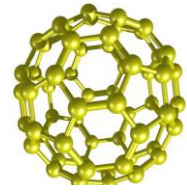




IXD HEAVY DUTY DIESEL ENGINE OIL



Fortified With
C60 Fullerenes
Technology

BARDAHL HIGH PERFORMANCE HEAVY DUTY DIESEL ENGINE OIL – SAE 15W-40 (API CI-4/SL)

PRODUCT DESCRIPTION

Bardahl High Performance Diesel Engine Oil 15W-40 is a high-performance heavy-duty diesel engine oil with outstanding protection properties. Providing excellent wear protection and long oil life in Euro 4, Euro 3 and other advanced engines. Specially selected additives package improves engine cleanliness and protection against piston deposits, allowing to exceed the demanding requirements of most OEMs.

C60 Fullerenes Technology

Bardahl C60 Fullerene technology uses fullerene molecules to reduce friction and wear in engines. Fullerene molecules create a protective layer of hard particles on engine surfaces and prevent direct surface-to-surface contact. Being spherical in shape, C60 Fullerene molecules act as nano ball bearings, allowing surfaces to glide over one another with minimal friction and wear.

Advantages

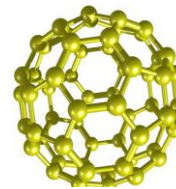
- Excellent stay-in-grade stability ensures viscosity integrity and reduces oil consumption
- Reduce maintenance costs by maximizing oil drain and engine overhaul periods
- Outstanding engine cleanliness
- Excellent sludge and varnish deposit control
- Protects against rust and corrosion
- Extraordinary oxidation and thermal stability
- Fully compatible with conventional mineral motor oils and other synthetic engine oils

Applications

- Highly recommended for diesel and gasolines; including EGR (Exhaust Gas Recirculation), naturally aspirated or turbocharged where either an API CI-4,CH-4,CG-4,CF-4,CF or SL grade of oils are specified.
- Suitable for many on- and off- highway applications in engines manufactured by Cummins, Detroit, Caterpillar, Mack, Renault, Volvo and others
- Suitable for use on engines using either low or high-sulphur diesel fuels.



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Performance Standards

API CI-4/CH-4/SL	MAN 3275	Volvo VDS-3	Mack E0-M Plus
ACEA E7-08	MB p228.3	Cat ECF-1	Detroit Diesel 93K215
ACEA A3/B4-08	MTU Type II	Cummins CES 20072/20077	

Typical Properties

SAE GRADE	15W-40
Density, kg/litre@15°C	0.8790
Colour ASTM	3.0
Kinematic Viscosity, mm ² /s@40°C	110.1
Kinematic Viscosity, mm ² /s@100°C	14.8
Viscosity Index	139
CCS@-20°C, cP	5990
HTHS@150°C, cP	4.2
Pour Point, °C	-27
Flash Point COC, °C	238
Sulphated Ash, %wt	1.2
TBN, mg KOH/g	9.10