

The Repair Guys



Mark Inman



Doug Taylor

In our line of work, we field questions from contractors and technicians concerning repairs, installations, and general backflow prevention practices.

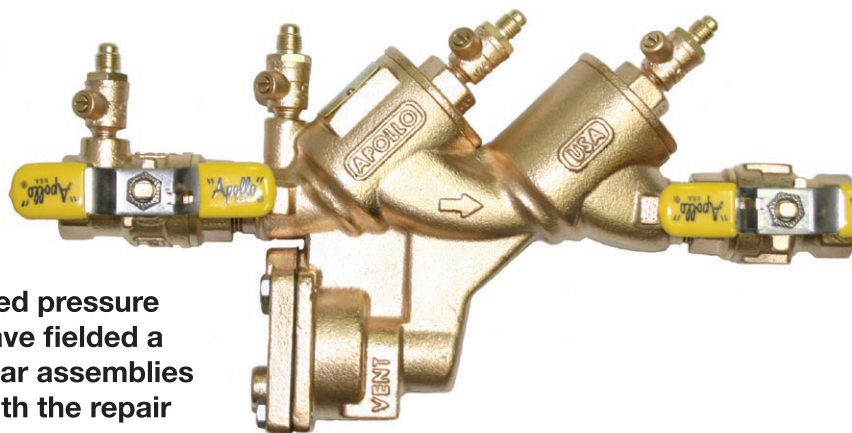
We'd like to share some questions that we receive as well as our answers. Everyone has different opinions on these subjects and we would like to hear yours.

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.

RPA4 Repairs

QUESTION:

This month we are going to offer some repair instructions for the Conbraco/Apollo RP4A series for sizes ½ inch – 2 inch. This is Apollo's newest version of a reduced pressure principle assembly. We have fielded a few calls on these particular assemblies and just wanted to help with the repair procedures on this model.



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Mark

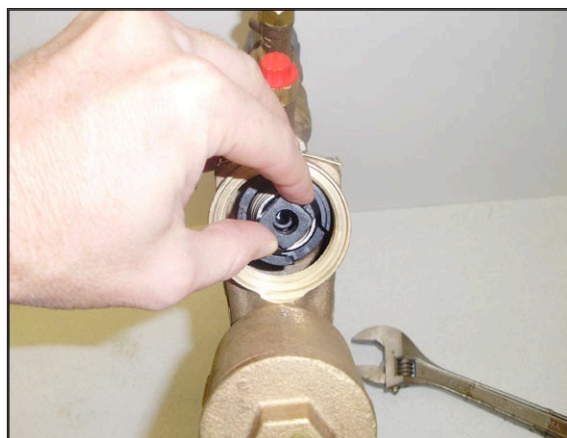
You will notice that the outward appearance of the RP4A series somewhat resembles Conbraco's earlier 40-200 series, but the internal components are completely different. One of the main differences that affect the repair of this assembly is that the check valve assemblies are self-contained modules. That means that the seat, poppet, spring, and spring retainer are one component. The other major difference is that no special tools are necessary to replace the check valve seats and relief valve seats.

Doug

We can get started by removing the check valve assemblies. The check lids are threaded into the body and sealed by an o-ring. Remember that the spring is contained in the check valve module, so you will not have to worry about it popping out when the lid comes off.

Once the lid is removed you will see the check module. The module is sealed by an o-ring. Either the check module can be removed as one piece or you can disassemble it while in the body. To remove it completely, simply rock it back and forth while pulling outward. Once

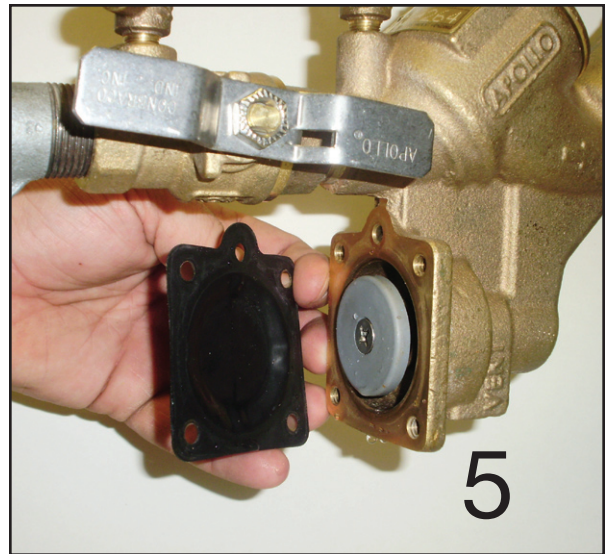
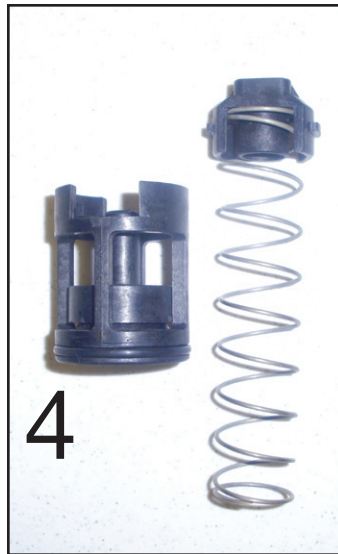
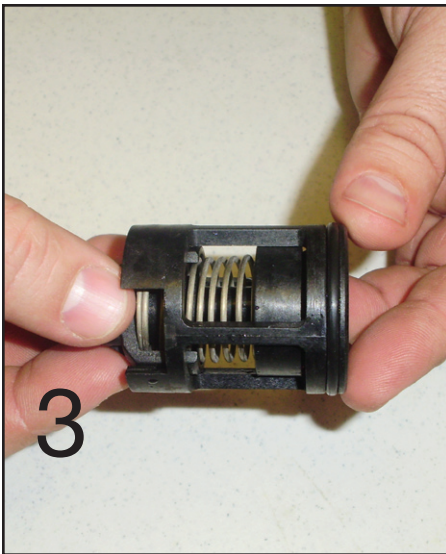
the check module is out, we can take it apart. Hold the seat (cage) firmly with one hand and use the other hand to push down and turn the spring retainer 90 degrees in either direction. At this point the spring, seat, and poppet will be free.



Mark

As Doug said, you can also disassemble the check valves while in the body. If it is in the body, hold the spring retainer firmly as you push down and turn 90 degrees in either direction. At this point, the spring and poppet are free and the seat remains in the body. To remove the seat (cage), simply rock back

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and forth while pulling outward. To replace the rubber disc, just remove the retainer screw and disc from the poppet. When you reassemble the check modules make sure that the spring retainer is in the correct position so that it mounts over the end of the spring. If the spring retainer is in the correct position, it should pop up and lock into the lugs on the seat.

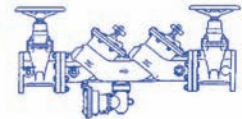
Doug

The RV cover is secured by bolts and is sealed by the diaphragm. There is no spring load on

the cover. Once the cover and diaphragm are removed, you can see the diaphragm plate of the RV module. The RV module is o-ring sealed. To remove, simply pull the module straight out of the body. The RV disc can be replaced by removing the retaining screw. To replace the stem o-ring we will have to disassemble the module further. The module is spring loaded, so hold firmly and remove the diaphragm plate. Now the spring, stem, and bushing are free. Be sure to lubricate all the o-rings and reassemble in the reverse order.



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