

TECH DATA DURON™ HEAVY-DUTY DIESEL ENGINE OILS

INTRODUCTION

Petro-Canada Lubricants DURON™ line of premium performance multigrade diesel engine oils deliver industry leading protection against increased wear which can lead to lower productivity and impaired fuel economy. They have been specifically designed to outperform various ACEA performance requirements, as well as various API service requirements, such as CK-4, CJ-4 and previous. These diesel engine oils exceed the highest standards of performance and provide extended drain capabilities and excellent all weather performance.

DURON heavy-duty diesel engine oils deliver superior engine protection and operational efficiency. Made with high quality base oils and premium additive chemistries, DURON outperforms API and ACEA requirements, as well as 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

Ultimate wear protection

- Superior engine protection
- Maximises uptime and helps lower maintenance costs
- · Extends drain intervals

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 leading OEMs

Reduced oxidative thickening

- Helps maintain peak fuel economy
- Extends drain intervals
- Ensures continued low temperature protection

Better Low Temperature Pumpability

• Exceptional cold start-up protection

Better Shear Stability

- High Viscosity Index (VI) base oils and shear stable viscosity modifiers help maintain stay in grade viscosity performance for reduced engine wear and improved engine protection over the life of the oil
- High oil film strength for high temperature protection
- Exceptional after shear viscosity retention helps protect your engine

Reduced 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 to Corrosion

· Helps maintain engine performance and efficiency

Advanced soot control

- Effectively controls and disperses particulate matter and soot while controlling viscosity increase
- Helps reduce wear and maintain fuel economy

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

Petro-Canada Lubricants specialty fluids, lubricants and greases have an advantage in quality and performance. That's because our formulas are created and reviewed by an expert team of Research & Development specialists who ensure our finished products deliver to the specifications we demand and the performance standards our customers need.

PRODUCT LINE

DURON heavy-duty diesel engine oils listed here are formulated to exceed various ACEA, API, and OEM requirements. For a full list of Approvals and Recommendations, please see the following page.

DURON UHP-E 10W-40

DURON UHP-E 10W-40 is an Ultra High Performance synthetic diesel engine oil specifically designed to outperform ACEA E8 requirements and protect engines in severe conditions with a full suite of approvals exceeding major OEM requirements. DURON UHP-E 10W-40 provides exceptional engine protection, longer engine life, extended oil drain intervals, best-in-class all weather performance and better operating efficiency for many on-road and off-road applications.

DURON UHP-E 5W-30

DURON UHP-E 5W-30 is an Ultra High Performance low SAPS and low viscosity synthetic diesel engine oil specifically designed to outperform ACEA E8 requirements (as well as E7 and E11). DURON UHP-E 5W-30 has a full complement of OEM approvals exceeding major OEM requirements and provides excellent engine protection in tough environments. DURON UHP-E 5W-30 also provides longer engine life, extended oil drain intervals[†], excellent all weather performance and improved fuel economy in many applications.

DURON HP 15W-40

In addition to exceeding ACEA standards and approval for API CK-4, DURON HP 15W-40 demonstrates excellent all weather performance including dependable cold start-up performance and exceptional shear stability. This helps minimize engine wear and oil consumption for maximum efficiency. DURON HP 15W-40's ultra pure base oils contribute to its proven extended oil drain capabilities in severe service conditions and helps keep fleets in service for longer, while protecting critical engine parts.

DURON SHP 15W-40

DURON SHP 15W-40 is formulated with a synthetic base oil blend and high-performance additive package to exceed ACEA standards, and is approved for API CK-4. It has been designed to deliver exceptional engine protection and all weather performance. Excellent shear stability and low temperature pumpability help deliver comprehensive protection to vital engine parts while promoting engine performance in a wide range of operating conditions.

DURON SHP 10W-30

DURON SHP 10W-30 is a Super High Performance synthetic blend heavy-duty engine that delivers advanced engine protection and all-weather performance. It provides optimal engine durability and can deliver up to 1%* fuel economy performance. DURON SHP 10W-30 keeps its fresh oil properties longer allowing for extended drains (versus OEM standard intervals)† and reduced need for top-up oil.

DURON UHP 10W-40

As an Ultra High Performance synthetic all-weather heavy-duty diesel engine oil, DURON UHP 10W-40 is designed to exceed ACEA requirements and is approved to API CK-4 requirements, and provides excellent protection against engine wear while extending oil drain intervals[†]. Its superior pumpability, excellent shear stability, outstanding engine wear control and oil top-up performance increase operating efficiency without compromising engine protection. DURON UHP 10W-40's combination of 99.9% pure base oils and additives can help make fleets more efficient by decreasing engine downtime and enhancing reliability.

DURON UHP 0W-30 and 0W-40

DURON UHP 0W-30 and 0W-40 are formulated for extreme cold service operations where reduced wear through ease of start-up and is the ultimate priority. They are Ultra High Performance heavy-duty engine oils with top performance additives and high quality synthetic base oils that can help users extend oil drain intervals[†].

DURON UHP 5W-40

DURON UHP 5W-40 is an Ultra High Performance full synthetic heavy-duty engine oil that provides excellent protection and performance, especially in low temperature environments. It helps conserve energy and reduces engine wear through ease of cold weather start-up and lower viscous drag while maintaining a strong oil film in service.

DURON CLASSIC 15W-40

DURON CLASSIC 15W-40 is licensed with API as CH-4/SJ and can be used in diesel powered engines in some smaller vehicles, including cars and light trucks where this viscosity grade and CH-4, CG-4, or earlier specifications are required.

DURON CLASSIC 20W-50

DURON CLASSIC 20W-50 is suitable for use in diesel powered engines in some smaller vehicles, including cars and light trucks where this viscosity grade and CH-4, CG-4, or earlier specifications are required.

DURON EXTRA 15W-40

DURON EXTRA 15W-40 is API CJ-4/SN licensed and provides excellent engine protection. It is fully back serviceable where CI-4, CH-4 and previous categories are required. It also demonstrates excellent all-weather performance including dependable cold start-up performance and exceptional shear stability, minimizes engine wear and oil consumption. It has demonstrated extended drain capabilities (exceeding OEM standard intervals)† while subjected to tough service conditions.

DURON EXTRA 20W-50

DURON EXTRA 20W-50 offers advanced soot control and is suitable for applications where an API CJ-4 lubricant of this viscosity grade is specified.

✓ Meets Specifications

		DURON	DURON UHP-E	DURON HP	DURON SHP	N SHP		DURO	DURON UHP		DURON (DURON CLASSIC	DURON	DURON EXTRA
CK-4 CK-4 CK-4 CK-4 SN CK-4	Floducis	10W-40	5W-30	15W-40	15W-40	10W-30	10W-40	0W-40	0W-30	5W-40	15W-40	20W-50	15W-40	20W-50
CK-4 CK-4 CK-4 SN	ACEA			E7, E11		E7,				√ E7, E9			6 7, E9	
EGF-3 CEF-3.10-2 CEF-3.10-2 </th <th>energy AMERICAN PETROLEUM INSTITUTE</th> <td></td> <td>•</td> <td>CK-4 / SN</td> <td></td> <td>•</td> <td></td> <td>•</td> <td></td> <td></td> <td>★ CH-4 / SJ</td> <td>• CH-4 / SJ</td> <td>★ CJ-4 / SN</td> <td>• CJ-4 / SN</td>	energy AMERICAN PETROLEUM INSTITUTE		•	CK-4 / SN		•		•			★ CH-4 / SJ	• CH-4 / SJ	★ CJ-4 / SN	• CJ-4 / SN
EDF-3. TOP-2 EDF-	Allison									★ TES 439				
C ES 20086 C ES 20086 X CES 20086		•		ECF-3, TO-2			*	•	•		● ECF-1-a	● ECF-1-a	CF-3, T0-2	• ECF-3, T0-2
Standard Drain ✓ Standard Drain </th <th>V</th> <td>•</td> <td>• CES 20086</td> <td></td> <td></td> <td>CES 20086</td> <td>•</td> <td>• CES 20086</td> <td>•</td> <td>CES 20086</td> <td>• CES 20076</td> <td>• CES 20076</td> <td>• CES 20081</td> <td>• CES 20081</td>	V	•	• CES 20086			CES 20086	•	• CES 20086	•	CES 20086	• CES 20076	• CES 20076	• CES 20081	• CES 20081
OFS 99K222 ★ DOC III-18 LA ★ DOC III-18 L	DAF	•	>	Standard Drain		Sta				Standard Drain				
• DOC IV-18 LA ★ DOC III-18 LA ★ DOC III-	Dernor Diesel.	•	• DFS 93K222			DFS 93K222	•					•	• DFS 93K218	DFS 93K218
★ BSS-M2C171-F1 ★ WSS-M2C171-F1 ★ WSS-M2C	DEUTZ.	•		DQC III-18 LA			•							
• DH-2-21 MA2. DH-1, DH-2 • MA2. DH-2 • MA2. DH-1, DH-2 • MA2. DH-1, DH-2 • MA2. DH-1, DH-2 • MA2. DH-1, DH-2 • MA2. D	Stord				★ WSS-M2C171-F1	WSS-M2C171-F1	•			★ WSS-M2C171-F1				
• DH-2-21 MA2, DH-1, DH-2 • MA2 • MA2 ★ BOS-4.5 <	Q W				•		•							
* EOS-4.5 * EOS-4.5 <th< th=""><th>JASO</th><th>•</th><th></th><th>• MA2, DH-1, DH-2</th><th>•</th><th>•</th><th>•</th><th>•</th><th></th><th>• MA2, DH-1, DH-2</th><th></th><th></th><th>MA, MA2</th><th>MA, MA2</th></th<>	JASO	•		• MA2, DH-1, DH-2	•	•	•	•		• MA2, DH-1, DH-2			MA, MA2	MA, MA2
* M3775** * M3776** * M3775** * M3775** * M3775** * M3775** * M3275-1 * DTFR 15C100 * DTFR 1	MAN	★ E0S-4.5	★ E0S-4.5	E0S-4.5		E0S-4.5					EO-M Plus	EO-M Plus	• E0-0 PP '07	E 0-0 PP '07
★ DTFR 15C1100** ★ DTFR 15C1100** ★ DTFR 15C100 ★ DTFR 15C1000	MAM	*****************		•	•						M 3275	• M 3275	• M 3275-1	• M 3275-1
• Type 3.1 • Type 2.1 ★ Type 2.1 ★ Type 2.1 ★ RLD-3 ★	Mercedes-Benz ***			→ DTFR 15C100							- 228.1	- 228.1	• DTFR 15C100	• DTFR 15C100
★ RLD-3 ★ RLD-3 ★ RLD-3 ★ RLD-3 ★ VDS-4.5 ★ VDS-4.5 ★ VDS-4.5 ★ VDS-4.5	mtu	Type 3.1 Type 2.1		Type 2.1	Type		•				Type 2	Type 2	• Type 2.1	• Type 2.1
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		★ VDS-4.5	★ VDS-4.5		★ VDS-4.5		★ VDS-4.5			★ VDS-4.5	ODS-2	• VDS-2	• VDS-4	• VDS-4

* Use of a diesel engine oil for gasoline applications may compromise the life of the emissions device. Please refer to the owner's manual to ensure proper oil is used.
** Approval pending.
*** DTFR 15C100 is formerly known as MB 228.31. DTFR 15C110 was MB 228.51 and DTFR 15C120 was MB 228.52.

APPLICATIONS

Car and Light Duty Diesel Engines

DURON engine oils are also suitable for use in diesel powered engines in smaller vehicles, including passenger cars and light trucks where API CK-4, CJ-4, CI-4 Plus, CI-4, CH-4 or earlier specifications are required. Consult your owner's manual.

Gasoline and CNG Engines

Many of the DURON diesel engine oils exceed the latest API SN gasoline engine oil specification and are suitable for some gasoline and CNG applications where API SN or earlier specifications are required. Many are also suitable for use in wet clutch applications where JASO MA2 is recommended. Please reference the Approvals and Recommendations list on the previous page to ensure you are using the correct product for your application.

Stationary & Marine type Diesel Engines

DURON HP and SHP 15W-40's 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.

TYPICAL PERFORMANCE DATA

PROPERTY	ASTM TEST	DURON	DURON UHP-E		DURON SHP		DURON UHP
PROPERTY	METHOD	10W-40	5W-30	15W-40	15W-40	10W-30	10W-40
Flash Point, COC, °C	D92	231	233	228	226	220	229
Kinematic Viscosity cSt @ 40°C cSt @ 100°C	D445	101.2 15.0	74.3 12.1	118 15.6	114 15.4	80.1 12.0	107 15.5
Viscosity Index	D2270	155	160	139	142	145	157
High Temp/High Shear Viscosity cP @ 150°C	D4683	3.9	3.6	4.1	4.1	3.5	4.1
Cold Cranking Viscosity, cP @ °C	D5293	5901 (-25)	6290 (-30)	5540 (-20)	5000 (-20)	5570 (-25)	5930 (-25)
Pour Point, °C	D5950	-45	-36	-36	-36	-42	-42
Borderline Pumping Viscosity cP @ °C	D4684	24442 (-30)	28600 (-35)	21350 (-25)	18340 (-25)	18160 (-30)	24700 (-30)
Sulphated Ash, % wt	D874	0.80	1.0	1.0	1.0	1.0	1.0
Base No. (BN), mg KOH/g	D2896	10.1	10.0	9.8	9.8	10.0	10.0

Bronorty	ASTM TEST	DURON UHP			DURON CLASSIC		DURON	EXTRA
Property	METHOD	0W-40	0W-30	5W-40	15W-40	20W-50	15W-40	20W-50
Flash Point, COC, °C/°F	D92	224	220	235	231/446	243/470	228/442	231/448
Kinematic Viscosity cSt @ 40°C cSt @ 100°C	D445	82 14.5	65.2 11.5	88.6 14.3	118 15.6	183 20.0	118 15.6	173 19.7
Viscosity Index	D2270	180	173	168	139	131	139	131
High Temp/High Shear Viscosity cP @ 150°C	D4683	3.9	3.4	3.8	4.1	5.1	4.1	5.0
Cold Cranking Viscosity, cP @ °C/°F	D5293	5900 (-35)	5400 (-35)	6290 (-30)	5250 (-20/-4)	6350 (-15/5)	6500 (-20/-4)	6400 (-15/5)
Pour Point, °C/°F	D5950	-45	-45	-45	-42/-44	-39/-38	-36/-33	-33/-27
Borderline Pumping Viscosity cP @ °C/°F	D4684	28300 (-40)	19600 (-40)	24780 (-35)	22400 (-25/-13)	22880 (-20/-4)	21000 (-25/-13)	20310 (-20/-4)
Sulphated Ash, % wt	D874	1.0	1.0	1.0	1.0	< 1.0	1.0	1.0
Base No. (BN), mg KOH/g	D2896	9.5	9.7	11.0	8.8	8.8	9.8	9.8

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

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Committed to the disciplined operation of our business.



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