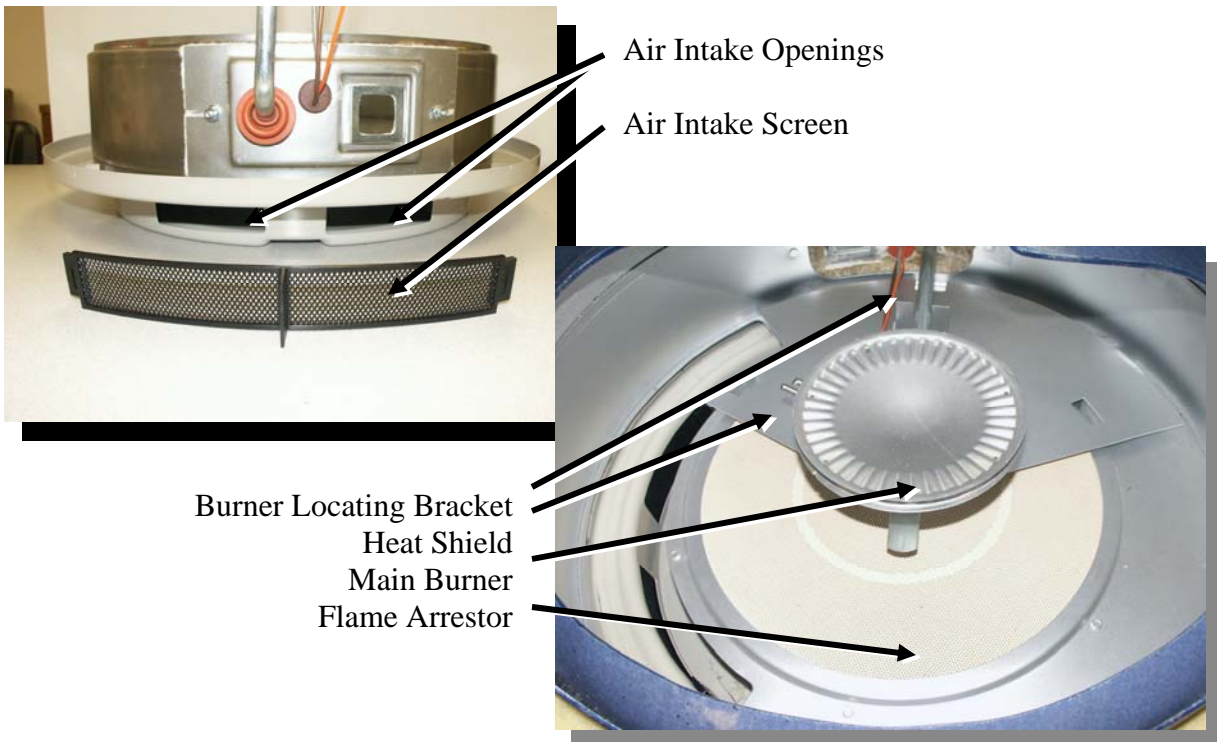


FLAMMABLE VAPOR IGNITION RESISTANT WATER HEATER – SERVICE TIP

Service Tip to keep your water heater in peak performance.

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). 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.



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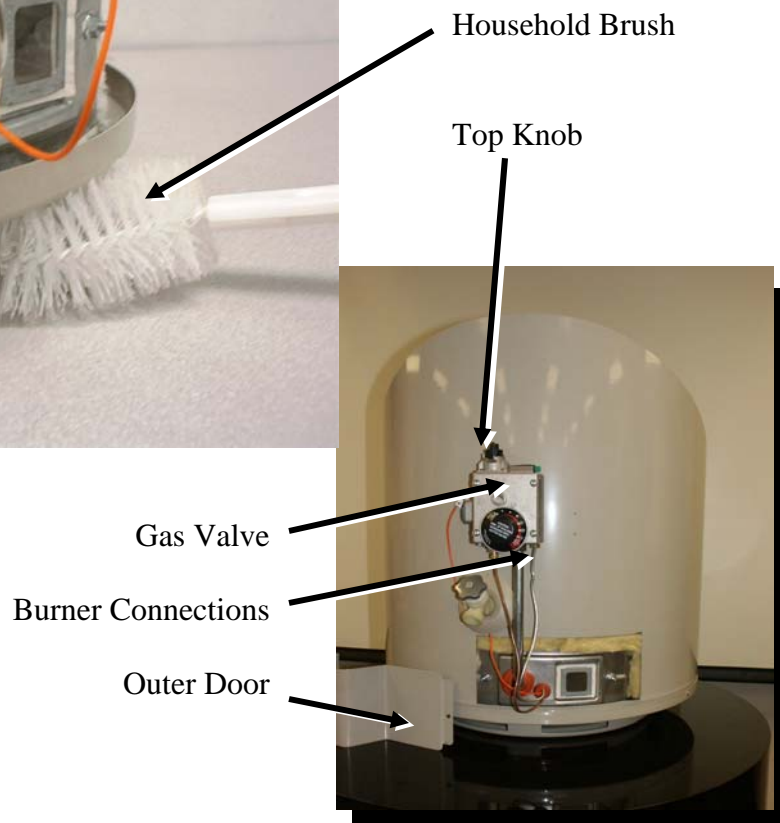
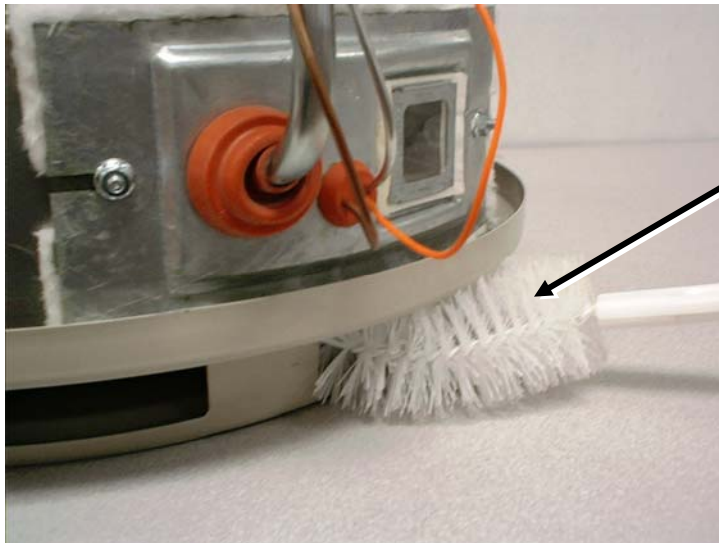
The following paragraphs address the cleaning of the flame arrestor and the combustion chamber. This procedure should be done in two phases: 1) under the heater and 2) the combustion chamber. Required tools are commonly found in most homes, and additionally are available in most home stores or surpercenters.

Tools:

- Vacuum cleaner with crevice and curtain attachments.
- Twisted wire brush (household cleaning brush)
- Flashlight
- Small mirror 2" X 3"
- 3/8", 7/16", and 3/4" inch open end wrenches
- 3/8 inch nut driver
- Small container of soapy water and an applicator.

Procedure

Turn the water heater top knob to "off" and allow the burner area to cool. Then, remove the plastic air intake screen(s) and use a small mirror and flashlight to view the bottom of the flame arrestor. Using the crevice tool, vacuum all dust and other particles from beneath the heater. To clean the bottom of the flame arrestor, use a common household cleaning brush that will pass through the air intake opening at the base of the heater and extend into the heater 2/3 the distance to the back. Use a gentle back and forth motion. Vacuum any remaining debris that may have fallen out of the flame arrestor. Re-insert the air intake screen when finished.



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At this point, relight the pilot, and check heater for operation. Allow an entire heating cycle to complete to assure proper operation.

The following procedure requires abilities equivalent to that of a licensed tradesman. Contact a qualified service agent for assistance.

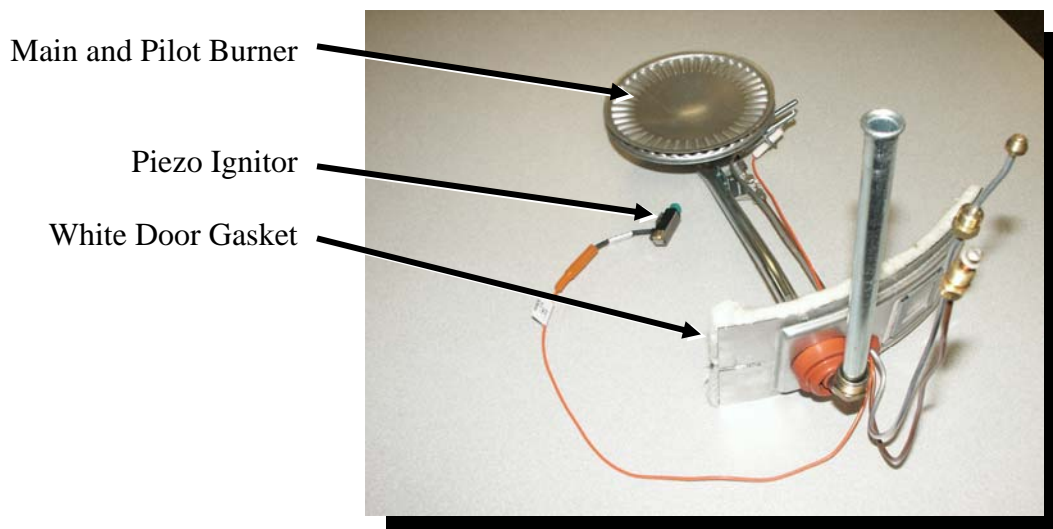
If the yellow flame or pilot outage problem persists, perform the following procedure.

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

WARNING

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

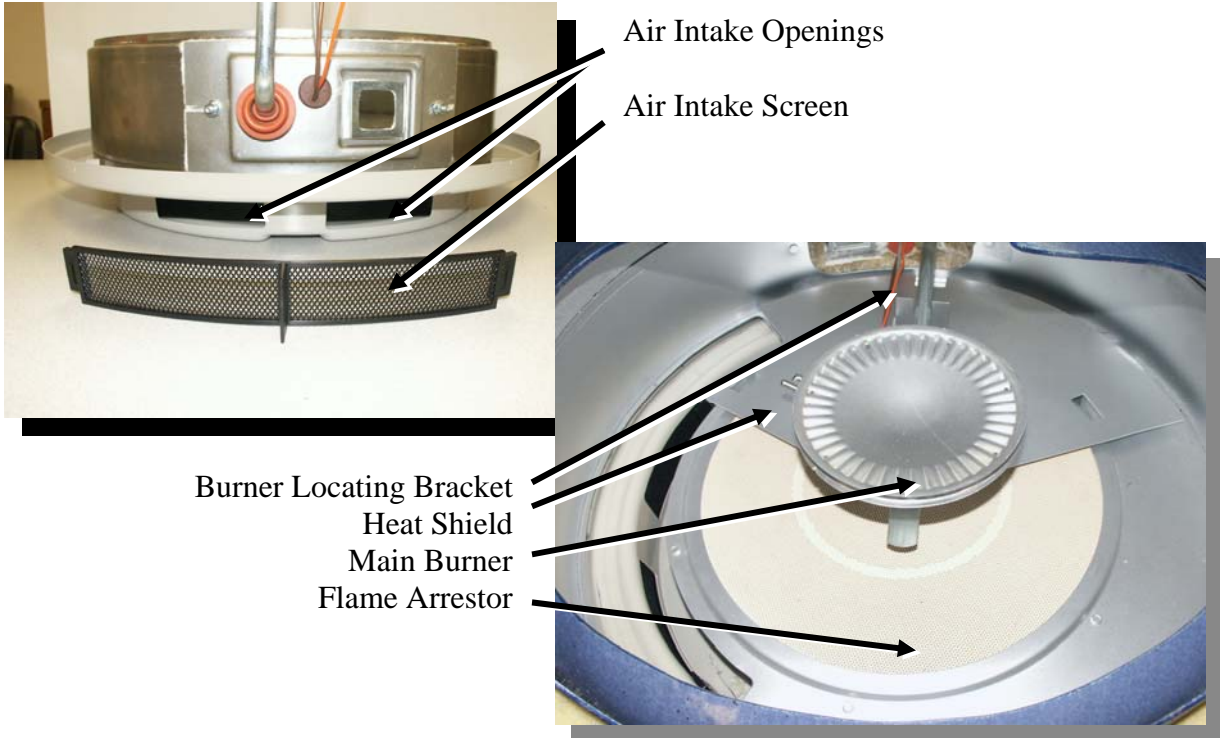
Remove the outer door from around the burner tubing at the base of the water heater. Remove the Piezo igniter (with the orange wire) from the gas valve by sliding it back toward the tank (leave the orange wire in the inner door assembly). Remove the 3/8” nuts, holding the inner door and white gasket in place. Place some protection such as newspaper to protect the floor from debris. Carefully remove the burner from the combustion chamber. There may be soot or other materials 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.**



Inspect the radiation shield (thin circular metal sheet under the burner and above the flame arrestor). If any of the sides of the radiation shield are touching the

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base (disrupting air flow), small feet can be obtained free of charge by contacting our call center at 800-365-8170 and requesting them.



Vacuum the main assembly and pilot burner assembly. Vacuum the top of the radiation shield located inside the burner chamber. Using the vacuum drapery brush attachment, clean the inside of the combustion chamber and the exposed area of the flame arrestor. Using the crevice tool, vacuum under the radiation shield as much as possible without bending the shield upward more than one inch or so.

Re-insert the burner taking care that the main burner tube is seated in the burner positioning bracket. 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. Make sure that the white fibrous door gasket is not folded over and protrudes out from the inner door in all directions. 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. 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.