



**TECHNICAL SERVICE DEPARTMENT**

**Technical Service Bulletin  
1-800-432-8373**



**Residential Standing Pilot Gas Troubleshooting Guide**

<b>NATURE OF TROUBLE</b>	<b>POSSIBLE CAUSES</b>	<b>SERVICE</b>
No Hot Water	<ol style="list-style-type: none"> <li>1. Gas supply turned off</li> <li>2. Pilot not lit</li> <li>3. Main burner not lit</li> </ol>	Turn on gas supply See Unable to light pilot and Pilot does not stay lit See Main burner will not stay lit
Not Enough Hot Water	<ol style="list-style-type: none"> <li>1. Thermostat set too low</li> <li>2. Burner orifice is clogged</li> <li>3. Low gas pressure</li> <li>4. Venting downdraft (or other improper draft)</li> <li>5. Clogged flue</li> <li>6. Defective thermostat</li> <li>7. Defective dip tube</li> <li>8. Heater is undersized</li> </ol>	Adjust thermostat Inspect and clean Check gas supply pressure and manifold pressure Check for proper up draft venting. Check for other drafts that could blow out the pilot light Inspect and clean flue way Conduct partial draw test. Replace gas control valve Check and replace dip tube Adjust Peak Hour Demand
Unable to light pilot	<ol style="list-style-type: none"> <li>1. Gas supply turned off</li> <li>2. Gas cock knob dial not positioned correctly</li> <li>3. Defective thermocouple</li> <li>4. Defective safety magnet assembly</li> <li>5. Pilot burner orifice clogged</li> <li>6. Pilot tube pinched or clogged</li> <li>7. Poor thermocouple connection</li> <li>8. Air in gas line</li> <li>9. Thermostat's single use ECO is tripped</li> <li>10. Gas valve defective</li> </ol>	Turn on gas supply Check lighting instructions. Set control knob Check and replace thermocouple Check and replace gas valve Clean or replace Clean, repair or replace Check and tighten Purge air from gas line Check ECO and replace gas valve Check gas valve
Pilot does not light          Pilot does not stay lit	<ol style="list-style-type: none"> <li>1. Poor thermocouple connection</li> <li>2. Thermocouple defective</li> <li>3. Thermocouple not in pilot flame</li> <li>4. Defective safety magnet assembly</li> <li>5. Venting downdraft (or other improper draft)</li> <li>6. Clogged flue</li> <li>7. Pilot partially clogged</li> <li>8. Improper gas pressure</li> </ol>	Tighten connection at gas valve Check thermocouple and replace Move tip of thermocouple so it is immersed in pilot flame Check magnet and replace gas valve Check for proper up draft venting. Check for other drafts that could blow out the pilot light Inspect and clean flue way Inspect and clean supply tube and pilot burner Check and adjust supply side
Main burner will not stay lit	<ol style="list-style-type: none"> <li>1. Low gas pressure</li> <li>2. Main burner orifice clogged</li> <li>3. Main burner supply tube clogged or pinched</li> <li>4. Defective magnet assembly</li> </ol>	Check gas supply pressure Clean or replace Clean, repair or replace Check and replace gas control valve



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	5. Defective thermocouple 6. Poor thermocouple connection 7. Defective main valve 8. Improper venting	Check and replace thermocouple Inspect and tighten Replace gas control valve Check venting for proper sizing and down drafts
Scale on burner and pilot assemblies	1. Condensation  2. Contaminated atmosphere	Excessive condensation caused by undersized heater, poor venting or continued use Check for contaminant causing chemicals near the heater
Sooting	1. Combustion air inlets or flueway is restricted 2. Not enough combustion or ventilation air supplied to room 3. Improper gas pressure 4. Burner orifice dirty	Remove obstruction or debris from heater or flueway Improve combustion air or ventilation air supply Check and adjust Inspect and clean
Yellow flame	1. Scale on top of burner  2. Burner orifice dirty 3. Flue way clogged 4. Improper gas pressure	Shut off heater; allow to cool; clean burner plate Inspect and clean Inspect and clean Check and adjust
Burner flame noisy (whistling)	1. Improper gas pressure 2. Burner orifice dirty	Check and adjust Inspect and clean
Burner flame floats	1. Improper gas pressure 2. Wrong orifice 3. Clogged flue	Check and adjust Install correct orifice Inspect and clean flue way
Burner flame too high	1. Improper gas pressure 2. Wrong orifice	Check and adjust Install correct orifice
Water too hot (followed by pilot outage)	1. Thermostat setting too high  2. Thermostat out of calibration	Adjust thermostat to lower setting Check and replace thermostat
Slow hot water recovery	1. Burner orifice clogged 2. Excessive drafts 3. Clogged flue 4. Improper gas pressure	Check and clean Locate and eliminate drafts Clean flue chamber Check and adjust
Noisy water heater (rumbling and sizzling)	1. Scale or sediment build up in bottom of tank 2. Baffles loose 3. Condensation on main burner	Clean tank  Reset and tighten Inspect for condensation (normal) and tank leaks
Excessive relief valve operation	1. Excessive water pressure  2. Excessive temperature	Install proper pressure reducing valve on cold side Check for open or closed system. Install expansion tank. Check thermostat; lower setting or replace
Rusty or black water	1. Anode rod dissolved 2. Excessive sediment build-up	Check anode rod and replace Drain tank; replace tank if sediment build up is excessive
Water heater is leaking (Gas water heaters produce condensation)	1. Cold in or hot out joints 2. T&P valve	Check joint and repair Check valve and replace (Caution: Do not confuse normal T&P operation as a leaking tank. If the



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that may drip on the floor.	3. Immersion thermostat or anode rod is loose 4. Inner tank has a pin hole	puddle dries up, then look for a T&P problem.) Check, tighten and replace  Replace water heater
Smelly water (rotten egg odor)	Bacteria formation inside water tank	Clean tank using chlorine bleach Replace anode rod if deteriorated Add automatic chlorine feeder to cold water inlet side of tank
Milky water	Aerated water	Allow a glass of hot water to set for a few minutes. If the water turns clear, the condition is a natural occurrence. See water chemistry section.