

Geothermal Heat Pump with Gas Back-Up - Check List

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|-------------------------|--|--------------|----------------------|
| 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. |

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| | If open loop and economically available, record return pressure to injection well and record. | | ft. |
| | 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 |
| | If desuperheater, check supply temperature and record. | | °F |
| | If desuperheater, check return temperature 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. | | |