FVIR WATER HEATER CLEANING INSTRUCTIONS

To perform the cleaning instructions below the following tools are needed:

- Vacuum cleaner with hose attachment.
- Flame arrestor cleaning attachment.
- Flashlight
- Small mirror approximately 2”x3”.
- 3/8”, 7/16”, and 3/4” open end wrenches.
- 3/8” nut driver
- Small container of soapy water and an applicator.

Like other appliances, your water heater will need occasional servicing to maintain peak performance. Sufficient air flow is crucial to the proper operation of your water heater. This publication addresses one possible cause of restricted air flow, and the procedure for its prevention and correction. Signs of restricted air flow are yellow flames, pilot outage, sooting, or unstable flame. Before starting, consult the sections of your owner’s manual dealing with condensation, air requirements, gas supply, venting, and cleaning the air intake screen. Also, make sure that your heater is properly sized for your home. An undersized heater may result in condensation which can drip onto the flame causing a pilot outage. Your water heater is built to the current industry safety standard and meets all FVIR (flammable vapor ignition resistant) requirements. This assures that any flammable vapors drawn into the combustion chamber and ignited can not ignite remaining flammable vapors on the exterior of the heater causing a fire or explosion. This design includes a flame arrestor and one or two air intake screen(s), see Figure 1.

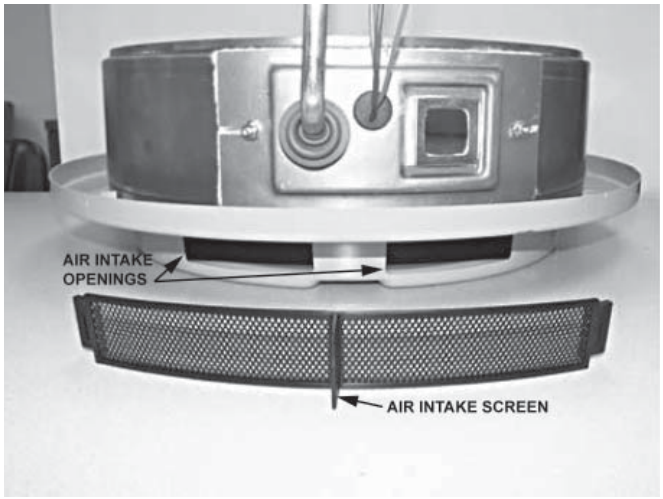

Figure 1

These screen(s) prevent larger particles of dust or lint from entering the heater, thus restricting air flow and causing improper combustion. The owner’s manual asks you to visually check and clean the screen(s) as necessary. Smaller particles may pass through these screens and lodge in the flame arrestor.

This document will cover 2 levels of cleaning. The first will cover the steps necessary to clean under the water heater, where combustion air is drawn in through the air intake screen(s) and flame arrestor. The second will cover the steps necessary to clean the combustion chamber.

Procedure: Level 1

1. Turn the water heater gas control knob to “off” and allow the burner area to cool, see Figure 2.

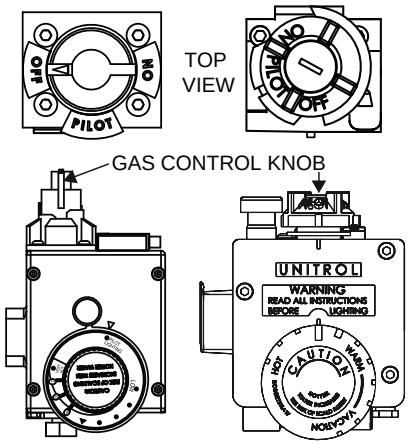

Figure 2

2. Remove the plastic air intake screen(s) and use a small mirror and flashlight to view the bottom of the flame arrestor.
3. Using the flame arrestor cleaning attachment, vacuum all dust and other particles from beneath the heater, see Figure 3.
4. To clean the bottom of the flame arrestor, turn the flame arrestor cleaning attachment over and insert it through the air intake opening at the base of the heater, and use a gentle sweeping motion to clean the entire base, see Figure 3.

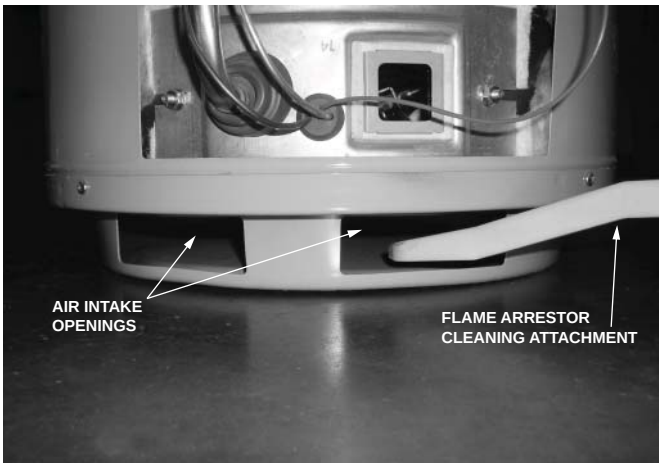

Figure 3

5. Re-insert the air intake screen when finished.
6. At this point, relight the pilot, and check heater for operation. Allow an entire heating cycle to complete to assure proper operation.

NOTE: If the original filter screen is missing or damaged, or you have an installation that frequently gets lint or dust buildup, we recommend the installation of a larger capacity filter screen. If you have questions, contact Residential Technical Assistance referencing the number in your manual.

Procedure: Level 2

1. Turn the water heater gas control knob to “off” and allow the burner area to cool completely, approximately 15 minutes, see Figure 2.
2. Turn off the supply gas at the supply gas line if applicable.
3. Disconnect the three connections from the bottom of the gas valve, being careful to note their location, see Figure 3.

⚠ WARNING!

Do not bend the gas valve connections too far; doing so may result in damage.

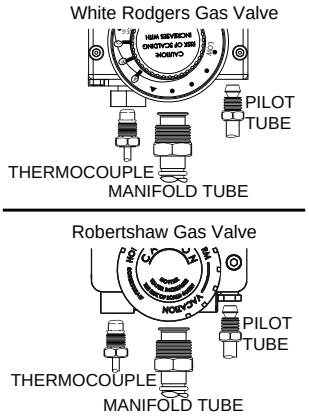

Figure 3

4. Remove the outer door from around the burner tubing at the base of the water heater. White-Rodgers Gas Valve: Remove the Piezo igniter (with the orange wire) from the gas valve by sliding it back toward the tank (leave the orange wire in the inner door assembly). Robertshaw Gas Valve: Disconnect the igniter wire at the base of igniter button.
5. Remove the 3/8” manifold door nuts, holding the inner door and white gasket in place, see Figure 4.

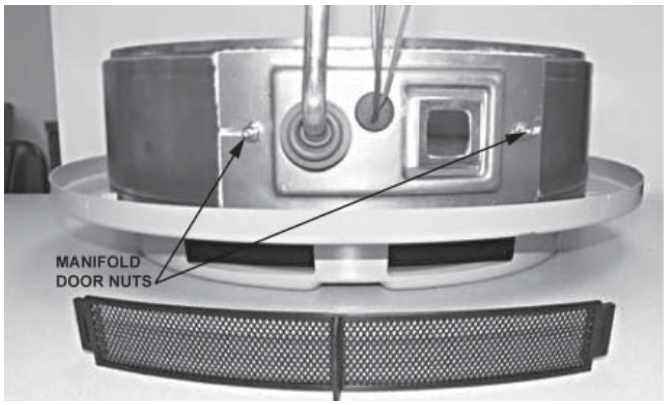

Figure 4

6. Carefully remove the burner from the combustion chamber. Scale or other materials may have collected on the top of the main burner; try not to dump any debris off of the burner until it and the inner door have been removed from the heater. TAKE CARE NOT TO DAMAGE THE WHITE GASKET ON THE INSIDE OF THE INNER DOOR.
7. Inspect the radiation shield (thin circular metal sheet under the burner and above the flame arrestor), see Figure 5. If any of the sides of the radiation shield are touching the base (disrupting air flow), install 1/4-inch high feet under the radiation shield. To obtain the feet free of charge, contact Residential Technical Assistance referencing the number in your manual.

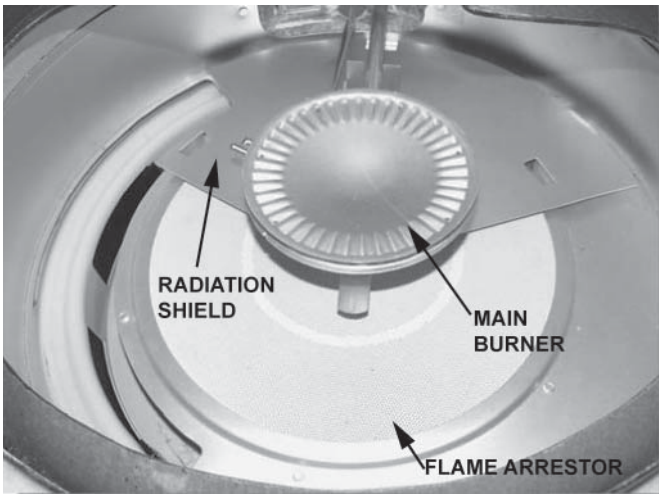

Figure 5

8. Vacuum the main assembly and pilot burner assembly. Then vacuum the top of the radiation shield located inside the burner chamber. Using the flame arrestor cleaning attachment, clean the inside of the combustion chamber and the exposed area of the flame arrestor.
9. Re-insert the burner taking care that the main burner tube is seated in the burner positioning bracket.
10. Carefully reposition the inner door w/gasket over the bolts on the combustion chamber. Do not tighten the nuts down until the main burner, pilot burner, and thermocouple are attached and tightened.
11. Make sure that the white fibrous door gasket is not folded over and protrudes out from the inner door in all directions.

⚠ WARNING

Fire and Explosion Hazard

- Tighten both manifold door nuts securely.
- Remove any debris between inner door and combustion chamber.
- Replace viewport if glass is missing or damaged.
- Replace door gasket if damaged.

Failure to do so can result in death, explosion or fire.

12. Then tighten the 3/8” nuts to hold the inner door in place. Check the gas connections for proper fitting and then light the pilot, following the directions on the side of the heater.
13. Once the pilot is lit, turn the valve to the “ON” position and ignite the main flame. Brush soapy water on the gas connections and look for bubbling. This is an indication of a gas leak. If bubbles appear, shut off gas supply and check fittings. Re-light the pilot and check for leaks again, repeating the soapy water solution method.