

# KLONDIKE SAE 15W-40 CK-4 Commercial Formula HD Engine Oil



## PRODUCT DESCRIPTION

KLONDIKE SAE 15W-40 CK-4 Commercial Formula Heavy Duty Engine Oil is a 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 previous service categories are specified.

## APPLICATIONS

KLONDIKE SAE 15W-40 CK-4 Commercial Formula Heavy Duty Engine Oil is 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.

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



## FEATURES AND BENEFITS

KLONDIKE SAE 15W-40 CK-4 Commercial Formula Heavy Duty Engine Oil is a premium engine oil engineered to deliver outstanding wear protection and performance in heavy duty diesel engines. Formulated with virgin 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 Commercial Formula Heavy Duty Engine Oil employs proven additive technology which delivers outstanding control on engine wear, engine cleanliness, and high TBN and viscosity retention for extended lubricant life and engine durability. Metal anti-wear protection exceeds API CK-4 standards and tough OEM specifications.

KLONDIKE SAE 15W-40 CK-4 Commercial 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 Commercial 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** – outstanding TBN and high viscosity retention supports extended lubricant life when used with regular oil testing.



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## SPECIFICATIONS AND APPROVALS

KLONDIKE SAE 15W-40 CK-4 Commercial Formula Heavy Duty Engine Oil 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-10LA
- **FCA** – MS-10902
- **FORD** – WSS-M2C171-F1
- **Global** – DHD-1
- **JASO** – DH-2, DH-1
- **Mack**® – EOS-4.5, EO-O Premium Plus, EO-N
- **MAN** – 3275, 3575,
- **MTU** – Type 2.1
- **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):

- **Caterpillar** – TO-2
- **Allison**® – C-4
- **API SN** (where 15W-40 viscosity grade is specified)
- **ZF** – TE-ML 04C

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   | 31.3        |
| Specific Gravity @ 15.6°C            | ASTM D4052  | 0.86        |
| Viscosity @ 40°C (cSt)               | ASTM D445   | 116         |
| Viscosity @ 100°C (cSt)              | ASTM D445   | 15.0        |
| Viscosity Index                      | ASTM D2270  | 135         |
| Flash Point °C                       | ASTM D92    | 224         |
| Pour Point °C                        | ASTM D5950  | -35         |
| Cold Cranking Simulator @ -20°C, cP  | ASTM D5293  | 6000        |
| High temp/high shear Vis @ 150°C, cP | ASTM D5481  | 4.3         |
| NOACK Volatility, % loss             | ASTM D6375  | 6           |
| Color                                | ASTM D1500  | 3.5         |
| Zinc, wt %                           | ASTM D5185  | 0.124       |
| Phosphorus, wt. %                    | ASTM D5185  | 0.113       |
| Calcium wt. %                        | ASTM D5185  | 0.225       |
| Sulfur, wt %                         | ASTM D4951  | 0.35        |
| Magnesium, wt %                      | ASTM D5185  | 0.0007      |
| Sulfated Ash, wt %                   | ASTM D874   | 0.99        |
| Nitrogen, wt %                       | ASTM D4629  | 0.183       |
| Pumping Viscosity @ (-30°C),cP       | ASTM D4684  | 25,000      |
| TAN, mgKOH/g                         | ASTM D664   | 2.9         |
| TBN, mgKOH/g                         | ASTM D2896  | 9.5         |

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](http://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. Follow OE recommended service and/or oil change interval based on service type, or with the support of a reputable oil analysis program. KLONDIKE takes no responsibility for product misuse or misapplication.

## PRODUCT NUMBERS

|                                |                        |           |
|--------------------------------|------------------------|-----------|
| 15W-40 CK-4 COMMERCIAL FORMULA | Pail: 18.9 L / 5 GAL   | KL-HD0780 |
|                                | Drum: 208 L / 55 GAL   | KL-HD0790 |
|                                | Tote: 1040 L / 275 GAL | KL-HD0795 |

## 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

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