

AWARD Trans Fluid TO-4

POWERSHIFT TRANSMISSIONS - CATERPILLAR TO-4 APPROVED

PRODUCT LINE

AWARD Trans Fluid TO-4 was specifically designed for modern Caterpillar transmissions, clutches/brakes, final drives. It provides excellent compatibility with transmission components and premium frictional characteristics to maximize equipment performance.

As equipment designs change to improve durability and efficiency, lubricants must be designed to keep pace. Caterpillar have redesigned their power shift transmissions incorporating new frictional materials in their clutches and brakes. These new materials are no longer compatible with many engine oils traditionally recommended in these applications.

AWARD Trans Fluid TO-4 is available as an SAE 10W, 30W & 50W grades to match your seasonal requirements.

APPLICATIONS

AWARD Trans Fluid TO-4 is specifically designed for Caterpillar transmissions, torque convertors, hoists brakes and hydraulic systems lubricated from a common sump. AWARD Trans Fluid TO-4 is an Allison C-3/C-4 fluid and exceeds the requirements of Caterpillar TO-2 and TO-4 for power-shift transmissions.

Available In These Sizes



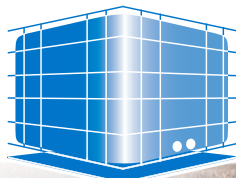
Jugs



Pails



Drums



Totes



PERFORMANCE BENEFITS

- AWARD Trans Fluid TO-4 is formulated without aggressive nitrogen containing components to ensure maximum life of clutch frictional materials.
- Improved Transmission Life - A key factor limiting transmission life in modern equipment is the compatibility of new friction materials such as F-37 and Rayflex with engine oils. Active nitrogen containing components commonly found in many engine oils, can cause these friction materials to become brittle and break up resulting in reduced transmission life.
- Superior Frictional Characteristics – Field tests have shown an increase in transmission disc life by up to 45% by utilizing the latest additive technology.
- Versatility – AWARD Trans Fluid TO-4 is formulated as an SAE 10W, 30, 50 to provide you with seasonal flexibility. These oils are not formulated with Viscosity Index Improvers and hence comply with Caterpillar’s lubrication recommendations. In addition AWARD Transmission Fluid is formulated to provide superior anti-wear protection, anti-foaming characteristics and oxidation stability resulting in longer equipment life.

**Always consult with original equipment manufacturer’s recommendations for specific performance and viscosity requirements.*

**Extending drain intervals should always be undertaken in conjunction with a regular oil analysis program.*

**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 notice.*

Health & Safety

This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

MSDS

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed.

MSDS can be found at:

<http://www.afdpetroleum.com/MSDS.aspx>



TYPICAL PROPERTIES

SAE GRADE	10	30	50	ASTM TEST METHOD
Viscosity @ -35°C, cP	50000	N/A	N/A	D2602
Viscosity @ 40°C, cSt	42.00	107.0	234.44	D445
Viscosity @ 100°C, cSt	6.50	11.50	19.84	D445
Viscosity Index	105	100	98	D2270
Flash Point, COC, °C (°F)	210 (410)	229 (444)	249 (480)	D92
Pour Point, °C (°F)	-36 (-33)	-21 (-5)	-12 (10)	D97
Color	2.0	3.0	4.0	D1500
Gravity, °API	31.5	28.4	26.3	D287
Sulfated Ash, % wt.	1.6	1.6	1.6	D874
Zinc, min.	0.090	0.090	0.090	D1549
Foaming: with 0.1% / without water	-	-	-	-
Sequence III	20/0	20/0	20/0	D892
Sequence II	50/0	50/0	50/0	D892
Sequence I	20/0	20/0	20/0	D892

PERFORMANCE SUMMARY

SPECIFICATIONS AND APPROVALS	AWARD TO-4
Caterpillar TO-2, TO-4, TDTO	Yes
Allison C3, C4 (10W, 30)	Yes
API CD, CF	Yes
API GL-1, 2 and 3	Yes
Komatsu Micro-Clutch	Yes

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