

lubricating oil
residue & drain.

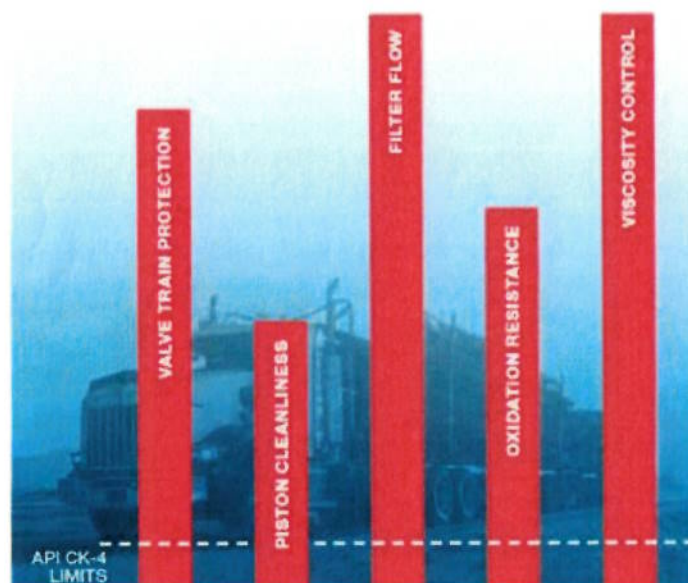
VALVOLINE™ PREMIUM BLUE 8600

Premium Blue™ 8600 15W-40 is blended with premium base stocks and latest generation additive chemistry to provide performance and protection in modern, emissions treatment equipped diesel engines, including those with Exhaust Gas Recirculation (EGR), Diesel Particulate Filters (DPF), and other modern diesel engine technology.

FEATURES & BENEFITS:

- Latest generation additive technology for enhanced engine deposit protection, oxidation and sludge control providing superior engine cleanliness over the oil drain interval.
- Stay in grade shear stable formulation for optimal viscosity control, pumpability and oil pressure control.
- Aftertreatment Mid SAP Oil suitable for SCR, EGR and DPF exhaust systems.
- Low ash catalyst compatible engine oil formulated to help protect the latest aftertreatment (DPF & SCR) systems fitted on the latest low emission vehicles.
- Improved wear protection to maximise engine efficiency and extend engine life.

The Valvoline Premium Blue™ 8600 Advantage:
Exceeds all API CK-4 base requirements



PART NUMBER	
IBC	1324IBC
205L	1324.51
20L	1324.20
5L	1324.05

TYPICAL PROPERTY CHARACTERISTICS:

Premium Blue™ 8600	Typical
SAE Viscosity Grade	15W-40
Viscosity @ 100 °C, mm²/s, ASTM D445	14.85
Viscosity @ 40 °C, mm²/s, ASTM D445	111
Viscosity Index, ASTM D2270	138
Density @ 15 °C, kg/L, ASTM D4052	0.874
Total Base Number, mg KOH/g, ASTM D2896	Typical 10
CCS Viscosity, mPa.s @ -20 °C, ASTM D5293	<6500
Flash Point (COC), °C, ASTM D92	225
Pour Point, °C, ASTM D5950	-39
HTHS @ 15 °C, mPa.s, ASTM D5481	4.2
Sulphated Ash, mass% ASTM D874	<1.0
Borderline Pumping Vis @ -25 °C, cP	Pass

PERFORMANCE LEVELS:*

APPROVED:

- API CK-4
- ACEA E9
- CAT ECF-3
- CUMMINS® CES 20086
- Detroit Diesel DDG 93K222
- Deutz DQC IV-10 LA
- MACK EOS-4.5
- MB 228.31
- MTU Type 2.1
- Renault Truck RLD-4
- Volvo VDS-4.5

MEETS:

- Cummins® CES20081, CES20078
- Detroit Diesel 93K218, 93K215
- Mack EO-0
- Volvo VDS-4, VDS-3
- Caterpillar ECF-2.
- API CJ-4
- ACEA E9/E7

* Note: Premium Blue™ 8600 15W-40 engine oil may be unsuitable for use in some engines, always consult owners' manual if in doubt.

PRODUCT INFORMATION



A Product of Valvoline Cummins Ltd.

Valvoline Premium Blue 15W-40

PRODUCT DESCRIPTION

Valvoline Premium Blue 15W-40 engine oil is designed to provide advanced lubricant performance in modern, low emission diesel engines operating under a wide variety of service conditions. The advanced product technology offers a long-life, extended drain capability. The balanced formulation helps maximize engine durability.

The Premium Blue Advantage

- Unique dispersive polymer technology (DPT), with premium Group II base oil, provides advanced soot control and cold start protection.
- Valve train wear protection and reduced oil filter restriction at high soot levels.
- High temperature deposit control, including single and two-piece pistons and ring/liner wear protection.

Valvoline Premium Blue engine oil is endorsed by Cummins Engine Company and is the first approved CES 20076 engine oil. It is a bench mark in diesel engine oil technology.

PERFORMANCE PROFILE

API	CH-4/SJ
ACEA	E3 – 96, Issue 2
Cummins	CES 20071, CES 20076
MB	228.3
Mack	EO-M Plus
Volvo	VDS-2
MTU	Type 2
DDC	Series 2000/4000, Type 2
MAN	271

APPLICATIONS

Valvoline Premium Blue 15W-40 engine oil is recommended for use in medium and heavy duty diesel engines for G-drive, off-highway, construction and mining, marine, loco, city fleet and long haul on-highway applications.

RECOMMENDATIONS

Exclusively formulated and recommended for use in all models of naturally aspirated and turbo charged diesel engines manufactured by Cummins India Ltd.

TYPICAL CHARACTERISTICS

SAE Grade	15W-40
Kinematic Viscosity, cSt @ 40°C	114.9
Kinematic Viscosity, cSt @ 100°C	15.3
Viscosity Index	139
TBN, mg KOH/g (ASTM D – 2896)	10.3
Pour Point, °C, max.	-30
Sulphated Ash, % wt.	1.35

Available Packs: 5, 20, 55 & 210 Liters

1/2004



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Valvoline 0.1
residue drum.

VALVOLINE™ PREMIUM BLUE 8600

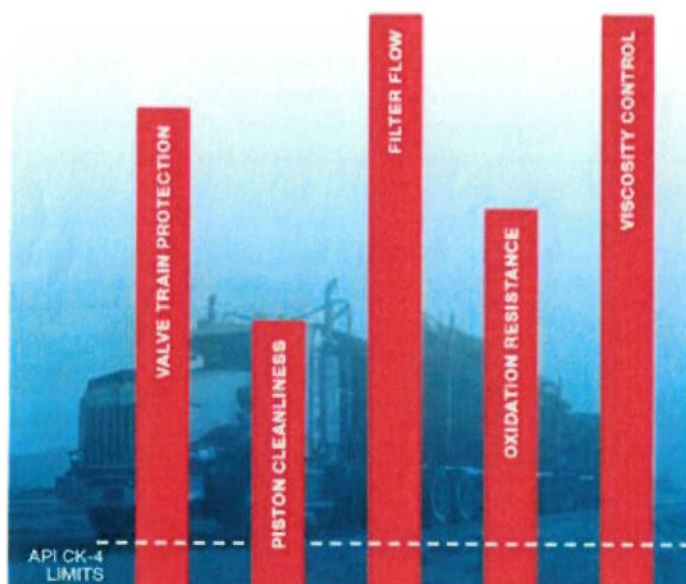
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Lubricating oil

Based up

Castrol drum.



Product Data

HLX Range

Diesel engine lubricants

Description

Castrol HLX is a Super High Performance Diesel (SHPD) lubricant, specially formulated to meet the latest performance requirements of marine monograde lubricant specifications. This allows extended drain periods to effectively compete with performance normally associated with synthetic oils. HLX is available in both SAE 30 and 40 viscosity grades.

Application

HLX, positioned at the top of the Castrol range of mineral based diesel engine lubricants, is formulated for use in very highly rated high speed marine and power generation diesel engines that use distillate fuel with sulphur from zero up to 1% and require extreme performance. It is particularly suitable for high power density applications such as fast ferries.

Advantages

HLX uses premium additive technology blended in high quality, high viscosity index base oils. It provides high detergency and excellent thermal and oxidative stability required to lubricate today's most severe diesel engine applications.

In summary, HLX can enable:

- Extended oil drain intervals compared to other API CF oils.
- Excellent high temperature performance.
- High resistance to bore polishing.

Product Performance Claims

HLX 30 and HLX 40 are approved by all the major OEM's, including approval as a 'Type 2' MTU monograde lubricant, that allows oil drain intervals to be doubled compared to standard marine oils.

HLX additive technology exceeds API CF and ACEA E3 - tested to MB 228.2, MAN M3275 and Volvo VDS-2.

Typical Characteristics

Name	Method	Units	HLX 30	HLX 40
SAE Grade			30	40
Density @ 15°C	ASTM D4052	g/ml	0.9	0.9
Viscosity @ 100°C	ASTM D445	mm²/s	11.5	14.0
Base Number	ASTM D2896	mg KOH/g	12	12
Closed Flash Point	ASTM D93	°C	225	228

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

Viscosity @ 40°C = 100 For HLX 30
Pour point -21 ??

HLX Range
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www.castrol.com/marine