



## DIOL 9 RD 40 and 2040

### Railroad Crankcase Oils

#### Product Description

DIOL 9 RD series oils are premium heavy-duty crankcase lubricants for locomotive diesel engines. These products are designed to meet the severe service demands imposed by the latest railroad diesel locomotive engines. An Electro-Motive Diesel (EMD) and General Electric (GE) endorsed additive system provides excellent engine protection, oil consumption control and oil drain interval extension capability.

#### Features and Benefits

- Zinc Free - Excellent Silver Bearing Lubricity
- Enhanced Oxidation, Sludge-Soot Handling and Viscosity Control
- Excellent Deposit, Corrosion and Wear Control
- Formulated for use with low sulfur and ultra-low sulfur diesel fuels
- Extended oil drain intervals and high locomotive utilization rates
- Chlorine Free

#### Applications

DIOL 9 RD oils are formulated to an LMOA Generation 5 quality level with an engine manufacturer endorsed additive package. They meet the requirements of for all EMD and General Electric diesel locomotives.

The newest improvements in General Electric and EMD engines are modified piston rings and cylinder liners that have significantly reduced oil consumption. This drastic reduction in the amount of fresh oil makeup, plus the higher operating temperatures of the newer engines, places an extra burden on the oil. The good base number retention and improved oxidation inhibition of DIOL railroad oils provide excellent service under these conditions, even with extended oil drain intervals.

#### Specifications and Approvals

<b>Meets or exceed the requirements of the following:</b>	<b>9 RD 40</b>
EMD Engines	X
General Electric Generation 4, Long Life	
According to ExxonMobil is of the following quality level:	
General Electric Generation 4, Long Life	X

#### Typical Properties

DIOL	9 RD 40	9 RD 2040
Viscosity		
cSt @ 40°C	141	135
cSt @ 100°C	14.7	15.3
Viscosity index	104	118
Flash Point, °C (°F)	262 (504)	235 (455)

Pour point, °C (°F)

21 (6)

21 (6)

Foot print, C ( F)	-21 (-0)	-21 (-0)
TBN, ASTM D 2896	9.1	9.1
AASH, Mass %	1.0	1.0
Zinc, ppm	<10	<10
Chlorine, ppm	<20	<20

## Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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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](http://www.exxonmobil.com). ExxonMobil is comprised of numerous affiliates and subsidiaries, many with names that include Esso, Mobil, or ExxonMobil. Nothing in this document is intended to override or supersede the corporate separateness of local entities. Responsibility for local action and accountability remains with the local ExxonMobil-affiliate entities.

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