



Technical Service Bulletin

27 48V vehicle electrical system warning, DTC U046900 stored in the ECM

27 24 83 2058831/15 November 20, 2024. Supersedes Technical Service Bulletin Group 27 number 24-72 dated April 26, 2024 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A6, A7, Q7, and Q8	2019 – 2023	All	48V MHEV
A8	2019 – 2022		
A6 allroad	2020 – 2023		
A8 e quattro	2021 - 2022		

Condition

REVISION HISTORY		
Revision	Date	Purpose
15	-	Revised <i>Warranty</i> (Updated Claim Types, Labor Operations) Revised <i>Service</i> (Added reference bulletin) Revised <i>Additional Information</i> (Updated reference information)
14	04/26/2024	Revised <i>Service</i> (Updated Requirements for Coverage) Revised <i>Warranty</i> (Updated Labor Operations)
13	03/12/2024	Revised <i>Service</i> (Updated Requirements for Coverage)

Customer states:

- The message “Electrical system: malfunction! Please contact Service” is displayed on the instrument cluster (Figure 1).
- A yellow or red battery warning symbol is displayed on the instrument cluster.



Technical Service Bulletin



Figure 1. Cluster Warning Message.

Workshop findings:

The following DTC is stored:

ECM, J623 (address word 0001), or Gateway, J533 (address word 0019):

- **DTC U046900:** Invalid data received from starter/generator control module (symptom 36564).



NOTICE

The DTC and symptom must match for this TSB to apply.

Technical Background 1

The Belt Starter Generator (BSG), together with the vehicle's 48V system is an intelligent vehicle system that provides electrical power to the vehicle as needed. Therefore, traditional diagnosis methods, like expecting the alternator to output at full voltage any time the vehicle is running, are no longer viable, as the output power of the BSG is regulated according to the current requirements of the vehicle.

A hardware related issue may cause the belt starter generator (BSG) to stop working as intended.

Production Solution

Not Applicable.

Service

Prior to following the diagnostic instruction:

- VAS tester with the current version of ODIS is installed.
- While diagnosing the 48V system ensure the 48V and 12V battery are charged properly prior to following the procedure, please refer to TSB [→ 2067906](#): 27 48V Reference: Charging 48V Battery with 12V Charger DTC P0A7D00 / P0B2900.



Technical Service Bulletin

Performing the function test “C29 – Check Erase” and attach to the test plan:

ODIS path for Q7:

- Body
- Electrical system
- 01 - On Board Diagnostic capable systems
- CC - starter-alternator -C29
- CC - Functions
- 00CC – Check/erase event memory entry

ODIS path for A6/A7/A8/Q8:

- Diagnostic capable system
- 00CC - starter alternator -C29
- 00CC - Functions
- 00CC – Check/erase event memory entry

When asked “Are you running this program based on an instruction in a Technical Service Bulletin (TSB)?”, answer the test plan with **YES**.

If the following event memory entry is shown in ODIS, replace the starter-alternator according to ELSA and reevaluate the concern:

- **B200096** – Faulty control module.

 **NOTICE**

If the listed DTC is not stored in the test plan, then the generator is not faulty and replacing parts will not fix the problem. If the test plan provides the message “The event memory could not be read.” Then the starter/generator is not faulty and replacing the parts will not fix the problem.

Complete function tests necessary for warranty coverage:

Function test from previous instructions:

- 00CC – Check/erase event memory entry.

Additional function tests necessary for 48V BSG replacement (provided from ELSA repair manual):

In the event the 48V BSG is replaced after meeting the criteria listed above, the additional test plans must all be attached in the GFF Log for warranty approval. These test plans are covered under the Labor Operation for replacement of the 48V BSG.

- De-energize of 48V vehicle electrical system.
- Re-energize 48V vehicle electrical system.



Technical Service Bulletin

- 00CC – Replace control module.
- 0001 – Coolant circuit bleeding procedure.



Failure to provide the necessary test plans listed above may result in scrutiny and potential rejection of the warranty claim.

Warranty

Claim Type:	• If the vehicle is outside of any warranty, this Technical Service Bulletin is informational only.		
Service Number:	2726		
Damage Code:	0040		
Labor Operations:	Replace starter-alternator (If required according to this TSB)	2726 XXXX	See SRT with associated operations
	12V battery Charge (if starter-alternator requires replacement)	2706 8950	See SRT with associated operations
	GFF	0150 0060	Time stated on the diagnostic protocol
	GFF (only if starter-alternator is not replaced)	0150 0010	See SRT with associated operations
Claim Comment:	As per TSB 2058831/15		

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.

Required Parts and Tools

Section may remain blank.

Additional Information

The following Technical Service Bulletin will be necessary to complete this procedure:

- TSB 2067606: 27 48V Reference: Charging 48V Battery with 12V Charger DTC P0A7D00 / P0B2900.

All part and service references provided in this TSB (**2058831**) 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.



Technical Service Bulletin

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