

# Pennzoil<sup>®</sup> Long-Life Transmission Fluid TO-4

## High Performance Off-Highway transmission oils

Long-Life Transmission Fluids are designed to provide operators with trouble free operation and maximum reliability for the lifetime of the equipment. Long-Life Transmission Fluids meet the demanding requirements of modern transmission, final drive, oil immersed brake and hydraulic systems fitted to heavy-duty off-highway.

### Applications

Long-Life Transmission Fluids are recommended for use heavy duty off-highway equipment produced by the world's leading manufacturers including; Caterpillar, Komatsu, Komatsu-Dresser and in transmissions manufactured by Eaton, Eaton Fuller, ZF, Dana, Rockwell amongst other:

- Powershift Transmissions
- Final drives
- Oil immersed brakes
- Hydraulic systems

### Performance Features

- **Frictional performance and material compatibility**

Highly consistent and reliable friction performance when used with the advanced metallic and non-metallic materials found in modern systems. Minimal clutch slippage, smooth and quiet brake operation, and trouble-free transmission operation.

- **Anti-wear protection**

The shear-stable SAE 10W, 30 and 50 viscosity grades are free from viscosity index (VI) improvers and thickeners and give the best protection of heavily loaded components.

- **Low temperature characteristics**

Formulated to meet low temperature viscosity and fluidity requirements, providing superior protection during start-up and low operating temperature conditions.

- **Optimum mechanical performance and long oil life**

Wide-ranging protection for critical components, such as bronze friction discs in powershift transmissions and gears in final drives and differential units.

- **Vickers 35V25 hydraulic pump test**

Excellent performance in this demanding test.

- **Oxidation stability**

Contains inhibitors to control oxidation and deposit formation. Protects both ferrous and non-ferrous metals from corrosion. Suppresses foaming.

### Performance Specifications

Long-Life Transmission Fluids are suitable for use where the following specifications are called for:

Caterpillar Tractor	- TO-4
GM / Allison	- C-4*
Komatsu	- Service fill approved KES 07.868.1
ZF	- TE-ML 03C*, 07F**

\* 10W and 30 grades only; \*\* SAE 30 grade only

### Typical Physical Characteristics

Long-Life Transmission Fluids	10W	30	50
SAE Grade	10W	30	50
Viscosity @ 40°C, cSt	36.0	93.9	217.4
100°C, cSt	6.0	10.9	19.0
Density @ 15°C, kg/l	0.884	0.899	0.910
Flash Point (PMCC), °C	201	207	204
Pour Point, °C	-36	-30	-18

*These characteristics are typical of current production. Whilst future production will conform to specifications, variations in these characteristics may occur.*

### Health & Safety

Long-Life Transmission Fluids are unlikely to present any significant health or safety hazard when properly used in the recommended application, and good standards of industrial and personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

For further guidance on Product Health & Safety refer to the appropriate Product Safety Data Sheet.

Take used oil to an authorised collection point. Do not discharge into drains, soil or water