

Refurbishing the Arbor Press

One of the items acquired as part of a bigger purchase in December, 2005 was a large arbor press. This is a Famco brand, model #3½; rated for ~4 tons. An arbor press is quite handy for it provides a nice "feel" for the amount of pressure being applied and has a long stroke that is good for pushing broaches, etc. It is not a substitute for a hydraulic press but rather a nice complement. One like this with the convenient ratcheting feature and the hand-wheel control can easily set you back \$1,000 or more if purchased new. I paid about \$50 for this one, including a very substantial stand, a pound of grime and the 17 layers of paint applied through the years. But wait! There was a problem. Somewhere in the distant past this machine was

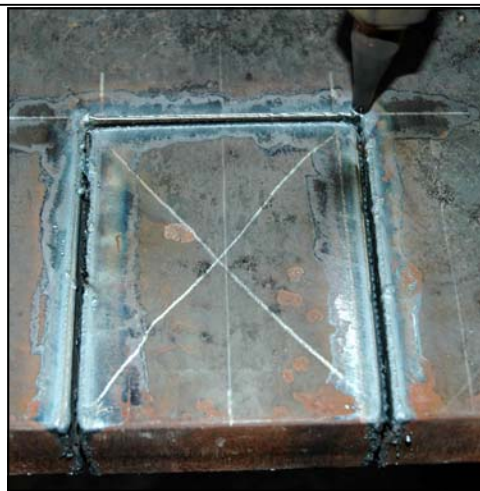
dropped and one of the front legs (3 inches of solid cast iron!) was broken. A repair had been attempted but was amateurish and failed



completely. Someone's "Plan B" was to add support by the use of an under plate. That's not a bad idea but the support was only ¾-inch plate and it seemed marginal to me. I secured a hunk of 1 ½-inch plate and went to work matching size and existing bolt locations. This is the kind of \$5 project that is accomplished by using \$5,000 worth of tools.

First, the plate is trimmed to size and a clearance cut made for the arbor by the use of a track torch (the motorized cutting torch runs in a track). Line it up, adjust flame and speed and, if properly adjusted, this device makes a cut so smooth that no further attention is required. How would you like to cut this 1 ½-inch plate by sawing? Notice (next page) how the trimmed section warps away as the cut proceeds.

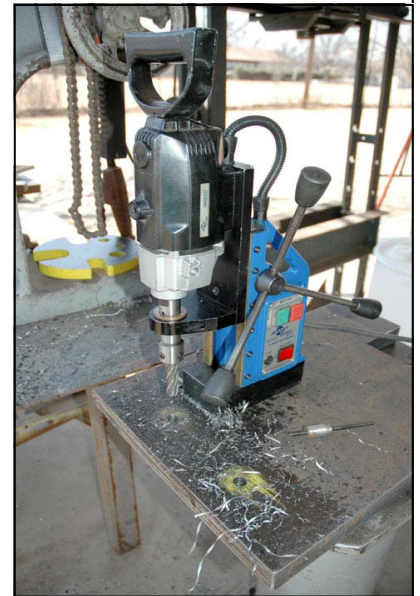




Next, The press is lifted off with an electric hoist, the old support discarded, and a trial fit made on the new support. Then, the mounting holes are drilled in appropriate locations by spotting through existing holes using a transfer punch and bushings custom made to fit the old holes. The portable magnetic base drill and annular cutter make quick work of a job that is too heavy and large for the drill press and too tough to do with hand drills.



As a final step, I disassembled the parts that move, cleaned and lubricated everything, and fabricated a missing gib plate for L-R ram clearance adjustment.



The press did not include an anvil plate. Earlier, I had fabricated a new anvil plate from 1-inch plate. This was cut almost perfectly by making a pattern from 1/8-inch steel and using a friend's pantograph torch.

That's it for now. Somewhere down the line I may take it completely apart, sandblast everything, and give it a nice coat of paint. . . but not this year.