Turbo Oil 2197

Aero derived gas turbine lubricant

Description

Turbo Oil 2197 is a synthetic ester based 5 cSt High Thermal Stability (HTS) lubricant intended for the lubrication of aero derived gas turbines packaged as the prime mover to drive generators, gas compressors and pumps on offshore & onshore production /processing facilities.

It is a latest generation synthetic lubricant that is formulated to provide exceptional high temperature cleanliness in vapour mist and liquid film areas as well as having outstanding oxidative, thermal and hydrolytic stability.

Application

Aero-derivative gas turbines.

Advantages

Turbo Oil 2197 is available globally and combines excellent stability, very low coking tendancy and proven performance to provide the following key benefits:

- Excellent thermal and oxidative stability giving longer life due to outstanding resistance to changes in viscosity and acidity.
- Superior hydrolytic stability, which leads to a greater resistance to acid formation due to hydrolysis.
- Best in class high temperature cleanliness resulting in minimum formation of varnish and sludge deposits in high temperature applications, even over long periods of use.
- Outstanding engine cleanliness: reduced or no carbon deposits in oil supply and scavenge tubes and bearing compartments. Potential for reduced oil filter replacement.

Performance Levels & OEM Approvals

- Approved against US Military MIL-PRF23699F-HTS
- R-R Allison 501K Series

Approved by the following engines manufacturers:

- Rolls-Royce Ltd - RB 211-22 & -24
  - Trent
- General Electric Co LM 1600 / 2500 / 5000 / 6000

Typical Characteristics

Name	Method	Units	Turbo Oil 2197
Density @ 15°C	ASTM D1298	Kg/l	0.9968
Kinematic Viscosity @ 100°C	ASTM D445	mm²/s	5.28
Kinematic Viscosity @ 40°C	ASTM D445	mm²/s	26.98
Kinematic Viscosity @ -40°C after 35 minutes	ASTM D2532	mm²/s	12,539
Pour Point	ASTM D97	°C	-57
Flash Point	ASTM D92	°C	262
Total acid Number	SAE ARP5088	mg/KOH/g	0.36
Evaporation Loss (6.5 hrs @ 204°C)	ASTM D972	%	2.30
Foaming Volume @ 1 min setting Sequence 1 @ 24°C Sequence 2 @ 93°C Sequence 3 @ 24°C	ASTM D892	ml/vol	 10/0 10/0 10/0
Thermal Stability & Corrosivity @ 274°C Viscosity Total Acid Number metal Weight	FED-STD-791, 3411	 mgKOH/g mg/cm²	 0.37 1.08 -0.154
Corrosion & Oxidative Stability (72 hrs @ 204°C) Viscosity, 40°C Total Acid Number Steel Weight Change Silver Weight Change Aluminium Weight Change Magnesium Weight Change Copper Weight Change Sludge	FED-STD-791, 5308	 % mgKOH/g mg/cm² mg/cm² mg/cm² mg/cm² mg/cm² mg/100ml	 14.75 0.96 0.011 -0.017 0.009 -0.012 -0.076 0.37
Sediment Visual Undissolved Water Sediment, 1.2 µm filter Metal Weight	FED-STD-791, 3010	 - mg/l mg/cm²	 None 0.85 0.12

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

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