



## Raysun Appollo

### Extra high performance diesel engine oil for low emission engines

Raysun Appollo series are extra high performance diesel engine oils specially developed for use in modern, high-output, low emission engines meeting US 2007 on-highway exhaust emission standards. These oils not only address the unique needs of these new engines and enhances the life of exhaust after treatment devices but also provides improved protection to older engines. These are formulated with state-of-the-art additive technology and severely hydroprocessed base oils to provide outstanding performance and overall protection. It exceeds the performance requirements of API CJ-4 and major global OEMs

#### Advantages

- Outstanding thermal and oxidative stability reduces low-temperature sludge build-up, high-temperature deposits and oil thickening
- Excellent soot handling minimizes soot related viscosity increase and leads to longer engine/oil life
- Outstanding corrosive and abrasive wear protection extend life of engine components
- Exceptional TBN retention resists harmful effects of corrosive exhaust gases and extends oil life
- Low ash content reduces particulate build-up in Diesel Particulate Filter (DPF) and enhances its life

#### Applications

- Latest high performance low emission engines including those equipped with DPF and Exhaust Gas Recirculation (EGR) and meeting US 2007 on-highway exhaust emission standards
- On-highway vehicles and off-highway equipment's operating in severe low speed/heavy load conditions using either low (500 ppm) or ultra low (15 ppm) sulphur fuels
- High performance gasoline engines and mixed fleet operations requiring oils meeting API CI-4 PLUS, CI-4, CH-4, CG-4 CF-4, SN, SM, SL and SJ performance levels

#### Specifications

- CJ-4/ SN, ACEA E9-12/ E7-12, MB 228.31, MAN M3575, Volvo VDS-4, MACK EO-O Premium, Renault Trucks RLD-3, Caterpillar ECF-3, Cummins CES20081, MTU Cat 2.1, Detroit Diesel DFS 93K218, Deutz DQC III-10 LA

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Values				ASTM Method	Specification
15W-40	10W-40	10W-30	5W-30		
0.861	0.860	0.858	0.848	D 1298	Density @ 15°C, kg/l
14.5	14.5	11.5	11.5	D 445	Viscosity @ 100 °C, cSt.
145	147	148	149	D 2270	Viscosity Index
236	234	232	230	D 92	Flash Point, °C
-30	-39	-36	-39	D 97	Pour Point, °C
9.5	9.5	9.5	9.5	D 2896	TBN, mg KOH/g
0.99	0.99	0.99	0.99	D 874	Sulphated Ash, %wt

Note: "All of the results are typical and the results of each batch are presented in the COA sheet."