



Thuban GL5 EP oils are high performance, multipurpose, thermally stable, extreme pressure, automotive gear lubricants formulated with "clean gear" technology for applications where API GL-5/MT-1 performance is required.

Thuban GL5 EP is available in SAE viscosity grades 80W-90 and 85W-140.

APPLICATIONS

- Automotive hypoid gear differentials operating under high speed and/or low speed, high torque conditions where API GL-5 performance gear oils are required or permitted.
- Heavy duty, non-synchronised manual transmissions where API MT-1 performance gear oils are specified.
- Automotive steering gears where API GL-5 performance gear oils are permitted.

Not recommended for manual transmissions other than as mentioned above except where the manufacturer explicitly allows the use of API GL-5 performance oils.

BENEFITS

- **Reduced maintenance costs**
Special dispersant in the "clean gear" technology additive package suspends sludges and carbonaceous deposits in the gear oil, preventing their deposition on gear components and oil seals, thus avoiding the need for premature overhaul due to deposit induced seal wear or leakage. Outstanding thermal stability minimises the total amount of deposits that the dispersant has to deal with.
- **Extended gear equipment life**
High performance, sulfur-phosphorus EP additive system provides excellent load carrying capacity to protect gear equipment against surface distress (i.e. spalling, pitting, scoring and wear) under heavily loaded conditions. The special inhibitor system resists corrosion of copper alloys and ferrous metals.
- **Prolonged oil service life**
Highly refined base oil and special inhibitor system provides excellent oxidation stability to resist oil degradation and thickening during long periods of severe high temperature operation.

PERFORMANCE STANDARDS

API	GL-5
API	MT-1
Mack	GO-J Approval
SAE	J2360 (80W-90 only) Approval
ZF	TE-ML 12M (85W-140 only)



TYPICAL CHARACTERISTICS

Product Code	2116	2117
SAE Grade	80W-90	85W-140
Density at 15°C, kg/L	0.903	0.909
Flash Point, °C	230	234
Pour Point °C	-30	-15
Timken OK Load, kg	27	27
Viscosity, at 40°C, mm ² /s at 100°C, mm ² /s	140 15.0	344 25.5
Viscosity Index	108	97

PACK SIZES

1000L, 205L, 60L, 20L, 4L.

SAE 80W-90 also available in 1L.

SERVICE CONSIDERATIONS

Modern automotive and heavy-duty equipment places severe demands on gear oils. Heavier loads, diverse driving conditions, terrain and more aerodynamically designed body shapes have resulted in higher operating temperatures for differentials, transmissions and steering gear units.

At elevated gear oil temperatures, it has been found that many gear oils used in manual transmission and differential applications can allow sludge and hard carbonaceous deposits to form which cause oil seal wear, leading to leakage and premature equipment failure. Consequently, more thermally stable, “clean gear” oils are required to resist oil degradation and deposit formation.

Thuban GL5 EP is a thermally stable, “clean gear” technology gear oil, incorporating additional dispersant chemistry in its additive package to suspend any sludges and carbonaceous deposits which form, and prevent their deposition on oil seals, gears and critical yellow metal components of transmissions.

For a minority of automotive drive axles of the spiral bevel types API GL-4 performance lubricants are specified. Thuban GL5 EP may be used in such applications as long as there is not a prohibition on the use of API GL-5 performance lubricants due to, for example, the presence of copper alloy materials such as bronze bushes. In all cases the manufacturer’s operating instructions should be consulted.

Some European heavy duty drive axles, such as those from Mercedes Benz, MAN and ZF require gear oils that meet specific builder additional requirements in addition to API GL-5. For such applications Caltex offers a range of alternative gear oils that meet the various manufacturer requirements

API MT-1 designates the type of service that is characteristic of non-synchronized manual transmissions, as commonly used in North American heavy-duty equipment. Lubricants meeting the requirements of API MT-1 provide protection against the combination of thermal degradation, component wear and oil seal deterioration, which is not provided by lubricants that meet the requirements of API GL-5 alone.



Except for the North American heavy-duty manual transmissions for which API MT-1 performance oils are acceptable, and a very small number of other manual transmissions, Thuban GL5 EP is in general not suitable for use as a manual transmission fluid (MTF).

Manual transmission fluids (MTFs) are now generally highly specialized products, and there is significant divergence of OEM requirements and diversity of product types. It is true that many MTFs meet API GL-4, but this is largely incidental, as primarily they are defined by other requirements including but not limited to materials compatibility, synchromesh performance and durability, shift feel properties, and gear wear and pitting protection. API GL-5 and GL-4 class drive axle gear oils are not required to meet these requirements, as their specification requirements and qualification tests are wholly drive axle-based.

Caltex offers a range of purpose-designed MTFs for both light and heavy duty applications including Easy Shift and Delo® Synthetic Transmission Fluid.

ENVIRONMENT, HEALTH AND SAFETY

Users should consult the MSDS, follow the precautions outlined and comply with all laws and regulations concerning its use and disposal. Used packaging material should not be incinerated or exposed to flame. After use, protect your environment. Do not pollute drains, soil or water with used product.

OTHER INFORMATION

For further information on Caltex products and services call the Technical Solutions on 1300 364 169.

Information in this publication is accurate at the time of printing and reasonable care has been taken to ensure it is complete and accurate. However, this information is subject to change (such as when formulations or usage and storage information changes). Please visit www.caltex.com.au for the latest product information. Independent advice should be sought before taking any action in reliance on the information in this publication, and Caltex Australia Limited and its related bodies corporate accept no liability for any reliance on this publication's content.