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## KLONDIKE SAE 15W-40 CK-4 Advanced Formula Heavy Duty Engine Oil



#### **PRODUCT DESCRIPTION**

KLONDIKE SAE 15W-40 CK-4 Advanced Formula Heavy Duty Engine Oil is a high performance, mixed fleet engine oil recommended for naturally aspirated and turbocharged diesel and gasoline engines in which SAE 15W-40 viscosity grade and API CK-4 or SN service categories are specified.

#### APPLICATIONS

KLONDIKE SAE 15W-40 CK-4 Advanced Formula Heavy Duty Engine Oil is specifically engineered for engines operating under severe service in a wide range of climatic conditions and ambient temperatures. An ideal mixed fleet engine oil designed for naturally aspirated and turbocharged heavy duty diesel engines in mobile and stationary equipment where the API CK-4 service category and SAE 15W-40 viscosity grade is specified. Advanced API CK-4 additive technology is fully backwards compatible with, and replaces, service categories CJ-4, CI-4 Plus, and previous.

KLONDIKE SAE 15W-40 CK-4 Advanced Formula Heavy Duty Engine Oil also meets the requirements of Allison<sup>®</sup> C-4 and Caterpillar TO-2 for use in transmissions requiring a fluid of this type.

- Some typical applications include:
- Current on-highway low emission diesel engines running on ultra-low sulfur diesel fuel.
- Current off-highway engines including those adapted for future emissions standards in construction, agriculture, marine, and mining applications.
- Mixed fleets where product consolidation is desired for performance and economics



#### OEM certified by:







ENAULT



KLONDIKE SAE 15W-40 CK-4 Advanced Formula is a premium heavy duty engine oil engineered to deliver outstanding wear protection and performance in modern heavy duty diesel engines. Formulated with premium, ultra-pure base oils and carefully balanced additive technology, this advanced engine oil delivers outstanding long-term performance for on and off-highway heavy duty engine applications operating under high-load, high-stress conditions in all climates.

KLONDIKE SAE 15W-40 CK-4 Advanced Formula Heavy Duty Engine Oil employs OEM tested, field proven additive technology which delivers outstanding engine cleanliness and reduced wear. Premium synthetic components which deliver advanced shear stability and viscosity retention, greatly limit shear induced viscosity loss over the drain interval for outstanding lubricant life and extended engine durability.

KLONDIKE SAE 15W-40 CK-4 Advanced Formula Heavy Duty Engine Oil is designed specifically to meet the stringent requirements of API Service Category CK-4 for heavy duty diesel engines running on Ultra Low Sulfur Diesel (ULSD) and equipped with advanced after treatment devices. Exceeds all soot control and particulate requirements of current emission control systems such as Exhaust Gas Recirculation (EGR), Diesel Particulate Filter (DPF), or Selective Catalytic Reduction (SCR).

KLONDIKE SAE 15W-40 CK-4 Advanced Formula Heavy Duty Engine Oil delivers value through the following benefits:

- **Premium base oil** excellent all-season performance characteristics.
- Engine efficiency advanced additive technology keeps internal engine components clean, reduces oil consumption for long service life.
- Outstanding anti-wear wear protection exceeds API CK-4 and tough OEM specifications even in severe service applications for maximum engine durability.
- Emission compliant fully compliant with all current emission control equipment. Promotes extended DPF life helping to minimize maintenance costs.
- Extended service life high initial TBN and synthetic shear stability improvers offer extended lubricant life in extreme conditions.

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### SPECIFICATIONS AND APPROVALS

KLONDIKE SAE 15W-40 CK-4 Advanced Formula meets the requirements of the following engine specifications:

- ACEA European Service Categories E9, E7, E4, E2
- API Service Categories CK-4, CJ-4, CI-4 PLUS, CI-4 (and previous)
- API Service Categories SN, SM, SL (and previous)
- Caterpillar<sup>®</sup> ECF-3, ECF-2, ECF-1a
- Cummins<sup>®</sup> CES 20086, 20081, 20078, 20077, 20076
- Daimler MB 228.31, 228.3
- Detroit Diesel<sup>®</sup> 93K222, 93K218, 93K215, 93K214
- Deutz DQC III-IOLA
- FCA MS-10902
- FORD WSS-M2C171-F1, WSS-M2C171-E

- **JASO** DH-2
- Mack<sup>®</sup> EOS-4.5, EO-0 Premium Plus, EO-N Premium Plus, EO-M
- MAN 3275, 3575,
- MTU Type 2.1, Type I, Type II
- Renault<sup>®</sup> VI RLD-4, RLD-3
- Volvo<sup>®</sup> VDS-4.5, VDS-4, VDS-3, VDS-2
- CID A-A-52306 / MIL-PRF-2104G

Other suitable uses include (but not limited to):

- Caterpillar TO-2
- Allison<sup>®</sup> C-4
- **ZF** TE-ML 04C

• Global – DHD-1

Other applicable uses may exist. Please contact KLONDIKE for more information.

## **TYPICAL TECHNICAL PROPERTIES**

PROPERTY	TEST METHOD	15W-40 CK-4
Gravity; °API	ASTM D287	30.2
Specific Gravity @ 15.6°C	ASTM D4052	0.876
Viscosity @ 40°C (cSt)	ASTM D445	114
Viscosity @ 100°C (cSt)	ASTM D445	15.5
Viscosity Index	ASTM D2270	145
Flash Point °C	ASTM D92	215
Pour Point °C	ASTM D5950	-39
Cold Cranking Simulator @ -20°C, cP	ASTM D5293	5500
High temp/high shear Vis @ 150°C, cP	ASTM D5481	4.2
NOACK Volatility, % loss	ASTM D6375	10
Color	ASTM D1500	3.0
Zinc, wt %	ASTM D5185	0.127
Phosphorus, wt.%	ASTM D5185	0.115
Calcium wt. %	ASTM D5185	0.105
Sulfur, wt %	ASTM D4951	0.32
Magnesium, wt %	ASTM D5185	0.1
Molybdenum, wt %	ASTM D5185	0.0066
Sulfated Ash, wt %	ASTM D874	0.99
Nitrogen, wt %	ASTM D4629	0.105
Pumping Viscosity @ (-25°C),cP	ASTM D4684	20,000
TAN, mgKOH/g	ASTM D664	2.9
TBN, mgKOH/g	ASTM D2896	10

All stated physical properties are typical of standard production and may vary.

## KLONDIKE SAE 15W-40 CK-4 Advanced Formula Heavy Duty Engine Oil

## HEALTH AND SAFETY

This product is not expected to have adverse health implications when used for its intended application. For detailed information on safe handling of this product, refer to its Material Safety Data Sheet (MSDS). To obtain an MSDS on this or any other KLONDIKE product, please visit www.klondikelubricants.com or call 1-877-293-4691. When disposing of used product, be responsible to the environment.

### DISCLAIMER

Always follow OEM recommendations for fluid viscosity and API service category. KLONDIKE takes no responsibility for product misuse or misapplication.

PRODUCT NUMBERS			
15W-40 CK-4 ADVANCED FORMULA	Bottle: 946 mL	KL-HD0540	
	Jug: 4.73 L / 1.25 GAL	KL-HD0560	
	Jug: 9.46 L / 2.5 GAL	KL-HD0575	
	Pail: 18.9 L / 5 GAL	KL-HD0580	
	EZE-BOX: 22 L / 5.8 GAL	KL-HD0582	
	EZE-KEG: 52 L / 13.74 GAL	KL-HD0584	
	Drum: 208 L / 55 GAL	KL-HD0590	
	Tote: 1040 L / 275 GAL	KL-HD0595	
	Bulk	KL-HD0599	

## **BRAVING THE FORCE OF MOVEMENT**

KLONDIKE stands for robust, reliable, high quality products tailored to suit the requirements of the on- and off-road heavy duty, automotive and industrial markets. Our solutions span from trend-setting retail lubricants through small-batch custom formulations to large bulk orders ready for immediate delivery.

The extensive KLONDIKE product range includes premium oils, lubricants, greases, chemicals and specialty fluids formulated with virgin base oils and protective inhibitors. Designed to handle the most extreme climates and operating conditions, the KLONDIKE products protect and extend the life of your equipment, optimize performance and improve productivity while meeting and exceeding industry standards and specifications.

#### KLONDIKE Lubricants Corporation

Toll-free 1-877-293-4691

info@klondikelubricants.com www.klondikelubricants.com