

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.

CAM REMOVAL

QUESTION:

I have an Ames 4" model 3000SS that I am trying to repair. I was told that the check valves are threaded into the body of the device and unscrew counter-clockwise. I can't seem to get them to even budge. I'm afraid that if I apply much more pressure, I'm going to break something. Could the checks be cross-threaded?

MARK

The cam checks for this model normally should not be that difficult to remove. The thread pattern for each cam check is very large, so it would be nearly impossible to cross thread into the body. So, let's first take a quick look at how the manufacturer instructs us to properly remove the checks.

The #1 check needs to be removed first before the #2 can be removed. If you're unable to remove the #1 check by hand, Ames recommends using a long screwdriver on the seat portion of the check either at the cam arm hinge point or at the clapper hinge point and apply pressure against the valve body for leverage. (It is important to remember that if you plan on using the first check valve again, do not to use the cam arm as a turning handle.) The #2 check, which has (4) protruding lugs or studs in the seat, is easier to remove by placing the screwdriver between two of these studs and applying pressure counter-clockwise. (Fig. 1 & 2)

DOUG

Many of the 3000SS assemblies are used on fire suppression systems that rarely have any water flowing through the assembly. This stagnant water will allow scale to develop on the check assemblies. Of course, we all know how scale and/or sediment can make the removal of the checks more difficult. In some situations, the checks can be so difficult to remove that the



screwdriver method that Ames recommends may not work at all. Some contractors have taken it upon themselves to fashion their own removal tools. I've seen a few of them that are pretty clever works of art, to say the least. If you want to purchase a tool, there are also a couple of companies that offer after-market tools that seem to work really well.

MARK

Be aware that there are certain situations when even the best-made tool will not budge the cam checks. The body of the Ames Silver Bullet series is made of stainless steel, which can flex or twist if torque is applied at the flange ends. This kind of stress can 'egg shape' the stainless body. Even the slightest twist of the body will bind the threads of the cam checks and makes removing them virtually impossible. So what causes the body to flex? Many times this problem can arise if the piping is not aligned correctly during the initial installation of the assembly. It can also happen if the underground piping settles or moves for any reason. Of course this causes a great deal of stress on the piping, fittings, and any fixture in the system- especially the stainless steel body of the assembly.

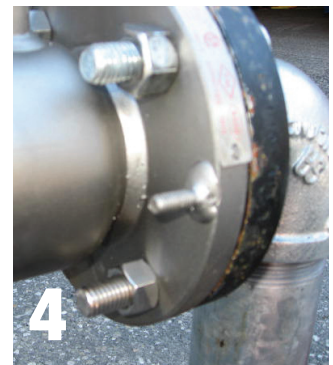
DOUG

We have experienced instances of torque so bad on the body that the cam checks would unscrew from the body, but they could not be removed because the top access hole was twisted into an "oblong" shape. Normally if the



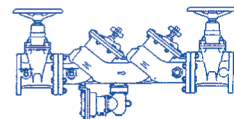
torque is slight, the cam check can unscrew, but the replacement will not thread into the body giving the appearance of a defect with the threads.

When this occurs, the only way to replace the cam checks is to relieve the stress or tension being placed on the assembly. The best remedy that we've found is to simply loosen the gate valve flange bolts on both sides of the assembly. Be sure not take the bolts completely out. The body should return to its original shape and allow you to replace the checks. Once the new checks are in place, then you can tighten up the flange bolts. (Fig. 3 & 4)



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