

the Repair Guys

Repairing the Watts Model 919 Assembly

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 that I need to repair. The assembly is new and probably only needs to be cleaned, but I've never worked on this model before. The device is a 1 inch Watts model 919 and I've decided to take a rubber repair kit with me to the job. Could you guys give me a little overview of this device so that I'll know what to expect when I arrive? Also let me know if I'll need any special tools for disassembly.

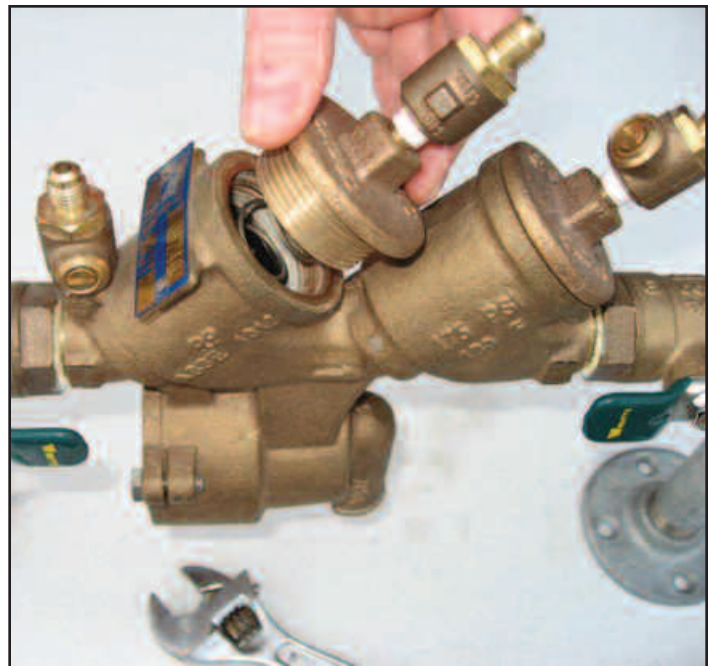
Mark:

The Model 919 is the latest Reduced Pressure Assembly offered by Watts in the 1/4 to 2 inch sizes. The Ames model number for this assembly is the 400B. Some of the features of the 919 include: separate threaded top access check valve covers, top mounted test-cocks, a twist-spring captured relief valve cover, replaceable seats, and silicone rubber discs. This model uses poppet style check valves. No special tools are required to repair this assembly.



Jason:

Let's get started by closing both shut off valves and bleeding any residual pressure in the device by opening the #2, #3 and #4 test-cocks. Using an adjustable wrench, loosen the check valve cover by turning counter-clockwise. The check valve springs are not contained. After removing the cover, we can now remove the spring and check poppet. The check valve disc is accessible by removing the retaining screw and washer. To inspect or replace the check valve seat, simply grasp the reinforcement ring at the top of the seat and pull straight out. The check seats are sealed by an o-ring and simply pressed back into the body bore. Lubricate the o-rings and reassemble in reverse order.



Mark:

Now we can get started on the relief valve repair. The relief valve is located on the bottom of the assembly. The relief valve cover is spring loaded and sealed by an o-ring. The RV cover has locking tabs that allow you to remove the cover bolts without having to apply constant pressure to the cover. After removing the (3) R.V. cover bolts simply push in and turn counter-clockwise to remove. Note: The cover is under some tension, so use caution.



Jason:

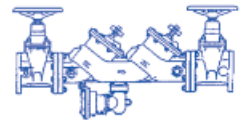
When removing the relief valve cover, the internal module should come out attached to the cover housing. The spring is loose and may fall out of the body. The relief valve seat is o-ring sealed. To remove, simply pull the seat straight out of the body. To replace the diaphragm, unscrew the RV stem assembly. Place a wrench on the flats of the disc holder, and place one on the flats of the plunger on the upper stem.



When you reassemble the stem assembly, make sure the molded step of the diaphragm should face toward the RV stem and disc. To access the RV disc, remove the retaining screw. Reassemble in reverse order. Remember when replacing the cover, to line up the grooves on the cover with the grooves in the body and turn the cover clockwise 1/4 turn. ▼



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