

# Spectra Vane Pumps

**The vane pump is a precision device. There are several factors that will impair service life.**

1. Dirty Water. It is imperative to have a 50 micron prefilter installed before the feed pump.
2. Inadequate flushing. Make sure the software is up to date (A-24 or later) and that the flushing sequence is set properly. Have a Spectra Service technician check this at your next service interval.
3. Electrolysis and galvanic corrosion will shorten the pump life. We recommend that the pump motor be grounded to the ships bonding system or DC ground.
4. In older Newport systems the 50 Micron filter is before the service valve. Be very careful to not pull debris into the pump during a maintenance procedure. Make sure that any chemicals are well dissolved before starting the pump.
5. On long voyages it is advisable to carry a spare feed pump.
6. On 400 systems Periodically check the charge level on the accumulator that is on the feed pumps discharge side. It should be set at 60 PSI (4.2 BAR).
7. Make sure that the check valve located in the inlet module is working properly. There is an improved and more robust version that can installed. Order check valve # PL-CKV-3/4F-F, and nipple PL-NP-3/4X2

Old Style



New Style



Note: AS of March 2004 all Spectra feed pumps have one piece 316 SS shaft rotor assemblies.

## Vane Pump Replacement

**Note: System electrical current will often run 15% to 20% higher upon replacement of the feed pump during the break in period. It is often necessary to install larger circuit protection during the first 24 hours of operation.**

Remove the front cover of the pump control module. Leave filters attached.



Loosen nut on the black plastic tube.



Loosen the V band clam until pump head can be removed.



Loosen the hose clamp on the inlet hose.



Drop the pump down and remove the coupling tang .

Remove the inlet hose by rotating the pump counterclockwise



To Reinstall, open the band clamp all the way. Make sure the coupling tang is in place. Tang ends may be different width. Mate the pump flange to the motor flange. Hold the pump firmly against the flange while lining up the clamp. Squeeze the clamp over both flanges and hold the pump in place while you tighten the clamp screw.

The Plastic tube nut (400 systems) should be just past hand tight. *Do not over tighten.*

On 700/1000 systems use two wrenches to tighten the stainless tube nut firmly.



**Computer Settings:** These are typical computer settings for standard Spectra systems. Unless otherwise specified, all other values remain the default Newport 400 values.

**Ventura:**

Max Pressure: 125  
Displacement: 7%  
Flush Duration: 2  
Pump On Time: 3  
Pump Off Time: 0

**Catalina 300**

Max Pressure: 125  
Displacement: 10%  
Flush Duration: 5  
Pump On time: 3  
Pump off time:6

**Newport 400:** (12 and 24v DC)

Max pressure: 150  
Displacement: 10%  
Flush Duration: 6  
Pump On Time: 3  
Pump Off Time: 3

**Newport 400 AC Version:**

Max Pressure: 150  
Displacement: 10%  
Flush Duration: 6  
Pump On Time: 3  
Pump Off Time: 0

**Newport 380 Modular Kit:**

Max Pressure: 140  
Displacement: 10%  
Flush Duration: 3  
Pump On Time: 3  
Pump Off Time: 0

**Newport 700:**

Max Pressure: 200  
Displacement: 12%  
Flush Duration: 7  
Pump On Time: 3  
Pump Off Time: 0

**Newport 1000 or Monterey:**

Max Pressure: 250  
Displacement: 20%  
Flush Duration: 8  
Pump On Time: 3  
Pump Off Time: 0