Conoflow

ITT Industries

Technical Bulletin - 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 an natural gas vehicle fuel system.

These seals can resist momentary temperature excursions to 275 °F, however sustained moderate to high temperatures can cause premature age hardening. This premature age hardening can cause one or more of these seals to leak, intermittently or continuously, at cold or ambient operating temperatures.

For this reason, vehicles which do not experience sustained high gas flow rates (such as busses and other heavy engine applications) should be equipped with a coolant circulation bowl that contains a temperature sensed valve. The HPNGV regulator comes equipped with a thermostat, which *closes* when the coolant temperature exiting the coolant bowl exceeds 100 degrees F. (40 °C). By preventing excessive heating of the regulator by hot engine coolant, at or below this temperature, heat related age hardening of the seals is prevented.

It is very important to assure the coolant lines are connected correctly to the coolant bowl when the bowl is equipped with this thermostat. 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.