
Grinding noises from area of front axle - wheel bearing malfunctioning

Topic number	LI33.20-P-047117
Version	6
Design group	33.20 Wheel location, wheel hub
Date	02-28-2013
Validity	Model 204 except 4MATIC; except AMG; except 204.9## (GLK), 207
Reason for change	Fixed error in title.
Reason for block	

Complaint:

Grinding noises from area of front axle - wheel bearing malfunctioning

Cause:

Corrosion spreading under wheel hub sealing ring. Dirt and water are washed in front of the sealing ring of the wheel hub via the rpm sensor bore in the steering knuckle or through corresponding gaps between the anchor plate and steering knuckle. Corrosion forms on the contact surface of the sealing ring and spreads under the sealing lips. As a result, moisture can penetrate the wheel bearing and cause corrosion.

Remedy:

Please note the revised procedure for repair in the case of wheel bearing damage on the front axle!

The most important new feature of the repair method is the use of a repair hub (Figure A) with inserted stainless steel race (1).

The stainless steel race (1) is pressed onto the corroded steering knuckle (Figure D) during assembly of the wheel hub and guarantees the new seal with the wheel hub sealing ring. This means that it is no longer necessary to replace the steering knuckle!

Axle alignment is not necessary with this repair method!

In order to avoid follow-up repairs, always replace both wheel bearings on the front axle in problem vehicles!

First-time installation of a repair wheel hub:

- 1.) Detach wheel hub, bearing and brake cover plate.
- 2.) Use a wire brush to remove loose corrosion from the contact surface of the wheel hub sealing ring (Figure C).
- 3.) Clean steering knuckle spindle thoroughly.
- 4.) Install new brake cover plate (Figure E) with optimized circumferential gasket (picture 2).
- 5.) Push on repair hub (Figure A) without tilting it and pull as far as the stop with the clamp nut (Figures G,H,I)
- 6.) Adjust wheel bearing play (Figure J).
- 7.) Install circumferential gasket (Figure F) on rpm sensor.
- 8.) Reassemble the vehicle.

Important note for subsequent reinstallation of a repair wheel hub:

When the repair hub with stainless steel race is installed, the stainless steel race is positively pressed onto the steering knuckle (Figure D).

If the wheel hub is subsequently removed/reinstalled, there is a risk of damaging the sealing lip of the wheel hub sealing ring when pushing on.

For this case there is a repair kit (Figure B), consisting of a wheel hub sealing ring with preinstalled stainless steel race.

This repair kit must be pulled into the wheel hub which is to be reinstalled.

To do this, use the regular tool W203 589 0243 00, but with a different method.

As the stainless steel race reduces the inside diameter of the hub sealing ring, the tool die (Figures M, N, picture 4) must be turned through 180° so that the hub sealing ring contacts the rear face of the tool die (the side not lined with rubber).

- 1.) Insert wheel hub sealing ring with stainless steel race into wheel hub by hand. This centers the hub and makes it easier to pull in with the tool.
- 2.) Pull in wheel hub sealing ring with stainless steel race using rear face of tool die of special tool W203 589 0243 00.
- 3.) Remove old stainless steel race from steering knuckle (as shown in Figures K, L).
- 4.) Push on wheel hub without tilting it and pull as far as the stop with the clamp nut.
- 6.) Adjust wheel bearing play.
- 7.) Reassemble the vehicle.

Note: This new repair method will soon (expected as of Week 19/2010) also be available in SDmedia

Attachments	
File	Designation
Anhang.pdf	Attachment

Symptoms
Chassis/suspension / Chassis, noises / Humming/droning/throbbing
Chassis/suspension / Chassis, noises / Howling
Chassis/suspension / Axles / Front axle / Front axle, noise / Squeaking

Parts							
Part number	ES1	ES2	Designation	Quantity	Note	EPC	Other make part
A2044202544			Brake cover plate, left	1	Improved rigidity to prevent cracking	X	
A2044202644			Brake cover plate, right	1	Improved rigidity to prevent cracking	X	
A 204 335 00 80			Circumferential gasket for rpm sensor	2	Circumferential gaskets are available with and without white adhesive foil. If the adhesive foil is present, it must be installed on the cable side (Figure E6).	X	
A 002 989 00 51	10		Wheel bearing grease	1	Order with quantity index 10! A 002 989 00 51 10	X	
A2204230071			Bolt, brake cover plate	6		X	
A2043300625			Repair wheel hub	2		X	
A 204 330 00 60			Repair kit, wheel hub sealing ring with stainless steel race	1	As required	X	

WIS-References			
Document number	Title	Note	Allocation

AR33.20-P-0310cw	Remove/install front wheel hub		Remedy
AR42.30-P-0712cw	Remove/install left or right front rpm sensor		Remedy
AR33.20-P-0310-03SX	Install radial sealing ring in front wheel hub		Remedy

Validity			
Vehicle	Engine	Transmission	
204.002	*	*	
204.003	*	*	
204.006	*	*	
204.007	*	*	
204.008	*	*	
204.022	*	*	
204.041	*	*	
204.044	*	*	
204.045	*	*	
204.046	*	*	
204.047	*	*	
204.052	*	*	
204.054	*	*	
204.056	*	*	
204.065	*	*	
204.202	*	*	
204.203	*	*	
204.207	*	*	
204.208	*	*	
204.222	*	*	
204.241	*	*	
204.245	*	*	
204.246	*	*	
204.247	*	*	
204.252	*	*	
204.254	*	*	
204.256	*	*	
207.303	*	*	
207.322	*	*	
207.347	*	*	
207.356	*	*	
207.357	*	*	
207.372	*	*	