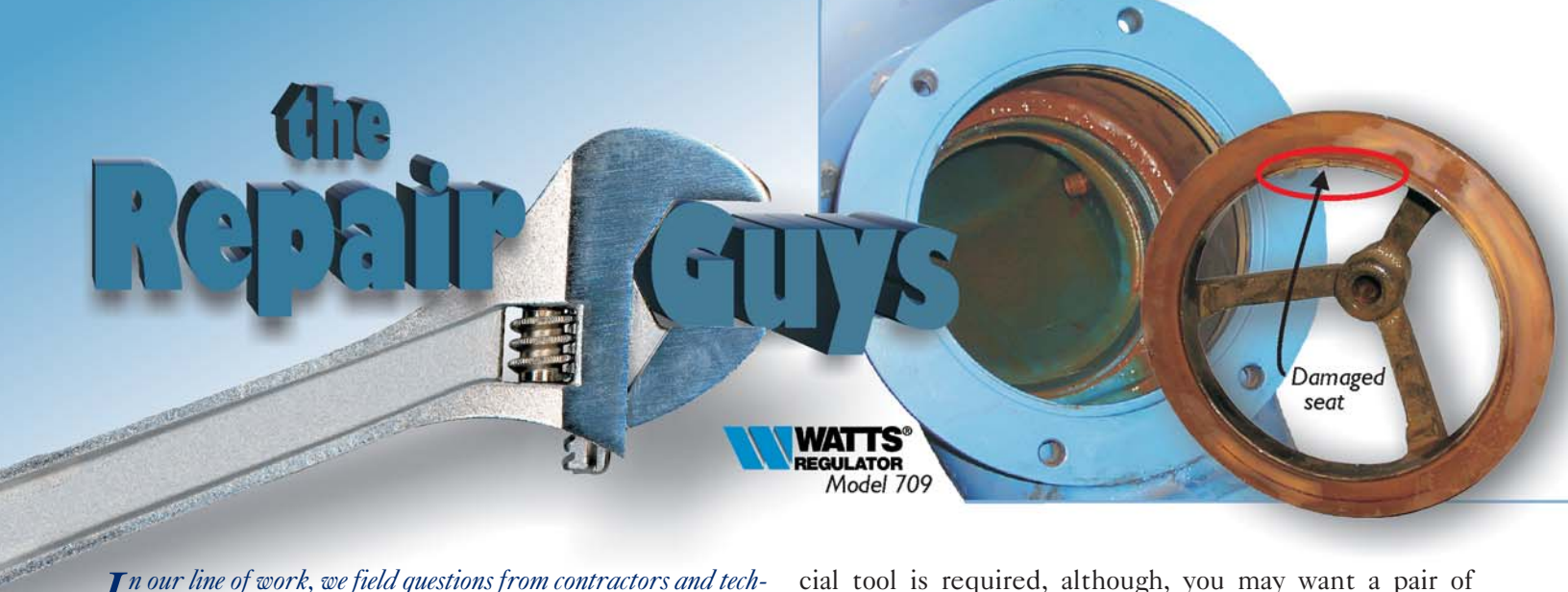
the Repair Guys



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

QUESTION —

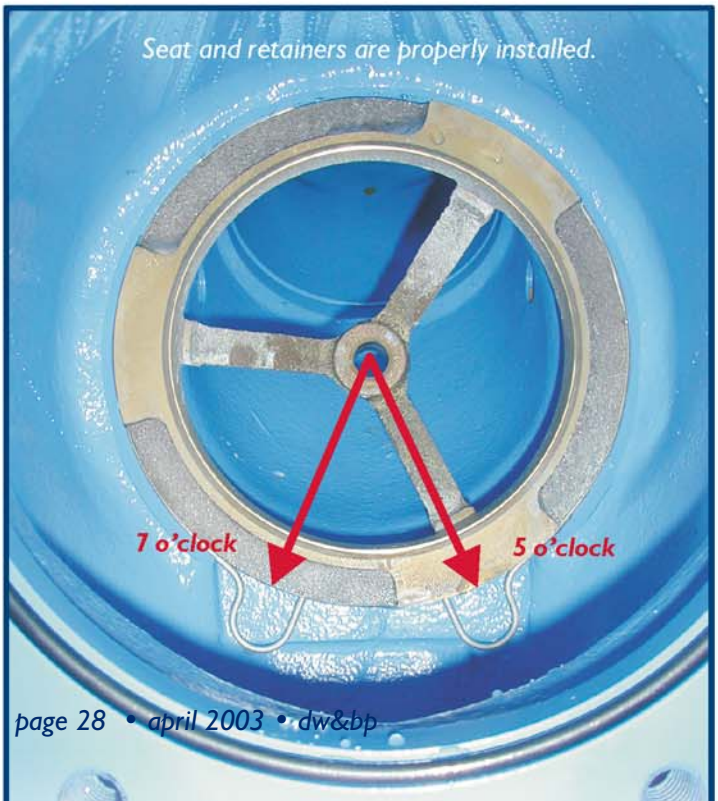
I have a 6-inch Watts model 709 double check valve assembly with a badly worn and pitted first check valve seat. I am planning to replace the seat, but upon inspection, I did not notice any bolts holding the seat into place. Are these seats threaded into the body? If so, do I need a special tool to remove the seat?

Mark -

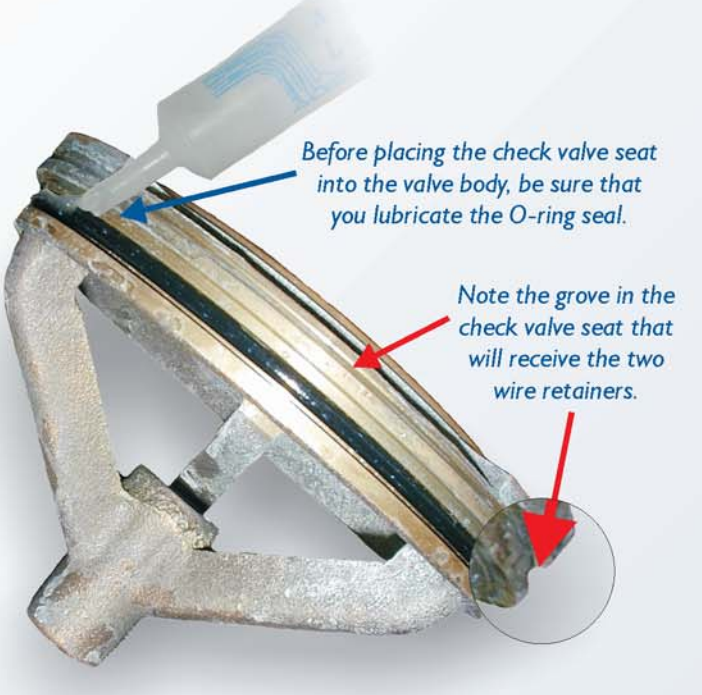
The check valve seats for the Watts 6-inch 709 are not threaded into the body of the device. Fortunately, no special tool is required, although, you may want a pair of gloves because this job can be a 'knuckle buster.' The first and second check valve seats for this model are identical. The check valve seats are O-ring sealed and held into place by (2) retaining wires or clips which; if they were installed correctly, you would have noticed them at approximately the 5 o'clock and 7 o'clock positions of the seat. Each retaining wire slides into a groove located between the seat and the body. Watts uses these retaining wires to secure the check valve seats into place in the 4, 6, 8, and 10-inch models of the 709 series double check valve assembly, and the 909 series reduced pressure principle assembly.

- Jason

To remove the check valve seat, you will need to first remove both retaining wires from the seat. I would suggest using a pair of channel lock pliers or vise grips to help. Start by pulling the right side retaining wire in a




Seat and retainers removed from check body.



clockwise direction until it is completely out. Then pull the left side retaining wire in a counter-clockwise direction. Note: The retaining wires do not necessarily need to be removed or installed in the order we have outlined here. Once both retaining clips have been removed, grab the check valve seat by the guide supports in the center of the seat and simply pull the seat straight up and out of the body. Be very careful not to hit the seat on the inside of the device body and risk damaging the internal epoxy coating.

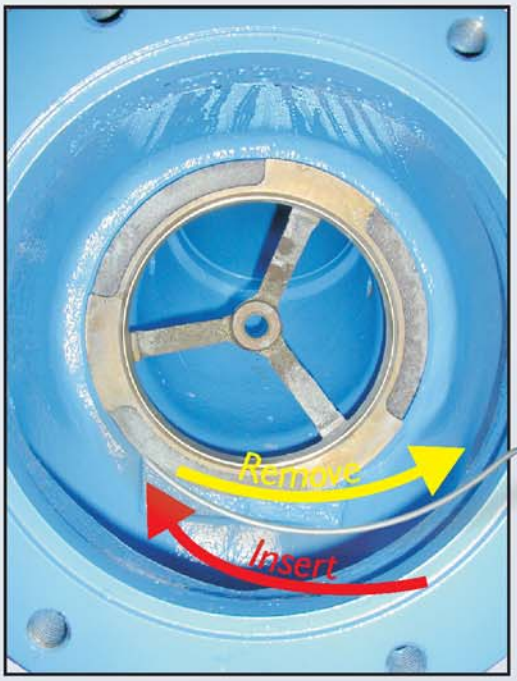
Mark -

The new Watts seat kit comes with a check valve seat, seat O-ring, (2) seat retainer wires, and a new cover O-ring. Before installing the new seat, make sure to clean the seat surface in the body, including the grooves for the retainer wires, and apply an FDA approved lubricant to the new seat O-ring. This is important to ensure an easy and clean fit. To install the new seat, push the seat

Looking into the check valve body and 'upstream' to establish left and right.

To remove the 'left' retainer, pull/rotate the wire counterclockwise. To re-insert, simply reverse the process.

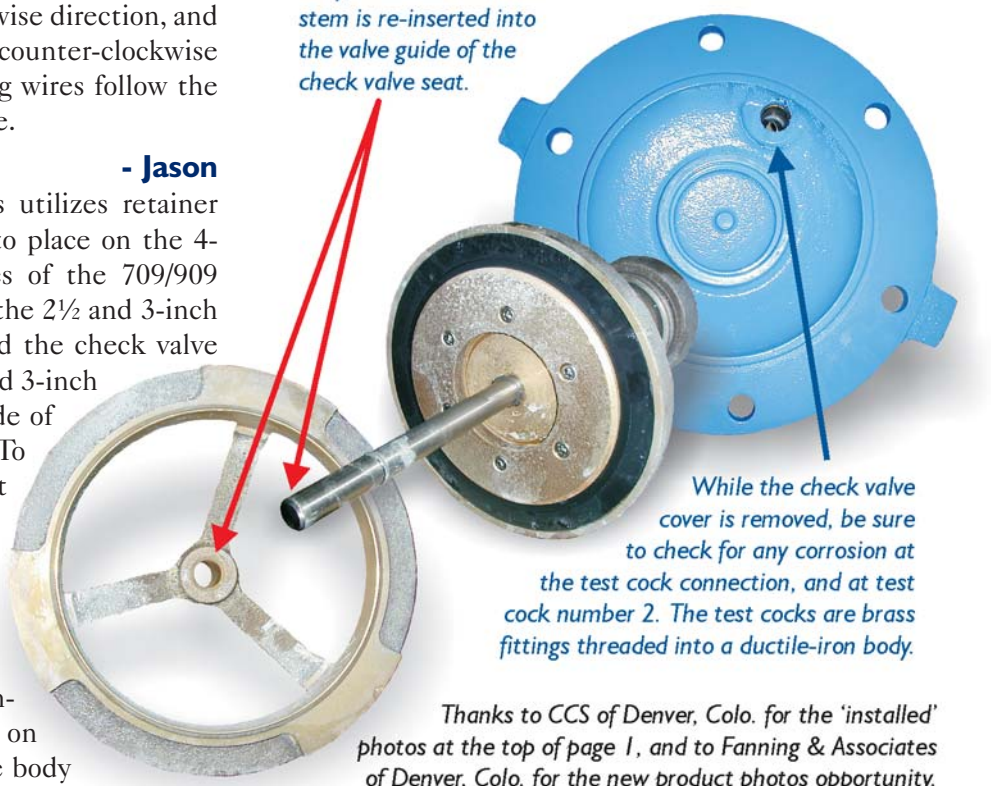
The right side is not shown in this picture.



straight down and evenly into the body until it is completely seated into place. Now, you should be able to install the new retaining wires by hand. You can start by sliding the left clip into place in a clockwise direction, and sliding the right clip into place in a counter-clockwise direction. As you push, let the retaining wires follow the groove in the seat around and into place.

- Jason

Mark mentioned earlier that Watts utilizes retainer wires to hold the check valve seats into place on the 4-inch, 6-inch, 8-inch, and 10-inch sizes of the 709/909 series. I thought I would mention that the 2½ and 3-inch sizes do not use retaining wires to hold the check valve seats into place. The seats on the 2½ and 3-inch sizes have protruding ears off of the side of the seat that lock it into the body. To remove these check seats, twist the seat a ¼ turn in either direction and pull straight out of the body. These seats are also O-ring fitted into the device body. To install new seat, lube the seat O-ring and push the seat straight down and evenly into the body until it is completely seated into place. Align the ears on the seat with the notches in the device body and twist the seat ¼ turn to lock into place.



During reassembly, remember that the test cock on the cover will be located at the highest point of the assembly body, and that the check valve stem is re-inserted into the valve guide of the check valve seat.

While the check valve cover is removed, be sure to check for any corrosion at the test cock connection, and at test cock number 2. The test cocks are brass fittings threaded into a ductile-iron body.

Thanks to CCS of Denver, Colo. for the 'installed' photos at the top of page 1, and to Fanning & Associates of Denver, Colo. for the new product photos opportunity.

dw&bp