

SAE TO-4 Fluids

Description	Pride Plus Advantage TO-4 Fluids are a high-performance multi-functional fluid developed for use in transmissions, final drives and hydraulic systems of off-highway equipment where a fluid meeting Caterpillar TO-4 requirements is specified and results performance of longer equipment life and reduced risk of field failure.			
Applications	<ul style="list-style-type: none"> • The SAE 10W and 30 viscosity grades are recommended for use in Allison C-4 off-highway automatic transmissions and hydraulic systems and the SAE 50W is recommended for differentials, final drives and heavy-duty manual transmissions. • Allison TES-439, for off-highway applications • Caterpillar TO-4 in heavy-duty manual and automatic trucks and buses, TO-2 • Vicker (Eaton) M-2950-S • ZF torque converter transmissions in off-highway equipment where OEM specifies TE-ML 03C 			
Features/Benefits	<ul style="list-style-type: none"> • 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 wide variety of seals and friction materials • Good low temperature properties • Good foam resistance 			
Typical Properties	SAE Grade	10W	30	50
	Specific Gravity @ 60° F	0.875	0.857	0.861
	Density, lbs/gal @ 60° F	7.29	7.34	7.43
	Color, ASTM D1500	2.5	3.0	4.0
	Flash Point, (COC), °C (°F)	213 (415)	233 (451)	242 (468)
	Pour Point, °C (°F)	-39(-38)	-33(-27)	-28 (-18)
	Viscosity, Brookfield cP -35°C	45,500	----	----
	Viscosity, Kinematic cST @ 40°C	43.0	96.0	227
	cST @ 100°C	6.6	11.1	19.1
	Viscosity Index	105	101	95
	TBN, ASTM D2896	7.6	7.6	7.6
	Zinc, Wt %	0.110	0.110	0.110

NOTE: The values are representative of current production and may vary within modest ranges.

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