

Conoflow



ITT Industries

## Technical Bulletin - ITT Conoflow HPNGV-1 Series Regulator and Compressor Oils

The ITT Conoflow HPNGV-1 series regulator reduces natural gas pressure from on board storage cylinders to a factory preset level. Typical system installations utilize a coalescing filter upstream of the regulator to remove excessive moisture and compressor oils which may be present in the stored fuel.

Although these filters do a fine job of removing the majority of moisture and oil, natural gas tends to act like a solvent and keeps some oil suspended (perhaps as vapor) in the gas stream.

When the pressurized gas expands from high pressure to low pressure, within the regulator, the gas rapidly cools and some of the oil vapors condense into a fine aerosol. This oil can and will deposit itself within the regulator and flow to downstream components.

We have learned that in some cases, the combination of organic and synthetic oils, in a vehicular natural gas fuel system, allows the deposited oils to thicken. The thicker residue may pose a problem for engine fuel management components, such as injectors or other fuel metering devices, but has not been a problem for the HPNGV-1 series regulator. This must be addressed by system maintenance considerations.

The function, safety and performance of an ITT Conoflow HPNGV-1 series regulator is typically not affected by either organic, synthetic or a combination of compressor oils. ITT Conoflow has performed extensive testing to assure that the materials of construction are not affected by these oils. It would take extreme circumstances for compressor oil to negatively affect the regulator (e.g. sufficient oil collection to permit hydraulic lock up of the pressure sensing diaphragm). At those extreme circumstances, the regulator would have performed correctly long after downstream components have failed.