HS-LF-6 POOR PRODUCT QUALITY, VANE PUMP

High salinity is directly related to both feed pressure and flow. On Spectra watermakers this can be caused by restricted suction, air leaks, restricted discharge, cavitation, a worn or damaged feed pump, or restricted brine overboard piping. Internal leakage in the Clark pump or a failing membrane can also cause high salinity. Be sure all filters and strainers are clean before proceeding.

On systems with vane pumps (300, 400, 700, and 1000 GPD models) the first thing to check for is air leakage into the system. This will cause lowered feed flows and erratic salinity readings. Check for air bubbles flowing along in the feed pump suction hose, the feed pump discharge line the brine discharge hose or the product hose. Spectra vane pumps make a distinctive buzzing sound if there is air in the feed water. Air can only get into the system on the suction side of the feed pump. Check the strainer, the 50 micron filter, and all the joints and hose clamps. Repair air leaks before proceeding. Always grease the threads and o-rings on the strainers and filters.

Check all the hoses for kinks or restrictions. Check that the pressures and flows are normal. On manual systems check the product flow rate and feed pressure. If product flow is low see the HS-LF7 Flow Test bulletin on how to proceed. The problem could be a worn out feed pump, misadjusted pressure regulator, or faulty Clark pump.

If product flow is normal but salinity is high the problem may be the membrane. Membranes can only be tested by putting them into a watermaker that is known to make good water. If testing is not possible try cleaning the membrane with SC-3 acid cleaner. Use SC-2 Cleaner only when all else fails.

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