

Gutschmidt's Shop Tips



Roger Gutschmidt, Gackle, N.D.: "My pickup tines on my baler get bent when they hit rocks or mole or gopher piles. I bend them straight with two simple tools."

"One is a 12-in. long piece of 1/2-in. by 1/2-in. key stock with a 5/16-in. hole drilled at one end. The other is a piece of pipe a little bigger than the tine."

"I slide the hole in the key stock over the bent tine and brace it against something solid. With the tine braced, I slide the pipe over it and bend it back in line with the others."

"It only takes a minute and beats replacing bent tines or having them break off."



"Debris gets into the bearings on the front auger shafts that connect to the PTO. Dust and debris often cause them to fail. I've found some simple ways to protect them."

"One method uses flanges inside solenoids on Delco starters. I've rebuilt hundreds of starters over the years in my on-farm repair business. I always cut the solenoid apart to save the copper. The flange is inside. Most

people wouldn't even know it was there."

"Lots of companies use shields to protect bearings. Looking at the flanges, I realized they would work as shields for the bearings on many auger shafts. If the shaft and bearing are apart, you can just slip one on. If not, and you don't want to take the shaft and bearing apart, use a cutting wheel to cut the flange in half. Slip it over the shaft and use a hose clamp to keep it in place."

"On bigger augers with larger shafts, you can make a shield using a piece of pipe that fits over the shaft and a washer with the correct outside diameter to cover the bearing seal and the shaft. Weld the washer to the pipe, then cut it in half lengthwise. Center it on the hole and clamp it to the shaft. It'll extend the life of your bearings."



"A plastic water bottle can save a lot of money when repairing a hydraulic cylinder. Seals for hydraulic cylinder barrels come in packs. You have to buy the pack, even if you only need one or two. Sliding the piston into the barrel can easily damage a seal, requiring you to buy another pack."

"I drink a lot of water when working in the shop, and one day it occurred to me that the quart-sized water bottle was the right size to fit over the piston. I cut off the top and bottom with scissors and made a vertical cut along the length of the bottle, turning the bottle into a sleeve."

"With the seals in place, I wrapped the plastic sleeve around the piston, lubricated it lightly and slid it into the barrel."

"Once the piston was past the seals, I slid the plastic sleeve out. Not only were the seals undamaged, but I was able to reuse the sleeve for the next hydraulic cylinder repair."



"I picked up four old leg vises with plans to mount them on semi-truck brake drums. I decided to clean them up first. It was a simple process, but it really made them look great."

"I took them apart to check for any damage. Then I sandblasted them and repainted the pieces. Once I sandblast and paint the brake drums, I'll decide if I want to sell them or not."

Homemade Lawn Clipping Blower

Jerry Reid puts his lawn clippings where he wants them, whether on the lawn or into the weeds. He can adjust the direction on the go or remove his adapter to blow the clippings vertically. That gives him a smooth spread and no windrowing, which is common with OEM mower output in heavy grass.

Reid's lawn-clipping blower was a by-product of his leaf collection system (Vol. 50, No. 3). He'd modified the mower's output by adding a tube that directed shredded leaves to the leaf cart. He also replaced the mower blades with shredding blades. However, when the leaf cart was removed and the mower blades were returned, the grass clippings were blown into the air.

"When the grass clippings covered the front porch, my wife was not pleased," recalls Reid. "At first, I put a bucket over the output tube, but then it had to be cleaned out periodically."

Reid's solution was an elbow he could use to direct the flow of lawn clippings. Although he acknowledges that he could have purchased a swivel elbow, he chose to make one from salvaged materials. He designed it to fit loosely over the output pipe. A piece of aluminum tubing salvaged from an old lawn chair was attached to the end of the elbow to serve as a handle.

"The elbow is loose enough that I can tilt it to direct the clippings toward the ground, like a regular discharge," says Reid. "I can also direct the clippings up and away from the edge of the lawn and into the woods at the side of the lawn."

The only downside is that he has to hold



"The elbow is loose enough that I can tilt it to direct the clippings toward the ground like a regular discharge," says Reid.

the handle with one hand while mowing. Reid notes that in fabricating the elbow with salvaged materials, he had to fill some gaps with putty or caulk.

"I also had to add a spring between the discharge tube and the elbow, or the air flow would blow it off," says Reid. "The air pressure is enough that I can use the mower like a leaf blower if needed. It's enough pressure that it hurts my hand if placed in the flow."

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Auger lift showing hydraulic cylinder and L-bracket on outside of cart.

Cylinder Add-On To Lift Discharge Auger

Lifting and lowering a discharge auger isn't too bad if it isn't full of grain, notes Roger Gutschmidt. However, it's still heavy enough even when it's empty, he adds.

"A 12-ft long, 8-in. discharge auger gets pretty heavy when it's full," he says. "Connected to a horizontal auger under the cart, it's not like you can empty it from the bottom. The OEM spring assist simply isn't enough."

Gutschmidt installs a solution on his own grain cart and on those of customers of his on-farm fabrication business. He mounts a hydraulic cylinder between the auger and a corner of the grain cart.

"I make a heavy-duty bracket to mount to

the cart," says Gutschmidt. "I use 1/2-in. steel plate for an L-bracket for the cylinder's base. It's bolted to a steel plate that extends around the corner of the cart."

Bolts on the bracket and the steel plate extend through the sides of the cart and through matching steel plates on the inside of the cart.

"The steel plates are stronger than individual washers would be and reinforce the corner of the cart," says Gutschmidt.

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