



Product Bulletin

TRANSMISSION FINAL DRIVE & HYDRAULIC FLUIDS

BRAD PENN® Transmission Final Drive & Hydraulic Fluids are specialized transmission and drive-train fluids containing additive technology that meets or exceeds the Caterpillar TO-4 specification requirements for use in off-highway equipment.

BRAD PENN® Transmission Final Drive & Hydraulic Fluids are formulated to give smooth transmission power transfer under high horsepower conditions. Additionally, they provide:

- Good fluidity and low temperature properties
- Excellent antiwear protection to critical components
- Outstanding oxidation stability, foam resistance, and rust control
- Excellent shear stability to maintain viscosity over the life of the equipment
- Superior frictional characteristics eliminating excessive brake noise and clutch slippage
- Improved friction and antiwear performance compared to TO-2 fluids for longer equipment life

BRAD PENN® Transmission Final Drive & Hydraulic Fluids are designed for use in powershift, direct drive transmissions, winches, and final drives of all new Caterpillar equipment requiring the use of a TO-4 fluid. Their use will also provide improved performance and equipment life in older Caterpillar equipment which require a TO-2 fluid. They are available in four viscosity grades – **10W**, **30**, **50**, and **60** as defined by the Society of Automotive Engineers (SAE). The SAE 10W and SAE 30 grades can be used in all Allison transmission, torque converter and hydraulic system applications specifying the use of an Allison C-4 fluid. Always follow the equipment manufacturer's recommendations for the selection of the appropriate viscosity grade.



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BRAD PENN[®]
Transmission Final Drive & Hydraulic Fluids – Typical Properties

SAE Grade	Test Method	10W	30	50	60
Gravity, API	ASTM D-4052	29.9	27.0	25.8	25.7
Density, lbs/gal (g/L)	Calculated	7.3 (875)	7.435 (891)	7.49 (897)	7.513 (900)
Viscosity, cSt @ 40°C	ASTM D-445	45.9	93	188.8	291.2
Viscosity, cSt @ 100°C	ASTM D-445	7.10	10.50	17.25	23.25
Viscosity, SUS @ 100°F	ASTM D-2161	248	485	995	1545.2
Viscosity, SUS @ 210°F	ASTM D-2161	50	62.1	89.2	115.8
Viscosity Index	ASTM D-2270	110	102	98	99
CCS, cP @ (-25)°C	ASTM D-5293	7,000 (max)	N/A	N/A	N/A
Pour Point, °F (°C)	ASTM D-5949	-49 (-45)	-27.4 (-33)	-5.8 (-21)	-0.4 (-18)
Flash Point, °F (°C)	ASTM D-92	400 (204)	425 (218)	465 (240)	465 (241)
KF Moisture, ppm	ASTM D-6304	300 (max)	300 (max)	300 (max)	300 (max)
Color	ASTM D-1500	4.5	6.0	7.0	L 8.0
Product Code		7354	7355	7356	7348