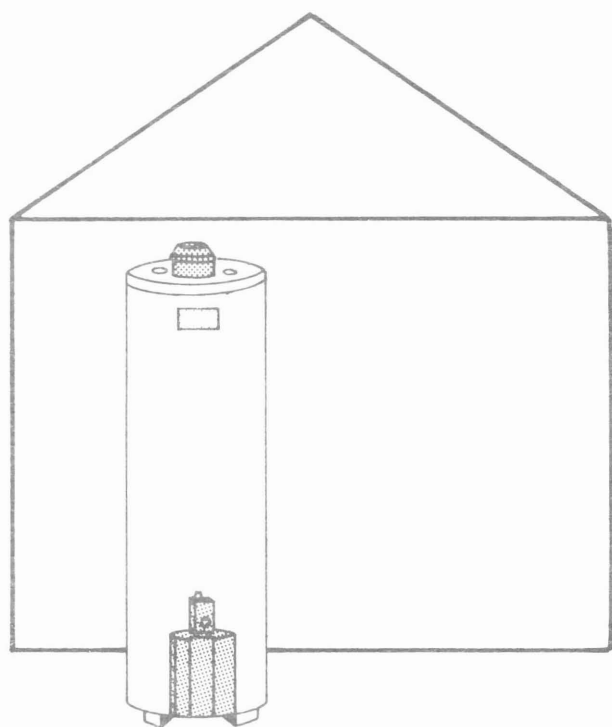


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# Care and Maintenance of Water Heaters



THE TEXAS A&M UNIVERSITY SYSTEM  
TEXAS AGRICULTURAL EXTENSION SERVICE  
J. E. Hutchison, Director, College Station, Texas

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## CARE AND MAINTENANCE OF WATER HEATERS

Extension Housing and Home Furnishings Specialists  
The Texas A&M University System

Water heaters are among the least troublesome of all major appliances, according to utility company service records. Though water heaters suffer few mechanical failures, they sometimes leak or fail to deliver enough hot water. Periodic attention can prevent major problems and the need for service calls.

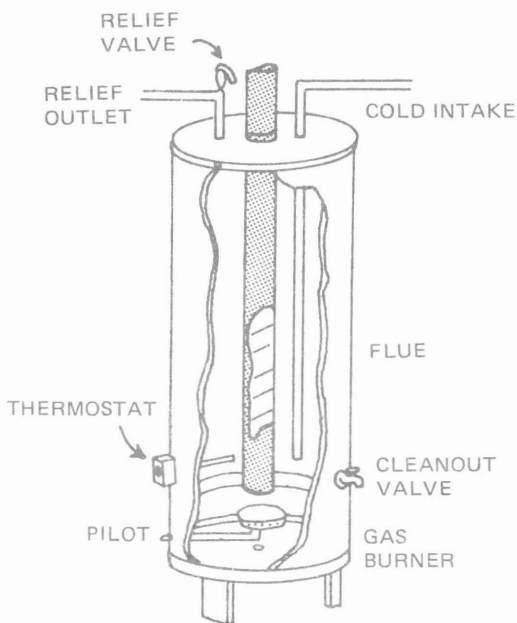
The major parts of water heaters and their functions are:

*Pressure relief valve*—allows steam to escape safely in case the thermostat goes out. Usually the valve must be purchased separately from the water heater.

*Pressure relief outlet*—provides a drain line that carries escaping water away.

*Cold intake valve*—controls the water supply coming into the water tank.

*Heat source*—a *burner* at the bottom of the tank heats the water in a gas unit. In an electric unit, *heating elements* inside the tank heat the water.



*Thermostat*—a heat-sensing device that regulates water temperature. In an electric unit, it is embedded in the insulation and must be adjusted by a serviceman.

*Cleanout valve*—a drain at the bottom of the unit for keeping the tank free of sediment.

*Tank*—the water tank is encased in insulation and an outer cover.

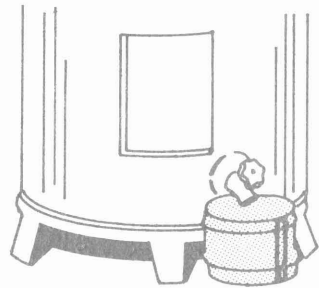
Knowing how the various parts of a water heater function can aid in more successful maintenance of the unit. Follow these guides in correcting the five most common *water heater nuisances*:

**Problem 1: Leaking Pressure Relief Valve**

The pressure relief valve releases steam and hot water when the thermostat fails. Catch the leaking water with a pan or drain hose. A valve that leaks continuously should be adjusted by a serviceman.

**Problem 2: Leaking Drain Valve**

On a *new* water heater, open the drain valve at the bottom of the tank every 2 to 6 months. This removes sediment. Opening the drain valve on a tank over 2 years old may cause a chronic leak. It is best to replace a leaky drain valve, but this is a job for a professional.



**Problem 3: No Hot Water**

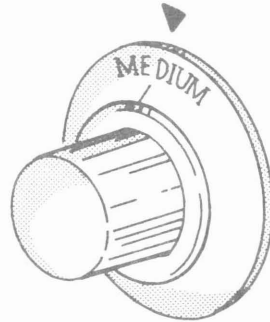
In a gas unit, any of the following will keep the water heater from adequately heating water: (1) an extinguished pilot light, (2) a closed gas supply valve or (3) a thermostat that has been shut off.

For an electric unit, check to see if the heater switch has been shut off or if the fuse has blown in the circuit supplying the heater.

#### **Problem 4: *Not Enough Hot Water or Water Not Hot Enough***

In a gas unit, lack of hot water may be caused by: (1) thermostat being set too low, (2) a partially closed valve on the supply line or (3) insufficient capacity of unit to meet needs.

Lack of hot water in an electric unit may result from: (1) thermostat being set too low, (2) heating element failure or (3) insufficient capacity of unit to meet needs. If your unit is electric, call a utility serviceman to adjust the thermostat and repair the heating element.



A thermostat set too low will cause insufficient hot water.

#### **Problem 5: *Water Too Hot***

When water in a gas unit gets too hot, the thermostat may be set too high, or it may not be operating properly. Adjust the thermostat downward. If the water temperature continues to be excessively high, shut down the unit and call a utility serviceman. A new thermostat can be installed.

When the thermostat of an electric heater is set too high, it is necessary for a professional to make the adjustment. The thermostat is embedded in the insulation between the tank and the outside cover.

An improperly grounded heating element also can cause an electric unit to produce excessively hot water. Again, have a serviceman check the grounding system.

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