

Positive Displacement Pump Troubleshooting

Unsuitable water additives

Addition of water additives that are incompatible with the BUNA-N nitrile seal and mechanical seal of the pump will cause premature failure of these sealing devices. Haskris recommends using potable distilled water in the system and changing the water at least once a year, if not sooner. Use of potable distilled water and annual replacement will minimize the amount of total dissolved solids circulating to the application being cooled by the Haskris. Changing the water will also reduce the need to introduce chemical additives to the water to prevent biological growth.

Pump overheating – Cavitation

Suction cavitation occurs when the pump suction is under a low pressure/high vacuum condition where the liquid turns into a vapor at the eye of the pump impeller. This vapor is carried over to the discharge side of the pump where it no longer sees vacuum and is compressed back into a liquid by the discharge pressure. This imploding action occurs violently and attacks the face of the impeller. An impeller that has been operating under a suction cavitation causes premature failure of the pump. Cavitation also reduces the amount of water available to the seal for cooling. This lack of water creates extra heat that the mechanical seal and bearing material is not designed to handle. A rumbling/cracking noise (pump sounds like it is pumping rocks!) is a typical sound produced by these pumps when cavitating. Check the nylon suction strainer for debris, slime, algae, etc., and clean with a soft bristled brush or replace as necessary. Check suction hose for kinks or collapse of the interior of the suction line. Clean or replace the strainer as necessary. Maintaining the Nylon Suction Strainer will ensure a long and useful pump lifetime.

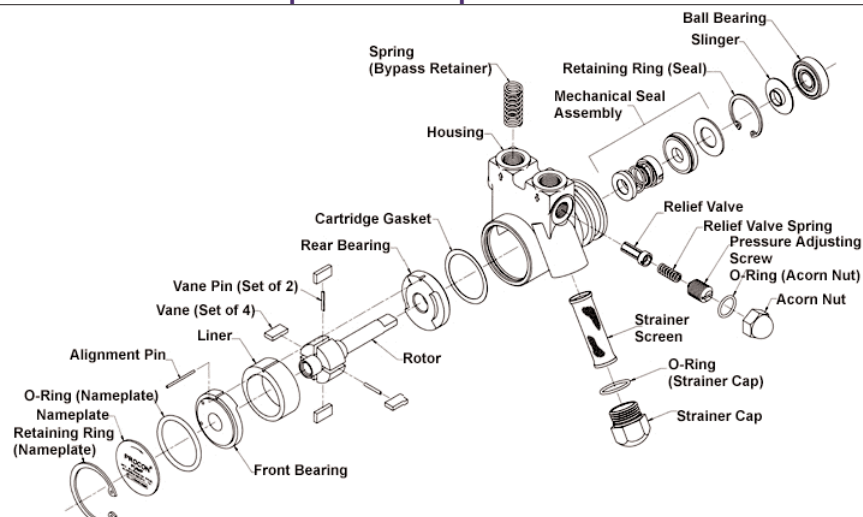
Abrasive particles in the water

The nylon suction strainer will prevent particles larger than 100 microns from entering the pump. Particles larger than 100 microns will score the face of the mechanical seal and bearing surfaces. Clean or replace the strainer as necessary. Maintaining the Nylon Suction Strainer will ensure a long and useful pump lifetime.

Shaft Eccentricity

Haskris uses a 3-point mount to positively attach the pump head to the motor. Excessive eccentricity will cause premature wearing of the coupling and may also cause uneven wear on the mechanical seal assembly. Check to make sure all 3 mounting bolts can be tightened. If any of the bolts can not be tightened, the threads in the mounting holes must be re-tapped or the motor must be replaced.

Isometric View of Positive Displacement Pump



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