



PURAMAX RAILROAD ENGINE OIL 13 TBN

PURAMAX RREO 13 TBN are premium heavy-duty engine oils designed to meet the severe requirements of high-output, turbo-charged and medium-speed railroad locomotive diesel engines and railroad-type diesel engines used in marine and stationary applications.

PURAMAX RREO 13 TBN oils provide excellent cleanliness with an additive system that includes increased levels of detergents, dispersants and protects against wear, oxidation, corrosion and foaming. Straight weights are compounded from a mix of Paraffinic/Naphthenic oils to reduce hard deposit formation in the ring belt area to minimize port blocking in 2-stroke cycle diesel engines. Multi-grades are formulated with a shear stable VI improver to provide better flow and lubrication at lower temperatures. Product does NOT contain zinc compound derivatives.

APPLICATIONS

Recommended for use in General Motors Electro-Motive Division (EMD), Caterpillar, General Electric and other diesel engines operating in higher than normal sulfur distillate-fuel where sulfated ash of +1% is acceptable. Straight grades are highly recommended for medium speed industrial engines such as Fairbanks-Morse opposed piston (OP) engines for which a medium viscosity index oil is preferred. In many marine applications, this product can be used in both marine propulsion engines as well as auxiliaries.

FEATURES AND BENEFITS

- Superior anti-wear protection
- Zinc free formulation to protect silver bearings
- Helps maximize engine cleanliness
- Excellent shear stability and oxidation control for longer oil and filter life
- Reduced sludge and piston deposit formulation

RECOMMENDED PERFORMANCE SPECIFICATIONS

- Railroad locomotive Engines: GE Generation 4 LL, LMOA Generation 5, EMD
- Medium speed diesel engines: Caterpillar, ALCO and Fairbanks-Morse
- API CF and obsolete CD

PURAMAX RREO 13 TBN Typical Characteristics

SAE Grade	ASTM-D	30	40	15W-40	20W-40
Gravity, °API	1298	27	24.0	28	26
Viscosity cSt @ 40°C	445	135	180	123	126
Viscosity cSt @ 100°C	445	12.1	14.5	15.5	14.8
Viscosity Index	2270	78	80	131	121
Flash Point, °C (°F)	92	241(465)	241(465)	224(435)	235(455)
Pour Point, °C (°F)	97	-21(-5)	-18(0)	-21(-5)	-21(-5)
TBN	2896	13	13.0	13.0	13.0
Sulfated Ash, Wt. %		1.5	1.5	1.5	1.5
Zinc, Wt, ppm		<10	<10	<10	<10

Minor variations in test data are to be expected in normal manufacturing