

## PERFORMANCE PLUS OILS AND LUBRICANTS

PERFORMANCE UNDER THE MOST EXTREME CONDITIONS



AUTOMOTIVE ENGINE | AUTOMOTIVE DRIVELINE | HEAVY DUTY ENGINE | HEAVY DUTY DRIVELINE | HYDRAULIC | GEAR OILS | GREASES | INDUSTRIAL LUBRICANTS | ANTIFREEZE

# **FULL SYNTHETIC HEAVY DUTY ENGINE OIL (CK-4)**

Performance Plus® Full Synthetic Heavy Duty Diesel Engine Oil is specially designed to provide outstanding protection and performance. Formulated using synthetic technology and premium state-of-the art performance additives; it delivers improved fuel economy, can extended drain intervals when used with a proper oil analysis program, provides superior wear protection as well as oxidation and deposit control. Additionally, it surpasses the latest heavy duty OEM (Original Equipment Manufacturers) requirements and is approved for use with: Ultra Low and Low Sulphur Diesel (ULSD & LSD) fuels, Caterpillar® engines using ACERT technology, and engines equipped with emission controls systems (EGR) and post treatment systems (DPF or DOC). Performance Plus Full Synthetic 5W-40 CK-4 is engineered to provide outstanding high and low-temperature protection, superior wear protection and cleanliness, and enhanced friction reduction.

PERFORMANCE PLUS PROPERTIES		
SAE Viscosity Grade	5W-40	
API Service Category	CK-4	
Kinematic Viscosity cSt @ 40°C cSt @ 100°C	93.9 15.3	
Viscosity Index	173	
CCS Viscosity cP @ -30°C	6,000	
TBN	10.2	
Evaporative Loss, NOACK, wt%	<13	
Specific Gravity 15.6°C (60°F)	0.852	
Flash Point, °C (°F)	230 (446)	
Pour Point, °C (°F)	-45 (-49)	
Color (ASTM)	2.5	
Sulfated Ash, wt%	1.0	

Note: Values shown above are representative of current production and may vary within modest ranges

### **Approvals and Specifications**

**ADLCK** 4\*

Performance Plus® Full Synthetic Heavy Duty Engine Oil has been formally approved\* to meet or suitable for use in the following specifications:

Cotorpillar ECE 2

API CK-4"	Caterpillar ECF-3
API CJ-4*	Caterpillar ECF-2
ACEA E9	Cummins CES 20086
ACEA E7	Cummins CES 20081
ACEA E4	Detroit Diesel DFS 93K222
ACEA E2	Detroit Diesel DFS 93K218
Deutz DQC III-10 LA	Mack EO-S 4.5
Deutz DQC III-10	Mack EO-O Premium Plus
Deutz DQC III-05	Ford WSS M2C171-F1
Volvo VDS-4.5	Ford WSS M2C171-E
Volvo VDS-4	Mercedes Benz 228.31
MTU Type 2.1	Mercedes Benz 228.3
MTU Type II	Renault Truck RLD-4

Since Performance Plus Full Synthetic Heavy Duty Engine Oils meet the latest stringent requirements of leading automobile manufacturers, they are suitable for the following OEMs (where applicable\*\*):

Caterpillar	Case
Volvo	Toyota
Freightliner	Kenworth
Navistar	Peterbilt
Mack	Mitsubishi
International	Hyundai
Ford	Komatsu

<sup>\*\*</sup>Information regarding recommended maintenance and equipment operating conditions can be found by referencing Original Equipment Manufacturer's (OEM) owner's manual and lubricant recommended grades.

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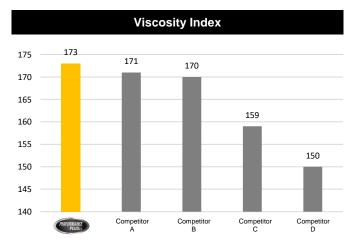
# FULL SYNTHETIC HEAVY DUTY ENGINE OIL (CK-4)

**Features and Benefits:** Today's heavy-duty trucks and fleets chose Performance Plus Full Synthetic Heavy Duty Engine Oil for its ability to provide advanced performance and extreme protection. Performance Plus is proven and trusted to deliver the highest quality engine oil to the industry today and in addition to superior performance and protection, Performance Plus Full Synthetic Heavy Duty Engine Oil offers:

Excellent cleanliness to reduce piston deposits
Superior resistance to viscosity and thermal breakdown
Outstanding soot control to protect against wear
Enhanced resistance to oxidative thickening
Protects against rust and bearing corrosion

Maintains engine power and fuel efficiency Performing at extreme temperatures and RPMs Maximizing engine output Maintaining performance over long drain intervals Extending the overall life of the engine

**Proven and Trusted:** The foundation of all Performance Plus products is the tested, proven and trusted base oil which exceeds the performance of many of the major oil refiners. Our finished lubricants start at a higher level than the competition due to our formulated blend of high quality base oils and additives.



Performance Plus® delivers exceptional performance at both low and high temperature environments, due to our product's superior resistance to temperature changes, beating out all the major competition.

# Synthetic v. Conventional Synthetic Oil Molecules Conventional Oil Molecules Metal Friction Metal

Performance Plus® Full Synthetic Heavy Duty Engine Oil delivers superior lubrication to vital components faster and more efficiently v. formulas formulated using mineral base oils. The improved results include:

Enhanced Performance
Extended Intervals
Advanced Fuel Economy
Quicker Start-ups
Fewer Emissions

Enhanced Protection
All-Weather Protection
Improved thickening resistance
Cleaner Oil
Cleans deposits and sludge

**Health and Safety:** Information detailing health and safety can be found in the corresponding Safety Data Sheet on the Performance Plus website. Performance Plus products contain petroleum distillates and are not likely to pose any significant health or safety hazards. Gloves should be used to avoid any contact - should there be contact with skin, washing with soap and water is advised. If ingested, call a poison center or doctor - do not induce vomiting.

**Storage:** Performance Plus products should not be stored where the temperatures are above 140° F (60° C) or near sparks and flames. Products should be stored under cover and away from the reach of children. In case where drums cannot be under cover, they should be laid horizontally to avoid any potential contaminants.

Disposal: All efforts should be made to protect the environment. Please properly dispose of used motor oil and lubricants. Should you need any assistance please contact your sales representative for information on how Safety-Kleen's used motor oil collection services.

For additional questions, please contact your Performance Plus® Products Sales Representative.

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