



The Repair Guys

Retrofitting

In our line of work, we field questions from contractors and technicians concerning repairs, installations, and general backflow prevention practices. We'd like to share some questions that we receive as well as our answers. Everyone has different opinions on these subjects and we would like to hear yours. Contact us with questions and ideas via email at: imark@backflowparts.com or mail us at American Backflow Products Co., PO Box 37025, Tallahassee, Florida 32315.

~ Mark Inman and Doug Taylor

Question:

I am a certified tester whose primary business is the testing & repairing of backflow devices. I was asked by a good customer of mine to look at a 6" Hersey assembly that was having problems. After testing and trying to repair the assembly, I have come to the conclusion we will need to replace the unit. I have never replaced a larger assembly such as this, and wanted to know what type of preparation I will need in order to do this job?

Doug:

Here at the Repair Guys we try to advocate repair over replacement, but there are situations where an assembly can no longer be repaired. The parts may no longer be available for the unit, the body may be damaged, or the parts and labor may be too costly. These are a few of the reasons an assembly may need to be replaced. This Hersey assembly is no longer produced, so in this situation we will need to replace the assembly.

Mark:

When replacing an assembly, one of the first things that we need to know is how much space we have to work with. As new assemblies are produced, they tend to become more compact in length. A new 6" assembly may be half the size of an assembly from a few generations ago. Once you have



decided on a replacement assembly, we will have to work on filling in the remainder of space from the older assembly. This space will need to be filled with either a make up spool or filler flanges. Make up spools are custom-made to fit the appropriate space, while flanges can be "stacked" together in order to fill the gap. One important thing to remember when computing the spool or flanges needed is the flange gaskets you will use. These gaskets will take up space, which will change the size of the spool or flange you use. Keep in mind that when stacking filler flanges it will require multiple gaskets.

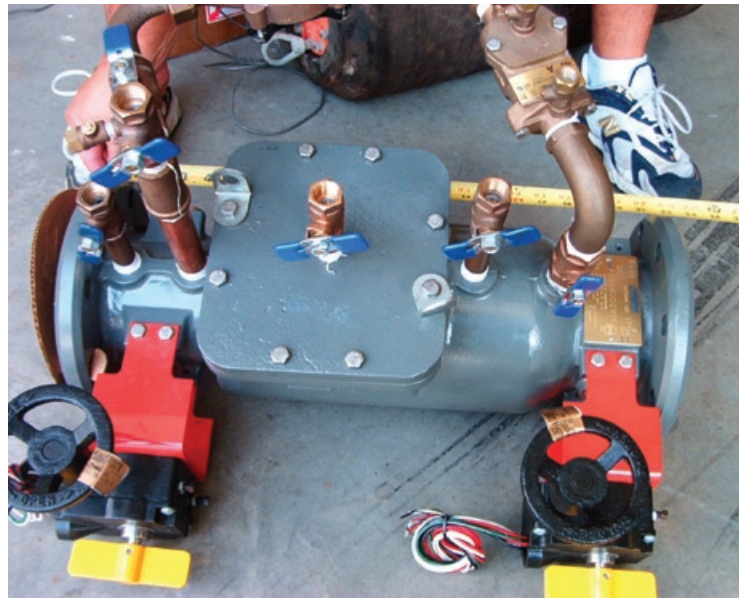
Doug:

Be sure to plan for any special equipment or manpower you may need to install the assembly. Unlike smaller units, larger assemblies may need two or more people to help with the installation. If you cannot do it with manpower, you may need to have a piece of heavy equipment on site to place the unit inline. It is also important to schedule a "shut down" with the customer. If you think it will take 4 hours to complete the job, ask the customer to be prepared for 6 hours without service. It is better to be safe than sorry.



Mark:

There are also some odds and ends you may need to get in order to finish the install. We had mentioned earlier about gaskets, which are used between the flanges of the spool or filler flange. You will need to make sure to have enough flange gaskets and bolts for the installation. If you use a filler flange you will have to cut all-thread rod because your standard flange bolts are not long enough to use with filler flanges.

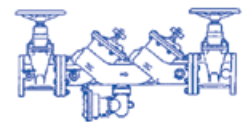


Doug:

One thing to consider if you are retrofitting a backflow assembly, is the effects it could have on the hydraulics of the system. Typically, newer assemblies will have a better flow rate and pressure loss compared to an older assembly. In these cases this should help the end user increase their downstream pressure. If you are installing an assembly in a system that does not have an existing backflow preventer, be sure to evaluate if this could cause pressure issues for the system. An example would be a fire suppression system where pressure reaching the sprinkler heads is so important. The difference in flow rate and pressure loss may require reengineering the system. It is important to always consult an engineer in these situations. ▼



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