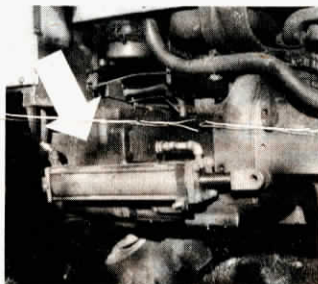


## Boost Tractor Hydraulics

A.G. McConnell, Danville, Ky., owns a 560 Farmall gas tractor with hydraulic pressure of about 1,800 psi. He also owns a new Hesston baler that requires at least 2,000 psi to operate. Although he had been assured by the Hesston dealer that the two machines would be compatible, the baler could not lift high enough to unload completed bales. The dealer got nervous because he thought he'd get the baler back and McConnell was anxious because his hay was ready to bale.



the piston rod end on the larger cylinder must be slightly larger than the volume of the two smaller baler cylinders. We hooked the feed hose on the baler to the piston rod end of the new cylinder and the return hose on the baler to the return on the tractor. The opposite end of the new cylinder hooks directly to the pressure side on the tractor. The piston rod end of the new cylinder had to be purged of air and some fluid added.

"The Hesston factory representative said we'd void our warranty if we put larger cylinders on the baler so we came up with an idea that I'd seen used on old compound steam engines. The idea is to use the large area of one piston to push against a smaller piston, increasing the per unit area pressure on the small piston. A friend, Dave Vogus, Terre Haute, Ind., helped me simplify the idea and make it work.

"We hooked the auxiliary cylinder up between the pressure side of the tractor hydraulics and the two smaller cylinders on the baler. The volume of

"Because the piston rod on the new cylinder rod was so large, it exerted extra pressure on the smaller baler cylinders. When all hoses were connected, the machine lifted well. It solved the problem for everyone."

## Air Compressor Made From Tractor Engine

Richard Jackson, Weldon, Iowa, made an air compressor out of a tractor engine, using about \$800 worth of old equipment and replacement parts. "It does everything an \$8,000 commercial compressor can do," he says.

Jackson made his compressor using a 2-cyl. engine from a John Deere B tractor, bought at a salvage yard for \$100. The air tank is a 100 lb. used propane tank. It's powered by a 7.5 hp electric motor valued at \$350.

He and his sons made the conversion in their farm shop. The biggest change was reverse grinding of the engine valves and replacement of the engine head with a steel plate. They had to buy a bleed-off valve and brass safety valve.

Jackson selected a Deere en-

gine because it has bigger pistons with a longer stroke and more air capacity. The engine runs at 650 rpm and can develop 250 psi of air pressure. It's equipped with a magnetic switch that turns on at 160 psi and off at 195 psi.

"You might be able to do this with a car engine, but it wouldn't be as good because the cylinders have less capacity," says Jackson. "You could also use a bigger air tank. It could easily be a portable unit but we mounted ours stationary in the shop where all the work is done. It does all the usual jobs of cleaning out tractor engines, combines, grain drills, etc., and it runs a 3/4-inch air wrench, air drill, air chisel, and paint sprayer."

**FARM  
SHOW**

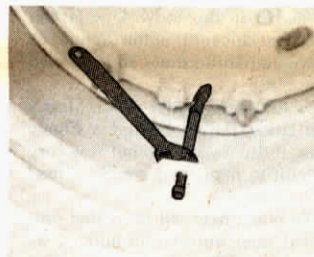
**"Made  
it  
Myself"**

Some of the best new products we hear about are "made it myself" innovations born in farmers' workshops. If you've got a new invention or favorite gadget you're proud of, we'd like to hear about it. Send along a photo or two, and a description of what it is and how it works. Is it being manufactured commercially? If so, where can interested farmers buy it? Are you looking for manufacturers, dealers or distributors? (Send to: FARM SHOW, Box 1029, Lakeville, MN 55044).

Harold M. Johnson, Editorial Director

## Handy Remover for Tractor Duals

"I've found an easy and safe way to remove band-type dual tires that are hard to separate. All you have to do is take a J-bolt, reverse the nut and clamp, put the hook of the bolt against the hub of the inner wheel near the rim and use it to push the dual off. This method is practically effortless, there's no risk of damaging the valve stem, and you never have to pick the dual up off the ground because you can have your hand on it as it



comes loose," says Wesley Lindstrom, Currie, Minn.

## New Way To Fertilize Corn

"Our corn plant seedlings used to be yellow the first couple days before their roots reached the fertilizer banded alongside it. Now, they're green as soon as they come up," says Frank Cawrse, Jr., Lebanon, Oreg., who drops fertilizer on the ground just ahead of the opener on his corn planter in addition to dual side-dress tubes that band fertilizer to the side and below the seed on both sides of the row.

Cawrse applies a total of about 500 lbs. of fertilizer per acre as he plants. He puts 100 lbs. down through the tube just ahead of the seed and 200 lbs. in the bands to either side. "The tube in front of the openers drops the fertilizer on top of the ground. The opener opens up

the furrow and, as the covering wheels cover the furrow back up, it mixes the fertilizer up, packing it with dirt back over the seed. As the seed germinates, it immediately receives the benefit of the fertilizer," says Cawrse.

The 400 lbs. of fertilizer on the sides is dropped in bands 2 in. to the side and 2 in. below the seed so that the plant roots begin to reach it when they're about 6 in. tall.

To put the forward tube on his planter unit, Cawrse simply poked a hole in the fertilizer tube right where it splits into the two side-dress tubes. He calibrated it to 100 lbs. by using tubes off a dry fertilizer spreader.