

Cracking/Metallic Clanging From Steering Rack at Full Steering Lock

Topic number	LI46.35-P-079817
Version	1
Function group	46.35 - Electrical steering
Date	9/26/25
Validity	Model 206, 223, 254, 294, 295, 296, 297
Reason for change	Operation step 5 adjusted (right instead of left)

Complaint

Cracking noises are audible from the area of the electric steering gear with full steering movement (i.e. when the wheel is turned to full lock).

Attachments	
File	Description
Noise at Limit Stop.mp4	Noise at Limit Stop

Cause

The vehicles have a function that electronically limits the steering movement.

In isolated cases, e.g. following a toe adjustment, the steering limitations can be taught in incorrectly; this results in a metallic cracking noise occurring when turning the steering wheel to the point of full steering movement, due to the mechanical end stops being reached; see video.

Remedy

For the steering limitations in electrical power steering control unit N68, perform the procedure [Reset value for 'straight-ahead position of the steering wheel'](#) with XENTRY in the "Adaptations" tab under "Teach-in processes" and re-teach in the steering limitations.

Teach-in process for the steering limitations:

1. Vehicle is stationary, engine is switched on
2. With XENTRY Diagnosis connected, open the "Actual values" menu in electrical power steering control unit N68
3. Turn the steering wheel all the way to the left to full lock and hold it there – then slowly press the steering wheel further to the left until the "Steering wheel torque" value (observe actual values in XENTRY) is approx. 10–15 Nm – the actual value "Left steering limitation "Partially learned"" is displayed
4. Bring the steering wheel into the center position
5. Turn the steering wheel all the way to the right to full lock and hold it there – then slowly press the steering wheel further to the right until the "Steering wheel torque" value (observe actual values in XENTRY) is approx. 10–15 Nm – the actual value "Right steering limitation "Partially learned"" is displayed

6. Bring the steering wheel into the center position – actual values of the steering limitations are displayed as "Fully learned" – see note!

Note: On vehicles of model series 223, 297, 296, 295 and 294, and on vehicles of model series 206 and 254 with 4MATIC (code M005) and/or rear axle steering (code 201 or 216), only the status "Partially learned" is achieved.

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				
Chassis/suspension > Noises > Cracking				
Chassis/suspension > Noises > Knocks				
Chassis/suspension > Steering system > Noises > Cracking				
Chassis/suspension > Steering system > Noises > Chattering/knocking				
Chassis/suspension > Steering system > Noises > Clattering				
Chassis/suspension > Axle > Front axle > Noises > Cracking				
Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note