Cat© DEO-ULS™

Caterpillar® ECF-3/API CJ-4 Engine Oil

SAE 15W-40 and 10W-30



Optimum Performance and Protection for Engines and Emissions Reduction Systems



Cat® DEO-ULS™ is the highest quality diesel engine oil for Caterpillar® on- and off-highway engines equipped with aftertreatment systems (On-Highway 2007/2010 and Off-Highway Tier 4, Stage IIIB/IV, Step 4), as well as, diesel engines without aftertreatment and automotive gasoline engines. Cat DEO-ULS exceeds the performance requirements of Caterpillar ECF-3 (Engine Crankcase Fluid Specification) and the API CJ-4 and API SM categories.

Cat DEO-ULS is formulated with precise amounts of sulfated ash, phosphorous, and sulfur to maintain the life of aftertreatment system components while providing superior engine protection. In extensive testing, Cat DEO-ULS had an oil consumption rate more than three times better than ECF-3 standards. Cat DEO-ULS was also demonstrated to deliver excellent valve train protection and to minimize the formation of piston deposits.

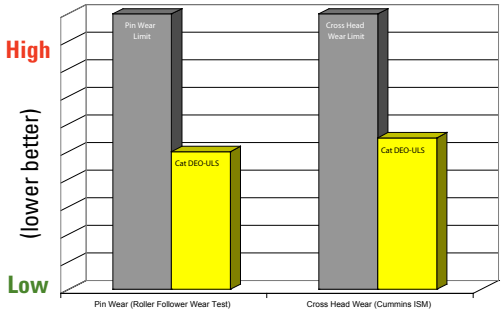
Benefits

- Reduced Engine Wear – Improved detergents keep engine components cleaner and better soot dispersion improves viscosity which controls engine wear
- Minimized Deposits – Reduced oxidation breakdown and thermal degradation improves stability which minimizes the formation of deposits
- Longer Protection – Specially designed additives deliver superior engine protection while supporting consistent emissions performance and extending the life of aftertreatment system components

Cat® DEO-ULS™

Cat DEO-ULS Extends Component Life

In testing, Cat DEO-ULS was shown to deliver superior component protection. Cat DEO-ULS performed significantly better than the required limits of API wear tests. During 500-hour endurance tests, Cat DEO-ULS created only a minimal amount of piston deposits.



Cat® DEO-ULS™ delivers excellent valve train protection.



Minimal piston deposits after a proprietary 500-hour endurance test of Cat DEO-ULS.

API Diesel Groups
CJ-4, CI-4 PLUS/CI-4, CH-4, CG-4, CF-4/CF

API Gasoline Groups
SM/SL

OEM Performance Level
Caterpillar - ECF-3
Volvo - VDS-4
DDC - PGOS 93K218
Cummins - CES 20081
Mack - EO-O Premium Plus
ACEA - E9-08/E7-04
MAN - M3275
DETZ - DQC 11-05

Typical Characteristics*		
SAE Viscosity Grade	15W-40	10W-30
Flash Point, °C (ASTM D92)	236	230
Pour Point, °C (ASTM D97)	-30	-27
Viscosity		
cSt @40° C (ASTM D445)	114	79
cSt @100° C (ASTM D445)	15.0	11.9
Viscosity Index (ASTM D2270)	137	145
Phosphorous, % wt. (ASTM D4951)	0.100	0.100
Sulfated Ash, % wt. (ASTM D874)	0.98	0.97
Sulfar, % wt. (ASTM D2622)	0.3	0.3
TBN (ASTM D2896)	10.4	10.4
TBN (ASTM D4793)	8.2	8.2
Zinc, % wt. (ASTM D4951)	0.109	0.109
Gravity @ 16° C		
API (ASTM D287)	30.2	31.6
Specific	0.876	0.863

*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.

Applications

Cat DEO-ULS is the best engine oil for Cat Engines[1] because it supports emissions reduction technologies while providing excellent performance and protection.

Cat DEO-ULS is required[2] for engines equipped with aftertreatment devices[3]:

- 2007/2010 On-Highway exhaust emissions standards (US)
- Tier 4 (US)
- Stage IIIB/IV (EU)
- Step 4 (Japan)

Cat DEO-ULS is recommended for engines without aftertreatment devices[3]. NOTE: When fuel with sulfur levels higher than 1,000 ppm is used, S•O•S℠ Fluid Analysis is necessary to determine the proper drain interval.

Cat DEO-ULS is an excellent choice for mixed fleets because it can be used in heavy-duty diesel engines built by manufacturers that recommend API CJ-4, CI-4 PLUS/CI-4, or CH-4 classification oil, as well as, automotive gasoline engines that recommend API SM classification oil.

[1]Oil recommendations for 3116 and 3126 MUI Marine and MaK diesel engines can be found in the Operation and Maintenance Manual (OMM).

[2]While Cat DEO-ULS is preferred, oils that meet Caterpillar ECF-3 and API CJ-4 are acceptable.

[3]Aftertreatment devices can include Diesel Particulate Filters (DPF), Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction (SCR), and/or Lean NOx Trap (LNT).

Health and Safety

For information on proper use for health, safety, and environment, please refer to the Material Safety Data Sheet (MSDS). Read and understand the MSDS before using this product. Always observe good hygiene measures. For a copy of the MSDS, contact us or visit the web at www.catmsds.com.

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 can help you maximize your equipment investment.



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