I HATE building these beams, they are very labor intensive. Here is a how-to, so that you can build your own...Because I'm done building these.


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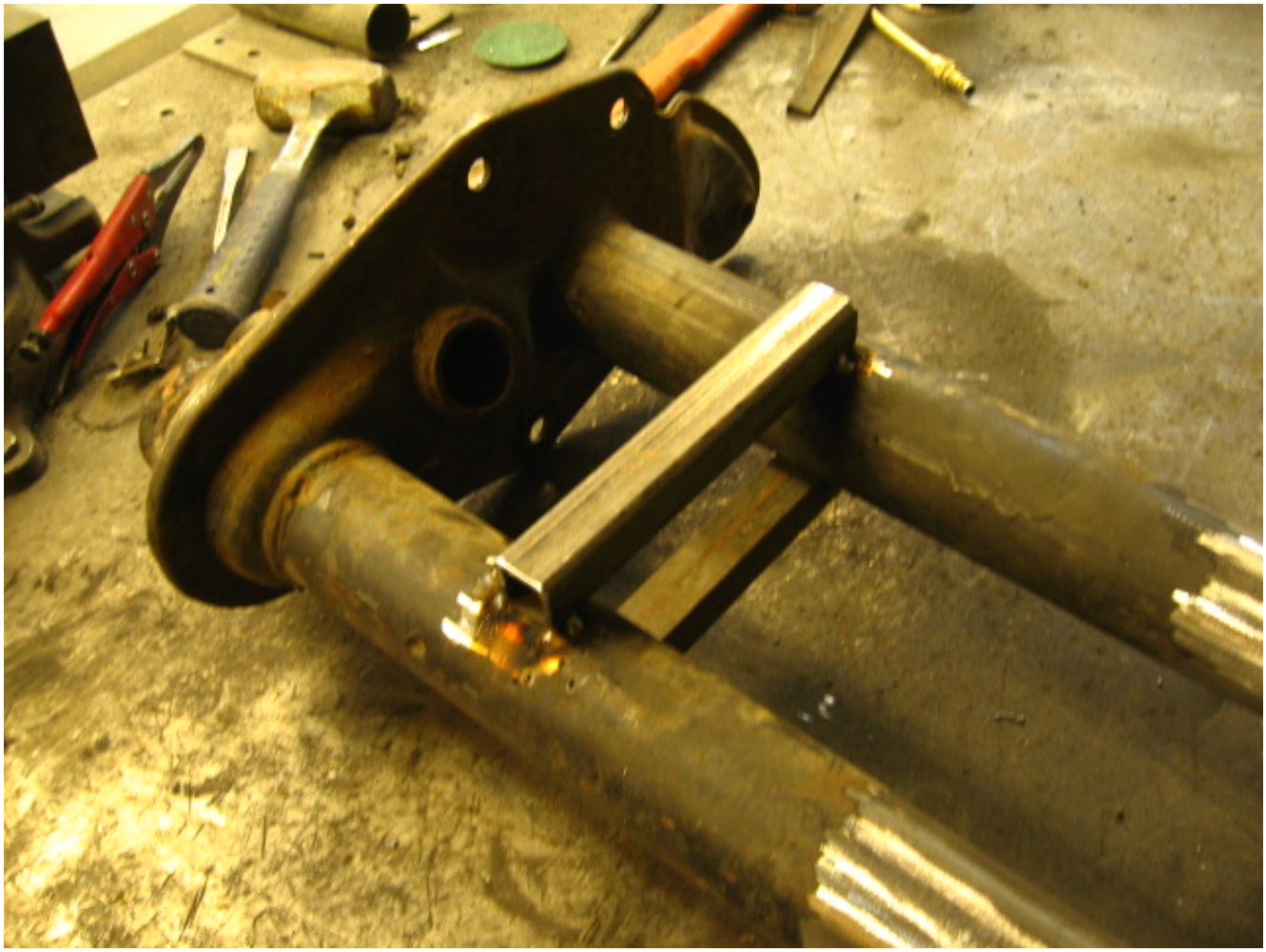
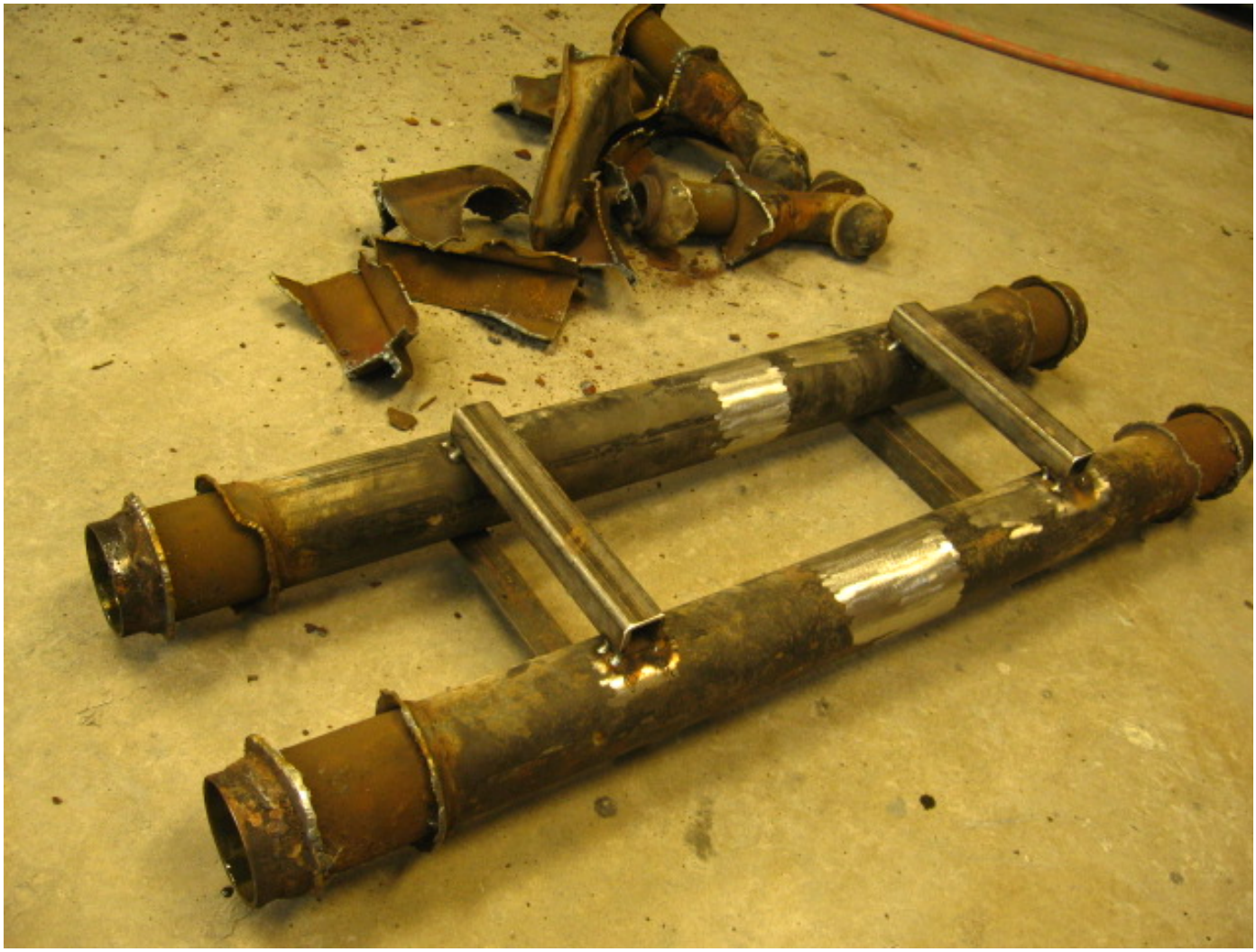
1)The first thing to do is scrape and remove as much dirt/greese as you can. Then carefully cut the welde so that you can remove the complete center pin carrier from the beam. On a bay window the beam tubes are flared/machined at the ends. Because of this you have to narrow the beam from the middle. I'm going to narrow this beam 4", so I'll have to remove exactly 4" from both tubes. Notice that I did not cut the 4" from the exact center. Instead I cut from the center block to 4" over. I did this so that when the beam is welded back together the welded area is not in the exact center of the beam where the adjuster will be.

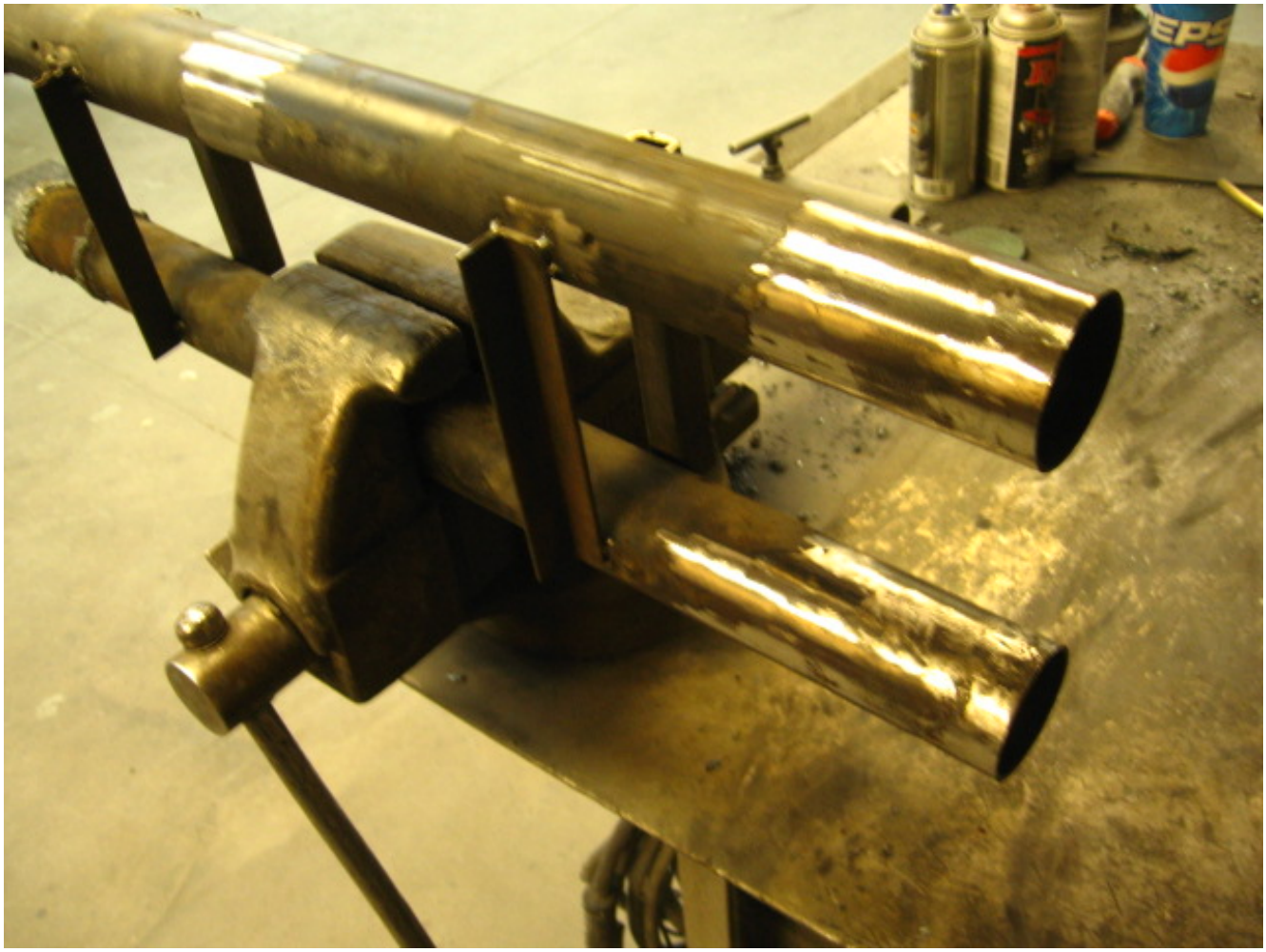
2) Once the beam is cut in half its easy to remove the dust seal cups and bearings. I like to use a piece of pipe and a hammer. I remove the bearings to prevent damage to them when I'm welding on the new shock towers. Also notice that I left the inner bearings. They are located far enough in the tubes that they are not in danger of being damaged, plus they are easy to ruin when trying to remove them.

3) Remove the center block from the old tube sections. I like to carefully cut a slit in the tube and pry it apart so that the block will simply fall out. Next, make sure that the center block will easily slide into the regular beam tube, you may have to remove a little material from the O.D. with a belt sander. If the center block is tight in the beam tube, it will be hard to adjust later.

4) Be sure to slide the center block in BEFORE welding the beam back together. I like grind bevels on the ends of the tubes so that the weld will be very strong. Clamp the beam in a vice and use several C-clamps, then use a strait edge to make sure the beam tubes are strait. After the beam tubes are aligned corectly, start welding it back together. I'll weld as much as I can before removing any clamps, then I'll remove one clamp and welds as much as I can before removing another clamp.







5) Since the beam was narrowed from the middle, the mounting locations on the stock shock towers will be too narrow to fit the frame on the bus. To solve this problem I have custom 1/4" plate shock towers that mimic the shape of the orginal shock towers. You'll have to do some measuring and cut the shock towers out of 1/4" plate.

The first thing to do is weld some braces on both sides and ends of the beam tubes. These braces are temporary and will be removed once the shock towers are welded on. After the braces are in place, cut the shock towers off, I used a plasma torch...but you may have to get creative if you don't have access to one. Once the bulk of the shock towers are removed, clean the remaining weld/shock tower with a grinder.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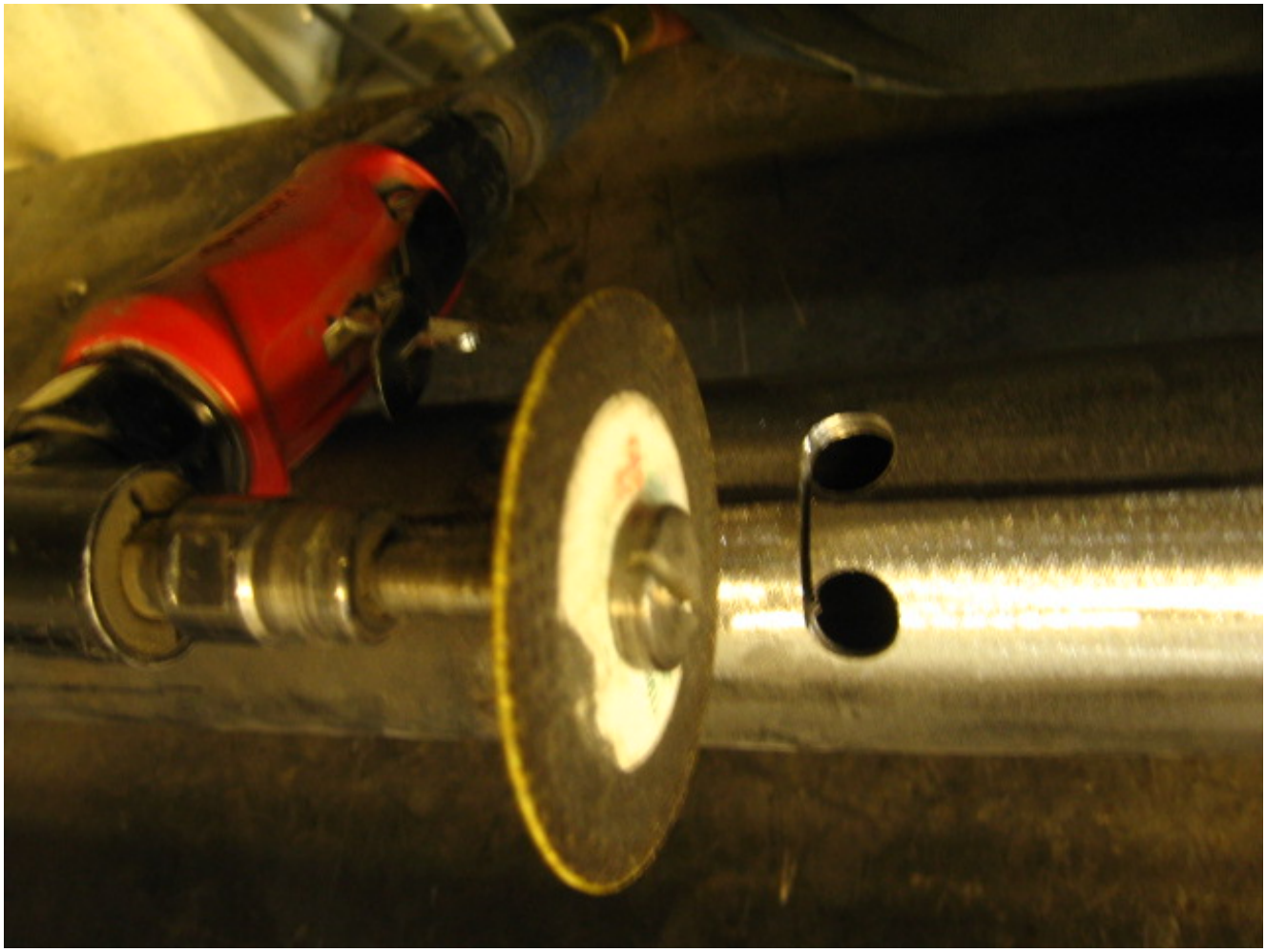
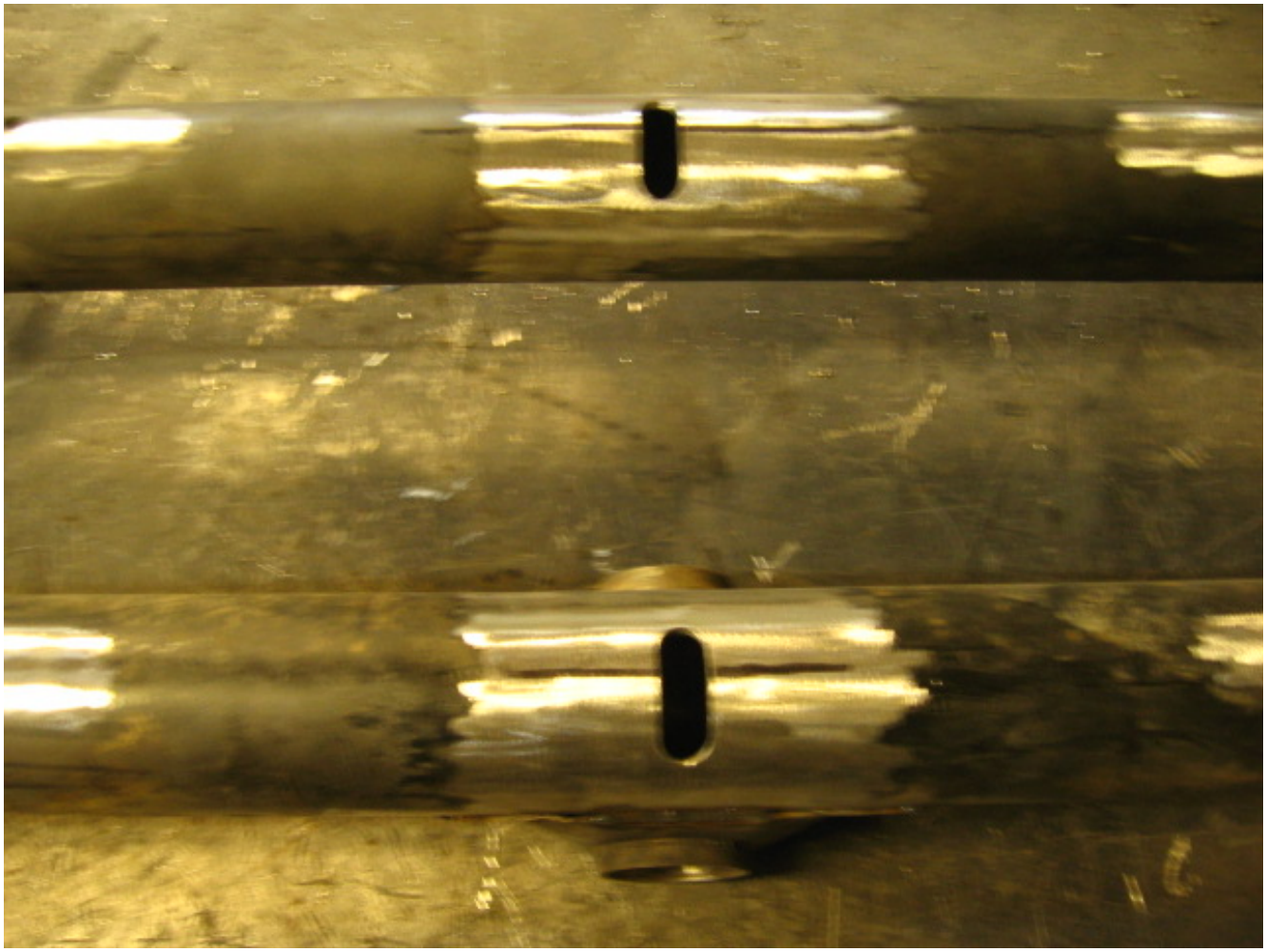
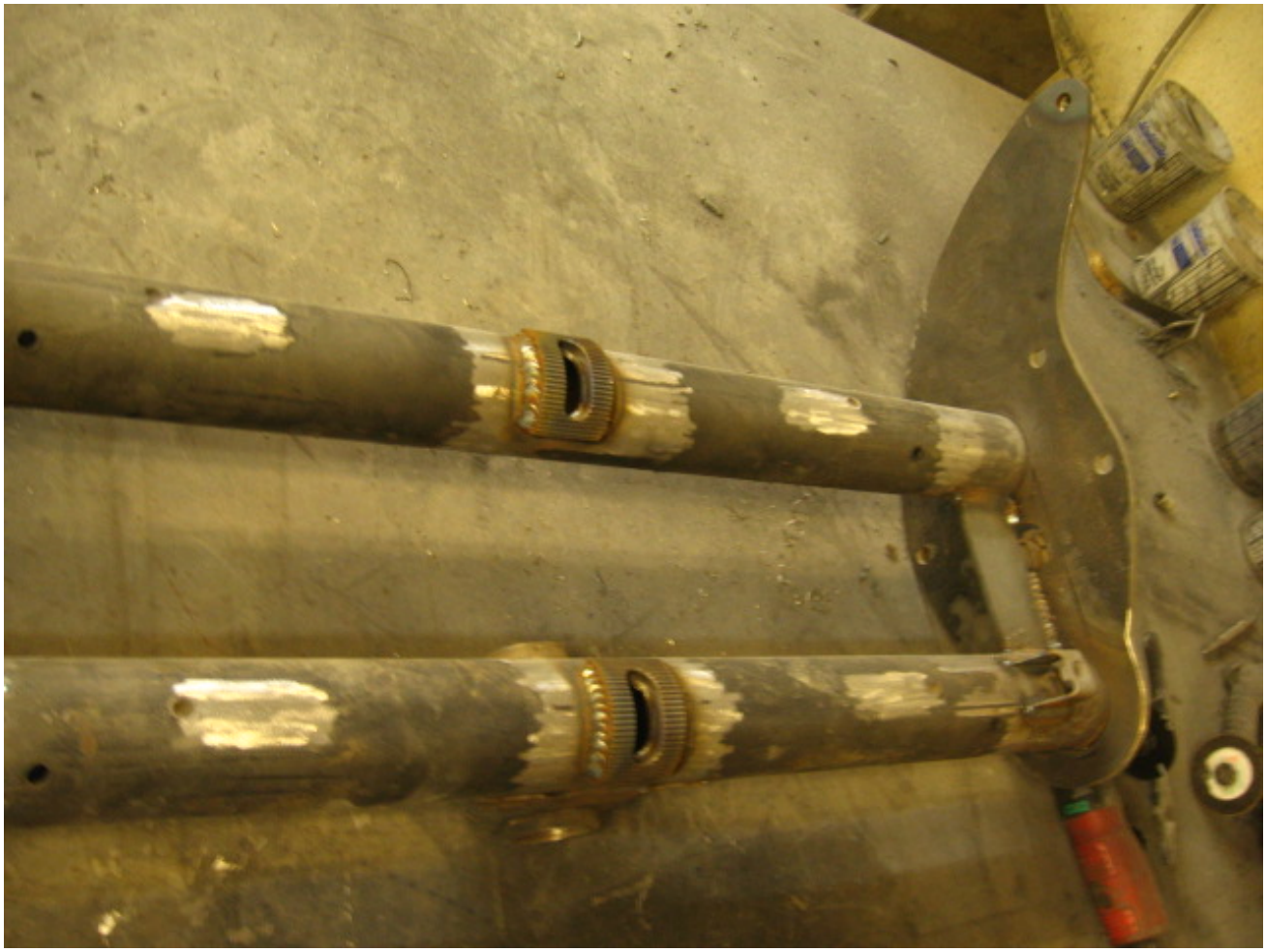
6) I have a bus frame section that I use to build bus beams. I'm guessing that most of you won't. So, you'll have to do this step in the bus. Bolt your custom 1/4" plate towers to the bus and center your beam between them. Do as much welding as you can with it bolted in the bus to keep things from twisting/warping.

7) After the shock towers are welded on, remove it from the bus. Now you can cut the braces off. Re-weld your center pin carrier back on, postion it in the center of the lower tube. The center pin should be parallel to the beam tubes. Also notice that I welded a 2" x 1/4" gusset between the tubes on the back side of the shock towers for added strength.







8) Drill two 1/2" holes 1" apart in the center of the beam. Be careful on what angle you position them at, as it wil limit your adjustablilty. Then, cut between the two hole so that you have a slot for the adjuster bolt to move in. Finally weld the adjuster plate to the beam tube, take your time welding so that the beam tube does not warp.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9) Now that all of the cutting and welding has been done on the beam its time to re-install the bearing and dust seal cups. All thats left now is to narrow the tie rods and torsion springs the same amount as the beam.