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9 Flush Valve Troubleshooting Tips

1) Flush Length Too Short

If the length of the flush is too short, or if the valve turns off immediately when activated, there are several possible causes. First, the diaphragm assembly could be worn out or damaged. Secondly, the handle assembly might be damaged. If either of these is the case, simply replace the diaphragm assembly or handle assembly. Having a low consumption diaphragm assembly installed in a water saver or conventional fixture could also be the cause of a short flush. In this case, check the label or markings on the fixture to learn what the required flush volume is. Then replace the diaphragm assembly or relief valve with one that is designed for the correct flush volume. View diaphragm assemblies and handle assemblies to find the repair parts you need.

2) Flush Length Too Long

Sometimes, the duration of a flush can be too long. A common reason for this is that the by-pass orifice in the diaphragm may be clogged. To resolve this issue, remove the diaphragm assembly, disassemble the filter rings from the diaphragm, and rinse the diaphragm thoroughly. Be aware that the size of the orifice in the by-pass is of utmost importance in the proper metering of water into the upper chamber of the valve. Do not enlarge or damage this orifice. If cleansing does not correct the problem, replace the diaphragm assembly. Read our Diaphragm Kit Guide for help finding the best replacement. Another reason for a long flush could be that the relief valve or the inside cover are damaged. Replace these parts if so. If a water saver/conventional diaphragm assembly is installed in a low consumption fixture, that could also cause a long flush. In this case, check the label or markings on the fixture to learn what the required flush volume is. Then replace the diaphragm assembly or relief valve with one that is designed for the correct flush volume. One more possible cause is that the line pressure has dropped and is not sufficient to force the relief valve to seat. To resolve that problem, shut off all control stops until the pressure has been restored, then open them again. Read our Control Stop Guide for more information regarding proper control stop installation.

3) Flush Valve Does Not Flush

Sometimes the valve might not flush at all. Check to see if the control stop or the main valve supply is closed. If they are, open them. General wear and tear can be expected over time, so if your valve isn't flushing, it could be because the handle assembly is worn out. To fix it, simply replace the handle assembly, or use a handle repair kit. The same goes for the relief valve. It can get damaged over time, so it may need to be replaced.

Other causes of no evacuation:

Cause: Low pressure (>25 psi / 1.7 bar)
Solution: Address plumbing system deficiencies or adjust control stop to increase flow pressure

Cause: Low consumption or urinal diaphragm installed in older closet.
Solution: Install correct GPF diaphragm

Cause: Cover not properly tightened for unit using dual filtered bypass diaphragm.
Solution: Tighten cover

Cause: Incorrect piston installed (in piston type flushometers.)
Solution: Match piston GPF to fixture GPF

Cause: Piston lip seal degraded (in piston type flushometers)
Solution: Replace piston assembly

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4) Continuously Runs

There are a couple of different reasons the unit could continuously run with no shut-off. First, understand that the potential causes and solutions are dependent on whether the unit is diaphragm or piston type.

For Diaphragm Type Flushometers:

Cause: Solenoid stuck open
Solution: Replace solenoid assembly EBV-136-A

Cause: Debris blocking diaphragm bypass
Solution: Clean diaphragm to clear bypass orifice

Cause: Debris under diaphragm
Solution: Remove debris

Cause: Low pressure drop
Solution: Check facility/municipal line pressure

Cause: Diaphragm assembly compromised
Solution: Replace diaphragm assembly with proper GPF kit

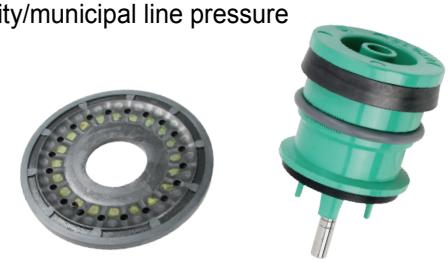
For Piston Type Flushometers:

Cause: Debris blocking bypass
Solution: Clean piston to clear bypass orifice

Cause: Debris under piston
Solution: Remove debris

Cause: Degraded relief valve seat
Solution: Replace the piston assembly

Cause: Low pressure drop
Solution: Check facility/municipal line pressure



5) Splashing Water

Water splashing out of a fixture can be unsanitary, as well as unsafe, creating a wet, slippery floor. If this is happening with your flushometers, there are two potential causes. One is that the control stop may be open wider than necessary. The other is that you may have the wrong diaphragm assembly installed in your valve. If you have a water saver/conventional diaphragm assembly installed in a low consumption fixture, check the label or markings on the valve to learn what the correct flush volume is, then install the parts that match that volume. Also, you may have a closet diaphragm assembly installed on a urinal. To resolve this issue, replace it with a urinal diaphragm assembly with a flush volume that matches your valve. Read our Diaphragm Kit Guide or Control Stop Guide for additional guidance.

6) Insufficient Flush

There may be times when there is an insufficient volume of water to adequately siphon the fixture. The first thing to do is make sure that the control stop is open wide enough. Another cause could be that you have a urinal parts kit installed in a closet valve. In that case, simply install the proper parts kit. You may also have a low-consumption valve installed on a non-low consumption fixture. Again, simply install the proper Sloan repair parts to correct the problem. If you have a water saver kit installed in an old, non-water saving bowl, that could cause insufficient water volume as well.

Finally, there may be inadequate volume or pressure at the water supply. If no gauges are available to properly measure the supply pressure or volume of water at the valve, then completely remove the entire diaphragm assembly and open the control stop to allow water to pass through the empty valve. If the supply is adequate to supply the fixture in this manner, then the restriction ring (A-164 on plastic guides) should be removed from the bottom of the guide to provide additional flow. If additional flow is still required, the refill head (A-170) may be replaced with a brass low flow refill head (A-85). Should none of these steps prove satisfactory, then steps should be taken to increase the pressure and/or supply.

7) Inconsistent Flush

When flush duration is randomly long or short, and then normal again, then there could be pressure fluctuation within the facility. The solution to this is checking the plumbing system pressure and flow capacity and adjusting accordingly.

8) Noise at Shut-Off

For diaphragm type flushometers: If you're hearing a chattering noise inside the valve during a flush, there are several possible parts that could be damaged: the relief valve, the inside cover or the diaphragm assembly. Continue to check each one until the problem is found, and then replace the parts accordingly.

Piston type flushometers: If you hear a 'thump' or 'bang' upon valve shut off then there are three possible causes and solutions:
Cause: High flow pressure
Solution: Adjust control stop to decrease flow pressure. Decrease plumbing system flow pressure.

Cause: Piston lip seal degraded
Solution: Replace piston assembly

Cause: Loose plumbing
Solution: Secure piping properly and/or check hammer arrestors

9) Leaking Water

There are a variety of places that a flushometer can leak from. Listed below are all of the possible leaky flushometer causes and solutions, listed by the part of the flushometer the leak is coming from.

Handle Leak
For diaphragm type flushometers: If you see water leaking around the handle, the handle seal or handle assembly is worn or damaged. If the seal is worn, a handle repair kit will solve the problem. If the handle assembly itself is damaged in some way, you will need to replace the entire assembly.

Tailpiece Leak
For leaks occurring at the tailpiece next to the control stop, the cause could be a worn or degraded O-ring. Fixing this leak means replacing the H553 O-ring.

Vacuum Breaker Leak
For leaks occurring at the vacuum breaker, the cause can be from two things, depending on the leak location, although the solution is the same for both: Clean the vacuum breaker tube and replace the vacuum breaker sack with V551A or V651A high back pressure vacuum breaker repair kit. If the dripping comes from above the vacuum breaker during or after a flush, then the vacuum breaker sack is damaged from over-tightening the vacuum breaker coupling. If it's leaking from below the vacuum breaker, it's due to the vacuum breaker sack becoming worn or degraded over time.

Control Stop Leak
A leak coming from the control stop adjustment screw (where it says Sloan Valve around the screw) is caused by an O-ring inside of the control stop being worn. The solution to this problem is the H541ASD control stop repair kit. (Use the H543ASD control stop repair kit for older units.)

Spud Flange Coupling Leak
A leak from the spud flange coupling (this is where the flushometer meets the fixture) can be caused by two scenarios: either the spud coupling has loosened and it needs to be tightened, or the spud flange coupling gaskets have become worn and need the following replacement parts: A F3 friction ring and either a VBF5 gasket (1-¼" or 1-½") or a F5 gasket (¾" or 1").

Flushometer Cover Leak
If you see water leaking from threads beneath the flushometer cover, there are four possible causes and solutions:

Cause: Cover not tight enough
Solution: Turn off water and tighten cover

Cause: Cracked inside cover (Crown)
Solution: Replace inside cover (CR-124-A - Call to order)

Cause: Worn cover gasket (GEM)
Solution: Replace cover gasket (G-106)

Cause: Worn cover gasket (Naval)
Solution: Replace cover gasket (CN-76/CN-105 - Call to order)