



How to Replace an Electrical Heating Element

If you are not comfortable working with electricity, do not attempt this procedure. Call your plumbing professional. If you are working on a Marathon Water Heater, the water in the tank must be cool before you drain the unit. Failure to cool the water may result in the polybutylene inner tank to collapse or deform. After shutting off the electric circuit breaker, allow the water to run from a hot water faucet till cool. You will also need to use a 1 7/8 inch socket to remove the elements.

Be sure to use the same element flange, gasket type, wattage, and voltage as on the element being replaced.

1. Before servicing the water heater, **DISCONNECT or TURN OFF** the main electric power breaker feeding the water heater. This is normally located in the electric service panel.
2. Remove the cover panel and insulation to expose the heating element. Remove the plastic protective cover over the thermostat and heating element.
3. Before servicing the heating element, verify with a voltmeter, that voltage/power has been disconnected to the water heater. Measure for voltage at the top two screws of the thermostat. There should not be any power.
4. Shut off cold water supply to the heater. Lift and open temperature and pressure relief valve to vent pressure. Open a nearby hot water faucet. Connect a garden hose to the drain valve at the bottom of the heater and open the drain valve. Drain water to a point below the element that you are replacing.
5. Disconnect the two wire leads to the heating element. You do not need to tag the leads before removal from the screw terminals.
6. Remove element using 1-1/2" socket for screw-in type, or 3/8" socket for four-bolt type.
7. Ensure surfaces of new coupling flange and new element flanges are clean. With a new heating element gasket in place, install the heating element. Snug it down tight.
8. Reconnect the two wire leads. It does not matter which color wire goes on which screw terminal.
9. Close the temperature and pressure relief valve. Open the shut off valve at the cold water inlet line. You will hear the heater start to fill. Shut off the faucet (that you opened in step 4) only after getting a constant flow of water, without air, from the faucet. Failure to properly fill tank can result in element damage.
10. Double check to be sure your wire connections are correct and they are firm and tight. Check for leaks around the heating element. Tighten more if needed.
11. Replace the plastic protective cover to the thermostat and heating element.
12. Re-establish the electric power to the water heater. Cycle test the water heater to be certain of proper operation.
13. Replace the insulation and cover panel.