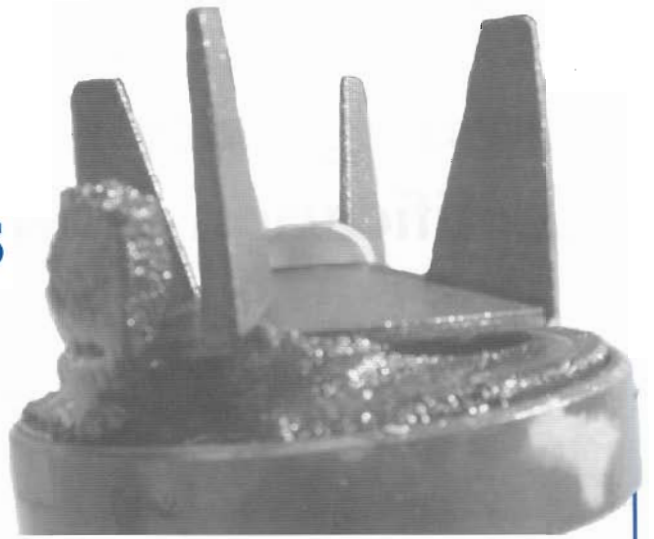


The Repair Guys



Mark -

By bending the spring you will make it stronger temporarily. This temporary strength can also increase the pressure drop across the valve affecting systems down stream from your valve. Also, the bend you made can become a weak spot and can eventually break. There are reasons that springs break or get weak and do need replacing, but we'll save that question for a later time.

- Jason

There are a few manufacturers that use check valve lids as guides for the poppet. We have found that when the hole is

During our work day, we field questions from contractors and technicians concerning repairs, installations, and general backflow prevention practices. This month, we would like to discuss two questions we receive and our answers. Everyone has different opinions on these subjects and we would like to hear yours. Contact us with your questions and ideas via email at: imark@backflowparts.com or mail us at American Backflow Products Co., P.O. Box 37025, Tallahassee, FL. 32315.

QUESTION —

Iam working on a 2" Febco 825Y. My initial test showed the second check valve holding against back pressure but leaking on the differential test. The rubber disc looks great and the seating surface is in good condition. Should I replace the spring, or maybe even stretch the spring to make it stronger?



FEBCO
BACKFLOW PREVENTION
Model 825Y

Cap is the guide for the check assembly.

Mark -

Do you mean 'stretch' or 'bend' the spring? There is a difference. If you merely stretch the spring it will return to its original position very quickly. If you bend the spring you are actually pulling the spring to a point where it changes the size and shape. Understand that these springs have been engineered to be a certain size and strength and if you alter that you have re-engineered the backflow preventer and may have not fixed the real problem.

- Jason

I agree with Mark concerning the spring. Sometimes after verifying a good rubber disc and a clean seat, we quickly suspect the spring to be the culprit. The test results would lead me to believe that the second check valve has some guide problems, which could be remedied with a little elbow grease. On this 2" device you are working with a poppet style check valve and your guide surface is actually a recess in the cover. Clean the poppet stem and inspect the cover for debris and or build-up. Once clean, the poppet should move in and out of the cover with ease.

drilled it is not always centered. This can help cause the poppet to bind in its travel. You can try adjusting the cover a little to allow the poppet to fall squarely on the seat. Once you have the unit closed up simply turn the lid counter-clockwise $\frac{1}{8}$ to $\frac{1}{4}$ of a turn. This may be just enough to let the check valve seat into place.

QUESTION —

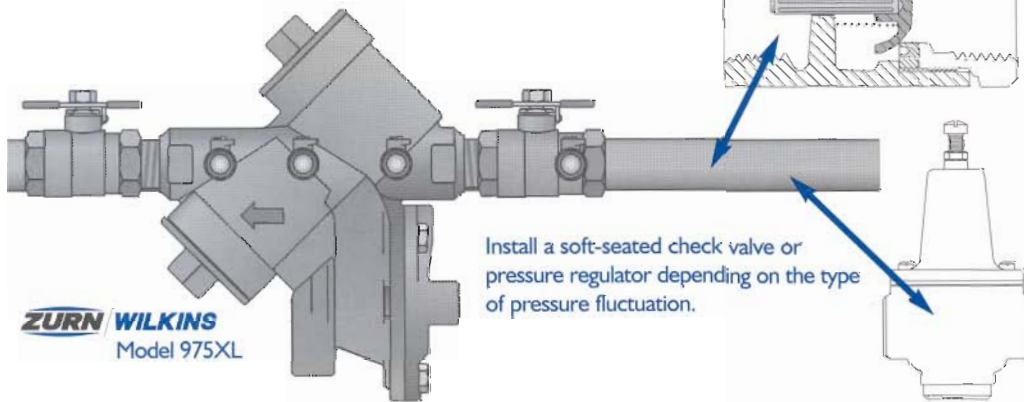
We have a 1" Wilkins 975XL reduced pressure principle assembly that is located in a mechanical room above other equipment. The customer calls us out about the relief valve dumping water periodically. When I test the valve, I can find nothing wrong with the internal components. Any suggestions?

Mark -

Sounds like you are dealing with pressure fluctuations upstream of the device. Check your line pressure gauge when you test the unit to see if it shows the pressure rising and lowering very quickly. If it does then the device is working correctly and it is just sensing the pressure spikes. Now we can figure out how to make it stop sensing the spikes.

- Jason

Pressure spikes can be stressful on the internal parts of the device. You want to find out how large the fluctuations are. If there is a 10 to 15 PSI fluctuation you could install a soft-seated inline spring-loaded check valve directly upstream of the device. This can help dampen the spikes just enough that the relief valve does not sense them.



Mark -

If the fluctuations are 20 to 30 PSI you may want to try a pressure-regulating valve just upstream on the device. This can be adjusted to help absorb larger spikes. The drawback to using this type of valve is that you will lower the downstream pressure to the customer. If they have pressure to spare than this will work good and will also help the life of the backflow preventer. If they don't have pressure to spare then try the inline check valve and an air gap drain adapter.

- Jason

Your customer may not want water on his other equipment so you definitely want to install an air gap drain on the device and pipe it to a floor drain in the mechanical room. Sometimes in this situation you may not completely get rid of the periodic discharge so have the right equipment installed so it does not cause any further problems. It would be a good idea to test this device at least twice a year. Because of the excess wear and tear it's a good idea to make sure the device is holding up well.

dw&bp



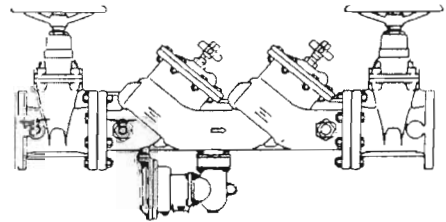
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