Petro-Canada **TechData**

DURONTM XL SYNTHETIC BLEND HEAVY DUTY ENGINE OILS

Introduction

DURON XL Synthetic Blend heavy duty engine oils are premium engine oils recommended for equipment operating in both on-road and offroad heavy duty service applications.

DURON XL Synthetic Blend engine oils simplify operations in mixed fleets of global origin and have the soot dispersing capability required by low emission engine designs up to the 2007 model year (for equipment with exhaust aftertreatment, DURON-E products are recommended). DURON XL Synthetic Blend engine oils are suitable for use in engines fuelled by diesel, gasoline, propane, or compressed natural gas (CNG).

DURON XL Synthetic Blend engine oils are formulated from one of the purest base oils in the world; the result of a patented HT purity process to produce 99.9% pure base oils. That purity helps maximize the effectiveness of the oil's soot controlling chemistry and high performance additive system. Extensive fleet trials over millions of kilometres have proven the outstanding benefits of DURON XL Synthetic Blend.

Features and Benefits

Advanced soot control

- Helps prevent soot agglomeration, which:
 - Minimizes soot related engine wear
 - Minimizes soot related viscosity increase, resulting in better maintenance of fuel economy and cold temperature performance and protection
 - Helps reduce filter plugging and better oil flow

• Excellent low temperature pumping for wide temperature range protection

- Oil flows easily on start-up for better wear protection
- Resists thickening and retains new oil characteristics longer even at high soot loads
- Better low temperature protection even with used oil
- Potential for improved fuel economy through lower viscous drag

• Excellent high temperature performance for superior all-weather performance

- Oil stays in grade and retains new oil properties during extended drain intervals
- Oil pressure remains stable even at extended drains

Helps provide exceptional engine wear protection

- Proven bore polish wear protection
- Outstanding engine ring and liner, valve train and bearing wear resistance
- Helps extend time between rebuilds
- Better performance through the life of the engine

Product Line

DURON XL Synthetic Blend 15W-40

The natural choice when the highest possible 15W-40 high temperature performance is required for pre '07 emission standard engines. Product of choice for most severe service, drain extension or around-the-clock operation.

What is the HT difference?

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





DURON XL Synthetic Blend 10W-40

Where extended temperature range is needed without any sacrifice in 15W-40 high temperature performance. Particularly suited for situations where equipment is frequently restarted, including fleets with a mix of Class 8 and smaller vehicles with pre '07 emission standard engines. Potential for fuel economy through lower viscous drag and avoidance of idling.

DURON XL Synthetic Blend 0W-30

Where fluidity is required down to sub-arctic conditions. Fully tested for confidence in wear protection and maximum engine life.

Approvals and Recommendations			 Approved Suitable For Use
Approvals	DURON XL 15W-40	DURON XL 10W-40	DURON XL 0W-30
ACEA			
ACEA E7 - 08			
ACEA E7 - 04			
API			
API CI-4 PLUS			
API CI-4			
API CH-4			
API SL			
API SJ			
Caterpillar			
Caterpillar TO-2			
Caterpillar TO-2 / Allison C4			
Caterpillar ECF-1-a			
Caterpillar ECF-2			
Caterpillar SEBU 6385			
Cummins			
Cummins CES 20076			
Cummins CES 20077			
Cummins CES 20078			
Detroit Diesel			
Detroit Diesel Power Guard 93K214			
Detroit Diesel Power Guard 93K215			
Detroit Diesel, 7SE270 2-Stroke Cycle*			
Detroit Diesel, 7SE273 (Series 2000/4000)			
Ford			
Ford M2C171-C			
Ford M2C171-D			
Mack			
Mack EO-M / EO-M Plus			
Mack EO-N PP			
Mack EO-N PP '03			
Volvo			
Volvo VDS-2			
Volvo VDS-3			
Other			
GLOBAL DHD-1			
JASO DH-1			
JASO MA, MA2			
MAN 3275			
MB 228.1			
MB 228.3	•		
MTU Type 2			
Renault VI RLD-2			
Scania LDF, LDF-2			

* Detroit Diesel recommends an SAE 40 grade only for 2-stroke cycle engines, except where starting aids are not available or at very cold temperatures, when the use of an SAE 15W-40 or SAE 30 will facilitate starting.

Applications

Diesel Engine Manufacturers

DURON XL Synthetic Blend engine oils can be used in Caterpillar, Detroit Diesel (4-stroke), Navistar International, Allis-Chalmers, Case IH, Deere, Fiat-Allis, White, DAF, Deutz, Continental, Hino, Komatsu, Perkins, Izusu, Volvo, and others where pre-2007 emissions service classifications are recommended.

Gasoline Engines

DURON XL Synthetic Blend 15W-40 and 10W-40 engine oils may be used in gasoline engines requiring API SL or an earlier specification. DURON XL Synthetic Blend OW-30 maybe used when API-SJ is required. Consult your owner's manual.

All grades may be used in certain natural gas fuelled automotive and stationary equipment. Check your owner's manual for specific engine oil requirements.

Stationary & Marine type Diesel Engines

DURON XL Synthetic Blend 15W-40 may be used in diesel-fuelled stationary and marine systems where an SAE 15W-40 diesel engine oil is specified and water separation is not required.

Car & Light Duty Truck Diesel Engines

All grades can be used in diesel engines in smaller vehicles, including cars and light trucks where API CI-4 Plus, CI-4, CH-4, CF or earlier specifications are required. Consult your owner's manual.

Transmission and Hydraulics

DURON XL Synthetic Blend engine oils serve as an excellent transmission and hydraulic fluid where engine oil is specified.

TYPICAL PERFORMANCE DATA

PROPERTY	ASTM TEST METHOD	DURON XL 15W-40	DURON XL 10W-40	DURON XL 0W-30
Flash Point, °C / °F	D92	235	251	247
Kinematic Viscosity	D445			
cSt @ 40°C / SUS @ 100°F		114/ 584	108 / 552	62.5 / 317
cSt @ 100°C / SUS @ 210°F		15.5 / 81.0	15.7 / 81.7	11.3 / 64.3
Viscosity Index	D2270	144	154	176
High Temp/High Shear Viscosity cP @ 150°C	D4683	4.4	4.4	3.4
Cold Cranking Viscosity, cP @ °C / °F	D5293	5219	6500	5590
		(-20 / -4)	(-25 / -13)	(-35 / -31)
Borderline Pumping Viscosity, cP @ °C / °F	D4684	15490	23790	18250
		(-25 / -13)	(30 / -22)	(-40/ -40)
Sulphated Ash, % wt.	D874	1.37	1.37	1.18
Total Base No. (TBN), mg KOH/g	D2896	9.6	9.7	9.1

The values quoted above are typical of normal production. They do not constitute a specification.

Health and Safety

To obtain Material Safety Data Sheet (MSDS), contact one of Petro-Canada's TechData Info Lines.

TechData Info Lines

If you would like to know more about Petro-Canada's DURON XL, or any other product in our complete line of quality lubricants, please contact us at:

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