

Solving Boat Odors

The following information was abstracted from an article entitled "Boat Odor, It's Not All In Your Head", written by Peggie Hall in *Passagemaker* magazine for May/June 2000 (page 118 – 121).

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Boat odors can be troublesome and difficult to identify and resolve. While the primary candidate is likely to be the head, there are also other possible odor sources.

Head Problems

1. Intake hose.

Any raw intake water, fresh or salt, is certain to be loaded with microorganisms, which line the hose and eventually die and decompose producing hydrogen sulphide and mercaptans to which the nose is extraordinarily sensitive. Test for this by removing the hose from the thru-hull (closing the latter first) and pumping a sterilizing solution through the line. This could be white vinegar solution, Raritan's "C.P." (a bio-enzymatic cleaner that is recommended in the article), dilute bleach, oxalic acid, or cationic soap/bactericides like Fantastic. Instead of removing the intake hose at the thru-hull, you may wish to consider removing it at the head itself (keeping the open end above the waterline) and pouring your sterilizing solution through a funnel which makes a tight connection to the hose. A 10' x 1" ID hose should only require about one and a half pints of solution.

If a sink drain is close to the head inlet hose, the former can be teed into the latter close to the thru-hull. With the thru-hull closed, you can then pour sterilizing solution down the sink drain, from which you can pump it through the head; this can be done each time the boat is closed up.

Some claim that it is sufficient to get the microorganisms out of the bowl and hose by flushing the head with fresh water before closing the boat. This can be done either with the teed-valve solution or more simply by pumping the head dry, then dumping a jug of fresh water into the bowl and again pumping dry.

2. Stinky Sanitation Hoses

Test for this problem by wetting three rags with hot water and wrapping them around the lowest point on each of the three sanitation hoses (head discharge hose, holding tank discharge hose, tank vent hose). Leave each rag until it cools then smell it. If it smells bad, you've found at least one source of the problem, so you're halfway to a solution.

First, consider your head-pumping habits. PDQ believes that half of the stinky hose problem is caused by people not pumping the head enough to get the contents of the bowl all the way to the holding tank. What was formerly in the bowl then sits in the hose, which is not as odorproof as a tank. Next cruise, pump a couple more strokes after the bowl is clear to ensure the hose is also clear. If the hoses still smell bad when you re-test them, replace them using good quality hose. PDQ has discovered a new type that is very effective.

Note that head- to-holding tank hoses become lined inside with a malodorous highly coherent coating which can eventually block the hose. I suspect this solid is the calcium salt of uric acid and related to the solids in gallstones. Its formation can be minimized by using lots of water for each flush, but this fills up the holding tank fast.

A JSI flyer recommends putting a pint of white vinegar down the head once a month and allowing it to sit awhile in the hose. It may not be a bad strategy to replace the hose periodically.

3. Holding Tanks

Properly constructed holding tanks are rarely a source of odor. Check O-rings and hose clamps for leakage (there should be an O-ring to seal the inspection port of most types of tanks). However, odor from the vent tube with each flush can be a serious issue. Try using more of your tank treatment or switch to another brand. Commercial vent-gas "scrubbing" tubes are available for insertion into the vent line but can be quite expensive (Sealand vent filter; West Marine Model 447144, \$75.49). On Cadenza we have inserted the "ODORBUSTER" from e-Marine Inc. This unit was recommended by Practical Sailor and contains calcium hypochlorite (for hydrogen sulphide etc.), and carbon (for ammonia). We paid \$29.95 but the website (e-marine-inc.com) cost is higher. We'll let you know how it works.

Other Possible Odor Sources

1. "Boat odors aren't all in your head". The bilge is another source of odor from decaying microorganisms or diesel fuel. The primary defense is to clean the bilges regularly and if possible keep them dry. Again, Raritan's "C.P." is an excellent cleaning agent for the bilge.

2. Mildew can cause odors and staining on cushions, mattresses, clothing, headliners, etc., the primary problem being keeping things dry. Bleach and sunshine are the most common mildew fighters. Cationic surfactants like Fantastic are powerful bactericides and are particularly useful on hard surfaces. On Cadenza we have put 1/8" tongue&groove cedar in the back of one of the problem clothing cupboards with great success. Based on this we put a frame of 5/8" cedar under the mattresses which keeps any condensation off the mattress and allows air circulation for faster drying.

3. The chain locker, an enclosed area filled with damp and often muddy chain and rope, provides an excellent breeding ground for odors, which can sometimes spread through the boat. Clean out the area and let the contents dry out completely, preferably in the sun.

Hope these comments help. Send us your solutions to odor problems and we will put them in the Newsletter and on the website.

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