Mobil

Mobil SHC™ 918 EE

Mobil Industrial , Japan

Energy Efficient Turbine Oil

Performance as described below*

Product Description

Mobil SHC™ 918 EE is a turbine oil that was designed to provide energy efficient benefits in certain GE gas turbine models. This product was developed together by ExxonMobil and GE. Mobil SHC 918 EE is the first product to meet GE's rigorous energy efficient turbine oil specification, GEK 121603. Mobil SHC 918 EE provided an overall turbine efficiency improvement of 0.09% when compared to conventional ISO 32 viscosity grade turbine oils. This energy efficient performance was measured in GE-designed bearing rig, GE Frame 7HA test stand, and GE Frame 7FA and 6FA field demonstrations and is achieved through lower viscometrics and proprietary additive technology. GE engineers confirmed proper bearing lubrication, maintaining strong reliability.

GE gas turbines operate at high power output that can thermally stress a lubricant resulting in filter plugging and valve sticking, shorter oil life, and reduced reliability. The carefully balanced combination of base oils and additives in Mobil SHC 918 EE are designed to limit the occurrence of varnish formation in the hydraulic and hydrogen seal systems of these GE turbines. The keep-clean performance in combination with a high level of oxidation and thermal stability help provide long and reliable turbine performance.

*Energy efficiency explained

The energy efficiency design is a trademark of Exxon Mobil Corporation. The energy efficiency of Mobil SHC 918 EE relates solely to the fluid performance when compared to conventional ISO 32 VG turbine oils. Mobil SHC 918 EE improved turbine overall efficiency by approximately 0.09% due to a 15% reduction in bearing frictional energy losses when compared to a conventional ISO VG 32 turbine oil in GE-designed bearing rig, GE Frame 7HA test stand and GE Frame 7FA & 6FA field demonstrations.

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Features and Benefits

Mobil-branded products have been the choice for turbine operators worldwide for more than one hundred years. During that period, our company's scientists have maintained strong ties with turbine equipment builders like GE to ensure that the needs of new turbine designs are met or exceeded by our lubricants. In partnership with GE, this product was developed to help customers achieve their reliability goals and improve energy efficiency of GE gas turbines.

This Mobil SHC 918 EE oil offers the following features and potential benefits:

Features	Advantages and Potential Benefits
Improved gas turbine efficiency	Reduces CO2 production /kWh
Reduces varnish formation potential	Increases reliable turbine operation and helps reduce maintenance of hydraulic and hydrogen seal system components

Features	Advantages and Potential Benefits
Excellent thermal/oxidation stability	Extends oil life and reduces downtime, leading to more cost-effective, reliable operation

Applications

GE Frame 7 HA (multi-shaft) , 7 FA and Frame 6 FA.01 turbines.

Specifications and Approvals

This product meets or exceeds the requirements of:
GE Power GEK 121603

Properties and Specifications

Property	
Air Release, 50 C, min, ASTM D3427	0.7
ASTM Color, ASTM D1500	L0.5
Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130	1A
Flash Point, Cleveland Open Cup, °C, ASTM D92	231
Foam, Sequence I, Stability, ml, ASTM D892	0
Foam, Sequence I, Tendency, ml, ASTM D892	10
Foam, Sequence II, Stability, ml, ASTM D892	0
Foam, Sequence II, Tendency, ml, ASTM D892	10
Foam, Sequence III, Stability, ml, ASTM D892	0
Foam, Sequence III, Tendency, ml, ASTM D892	10
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1	10
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	4.2
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	18.9
Neutralization Number, mgKOH/g, ASTM D974	0.07
Pour Point, °C, ASTM D97	-33
Rotating Pressure Vessel Oxidation Test, min, ASTM D2272	2006
RPVOT Oxidation, after Nitrogen Sparge, 48 h, 121 C (250 F), %, ASTM D2272(mod)	106.7
Rust Characteristics, Procedure B, ASTM D665	Pass

Property	
Turbine Oil Stability Test, Life to 2.0 mg KOH/g, h, ASTM D943	>10000
Viscosity Index, ASTM D2270	125

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com

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