Lubricant Product Comparison

FSE-TURBOCOOL™ • Mobil Rarus™ • Mobil DTE™ 24

FSE-TurboCool

FSE-TurboCool is manufactured using a proprietary blend of synthetic esters, with a focus on additives designed for high-speed rotating equipment. This lubricant is designed exclusively for centrifugal compressors to provide maximum wear and varnish protection and only available from FS-Elliott.

Mobil Rarus™

Rarus™, a mineral-oil based lubricant, is used in a wide range of applications and is formulated for low and medium pressure reciprocating applications. This formulation is designed for gas compressor applications, but its primary role in the Mobil product line is for reciprocating and oil-flooded screw compressor applications.

Mobil DTE™ 24

DTE, a light hydraulic fluid, is designed for medium and high-pressure hydraulic systems. Mobil sells this product heavily in manufacturing markets where it is used for equipment such as hydraulic presses, scissor jacks, and automotive maintenance applications. DTE can be used as a low-cost alternative to fully formulated centrifugal compressor lubricants, but it is not optimized for air compression.

Physical and Chemical Properties	FSE-TurboCool	Mobil Rarus™ 424*	Mobil DTE™ 24*
Rated Hours	24,000	12,000	Not Rated
Temp. Max Rated	212°F	200°F	168°F
Flash Point	453°F	456°F	200°F
Viscosity Index	133	105	102
Copper Corrosion	1A	1B	1B
Pour Point (°F)	-47	Not Reported	0

Based on this comparison there is a clear hierarchy of lubricant quality. FSE-TurboCool has a clear advantage operating within a centrifugal application, because it is designed to do so, and is not built for a wide range of applications like the Mobil products.

The benefits of choosing FSE-TurboCool include:

- Lower operating temperatures,
- Unmatched thermal and oxidative stability,
- Extended drain intervals (*Based on optimized chemistry for manufacturer specific applications.*)

*All chemical and physical properties listed were taken from Mobil Product Data Sheets shown on the manufacturers website for the products in question.

Oxidation Testing Results

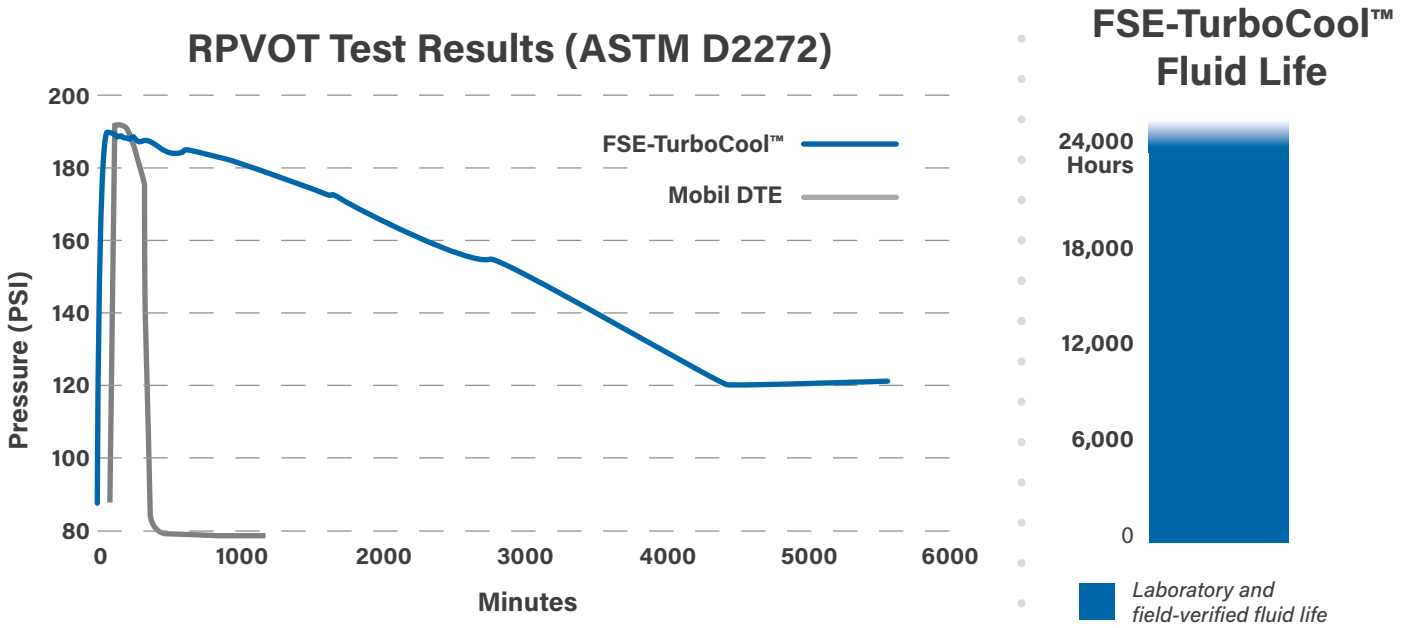
FSE-TurboCool™ Coolant For Centrifugal Compressors

Resistance to oxidation is critical to assessing the useable life of lubricants. As oxidation degrades the lubricant, it reduces the fluid's ability to protect equipment against friction and wear. High quality synthetic lubricants, like FSE-TurboCool™, are formulated to provide increased resistance to oxidation—maximizing fluid life and equipment protection.

Reducing, controlling and preventing oxidation in your lubricants can help:

- Maximize the service life of the lubricant
- Reduce unplanned maintenance downtime
- Provide better protection for equipment, reducing costs related to repairs and replacement

FSE-TurboCool™ lasts longer than competitor fluids with lower deposit formation.



FSE-TurboCool™ is designed to provide up to 24,000 hours of service

RPVOT Test Results	FSE-TurboCool™	Mobil DTE™ 24*
Maximum Pressure, PSI	189	190.9
25.4 PSI Drop	2,085 minutes	241 minutes
Minimum Pressure Oxidative Stabilization	120 PSI at 4,400 minutes	77 PSI at 584 minutes

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MEMBER OF CAGI Compressed Air & Gas Institute

class zero oil-free ISO 8573-1

LLOYD'S REGISTER · LRQA ISO 9001

ISO 9001- certified for the design and manufacture of centrifugal compressors.