Town of Jupiter Water Utilities

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Hot Water Heater Guidance Document

Routine maintenance will help your water heater last longer and work better. There are 3 basic maintenance tasks that are recommended by most hot water heater manufacturers:

1. Draining and flushing the water heater
2. Replacement of the anode rod
3. Inspection and Replacement of the heating element

These maintenance tasks are described below. If you cannot perform these routine tasks yourself, contact a qualified person. It is recommended that you consult your water heater's maintenance guide to determine if these general practices are consistent with maintenance instructions for your particular make and model.

Draining and Flushing the Water Heater

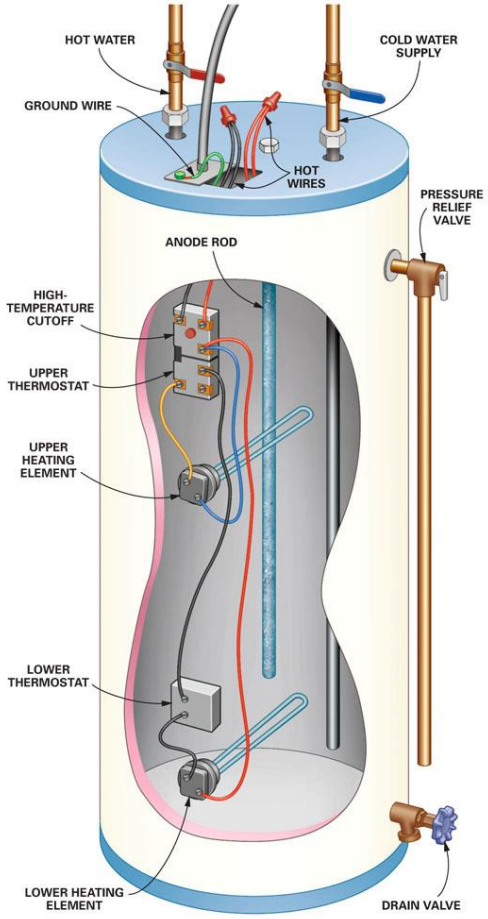
Minerals like calcium and magnesium are typically found in Florida's groundwater. These minerals are not dangerous to health, but can form deposits around heating elements or sediment in the bottom of the tank. The rate at which sediment builds up depends on water quality, temperature settings and other variables. It is recommended that water heaters are drained and flushed after the first 6 months of operation to determine the amount of sediment build-up. Depending on the amount of build-up, repeat this process annually, or more frequently as needed. Draining sediment extends the life of the tank, heating elements and drain valves. To drain and flush the tank:

1. Turn power off to the water heater
2. Turn off cold water supply to tank (inlet)
3. Attach a garden hose to the drain located at the bottom of the tank and run hose outside
4. Open the drain at the bottom of tank
5. Open a hot water faucet in the home to vent the tank for draining
6. Drain tank until empty
7. Open the cold water supply (inlet) on tank to flush. Continue until water coming from hose is clear and free of debris
8. Close water supply (inlet) to tank
9. Close drain located at bottom of tank and remove hose
10. Open water supply (inlet) on tank to fill. When water flows from opened hot water faucet in the home, tank is full and you may turn off faucet
11. Restore power to water tank. It will take some time to heat water to correct temperature

Replacement of the Anode Rod

The sacrificial anode, also called an anti-corrosion rod, is typically made of magnesium and is used to attract corrosive elements so that the water tank itself will not corrode as quickly. The anode rod is a consumable item, and should be replaced when it is badly corroded to protect and extend the life of the water tank. Inspect the anode rod after the first six months of operation when you drain and flush the tank. Thereafter, inspect the rod annually or more frequently, and replace as needed. To inspect and replace the anode rod:

1. Turn power off
2. Run hot water until it's cool
3. Turn cold water supply valve off
4. Open hot water faucet to vent tank
5. Locate and remove the black plastic cover marked "Anode"
6. Use a "key hole" saw or similar tool to remove any foam insulation covering the anode rod
7. Once exposed, use a socket wrench with an extension to remove the rod
8. Inspect the rod and replace if depleted
9. Apply Teflon ® tape or pipe joint compound and reinstall the anode rod tightly
10. It is not necessary to replace the foam removed to access the anode
11. Open water supply (inlet) on tank to fill. When water flows from opened hot water faucet in the home, tank is full and you may turn off faucet
12. Check for leaks and repair if necessary



Inspection and Replacement of Heating Elements

Most electric hot water heaters have two heating elements located at the top and the bottom of the unit. These heating elements work around the clock to keep your water at just the right temperature for showering, doing laundry and washing dishes. The heating elements can fail long before the hot water heater itself. When the water heater quits producing hot water, it is beneficial to first check the heating elements before replacing the entire unit.

While this is relatively simple task, working on an energized circuit can result in severe injury or death from electrical shock. The power must be turned off and the wires checked with a non-contact circuit tester to make sure the power is off. When you are finished, be sure all covers are secured to reduce risk of fire and electric shock. If you are not comfortable replacing a heating element yourself, have this work done by a qualified person. To inspect and replace the heating element(s):

1. Turn power off
2. Open the electrical junction box on top of the water heater. Using a non-contact circuit tester, check the power wires to make certain the power is OFF.
3. Drain the tank (see instructions under Draining and Flushing Water Heater)
4. Remove the upper and/or lower access panel on the water heater, and then fold back the insulation and remove the plastic element/thermostat cover
5. With the tank drained and power off, remove the power wires from the element you intend to replace
6. Remove the element using an element wrench
7. Inspect the element for scale build-up or signs of failure (see “Electric Water Heater Element Failures” document for more information). Scale build-up should be gently brushed away.
8. If replacing the element, make sure the new element is the correct replacement by referring to the water heater’s data plate for voltage and wattage information. Use a new rubber gasket if re-installing the existing element.
9. Clean the threads in the tank opening with a rag. Insert the cleaned or new element equipment with a rubber gasket and tighten
10. Do not turn power back on until the tank is completely full of water
11. Refill tank by opening the cold water supply valve. Make sure the hot water faucet is open and the drain valve is closed. Allow the hot water to run full for at least three minutes to make sure the tank has all the air removed and is completely full. Failure to perform this step can cause the upper heating element to burn out.
12. Check for leaks and tighten as needed
13. Once the element is successfully installed, replace insulation and covers.
14. Restore power to the water tank and allow time for the water to heat back up