

Brake noise on AMG vehicles

Topic number	LI42.10-P-063502
Version	9
Function group	42.10 - Service brake
Date	2/3/25
Validity	All AMG model designations with steel or ceramic brakes (code B07)
Reason for change	Adding instructions for "2. specific axle work".

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, apart from this document, an additional document exists for the model series in question, and if so, work through it and then continue with 1b.
- b) Check whether the complaint can be reproduced and at which axle or side the noises occur (ideally together with the customer while driving).
- c) Check the affected system for component wear, mechanical damage or localized overheating damage.
 1. Replace damaged components as necessary and re-assess noise concern.
- 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) Assess condition of brake rotors and pads per WIS and visually (i.e. long periods of stagnation, etc...).

2. Specific Axle Work:

XENTRY Tips

NOTE: If brake pad has a metal backing plate, there is no need to affix the adhesive film.

a) If the noises are coming from the front axle => Affix linings with adhesive film (see attachments for front axle). If backing plate is installed on pads, move to step 3.

1. Remove brake linings of front axle.
2. Clean all contact points on brake lining 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. For 6 piston calipers, only in the area of the center piston. For other piston caliper configurations less than 6, apply where the piston(s) makes contact with the back of the pad.
4. Chamfer edges (round off sharp leading edges) on brake pads. See picture "Chamfered Pads".
5. After installing the brake linings, actuate the brake for 30 seconds.

b) If the noises are coming from the rear axle => Affix linings with adhesive film and grease the lining as per the specification (see attachments for rear axle).

1. Remove brake pads of rear axle.
2. Cleaning all contact points on brake lining and brake caliper/carrier.
3. Grease contact points (red areas) between brake lining and guide of brake caliper with heat-resistant lubricating paste.
4. Clean bonding surface (where pistons contact back of brake pad). Apply adhesive film to the backplate of the piston-side brake lining.
5. Chamfer edges (round off sharp leading edges) on brake pads. See picture "Chamfered Pads".

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

3. Brake Bedding Process:

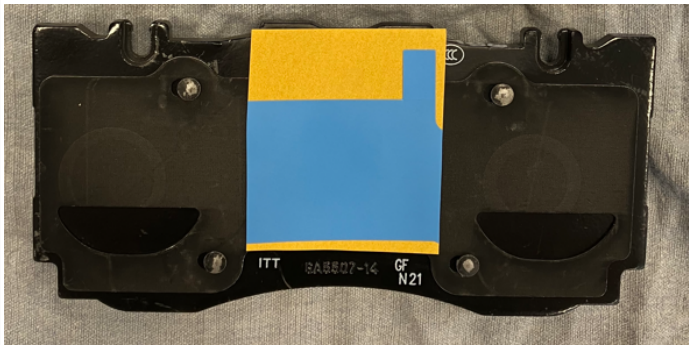
a) Before trip, the mileage incurred must be clarified with the customer (approx. 30 miles).

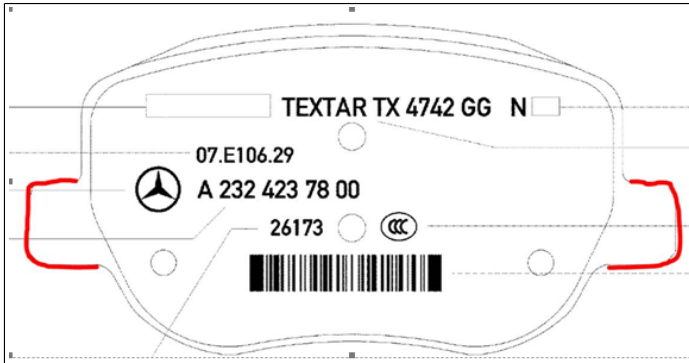
b) Select a suitable route so speeds of approximately 65 MPH can be achieved.

c) 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.

d) Finally drive approx. 3 miles to allow the system to cool.

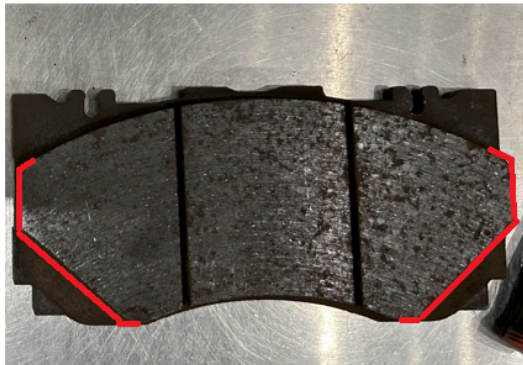
e) Reassess noise.

Attachments	
File	Description
6 Piston Adhesive Location.png	6 Piston Adhesive Location
	
Rear Pad Grease Area.png	Rear Pad Grease Area

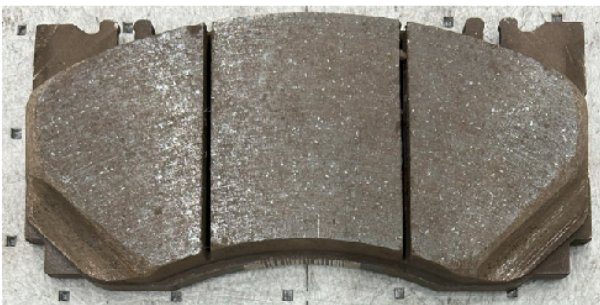


Chamfered Pads.png

Example: Pads not chamfered.



Example: Pads chamfered.



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

XENTRY Tips

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
A001 989 87 51			Heat-resistant lubricating paste	<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