

## WATER VALVE REBUILD

MODELS: 125B (BRASS WATER VALVE)



### 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.

A complete kit to rebuild the **125B** Water Valve

Assembly consists of these parts:

- |                                      |              |
|--------------------------------------|--------------|
| a) Repair kit (pushrod, o ring, nut) | # 8703406178 |
| b) Slow ignition valve               | # 8708503063 |
| c) Heat Exchanger Washers            | # 8710103045 |
| d) Cold & Hot Water Washers          | #8710103043  |
| e) Lubricant packet                  | #DOWLUBE     |

see diagrams on page 2

### A. Preparation

Tools Needed:

- Phillips head and flat screwdriver
- Medium sized adjustable wrench
- Needle nosed pliers
- Container to catch water

### Shut off gas and water supply to heater and open a faucet to relieve pressure in water line

1. Pull off flow knob and unscrew collar, then lift up and pull cover off.
2. Complete draining of the heater by removing drain screw (14), then disconnect the water fittings at the back of water valve. Have container ready for remaining water. After draining, replace drain screw.
3. Disconnect water fittings on right and left side of water valve.

### B. Removing the water valve assembly

1. Two set screws are now holding water valve up against gas valve. One set screw is on right 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

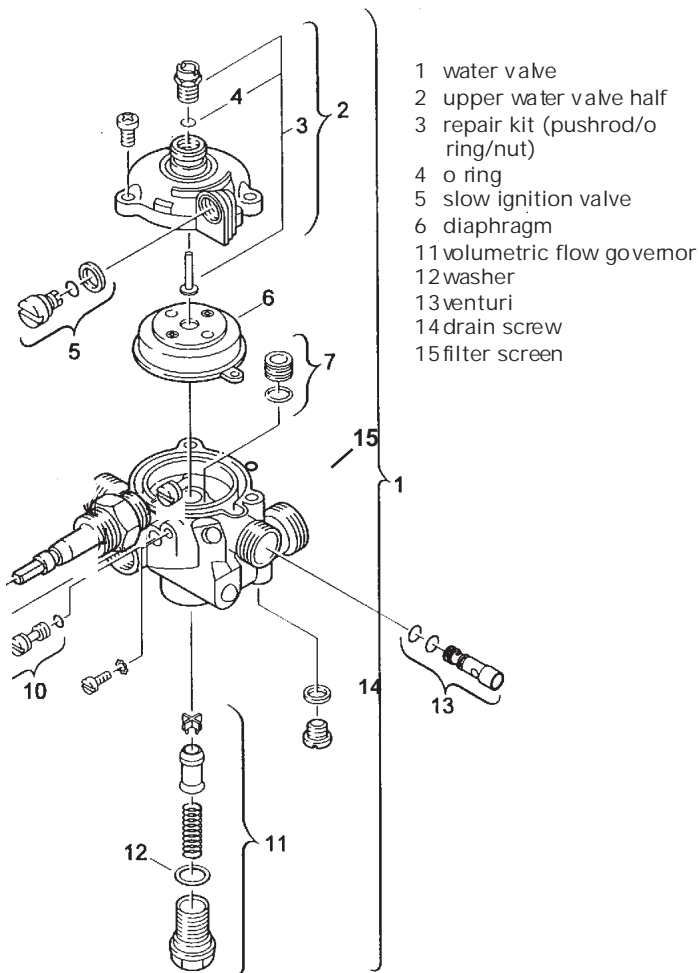
### C. Removing old or worn parts

1. Remove the 3 screws on top of 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. With wrench remove volumetric flow governor (11) from underside of lower water valve half.
4. With screwdriver remove slow ignition valve (5) from front of upper water valve half.
5. **Remove / clean filter screen (15)**
6. Soak the two halves of the water valve housing and volumetric flow governor (11) in white vinegar or other descaling solution to remove any mineral deposits. Inspect venturi (13) passage when done.

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### D. Rebuilding water valve

1. Place diaphragm (6) on bottom half of water valve 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 diagram)
3. Place upper water valve half (2) on top of lower half and tighten down the three screws.
4. Install volumetric flow governor (11) underneath water valve and slow ignition valve (5) into front of the water valve's upper half.



### E. Installing water valve

1. Place the water valve up into the under side of the gas valve, being sure cold in and hot out ports face the back.
2. Hold flush and tighten both setscrews. We suggest the use of an anti-sieze compound on screw threads.
3. Connect right and left side pipesto water valve using new washers provided.
4. Connect elbows to back of water valve with new washers provided.

### 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 then flow controls collar and knob.
3. Light pilot and position slide but ton to three flame setting, then 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.

LOCATION OF TWO  
 SET SCREWS

