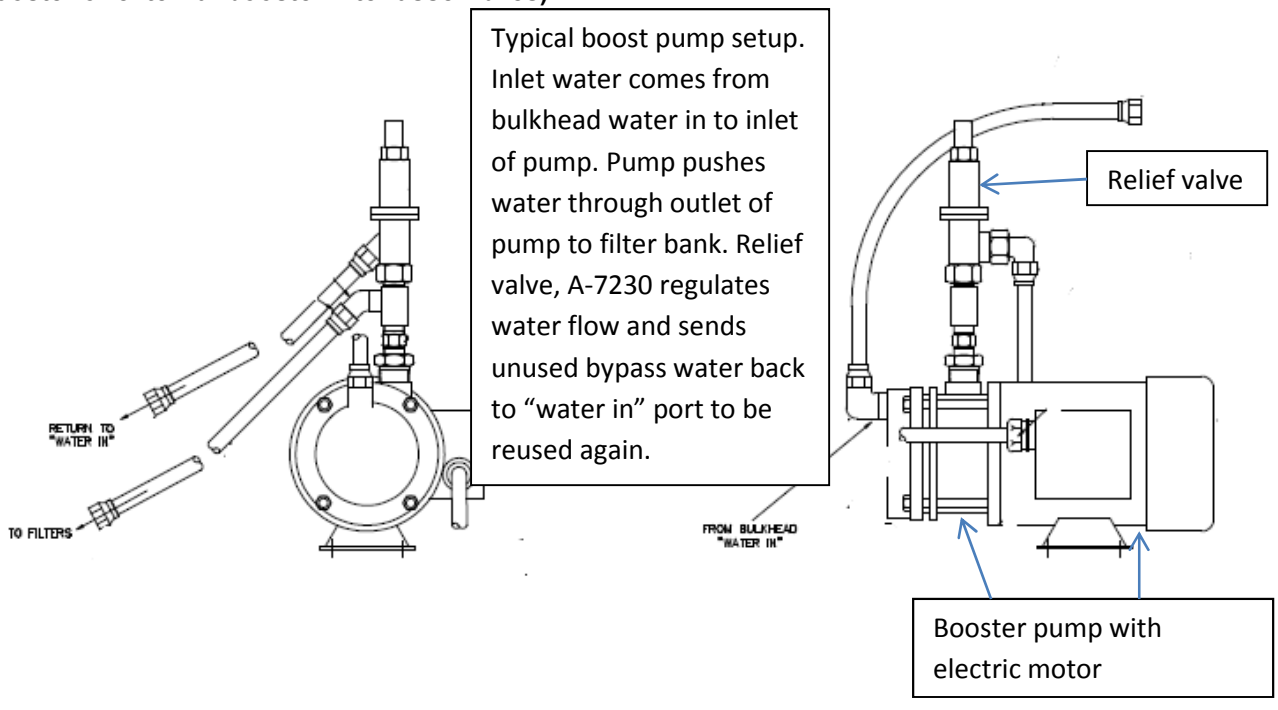
Check your inlet water system

The inlet or supply water is customer supplied into the high pressure pump usually at the bulkhead and marked "inlet water". The supply must be for the recommended amount, check your manuals or install documentation to determine recommended gallons per minute for supply water. Most modern pumps except for the 5X and 7X (unless a retrofit kit is installed), 30SA and much older model pumps, have an inlet solenoid valve inside the pump frame on the bulkhead plate (the other side of the "inlet water" port.

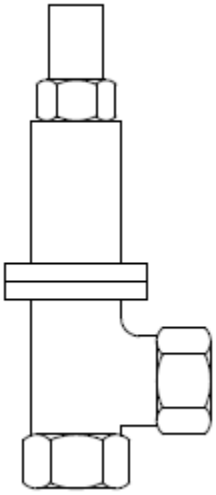
Typical solenoid. This model is part number A-12812 which is popular with most Flow pumps. Always check to see if components like solenoids are bi-directional installing a replacement unit. This model is not and has an "in" port and an "out" port. If solenoid is not working, check for control voltage at din connector. Most modern pumps are 24VDC while older models are 110 VAC.

From the solenoid the water travels to the inlet of the booster pump (pumps such as the 5X, 9X, 30SA, 50i.s. stonecrafter, direct drive pumps and much older model pumps either have no booster or external booster/filter assemblies).

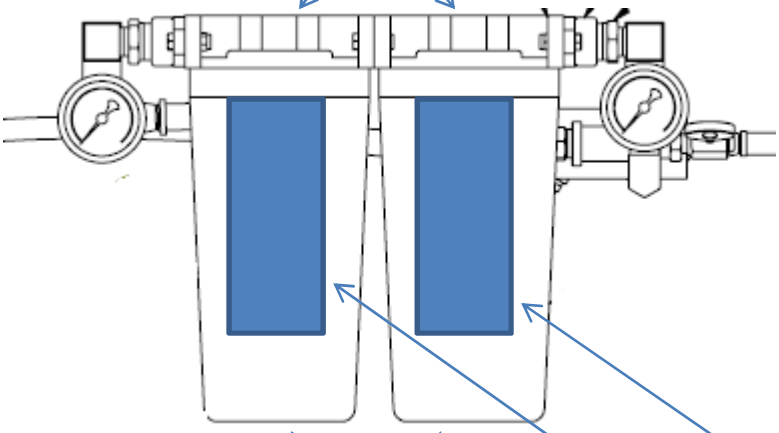


Typical boost pump setup. Inlet water comes from bulkhead water in to inlet of pump. Pump pushes water through outlet of pump to filter bank. Relief valve, A-7230 regulates water flow and sends unused bypass water back to "water in" port to be reused again.

When replacing the booster pump or relief valve, you must check relief valve setting. If water pressure is too high or low this must also be done. Sometimes when the valve has been in the system for a long period of time, the spring and/or poppet/seat arrangement can develop a buildup of dissolved solids which can hamper or affect the operation of the valve. Tapping around the body up and down the length of the body can sometimes free up the affected parts. Use a brass hammer or drift if possible.



When installing new or resetting the valve, take off the brass cap. Loosen jam nut on adjustment screw and run it upward on the screw about half an inch. Use an socket and counting the number of turns or marking the adjust screw in starting position, turn screw clockwise until you feel it to just bottom out. Do not run it down too far but just seat it and bring the screw back to the starting position and start pump to see where you are at. From there adjust screw to raise or lower water pressure. With 60K units, it is recommended to set the valve with the inlet filter gauge deflecting just above 60psi with the intensifier in full stroke operation. With 94K systems, 80psi is the recommended setting.

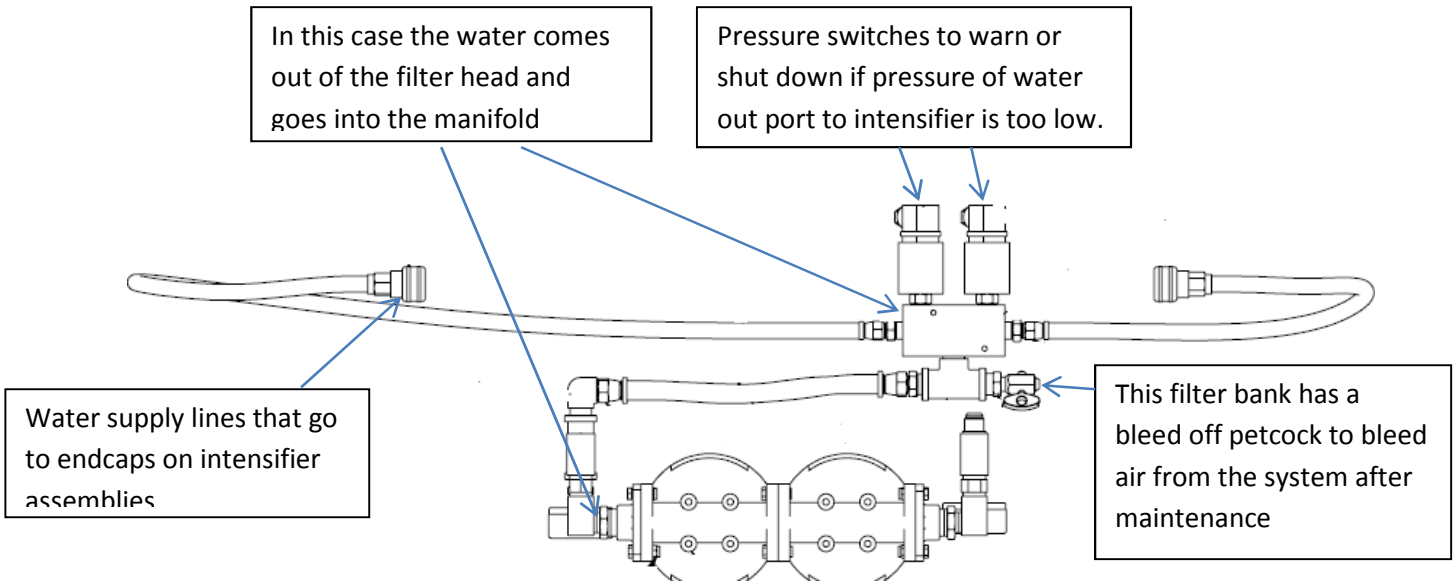


Determine the inlet side of the filter bank which is the side the hose from the booster pump or inlet water port is coming from. Water goes into filter head and down into the filter bowl. The water then gets extruded into the center of the filter elements, up into the filter head and into the next filter head, repeating the process.

Filter elements. In most cases the first inlet filter a 1 micron size and the second filter inline is a .5 micron filter

Now lets follow the water to its final destination which is out to the intensifier(s). The water has now went through both filters and will go into a manifold which will have the necessary hoses to attach to the intensifier end caps. In the manifold there are usually pressure switches. One

would be a 40psi shutdown switch and if available a 50 psi warning switch. Some models and types of pumps may have psi rating switches.



Make sure you have sufficient water flow and volume going through your system. Your manuals and installation documents can tell you what is required. The intensifier must also be running efficiently to adequately troubleshoot problems in the filtered water system.

If you have a softener or any other treatment that feeds into intensifier pump, make sure they are operating correctly. Water softeners must not regenerate and purge during usage of Waterjet system.

If gauges show low readings, the filters could be clogged or the relief valve may need adjusting or the booster pump may be bad or not running at all. Check everything out.