



Product Data Sheet

PowerTrans TO-4 Mono-Grade 10W, 30 & 50 Oils TO-4 HD Transmission and Drive Train Lubricants

DESCRIPTION

Nemco PowerTrans HD oils are latest-technology products designed to optimize performance of off-highway transmissions, drive trains, and hydraulic systems without the compromises inherent in the mixed-fleet engine oils previously used in these applications. The new lubricants are formulated from selected base oils and a balanced additive system which provides outstanding oxidation stability, elastomer compatibility, corrosion and rust control, and maximum protection against foaming. The three viscosity grades, SAE 10W, 30 and 50, have optimum shear stability and excellent high-temperature/high-shear viscosity. The SAE 10W grade has very good low temperature pumpability and a low pour point.

Advantages

- Optimized clutch friction retention and slippage control
- Significantly improved clutch life compared to the former API CD/CAT TO-2 engine oils
- Greatly improved control of gear wear in transmissions, gear boxes, and drive trains
- Top performance in wet brakes, excellent control of brake chatter
- Outstanding hydraulic oil stability and protection against high pressure pump wear

Applications

Nemco PowerTrans HD products are designed to lubricate the most demanding transmissions, drive trains, clutches, and hydraulic systems in Caterpillar, Case, Komatsu and other contractor, off-highway contractor, logging, mining, and farming equipment. These oils are fully qualified CAT TO-4 and Allison C-4 fluids and can be used in manual, powershift, and automatic transmissions marketed by this builder for on- and off-highway applications. They are also suitable for most automotive hydraulic applications.

Nemco PowerTrans HD fluids are recommended for most spur, helical, bevel and worm gear boxes, even under severe-duty applications. Since the products do not contain friction modifiers, they can be used in Twin Disc clutches and Type F transmission oil applications within the ambient temperature ranges dictated by their SAE grades. Nemco PowerTrans HD 10W, 30 and 50 grades are rated ISO VG 32, VG 100 and VG 220, respectively, and can be used wherever these grades are specified.

Meets and/or exceeds

- Caterpillar TO-4
- ZF Power Shift TE-ML 01, 03C, 07F
- Allison C-4
- Komatsu KES 07.868.1
- Spicer Clark-Hurth Power Shift
- Dana Power Shift
- Euclid, Terex, Dresser
- Eaton/Fuller/Tremec/TTC/Dana/Spicer manual transmissions
- Eaton/Vickers M-2950S/35VQ25 Hyd (10W)



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Typical Characteristics – PowerTrans TO-4 Mono-Grade Oils

SAE Grade	TO-4 10W	TO-4 30	TO-4 50
Density, kg/L @ 15 °C	0.870	0.878	0.895
Viscosity, Kin cSt at 40°C cSt at 100°C	38.5 6.1	103.0 11.7	215.0 18.9
Viscosity index, min	109	100	99
Brookfield Viscosity, cP @ -20°C	3,000	n/a	n/a
Pour point °C (°F)	-36 (-24)	-27 (-10)	-20 (-4)
Pumpability, cP at -25°C, MRV TP-1	6,000	n/a	n/a

Physical characteristics shown in the table are typical and may vary slightly.