



Heavy Duty Diesel Engine Oils

SAE 10W-30 API Service CK-4, CJ-4, CI-4, CH-4

SAE 15W-40 API Service CK-4, CJ-4, CI-4 Plus, CI-4, CH-4

HDDEO SAE 10W-30 and SAE 15W-40

Benefits:

- Product focus toward reducing greenhouse gas emissions and improving fuel economy while emphasizing improvements in oxidation stability, shear stability, and resistance to aeration
- Fuel economy and wear protection for older and newer engines
- Performance benefits in both on- and off-road applications
- Offers protection and oxidation resistance for highly rated diesel engines operating in severe service conditions

Applications:

Recommended for use in applications such as construction, mining, agricultural, and stationary engines.

API Commercial/Service Categories:

- 10W-30 (CK-4, CJ-4, CI-4, and CH-4)
- 15W-40 (CK-4, CJ-4, CI-4 PLUS, CI-4, and CH-4)

Fit for use in:

- Cummins 20086
- Detroit Fluids Specification 93K222
- Caterpillar ECF-3
- Volvo VDS-4.5
- Mack EOS - 4.5
- Renault RLD-4
- Daimler MB 228.31
- MAN 3575
- MTU 2.1
- DQC III-10 LA
- ACEA E9-12
- Ford WSS-M2C171-F1

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SAE Grade	Test Method	Typical	Typical
<i>API Service</i>		<i>10W-30 CK-4, CJ-4</i>	<i>15W-40 CK-4, CJ-4</i>
Gravity, API	ASTM D-4052	31.6	30.8
Density, lbs/gal (g/L)	Calculated	7.23 (867)	7.27 (871)
Viscosity, cSt @ 40°C	ASTM D-445	83.6	110
Viscosity, cSt @ 100°C	ASTM D-445	12.2	15.0
Viscosity Index	ASTM D-2270	141	140
CCS @ -20°C, cP	ASTM D-5293		5,060
CCS @ -25°C, cP	ASTM D-5293	6,210	
MRV @ -25°C, cP	ASTM D-4684		14,500
MRV @ -30°C, cP	ASTM D-4684	17,300	
Pour Point, °F (°C)	ASTM D-5949	-38.2 (-39)	-32.8 (-36)
Flash Point, °F (°C)	ASTM D-92	440 (227)	450 (232)
Color	D-6045	5.7	5.8
TBN mg KOH/g	ASTM D-2896	8.6	8.6
Sulfated Ash, wt. %	ASTM D-874	1.0	1.0
Product Code		7210	7215

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