

# Ask Steve – November 2014

Hi Steve,

Greg Lee here. Having sold our N47 we are about to close on our purchase of N3522. The sanitation hose badly needs replacing and I recalled one of your posts about using EPDM based hose. Trident and Shields both make a EPDM hose. In your experience is there any reason to use one over the other?

Your thoughts?

Greg Lee

Huntington Harbour, California

**Greg:**

Selecting the incorrect sanitation system hose can lead to untold heartache and ruin an otherwise fine cruising vessel, not to mention its resale value. Perhaps equally as important, however, is incorrect installation of sanitation system plumbing. I've seen marginal quality hose perform well because the system was designed in such a way (or it was just luck) as to prevent effluent from standing in the hose.

Among other things, try to avoid low spots and dips in hoses, where effluent might collect. Standing effluent challenges even the most resilient hose material. If there are areas where effluent might stand, in the case of holding tanks that have bottom drain or pump out fittings for instance, rigid, PVC pipe should be used in place of hose, it's impermeable.

Additionally, resist the temptation to install hose over pipe to hose adapters using polyurethane sealant, i.e. 3M 5200, or sealant of any kind. In many cases I find the sealant is less permeation resistant than the hose, eventually leading to leaks. If the hose doesn't seal dry (you can use diluted dishwashing detergent to ease installation of hoses onto

fittings), then there's another problem that sealant is simply masking. On the other hand, you should use sealant on pipe threads; my preference is for a product called Leak Lock from Highside Chemical.

Where the hose itself is concerned, I can only comment authoritatively on the product with which I've had experience. I've used Trident's 101 and 102 series, EPDM-based hose for nearly two decades and have never removed a single foot because of permeation or leaks. It carries a five year warranty, although I know of no one who has made a claim.

Finally, make certain all hoses in the system are sanitation grade, including vents. And, where vents are concerned, bigger, 1" or 1.5", is better, and two (one located on each side of the boat), are better than one.

I wrote a column on this subject, you might find it useful before you proceed:  
<http://www.passagemaker.com/channels/avoiding-sanitation-system-woes/>.

Sincerely,

S D'A

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**Dear Steve,**

Looks like you are busy as always and still traveling around the world making boating better for everyone.

Quick, I hope, question. If you were installing a freshwater (potable) water pump, which would you use? I have a Selene 53 and my 24 V Johnson, Duo 10.0 pump is failing. One of the 2 pumps doesn't work, accumulator bladder failed and doesn't come close to the specified gpm or psi.

Selene owners' forum mentions Jabsco, Flojet, Graco Paragon and Headhunter Xcaliber.

Thank you and still waiting for your book,

Rich Piasecki

Baltimore Marine Center, Baltimore, Maryland

**Rich:**

Potable water pumps are a frequent source of frustration; I receive many requests regarding their replacement and specifications.

I'm disappointed to hear the Johnson Pump hasn't worked as advertised. While I experienced some reliability and operational issues a few years ago, mostly the 120/240 volt models, those seem to have been resolved. They now continue to offer a very good product. The Headhunter is likely the most expensive option, and very capable, I frequently specify the 24 volt model as a backup on larger vessels, 60 feet and up, where the primary pump is a Headhunter 120 or 240 volt model.

Jabsco, Flojet and Rule, among others, are brands that are now owned by Xylem Flow Control, a spin off from ITT in 2011, which previously held these pump brands. ITT wasn't terribly responsive where customer support was concerned, however, I could get a response to an e mail if necessary. In my experience Xylem isn't any better, and maybe worse. I suppose it may be a function of the large corporate communications atmosphere, the individual user simply isn't very important.

Having said that, these pump brands, Jabsco, Flojet and Rule, represent a vast swath of the marine market (thereby reducing competition, not a good thing), making it hard to avoid using them in some locations.

An alternative is Shurflo's (they make some of the best bilge

pumps in the business, up to 2000 gph) Extreme High Flow System 24 VDC pump. I've had favorable experience with this pump; it would be an alternative to the Headhunter. To be fair, ShurFlo is owned by Pentair, which owns a number of pump brands as well. However, their customer support is actually pretty good; their contacts include real e mail addresses and names.

My book is complete and is in the hands of the publisher. I'll work on editing during the fall and hope to see it published early next year.

Sincerely,

S D'A

**Steve,**

I managed to repair my Johnson Duo pump by just replacing the accumulator tank ( cost \$100 instead of a new pump for \$1100. Bladder had a hole in it) That resolved the pulsating problem with the pump, like I thought it would. I also removed the shrink tube from the wires leading to both pumps. This allowed me to get a amp meter loop around the wires to see if both pumps really worked. ( I was never really sure by just feeling the two motors if they were both running since they were so close together) The second pump kicked in finally after opening 6 water valves in the boat simultaneously to

Increase the demand sufficiently. I did purchase a pressure switch, but didn't need it since the second pump kicked in ( I didn't think it was working since pressure seemed low) now have a spare pressure switch if I ever need it.

Thank you again,

Rich Piasecki

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**Howdy Steve,**

I have an 'Ask Steve' question. In your vast experience in the marine inspection / repair / service arena have you ever dealt with a MSD known as a 'dry' eco-system?

In Passage Maker issue: May / June: p. 114, Trawlers Midwest advertise an 'Eco-Trawler 33' and in the description they have a 'no muss – no fuss [dry compost ] MSD.'

The makers, there are several, of these dry MSDs mostly claim no plumbing, clogs, no smell if used correctly, no pump-out, no sloshing of many gallons of waste, nothing to replace, works for years trouble free . . . .?? Another thing is: IF these are such great eco MSD why don't the builders of boats install them as oppose to the wet MSD?!

Have you any knowledge about these MSD devises: Pros & Cons? Perhaps you know of someone[s] who uses this type of MSD. It seems like a good idea but then again I don't own a boat nor have had any experience with a MSD. Then again this may well be one of those ' left field ' questions that's not that important except to tree huggers.

Hope I didn't bore you with the question and have a great day.

Henry Schweinbold

Jacksonville, Florida

**Henry:**

You certainly aren't the first boat owner to long for a 'no muss no fuss' toilet; some would say marine sanitation systems are the bane of a boat owners' existence. Having troubleshot and repaired more than a few in my career, at times I might

agree, although many sanitation system woes are avoidable with good design, proper installation and routine maintenance.

For the most part, “dry” composting toilets, those that require no running water, do work, allowing waste to break down naturally, separating liquids and solids and drying the latter, they are popular in off-grid cabins and out buildings for this reason. However, whether they are practical for use aboard the average cruising vessel remains open to debate. If they were a viable answer, I suspect you’d see many more boat builders taking this route. While there are those who embrace their attributes, simplicity and reliability being chief among these, most remain uncomfortable with sitting on top of days or weeks’ worth of waste, and periodically dumping the urine and solids containment, no matter how inoffensive they may have been rendered (nothing is done to “process” the urine).

While no doubt more complex and more costly than the composting variety, marine sanitation systems have come a long way, reliable “wet” toilets are available and remain the preferred approach.

Sincerely,

S D’A

**Ask Steve questions should be addressed  
to [asksteve@stevedmarineconsulting.com](mailto:asksteve@stevedmarineconsulting.com). Please include your  
full name and home port. Concise questions are more likely to  
be answered.**

**For more information on the services provided by Steve  
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