

Oil Leak at Front Axle Differential

Topic number	LI33.30-P-080490
Version	1
Function group	33.30 - Final drive, differential, drive shaft
Date	8/3/26
Validity	BR 206, 214, 223, 232, 236, 254 4-Matic (SA code M005)
Reason for change	

Complaint

Leakage/oil leakage at drive pinion sealing ring (input shaft) (Figures 1-2)

Minor leakage/slight seepage at coupling flange nut at drive pinion (Figures 3-4)

Attachments	
File	Description
Musterbild-I Ölverlust Dichtring Antriebskegelrad.pdf	Figure 1: Oil leakage at drive pinion sealing ring
Musterbild-II Ölverlust Dichtring Antriebskegelrad.pdf	Figure 2: Oil leakage at drive pinion sealing ring
Musterbild-IV Ölverlust Bundmutter-Verzahnung Antriebskegelrad.pdf	Figure 3: Oil leakage at collar nut/spline of drive pinion
Musterbild-III Ölverlust Bundmutter-Verzahnung Antriebskegelrad.pdf	Figure 4: Sample image: Oil leakage at collar nut/spline of drive pinion

Cause

Damage to sealing ring during production process or insufficient use of lubricating paste during assembly of collar nut on coupling flange

Remedy

If any of the above-mentioned customer complaints are present, or if oil leakage or seepage is found at the front axle differential during a workshop visit, the following steps must be performed:

If oil leakage is found at drive pinion sealing ring (input shaft):

- Remove coupling flange from differential, AR33.30-P-0550WT
- Replace drive pinion sealing ring
- New collar nut (for coupling flange), part number A 221 353 03 72, on contact surface and coat the 1st thread (from contact side to coupling flange) with lubricating paste (Figures 5-6)
- Install coupling flange.

If oil leakage or slight seepage is found at coupling flange nut to drive pinion:

- Remove coupling flange from differential, AR33.30-P-0550WT
- Clean threads on input shaft
- new collar nut (for coupling flange), part number A 221 353 03 72, on contact surface and coat the 1st thread (from contact side to coupling flange) with lubricating paste (Figures 5-6)
- Install coupling flange.

Attachments	
File	Description
Musterbild-V Schmierpaste auf Bundmutter.pdf	Figure 5: Lubricating paste on collar nut
Musterbild-VI Schmierpaste auf Bundmutter.pdf	Figure 6: Lubricating paste on collar nut

WIS-References		
Document number	Title	Note
AR33.30-P-0550WT	Remove/install radial shaft sealing ring on drive pinion	Collar nut must be replaced.

Disclaimer

NOTE: The information contained in this document is intended for use by trained, professional technicians with the knowledge to properly and safely perform diagnosis and repairs on Mercedes-Benz vehicles, using Mercedes-Benz approved tools and equipment. It informs service technicians about conditions that could occur in certain vehicles and provides information that could assist in proper vehicle diagnosis, service, or repair. It does not indicate that a defect is present in any vehicle referenced in this document nor does it imply warranty coverage. DO NOT assume that a symptom or condition, or a described cause of a symptom or condition, affects any particular vehicle or groups of vehicles, or that a described repair applies to any particular vehicle or groups of vehicles. There can be multiple causes resulting in the same or similar symptoms or conditions described in this document, and trained professional service technicians must use their diagnostic skills to make evaluations on a case-by-case basis. The information contained in this document does not guarantee warranty coverage nor does it extend the vehicle's warranty in any way.

Symptoms
Power transmission > Differential > Front axle differential > Leakage > Leaks

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
A 221 353 03 72			Collar nut	1		X
A000 989 63 51 09			Lubricating paste	1		X

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note