

Res Tech
Support

Gas - Electronic Control Water Heaters Status Light Does Not Blink

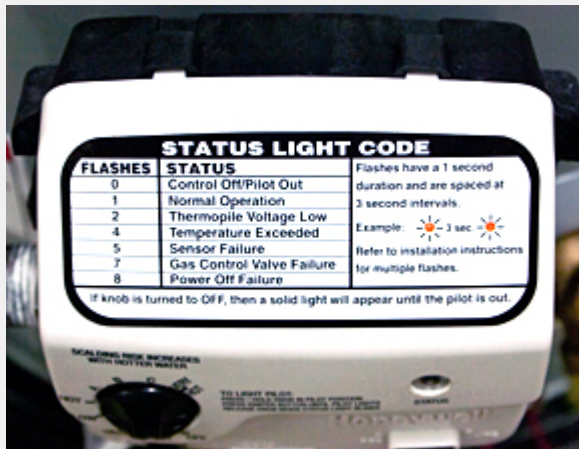
Dear Homeowner,

This article, the website, videos, and other documents contain *supplementary information* and are not intended to replace the printed Instructions. For complete details, read and follow the printed Installation Instructions that came with your water heater or parts kit. The printed Instructions and product labels contain model-specific information, important warnings, and safety notices.

Based on the symptoms you described during your call, we believe the following information may be helpful.

Please read the safety information in the Owner's Manual and the labels on the water heater before attempting any of these procedures.

Status Light Doesn't Blink



Status light code label.

There are several possible reasons why the status light may not be blinking:

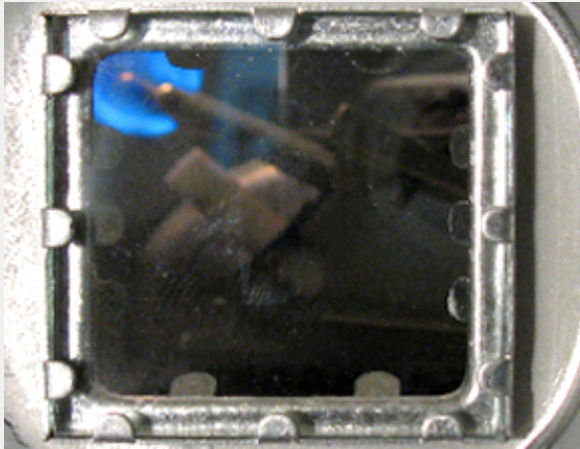
- the pilot is not lit
- air in the gas line
- the thermopile is not hot enough
- the thermal switch has tripped
- the gas control valve wiring is bad or the connectors are loose
- the thermopile is bad

This water heater uses a thermopile to generate electricity needed to power the gas control valve. Once the pilot is lit, it may take up to 90 seconds for the thermopile to get hot enough to power the gas control valve. When that happens, the status light will blink once every three seconds indicating normal operation. If the status light blinks more than once every three seconds, refer to the status light code label on the gas control valve.

WARNING: BEFORE LIGHTING THE PILOT!

Fire and Explosion Risk. Do not attempt to light the water heater if flammable vapors or liquids are present. Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other gas appliance. Storage of or use of gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance can result in serious injury or death.

Is the Pilot Lit?



Confirm that the pilot is lit (it may be difficult to see).

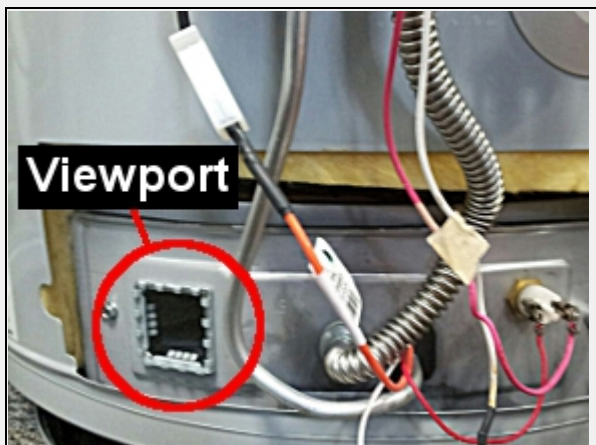
We recommend [watching this video](#) for help lighting this water heater.

Try lighting the pilot following the lighting instructions on the water heater and visually confirm the pilot can be lit. Set the gas control knob to PILOT. Hold the gas control knob in while clicking the igniter button and looking through the viewport (inside the water heater to the left). You may have to dim the room lights in order to see the pilot.

Since there may be air in the gas line, it may take up to 90 seconds before the pilot lights and the status light begins to blink. If the status light does not start blinking after 90 seconds, release the gas control knob, turn the gas valve off, and wait 10 minutes before attempting to relight the pilot. On newly installed water heaters, it may take up to 2-3 lighting attempts before the pilot lights and the status light starts blinking. If the pilot still does not light after three lighting attempts, go to **Checking the Igniter**.

If the pilot lights but the status light does not blink after 90 seconds, go to **Checking the Wiring**.

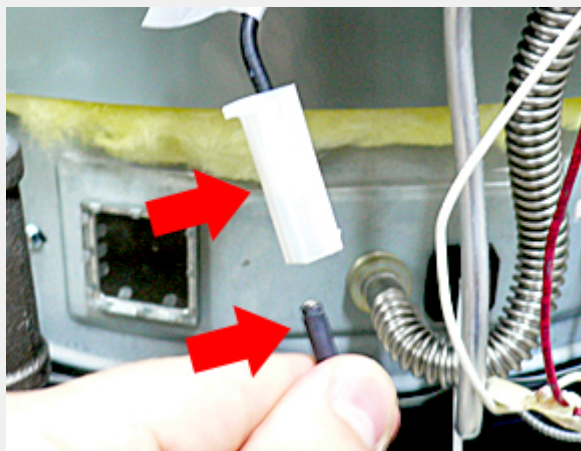
Checking the Igniter



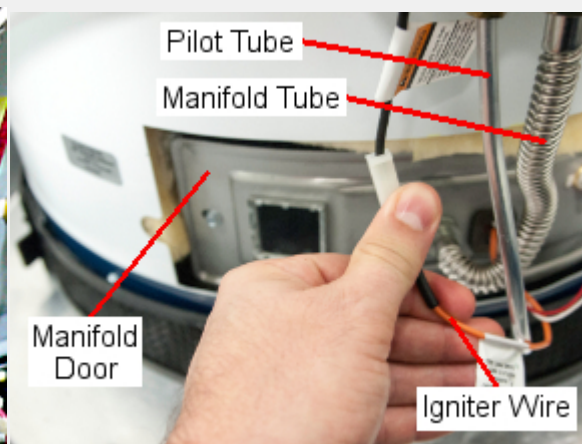
Viewport

Look through the viewport and check for a spark.

Look through the viewport while you click the igniter button and check for a spark (look inside the water heater to the left when checking for a spark). You may have to dim the room lights in order to see the spark.

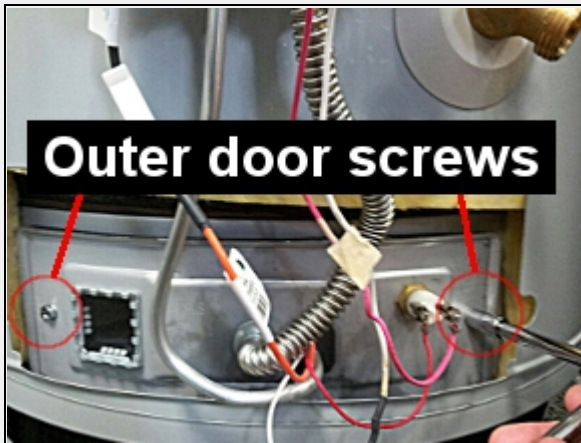


The igniter wire must be firmly inserted into the white connector.



Bend the white connector away from the metal pilot tube, manifold tube, and manifold door.

If you don't see a spark, check to make sure the orange or white igniter wire is firmly inserted into the white connector. Also, make sure the white connector (where the orange or white igniter wire is inserted) is not touching the metal pilot tube, manifold tube, or manifold door (if necessary, bend the white connector away from the pilot tube, manifold tube, and manifold door).



Remove outer door screws.



If you can't see a spark through the viewport, pull out the burner assembly and check for a spark near the igniter.

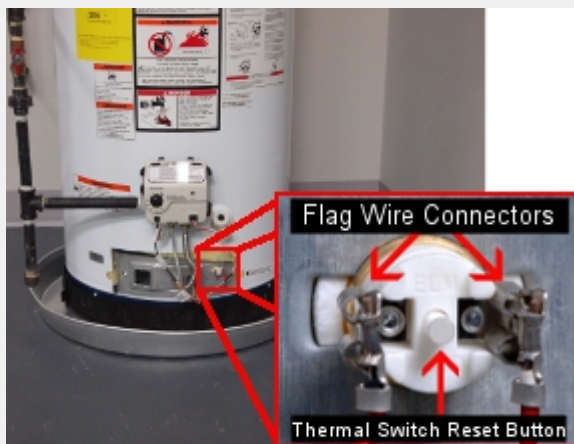
If you still don't see a spark, remove the outer door screws and pull the burner assembly out just far enough to see the igniter on the pilot assembly. Click the igniter button several times and if you see a spark, go to **Checking the Pilot**. Replace the burner assembly and re-tighten the outer door screws. Be sure the door gasket is completely sealed against the combustion chamber. If there's still no spark, call the phone number on the side of your water heater for help in determining the cause.

Checking the Pilot

If you can see a spark, make sure the gas supply valve is turned on and try lighting the water heater again. If you still can't get the pilot to light, call the phone number on the side of your water heater for help in determining the cause.

If the pilot lights, continue to hold the gas control knob in for 90 seconds. The status light should begin blinking once every 3 seconds (you may have to dim the room lights to see the red status light). If the pilot is lit and the status light doesn't blink after 90 seconds, go to **Checking the Wiring**.

Checking the Wiring



Make sure the two thermal switch wires are undamaged and the wire connectors are firmly attached to the thermal switch.

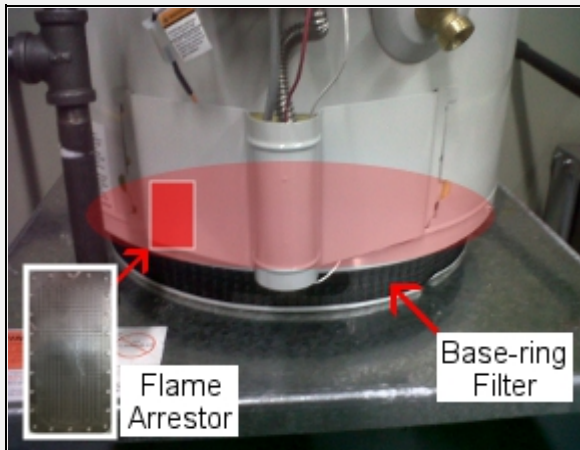


Make sure the black connectors are firmly attached to the gas control valve.

Make sure the flag wire connectors (on the two red wires) are firmly attached to the thermal switch. In addition, press the two black connectors (red and white wires) on the gas control valve in firmly.

Next, press the thermal switch reset button in fully. If the thermal switch has tripped, the water heater's air supply may be restricted, there may be negative air pressure in the home, the vent system may be blocked, or there may be flammable vapors or liquids near the unit.

Thoroughly check the area near the water heater for any substances that may give off flammable vapors such as gasoline, paint, thinners, cleaning agents, solvents, or glue. If any flammable vapors or liquids are found near the water heater, remove them and do not relight the unit. Have a service technician inspect the flame arrestor for discoloration. If the water heater has been subjected to a flammable vapors incident, the entire water heater must be replaced. Please note that the water heater's warranty does not cover a flammable vapors incident.



Flame arrestor and base-ring filter locations.

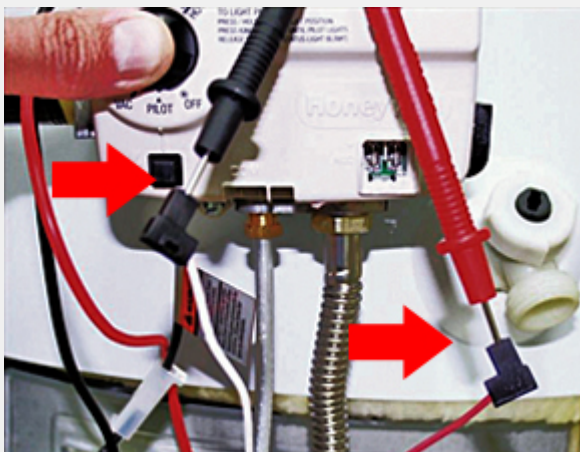


Use a household cleaning brush with plastic bristles to clean the flame arrestor.

If there are no flammable vapors or liquids near the water heater, check the base-ring filter (around the base of the unit) and flame arrestor (underneath the base of the unit) for dust or dirt. If the base-ring filter is dirty, clean it using a vacuum cleaner with a brush attachment. If the flame arrestor is dirty, clean it using a household cleaning brush with plastic bristles. Next, check to make sure that the vent system isn't blocked and that the water heater is getting enough air.

Relight the pilot. If the status light still does not blink, go ahead and test the thermopile.

Testing the Thermopile



Use a multimeter to test the millivolt output of the thermopile.

1. Remove the black connectors from the gas control valve (red and white wires). Attach multimeter leads to the black connectors and set your multimeter to read millivolts DC (on a scale that can read 750 millivolts).
2. Light the pilot. Once the pilot is lit, continue to hold the gas control knob in until this test is complete (you may need assistance from another person to do this). You should see the millivolts gradually rise as the thermopile heats up.
3. After a few minutes of continuous pilot operation, you should get a reading of at least 350 millivolts. If you get a reading of less than 350 millivolts, replace the pilot/thermopile assembly. If you get a reading of 350 millivolts or higher, securely reconnect the black connectors to the gas control valve and release the gas control knob. If the status light still doesn't blink once every 3 seconds, replace the gas control valve.

If you need any additional help, go ahead and call the phone number on the side of your water heater.

[Please take a moment to tell us how we did today.](#)