

# Cat® DEO-ULS SYN

Cat® ECF-3 / API CK-4 Engine Oil



## Advanced Formula Protection for Maximum Performance in off-highway and on-highway applications

### Best Choice For All Engines

Cat® DEO-ULS SYN 5W-40 is an advanced full synthetic, extreme high-performance diesel engine oil that can deliver long oil drain capability through its proprietary additive technology. It is formulated to provide resistance to thermal degradation and oxidation for wear and degradation.



## 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 Operations – 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**

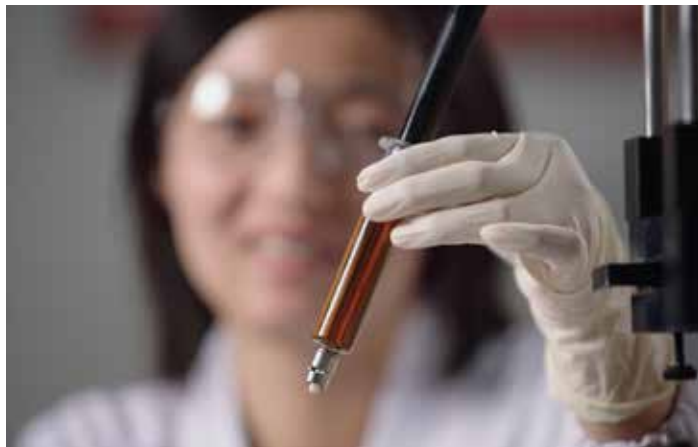
- Better wear handling capacity
- Superior soot dispersion
- Lower oil consumption
- Less piston deposit formation

## 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.



## Recommended Uses

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

## 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.

## Cat® DEO-ULS SYN

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-ULS
	Yes –Diesel Oxidation Catalyst (DOC)*	$\leq 500$ ppm	
	None	$\leq 15$ ppm	
		$\geq 5000$ ppm	

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

Typical Characteristics*	
SAE Viscosity Grade	5W-40
API Service Category: Diesel Gasoline	CK-4 SN
OEM Performance Level: Caterpillar Volvo DDC Cummins Mack ACEA	ECF-3 VDS.4.5 93K222, 93K218 CES 20086, 20081 EOS-4.5 E9, E7
Flash Point °C (°F) (ASTM D92)	233 (451)
Pour Point °C (°F) (ASTM D92)	-39 (-39)
Viscosity: cSt @ 40° C (ASTM D445) cSt @ 100° C (ASTM D445)	84 13.8
Viscosity Index (ASTM D2270)	150
TBN, mg KOH/g (ASTM D2896)	10
Sulfated Ash, % wt (ASTM D874)	1
Phosphorus, % wt (Spectro or AA)	.110
Sulfur, % wt (ASTM D2622)	0.4
Gravity @ 16° C: API (ASTM D287) Specific	7.12 0.853

\*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.

## DEO-ULS SYN Options

Size	Part Number
20L	515-3989
208L	515-3990
1000L	515-3991
1200L	515-3992
1 GAL	515-3993
5 GAL	524-8573
55 GAL	515-3995

## 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 are built to help you maximize your equipment investment.

### BUILT FOR IT.™

