

# Cat<sup>®</sup> DEO-ULS SYN

Full Synthetic Diesel Engine Oil

SAE 5W-40



## Advanced Formula for Maximum Performance and Protection

### Best Choice for New Engines

Cat<sup>®</sup> DEO-ULS<sup>™</sup> SYN 5W-40 contains a blend of synthetic PolyAlphaOlefin (PAO) ingredients and additives; the resistance to thermal degradation and oxidation for wear and corrosion prevention.

The oil is balanced to provide optimum engine life in highly-loaded, thermally-stressed engines and units that operate at lower speeds with frequent starts and stops.

In addition to prolonging the life of the Diesel Particulate Filter (DPF), DEO-ULS SYN allows longer intervals between DPF cleanings. It also prevents premature filter plugging, leading to engine derating, and poor fuel economy.



**CATERPILLAR<sup>®</sup>**

## Customer Benefits

- **Increased Fuel Economy**—Reduces friction on internal engine parts.
- **Contains Advanced Additive Package**—Improves protection of the engine and the Diesel Particulate Filter (DPF) while protecting against piston and ring groove deposits.
- **Extended Drain Intervals**—Extends oil drain intervals while providing excellent engine protection and performance when used in conjunction with our S·O·S Services oil analysis program.

**Excellent Cold-Weather Operation**—Allows cold start-ups at temperatures as low as -30° C (-22° F) without loss of flow to critical engine parts, while maintaining the same high-temperature range as most SAE 15W-40 oils.

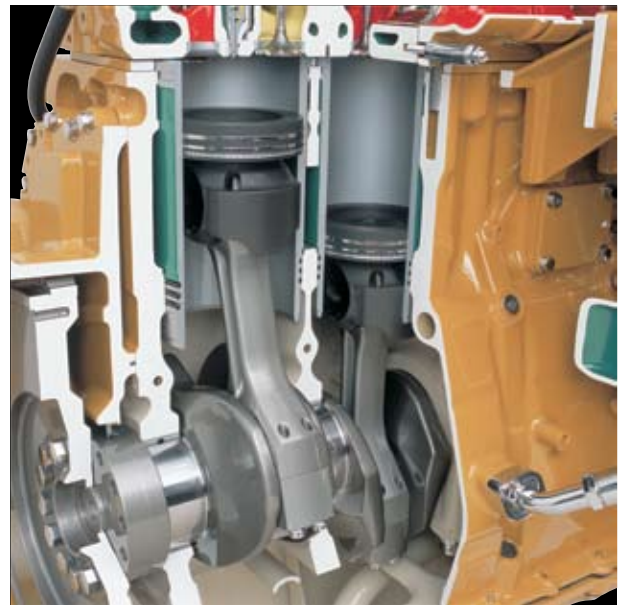
**Cat DEO-ULS SYN was developed and tested to provide improved protection and life for Cat engines.**

**Cat DEO-ULS SYN passed five additional industry oil tests to measure enhanced performance:**

- Better wear handling capability
- Superior soot dispersion
- Lower oil consumption
- Less piston deposit formatio



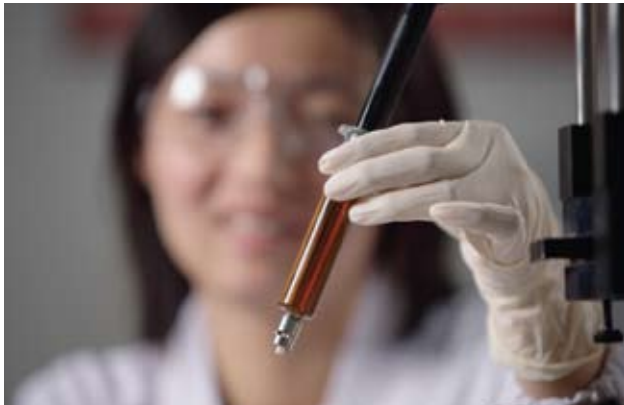
**Cold Testing**



## Cat Filters:

### Complete protection for your engine

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.



### 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 resulting in costly and unscheduled downtime.

### Recommended Uses

Cat DEO-ULS SYN exceeds the performance requirements of Caterpillar ECF-3 (Engine Crankcase Fluid Specification) and the *API CJ-4* category.

- Strongly recommended for all 2007 and newer on-highway engines equipped with after treatment systems using 15-ppm sulfur fuel.
- May also be used with engines not equipped with aftertreatment systems using  $\leq 5000$  ppm sulfur fuel without affecting the oil change interval.

### DEO-ULS or DEO

On-Highway Engine	Aftertreatment System	Fuel Sulfur Content	Recommended Engine Oil
Model Year 2007 & Newer	Yes - Diesel Particulate Filter (DPF)*	$\leq 15$ ppm (Required)	Cat DEO-ULS
Model Year Prior to 2007	Yes - Diesel Particulate Filter (DPF)*	$\leq 15$ ppm (Required)	Cat DEO or Cat DEO-ULS
	Yes - Diesel Oxidation Catalyst (DOC)	$\leq 15$ ppm $\leq 500$ ppm	
	None	$\leq 15$ ppm $\leq 5000$ ppm	

\* With Cat DEO-ULS preferred, it is strongly recommended that oils used in this application, at the minimum, meet Cat ECF-3 and API CJ-4



Typical Characteristics*	
SAE Viscosity Grade	5W-40
API Service Category	
Diesel	CJ-4, CI-4 Plus/CI-4, CH-4
Gasoline	SM/SL
OEM Performance Level	
Caterpillar	ECF-3/ECF-2
Volvo	VDS-4/VDS-3
DDC	PGO S 93K218/93K214
Cummings	CES 20081
Mack	EO-O Premium Plus/EO-N PP '03
ACEA	E704/E5
Flash Point, °C (ASTM D92)	215
Pour Point, °C (ASTM D92)	-39
Viscosity	
cST @ 40°C (ASTM D445)	98.3
cST @ 100°C (ASTM D445)	15
Viscosity Index (ASTM D2270)	15
TBN, mg KOH/g (ASTM D2896)	10.1
Sulfated Ash, % wt (ASTM D874)	0.9
Phosphorous, % wt (Spectro or AA)	0.100
Sulfur, %wt (ASTM D2622)	0.4
Gravity @ 16°C	
API (ASTM D287)	7.12
Specific	0.853
* 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.	
NOTE: Initial Distribution of DEO-ULS SYN is limited to the United States, Canada, and Mexico. Ordering and delivery are the same as other oils.	

## DEO-ULS SYN Options

Size	Part Number
5L	335-9836
20 L	335-9837
208 L	335-9838
4 Qty	335-9840
55 Gallon	335-9841
Bulk L	335-9842

## 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).

## 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.

