



## LUBRICANTS

### **STERN Synthetic Blend Heavy-Duty Motor Oil (HDMO) P-Series**

STERN Special Synthetic Blend HD Multi-grade, API CK-4, is the most current formulated heavy-duty motor oil for all-season use in highway commercial diesel engines, including EGR equipped engine emission controlled systems. The product is manufactured from selected premium quality base stocks with additive technology to provide engine protection for current EPA exhaust particulate emissions standards using Ultra-Low Sulfur Diesel (ULSD). It meets performance requirements for all naturally aspirated, turbocharged and supercharged, diesel engines as well as all four-cycle gasoline engines. The product reflects API CI-4 Plus test improvements in reducing aeration, better oxidation stability, enhanced soot control, and advanced wear protection.

Special Synthetic Blend HD meets API current service classifications CH-4, CI-4, CI-4 Plus, CJ-4, and CK-4 and ACEA European Oil Sequences Section E-7-12 & E-9-12. The product satisfies the following engine manufacturer requirements where a SAE 10W-30 is recommended: Mack EO-0 Premium Plus, Mack EOS-4.5, Renault VI RLD-3, Renault VI RLD-4, Caterpillar ECF-3, Cummins CES 20081, Cummins CES 20086, Detroit Diesel DDC93K218, Detroit Diesel DDC93K222, JASO DH-2, MB-228.31, MAN M3575, MTU 2.1, Deutz DQC III-10 LA, Ford WSSM2C171-E, Ford WSS-M2C171-F1 Volvo VDS-4, and Volvo VDS-4.5.

#### **APPLICATIONS**

Recommended for all major diesel and mixed fleet (diesel/four-cycle gasoline) engine operations in all service and under all operating conditions where the equipment owner specifies the additional performance benefits of multi-grade oils. This product is preferable for newer diesel engines with EGR systems and those equipped with Diesel Particulate Filter (DPF) and Diesel Oxidation Catalyst (DOC) technologies.

**TYPICAL PROPERTIES**

<b>Synthetic Blend Heavy-Duty Motor Oil (HDMO)</b>	<b>10W-30</b>	<b>15W-40</b>
<i>Viscosity (cSt) at 40°C</i>	76.39	115
<i>Viscosity (cSt) at 100°C</i>	11.6	15.4
<i>Viscosity Index</i>	145	140
<i>Viscosity, CCS, D-5293, -20°C/cP</i>	6350	6000
<i>Flash Point, (COC), °C/°F</i>	221/430	238/460
<i>Pour Point, °C/°F</i>	-34/-30	-34/-30
<i>Sulfated Ash, %wt</i>	1.0	1.0
<i>Neutralization No., TBN-E</i>	9.2	8.5
<i>HTHS, Vis/cP, D-4683</i>	3.5	4.4
<i>Gravity, API @ 60°F</i>	30.5	30.5

