



Blue Flame Synthetic HD 5W-30 Diesel Engine Oil

CHAMPION BLUE FLAME® SAE 5W-30 synthetic heavy duty diesel engine oil is purpose built to be the most robust oil available for maximum engine lubrication and wear protection. It is designed to specifically address the extreme performance demands of turbo, or super-charged, diesel engines modified for higher compression for more horsepower and torque.

KEY FEATURES:

- 100% synthetic SAE 5W-30 formula
- Reported savings of up to 4.5% better fuel economy improvement compared to SAE 15W-40
- Exceeds API service levels CJ-4, CI-4, CH-4, CG-4, CF-4 and current OEM warranty requirements for extended service
- Meets, or exceeds, pre and post-2007 emissions requirements
- Safe for use in applications equipped with Exhaust Gas Recirculation (EGR) and diesel particulate filters (DPF) systems
- Advanced viscosity and soot control technology for shear stability and engine cleanliness
- High reserve alkalinity chemistry reduces corrosive wear and oil oxidation

Blended with synthetic PAO base oils, ground-breaking detergent-inhibitor chemistry and some of the most shear-stable thickener in the business, these oils have what it takes to stand up to the toughest challenges of high performance diesel applications in the most extreme temperatures.

APPLICATIONS:

Diesel Engine Service

- Drain intervals may be extended further with oil analysis.
- 2007-2009 Caterpillar C13 and C15 on-highway engines must follow OEM-recommended drain interval.
- 2007-2010 Dodge 6.7L, Ford 6.4L and GM 6.6L LMM light-duty diesel pickups must follow OEM-recommended drain interval. Drain intervals may be extended with oil analysis.

Gasoline Engine Service

- Suitable for use in 4-stroke gasoline engines.
- Do not use in wet clutch applications

SPECIFICATIONS & APPROVALS:

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|-------------------------------|------------------------------------|--------------------------|
| • API CJ-4, CI-4 Plus | • API SN | • ACEA E6/E9/E7 |
| • DDC 93K218 | • MB 228.51/228.31/235.28 | • Volvo VDS-4, VDS-3 |
| • MAN M3477, M3677, M3271-1 | • Renault RXD, RLD-3, RLD-2 | • Voith Retarder Class B |
| • MTU Type 3.1 | • Caterpillar ECF-3 | • JASO DH-2 |
| • Volvo CNG | • Deutz DQC IV-10 LA | • Scania Low Ash |
| • Cummins CES 20078 and 20081 | • Mack EO-O PP 07, EO-N PP, EO-M P | |

TYPICAL PROPERTIES

TBN (ASTM D2896) mgKOH/g	= 10
Viscosity@100C, (ASTM D445), cSt	= 11.4
Cold Crank (ASTM D4182), cP	= 6,090
High Shear Viscosity (ASTM D4683), cP	= 3.50
NOACK Volatility (ASTM D5800), %wt	= 11.6



Note: Extended drain intervals are not recommended when using biofuels containing >10% Ethanol or 5% biodiesel (B5). Follow OEM drain intervals or extend drain intervals with oil analysis.

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