Technical Service Bulletin

206847 Vibration/noise from brake pedal area - pedal feels different - DTC P05FF00
47 23 23 2068205/4 April 18, 2023. Supersedes Technical Service Bulletin Group 47 number 22-22 dated December 19, 2022, for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
e-tron GT, and RS e-tron GT	2022 - 2024	All	Not Applicable

Condition

REVISION HISTORY		
Revision	**Date**	**Purpose**
4	-	Revised *Service & Technical Background* (Revised Procedure) Revised *header* (Added Model Year)
3	12/19/2022	Revised *Service* (Revised Procedure) Revised *Warranty* (Revised Labor Operation)
2	11/08/2022	Revised *Service* (Revised Procedure) Revised *Parts and Tools* (Added table) Revised *Warranty* (Added Labor Operation)

Customer states:

- During braking at low speeds, a vibration/pulsation is felt at the brake pedal.

AND/OR

- The brake response feels “different”.

Workshop findings:

The following DTC may be stored in the ABS/ESC Control Module -J104- (address word 0003):

- **DTC P05FF00** – *Brake pressure sensor / Sensor for brake pedal travel deviation*.

The complaint can be reproduced.

Technical Background

Information concerning e-tron GT Brake System.

Bedding-in routine not yet complete.

On new vehicles or after changing the brake pads, the new brakes must be bedded in. The vehicle performs this procedure independently by briefly deactivating the recuperation function. Depending on the driving style, the bedding-in routine may take up to 1000 miles.

“Brake refresh” function

This function helps to preserve the friction value of the brakes. After the vehicle has been stationary for an extended period of time (+12 hours), braking energy of 500 kJ is applied to the mechanical brakes.

During this procedure, the recuperation function is deactivated briefly.

“Stiffness adaptation routine” function

During a regenerative braking (recuperation) procedure, the electric braking torque of the electric drive motors needs to be exchanged for the hydraulic braking torque of the wheel brakes “blending” at least once, usually shortly before the vehicle comes to a standstill.

To eliminate longitudinal braking fluctuations during “blending”, the control units involved (ABS/ESC control unit and electromechanical brake servo) must be informed as precisely as possible of the actual stiffness of the brake system.

For this purpose, a defined pressure value of the electromechanical brake servo is built up and then released again with as small a gradient as possible. During this build-up and release of pressure, the ABS/ESC control unit learns the current stiffness of the wheel brakes and stores the values. While the function is active, the brake pedal moves approximately 1 in.

The brake lights are not activated in the process.

- The routine above is performed during every charging procedure.
- The adaptation procedure takes approx. 10 seconds.
- No adaptation procedure is accepted if the brakes are hot or the steering wheel is turned significantly out of the center position.
- The adaptation procedure is only performed if the temperature of the brake discs is <100°C (212° F) and the temperature of the brake calipers is <55°C (131° F).
- There is no minimum time interval between the adaptation procedures. The routine is initiated if the selector lever is moved from P to D and back to P before charging.

Pedal travel is generally longer when maneuvering.

To improve brake modulation when parking, a smaller brake master cylinder is fitted on the e-tron GT compared to the plug-in hybrid electric vehicles. This extends the pedal travel to ensure better modulation when parking and maneuvering. In addition to this, both brake circuits are opened fully at speeds below 12 mph for reasons relating to noise, vibrations, and comfort; this results in longer pedal travel.

Inferior friction value of ceramic brakes in wet and/or cold conditions compared to cast iron brakes.

This effect may occur if the vehicle switches from electric to hydraulic braking. This may result in the brake pedal feel being different under braking although the same pressure is applied to the pedal.

Production Solution

Under analysis.

Service

Bedding-in routine not yet complete

The bedding-in routine must be completed. After it is completed, the relevant event memory entry is deleted automatically from the ABS/ESC control unit.

For further details, refer to TSB 2063679.

"Brake refresh" function

The customer must be informed of the new function and vehicle characteristics.

Pedal travel is generally longer when maneuvering.

The technology has changed and the characteristics initially appear unusual. The customer must be informed of the new functions and the corresponding vehicle characteristics.

Inferior friction value of ceramic brakes and tungsten carbide brakes in wet and/or cold conditions compared to cast iron brakes

The customer must be informed of the differences between the brake systems and their characteristics in the relevant weather conditions.

If necessary, the "Brakes" chapter of the Owner's Manual can be used for this purpose.

If the travel of the brake pedal is still not suitable in relation to comparable vehicles after all the points listed have been worked through and taken into account, perform the following additional steps:

- Read out the measured value "Adaptation value offset wheel brake stiffness" and upload the ODIS protocol to GFF database.
- Run ODIS test plan "0023 - Brake booster / bleed brakes".
- It is essential to charge the vehicle for at least 60 seconds so that the stiffness adaptation routine is performed. Then read out the measured value and upload the protocol to the GFF database.
- A new software version for the ABS/ESC control unit is being prepared.

Warranty

Claim Type	• 110 up to 48 Months/50,000 Miles. • If the vehicle is outside any warranty, this Technical Service Bulletin is informational only.

Service Number:	4708		
Damage Code:	0011		
Labor Operations:	Bleed brake system	4701 0750	See SRT
Diagnostic Time:	GFF	0150 0000	Time stated on the diagnostic protocol (Max 70 TU)
	Road test prior to the service procedure	0121 0002	10 TU
	Road test after the service procedure	0121 0004	10 TU
Claim Comment:	As per TSB 2068205/4		

All warranty claims submitted for payment must be in accordance with the *Audi Warranty Policies and Procedures Manual*. Claims are subject to review or audit by Audi Warranty.

Additional Information

All part and service references provided in this TSB (**2068205**) 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.