

# Delo 400 Multigrade

**SAE 15W-40** 

Universal Diesel Engine Oil

Product Data Sheet



Premium performance, multigrade, heavy-duty diesel engine oil specifically designed to lubricate a wide range of diesel and gasoline engines requiring API CI-4 PLUS, CI-4, SL, ACEA E7 or JASO DH-1 performance lubricants operating under the most severe service conditions. Specifically designed for the latest electronically controlled diesel engines, including those fitted with EGR and/or SCR systems. Formulated with ISOSYN<sup>TM</sup> technology to provide exceptional soot dispersancy, deposit control and wear protection.

#### **APPLICATIONS**

- Mixed fleets of European, North American and/or Japanese diesel engines (high speed, four-stroke, turbocharged or naturally aspirated).
- Mixed fleets of both diesel and gasoline engines.
- Mixed fleets including both old and new equipment.
- Commercial road transport, including the latest electronic controlled engines and those designed to meet Euro 3 emissions standards. Also for Euro 4 and 5 compliant vehicles, except those units fitted with diesel particulate filters and requiring ACEA E6 or E9 oils.
- Stop-and-go vehicles in high soot loading service such as buses and waste collection trucks.
- Off-highway vehicles and plant.
- · Agricultural tractors and farm machinery.
- Generator sets.
- Mobile hydraulic systems (where oil type and viscosity are appropriate).
- For engines fitted with diesel particulate filters, Delo 400 LE or Delo XLE Multigrade should be selected in accordance with manufacturers recommendations.

### **BENEFITS**

### Minimises fleet maintenance costs

Exceptional soot dispersancy keeps fuel soot in suspension, avoiding filter plugging, heavy cylinder head sludge, abrasive polishing wear and oil thickening.

### Minimises fleet operating costs

Excellent deposit control on valves and piston crownlands reduces oil consumption. Exceptional oxidation stability and soot control extends oil drain capability so that equipment is in service longer generating revenue. Outstanding valve train wear protection maintains fuel economy.

### Extends engine life to overhaul

High level of antiwear additive protects against valve train wear and scuffing of highly loaded parts operating under boundary lubrication conditions.

### Reduces inventory costs

"Universal" formulation provides excellent overall performance in mixed fleets of different engine designs, (including modern electronically controlled/low emission diesel engines) allowing one oil for all services and reducing the chance of problems arising through product misapplication.





# PERFORMANCE STANDARDS

|               | 1  |  |
|---------------|--|--|
| API           | CI-4 PLUS, CI-4, CH-4, CG-4*, CF*, CD*     |  |
| API           | SL, SJ                                     |  |
| ACEA          | E7-08, E5-02*, E3-96*                      |  |
| JASO          | DH-1*                                      |  |
| EMA           | Global DHD-1                               |  |
| Caterpillar   | ECF-2, ECF-1-a                             |  |
| Cummins       | CES 20078, 20077, 20076, 20072*            |  |
| DDC           | 93K214                                     |  |
| DDC/MTU       | Category 2                                 |  |
| Deutz         | DQC III-10                                 |  |
| Mack          | EO-N Premium Plus 03, EO-M Plus*,<br>EO-M* |  |
| MAN           | M 3275                                     |  |
| Mercedes-Benz | 228.3                                      |  |
| Renault       | RLD-2                                      |  |
| Volvo         | VDS-3                                      |  |

<sup>\*</sup> Meets the requirements of

| Planned Approvals |                |
|-------------------|----------------|
| ZF                | TE-ML 04C, 07C |

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### **TYPICAL CHARACTERISTICS**

| Product Code                       | 2696        |
|------------------------------------|-------------|
| SAE Grade                          | 15W-40      |
| Density at 15°C, kg/L              | 0.886       |
| Base No., D2896, mg KOH/g          | 12.2        |
| Base No., D4739, mg KOH/g          | 10.1        |
| Flash Point °C                     | 230         |
| Phosphorus, m%                     | 0.13        |
| Pour Point °C                      | -33         |
| Sulfated Ash, m%                   | 1.4         |
| Viscosity, cSt at 40°C<br>At 100°C | 125<br>15.1 |
| Viscosity Index                    | 125         |
| Zinc, m%                           | 0.15        |

### **PACK SIZES**

1000L, 205L, 20L, 5L, 1L

### **SERVICE CONSIDERATIONS**

For vehicles fitted with diesel particulate filters (DPFs), Delo 400 LE or Delo XLE Multigrade should be selected in accordance with the manufacturer's recommendations. The use of these low SAPS (sulfated ash, phosphorus and sulfur) products will maximize intervals between filter cleaning.

While modest by typical heavy duty diesel standards, Delo 400 Multigrade has a level of phosphorus higher than permitted by certain recent standards for passenger car motor oils, e.g. ILSAC GF-5, and the ACEA "C" standards. Optimum life of catalytic emission control systems will be achieved by using oils of the performance standard recommended by the vehicle manufacturer.

This product is not recommended for motorcycle engines.

## **ENVIRONMENT, HEALTH AND SAFETY**

Users should consult the MSDS, follow the precautions outlined and comply with all laws and regulations concerning its use and disposal. Used packaging material should not be incinerated or exposed to flame. After use, protect your environment. Do not pollute drains, soil or water with used product.

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### **OTHER INFORMATION**

For further information on Caltex products and services call the Lubelink Advisory Service on 1300 364 169 between 8.00am and 6.00pm (EST) Monday to Friday.

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