Hot Water Tank

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Overview



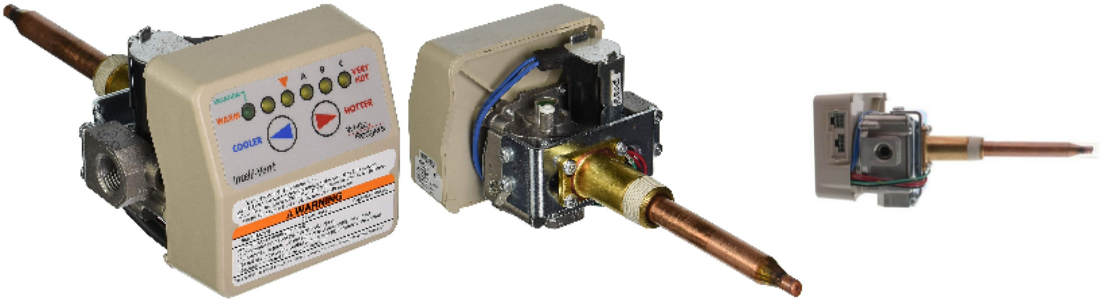


Specification	Details
Make	GSW
Model	8G50NVH-ES-02
Capacity	50 US Gal
Recup per/hour	34.5 US Gal

Controller (Intelli-vent)

INTELLI-VENT™ CONSTRUCTION





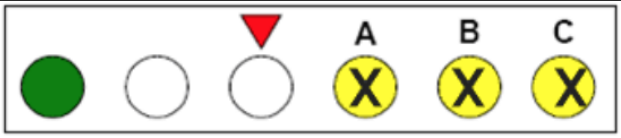
Problem

High Temp Thermo Cut-Off

The controller was showing an error 11 code at startup indicating that the high temperature thermal cut-off had tripped. Turns out once this trips, you need to replace the unit.

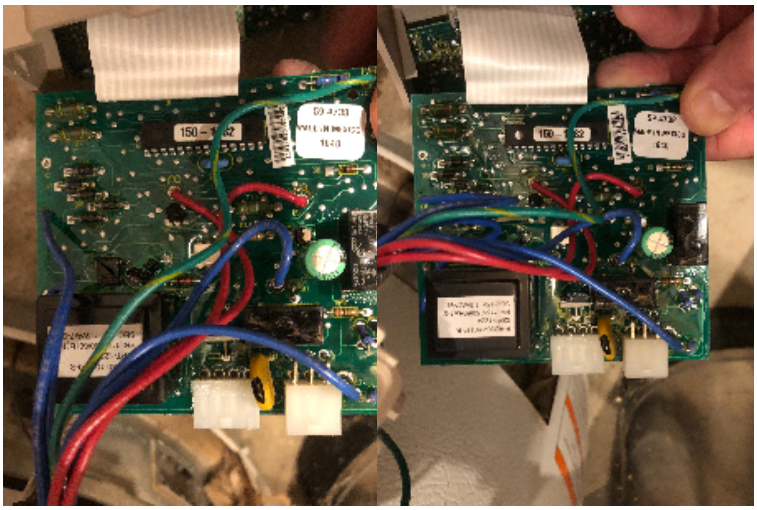
INTELLI-VENT™ CONTROL SPECIFICATIONS	
Body	½ inch NPT inlet. ½ inch inverted flare outlet. (RH thread natural, LH thread propane)
Electrical Ratings	120 VAC, 60 Hz, 1Ø, 5-7 FLA. Ignitor load: 2 amps maximum. Blower/inducer motors: 3 amps full load - 4 amps locked rotor.
Max Inlet Gas Pressure	½ PSI maximum (14.0" W.C.)
Temperature Range	70 - 160°F Residential. 120 - 180°F Commercial.
High Temp Cut Off - ECO	195°F Residential - single use (control must be replaced) 195°F Commercial - resettable (reset temp 120°F)

Error 11

Indications	Display
High temperature thermal cut-off (ECO) switch is tripped. (This one time use device trips when the water temperature exceeds 195^0 F.)	
Troubleshooting	
1. Cycle power to the water heater off for 10 seconds and then back on. 2. If the above step did not clear the error, the Intelli-Vent™ control must be replaced.	

Disassembling the Controller

I attempted to see if I could bypass the high temperature cut off but had no luck. Here are some pictures of the circuit board.



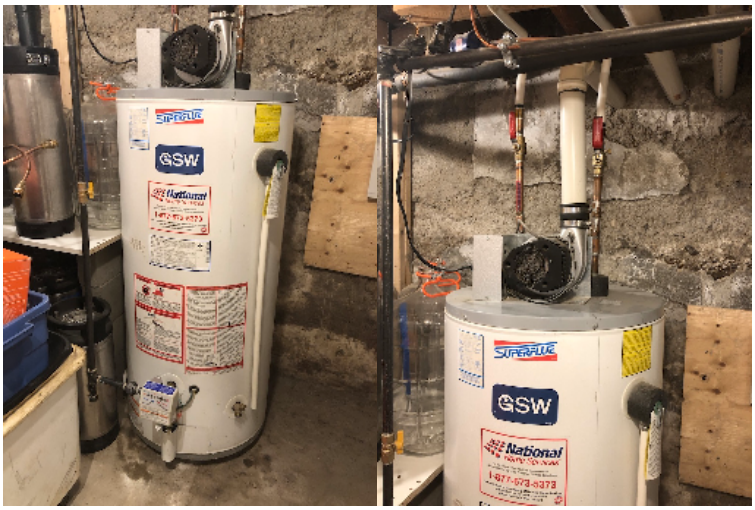
Temporary Fix

Picked up 10L electric water heater and connected it to the hot and cold line near the shower. Allows for a quick shower when desperate.



Fix

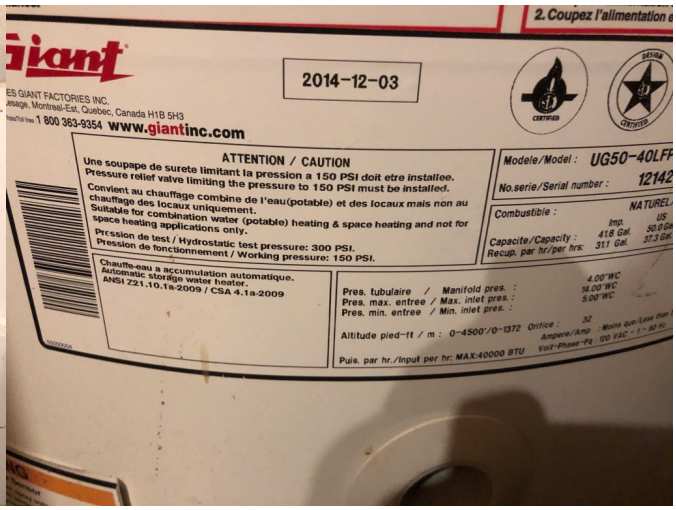
I managed to buy a similar hot water tank with the same controller. Transfered the new controller to the old tank and all was well again. Perhaps I should have just installed the newer tank but didn't want to mess with all of the plumbing and the gas. Might do it at some point since the other tank is newer.



Donor Tank

Specification	Details
Make	Giant
Model	UG50-40LFPV1-N2U-DE
Capacity	50 US Gal
Recup per/hour	37.3 US Gal
User Manual	GI-IM052En-Res-Gas-PV2.pdf

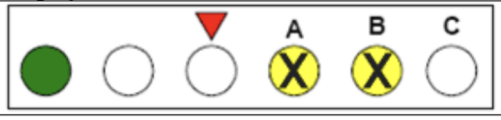






Ignitor Problem

Error 6

Indications	Display
The maximum number of ignition retries or recycles has been reached and the system is in lockout. (This means there was no flame rectification to the control to verify main burner.)	
Troubleshooting	
1. Check if the gas supply is off or too low to operate. 2. Check the flame sense rod to see that it is located properly and free from contamination. Reposition the flame sense rod or lightly clean with an abrasive cloth. (See last page for positioning of flame rod.) 3. The Hot Surface Ignitor may not be positioned on the burner correctly. Reposition as necessary. (See last page for proper positioning of hot surface igniter and flame probe) 4. Low voltage to the water heater. (Verify the hot surface ignitor glows by recycling power and looking thru sight glass window. If you have a glowing ignitor, then your problem is probably fuel related.) 5. Thermal Release Device is damage or missing. No oxygen in combustion chamber. 6. Inadequate fresh air to support combustion inside combustion chamber. 7. Main burner supply tube is blocked, bent or restricted; burner orifice is blocked or restricted.	

Fix

Remove element and lightly sand the flame sense rod with emery cloth or steel wool.

https://www.youtube.com/watch?v=MuGY9nfcTZA

References

Reference	URL
SuperFlue Hot Water Tank Manual	superflue.pdf
Intellivent Trouble Shooting Guide	Intellivent-gas-control-troubleshoot.pdf
Service Manual	Intellivent-service-manual.pdf