



Havoline® Extra

High performance part-synthetic engine lubricant

Product Data Sheet

Customer benefits

All-temperature wear resistance

Havoline Extra's advanced non-conventional base oil formulation, high performance additive systems and leading edge viscosity index improvers deliver excellent shear stability and maximum wear protection in high speed, high temperature driving conditions and rapid, highly effective oil film protection and component wear resistance during very low temperature cold starts.

Havoline Extra's high performance thermal stability and advanced detergency and dispersancy characteristics maximise engine cleanliness and prevent the formation of varnish, soot or other harmful deposits in the engine.

Extended service life

Havoline Extra offers a very long service life and low oil consumption and is available in two grades - 10W-40 and 15W-50. This highly durable product delivers high performance wear and corrosion protection to conventionally aspirated and turbocharged gasoline power units as well as light duty diesel engines.

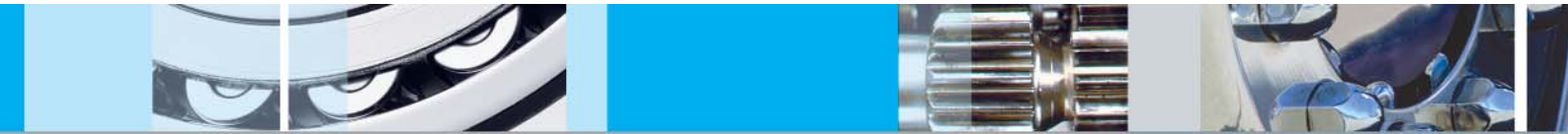
Havoline Extra 10W-40 and 15W-50 provide excellent protection and performance in latest generation high output lean burn engines, and offer leading edge protection to catalytic converters.

Applications

- High performance naturally aspirated and turbocharged passenger car gasoline engines.
- Latest generation naturally aspirated and turbocharged light duty diesel engines.
- Suitable for vehicles with catalytic converters.

Product features:

Havoline Extra advanced technology engine lubricants deliver power, protection and extended engine life to gasoline and diesel power units, and provide outstanding cold start performance in very low temperature environments.



Specifications and approvals

Havoline Extra 10W-40 and 15W-50 meet and exceed the requirements of the former API SJ/SH/SG/CD and/or the former CCMC G5 or PD2 performance specifications, and surpass the following gasoline and diesel engine oil performance standards and approvals:

- | | |
|----------------------|-----------------------------------|
| • Certified against: | ACEA A3/B4-04 (includes A3/B3-04) |
| • Licensed as: | API SL/CF |

Manufacturers approvals

- | | |
|---------------|-----------|
| • Volkswagen | VW 505.00 |
| • MB-Approval | 229.1 |



Havoline® Extra

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continued

Product specifications

| HAVOLINE EXTRA | | | |
|--------------------------------------|---------------|---------|--------|
| TYPICAL DATA | | | |
| TEST | TEST METHODS | RESULTS | |
| Viscosity Grade | | 10W-40 | 15W-50 |
| Density, 15 °C, kg/l | ASTM D4052 | 0.873 | 0.878 |
| Kinematic Viscosity at 40 °C, mm²/s | ASTM D445 | 100 | 149 |
| Kinematic Viscosity at 100 °C, mm²/s | ASTM D445 | 14.6 | 18.9 |
| Viscosity Index | ASTM D2270 | 151 | 144 |
| Cranking Viscosity at -25 °C, mPa.s | ASTM D5293 | 6500 | 6700 |
| HTHS Viscosity, 150 °C, mPa.s | CEC-L-36-A-90 | 3.95 | 4.75 |
| Pumping Viscosity at -30 °C, mPa.s | ASTM D4684 | 24400 | 25300 |
| Pour Point, °C | ASTM D97 | -27 | -27 |
| Flash Point COC, °C | ASTM D92 | 224 | 230 |
| Total Base Number, mg KOH/g | ASTM D2896 | 7.7 | 7.7 |
| Sulphated Ash, %wt | ASTM D874 | 0.9 | 0.9 |
| Colour | ASTM D1500 | <4.0 | <4.0 |
| Copper Corrosion 3hrs at 100 °C | ASTM D130 | 1a | 1a |

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved. This supersedes all previous editions and information contained in them.

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