ITT Conoflow

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ITT Conoflow HPNGV Series Regulator Temperature Considerations

The HPNGV Regulator is designed with special seal materials. These seals are designed to remain flexible and perform their function at extremely cold temperatures, while resisting degradation by natural gas, compressor oils, odorants, engine coolants, and other fluids normally present in a natural gas vehicle fuel system.

These seals can resist momentary temperature excursions to 275 °F, however sustained moderate to high temperatures can lead to premature age hardening of rubber parts within the regulator. The regulator will operate safely and correctly at these elevated temperatures, however premature age hardening will reduce the useful life of the regulator. Rubber hardening may cause one or more of these seals to develop leakage, intermittently or continuously, at cold or ambient operating temperatures.

By reducing heating of the regulator by hot engine coolant, heat related age hardening of the seals is also reduced, maximizing the service life of the regulator.

For this reason, vehicles with duty cycles that experience significant low gas flow engine idle time (such as taxis, some buses and smaller service vehicles) may be equipped with an optional coolant circulation bowl that contains a temperature sensed valve. This optional coolant bowl is equipped with a thermostat, which *closes* when the coolant temperature exiting the coolant bowl exceeds 100 degrees F (40 °C).

For the thermostat equipped coolant bowls, it is imperative the coolant lines are connected correctly to the integral hose barbs on the coolant bowl. If the coolant feed line is mistakenly connected to the thermostat connection side of the coolant bowl, the thermostat could prematurely close and not permit sufficient warm coolant to flow through the regulator. The regulator coolant connections are identified as “IN” and “OUT”, referring to the coolant feed and engine return line connections.

ITT does not condone the alteration or modification of this product without factory product engineering review and subsequent written authorization. Unauthorized modifications will void the regulator warranty and could lead to potentially dangerous failure modes.