

Delany Products: Empire

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. 2) Operating Stem in handle is not hitting Relief Valve	1) Open Control Stop. 2) Operating Stem tip is worn. Time to replace. Order 223-2A-K 3) Install correct length Operating Stem as indicated in parts listings.	If the operating stem is too short, a short term solution will be to place a dime between the operating stem inside handle assembly.
VALVE STARTS FLUSHING BUT CLOSES IMMEDIATELY	The bypass is too large & shutting the piston cartridge down too quickly, or the operating stem is not making contact with the relief valve	1) Piston cartridge bypass is oversized. 2) Tip of operating stem is worn.	1) Replace piston cartridge with appropriate piston cartridge repair kit. 2) Check to make sure all parts are tight such as seat guide. Otherwise the bypass is damaged. 3) Replace operating stem.	
FLUSH VOLUME IS NOT ENOUGH (SHORT FLUSH)	The water in the bowl is not starting the syphoning action to then clear the trap. More water is needed.	1) The refill of the toilet bowl is not sufficient enough.	1) Substitute the available higher discharge (GPF) piston cartridge.	
FLUSH VOLUME IS TOO MUCH		1) The discharge (GPF) of the piston cartridge is rated greater than the toilet. 2) The piston's bypass is partially blocked.	1) Insert a new piston cartridge that properly matches the GPF of the piston cartridge to that of the toilet. 2) Push the Masharator Spring or blow into bypass to make sure you can see clean and open bypass. Otherwise replace with a new piston cartridge.	
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.	1) The piston bypass is blocked. 2) Debris is embedded into the rubber of the cup washer of seat itself. 3) Piston guide is loose	1) Push the Masharator Spring or blow into bypass to make sure you can see clean and open bypass. Otherwise replace with a new piston cartridge. 2) Examine the piston cartridge closely and clean it of any debris that may have lodged into the rubber parts. 3) Tighten Guide by hand as much as possible.	The Empire uses as standard the Delany Mashaerator® piston cartridge. The blocking of the bypass has shown to be a rare occasion.
CONTINUES TO RUN BUT ONLY SLIGHTLY (It Weaps)		1) The piston seat has debris embedded into it. 2) Water pressure is too low.	1) Same as #2 above 2) Boost water pressure at pump or install an expansion tank.	
WATER SPLASHES FROM BOWL		1) Water pressure is too high. 2) The discharge of the diaphragm is rated greater than the toilet.	1) Make sure the PSI of building is less than 80. 2) 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 proper amount of water that it needs to supply to the toilet.	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 undersized piping.	1) Open control stop all the way. 2) A properly sized bypass (GPF) needs to be installed along with 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. 4) Make sure that all incoming supply lines to the bathroom are open.	A good way to establish if volume of water is inadequate to initiate the flush is by removing piston cartridge. 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. 2) The flush is weak and you have to hold handle to generate a good flush.	1) Put in a Pressure Reducing Valve (PRV) and get pressure below 80psi 2a) It is time for a new Operating Stem. Order the 223-2A-K 2b) Rubberflexer has reached the end of its life. Order the 223-2A-K	The 223-2A-K is the combination of the Rubberflexer® and the Operating Stem is one has gone bad, it is very common that both should be replaced for good maintenance.
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)	
VALVE LEAKS AT HANDLE		1) NON-Delany OEM Rubberflexer® was substituted.	Order Delany Genuine Rubberflex® Internal Handle Assembly (#223-2A-K)	