PowerCube6 Hydraulic Reservoir

From Open Source Ecology

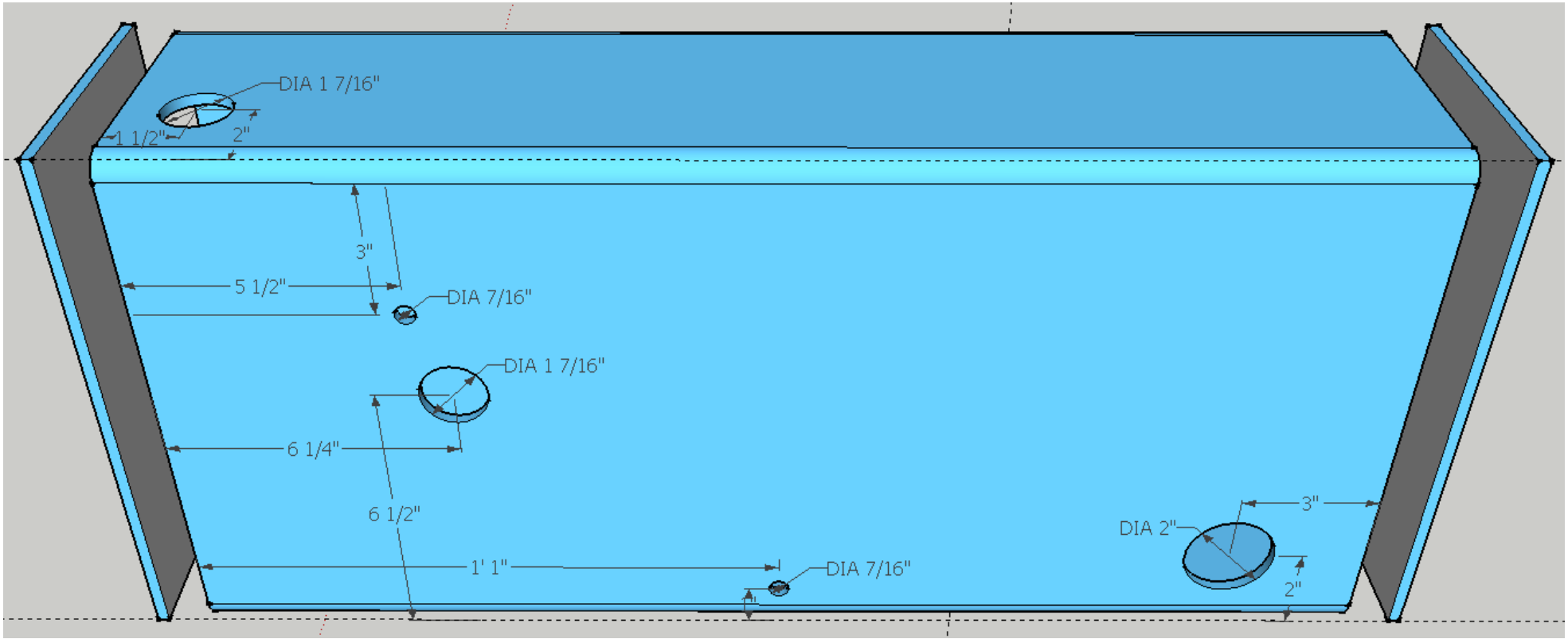
Procedure for fabricating the hydraulic reservoir. Note that the preparation of the edges for welding is critical, as the welded seams must prevent fluid leaks.

Part List:

- 1/4" x 6" x 12" - 26" Rectangular tube
- [2] 1/4" x 6" x 12" Flat Steel
- [2] 3/4" NPTF weld-in flange
- 3/4" NPTM plastic tank breather
- 1 1/2" NPTF x 3" union
- Hydraulic tank thermometer and sight gauge
- [2] 1/4" NPTM plug - Galvanized
- [2] 3/4" NPTM plug - PVC
- 1 1/2" NPTM plug - PVC
- Schrader air valve
- Soapy water

Procedure:

1. Grind the 1/4" x 6" x 12" plates, rounding the corners to 1/2" radius and beveling the edges for welding.
2. Grind the 1/2" x 6" x 12" Tube, beveling the edges for welding.
3. Cut the 7/16", 1 7/16" and 2" holes in the tube as shown. The larger holes may be cut with an Oxy/Acetylene torch, then smoothed with a grinder.
4. Tap threads in the two smaller holes with a 1/4" NPTF tap
5. Weld the three flanges to the tank
6. Weld the "front" plate (ie: the one near the oil filter) to the end of the tube
7. Drill the two 1/2" holes for site gauge and securely install the site gauge
8. Tap the 7/16" hole for 1/4" NPTF threads, smooth the welds with the grinder.
9. Pressure test the tank by covering the filler neck with a plastic sheet, then securing the cap. Secure the smaller hole with a the fuel pickup and some 1/4" hose on the hose barb. Apply compressed air to the end of the rubber hose to pressurize the tank, then apply soapy water to all welds and check for bubbles.
10. Mark any bubbling spots with a felt-tip marker and re-weld
11. Re-test the tank and re-weld as necessary to stop all leaks



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