

POWER TRANSMISSION FLUID

General Description

Power Transmission Fluid is a heavy duty transmission fluid that is specially formulated to meet the Caterpillar TO-4 and Allison C-4 specifications, required for use in their power shift transmissions.

Caterpillar created the very stringent TO-4 specification in answer to lubricant related problems due to improper frictional properties and materials compatibility characteristics in some TO-2 qualified oils. (The TO-2 specification was the former warranty requirement for Caterpillar.) TO-4 qualified oils are now the warranty requirement for Caterpillar and the use of TO-4 qualified oils is now the Caterpillar recommendation, even in equipment that originally recommended the use of TO-2 qualified oils. Caterpillar states that improved performance and equipment life should be expected from use of TO-4 qualified fluids.

The C-4 specification was created by Allison as a warranty requirement in response to new equipment designs with more severe operating conditions expected in modern equipment using their transmissions.

Power Transmission Fluid contains high quality paraffinic base oils and a highly specialized additive system that, together, provide the frictional properties, material compatibility and overall performance level required to meet performance requirements for heavy duty equipment.

Expect superior performance in:

- Caterpillar power shift transmissions, clutches, final drives and other drive train components as specified.
- Allison heavy duty automatic transmissions.

Features and Benefits

Frictional Properties: Improved frictional characteristics and materials compatibility, when compared to TO-2 oils, provides longer component life (up to 45%) and better performance.

Extra Protection: Superior wear and corrosion protection extend equipment life.

High Temperature Protection: Oxidation inhibitors and additives to control sludge lead to long fluid life.

OEM Approval: Approval against Original Equipment Manufacturer (OEM) specifications to maintain warranty coverage.

Typical Application

Power Transmission Fluid is recommended for all Caterpillar and Allison automatic or powershift transmissions in heavy duty equipment. TO-4 qualified fluids like Cenex Power Transmission Fluid must be used to maintain warranty on Caterpillar powershift transmissions requiring TO-4 quality oil.

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Typical Customer

Owners and operators of:

- Truck and bus fleets using automatic transmissions
- Heavy-duty construction equipment

Health & Safety

A complete material safety data sheet is available upon request. Used oil contains by-products which may be harmful. Avoid prolonged or repeated skin contact. Wash clothing and exposed areas with soap and water. Don't pollute - return used oil to a collection center.

Typical Properties

| SAE Grade | SAE 10W | SAE 30 | SAE 50 |
|------------------------------|------------|------------|-----------|
| API Gravity | 28.4 | 27.0 | 26.6 |
| Viscosity @ 40°C, cSt (SUS) | 36.3 (170) | 97.7 (453) | 208 (964) |
| Viscosity @ 100°C, cSt (SUS) | 5.8 (45) | 11.2 (64) | 18.7 (93) |
| Viscosity Index | 100 | 100 | 100 |
| Pour Point | -20 | -10 | 15 |
| Flash, COC, °F | 410 | 450 | 460 |

The typical properties listed reflect the general characteristics of the product, and are not manufacturing specifications. Normal batch-to-batch variations should be expected.