

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

## **HEAVY DUTY ENGINE OILS (CK-4)**

Performance Plus® Heavy Duty Diesel Engine Oils are formulated using specially engineered KLEEN+ base oil and premium state-of-the art performance additives to surpass the latest heavy duty Original Equipment Manufacturer's (OEM) severity requirements. The ir proprietary formula is designed to provide outstanding oxidation resistance, improved wear protection and exceptional thermal stability under extreme conditions (low and high temperatures). Additionally, they are recommended for the latest heavy duty diesel, gasoline, and propane engines including those equipped with emission control (EGR) and post treatment (DPF or DOC) systems and are approved and licensed to meet or exceed the latest API CK-4 requirements. Performance and Protection are the foundation of all Performance Plus products which is whythey are designed to maintain power, perform, and protect engines in harsh driving conditions.

| P | PERFO | RMAN | CE PL | US P | ROPE | RTIE | S |
|---|-------|------|-------|------|------|------|---|
|   |       |      |       |      |      |      |   |

| SAE Viscosity Grade                              | 10W-30       | 15W-40        |
|--|--------------|---------------|
| API Service Category                             | CK-4         | CK-4 / SN     |
| Kinematic Viscosity<br>cSt @ 40°C<br>cSt @ 100°C | 81.7<br>12.2 | 113.9<br>15.6 |
| Viscosity Index                                  | 145          | 145           |
| CCS Viscosity<br>cP @ -25°C<br>cP @ -20°C        | 6,200<br>-   | -<br>5,500    |
| MRV Viscosity<br>cP @ -30°C<br>cP @ -25°C        | 23,600       | -<br>22,200   |
| твл  | 10.0         | 10.0          |
| Evaporative Loss, NOACK, wt%                     | 10           | 8             |
| Specific Gravity 15.6°C (60°F)                   | 0.865        | 0.869         |
| Flash Point, °C (°F)                             | 237 (459)    | 226 (439)     |
| Pour Point, °C (°F)                              | -39 (-38)    | -33 (-27)     |
| Color (ASTM)                                     | L 4.0        | L 4.0         |
| Sulfated Ash, wt%                                | 1.0          | 1.0           |

## Approvals and Specifications

Performance Plus® Heavy Duty Engine Oils have been formally approved to meet the following specifications:

| API CK-4<br>API CJ-4<br>API CI-4 Plus<br>API SN (15W-40)<br>Renault RLD-3<br>Renault RLD-4<br>Volvo VDS-4<br>Volvo VDS-4.5 | Detroit Diesel DFS 93K222<br>Detroit Diesel DFS 93K218<br>Ford WSS M2C171-F1<br>Cummins CES 20081<br>Cummins CES 20086<br>Mack EO-O Premium Plus<br>Mack EOS-4.5 |
|--|--|
| V01V0 VD3-4.5  |  |

| Since Performance Plus   |
|--|
| Heavy Duty Engine Oils meet and can exceed the   |
| latest stringent OEM requirements they are also<br>suitable for use where the following specifications<br>are recommended: |

| Caterpillar ECF-3   | Mercedes Benz 228.31 |
|---------------------|----------------------|
| Caterpillar ECF-2   |                      |
| MTU Category 2.1    | ACEA E9              |
| Deutz DQC III-10 LA |                      |
| MTU Category 2.1    |                      |

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

Information regarding recommended maintenance and equipment operating conditions can be found by referencing Original Equipment Manufacturer's (OEM) owner's manual and lubricant recommendations.



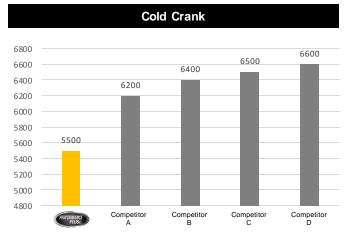
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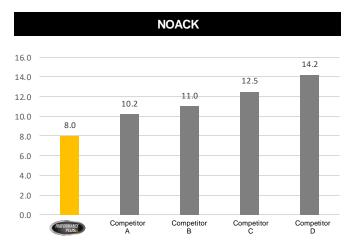
**Features and Benefits:** Today's trucks and fleets demand power, performance and protection and Performance Plus Heavy Duty Engine Oils are designed to meet and exceed their needs. Tested, proven, and trusted quality are why those demanding the best turn to Performance Plus. In addition to performance and protection, Performance Plus Heavy Duty Engine Oils offer:

Enhanced soot control and reduced oxidative thickening Excellent cleanliness reducing piston deposits Superior resistance to viscosity and thermal breakdown Outstanding soot control to protect against wear Protects against rust and bearing corrosion Extending performance over long drain intervals Improving overall fuel economy Performing under the most extreme conditions Optimizing engine output Prolonging the 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<sup>®</sup> delivers superior lubrication flow to vital components faster and more efficiently thus significantly reducing critical engine w ear during cold temperature operation v. conventional formulations.



Performance Plus<sup>®</sup> uses KLEEN+ base oil to provide exceptional volatility performance resulting in less oil top off, less light end engine deposits, and excellent cold and high temperature viscosity performance v. conventional formulations.

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 youneed 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.

Rev.7/23