



KAPPA PREMIUM

(Heavy Duty Engine Oils—10 TBN, API CJ-4/SM)

KAPPA PREMIUM is top tier heavy-duty diesel engine oil designed to meet the latest and most stringent requirements of modern four-cycle, high-output diesel engines. In addition, the oil is compatible with catalysts, soot traps and other pollution control devices required for 2007 diesel engines.

KAPPA PREMIUM motor oil is formulated to enable extended oil drain intervals for most engines without the risk of sludge and varnish buildup. (See engine maintenance manual for oil drain extension guidelines.)

This specially formulated multigrade oil has advanced soot dispersancy and high detergency levels, which effectively protect bearings and other engine surfaces from corrosive wear. In addition **KAPPA PREMIUM** oils control ring and piston deposits that lead to oil consumption and wear. Its advanced formulation also minimizes engine wear at cold startup when engines are most susceptible to damage.

KAPPA PREMIUM motor oils exceed Caterpillar requirements for operation using ultra-low sulfur fuel (15 ppm max) as well as for low sulfur fuel (500 ppm max). Regardless of fuel sulfur content, users find that **KAPPA PREMIUM** motor oils have enabled longer engine life and trouble-free service.

KAPPA PREMIUM motor oils are recommended for many transmissions. They have been proven to extend transmission life in Caterpillar power shift units, as compared to conventional diesel engine oils.

The 15W-40 grade is ideal for extending drain intervals. Both the OEM recommended guidelines as well as the owner-operator type of service (on road versus off-road, etc) and maintenance practices need to be considered. FINA CHECK (used oil analysis) should always be used when extending drain intervals.

BENEFITS:

- EFFECTIVELY REDUCES ENGINE WEAR AND CONTROLS DEPOSITS
- EXTENDS OIL DRAIN INTERVALS
- PROVIDES CLEANER ENGINES
- REDUCES OIL CONSUMPTION AND RING BREAKAGE
- 2007 EPA EMISSION FRIENDLY

APPLICATIONS:

KAPPA PREMIUM 15W-40 OIL meets or exceeds the performance requirements of the latest API category CJ-4/SM as well as earlier heavy-duty engine categories. In addition, it meets Detroit Diesel 93K218 and 93K215, Mack EO-O Premium Plus 07, Caterpillar ECF-3, ACEA E-5 and E-7, Cummins CES 20081, Mercedes Benz 228.31, and the latest Volvo VDS-4 requirements. **KAPPA PREMIUM** motor oil also meets or exceeds Allison C-4, MIL-PRF-2104-G, John Deere and MAN 3275.

KAPPA PREMIUM motor oils is recommended for naturally aspirated, turbocharged or EGR diesel engines and most gasoline engines. This oil is also suitable for many transmissions and other applications requiring high quality engine oils.



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TYPICAL CHARACTERISTICS

SAE Viscosity Grade	15W-40
API Service	CJ-4, CI-4 Plus, CI-4, CH-4, SM, SL
Product Code	11757
API Gravity (ASTM D-1298)	29.2
Specific Gravity, g/cc	0.880
Viscosity (ASTM D-445):	
cSt @ 40°C	118
cSt @ 100°C	15.2
SUS @ 100°F	579
SUS @ 210°F	78
cPs @ -20°C (D-5293)	<7000
Viscosity Index (ASTM D-2270)	133
Pour Point (ASTM D-97) °F (°C)	-25 (-32)
Flash Point, COC (ASTM D-92) °F (°C)	420 (216)
Color (ASTM D-1500)	5.0
Sulfated Ash (ASTM D-874)	1.0
Total Base Number (ASTM D 2896)	10.1
Credential claims	
ACEA	E5 and E7
Allison	C-4
Caterpillar	ECF-1, ECF-3
Cummins	CES 20081, 20078, 20077, 20076
Detroit Diesel	93K218, 93K215, 93K214
	MTU type I, MTU type 2
Global	DHD-1
JASO	DH-2
Mack	EO-O Premium Plus 07
MAN (Mining & Marine)	3275
Mercedes	228.3, 228.31
Renault	RLD-3
Volvo	VDS 4, VDS 3
Military	MIL-PRF-2104-G and H

The above data is subject to usual manufacturing variation. For more information or availability, call 1-800-442-LUBE.
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