

Holding Tank Aerator Details

During our first season we quickly noticed a significant holding tank odor problem. We tried several different head treatments without any real improvement.

I was able to solve a similar problem on our previous Carver Riviera by adding a second vent allowing aerobic bacteria (no odor) to thrive and overcome the anaerobic (smelly) bacteria.

The location of the MS holding tank and difficulty and distance required to obtain the same affect with additional vents seemed impossible.

I had previously removed the factory installed macerator pump as it was leaking and we cruise inland waters where overboard discharge is prohibited. I decided to fabricate an aerator system using a 12V fish tank bubbler which I could easily wire to the existing 12V macerator circuit and would allow bubbling while cruising or at the dock.

The aerator tube was fabricated from a $\frac{1}{4}$ " copper tube by plugging one end, drilling a series of $\frac{1}{16}$ " holes and soldering a $\frac{1}{4}$ " tubing fitting on the other end.

A 1-1/2" PVC fitting was reduced down to accept a ball valve with an opening large enough to pass the aerator tube through. This was done to allow removal of the tube (and closing of the valve) for tube cleaning or replacement, if necessary.

The concept of aeration has worked well from the start... it took approx. 2 - 3 days to aerate the tank sufficiently to allow aerobic bacteria growth and virtually eliminate any noticeable odor.

We usually run the system 24 / 7 but have considered the possibility of adding a timer to reduce actual run time.

Credit must be given to Peggy Hall, known in boating circles as "The Headmistress" for educating me about marine holding tank problems and solutions.

See: [Get Rid of Boat Odors](#) by Peggy Hall and

A \$400 commercially available system
[GROCO SweetTank Holding Tank Deodorizing System](#)

