

7G-DCT: Scratching noise when changing gear from D to R when transmission cold.

Topic number	LI27.50-P-064440
Version	8
Function group	27.50 Gear assembly
Date	07-16-2018
Validity	All vehicles of BR 176, BR 117, BR 156, BR 242, BR 246 with transmission 724.0
Reason for change	Information for repairs, valid for all vehicles, added. Special tool for repair of transmission A 246 370 70 03 now available.
Reason for block	

Complaint:

Scratching noise when changing gear from D to R with the transmission cold.

Attachments	
File	Description
Kratzen in R.mp3	Scratching in R at second 14

Cause:

Possibly the Synchronizer ring of reverse gear

Check whether the vehicle is affected by the scratching noise:

Accelerate the cold vehicle to 18mph (2nd gear must be engaged).

Slow the vehicle with the brakes and at 4mph select reverse gear.

Remedy:

Information for repairs, valid for all vehicles:

- The oil pump gear must be replaced at the same time, otherwise initial damage to the oil-pump drive shaft can occur.
- Caution when removing the oil pump gear: The mounting nut has a left-hand thread. Do not use an impact wrench or compressed-air tool, otherwise the shaft of the primary oil pump and the special tool will be damaged.
- Assembly: Before installing the oil pump gear, the shaft of the primary oil pump and the contact surface between the nut and the pump gear must be cleaned of all grease and oil.
- It is not absolutely necessary to remove the oil pump when replacing the output shaft.

XENTRY TIPS

AMG vehicles:

Remedy for 724.015 (prior to facelift):

- Order and replace output shaft (3rd, 6th, 7th and reverse gear) A 246 260 95 00. Make sure that the oil restrictors (A 246 372 18 50) are installed in the output shaft; if not, order them at the same time. When assembling the transmission, make sure that the shift valve 56 (absolute pressure valve) in picture B for the park pawl (AR27.10-P-0510NKB) is installed correctly. If the valve is installed the wrong way round, the park pawl will be damaged due to pressure spikes.
- Valid for transmission variants:
 - Transmission A 246 370 63 02 (FBS3 + VGS1)
 - Transmission A 246 370 57 02 (FBS3 + VGS2)
 - Transmission A 246 370 40 02 (FBS4 + VGS2)

Remedy for 724.016 (as of facelift):

- Order output shaft (3rd, 6th, 7th and reverse gear) A 246 260 27 01. Make sure that the oil restrictors (A 246 372 18 50) are installed in the output shaft; if not, order them at the same time. When assembling the transmission, make sure that the shift valve 56 (absolute pressure valve) in picture B for the park pawl (AR27.10-P-0510NKB) is installed correctly. If the valve is installed the wrong way round, the park pawl will be damaged due to pressure spikes.
- Valid for transmission variant:
 - A 246 370 54 03 (without lock)
 - A 246 370 70 03 (with lock, code 471, 37A) The special tool (SWZ) W724 589 00 16 00 for spinning and calibrating the differential under preload is now available and can be ordered. It is no longer necessary to replace the transmission. The adapter is then only to be inserted into the special tool W 724 589 02 31 00 in place of the driver in the current description. The function for spinning is identical to that already described. The WIS document is being amended.

Series production vehicles:

- Remedy for vehicles , prior to 04/2017
- Using the full VIN, check the part number of the output shaft (3rd, 6th, 7th and reverse gear) in the EPC. If one of the following part numbers is listed, the output shaft must be replaced. Order corresponding output shaft.
- Output shafts:
 - A 246 260 67 20
 - A 246 260 68 20
 - A 246 260 69 20
 - A 246 260 70 20
 - A 246 260 84 00
 - A 246 260 85 00

XENTRY TIPS

- If none of these part numbers is listed in the EPC, the transmission must be replaced in the event of complaints.

Symptoms
Power transmission / Automatic transmission / Function / Engaging process
Power transmission / Automatic transmission / Drive position selection / Noises / Scratching
Power transmission / Automatic transmission / Noises / Noise

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
A 246 260 27 01			Output shaft	1	724.016	X
A 246 260 95 00			Output shaft	1	724.015	X
A 246 260 69 20			Output shaft	1	724.021,724.011, 724.004	X
A 246 260 70 20			Output shaft	1	724.001	X
A 246 260 68 20			Output shaft	1	724.002 with code A69 (Carbon synchronization)	X
A 246 260 67 20			Output shaft	1	724.003 with code A69 (Carbon synchronizer), 724.020	X
A 246 260 85 00			Output shaft	1	724.003 with code 28A (Uprated synchronizer body) +A69 (Carbon synchronizer)	X
A 246 260 84 00			Output shaft	1	724.004, 724.011 with code 28A (Uprated synchronizer body)	X

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
			27389 46	In the dealer text note please state "Reverse gear scratching"

WIS-References			
Document number	Title	Note	Allocation
AR27.10-P-0510NKB	Disassemble/assemble transmission		Remedy

Validity		
Vehicle	Engine	Transmission
A (176)	*	*
B (242, 246)	*	*
CLA (117)	*	*
GLA (156)	*	*