

"A 3-in. dia. electric squirrel cage fan blows air into the fire box. I made a metal flapper for the inlet of the squirrel cage to control air flow. The forge mounts on 38-in. tall legs and there's a door on the bottom to dump the ash.

"I can heat 3/4-in. thick plate steel to red hot in 10 to 15 minutes much more cheaply than I could using an acetylene torch. The only improvement I'd make is to use a bigger squirrel cage, one with a 6 or 8-in. fan, for better efficiency."

Richard Day, Neligh, Neb.: "You can start cold tractors and combines with what I call 'jumper hoses' that circulate hot coolant from a warmed-up engine to the cold one. You need two lengths of heater hose. Just cut the heater hose on the 'starter' vehicle, such as your pickup, and install a 2-way quick-tach hydraulic coupler. When you need to start a machine, run the hose to the heater hose on the water pump on the cold vehicle. Simply repeat the process with the other length of hose, running one end from the heater on the cold vehicle to the heater on the starter vehicle. One note: be sure heaters in both vehicles are turned on. By the time you've had a cup of coffee, warm water has been circulated through the cold engine so it pops right over. Works great. I wish I'd known about it 20 years ago."

Melvin Carlson, Buffalo, Kan.: Melvin's come up with a slick way to convert old AC welders, ranging in size from 0 to 500 amps, to DC to reduce splatter and



get more penetration with a smoother weld.

"I've converted my three Lincoln TM 300's as well as a couple of my neighbors' Lincoln 225's," he says. "I make a box out of 3/8-in. thick plate steel that attaches to the bottom of the welder and houses the new components. It has caster wheels so you can roll the welder around."

"I install four 500 amp diodes (smaller ones would probably work, too) to make a bridge diode. It mounts on an aluminum heat sink to keep it cool. I insulate the heat sink from the welder's frame with insulating board or rubber. I insert a current stabilizer on the negative line to smooth out the flow of current."

"I make conversion kits for \$225 FOB."

Contact: Melvin Carlson, Mortgage Hill Farm, Box 66, Buffalo, Kan. 66717 (ph 316 537-6590)."

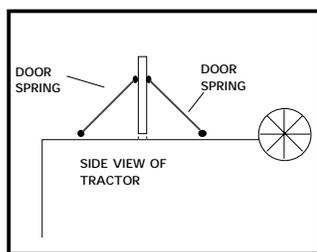
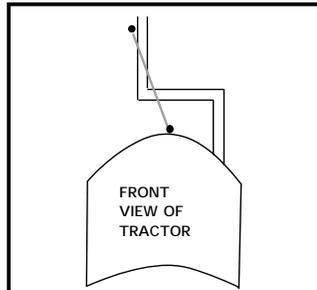
Dennis Kees, Harlan, Ind.: "The trouble with the 3-in. twisted spikes on our 9-shank Glencoe soil saver was that in bringing up soil and residue in hard ground they tripped a lot, eventually wearing them down at the neck and breaking them off. We solved the problem by replacing them with 10-in. sweeps and 2-in. wide, 1 1/2-in. thick straight chisel plow shanks, which simply bolt with a 3-in. bolt right through the sweep onto the shank. They work great for holding sweeps down when breaking up hard pan and they wear at least twice as long. Commercial kits are available to do

much the same thing, but they're extremely difficult to install and cost about \$40 per shank. The straight spikes we used cost \$13 apiece; the sweeps \$10 apiece."

Jack Gardiner, Ilderton, Ontario: "The moldboards on my International 710 plow had holes worn through them near the center next to the shins. I found a way to keep the moldboards from wearing so that they last a lot longer - whenever I replace the points and shins I reuse the old shins. Since the old shins are shaped the same as the moldboards everything looks custom made. I remove the bottom bolt from the moldboard near the shin. I use a longer bolt to fasten the old shin through the bottom hole onto the moldboard. Then I put a bead of weld on top of the old shin and moldboard. The old shin is sort of layered over the edge of the new shin (about 1/4 in.) and over the moldboard. This adds a lot of metal right where most of the wear occurs on my moldboard. Now my moldboards seem to last forever."

Alan Linda, Rt. 3, Box 83, New York Mills, Minn. 56567.: "Does anyone out there know how to stop an IH 'Super' series tractor? I've got a super MTA but I don't think it matters which Super model it is. They won't stop. I even tried installing new brake assemblies. Those were the only brakes I've ever seen wear out in the shed. If anyone knows how to fix them right, please write."

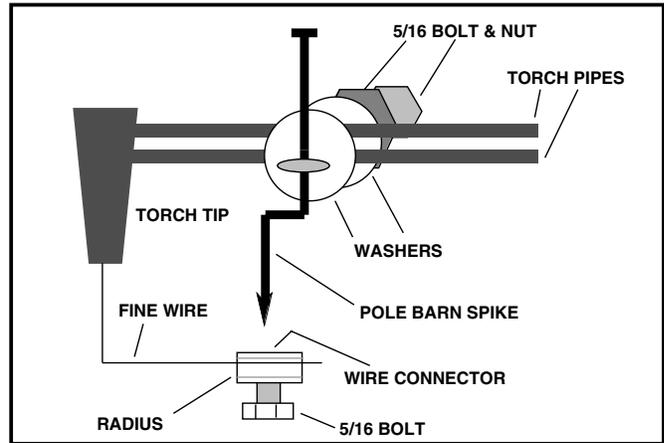
Leland Jordal, Mexico, New York: "I made this spring-loaded, fold-down exhaust pipe for my tractor. Now, if the pipe hits a tree branch or other low-lying obstacle, I



don't end up with a broken or cracked manifold. It consists of two L-shaped pipes. One comes up out of the tractor hood from the manifold. The bottom of the 'L' on the top pipe fits loosely over the lower pipe, so it pivots back and forth in line with direction of travel. I put a door spring in front and back of the pipe, so if I hit anything, the pipe springs right back up."

Harold Brewer, Lebanon, Tenn.: "A lot of guys say they have trouble starting small engines. I use WD-40 and I never have a problem. It fires quickly."

Thomas Dale Martin, Omaha, Neb.: "The traction drive pulley on our Gleaner K combine kept wearing out bearings. Finally, we solved the problem by having a machine shop turn the outer hub for the outboard bearing, which we anchored around the front axle with plate iron. Provides extra support for shaft bearings."



Eugene G. Johnson, Rapid River, Mich.:

"Making large holes in thick steel often requires the use of large, expensive power tools. A simple, inexpensive way to cut holes is to make a compass attachment for your cutting torch. Sharpen the end of a 7-in. pole barn spike to a smooth point and make a bend in the spike (as shown). Then flatten the end of a 5/16-in. bolt and drill a hole in it the size of the spike. Slide this through the space between the torch pipes, placing a washer on either side of the pipes and tightening the nut when you have the spike adjusted to the radius you want."

"To aid in adjusting the radius, find a medium size electrical wire connector and substitute a short 5/16-in. fine thread bolt for the standard set screw. Use a short piece of wire that fits the oxygen hole in the cutting tip. Bend a short 90 degree angle in the wire and slide the wire connector to get the exact radius. You can drill a small hole at the edge of the hole to start the cut. Center-punch the hole and place the point of the spike in it. I do the work on top of a small oil barrel with an old tire rim on top so that I can walk 360 degrees around the piece I'm cutting while holding the torch."



Arne Eissner, Souris, Manitoba: "When one of the tie rod balls on the adjustable front axle on my Deere 6030 tractor wore out, I discovered that replacing it would cost me about \$320. I was able to save a lot of money by adapting a tie rod ball that was designed for my Deere 5010 tractor. I already had the part on hand as a spare and paid \$108 for it."

"I used a grinder to grind off the weld

between the tie rod ball and threaded steel shaft, then unscrewed the old tie rod ball from the threaded shaft and screwed in the new one. Then I welded the two parts together for safety. The job took only about 30 minutes. The reason it costs so much to replace tie rod balls on the 6030 is that the tie rod ball and threaded shaft are built and sold as one piece, whereas units designed for the 5010 are built and sold separately."

Phillip Myers, Nathrop, Colo.: "I've discovered that valve stems from old tubeless tires make good handles for small files, such as for sharpening chain saws."

Jim & Roger Koppes, Medina, Ohio: "Here's a time-saving revision we've made to strap ratchets on our flatbed bale-hauling trailers. By welding a 1/8-in. piece of



flat stock onto the end of the ratchet and cutting a 3/8-in. square hole in the center, I

can insert a 3/8-in. drive on a cordless drill to rewind the 27-ft. strap in just seconds. A handy timesaver."

Travis Cooper, Ill.: He made a handy shop stool that rolls on four gauge wheels



off a Deere cultivator. The stool stands about 18 in. high. The frame is made from various pieces of scrap metal. Cooper likes

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