The Repair Guys

Access Cover

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 working on an Ames 4 inch model C-200(a). The strange thing is that it doesn't seem to have any access covers. Do you guys have any experience with this assembly? If so, can you give me some tips regarding service procedures for this assembly?


Mark:

The Ames Model C-200(a) is a double check valve assembly. The Colt 200 is very unique in its appearance. The body of this assembly is made of stainless steel and uses grooved couplings to connect the shut off valves instead of traditional flanged ends. Many people say this assembly looks like a solid piece of pipe between two gate valves, but rest assured there is a way to get into this assembly. As manufacturers strive to build assemblies smaller, lighter and with better flow rates, we will start to see different looking assemblies in the field. They will also have new innovations for access and repair of the check valves. This particular model utilizes a closure sleeve as an access cover.

Doug:

We'll go over a complete repair procedure so that we don't leave anything out. First, you want to close both shutoff valves. Then bleed the #2, #3, and #4 test-cocks to relieve any pressure in the device body. To gain access to the check valves, you need to completely remove the #3 test-cock by turning it counterclockwise. Removing this test-cock will unlock the closure sleeve. You will notice a tab that is welded to the sleeve. Place a screwdriver through the hole in the tab and use your screwdriver as a handle. To break the seal, move the sleeve from side to side and then slide the closure sleeve towards the outlet gate valve. With the closure sleeve opened and out of the way you should now be able to see the stainless steel check retainer.

Mark:

The retainer will lift straight out and should not be difficult to remove. If you have trouble removing the retainer, make sure you have opened the #2, and #4 test-cocks to relieve all pressure in the device body. Once the retainer is out, you'll notice notches in each check valve. Place the tip of a slot-

ted screwdriver in these notches and pry each check valve out, removing the #1 check first, followed by the #2 check. The check valves are o-ring sealed and simply slide out of the body. Now you are ready to start the repair on the checks. If you turn the check valve so that you're looking at the inlet side of the check, you'll notice two links, also known as a bi-link. One link is attached to the disc retainer and one is attached to the spring assembly. We want to hold the link in place so that it can be disconnected. To do this, slip a round shank screwdriver through the hole in the link and let it rest in the grooves of the plastic check body. You may have to push forward on the link so that the hole is lined up with the grooves.
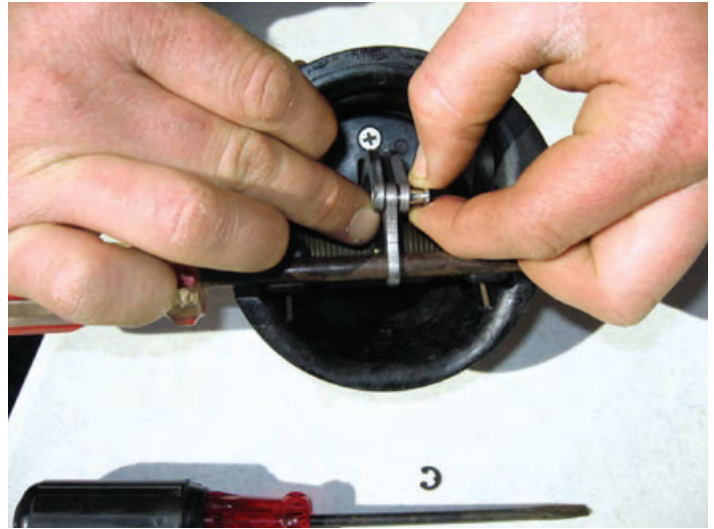
Doug:

With the screwdriver in place, the spring tension is now contained and we can inspect the seat and/or replace the check rubber. The two links are joined by a clevis pin that is held into place by an "E" Clip. Remove the "E" Clip with a small tip screwdriver being careful not to lose it. Once you remove the clevis pin, the disc retainer portion (clapper) will swing free. You can remove the (5) screws and replace the check disc if necessary. After cleaning or replacing the check valve rubber, reassemble links using the clevis pin and "E" Clip and remove screwdriver. Lube the seat o-rings and slide check assembly #2 in first, followed by the #1 check assembly. Now replace the retainer, slide the closure sleeve back into place, and then reinstall test-cock #3. 🔽