

# **Gulf Dieselmotive 135**

High performance, zinc-free and chlorine-free railroad engine oils

# **Product Description**

**Gulf Dieselmotive 135** series are high performance, zinc-free and chlorine-free oils specially designed to provide excellent engine cleanliness and oil filter life in the modern railroad diesel locomotive engines. These oils are formulated with an additive package endorsed by engine manufacturers' and meet the requirements of newer diesel locomotive engines of General Electric (GE) and ElectroMotive Division (EMD) of General Motors. Though the newer engines consume significantly less oil and operate at higher temperatures, the excellent TBN retention property and improved oxidation resistance of Gulf Dieselmotive 135 provide superior service and facilitate extended drain intervals. These oils exceed the performance requirements of Locomotive Maintenance Officers Association (LMOA) Generation 5 and API CF/CF-2 and are available in two viscosity grades, viz. SAE 20W-40 and SAE 40.

# Features & Benefits

- Exceptional detergency/dispersancy provides excellent engine cleanliness, especially engine top decks
- Excellent in-service retention of TBN facilitates extended drain intervals
- High thermo-oxidative stability protects against sludge formation providing cleaner engines
- Zinc-free formulation protects silver bearings against corrosion
- Non-chlorinated additive package helps in reducing used oil disposal costs
- SAE 20W-40 helps provide reduced oil consumption, fuel economy, longer oil drain intervals and effective lubrication and oil flow at lower temperatures

#### **Applications**

- Railroad diesel locomotive engines specifying LMOA Generation 5 quality oils
- Medium speed two-cycle and four-cycle railroad engines, including newer diesel locomotive engines of GE and EMD of General Motors
- Marine and stationary engines for power generation or off-shore drilling requiring zinc-free oils
- Detroit Diesel 149 series engines operating under severe conditions
- Stationary engines requiring API CF and CF-2 quality oils

### **Specifications, Approvals & Typical Properties**

| Meets the following Specifications                             |             | 20W-40         | 40           |
|--|-------------|----------------|--------------|
| LMOA Generation 5  |             | Х              | Х            |
| API CF, CF-2   |             | Х              | Х            |
| EMD of General Motors  |             | Х              | Х            |
| GE as Generation 4 Long Life Oils                              |             | Х              | Х            |
| Has the following Approva                                      | ls          |                |              |
| General Electric Company approval for use in GE diesel engines |             |                | Х            |
| Electro-Motive Diesel, Inc. approval for use in EMD engines    |             |                | X            |
| Typical Properties   |             |                |              |
| Test Parameters  | ASTM Method | Typical Values |              |
| Viscosity @ 100 °C, cSt  | D 445       | 15.5           | 15.1         |
| Viscosity Index  | D 2270      | 114            | 98           |
| Flash Point, ºC  | D 92        | 228            | 246          |
| Pour Point, °C   | D 97        | -24            | -18          |
| TBN, mg KOH/g  | D 2896      | 13.2           | 13.2         |
| Density @ 15°C, Kg/l   | D 1298      | 0.893          | 0.898        |
| Sulphated Ash, %wt   | D 874       | 1.52           | 1.52         |
| Zinc, ppm  | ICP         | < 10           | < 10         |
|  |             |                | February 201 |

Properties mentioned above are typical only and minor variations, which do not affect the product performances, are to be expected in normal manufacturing. The above information is based on past history of the grade only and must not be construed as a guarantee of performance. Follow equipment manufacturer's recommendations for performance level and viscosity grade. The Material Safety Data Sheet for this product is available from your nearest Gulf Distributor.

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