



A HOLLYFRONTIER BRAND

# TECH DATA

## DURATRAN™ AND DURATRAN XL

### SYNTHETIC BLEND TRACTOR HYDRAULIC FLUIDS (THF) UNIVERSAL TRACTOR TRANSMISSION OILS (UTTO)

## INTRODUCTION

Petro-Canada Lubricants DURATRAN™ and DURATRAN XL Synthetic Blend are premium heavy duty multifunctional tractor hydraulic fluids (THF) (sometimes referred to Universal Tractor Transmission Oils (UTTO)) and are designed for agriculture, mining, forestry and construction equipment with a common oil reservoir for transmission, differential, final drive, hydraulic system, power take-off, wet brake and power steering mechanisms.

The DURATRAN product line is formulated with 99.9% pure crystal clear HT processed base oils in combination with minimal viscosity index improver and a leading edge additive package. This formulation offers exceptional performance surpassing equipment manufacturer's specifications and requirements.

## FEATURES AND BENEFITS

### Superior Wear Protection

- Minimizes and reduces wear on transmission, differential, and final drive gears at elevated temperatures reducing the need for replacement parts
- Superior gear and bearing wear protection in the presence of water contamination
- Less internal component wear reduces maintenance costs allowing increased operating up time and reliability
- Extended service intervals, reducing the need for seasonal change-outs (DURATRAN XL Synthetic Blend)

### Excellent Fluidity at Low Temperatures

- Smoother cold weather operation down to temperatures below -41°C (-42°F) (DURATRAN XL Synthetic Blend) or temperatures below -35°C (-31°F) (DURATRAN)
- Extra protection for lubricated components during cold weather operation

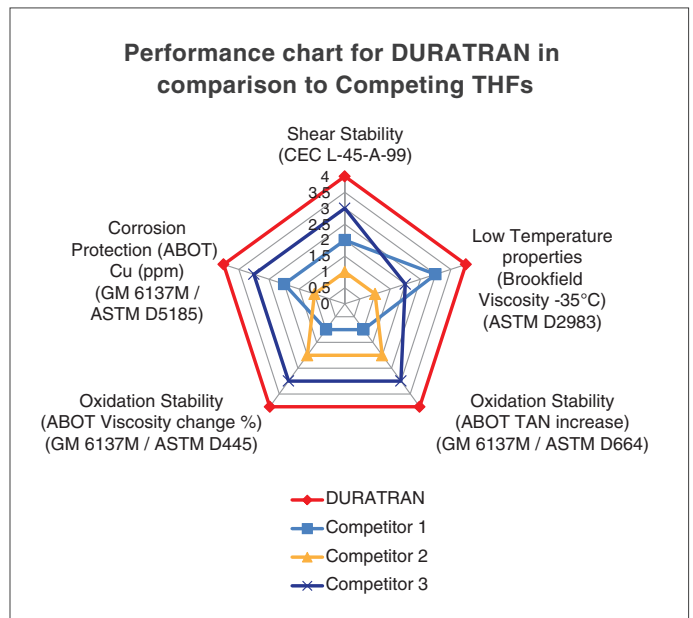
### Superior Frictional Properties

- Exceptional frictional performance offering less brake chatter, and effective braking to avoid slip-skip problems
- Allows superior clutch and transmission performance for smoother equipment operations

### Long Life Protection

- Superior resistance to high temperature fluid break down
- Superior oxidation stability resulting in resistance to viscosity increase and acid formation at elevated temperatures

- Superior resistance to build up of sludge and varnish on transmission and hydraulic components for extended drain intervals
- Surpasses the Allison C-4 (obsolete) oxidation test as well as the more demanding ABOT oxidation test used in Automatic Transmission Fluid validations



## APPLICATIONS

Petro-Canada DURATRAN™ and DURATRAN XL Synthetic Blend are recommended for use in agriculture, mining, forestry and construction equipment that use a common oil reservoir for the transmission, final drive, hydraulic system, power take-off, wet brake and power steering mechanisms.

**In this new age of efficiency, farm tractor OEM's such as AGCO, CNH and John Deere are designing new hardware such as farm tractor (FT) continuously/infininitely variable transmission (CVT/IVT). Note that these CVT/IVT transmissions are different than the passenger car CVT designs in the field today.**

**AGCO** group implemented a FT CVT designed by Fendt and the same design in Massey, Valtra, and Challenger tractors recommends their M1145 fluid as service fill for these transmissions.

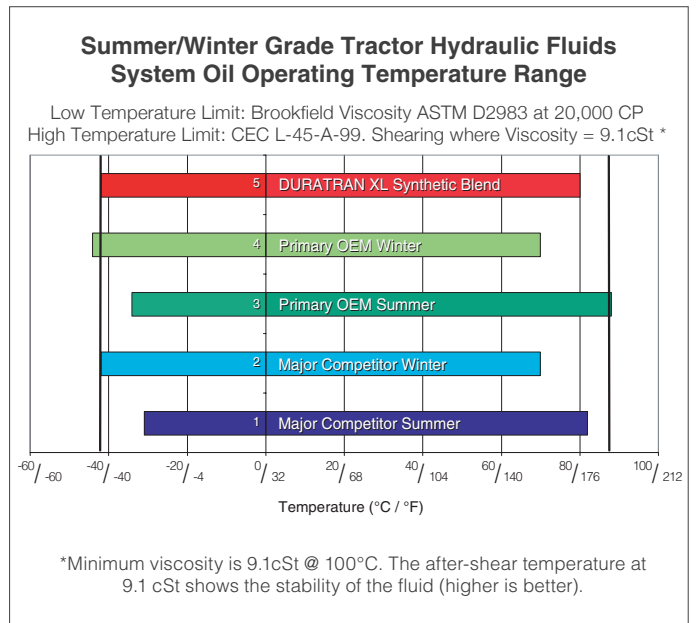
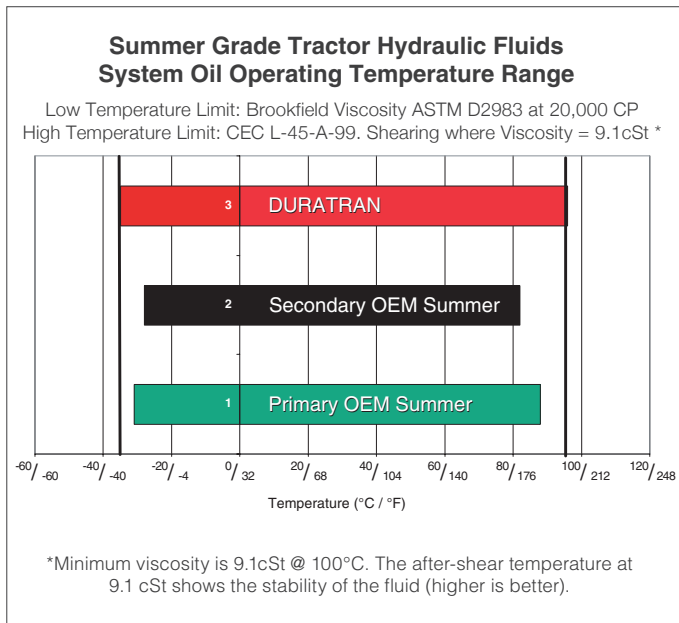
**Case New Holland** offer a FT CVT. They recommend latest specification MAT 3540 type fluid. In some CNH owners manuals if the owner does not have access to MAT 3540 they can use MAT 3525 fluid.

**John Deere** also offer a FT CVT designed by ZF (John Deere markets it as an IVT). The fluid recommended must meet the latest specification JDM J20C.

Check with the OEM as to the correct fluid specification required to lubricate FT CVT/IVT systems.

**DURATRAN** is best suited for agriculture applications where various OEM farm equipment and/or extreme summer climate operating conditions are present.

**DURATRAN XL Synthetic Blend** is best suited for mining, forestry, construction and farming applications where equipment is operated in both hot and cold temperatures. One product for extended seasons.



DURATRAN and DURATRAN XL Synthetic Blend are recommended for use in AGCO, Massey, Valtra, Challenger tractors as well as Case New Holland and John Deere tractors.

DURATRAN and DURATRAN XL Synthetic Blend are recommended for use where the following farm tractor fluid types are specified:

## FARM TRACTOR FLUIDS

| Manufacturer                                       | Current Specification   | Meets Older Specifications (Obsolete)   |
|--|---|---|
| JOHN DEERE   | JDM J20C (DURATRAN)<br>JDM J20D (DURATRAN XL)   | JDM J20A, JDM J14B, JD 303 Fluid (DURATRAN)<br>JDM J20B, JDM J14C, JD 303 Fluid (DURATRAN XL)   |
| MASSEY-FERGUSON                                    | M-1135, M-1141, M-1143<br>M-1145* (DURATRAN only)<br>*Note: For UTTO applications only. Do not use in STOU engine applications. | M-1129-A, M-1127-A/B, M-1110  |
| CNH<br>(CASE I.H., J.I. CASE<br>NEW HOLLAND GROUP) | MS-1209/MAT 3505, MS-1210/JIC-145/<br>MAT 3506, MS-1230/CNH MAT 3509,<br>ESN-M2C134-D/MAT 3525                                  | MS-1207, MS-1206, MS-1205, MS-1204/<br>JIC-185, B-6, B-5, JIC-144, JIC-143<br>FNHA-2-C-201.00 (DURATRAN)<br>FNHA-2-C-200.00 (DURATRAN XL)<br>ESN-M2C134-A/B/C, ESN-M2C86-B/C,<br>ESN-M2C53-A, ESN-M2C48-B |
| GIMA   | MF CMS 1141<br>MF CMS 1145 (DURATRAN)   | —   |
| KUBOTA   | Kubota UDT Fluid (DURATRAN)<br>Kubota UDT <sup>2</sup> (DURATRAN XL)  | —   |
| WHITE FARM (OLIVER)                                | Q-1826, Hydraulic Transmission Fluid (HTF)  | Q-1802, Q-1766B, Q-1722, Q-1705   |
| AGCO<br>Deutz ALLIS<br>ALLIS                       | Power Fluid 821XL<br>272843   | 257541<br>246634  |
| STEIGER  | Hydraulic/Transmission Fluid, SEMS 17001  | —   |
| VERSATILE  | ESN-M2C134-D  | Hydraulic/Gear Fluid<br>Spec 24M, Spec 23M  |
| VALTRA /VALMET                                     | —   | G 2-08 (DURATRAN) and G2-98 (DURATRAN)  |
| LANDINI  | Tractor II Hydraulic Fluid  | —   |
| HESSTON FIAT                                       | Oliofiat Tutela Multi-F   | AF-87   |
| VOLVO  | Std 1273.03 -97303 WB 101<br>DURATRAN (Approved)  | ESN-M2C 134-D   |
| KOMATSU  | KES 07.866 (DURATRAN)   | —   |
| ZF TRANSMISSIONS                                   | TE-ML, -03E; -05F; -06K; -21F (axles) (DURATRAN)  | —   |

## TRANSMISSIONS, DIFFERENTIALS AND HYDRAULICS

| Manufacturer                               | Current Specification                       | Meets Older Specifications (Obsolete)         |
|--|---|---|
| SUNDSTRAND                                 | —   | Hydrostatic Transmission Fluid                |
| ALLISON                                    | —   | Type C-4 and C-3 Fluids                       |
| CATERPILLAR                                | —   | TO-2  |
| DRESSER CONSTRUCTION<br>EQUIPMENT DIVISION | —   | Transmission/Hydraulic Fluid                  |
| PARKER/ABEX/DENISON                        | —   | Hydraulic Fluid-HF-1 and Hydraulic Fluid-HF-2 |
| EATON/VICKERS                              | —   | M-2950-S, I-286-S                             |
| PLESSEY-SUNDSTRAND                         | —   | Hydraulic Fluid                               |
| CLARK                                      | Lift Truck Transmission Fluid<br>TA12, TA18 | HR 500 (DURATRAN XL)<br>HR 600 (DURATRAN)     |

## TYPICAL PERFORMANCE DATA

| Property  | Test Method   | DURATRAN™                 | DURATRAN XL           |
|---|---------------|---------------------------|-----------------------|
| Flash Point, COC, °C/°F   | ASTM D92      | 241/466                   | 219/426               |
| Kinematic Viscosity<br>cSt @ 40°C/SUS @ 100 °F<br>cSt @ 100°C/SUS @ 210 °F      | ASTM D445     | 55.1/281<br>9.4/58.0      | 40.0/202<br>8.45/54.5 |
| High Temp / High Shear Viscosity<br>cP @ 150°C/302°F                            | ASTM D4683    | 2.94                      | 2.5                   |
| Viscosity Index   | ASTM D2270    | 153                       | 190                   |
| Brookfield Viscosity<br>cP @ -20°C/-4°F<br>cP @ -35°C/-31°F<br>cP @ -40°C/-40°F | ASTM D2983    | 2,670<br>17,300<br>61,200 | 1,120<br>—<br>13,750  |
| Pour Point, °C/°F   | ASTM D5950    | -45/-49                   | -51/-60               |
| Vickers Pump Wear   | ASTM D2882    | Pass                      | Pass                  |
| Total Base Number (TBN)   | ASTM D2896    | 10.2                      | 10.3                  |
| KRL Shear Testing after 20 Hr,<br>viscosity cSt @ 100°C/212°F                   | CEC L-45-A-99 | 8.0                       | 5.9                   |

### John Deere Tests

|   |          |      |      |
|---|----------|------|------|
| Shear Stability Test; sheared oil cSt 100°C / 212°F     | JDQ 102  | 8.45 | 6.9  |
| Rust Test – Humidity Cabinet<br>(49°C/120°F), 100% R.H. | JDM J20C | Pass | Pass |
| Oxidation Stability Test                                | JDQ 16   | Pass | Pass |
| Oil Compatibility Test                                  | JDQ 23   | Pass | Pass |
| Compatibility Sensitivity Test                          | JDQ 19   | Pass | Pass |
| Foam Test   | JDQ 33   | Pass | Pass |

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

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

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

Learn more about us: [lubricants.petro-canada.com](http://lubricants.petro-canada.com)

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Committed to the disciplined operation of our business.



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