

Glass TO-4 SAE 10w, 30, 50

Product Data Sheet



Glass TO-4 products are high performance lubricants designed for use in transmissions, final drives, and hydraulic systems in Allison, Caterpillar, Dana Powershift, Komatsu, Komatsu Dresser, Tremec/TTC, Vickers and ZF equipment.

Glass TO-4 products are manufactured to exceed industry standards. Every batch is laboratory tested from base stocks and additives to finished product to consistently deliver an exceptional level of performance and protection. They are manufactured using highly refined base oils, detergents, dispersants, oxidation and corrosion inhibitors, anti-wear and extreme pressure agents, and a foam suppressant.

Glass TO-4 products are formulated to help protect against wear, even in severe service conditions and under high loads. They help protect precision parts against wear under high load conditions by controlling the formation of corrosion, varnish, and sludge. They offer excellent friction retention, wear control, seal compatibility, oxidation stability, and viscosity stability.

FEATURES AND BENEFITS

- **Long equipment life** – special additives help protect metal surfaces against scuffing and wear even under severe operating conditions of high temperature and high load.
- **Smooth operation** – excellent frictional control helps prevent clutch slippage and offers quiet and efficient action of transmission and brakes while minimizing wear.
- **Minimal downtime** – good compatibility with seals, O-rings, and packing materials maintains their good condition and keeps leakage at a minimum.
- **Long oil life** – outstanding ability of the base stock to withstand oxidation at high operating temperatures results in maximum service life for the oil.
- **Reliable operation** – formulated to keep metal parts clean and free of varnish and sludge deposits that could result in premature breakdown.

APPLICATIONS

Designed for use in transmissions, final drives, and hydraulic systems requiring a fluid meeting Caterpillar TO-4 or Allison C-4 requirements. They are also recommended for transmission and hydraulic systems manufactured by Dana Powershift, Komatsu, Komatsu Dresser, Tremec/TTC, Vickers and ZF. Glass TO-4 products are compatible with new and traditional seal and clutch materials, designed for both newly developed and older model drive train components where the following specifications are recommended

ZF TE-ML 03C (SAE 10W, 30); **ZF TE-ML 07F** (SAE 30); **Allison C-4** (SAE 10W, 30); **Caterpillar TO-4**; **Dana Powershift** (SAE 10W, 30); **Komatsu KES 07.868.1**; **Komatsu Dresser**; **Tremec/TTC**; **Vickers 35VQ25** (SAE 10W, 30)

Hydraulic systems will use the SAE 10W viscosity grade Under normal ambient temperatures. SAE 10W and 30 are recommended for mobile hydraulic systems where operating requirements are severe.

Transmissions will use the SAE 30 viscosity grade. Glass TO-4 products are also recommended for heavy duty off highway automatic transmissions requiring an SAE 10W, 30 or 50 fluid.

Final drives will use the SAE 50 viscosity grade at normal temperatures.

Do not use in high pressure systems in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

TYPICAL PROPERTIES

SAE	10w	30	50
Viscosity, cSt			
@40C	43.8	94.2	185.2
@100C	6.8	11	17.3
Viscosity Index	110	100	100
Viscosity, Cold Crank – 20C	-25/60		
Flash Point, (COC) Deg. F	460	510	510
Color, ASTM	3	3	4.5
TBN	7.5	7.5	7.5
Sulfated Ash. %	1.2	1.2	1.2
Pour Point, Deg. F	-27	-17	-17
Gravity, API @ 60F	30	28.7	26.5

Typical test data are average values only. Minor variations which do not affect product performance are to be expected during normal manufacturing. Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.