Customer benefits

**Extended oil drain intervals**
Special frictional properties significantly lower transmission running temperatures for cooler operation and less heat stress on the oil. Thermally stable EP system provides improved protection against pitting and wear, enabling extended drain capability compared with more conventional technology oils.

**Long transmission life**
Thermally stable EP system limits corrosion of copper-containing bearings and bushings and provides improved steel pitting protection under severe conditions. The EP system also provides very good anti-wear protection for transmission gear components.

**Enhanced synchronizer performance**
Special frictional characteristics provide optimum transmission synchronizer performance and shift feel in European vehicles.

**Low environmental impact**
Very low chlorine content reduces the environmental impact of ultimate disposal. Extended drain capability potentially lessens quantity of used oil requiring disposal.

Applications

- Manual transmissions, both synchromesh and constant mesh, and other components of Mercedes-Benz, MAN and other European heavy-duty vehicles.

- Other light-duty and heavy-duty manual transmissions, transaxles, which specifically require mild EP gear oils meeting API GL-4

- Spiral bevel drive axles, planetary hubs and other automotive gear units for which mild EP gear oils meeting API GL-4 are required or are acceptable.

Product features:

- **Translube LD oil** is premium performance, mild EP, automotive gear lubricant.

- **Translube LD** has been specifically designed to meet Mercedes-Benz Sheet 235.5 requirements for service in heavy-duty vehicle manual transmissions.

- **Translube LD** is also suitable for other light and heavy-duty manual transmissions for which mild EP gear lubricants are specified.
Typical key properties

| TRANSLUBE LD   | KEY PROPERTIES | SAE Grade | Product Code | Pour Point, °C | Timken OK Load, kg | Viscosity, mm²/s @ 40°C | mm²/s @ 100°C | Viscosity Index |
|----------------|----------------|-----------|--------------|----------------|---------------------|------------------------|----------------|----------------|----------------|
|                |                | 80W       | 510317       | -30            | 34                  | 85.4                   | 10.5           | 106            |                |
|                |                | 80W-90    | 510316       | -33            | 36                  | 134                    | 14.5           | 107            |                |
|                |                | 90        | 510318       | -30            | 36                  | 150                    | 15.0           | 100            |                |

Performance standards

- Translube LD SAE 80W:
  - Mercedes-Benz Sheet 235.5 (approved)
  - MAN 341 Type E2 (approved)
  - MAN 341 Type Z2 (approved)
  - ZF TE-ML 02B (approved, reference ZF 000800)
  - ZF TE-ML 17A (approved, reference ZF 000800)
  - API GL-4 (self-certified)

- Translube LD SAE 90:
  - Mercedes-Benz Sheet 235.5 (approved)
  - MAN 341 Type E2 (approved)
  - MAN 341 Type Z2 (approved)
  - ZF TE-ML 02B (approved, reference ZF000801)
  - ZF TE-ML 16A (approved, reference ZF000801)
  - ZF TE-ML 17A (approved, reference ZF000801)
  - ZF TE-ML 19A (approved, reference ZF000801)
  - API GL-4 (self-certified)
Performance standards (Cont.)

• Translube LD SAE 80W-90:
  - Mercedes-Benz Sheet 235.5 (meets)
  - MAN 341 Type E2 (suitable for use)
    MAN 341 Type Z2 (meets)
  - ZF TE-ML 02B (meets)
    ZF TE-ML 17A (meets)
  - API GL-4 (self-certified)
Translube LD

Service considerations

Translube LD is primarily intended for use as a heavy-duty synchromesh manual transmission fluid (MTF) of the mild EP type and based upon sulfur-phosphorus chemistry.

It may also be suitable for use in some light-duty synchromesh manual transmissions where mild EP type oils are required, and where SAE 80W or SAE 90 viscosity is acceptable. However, many such transmissions required “multiviscosity” fluids such as SAE 75W-90.

Translube LD also meets API GL-4, and so may be used in other applications, such as spiral bevel drive axles, where this type of oil is acceptable. However, it is not intended for use in any hypoid drive axles or other equipment where API GL-5 performance oils are specified. It should not be mixed in service with manual transmission and other fluids that are based upon detergent-zinc type additive technology.