

THE WASTE INDUSTRY POWERED BY PETRO-CANADA LUBRICANTS

LUBRICANTS AND FLUIDS FOR THE WASTE INDUSTRY



Beyond today's standards.™



STRONGER LUBRICANTS STRONGER OPERATIONS FACT

No industry gives its vehicles – and its lubricants – a tougher time than the waste sector.

Vehicles working ten hours a day, up to seven days a week. Endless stop-start operation, with hours of idling. This puts a big strain on the vehicle and places stress on the lubricants and fluids used to protect critical parts ranging from the engine to the hydraulics.

Downtime impacts reliability and profits. Which is why in the waste industry, perhaps more than any other, the right lubricants and fluids can make a big impact on both productivity and profitability.

Petro-Canada's lubricants are proven in some of the toughest industry tests and waste fleets to protect better, for longer.

ALL WITH WORLD CLASS SERVICE AND SUPPORT.



THE HIDDEN SECRET 99.9% PURE BASE OILS

At the heart of all Petro-Canada's Lubricants, we use the HT purity process to produce 99.9% pure, crystal clear base oils - some of the purest in the world.

➤ **HEAVY DUTY DIESEL ENGINE OILS**
DURON™ — our most durable heavy duty diesel engine oils ever, to cut maintenance costs and extend oil drains, no matter how extreme your operating conditions.

➤ **HYDRAULIC FLUIDS**
HYDREX™ — lasts longer and provides better wear protection. HYDREX means more uptime, increased productivity and better energy efficiencies.

ENVIRON™ — robust inherently biodegradable hydraulic oils free of heavy metals, non-toxic, and recyclable, formulated to perform without compromise.

➤ **GREASES**
PRECISION™ — multi-application high performance lithium based greases formulated for all season long service protection and lower operating costs.

➤ **CNG/LNG**
DURON GEO — provides exceptional engine protection and is specifically formulated for the high combustion temperatures in today's natural gas mobile engines.

➤ **GEAR OILS**
TRAXON™ — superb wear protection to extend waste vehicle component life and reduce maintenance costs.

➤ **AUTOMATIC TRANSMISSION FLUIDS**
Outstanding oxidation stability and low temperature performance to deliver essential transmission wear protection and better productivity.



EXTREME PERFORMANCE WHERE YOU SEE THESE SYMBOLS



MAXIMUM DURABILITY

Outperforming the toughest specifications tied to oxidation control, shear stability and aeration control.



MAXIMUM ENGINE PROTECTION

Exceptional performance in wear tests such as the Cummins ISB, one of the toughest tests in the category.



MAXIMUM EXTENDED DRAINS

The potential for more vehicle uptime between oil drains, to keep you working and productive.



EXTREME HIGH AND LOW TEMPERATURE PERFORMANCE

Designed to perform and protect in extreme climatic conditions of cold and heat.



ENHANCED FUEL ECONOMY

Advanced, highly protective lower viscosity oils designed to reduce friction and boost fuel economy.

HEAVY DUTY ENGINE OILS FOR THE WASTE INDUSTRY

DURON™
THE TOUGHER.
THE BETTER.™

Keeping your waste fleet working, reliable and low maintenance is a tough job.

But tough is just the way we like it.

That's why DURON is our most durable, most protective and most advanced product line ever. Rigorously tested and ready to improve your reliability, extend your drain intervals, and keep you operating and profitable, even when the city streets are at their toughest.

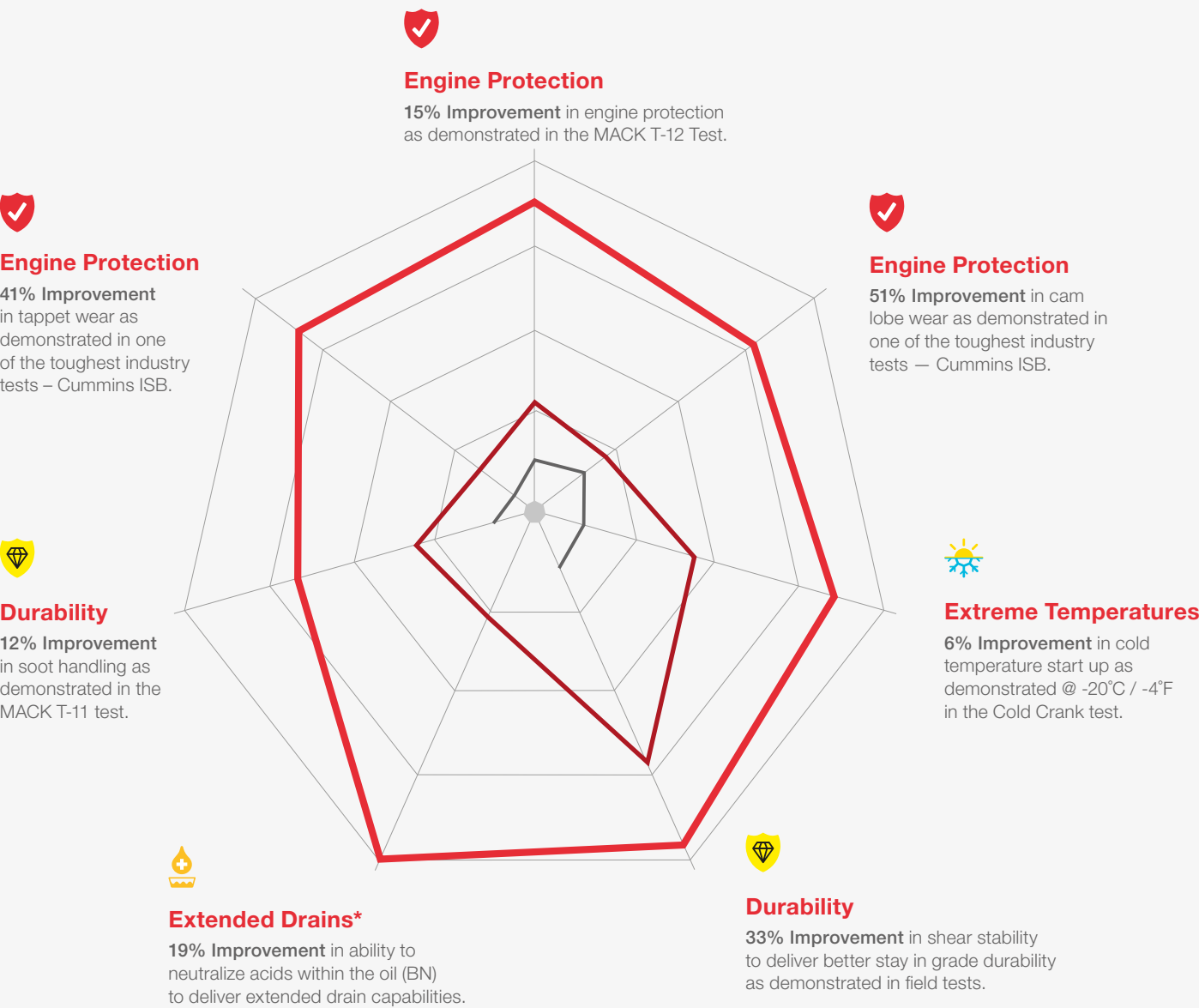
Because DURON loves a challenge.

THE TOUGHER. THE BETTER.™

DURON™ heavy duty diesel engine oils have advanced across a whole range of performance and protection measures. Look for the performance symbols on DURON labels.



PROVEN: DURON™ HP 15W-40



*Base Number (BN) does not have a specification limit, and is represented as such on the spider diagram.

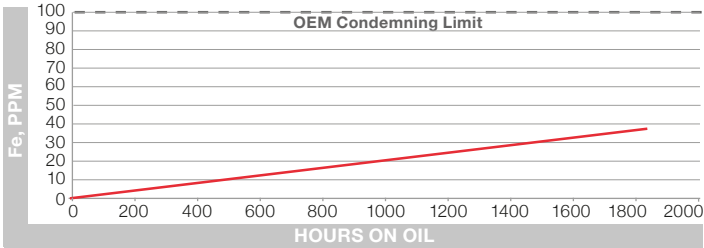
UP TO 1,600 HOURS CONTINUOUS OPERATIONS



MAXIMUM ENGINE PROTECTION

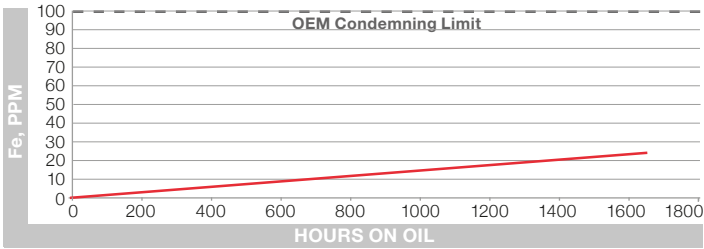
DURON™ engine oils provide our highest ever levels of engine protection to deliver maximum up-time for your vehicles. Need proof? Look at DURON's performance in **real world** trials with one of the world's top waste fleets. DURON proves performance well below the OEM condemning limit.

Cummins Engine



Demonstrates excellent wear protection with < 40 ppm Fe well beyond 1600 hours.

Detroit Diesel Engine



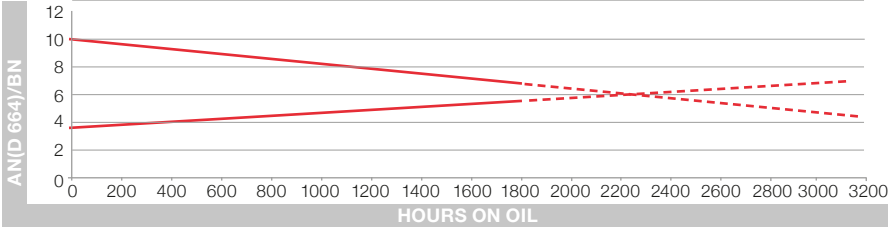
Demonstrates excellent wear protection with < 30 ppm Fe even up to 1600 hours.



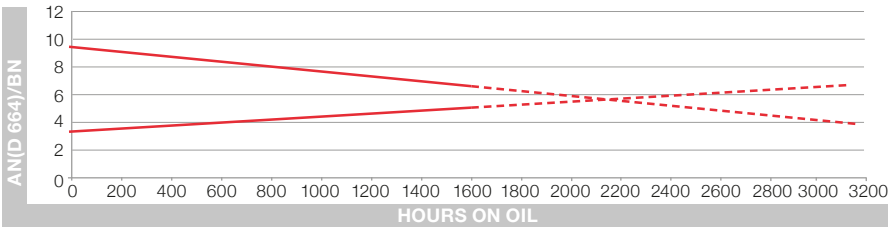
MAXIMUM EXTENDED DRAINS

More uptime between oil drains adds value to the bottom line. DURON engine oils deliver extended drain capabilities with no compromise to reliability and engine protection, even up to 1900 hours.

Cummins Engine



Detroit Diesel Engine

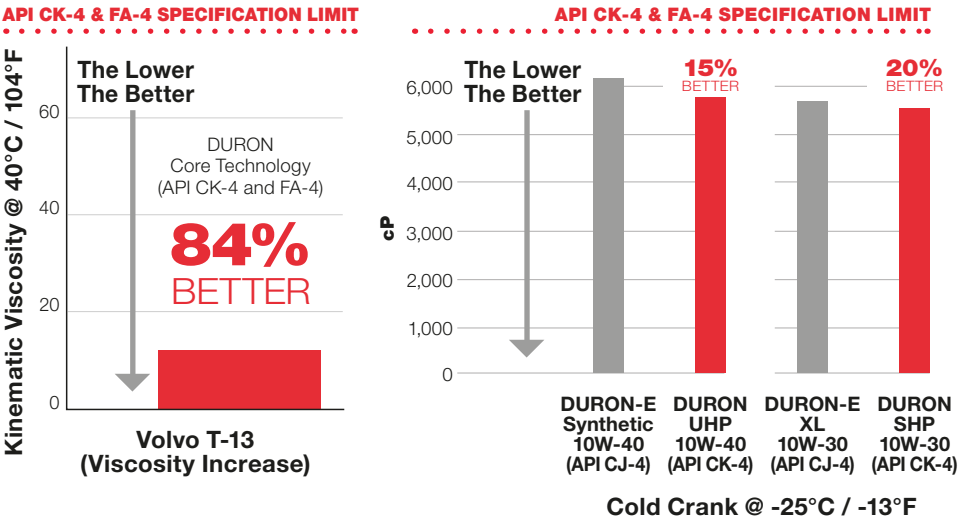


EXTREME PERFORMANCE



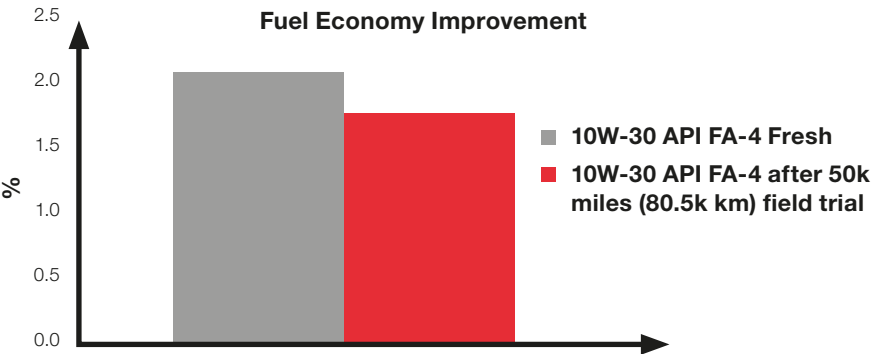
EXTREME HIGH AND LOW TEMPERATURE PERFORMANCE

It may be -40°C/°F or even 50°C/122°F outside. It could even get up to 500°C/932°F in the engine. That's no match for DURON™. We've built our reputation on superior performance at every temperature extreme – and DURON sets new standards.



ENHANCED FUEL ECONOMY

Fuel. A massive variable cost. Improvements to fuel economy go straight to your bottom line. Using lower viscosity engine oils can help boost fuel economy throughout the drain interval without compromising engine protection. That's just good for business.



New and retained fuel economy

Even after 50k miles (80.5k km) on the oil, DURON Core Technology API FA-4 10W-30 delivers up to 1.8% better fuel economy (vs. an SAE 15W-40 API CJ-4)

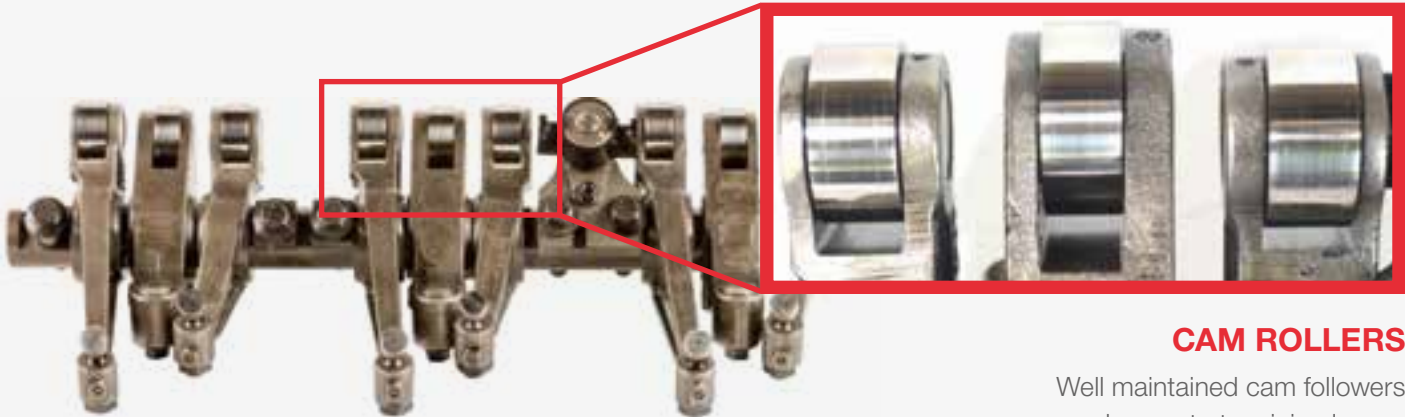
STRONGER IN EVERY WAY DURON™ CORE TECHNOLOGY IN ACTION

COMPONENT WEAR – 2014 CUMMINS ISX 15.0L ENGINE AFTER HALF A MILLION MILES IN THE FIELD



LINERS

Liners are still in excellent condition, demonstrating minimal wear with cross hatching marks clearly intact.



CAM ROLLERS

Well maintained cam followers demonstrate minimal wear.



CAMSHAFT

Cam lobes appear to be in excellent condition with minimal wear.

The **DURON™** product line delivers immediate efficiency gains, including the potential for extended drain intervals* and fuel savings.



CNG/LNG ENGINE OILS FOR THE WASTE INDUSTRY

DURON™ GEO LD 15W-40

Specially formulated for the high combustion temperatures in today’s Compressed Natural Gas/Liquefied Natural Gas (CNG/LNG) mobile engines. The proven performance technology in DURON GEO LD 15W-40 delivers exceptional engine protection and stay-in-grade capability, helping to maintain the power and fuel economy of “like new” performance longer.



| | Durability | Engine Protection | Extended Drain* | Extreme Temperature | Fuel Economy |
|--|------------|-------------------|-----------------|---------------------|--------------|
|--|------------|-------------------|-----------------|---------------------|--------------|

| | | | | | | |
|--|-----------------------------------|--|--|--|--|--|
| DURON^{HP} <i>High Performance</i> | DURON HP 15W-40 CK-4 | | | | | |
|--|-----------------------------------|--|--|--|--|--|

| | | | | | | |
|---|------------------------------------|--|--|--|--|--|
| DURON^{SHP} <i>Super High Performance</i> | DURON SHP 15W-40 CK-4 | | | | | |
| | DURON SHP 10W-30 CK-4 | | | | | |

| | | | | | | |
|---|------------------------------------|--|--|--|--|--|
| DURON^{UHP} <i>Ultra High Performance</i> | DURON UHP 10W-40 CK-4 | | | | | |
|---|------------------------------------|--|--|--|--|--|

| | | | | | | |
|-------------------------------|-------------------------------|--|--|--|--|--|
| DURON^{GEO LD} | DURON GEO LD 15W-40 | | | | | |
|-------------------------------|-------------------------------|--|--|--|--|--|

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

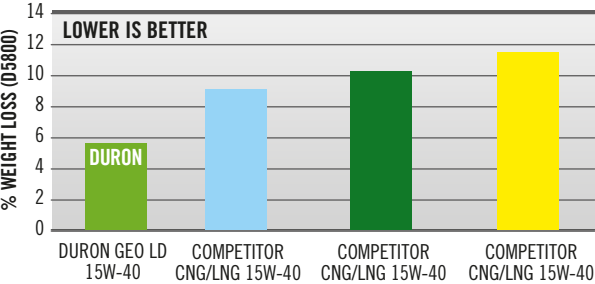
EXTENDED DRAIN INTERVALS TO OR BEYOND 1200 HOURS¹

DURON GEO LD 15W-40 retains its fresh oil properties longer, making it possible to extend drain intervals¹ safely up to or beyond 1,200 hours without risk of increased engine wear and sluggish performance.

CUMMINS AND DETROIT DIESEL APPROVED

DURON GEO LD 15W-40 has earned Cummins CES 20085 and Detroit Diesel DFS 93K216 approvals. Go with confidence knowing your warranties are as well protected as your engines.

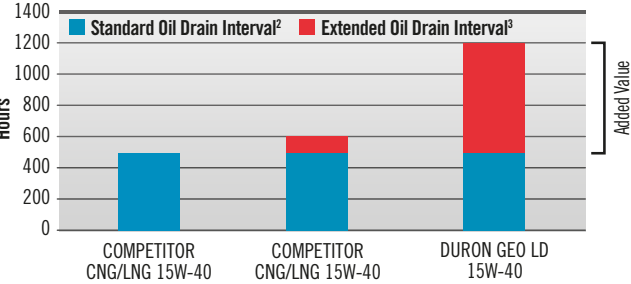
VOLATILITY BY NOACK



DURON GEO LD 15W-40 IS AMONG THE BEST FOR NOACK VOLATILITY.

The Noack Volatility Test is a simulated measure of evaporation loss of oil in high temperature service. Low volatility means less need for oil top-ups, better retention of its original formulation, and less fouling of components in the emissions system.

CNG/LNG ENGINE OIL DRAIN INTERVALS



DURON GEO LD 15W-40 SPECIALLY FORMULATED TO MEET AND EXCEED THE HIGHEST OEM STANDARDS

The proven technology of DURON GEO LD 15W-40 can extend your drain intervals¹ up to 1,200 hours, while maintaining exceptional engine protection and stay-in-grade capability. This means more time on the road and less costly downtime, keeping your investment well protected and your fleet running efficiently.

¹Extending drain intervals should always be undertaken in conjunction with an oil analysis program.
²ODI based on Cummins Westport ISL 9G.
³With used oil analysis program and following OEM recommendations.



HYDRAULIC FLUIDS FOR THE WASTE INDUSTRY

HYDREX™

UP TO 3X LONGER FLUID LIFE. UP TO 2X BETTER WEAR PROTECTION.

With HYDREX, you can reduce maintenance and mechanical failures, and prolong the life of your waste equipment. Proven to provide up to 2x¹ better wear protection than global competitors, its combination of pure base oils and carefully selected additives delivers exceptional anti-wear protection. HYDREX lasts up to 3x¹ longer than global competitors extending drain intervals and reducing time and money spent on fluid change-outs. Designed for hydraulic systems exposed to wide temperature ranges, HYDREX multigrade products increase equipment precision and responsiveness even in the toughest conditions.



¹ Measured against leading North American hydraulic oil brands.
² Based on Petro-Canada's definition of mobile equipment applications.

HYDREX™ XV ALL-SEASON HYDRAULIC FLUID

Top tier wear protection and oil life, whatever the temperature.

Take your equipment to the highest levels of performance and fuel efficiency. Using semi-synthetic base-oil technology, HYDREX XV combines top-tier wear protection and oil life with versatile design so you can operate across a wide, all-season temperature range.

**Performance from
-34°C/-29°F to
90°C/194°F.²**

HYDREX XV allows systems to start at temperatures as low as -34°C/-29°F and to run as high as 90°C/194°F.²

By pairing excellent shear stability with a high Viscosity Index, HYDREX XV maintains optimal fluid viscosity across a wide range of operating temperatures - this enables increased hydraulic pump and system efficiencies, lower energy consumption and reduced carbon dioxide emissions.

HYDREX MV

World-class protection and industry-leading oil life, whatever the temperature.

Wide temperature range hydraulic fluid - World-class protection and industry-leading oil life. HYDREX MV better protects from wear across high and low temperatures, reducing the need for seasonal change-outs and enabling inventory consolidation.

Fluid life up to 3x longer than global competitors.

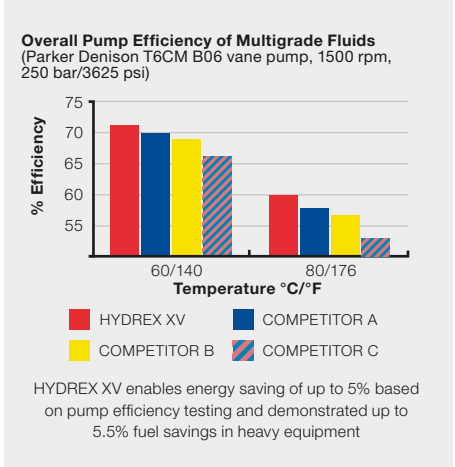
Formulated to provide proven wear protection, HYDREX MV prolongs equipment life – giving you the confidence to run your machines to get the productivity you need. HYDREX MV lasts up to 3x longer than global competitors (up to 7,000 hours before reaching the condemning limit in ASTM D943), therefore drain intervals may be extended – reducing time and money spent on fluid change-outs.

HYDREX AW

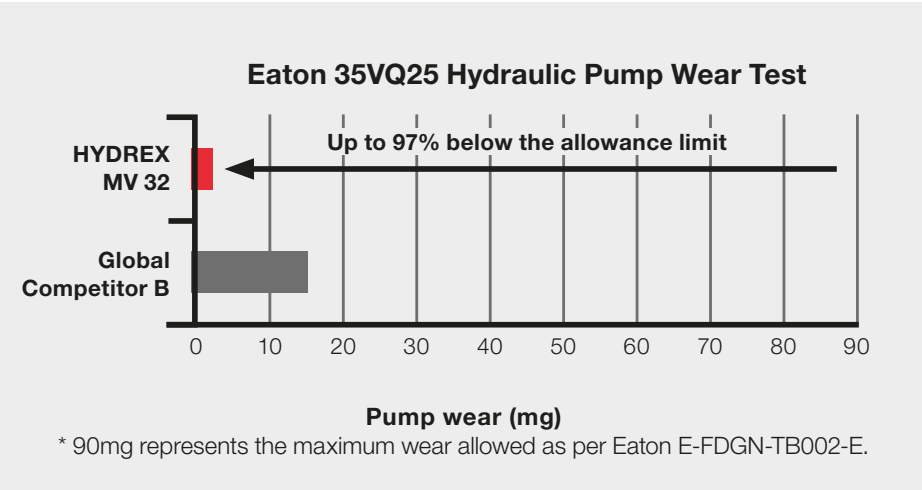
Superior wear protection and oil life.

Hydraulic fluid - Superior wear protection and oil life. HYDREX AW is a high-performance, anti-wear hydraulic fluid designed to exceed the demands of today's advanced hydraulic systems in waste equipment. It protects against accelerated oil degradation and oxidation and ultimately extends the life of your pump. By minimizing oxidation and sludge, HYDREX AW also provides long oil life – helping you to operate longer without interruption.

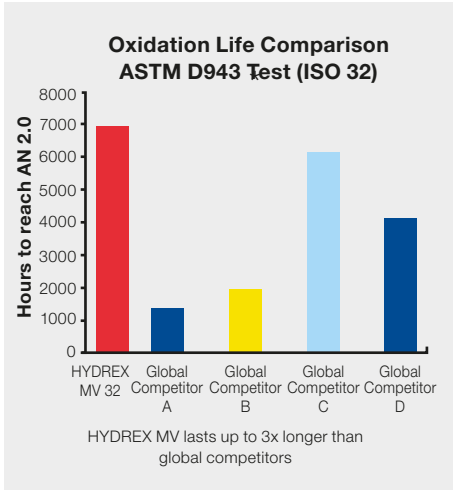
HYDRAULIC SYSTEM EFFICIENCY



WEAR PERFORMANCE



OXIDATION STABILITY





GREASES FOR THE WASTE INDUSTRY **PRECISION™ AND PEERLESS™**

In every waste fleet, effective grease performance can make a real impact on uptime and running costs. PRECISION greases are formulated to reduce operating costs and provide long service protection over a wide temperature range.



**PEERLESS – premium protection
under high temperatures**

INHERENTLY BIODEGRADABLE HYDRAULIC FLUIDS **ENVIRON™**

When your work takes you into an environment that's at risk, ENVIRON is the hydraulic fluid you want to take with you. Petro-Canada Lubricants' ENVIRON line of inherently biodegradable hydraulic oils is free of heavy metals, non-toxic, and recyclable.

ENVIRON AW

Exceptional performance, lasting far longer than competitive vegetable-based and conventional products. ENVIRON AW maintains excellent anti-wear, rust and corrosion protection to meet the rigorous demands of waste fleets everywhere.

ENVIRON MV

Excellent all season performance allowing hydraulic systems to start in temperatures as low as -36°C/-33°F while providing exceptional lubrication of hydraulic components operating at high temperatures.



PRECISION EP GREASES

PRECISION EP lithium greases give you improved resistance to water washout, longer life under extreme conditions and outstanding resistance to shearing. PRECISION XL EP1, 2 and Synthetic have NLGI's GC-LB certification. PRECISION XL EP00 and XL EP000 feature increased low-temperature mobility.

PRECISION SYNTHETIC EP00

PRECISION Synthetic EP00 delivers exceptional wear protection for truck/trailer rear-end and hub assemblies. It has an operating temperature range of -40°C/-40°F to 170°C/338°F.

PRECISION XL EP, EP2, EP00 AND EP000

PRECISION XL EP1 and EP2 are recommended for lubricating heavy duty and general purpose bearings. PRECISION XL EP2 is intended for low or high speed applications encountered in the field, while EP1 is intended for applications equipped with centralized lubrication systems. PRECISION XL EP000 is designed specifically for use in leaky or poorly sealed gearboxes, in centralized, on-board truck chassis lubricating systems.

PRECISION XL 3 MOLY EP1/EP2

PRECISION XL 3 Moly EP1 and EP2 Greases are lithium greases compounded with 3% molybdenum disulphide. They are best suited for tough, heavy-duty shock loaded equipment in off-highway applications. They are also suitable for truck fifth wheels.

PEERLESS™

PEERLESS calcium sulphonate complex greases are premium performance, multi-application greases formulated to reduce operating costs and provide extended protection in high temperatures or wet operating conditions.

GEAR OILS FOR THE WASTE INDUSTRY **TRAXON™**

Excellent shear stability. Outstanding oil life. Superb wear protection. These are the qualities that enable the TRAXON line to help extend the life of the gearbox in every vehicle in your waste fleet, reduce downtime and maintenance costs, and deliver what matters most – better bottom-line performance. Top OEM approvals such as Mack GO-J/GO-J Plus, TO-A, etc.

AUTOMATIC TRANSMISSION FLUIDS FOR THE WASTE INDUSTRY **HEAVY DUTY SYNTHETIC BLEND ATF**

Automatic transmissions need some of the most advanced and complex lubricants. Petro-Canada Lubricants' ATFs offer industry-leading performance in oxidation stability, low temperature fluidity and wear protection.

TRAXON E SYNTHETIC

This premium line of heavy duty, extreme pressure, synthetic gear lubricants is formulated to meet the “Genuine Roadranger” extended drain and warranty performance requirements set by Eaton Corporation (for transmissions) and Dana CVSD Corporation (for axles). Available in 75W-90 and 80W-140 grades as well as two manual transmission fluids; CD-50 and MTF.

TRAXON SYNTHETIC

This gear oil provides excellent year-round protection in extreme weather conditions in a full synthetic formulation. Available in 75W-90 grade.

TRAXON XL SYNTHETIC BLEND

Offering excellent low temperature protection, better shear stability and long oil life, TRAXON XL delivers outstanding, long-lasting protection. Available in 75W-90 and 80W-140 grades.

TRAXON

Formulated for long-lasting wear protection, this multigrade gear oil extends equipment life to maximize productivity and reduce downtime. Available in 80W-90 and 85W-140 grades.











HEAVY DUTY SYNTHETIC BLEND ATF

Specially formulated for commercial and heavy duty transmissions. Approved for Voith (H55.6336.xx DIWA Service Bulletin 013 & 118, formerly G1363) 72,000 mile and ZF TE-ML 14B extended drain applications. Also approved for Allison C4 (legacy), ZF TE-ML 03D, 04D, 16L and 17C (ZF001236). Suitable for use where Allison TES-295, Caterpillar TO-2, MB 236.1/5/6/7, MAN 339 Typ Z2 & V2, Volvo 97341 or Ford MERCON® V specification is recommended. May also be used in automatic transmissions where a fluid meeting the former DEXRON®III(H),-III(G), -II(E), or -II specification is recommended.

MERCON® is a registered trademark of Ford Motor Company.
DEXRON® is a registered trademark of General Motors LLC.
ATF+4® is a trademark of FCA US LLC, used under license.

APPROVED FOR YOUR ENGINES BY THE WORLD’S OEMs

HEAVY DUTY DIESEL ENGINE OIL Recommended Applications

| ★ Approved for Use | | | | • Suitable for Use | | | | ✓ Meets | | | | | | | |
|--|----------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|--------------------|-----------------------|--------------------|-------------|--------------------|-------------|
| Products | | DURON™ HP 15W-40 | | DURON SHP 15W-40 | | DURON SHP 10W-30 | | DURON UHP 10W-40 | | DURON UHP 5W-40 | | DURON UHP 0W-30 | | DURON UHP 0W-40 | |
|  | ACEA | ✓ | E7, E9 | ✓ | E7, E9 | ✓ | E7, E9 | ✓ | E7, E9 | | | | | | |
|  | API | ★ | CK-4 / SN | ★ | CK-4 / SN | ★ • | CK-4 SN* | ★ | CK-4 / SN | ★ | CK-4 / SN | • | CK-4 / SN | • | CK-4 / SN |
|  | Caterpillar | ✓ | ECF-3, TO-2 | ✓ | ECF-3, TO-2 | ✓ | ECF-3, TO-2 | ✓ | ECF-3, TO-2 | ✓ | ECF-3, TO-2 | • | ECF-3, TO-2 | • | ECF-3, TO-2 |
|  | Cummins | ★ | CES 20086 | ★ | CES 20086 | ★ | CES 20086 | ★ | CES 20086 | ★ | CES 20086 | • | CES 20086 | • | CES 20086 |
|  | Detroit Diesel | ★ | DFS 93K222 | ★ | DFS 93K222 | ★ | DFS 93K222 | ★ | DFS 93K222 | ★ | DFS 93K222 | | | | |
|  | Deutz | | | | | | | ★ | DQC III-10 LA** | | | | | | |
|  | Ford | ★ | WSS- M2C171- F1 | ★ | WSS- M2C171- F1 | ★ | WSS- M2C171- F1 | ★ | WSS- M2C171- F1 | ★ | WSS- M2C171- F1 | | | | |
|  | GM | | | • | 9985930 | • | 9985930 | • | 9985930 | | | | | | |
| JASO | JASO | • | MA, MA2 | • | MA, MA2, DH-1 | • | MA, MA2, DH-1 | • | MA, MA2, DH-1 | | | • | MA, MA2 | • | MA, MA2 |
|  | Mack | ★ | EOS-4.5 | ★ | EOS-4.5 | ★ | EOS-4.5 | ★ | EOS-4.5 | ★ | EOS-4.5 | | | | |
|  | MAN | • | 3575, 3275-1 | • | 3575, 3275-1 | | | | | | | | | | |
|  | Mercedes-Benz | ★ | 228.31 | ★ | 228.31 | ★ | 228.31 | | | | | | | | |
|  | MTU | ★ | Type 2.1 | ★ | Type 2.1 | | | | | | | | | | |
|  | Renault | ★ | RLD-4 | ★ | RLD-4 | ★ | RLD-4 | ★ | RLD-4 | ★ | RLD-4 | | | | |
|  | Volvo | ★ | VDS-4.5 | ★ | VDS-4.5 | ★ | VDS-4.5 | ★ | VDS-4.5 | ★ | VDS-4.5 | | | | |
| * 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 with proven technology | | | | | | | | | | | | | | | |

CNG/LNG Recommended Applications

| | |
|-----------------------|---------------------|
| ★ Approved for Use | |
| Approvals | DURON GEO LD 15W-40 |
| Cummins CES 20085 | ★ |
| Detroit Diesel 93K216 | ★ |

GREASES Recommended Applications

| Product | NLGI Grade | Composition | Operating Temperature Range (°C) | Application |
|--------------------------|------------|---|----------------------------------|--|
| PRECISION Synthetic | 1 | Lithium Complex (Colour = Gold) | -40 to 170 | Specially designed to provide protection over a wide range of operating temperatures, for all-season protection. Delivers excellent cold weather protection without compromising high temperature performance. |
| PRECISION XL EP1 | 1 | Lithium Complex (Colour = Green) | -25 to 160 | Specially designed for automotive wheel bearings, chassis points on on-road and off-road vehicles. |
| PRECISION Synthetic EP00 | 00 | Lithium Complex (Colour = Gold) | -40 to 170 | Semi-fluid synthetic grease that is specifically designed for lubricating truck/trailer wheel-end bearings. |
| PRECISION XL EP2 | 2 | Lithium Complex (Colour = Green) | -20 to 160 | Specially designed for automotive wheel bearings, chassis points on on-road and off-road vehicles. |
| PEERLESS LLG | 2 | Calcium Sulphonate Complex (Colour = Burgundy) | -20 to 200 | Recommended for “sealed-for-life” bearings, other high temperature and long-life applications. Designed to match the performance of Polyurea greases. |
| PEERLESS OG1 | 1 | Calcium Sulphonate Complex (Colour = Tan) | -30 to 163 | Recommended for applications requiring water resistance. Effective at resisting changes in consistency and still providing rust protection. |
| PEERLESS OG2 | 2 | Calcium Sulphonate Complex (Colour = Tan) | -25 to 163 | Recommended for applications requiring water resistance. Effective at resisting changes in consistency and still providing rust protection. |
| PEERLESS OG2 Red | 2 | Calcium Sulphonate Complex (Colour = Red) | -25 to 163 | Recommended for applications requiring water resistance. Effective at resisting changes in consistency and still providing rust protection. Dyed red for applications requiring greater grease visibility. |

GEAR OILS Recommended Applications

| ★ Approved for Use | • Suitable for Use | | | | ✓ Meets | | | | |
|---|--------------------|-------------------|--|---|-------------------------------|---------------------------------|----------------------------------|--------------------------------|------------------------------|
| Products | TRAXON™ 80W-90 | TRAXON 85W-140 | TRAXON XL Synthetic Blend 75W-90 | TRAXON XL Synthetic Blend 80W-140 | TRAXON Synthetic 75W-90 | TRAXON E Synthetic 75W-90 | TRAXON E Synthetic 80W-140 | TRAXON E Synthetic CD-50 | TRAXON E Synthetic MTF |
| API GL-5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| API MT-1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Dana CVSD SHAES 256 Rev C‡ | | | | | | ★ | | | |
| Dana CVSD SHAES 429 Rev A‡ | | | | | | ★ | ★ | | |
| Eaton PS-164 Rev 7 (obsolete) | | | | | | | | ✓ | |
| Eaton PS-386‡ * | | | | | | | | | ★ |
| International TMS 6816 / Navistar MPAPS B-6816 Type I | | | | | | ✓ | ✓ | ✓ | |
| International TMS 6816 / Navistar MPAPS B-6816 Type II | | | | | | | | | ✓ |
| Mack GO-J | ★ | ★ | ★ | ★ | ★ | | ★ | | |
| Mack GO-J Plus | | | | | | ★ | | | |
| Mack TO-A Plus | | | | | | | | ★ | ★ |
| Meritor 0-76-A | | ✓ | | | | | | | |
| Meritor 0-76-B | | | | ✓ | | | ✓ | | |
| Meritor 0-76-D | ✓ | | | | | | | | |
| Meritor 0-76-E | | | ✓ | | ✓ | | | | |
| Meritor 0-76-N | | | | | | ✓ | | | |
| Meritor 0-80 | | | | | | | ✓ | | |
| SAE J2360 ** | ★ PRI GL 0794 | ★ PRI GL 0795 | ★ PRI GL 0796 | ★ PRI GL 0914 | ★ PRI GL 0841 | ✓ | ✓ | | |
| Scania STO 1:0 (axles) | | ★ | | ✓ | | | | | |
| Scania STO 1:0 (axles and gearboxes/MT) | | | ★ | | ★ | | | | |
| Volvo 97305 | | | | | | | | ★ | |
| ZF - Freedom Line (ZF-AS Tronic) | | | | | | | | ✓ | |
| ZF TE-ML - 17B | ★ (ZF000764) | | | | ★ (ZF002212) | | | | |
| ZF TE-ML -05A, 12M, 16B, 19B, 21A | ★ (ZF000764) | | | | | | | | |
| ZF TE-ML -05A, 12M, 16D, 21A | | ★ (ZF000778) | | ★ (ZF002287) | | | | | |
| ZF TE-ML - 05A, 16B, 21A | | | | | ★ (ZF002212) | | | | |
| ‡ Products meeting these specifications are required as part of the Eaton "Genuine Roadranger" extended drain and warranty performance requirements set by Eaton Corporation (for transmissions) and Dana CVSD Corporation (for axles). * For use in Eaton transmissions such as UltraShift Plus, Fuller Advantage Series (FAS), FR and RT Series. ** SAE J2360 global standard (formerly MIL-PRF-2105E). | | | | | | | | | |

ENVIRON™ INHERENTLY BIODEGRADABLE HYDRAULIC FLUIDS Recommended Applications

| ★ Approved for Use | • Suitable for Use | | ✓ Meets | ◆ Recommended for Use | |
|--|--------------------|---------------|---------------|-----------------------|---------------|
| Products | ENVIRONAW 32 | ENVIRON AW 46 | ENVIRON AW 68 | ENVIRON MV 32 | ENVIRON MV 46 |
| Bosch Rexroth | • | • | • | • | • |
| Denison | ◆ | ◆ | ◆ | ◆ | ◆ |
| Denison HF-0 | ★ | ★ | ★ | ★ | ★ |
| Eaton Brochure 03-401-2010 | ★ | ★ | ★ | | |
| Eaton | ◆ | ◆ | ◆ | ◆ | ◆ |
| DIN 51524 Part 2 HLP | ✓ | ✓ | ✓ | | |
| DIN 51524 Part 3 HVLP | | | | • | • |
| ISO 6743/4 Type HM (ISO 11158 HM) | ✓ | ✓ | ✓ | | |
| ISO 6743/4 Type HV (ISO 11158 HV) | | | | • | • |
| WGK (German Water Hazard Classification) of 1 | ✓ | ✓ | ✓ | ✓ | ✓ |
| • Formulated for both indoor and outdoor seasonal use in piston, gear and vane hydraulic pumps found in industrial plant and mobile equipment used in environmentally sensitive areas • Can be used in systems equipped with fine porosity filters down to 3 microns, there will be no loss of additives or filter plugging • Can be used in hydraulic pumps with silver bearings such as Lucas pumps because they will not displace the silver in these bearings, as they do not contain zinc-based anti-wear additives | | | | | |

HYDRAULIC FLUIDS Recommended Applications

| ★ Approved for Use | | | • Suitable for Use | | | | ◆ Recommended for Use | | | | ✓ Meets |
|----------------------|------------------|-----------------|--------------------|-----------------|-----------------|------------------|-----------------------|-----------------|-----------------|-----------------|-------------------------|
| Products | HYDREX™ AW 22 | HYDREX AW 32 | HYDREX AW 46 | HYDREX AW 68 | HYDREX AW 80 | HYDREX AW 100 | HYDREX MV 22 | HYDREX MV 32 | HYDREX MV 46 | HYDREX MV 68 | HYDREX XV All Season |
| Bosch Rexroth | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Bosch Rexroth A2F10 | | | | | | | | | | | ✓ |
| Denison | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Denison HF-0 | | ★ | ★ | ★ | | | | ★ | ★ | ★ | ★ |
| Dynex | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Eaton-Vickers | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Eaton E-FDGN-TB002-E | ★ | ★ | ★ | ★ | | ★ | ★ | ★ | ★ | ★ | ★ |
| Hydrecó | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Komatsu | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Komatsu HPV35+35 | | | ✓ | | | | | | ✓ | | |
| Link-Belt | | | ★ | | | | ★ | | | | ★ |
| McCloskey | | | ◆ | | | | | | | | |
| Oilgear | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Racine | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Sauer-Danfoss | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |

HYDRAULIC FLUIDS Recommended Applications

| ★ Approved for Use | | | • Suitable for Use | | | | ◆ Recommended for Use | | | | ✓ Meets |
|-----------------------|------------------|-----------------|--------------------|-----------------|-----------------|------------------|-----------------------|-----------------|-----------------|-----------------|-------------------------|
| Products | HYDREX™ AW 22 | HYDREX AW 32 | HYDREX AW 46 | HYDREX AW 68 | HYDREX AW 80 | HYDREX AW 100 | HYDREX MV 22 | HYDREX MV 32 | HYDREX MV 46 | HYDREX MV 68 | HYDREX XV All Season |
| Skyjack | | | | | | | | | ◆ | | |
| Voith 3625-006072 | | ◆ | | | | | | | | | |
| Voith 3625-006073 | | ◆ | | | | | | | | | |
| Voith 3625-006101 | | | | | | ◆ | | | | | |
| Voith 3625-006208 | | | ◆ | | | | | | | | |
| Voith 3625-006209 | | | ◆ | | | | | | | | |
| Voith 3625-008426 | | ◆ | | | | | | | | | |
| Industrial Standards | | | | | | | | | | | |
| DIN 51524 Part 2 HLP | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | |
| DIN 51524 Part 3 HVLP | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| ISO 11158 HM | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | |
| ISO 11158 HV | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| ASTM D6158 HM | ✓ | ✓ | ✓ | ✓ | | • | | | | | |
| ASTM D6158 HV | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| AIST 126 and 127 | | • | • | • | | | | • | • | • | • |
| JCMAS HK | | | ✓ | | | | | | ✓ | | ✓ |



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