

says Doug Lucas, Central City, Iowa.

"I've had good luck with parts from Shoup Manufacturing, Kankakee, Ill. (ph 800 627-6137). Cost is usually 10 to 20 percent less and most parts are satisfactory, although I feel some are slightly lower in quality than factory replacements. I'm especially pleased with a rotary hoe hydraulic fold kit I bought from them. It looks and works like a factory job," says John Voigt, Avon, S. Dak.

Mathew Outland, Lakeview, Ore., found a way to improve his 1974 Deere 7020 4-WD tractor. "I always had trouble hooking equipment up to the hydraulics under pressure. I bought after-market valves with individual shut-offs that fit the most common hose ends on the market and got rid of all Deere hose ends. No more problem."

"We needed a power steering part on the steering mechanism of our Ford 9600 tractor. New price was approximately \$450.

We bought a used one from a Case 970 from a salvage yard for \$25. Works perfect," says James Sheeler, Vale, S. Dak. "On our IH 315 roller harrow, it was nearly impossible to keep end plates and bearings in the axle holding the rollers. We replaced the axle with one shaft 16 ft. long made out of heavy-walled pipe with Kewanee sealed bearings on each end. It solved the problem."

"I wanted to put an electric fan above the knotters on our New Holland 500 twine baler but, when I priced the fan assembly that comes on the new 515 models, I decided against it because of the \$200 price tag. My solution was to use an electric radiator fan from a wrecked import car. For \$20 I got a fan that does a great job keeping the knotters clean. I wired it up to a switch so it runs only when the machine is in gear," says Robert Ingram, McArthur, Calif.

Tool Shed Built Inside Farm Shop

By C.F. Marley

Len Corzine, Assumption, Ill., built this square "tool shed" inside his farm shop in order to organize his shop tools into a small, compact area.

Tools hang on all four sides of the small wooden structure and there's a walk-in door so he can store more equipment inside.

One innovation he included was hanging a roll of baling wire inside the shed and running the end of the wire out through the wall so wire is always handy when needed.

Contact: FARM SHOW Followup, Len Corzine, RR, Assumption, Ill. 62510 (ph 217 226-4303).



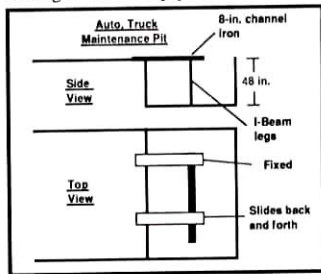
Time-Saving Shop Modifications & Maintenance Shortcuts

"One shortcut I've found is that heating paints to 75 to 125 degrees helps make mixing easier and also makes paint spread more evenly when applied," says Bill Short, Hamilton, Mo.

"We make large rolling work tables out of wooden cable or wire spools by putting rollers under them," says John Kimpan, Oswego, Ill.

"Our welding bench is a 4 by 6-ft. plate of 1-in. thick steel with 4-in. H-beams for legs. We welded a set of steel caster wheels onto the legs. It normally sits in a corner where we weld but if we need more room, we roll it out into the middle of the shop. Works great," says Phil Short, Winthrop, Iowa. "The biggest maintenance shortcut we've found is to change oil and lube all equipment on a strict schedule - every 100 hrs. for oil and daily or more often for lube. This will save more repairs than anything else you can do. Oil and grease are cheap."

"I put a maintenance pit in my shop by making a 48-in. deep pit in the floor and



mounting an I-beam on posts with 8-in. channel iron used for drive-over ramps. Much easier than using jacks for changing oil, brakes, exhaust system, etc.," says Edwin L. Koestler, Askov, Minn. "When removing worn-out bearings on a shaft, I use a portable grinder to grind through the inner race from each side, just enough to free it up, and then I use emery cloth to polish the rust off the shaft so the new bearing will slip on."

"We recently started a simple maintenance procedure for our tractors, trucks and pickups. We list all repairs, service, etc., on a recipe card and file them in a recipe card box. We plan to put all maintenance information on a computer in the near future for a more permanent record," says Marlin Miller, Manfred, N.Dak. "We built an in-shop parts room with parts bins for most all the equipment we own. Before this, the parts were all bunched up in one area and you had to hunt through everything to find the part you needed. Now we just go to the appropriate bin and pull out what we need."

David Nienhuis, Lawton, N.Dak., came

up with this shortcut for changing oil on his Deere 4440 tractor. "Whenever I pulled the plug to drain the oil filter, it would make a mess down the side of the engine. To correct this, I took a piece of 1/4-in. hydraulic hose 20 in. long and had hydraulic ends put on it. One end I screwed into the filter housing and the other end I threaded down through the tractor frame so it hangs alongside the oil pan. I then capped the end of the hose. When I pull the plug on the oil pan, I just take the cap off the hose and drain the filter into the same bucket the oil pan drains into."

"One shortcut I discovered was putting a cable winch around tubeless truck and tractor tires to seat beads on the rims so you can inflate them. Works great," says Bryan Ravenscroft, Tuttle, Idaho.

"I made a heat chamber out of two tractor fuel tanks welded together to mount over the wood stove that heats my shop. There are baffles inside that capture heat that would otherwise go up the chimney. Lets me heat my 35 by 65-ft. shop all day with three chunks of wood and 1/2-gal. of waste oil," says William Calhoun, Griffithville, Ark.

"I bought a 110-volt hour meter and wired it into my stationary air compressor. The hour meter only runs when the air compressor is pumping air so I can more accurately keep track of when to change oil in the pump. It should prolong the life of the compressor," says Doug Lucas, Central City, Iowa.

Luveme Koziolk, Wells, Minn., heats his shop with solar heat. "There are collectors on the south wall of the shop. Air is channeled under the floor and exits on the opposite wall. Keeps the floor warm, providing a comfortable work atmosphere. I've used the system for 10 years. Works great whenever the sun shines. One time-saving shop product is Nealey Co. tire plugs for fixing flats in tubeless tires. Makes tire repair quick and there's no need to take the wheel off the machine. (Nealey Co., 8767 Sunny Hill Dr., Des Moines, Iowa 50325)."

"When we poured the floor in our shop, I installed two combination hold-down and floor drain units. I made them out of 6-in. long pieces of heavy-walled 4 by 4-in. sq. tubing with a 1-in. dia. rod running through them from corner to corner (the rod extends into the concrete on either side). They're open on the bottom so when we hose out the shop, water drains out into the gravel under the slab. If we have something bent, we can chain it down to the floor and pull on it with our overhead hoist," says Robert Ingram, McArthur, California. "One shortcut that

works good is storing oil cans and funnels inside a 5-gal. plastic bucket with the lid on (take the lock tabs and O-ring off the lid so it goes on and off easily). That way you don't have to wipe them off each time you use them. A handy repair method we discovered is using wear bars from grader blades to replace worn points on V-chisel plows and Howard Para-Plows. We have sandy soil so points wear out fast and the edges of grader blades last as long or longer than factory replacement parts at little or no cost other than your labor. I cut them up with a torch and either bolt or weld them to the old tips. Grader operators are usually happy to get rid of old blades."

"It's important to keep a maintenance log on each piece of equipment listing dates, hours/mileage, part repaired, etc. This helps you determine if you've got normal wear or if there are other factors involved, such as a bent shaft causing a bearing to wear prematurely," says George Grubb, Purlima, Tex.

"I bought an old 1966 Dodge fuel delivery truck which I keep in the fields with tractors and combine all the time," says Renell Weeks, Swan Valley, Idaho.

"I installed light bulbs in an old refrigerator to keep tire patches, paint sealers, welding rods, etc., warm and dry. I do the same thing in an old chest freezer to keep leftover chemicals from freezing. One maintenance shortcut I came up with is to install grease zerks in wagon wheel bearing caps so they can be greased without pulling the wheels," says Wayne Jacobsen, Fremont, Neb.

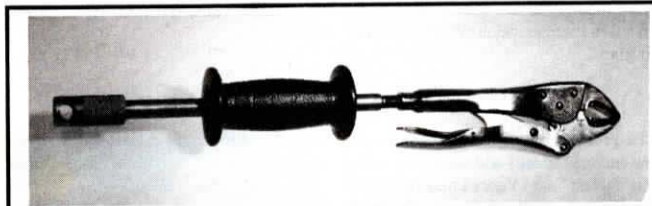
"The oil fill pipe on my IH 1440 combine sits at an angle so I made a filler extension out of two 3-in. pieces of 1-in. dia. PVC pipe and a 45 degree elbow. When I insert the extension in the filler pipe, it stands straight up," says Norman Kelm, Westbrook, Minn.

"I have a chalkboard in my shop for keeping track of maintenance work. Makes it much more convenient to keep records rather than trying to remember to write it all down later with a pen and paper when your hands are clean. We also use the chalkboard to jot down needed parts," says Ken Alexander, Unity, Okla.

"I mounted my Air Products AC-DC welder on an old grocery cart. The welder weighs about 300 lbs. and now I can roll it around with ease," says Mark Alberts, Gothenberg, Neb. "One of my best maintenance ideas is to go through our Max-Emerge planters right after we're done planting. That way I remember what's needed and don't put it off until winter."

"I soak all my shovel, hoe, pitch fork, and garden tool handles in linseed oil once a year by upending them into a 2-in. pipe with a cap on one end and an overflow tube 4 in. from the top. After treatment, they will not absorb water and split the way handles usually do," says Mathew Outland, Lakeview, Ore.

"We have a house-moving jack in our shop at all times. It eliminates the use of blocks, jack stands, and all problems with standard hydraulic jacks like leaking fluid, etc.," says James Sheeler, Vale, S. Dak.



Slide Grip For Vise Grips

You won't believe all the jobs you can do with this screw-in "slide grip" for vise grips that turns any full-size pair of locking pliers into a first-of-its-kind pulling tool.

Farmer-inventor Monte Kammerzell says he keeps finding new uses for the tool. "I got the idea when my house flooded and we couldn't pull the nails in the decking with a hammer or bar because of swelling in the wood. I made up a slide grip and it pulled every one."

The slide grip handle slides back and

forth giving it a hammer-like action for pulling. Some uses include: pulling cotter pins and bearings; pulling dents on auto bodies; pulling slide gates open on grain bins; pulling nails without damaging finished wood; pulling staples from fence-posts; and many other mechanical, electrical and plumbing jobs.

Sells for \$39.95 (plus \$5 S&H). Includes a pair of vise grip pliers.

Contact: FARM SHOW Followup, Kamco International, Rt. 3, Box 25, Colfax, Wash. 99111 (ph 509 397-4922).