



SYNTHETIC BLEND HEAVY DUTY DIESEL ENGINE OIL

HEAVY DUTY ENGINE OIL

Our complete family of Synthetic Blend Heavy Duty Diesel Engine Oils provide extra protection and performance, compared to Conventional Engine Oil.

PROTECTION FOR TODAY'S ENGINE DESIGNS

As today's engines are evolving and heavy duty engine manufacturers are recommending thinner, lighter oils, Volotec has evolved right along with them. Only the most advanced engine oils meet the difficult challenges of effectively balancing durability, extending drain intervals and protecting emissions control devices.

UNSURPASSED PROTECTION, EVEN IN THE LIGHTEST VISCOSITY

Volotec with FMX® Technology provides unsurpassed protection in every viscosity. Even our lowest viscosity oils protect better than thick oils of the past. FMX Technology creates a strong, durable and high-performing level of protection that controls friction and reduces metal-to-metal contact.

Our advanced oil technology actually improves oil properties over time, retaining viscosity, friction and anti-wear benefits, in spite of severe engine temperatures. Volotec also delivers greater horsepower and improved fuel economy.

SYNTHETIC BLEND HEAVY DUTY DIESEL ENGINE OIL

Volotec Heavy Duty Diesel Engine Oils are specially engineered and formulated to provide:

PERFORMANCE

Outstanding protection for extended drain intervals.

Up to 1.6% improved fuel mileage with HD 10W-30 grade.¹

STRENGTH

Up to 53% better wear protection.

DURABILITY

Up to 83% better oxidation control.²

Up to 63% better deposit control.²

¹ Using HD 10W-30 CK-4, compared to Conventional HD 15W-40 CK-4 during on-highway long-haul service. Savings will vary on idle time and other driving conditions of your fleet or vehicle.

² Compared to new limits of API CK-4 requirements.

TYPICAL PROPERTIES

Viscosity Grade		Syn Blend 15W-40 CK-4	Syn Blend 10W-30 CK-4
Calcium, wt. %	ASTM D5185	0.105	0.105
Cold Cranking Simulator at (°C), cP	ASTM D5293	5398 (-20)	6270 (-25)
Color	ASTM D1500	3	2.5
Flash Point °C	ASTM D92	224	220
Flash Point °F	ASTM D92	435	428
Gravity, °API	ASTM D287	30.55	31.39
High Temperature / High Shear Vis at 150°C, cP	ASTM D5481	4.3	3.5

Magnesium, wt. %	ASTM D5185	0.1	0.1
Molybdenum, wt. %	ASTM D5185	0.0066	0.0066
Nitrogen, wt. %	ASTM D4629	0.105	0.105
Noack Volatility, % loss	ASTM D6375	10	13
Phosphorus, wt. %	ASTM D5185	0.115	0.115
Pour Point °C (°F)	ASTM D5950	-36°C (-33°F)	-39°C (-38°F)
Pumping Viscosity at (°C), cP	ASTM D4684	21,600 (-25)	23,000 (-30)
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.8732	0.8687
Sulfated Ash, wt. %	ASTM D874	0.99	0.99
Sulfur, wt. %	ASTM D4951	0.32	0.32
TBN, mgKOH/g	ASTM D2896	10.0	10
Viscosity @ 100°C cSt	ASTM D445	15.66	12.21
Viscosity @ 40°C cSt	ASTM D445	116.1	82.06
Viscosity Index	ASTM D2270	143	149
Zinc, wt. %	ASTM D5185	0.127	0.127

INDUSTRY/OEM APPROVALS

Title	Syn Blend 15W-40 CK-4	Syn Blend 10W-30 CK-4
ACEA E9, E7, E4, E2	Meets Requirements	Meets Requirements
Allison C-4	Suitable for Use	Suitable for Use
API CI-4 Plus, CI-4, CH-4, CG-4, CF-2, CF	Meets Requirements	Meets Requirements
API CJ-4	Meets Requirements	Meets Requirements
API CK-4	Approved	Approved
API SJ, SH, SG, SF	Meets Requirements	-
API SL	Meets Requirements	-
API SM	Meets Requirements	-
API SN	Approved	-
CAT ECF-3, ECF-2, ECF-1-a	Meets Requirements	Meets Requirements
Chrysler/Fiat MS-10902	Meets Requirements	-
CID A-A-52306, MIL-PRF-2104G	Meets Requirements	Meets Requirements
Cummins 20086	Meets Requirements	Meets Requirements
Cummins CES 20081, 20077, 20076	Meets Requirements	Meets Requirements
Detroit Diesel 93K218, 93K215, 93K214	Meets Requirements	Meets Requirements
Detroit Diesel 93K222	Meets Requirements	Meets Requirements
Ford WSS-M2C171-E	Meets Requirements	Meets Requirements
Ford WSS-M2C171-F1	Approved	Approved
Global DHD-1	Meets Requirements	Meets Requirements
JASO DH-2	Meets Requirements	Meets Requirements
Mack EO-O Premium Plus, EO-N Premium Plus 03, EO-M Plus, and prior	Meets Requirements	Meets Requirements
Mack EOS-4.5	Meets Requirements	Meets Requirements
MAN 3275, 270	Meets Requirements	Meets Requirements
MAN 3575	Meets Requirements	Meets Requirements
MB 228.3, 228.31	Meets Requirements	Meets Requirements
MTU 2.1	Meets Requirements	Meets Requirements
MTU Type I, Type II	Meets Requirements	Meets Requirements
Renault RLD-4	Meets Requirements	Meets Requirements
Volvo VDS-4, 3, 2	Meets Requirements	Meets Requirements
Volvo VDS-4.5	Meets Requirements	Meets Requirements
CAT TO-2	-	Suitable for use