

Petro-Canada TechData



DURON™ UHP 10W-40 ULTRA HIGH PERFORMANCE DIESEL ENGINE OIL

Introduction

DURON UHP 10W-40 is a superior quality heavy duty, low SAPS (Sulphated Ash, Phosphorous, Sulphur) diesel engine oil primarily designed for European trucks and buses to exceed ACEA E6 and API CI-4 Plus performance requirements. It is an Ultra High Performance Diesel engine oil with extended drain capability and excellent all weather performance. DURON UHP 10W-40 is approved for use with leading OEMs and meets the latest European emission legislation: Euro V and VI.

DURON UHP 10W-40 Heavy Duty Engine Oil delivers superior engine protection and operational efficiency. Made with base oils that are 99.9% pure, DURON UHP 10W-40 outperforms ACEA requirements and demanding OEM specifications to provide tangible benefits such as longer engine life, extended oil drain intervals*, better all weather performance and better efficiency resulting in increased productivity.

Features and Benefits

- **Advanced Engine Protection**
 - Ultra pure, consistent quality base oils help minimize engine sludge and piston top groove deposits, thereby maintaining 'like new' engine conditions
 - Protection and performance that exceed the expectations of the leading OEM
- **Better Resistance to Oxidative Thickening**
 - Helps maintain peak fuel economy
 - Extends oil drain intervals
 - Ensures continued low temperature protection
- **Better Low Temperature Pumpability**
 - Exceptional cold start-up protection
 - Also meets pumpability requirements of an SAE 5W engine oil

- **Better Shear Stability**
 - High Viscosity Index (V.I.) base oils and shear stable viscosity modifier help maintain stay in grade viscosity performance for reduced engine wear and improved engine protection over the life of the oil
- **Less Oil Consumption**
 - Low volatility base oils decrease vaporisation so less oil is lost, efficiency is improved, and the oil retains more of its fresh oil properties
 - Reduces oil top-up frequency
- **Greater Piston Cleanliness**
 - Significantly reduces deposit-causing sludge
 - Helps maintain engine integrity, performance and efficiency
- **Better Resistance against Corrosion**
 - Helps maintain engine performance and efficiency
- **Better Cam Wear Protection**
 - Combination of consistent quality base oils and additives help maintain peak engine performance, power and fuel economy
- **Effective Soot Control**
 - Effectively controls and disperses particulate matter and soot while controlling viscosity increase
 - Helps reduce wear and maintain fuel economy

Applications

Applications include modern low emission diesel engines with cooled exhaust gas recirculation and exhaust after treatment technology.

What is the HT difference?

Petro-Canada starts with the HT purity process to produce water-white, 99.9% pure base oils. The result is a range of lubricants, specialty fluids and greases that deliver maximum performance for our customers.

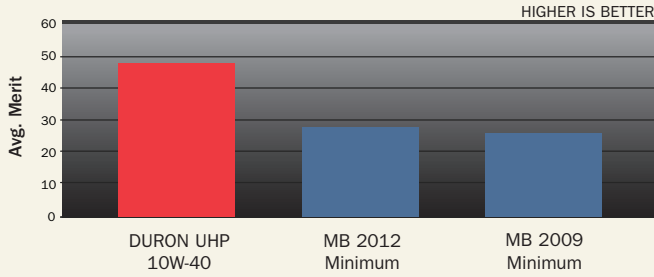


*Extending drain intervals should always be undertaken in conjunction with a regular oil analysis program.

ENGINE PROTECTION

This engine test measures how well the engine oil maintains engine cleanliness in severe conditions. Greater piston cleanliness means your engine performs more efficiently and with more power.

PISTON CLEANLINESS Daimler OM 501 LA

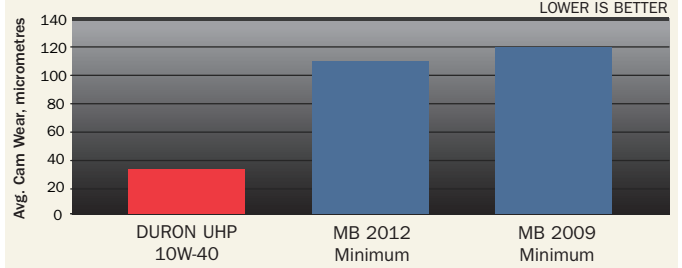


DURON UHP surpasses MB 2012 engine cleanliness specifications by 160%.

Engine testing completed June, 2012.

This engine test measures how well the engine oil prevents engine wear in severe conditions. By reducing the wear on engine parts - the engine maintains 'like-new' conditions, providing you with increased operating efficiency and reliability.

CAM WEAR OUTLET Daimler OM 646 LA



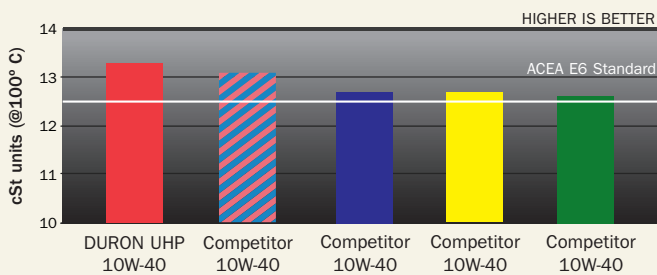
DURON UHP surpasses MB 2012 engine wear specifications by 300%.

ALL WEATHER PERFORMANCE

The Viscosity Retention test simulates shear that can occur in the engine under regular operating conditions. Consistent wear protection promotes longer engine life, reduced oil consumption and lower cost per kilometre.

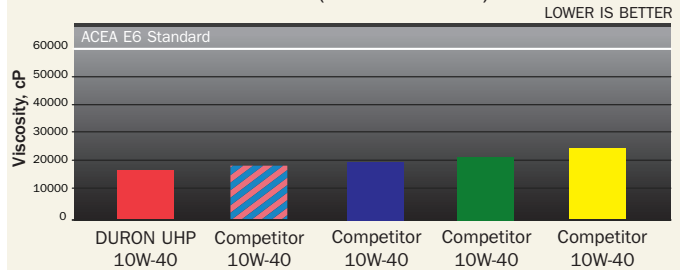
VISCOSITY RETENTION

after 90-cycle KO shear test (ASTM D6278)



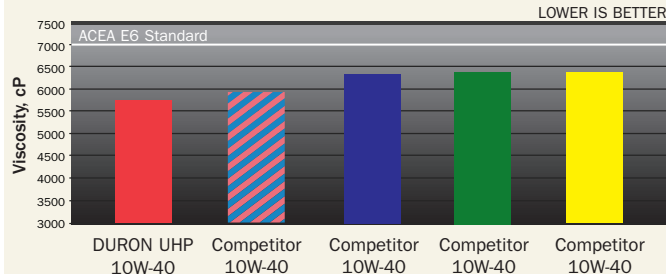
The MRV Pumpability test measures how easily the oil flows through the engine after start-up in low temperatures. The lower the number the less resistance there is to oil flow. And the faster oil gets distributed to critical moving parts, in cold weather environments where engine starts are crucial.

MRV BORDERLINE PUMPABILITY @ -30° C (ASTM D4684)



Cold Crank Viscosity measures ease of starting in low temperatures. Lower cranking resistance means faster, easier starting, which helps protect your starter and battery.

COLD CRANK VISCOSITY @ -25° C (ASTM D5293)



DURON UHP demonstrates best in class all - weather performance.

Competitive benchmarking completed August, 2012.

NOTE: When benchmarking, Petro-Canada always tests competitive products against industry recognized standards. This means using recognized industry tests, matching product classes, and matching the products being tested as closely as possible by 1) Base Oil Quality (full synthetic vs. synthetic blend vs. conventional), 2) Viscosity Grade (15W-40 vs. 10W-40), and 3) ACEA performance categories (E4, E6, E7, E9)

Approvals and Recommendations

- Approved
- Suitable For Use
- ◇ Meets Specification

Approvals	DURON UHP 10W-40
ACEA	
ACEA E6	◇
ACEA E7	◇
ACEA E9	◇
API	
API CI-4 Plus	◇
CATERPILLAR	
CAT ECF-2	◇
CUMMINS	
CUMMINS CES 20078	○
DAF	
DAF Standard Drain	●
Deutz	
Deutz DQC III-10 LA	●
Mack	
Mack EO-N	●
MAN	
MAN 3271-1	●
MAN 3477	●
Mercedes-Benz	
MB-223.2 Specification for Gas Engines	●
MB-Approval 228.51	●
MTU	
MTU 3.1	●
Renault	
Renault VI RLD-2	●
Scania	
Scania low ash	○
Volvo	
Volvo VDS-3	●

Typical Performance Data

PROPERTY	TEST METHOD	DURON UHP 10W-40
Kinematic Viscosity, cSt @ 40 °C	D445	92.83
cSt @ 100 °C		14.18
Viscosity Index	D2270	157
Pour Point, °C	D5950	-39
HTHS, cP @ 150 °C	D4683	4.1
Flash Point, COC, °C	D92	237
Cold Cranking Viscosity, cP @ -25 °C	D5293	5,750
Borderline Pumping Viscosity, cP @ -30 °C	D4684	17,320
Total Base Number (TBN), mg KOH/g	D2896	9.5
Sulphated ash, mass %	D874	1.0

The values quoted above are typical. they do not constitute a specification.

Health and Safety

To obtain Material Health and Safety Data Sheets, contact one of Petro-Canada's TechData Info Lines.

TechData Info Lines

To place an order, please call a Customer Order Management Representative at :

Canada (English) Phone 1-800-268-5850
(French) Phone 1-800-576-1686
United States Phone 1-877-730-2369
Latin America Phone +1-416-730-2369
Europe Phone +1-416-730-2389
Asia Phone +1-416-730-2372
China Phone +86 (21) 6362-0066

You can also e-mail us at lubecsr@suncor.com



To learn more about how Petro-Canada lubricants, specialty fluids, oils and greases can help maximize your equipment performance, savings and productivity, please contact us at :

North America Phone 1-866-335-3369
Europe Phone +44 (0) 121-781-7264
Germany Phone +49 (0) 201-726-2913
Latin America Phone +1-416-730-2369
Asia Phone +1-416-730-2372
China Phone +86 (21) 6362-0066
E-mail sales@suncor.com

Visit us on the web at lubricants.petro-canada.com

