

over dips and terraces. It saves the mower because it's not being held under stress when going over rough terrain.

"Another idea that works well for me is using heavy tarps for partitions in my shed. They're much less expensive than building walls, and if I need extra room, I simply take a partition down."

Randy Catron, Jackson, Mo.: "Many Chevy engines have trouble with hot starts due to heat build-up in the starter solenoid. We ended the problem by adding a remote starter solenoid from a Ford. I just removed all the wires from the GM solenoid except the big battery wire and hook all wires to remote solenoid. Then I hooked a big battery wire from the GM solenoid to the output of the Ford solenoid. Then I added a jumper strap between the battery post and starter post on the GM solenoid, and added a cable from the battery to the input side of the Ford solenoid. After the conversion, there's no live hot wires going to solenoid except during cranking. It ended the no-rank-when-hot problem. Also, this setup makes it easier to add a remote starter button for tuneups."

George Martin, Merrimac, Wis.: "Here's an easy way to be more accurate when replacing roller chains. Have a couple of wire twist ties in your shirt pocket and when you decide where to break the chain, put a twist tie on the roller to disconnect. If you decide to apply the chain to sprockets to double check the length, the twist tie won't be in the way and you won't have to squint or use a magnifying glass to find the scratch or file mark. Works well for me."

Lyle Honess, Evansville, Ontario: "I came up with a handy way to pump calcium into and out of tractor tires. I have an 80-gal. water tank which is attached to a vacuum line in my milkhouse. I use it to suck the calcium out. After the repair is made to the tire or tube, I remove the vacuum line from the tank and hook up the compressor to the same valve and blow the calcium back into the tire. Works great and saves a lot of costly repair bills and time."

Glen Grice, Beechy, Sask.: "Changing sickle blades on swathers and mowers is a big job using a chisel and punch. I found a way to speed up the job by using a piece of 4-in. I-beam. I rest the main bar of the knife on it and then pound the blade sections with a sledge hammer. This cuts both rivets in the center. It's fast and easy."

Dale Scheiderer, Marysville, Ohio: "There are two nozzles on my John Blue 500-gal. sprayer that are not visible from the tractor seat because the tank's in the way. To solve the problem, I mounted two pickup mirrors on the overhead boom support so I can easily see if the nozzles are plugged or not."

Jim Bishop, East Prairie, Mo.: "When the disc openers on Deere 7000 planters wear down and need replacing, I transfer the worn discs to the fertilizer disc openers. When worn, the discs are just about the same size as new fertilizer discs and they fit right on."

Paul Umble, Jr., Knoxville, Iowa: "In a recent issue, Mel Kastella of White Fish, Mont., had a question about the reason for a chalk-like powder he found in the distributor cap on his Chevy S-10 pickup. This isn't chalk. It's oxidation of the aluminum electrodes in the cap. If he buys caps with brass electrodes he won't have the problem. I had the same trouble with my 1989 S-10. After I figured out the problem and changed caps, I've had no further problems

and get better gas mileage."

Marvin Kuhn, Victoria, Kan.: "My Deere dealer wanted \$800 for a new Cat. II quick coupler which I thought was too much, and I was unable to find a used one. I did find a used Cat. III quick coupler for \$350, but the dealer told me that Cat. III quick couplers won't fit on my Deere 4430 tractor because they were made for larger tractors. I bought the Cat. III quick coupler anyway and spent another \$25 to make pins and bushings to adapt it to my tractor. It works fine."

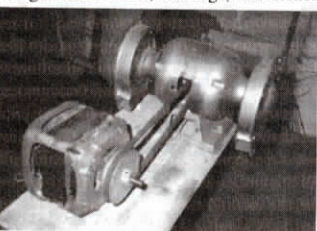
"The Cat. III hitch has 1 1/4-in. dia. holes, but the holes on my 4430's 3-pt. are only 1 in. in diameter. I had to make a new bushing and machine a shoulder onto it to keep the 1-in. dia. pin from sliding in too far."

"I made a special hitch on the quick coupler so that I can use the 4430 tractor to pull my Donahue trailer. I drop the hitch onto the ground in order to hook up the trailer, then put my grain drill on the trailer and lift the hitch to the desired height for transport. I can also mount a spear on the hitch and use it to haul round bales."

Dan Anderson, Deshler, Ohio: "I repowered two early 1970's Chevrolet pickups with Cummins diesel engines, which allows me to pull bigger loads using less fuel than the original gas engines. At this point, I'm convinced nothing beats the Cummins engine for power and fuel efficiency."

"My most recent project was repowering a '72 Chevrolet 3/4-ton, which originally had a 402 cu. in. gas engine, with a 155 hp 378 cu. in. Cummins V6 diesel. The V6 was the only Cummins engine that would fit in the truck, even though it had a big engine block. I had to make an adapter plate to fit between the flywheel housing and the transmission because there was nothing commercially available. I made the adapter out of 3/8-in. thick steel plate, 22 in. in dia. to fit the bell housing, and bolted it between the engine and transmission. I had to redrill and retap the 14-in. dia. Cummins flywheel so it would accept the Chevrolet's 12-in. dia. clutch pressure plate. Then, I had to cut the crossmember of the front axle roughly in half and weld it together so the oil pan would fit. I installed an auxiliary, Spicer 3-speed transmission which mounts on the frame between the main 5-speed transmission and rear differential. This way, I have direct drive and overdrive. I use overdrive when I'm not pulling a load. The Chevrolet had 77,000 miles on it when I installed the Cummins and it now has 170,000 miles on it. My brother has a 1973 3/4-ton Chevrolet pickup with a 402 cu. in. gas engine, and if he pulls a 10-ton load, he gets 3 or 4 mpg. If I pull a 10-ton load, I get 10 or 12 mpg. When empty, I can get 22 or 23 mpg. Including the Cummins, I've got only about \$1,000 invested in the project because the engine already had 10,000 hours on it from being used in an irrigation system."

Dan Krenzel, Cullman, Ala.: "I burned out the motor on a commercial grinder but the grinder's frame, bearings, and stones



Positive Cultivator Depth Control

Maintaining even depth control across the entire width of his big Ezee-On cultivator was a problem for Wayne Williams, Souris, Manitoba, until he came up with a relatively simple solution to solve the problem.

He says the idea may well work with other cultivators and other types of equipment.

The problem was that the cultivator - which Williams uses to "air seed" small grains - uses just one large master cylinder to lift and lower the cultivator. The master cylinder attaches to a main rocker shaft at the center of the machine, and the main shaft in turn operates the rocker shafts on the wings through a mechanical linkage.

The problem was that depth on the wings often did not match depth on the center section due to flexing and "play" that would develop in the rockershafts, particularly under heavy draft conditions.

So Williams simply built two small frames out of 4-in. sq. tubing to mount just behind the linkages on the rockershafts on either wing.

Each well-braced frame is fitted with a large 1 7/8-in. dia. bolt that screws into the brackets from behind.

"They're positioned so when the cultivator is lowered to working position, the bolt can be adjusted to butt up against the linkage arm of the rockershaft," notes Williams.

To change depth, he merely backs the



stop bolt off, establishes proper depth on a loose well-worked piece of ground, then butts the stop bolt up against the rockershaft arm and tightens a jam nut to hold it in place. "After that, there's no physical way that the working depth of the cultivator can vary from one end to the other. We've had very uniform emergence of our crops since adding this depth stop to the cultivator," says Williams.

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were still good. I repowered it with a 1/2-hp electric motor from a neighbor's junked washing machine. I mounted a 4-in. pulley on the motor and a 2-in. pulley on the grinder shaft after cutting a square hole in the grinder case. I mounted a toggle switch into the original switch holes. The motor turns about 3,500 rpm's, a bit slower than the original but has plenty of power for my shop needs. The motor is mounted on a hinged steel plate so that its weight keeps tension on the belt. It runs quite smooth."

Dean Quiett, Gettysburg, S. Dak.: "Where can I find an Allison electronic ignition kit like the one Dan Krenzel, of Cullman, Ala., installed in his 1971 Plymouth Duster (Vol. 19, No. 4)? He says he's had only two plug changes in the 120,000 miles since he installed the kit in 1976. That's the kind of performance I'd like to see in a couple of my old Ford trucks. Also, is there anything like it for tractors?"

Editor's note: Dan tells us he ordered the Allison electronic ignition kit from Warshauski's Auto Accessories and Parts (1900 South State, Chicago, Ill. 60608; ph 312-431-6003). It operates with a virtually maintenance-free "Detector Block" (LED and electric eye trigger system) which mounts in the distributor. The LED generates an infrared beam that passes through the openings in the control rotor and hits the electric eye. The signal penetrates oil, ice, water, dirt, etc., to ensure performance under all conditions. The kit works on all 1947-'86 4, 6 or 8-cyl. American and imported cars and light trucks except 1981-'86 vehicles with computers. (Dan feels it might also be suitable for some tractors.) The company claims it'll keep your engine timed for as long as you own your vehicle. Warshauski's still handles the kit, as does J.C. Whitney. Price is \$69.95 from Warshauski's; \$99.95 from J.C. Whitney.

As for tractors, in our last issue we featured an electronic ignition kit for 1939 to '58 tractors from Denny's Carb Shop (8620 N. Casstown-Fletcher Rd., Fletcher, Ohio 45326; ph 513-368-2304). The shop specializes in building carburetion and emission systems for old farm tractors. They calibrate distributors and carburetors specifically for farm work or tractor-pulling or exhibiting at shows. Kits are available for 4-cyl. engines with IH and Delco ignition systems as well as 6-cyl. engines with Delco ignition systems.

Victor Esparza, Granite Farmers Co-op, Granite, Okla.: "Our local handyman, Jim Ammons, rigged one of our big grain bins with a simple but effective continuous loading spout for wheat harvest this spring. Truckers from Texas, Louisiana and Missouri have looked him up to thank him for it. Ammons used a 40-ft. length of 8-in. dia. pipe welded into a hole he cut in the side of the bin. Inside the bin, there's a metal gate which is controlled from the outside by a jack handle and rod. When it's opened, wheat gravity flows to the bottom of the pipe. Another metal gate, also controlled by a jack handle and rod, attaches to the bottom of the pipe. The pitch of this gate can be raised and lowered with the handle so it deflects grain to different parts of the semi trailer. The upshot of Ammons' invention is that truckers never have to move their rigs to level loads when they're loading out. They love it."