

Excessive High Pressure Water Pump Vibration

There are three reasons that a wanner pump may vibrate excessively.

1. The pump may have air in it from a leak in the hose, or the tank running low/dry. The pump will generally take care of this itself if allowed to do so. Simply turn the unloader valve pressure way down (turn the adjusting screw out/counter-clockwise) and let the pump move a high volume of water at a low pressure. This will often sweep the bubbles out. If this does not work, leave the unloader valve open and go out into the tunnel and remove nozzles or disconnect a line so that, again, the pump can pump a high volume of water at low pressure.

Make sure to find the cause/source of the air. If there is a leak in the inlet hose, that needs to be fixed.

Another thing to check is to make sure that the water supply and float valve can fill the tank fast enough to keep the tank water level from dropping too low so that bubbles are retained in the water as it is drawn into the suction line to the pump. This can happen on busy days if the water pressure is too low or the float valve is acting up. Line scale can plug the float valves.

2. Another cause of bad vibration is a ruptured diaphragm or broken or fouled valve. When a diaphragm breaks, the pump will have trouble developing pressure and if you check the oil in the pump under the red cap on the top of the pump body, it will not be clean oil, but it will be a water-oil emulsion, and may be a sick, dull green color. Install a diaphragm repair kit or a complete repair kit if the valves have been damaged and change the oil. If dirt, like a piece of line scale or a tiny stone particle has gotten into a valve between the valve plate and the seat, the valve can't close off and the cell can't build pressure. There is no way to positively diagnose this; it's more of a process of eliminating the other potential causes. If the problem has been isolated to the pump, air has been eliminated as a cause, and there is no sign of diaphragm breakage in the oil, it's probably a valve problem and the pump has to be opened up and inspected.
3. We have seen the third cause only once in a brand new High Pressure Pump Stand. We dealt with this for four weeks, trying everything including the replacement of the Wanner pump, and nothing was alleviating the problem. We tested EVERYTHING else except the unloader valve, and so finally determined that it had to be the valve. When the valve was replaced, the problem went away. The problem valve was returned to Wanner and all they found was some excess grease in the valve. They cleaned it, and we put it back into service.