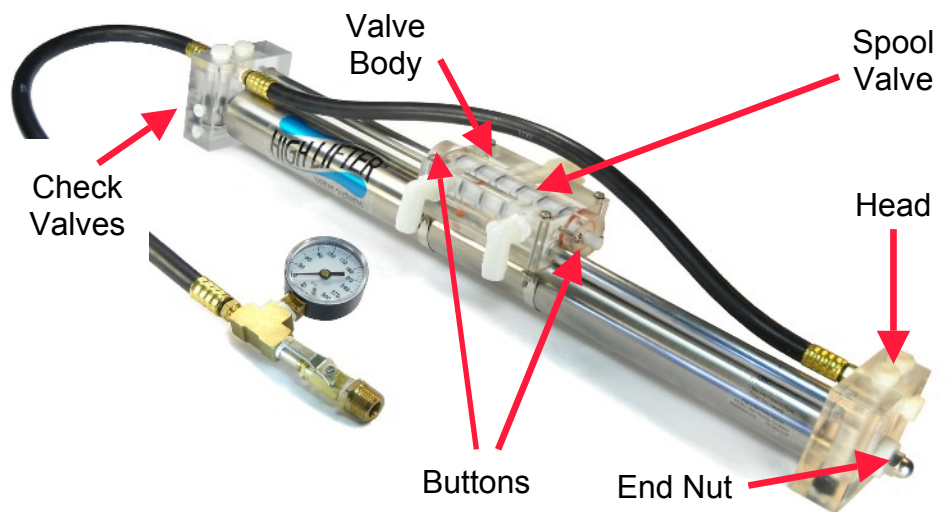


**Before taking your High Lifter apart, or sending it in for repairs, it's good to do a few simple tests to determine whether the problem is in the High Lifter or in your water system.**

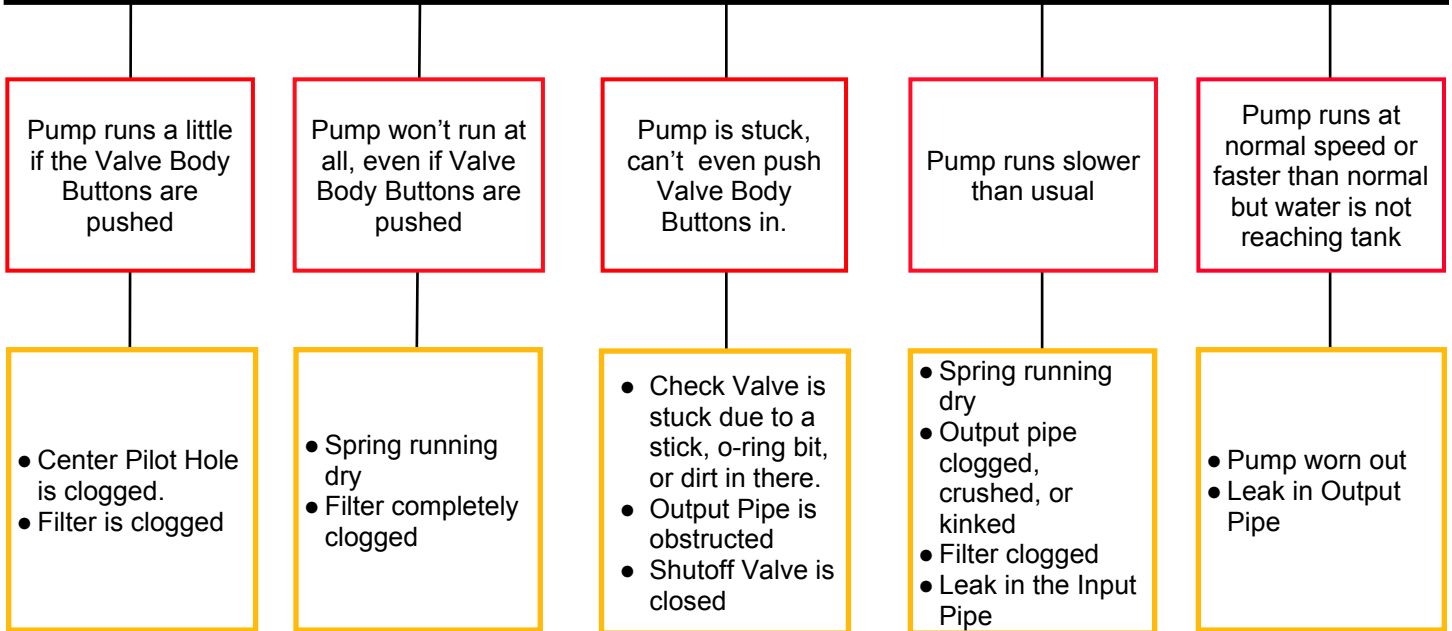
1. Check the water filter. Make sure water can flow through it freely. Disconnect it from the pump and run water through it, then remove the filter element and see if the water flows faster without the element. Sometimes algae or clay can clog up the filter element so badly that it has to be cleaned with toothbrush. See "How to Clean the Filter and Use a Settling Tank" and "How to Deep Clean the Filter".
2. Disconnect the outlet pipe from the High Lifter. Does the pump run normally with the outlet line disconnected? On rare occasions, the outlet line can get crushed or plugged, restricting the flow.
3. Observe the Output Pressure Gauge when the pump is running. If the Output Pressure Gauge reads lower than normal, there is probably a leak in the output pipe somewhere, or you are running out of water in your spring. Higher than normal output pressure can indicate a blockage in the Output Pipe.
4. Observe the Input Pressure Gauge when the pump is running. Lower than normal pressure can indicate that your spring is running dry, or the filter is clogged, or there is air in the line, or the pipe is clogged.
5. **Perform the Stall Test. See "How to Perform the Stall Test". The Stall Test will tell you for sure whether the problem is in the pump or in your water supply.**

### Some other things to check:

1. Center Pilot Hole in the Valve Body gets clogged. Pump gets stuck, runs if you keep pushing the buttons. This is a very common problem, due to not following the correct filter cleaning procedure.
2. Sticks, rocks, or o-ring bits in the Check Valves in the Heads. Weak on one side or gets stuck.
3. Broken Spool Valve O-Rings. You can see pieces of the o-ring in the Valve Body. Erratic or noisy operation.
4. Air bubbles in the input pipe. This can greatly reduce the input pressure if there isn't much to begin with. It's a particular problem if the input pipe has to traverse flat areas.
5. Freeze damage. Often overlooked as a problem. You will see big leaks out the sides of the Heads, and the End Nuts will be loose and can't be tightened, they just keep pulling out. Pump won't run.
6. Bears and rats gnawing on pipes, causing loss of input water or bad leaks in the output pipe.
7. Valve Body is loose or misaligned on Barrel. Pump gets stuck. A rare problem.
8. Once in a blue moon the Barrel will get dented somehow, causing loss of pressure on one side.
9. Popped Low Pressure Piston O-Ring. Causes loss of pressure on one side, the stroke on that side is much faster than on the other side.
10. Algae and other deposits on the tubes in the clear plastic pieces looks bad but is generally not a problem because it stays put.
11. Badly worn out pump, just can't do it any more. Pumps can wear out in year if you don't use a settling tank for your stream water.



## Troubleshooting Chart



See the Owner's Manual for a more detailed Troubleshooting Flow Chart

## Four Things to Try

