



# Technical Service Bulletin

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

27 24 72 2058831/14 April 26, 2024. Supersedes Technical Service Bulletin Group 27 number 24-69 dated March 12, 2024 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A6, A7, A8, and Q8	2019 - 2023	All	48V electrical system
A6 allroad, S8, and Q7	2020 - 2023		

## Condition

REVISION HISTORY		
Revision	Date	Purpose
14	-	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)
12	01/18/2024	Revised <i>Service</i> (Updated Notices for clarity) Revised <i>Additional Information</i> (Updated reference TSB documents)

### 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.



**Figure 1.** Cluster Warning Message.

### Workshop findings:

The following DTC is stored:



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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

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.

For further information, please refer to TSB 2067906: *27 48V Reference: diagnosis and system information.*

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.*

### **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



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- 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 (Figure 2).

**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
- 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

<b>Claim Type:</b>	<ul style="list-style-type: none"> <li>• 110 up to 48 Months/50,000 Miles.</li> <li>• G10 for CPO Covered Vehicles – Verify Owner.</li> </ul>
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	<ul style="list-style-type: none"> <li>1-GW for vehicles that fall under the Starter-Alternator Limited Warranty Extension.</li> </ul>		
<b>Service Number:</b>	2726		
<b>Damage Code:</b>	0040		
<b>Labor Operations:</b>	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
<b>Diagnostic Time:</b>	GFF	0150 0060	Time stated on the diagnostic protocol (Max 100 TU)
	GFF (only if starter-alternator is not replaced)	0150 0010	See SRT with associated operations
	Road test prior to the service procedure	No allowance	0 TU
	Road test after the service procedure	No allowance	0 TU
<b>Claim Comment:</b>	As per TSB 2058831/14		

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

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

- TSB 2067906: *27 48V Reference: Charging 48V Battery with 12V Charger DTC P0A7D00*
- TSB 2067937: *27 48V Reference: diagnosis and system information*

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.

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