

Brake noise on AMG vehicles

Topic number	LI42.10-P-063502
Version	12
Function group	42.10 - Service brake
Date	7/1/25
Validity	All AMG model designations with steel or ceramic brakes (code B07)
Reason for change	Updating Adhesive/copper paste on backing plate

Complaint

Noises/ squealing from the service brake in various driving situations and ambient conditions.

WIS-References		
Document number	Title	Note
SI 00.00-P-0086A	Guidelines for queries relating to technical complaints	Guidelines for queries relating to technical complaints

Cause

Frictional vibrations

Remedy

AMG brake systems are designed for high loads. This can result in noises under certain operating conditions and driving styles. Please refer to the Operator's Manual for further information such as care and maintenance instructions (washing vehicle directly after heavy use and using approved cleaning agents).

These are dependent on speed, brake pressure or ambient conditions such as temperature and air humidity.

1. Beginning Diagnostics:

- a) Check whether the complaint can be reproduced and at which axle or side the noises occur (ideally together with the customer while driving).
- b) Check the affected system for component wear, mechanical damage or localized overheating damage. Replace damaged components as necessary.
- c) Assess condition of brake rotors and pads per WIS and visually (i.e. long periods of stagnation, etc...).
- d) Clean brake components free of brake dust and debris.
- d) Secure vehicle on a lift.
 1. Start the engine and depress the brake pedal 3-4 times.
 2. Check each wheel to see if they turn freely by hand.
 3. If a wheel is not turning freely by hand, this needs to be addressed prior to re-assessing the noise concern.
- e) Check whether, apart from this document, an additional document exists for the specific model in question, and if so, work through it and then continue.

2. Specific Axle Work:

XENTRY Tips

NOTE: If the brake pad has a metal backing plate, there is no need to affix the adhesive film. Continue with applying chamfer and brake paste as instructed below.

IMPORTANT: Be absolutely certain to not allow paste between friction surfaces of the pad and disc!

a) If the noises are coming from the front axle.

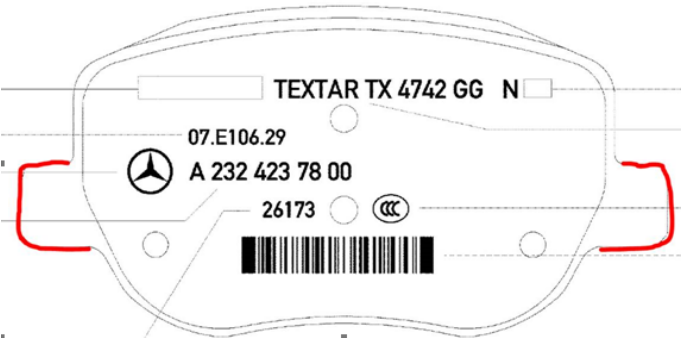
1. Remove brake linings of front axle.
2. Clean all contact points on brake lining backing plate, including the brake lining guide pins and brake caliper/carrier.
3. Clean bonding surface (where pistons contact back of brake pad). Apply adhesive film to the backplate of the piston-side brake lining where the piston contacts the pad backing plate. See picture "Adhesive and Paste Application Area". If adhesive is already installed on backing plate, you may gently scrape off and re-apply a new adhesive. In some instances the adhesive may be very carefully removed and Molykote applied instead.
4. Chamfer edges (gently round off sharp leading edges) on brake pads. Some pads have vertical grooves, these can be gently chamfered with a triangular file as well. See picture "Chamfering Technique".
5. Apply Molykote to the sides of the backing plate. See picture "Adhesive and Paste Application Area".
6. After installing the brake linings, actuate the brake for 30 seconds.

b) If the noises are coming from the rear axle.

1. Remove brake pads of rear axle.
2. Clean all contact points on brake lining backing plate and brake caliper/carrier.
3. Clean bonding surface (where pistons contact back of brake pad). Apply adhesive film to the backplate of the piston-side brake lining.
4. Chamfer edges (round off sharp leading edges) on brake pads. See picture "Chamfering Technique".
5. Grease contact points (red areas on attachment "Rear Pad Grease Area") between brake lining and guide of brake caliper with Molykote.

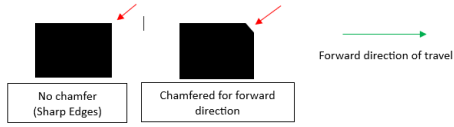
3. Brake Bedding Process:

- a) Before trip, the mileage incurred must be clarified with the customer (approx. 30 miles).
- b) Select a suitable route so speeds of approximately 65 MPH can be achieved.
- c) If the vehicle is an AMG P3 Hybrid, switch off recuperation prior to bedding in brakes.
- d) Brake the vehicle 15 times with a brake pressure of approx. 30 bar (have the passenger read it out using XENTRY) from 62 MPH to 30 MPH (no emergency stops and no braking in the ESP control range). Maintain a cooling distance of approx. 1 mile between brake applications.
- e) Finally drive approx. 3 miles to allow the system to cool.
- f) Reassess noise.

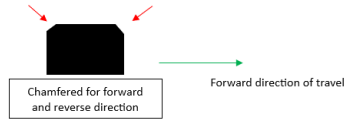
Attachments	
File	Description
Rear Pad Grease Area.png	Rear Pad Grease Area
	
Chamfering Technique.png	

Chamfering Technique

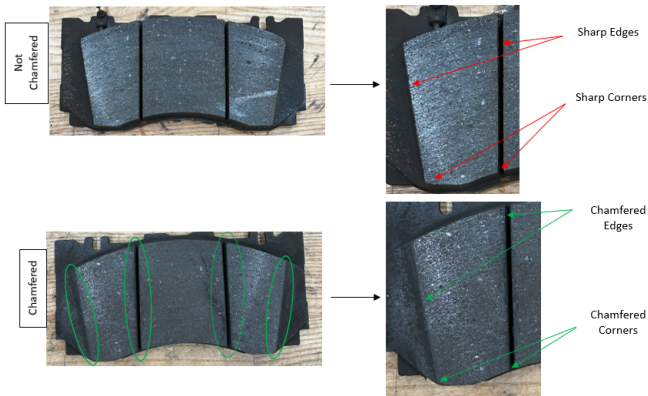
If noise is present in forward direction of travel.



If noise is present in forward and reverse direction of travel.



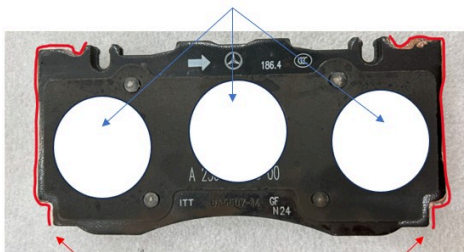
Example:



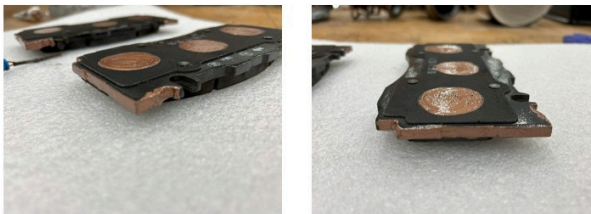
Adhesive and Paste Application Area.jpg

Adhesive and Copper Paste Application Area

Adhesive Transfer Tape Application Area



Copper Paste Application Area:



Side View

Side View

Disclaimer

XENTRY Tips

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 > Brake system > Service brake > Noises > General
Chassis/suspension > Brake system > Service brake > Noises > Squeals
Chassis/suspension > Brake system > Service brake > Noises > Whirring/howling
Chassis/suspension > Brake system > Service brake > Noises > Makes noise

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
3M F9469PC			Alternate Adhesive Transfer Tape	1	Sourced Locally	X
A 001 989 87 51 09			Molykote	<1		X
A 190 423 32 00			Adhesive Transfer Tape	1	Modify to fit. May use alternate.	X

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note