

## Juddering/shuddering at the rear axle brakes

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Topic number	LI42.10-P-065679
Version	4
Function group	42.10 Service brake
Date	10-25-2017
Validity	Model series 213 without AMG
Reason for change	Operation item
Reason for block	

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### Complaint:

Juddering/shuddering of the brakes at the rear axle can be felt when braking.

Valid for cold juddering:

Cold juddering occurs when braking normally at any speed and is identifiable as pulsation of the brake pedal.

As opposed to cold juddering, thermal juddering occurs when braking sharply at high speeds.

This document is not valid for juddering related to heat!

### Cause:

Grinding creates a thickness error in the brake disc.

Possible causes:

- Different torque due to improper tightening of the wheel threaded connection
- Wheel contact surface damaged or soiled
- Imbalance at the wheel
- Wheel suspension damaged
- Wheel flange

### Remedy:

Always check the wheel assembly components:

1 Check operational condition of disc brake and brakepads (AP42.10-P-4256EW, see attachment), particularly the sliding elements.

2 Check the wheel for imbalance (including vertical runout if possible) and rebalance if necessary.

3 Ensure operational condition of wheel suspension.

# XENTRY TIPS

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## 4 Check wheel hub:

4.1 Disassemble brake disc at left and right.

4.2 Check wheel hub batch number at left and right (see attachment "Rear axle wheel hub"): If the number is between 273 and 338, then the affected wheel hub must be replaced as per WIS.

### Note:

- When replacing the wheel hub, damage code 35S03 20 must be used for the right and 35D03 20 for the left for the entire repair.

-> Please send the wheel hub with the vehicle data attached to the relevant inspection center (QEC, Euro GBZ) to be checked.

- If the wheel hub is not affected, then use damage code for brake disc jolting 42201 H4.

5 If none of the components mentioned above are visibly or measurably damaged, then carry out the following repairs:

5.1 Replace brake discs.

### Note:

- Please observe "Note on processing, transporting and storing compound brake disc" (AH42.10- P-9406-12LF, see attachment)!

5.2 Replace brakepads.

6 Assemble wheels as follows:

### Note:

- An impact wrench must NOT be used for assembly!

6.1 Clean, check and protect the wheel threaded connection components from corrosion before assembly (see attachment AR40.10-P-1100-02A).

6.2 Mount wheel bolts crosswise by hand with max. 20 Nm (see picture in attachment "Wheel threaded connection tightening sequence").

6.3 First tighten wheel bolts crosswise with a torque wrench by max. 70 Nm (see picture "Wheel threaded connection tightening sequence").

6.4 Lower vehicle until the wheels are prevented from spinning.

6.5 Tighten wheel bolts crosswise with a torque wrench to the vehicle-specific prescribed tightening torque (see picture "Wheel threaded connection tightening sequence").

6.6 Lower vehicle completely.

6.7 Retorque wheel bolts with vehicle-specific prescribed tightening torque.

Attachments	
File	Description
Anzugreihenfolge Radverschraubung.jpg	Wheel bolts are to be tightened in the 1-2-3-4-5 sequence displayed in the picture

# XENTRY TIPS

Radnabe HA.pdf	Wheel hub
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## Symptoms

Chassis/suspension / Brake system / Service brake / Function / Vibrates/shudders

## Parts

Part number	ES1	ES2	Designation	Quantity	Note	EPC
A 213 357 05 00			Wheel flange			X
A 211 356 00 00			Wheel bearing			X
A 000 423 18 12			Brake disc	2		X
A 000 420 60 00			Brake lining set	1		X
A 000 423 07 12			Brake disc	2		X
A 000 420 62 00			Brake lining set	1		X
A 000 420 63 00			Brake lining set	1	Code 494	X
A 000 423 17 12			Brake disc	2		X
A 000 420 64 00			Brake lining set	1		X
A 000 420 65 00			Brake lining set	1	Code 494	X

## Attachments

File	Description
AR40.10-P-1100-02A.pdf	Note on checking and cleaning the wheel threaded connection
AH42.10-P-9406-12LF.pdf	Note on processing, transporting and storing compound brake disc
AP42.10-P-4256EW.pdf	Note on evaluating the condition of brake disc

## Operation numbers/damage codes

Op. no.	Operation text	Time	Damage code	Note
42-2882	REMOVE/INSTALL BRAKE DISKS		42201 H4	Rear axle brake disk
			35S03 20	Right wheel flange
			35D03 20	Left wheel flange
42-2851	REMOVE/INSTALL BRAKEPAD		42201 H4	