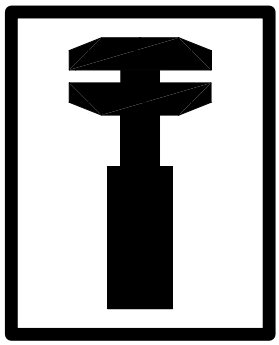


Order No.: 5871 970 102

ZF – REAR AXLE
and
REMOTE CONTROL
T - 7336

ZF Passau GmbH
Donaustr. 25 – 71
D- 94 034 Passau

Edition: 1999/10

REPAIR MANUAL
for the ZF – REAR AXLE
T - 7336

INSTRUCTIONS CONCERNING THE REPAIR MANUAL

The described Disassembly and Assembly Manual is based on the design level of the ZF-Rear Axle at the time of preparation of the Repair Manual.
Technical development of the product as well as extensions concerning the design possibilities may require differing steps, which can be carried out by qualified Specialists without greater difficulties with the help of the Perspective Illustrations in the corresponding Spare Parts Lists.

The present Disassembly and Assembly Manual is losing its legal obligation with the publication of a new successional Edition.
The ZF Passau GmbH is in this connection not responsible for the positive knowledge at the User of the Manual.

ATTENTION:

For the installation as well as for the commissioning of the unit, the Instructions and Specifications of the Vehicle Manufacturer have to be observed !

ZF Passau GmbH
Donaustr. 25 - 71
D - 94034 Passau

Abt.: ASTDM / Section : ASTDM

1.Auflage / 1.Edition

PREFACE

This documentation has been developed for the skilled Serviceman, trained by the ZF Passau for the Repair and Maintenance operations on ZF-Units.

Treated is a ZF-Serial product according to the design stage of the date of Edition.

However, due to further technical developments of the product, the repair of the unit at your disposal could require different steps as well as other adjustment and testing specifications.

Therefore, we recommend to commit your ZF-Product to Masters and to Servicemen, whose practical and theoretical training is constantly completed to the actual situation in our Training School.

The Service Stations, established by the Zahnradfabrik Friedrichshafen all over the world, offer you:

1. Constantly trained personnel

2. Prescribed installations, e.g. Special Tools

3. Genuine ZF-Spare Parts according to the latest phase of development

Here, all operations are carried out for you with utmost care and reliability.

Repair operations carried out by ZF-Service Stations, are covered additionally within the terms of the actual contractual conditions, by the ZF-Warranty.

Damages caused by inappropriate or inexpert work, carried out by personnel foreign to ZF, and after-expenditures eventually arising from it, are excluded from this contractual responsibility.
This applies also in case of a renouncement of Genuine ZF-Spare Parts.

ZF Passau GmbH

Service Department

GENERAL WORKING INSTRUCTIONS

During all operations, pay attention to cleanliness and skilled working.
Therefore, Transmissions, removed from the vehicle, must be cleaned prior to open them.

We assume that the Special Tools, specified by ZF, will be used.

The Special Tools have a 10-digit Subject-No. and are available from ZF-Passau.

After the disassembly, all components must be cleaned, especially corners, cavities and recesses of housing and covers.

The old sealing compound must be carefully removed.

Check lubricating holes, grooves and pipes for free passage.
They must be free of residues, foreign material or protective compounds.
The latter refers especially to new parts.

Parts which have been inevitably damaged in a disassembly operation, must be generally replaced by new ones, e.g. : rotary seal rings, O-Rings, U-Section rings, cap boots, protective caps etc.
Components such as roller bearings, thrust washers, synchronizing parts etc. which are subject to normal wear in automotive operation, must be checked by the skilled Serviceman.
He will decide if the parts can be reused.

For the heating of bearings etc., hot plates, rod heaters or heating furnaces must be used.
Never heat parts directly with the flame.

Ball bearings, covers, flanges and parts like that must be heated to about 90^{o} to 100^{o} C.

Hot-mounted parts must be reset after cooling in order to assure a proper contact.
Before pressing shafts, bearings etc. in position, both parts must be lubricated.

During the reassembly, all specified adjustment values, testing specifications and torque limits must be respected.

Before a test run or prior to commissioning ZF units are filled up with oil.
The procedure is indicated in the ZF Lubrication and Maintenance Instructions, the permitted oil qualities can be taken from the ZF List of Lubricants.
The ZF Lists of Lubricants are available at all ZF-Service Stations.
After the oil filling, the oil level plugs and oil drain plugs must be tightened to the specified torque limits.

IMPORTANT INSTRUCTIONS

CONCERNING THE LABOUR SAFETY

In principle, Repairers of ZF-Units are themselves responsible for the labour safety.

The observance of all valid Safety Regulations and Legal Rules is a precondition to prevent damage to individuals and products during the Maintenance and Repair operations.

The proper Repair of these ZF-Products requires especially trained personnel.
The Repairer himself is obliged to provide for the training.

SYMBOL EXPLICATION

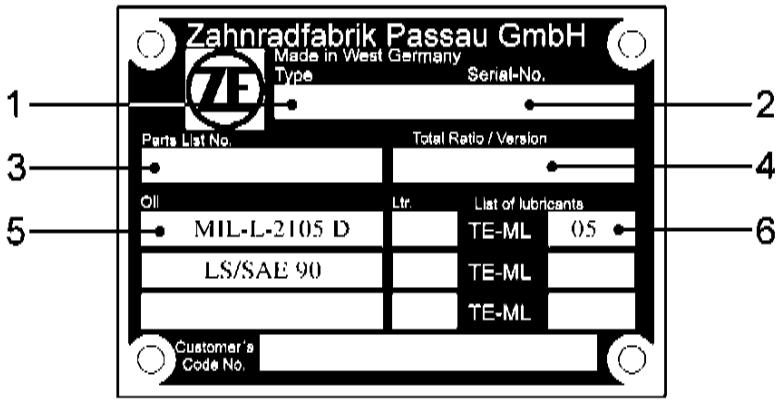
ATTENTION

You will find this Symbol in this Repair Manual on passages, which require your special attention !

NOTE

You will find this Symbol in this Repair Manual on passages, which include a Note concerning the Disassembly and Assembly sequence !

INSCRIPTIONS ON THE MODEL IDENTIFICATION PLATE



1 = Axle Type

2 = Axle Serial No.

3 = ZF - Parts - List No.

4 = Total-Ratio of the Axle / Version with or without ZF-multi-disc self locking differential

5 = Type of lubricant

6 = Lubricant specifications

NOTE FOR 6: ZF - List of lubricants for ZF - Axles TE - ML 05 !

NOTES FOR THE COMPILATION OF SPARE PARTS ORDERS

When ordering genuine ZF - Spare Parts please indicate :

1. Axle type

2. Serial - No.

3. ZF - Parts List No.

4. Trade Mark and Type of vehicle

5. Denomination of the Spare Part

6. Spare Part No.

7. Way of delivery

NOTE : Point 1, 2 and 3 see Model identification Plate.

Please complete the above mentioned details in order to avoid mistakes in the delivery of ordered spare parts!

LUBRICATION AND MAINTENANCE INSTRUCTIONS

1. Oil type:

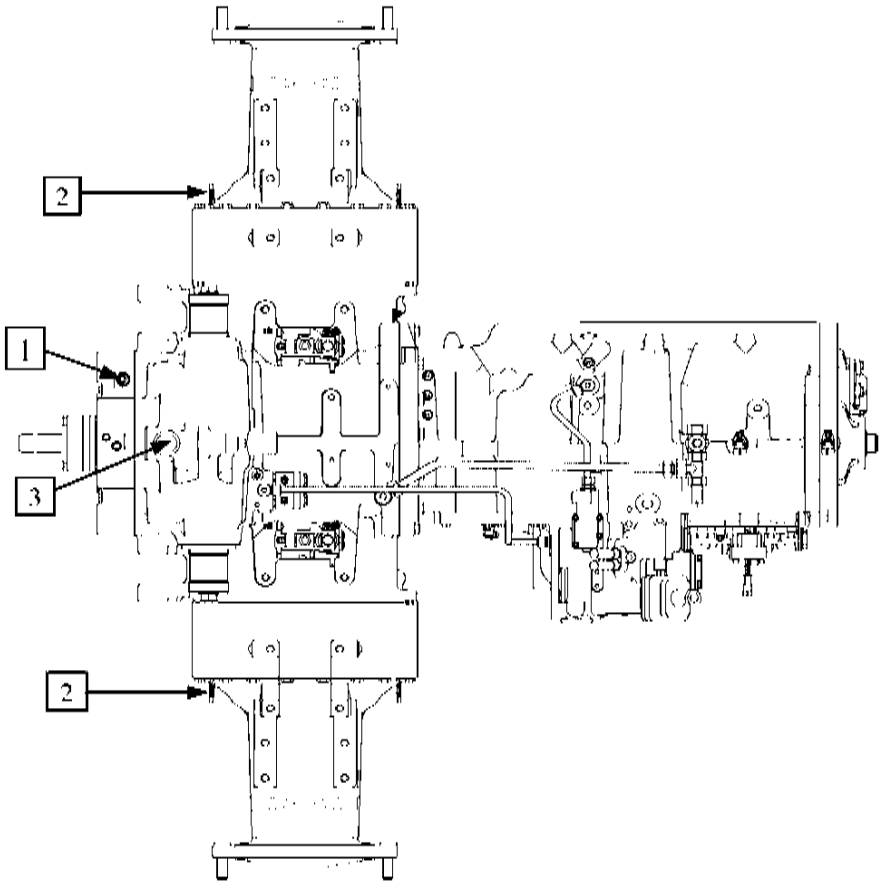
For the transmission T-7336 including bevel drive in the rear axle center part (differential lock, P.T.O. shaft and brakes) super tractor oils (STOU) to ZF List of Lubricants TE-ML 06 are specified and permissible respectively.

A trouble-free function of the wet multi-disc brakes is only ensured when the oils as indicated in the ZF List of Lubricants TE-ML 06 are used!

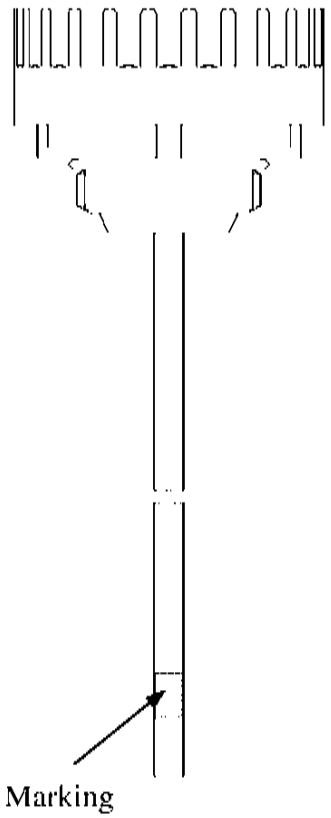
In the rear axle final drives (planetary drive) the transmission oils to ZF List of Lubricants TE-ML 05 are specified and permissible respectively.

2. Oil level check:

Decisive for the exact oil quantity and the oil level check is the oil level on the oil dipstick (with stopped engine).
In order to avoid measuring errors the vehicle must be placed exactly in a horizontal plane.
Have the engine run shortly and then make an oil level check once again.



Oil dipstick



☞ **Transmission with rear axle center part every 250 operating hours**

- Unlock the oil dipstick (1) in anticlockwise direction, remove and clean it.
- Reinsert the oil dipstick (1) into the housing and tighten it, then loosen and remove it again.
- The oil level must be between the marking.
- If necessary, refill the specified oil.
- Loosen the screw plug (3), fill in the oil according to the marking on the oil dipstick. Then provide the screw plug (3) with the new sealing ring and reinstall it.
- Reinsert the oil dipstick (1) into the housing and tighten it by turning into clockwise direction.

☞ **Rear axle final drives every 250 operating hours**

- Loosen and remove the screw plugs (2).
- The oil level must reach the bottom edge of the oil filler hole.
- If necessary, refill the specified oil to the overflow.
- Provide the screw plugs with a new sealing ring and install it.

3. Oil change intervals:

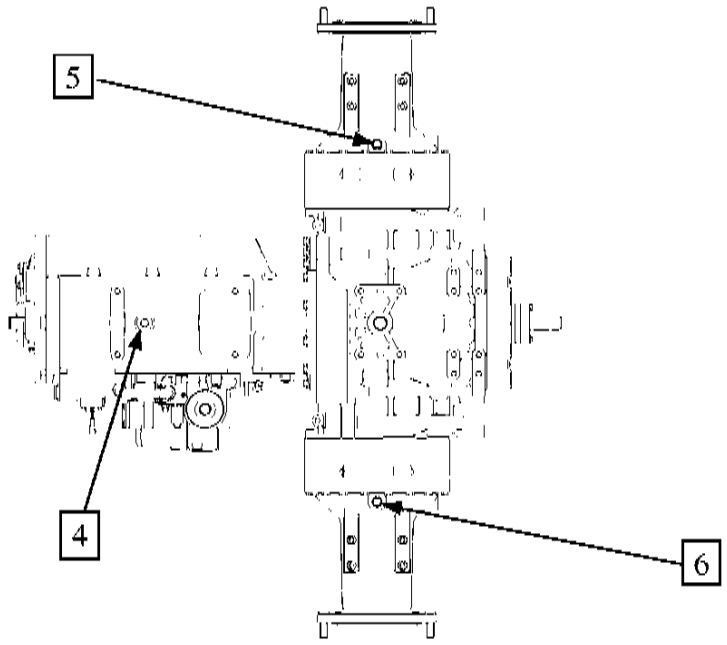
Drain oil only immediately after a longer running time.

☞ First oil change after 500 operating hours, every further oil change after 1000 operating hours, however, at least once a year.

4. Oil drain:

Transmission, rear axle center part and rear axle final drives:

- Loosen the drain plugs (4, 5 and 6) (the oil drain plugs are at the transmission bottom side).
- When the oil is drained completely, the screw plugs (4, 5 and 6) are to be provided with new sealing rings and reinstalled.



5. Oil filling:

☞ **Transmission with rear axle center part:**

- The oil filling (3) is to be made on the upper side of the rear axle center part. Basic oil level 65 mm below main shaft center.
- Loosen and remove screw plug (3).
- Filling up to the marking on the oil dipstick (approx. 81 liters).
- Provide the screw plug (3) with a new sealing ring and install it.

☞ **Increased oil level**

In this case the oil level is slightly above the marking.
This oil filling is only allowed upon consultation with the vehicle manufacturer !!!

☞ **Rear axle center part:**

- Loosen and remove the screw plugs (2).
- Fill up oil to the overflow on the level or filler plugs respectively (2) (approx. 12 liters each planetary transmission).
- Provide the screw plugs (2) with new sealing ring and install the same.

6. Admissible oil removal quantity:

☞ Basic oil level:

Stopped and on a horizontal plane	=	50	liters
Driving and 14° longitudinal and transverse inclination	=	20	liters

7. Filter change: