

Gutschmidt notes that pipe is often superior to solid shaft because it'll give a little under extreme pressure, whereas the shaft may snap.



Shop-Built Loader Pallet Forks

Roger Gutschmidt built his first set of tractor loader pallet forks more than 30 years ago. Soon after, he crafted similar sets for his brother and several customers. The frames were fitted with 4-in. by 1 1/2-in. forks. They were tough, but not tough enough for Gutschmidt. A decade later, he made a replacement for himself.

"I found tougher forks that were 4 in. wide by 2 in. thick," says Gutschmidt. "My brother and the others never replaced theirs. Every once in a while, they bend a fork line and bring it back to be straightened. If you get pallet forks, they have to be strong. You never know what you'll try to lift."

The forks themselves weren't the only strong component. The mast posts were made from 6 by 2-in., 3/8-in. channel iron. At the bottom of the posts, Gutschmidt used 4 by 6-in. angle iron for the kick plate that the forks rest against.

"That bottom plate has to be really strong as it takes the force of the forks and ties the mast together," he says. "The upper horizontal is also strong. It's 2 by 4-in., 1/4-in. thick rectangular steel tubing. The pipe the forks pivot on is 3 1/2-in., 1/2-in. thick pipe."

Gutschmidt notes that pipe is often superior to solid shaft because it'll give a little under extreme pressure, whereas the shaft may snap.

The pipe rides in sockets at either end and in the center of the 2 by 4-in. tubing. He gusseted the horizontal to the verticals with angled pieces of the same rectangular tubing.

He further reinforced the mast by welding a 4-in. wide piece of 1-in. flat steel to the backs of both horizontals, centered on them. A 1-in.

steel piece welded perpendicularly to the flat steel adds extra strength.

Gutschmidt notes that the mast uprights tilt slightly backward just above the upper horizontal, making them perpendicular to the angle of the objects being lifted. At the top of each upright is a horseshoe-shaped piece of steel rod.

"I heated them red-hot with a torch, welded one end, bent the other over, and welded it," says Gutschmidt. "It's easy to do, and they're handy for securing tarp straps and such."

As a final touch, he painted the pipe with Slip Plate and attached short chains to the forks where they rest against the mast.

"Slip Plate lets the forks slide easily, and it doesn't wear off," says Gutschmidt. "The chains prevent the forks from tipping too far forward, which can be a problem when trying to slip away from a pallet or odd-shaped loads."

While Gutschmidt built the frames for the front-end loader pallet forks back then, he wouldn't recommend others do the same today.

"It was complicated to weld all the tubing square and straight to match the loader," recalls Gutschmidt. "My brother is an engineer, and I don't know if I'd have built them as well without his help. Today, there are lots of sources for pallet forks for tractor loaders and skid steers. Just make sure the one you buy is strong enough for what you expect to lift."

Contact: FARM SHOW Followup, Roger Gutschmidt, Gutschmidt Manufacturing, 6651 Hwy. 56, Gackle, N.D. 58442 (ph 701-698-2310; shopdoc@drtel.net).

Haubrich created tool storage on the outside of the combine so you can easily see and find tools.



Open-Air Toolbox Makes Finding Tools Easy

Retired farmer Brian Haubrich enjoyed planning and developing new ideas while he was still actively farming. His ideas have been featured in FARM SHOW several times over the years, and his shop tool tree was featured in Vol. 49, No. 5.

"I hate toolboxes. When you want a small tool, you have to dig through the chaff to find it. I created tool storage on the outside of

the combine so you can see and find the tool when you need it," says Haubrich.

"There's also a guard rack for the header knife guards. I've given some of these racks to others, and everyone really likes them," says Haubrich.

Contact: FARM SHOW Followup, Brian Haubrich, Glenbain, Sask., Canada S0N 0X0 (ph 306-264-3809).

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 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 or email us at: editor@farmshow.com.

Scott Geyer, Editor & Publisher



Don Wooley, Lawton, Okla.: "Lifting heavy equipment (generators, pumps, mowers, etc.) is always difficult or impossible. I mounted a 2 by 4 to a heavy crossbeam in the structure of the attic and extended it through the ceiling into the workshop. I mounted an unused boat trailer winch to it. Now, I lift heavy items onto a small rolling table and move it to the main workbench. Works very well."



"My 4-car attached garage has never seen a car as it's my workshop. I installed my tall 60-gal. air compressor in the attic above. I dropped the drain through the ceiling into a reservoir with the drain at the bottom. This way, it doesn't get ignored as most drains do, allowing the compressor tank to rust out. I can get to the drain easily, and I'm reminded of it every time I see it. I also brought the air feed through the ceiling with an iron pipe and a valve before it continues to the outlets around the shop. That way, I won't blow a hose when I'm gone and burn out the compressor motor. I shut it off every time I end work. This system is easy and works great."

Mike Munson, Preston, Idaho: "The newer Honda self-propelled small engines don't have oil drain plugs for changing the oil. You need to lay the mower on its side to drain the oil through the dipstick tube. However, I made a suction device to remove the used oil. It's a 5-gal. bucket with

a sealed lid. I cut a hole large enough to fit a 3-in. vacuum hose and another hole just big enough for a flexible, clear hose. The larger hose is attached to my shop vac. The smaller hose, with a piece of brake line, goes into the filler neck."



Dwight Veldhouse, Norcross, Minn.: "Ever try to keep a belt on but have it fall off before you can tighten it? I used a magnet tray on the pulley to hold it in place while I tightened it. Any magnet would work."

Tommy Sanson II, Red Wing, Minn.: "I had a 3-pt. on a Case tractor not working because it was stuck. I put a 20K load on the hitch, and it dropped."

"If an oil filter is stuck, use a #3 screwdriver to help remove the filter."



Dan Gray, Dewberry, Alberta: "I made a rugged, simple HD oil filter wrench. It's made from an old cogged timing belt, 1-in. slotted square steel tubing, a 13/16-in. connector nut, and a locking cotter pin. The slotted tubing is only wide enough to allow the folded belt to slide in when the cogs are engaged. The wrench is adjustable, locks at several diameters, and is very inexpensive to build."