

# The Repair Guys

## Ames 4 Inch Model 3000SS

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](mailto:imark@backflowparts.com) or mail us at American Backflow Products Co., PO Box 37025, Tallahassee, Florida 32315.

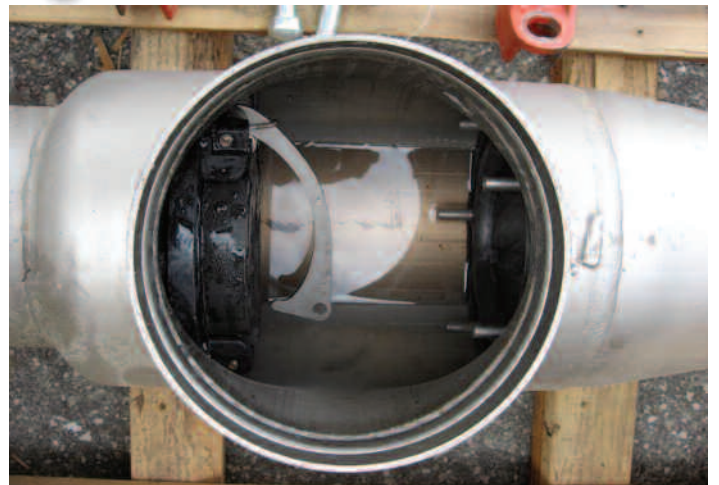
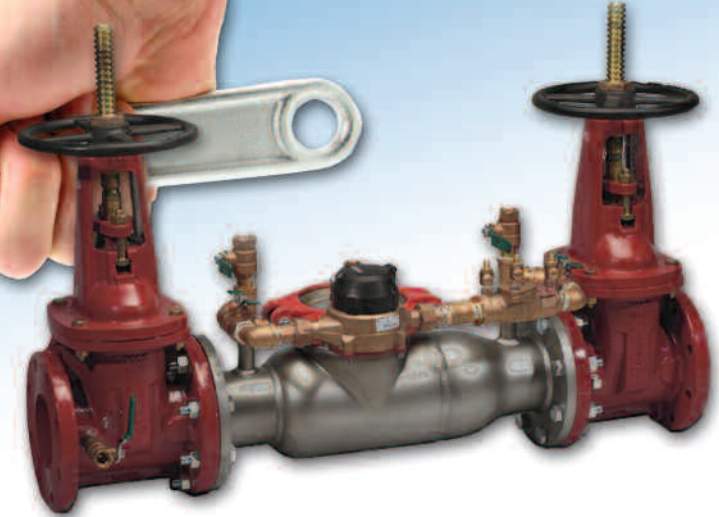
-- Mark Inman and Jason Gregg

### Question:

I have an Ames 4 inch model 3000SS that I am trying to repair. I was told that the check valve assemblies are threaded into the body of the device and turn counter-clockwise for removal. I've tried everything I can think of to unscrew these checks but 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 have a reverse thread?

### Mark:

The check valves for this model are removed in a counter-clockwise direction. These check valves normally should not be that difficult to remove. First let's take a quick look at how the manufacturer instructs us to properly remove the checks. Then we can go over some things we have found that can make them very hard to remove from the body. Ames recommends using a long screwdriver as a pry-bar to remove the checks. The #1 check needs to be removed first, if you're unable to remove the #1 check by hand place the tip of the screwdriver on the seat portion of the check at the cam arm hinge point or the clapper hinge point and apply pressure against the valve body for leverage. 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.





**Mark:**

Be aware that there are certain situations where even the best-made tool wouldn't budge the cam checks. We know that there are as many different methods and practices of installation of assemblies out there as there are plumbers, pipe-fitters, and contractors. One practice that I've seen is the backflow assembly being laid on its side, the 90 ells bolted on, then the riser material bolted onto the 90 ells, then being lifted and lowered into the hole or ditch, and finally bolted into the supply line. Well guess what, unless the contractor made perfect calculations there is going to be some stress or tension on all bolted connections which ends up putting torque on, or twisting the stainless steel body of the 3000SS. Even the slightest twist will bind the threads of the check and will make removing the round cam checks virtually impossible.

**Jason:**

The body of the Ames Silver Bullet series is made of stainless steel, which can flex or twist if enough torque is applied at the flange ends. This kind of stress can "egg shape" the stainless body unlike cast or ductile iron body assemblies. We also have to remember that even with a perfect installation, underground piping can settle or shift with time. In some cases, this shift or movement can be quite a bit depending on the size of the pipe and soil types. I've seen instances where the cam checks would unscrew with no problem, but they could not be removed from the device through the top cover because it was slightly twisted into an "oblong" shape.

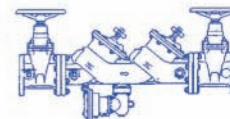
The remedy that we've found for both situations mentioned is to loosen the gate valve flange bolts on both sides of the assembly. This will help relieve the stress or tension being placed on the assembly from the system piping. This will also make the removal of the cam checks a whole lot easier. Be sure to install the new cam checks in place before you tighten the flange bolts. ♥

**Jason:**

Many of the 3000SS assemblies are used on fire suppression systems, which rarely have any water flowing through the device. This stagnant water has sediments that usually settle and stick to everything which could make the removal of the checks more difficult. In situations like this the checks can be so difficult to remove that the screwdriver method that Ames recommends may be very difficult. (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.) 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. There are also a couple of private manufacturers that make cam check removal tools that can be purchased.



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