

# CAT® DEO-ULS SYN

CAT ECF-3 / API CK-4  
ENGINE OIL



## CAT DEO-ULS SYN WAS DEVELOPED AND TESTED TO PROVIDE IMPROVED PROTECTION AND LIFE FOR CAT 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<sup>SM</sup> Services fluid 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.

## 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 ≤ 5000 ppm sulfur fuel without affecting the oil change interval.



# CAT DEO-ULS SYN

On-Highway Engine	Aftertreatment System	Fuel Sulfur Content	Recommended Engine Oil
Model Year 2007 and Newer	Yes – Diesel Particulate Filter (DPF)*	≤ 15ppm (Required)	Cat <sup>®</sup> DEO-ULS
Model Year Prior to 2007	Yes – Diesel Particulate Filter (DPF)*	≤ 15ppm (Required)	Cat DEO-ULS
	Yes – Diesel Oxidation Catalyst (DOC)*	≤ 500ppm	
	None	≤ 15ppm ≥ 5000ppm	

\* 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	CK-4
Gasoline	SN
OEM Performance Level:	
Caterpillar	ECF-3
Volvo	VDS.4.5
DDC	93K222, 93K218
Cummins	CES 20086, 20081
Mack	EOS-4.5
ACEA	E9, E7
Flash Point °C (°F) (ASTM D92)	233 (451)
Pour Point °C (°F) (ASTM D92)	-39 (-39)
Viscosity:	
cSt @ 40° C (ASTM D445)	84
cSt @ 100° C (ASTM D445)	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)	7.12
Specific	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.

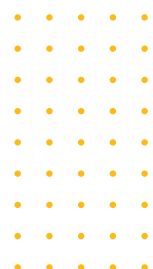
## S•O•S<sup>SM</sup> SERVICES FOR EARLY PROBLEM DETECTION

Protect your investment with Cat S•O•S fluid 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.

## 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 Safety Data Sheet (SDS) before using this product. For a copy of the SDS, 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 helps keep your entire fleet up and running to maximize your equipment investment.



PEHJ0220-02  
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