

SWAG AIR-HYDRO RAM MOUNT ASSEMBLY INSTRUCTIONS



Tools needed for assembly:

- ✓ ¼" HEX KEY WRENCH
- ✓ ¾" SOCKET AND WRENCH
- ✓ 1.125" SOCKET
- ✓ HAMMER
- ✓ FLAT SCREWDRIVER
- ✓ GREASE FOR ASSEMBLY

Step #1

Fully disassemble your tubing roller as shown in the pictures below (JD2 Model 32 is on top and the JD2 Model 3, Pro Tools, JMR, & Woodward fab is on the bottom.) It's best to assemble the SWAG Air/hydro conversion kit on a work bench rather than on your tube bender's pedestal. The heavy weight is awkward, and the pivoting/swinging parts make great pinch points!



JD2 Model 32 Kit Contents ↓



JD2 Model, Pro Tools, JMR, & Woodward Fab Kit Contents ↓



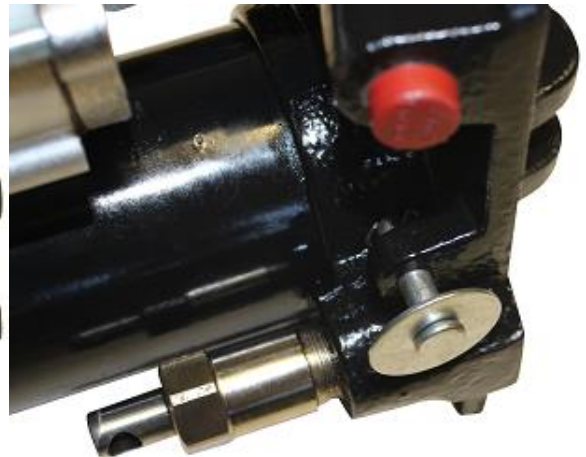
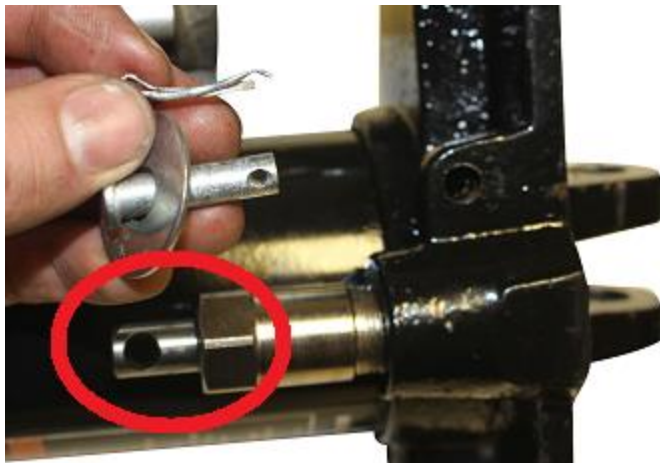
Step #2

Remove the dowel pin from your ram's pressure release valve. Attach the machined thumb knob as shown below. Reinstall the dowel pin, making sure the pin goes through both sides of the knob.



Step #3

Remove the bottle jack handle pumping assembly by removing the cotter pins from the piston and the frame. Do not remove the pump piston (circled in red below) as oil will leak out of the ram. Install the flat washer and cotter pin as shown in the 3rd photo below.



Step #4

Install the two threaded studs into the cylinder clamp by hand as shown below with the long-threaded stud on the bottom and the shorter threaded stud on the top. **DO NOT OVERTIGHTEN THE STUDS!!** They don't need to be more than hand tight as the bender arm will prevent them from backing out. The Hex holes are provided in case removal is necessary in the future.



Using a flat head screwdriver and a hammer, spread the cylinder clamp far enough to inset the 1/8" flat bar as shown below. Make sure the flat bar does not stick down into where the ram cylinder will pass through.

First, apply grease to the provided 2" long bolts to prevent them from seizing in the threads of the cylinder clamp. Install the 2" long bolts into the back side of the cylinder clamp so they press against the flat bar and separate the clamp so it can easily slide over the 8-ton air/hydraulic cylinder.



Remove the two 2” long bolts when the clamp assembly is positioned as close to the edge of the ram as possible. The rolled edge of the cylinder should be the only part of the ram extending past the clamp and the short threaded stud should be in line with the machine thumb knob installed in step #2.

Torque down the three 1” long bolts as shown below to 25 ft/lbs.



Step #5

Please note: You will need to grease the two main pivoting points where the ram connects to the bender arms to reduce premature wear. Tightening the two $\frac{3}{4}$ ” nuts so they are tight enough to remove all slop yet still loose enough for the ram to freely rotate.



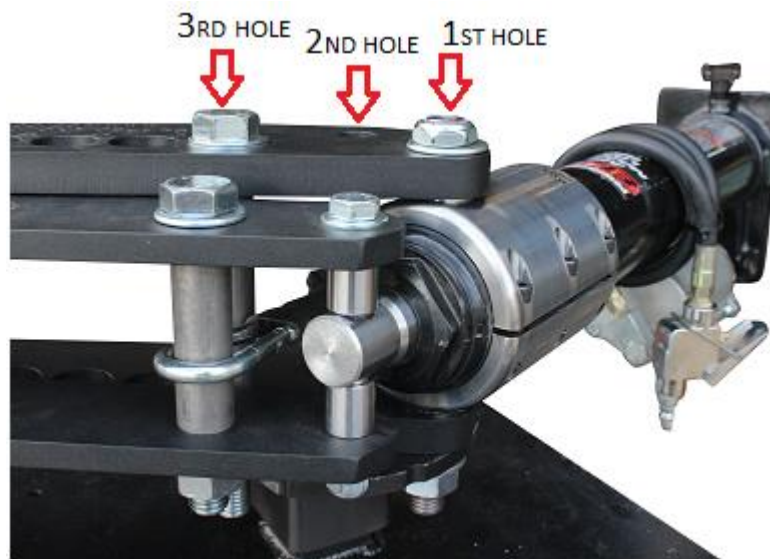
Install the assembled clamp into the bottom stationary arm on your bender, tighten the outer $\frac{3}{4}$ ” nut enough to remove all slop, yet loose enough to pivot on the greased pin.

Using the ½” x 5” bolt, (2) ½” washers and ½” nyloc nut, bolt together the two arms shown below using the provided reducer bushings that get inserted into the shaft of the air/hydro ram. Install the elastic return spring’s carabineer over the spacer as shown below and torque both bolts down to ~40 ft/lbs.



The pictures below are of the JD2 model 32 tube bender which uses the 1st and 3rd hole locations to mount your tube bender to the mounting pedestal, as illustrated below. If you own a different model of tube bender you will use the 1st and 2nd mounting holes

Install the top arm of your bender as shown below, tighten the outer ¾” jam nut enough to remove all slop, yet loose enough to pivot on the greased pin and torque both bolts down to ~40 ft/lbs.



Step #6

Attach the loose end of the elastic return spring over the washer that was installed in step #3. It will take some effort; however, you are able to slide the carabineer over washer without removing the pin.



The completed assembly is shown above with our U-turn digital read out display.

Just because you can does not mean you should! 8 tons is 16,000 lbs, it takes only ~2.5 tons to bend any of the commonly used materials that these tube bending machines are rated for. You can easily destroy your bender and the dies if you do not follow the manufactures recommended maximum capacity's.

The jack will only work with the thumb knob pointed straight up, if you are having problems with the ram not providing enough stroke length to move your die set to the next hole position make sure the ram is bled and full of jack/hydraulic oil. The rubber fill plug is located on the side of the body about halfway up the metal housing.

Do not use a different ram then what this kit was designed for. A longer stroke length will push past the specifications of the return springs, and it will break.

Wear safety glasses and keep your fingers out of harms way at all times.

Thanks for the order and be sure to visit Swag Off Road on [Facebook](#).



Machined Air/hydraulic Ram Mount Bracket

The machined air/hydraulic ram mount bracket it can be mounted to a fixed mounting post in your concrete floor, a rolling fabrication cart, or on a quick detachable mount for easy storage when not in use. The five pictures below will help tell the story of how we mounted our bender.

