



## DURON™ MULTIGRADE HEAVY DUTY ENGINE OILS

### Introduction

Petro-Canada DURON multigrade engine oils are premium heavy duty engine oils recommended for engines fueled by diesel, gasoline, propane, or compressed natural gas (CNG), operating on-highway or off-highway in transportation, mining, forestry, construction, farm and marine applications.

DURON multigrade engine oils have superior soot dispersing performance and thermal stability required by the latest low emission engine designs, with features such as advanced combustion chamber design, sophisticated fuel injection management, cooled exhaust gas recirculation and exhaust gas aftertreatment.

DURON multigrade engine oils are specially formulated with Petro-Canada's unique patented 99.9% pure HT base oils and high performance additives. Extensive testing, including laboratory benchtests and fleet field trials, clearly prove the outstanding benefits of DURON multigrade engine oils for both cooled EGR engines and non-EGR engines.

### Features and Benefits

#### DURON 15W-40

Exceeds latest industry requirements for severely turbocharged, delayed injection and cooled EGR designs. Meets the latest API CI-4 Plus, CI-4/SL standard, Mack EO-N Premium Plus '03, Cummins CES 20078, Caterpillar ECF-1, Detroit Diesel Power Guard 93K214 as well as many European and Global standards.

- **Oil stays-in-grade and retains new oil properties for extended durations**
  - Superior soot handling
  - Excellent resistance to viscosity loss
  - Combats soot thickening and sludge formation
  - Stable oil pressure

- **Easier, faster cold weather start-ups**
  - Excellent low temperature flow properties
  - Less wear on start-up
- **Extend time between rebuilds and increased resale value**
  - Micro disperses high soot load to prevent abrasive wear
  - Strong oil film stops metal to metal contact
- **Minimize down time and reduced operating and maintenance costs**
  - Exceptional engine wear protection
  - Reduced filter plugging

#### DURON 10W-30

DURON 10W-30 delivers the outstanding performance of DURON 15W-40 in a 10W-30 viscosity grade for lower temperature applications. DURON 10W-30 is an excellent hydraulic fluid for use in mobile heavy equipment. Meets the API CI-4/SL standard, including the requirement for higher film strength.

### Applications

Petro-Canada DURON multigrade engine oils are formulated to meet the following requirements:

#### Engine Service Classifications

SAE Grade	Current API Category	Former API Categories
15W-40	CI-4 Plus, CI-4, CH-4, CF/SL, SJ	CG-4, CF-4, CE, CD/SH, SG
10W-30	CI-4, CH-4, CF/SL, SJ	CG-4, CF-4, CE, CD/SH, SG

- API CI-4 Plus & CI-4 engine service classifications required for EGR equipped diesel engines

#### What is the HT difference?

Petro-Canada starts with the patented 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.



## **Diesel Engine Manufacturers**

Both DURON 15W-40 and 10W-30 meet:

- Cummins CES 20078, 20076
- Mack EO-M, EO-M Plus
- Caterpillar ECF-1, SEBU 6385
- Allison C-4, and Caterpillar TO-2 transmission requirements
- Detroit Diesel 7SE270 (4-stroke engines)
- Ford M2C171-D for both diesel and gasoline engines

DURON 15W-40 also meets:

- Global DHD-1
- ACEA E7, E5, E3, E2
- JASO DH-1
- Mack EO-N Premium Plus '03
- Detroit Diesel Power Guard 93K214
- Detroit Diesel 7SE273 (Series 2000/4000)
- Volvo VDS-3, VDS-2
- MTL 5044 (MTU Type 1 and 2)
- Mercedes Benz 228.3, 228.1, 229.1
- MAN 271 & 3275
- Caterpillar 3600
- John Deere 6466A
- VW 501 / 505
- DAF HP, Scania LDF, LDF-2
- and others

In addition, DURON multigrade engine oils meet the engine warranty requirements of Navistar, Allis-Chalmers, Case IH, Fiat-Allis, GMC, White, DAF, Deutz, Continental, Hino, Komatsu, Perkins, Isuzu.

## **Car and Light Truck Diesel Engines**

DURON Multigrades are also suitable for use in diesel powered engines in smaller vehicles, including cars and light trucks where API CI-4 Plus, CI-4, CH-4, CF, ACEA A3/B3, A3/B4 or earlier specifications are required. Consult your owners manual.

## **Stationary Diesel Power Generation & Marine**

DURON 15W-40 may be used in stationary power generation & marine service where an SAE 15W-40 diesel engine oil is specified and water separation is not needed.

## **Gasoline Engines**

DURON multigrade engine oils may be used in gasoline engines requiring API SL, ACEA A3/B3, A3/B4 or an earlier specification. Consult your owner's manual.

## **Transmissions and Hydraulics**

- Caterpillar powershift transmissions, semi-automatic transmissions and torque converters where a TO-2 fluid is specified
- Allison transmissions and torque converters where a C-4 fluid is specified. Use DURON 10W-30 where low temperature performance is required and DURON 15W-40 where higher temperature performance is required
- ZF transmissions where TE-ML07 is specified
- Clark powershift transmissions
- Wet clutch transmissions, including motorcycles and all terrain vehicles (meets friction requirements of JASO MA)
- DURON 10W-30 is an excellent hydraulic fluid

## Typical Performance Data

PROPERTY	ASTM TEST METHOD	DURON	
		10W-30	15W-40
Flash Point, °C / °F	D92	231 / 448	225 / 437
Kinematic Viscosity			
cSt @ 40°C / SUS @ 100°F	D445	74.0 / 378	112.8 / 580
cSt @ 100°C / SUS @ 210°F	D445	11.4 / 64.8	15.4 / 80.6
Viscosity Index	D2270	146	143
High Temp/High Shear Viscosity cP @ 150°C	D4683	3.5	4.5
Cold Cranking Viscosity, cP @ °C	D5293	4,814 @ -25	5,327 @ -20
Pour Point, °C / °F	D5950	-45 / -49	-42 / -44
Borderline Pumping Viscosity cP @ °C	D4684	13,797 @ -30	19,009 @ -25
Sulphated Ash, % wt	D874	1.18	1.37
Total Base No. (TBN), mg KOH/g	D2896	9.1	10.6

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

## Health and Safety

Petro-Canada DURON multigrade engine oils have no adverse effect on health provided they are used as directed. To obtain Material Health and Safety Data Sheets, contact one of Petro-Canada's TechData Info Lines.

## TechData Info Lines

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

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