



## DIOL™ 40 and 20W40

Mobil Commercial Vehicle Lube , Canada

Railroad Crankcase Oils

### Product Description

DIOL™ series oils are premium heavy-duty crankcase lubricants for locomotive diesel engines. These products were developed to meet the stringent performance requirements of Tier 4 locomotives from Progress Rail (EMD engines) and GE Transportation. Older locomotive engines will also benefit from using the DIOL series. The additive system provides excellent engine protection, enhanced oxidation performance, improved oil consumption control, enhanced Alkalinity / TBN retention, and oil drain interval extension capability compared with LMOA generation 6 oils such as our former Diol 9 RD series.

### Features and Benefits

- Zinc Free - Excellent Silver Bearing Corrosion Protection
- 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
- Chlorine Free

### Applications

DIOL 40 and 20W-40 oils are formulated to an LMOA Generation 7 quality level with formal approvals from GE transportation and Progress Rail diesel locomotives. The DIOL product line incorporates a field proven additive technology that offers enhanced oxidation performance and wear inhibitors. This addresses the deleterious effects of lower oil consumption and engine modifications in the Tier 4 locomotive engines, while being backward compatible with older engine technologies (Tier III and lower). The DIOL series offers excellent Alkalinity / TBN retention, oxidation and thermal stability, and acid control.

### Specifications and Approvals

| This product has the following approvals:                       | DIOL 40 | DIOL 20W-40 |
|---|---------|-------------|
| LMOA Gen 7 - Fundamental Approval (letter on file)              | X       | X           |
| Progress Rail Worthy of Field Test (recognition letter on file) | X       | X           |

### Properties and Specifications

| Property   | DIOL 40 | DIOL 20W-40 |
|--|---------|-------------|
| Grade  | SAE 40  | SAE 20W-40  |
| Base Number, mgKOH/g, ASTM D2896                           | 10      |             |
| Flash Point, Cleveland Open Cup, °C, ASTM D92              | 227     | 259         |
| Kinematic Viscosity @ 100 C, mm <sup>2</sup> /s, ASTM D445 | 14.2    | 15.4        |

| Property  | DIOL 40 | DIOL 20W-40 |
|---|---------|-------------|
| Kinematic Viscosity @ 40 C, mm <sup>2</sup> /s, ASTM D445 | 137.7   | 132.9       |
| Pour Point, °C, ASTM D97                                  | -24     | -33         |
| Total Base Number, mgKOH/g, ASTM D2896                    |         | 10          |
| Viscosity Index, ASTM D2270                               | 100     | 120         |
| Zinc, ppm, ASTM D4951                                     |         | <10         |
| Zinc, mg/kg, ASTM D5185                                   | <10     |             |

## 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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### Imperial Oil

Petroleum and Chemicals Division

Lubricants and Specialties

240 Fourth Ave SW

C. P. 2480, Station M

Calgary AB T2P 3 M 9

1-800-268-3183

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)

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