



Technical Service Bulletin

46 Brakes creak at an almost standstill

46 23 52 2054385/3 September 18, 2023. Supersedes Technical Service Bulletin Group 46 number 21-25 dated February 25, 2021, for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
All Audi Vehicles	2015 – 2025	All	Not Applicable

Condition

REVISION HISTORY		
Revision	Date	Purpose
3	-	Revised header (Added model years)
2	02/25/2021	Revised header (Added model years)
1	03/21/2019	Initial publication

Customer states:

- Creaking noises when braking at almost standstill (crawling when pulling away or briefly before standstill).
- Please review the audio/video example:
<https://audi-external.kzopplatform.com:443/#/player/medium/1376799528052593748?autoplay=on&embed=true> (Figure 1).



Figure 1. QR Code for supporting video.

Technical Background



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Brakes creak through the stick-slip effect:

- The stick-slip effect describes an undesired, jerky, and pulsating slip (transition from static to dynamic friction) of two objects moving against each other.
- The stick-slip effect occurs if the static friction is clearly bigger than the dynamic friction. Example: when driving very slowly and slightly operating the brakes.
- This effect occurs particularly often when lightly braking on vehicles with automatic gearbox at almost standstill.
- The resulting vibrations are transmitted as vibrations via the suspension to the body where they are converted to sound waves, such as creaking noises.



Note:

The stick-slip effect is more noticeable in vehicles with high-performance brakes, for example: SQ5, S4, S5, S6, S7, or the e-tron, but it can be present in all vehicles.

Figure 2 graphically shows the stick-slip effect.

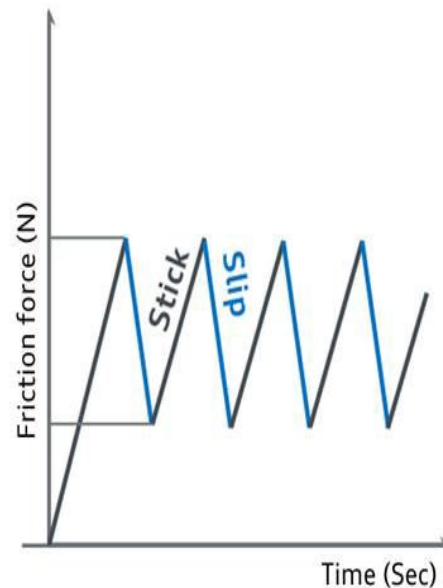


Figure 2. The stick-slip effect.

Production Solution

Not applicable.

Service



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Note:

The information below is a simplified explanation for Customers:

This creaking noise is a physical phenomenon (stick-slip effect), which in various intensity can also be reproduced on other vehicles (normal condition) and does not reduce the braking performance.

Warranty

This TSB is informational only and not applicable to any Audi Warranty.

Additional Information

All parts and service references provided in this TSB (**2054385**) are subject to change and/or removal. Always check with your Parts Department and/or ETKA for the latest information and parts bulletins. Please check the Repair Manual for fasteners, bolts, nuts, and screws that require replacement during the repair.

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