

Delany Products: Pulsar & Pulsar Plus

Troubleshooting Chart

Issue	Comment	Likely Cause	Solutions	Tip
VALVE WILL NOT START TO FLUSH	Once you open the Control Stop, the valve should go through a flush cycle and shut down.	1) Control Stop is closed.	1) Open Control Stop.	
VALVE WILL NOT FLUSH	1) Start by putting your hand in front of the sensor to see if it flushes. Then try the Override Button, if it works then unit is getting power. 2) The reason that the valve will not flush if the range is too short (or turned all the way down) is because it will not see a user. 3) On the other hand if the range is too long, it may be seeing an object in front of it but never sees it move away due to being in constant contact.	1) Valve is not getting any power. 2) Range is too short. 3) Range is too long. 4) The Control Stop is closed. 5) Component on circuit board is damaged/faulty.	1) Replace battery with new one (2CR5 battery) 2) Loosen set screws on PL3015A (head) and adjust the "white" range dial. Turn in clockwise to roughly a 10 o'clock setting, as if this were the face of a clock. (See Instructions Manual) 3) Inside the PL3015A, shorten range by turning "white" range dial counter clockwise. 4) With a screwdriver open the Control Stop. 5) Replace PL3015A with new head.	To verify if the battery is dead, first press the override button on the top. If the unit flushes, the battery is "good". Next easiest is exchange a "good" head and the "bad" one. If both valves now work, then go to Step #4. If it does "bad" still does NOT flush, then check the battery by substituting a "known" good battery from a working unit into the place of the problem head. If the battery is "good" and the range is properly set, then a component on the circuit board has become damaged and a new Pulsar head is required.
VALVE STARTS FLUSHING BUT CLOSSES IMMEDIATELY	The bypass is too large & shutting the diaphragm down too quickly, or the operating stem is not making contact the relief valve	1) Diaphragm is ruptured. 2) Diaphragm bypass is oversized or secondary bypass has occurred.	1) Replace diaphragm with appropriate #PL143 Drop-in Kit. 2) Check to make sure all parts are tight such as seat guide. Otherwise the bypass is damaged.	
FLUSH VOLUME IS NOT ENOUGH (SHORT FLUSH)	The water in the bowl is not starting the syphoning action to then clear the trap. Thus Delany valve can simply be tweaked with the regulation screw without opening the valve.	1) The refill of the toilet bowl is not sufficient enough.	1) Remove No. PL3015A (head) by loosening set screws. Gently lift the head and turn it over. Insert screwdriver provided into the red colored dial (discharge switch). Go to next highest setting. Each setting is 10% more water than previous setting.	
FLUSH VOLUME IS TOO MUCH	This sensor activated valve uses a solenoid which due to the nature of electronics can adapt its single to big range changes in pressure beyond the normal.	1) Water pressure is too high. 2) The discharge of the diaphragm is rated greater than the toilet. 3) The diaphragm's bypass is partially blocked. 4) Solenoid is partially blocked.	1a) Make sure the PSI of building is less than 80. (Install a PRV valve if necessary.) 1b) Turn the Discharge Switch setting down to reduce discharge. 2) "1b" should fix this. Otherwise insert a new diaphragm that properly matches the GPF of the diaphragm to that of the toilet. 3) Blow into bypass to make sure you can see clean and open bypass. Otherwise replace with a new diaphragm (PL143-?-ACQ). 4) Replace with new solenoid (#3008).	The best way to verify if the solenoid is the problem is to change a "known" good solenoid into the position of the solenoid in question. If valve now functions properly, you have verified the the solenoid was the problem.

VALVE CONTINUES TO "RUN" (FULL FORCE)	A flush valve "runs" because the upper chamber is not refilling to shut the diaphragm or piston back down on the main valve seat.	<ol style="list-style-type: none"> 1) The diaphragm bypass is blocked. 2) Debris is embedded into the diaphragm itself. 3) Diaphragm Guide is loose. 4) Solenoid is not closing. 5) Cup Washer is worn (#3074A) 	<ol style="list-style-type: none"> 1) Blow into bypass to make sure you can see clean and open bypass. Otherwise replace with a new diaphragm (#PL143-?-ACQ). 2) Examine the diaphragm closely and clean of any debris that may have lodged into the diaphragm rubber. 3) Hold diaphragm and tighten Guide by hand as much as possible. 4) Replace solenoid (#3008). 5) Replace Cup Washer (#3074A). 	The Pulsar Plus uses as standard the Delany Mashaerator® Diaphragm. The blocking of the bypass has shown to be a rare occasion.
CONTINUES TO RUN BUT ONLY SLIGHTLY (It weaps)		<ol style="list-style-type: none"> 1) The diaphragm auxiliary seat has debris embedded into it. 2) Water pressure is too low. 3) Main valve seat is loose. 	<ol style="list-style-type: none"> 1) Same as #2 above 2) Boost water pressure at pump or install an expansion tank. 3) Examine and tighten as needed. 	
PHANTOM FLUSH	This is a reference to a flush that occurs when no user is proximity of the particula unit.	<ol style="list-style-type: none"> 1) Range is set too long for that environment and reflecting off the surface. 2) Unit has circuitry problem. 	<ol style="list-style-type: none"> 1) Remove No. PL3015A (head) and shorten the range of the "white" range dial by turning it counter clockwise slightly. 2) Replace the PL3015A with a new one. 	The best way to verify if the PL3015A (head) is the problem is to exchange for a time with a "known" good head. If valve you have moved the "assumed" bad head too, now displays the same phatom flushing then as long as you already ruled out that the range is not the problem, then it is a bad PL3015A.
WATER SPLASHES FROM BOWL		<ol style="list-style-type: none"> 1) Water pressure is too high. 2) The discharge of the diaphragm is rated greater than the toilet. 	<ol style="list-style-type: none"> 1a) Make sure the PSI of building is less than 80. 1b) Slowly close down the control stop to slow the GPM coming into the valve. 	
VALVE WILL NOT PASS ENOUGH WATER TO INITIATE THE SYPHONIC ACTION OF BOWL	The flush valve is being choked of water to supply to the toilet.	<ol style="list-style-type: none"> 1) Control stop is not opened enough. 2) 3/4" urinal flush valve was installed in error. 3) Insufficient water is being supplied either due to low water pressure or udersized piping. 	<ol style="list-style-type: none"> 1) Open control stop all the way. 2) A properly sized bypass needs to be installed and 1-1/2" flush connection. Either change parts or install the proper W.C flush valve. 3) The water pressure or pipe sizes, or both, must be increased. 	A good way to establish if volume of water is inadequate to initiate the flush is by removing relief valve or even the entire diaphragm operating assembly. This will convert the valve into a simple elbow. If there is not enough water, you will know.
FLUSHING ACTION NOT QUIET ENOUGH (WEAK FLUSH)	1) The High Efficiency Urinal (0.125 GPF) is such a short flush that with high pressure (over 80 psi) the diaphragm may shutdown way too quickly.	1) Flush valve is shutting too quickly	1) Put in a Pressure Reducing Valve (PRV) and get pressure below 80psi	

WATER LEAKS FROM AIR VENTS OF FLUSH CONNECTION	Beads of water are dribbling down the flush connection after each flush.	1) Fiber washer that works with vacuum breaker is missing. 2) Vacuum breaker sleeve inside the flush connection has either a) ruptured due to age or b) fatigued due to harsh chemicals in water supply.	1) Order new Fiber Washer 2) Replace with new Delany Vacuum Breaker (#427A)	
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