

## DURON™ GEO LD NATURAL GAS MOBILE ENGINE OILS

### Introduction

DURON GEO Long Drain (LD) 15W-40 and 10W-30 natural gas mobile engine oils deliver superior engine protection and extended drain\* capabilities for Compressed Natural Gas/Liquefied Natural Gas (CNG/LNG) engines in mobile applications as well as mixed fleets. They are API CK-4 licensed and Cummins CES 20092 and CES 20086 approved.

Specifically designed for extended drain intervals while protecting critical engine parts, DURON GEO LD can help minimize downtime and service costs by keeping units on the road longer. In addition to extended oil drains, DURON GEO LD's proven technology helps mixed fleets with natural gas, diesel and gasoline engines start with ease in cold weather, while retaining protection under high temperature operating conditions. With DURON GEO LD's best-in-class all-weather protection, engines perform the way they were meant to while critical engine parts remain lubricated and protected.

Made with base oils that are 99.9% pure and blended with proven premium additives, DURON GEO LD outperforms demanding OEM specifications such as Cummins CES 20092.

### Features and Benefits

- **Extended Drains\***
  - Extending oil drains can help minimize downtime, maintenance costs and waste to the environment
- **Less Oil Consumption**
  - Low volatility base oils decrease vapourization so less oil is lost, efficiency is improved, and the oil retains more of its fresh oil properties
  - Reduces oil top-up frequency
- **Mixed Fleet Solution**
  - For use in CNG/LNG, diesel and gasoline engines
  - Allows for product consolidation
  - Reduces potential for product misapplication

- **Advanced Engine Protection**
  - Ultra pure, consistent quality base oils in combination with specialty performance additives help to minimize engine sludge and deposits, thereby maintaining excellent engine condition
  - Protection and performance that exceed the expectations of the leading OEMs
  - Optimized oil ash content to suit engine operating conditions
- **Better Low Temperature Pumpability**
  - Exceptional cold start protection
  - Excellent low temperature pumpability to protect equipment
- **Better Shear Stability**
  - High Viscosity Index (VI) base oils and shear stable viscosity modifier help maintain proper oil viscosity for reduced engine wear and improved engine protection over the life of the oil
- **Better Component Protection from Corrosion**
  - Extended component life through corrosion protection in presence of contaminants and acidic degradation products
- **Better Resistance to Oxidative Thickening**
  - Helps maintain peak fuel economy
  - Enables extended drain intervals
  - Ensures continued low temperature protection

### Applications

DURON GEO LD is recommended for use in natural gas, diesel and gasoline engines that require excellent wear control. It is recommended for use where oils meeting Cummins CES 20092 is specified, and is fully backserviceable to CES 20085 specification. For engines requiring Cummins CES 20074 approvals (lean burn engines), use SENTRON VTP 10W-40.

DURON GEO LD engine oils are also suitable for use in diesel powered engines, including heavy duty and light duty trucks as well as passenger cars where API CK-4/SN, CJ-4, CI-4 Plus, CI-4, CH-4 or earlier specifications are required. Consult the owner's manual.

### What is the HT difference?

Petro-Canada Lubricants 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 an oil analysis program. Refer to owner's manual or operations and maintenance manual for complete information.

## Approvals and Recommendations

★ Approved

● Suitable For Use

✓ Meets Specifications

PRODUCTS	DURON GEO LD 15W-40	DURON GEO LD 10W-30	PRODUCTS	DURON GEO LD 15W-40	DURON GEO LD 10W-30
 ACEA	✓ E9	✓ E9	 MACK	★ EOS-4.5	★ EOS-4.5
 energy <b>API</b> AMERICAN PETROLEUM INSTITUTE	★ CK-4/SN	★ CK-4/SN	 Mercedes-Benz	✓ 228.31	
 <b>CAT</b> <sup>®</sup>	✓ ECF-3	✓ ECF-3	 mtu	✓ Type 2.1	
 Cummins	★ CES 20092, CES 20086	★ CES 20092, CES 20086	 RENAULT TRUCKS	★ RLD-4	★ RLD-4
 DETROIT DIESEL	★ DFS 93K222	★ DFS 93K222	 VOLVO	★ VDS-4.5	★ VDS-4.5
<b>JASO</b>	● DH-2	● DH-2			

## Typical Performance Data

PROPERTY	ASTM TEST METHOD	DURON GEO LD 15W-40	DURON GEO LD 10W-30
Kinematic Viscosity, cSt @ 40 °C cSt @ 100 °C	D445	117 15.1	85.4 12.4
Viscosity Index	D2270	134	141
Pour Point, °C / °F	D5950	-39 / -38	-45 / -49
High Temperature High Shear, Viscosity, cP @ 150 °C	D4683	4.1	3.6
Flash Point, COC, °C / °F	D92	225 / 437	221 / 430
Cold Cranking Viscosity, cP @ -20 °C/ -4 °F cP @ -25 °C/ -13 °F	D5293	6,480 -	- 6,610
Borderline Pumping Viscosity, cP @ -25 °C/ -13 °F cP @ -30 °C/ -22 °F	D4684	19,280 -	- 18,390
Base Number (BN), mg KOH/g	D2896	10	10
Sulphated ash, % wt	D874	0.9	0.9
Zinc, mass %	D4951	0.087	0.087

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

To order product or to learn more about how Petro-Canada Lubricants can help your business visit: [lubricants.petro-canada.com](http://lubricants.petro-canada.com) or contact us at: [lubecsr@petrocanadalsp.com](mailto:lubecsr@petrocanadalsp.com)



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