

Heavy Duty Lubricants

Economical, dependable lubricants

MULTI-SEASON TRANSMISSION OIL (TMS)

PRODUCT DESCRIPTION

SURE-CRAFT™ TMS (Transmission Multi-Season) Oil is specifically designed for modern Caterpillar transmissions. It provides excellent compatibility with transmission and drive train components offering premium frictional characteristics to maximize equipment performance.

APPLICATIONS

SURE-CRAFT™ TMS (Transmission Multi-Season) Oil is designed for specific Caterpillar transmissions and drive train components where Caterpillar TDTO-TMS is recommended. Its multigrade, semi-synthetic composition is suited for machines subject to "cold soaked" starts in an ambient temperature range of -30 to +20C.

It is also recommended for torque converters, final drives and hydraulic systems of Caterpillar equipment for the prescribed temperature range of a 5W-30 oil. It is not for use in wet brake compartments of off-highway trucks.

SURE-CRAFT™ TMS (Transmission Multi-Season) Oil meets Allison C-3/C-4 fluids requirements as well as Caterpillar T0-2 specifications for powershift transmissions.

Although **SURE-CRAFT™ TMS (Transmission Multi-Season) Oil** is not approved for the Caterpillar TO-4/TO-4M specification, it does utilize the same additive performance package as TO-4/TO-4M approved fluids. It is acceptable for use in Caterpillar components specifying Caterpillar TDTO-TMS fluids.

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PERFORMANCE TESTING

SURE-CRAFT™ TMS (Transmission Multi-Season) Oil is formulated without aggressive nitrogen containing components to ensure maximum life of clutch friction materials such as F-37 and Rayflex. Many engine oils are not recommended for transmission and final drive use due to the active nitrogen containing components in the formulation, which can cause these clutch friction materials to become brittle and break up resulting in reduced transmission life.

In addition, SURE-CRAFT™ TMS (Transmission Multi-Season) Oil provides superior oxidation stability, anti-wear protection and anti-foaming characteristics resulting in longer equipment life.

TYPICAL PROPERTIES

Viscosity cSt @ 40C	55.4
cSt @ 100C	10.97
Viscosity Index	195
Brookfield Viscosity cP @ -30C	5327
cP @ -35C	13710
Pour Point, C	-51
Zinc Content % mass	0.12
Calcium Content % mass	0.31
MRV @ -40C	24150

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