



**YOU GET OUT
WHAT YOU
PUT IN.** 

SHP® Diesel Engine Oil

Kendall® SHP Diesel Full Synthetic Engine Oil is a premium quality, full-synthetic engine oil developed for use in four-stroke cycle diesel engines operating under extreme temperature conditions. It meets API CK-4 performance requirements for use in modern low-emission engines designed to meet 2007 and later EPA on-highway exhaust emissions standards, and is backward serviceable for use in older diesel engines. It is specially formulated for compatibility with exhaust aftertreatment systems using diesel particulate filters (DPF), diesel oxidation catalysts (DOC) and/or selective catalytic reduction (SCR). The full-synthetic formulation and SAE 5W-40 viscosity grade provide excellent low-temperature properties for better performance in harsh winter climates.

SHP Diesel is formulated with synthetic base stocks and an advanced low-SAPS additive package to provide outstanding wear protection, soot control and bearing corrosion protection in both conventional and EGR-equipped diesel engines. It has excellent soot dispersancy to protect against abrasive wear and soot-induced oil thickening, and to ensure good low-temperature pumpability even with highly soot-laden oil. The full-synthetic formulation provides enhanced oxidation resistance and thermal stability at high temperatures and improved low-temperature properties compared with a conventional, non-synthetic formulation.

SHP Diesel meets or exceeds the performance requirements of API Service Categories CK-4 and SN, and is approved under the latest OEM specifications for use in low-emission diesel engines. It is backward serviceable for use where earlier API "C" category engine oils, or the concurrent earlier OEM specifications, are specified. It is formulated for use in diesel engines operating on diesel fuels with sulfur content up to 500 ppm. However, for applications not using Ultra-Low Sulfur Diesel (ULSD), consult the engine manufacturer for recommended service interval.

Applications

- On- and off-highway diesel equipment operating at low ambient temperatures
- On-highway diesel trucks equipped with EGR and exhaust aftertreatment systems to meet 2007/2010 emissions standards
- Off-highway construction, earth moving and mining equipment
- Mixed fleets with diesel and gasoline-fueled vehicles

SHP Diesel Full Synthetic is licensed or OEM-certified for:

- API Service CK-4, CJ-4, CI-4 with CI-4 PLUS, SN
- Ford WSS-M2C171-F1
- Cummins CES 20086
- Detroit Diesel DFS 93K222
- Mack EOS 4.5 Volvo VDS 4.5
- Mercedes-Benz Sheet 228.31

**Premium Full
Synthetic API
CK-4 Diesel
Engine Oil;
Fortified with
Liquid Titanium®
Protection
Additive**



SHP Diesel Full Synthetic meets or exceeds the requirements of:

- ACEA E9-08, E7-08
- Caterpillar ECF-3, ECF-2, ECF-1-a
- Deutz DQC III-10
- Renault VI RLD-4
- Diesel engines manufactured by OEMs not listed above, where the OEM specifies API CK-4 engine oil

Features/Benefits

- Excellent protection for newer low-emission diesel engines and older diesel engines
- Specially formulated to protect exhaust aftertreatment systems
- Outstanding soot control for protection against abrasive wear and soot-induced oil thickening
- Outstanding resistance to viscosity and thermal breakdown at high temperatures
- Exclusive Liquid Titanium additive provides enhanced oxidation and wear control
- Protects against rust, bearing corrosion and wear
- Excellent low-temperature pumpability for easier starting and less wear during cold starts
- High shear stability
- Good resistance to foaming and aeration

SHP® Diesel Engine Oil

Typical Properties	
SAE Grade	5W-40
Specific Gravity @ 60°F	0.855
Density, lbs/gal @ 60°F	7.12
Color, ASTM D1500	4.0
Flash Point (COC), °C (°F)	240 (464)
Pour Point, °C (°F)	-48 (-54)
Viscosity, Kinematic	
cSt @ 40°C	96.0
cSt @ 100°C	14.5
Viscosity Index	166
Cold Cranking Viscosity, cP @ -30°C	6,230
High-Temp/High-Shear Viscosity, cP @ 150°C	4.2
Sulfated Ash, ASTM D874, wt %	1.0
Total Base Number (TBN), ASTM D2896	10.2
Zinc, wt %	0.1288
Titanium, wt %	0.010

Health & Safety Information

For recommendations on safe handling and use of this product, please refer to the Safety Data Sheet via <http://www.phillips66.com/SDS>

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Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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