



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

## PRODUCT DATA SHEET

### TRANS OILS SAE 10W, 30, 40, 50 and 60

#### PRODUCT DESCRIPTION

**Trans Oils** are specialised Transmission and Drive Train Oils (TDTO) which have been formulated to meet the special requirements of the Caterpillar TO-4 and Allison TES-439 specifications. They greatly reduce gear wear, improve friction control, promote long life in transmissions and brakes, and ensure less brake noise and increased rimpull. **Trans Oils** are not compromise fluids as are conventional powershift fluids, which are fundamentally engine oils meeting the former less restrictive CAT TO-2 and Allison C-2 specifications.

The individual additive components of **Trans Oils** were specially selected to balance and control the friction performance of the materials comprising the metallic and the newer non-metallic clutch surface materials. The frictional properties uniquely provided by **Trans Oils** overcome problems of excessive brake noise, weakening of the binders in paper surface materials and embrittlement of elastomeric materials. **Trans Oils** 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.

The excellent anti-oxidation properties of **Trans Oils** together with the resistance to sludge formation provide longer oil drain intervals and far more reliable equipment operation. The low temperature fluidity of **Trans Oils** ensures easier cold weather starting and improved wear protection with low temperature start-ups.

Long term anti-wear protection to gears and bearings is assured by the inclusion of special anti-wear additives. The foam inhibitors in **Trans Oils** provide effective protection against foam development thus avoiding metal-to-metal contact and further minimising wear. Long term rust and corrosion protection to steel and copper-based metal is assured by the inhibitors in **Trans Oils**.

#### RECOMMENDATIONS

**Trans Oils** are recommended for many heavy duty transmissions and drives in a wide range of automotive, mining, agricultural and earthmoving applications and particularly:

##### Caterpillar™ Transmissions

**Trans Oils** meet the Caterpillar TO-4 performance specifications and may be used in manual transmissions which have the API-CD/Caterpillar TO-2 oil recommendation.

**Trans Oils** transmission fluids are 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

**Trans Oils 10W and SAE 30** meet the Allison C-4 specification and can be recommended wherever an Allison C-4 (or C-3) level fluid is required.

**Trans Oils** also meet the Allison TES-439 specification and can be recommended wherever an Allison TES-439 level fluid is required.

##### Eaton Fuller Road Ranger Transmissions

**Trans Oil 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.



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## SPECIFICATIONS

Trans Oils meet or exceed the following demanding performance requirements:

- Caterpillar TO-4, TO-2 and TO-4M
- Komatsu Dresser and Komatsu KES 07.868.1 (SAE 10W and SAE 30) powertrain fluid
- Dana Powershift (SAE 10W and SAE 30)
- Allison C-4 (SAE 10W and SAE 30) and TES-439
- API: GL-3, GL-4, MT-1
- API: CF in case of misapplication as an engine oil.
- ZF TE-ML-03C (SAE 10W and SAE 30)
- ZF TE-ML-07D (TO-4M only)
- ZF TE-ML-07F (SAE 30)
- Eaton (SAE 50)
- Vickers 35 VQ25 and M-2950-S
- Tremec/TTC (SAE 50)
- Spicer Clark-Hurth (SAE 10W and SAE 30)

Always consult your vehicle owner's manual for the manufacturer's recommendations.

## TYPICAL PROPERTIES

Property	ASTM Method	Trans Oil				
		SAE 10W	SAE 30	SAE 40	SAE 50	SAE 60
Item Code (HI3-) -		2510	2515	2516	2519	2520
Density (kg/ltr) @ 15°C	D-129	0.880	0.901	0.905	0.909	0.913
Viscosity (cSt) @ 40°C	D-445	39	96.8	138.6	203	310
Viscosity (cSt) @ 100°C	D-445	6.0	11.0	14.0	18	24
Viscosity Index	D-2270	96	98	97	97	98
Pour Point (°C)	D-97	-30	-30	-27	-27	-27
Flash Point COC (°C)	D-92	>200	258	259	261	267
Carbon Residue, Conradson - % Mass (in excess of Ash)	D-524	0.08	0.08	0.10	0.11	0.12
Copper Strip Corrosion - 3 hours at 100°C	D-130	1a	1a	1a	1a	1a
Foaming Characteristics - Sequence I, II, III	D-892	Nil	Nil	Nil	Nil	Nil
Total Base Number (mg KOH/g)	D-2896	7.6	7.6		7.6	7.6
Calcium (% wt) IP308		0.207	0.207	0.207	0.207	0.207
Phosphorus (% wt)	D1091	0.113	0.113	0.113	0.113	0.113
Zinc (% wt) IP308		0.124	0.124	0.124	0.124	0.124
Colour Visual		Amber	Amber	Amber	Amber	Amber



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## PRODUCT DATA SHEET

**Available in:** Bulk, 1000 Litres, 200 Litres, 20 Litres and 5 Litres

“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)”

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