



Troubleshooting Tables – Universal Commercial Gas

Universal Commercial Gas Troubleshooting Table

NATURE OF TROUBLE	POSSIBLE CAUSES	SERVICE
No Hot Water	Manual switch turned off Blown service panel fuse or breaker High limit switch tripped Damper Assembly not working Thermostat faulty Thermostat out of calibration Improper or loose wiring	Turn to ON Replace or reset Cool tank by turning on a hot water faucet Check and replace Check and replace Check and replace Check and replace
Not Enough Hot Water	Thermostat set too low Improper or loose wiring Thermostat not seated in tank Heater is undersized Improper gas supply	Increase thermostat setting Rewire per wiring diagram Reseat thermostat Resize and compare Check gas pressure
Water too hot	Thermostat setting too high Thermostat out of calibration Thermostat not seated in tank	Lower thermostat setting Check and replace Reseat thermostat
Slow hot water recovery	Improper gas supply	Check gas pressure
Noisy water heater	Sediment build-up on the bottom of the tank	Clean tank
Excessive relief valve operation	Excessive water pressure (just a little water from the T&P) Excessive temperature (approximately 2/3 of tank volume is on the floor)	Check for open or closed system. Install thermal expansion tank. Install proper expansion tank on cold side Check thermostat; lower setting or replace. Thermostat not seated in tank
Rusty or black water	Anode rod dissolved Excessive sediment build-up	Check anode rod and replace Drain tank; replace tank if sediment build up is excessive
Water heater is leaking (Caution: Do not confuse normal T&P operation as a leaking tank. If the puddle dries up, then look for a T&P problem.)	Cold in or hot out joints T&P valve Anode rod or hand hole gaskets Inner tank has a pin hole Also, check for signs of condensation when diagnosing a leaking heater.	Check joints and repair Check, tighten and replace Check, tighten and replace Replace water heater (When diagnosing a leaker - you will notice a puddle of water on the floor, next to the heater, that will not go away.)



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Troubleshooting Table – Parallel Installation and Storage Tanks

Check the water heaters with the previous table; then check.....

NATURE OF TROUBLE	POSSIBLE CAUSES	SERVICE
No Hot Water	Circulating pump to storage tank is not operating	Check and replace
Not Enough Hot Water	Circulating pump to storage tank is not operating	Check and replace
Water too hot	Check for stacking	Install circulating lines and pump

Universal Commercial Gas with System Sentinel™ Troubleshooting Table

See the Use and Care Manual for the System Sentinel™ for a comprehensive diagnostics flow chart.

NATURE OF TROUBLE	POSSIBLE CAUSES	SERVICE
If the POWER LED is not illuminated -	No power to heater No power to transformer Transformer is damaged	Turn ON/OFF switch to ON Check circuit breaker Replace ON/OFF switch Replace transformer
If the THERMOSTAT LED is not illuminated -	Thermostat set too high Thermostat defective or out of calibration	Lower thermostat setting and check for LED Replace thermostat
If the IGNITION LED is not illuminated -	Damper assembly did not open Wiring harness is defective	Inspect and test damper Replace wiring harness
If the PILOT VALVE LED is not illuminated -	Pilot electrode (spark ignitor) is defective Orange ignition cable is defective Ignition control module is defective Gas control valve is defective	Check for proper gap. Check for cracks. Replace spark ignitor; Replace ignition cable Replace ignition control module Replace gas control valve
If the ECO LED is not illuminated -	Water in tank is too hot ECO is defective	Cool tank down by drawing off hot water Replace ECO
If the MAIN VALVE LED is not illuminated -	Ignition control module is defective Gas control valve is defective	Replace ignition control module Replace gas control valve