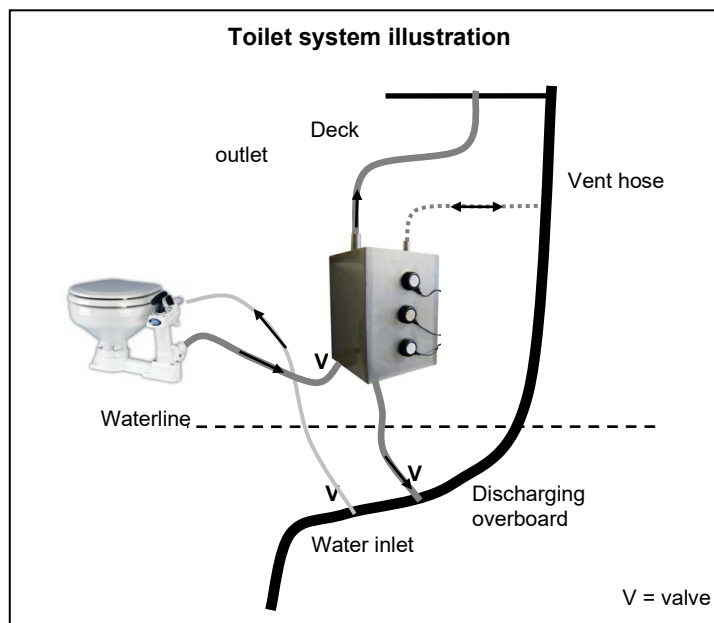


Odors from the Marine Sanitation System (short version) Problems, their sources and some simple solutions

Awkward or even disastrous toilet situations destroying your sunny days onboard. Here are some problems many of us recognize regarding troublesome marine sanitation systems and some simple solutions which work!

Odor problems and troublesome pumps are highlighted here, because most of us often have awkward experiences with these two during the holiday.



A marine toilet system includes a head (toilet bowl), pumps, hoses, pipes, valves, deck outlet, and thru-hull discharge valve and of course a holding tank (also called septic tank). Normally, the holding tank itself is not the source of any problems if it is unbroken and if it is ventilated properly. Level indicator on the holding tank and a good check over how many people are on your boat or visiting your boat should be enough to avoid any "accidents" or "surprises" with tank overflow and its consequences.

Odors from the head

Source: flushing only with raw water. Organic material, algae, plankton, small living organisms, salts, particles of sediment or mud get stuck on the interior of the hoses and in the head. The decay of the organic material begins immediately after flushing, in the head. And smells bad.

Solution: flushing the toilet with drinking water as often as possible. Flushing with white vinegar (ca 1-2 dl at a time) at least once per week.

Odors from hoses and pipes

Source: the quality and the age of hoses and pipes (some plastic materials are more porous, aging faster, etc). The diameter of hoses and pipes (small ones clog more often with salt precipitates,

toilet paper and solid waste). Long and bent (or curving) hoses collect solids and flush water and the decay of organic material produces nasty odors.

Solution: rinse, several flushing with drinking water and with white vinegar (as described above). Avoid installation of long and bent hoses which easily form “low spots” where solids and flush water can stagnate. Choose hoses and pipes of high quality, otherwise you will need to change them pretty often.

Odors from the holding tank

Source: the organic decomposition in the tank has got wrong all the way! Normally, with functioning ventilation the *aerobic* bacterial decomposition dominates the process. This process is odorless. Clogged vent hoses stop the air intake and cause oxygen free environment in the tank. The *anaerobic* bacteria will take over the decomposition! Nasty smelling sulfurous gases and methane is produced. Hard to get rid of it and restore the aerobic system. Addition of commercially available “miracle-solutions” or other “bio-activators” or even chemicals will work for a short time, but until the ventilation is not restored the problem will return.

Solution: The vent hose must be rinsed from the clogging agents and if you have an odor- filter installed between the vent outlet (deck outlet) and the tank, change this filter. A filter change at least once per season is recommended. Please have some patience! It takes probably several weeks until the aerobic environment will be fully restored in the tank.

Troublesome pumps

Pumps getting stiff and pumps squeaking are two, very common complaints.

The cause of a *squeaking pump* is probably simple: you need to lubricate!

Solution: lubricating with Teflon based grease, once per year. Acute fix: some drops of cooking oil. Be aware! Cooking oil is not for permanent use!

The causes for *pumps getting stiff* can be many. Due to the sporadically use of the marine toilet (only under weekends) the pumps can easily get dry and get stiff next time you are on boat. The most likely source is salt precipitation in hoses and pipes. When the layer of salts is increasing with time, the diameter of hoses and pipes are reduced and you can notice that is “harder to pump”. Another source may be an almost clogged hose or pipe.

Solution: as above. Furthermore, check and if the hoses/pipes are clogged, rinse them using some of the methods described earlier.

The right knowledge is crucial to understand your problem and to find the right solutions! Simple solutions that work are like balsam to our anxious souls in the middle of the sea, in the middle of our holiday.

If you will try some of the solutions described here and if you want, you can send me some comments about your experience to the e-mail address here below.

Have a nice summer and take care!

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