Maintenance

Maintenance intervals

Driveshafts are used in a great variety of industrial plants with very different operating conditions. We recommend inspections at regular intervals and, if possible, to coordinate them with maintenance work on other parts of the equipment. However maintenance work should be carried out once a year at least.

Inspection

⚠WARNING

Excessive looseness can cause imbalance or vibration in the driveshaft assembly. Imbalance or vibration can cause premature component wear, which can eventually result in separation of the shaft resulting in serious injury to persons or damage to property. It is important that you follow the inspection procedures.

- Check the flange bolts for tightness and retighten them with the prescribed torque (see Flange bolting on page 7).
- Backlash inspection. By lifting the joints and the length compensation check the visible or tangible backlash.

Check the driveshaft for any unusual noise, vibration or abnormal behaviour and repair the damage, if any.

Lubrication

⚠WARNING

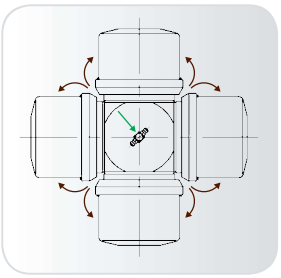
Lubrication Warnings

- In adequate lubrication intervals or improper lubrication can cause journal cross burn up, which can lead to separation of the shaft or connecting components from the vehicle or machine, resulting in serious injury or damage to property.
- The use of incompatible lubricants or greases can result in driveshaft failure and possible separation of the driveshaft.

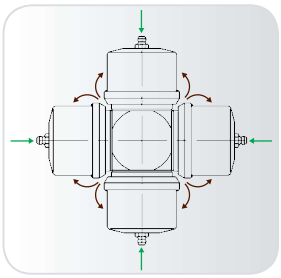
GWB™ driveshafts are lubricated with grease and ready for installation.

- For relubrication of driveshafts, use a standard grease according to STD 4006-005. You may use a lithium complex grease ONLY if it meets the following specification: **KP2N-20/DIN 51502 according to DIN 51818.**
- **Do not use grease with molycote additives! Original standard GWB grease can be mixed ONLY with lithium complex grease on mineral oil base.**
- Clean the grease nipples before relubricating.
- Use adequate regreasing devices. For joint relubrication maximal pressure of 15 bar is required. For the length compensation it depends on the design. The regreasing must be continued until fresh grease becomes visible from all four seals.
- Driveshafts that have been stored for more than 6 months must be regreased before use.

Central lubrication



4 point lubrication



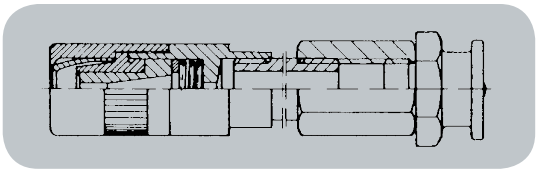
Maintenance

- When cleaning driveshafts, do not use aggressive chemical detergents or pressurized water or steam jets because the seals may be damaged and dirt or water may penetrate. After a cleaning, the driveshaft must be regreased until the grease escapes out from all four seals.

Journal cross assemblies

⚠WARNING

Excessive looseness across the ends of journal cross bearing assemblies can cause imbalance or vibration in the driveshaft assembly. Imbalance or vibration can cause component wear, which can result in separation of the driveshaft from the machine or vehicle.



Order No.: 1 000 00 86 05 006 (90 mm length)
1 000 00 86 05 025 (300 mm length)

Regreasing intervals (standard)

Series	Joints	Length compensation
587	6 months	6 months [1]
687/688	6 months	maintenance-free 12 months [1]
190	6 months	6 months
390/689	6 months	6 months
392/393	6 months	6 months
492/498/598	3 months	3 months

1) for greasable length compensation

The journal cross assemblies may be relubricated via a conical grease nipple (DIN 71412) located in the middle of the cross or at the bottom of the bush. The journal cross assembly has to be replaced before the calculated bearing lifetime is reached. The bearings of the journal cross must be lubri-cated until the grease passes through from all four seals of the bearings. Driveshafts of the series 498/598 (in special cases also the series 390, 392, 393, 492, 689) must be lubricated via a flat grease nipple according to DIN 3404. The illustrated adapter pipe can be used as adapter between a conical grease nipple at the driveshaft (acc. to DIN 71412) and a flat grease nipple connection at the grease pump (see illustration).

Length compensation

The length compensation of the series 390, 392, 393, 492, 689, 190 and 587 as well as special designs of the series 687/688 is lubricated via a combined grease and air-relief valve with a conical grease nipple according to DIN 71412 (no self-locking grease nipple). The length compensation of the series 498/598 is lubricated via a flat grease nipple according to DIN 3404.

- Grease and air-relief valves must not be removed or replaced by standard grease nipples.
- Protection caps should be removed from the grease nipples before operation.
- Relubricating should be done at the shortest compressed length L_z of the shaft.

Recommended regreasing intervals

We recommend the following inspection and regreasing intervals (see table below).

- Unfavourable effects like temperature, dirt and water may necessitate shorter lubricating intervals. Principally we recommend adapting the lubricating intervals to the individual operating conditions.
- For driveshafts with plastic-coated splines (on request) the relubricating intervals may be extended, dependent on the application, to 12 months.