## Money-Saving Repairs & Maintenance Shortcuts



Richard Erickson, Farwell, Mich.: "Here's a photo of several equipment holders that my grandson, Ryan Erickson of Tustin, Mich., built to hold small 3-pt. mounted implements. The carriers make hooking up equipment a much easier job. The upright posts measure 4 by 6 in., with 1-in. dia. well pipe cross bars."

Frank Miller, Beecher City, Ill.: After operating a 25-man shop for 28 years, Frank



retired and moved to the country. He wanted to make certain he could take his standby power wherever he wanted, so he bought a Harbor Freight trailer and mounted a gas welder and a generator on it. The generator is set up for either 110 or 220 volts and has an output of 10,000 watts. With 110 volts it has an output of 80 amps; 40 amps with 220 volts.

Robert Nanius, Union Dale, Penn.: "Over the years I've seen all kinds of gadgets designed to lift riding mowers for doing maintenance work. The trouble is, they all get in the way when doing the repair work. The best thing I've found is to use a portable shop crane. Just hook the crane's boom into the mower's drawbar hole and raise it. Be sure to brace the rear wheels for safety."

Gene Lamb, Centralia, Wash.: "In the early 1970's I bought a used Leland 384 70 hp tractor, which was my only tractor for many years. In the late 1980's the clutch went bad so I tore it down, planning to install new clutch plates. Then I discovered the pin-bolts that hold the assembly together were about 3/8 in. into the main bell assembly.

"The dealer wouldn't even try to repair it and said I needed a new unit that would cost about \$700. Instead, I simply built up the worn areas with JB Weld. Het it cure for 24 hours, then put it in the kitchen oven for one hour at 200 degrees. I did this twice, and then put it all together again. The clutch was still running strong in 2007 when the engine failed. It turned out to be a pretty worthwhile \$5 repair job."



## Kenneth Gustafson, Carney, Mich.:

"I need to use an angle drill from time to time, but I didn't want to spend the money for one as they cost anywhere from \$200 to \$400. So I bought an inexpensive handheld angle grinder at Harbor Freight for \$8.88 and mounted a drill chuck on it. The adapter I made to mount it consists of a 3/4-in. nut with a cut-off threaded bolt welded onto it with 3/8 by 24 threading. Works great and I saved a lot of money."



Rex Gogerty, Zearing, Iowa: "I have a gravity wagon with big flotation tires, and over the years the inside part of the tires wore out faster than the rest of the tires. The extra wear was so bad on one tire that I had to replace it. I know if I had rotated the tires they would have lasted longer. The tires should be cross switched front to back and left to right, and they should also be turned around."

**Royal Weber, Nokomis, Ill.:** "I converted my old 8,000-watt, electric start Onan generator so I can move it around like a



wheelbarrow. It mounts on a frame made from 1 1/4-in. steel tubing and rides on a pair of wheelchair wheels. A car exhaust and muffler help keep the noise down.

"The generator was given to me by someone in the welding business, who had used it in a truck to operate a welder. I use it when I go to motorcycle rallies. The wheelchair wheels bolt onto homemade metal brackets that are welded onto the frame. The bottom of the generator bolts onto steel cross members on the frame. The generator is rubber-mounted so there's very little vibration. I can run the generator on either 220 or 110 volts."



Tom De Clerck, Pana, Ill.: "I can store up to 200 ft. of air hose neatly out of the way with this homemade 'split wheel' holder. I cut a car wheel rim in half and welded a 4-ft. length of 4-in. channel iron to the back side of both rims. Then I bolted the channel iron to the wall. I just wind up the air hose in big loops on the rims. I mounted the unit near the door of my garage, where the air hose is readily available for any inside or outside

## **How To Cut Circles With A Cutting Torch**

"Flame-cutting circles in mild steel accurately with my acetylene torch is surprisingly easy with this attachment my grandfather made for it. It lets me cut neat holes up to 12 in. in dia.," says Steven Troyer, Millersburg, Ohio.

He uses a Smith acetylene-cutting torch with 3 in-line tubes that lead to the cutting head. The attachment consists of a pair of 4 1/2-in. long, 1-in. wide mild steel plates that go on both sides of the tubes. The plates are held together by 2 brazed-on bolts that straddle the tubes and a pair of wing nuts. A pointed 3/16-in. dia. metal rod is brazed to the edge of one plate and sticks out a bit farther than the cutting head.

To set the diameter of the circle, Troyer loosens the thumbnuts and slides the attachment anywhere along the torch tubes. When he positions the torch on a center punch mark on a steel plate, the metal rod lifts the cutting head off whatever he's cutting providing room for the flame to operate. Then Troyer 'walks' the torch 360 degrees around that point to cut the circle.

"The metal rod works like a pencil point and lifts the cutting head off the metal I'm



Attachment's pointed metal rod sticks out beyond torch's cutting head. It slides up and down torch, cutting neat holes up to 12 in. in dia.

cutting. It also locates the torch. As a result, I can cut a much more accurate hole – within 1/32 in. – than if I tried to follow a line visually," says Troyer.

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Photo shows Hochstetler straightening out a steel pipe. I-beam holds pipe in place.

## **Log Splitter Converts To Metal Bender**

"I made a metal bender to fit my log splitter. It lets me bend metal without dulling the wedge," says Milan Hochstetler, Cumberland, Va.

The bender consists of a short length of heavy angle iron that mounts on front of the splitter wedge. A horizontal steel plate that's welded on top of the angle iron rests on top of the wedge, and a short length of strap iron welded to the bottom of the angle iron rests on the splitter table. Square tubing welded onto the middle of the horizontal plate fits down inside the hollow wedge to hold it in

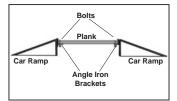
place when bending metal. To convert back to splitting wood, Hostetler simply pulls the bender off the wedge.

"The splitter has 22 tons of pressure so it can do some heavy duty bending," says Hostetler. "My son and I recently used it to straighten a 1 5/8-in. dia. solid steel bar. We also used it to straighten one of the tines on a forklift."

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"I used a pair of wheel hubs to hang up the terminal clamps on my electric welder. First I welded an old tractor spindle to a length of angle iron, and then I welded both hubs to the ends of the spindle. Then I lag screwed the angle iron to the wall in my shop. What's nice is that all edges are rounded so there's nothing to catch or scratch. Also, I can unwind however much cord I want without having to drag it around."



Delbert E. Hayes, Norwalk, Iowa: "I came up with this handy device to change oil or gearbox fluids in my 4-wheelers. I start with 2 pairs of car ramps and weld a 2-in. angle iron onto each one. Then I drill holes into the angle irons and bolt on a 2 by 10-in. plank between the ramps. I just drive on, change the oil, and drive off. If I want I can work from a creeper placed under the plank."