

Full Synthetic  
**Diesel Engine Oil**

*Advanced formula for maximum performance and protection*

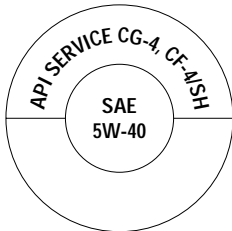
**Description**

Cat DEO 5W-40 high-performance diesel engine oil contains a blend of synthesized hydrocarbons and carefully selected esters. The additive system provides outstanding high-temperature detergency and all-temperature dispersancy, with optimized resistance to thermal degradation and oxidation, wear, and corrosion.

Cat DEO 5W-40 has all the advantages of an SAE 15W-40 weight oil without the higher oil consumption inherent in some multigrade oils that use very light mineral base stocks. Because synthetics have higher boiling points than conventional oils, Cat DEO 5W-40 does not evaporate as readily in the high-temperature piston ring area of turbocharged diesel engines.

Cat DEO 5W-40 has the same viscosity as most SAE 15W-40 oils at the high end of the temperature-viscosity scale. However, because of its higher viscosity index and unique molecular structure, it provides a better protective film at higher temperatures than conventional oils. Cat DEO 5W-40 remains fluid at subzero temperatures and provides rapid cold-engine start-ups and warm-ups at temperatures down to -30°C (-22°F).

Cat DEO 5W-40 can provide satisfactory lubrication at temperatures up to 100 degrees above the upper limit for conventional mineral oils. It is fully compatible with conventional mineral oils and all seals used in heavy-duty diesel and gasoline fleet engines.



**API certification**

Cat DEO 5W-40 meets the Engine Oil Licensing and Certification requirements set forth by the American Petroleum Institute (API). Engine oils that bear the API symbol are authorized by the API.

**Fluid analysis for early detection**

We recommend protecting your investment by using scheduled fluid analysis. Our S•O•S analysis program is the ultimate detection and diagnostic tool for your equipment, helping you head off potential problems before they can lead to major failures and costly unscheduled downtime.

**Customer benefits**

The performance of Cat DEO 5W-40 surpasses all conventional oils to provide:

- extended drain capability.
- the capability to improve fuel economy.
- outstanding high temperature characteristics.
- improved cold weather operation, including engine start-ups at temperatures down to -30°C (-22°F), compared to SAE 15W-40 oils that have a -15°C (5°F) minimum start-up temperature. (Cat DEO 5W-40 flows to critical engine parts at these low temperatures while minimizing stress on the starter and battery.)
- outstanding wear and soot thickening protection, as well as excellent deposit and oxidation control in the most demanding diesel engine applications.
- full compatibility with conventional mineral oils and seals used in Cat engines.
- new super-high performance in both diesel and gasoline engines.

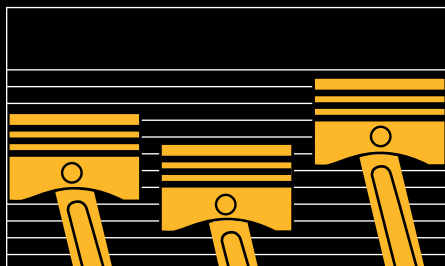
**Proper use for health and safety**

According to toxicology information, Cat DEO 5W-40 has little or no adverse effects if handled and used properly. No special precautions are suggested beyond attending to good personal hygiene and avoiding prolonged, repeated skin contact. For more information, refer to the "Material Safety Data Sheet," which is located on the Internet at Caterpillar's web site:

<http://www.CAT.com/products/custserv/msds>

Full Synthetic  
**Diesel Engine Oil**

SAE 5W-40



Specifically developed, tested, and approved by Caterpillar to be used in Cat® diesel engines. Cat Diesel Engine Oil SAE 5W-40 is a full synthetic (100% synthetic base stocks) engine oil.

**Recommended use**

**Application**

Cat DEO 5W-40 provides both extended drain capability and optimized engine life in selected engine applications when used with Cat filters and S\*O\*S<sup>SM</sup> Fluid Analysis (in accordance with Cat program guidelines). It can be used in:

- Cat diesel engines (excluding 3600), including low emission on-highway truck, earthmoving, commercial, and marine diesel engines.
- automotive gasoline engines that require the API SH Service Classification.
- OEM heavy-duty diesel engines, including low emission designs that permit the use of API CG-4, CF-4, CF, or SH Service Classification oils.

When Cat DEO 5W-40 is used for the first time, no system preparation is necessary other than proper draining and installation of a new filter. In an emergency, conventional oil can be used as a makeup for Cat DEO 5W-40, but mixing may lower performance. Do not dilute crankcase oil with gasoline or kerosine in cold weather. The dilutant will not improve cold cranking and may have an adverse effect on performance.

**Information sources**

We can help you determine the right oil for Cat machines and engines, or you can refer to your “Operation and Maintenance Manual” or service publications SEBU6385 (On-Highway Trucks), SEBU6250 (Earthmoving Machines), and SEBU6251 (Commercial and Marine Engines).

**Typical Characteristics\***

SAE Viscosity Grade	5W-40
API Service Classification	CG-4, CF-4, CF, SH
Gravity, API	31.7
Pour Point, °C (°F)	-54 (-65)
Flash Point, °C (°F) (ASTM D92)	230 (446)
Viscosity,	
cSt @ 40°C	86.0
cSt @ 100°C	15.0
SUS @ 100°F	445.0
SUS @ 210°F	80.0
Cranking Viscosity,	
cP @ -25°C	2300
cP @ -30°C	3600
Pumping Viscosity,	
cP @ -30°C	6700
cP @ -35°C	12,800
Borderline Pumping Temperature, °C	-44
HT/HTS, cP @ 150°C	3.9
Viscosity Index	186
Sulfated Ash, wt. %	1.2
TBN (ASTM D2896)	11.0
Color (ASTM D1500)	5.0

\* 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.