by using a special tool to bend a .035 thick section of stainless steel into a U-shape, then clamped the shim onto the bottom band so that it can't move back and forth. I didn't weld the shim in place because I wasn't really sure that the idea would work. However, I installed the shims on the brakes of two different tractors and haven't had any problems with either of them."

Jack Griffith, Arlington, Texas: "I also



made ramp ends to fit 2 by 8's for loading equipment onto a pickup or flatbed. I used pieces of 6-in. wide, 1/4-in. thick steel plate. I heated the plates and bent them in the middle, then drilled three holes in one end."

Steve McDermott, Epworth, Iowa: Steve mounted caster wheels on a portable welding table so that he can easily roll it around the shop wherever it's needed. The frame and legs of the table are made from heavy angle iron, with X-braces on the ends made from strap iron. The top of the table