

DIOL 13 RD 40 (E)

HD CRANKCASE LUBRICANT FOR LOCOMOTIVE DIESEL ENGINES

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DIOL^{*} 13 RD 40 (E) oil is a heavy duty crankcase oil designed to meet the severe service demands imposed by the newer railway diesel locomotive engines. An Electromotive Division (EMD) of General Motors and General Electric (GE) endorsed additive provides superior engine protection, oil consumption control and oil drain interval extension capability. DIOL 13 RD 40 (E) oil offers the following features and benefits:

- ◆ **Zinc Free - Excellent Silver Bearing Lubricity**
- ◆ **Excellent Oxidation, Sludge-Soot Handling and Viscosity Control**
- ◆ **Excellent Deposit, Corrosion and Wear Control**
- ◆ **Improved Technology for Lower Maintenance Costs and Longer Engine Life**
- ◆ **Chlorine Free**
- ◆ **LMOA Generation 5.**
- ◆ **G.E. Generation 4 'Long Life'.**
- ◆ **Meets service application requirements of API CF**

Primary Applications

DIOL 13 RD 40 (E) oil is formulated to a LMOA Generation 5 quality level with an engine manufacturer endorsed additive package. It meets the requirements of, and is recommended for all EMD of General Motors and GE diesel locomotives. It also meets the API engine service application CF requirements and is suitable for Caterpillar railway diesel engines.

Performance Features

Some General Motors railway diesel engines in service are equipped with silver wrist-pin bearings. Some zinc-containing additives can contribute to rapid corrosion and wear of silver bearing alloys. DIOL 13 RD 40 (E) oil is blended to be zinc-free.

The combination of premium paraffinic base stocks and inhibitors provide excellent oxidation, sludge-soot handling and oil viscosity control. These features are especially important with new "tighter" reduced oil consumption engine designs.

DIOL 13 RD 40 (E) oil has a 13 TBN (Total Base Number) detergent/dispersant additive, which minimizes deposits on engine components and maintains balanced non-corrosive lubrication longer - a prime consideration for newer design and higher operating severity engines.

A balanced additive package provides additional protection against wear, corrosion, rust and foam. The non-chlorinated anti-wear technology

provides improved used oil disposal/recycling options.

Precautions

DIOL 13 RD 40 (E) oil is manufactured from quality petroleum base stocks blended with selected additives. As with all petroleum products, good personal hygiene and careful handling should always be practiced. Avoid prolonged contact with the skin, splashing into the eyes, ingestion or inhalation of vapours. Please refer to the Esso Material Safety Data Sheet for further information.

Note: This product is NOT controlled under the Canadian WHMIS legislation.

Typical Properties

Density at 15°C, kg/L	0.89
Kinematic Viscosity, cSt @ 40°C	144
@ 100°C	14.6
Flash Point, °C, Min	220
Total Base Number	13
Colour, ASTM	3.5
Calcium, %	0.42
Pour Point, °C	-21

The values shown above are representative of current production. Some are controlled by manufacturing and performance specifications while others are not. All may vary within modest ranges.