Wanderer's water

BY JEFF MERRILL

The freshwater system on your power voyager probably ranks in importance right behind your fuel and electrical systems. With a little care and with regular inspections it doesn't take too much effort to keep the water flowing.

Fresh water on board is generally used for consumption (drinking, cooking, brushing teeth, etc.) or for cleaning (showering, rinsing your boat, flushing toilets, etc.). You should be most concerned with the consumption water. Many trawler owners add UV sterilizers (like the Water Fixer) to kill microorganisms, combat germs, viruses and bacteria. A great addition to your galley is a Seagull IV water purifier. This is a separate freshwater tap that has a special filter and provides clean drinking water for making coffee, tea or for use in cooking — soups, etc.

I've has some clients add an instant hot tap for quick tea fixes. Another good tip is to get a Brita pitcher (or equivalent) to keep clean drinking water in the refrigerator and it also minimizes the reliance on those ubiquitous plastic water bottles that we all seem to cart around in crates.

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Above, a Seagull IV water purifier tap. Right, a dual-filter system for cleaning dock water.

Dock water

Keep a separate clean hose that is only used for filling (and connect the ends to seal it when not in use). Check your deck plate fitting to make sure it seals properly. Keep the deck fill clean by inspecting your O-ring and clean and lubricate the threads with dielectric grease. Before attaching your hose, it is a good practice to first turn on the dock water spigot to visually inspect the running water (looking for discoloration or rust). When clean water issues forth attach your clean fill hose and flush it out for a couple of minutes (I have seen spiders inside hoses — clear them out before you insert the hose to your fill plate).

Pre-filter from the dock

If you are more of a do-it-yourselfer, most hardware stores carry water filters that will attach to a hose. You can easily make up a double filter system with a tandem arrangement including a (part one) sediment/sand filter to restrict particulate impurities before the dock water enters your boat and a (part two) charcoal cartridge (for water purity, taste, and removing odor with various size mesh screen filters). Your dock water filter kit will require a small length of hose that connects the dock water spigot to the filter kit and then connect your clean hose to the other end. A slow steady

stream of dock water may take a bit longer to fill your tank, but will let the cartridges do their job and provide clean tasting, odorless, filtered water for your tank(s). Reminder — if your boat has a city water pressure connection (taking on water directly and continuously from the dock) be extremely careful with connections and fittings as a loose part could inadvertently fill up your trawler instead of your water tank! If you use this type of setup I suggest that you only turn it on when you are aboard and never leave your trawler unattended if you are connected.

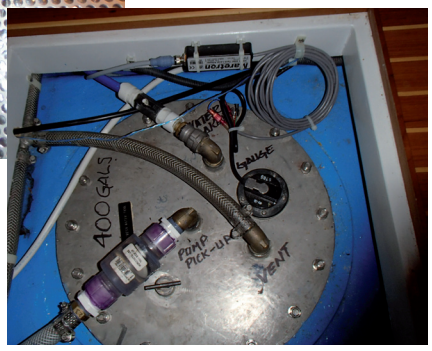
Freshwater tank

Your freshwater tank(s) also need some care. It is not uncommon for water that has been sitting for months on end to become stale and it is possible to get some scale, growth and debris in your tanks even if you are very careful. If your water tanks have inspection lids it is a good practice to open them up annually and check on the inside condition of each tank to wipe clean any slime that attaches to the surfaces.

It's a prudent practice (at the beginning of the season) to sanitize your system with a mixture of 5 percent hydrochloride (aka bleach — use the unscented type) to shock your tanks and plumbing lines — all the way through the shower heads and sink faucets. A safe ratio of bleach to water is 1 part bleach to 150 parts of fresh water. Fill your tanks three-quarters full with this mixture and go out for a run underway, making turns to slosh the mixture around your tank(s).

After a short time (two hours) slowly drain the tank(s) by dispensing water through all of your connections — sinks, showers and hose bibs (start the purge by turning on those fittings that are farthest away from the pump — you want to smell a bit of bleach to confirm that it has run through each plumbing line). Refill your tank(s) with fresh dock water (no bleach this time) and do another sloshing — you should not smell any bleach after emptying this second fill and then you are ready for a final,

Jeff Merril



Above, a freshwater accumulator tank with the pressure marked. Right, a freshwater tank inspection top that has been properly labeled to ease troubleshooting.

usable pre-filtered dock water fill. This simple, but slightly time consuming bleach and sloshing drill should clean out your tank(s) and all of the plumbing runs. If you have winterized your boat during the off season and are ready to "summerize" this is a perfect opportunity to flush out your entire freshwater system so you start out with clean, odorless and safe water.

Freshwater plumbing system

Having plenty of good, clean fresh water in your tank(s) is pretty easy to do. Naturally we expect that when we turn on the water everything will work fine, but a system failure (pump, water heater or accumulator tank) can create a huge disruption to our onboard enjoyment.

Diagram your entire system from deck fill to tank and understand all of the hose connections. You will have a vent line that leads up to the hull sides at or near deck level. This vent line is an important part of the tank pressure and you need to make sure it is completely open to equalize the tank and let the water flow. I have seen corroded vent fittings (some have become insect nests) and a clog will disrupt your pressure. The vent fitting should be kept clean of saltwater intrusion as well.

Water tanks have feed lines to your hot water heater and to every sink and shower on board. Many trawlers also have freshwater feeds to ice makers in freezers, windshield wipers, dishwashers, clothes washers, hose bib connections and sometimes even toilets.

Cockpit showers are pretty common (and very useful). Underway you will typically notice if a sink faucet or shower head is dripping, but it is easy to overlook a cockpit shower until you realize it has become loose and is slowly draining your tank. Similarly, putting a screw-on end cap on all of your hose bibs will help prevent loss of water.

Keep an assortment of hose fittings (some are specialized connections specifically designed for a particular brand of hose) and some spare lengths of red (hot) and blue (cold) water hose in case you need to make an onboard repair.

Sinks and shower screens

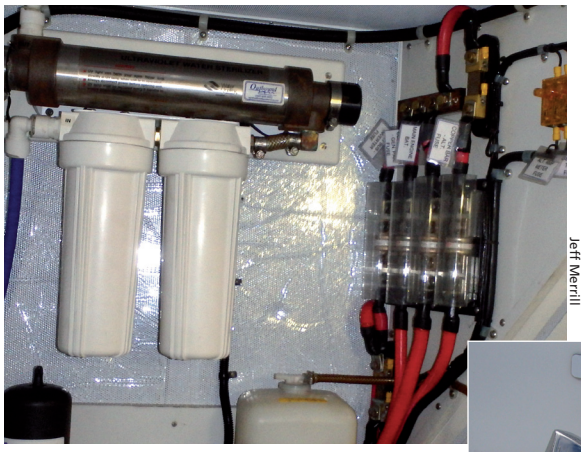
Sink faucets and shower heads are typically assembled with screw-on heads that house mesh screen to collect debris. Every six months or so you can unscrew these attachments to clean out any debris that has worked its way through the system — these dead ends can clog and restrict water flow.

Electric pump and accumulator tank

Your freshwater system will also include an electric pump activated by the pressure water breaker on your electrical panel. There is also an accumulator tank that is essentially a bladder filled with air (from a bicycle pump — a key tool to have aboard and make sure you can use it to add air pressure). I like to mark the correct PSI pressure on the accumulator for easy reference. This pump is both the heart and brain of your freshwater plumbing system so protect it with a screen filter (between the tanks(s) and the pump) and if you have the room I encourage you to plumb in a back up pump so that if you have an unexpected failure you can quickly switch over and not miss a drop.

If you lose water pressure it can take some time to get the flow re-established. You will need to open up the faucets to purge the air in the hose lines — this usually takes longer than you would expect and creates some unusual noises, so be patient.

The electric motor in your water



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Above, this water fixer unit has a UV sterilizer and dual-filter cartridges. Right, hose bib caps close off the ends of these fixtures and prevent leaks.

pump is not designed for prolonged use and, if you run a lot of water through it be aware that the pump motor can overheat and stop. I like to see a light diode on the electrical panel that illuminates when the pump runs; if you see that light flickering off and on when it shouldn't be, it is an early tell tale that you may have a tap open or a leak in the system. I have also seen some trawler owners adopt the old sailboat trick of installing a back-up foot pump system so that they can always draw water when needed.

Hot water heaters

Hot water for showers is developed through your hot water tank (check the fittings — especially the pressure release valve) and adjust the temperature lower if it gets too hot (it typically should not be set higher than 130° F. It's also a good idea to have an

anti-scalding valve to prevent extreme temperature variations). The element in the hot water tank uses a lot of electricity (breaker must be on at your panel) so many trawlers also circulate waste heat from the engine into the heater tank to warm up the contents for showers, etc. (typically 11 to 40 gallon capacity). Be sure that your guests understand that your freshwater resources are limited and explain to them how to take a boat shower — turn off the flow to suds up — so that you don't run out of hot water.

Tank monitoring

You should have a means of monitoring the capacity in your water tank(s) so you know when you are running low (analog gauge or lighted sensor indicator — some even have dip sticks). The Hart Tank Tender is another good system to monitor tank levels. Keep in mind that your water tank is probably not a large cube that can be accurately measured from top to bottom. Many boatbuilders cleverly fabricate un-uniform tanks to match their rounded or pointed hull shapes and so you will quickly learn to appreciate that when your tank indicator reads half full you are probably more than half empty. ■

Jeff Merrill, CPYB, is the president of Jeff Merrill Yacht Sales — www.JMYS.com. He is a veteran yacht broker and is an active speaker and writer. Merrill has written several "dialing-in" trawler articles for Ocean Navigator *and looks for new ideas to improve and simplify the trawler lifestyle. If you want to get in touch, e-mail him at: trawlerspecialist@gmail.com.*