

Geothermal Heat Pump with Gas Back-Up - Check List

Member/Customer Name			
Member/Customer Address			
Make		Model #	
		Serial #	
Contractor Name		Service Date	Gas Furnace (Btu/hr)
Check Off If Done	If any item cannot be checked or recorded, please provide an explanation. (For example, "No temperature/pressure Pete's plugs in loop piping.")		
	Check air filter and change if required.		
	Check relays and contactors and for loose electrical connections.		
	Calibrate thermostats.		
	Clean Indoor coil.		
	Check drain pan and trap for blockage or leaks. Flush the condensate drain.		
	Check blower assembly for proper operation, or damage, and lubricate as required.		
	Check static air pressure and record.		in. WC
	Check air supply temperature in heating mode and record. Calculate supply – return temperature difference.		°F Sup-Ret Δ °F
	Check air return temperature in heating mode and record. Compare temperature difference to manufacturer specifications.		°F Mfg. Spec. Δ °F
	Check air supply temperature in cooling mode and record. Calculate supply – return temperature difference.		°F Sup-Ret Δ °F
	Check air return temperature in cooling mode and record. Compare temperature difference to manufacturer specifications.		°F Mfg. Spec. Δ °F
	Compare static pressure and temperatures to manufacturer specifications and adjust blower speed settings if required and record final pressure and temperatures.		
	Check water pump for proper operation, or damage, and lubricate as required.		
	Measure water pump volts and record. Compare to manufacturer specifications.		Volts Mfg. Spec. Volts
	Measure water pump amps and record. Compare to manufacturer specifications.		Amps Mfg. Spec. Amps
	Clean water strainer.		
	If open loop and economically available, record dynamic water level of production well and record.		ft.
	If open loop and economically available, record dynamic water level of injection well and record.		ft.
	If open loop and economically available, record static water level of production well and record.		ft.
	If open loop and economically available, record return pressure to injection well and record.		ft.

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Check loop water pressure in and record.		psi
Check loop water pressure out and record.		psi
Calculate loop water flow rate and record. Compare to manufacturer specifications.	GPM	Mfg. Spec. GPM
Check loop supply temperature in heating mode and record.		°F
Check loop return temperature in heating mode and record.		°F
Calculate the heat of extraction and record. Compare to manufacturer specifications.	Btu/hr	Mfg. Spec. Btu/hr
Check loop supply temperature in cooling mode and record.		°F
Check loop return temperature in cooling mode and record.		°F
Calculate the heat of rejection. Compare to manufacturer specifications.	Btu/hr	Mfg. Spec. Btu/hr
If air or water temperature deltas are not per manufacturer specifications, measure refrigerant levels and charge as required. Recheck and record temperatures if charged.		
If closed loop, check water loop PH, antifreeze, and corrosion inhibitor. Correct if necessary.		
If closed loop, repressurize water loop to manufacturer specifications.		
Measure compressor volts and record. Compare to manufacturer specifications.	Volts	Mfg. Spec. Volts
Measure compressor amps and record. Compare to manufacturer specifications.	Amps	Mfg. Spec. Amps
Check loop supply temperature in heating mode and record.		°F
Check loop return temperature in heating mode and record.		°F
Inspect heat exchanger.		
Check and clean pilot light or igniter, flame sensor and gas valves.		
Check operation of the safety limit switch.		
Check the gas burner flame and adjust the flame height as required.		
Check back-up gas heat staging.		
Check air supply temperature in back-up heating mode and record. Calculate supply – return temperature difference.	°F	Supply-Return Δ °F
Check air return temperature in in back-up heating mode and record. Compare temperature difference to manufacturer specifications.	°F	Mfg. Spec. Δ °F
Check and record cut-out or switch over temperature if applicable.		°F
If humidifier, clean, check control and adjust as required.		