

KLONDIKE API CK-4 Full Synthetic Heavy Duty Engine Oils: SAE 0W-30, SAE 0W-40



PRODUCT DESCRIPTION

KLONDIKE API CK-4 Full Synthetic Heavy Duty Engine Oils with Arctic Performance Technology are premium high performance formulations recommended for naturally aspirated and turbocharged diesel engines starting and operating in extreme low temperature conditions.

APPLICATIONS

KLONDIKE API CK-4 Full Synthetic Heavy Duty Engine Oils with Arctic Performance Technology are specifically engineered for engines operating under severe service in a wide range of climatic conditions and ambient temperatures. These are ideal mixed fleet engine oils primarily designed for naturally aspirated and turbocharged heavy duty diesel engines in mobile and stationary equipment where the API CK-4 service category and SAE 0W-30 or 0W-40 viscosity grades are recommended. Advanced API CK-4 additive technology is fully backwards compatible with, and replaces, service categories CJ-4, CI-4 Plus, and previous categories.

KLONDIKE API CK-4 Full Synthetic Heavy Duty Engine Oils are also suitable for use in transmissions requiring a fluid meeting Allison C-4 performance.

Some typical applications include:

- Current on-highway low emission diesel engines running on ultra-low sulfur diesel fuel and operating in extreme climatic conditions
- Current off-highway engines including those adapted for future emissions standards in construction, agriculture, marine, and mining applications and operating in extreme climatic conditions.
- Mixed fleet operations where product consolidation is desired for performance and economics



FEATURES AND BENEFITS

KLONDIKE API CK-4 Full Synthetic Heavy Duty Engine Oils are premium full synthetic formulations engineered to deliver outstanding wear protection and performance in modern heavy duty diesel engines. Formulated with premium, ultra-pure, full synthetic base oils and carefully balanced additive technology, these advanced engine oils deliver outstanding extended performance in on and off-highway heavy duty engines operating under high-load, high-stress conditions in all climates.

KLONDIKE API CK-4 Full Synthetic Heavy Duty Engine Oils contain field proven additive technology which delivers maximum control on engine wear, outstanding engine cleanliness, and high TBN and viscosity retention for outstanding lubricant life and maximum engine durability. Metal anti-wear protection exceeds API CK-4 standards and tough OEM specifications.

KLONDIKE API CK-4 Full Synthetic Heavy Duty Engine Oils formulated with advanced Arctic Performance Technology ensure maximum possible reliability and performance in extreme low temperature applications. Ultra-low pour points and outstanding fluidity reduce stress at equipment startup and minimize wear in extreme low temperature conditions.

KLONDIKE API CK-4 Full Synthetic Heavy Duty Engine Oils with Arctic Performance Technology 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 API CK-4 Full Synthetic Heavy Duty Engine Oils with Arctic Performance Technology deliver value through the following benefits:

- **Premium full synthetic 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** – outstanding TBN and high viscosity retention supports extended lubricant life when used with regular oil testing.



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SPECIFICATIONS AND APPROVALS

KLONDIKE API CK-4 Full Synthetic with Arctic Performance Technology 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)
- **Caterpillar**® – ECF-3, ECF-2, ECF-1a
- **Cummins**® – CES 20086, 20081, 20078, 20077, 20076
- **Daimler** – MB 228.31, 228.3
- **Detroit Diesel**® – 93K222, 93K218, 93K215, 93K214
- **Deutz** – DQC III-IOLA
- **FCA** – MS-10902 (SAE 0W-40)
- **FORD** – WSS-M2C171-F1, WSS-M2C171-E
- **Global** – DHD-1
- **JASO** – DH-2
- **Mack**® – EOS-4.5, EO-O Premium Plus, EO-N Premium Plus, EO-M
- **MAN** – 3275, 3575
- **MTU** – Type 2.1, Type I, Type II
- **Renault**® – VI RLD-4, RLD-3
- **Volvo**® – VDS-4.5, VDS-4, VDS-3, VDS-2
- **CID A-A-52306 / MIL-PRF-2104G**
- **Other suitable uses include (but not limited to):**
- **Allison**® – C-4

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

TYPICAL TECHNICAL PROPERTIES

PROPERTY	TEST METHOD	SAE 0W-30 CK-4 FULL SYNTHETIC	SAE 0W-40 CK-4 FULL SYNTHETIC
Gravity; °API	ASTM D287	35.62	35.76
Specific Gravity @ 15.6°C	ASTM D4052	0.847	0.846
Viscosity @ 40°C (cSt)	ASTM D445	59.5	84.3
Viscosity @ 100°C (cSt)	ASTM D445	10.95	14.75
Viscosity Index	ASTM D2270	180	185
Flash Point °C	ASTM D92	225	225
Pour Point °C	ASTM D5950	-54	-51
Cold Cranking Simulator @ -35°C, cP	ASTM D5293	5300	5800
High temp/high shear Vis @ 150°C, cP	ASTM D5481	3.5	3.5
NOACK Volatility, % loss	ASTM D6375	12	12
Color	ASTM D1500	3.0	3.0
Zinc, wt %	ASTM D5185	0.127	0.127
Phosphorus, wt. %	ASTM D5185	0.115	0.115
Calcium wt. %	ASTM D5185	0.105	0.105
Sulfur, wt %	ASTM D4951	0.32	0.32
Magnesium, wt %	ASTM D5185	0.1	0.1
Molybdenum, wt %	ASTM D5185	0.0066	0.0066
Sulfated Ash, wt %	ASTM D874	0.99	0.99
Nitrogen, wt %	ASTM D4629	0.105	0.105
Pumping Viscosity @ (-35°C),cP	ASTM D4684	24,000	26,000
TAN, mgKOH/g	ASTM D664	2.9	2.9
TBN, mgKOH/g	ASTM D2896	10	10

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



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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.

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.

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