



**Residential Electric Troubleshooting Table**

NATURE OF TROUBLE	POSSIBLE CAUSES	SERVICE
No Hot Water	<ol style="list-style-type: none"> <li>1. Manual switch turned off</li> <li>2. Blown fuse of breaker</li> <li>3. High limit switch tripped</li> <li>4. Upper Thermostat defective</li> <li>5. Upper Element Defective</li> <li>6. Grounded thermostat</li> <li>7. Thermostat out of calibration</li> <li>8. Improper wiring               <ol style="list-style-type: none"> <li>a. Shorted or loose wiring</li> <li>b. Undersized service wire</li> </ol> </li> </ol>	Turn to ON Replace or reset Manually reset ECO button Check and replace Check and replace Check and replace Check, tighten and replace Check and replace  Rewire per wiring diagram
Not Enough Hot Water	<ol style="list-style-type: none"> <li>1. Thermostat set too low</li> <li>2. Defective lower element</li> <li>3. Defective lower thermostat or miswired thermostat</li> <li>4. Improper wiring</li> <li>5. Loose wiring</li> <li>6. Improper heating elements</li> <li>7. Scale formation on heating elements</li> <li>8. Thermostat not flush with tank</li>   <li>9. Poor grounding of tank</li> <li>10. Heater is undersized</li> <li>11. Damaged dip tube</li> </ol>	Increase Thermostat setting not to exceed 120 degrees Check and replace Check and replace  Rewire per wiring diagram Check and tighten Check wattage and replace Check elements; clean or replace  Position thermostat so back touches the tank Check grounding and tighten Resize residence and compare Check and replace
Water too hot	<ol style="list-style-type: none"> <li>1. Thermostat setting too high</li> <li>2. Thermostat out of calibration</li> <li>3. Thermostat not flush with tank</li> <li>4. Grounded element</li> </ol>	Lower thermostat setting Check and replace Position thermostat so back touches the tank Check and replace
Slow hot water recovery	<ol style="list-style-type: none"> <li>1. Heating elements too small</li> <li>2. Lower thermostats is defective</li> </ol>	Check wattage and replace Check lower thermostats and replace
Noisy heating element	<ol style="list-style-type: none"> <li>1. Scale build-up on elements</li> <li>2. High watt density elements in the heater</li> </ol>	Remove, clean or replace Install low watt density elements
Excessive relief valve operation	<ol style="list-style-type: none"> <li>1. Excessive water pressure</li>   <li>2. Excessive temperature</li> </ol>	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	<ol style="list-style-type: none"> <li>1. Scale formation on elements</li> <li>2. Anode rod dissolved</li> <li>3. Excessive sediment build-up</li> </ol>	Clean or replace elements Check anode rod and replace Try to drain tank; replace tank if sediment build up is excessive



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Water heater is leaking	1. Cold in or hot out joints 2. T&P valve 3. Heating elements and gaskets 4. Inner tank has a pin hole	Check joint and repair Check valve and replace 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.