

Powershift Transmission Fluid

Kendall Powershift Transmission Fluid is a high-performance multifunctional fluid developed for use in transmissions, final drives and hydraulic systems of off-highway equipment that require a fluid meeting Caterpillar TO-4 performance requirements. It provides substantially improved friction and antiwear performance compared to older API CD/TO-2 quality fluids, resulting in longer equipment life and reduced risk of field failure. It 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. Carefully optimized frictional properties ensure smooth shifting, more consistent transmission operation and improved wet brake performance. The SAE 10W and 30 viscosity grades also meet Allison C-4 performance requirements for use in Allison off-highway heavy-duty automatic transmissions.

Applications

Powershift Transmission Fluid is recommended for use in powershift transmissions, hydrostatic transmissions, torque converters, final drives and hydraulic systems of Caterpillar and other off-highway construction and mining equipment. It also is recommended for use in heavy-duty commercial automatic and manual transmissions where an Allison C-4 or Caterpillar TO-4 fluid is specified. 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.

Powershift Transmission 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**

**Customer Service
Number:
1-800-368-7128**

**Technical Hot Line:
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Features/Benefits

- Well-balanced frictional properties for smooth shifting and reduced brake chatter
- 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 against rust and corrosion
- High shear stability
- Compatible with a wide variety of seals and friction materials
- Good low-temperature properties
- Good foam resistance

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Typical Properties

SAE Grade	10W	30	50
Density, g/cm ³ @ 15.6°C (60°F)	0.874	0.882	0.892
Density, lbs/gal @ 15.6°C (60°F)	7.29	7.36	7.44
Color, ASTM D1500	2.0	2.0	4.0
Flash Point (COC), °C (°F)	213 (415)	233 (451)	242 (468)
Pour Point, °C (°F)	-39 (-38)	-33 (-27)	-28 (-18)
Viscosity,			
cP @ -35°C (Brookfield)	45,350	—	—
cSt @ 40°C	43.0	96.0	227
cSt @ 100°C	6.6	11.1	19.1
SUS @ 100°F	221	500	1,202
SUS @ 210°F	48.3	64.3	97.3
Viscosity Index	105	100	94
Total Base Number (TBN), ASTM D2896	7.6	7.6	7.6
Zinc, wt %	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>.

Due to continual product research and development, the information contained herein is subject to change without notification.

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