

# Cat® DEO™

Diesel Engine Oil for Asia Pacific, Europe, CIS.

SAE 15W-40



## Recommended Use

- Cat earthmoving, commercial, marine\* and on-highway truck diesel engines
- Low-emission diesel engines including Cat engines with ACERT® Technology
- Heavy-duty diesel engines made by other manufacturers that recommend API CI-4 or CH-4, classification oil (See "Typical Characteristics" on page 2 for more information)
- Automotive gasoline engines that require API SJ/SL classification oils

\* Excluding 3126 and 3116 MUI Marine and MaK diesel engines. The 3116 and 3126 MUI Marine diesel engines with closed crankcase ventilation systems should use Cat SAE0™.

## Discover the Difference

Cat DEO is developed, tested and approved by Caterpillar to meet the same high standards as all Genuine Cat Parts.

- Factory-Fill—Used as standard factory-fill for Cat machines.
- Increased Engine Life—Resists oxidation and prevents buildup of deposits on pistons and rings.
- Extended Drain Intervals—Extends oil drain intervals while providing excellent engine protection and performance when used in conjunction with our S•O•S<sup>SM</sup> Services oil analysis program.
- Proven Performance—Tested thoroughly in Cat diesel engines including Cat engines with ACERT Technology to ensure excellent engine life and performance.
- Long-Lasting Protection—Improved soot control and enhanced shear stability enable oil to maintain proper viscosity for longer operating periods in Cat engines with ACERT Technology, especially those equipped with HEUI systems.



## Cat DEO Performance

| Performance Requirements                      | Test            | Commercial ECF-2 | Cat DEO |
|-----------------------------------------------|-----------------|------------------|---------|
| Cat 3406E Endurance Test                      | Cat Proprietary |                  |         |
| Cat C13 ACERT Endurance Test                  | Cat Proprietary |                  |         |
| Cat 3500 Series Test                          | Cat Proprietary |                  |         |
| Cat C13 ACERT Series Wheel Loader Test        | Cat Proprietary |                  |         |
| C13 500 Hour Engine Test                      |                 |                  |         |
| Improved Soot-Viscosity & Shear Control       |                 |                  |         |
| High Temperature Shear                        |                 |                  |         |
| Elastomer Compatibility                       |                 |                  |         |
| Piston ring & Cylinder liner wear             |                 |                  |         |
| Valve train wear, sludge, oil filter plugging |                 |                  |         |
| Aeration Control                              |                 |                  |         |
| Bearing Corrosion                             |                 |                  |         |
| Cam roller follower pin wear                  |                 |                  |         |
| Copper, lead and tin erosion                  |                 |                  |         |
| Foaming Control                               |                 |                  |         |
| Viscosity Shear loss                          |                 |                  |         |
| Viscosity Increase from soot                  |                 |                  |         |
| Oxidation                                     |                 |                  |         |
| Piston deposits and oil control               |                 |                  |         |

### Typical Characteristics\*

|                                     |                    |
|-------------------------------------|--------------------|
| SAE Viscosity Grade                 | 15W-40             |
| API Service Classification:         |                    |
| Diesel                              | CI-4, CH-4         |
| Gasoline                            | SL/SJ              |
| ACEA Classifications                | E7-12              |
| OEM Performance Level:              |                    |
| Caterpillar                         | ECF-2              |
| MB                                  | 228.3              |
| MAN                                 | 3275-1             |
| Renault                             | RLD-2              |
| Volvo                               | VDS-3              |
| Cummins                             | CES 20071/72/76/77 |
| Mack                                | EO-N/EO-M PLUS     |
| Flash Point, °C (ASTM D92)          | 230                |
| Density, g/mL @ 15.6°C (ASTM D4052) | 0.884              |
| Pour Point, °C (ASTM D97)           | -27                |
| Viscosity                           |                    |
| Kinematic cSt @ 40° C (ASTM D445)   | 106                |
| Kinematic cSt @ 100° C (ASTM D445)  | 14.5               |
| Viscosity Index (ASTM D2270)        | 140                |
| Sulfated Ash, % wt. (ASTM D874)     | 1.0                |
| TBN (ASTM D2896)                    | 9.1                |
| Zinc, % wt. Spectro or A.A. or ICP  | 0.140              |

\*The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

## Tested Beyond Industry Standards

In addition to the tests required for the ECF-2 classification, Cat DEO undergoes four proprietary multi-cylinder endurance tests, a variety of quality assurance tests and thousands of hours of field service. Only when it has passed all these tests can it be approved by Caterpillar. The chart to the left indicates the differences between ECF-2 standards and the proprietary standards of Caterpillar.

### S•O•S<sup>SM</sup> Services for early problem detection

Protect your investment with Cat S•O•S oil analysis, the ultimate detection and diagnostic tool for your equipment. S•O•S helps you detect potential problems before they can lead to major failures and costly, unscheduled downtime.

### Cat Filters: Complete protection for your machine

Combine Cat Fluids with Cat Filters for the highest level of contamination control and protection for your machine. We recommend Cat Filters for all Cat machine applications.

## CAT® DEALERS DEFINE WORLD-CLASS PRODUCT SUPPORT.

We offer you the right parts and service solutions, when and where you need them.

The Cat Dealer network of highly trained experts keeps your entire fleet up and running to maximize your equipment investment.

## BUILT FOR IT.™



## Health and Safety

Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. Read and understand the Material Safety Data Sheet (MSDS) before using this product. For a copy of the MSDS, visit us on the web at [www.catmsds.com](http://www.catmsds.com).