

VP-6 FLUSHING THE FEED PUMP

Catalina, Newport, Monterey, and Watermachine model watermakers are equipped with Stainless Steel Vane Pumps that pump the feed water to the Clark Pump Pressure Intensifier. These are close tolerance pumps with precision bearings and seals. Stainless Steel is subject to a form of corrosion known as “Crevice Corrosion” which attacks the metal when it is in contact with stagnant sea water. When the watermaker is making water and sea water is flowing through the pump this form of corrosion won’t take place, but if the pump is left with sea water inside it when the water maker is turned off, the internals of the pump will be attacked. This can show up as a leaking seal which allows water to get to the bearings in the pump head and the motor, as well as leaking out into the boat. The “Auto Store” fresh water flush feature is designed to insure that the pump is always filled with fresh water when the unit is not operating. When the system is first installed and occasionally thereafter the flush cycle should be tested to insure that the pump is properly protected.

Because the maximum flow rate for the Charcoal Filter must not be exceeded, the watermaker is adjusted at the factory, either by cycling the feed pump on and off or by adjusting its speed, to use 1.5 gpm (6lpm.) To operate properly, the boat’s fresh water system must be able to deliver **1.5 gpm (6lpm) at the flush valve**. If the fresh water flow is insufficient, sea water will be drawn in to make up the difference. This will result in salt or brackish water remaining in the watermaker after the flush.

The best way to ensure that the watermaker is properly flushed is to test the water coming out through the brine discharge overboard fitting. This water should be less than 1000 ppm salinity at the end of the flush. If it is higher than 1000ppm either the flush cycle is too short or sea water is being drawn in. To find out if sea water is being drawn in close the sea cock at the beginning of the flush cycle. If the fresh water supply is inadequate the “Check Sea Strainer” or “Service Prefilter” alarm will sound due to a high vacuum at the feed pump suction. If the flush water supply is only slightly below the required flow the alarm may not sound, but there will be an improvement in the salinity of the overboard discharge water. If the discharge water salinity never drops below 1000 even though you have the seacock closed then the flush cycle should be lengthened.

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