



Hi-Tec Oil Traders Pty Ltd ABN 28 053 837 362

5 Tarlington Place Smithfield NSW 2164

Correspondence: P.O Box 322 Castle Hill NSW 1765

Ph: 1300 796 009 | Fax: (02) 9604 1611 | Email: hitecoils@hi-tecoils.com.au

[www.hi-tecoils.com.au](http://www.hi-tecoils.com.au)

## PRODUCT DATA SHEET

### TRANS SAE 10W, 30, 50 & 60

#### DESCRIPTION

**Hi-Tec TRANS** is a specialised Transmission and Drive Train Oil (TDTO) which has been formulated to meet the special requirements of the Caterpillar TO-4™ (2005 revision) specification.

**Hi-Tec TRANS** greatly reduces gear wear, improves friction control, promotes long life in transmission and brakes, and ensures less brake noise and increased rimpull.

**Hi-Tec TRANS** is not a compromise fluid as are conventional powershift fluids, which are fundamentally engine oils meeting the former less restrictive CAT TO-2™ and Allison C-2 specifications.

#### CHARACTERISTICS

**CONTROLLED FRICTION PERFORMANCE.** The individual additive components of **Hi-Tec TRANS** were specially selected to balance and control the friction performance of the materials comprising the metallic and the newer non-metallic clutch surface materials.

**STABLE FRICTION CHARACTERISTICS.** The frictional properties uniquely provided by **Hi-Tec TRANS** overcome problems of excessive brake noise, weakening of the binders in paper surface materials and embrittlement of elastomeric materials. **Hi-Tec TRANS**'s stable friction properties eliminate clutch slippage even under heavy loads on steep inclines. There is no need to constantly adjust equipment to maintain clutch settings.

**OXIDATION STABILITY.** The excellent anti-oxidation properties of **Hi-Tec TRANS** together with the resistance to sludge formation provide longer oil drain intervals and far more reliable equipment operation.

**LOWER TEMPERATURE PERFORMANCE.** The low temperature fluidity of **Hi-Tec TRANS** ensures easier cold weather starting and improved wear protection with low temperature start-ups.

**ANTI-WEAR PROPERTIES.** Long term anti-wear protection to gears and bearings is assured by the inclusion of special anti-wear additives. The foam inhibitors in **Hi-Tec TRANS** provide effective protection against foam development thus avoiding metal-to-metal contact and further minimising wear.

**CORROSION PROTECTION.** Long term rust and corrosion protection to steel and copper-based metal is assured by the inhibitors in **Hi-Tec TRANS**.



AUSTRALIAN FAMILY OWNED SINCE 1989





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### RECOMMENDATIONS

**Hi-Tec TRANS** is recommended for many heavy duty transmissions and drives in a wide range of automotive, mining, agricultural and earthmoving applications and particularly:

#### Caterpillar™ Transmissions

**Hi-Tec TRANS** meets the Caterpillar TO-4™ performance specifications and may be used in manual transmissions which have the API-CD/Caterpillar TO-2™ oil recommendation.

**Hi-Tec TRANS** transmission fluid is the ideal product for Final Drives:

Track type: tractors, pipe-layers, skidders, loaders and track excavators

Wheel Type: tractors, loaders, skidders, compactors, motor graders, off-highway tractors and trucks.

#### Allison Transmissions

**Hi-Tec TRANS SAE 30** meets Allison C-4 specification and can be recommended wherever an Allison C-4 (or C-3) level fluid is required.

#### Fuller Road Ranger Transmissions

**Hi-Tec TRANS SAE 50** is also suitable in manual gearboxes specifying an SAE 50 engine oil or an SAE 90 gear oil up to API GL-3.

### SPECIFICATIONS

**Hi-Tec TRANS** meets and exceeds the following demanding performance requirements:

- Caterpillar TO-4™ (Version 2005)
- Caterpillar TO-2™ (obsolete)
- Komatsu KES 07.868.1 powertrain fluid
- Komatsu Dresser
- Dana Powershift: SAE10W and SAE30
- Allison C-4 and Allison C-3 (obsolete): SAE 10W and SAE30
- API: GL-3
- API: GL-4 Gear Wear Protection Capability
- API: CF & CF-2 (SAE 30, 40, and 50 in case of misapplication as an engine oil)
- ZF TE-ML03C (converter transmissions for off-road equipment): SAE10W and SAE30
- ZF TE-01 (list obsolete): SAE30 and SAE50
- Eaton: SAE50
- Vickers 35 VQ25: SAE10
- Tremec/TTC: SAE50
- Spicer Clark-Hurth: SAE 10W and SAE30



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### TYPICAL TEST

<u>TYPICAL TEST</u>	<u>ASTM</u>	<u>TRANS</u>			
	<u>METHOD</u>	<u>SAE10W</u>	<u>SAE30</u>	<u>SAE50</u>	<u>SAE60</u>
Item Code		2510	2515	2519	2520
Density, kg/lit @ 15°C	D.129	0.880	0.901	0.909	0.913
Viscosity, cSt @ 40°C	D.445	39	96.8	203	310
Viscosity, cSt @ 100°C	D.445	6.0	11.0	18	24
Viscosity Index	D.2270	96	98	97	98
Pour Point, °C	D.97	-30	-30	-27	-27
Flash Point COC, °C	D.92	>200	258	261	267
Carbon Residue, Conradson - % Mass (in excess of Ash)	D.524	0.08	0.08	0.11	0.12
Copper Strip Corrosion - 3 hours at 100°C	D.130	1a	1a	1a	1a
Foaming Characteristics - Sequence I, II, III	D.892	Nil	Nil	Nil	Nil
Total Base Number, mg KOH/g	D.2896	7.6	7.6	7.6	7.6
Calcium, % wt	IP308	0.310	0.310	0.310	0.310
Phosphorus, % wt	D.1091	0.110	0.110	0.110	0.110
Zinc, % wt	IP308	0.124	0.124	0.124	0.124
Colour	Visual	Amber	Amber	Amber	Amber

"Hi-Tec Oil Traders Pty Ltd (Hi-Tec Oils) has endeavoured to ensure that all information, representations and specifications contained in this product data sheet are accurate at the time of publication. This general information should be used in conjunction with appropriate inquiries by users of the product including consultation with the vehicle or equipment manufacturers published information.

It is the responsibility of users of the product to use the product safely. Users should consult the safety data sheets for each product at [www.hi-tecoils.com.au](http://www.hi-tecoils.com.au).

Hi-Tec Oils takes no responsibility for injury or damage if the product is used in an inappropriate or unsafe manner. Our product warranty and product quality statement can be viewed at [www.hi-tecoils.com.au](http://www.hi-tecoils.com.au)"

Effective: April 2014

Expires: April 2016

GH414051/3



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