



# Delo® 400 Multigrade

## High performance heavy-duty diesel engine lubricant

Product Data Sheet

### Product description

Delo 400 Multigrade SAE 15W-40 is a high performance heavy-duty diesel engine lubricant formulated with advanced ISOSYN® technology and specifically designed for a wide range of diesel and gasoline engines requiring an API CI-4 PLUS, CI-4, SL, ACEA E7 or JASO DH-1 performance lubricant.

Designed for use in severe operating conditions, Delo 400 Multigrade SAE 15W-40 is suitable for use in electronically controlled diesel engines utilising EGR and SCR exhaust after treatment systems, and where high soot loadings require exceptional soot dispersancy, harmful sludge and deposit control and increased wear protection.

### Customer benefits

- **Minimizes fleet maintenance costs**  
Exceptional soot dispersancy keeps fuel soot in suspension, avoiding filter plugging, cylinder head sludge, abrasive polishing wear and oil thickening.
- **Minimizes 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 anti-wear additive protects against valve train wear and scuffing of highly loaded parts operating under boundary lubrication conditions.
- **Reduces inventory costs**  
Formulation meeting extensive industry and OEM specifications 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.

### Product highlights:

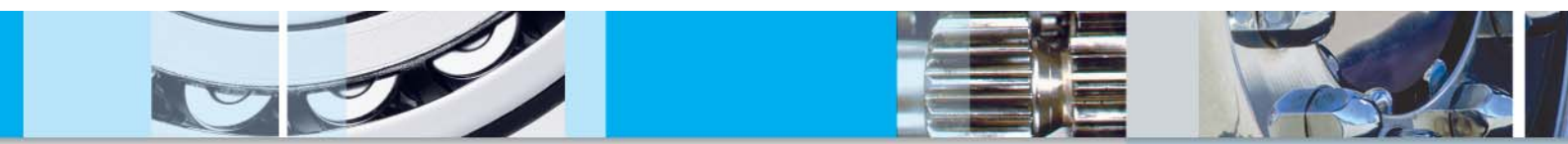
- Advanced ISOSYN® protection
- Meets extensive industry and OEM performance specifications
- Excellent soot control
- Optimised keep-clean performance
- Wide mixed fleet application



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## 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 electronically controlled engines and those designed to meet Euro 3 emissions standards
- Euro 4 compliant vehicles, except those units fitted with diesel particulate filters and requiring ACEA E6 or ACEA E9 oils
- Electronically controlled diesel engines, including those fitted with EGR and/or SCR systems, experiencing high soot loading
- 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

## Performance standards

- API CI-4 PLUS, CI-4, CH-4,
- API SL, SJ
- ACEA E7-08
- EMA Global DHD-1
- Caterpillar ECF-2, ECF-1-a
- Cummins CES 20078, 20077, 20076
- DDC 93K214
- Mack EO-N Premium Plus O3
- Daimler MB-Approval 228.3
- MAN M 3275-1
- Volvo VDS-3



# Delo<sup>®</sup> 400 Multigrade

High performance heavy-duty diesel engine lubricant

*continued*

- Renault RLD-2
- DEUTZ DQC III-10
- DDC / MTU Category 2

#### Planned Approvals

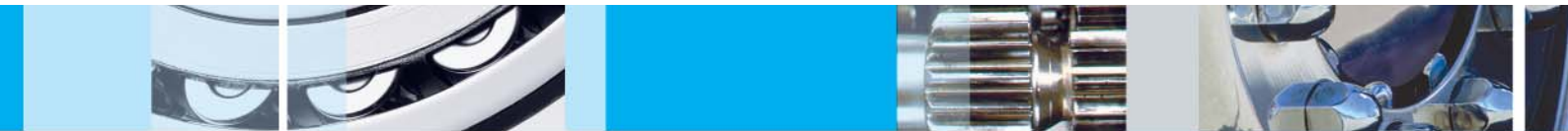
- ZF TE-ML 04C, 07C

#### Meets the Requirements Of

- API CG-4, CF-4, CF, CD
- ACEA E5-02, E3-96
- JASO DH-1
- Cummins CES 20072
- Mack EO-M Plus, EO-M

### Product specifications

DELO 400 MULTIGRADE KEY PROPERTIES	RESULTS
<b>SAE Grade</b>	<b>15W-40</b>
<b>Product Code</b>	<b>500499</b>
<b>Base No.,</b> D2896, mg KOH/g	12.2
<b>Viscosity,</b> mm <sup>2</sup> /s @ 40°C	125
mm <sup>2</sup> /s @ 100°C	15.1
<b>Viscosity Index</b>	125
<b>Zinc, m %</b>	0.15
<b>Phosphorus, m %</b>	0.13



## 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.

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Environment, Health and Safety Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit [www.caltexoils.com](http://www.caltexoils.com).

Produced by Chevron Global Lubricants, Africa, Middle East and Pakistan.

For more information, go to [www.chevronlubricants.com](http://www.chevronlubricants.com)

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