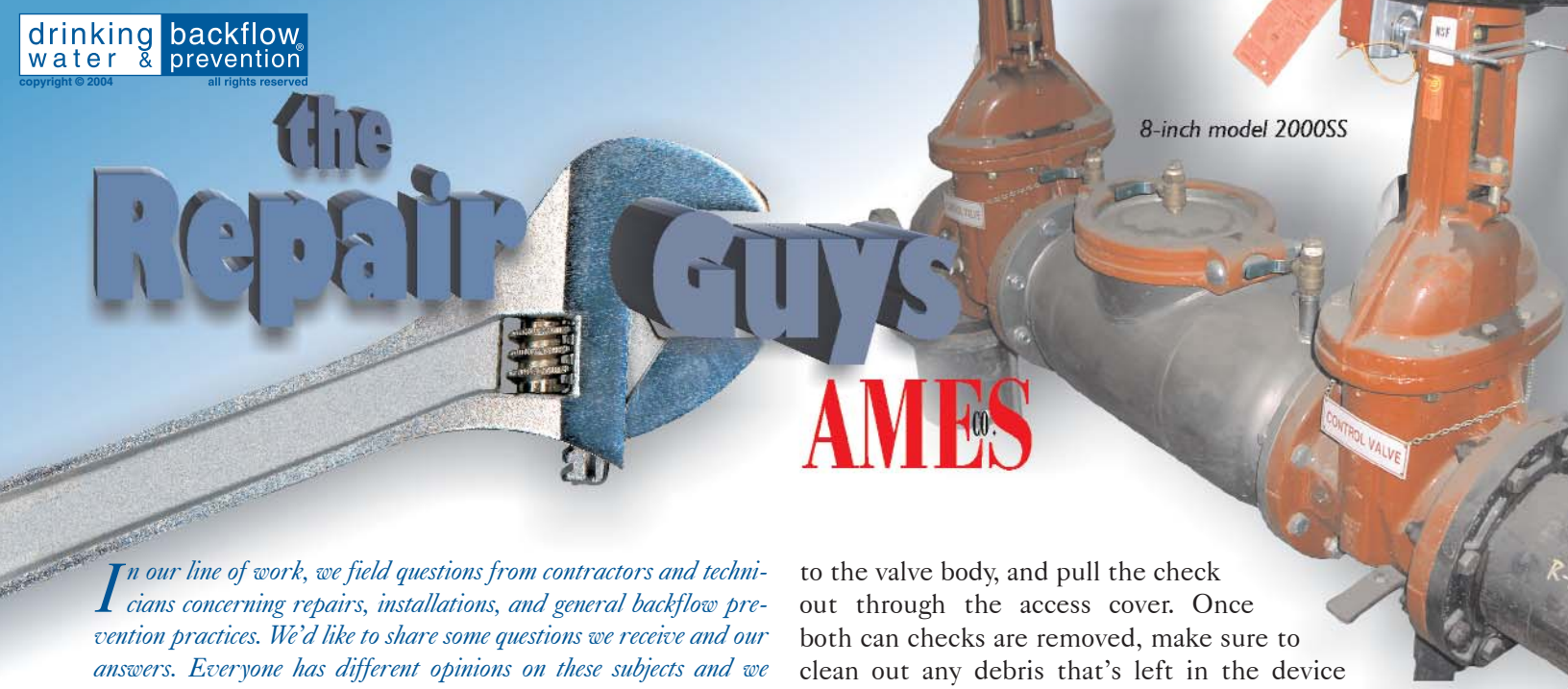
drinking water & backflow prevention

the Repair Guys



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 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., Post Office Box 37025, Tallahassee, FL 32315.

— Mark Inman and Jason Gregg

Editor's Note: The AMES Model 2000SS question was raised in the January 2004 issue of DW&BP. Because of production constraints, we were unable to provide good images with the important repair instructions in Mark and Jason's article. Therefore, we wanted to provide a better representation of this important check valve repair in this issue.

Mark -

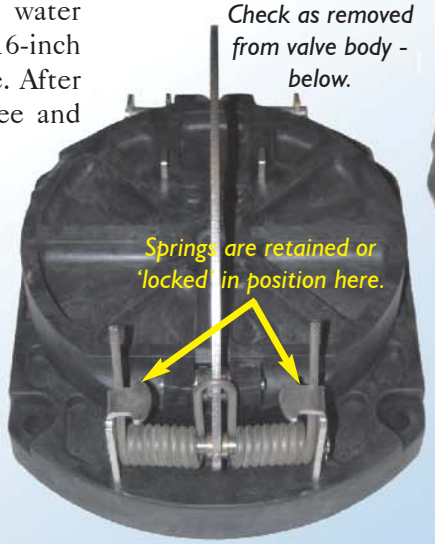
The cam-checks in the 8-inch 2000SS are similar in appearance to the 2½ through 6-inch cam-checks, except the 8 inch are held into place with bolts and nuts instead of being threaded into the device body. After closing both gate valves and bleeding the pressure off, we'll start by removing the two bolts on the groove coupler that hold the cover into place. After removing the cover, you need to remove all of the water out of the body of the device to enable you to see the bolts and nuts. A manual hand pump is a great time saver in this situation. With the water removed, we can now loosen and remove the four 9/16-inch nuts that hold the number 1 cam check into place. After removing the nuts, wiggle the check assembly free and remove through the access cover spring end down.

- Jason

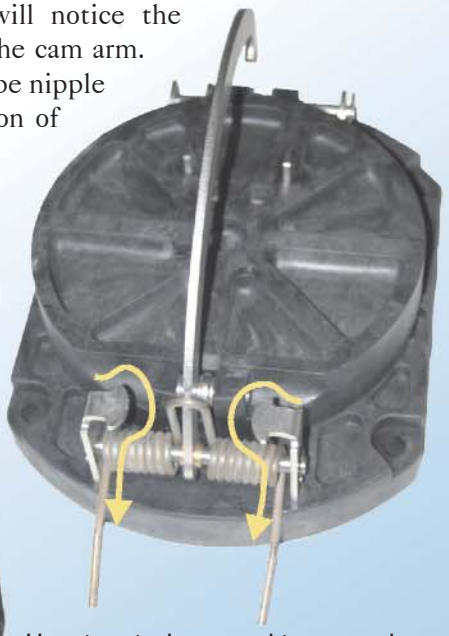
To remove the number 2 cam-check you will need to remove the four 9/16 inch bolts that run through the retaining wall that hold the cam-check into place. Now using the centerline access bar, spin the cam check from the 9 o'clock position to the 12 o'clock position, then (without letting go of the access bar) push the cam-check slightly downstream so that the clapper is now parallel to the valve body. Now bring the cam-check through the check retaining wall. Leave the cam-check parallel to the valve body, and pull the check out through the access cover. Once both can checks are removed, make sure to clean out any debris that's left in the device body. This can be done with a good vigorous flushing of the assembly through the access port, if the location of the assembly permits. Cleaning out the body well, will keep us from having to repeat the check removal process again.

Mark -

With both cam-checks removed from the device body, we can begin the inspection and cleaning of the check assemblies. The safest and easiest way to inspect and or clean lodged debris out of the cam-check is to relieve the spring tension. To relieve the spring tension from the cam arm you will need either a small diameter nut-driver with a hollow shank or a 1/8 × 6 inch long pipe nipple for leverage. With the check assembly laying face down, you will notice the spring on either side of the cam arm. Place the nut-driver or pipe nipple over the protruded portion of the torsion spring and move away from



Check as removed from valve body - below.

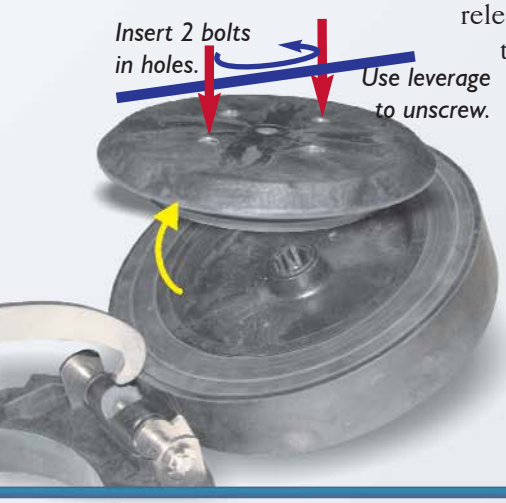


Use pipe nipple or nut driver on end of torsion spring to move it around retaining bracket - and CAREFULLY release it until it rests on the molded check valve. (2 ends)

and around the torsion spring retaining bracket on both sides of the cam arm. This will relieve the spring tension and allow the cam arm to move freely. This will allow you to inspect the clapper face and check valve seat. If upon inspection of the seat you find cracks or nicks, unfortunately you will need to replace the complete cam-check because the seat portion of the cam-check is not sold separately.

- Jason

Regarding the replacement of the rubber check disc, the answer is yes it can be replaced but this should be tackled only by the brave at heart because of the level of difficulty involved. First unload the spring tension on the cam arm using the instructions above. Once the tension is released you can now pull the cam arm up and move the clapper assembly under the arm and fully open, then release the cam arm. With the clapper assembly open you'll notice four holes in the face of the round disc retainer. Two of these holes will accept a 3/8-inch size bolt, and the other two holes will accept a ½-inch size bolt. I have a couple of ½ × 3 inch bolts with threads only halfway up the shank that I use. With the bolts in place, now slip a long rod or a long handled screwdriver between the bolts to create a handle for turning. With someone to hold the clapper assembly turn the disc holder counter-clockwise to loosen and unscrew. Sounds Easy! However it can be difficult. The hard part is trying to keep the clapper assembly in place while not putting too much pressure on the mounting brackets, which could bend or warp. The easier way would be to remove the clapper assembly by taking out the hinge pin and then (carefully) securing the clapper in a vise. However, not everyone has a vise mounted on their truck. If you decide to try replacing the rubber on this cam-check, keep in mind that it might take two extra guys to help hold the clapper in place while you unscrew the disc retainer. Also the discs cannot be inverted, so make sure you take along a couple of extra replacement discs.



dw&bp