



Delo® 400 LE Synthetic SAE 5W-40

Premium Performance Synthetic Heavy Duty Diesel Engine Oil

Product Data Sheet

Customer benefits

Reduced emissions

Formulated with latest generation “low-SAPS” (sulfated ash, phosphorus and sulfur) technology containing reduced levels of metals, phosphorus and sulfur, it maximizes the life of sensitive catalyst metals and the cleaning intervals of diesel particulate filters.

Minimizes maintenance and operating costs

Exceptional soot dispersancy and wear control protects cylinders, pistons, rings, and valve train components against wear and corrosion, promoting optimum service life and minimal maintenance. Contributes to maximum vehicle utilization and minimal downtime

Reduces inventory costs

“Universal” formulation provides excellent overall performance in mixed fleets of different engine designs, (including modern low emission diesel engines) allowing one oil for many services and reducing the chance of product misapplication.

Wide temperature operating condition

SAE 5W-40 viscosity grade, formulated with synthetic base oils and shear stable viscosity modifier to give good low temperature startability and high viscosity index, minimizing change in viscosity with temperature, allowing use over a wider range of operating temperatures.

Applications

The following applications whenever the manufacturer recommends SAE 5W-40 grade:

- Mixed fleets of diesel engines (high speed, four-stroke, turbocharged or naturally aspirated)
- Commercial road transport, including the latest engines fitted with exhaust cleanup devices of all types.
- Vehicles meeting the most recent exhaust emissions standards, including US EPA 2002 and 2007, Euro IV, V and VI, and Australian ADR 80/02 (for medium duty) and ADR 80/03 (for heavy duty)
- Mixed fleets of both diesel and gasoline engines, and both old and new equipment
- Stop-and-go vehicles in high soot loading service such as buses and waste collection trucks
- Most diesel engined light duty vehicles

Product features:

- **Delo® 400 LE Synthetic** is a premium performance, “low-SAPS” synthetic heavy-duty diesel engine oil specifically designed to lubricate a wide range of high speed diesel engines requiring API CJ-4, CI-4 PLUS / SM, or ACEA E9 performance lubricants and SAE 5W-40 viscosity grades are recommended.
- **Delo® 400 LE Synthetic** is specifically designed for the latest low emission diesel engines fitted with Diesel Particulate Filters (DPF), and also those fitted with Selective Catalytic Reduction (SCR) and / or Exhaust Gas Recirculation (EGR) emission control technologies.
- **Delo® 400 LE Synthetic** is formulated with ISOSYN® base oils and the latest low-ash additive technology to provide exceptional soot dispersancy, deposit control and wear protection.



Typical key properties

| DELO® 400 LE Synthetic | |
|---|--------|
| SAE Grade | 5W-40 |
| Product Code | 500541 |
| Base No., D2896, mg KOH/g | 10.3 |
| Phosphorus, m % | 0.11 |
| Sulfated Ash, m % | 1.0 |
| Sulfur, m % | 0.29 |
| Viscosity, mm ² /s @ 40°C | 90.7 |
| mm ² /s @ 100°C | 14.6 |
| Viscosity Index | 168 |
| Zinc, m % | 0.13 |

1503

Performance standards

- API CJ-4, CI-4 PLUS, CI-4, CH-4 / SM
- ACEA E9, E7
- Caterpillar ECF-3, ECF-2
- Cummins CES 20081
- Daimler MB-Approval 228.31
- Detroit Diesel DDC Power Guard 93K218, 93K214
- Mack EO-O Premium Plus 07
- MAN M 3575
- Renault RLD-3
- Volvo VDS-4
- Allison TES-439

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.CaltexDelo.com.

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.

Produced by:
Chevron Lubricants
– Asia Pacific



Service Considerations

"Low SAPS" engine oils tend to have lower Base Numbers than "conventional" heavy duty diesel engine oils. Used in conjunction with today's low, very low or ultra low sulfur content fuels this is of no consequence. However In situations where very high sulfur (>0.5%) fuels are in use this may to some extent limit achievable drain intervals. Fuel sulfur levels have declined significantly over the past decade but are still relatively high in some countries.

While the level of phosphorus is low by heavy duty diesel engine oil standards, it is somewhat 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.

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