

# Product data

## **Syntrans 75W/85**

## **Syntrans M**

### **Product Description**

Castrol Syntrans 75W/85 and Castrol Syntrans M are full synthetic manual transmission lubricants with outstanding low temperature fluidity, oxidation stability and synchroniser performance.

### **Product Application**

Castrol Syntrans 75W/85 is recommended for manual transmissions where excellent synchroniser performance is required or where severe duty or extended drain intervals are experienced. Also recommended for passenger car and light commercial vehicle transmissions, transaxles and transfer cases where API GL 3 or 4 and SAE 75W/85 or 80 viscosity is specified.

Castrol Syntrans 75W/85 has proved to provide the best synchroniser performance in Mitsubishi, Pajero, Galant VR4 and Lancer GSR manual transmissions. Also effective in Holden Jackaroo and Rodeo manual transmissions for best cold shift performance, as well as in competition applications.

Castrol Syntrans M is our prime recommendation for long drain applications in Eaton Road Ranger, Spicer and Rockwell truck transmissions, in both normal and severe duty conditions. It is suitable for both synchronised and non-synchronised manual transmissions. It is particularly recommended for long haul interstate trucks, b-double, road train and other severe duty applications. However it may also be used in manual transmissions of cars and light commercial vehicles where API GL4 and SAE 75W/90 or SAE 40 or 50 engine oils are recommended.

## Field Experience

Field experience with both **Castrol Syntans 75W/85** and **Castrol Syntans M** in Australia has demonstrated excellent performance in ZF, Mercedes Benz, Volvo and Mitsubishi manual transmissions in a range of vehicles, particularly trucks. Long haul operating conditions in Australia differ from most overseas operations. There is a higher proportion of engines above 400 hp (300 kw) operating on longer point to point destinations, at higher speeds, as well as on rough roads. These conditions increase the stress on the drive train and the lubricant. Both **Castrol Syntans 75W/85** and **Castrol Syntans M** have demonstrated excellent gear set and bearing durability in field evaluation in Australia.

## Product Features & Benefits

Extensive field evaluation in Australia confirms excellent transmission performance in synchronised transmissions.

### Features

- ◆ Excellent oxidation stability.
- ◆ Proven synchroniser performance.
- ◆ Very fluid at low temperatures.
- ◆ Excellent viscosity temperature characteristics.
- ◆ Good wear protection.
- ◆ Excellent seal compatibility with normal mineral oil seals.
- ◆ Compatible with normal mineral oil.
- ◆ Long drain performance.
- ◆ Specially selected synthetic base fluids and additive system.

### Benefits

- ◆ Suitable for high temperature and extended drain service.
- ◆ Makes gear shifting easier, and transmission operation quieter. Helps lower driver fatigue.
- ◆ Easier cold start gear shifting.
- ◆ Helps retain effective viscosity over all ambient working temperature ranges.
- ◆ Low wear and long gear life.
- ◆ Standard seals can be retained and long seal life expected.
- ◆ No special flushing procedure needed when changing from mineral to synthetic oil.
- ◆ Potentially lower maintenance costs and greater vehicle availability.
- ◆ Very stable viscosity in service.

## Typical Characteristics

SAE Grade	Syntrans 75W/85	Syntrans M
Viscosity cSt @ 100°C	11.9	18.5
Viscosity cSt @ 40°C	64.4	120
Pour Point °C	<45	<45
API Rating	GL4	GL4
Viscosity Index	183	160
Viscosity cP @ -26°C	3,800	8,800

## Performance Levels

Castrol Syntrans 75W/85 and Castrol Syntrans M are suitable where the following performance levels are specified:

### Performance

- ◆ API GL 3 or 4
  - ◆ API CC, CD, SE, SF, SG
  - ◆ ZF TE-ML 02, 01
  - ◆ Volvo
- MB 235.4  
 MAN 34 transmissions only  
 (Manual Transmissions: car, light commercial vehicles and heavy commercial vehicles.) Approved for extended drain 300,000 kms in commercial vehicles with ZF transmissions.  
 Transmission Oil Part No. 97307 (Syntrans 75W/85 only).

### Viscosity

#### Castrol Syntrans 75W/85

- ◆ SAE 75W/85, 75W, 80W,
- ◆ SAE 5W-30, 10W-30, 30

#### Castrol Syntrans M

- ◆ SAE 75W/90, 80W/90, 75W/80, 75W/90
- ◆ SAE 15W-50, 20W-50, 15W-40, 20W-40, 40, 50

## Changeover Procedure

Drain and changeover from mineral oil to **Castrol Syntrans 75W/85** or **Castrol Syntrans M**.

As **Castrol Syntrans 75W/85** and **Castrol Syntrans M** are compatible with normal mineral gear oils, extensive flushing is not usually required.

For the optimum performance of **Castrol Syntrans 75W/85** or **Castrol Syntrans M** the following advice is offered. Where transaxle, transfer case or transmission has been subjected to high operating temperatures, the system should be flushed with clean gear oil, either mineral (Castrol VMX80 or Castrol TFC 430) or preferably CASTROL SYNTRANS 75W/85 or **Castrol Syntrans M**.

Flushing is best carried out by draining the used oil while still warm, refilling with fresh clean gear oil and the unit worked for at least 1-2 hours. Then drain and refill with **Castrol Syntrans 75W/85** or **Castrol Syntrans M**, making sure transaxle, transfer case or transmission is filled to the correct level.

Note: Although **Castrol Syntrans 75W/85** or **Castrol Syntrans M** may be topped up with mineral oil (Castrol VMX 80 or Castrol TFC 430 or 450 preferred), some of the performance advantages and protection provided by **Castrol Syntrans 75W/85** or **Castrol Syntrans M** will be significantly reduced.

## Extended Drain Applications

Determining service durability:

1. Recommended maximum service interval 400,000 kms or 2 years.
2. For extended drain service intervals, on-going wear metal analysis is considered vital for maximum equipment durability. Castrol Labcheck analysis at least every 100,000 kms should replace the normal visual oil inspection at standard drain intervals.

3. For off-highway or arduous operations, the drain interval should be shortened from 400,000 kms to a length determined by Castrol Labcheck sampling. To determine the drain interval, Labcheck sampling should be undertaken at least every 100,000 kms. The drain period should be calculated by the sample results and the interpretation by the Castrol Technical Services Manager.
4. **Castrol Syntrens 75W/85** and **Castrol Syntrens M** are NOT compatible with glycol based gear oils. Compatibility with other synthetic oils would need to be determined on a case by case basis. Consult your local Castrol Office for advice.
5. **Castrol Syntrens 75W/85** and **Castrol Syntrens M** are NOT recommended for engines or hypoid differentials.

## **Health, Safety & Environment**

**Castrol Syntrens 75W/85** and **Castrol Syntrens M** are considered non-hazardous according to Worksafe. However, in line with safe handling practices, it is recommended that the handling instructions outlined in the Castrol Material Safety Data Sheet be followed.

### **Spillage**

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| <b>Small:</b>    | Soak up using an inert mineral adsorbent such as Castrol Diatomaceous Earth and dispose of in the appropriate manner.  |
| <b>Large:</b>    | Corrective action usually dictated by individual company safety procedures. Immediate containment and subsequent removal is essential.                               |
| <b>Disposal:</b> | Oily materials must not be allowed to enter groundwater, watercourses, sewerage or drainage systems. Refer to local Waste Disposal Authority for legal requirements. |

## **Product Removal**

- Bare Metal Surfaces:** Remove with Castrol solvent cleaners or water based degreasers.
- Hand Cleaning:** Use any of the Castrol range of hand cleaners, e.g. CareClean Plus.
- Other Surfaces:** Contact your local Special Products Division in each State Office.

Although all reasonable care has been taken to ensure that the information contained in this publication is accurate as at the time of printing, such information is nevertheless liable to variation in the event of changes occurring subsequent to the date of printing it: the blend formulation, methods of storage, or due to the improper handling or application of any of the products referred to, or in the requirements of any specification or approval relating to any of the products.

**For more information contact: Castrol Australia Pty Limited (ABN 87 008 459 407)**

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