

WATER VALVE REBUILD

MODELS: 125BS, 38B



WARNING

LP & NG ARE EXTREMELY FLAMMABLE SO
TAKE EXTRA PRECAUTIONS WHEN
PERFORMING ANY WORK TO THE HEATER

Introduction

The AquaStar Water Valve Assembly requires periodic maintenance. Some of the components need to be replaced every two (2) to five (5) years. Exactly how often depends on water conditions and use. Failure to maintain this assembly could result in unsafe operation of the gas valve and costly damage to the rest of the heater.

Indications That Your Water Valve Assembly Could Need Service:

- Any signs of a white or greenish powdery substance where the brass Water Valve Assembly joins the aluminum Gas Valve Housing.
- Water weeping from the weep hole located at the same joint. An indication that water may be coming from the weep hole can be seen on the silver tray at the bottom of the heater.
- Any instances of freeze damage.
- If the burners fail to go off immediately when the water is turned off, usually due to mineralization in the water valve on older heaters. To test for this possibility run hot water at a faucet, then shut off the cold inlet supply and observe if the burners go off immediately. If they do not the Aquastar will overheat and shut down on safety depending on the delay.

125BS Water Valve Assembly Repair Kit

Repair kit (pushrod, o ring, nut) #8703406204
Slow ignition valve #8708503061
Heat Exchanger Washers (2) #8710103045
Cold & Hot Water Washers (2) #8710103043
Lubricant pack #DOWLUBE

38B Water Valve Assembly Repair Kit

Repair kit (pushrod, o ring, nut) #8703406204
Slow ignition valve #8708503061

A. Preparation

Tools Needed:

- Philips head and flat screwdriver
 - Medium sized adjustable wrench
 - Needle nosed pliers
 - Container to catch water
1. Shut off gas and water supply to heater and open a faucet to relieve pressure in water line
 2. Loosen screw at bottom of cover, then pull forward and lift up. Remove flow dial and collar on 38B prior.
 3. Complete draining of the heater by removing drain screw (11) underneath water valve, then disconnect the water fitting(s) at the back of water valve. Have container ready for remaining water. After draining, replacedrain screw.
 4. 125BS model, disconnect water fittings on right and left side of water valve. 38B model, disconnect inlet water fitting on right side of water valve.

B. Removing the water valve assembly

1. Two set screws are now holding water valve up against gas valve. On the 125BS they are on the right side in between the water valve and gas valve. On the 38B one is on the right side and the other is facing forward, there is a hole through the front control plate for a screwdriver. Support water valve with one hand and loosen both set screws, once loose the valve will drop downward.
- If Set screws do not unscrew easily **do not force them** you could damage the gas valve.
 - Call 800-642-3111 for help

C. Removing old or worn parts

1. Remove the 3 screws on top of the water valve and separate the two halves. Pull off the diaphragm (6).
2. With wrench remove top nut (3) from top of upper water valve cover and push out stainless steel rod (3). A small black o-ring (4) should come with it. If not, it will need to be picked out.
3. On 125BS model remove pressure dampner (12) from front of lower water valve half.
4. With screwdriver remove slow ignition valve from front of upper water valve half (5).
5. Remove / clean filter screen (14).
6. Soak the two halves of the water valve housing and pressure dampner (12) on 125BS in white vinegar or other descaling solution to remove any mineral deposits. Inspect venturi (13) passage on either model when done.

D. Rebuilding water valve

1. Replace diaphragm (6) on bottom half of water valve. Set diaphragm with flat side up. Note that the outer rim of the rubber diaphragm has a ring, it will need to go around the hollow tube facing up from the bottom water valve half.
2. Liberally apply supplied lubricant on all of the following parts. Slide new pushrod (3) up through the underside of the upper water valve half, once through slide small black o ring (4) down it. With wrench replace top nut. (See diagrams)
3. Place upper water valve half (2) on top of lower half and tighten down the three screws.
4. Re-install pressure dampner on BS (12) and slow ignition valve (5) into front of the water valve's upper half.

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E. Installing water valve

1. Place the water valve up into the under side of the gas valve, being sure cold inlet port faces the back.
2. Hold flush and tighten both set screws. We suggest the use of an anti-sieze compound on screw threads.
3. Connect pipe(s) to water valve side port(s). New washers are provided for the 125BS model.
4. Insert cleaned filter screen (14) into cold inlet port of water valve.
5. Connect elbow(s) to back of water valve. New washers are provided for the 125BS model, none needed on 38B.

F. Testing operation

1. **Important:** Before firing the unit, run water through heater to test for water leaks and purge all air.
2. Shut water off at inlet supply. Replace front cover and tighten its lower screw. Replace flowcontrol knob and collar on 38B model.
3. Light pilot and position control button to three flame setting. On 38B set flow dial all the way clockwise. Now slowly open inlet water supply until burners ignite. Stop there. Measure flow at open outlet to verify proper activation of a 1/2 gallon per minute flow rate (1/2 gpm = a quart in 30 seconds or a gallon in 120 seconds).
4. Shut water off and verify burners deactivate when water flow stops.

