# Puma HD Ultra S 15W-40

**Advanced Technology Diesel Engine Oil**

Puma HD Ultra S 15W-40 is a new generation CK4 lubricant that has been designed to meet the requirements of the latest technology engines designed to meet the lower Greenhouse Gas Emission requirements of 2017 model engines. These engines are fitted with Exhaust Gas Recirculation (EGR), Diesel filter Particles (DPF) and Selective Catalytic Reduction systems (SCR) present in the 2007 models and later. It is also suitable for pre-2007 equipment.

Puma Ultra S has been formulated with highly refined base oils and advanced technology additives to provide superior performance than predecessor technologies. Providing more wear control on valve trains, effective handling of soot, reduced oil consumption, better protection for the piston rings and superior control of piston deposits which significantly improve operation and engine durability.

- ✓ Anti-wear Protection
- ✓ Oxidation Resistance
- ✓ Anti-foam Performance

## Designed to Perform

### Anti-wear Protection – Longer Equipment Life

Proven anti-wear additive packages provide greater resistance to sliding wear thus ensuring efficiency and long life of all moving parts which greatly reduce the need for engine servicing and overhauls.

### Multi-grade Performance

Suitable for all year use in most climatic conditions. An enhanced viscosity index improver allows for the engine oil to give excellent protection during cold start-ups and extremely hot conditions.

### Oxidation Resistance - Longer Oil Life

It has extremely good oil life and lubricant stability even when subjected to unusually high thermal stresses; this property minimises sludge and deposit formation, thus preventing blocking of ports, valves and controls, while guaranteeing that the oil remains properly fluid. Maintenance costs are therefore reduced and the useful service life of the oil is extended.

### High Detergency – Increased Engine Cleanliness

It has excellent detergency properties, making it particularly suitable for use in turbocharged engines. It also has high dispersant properties. The lubricant is thus very resistant to the formation of lacquer and varnish, as well as sludge and other engine deposits. It helps prevent ring sticking and keeps pistons clean, while maintaining soot deposits in suspension ready to be filtered.

### Anti-foam – Increased Performance

Easy release of entrained air which will prevent difficulties with pumps and controls which can cause irregularities in performance and other problems arising from the compressibility of air bubbles.

### Fuel Saving Properties

The fuel saving properties allow for a reduction in fuel consumption compared to traditional diesel engine lubricants.

### Low Pour Point - Easy Start Up

Allows for easy start-up of diesel engines, even at low temperatures, without circulation or regulation problems.

### Anti-corrosion & Anti-rust Properties

It has particularly good anti-corrosion properties which effectively protect the engine from corrosion from combustion moisture and acids. These additives inhibit the oxidation of internal surfaces of the engine and therefore prevent breakdown of the oil.

### Demulsibility – Engine Life Extension

Prevents the formation of water in oil emulsion, which enters the system through leakage or condensation. The fluids therefore maintain their lubricating power and anti-corrosion performance even under these circumstances.

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The information contained herein is accurate at the time of this review. However specifications change from time to time. Ensure specifications meet equipment manufacture requirements. Document No: 01/03/2017 | Printed copies are UNCONTROLLED

# Puma HD Ultra S 15W-40

**Performance Claims**

- API CK4
- API CJ4, CI-4 Plus, CI-4, CH-4
- ACEA E9 (2016)
- DDC 93K-222
- Man M-3575
- MTU 2.1
- Caterpillar ECF-3
- JASO DH-2

**OEM Approvals**

- Cummins CES-20086
- MB 228.31
- FORD WSS-W2C171-F1
- Deutz DQC III-10 LA
- Mack EOS 4.5
- Renault VI RLD -3
- Volvo VDS- 4.5

## Typical Physical Characteristics

| Property | Temp | Units | Test Methods | 15W-40 |
|---|---|---|---|---|
| Kinematic Viscosity | @ 40℃ | cSt | ASTM D445 | 128.8 |
| Kinematic Viscosity | @ 100℃ | cSt | ASTM D445 | 15.95 |
| Viscosity CCS (15 W) | @ -15 C | mPa.s | ASTM D5293 | 6131 |
| Viscosity Index | - | - | ASTM D2270 | 131 |
| Density | @ 15℃ | $kg/m^3$ | ASTM 4052 | 0.873 |
| Total Base No | - | mg KOH/g | ASTM D-2896 | 9.2 |
| Sulphated Ash | - | % | ASTM D874 | 0.86 |
| Flash Point (COC) | - | ℃ | ASTM D92 | 237 |
| Pour Point | - | ℃ | ASTM D97 | -39 |

*These characteristics are typical of current product methods whilst future production will conform to Puma Lubricants specifications, variations in these physical characteristics may occur.*

## Health & Safety Environment

- This product is unlikely to present any significant health and safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.
- Avoid contact with eyes and skin, use proper impervious gloves with used oil. After skin contact, wash immediately with soap and water. Guidance on health and safety is available on the appropriate Safety Data Sheet (SDS) which can be obtained from sds.pumaenergy.com.au.

## Protect the Environment

- Take used oil to an authorized collection point. Do not discharge used or new oil into drains, soil or water.

## Additional Information

- Technical advice on any applications not covered here may be obtained from your Puma Energy Representative.

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