

CONDITION	CAUSE	REMEDY
No hot water.	Dry-fired element.	Replace with new element.
	Main power supply is "OFF".	Turn "ON" main power supply.
	Burnt fuse.	Replace with new fuse.
	Circuit breaker has tripped.	Reset circuit breaker.
	High limit reset control has tripped.	Reset high limit control by pushing the red reset button.
	Circuit breaker is defective.	Replace with new circuit breaker.
	Defective thermostat.	Replace with new thermostat.
	Defective element.	Replace with new element.
Not enough hot water.	Water heater is undersized.	Install size of water heater that meets demand.
	High hot water demand.	Increase the temperature of the thermostat.
	Very cold water supply.	Increase the temperature of the thermostat.
	Wrong piping connections.	Correct piping.
	Sediment or lime accumulation at bottom of water heater.	Drain water heater. Check to see if water treatment is necessary.
	Hot water plumbing system leaks.	Check hot water plumbing system for leaks and repair.
	Thermostat adjusted too low.	Increase the temperature of the thermostat.
	Defective thermostat.	Replace with new thermostat.
	Defective element.	Replace with new element. In 90% of all cases, it is the bottom element.
	Long runs or exposed piping.	Insulate piping.
	Hot water piping on outside wall.	Insulate piping.
Boiling hot water.	Thermostat temperature set too high.	Lower the temperature on the thermostat.
	Thermostat not in contact with water heater.	Position properly. Be sure insulation is not interfering with thermostat.
	Element attacked by CO ₂ .	Replace with new element.
	Defective thermostat.	Replace with new thermostat.
Continuous operation.	Water heater is undersized.	Install size of water heater that meets demand.
	Element wattage too small.	Replace with higher element wattage.
	Thermostat not in contact with water heater.	Position properly. Be sure insulation is not interfering with thermostat.
	Thermostat temperature set too low.	Increase the temperature of the thermostat.
	Defective thermostat.	Replace with new thermostat.
Defective high limit reset control.	Defective high limit reset control.	Replace with new high limit reset control.
Element failure.	Wiring connections are wrong.	Refer to the installation manual for correct wiring.
	Wiring connections are loose.	Locate, clean carefully, reconnect properly.
	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	High voltage.	Check with electrical utility and correct.
	Short circuit.	Locate short circuit and repair.
Thermostat failure.	No power.	Inspect fuse/circuit breaker, replace/reset.
	Loose wiring connection.	Locate, clean carefully, reconnect properly.
	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	Low/High voltage.	Check with electrical utility and correct.
	Short circuit.	Locate short circuit and repair.
Blown fuse/circuit breaker.	Wiring connections are wrong.	Refer to the installation manual for correct wiring.
	Wiring connections are loose.	Locate, clean carefully, reconnect properly.
	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	High voltage.	Check with electrical utility and correct.
	Short circuit.	Locate short circuit and repair.
Power supply wiring undersized.	Power supply wiring undersized.	Refer to the installation manual for correct wiring size.
Fuse burns instantly.	Short-circuit.	Locate short circuit and repair.



Enhancing everyday living

TROUBLESHOOTING GUIDE

Residential Electric Water Heaters

CONDITION	CAUSE	REMEDY
Fuse burns often.	Fuse contacts oxidized or fuse not screwed in tight enough.	Clean contacts and tighten fuse.
	Power supply wiring is undersized.	Refer to the installation manual for correct wiring size.
Smoking wiring.	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	Low/High voltage.	Check with electrical utility and correct.
	Power supply wiring undersized.	Refer to the installation manual for correct wiring size.
Service wires charred or hot.	Wiring connections are wrong.	Refer to the installation manual for correct wiring.
	Water heater not properly grounded.	Properly ground the water heater.
	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	High voltage.	Check with electrical utility and correct.
	Short circuit.	Locate short circuit and repair.
Drain valve leaks.	Power supply wiring undersized.	Refer to the installation manual for correct wiring size.
	Drain valve is open.	Close the drain valve.
Water drips from the relief valve.	Defective drain valve.	Replace with new drain valve.
	Excessive water pressure.	Install a pressure reducing valve.
	Thermal expansion in a closed water system.	Install a suitable expansion tank on the cold water supply line.
	Improperly seated relief valve.	Check relief valve works properly and replace, if necessary.
	Defective thermostat.	Replace with new thermostat.
Water on the floor/drain pan.	Defective relief valve.	Replace with new relief valve.
	Water discharge from the relief valve.	Refer to the installation manual.
	Element leaks.	Replace with new element.
Condensation.	Water heater leaks.	Replace with new water heater.
	Water heater filled for the first time.	Let water heater warm up. Problem should go away. If it persists, check all plumbing connections for leaks.
	Heavy draws of hot water with very cold refill water.	Let water heater warm up. Problem should go away. If it persists, check all plumbing connections for leaks.
Wet insulation.	Water heater is undersized.	Install size of water heater that meets demand.
	Leaking plumbing connections.	Locate leak and repair.
	Leaking around heating element.	Tighten, clean, and smooth face of tank flange and element gasket.
Singing element.	Water discharge from the relief valve.	Refer to the installation manual.
	Build-up of mineral deposits on element.	Clean element, replace with new element, if necessary.
Singing thermostat.	Thermostat not flush with tank.	Install thermostat properly.
	Wiring connections are loose.	Locate, clean carefully, reconnect properly.
Traces of rust in the hot water.	Anode has been eaten away.	Replace with new anode.
Rusty water.	Water corrosion.	Replace with new water heater.
Rotten egg smell.	High sulfate or mineral content in water.	Change magnesium anode to an aluminum anode and bleach water heater.
Tank bulged.	No relief valve installed.	Install proper relief valve.
	Excessive water pressure.	Install a pressure reducing valve.
	Thermal expansion in a closed water system.	Install a suitable expansion tank on the cold water supply line.

In accordance with our company policy of on-going product improvement, Giant Factories Inc. reserves the right to make changes without prior notice.

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