



## **KAPPA SL** **(2007 Heavy Duty Engine Oil—API CJ-4/SL)**

**KAPPA SL** is premium quality heavy-duty diesel engine oil designed to meet the 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 EPA compliant low-emission diesel engines.

**KAPPA SL** 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.)

These specially formulated multigrade oils have advanced soot dispersancy and high detergency levels, which effectively protect bearings and other engine surfaces from corrosive wear. In addition **KAPPA SL** 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 SL** motor oils are recommended for most 2007 units, operating with ultra low sulfur fuel (15 ppm maximum sulfur) as well as for units which burn low sulfur diesel (**sulfur content up to 0.05%**). **KAPPA SL** motor oils enable longer engine life and trouble-free service. *New Mack and Volvo engines require an additional test requirement to obtain the passenger car API category SM.* Hence use **Kappa Premium** (API CJ-4/SM) for new Mack or Volvo units. Other OEMs do not require this additional test requirement.

**KAPPA SL** 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
- REDUCES OIL THICKENING AND OIL CONSUMPTION
- EXTENDS OIL DRAIN INTERVALS
- PROVIDES CLEANER ENGINES
- 2007 EPA EMISSION FRIENDLY

### **APPLICATIONS:**

**KAPPA SL OIL** meets or exceeds the performance requirements of the latest API category CJ-4 as well as earlier heavy-duty engine categories. In addition it meets Detroit Diesel 93K218, Mack EO-N Premium Plus 03, Caterpillar ECF-3 and ECF-1, ACEA E-5 and E-7, Cummins CES 20081, Mercedes Benz 228.3, and far exceeds Volvo VDS-3 requirements. **KAPPA SL** motor oil meets or exceeds the Allison C-4 and MIL-PRF-2104G.

**KAPPA SL** motor oil 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/SL
Product Code	11756
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)	0.99
Total Base Number (ASTM D 2896)	9.7
Credentials	
ACEA	E-7 and E-5
Allison	C-4
Caterpillar	ECF-1, ECF-3
Cummins	CES 20081, 20078, 20076
Detroit Diesel	93K218, 93K215, 93K214 MTU Type I and II
JASO	DH-2
MAN (Mining & Marine)	3275
Mack	Premium Plus 03
Mercedes	228.3
Volvo	VDS-3*

\*\*VDS-4 requires API CJ-4/SM. Please order Kappa Premium if this is needed.

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