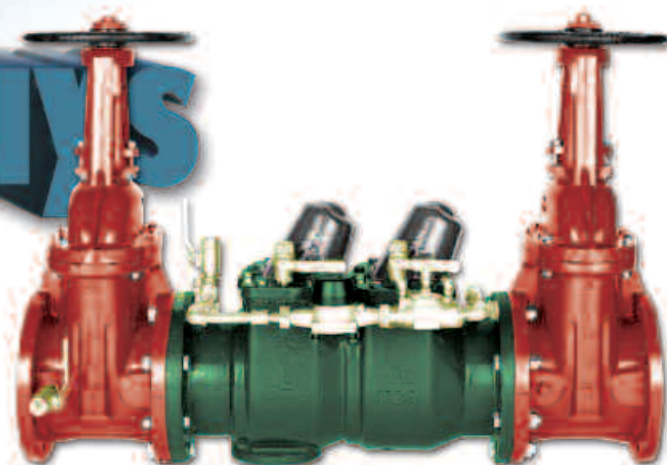


the Repair Guys



Conbraco 4S Series

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.

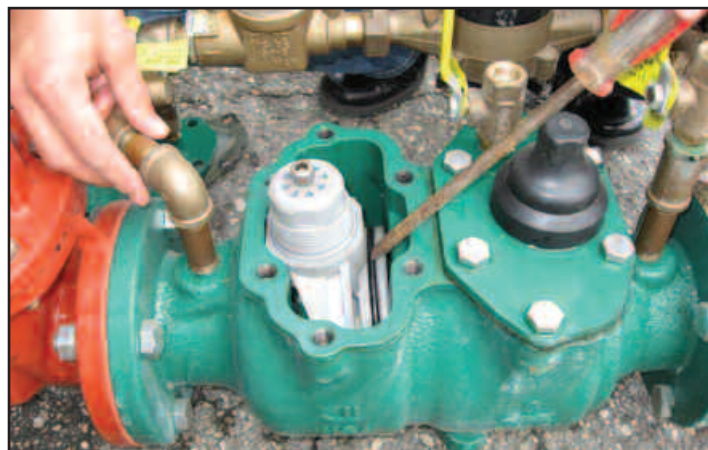
-- Mark Inman and Jason Gregg

Question:

I have an assembly on a fire sprinkler system that needs some work. The assembly is a 3 inch Conbraco model # DCDA. I've seen this assembly advertised in some of the trade magazines but I've yet to work on one. I'm planning on going into both check valves to either clean or replace the check rubbers if needed. Before jumping into this one I thought I might ask if you had any information or tips on what to expect when I open this assembly.

Mark:

This assembly that you have is part of the new 4S Series from Conbraco. This series includes Reduced Pressure Principle, Double Check, and Double Check Detector assemblies. The model DCDA is available in the 2 1/2 inch through 10 inch sizes. You will probably see more of this series as they become approved and available. The 3 inch assembly that you have has an epoxy coated ductile iron body, with spring loaded swing type check valves made out of glass filled Noryl. The springs are contained and come in a module form. The check valves are easy to remove, and changing rubbers is very simple. I think that after we point out a few things to look for on this assembly, you'll find that a repair on this device should be very quick and easy.



Jason:

After closing both the inlet and outlet shutoff valves, open the #2, #3, and #4 test-cocks to bleed any pressure from the assembly. The first step to disassemble the check valve would be to remove the black plastic spring cap that is located on top of each of the check valve covers. Note: The check valve cover cannot be removed without first taking off the spring cap. These are removed by un-screwing counter-clockwise. Depending on the age of the assembly you might need to use a wrench on the flats near the top of the caps to help loosen these. After removing the plastic caps, you can now remove the cover bolts and the covers. A gasket seals the check valve covers.



Mark:

Now you can pull the check valves out of the assembly. The check valves are recessed back into the bore of the device body and sealed by an o-ring. To remove the check assemblies- push the top portion of the check valve towards the downstream side of the device. Depending on the age of the device, you may need to use a standard screwdriver to pry the check valve loose. Once the top portion of the check is free, you should be able to wiggle the bottom portion free then lift the check valve out of the device body. The next step is to release the spring tension that is on the swing arm. To do this, we need to remove the spring module. Note: Do not remove the socket bolt at the top of the spring module. This retainer bolt holds the spring in the compressed position. The spring module is threaded into the top of the check assembly and is removed by turning counterclockwise. You may need to use a wrench on the flats near the top of the spring module to aid in its removal.



Jason:

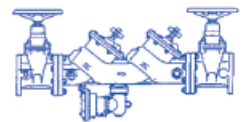
After removing the spring module, the disc holder is able to swing open without any tension. If you are going to replace the rubbers, remove the retainer bolts and plate to allow access to the disc. After replacing the rubbers and cleaning the check seat, we can now thread the spring module back onto the check valve assembly. You should be able to hand



tighten the spring module back into place without the use of a wrench. Inspect the check valve o-ring, replace if necessary and re-lube. Place the bottom of the check valve into the bore of the body and push towards the inlet side of the device. Once the bottom side of the check is in place, you can now pull back on the topside of the check valve to snap it into place. When you replace the cover gasket, be careful not to get the cover gasket turned around so as to cover the test-cock opening. After bolting the cover back into place, lube the o-ring on the plastic spring cap and thread (hand tight) back into place. ▼



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