

was \$15 and cost of the 'face flips' was \$20. The idea has worked great on three or four farms. Kills weeds in a couple days. I would suggest using this with a front mounted tool such as loader. That way you're not running weeds down with the back tires of the tractor before they're treated."

Robert B. McKeehan, Williamsburg, Ky.: Robert recently published a 25-page booklet that describes in detail how to build and operate a farmer-size lumber kiln. He says the growth in popularity of new farm-size band saw mills means there are a lot of farmers out there with lumber to dry.



"Although commercial kiln drying can be very complicated, my approach cuts through all the jargon and technicalities and gets down to the nuts and bolts of the drying process. It covers both dehumidification and ventilation techniques. All materials and equipment can be purchased locally. In many cases, scrap materials the woodworker has lying around can be incorporated in the design. All work can be performed by the average do-it-yourselfer and the kiln can be as small or as large as you need. It's an excellent approach for beginners and professionals alike. It also contains proven drying schedules for most popular woods, techniques for avoiding and preventing drying defects, a list of equipment suppliers and related publications."

Sells for \$12.50 including S&H.
Contact: FARM SHOW Followup, Robert B. McKeehan, P.O. Box 103, Williamsburg, Ky. 40769 (ph 606 528-6707).

Roger H. Bean, Haydenville, Maine: "To keep the ends of steel cable from unraveling when you cut with a bolt cutter or other tool, I use my 225-amp Lincoln welder to cut through cable. I turn the welder up as high as it'll go and use a worn out welding rod to cut the cable. This melts all the strands in the cable ends together and prevents unraveling. I've cut steel cable this way for as long as I remember and it really works slick."

Roger W. Wessels, Fairbury, Ill.: "I haven't used the original drawbar on my Deere 4640 since I installed this heavy-duty



attachment on the 3-pt. hitch. It allows me to level my 24-ft. field cultivator, disc and other implements on the go, which is a time and back saver.

"I used a length of railroad rail 10 in. wider than the original 3-pt. hitch for the main bracket. It's welded to 12 square steel plates approximately 5 in. sq., six plates per side. Four plates are slightly shorter and weld to a round bar and rail. It secures the drawbar hitch attachment to the 3 pt.

"A stair-stepped double vertical member serves as the hitch connection. A couple angle braces complete the attachment.

"Cost was minimal. The scrap iron I used came out of an old printing press."

Marvin Heins, Houston, Ohio: "After years of constantly replacing worn-out rubber bushings on my New Holland Haybine's sickle head, I solved the problem by replacing the bushing with a ball bearing.

"It's a simple solution but it solved the problem. The New Holland Haybine is a good machine overall but it has a troublesome sickle drive system. Our machine is 12 years old, but newer models have the same problem. We were never able to cut more than 100 acres before the bushing wore out and we had to replace it. Once we were able to cut only 5 acres before the bushing wore out.

"The bushing mounts inside a steel ring welded to one end of the sickle. The sickle drive arm uses a bolt to drive the bushing. The problem is that the arm has too much movement which causes the bushing to wear out prematurely.

"I replaced the bushing with a 1/2-in. dia. bore bearing equipped with an extended inner race on both ends. I cut off the ring where it joins the back of the sickle and welded on a new ring, using the ring's original insert that goes into the flange head assembly but discarding the locking collar. After the weld had cooled I pressed the bushing out, then drilled three holes in the ring to match those in the bearing flange. I inserted three 5/16-in. dia. cap screws through the holes, put the washers on, and applied Lock Tite thread locking compound to secure the bearing. I then bolted the ring to the arm.

"I used a regreasable bearing because I happened to have it on hand. However, I see no reason why a conventional sealed bearing wouldn't work. We replaced the bushing three years ago and have cut more than 600 acres since then without an ounce of trouble."

Guy Klosterman, Wahpeton, N. Dak.: "When the muffler on my Case-IH 2670 trac-



tor fell off, I used 3/8-in. thick steel plate to build a new 'unbreakable' mounting bracket.

"The muffler on this tractor is notorious for falling off because the mounting hardware

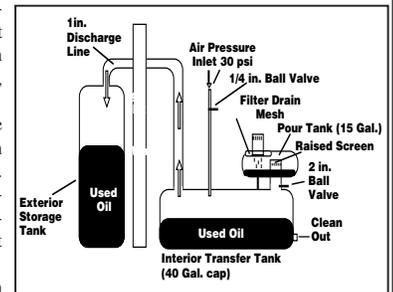
Waste Oil Storage System

With six tractors, five trucks, a combine, pickups and a van, there are a lot of scheduled oil changes at Ron Karlowsky's farm near Brunkild, Manitoba.

Karlowsky used to funnel his waste oil into regular 55-gal. drums which were difficult to handle for disposal. Now, he uses a low-cost shop-built storage and transfer system to hold oil until a nearby implement dealer picks it up to burn in waste oil heater.

Three 40-gal. water heater tanks with burned out elements form the heart of the system. One tank, split in half lengthwise and covered with steel mesh holds filters and funnels, is a pour tank along one side of Karlowsky's 4,000 sq. ft. shop. It mounts above a second tank that serves as a transfer tank. It's fitted with a clean out valve and air pressure inlet. A third tank which is used for storage is located outside the shop.

The system plumbs together with 2-in. dia. steel pipe.



"Welding the pipe and tanks together so the fittings didn't leak was the hardest part of the project," notes Karlowsky.

An air compressor run at a low 30 psi's is all that's needed to transfer oil from the inside tank to the tank outside.

The system has a combined capacity of 100 gals. Karlowsky empties it out twice a year.

Out-of-pocket expense was about \$100 (Canadian).

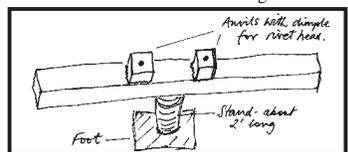
Contact: FARM SHOW Followup, Ronald E. Karlowsky, Box 9, Brunkild, Manitoba, Canada ROG OEO (ph 204 736-2630).

for it is poorly designed. It costs about \$500 to replace the entire muffler system with a heavier duty one. I've known farmers who have welded steel fence posts to the muffler to the cab to solve the problem. I spent only about \$10 on parts to make my bracket.

"I made a new heavy duty steel bracket by bending a 3/8-in. steel plate into an L shape and welding it to another steel plate that was already on the bottom of the muffler. A steel strap runs diagonally from one side of the new plate down to the original factory mounted bracket. A bolt runs through the bottom of the strap and through the factory-mount bracket to the other side of the new bracket."

Michael Foster, Ipswich, Suffolk, U.K.:

Foster's shop-built jig allows him to replace sickle sections without removing the entire



sickle bar. "It's saved us a great deal of time and frustration, particularly in a difficult harvest when sickle sections are easily damaged," he says.

The tool consists of a 2-ft. high stand with a wide base that keeps it from sinking into the ground when it's used to brace the sickle.



A 9-in. long sq. bar welds to the top of the stand. It's fitted with two short lengths of square bar that serve as "anvils". They are positioned to match up with the rivet spacing on the sickle sections. At the top of each "anvil", a dimple is drilled for the rivet head to fit into.

You first grind off old rivets, remove the broken blade and then replace the blade and re-rivet. Lower the header until the blade rests on the jig and flatten the rivets against the little anvils. Be careful not to lower the header too much or the weight will damage the blade, he notes.

Working With Diesels In Ford Pickups

"In recent issues, I've noticed comments by farmers disappointed with the performance of the 7.3 liter diesel engines in their Ford pickups. As a diesel mechanic who works on these engines every day, I'd like to offer some advice on how to extend the service life of these engines. If you follow these suggestions, it's quite possible to get as much as 400,000 miles out of them with only minor maintenance," says Doug McKenzie, Stony Plain, Alberta.

"The 7.3 diesel is actually a gas engine which International redesigned. Other companies have done that, too (for example, the Cat 3208). It's just something you should be aware of in looking for a way to extend the service life.

"These engines should not be idled for more than 3 minutes due to low oil supply at the top of the engine that can cause valve

and ring problems. The solution is to remove the electric solenoid on the side of the injection pump which has a 1/2-in. stroke, and install a new one with a 3/4-in. stroke. Then install a dash-mounted toggle switch which you can then use to bump up idle speed to 1,350 rpm's.

"Another common problem is coolant leaking into the oil. This results from tiny pinholes caused by erosion to the cylinder walls. The solution is to add an anti-corrosion additive to the radiator and test coolant on a regular basis. Never use just water.

"These engines are also prone to cracking heads. The solution is to idle the engines for two minutes before shut down. Also, you should never lug these engines. They achieve maximum torque at the top of the rpm scale and should never be run below 2,000 rpm when pulling a load.

"These engines do not stand up well to turbo charging.

"One common misunderstanding about this engine is that very rarely do the injectors used on this engine cause problems. Thousands of injectors are changed for no other reason than that the shop working on them didn't understand that these injectors dump fuel, rather than spray.

"Oil pan heaters and coolant heaters are a must in cold weather.

"A certain amount of oil consumption is normal in these engines. A quart per 1,000 miles is quite acceptable. Oil filters and air filters must be serviced regularly and a better-than-average quality filter must be used."

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