

DURON™ RECOMMENDED FOR DETROIT DIESEL.

**DURON.™ THE TOUGHER.
THE BETTER.™**



LUBRICANTS

AN HF SINCLAIR BRAND

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DETROIT DIESEL IS A GLOBAL LEADER IN DIESEL ENGINES, **TRUSTED BY OPERATORS AROUND THE WORLD.**

Wherever you depend on Detroit Diesel equipment, your Detroit Diesel equipment can depend on DURON™ heavy-duty diesel engine oils. Driven by API CK-4 and FA-4, it's the most durable, most protective, most advanced product line we've ever made.

Which is why DURON is approved for Detroit Diesel.

In all your Detroit Diesel engines, our DURON product line is ready to help protect your reliability, extend drain intervals*, and even cut your fuel costs.

DURON. Approved for Detroit Diesel, whatever the challenge.

DURON.™ THE TOUGHER. THE BETTER.™



DETROIT DIESEL OIL DRAIN INTERVAL

ENGINE TYPE	SEVERE*	SHORT-HAUL*	LONG-HAUL*	EXTRA LONG-HAUL*	API / GRADE
GHG '17 DD16** GHG '14 DD16**	35,000 miles (56,000 km)	40,000 miles (64,000 km)	55,000 miles (88,500 km)	55,000 miles (88,500 km)	CK-4 / xW-40, xW-30
GHG '17 AND GHG'21 DD15** GHG '14 DD15** EPA 10 DD15**	35,000 miles (56,000 km)	45,000 miles (72,000 km)	60,000 miles (96,500 km)	75,000 miles (121,000 km)	CK-4 / xW-40, xW-30
GHG '17 DD13** GHG '14 DD13** EPA 10 DD13**	35,000 miles (56,000 km)	40,000 miles (64,000 km)	55,000 miles (88,500 km)	65,000 miles (105,000 km)	CK-4 / xW-40, xW-30
EPA 10 DD16**	35,000 miles (56,000 km)	45,000 miles (72,000 km)	45,000 miles (72,000 km)	55,000 miles (88,500 km)	CK-4 / xW-40, xW-30

* Severe means vehicles that average 5 mpg (2.1 kpl) or less; Short Haul means between 5.1 and 5.9 mpg (2.2 and 2.5 kpl); Long Haul is for an average between 6.0 and 6.9 mpg (2.5 and 2.9 kpl); Highly Efficient Long Haul means greater than 7.0 mpg (3 kpl). Fuel Economy represents overall fuel economy (including idle time).
** When using an SAE 10W-30 with EPA 07 Detroit Diesel engines, please install the MCM software 13.4.2.0 or higher update to run the lower viscosity engine oils. This is to ensure the engine oil light doesn't come on for low idle and instigates an engine shutdown.

DURON APPROVED FOR DETROIT DIESEL ENGINES

	DETROIT DIESEL	DURON	APPROVAL	API LEVEL
CONVENTIONAL OIL	DFS 93K222	DURON HP 15W-40	Approved	API CK-4
SYNTHETIC BLEND OIL	DFS 93K222	DURON SHP 15W-40	Approved	API CK-4
	DFS 93K222	DURON SHP 10W-30	Approved	API CK-4
SYNTHETIC OIL	DFS 93K222	DURON UHP 10W-40	Approved	API CK-4
	DFS 93K222	DURON UHP 5W-40	Approved	API CK-4
	DFS 93K222	DURON UHP 5W-30	Approved	API CK-4
ADVANCED FUEL ECONOMY OIL	DFS 93K223	DURON ADVANCED 5W-30	Approved	API FA-4
	DFS 93K223	DURON ADVANCED 10W-30	Approved	API FA-4

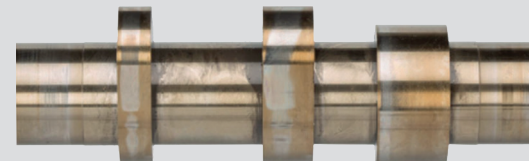
API CK-4 – replaces API CJ-4 and previous categories, delivering higher performance levels and backwards compatible for older engines.
API FA-4 – an even more advanced lower viscosity oil that delivers better fuel economy in next generation diesel engines.

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



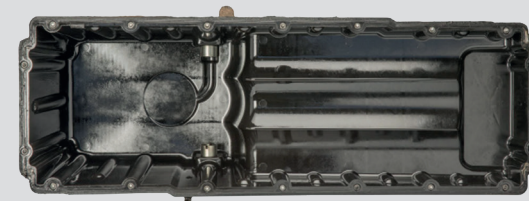
MAXIMUM ENGINE PROTECTION

2013 DETROIT DIESEL DD15 14.8L ENGINE AFTER 540,000+ MILES IN THE FIELD



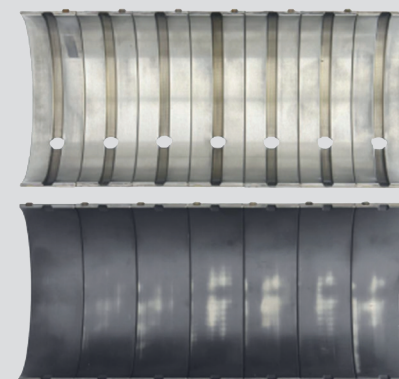
EXHAUST LOBES

Well maintained exhaust lobes demonstrate minimal wear. DURON™ Core Technology demonstrates excellent top end engine protection.



OIL PAN

Oil pan appears very clean with no evidence of sludge. Proof that DURON Core Technology is able to maintain engine cleanliness.



MAIN BEARINGS

The main bearings are in outstanding condition with very low wear. Further proof that DURON Core Technology is able to protect these bearings even under the heaviest of loads.



DURON™

HEAVY-DUTY ENGINE OILS
THE TOUGHER. THE BETTER.™

THE FULL DURON PRODUCT LINE FOR DETROIT DIESEL ENGINES

DURON heavy-duty diesel engine oils are formulated to exceed API CK-4 and FA-4 requirements

DURON^{HP} 15W-40

DURON HP 15W-40 is a High Performance heavy duty engine oil that delivers all-weather engine protection including dependable cold start-up and exceptional shear stability. It can deliver extended drain capabilities (exceeding OEM standard intervals)*.



DURON^{SHP} 15W-40

DURON SHP 15W-40 is a Super High Performance synthetic blend heavy-duty engine oil that delivers exceptional performance. Outstanding shear stability combined with superior wear protection helps deliver comprehensive protection to vital engine parts over a wide range of operating conditions. DURON SHP 15W-40 is designed to handle more demanding operations, as well as extending drains.



DURON^{SHP} 10W-30

DURON SHP 10W-30 is a Super High Performance synthetic blend heavy-duty engine oil that delivers advanced engine protection and all-weather performance. It provides optimal engine durability and can deliver up to 1%** fuel economy improvement. 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

DURON UHP 10W-40 is an Ultra High Performance synthetic all-weather heavy-duty diesel engine oil. It is formulated to provide exceptional protection against engine wear and extended drain performance (exceeding OEM standard intervals)* even in the harshest operating conditions and maximum allowable load conditions. It combines superior pumpability and shear stability with excellent engine wear control. DURON UHP 10W-40 can potentially help improve fuel economy through ease of start-up, lower viscous drag and avoidance of the need for idling.



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.



DURON^{UHP} 5W-30

DURON UHP 5W-30 is an Ultra High Performance synthetic all-weather heavy-duty diesel engine oil formulated to provide fuel economy benefits and exceptional protection against engine wear and extended drain performance (exceeding OEM standard intervals)* even in severe operating conditions.



DURON^{ADVANCED}

DURON ADVANCED 10W-30 and 5W-30 are synthetic blend and synthetic respectively heavy-duty diesel engine oils formulated to the highest API diesel standards for 4-Stroke engine oils and are suitable for use in extended oil drain service. Extending drain intervals should always be undertaken with good operating practices and maintenance programs including an oil analysis program. API FA-4 provides additional fuel savings over CK-4 of the same grade, up to 1%***.



 Durability  Engine Protection  Extended Drain  Extreme Temperature  Fuel Economy  Sustainability

API CK-4 – replaces API CJ-4 and previous categories, delivering higher performance levels and backwards compatible for older engines.
API FA-4 – an even more advanced lower viscosity oil that delivers better fuel economy in next generation diesel engines.

* Extending drain intervals should always be undertaken in conjunction with an oil analysis program. ** Comparing an SAE 15W-40 with 4.1cP HTHS vs a 10W-30 with 3.5cP HTHS. *** Comparing an SAE XW-30 with 3.5cP HTHS vs a XW-30 with 3.1cP HTHS.

* Extending drain intervals should always be undertaken in conjunction with an oil analysis program.
** Comparing an SAE 15W-40 with 4.1cP HTHS vs a 10W-30 with 3.5cP HTHS.

BOOTS TRANSPORT TESTIMONIAL

“**DURON™** Advanced demonstrated the capability to extend our drains to 100,000 kilometres (62K miles)... we will continue to partner with Petro-Canada Lubricants to improve our fleet efficiency.”

Kevin Emsley Fleet Manager, Boots Transport Ltd.

THE CHALLENGE

Boots Transport maintains a comprehensive and proactive maintenance program to ensure the optimal operation of their fleet and commitment to the safety of their drivers. Operating seven days a week with a commitment to dedicated and quality service, and in all weather conditions – ranging from -35°C to +35°C – each truck transports on average a distance of 1050 kilometres per day. With such a high reliance on uptime, Boots Transport requires quality products and exceptional technical expertise to guarantee the effective and efficient maintenance of the fleet. Always looking for opportunities to find progressive solutions to lower operating costs and time, the company had two clear qualifications when deciding on the oil provider they chose to work with:

- 1 High-quality products that deliver value
- 2 A trusted, collaborative and loyal partner

Boots Transport needed a full-service lubricants provider, with a quality product that extends drain intervals and in turn reduces downtime and maintenance costs. They also needed a provider that could deliver superior technical expertise and sales support through an enhanced customer relationship.

THE SOLUTION

Boots Transport started working with DURON UHP 5W-30 in 2015, in partnership with Petro-Canada Lubricants distributor, Jepson Petroleum, based locally in Calgary, Alberta.

Through a consultative approach, the distributor and Petro-Canada Lubricants learned about the unique challenges Boots Transport faced and offered personalized solutions to maximize fleet efficiency.

In 2018, Boots Transport added new Freightliner trucks with Detroit Diesel DD16 engines to their fleet. With these new engines calling for API FA-4 oils, Petro-Canada Lubricants recommended DURON Advanced 10W-30.

Petro-Canada Lubricants sought to demonstrate that API FA-4 oils were just as durable as API CK-4 but with added benefit of further improved fuel economy.

Over a 10-month period, Boots Transport trialed DURON Advanced 10W-30, alongside recommended value-added services to support the trial and demonstrate proof of performance:

- Oil analysis support
- Technical consultation
- Best practice information sharing
- Onsite technical training

THE RESULTS

Petro-Canada Lubricants assisted Boots Transport in achieving considerable **performance optimization** throughout the trial and was able to show them that they could extend **drain intervals from 75,000 to 100,000 kilometres (42K - 62K miles)**.



- Extending drain intervals resulted in **fewer oil changes, less time in the shop, more time on the road**, and therefore **considerable cost savings**.
- Used oil analysis clearly demonstrated that the API FA-4 DURON™ Advanced 10W-30 offered **exceptional wear protection**. In addition, the oil analysis identified an underlying coolant leak before it caused unplanned downtime.
- Even in the harsh Alberta winter, DURON Advanced 10W-30 performed **cold starts flawlessly**, offering ease and reliability throughout the winter.

Following a successful trial, Boots Transport will continue to use DURON UHP 5W-30 throughout their fleet until they fully upgrade to new trucks and new engines that call for API FA-4 oils.

By the end of 2020, Boots Transport will hope to have transitioned its entire fleet to DURON Advanced 10W-30.

“The quality of **DURON Advanced 10W-30** and the technical expertise we get from Jepson and Petro-Canada Lubricants allows our trucks to **spend less time in the shop** and more time on the road – and in our business **that is crucial**.”

Kevin Emsley Fleet Manager, Boots Transport Ltd.





OUR NO-NONSENSE LUBRICANTS WARRANTY

“Petro-Canada will repair damaged equipment, or replace damaged equipment parts resulting from a failure due to defects of the Petro-Canada lubricant, as long as the lubricant is used in accordance with your equipment manufacturer’s and our recommendations.”

IT’S MORE THAN JUST A WARRANTY. IT’S A COMMITMENT.

To learn more about how Petro-Canada Lubricants can help your business visit: petrocanadalubricants.com or contact us at lubecsr@hfsinclair.com

Committed to the disciplined operation of our business.



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