Help Center

No Hot Water

Written By: Jason Leonard



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INTRODUCTION

No hot water is often caused by a problem with the home’s electrical wiring or circuit breakers. It can also be caused by a burned-out upper heating element.

The information on this web site is supplemental to the printed instructions that came with your water heater. To reduce the risk of property damage, serious injury or death, read and follow all labels on the water heater and the safety instructions in the printed owner's manual.

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Step 1 — Tools and Supplies





- Common electrical and plumbing tools
- To check for power or to check for a burned out heating element, you'll need a multimeter.
- A non-contact circuit tester or volt meter.

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Step 2 — Turn Power Off





- Turn the power to the water heater OFF at the circuit breaker (or remove fuses).

⚠ **WARNING! Working near an energized circuit can result in severe injury or death from electrical shock. Check wires with a volt meter or circuit tester to make sure power is off .**

Step 3 — Remove Junction Box Cover







- Open the electrical junction box on top of the water heater.

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Step 4 — Check for Electrical Power





- Using a non-contact circuit tester, check the power wires to make certain the power is off.

⚠ WARNING! Working on an energized circuit can result in severe injury or death from electrical shock. Check wires with a volt meter or circuit tester to make sure power is off.

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Step 5 — Replace the Junction Box Cover




- Replace the junction box cover.

⚠ **WARNING! Be sure all covers are secured to reduce the risk of fire and electric shock.**

Step 6 — Remove the Upper Heating Element Cover



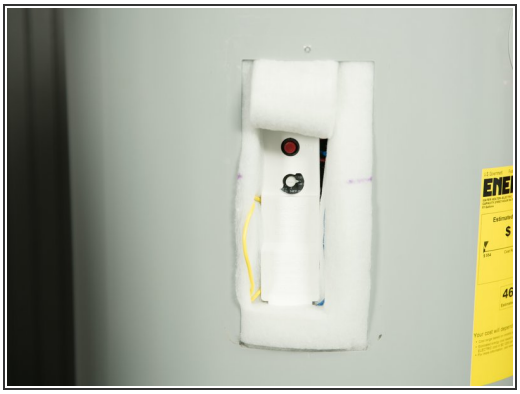


- Remove the Upper Heating Element Cover

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Step 7 — Move Insulation Out of the Way





- Carefully fold back the insulation (tuck the insulation under the water heater's jacket).

Step 8 — Remove Plastic Protector



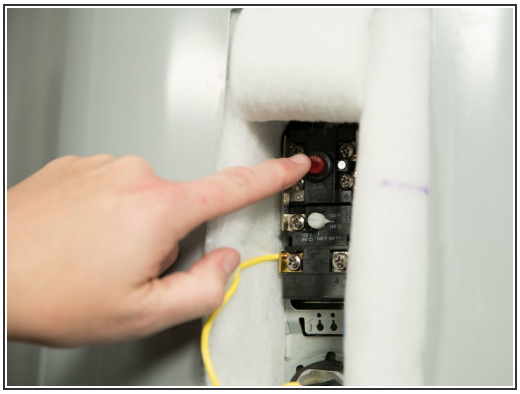
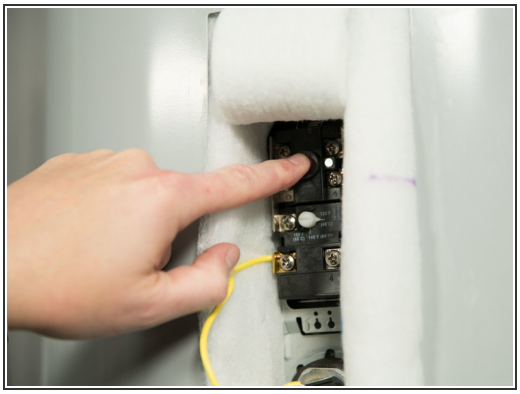



- Remove the plastic protector.

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Step 9 — Press the Red ECO Reset Button



The Energy Cutoff (ECO) shuts off power to the water heater's elements if the temperature of the water in the tank gets too hot. If the ECO has tripped, you'll have no hot water.

- To check the ECO, press the red ECO reset button.
- If the ECO was tripped you'll hear a click. A tripped ECO indicates a problem with one of the heating elements or thermostats. See **Energy Cutoff (ECO) Tripped**.
- If you don't hear a click, the ECO was not tripped.

Do not turn the power back on until the cause of the overheating has been identified and repaired.

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Step 10 — Turn Power Back ON





- Turn the power back ON.

⚠ **WARNING! Working near an energized circuit can result in severe injury or death from electrical shock.**

Step 11 — Set the Multimeter to AC Volts



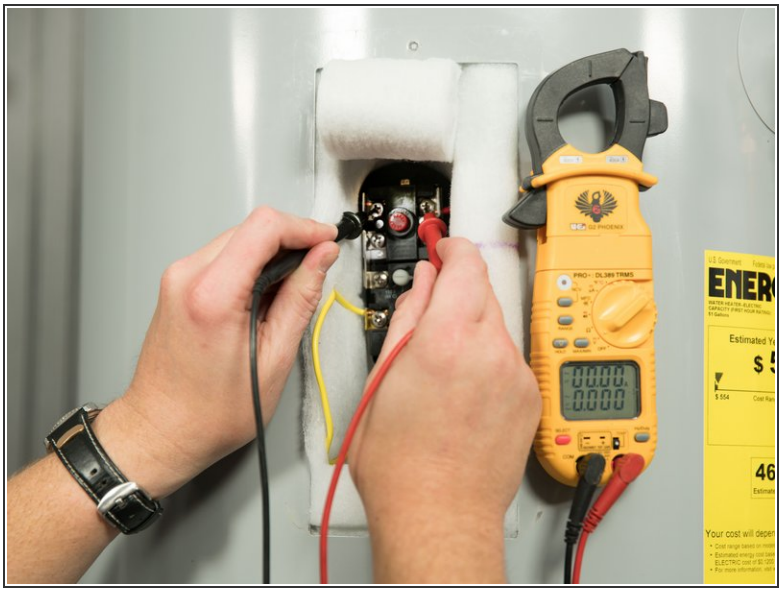


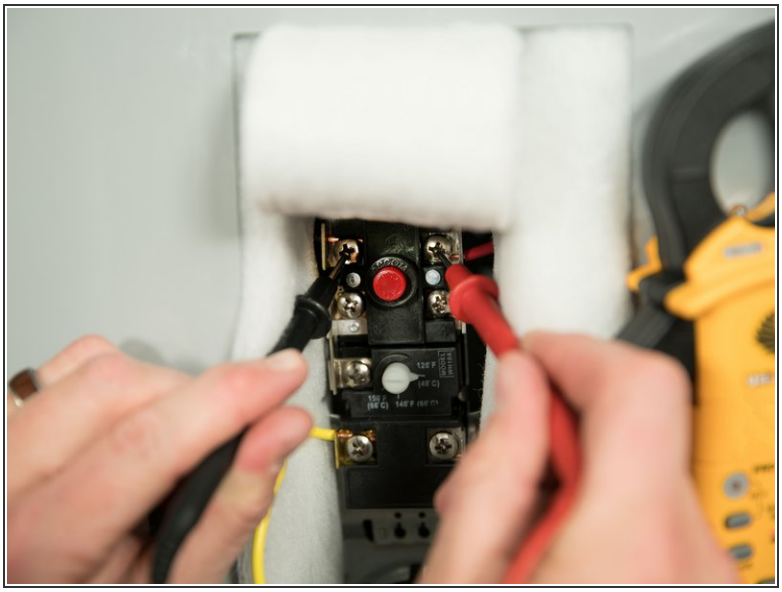


- Set your multi-meter to read AC volts.
- See the water heater's data plate for the correct voltage.

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Step 12 — Check Voltage





- Read the voltage on the top two screws of the upper thermostat.
- **If the voltage supplied to the water heater matches the requirements on the data plate, skip to step 16.**
- **If the voltage supplied to the water heater does not match the requirements on the data plate, contact an electrician or other qualified person.**

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Step 13 — Replace Plastic Protector





- Replace the plastic protector.

Step 14 — Replace Insulation





- Replace the insulation.

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Step 15 — Replace Heating Element Cover





- Replace the heating element cover.

⚠ **WARNING! Be sure all covers are secured to reduce the risk of fire and electric shock.**

Step 16 — Turn Power Off

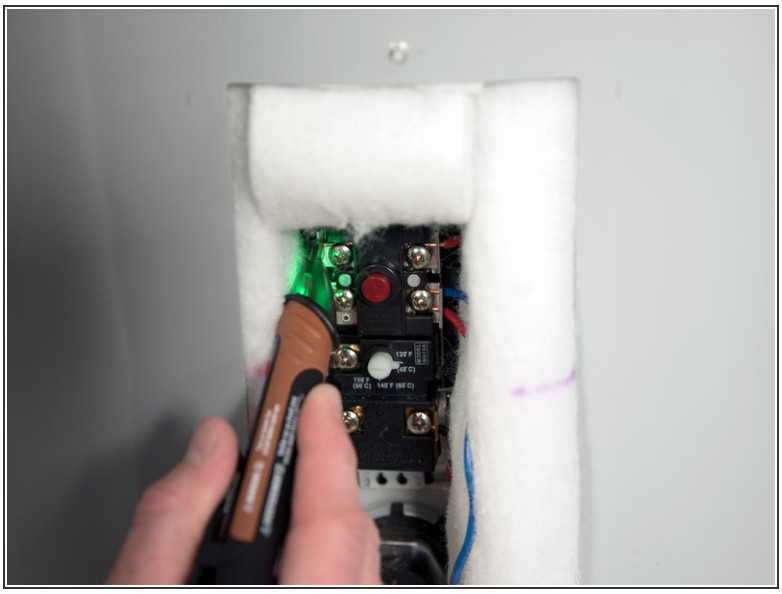
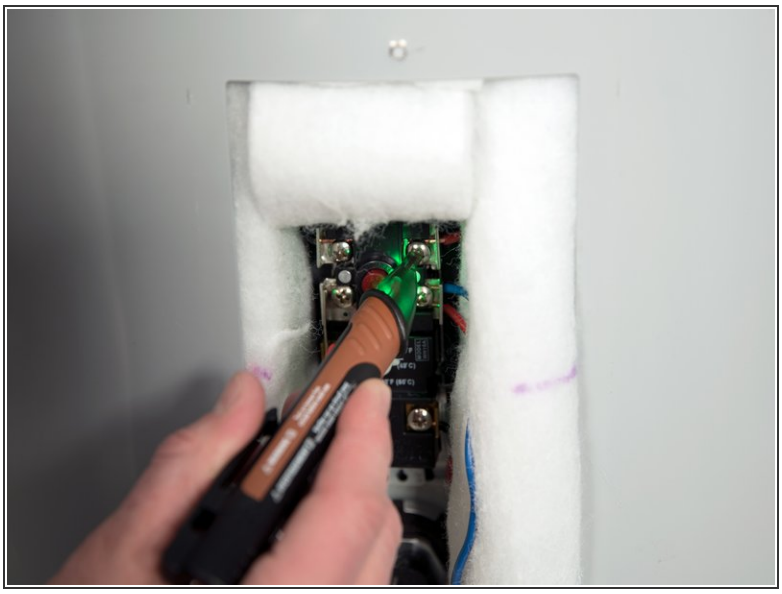




- If the water heater is getting the correct voltage, check to see if the upper heating element has burned out.
- Turn the power to the water heater OFF at the circuit breaker (or remove fuses).

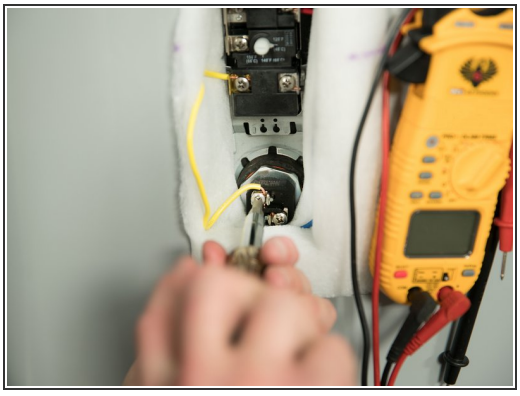
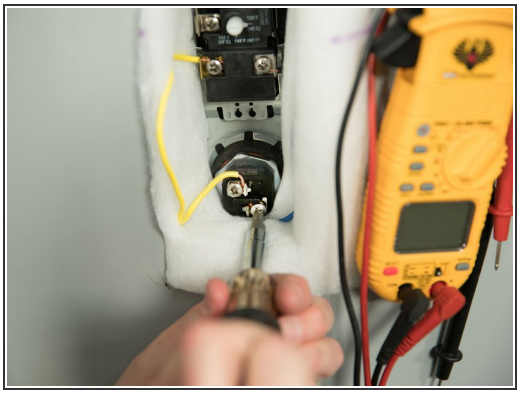
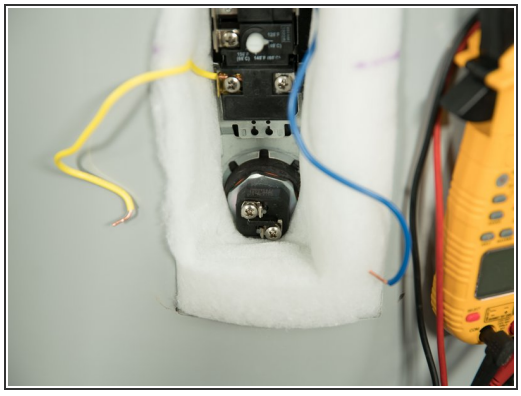
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Step 17 — Check for Electrical Power

⚠ **WARNING! Working on an energized circuit can result in severe injury or death from electrical shock. Check wires with a volt meter or circuit tester to make sure power is off.**

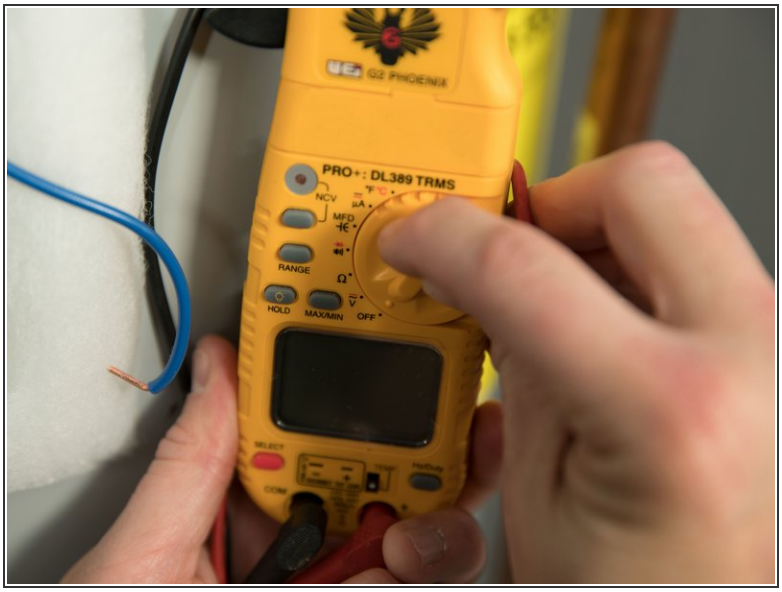
Step 18 — Remove Power Wires

- Remove the two power wires from the upper heating element.

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Step 19 — Set Multimeter to Resistance

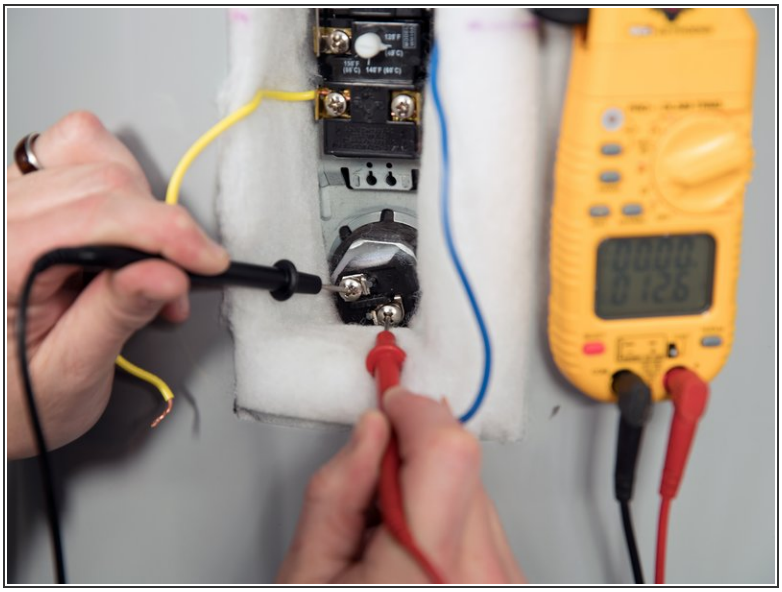


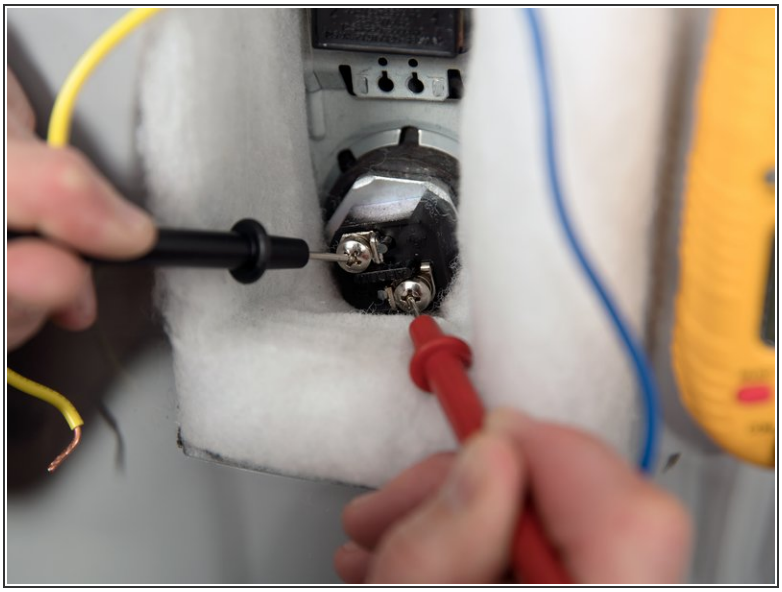


- Set the multimeter to read resistance (200 Ohm range or lower, depending on the type of meter you have).

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Step 20 — Check the Resistance of the Heating Element





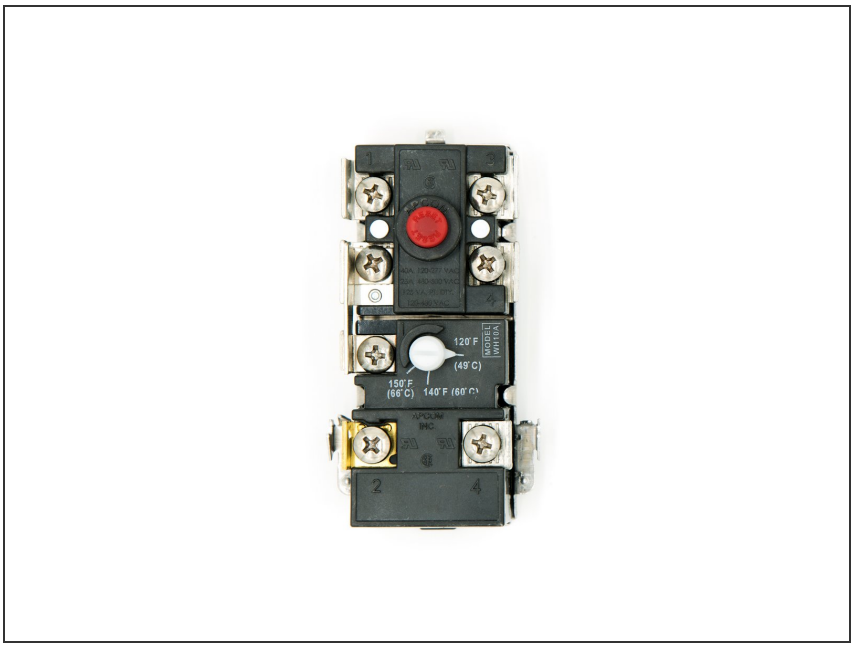
- Check the resistance of the upper heating element using a multimeter. Measure the resistance between the two screw terminals on the upper heating element.

A good element will have a resistance between 5 and 25 Ohms. If the reading is outside that range See Checking/Replacing Heating Elements.

On a new water heater, a burned out upper heating element is almost always caused by turning the power on before the tank was completely full of water (dry fire).

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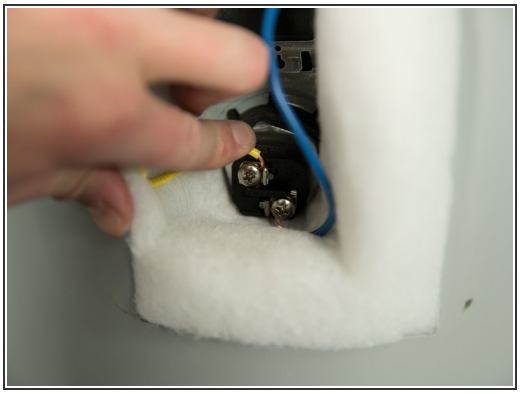
Step 21

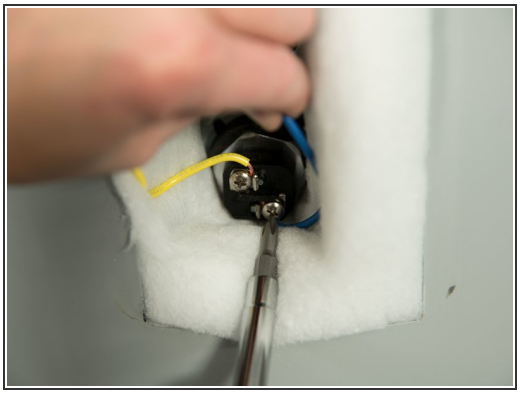


- **If upper element is good, replace the upper thermostat. see Replacing a Thermostat**

Step 22 — Attach the Wires







- Attach the wires to the element.

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Step 23 — Replace the Plastic Protector





- Replace the plastic protector.

Step 24 — Replace the Insulation





- Replace the insulation.

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Step 25 — Replace the Heating Element Cover





- Replace the heating element cover.

⚠ **WARNING! Be sure all covers are secured to reduce the risk of fire and electric shock.**

Step 26 — Plumbing Leak?



- **If both elements and thermostats are good, check for a leak on the hot water side of the homes plumbing system. Even a small**

leak can make it seem like the water heater is not making hot water.

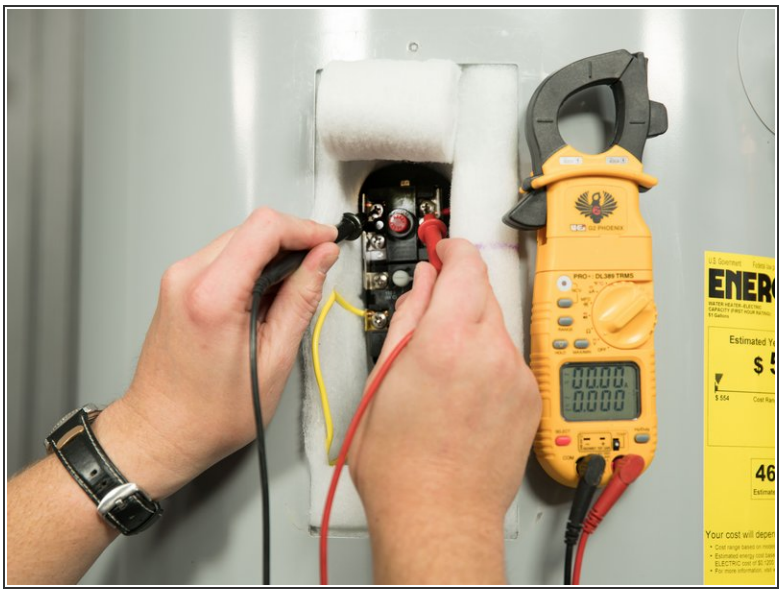
Step 27 — Turn Power Back ON

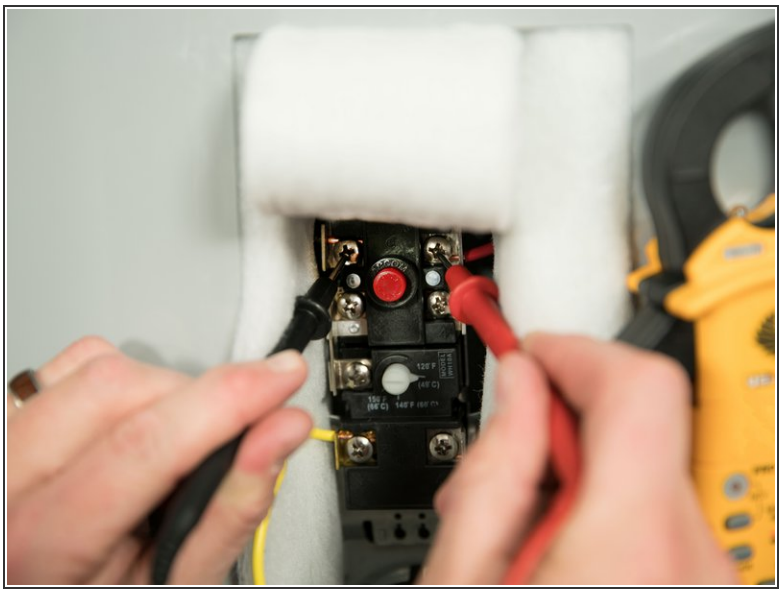


- Turn the power back ON (or replace fuses).

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Step 28





⚠ WARNING! Working near an energized circuit can result in severe injury or death from electrical shock. Check wires with a volt meter or circuit tester to make sure power is off .

Step 29





- Unscrew the old element with an element wrench.

Step 30



- Remove the old element.

Step 31





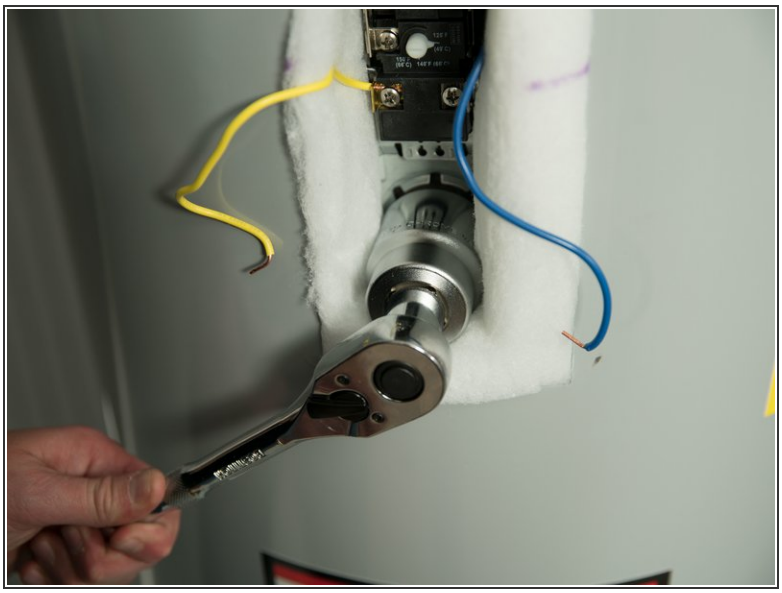


- Lubricate the gasket of the new element with dish soap.

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Step 32





- Install the element and hand tighten.
- Tighten with an element wrench or 1 1/2" deep well socket.

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