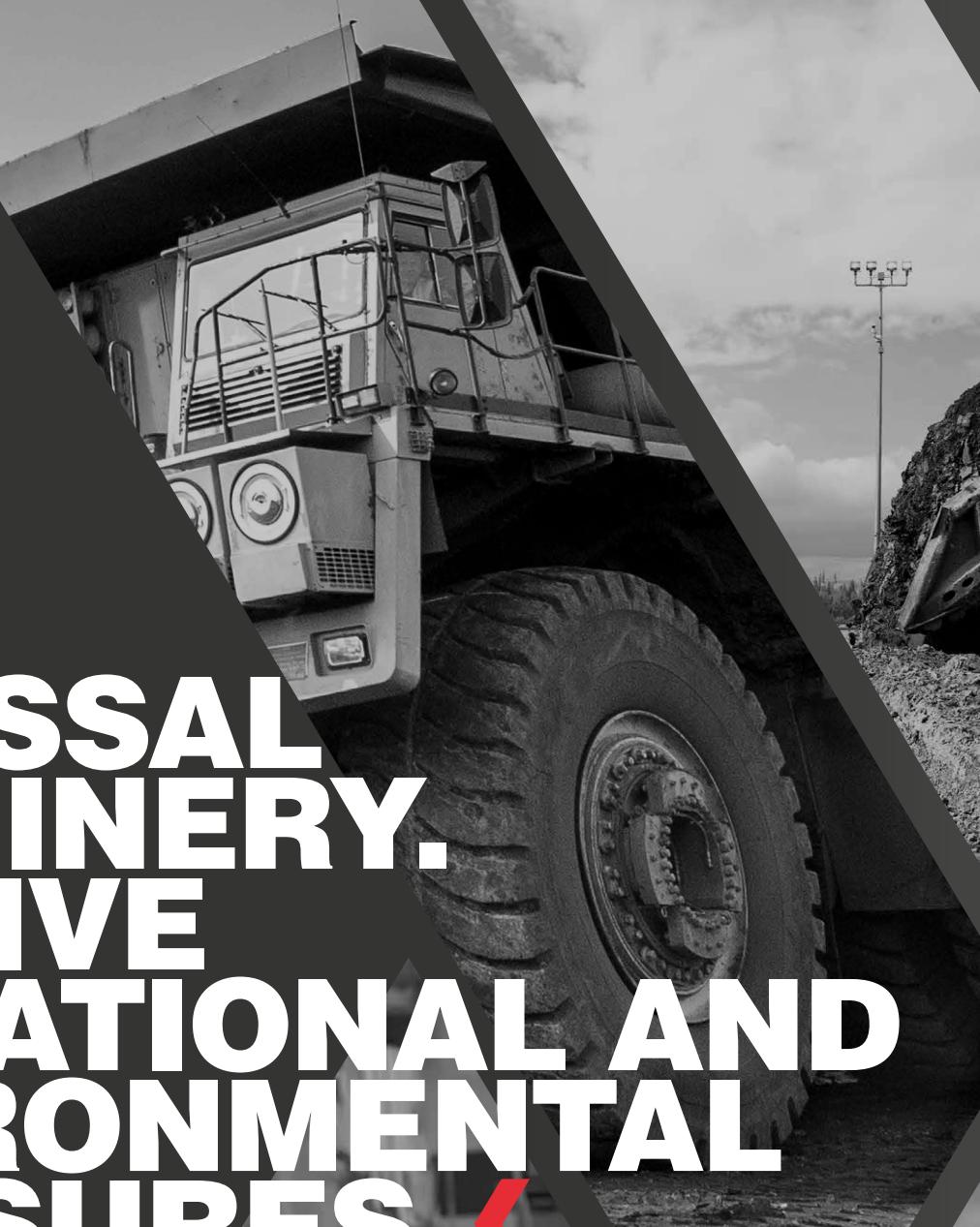


# PRODUCTIVITY AND EFFICIENCY ABOVE > AND BEYOND <



AN HF SINCLAIR BRAND



› COLOSSAL  
MACHINERY.  
MASSIVE  
OPERATIONAL AND  
ENVIRONMENTAL  
PRESSURES. ‹





AN HF SINCLAIR BRAND

› OPENING A MINE IS A HUGE  
UNDERTAKING, WHICH IS WHY  
NEW MINES DON'T OPEN EVERY DAY.  
SO WHEN THEY DO, IT'S IMPORTANT  
TO CHOOSE THE RIGHT PEOPLE TO  
WORK WITH. WE BELIEVE WE HAVE  
A GREAT BUSINESS RELATIONSHIP  
WITH PETRO-CANADA ↗

**Tom Blake**, Mine Maintenance Superintendent,  
Copper Mountain Mine, Princeton, British Columbia

Mining depends on equipment that has to work  
in some of the toughest conditions on earth  
and beneath it, where repair and maintenance  
can be difficult in the extreme.

The smart move is to protect the reliability and productivity  
of your mining operations with respected oils and greases,  
proven in mines worldwide. The stronger your lubricants,  
the stronger your operations. **That's a fact.**

## › PRODUCTIVITY, POWERED BY PETRO-CANADA LUBRICANTS

Petro-Canada Lubricants products have a powerful  
reputation in off-road operations built on proven  
performance in extreme environments.

Every engine oil, gear oil and grease has been  
engineered to make your mining operations more  
robust, more efficient and more profitable.

TRANSMISSION  
TRANSMISSION  
DRIVE TRAIN  
DRIVE TRAIN  
OILS

# PRODUCRO™ TRANSMISSION DRIVE TRAIN OILS

## LONGER LASTING PROTECTION AT ALL TEMPERATURES

Across the mining industry, PRODUCRO is proven to operate longer under optimal viscosity. PRODUCRO TO-4+ exceeds Caterpillar's TO-4 specification, Komatsu KES 07.868.1 and industry specification API GL-3 (inactive). With a blend of ultra-pure, high quality base oils and specially selected additives, PRODUCRO delivers long equipment life, fewer change-outs, less downtime and lower operating costs.





## PRODUCRO TO-4<sup>+</sup> UHP

PRODUCRO TO-4<sup>+</sup> UHP is a premium, multipurpose synthetic all season transmission, hydraulic and drive line fluid for heavy-duty mobile equipment that helps customers increase equipment productivity and decrease operating costs. During a two+ year long customer trial, the fluid demonstrated the ability to meet the requirements of the Caterpillar TO-4 specification, increase equipment life by up to 6% and deliver significant cost savings\*.



## PRODUCRO TO-4<sup>+</sup> SYNTHETIC ALL SEASON

PRODUCRO TO-4<sup>+</sup> Synthetic All Season outperforms leading competitors with longer oil life and better protection. Its all-season performance eliminates seasonal change-outs without compromising lubricant performance.



## PRODUCRO TO-4<sup>+</sup> XL SYNTHETIC BLEND LO TEMP

This synthetic blend SAE 0W-20 fluid is ideal for use at colder ambient temperatures. It protects your equipment down to -45°C/-49°F.



## PRODUCRO TO-4<sup>+</sup> 10W, 30, 50, 60

These monograde fluids work hard at protecting your equipment through a wide temperature range. They allow your mining equipment to operate under optimal viscosity longer, resulting in better protection. Available in SAE grades 10W, 30, 50 and 60.



## PRODUCRO FD-1 CATERPILLAR FINAL DRIVE AXLE OIL

This product's special blend allows it to deliver improved final drive performance, extended drain intervals beyond conventional TO-4 fluids, with added rust and corrosion protection, and advanced protection from foaming. Available in FD-1 60 and FD-1 Synthetic.

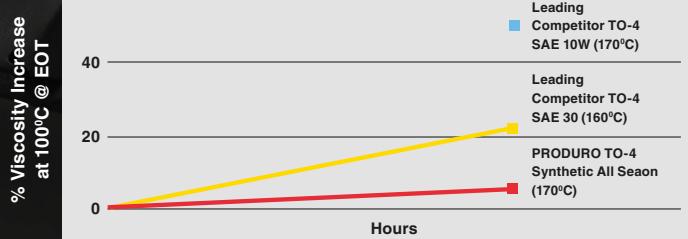


See recommended application tables at the end of the brochure for further details.

**GO LONG:** Resists oil degradation and sludging for longer oil life and better protection DKA (CEC L-48-B-00) Oxidation Test (192hrs @ Specified temp)

In the DKA oxidation test, product performance is measured by how much harmful viscosity increases will occur over time (therefore the flatter the line the better). Compared to the leading competitor, PRODUCRO TO-4<sup>+</sup> Synthetic All Season advanced formulation resists oil degradation best.

\* based on 25 units for large Canadian mine operating across two sites.



# HEAVY-DUTY ENGINE OIL

## DURON™ HEAVY-DUTY ENGINE OILS

### THE TOUGHER. THE BETTER.™



#### MAXIMUM OIL DURABILITY

When ordinary oils weaken, DURON stays strong, outperforming the toughest specifications tied to oxidation control, shear stability and aeration control.



#### MAXIMUM ENGINE PROTECTION

DURON keeps your engine strong for longer, with exceptional performance in wear tests such as the Cummins ISB, one of the toughest tests in the category.



#### EXTENDED DRAINS\*

Longer drains mean more uptime, to keep you working and productive.



#### EXTREME HIGH AND LOW TEMPERATURE PERFORMANCE

Whether extreme heat or cold threatens your reliability, DURON is designed to perform and protect in extreme climatic conditions.



#### 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.



#### SUSTAINABILITY

Improving fuel economy is one of several ways to run more sustainably – both economically and environmentally. The growing awareness of societal impact on the environment has also increased demand for fuel saving initiatives, and legislation and more stringent emission targets are changing the requirements for the next class of engine oil categories.

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

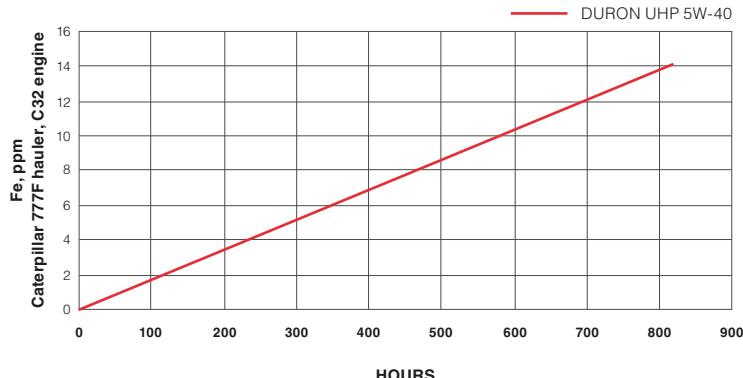


# BEYOND 750 HOURS CONTINUOUS OPERATION

## MAXIMUM ENGINE PROTECTION

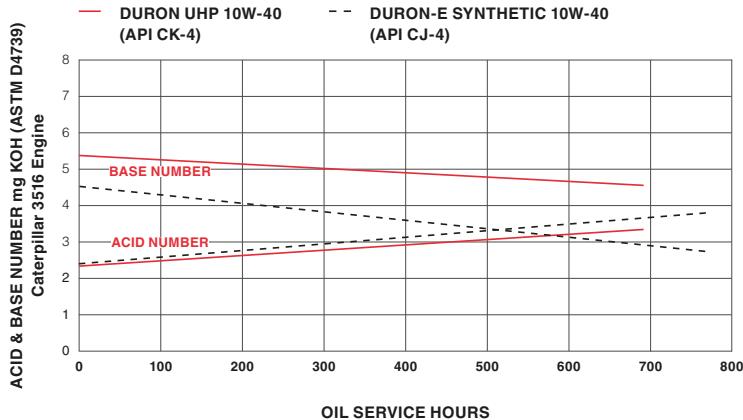


DURON engine oils provide our highest ever levels of engine protection to deliver maximum up-time for your vehicles. Need proof? Look at DURON's performance in **real world** trials.



At 800 hours, wear is minimized. DURON provides superior wear protection, even in severe mining applications.

## MAXIMUM EXTENDED DRAINS\*

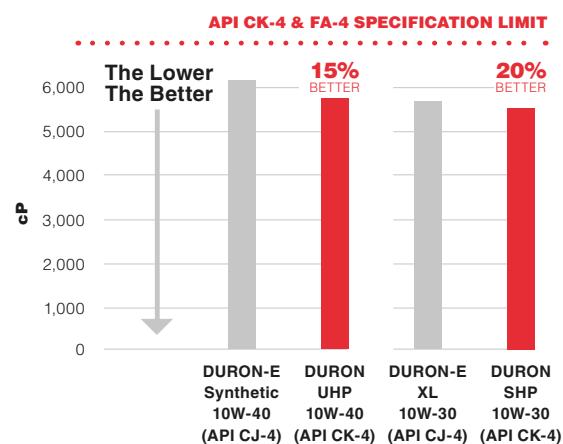
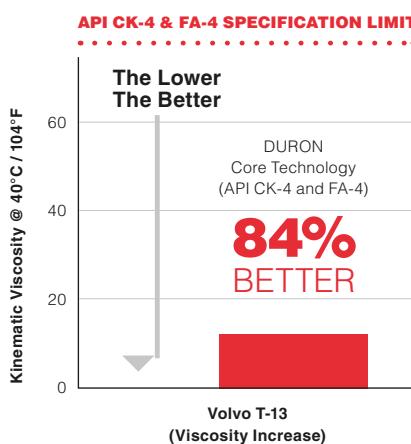


More uptime between oil drains adds value to the bottom line. DURON engine oils deliver extended drain capabilities with no compromise to reliability and engine protection.

## 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. DURON has a reputation for superior performance at every temperature extreme – and DURON sets new standards.



Cold Crank @ -25°C / -13°F

# PERFORMANCE GREASES

## VULTREX™ GREASES

### FOR ALL YOUR MINING NEEDS

Across your operations, effective grease performance can make a big impact on uptime, running costs and equipment life. VULTREX delivers outstanding equipment protection over a wide temperature range, and uncompromising reliability.



PRECISION Synthetic, PRECISION Synthetic 220, PRECISION XL EP2 and PRECISION XL EP1 all meet NLGI Automotive Service Classification GC-LB for wheel bearing and chassis lubrication.



### › VULTREX MPG GREASES

High dropping point, heavy-duty greases that excel when used in bearings subject to high pressures or heavy shock loading<sup>1</sup> and in equipment with centralized greasing systems. Excellent long-life performance.

### › VULTREX MPG SYNTHETIC ARCTIC

For use in centralized greasing systems on heavy-duty off-highway equipment and equipment that operates in extreme low temperatures.

### › VULTREX MPG EP1

For heavy-duty gear and bearing applications served by centralized greasing systems.

## OTHER MINING SPECIALTY GREASES

### › VULTREX DRILL ROD HEAVY GREASE

Formulated for use on diamond drill rods to reduce friction between the rod and rock strata.

### › VULTREX ROCK DRILL EP000

Designed for mist-free lubrication of rock drills and in-line pneumatic systems, delivering the kind of performance demanded in these conditions.

### › VULTREX G-124

Red tacky grease designed to lubricate heavy-duty truck components, such as wheel bearings, bushings, king-pins; and chassis points found on vehicles operated by the mining, forestry and transportation industries.

## OPEN GEAR LUBRICANTS

### VULTREX OPEN GEAR LUBRICANTS – ALL SEASON PROTECTION IN THE MOST EXTREME OPERATING ENVIRONMENTS.

Formulated to excel in multi-service applications, including shovel, excavator, drill, and haul truck applications, VULTREX OGL multi-service lubricants are designed to withstand the challenging operating conditions of your equipment.

- Superior adhesion resists water spray-off to extend time between change-outs in wet climates
- Solvent-free formulation makes disposal easier and less expensive
- Darkened formulation is easier to see on open gears

### › VULTREX OGL SYNTHETIC ALL SEASON 680

Wide operating temperature range for use during fall, winter and spring seasons.

### › VULTREX OGL SYNTHETIC 2200

Higher viscosity product for use during the summer, or for year-round use in warmer climates.

### › VULTREX OGL HEAVY 6200

Formulated for greater load carrying capacity at warmer ambient temperatures. Specifically intended for lubricating hoist gear and pinions on Caterpillar and Bucyrus International electric rope shovels.

### › VULTREX OGL

These lubricants meet or exceed major OEM requirements for open gear lubricants. VULTREX OGL Synthetic All Season 680, VULTREX OGL Synthetic 2200 and VULTREX OGL Heavy 6200 meet the Caterpillar Global Mining (former Bucyrus International) SD 4713 specification and the P&H 464 specification. VULTREX OGL Synthetic All Season 680 and VULTREX OGL Synthetic 2200 are approved by Komatsu for lubrication of slew ring gear on Komatsu hydraulic shovels.

<sup>1</sup>For equipment with a Moly or solids requirement for heavy shock loading, PRECISION XL Moly greases are also available. Petro-Canada is a registered user. Subject to regional availability.

# PEERLESS GREASES

## PEERLESS<sup>TM</sup> GREASES

### FOR ALL YOUR MINING NEEDS

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

#### ► PEERLESS 3 MOLY 322

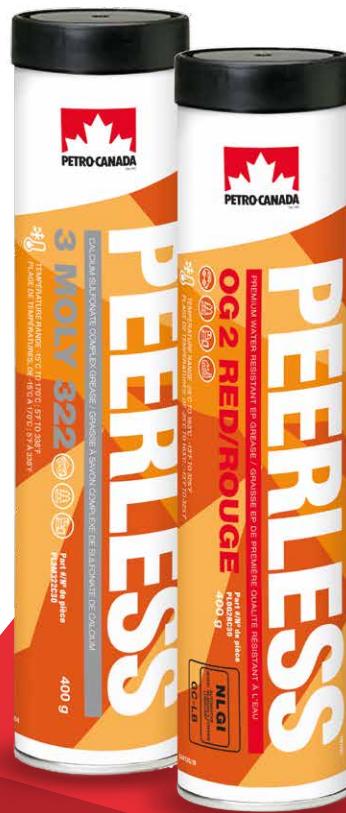
A high viscosity ISO 320 base oil, molybdenum disulphide grease with excellent stay-in-place properties. Therefore, it is best suited for those low speed, severe, heavy-duty applications in which high temperatures are encountered and wear protection is critical under conditions of heavy load, shock loading and vibration.

#### ► PEERLESS OG2 RED

Has excellent performance in the presence of water, wide operating temperature range, great rust and corrosion protection and superior adhesive properties.

#### ► PEERLESS XCG-FLEX COUPLING GREASE

Has outstanding mechanical stability and resistance to oil separation. It has a high-load carrying ability, high dropping point and excellent resistance to corrosion and water washout.



PRECISION Synthetic, PRECISION Synthetic 220, PRECISION XL EP2 and PRECISION XL EP1 all meet NLGI Automotive Service Classification GC-LB for wheel bearing and chassis lubrication.



# PRECISION™ GREASES

## FOR ALL YOUR MINING NEEDS

PRECISION greases help your equipment operate under heavier loads and run at higher speeds with longer lubricating intervals. PRECISION XL Molys are widely used in surface mining to protect against vibration and shock loading at low temperatures.

### ► PRECISION GREASES

A premium line of multi-application, lithium greases specially formulated to deliver three levels of protection:

- Better long life protection
- Better water washout protection
- Better extreme pressure protection

PRECISION Synthetic, XL EP1, and XL EP2 all meet NLGI's GC-LB rating.

### ► PRECISION XL EP00

Specially designed for centralized, onboard truck chassis lubrication systems.

### ► PRECISION XL EP000

Specifically designed for use in leaky and poorly sealed gear boxes where the OEM recommends an ISO VG 320 or similar. It is well suited for the gear boxes of continuous miners operating in the coal and potash industries.

### ► PRECISION Synthetic EP00

Provides excellent protection against wear for trailer rear-end and hub assemblies.

### ► PRECISION XL 3 Moly EP1 and EP2 Greases

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.

Both grades are on the Certified Lubricants Listing for the Caterpillar Global Mining (formerly Bucyrus International) MPG – Multi-Purpose Grease (SD 4711) specification.

### ► PRECISION XL 3 MOLY ARCTIC GREASE

NLGI #1 lithium grease formulated to deliver excellent low temperature mobility. It is compounded with 3% molybdenum disulphide for heavy-duty shock loaded off-highway applications.

### ► PRECISION XL 5 MOLY EP0, EP1 AND EP2

Lithium greases are compounded with 5% molybdenum disulphide. They are designed to meet Caterpillar lubricant specifications for their 5130 (7TJ and 5ZL), 5230 (7LL) model Mining Excavators and 994 (9YF) model Wheel Loaders. The EP0 is on the Certified Lubricants Listing for the Caterpillar Global Mining (formerly Bucyrus International) grease specification SD 4711 (Multi-Purpose Grease).



HYDRAULIC FLUIDS

# HYDREX™ HYDRAULIC FLUIDS

## RAISE YOUR GAME

**Lasting up to 3x longer** and offering up to **2x better wear protection<sup>1</sup>** is just the start.

With HYDREX, you can reduce maintenance and mechanical failures, and prolong the life of your equipment. Proven to provide up to 2x<sup>1</sup> better wear protection than global competitors. HYDREX lasts up to 3x<sup>1</sup> longer than global competitors which helps users by 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.



<sup>1</sup>Measured against leading North American hydraulic oil brands.

## HYDREX XV ALL-SEASON HYDRAULIC FLUID

Take your equipment to the highest levels of performance and fuel efficiency.

HYDREX XV combines top-tier wear protection and oil life with versatile design so you can operate across a wide, all-season temperature range. 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.\* 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

Wide temperature range hydraulic fluid – World-class protection and oil life.

HYDREX MV better protects from wear across high and low temperatures, reducing the need for seasonal change-outs and enabling inventory consolidation. 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 (more than 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. Available in ISO 22, 32, 46 and 68 grades.

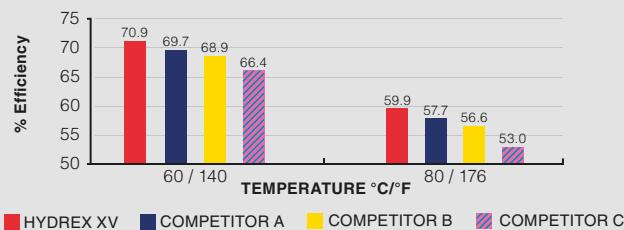
## HYDREX AW

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 construction 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. Available in ISO 22, 32, 46, 68, 80 and 100 grades.

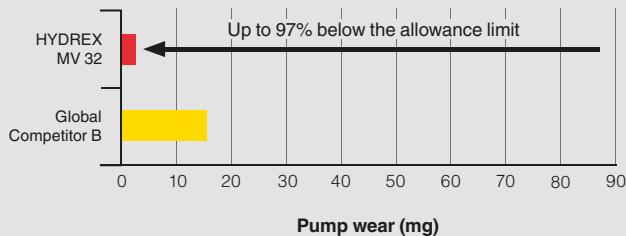
### Overall Pump Efficiency of Multigrade Fluids

(Parker Denison T6CM B06 vane pump, 1500 rpm, 250 bars / 3625 psi)



\*Based on Petro-Canada Lubricants' definition of mobile equipment applications.

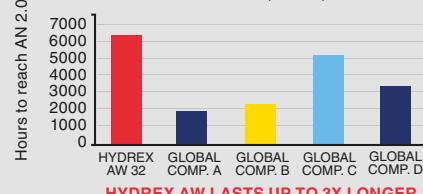
### Eaton 35VQ25 Hydraulic Pump Wear Test



90mg represents the maximum wear allowed per Eaton E-FDGN-TB002-E.

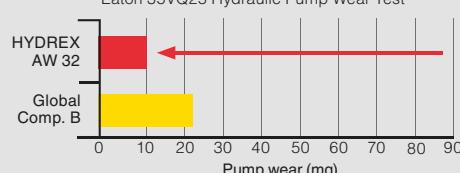
### HYDREX AW Oxidation Life vs. Competing Oils

ASTM D943 Test (ISO 32)



### HYDREX AW Wear Protection vs. Competing Oils

Eaton 35VQ25 Hydraulic Pump Wear Test



HYDREX AW PROVIDES UP TO 2X BETTER WEAR PROTECTION THAN GLOBAL COMPETITORS

90mg represents the maximum wear allowed per Eaton E-FDGN-TB002-E.

# BIODEGRADABLE HYDRAULIC FLUIDS

## BIODEGRADABLE HYDRAULIC FLUIDS

### PROTECTION WITHOUT COMPROMISE

Environmental responsibility is a huge challenge for mining operators, especially in environmentally sensitive areas. Your solution is the ENVIRON line of inherently and readily biodegradable hydraulic fluids. ENVIRON products and HYDREX Extreme are “ashless”, free of heavy metals, non-toxic and recyclable, and last longer than most conventional and vegetable-based hydraulic fluids. ENVIRON has all the performance the mining industry needs. It's future-proof protection for your operations, and the world you operate in.



## ENVIRON MV R READILY BIODEGRADABLE HYDRAULIC FLUID

- Readily biodegradable fluid with year-round protection in any conditions
- Excellent equipment protection in demanding extremes
- Extends equipment life leading to lower costs of operation and ownership



## ENVIRON MV INHERENTLY BIODEGRADABLE HYDRAULIC FLUID

- Designed to keep your construction equipment running smoothly in all seasons
- Enables hydraulic systems to start in temperatures as low as -36°C/-33°F, and provides exceptional lubrication of hydraulic components operating at high temperatures



## ENVIRON AW INHERENTLY BIODEGRADABLE HYDRAULIC FLUID

- Exceptional performance, lasting considerably longer than competitive conventional products
- Maintains excellent anti-wear, rust and corrosion protection to meet the rigorous demands of your construction equipment



## HYDREX EXTREME

- Designed for challenging climates and protection in regions exposed to extreme high and low temperatures
- Enables hydraulic systems to start easily at temperatures as low as -48°C/-54°F with an operating range between -35°C/-31°F to 76°C/169°F in mobile equipment



**TRACTOR  
HYDRAULIC  
FLUIDS**

# **DURATRAN™ TRACTOR HYDRAULIC FLUIDS/ UNIVERSAL TRACTOR TRANSMISSION OILS**

The DURATRAN line stands for extreme performance and durability in your transmissions, differentials, hydraulics, power take-offs, wet brake and power steering mechanisms. Highly resistant to sludge, varnish build-up and fluid thickening, controlled frictional properties and wear protection to keep equipment at its best in all operating conditions.





## DURATRAN SYNTHETIC

DURATRAN Synthetic ultra premium THF/UTTO delivers top performance through all seasons, eliminating seasonal change-outs. It performs at temperatures down to -41°C/-42°F and provides reliable cold and hot weather performance. It maintains OEM specifications such as JDM (J20C and 20D), AGCO, Massey Ferguson, CNH, Kubota UDT and UDT<sup>2</sup>, Mahindra, Volvo WB101 (approved), ZF and industry specification API GL-4. The demanding GIMA MF CMS M1145 approval has also been granted.



## DURATRAN XL SYNTHETIC BLEND

DURATRAN XL Synthetic Blend extended season THF offers exceptional low-temperature performance. This exceptional extended season product is covered by OEM specifications such as JDM (J20D), CNH, Kubota UDT<sup>2</sup>, Mahindra, and industry specification API GL-4.



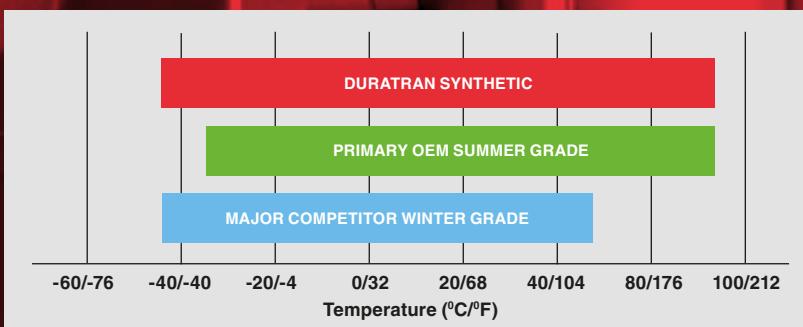
## DURATRAN

DURATRAN is a premium THF/UTTO, offering the best high- temperature summer performance. It maintains OEM specifications such as JDM (J20C), CNH, AGCO, Massey Ferguson, Kubota UDT, Mahindra, Volvo WB101 (approved), ZF and industry specification API GL-4.



**GO LONG:** Wide Oil Operating Temperature Range  
High temperature corresponds to temp where sheared fluid viscosity is at 9.1 cSt (KRL Shear CEC L-45-A-99)  
Low temperature corresponds to temp where Brookfield Viscosity (ASTM D2983) is at 20,000 cP.

Products



DURATRAN Synthetic provides wider protection than either of the major OEM's/competitors summer or winter brands of Tractor Hydraulic Fluid/Universal Tractor Transmission Oil. So, whether the oil temperature falls to -41°C/-42°F or gets as hot as 90°C/194°F you're covered.

# AUTOMATIC TRANSMISSION FLUIDS

## DURADRIVE™ AND DEXRON® AUTOMATIC TRANSMISSION FLUIDS

Automatic Transmission Fluids (ATFs) are some of the most complex lubricants your equipment depends on, needing a precise balance of properties to protect automatic transmissions. The DURADRIVE and DEXRON® lines excel in oxidative stability, low temperature fluidity and wear protection. That means superior automatic transmission performance, extended drains and an improved bottom line.



## ► DURADRIVE HD SYNTHETIC BLEND ATF

SPECIALLY FORMULATED FOR COMMERCIAL  
AND HEAVY-DUTY TRANSMISSIONS.

- Approved for Voith (H55.6336.xx DIWA Service Bulletin 013 and 118, formerly G1363) 72,000 mile and ZF TE-ML 14B extended drain applications
- Approved for Allison C4 (legacy), ZF TE-ML 03D, 04D and 17C (ZF004790). Suitable for use where Caterpillar TO-2, MB 236.1/5/6/7, MAN 339 Type Z2 and 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



## ► DURADRIVE MV SYNTHETIC ATF

FULL SYNTHETIC, HIGH VISCOSITY,  
MULTI-VEHICLE ATF.

- Industry-leading anti-shudder durability (ASD) and frictional stability; exceeding the performance of many genuine OEM fluids
- Suitable\* for use in a wide range of North American, Asian, and European automatic transmissions, power steering and transfer case applications
- Fully approved against Ford MERCON® V and exceeds JASO 1A requirements



## ► DEXRON®-VI

- Delivers twice the service life of DEXRON®-III (H) ATF. Enhanced performance for both new and older transmissions
- Recommended for all 2006 and beyond GM vehicles with automatic transmissions calling for the GMW16444 specification
- Fully back serviceable for DEXRON®-III (H), III(G) and II(E) applications. Suitable for use where Volvo specification 97342 is mandated



## ► DURADRIVE HD SYNTHETIC 668

- High performance full synthetic heavy-duty automatic transmission fluid purpose-designed for transmissions requiring Allison TES 668® specification fluids (Approval # AN668-10012020)
- For severe duty and extended drain intervals in mining operations
- Fully backward compatible with Allison TES 295® fluids.



TES 295® and TES 668® are registered trademarks of Allison Transmission, Inc.

DEXRON® is a registered trademark of General Motors LLC | MERCON® is a registered trademark of Ford Motor Company

\*Always consult the vehicle owner's manual for specific transmission fluid recommendations. For a full listing of suitable for use applications, please consult the technical data sheet (Tech Data) or your Technical Service Advisor.

# ENCLOSED GEAR AND AXLE FLUIDS

## ENDURATEX™ AND TRAXON™ ENCLOSED GEAR AND AXLE FLUIDS

MINING VEHICLE GEARS  
AND AXLES COME UNDER  
RELENTLESS STRESS

Let ENDURATEX and TRAXON help to extend the life of your mining equipment, reduce downtime and maintenance costs, and improve your bottom-line performance.



# TRAXON AXLE GEAR FLUIDS

## ► TRAXON SYNTHETIC

- Full synthetic formulation; excellent year-round protection in extreme weather conditions
- Hypoid axle gear fluids available in 75W-85, 75W-90
- Suitable for use in axle OEM equipment such as Mack/Volvo, Meritor, ZF and others with synthetic extended drain capabilities
- Also available in an SAE 50 grade for use in manual transmission OEM equipment such as Mack/Volvo, Meritor, Eaton and others with synthetic extended drain capabilities

## ► TRAXON XL SYNTHETIC BLEND

- Hypoid axle gear fluids offering excellent low temperature protection, better shear stability and long oil life
- Outstanding, long-lasting protection
- Available in 75W-90 and 80W-140 grades. Suitable for use in OEM equipment such as Mack/Volvo, Meritor, ZF and others

# ENDURATEX ENCLOSED GEAR LUBRICANTS

## ► ENDURATEX SYNTHETIC EP

- Premium performance, extreme pressure lubricants designed for enclosed industrial gears and bearings
- Operate under severe load conditions, such as heavy loading, slow speed, shock loads and in wide extremes of temperature

## ► ENDURATEX SYNTHETIC OHV 680

- Premium performance, extreme pressure lubricant that is approved against the General Electric D50E35E specification for use in the lubrication of both DC and AC motorized wheel gearbox applications in off-highway haul trucks
- Optimized oil film that reduces friction in gearboxes
- High viscosity index allows the fluid to maintain a high viscosity and film strength at high operating temperatures



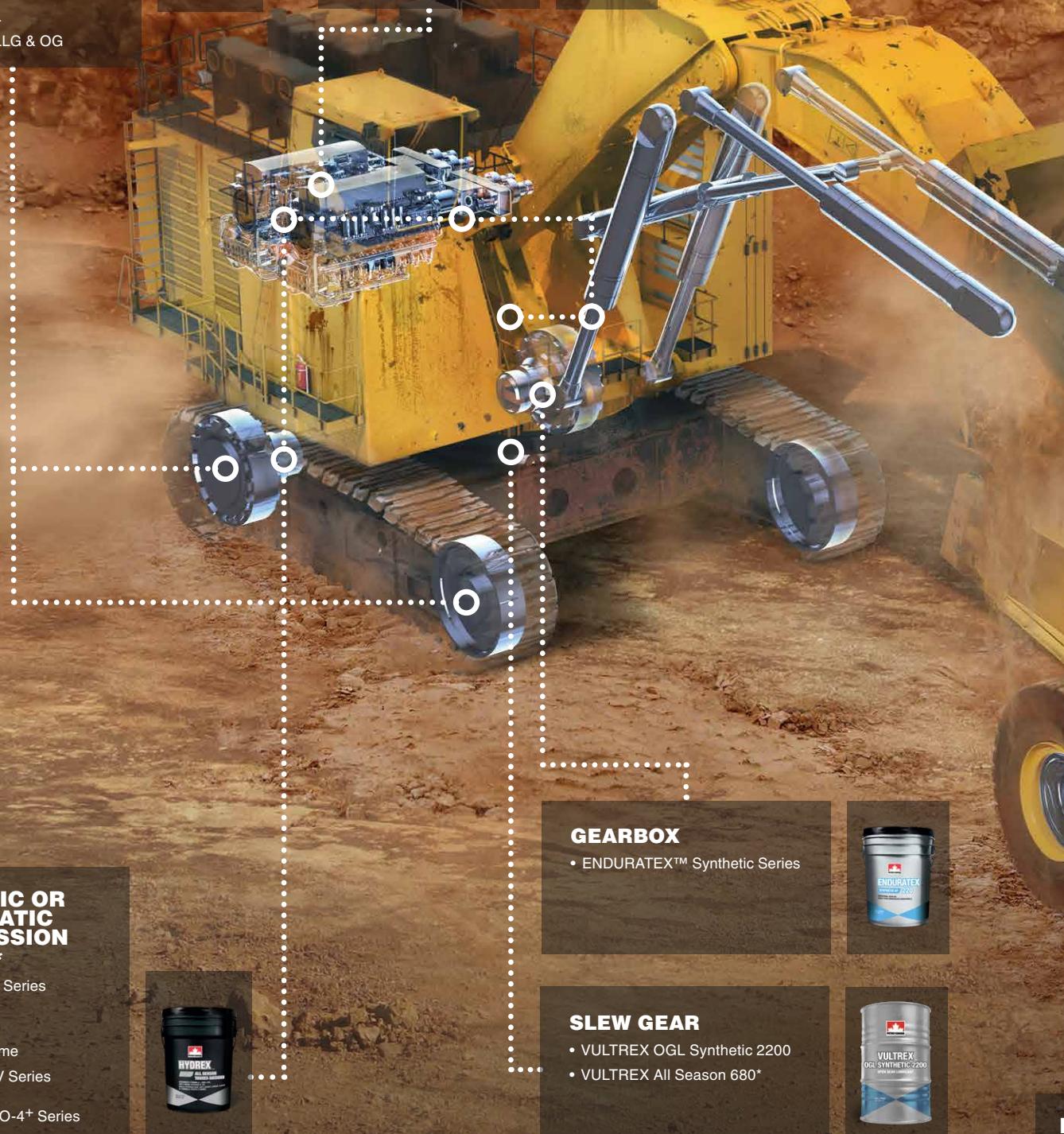
### **BEARINGS/ PINS/BUSHINGS**

- VULTREX™ OGL Synthetic 2200 & All Season 680\*
- PRECISION™ XL 3 Moly & 5 Moly
- PRECISION Synthetic
- PRECISION XL
- PEERLESS™ LLG & OG



### **ENGINE CRANKCASE**

- DURON™ HP
- DURON SHP
- DURON UHP



### **HYDRAULIC OR HYDROSTATIC TRANSMISSION SYSTEM\*\***

- HYDREX™ MV Series & AW Series
- HYDREX XV
- HYDREX Extreme
- ENVIRON™ MV Series & AW Series
- PRODUTO™ TO-4+ Series



### **GEARBOX**

- ENDURATEX™ Synthetic Series



### **SLEW GEAR**

- VULTREX OGL Synthetic 2200
- VULTREX All Season 680\*



# **LUBRICATION PROTECTION FOR SURFACE MINING EQUIPMENT**

Note: These are general guidelines containing select Petro-Canada Lubricants products that may be most suitable for your equipment. The product lists reflect general recommendations only, and does not constitute a final recommendation. Please consult your original equipment manufacturer lubricant requirements for final recommendations. Please contact a Petro-Canada Lubricants representative or visit our website, [lubricants.petro-canada.com](http://lubricants.petro-canada.com) for more information and our complete product listing.

\* The slew ring gear on Komatsu hydraulic shovels requires lubrication with a grease from their approved list. VULTREX OGL Synthetic All Season 680 and VULTREX OGL Synthetic 2200 have this approval.

\*\* Certain equipment models have common hydraulic or hydrostatic transmission system that works together with the same fluid. It is always best to follow the OEM recommendations to ensure you are using the right fluid in the equipment.

## BEARINGS & GENERAL PURPOSE GREASE

- PRECISION Synthetic
- PRECISION XL



## PINS & BUSHINGS

- PRECISION XL 3 Moly & XL 5 Moly
- PEERLESS 3 Moly 322



## HYDRAULIC

- HYDREX MV Series
- HYDREX XV
- HYDREX Extreme
- ENVIRON MV Series
- ENVIRON MV R Series
- PRODUCRO TO-4+ Series



## TRANSMISSION / DIFFERENTIAL / HYDRAULIC

- PRODUCRO TO-4+ Series



## WHEEL MOTORS

- ENDURATEX™ Synthetic OHV 680



## STRUTS

- PC HEAVY DUTY SUSPENSION FLUID



## AXLES

- TRAXON Series



## COOLANT SYSTEM

- HD EXPERT PREMIUM

## FINAL DRIVE

- PRODUCRO FD-1 Series
- PRODUCRO TO-4+ Series



## ENGINE CRANKCASE

- DURON HP
- DURON SHP
- DURON UHP



# **PETRO-CANADA LUBRICANTS. PROUD TO BE AN HF SINCLAIR BRAND.**

Choosing the Petro-Canada Lubricants brand gives you access to the resources and global supply chain of a world leader, HF Sinclair. We are an independent petroleum refiner and producer of high-quality lubricants and specialty products, with facilities across North America and Europe. That global reach and logistical support is there for every customer.

## **UNRIVALLED TECHNICAL EXPERTISE**

Petro-Canada Lubricants products have been performing in the toughest industries and applications for more than 30 years. They're tested in the most extreme conditions and surpass the most demanding Original Equipment Manufacturer (OEM) standards, to make you more successful.

## **NEXT LEVEL CUSTOMER SUPPORT**

When other suppliers are pulling back from customer support, HollyFrontier is investing in it. We're 100% committed to working with you as a partner. Our mining lubricant specialists are ready to work with your teams onsite, where it matters most, to help you:

- optimize your product choices
- find solutions that increase productivity, minimize downtime and save money
- carry out lube surveys and develop cost-savings models
- help you consolidate your lubrication product inventories
- train your teams on lubricant optimization

## **BUSINESS MADE EASY**

Time is money, so we make it easy to do business with us. By doing the simple things brilliantly, we set you free to grow your business.

# 360 TECHNICAL EXPERTISE.

THE COMPLETE SUPPORT SERVICE.

From smart product selection tools to performance-optimizing oil diagnostics and industry-leading reliability services, no one offers a support package like 360 Technical Expertise. Choose Petro-Canada Lubricants, and it's all yours, to make your life easier and your business more successful.



## OIL DIAGNOSTICS

State of the art oil analysis and diagnostics. **Maximize your equipment reliability and efficiency to save you money.**



## SAVING SOLUTIONS

Work with our experts to create a product optimization strategy. **Uncover real, measurable and sustainable cost and productivity savings.**



## TARGETED TRAINING

Learn from the best in the industry. **Elevate your teams to tackle any challenge.**



## RELIABILITY SERVICES

One of the most comprehensive reliability service offerings, from equipment inspections and optimization to storage assessments. **Everything you need to maximize your productivity and uptime.**



## PRODUCT SELECTOR

Finding the right product for your application has never been easier. **Get the answers you need, fast.**



## CERTIFIED CLEAN

Meet and exceed OEM and industry cleanliness requirements. **We can provide Guaranteed Cleanliness Filtration.**



# APPROVED FOR YOUR EQUIPMENT BY THE WORLD'S OEMs

## HEAVY-DUTY ENGINE OIL Recommended Applications

Products		DURON HP 15W-40		DURON SHP 15W-40		DURON SHP 10W-30		DURON UHP 10W-40		DURON UHP 5W-30		DURON UHP 5W-40		DURON UHP 0W-30		DURON UHP 0W-40	
 ACEA	ACEA	✓	E7, E11	✓	E7, E11	✓	E7, E11	✓	E7, E11	✓	E7, E9	✓	E7, E9				
 Allison	Allison											★	TES 439				
 API AMERICAN PETROLEUM INSTITUTE	API	★	CK-4 / SN	★	CK-4 / SN	★	CK-4 SN*	★	CK-4 / SN	★	CK-4 SN*	★	CK-4 SN	•	CK-4 / SN	•	CK-4 / SN
 Caterpillar	Caterpillar	✓	ECF-3, TO-2	✓	ECF-3, TO-2	✓	ECF-3, TO-2	✓	ECF-3, TO-2	✓	ECF-3	✓	ECF-3, TO-2	•	ECF-3, TO-2	•	ECF-3, TO-2
 Cummins	Cummins	★	CES 20086	★	CES 20086	★	CES 20086	★	CES 20086	★	CES 20086	★	CES 20086	•	CES 20086	•	CES 20086
 Detroit Diesel	Detroit Diesel	★	DFS 93K222	★	DFS 93K222	★	DFS 93K222	★	DFS 93K222	★	DFS 93K222	★	DFS 93K222				
 Deutz	Deutz	★	DOC III-18 LA	★	DOC III-18 LA			★	DQC III-18 LA								
 Ford	Ford	★	WSS-M2C171-F1	★	WSS-M2C171-F1	★	WSS-M2C171-F1	★	WSS-M2C171-F1	★	WSS-M2C171-F1	★	WSS-M2C171-F1				
 GM	GM	•	9985930	•	9985930	•	9985930	•	9985930								
JASO	JASO	•	MA2, DH-1 DH-2	•	MA2, DH-1 DH-2	•	MA2, DH-1 DH-2	•	MA2, DH-1 DH-2	•	MA2	•	MA2, DH-1, DH-2	•	MA2	•	MA2
 Mack	Mack	★	EOS-4.5	★	EOS-4.5	★	EOS-4.5	★	EOS-4.5	★	EOS-4.5	★	EOS-4.5				
 MAN	MAN	•	3575, 3275-1	•	3575, 3275-1							•	3575				
 Mercedes-Benz**	Mercedes-Benz**	★	228.31	★	228.31	★	228.31	•	228.31								
 MTU	MTU	★	Type 2.1	★	Type 2.1			•	Type 2.1			•	Type 2.1				
 Renault	Renault	★	RLD-3	★	RLD-3	★	RLD-3	★	RLD-3	★	RLD-3	★	RLD-3				
 Volvo	Volvo	★	VDS-4.5	★	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.

\*\* DTFR 15C100 is formerly known as MB 228.31.

★ Approved for Use | • Suitable for Use | ✓ Meets Specifications

## GEAR OILS Recommended Applications

Products	TRAXON 80W-90	TRAXON 85W-140	TRAXON XL Synthetic Blend 75W-90	TRAXON XL Synthetic Blend 80W-140	TRAXON 75W-85	TRAXON Synthetic 75W-90	TRAXON E Synthetic 75W-90	TRAXON E Synthetic 80W-140	TRAXON E Synthetic MTF	TRAXON Synthetic CD-50	TRAXON Synthetic MTF 75W-80
API GL-4										✓	✓
API GL-5	✓	✓	✓	✓	✓	✓	✓	✓			
API MT-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bosch TE-ML 08											•
CNH MAT 1316	•	•									
CNH MAT 3511		•		•		•					
Dana CVSD SHAES 256 Rev E (EATON TCMTO020-EN U.S Listed)							★				
Dana CVSD SHAES 429 Rev A * (EATON TCMTO020-EN U.S Listed)							★	★			
Detroit Diesel DFS93K219.01							✓				
Eaton PS-164 Rev 7 (obsolete)											•
Eaton PS-386 ** (TMCT00200-EU U.S Listed)									★		
Ford M2C-94A / M2C-197A	•										
Ford M2C-200B and M2C-201A			•			•					
International TMS 6816 / Navistar MPAPS B-6816 Type I							✓				
International TMS 6816 / Navistar MPAPS B-6816 Type II									✓		•
Inveco 18-1807 MGS-1											•
John Deere JDM J11E	•	•	•	•	•	•	•	•	✓	✓	
Navistar MPAPS B-6821									★		
Mack GO-J	★	★	★	★	★	★			★		
Mack GO-J Plus							★				
Mack TO-A Plus									★		•
MAN 342 Typ M1 (obsolete)	★	•				★	•	•			
MAN 342 Typ M2	★				•	★					
MAN 341 Typ Z4***											★
Meritor 0-76-A (obsolete)		✓									
Meritor 0-76-B (obsolete)				✓					✓		
Meritor 0-76-D (obsolete)		✓									
Meritor 0-76-E (obsolete)			✓				✓		✓		
Meritor 0-76-Q (obsolete)							•				
Meritor 0-76-N (obsolete)							★				
Meritor 0-76-R (obsolete)									•		
Meritor 0-80 (obsolete)									•		
Meritor 0-81									★		•
Meritor 0-94	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Meritor 0-95						★	★	★			
SAE J2360***	★ PRI GL 1253	★ PRI GL 1252	★ PRI GL 1254	★ PRI GL 0891	★ PRI GL 1013	★ PRI GL 1251	✓	✓			
Scania STO 1:0 (axles)		✓									
Scania STO 1:0 (axles and gearboxes/MT)			✓				✓				
Volvo Std 1273.05 - 97305										•	•
Volvo Std 1273.07 - 97307										•	•
Volvo Std 1273.10 - 97310	•	•	•	•	•	•					
Volvo Std 1273.12 - 97312											
Volvo Std 1273, (15-18 & 19) - 973 (15, 18 & 19)											•
Voith Retarder Class B											•
ZF TE-ML -01L, 02L, 13 (where stipulates ZF TE-ML 02L), 16K											★ (ZF002286)
ZF - Freedom Line (ZF-AS Tronic) - Applications											✓
ZF - Ecolite, Econid, Etronic-Applications											✓
ZF TE-ML - 17B	★ (ZF000764 and ZF003389)						★ (ZF002212)				
ZF TE-ML - 05A, 12M, 16B, 19B, 21A	★ (ZF000764 and ZF003389)										
ZF TE-ML - 05A, 12M, 16D, 21A		★ (ZF000778 and ZF003390)			★ (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.

\*\*\* Approval from MAN North America only.

\*\*\*\* SAE J2360 global standard (formerly MIL-PRF-2105E).

★ Approved for Use | • Suitable for Use | ✓ Meets Specifications

## GEAR OILS Recommended Applications - Continued

Products	ENDURATEX SYNTHETIC EP 150	ENDURATEX SYNTHETIC EP 220	ENDURATEX SYNTHETIC EP 320	ENDURATEX SYNTHETIC EP 460	ENDURATEX SYNTHETIC OHV 680
Flender Gear Units Rev. 16 - Helical, Bevel, and Planetary Gear Units	★	★	★	★	
General Electric D50E35E - Off-Highway Vehicle Motorized Wheel Gearbox					★
WIFAG - CLP HC 150, 220, 320, 460 Gearbox	★	★	★	★	
DIN 51517-3 (CLP)	✓	✓	✓	✓	✓
AIST 224 (Formerly US Steel 224)	✓	✓	✓	✓	✓
MAG IAS (formerly known as Cincinnati Machine)	✓	✓	✓	✓	✓
David Brown S1.53.101 Type E	✓	✓	✓	✓	✓
ANSI/AGMA 9005-F16	✓	✓	✓	✓	✓

★ Approved for Use | ✓ Meets Specifications

## SPECIALTY HYDRAULIC FLUIDS Recommended Applications

Products	ENVIRON AW 32	ENVIRON AW 46	ENVIRON AW 68	ENVIRON MV 32	ENVIRON MV 46	ENVIRON MV R 32	ENVIRON MV R 46
Bosch Rexroth	•	•	•	•	•	•	•
Denison HF-0	★	★	★	★	★	★	★
Eaton Brochure 03-401-2010	★	★	★	★	★	★	★
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

★ Approved for Use | • Suitable for Use | ✓ Meets Specifications

## HYDRAULIC FLUIDS Recommended Applications

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	HYDREX MV Arctic 15	HYDREX Extreme
Bosch Rexroth	•	★	★	★	•	•	•	•	•	•	•	•	•
Dension HF-0, HF-1, HF-2	•	★	★	★	•	•	•	★	★	★	★	•	•
Dynex	•	•	•	•	•	•	•	•	•	•	•	•	•
Eaton E-FDGN-TB002-E	★	★	★	★	•	★	★	★	★	★	★	•	•
Hydrexco	•	•	•	•	•	•	•	•	•	•	•	•	•
Karl Mayer	★	★											
Komatsu	•	•	•	•	•	•	•	•	•	•	•	•	•
Liebherr Crane													•
Link-Belt											★		★
Oilgear	•	•	•	•	•	•	•	•	•	•	•	•	•
Danfoss Power Solutions	•	•	•	•	•	•	•	•	•	•	•	•	•
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	•	•						•	✓		•		

★ Approved for Use | • Suitable for Use | ✓ Meets Specifications

## TRANSMISSION DRIVE TRAIN OILS Recommended Applications

Products	PRODUCRO TO-4+ 10W, 30, 50, 60	PRODUCRO TO-4+ XL Synthetic Blend Lo-Temp	PRODUCRO TO-4+ Synthetic All Season	PRODUCRO TO-4+ UHP
Allison C-4 for transmission (obsolete)	•	•	•	•
API GL-3 for Gear (obsolete)	✓	✓	✓	✓
API CD for Diesel Engine (obsolete)	✓	✓	✓	✓
Caterpillar TO-4	✓ Recommended for use in Caterpillar powershift and hydrostatic transmissions*, wet brake mechanisms, differentials and final drives and hydraulics	✓ Recommended for use in Caterpillar powershift and hydrostatic transmissions*, wet brake mechanisms, differentials and final drives and hydraulics	✓ Recommended for use in Caterpillar powershift and hydrostatic transmissions*, wet brake mechanisms, differentials and final drives and hydraulics	✓ Recommended for use in Caterpillar powershift and hydrostatic transmissions*, wet brake mechanisms, differentials and final drives and hydraulics
ZF Transmission	• TE-ML 03C (SAE 10W and SAE 30) and TE-ML 07F (SAE 30 only)		• TE-ML 03C	• ZF TE-ML 03C
Komatsu KES 07.868.01	•	•	•	•

Products	PRODUCRO FD-1 60	PRODUCRO FD-1 Synthetic
Caterpillar FD-1	✓ For Caterpillar final drives and axles **	✓ For Caterpillar final drives and axles **

\* Refer to "Caterpillar Machine Fluids Recommendations" service publication SEBU 6250 (Most Recent Version) for more specific information.

\*\* FDAO fluids are not recommended for use in compartments which contain friction materials unless a FD-1 type of product is specified.

★ Approved for Use | • Suitable for Use | ✓ Meets Specifications

# TRACTOR HYDRAULIC FLUIDS/UNIVERSAL TRACTOR TRANSMISSION OIL

## Recommended Applications

Products	DURATRAN	DURATRAN XL Synthetic Blend	DURATRAN Synthetic
AGCO (Deutz-Allis/Allis/Challenger/Fendt/GSI/Valtra)	• Power Fluid 821XL, 272843, 257541, 246634, Valtra G2-08, G2-98	• Power Fluid 821XL, 272843, 257541, 246634	• Power Fluid 821XL, 272843, 257541, 246634, Valtra G2-98
Allison	• Type C-4 and C-3 Fluid (obsolete)	• Type C-4 and C-3 Fluid (obsolete)	• Type C-4 and C-3 Fluid (obsolete)
API	• GL-4	• GL-4	• GL-4
Case New Holland (CASE I.H., J.I. CASE NEW HOLLAND GROUP)	• MAT 3540, MS-1209/MAT 3505, MS-1210/JIC-145/MAT 3506, MS-1230/CNH MAT 3509, ESN-M2C134-D/MAT 3525, MS-1207, MS-1206, MS-1205, MS-1204/JIC-185, B-6, B-5, JIC-144, JIC-143, FNHA-2-C-201.00, ESN-M2C134-A/B/C, ESN-M2C86-B/C, ESN-M2C53-A, ESN-M2C48-B	• MS-1209/MAT 3505, MS-1210/JIC-145/MAT 3506, MS-1230/CNH MAT 3509, ESN-M2C134-D/MAT 3525, MS-1207, MS-1206, MS-1205, MS-1204/JIC-185, B-6, B-5, JIC-144, JIC-143, FNHA-2-C-200.00, ESN-M2C134-A/B/C, ESN-M2C86-B/C, ESN-M2C53-A, ESN-M2C48-B	• MS-1209/MAT 3505, MS-1210/JIC-145/MAT 3506, MS-1230/CNH MAT 3509, MAT 3526, ESN-M2C134-D/MAT 3525, MS-1207, MS-1206, MS-1205, MS-1204/JIC-185, B-6, B-5, JIC-144, JIC-143, FNHA-2-C-201.00, FNHA-2-C-201.00A (134-D), FNHA-2-C-200.00, ESN-M2C134-A/B/C, ESN-M2C86-B/C, ESN-M2C53-A, ESN-M2C48-B
Caterpillar	• TO-2 (obsolete)	• TO-2 (obsolete)	• TO-2 (obsolete)
Clark	• Lift Truck Transmission Fluid, TA12, TA18, HR 600	• Lift Truck Transmission Fluid, TA12, TA18, HR 500	• Lift Truck Transmission Fluid, TA12, TA18, HR 500, HR 600
DANA			★ DANA UTTO-LV
Dresser Construction Equipment Division	• Transmission/Hydraulic Fluid	• Transmission/Hydraulic Fluid	• Transmission/Hydraulic Fluid
EATON (Vickers)	• M-2950S, I-286-S	• M-2950S, I-286-S	• M-2950S, I-286-S
GIMA (AGCO/Class tractor SAS)	• GIMA MF CMS M1145, GIMA MF CMS M1141	• GIMA MF CMS M1141	★ GIMA MF CMS M1145 • GIMA MF CMS M1141
Hesston-Fiat	• Olioifat Tutela Multi-F, AF-87	• Olioifat Tutela Multi-F, AF-87	• Olioifat Tutela Multi-F, AF-87
John Deere	• J20C	• J20D	• J20C, J20D
Komatsu	• KES 07.866		• KES 07.866
Kubota	• UDT	• UDT <sup>2</sup>	• UDT, UDT <sup>2</sup>
Landini	• Tractor II Hydraulic Fluid	• Tractor II Hydraulic Fluid	• Tractor II Hydraulic Fluid
Massey-Ferguson	• M-1141, M-1135, M-1143, M-1145*, M-1129-A, M-1127-A/B, M-1110	• M-1141, M-1135, M-1143, M-1129-A, M-1127-A/B, M-1110	★ M-1145* • M-1141, M-1135, M-1143, M-1129-A, M-1127-A/B, M-1110
Parker (Abex/Denison)	• HF 0/1/2	• HF 0/1/2	• HF 0/1/2
Plessey/Sundstrand	• Hydraulic Fluid	• Hydraulic Fluid	• Hydraulic Fluid
Steiger	• SEMS 17001	• SEMS 17001	• SEMS 17001
Sundstrand	• Hydrostatic Transmission Fluid	• Hydrostatic Transmission Fluid	• Hydrostatic Transmission Fluid
Versatile	• ESN-M2C134-D, Hydraulic/Gear Fluid Spec 24M, Spec 23M	• ESN-M2C134-D, Hydraulic/Gear Fluid Spec 24M, Spec 23M	• ESN-M2C134-D, Hydraulic/Gear Fluid Spec 24M, Spec 23M
Volvo	★ Std 1273,03-97303 WB 101		★ Std 1273,03-97303 WB 101
White Farm (Oliver)	• Q-1826, Hydraulic Transmission Fluid (HTF), Q-1802, Q-1766B, Q-1722, Q-1705	• Q-1826, Hydraulic Transmission Fluid (HTF), Q-1802, Q-1766B, Q-1722, Q-1705	• Q-1826, Hydraulic Transmission Fluid (HTF), Q-1802, Q-1766B, Q-1722, Q-1705
ZF	• TE-ML 03E, 05F, 06K, 21F (axles)		• TE-ML 03E, 05F, 21F (axles)

\* Note: For UTTO applications only. Do not use in engine application where Super Tractor Oil Universal (STOU) are recommended.

Note: Many Tractor OEM's have since been consolidated to one Brand. Specifications have been noted to be the last known specification published for specific Tractor brand names. Check with your OEM supplier for the latest lubricant specification required for your equipment or your OEM Manual.

★ Approved for Use | • Suitable for Use | ✓ Meets Specifications

# AUTOMATIC TRANSMISSION FLUIDS Recommended Applications

Application / Specification		DuraDrive HD Synthetic 668	DEXRON®-VI	DuraDrive MV Synthetic ATF	DuraDrive HD Synthetic Blend ATF
North American OEM					
Allison TES 668®		★ AN668-10012020			
Allison V-730D, C-4 (Obsolete)					★ C4-29493700 (legacy)
Caterpillar TO-2 (Obsolete)					•
Chrysler ATF+3®, MOPAR ASRC			•		
Chrysler/Dodge/Jeep PN# 68043742AA			•		
Ford FNR5			•		
Ford MERCON® V			○ M5080701		•
Ford MERCON®			•	•	•
General Motors DEXRON®-VI (GMW16444)		○ J-60001			
General Motors DEXRON® II (IID, IIE), DEXRON® III (IIIF, IIIG, IIH) (obsolete)		★ H-36006 (legacy)	•		★ H-36007 (legacy)
European OEM – High Viscosity Specification/Vehicle	European OEM – Low Viscosity Specification/Vehicle				
MAN 339 Typ V1			•		
MAN 339 Typ Z2 and V2					•
Mercedes-Benz 236.1/2/3/5/6/7/9/11/12/14/15/.41/.81				• *	
Mercedes-Benz 236.1/5/6/7					•
Mercedes-Benz MB 236.41/DTFR 10B100			★		
Mercedes-Benz MB 236.92/DTFR 13C190		★			
Voith Transmission - 36,000 mile standard drain interval (H55.6335.xx DIWA Service Bulletin 013 and 118, formerly G1363)		★	★		
Voith Transmission - 72,000 mile extended drain interval (H55.6336.xx DIWA Service Bulletin 013 and 118, formerly G1363)					★
Volvo STD 1273,41 - transmission oil 97341 (AT101)		★ #97341-086			•
Volvo 97342			•		
Volvo 4 speed (P/N 1161621)	Volvo 6 speed MY 2011-2013 (P/N 31256774 or 31256675)			• *	
Volvo P/N 1161540/1161640 <sup>1</sup>				• *	
VW G 052 162, G 052 990, G 055 025	VW G 052 540, G 055 005, G 055 162			• *	
ZF TE-ML 09, 11 (3/4/5 speed)	ZF 6 speed (S671 090 255)			• *	
ZF TE-ML 03D, 04D, 17C					★ ZF004790
ZF TE-ML 16L					•
ZF TE-ML 14A (standard drain)		•			
ZF TE-ML 14B, 14C (standard drain - for on-highway use in buses and coaches only)		•			
ZF TE-ML 14B extended drain applications					★ ZF004790

Always consult your vehicle owner's manual for specific transmission fluid recommendations.

\* For low viscosity specifications/vehicles, please note the following: DuraDrive™ MV Synthetic ATF is a high viscosity formulation and does not meet the viscosity profiles of these low viscosity specifications. Field testing results have demonstrated proof of no harm but product will not provide the potential fuel economy benefits of the low viscosity genuine oils.

<sup>1</sup> Except AWTF80-SC transmissions or MY 2008-2010 V70.

ATF+3® is a trademark of FCA US LLC, used under license.

DEXRON® is a registered trademark of General Motors LLC. MERCON® is a registered trademark of Ford Motor Company.

TES 668® is a registered trademark of Allison Transmission, Inc.

★ Approved for Use | • Suitable for Use | ✓ Meets Specifications | ○ Licensed

## 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 outstanding cold weather performance without compromising high temperature lubrication.
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 grease 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.
PEERLESS 3 MOLY 322	2	Calcium Sulphonate Complex (Colour = Grey)	-15 to 170	Specially designed as a high viscosity, heavy-duty grease for off-road and construction equipment.
PRECISION Synthetic Moly	1	Lithium Complex (Colour = Grey)	-40 to 170	Formulated for shock loaded mobile equipment in mining, forestry and construction applications.
PRECISION XL 3 Moly EP1	1	Lithium (Colour = Green/Grey)	-25 to 135	Heavy-duty mining and construction applications including ball mills, conveyor and crusher bearings, off-highway operations
PRECISION XL 3 Moly EP2	2	Lithium (Colour = Green/Grey)	-15 to 135	Heavy-duty mining and construction applications including ball mills, conveyor and crusher bearings, off-highway operations
PRECISION XL 5 Moly EP0	0	Lithium (Colour = Grey)	-50 to 120	Designed for protection against vibration and shock loading, suitable for the lubrication requirements of heavy-duty shock loaded equipment in off-highway operations
PRECISION XL 5 Moly EP1	1	Lithium (Colour = Grey)	-30 to 135	Designed for protection against vibration and shock loading, suitable for the lubrication requirements of heavy-duty shock loaded equipment in off-highway operations
PRECISION XL 5 Moly EP2	2	Lithium (Colour = Grey)	-25 to 135	Designed for protection against vibration and shock loading, suitable for the lubrication requirements of heavy-duty shock loaded equipment in off-highway operations

## SPECIALTY GREASES Recommended Applications

Products	VULTREX OGL SYNTHETIC ALL SEASON 680	VULTREX OGL HEAVY 6200	VULTREX OGL SYNTHETIC 2200
Caterpillar SD 4713	★	★ (including special requirement for electric mining shovel hoist gears)	★
Komatsu PC3000/6	★		★
Komatsu PC4000/6	★		★
Komatsu PC5500/6	★		★
Komatsu PC8000/6	★		★
P&H 464	✓	✓	✓

\* Approved for Use | ✓ Meets Specifications

### VULTREX OGL SYNTHETIC ALL SEASON 680

- Designed for use in extremely cold weather on resource industry equipment such as shovels, draglines, excavators, blasthole drills, tracked equipment and other slow moving vehicles
- Suitable for use in centralized greasing systems
- Suitable for year round use in many climates with an operating temperature range of -40°C to 25°C (-40°F to 77°F)

### VULTREX OGL HEAVY 6200

- Suited for the most demanding open gear lubrication requirements and high temperature conditions where low temperature pumpability is not a requirement
- Specifically intended for lubricating hoist gear and pinions on Caterpillar and Bucyrus International electric rope shovels
- Suitable for use in centralized greasing systems
- Operating temperature range -5°C to 60°C (23°F to 140°F)

### VULTREX OGL SYNTHETIC 2200

- Designed for use on resource industry equipment such as shovels, draglines, excavators, blasthole drills, tracked equipment and other slow moving vehicles
- Suitable for use in centralized greasing systems
- Provides excellent wash-off resistance from the shovel stick under all weather conditions and has an operating temperature range of -15°C to 40°C (5°F to 104°F)

### VULTREX MPG SYNTHETIC ARCTIC

- Formulated for centralized greasing systems on heavy-duty off-highway and mining equipment, operating in extreme low temperature conditions

### VULTREX MPG EP1

- For use with centralized greasing systems with an operating range of -25°C to 160°C (-13°F to 320°F)
- Specific applications include off-highway vehicle chassis and wheel bearings, ball mill conveyor and crusher bearings, low-medium speed gear couplings, and steel mills, especially for bearings on slab casters

### VULTREX MPG EP2

- Formulated for lubricating heavily loaded plain or anti-friction bearings as well as sliding surfaces moving at low to moderate speeds, operating range is -20°C to 160°C (-4°F to 320°F)
- Specific applications include off-highway vehicle chassis and wheel bearings, ball mill conveyor and crusher bearings, low-medium speed gear couplings, and steel mills, especially for bearings on slab casters

## SPECIALTY GREASES Recommended Applications

Products	VULTREX ROCK DRILL EP000
Boliden-Allis	
Dominion	
Falk	
Fuller	
Ingersoll-Rand	✓
Joy Global	✓
Koppers	
Metso (Svedala)	
Parts Headquarters	✓
UBE	
Worthington	✓

✓ Meets Specifications

### **VULTREX DRILL ROD HEAVY**

- Designed for use on diamond drill rods where it reduces friction between the rod and rock strata

### **VULTREX G-124**

- Designed specially to lubricate heavy-duty truck components such as wheel bearings, bushings, king pins, chassis points, etc. encountered in the mining, forestry and transportation industries.
- Operating range is from -20°C to 160°C (-4°F to 320°F)

### **VULTREX ROCK DRILL EP000**

- Formulated for the lubrication of air operated rock drills and similar mining equipment used in underground mining
- Can be applied easily at fairly low temperatures in the 0°C to 5°C (32°F to 41°F) range but field testing has confirmed it will still flow down to -20°C / -4°F

# **PETRO-CANADA LUBRICANTS NO-NONSENSE WARRANTY**

"We will repair damaged equipment, or replace damaged equipment parts resulting from a failure due to defects of the Petro-Canada Lubricants product, 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](http://petrocanadalubricants.com)**  
or contact us at **[lubecsr@HFSinclair.com](mailto:lubecsr@HFSinclair.com)**

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LUB1586E (2023.12)



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