



# STRONGER OPERATIONS.

FACT.

# STRONGER The construction industry. LUBRICANTS. It's never been a tougher place.

Time is a relentless pressure on profitability. And from giant city projects to the most remote and difficult builds, operating conditions are often extreme.

Every disruption to your dozers and excavators, loaders and dump trucks, carries heavy cost penalties. Every pause for maintenance costs you in parts, labour - and lost time.

And the reliability and productivity of your equipment depends on the strength and quality of your fluids and greases.

There's major value to your operations in reducing cost everywhere you can, from stretching oil drain intervals to the Big One – lowering long-term operating costs.

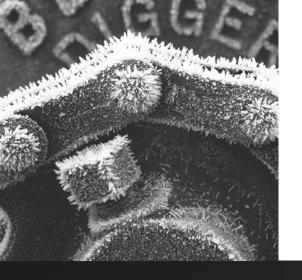
That's why using the wrong lubricants can be so costly - and why using the right ones is so valuable.

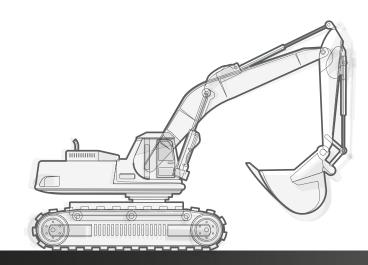
#### PRODUCTIVITY, POWERED BY PETRO-CANADA LUBRICANTS

Here's another fact. Petro-Canada Lubricants has a long standing proven track record in off-road operations. This stems from our extensive experience providing the toughest lubricants for the toughest operations out there.

Every product in our latest line of engine oils, gear oils, specialty fluids and greases has been engineered specifically to make your construction operations more robust, more efficient and more profitable.







#### HEAVY-DUTY DIESEL ENGINE OILS

DURON

Shaped by the demands of the new API CK-4 category, the DURON product line is the most durable we've ever made.

This strength enables DURON to go beyond the toughest category performance requirements including shear stability, oxidation resistance and aeration control. Stronger oil means better, longer-lasting protection, no matter how extreme your operating conditions.

DURON delivers what you need most – exceptional engine protection you can believe in, to make you more productive than ever before, however tough it gets.

#### **HYDRAULIC FLUIDS**

HYDREX™ lasts longer and offers better wear protection. HYDREX means more uptime, increased productivity and better energy efficiencies.

TRACTOR HYDRAULIC FLUIDS/UNIVERSAL TRACTOR TRANSMISSION OILS

DURATRAN™ is proven to last longer than the leading competitors; meeting the latest Tractor OEM specifications such as John Deere (JDM).

#### TRANSMISSION DRIVE TRAIN OILS

PRODURO™ ensures your construction equipment operates under optimal viscosity resulting in better protection; meeting the latest Construction OEM specifications such as Caterpillar (TO-4 and FD-1).

#### GREASES

PRECISION™ is a line of multi-application lithium greases formulated to provide long service protection over a wide temperature range and reduce operating costs.

#### GEAR OILS/MANUAL TRANSMISSION FLUIDS

TRAXON™ provides superb wear protection to extend equipment life and reduce maintenance costs; TRAXON axle fluids meet the latest API GL-5 / SAE J2360 specifications and TRAXON manual transmission fluids meet API-GL-4 and API MT-1.

#### **AUTOMATIC TRANSMISSION FLUIDS**

DuraDrive™ ATFs excel in oxidation stability and low temperature performance to deliver essential wear protection and productivity benefits.



#### **DURON**

THE TOUGHER.

THE BETTER™

Keeping your business profitable, efficient and ahead of your competitors has never been tougher.

But tough is just the way we like it.

So we've made DURON our most durable, most protective, most advanced product line ever.

DURON's ready to improve your reliability, extend your drain intervals, and keep you operating, however extreme your operating conditions.

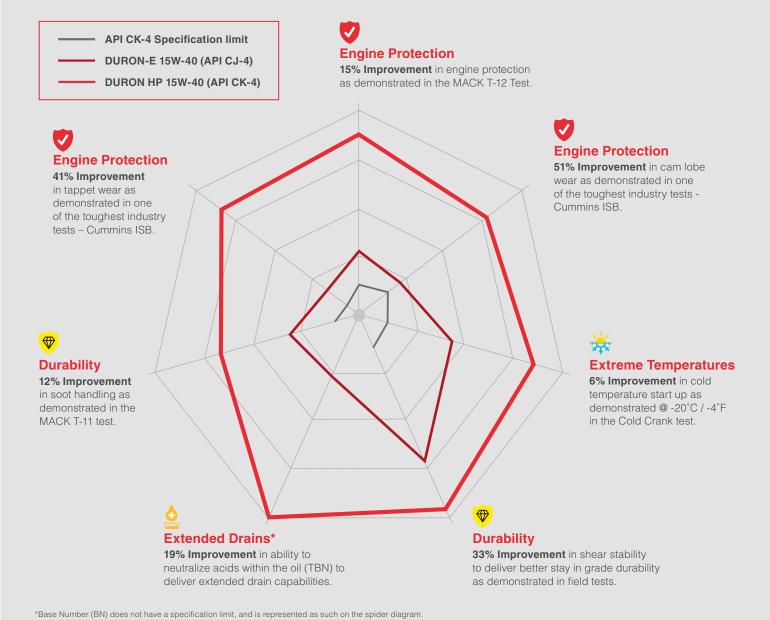
Because when your oil can handle extreme challenges, you know it can handle anything.

And DURON loves a challenge.

THE TOUGHER. THE BETTER.

#### **DURON - STRONGER IN EVERY WAY**

#### LAST GENERATION API CJ-4 vs. API CK-4



#### **TOUGHER PRODUCT LINE...**

#### ... SAME BASE OIL PURITY

At the heart of DURON, we use the HT purity process to produce 99.9% pure, crystal clear base oils – one of the purest in the world.



#### ... SAME SERVICE EXCELLENCE

Our team of global lubricants specialists are here to support you. They are here to help you to find the lubricants you need to keep your vehicles and equipment performing and protected. From minimizing downtime and extending drain intervals to savings on fuel costs, we'll give you support that's just good for business.

# **EXTREME PERFORMANCE**WHERE YOU SEE THESE SYMBOLS









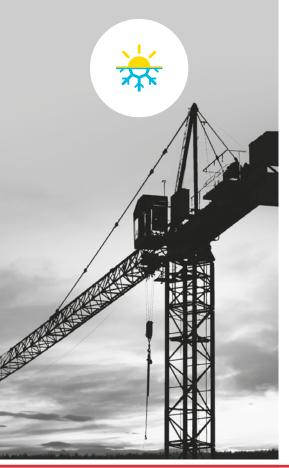


DURON oils have advanced across a whole range of performance and protection measures. Look for the performance symbols on DURON packs.

"I would recommend Petro-Canada Lubricants... the key points for us were: the quality, extended drain intervals and the full range of products they supply."

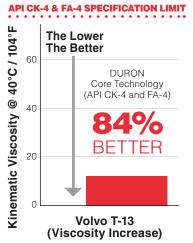
**LONNY SYVRET.** MAINTENANCE SUPERINTENDENT, AGNICO EAGLE

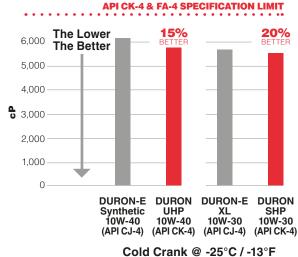




## EXTREME HIGH AND LOW TEMPERATURE PERFORMANCE

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.







### **00**

#### **OXIDATION CONTROL.**

High operating temperatures can lead to increased oil thickness and deposit formation.



#### AERATION CONTROL.

Air bubbles can form in oil preventing the ability of the oil film to protect engine parts, potentially causing wear and maintenance/repair costs.



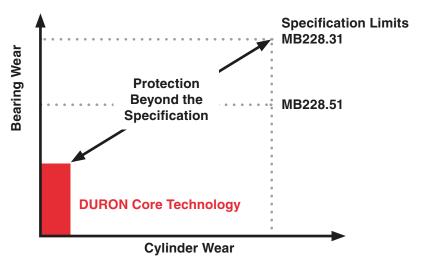
#### SHEAR STABILITY.

Under stress, large viscosity modifier molecules may 'shear', causing the oil to lose control of viscosity and drop out of grade which could compromise protection.

#### **MAXIMUM DURABILITY**

DURON engine oils outperformed both the API CK-4 and FA-4 specifications and the previous generation DURON line across a number of the toughest durability tests tied to oxidation control, shear stability and aeration control.

#### **OM501LA ENGINE TEST PART OF MB228 SPECIFICATION**



#### Beyond industry standards

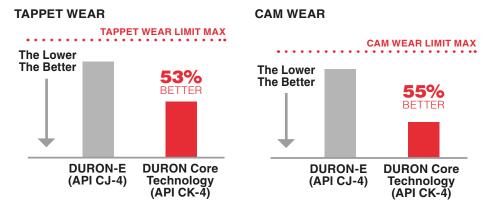
In both bearing and cylinder wear control, DURON Core Technology performs far beyond industry standards.

#### **EXTREME PERFORMANCE**

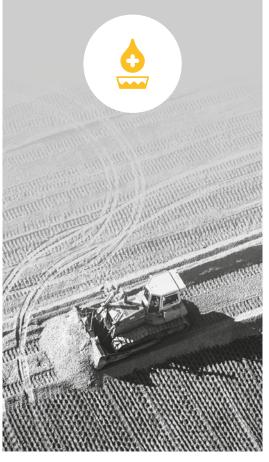


#### **MAXIMUM ENGINE PROTECTION**

DURON engine oils provide our highest ever levels of engine protection to deliver maximum uptime for your fleet. The proof? Look at DURON's performance in the Cummins ISB wear test, one of the toughest engine performance tests in the whole PC-11 category. DURON next generation proves performance well below the specification limit.



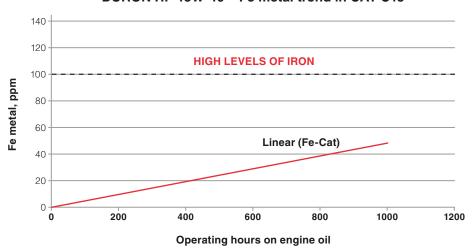
DURON API CK-4 is a significant upgrade in performance compared to DURON API CJ-4 as demonstrated in the Cummins ISB test that means ultimate engine protection.



#### **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.

#### DURON HP 15W-40 - Fe metal trend in CAT C15



<sup>\*</sup>Extending drain intervals should always be undertaken in conjunction with an oil analysis program.

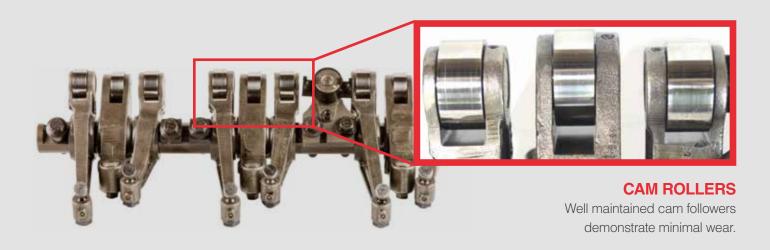
# STRONGER IN EVERY WAY DURON CORE TECHNOLOGY IN ACTION

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



		Durability	Engine Protection	Extended Drain	Extreme Temperature	
DURONHP High Performance	<b>DURON HP</b> 15W-40 CK-4	<b>⊕</b>	•	<u>&amp;</u>		
DURONSHP	<b>DURON SHP</b> 15W-40 CK-4					
Super High Performance	<b>DURON SHP</b> 10W-30 CK-4	<b>**</b>		<u>&amp;</u> &	क्रेंद	
	<b>DURON UHP</b> 10W-40 CK-4		000	<b>&amp; &amp; &amp;</b>	**	
	<b>DURON UHP E6</b> 10W-40 CJ-4 <b>E6</b>		000	<u></u>	<del>À</del> k	
DURONUHP  Ultra High Performance	<b>DURON UHP</b> 5W-40 CK-4		999	<u>\$</u> <u>\$</u> <u>\$</u>	茶茶	
	DURON UHP 0W-40 CK-4	<b>* * *</b>	000	<u>♦</u> <u>♦</u>	茶茶	
	DURON UHP 0W-30 CK-4		000	<u>\$</u> <u>\$</u> <u>\$</u>	茶茶	



# TRAXON™ EXTENDS YOUR EQUIPMENT LIFE AND REDUCES MAINTENANCE.

With their excellent shear stability and long service oil life, the TRAXON line of products gives you superb wear protection. It helps extend the life of your construction equipment, reduce downtime and maintenance costs, and improve your bottom-line performance.

TRAXON Axle fluids meet the latest API GL-5 / SAE J2360 specifications and TRAXON Manual Transmission Fluids meet API GL-4 and API MT-1.

#### TRAXON E SYNTHETIC

This premium line of heavy-duty, extreme pressure, synthetic hypoid gear and manual transmission fluids (MTF) are formulated to meet the "Genuine Roadranger" extended drain and warranty performance requirements set by Eaton Corporation (for transmissions) and Dana CVSD Corporation (for axles). Hypoid axle gear fluids are available in 75W-90 and 80W-140 grades as well as a manual transmission fluid.

#### TRAXON SYNTHETIC

These fluids provide excellent year-round protection in extreme weather conditions in a full synthetic formulation. Hypoid axle gear fluids are 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. It is also available in a manual transmission SAE 50 grade and is suitable 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, TRAXON XL delivers 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.

#### **TRAXON**

Hypoid gear axle fluids 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. Suitable for use in OEM equipment such as Mack/Volvo, Meritor, ZF and others.





#### **GREASES**

PRECISION™ – TRUSTED PROTECTION AND PERFORMANCE.

PRECISION is a line of multi-application lithium greases line for all your construction needs, from backhoe loaders to compactors. PRECISION greases are formulated to provide long service protection over a wide temperature range and reduce operating costs.

#### 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 meet NLGI's GC-LB rating. PRECISION XL EP00 and XL EP000 feature increased low-temperature mobility.

#### PRECISION XL 5 MOLY EP0, EP1, & EP2

PRECISION XL 5 Moly EP0, EP1 and EP2 greases are lithium greases compounded with 5% molybdenum disulphide, used for protection against vibration and shock loading. They are recommended to be used in severe operations such as heavy-duty shock loaded equipment in off-highway operations.

#### PRECISION XL EP1, 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, while EP00 is recommended for use 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 2equipment in off-highway applications. They are also suitable for truck fifth wheels.

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

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.



#### **AUTOMATIC TRANSMISSION FLUIDS**

Automatic Transmission Fluids (ATFs) are among the most complex lubricants on the market today. Containing many additive components in order to carefully balance the properties needed to meet the unique requirements of automatic transmissions. ATFs offer industry-leading performance in oxidation stability, low temperature fluidity and wear protection to deliver long-lasting performance and increased productivity.

#### **DURADRIVE HD SYNTHETIC 668**

Full synthetic heavy-duty automatic transmission fluid for severe duty and extended drain intervals, specifically designed and approved for use in transmissions requiring Allison TES 668™ fluids (Approval # AN668-10012020). Backwards compatible to Allison TES 295® fluids.

#### DURADRIVE HD SYNTHETIC BLEND ATF

Specially formulated for commercial and heavy-duty transmissions. 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 Typ Z2 and V2, Volvo 97341 or Ford MERCON® V specification is recommended. Also 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. 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.

#### PETRO-CANADA ATFD3M

Petro-Canada ATF D3M is an automatic transmission fluid that demonstrates exceptional oxidation and thermal stability, giving extremely long service life. This fluid is recommended for automatic, powershift and hydrostatic transmissions installed in many older cars and trucks, as well as off-highway vehicles.

#### DURADRIVE MV SYNTHETIC ATF

Petro-Canada's full synthetic, high viscosity, multi-vehicle ATF. It provides industry leading

anti-shudder durability (ASD) and frictional stability; exceeding the performance of many genuine OEM fluids. DuraDrive MV Synthetic ATF is suitable\* for use in a wide range of North American, Asian, and European automatic transmissions, power steering and transfer case applications. It is fully approved against Ford MERCON® V and exceeds JASO 1A requirements.

#### DURADRIVE LOW VISCOSITY MV SYNTHETIC ATF

Petro-Canada DuraDrive Low Viscosity MV Synthetic ATF (Automatic Transmission Fluid) is a full synthetic low viscosity formulation that offers true multi-vehicle performance, outstanding wear protection, and exceptional fluid life. This fluid is approved by General Motors (DEXRON®-VI) and Ford (MERCON® LV) for service fill applications. It provides the frictional properties, wear protection and viscometrics needed by most newer North American, Asian, and European automatic transmissions.

HD = Heavy-Duty.

MERCON® is a registered trademark of Ford Motor Company. DEXRON® is a registered trademark of General Motors LLC. TES 295® and TES 668™ are trademarks of Allison Transmission, Inc. \*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) IM-8043E or your Petro-Canada Technical Service Advisor.



#### HYDRAULIC FLUIDS

#### EXPECT TO REALIZE MORE WITH HYDREX™ HYDRAULIC FLUIDS. LASTING UP TO 3X LONGER AND OFFERING UP TO

LASTING UP TO 3X LONGER AND OFFERING UP TO 2X BETTER WEAR PROTECTION! IS JUST THE START.

With HYDREX, you can reduce maintenance and mechanical failures, and prolong the life of your construction 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.

#### HYDREX XV ALL SEASON HYDRAULIC FLUID

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.

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.<sup>2</sup>

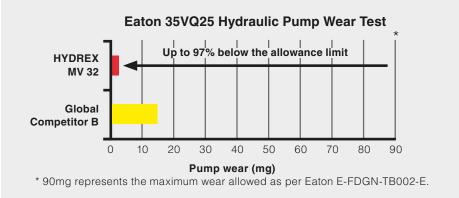
By pairing excellent shear stability with a high Viscosity Index, HYDREX XV maintains optimal fluid viscosity across a wide range of operating temperatures – this enables increased hydraulic pump and system efficiencies, lower energy consumption and reduced carbon dioxide emissions.



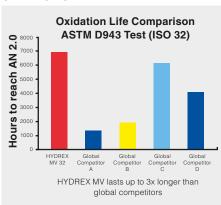
<sup>1</sup>Measured against leading North American hydraulic oil brands. <sup>2</sup>Based on Petro-Canada's definition of mobile equipment applications.



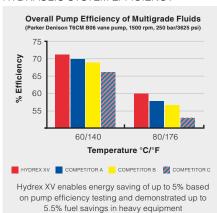
#### WEAR PERFORMANCE



#### OXIDATION STABILITY



#### HYDRAULIC SYSTEM EFFICIENCY





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.

**HYDREX MV** 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. 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.

#### SPECIALTY HYDRAULIC FLUIDS:

ENVIRON™ For construction sites in environmentally-sensitive areas, ENVIRON is the ideal hydraulic fluid. These high performance hydraulic

fluids are free of heavy metals, non-toxic, environmentally friendly and last longer than most competitive conventional and vegetable-based hydraulic fluids.

ENVIRON AW Provides exceptional performance, lasting considerably longer than competitive conventional products. It is inherently biodegradable and maintains excellent anti-wear, rust and corrosion protection to meet the rigorous demands of your construction equipment.

ENVIRON MV Keep your construction equipment running smoothly in all seasons with ENVIRON MV. It is inherently biodegradable, allows 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 MV R Readily biodegradable fluid with year-round protection in any conditions. Provides excellent equipment protection in demanding extremes and extends equipment life leading to lower costs of operation and ownership.

HYDREX EXTREME Designed for extremely wide temperature protection for high and severe low temperatures. HYDREX Extreme allows 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 construction equipment.

# TRACTOR HYDRAULIC FLUIDS/UNIVERSAL TRACTOR TRANSMISSION OIL

#### WHATEVER THE SEASON. WHATEVER THE TEMPERATURE. TRUST DURATRAN $^{\text{TM}}$ .

With DURATRAN Tractor Hydraulic Fluids (THF) / Universal Tractor Transmission Oil (UTTO), you can be confident that, whatever your job site, whatever the weather, DURATRAN is proven to last longer than the leading competitors. DURATRAN products have been designed to meet the latest OEM specifications such as John Deere (JDM), Case New Holland (CNH), Massey Ferguson, Kubota and industry specification API GL-4. Its unique Total Temperature Protection formula means less downtime and reduced maintenance costs for hard-working performance in all weather conditions.



#### **DURATRAN SYNTHETIC**

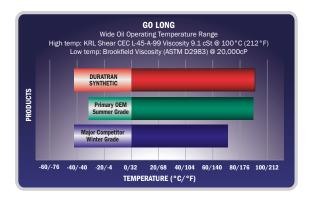
DURATRAN Synthetic ultra premium THF/ UTTO delivers top performance through all seasons, eliminating seasonal change-outs. It performs at temperatures down to -41°C/-42°F and provides reliable cold and hot weather performance. It maintains OEM specifications such as JDM (J20C and 20D), AGCO, Massey Ferguson, CNH, Kubota UDT and UDT², Mahindra, Volvo WB 101 (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.

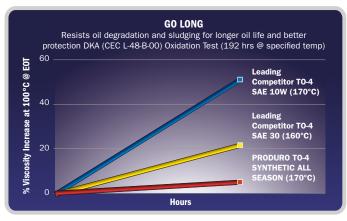
#### **DURATRAN**

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 WB 101 (approved), ZF and industry specification API GL-4.



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





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, Petro-Canada's PRODURO TO-4\* Synthetic All Season advanced formulation resists oil degradation best.

#### TRANSMISSION DRIVE TRAIN OILS

#### **PRODURO™ FLUIDS.** RELIABLE PERFORMANCE OVER A WIDE RANGE OF TEMPERATURES FOR OFF-ROAD FLEETS.

Like you, your construction equipment works hard. That's

why it needs the best protection it can get against wear. PRODURO ensures your construction equipment operates longer under optimal viscosity, resulting in better protection. In fact, PRODURO TO-4<sup>+</sup> exceeds Caterpillar's TO-4 specification, Komatsu KES 07.868.1, ZF and industry specification API GL-3 which means long equipment life, fewer change-outs, less downtime and lower operating costs. These PRODUROs have a special blend of ultra-pure, severely hydrotreated and hydroisomerized base oils and specially selected additives allowing it to deliver improved performance, extended drain intervals, rust and corrosion protection.

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

PRODURO 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.

#### PRODURO TO-4+ XL SYNTHETIC BLEND LOTEMP

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.

#### PRODURO 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 construction equipment to operate under optimal viscosity longer, resulting in better protection. Available in SAE grades 10W, 30, 50 and 60.

#### PRODURO 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.

# APPROVED FOR YOUR ENGINES BY THE WORLD'S OEMS Heavy-Duty Diesel Engine Oil Recommended Applications



Products			JRON HP W-40		JRON SHP W-40		JRON SHP W-30	_	JRON UHP W-40		JRON UHP /-40		JRON UHP /-30		JRON UHP /-40		JRON UHP W-40 E6
ACEA	ACEA	<b>√</b>	E7, E9	✓	E7, E9					✓	E4, E6, E7, E9						
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	*	CJ-4/SN
Allison Transmission.	Allison Transmission									*	TES 439						
CAT	Caterpillar	<b>√</b>	ECF-3, TO-2	✓	ECF-3, TO-2	•	ECF-3, TO-2	•	ECF-3, TO-2	✓	ECF-3						
Casterior	Cummins	*	CES 20086	*	CES 20086	*	CES 20086	*	CES 20086	*	CES 20086	•	CES 20086	•	CES 20086	*	CES 20081
DETROIT	Detroit Diesel	*	DFS 93K222	*	DFS 93K222	*	DFS 93K222	*	DFS 93K222	*	DFS 93K222					*	DFS 93K218
DEUTZ	Deutz	*	DQC III-10 LA	*	DQC III-10 LA			*	DQC III-10 LA							*	DQC IV-10 LA
(Stord)	Ford	*	WSS- M2C171- F1	*	WSS- M2C171- F1	*	WSS- M2C171- F1	*	WSS- M2C171- F1	*	WSS- M2C171- F1						
<u>GM</u>	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, DH-1, DH-2	•	MA2	•	MA2		
MAEN	Mack	*	EOS-4.5	*	EOS-4.5	*	EOS-4.5	*	EOS-4.5	*	EOS-4.5					*	EO-O PP '07
MAM	MAN	•	3575, 3275-1	•	3575, 3275-1											*	3477, 3271-1
Mercodes-Benz	Mercedes- Benz	*	228.31	*	228.31	*	228.31									*	228.51 228.31
intu .	MTU	*	Type 2.1	*	Type 2.1			•	Type 2.1	•	Type 2.1					*	Type 3.1
RENAULT TRUCKS	Renault	*	RLD-3	*	RLD-3	*	RLD-3	*	RLD-3	*	RLD-3					*	RLD-3
	Volvo	*	VDS-4.5	*	VDS-4.5	*	VDS-4.5	*	VDS-4.5	*	VDS-4.5					*	VDS-4

\*Use of a diesel engine oil for gasoline applications may compromise the life of the emissions device. Please refer to the owner's manual to ensure proper oil is used.

# Gear Oils and Manual Transmission Fluids Recommended Applications

Products	TRAXON 80W-90	TRAXON 85W-140	TRAXON XL Synthetic Blend 75W-90	TRAXON XL Synthetic Blend 80W-140	TRAXON Synthetic 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 3510				•							
CNH MAT 3511		•		•		•					
Dana CVSD SHAES 256 Rev E (EATON TCMT0020-EN U.S Listed)							*				
Dana CVSD SHAES 429 Rev A* (EATON TCMT0020-EN U.S Listed)							*	*			
Detroit Diesel DFS93K219.01							✓				
Eaton PS-164 Rev 7 (obsolete)										•	
Eaton PS-386 ** (TCMT0020-EN U.S Listed)									*		
Ford FNHA-2-C-301.0	•										
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									✓	•	
Iveco 18-1807 MSG-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)				<b>√</b>				<b>√</b>			
Meritor 0-76-D (obsolete)	✓										
Meritor 0-76-E (obsolete)			✓			<b>✓</b>	✓				
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	<b>√</b>	✓	✓	<b>/</b>	<b>✓</b>	<b>✓</b>	✓	✓			
Meritor 0-95						*	*	*			
	<b>→</b> DDI C1 0704	<b>→</b> DDI C1 0705	<b>→</b> DDI C1 0700	<b>→</b> DDI CI	★ PRI GL						
SAE J2360 ****	* PRIGL 0/94 and 0919	* PRI GL 0795 and 0920	★ PRI GL 0796 and 0951	★ PRI GL 0891	★ PRI GL 1013	★ PRI GL 0841	✓	✓			
Scania STO 1:0 (axles)		<b>√</b>		<b>√</b>							
Scania STO 1:0 (axles) Scania STO 1:0 (axles)	✓		<b>√</b>	,		✓					
Volvo Std 1273,05 - 97305										•	•
Volvo Std 1273,07 - 97307											+
Volvo Std 1273,07 - 97307 Volvo Std 1273,10 - 97310	•	•	•			•					^
Volvo Std 1273,10 - 97310 Volvo Std 1273,12 - 97312					•						
Volvo Std 1273, (15- 18 & 19) - 973 (15,18 and 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											* (∠FUU2Z0U)
ZF -Ecolite, Ecomid, Etronic- Applications											<b>√</b>
	★ (ZF000764										,
ZF TE-ML - 17B	and ZF003389)					★ (ZF002212)					
ZF TE-ML - 05A, 12M, 16B, 19B, 21A	★ (ZF000764 and ZF003389)										
ZF TE-ML - 05A, 12M, 16D, 21A		★ (ZF000778 and ZF003390)		★ (ZF002212)							

<sup>\*</sup> 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 Sp

#### **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

#### **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	*	*	*	*	•	*	*	*	*	*	*	•	•
Hydreco	•	•	•	•	•	•	•	•	•	•	•	•	•
Karl Mayer	*	*					*	*	*	*			
Komatsu	•	•	•	•	•	•	•	•	•	•	•		
Liebherr Crane													•
Link-Belt											*		*
McCloskey			•										
Oilgear	•	•	•	•	•	•	•	•	•	•	•	•	•
Racine	•	•	•	•	•	•	•	•	•	•	•	•	•
Sauer-Danfoss	•	•	•	•	•	•	•	•	•	•	•	•	•
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		•	✓					•	✓		✓		

#### **TRANSMISSION DRIVE TRAIN OILS** Recommended Applications

Products	PRODURO™ TO-4+ 10W, 30, 50, 60	PRODURO TO-4* XL Synthetic Blend Lo-Temp	PRODURO TO-4⁺ Synthetic All Season
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
ZF Transmission	TE-ML 03C (SAE 10W and SAE 30) and TE-ML 07F (SAE 30 only)		• TE-ML 03C
Komatsu KES 07.868.01	•	•	•
Eaton/Vickers (M-2950/I-280-S) (obsolete)	•	•	•
Products	PRODURO FD-1 60	PRODURO FD-1 Synthetic	
Caterpillar FD-1	✓ For Caterpillar final drives and axles **	✓ For Caterpillar final drives and axles **	

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

#### **AUTOMATIC TRANSMISSION FLUIDS** Recommended Applications

Application / Specification		Petro-Canada ATFD3M	DuraDrive™ MV Synthetic ATF	DuraDrive Low Viscosity MV Synthetic ATF	DuraDrive HD Synthetic Blend ATF	DuraDrive HD Synthetic 668 ATF
North American OEM						
Allison V-730D, C-4		•		•	★ C4-29493700 (legacy)	
Allison TES 389B		✓				
Allison TES 668™						★ AN668-10012020
Caterpillar TO-2 (obsolete)		•		•	•	
Chrysler ATF+3®, MOPAR ASRC			•	•		
Ford FNR5		•	•			
Ford M2C166H		•				
Ford MERCON®		•	•	•	•	
Ford MERCON® V			O M5080701		•	
Ford MERCON® LV (SF only)				★ MLV161104		
General Motors DEXRON® II (IID, IIE), DEXRON® III (IIIF, IIIG, IIIH)		•	•	•	★ H-36007 (legacy)	
General Motors DEXRON® VI				★ J-60185		
European OEM - High Viscosity Specification/Vehicle	European OEM - Low Viscosity Specification/Vehicle					
MAN 339 Typ Z2 and V2					•	
Mercedes-Benz MB 236.10 (NAG 1 / Shell 3403)	Mercedes-Benz 236.12 /.14/.15/.41		•*	<b>●</b> †		
Mercedes-Benz 236.1/.5/.6/.7			•	•†	•	
Mercedes-Benz; MB 236.2/.3/.5/.6/.7/.9/.11/.81			•	<b>●</b> †		
Mercedes-Benz; MB 236.1, 236.2, 236.3, 236.5, 236.6, 236.7, 236.8, 236.9				•†		
Voith Transmission- 36,000 mile standard drain interval (H55.6335. xx Service Bulletin 013 and 118, formerly G1363)						•
Voith Transmission - 72,000 mile extended drain interval (H55.6336 DIWA Service Bulletin 013 and 118, formerly G1363)					*	
Volvo 97340		•		•		
Volvo 97341 (AT101)					•	
Volvo 97342 (AT102)				•		
Volvo 4 speed (P/N 1161621)	Volvo 6 speed MY 2011-2013 (P/N 31256774 or 31256675)		•*	•†		
Volvo P/N 1161540/1161640			•*	<b>●</b> †		
VW G 052 162, G 052 990, G 055 025	VW G 052 540, G 055 005, G 055 162 G 060 162		•*	•†		
ZF TE-ML 09, 11 (3/4/5 speed)	ZF 6 speed (S671 090 255)		•*	•†		
ZF TE-ML 14A						•
ZF TE-ML 05L, 09, 11A, 11B, 21L	ZF 6/8/9 speed			<b>●</b> †		
ZF TE-ML 03D, 04D, 17C					★ ZF004790	
ZF TE-ML 16L					•	
ZF TE-ML 14B extended drain applications					★ ZF004790	

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

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

<sup>★</sup> Approved for Use | • Suitable for Use | ✓ Meets Specifications

<sup>\*</sup> 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>†</sup> DuraDrive Low Viscosity MV Synthetic ATF is a low viscosity formulation and does not meet the viscosity specification of these high viscosity 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-M2C48-B	• MS-1209/MAT 3505, MS-1210/JIC145/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		
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	Oliofiat Tutela Multi-F, AF-87	Oliofiat Tutela Multi-F, AF-87	Oliofiat Tutela Multi-F, AF-87		
John Deere	• J20C	• J20D	• J20C, J20D		
Komatsu	• KES 07.866		• KES 07.866		
Kubota	• UDT	• UDT²	• UDT, UDT²		
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)		

<sup>\*</sup> 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.

#### **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, HF-1, HF-2	*	*	*	*	*	*	*
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



# **OUR NO-NONSENSE LUBRICANTS WARRANTY**

"Petro-Canada Lubricants 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.

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Committed to the disciplined operation of our business.



