

Juddering/shuddering at the front axle brakes

Topic number	LI42.10-P-064899
Version	7
Function group	42.10 Service brake
Date	08-16-2017
Validity	All vehicles of model series 222/217 without AMG
Reason for change	Remedy updated
Reason for block	

Complaint:

Juddering/shuddering of the brakes at the front axle brake can be felt when braking normally.

Validity 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 only occurs when braking sharply at high speeds.

This document is not valid for juddering related to heat.

Cause:

Grinding of a thickness error into the brake disk.

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 or steering parts damaged

Remedy:

Always check the components of the wheel assembly:

1. Check operational condition of disk brake and brakepads (see attachment AP42.10-P-4256EW), particularly sliding elements.
2. Check the wheel for imbalance (including vertical runout if possible) and, if necessary, rebalance.
3. Ensure operational condition of wheel suspension and steering parts.
4. Check wheel hub contact surface for damage and cleanliness.

XENTRY TIPS

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

5.1 Replace brake disks with appropriate A-object number and Index 39.

Note:

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

- Note that brake disks with Index 39 are extensively validated and filtered out in production.

They are subject to carefully selected quality criteria and only an extremely limited amount are available.

Therefore, please remember that the brake disk with Index 39 may only be used in the described problem instance and not for any repairs of worn parts.

5.2 Replace brakepads.

6. Install 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 up to max. 70 Nm (see picture in attachment "Wheel threaded connection tightening sequence").

6.4 Lower vehicle until the tires are prevented from spinning.

6.5 Tighten wheel bolts crosswise with a torque wrench to the prescribed vehicle-specific tightening torque (see picture in attachment "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 shown in the picture

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

Parts

Attachments

XENTRY TIPS

File	Description
AH42.10-P-9406-12LF.pdf	Notes on handling, transport and storage of composite brake disks.
AR40.10-P-1100-02A.pdf	Clean/check/corrosion protect wheel bolting components.
AP42.10-P-4256EW.pdf	Assess condition of brake disks.

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
40-1590	REMOVE/INSTALL WHEELS (2)		42101 H4	
42-2706	REMOVE/INSTALL BRAKE PADS OF FRONT AXLE, REPLACE IF NECESSARY (WHEELS REMOVED)		42101 H4	
42-2731	REMOVE/INSTALL BRAKE DISKS OF FRONT AXLE, REPLACE IF NECESSARY (BRAKE PADS REMOVED)		42101 H4	

Attachments

Anzugreihenfolge Radverschraubung.jpg:

