G Class
Axles & Propeller Shafts

Mercedes-Benz

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Front Axle Maintenance

- Every 2 years check / correct grease packing of joint housing
- Every B service check oil level
- Oil change - 60,000 miles or 5 years since last change
- Oil grade - SAE 85W 90, 90 (sheet #231.1)
  1.4 liters or 1.5 quarts
Rear Axle Maintenance

• Every B service check oil level
• Oil change - 60,000 miles or 5 years since last change
• Oil grade - SAE 85W 90, 90 (sheet #231.1)
  1.8 liters or 1.9 quarts
Propeller Shaft Maintenance

Universal Joints
- Every A & B service lubricate
- Requires MB long life grease (000 989 63 51)
- Lubricate U-joints until new grease exits

Slip Joints
- Every A & B service lubricate
- Requires MB long life grease (000 989 63 51)
- Use drive-on lift
  - Do not overfill, lubricate with 3 - 4 strokes (approx. 3 cm³)

Note: U-joints not serviceable
(replace propeller shaft)
Propeller Shafts

Propeller shaft to rear differential

Propeller shaft to transfer case

Note: “Phased-off” universal joints

Propeller shaft to front differential
Propeller Shafts

Prior to removal of any propeller shaft:
- Mark the installed position of shafts to flanges!

When installing new propeller shafts observe the following:
- Slip joints must be assembled arrow to arrow or arrow to grease nipple
- Rotate the shaft while tightening evenly to prevent binding of joints
Propeller Shaft

Installation of input propeller shaft:
- color marks must be installed 180° offset
6. Drive shaft, left
7. Drive shaft, right
8. Axle housing
9. Drive flange
24. Filler plug
25. Crown wheel
26. Differential cover
27. Spider gears
28. Drive pinion
29. Differential housing
30. Differential side gears

Fully serviceable - Use correct tools as described in WIS
Pinion Seals

2. Ring
3. Oil retainer
4. Compression ring
5. O-ring
6. Inner radial seal ring
7. Outer radial seal ring

Replacing pinion seal:

- Prior to removing drive flange measure friction torque (without wheels)
- Mark drive flange to drive pinion, unlock and remove nut
- Remove drive flange with puller (do not use hammer)
- Remove seals and replace as per WIS
- Install drive flange with new nut and tighten until friction torque is 0.5 Nm higher than previously measured
- Lock nut by bending tab
Front Axle

Unit # 730.390
(type VI in WIS window)
Joint Housing

One mounting bolt has a secondary function as a steering lock stop.
Joint Housing

5. Joint housing
6. Wheel hub
7. Grease cap
8. Inner slotted nut
9. Tab washer
10. Outer slotted nut
11. Drive shaft
12. Tapered roller bearing

Fully serviceable - Use correct tools as described in WIS
Joint Housing Bearings

- Tapered roller bearings
  - wheel bearings (2)
  - steering knuckle (2)
- Bushing
  - drive shaft

Tool for wheel bearing adjustment
463 589 00 70 00
Steering Knuckle

Steering knuckle pre-load adjusting shims
Steering Knuckle

- With joint housing removed, tapered roller bearings are accessible
- Watch for cup-shaped washers (chrome at bottom) and shims on outer surface
- Upper and lower bearings have different inside diameters
- If parts replaced adjust bearing pre-load
Steering Knuckle Pre-load

Step 1:
Install the guide ring tool that fits the axle driveshaft seal position in the joint housing without play.
Steering Knuckle Pre-load

Step 2

Install 4.0mm and 6.0mm spacers on steering knuckle arm as shown.

Install 2.0mm spacer on steering knuckle pin.

463 589 00 23 00
Steering Knuckle Pre-load

Step 3

Install steering knuckle pin and arm.
Tighten clamp (460 589 04 31 00) until there is no play in steering knuckle mount.

Step 4

Measure gap (feeler gauge) at top for steering knuckle pin (Gap A) and at bottom for steering knuckle arm (Gap B).
Steering Knuckle Pre-load

Determine shim required:

2.15 mm
- Gap A

= shim needed on steering knuckle pin

2.15 mm
- Gap B

= shim needed on steering knuckle arm
Joint Housing Seals

Wheel bearing

Seal retainer

Driveshaft
Joint Housing Seals

Joint housing is sealed to “ball” using:

- Paper gasket
- Sealing ring
- Steel ring

Driveshaft seal
Driveshaft

1. Hose clip
2. Rubber boot
3. Spring washer
4. Joint piece
5. Bushing

Fully serviceable - Use correct tools as described in WIS
Rear Axle

Unit # 741.142
(type HI in WIS window)
Driveshaft

2 - Bearing cap
3 - Radial shaft seal
4 - Gasket
6 - Bearing
7 - Seal
8 - Locking plate
9.1 - Grooved nut with RH thread
9.2 - Grooved nut with LH thread

Fully serviceable - Use correct tools as described in WIS
Driveshaft Bearing

RH thread

LH thread
(with groove)

Double tapered roller bearing
Driveshaft

Repairs to bearings and seals:

- Remove differential lock shift cylinder (left only)
- Remove bearing cap bolts and pull out driveshaft
- Slide special tool for removing grooved nut over driveshaft
- Secure driveshaft in vise
- Unlock & remove grooved nut and locking plate
- Press off roller bearing
- Replace bearing cover seal and gasket
- Reassemble according to WIS ensuring that locking plate is installed correctly
Driveshaft

- Torque grooved nut (500Nm) 370 ft lb
- Grooved nut secured with washer to prevent rotation in both directions
Driveshaft Seals

3. Driveshaft seal

4. Gasket

7. Square seal