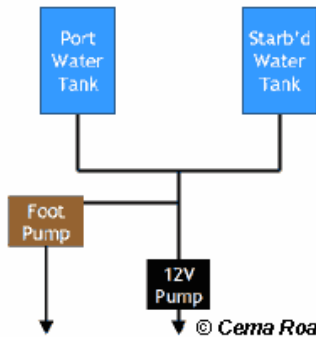


# FRESH WATER SYSTEM

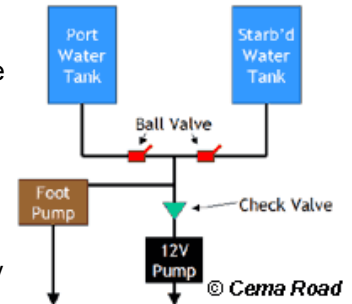
Rick Lucas: *Ping*



Having been informed by my cockpit bilge pump indicator light that I was overflowing water out of my fresh water tanks into the bilge I thought it was time to investigate this system. Ping has an 18-gallon tanks under both the port and starboard settees, and it turns out that someone had re-plumbed the boat in years past, neglecting to install any shut-off valves on the tanks. With the tanks always connected to the system, and each other, it was only natural that gravity wanted to transfer the water from the windward tank into the leeward one. That became a particular problem when the leeward tank was already full of water.

The job was now to install ball-type shut-off valves on the hosepipe from each tank upstream of the T-valve that joined the tanks to the system. Since the hosepipe looked like it came from the Pearson factory, it was an opportunity to replace that as well. This diagram shows how the water system was configured when I purchased the boat. I've left out the shore water connection and water heater as they were not affected by these changes.

The primary goal of this project was to separate the two tanks and provide the benefit of using only one water tank at a time. That way I would know approximately how much water was left on the boat when one of the tanks was empty. The project was really pretty simple, add a ball valve to the hosepipe from each tank, and add a check valve upstream of the 12-volt water pump. The implementation was a little more involved.



The biggest fun was trying to slip the new, reinforced hosepipe onto the existing barb connections at the water tanks, T-valve, ball valves and water pumps. The lack of stretch in the hose diameter made each connection a major isometric exercise. (I learned later that warming the hosepipe with a heat gun or even a hair dryer will soften it enough to give some desired stretch.) I also found out that the foot pump was leaking and needed rebuilding. After getting the wrong kit the first time, my first rebuilding attempt caused the pump to run backward. Oops. Second time was a charm. I also found that there was backpressure upstream of the 12-volt pump into the foot pump so I added a check valve to the circuit.

The two ball valves are located on either side of the T-valve and mounted just under the sole, forward of the opening in the galley. This makes them easy to reach and out of the way. I later learned that the Pearson 323 design called for them to be installed under the galley sink, which is probably a better place but would involve the use of substantially more hosepipe. This new system solved the water overflow problem and lets me manage my water usage and storage better.

**Things I'd do differently:** Use a heat gun or hair dryer to heat the hosepipe so it would slip on the barb fittings more easily.

Cost: US\$70.00 (does not include foot pump rebuild kit)

Time: 2 Days (although it would have been shorter if I didn't have to rebuild the foot pump... twice!)