



## Gulf HT Fluid TO-4

### Heavy-duty Powershift Transmission Fluid

#### Product Description

Gulf HT Fluid TO-4 series are specifically designed for powershift transmissions, final drives and wet brakes on heavy duty off-highway equipment used in earthmoving, mining logging, road transport and agricultural applications. These oils are blended from premium quality base oils and proven performance additives to provide enhanced wear protection, thermo-oxidative stability, frictional characteristics and rust & corrosion protection. These oils are specifically designed to meet the performance requirements of Caterpillar TO-4, Komatsu powershift transmissions, ZF torque converter transmissions and Allison C-4 Automatic Transmissions.

#### Features & Benefits

- Improved thermo-oxidative stability and protection of metal surfaces against scuffing and wear gives longer oil and equipment life
- Excellent control of frictional properties prevents clutch slippage and ensures smoother operation of transmissions and brakes
- Provides good protection against rust and corrosion to precision equipment components when operating in humid conditions
- Keeps metal parts free of sludge and varnish leading to reliable operation
- Excellent foam control ensures effective wet brake and transmission performance and controls brake chatter
- Good compatibility with all common seals, O rings, packing materials and clutch materials leads to reduced downtime
- Very good low temperature fluidity (SAE 10W grade) ensures quick startup of equipment

#### Applications

- Powershift and automatic transmissions, wet brake, torque converters and hydrostatic systems requiring these quality fluids
- Heavy duty manual transmissions, gear boxes, final drives and hydraulic systems used in off-highway equipments for Earthmoving, agricultural, logging, construction and mining applications requiring fluids meeting the below mentioned specifications.
- Industrial torque converters and hydraulic systems where such type of fluids are specified

#### Specifications, Approvals & Typical Properties

Meets the following Specification		10W	30	50
Caterpillar TO-4, Komatsu KES 07.868.1		x	x	x
Allison C4, ZF TE-ML 03		x	x	
API CF, CF-2		x	x	x
Typical Properties				
Test Parameters	ASTM Method	Typical Values		
Viscosity @ 100 °C, cSt	D 445	7.12	10.88	18.4
Viscosity Index	D 2270	100	95	96
Flash Point, °C	D 92	182	238	248
Pour Point, °C	D 97	-24	-15	-12
TBN, mg KOH/g	D 2896	7.56	7.56	7.56
Density @ 15°C, Kg/l	D 1298	0.895	0.902	0.908

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Properties mentioned above are typical only and minor variations, which do not affect the product performances, are to be expected in normal manufacturing. The above information is based on past history of the grade only and must not be construed as a guarantee of performance. Follow equipment manufacturer's recommendations for performance level and viscosity grade. The Material Safety Data Sheet for this product is available from your nearest Gulf Distributor.

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