

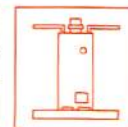
## ELECTRICAL TROUBLESHOOTING CHART

THE PROBLEM	POSSIBLE REASONS	WHAT YOU CAN DO
You can't get the lights or outlets to work.	No power is reaching the fixtures or outlets.	Check the fuse box/circuit breaker and make sure everything is fully set to the on position, or fuses aren't blown. Check for an overload – too many appliances plugged into one circuit. Unplug all appliances and reset the breaker. Check the GFI outlet and reset it if it's tripped.



## ELECTRIC WATER HEATER TROUBLESHOOTING CHART

THE PROBLEM	POSSIBLE REASONS	WHAT YOU CAN DO
There is no hot water.	The heater has no power. The safety thermostat has quit working. There is a defect in the heating elements. Rust, scale or sediment has accumulated in the tank or pipes.	Check the fuse box/circuit breaker. If the heater repeatedly blows fuses, call an electrician. Push the reset button. Test the heating thermostats and elements. Test the elements and replace them if necessary. Drain and flush out the tank and pipes.
The hot water supply is too low.	The thermostat is set wrong. The tank is too small. Heat is getting lost in the pipes.  There is a defect in the heating element. The hot water faucets leak.	Turn the thermostat to a higher temperature. Have a professional install a larger heater. Move the heater nearer to the point of use if possible and insulate the hot water pipes. Test the element then replace it. Repair or replace the faucets.
The water temperature is too high.	The thermostat is on the wrong setting. There is not enough insulation around the thermostats. The elements are defective. The thermostats are defective.	Turn the thermostat to a lower temperature. Pack the insulation more tightly around the thermostats.  Test the elements, then replace them. Test the thermostats, then replace them.
There is a water leak.	The gasket or seal on the element is defective. There is a defect in the safety valve. The tank is rusted through. The plumbing connection leaks.	Check and replace the gasket or seal. Check and replace the safety valve. Have a professional install a new water heater. Call a plumber.
The heater becomes unusually noisy.	Rust, scale or sediment has accumulated in the tank. Scale has formed on the elements.	Drain the tank and flush it out.  Remove the elements and soak them in vinegar, then scrape off the scale.
Your hot water is rusty or discolored.	Rust or sediment has accumulated in the tank. Scale has formed on the elements.  The water pipes are corroded.	Drain the tank. Remove the elements and soak them in vinegar, then scrape off the scale.  Have a plumber replace the pipes.



## CENTRAL AIR-CONDITIONING TROUBLESHOOTING CHART

THE PROBLEM	POSSIBLE REASONS	WHAT YOU CAN DO
Water leaks into the walls or ceiling.	The drain hose from the condenser pan is clogged (in attic installations).	Make sure the hose is able to empty the water.
The unit constantly cycles on and off.	There may be something clogging evaporator unit or blocking the fan.	Have a professional clean out the evaporator unit.
The air conditioner doesn't get cool enough.	The condenser coil is dirty.  There is direct sun on the evaporator unit. The insulation has fallen off the feed line.	Clean any debris from the condenser unit so air can circulate around the fins. Create shade for the unit. Secure the insulation firmly to line and replace any worn-out insulation.



## HOT-AIR FURNACE TROUBLESHOOTING CHART

THE PROBLEM	POSSIBLE REASONS	WHAT YOU CAN DO
There is no heat at all.	The power is out. The blower belt is broken. The blower motor is broken.	Check the fuse box/circuit breaker. Replace the belt. Call a qualified contractor.
Your rooms aren't warm enough.	The filter is dirty. The registers are dirty. There are air leaks in the ducts. The heat exchanger is dirty. The ducts are blocked. The blower belt is loose. The blower is slow. A register is closed. The duct damper is in an incorrect position.	Replace the filter. Clean the registers. Seal the ducts with duct tape. Call a qualified contractor. Remove any visible obstructions. Tighten the blower belt. Call a qualified contractor. Open the register. Adjust the dampers.
Soot collects in your house.	The filter is dirty. The heat exchanger is damaged. The ducts are dirty.	Replace the filter. Call a qualified contractor. Have a professional clean them.
The blower makes unusual noises – noticeable when the burner is off.	The pulley is loose. The blower mounts are worn. A worn belt. The belt tension is too tight. The blower bearings need oil.	Tighten the setscrews. Put in new blower mounts. Replace the belt. Loosen the belt tension. Oil the bearings.

