Order no.: 5871 214 902

LUBRICATION AND MAINTENANCE INSTRUCTIONS

ZF-OMNITRAC AV-132

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Preface

This documentation has been developed for the skilled Serviceman, trained by ZF for the repair and maintenance operations on ZF-Units.
However, due to further technical developments of the product the maintenance of the unit at your disposal could require different steps as well as other adjustment and testing specifications.

This manual is based on the state of the art at the time of printing and has been most carefully prepared to avoid the occurrence of mistakes.
However, we shall not be liable for any mistakes in representation and description.

We reserve the right to make modifications without prior notice.

The responsibility to observe safety instructions and to perform maintenance works in accordance with the required specifications lies with the owner and with the user.

ZF shall not be liable for incorrect installation, improper handling, insufficient maintenance, improperly as well as incompetently performed works and resulting consequential damage.

It is ***imperative*** to observe the relevant instructions and manuals of the vehicle manufacturer.

Important information regarding technical reliability and operational safety are highlighted by the following symbols:

☞ **Applies for instructions which must be observed for maintenance, implementation of works or vehicle handling!**

⚠ **Refers to working and operating processes which must be strictly observed to avoid any damage or destruction of the unit or to exclude any endangerment to persons!**

Note: **These maintenance instructions are valid for several versions!**
The resulting varying arrangements of the individual filler, drain and level plugs can be taken from the following illustrated tables!

Illustrated table 1 (oil drain):

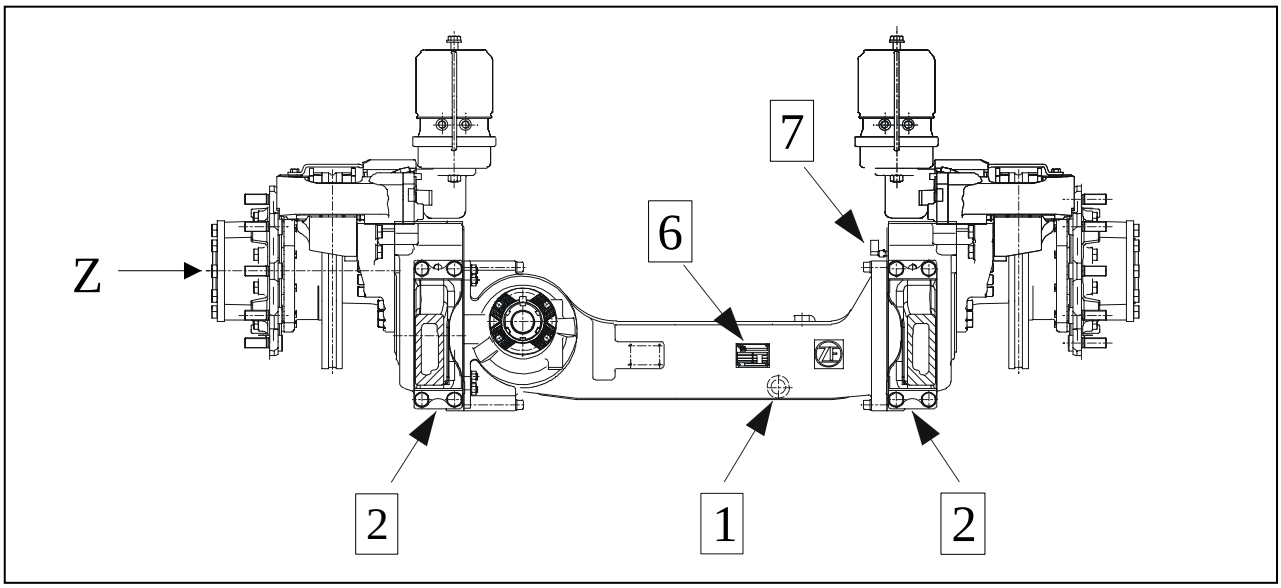

Figure 1

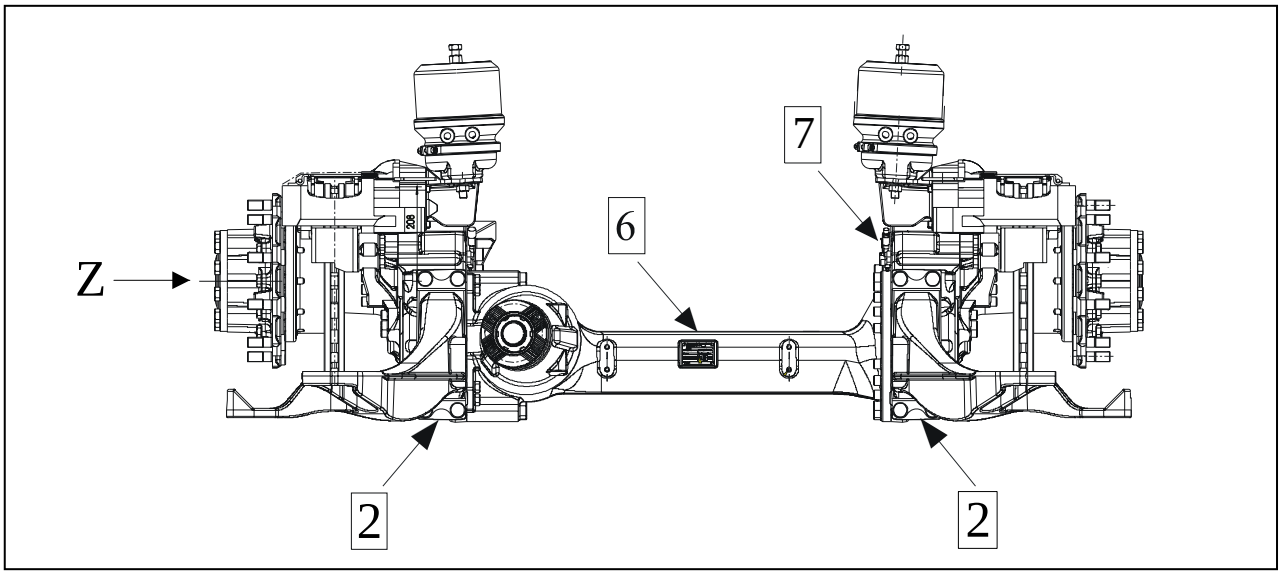

Figure 2

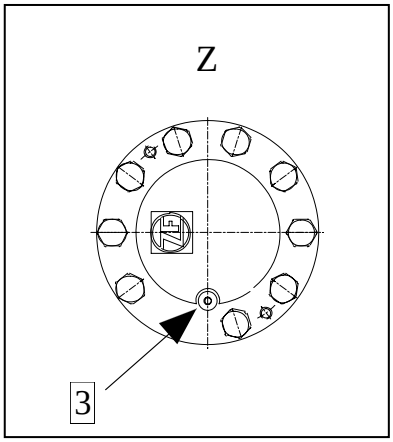

Figure 3

Legend to table 1 and 2:

Position	Quantity	Designation	Group	Dimension	Tightening torque	Note
1	1	Drain hole	Axle housing and portal drive	M24x1.5 (SW = 12)	M_A = 70 Nm	([1]
2	2	Drain hole	Portal drive and axle housing	M36x1.5 (SW = 19)	M_A = 130 Nm	
3	2	Drain, filler and level hole	Output (wheel bearing)	M14 x 1.5 (SW = 6)	M_A = 35 Nm	([2]
4	1	Filler and/or level hole	Axle housing and portal drive	M24x1.5 (SW = 12)	M_A = 70 Nm	([3]
5	1	Filler hole	Axle housing and portal drive	M24x1.5 (SW = 12)	M_A = 70 Nm	([4]
6	1	Identification plate	-	-	-	
7	1	Breather valve	-	-	-	

Notes:

([1] No drain hole pos. 1 for axle housings of the new generation (see illustrated table 1/figure2)!

([2] No. pos. 3 for version with grease lubricated compact bearing!

([3] For version with above center filler hole pos. 5, pos. 4 must only be used as oil level check hole!

([4] With regard to the oil level, the markings on the housing and oil level check hole pos. 4 are binding!

Illustrated table 2 (oil filling):

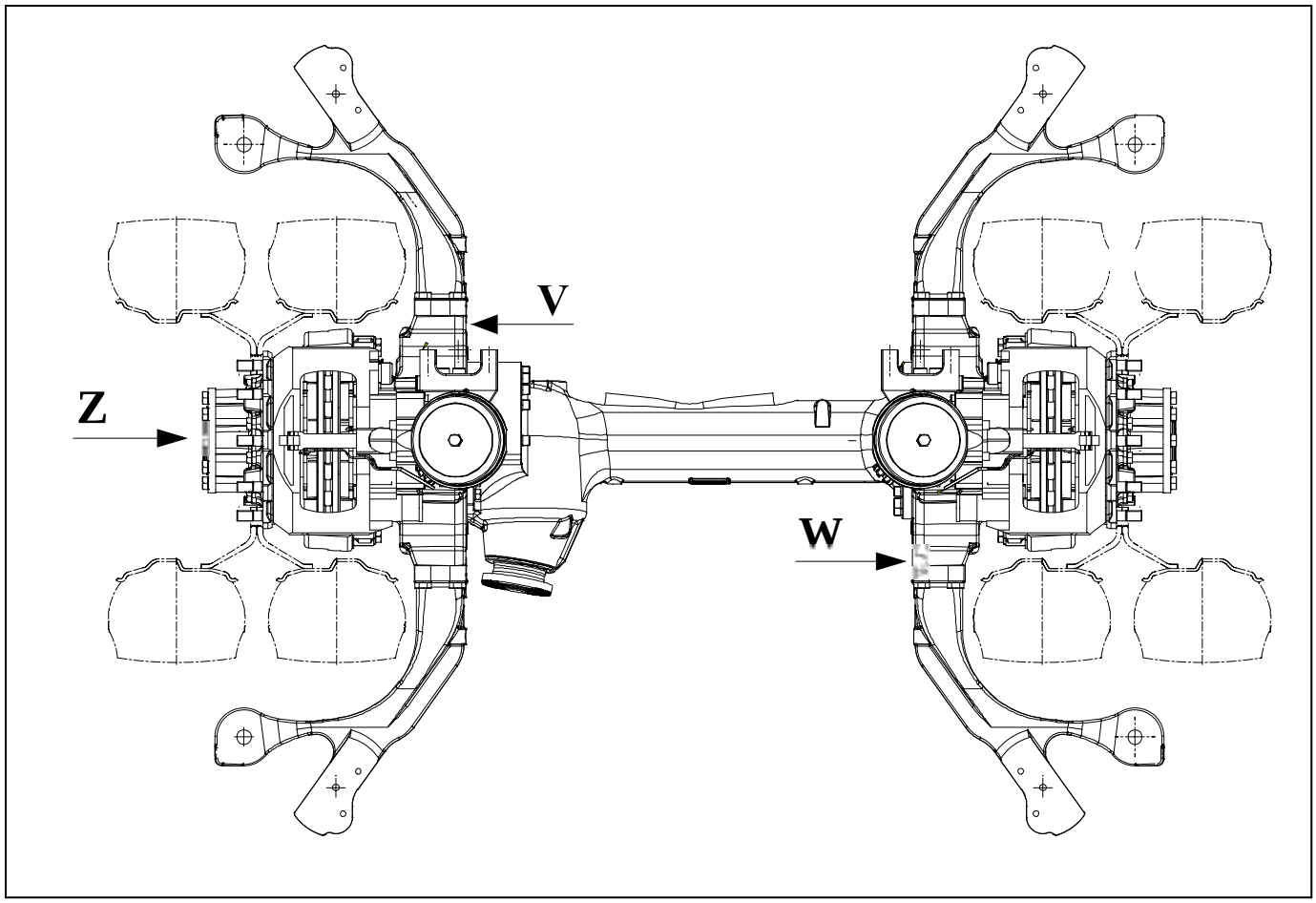

Figure 4

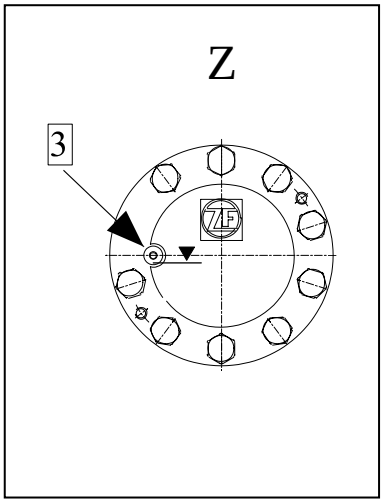

Figure 5

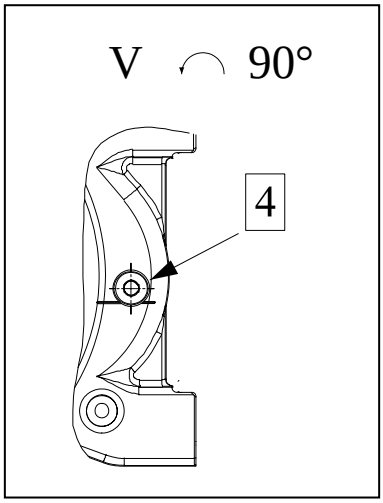

Figure 6

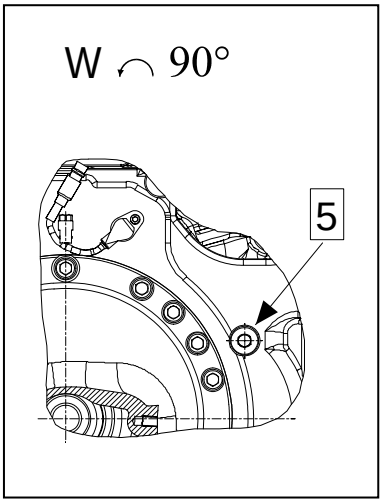

Figure 7

Legend to table 1 and 2:

Position	Quantity	Designation	Group	Dimension	Tightening torque	Note
1	1	Drain hole	Axle housing and portal drive	M24x1.5 (SW = 12)	M_A = 70 Nm	([1]
2	2	Drain hole	Portal drive and axle housing	M36x1.5 (SW = 19)	M_A = 130 Nm	
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4	1	Filler and/or level hole	Axle housing and portal drive	M24x1.5 (SW = 12)	M_A = 70 Nm	([3]
5	1	Filler hole	Axle housing and portal drive	M24x1.5 (SW = 12)	M_A = 70 Nm	([4]
6	1	Identification plate	-	-	-	
7	1	Breather valve	-	-	-	

Notes:

([1] No drain hole pos. 1 for axle housings of the new generation (see illustrated table 1/figure2)!

([2] No. pos. 3 for version with grease lubricated compact bearing!

([3] For version with above center filler hole pos. 5, pos. 4 must only be used as oil level check hole!

([4] With regard to the oil level, the markings on the housing and oil level check hole pos. 4 are binding!

IMPORTANT INFORMATION

1. Oil quality/ Oil change interval ;
Grease quality / Grease change interval (wheel head with compact bearing:

According to ZF List of Lubricants TE-ML 12!

The ZF List of Lubricants will be constantly updated – To order it or have a look at it, please contact:
- Any ZF plant
- Any ZF After Sales Service Center
- Internet http://www.zf.com/ **Service / Techn. Information**

General: Place vehicle in horizontal position!
All drain, filler and level plugs must be cleaned carefully before opening!
Drain oil only at operating temperature, immediately after the vehicle has been operated for an extended period of time!
Observe the safety directions of the vehicle manufacturer!
Clean the magnetic inserts of the drain plugs!!
Renew seals components (O-rings).

2. Oil drain, see also illustrated table 1:

If the oil has operating temperature, max. pressure build up in the wheel head of 0.2 bar is possible. In order to avoid uncontrolled oil outlet, first unscrew drain plug pos. 3 in 12 o'clock position.
Also, unscrew drain plug carefully to ensure continuous pressure reduction. Then bring drain hole into 6'o clock position and drain oil!
Dispose of drain oil environmentally safe and in accordance with the legal regulations!

3. Oil filling, see also illustrated table 2:

☞ Each version requires a specific oil filling quantity. The data given on the identification plate (total filling quantity) or the level holes pos. 3 and pos. 4 are binding!
For the version without above center filler hole (pos. 5) the filling time is expected to be comparatively long (up to 70 min.)! Repeated refilling on the filler and level hole pos. 4 is necessary!

4. Grease change-compact bearing (wheel head):

☞ When grease is changed within the scope of the maintenenace interval, it is necessary to completely remove the compact bearing.
The information being necessary to disassemble and reassemble the wheel head (special tool, adjustment values etc.) are to be taken from the repair manual.

The internal investigation of the compact bearing and the consequent change of grease not in accordance with the maintenance interval must also be carried out under the following preconditions:

- Grease outlet of the shaft seal ring on the side of the brake disk.
  The shaft seal rings must always be checked when changing the brake disk.

- Overheated brake parts (e.g. burnt pressure piece- bellows).

Only use grease which has been released by ZF according to ZF List of Lubricants TE ML 12!

5. Oil level check: Oil level check once a month, but in particular when putting a vehicle into operation with new or repaired axles or relevant axle components.

6. Breather valve (pos.7):

Check the function of the breathers when putting the vehicle into operation.
Within the scope of the oil change intervals the breather valve must be renewed.
Check the breather of the hose for leakages.

7. Grease lubrication- brake shaft bearing (drum brake):

Regrease the lubricating nipples at least once a year or with each main inspection. Grease quality acc. to List of Lubricants TE ML 12!