



## PowerDrive® Fluid

Conoco® PowerDrive Fluid is a high-performance multifunctional fluid developed for use in transmissions, final drives and hydraulic systems of off-highway equipment where a fluid meeting Caterpillar TO-4 performance requirements is specified. It provides substantially improved friction and antiwear performance compared with older API CD/TO-2 quality fluids, resulting in longer equipment life and reduced risk of field failure. The SAE 10W and 30 viscosity grades also meet Allison C-4 performance requirements for use in Allison off-highway heavy-duty automatic transmissions.

PowerDrive Fluid is formulated with state-of-the-art additive technology that provides improved deposit control, corrosion protection and load-carrying capacity for better equipment protection and more reliable operation. Its carefully optimized frictional properties prevent clutch slippage for smoother, more consistent transmission operation and also provide improved wet brake performance.

### Applications

- Powershift transmissions, hydrostatic transmissions, torque converters, final drives and hydraulic systems of Caterpillar and other off-highway construction and mining equipment
- Heavy-duty commercial automatic and manual transmissions where an Allison C-4 or Caterpillar TO-4 fluid is specified

*Note: Typically, the SAE 10W and 30 viscosity grades are recommended for hydraulic systems and transmissions, and the SAE 50 and 60 viscosity grades are recommended for differentials and final drives. Refer to the OEM recommendations for selection of the proper viscosity grade.*

PowerDrive Fluid meets or exceeds the requirements of:

- Allison C-4 (SAE 10W, 30)
- Caterpillar TO-4, TO-2 (obsolete)
- Dana Spicer transmissions (SAE 30, 50)
- Eaton Fuller transmissions (SAE 30, 50)
- Euclid equipment
- Komatsu equipment
- Vickers (Eaton) M-2950-S
- ZF TE-ML 03C for torque converter transmissions (SAE 10W, 30)

**Caterpillar TO-4  
Fluid For  
Off-Highway  
Equipment**

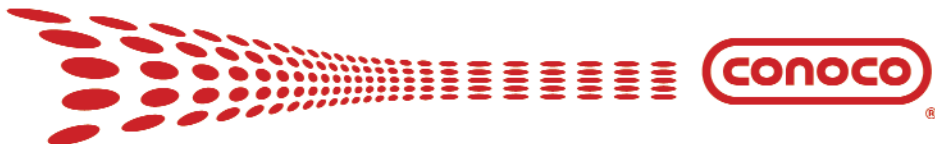
### Contact Information

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## Features/Benefits

- Well-balanced frictional properties for efficient clutch operation and improved wet brake performance
- Excellent oxidation resistance and thermal stability for long fluid life
- High load-carrying capacity for protection of final drive gear sets
- Excellent deposit control and wear protection
- Protects yellow metals against corrosion
- High shear stability
- Compatible with a wide variety of seals and friction materials
- Good low-temperature properties
- Good foam resistance

### PowerDrive® Fluid

#### Typical Properties

SAE Grade	10W	30	50	60
Specific Gravity @ 60°F	0.875	0.884	0.892	0.896
Density, lbs/gal @ 60°F	7.29	7.36	7.43	7.46
Color, ASTM D1500	2.0	2.0	4.0	5.5
Flash Point (COC), °C (°F)	213 (415)	233 (451)	242 (468)	281 (538)
Pour Point, °C (°F)	-39 (-38)	-33 (-27)	-28 (-18)	-12 (10)
Viscosity, Brookfield				
cP @ -35°C	45,500	—	—	—
Viscosity, Kinematic				
cSt @ 40°C	43.0	96.0	227	318
cSt @ 100°C	6.6	11.1	19.1	24.0
Viscosity Index	105	100	94	95
Total Base Number (TBN), ASTM D2896	7.6	7.6	7.6	7.6
Zinc, wt %	0.110	0.110	0.110	0.110

## Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3.conocophillips.com/NetMSDS>.

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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