

# WATER VALVE REBUILD

MODELS: 170VP



## WARNING

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

### A. Preparation

Tools needed

- Straight blade screwdriver
- Large adjustable wrench
- Container to catch water

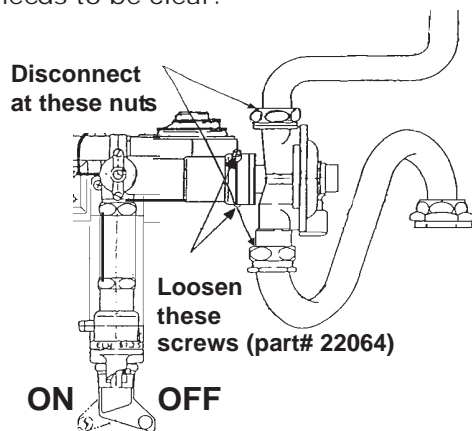
1. Shut off water and gas at heater inlet
2. Remove front panel from heater

### B. Removing the Water Valve Assembly

1. "Disconnect at these nuts" as shown in the illustration below
2. Using the wrench, fully loosen the two union fittings on the water valve assembly
3. Loosen the set screws where the illustration indicates "Loosen these screws"
4. Rotate the water valve assembly to remove the flow restrictor and washers at the inlet and outlet fittings
5. Pull the assembly out to the right. You may need to loosen the set screws further.
6. As the Brass Water Valve starts to separate from the aluminum housing...hand tighten one of the set screws to retain a hidden spring assembly.

### C. Cleaning the Water Valve

1. Remove old pushrod (#38475) and be certain both its o rings come out with it.
2. Remove the 8 screws that hold the halves of the Water Valve together.
3. Separate the 2 halves of the housing.
4. Remove the diaphragm (#33071).
5. Soak both halves of the housing in white vinegar or other descaling solution to remove mineral deposits. Inside of the left side shell there is a small port hole, this needs to be clear.



### D. Re-assembling the Water Valve Assembly

1. Reuse the Centering Tube (# 00341)
  - Tube belongs in the non-threaded hole at the edge of the water valve housing
2. Position Diaphragm (# 33071) on the larger half of the Water Valve Housing with brass plate facing towards it.
  - The brass plate has a dimpled cup in its center
3. Screw both halves of the housing together
4. Liberally apply supplied lubricant to pushrod. Replace the pushrod (#38475) being sure o rings are on each end and insert the plastic end into the water valve

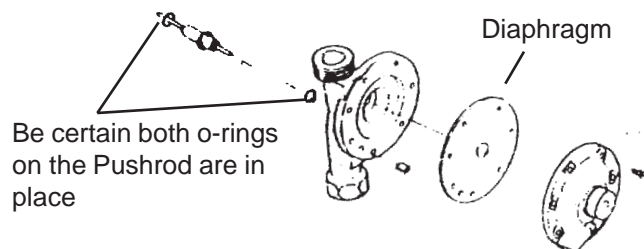
### E. Insert Water Valve Assembly back into the Gas Valve Housing

1. Loosen Set Screw (# 22064) so that the Water Valve Assembly can be inserted all the way
2. Rotate Water Valve Assembly into proper position - push in and fully hand tighten Set Screws (# 22064)
3. Connect union fitting from inlet connecting tube - make certain the washer (# 25775) is in place - connect both connecting tube union fittings - **do not over tighten**
4. Connect union fitting (with washer (# 25775) from the Heat Exchanger tube
5. Re-tighten Set Screws (# 22064)

### F. Completion

1. Open water inlet and check for leaks
2. Open gas inlet; check for leaks and light pilot
3. Run water - check activation and de-activation of burners and for leaks during operation

### Water Valve Diagram



- Water valve kit: Diaphragm #33071  
 Pushrod # 38475  
 2 Washers #25775  
 Lubricant pack #DOWLUBE