

Side-Power hydraulic tank – internal oil cooler coil installation.

Parts needed;

- #10 2304 oil cooler coil kit complete or as parts;
 - o 2 pcs #10 2499 Oil cooler coils, Ø16mm
 - o 4 pcs #HS6509-16-1390, fitting body Ø16 through hole.
 - o 4 pcs #HS6652-03-16, bite ring Ø16 w/soft seals
 - o 4 pcs #HS6650-00-16, Compression nut, 16-S
 - o 4 pcs #10 2535, hose barb sleeve for 3/4" water hose,
 - OR 4 pcs #10 2534, hose barb sleeve for 1" water hose
- Sanding paper
- Molykote Metal Cleaner or similar
- Permabond A1046 high strength seal/glue or similar
- Spanners
- Rag

The 16mm CuNi pipe goes through a “bite type” fitting body with an olive and tightening nut.

The installation procedure is as follows;

- Install the fitting bodies into the 1/2" BSP threads in the tank. A rubber seal at the fitting will prevent any leak between these two parts. Tighten normally.
- Insert the cooler coil from inside the tank, through the two fitting bodies.
- Check that coil pipe ends are not too rough/sharp to avoid damage to the bite ring soft seal.
- Carefully slide the olive (bite ring) in, onto the CuNi pipe. Prevent damaging the soft seal.
- Insert the nut onto the pipe
- Make sure the coil is more or less in level, so that you have about the same length sticking out through the two fittings.
- Make sure the coil is about 5-10mm away from the tank wall inside the tank. This will allow maximum length outside the tank for gluing on the barbs later, and will also make sure the cooler is not interfering with the tank wall during vibrations.
- While keeping the cooler coil in place, push olive and nut into the fitting body and tighten carefully by hand.
- Repeat on the other connection (hand tighten the olive)
- Then tighten additional 3/4 turn with a wrench.
 - o Note that over tightening will damage the pipe. The olive has dual soft seals, so 3/4 turn should be more than enough.
- Use sanding paper to roughen up the outside of the pipe in the area where the brass barb will cover
- Clean both the pipe (the area where the barb will cover) and the inside of the brass barbs with Molykote Metal Cleaner or similar degreaser/cleaner to allow best possible grip for the glue.
- Apply green Permabond A1046 or similar high strength retainer on the inside of the barb.
- Insert the barb onto the CuNi pipe while rotating the barb to spread out the glue evenly. Note that the Permabond A1046 hardens very quickly, so make sure you do this rather quick. As soon as it sticks, you will not get it off without heat or a saw..
- Use a rag to remove excessive Permabond .

See pictures of this procedure. I used a paper to substitute for the tank wall, as we don't have any open tanks in production right now.

See also sketch showing a cut-through of the assembly.













