



## HEAVY DUTY TRANSMISSION OILS (TO4) SAE 10W, 30, 50 & 60

### DESCRIPTION

Heavy Duty Transmission Oil, TO4 combines superior additive technology with high-quality base stocks. These oils are formulated for use in Caterpillar and Komatsu equipment which specify, TO4 transmission qualified oils.

They also exceed the performance requirements of the Allison C-4 specification. TO4 provides excellent wear protection and extends component life.

Today's powershift transmissions are made with high tech materials which improve power transfer but are not completely compatible with many crankcase oils. Although TO4 is not our primary recommendation for crankcase oil, it is fully approved API CF oil and is thus compatible with all crankcase oils and may be used in any engine which specifies API CF performance levels provided that the drain interval is shortened.

TO4 provides superior gear protection and excellent thermal stability. TO4 maintains a delicate balance of static and dynamic friction characteristics with a variety of materials, which improves load carrying capacity and durability and reduces brake chatter. As a result this oil improves performance and provides longer component life. Changeover to TO4 should be made after the initial break in period on factory fill oil (i.e. at 5,000-8,000km).

### APPLICATION

- Recommended for the lubrication of heavy duty equipment in both on-highway and off-highway service that require a lubricant meeting the Caterpillar TO-4, Allison C-4 or API GL-3 specifications.
- Provides excellent service to all Caterpillar powershift transmissions, final drives, hydrostatic transmissions, torque converters, as well as transmissions and drive trains recommending Allison's C-4 qualified oils.

### PERFORMANCE

Meets or exceeds:

- ALLISON C-4 SPECIFICATIONS
- CATERPILLAR TO-4
- API GL-3 SPECIFICATIONS

### ADVANTAGES

- Excellent gear wear protection
- Extends component life
- Excellent thermal stability
- Compatible with crankcase oils
- Excellent frictional characteristics
- Outstanding cleanliness
- Excellent protection against rust and corrosion

**TYPICAL PHYSICAL CHARACTERISTICS**

Property	Unit	SAE 10W	SAE 30	SAE 50	SAE 60	Method
Temperatures for power shift transmissions	°C	-25-40	0-35	10-50	N/A Too viscous	-
Gravity	Degree API	30.3	28.9	26.5		ASTM D287
Viscosity 40°C	cSt	42	94	220	315	ASTM D445
Viscosity 100°C	cSt	6.6	11	19.3	24	ASTM D445
Viscosity Index	VI	109	102	99	97	ASTM D2270
Pour Point (Max)	°C	-35	-25	-15	-15	ASTM D97
Sulphated Ash	Wt %	1.2	1.2	1.2	1.2	ASTM D482

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