Got Cast Iron To Weld?

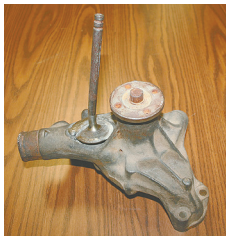
Welding cast iron is easy with Magna 770 rod. Starting at $330/lb., the electrodes aren't cheap, but they're money-back guaranteed. They provide machinable welds on nearly all types of cast iron without preheating.

"Magna 770 welds have a much higher elongation, or stretch capability, than cast iron, so they won't crack," says Jimmy Morris of Brecko Corporation, the U.S. distributor for Magna welding alloys. "Their 58,500 psi tensile strength is stronger than most cast iron. The rods are popular for repairing any type of cast iron that is not easily or cheaply replaceable, and when broken machinery needs to be put back in service immediately.

The 770 comes in three sizes, 3/32", 1/8", and 5/32". It can be used with either AC or DC machines, and needs only 40 to 140 amps. Morris says, "Because the rods are so expensive, we have a 'per rod' price for smaller customers".

Magna 770 rods 1/8" size are currently $22 each, but we have a "Farm Show Sample Pack" – 5 rods for $100, with only $10 shipping. Magna 720 for burned and dirty cast iron, is much less expensive at $70 per pound. Morris says, "The tensile strength is 50,000 psi, it only comes in 1/8" size", and it is NOT machinable.

"Magna 303 steel rods will weld any steel to any steel and are stronger than any other rods we can find, with tensile strength as great as 128,000 psi", says Morris. Call us toll free at 800-720-2887 or 1-325-665-9515.



Magna 770 rod provides machinable welds that won't crack on most types of cast iron. Photo shows a steel valve welded to a cast iron pump.

Contact: FARM SHOW Followup, Brecko Corp., 1390 Amarillo St, Abilene, Texas 79602 (breckocorp@yahoo.com; www.breckousa.com). **Reader Inquiry No. 80**

Zero-Turn Stump Grinder

Roessler decided to make his own stump grinder after renting, using a Grasshopper with the front pto in mind.

Grasshopper zero-turn mowers are known for their wide range of implements, but only Larry Roessler has a stump grinder on his.

"It's really dirty with chips flying, but it's so nimble," says Roessler. "I can grind up a stump and then follow roots, zigging and zagging as they do."

Roessler got the idea to build a stump grinder after renting one for $300. He had jammed his lawn mower into a stump on a new property. He built it with the Grasshopper's front pto in mind. He bought a gearbox, bearings, hubs, and a keyed shaft and coupler from Surplus Center. He fabricated much of the rest with the help of carbide bits from CEI Supply.

"I went through plenty of bits," he says.

The gearbox is mounted rigidly to the mower frame. The cutting wheel rides on a spring-supported frame mounted to pillow block bearings on the gearbox output shaft. The frame is made mostly from 1 1/4-in. steel tubing and pivots on the mower's toolbar.

The lift springs are from an old farm implement with one end 3 1/2 in. from the pivot point. The other end of the twin springs is connected to a post on the mower frame. A threaded rod between the post and the springs lets Roessler adjust the tension so the cutting wheel will float. A third light-duty spring, between the cutting wheel end of the frame and a lever on the mower, lets him fine-tune suspension.

A belted pulley between the gearbox and a pillow block bearing on the output shaft of the gearbox drives the cutting wheel.

"I had to fabricate an extension to the gearbox shaft to provide space for the pulley and the bearing," says Roessler.

The cutting wheel is two pieces of 4 by 12-in., 5/8-in. steel plate. They're welded in a cross shape with a piece of 1/2-in. plate in between to offset the grinding bits or teeth. The 1/2-in. sq. bits are mounted in split hubs at the ends of the cross plates. A third piece of 5/8-in. steel is added to the cross plates to provide extra width for the split hubs.

"The heavy welding caused the plates to warp, and I had to press them straight again," says Roessler. "In hindsight, I should've bolted the stack together and then put several small welds to hold everything in place."

The cutting wheel rides on a shaft suspended from the front ends of the frame with a 3 1/2-in. pulley for the belt drive. The pillow block bearings they ride in can be adjusted to take up belt slack. The ends of the shaft have bolts with heavy washers to prevent the belt from walking.

"Initially, I attached a linear actuator between the mower frame and the cutting wheel with a toggle switch to lower the wheel into the stump," says Roessler. "However, the load on the wheel would be erratic, and it would either jam or run with only a light load. Instead of it, I simply apply pressure with my feet. The footrest can flip forward or backward to shorten or lengthen leg travel."

Grinding stumps is rough on the pto shaft spline, acknowledges Roessler. "After replacing two mower shaft splines, I incorporated a 1-in. keyed shaft for the mower pto. The gearbox now mounts to the pto shaft with a keyed coupler, and I've had no more problems."

The cutting wheel operates at the same rpm's as the Grasshopper's 14-hp. motor, upgraded with a bigger carburetor to 16 hp. Roessler installed a metal shield over the cutting wheel and a piece of rubber tire underneath the frame to deflect some of the chips. Enough fly back at him that he always wears a face shield.

With only $60 more than his previous rental rate invested, Roessler is more than satisfied with how his stump grinder works.

"We had a major windstorm come through earlier this year, and it blew over trees," says Roessler. "I had relatives coming out of the woodwork needing stumps ground out. I don't charge. Mostly, I do it for the free meals."

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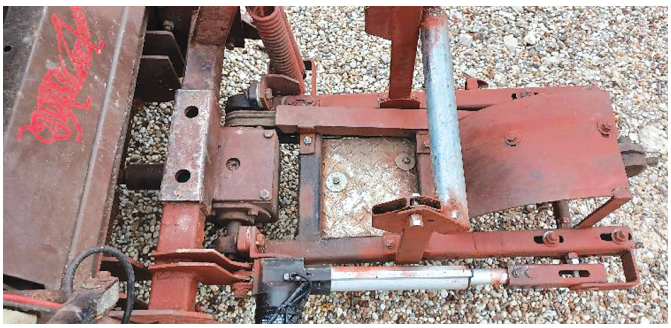

"I incorporated a 1-in. keyed shaft for the mower pot. The gearbox mounts to the pto shaft with a keyed coupler."