

Technical Service Bulletin

Topic	27 48V vehicle electrical system warning, DTC U046900 stored in the ECM
Market area	United States 444 Volkswagen of America, Inc. (6444)
Brand	Audi
Transaction No.	2058831/16
Level	EH
Status	Released for publishing
Release date	Mar 4, 2025

Diagnostic trouble codes

Diagnostic address	Diagnostic trouble code	Fault symptom	Storage state
0001 - Engine electronics	U046900: Invalid Data Received From Starter / Generator Control Module		Intermittent
0001 - Engine electronics	U046900: Invalid Data Received From Starter / Generator Control Module		static
0019 - Data Bus OBD Interface	U046900: Invalid Data Received From Starter / Generator Control Module		Intermittent
0019 - Data Bus OBD Interface	U046900: Invalid Data Received From Starter / Generator Control Module		static

New customer code

Object of complaint	Complaint type	Position
information, navigation, communication, entertainment -> malfunction display symbols -> vehicle electrical system malfunction indicator	functionality -> activates	
information, navigation, communication, entertainment -> malfunction display symbols -> vehicle electrical system malfunction indicator	functionality -> activates without cause	
information, navigation, communication, entertainment -> malfunction display symbols -> vehicle electrical system malfunction indicator	functionality -> does not switch off/disconnect	

New workshop code

Object of complaint	Complaint type	Position
power, vehicle electrical system, data transfer -> power supply -> generator	functionality -> misfire	

Vehicle data

MLBevo with 48V MHEV

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
*	2018	A		DLZ*	*	*
*	2018	A		CZS*	*	*

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
*	2018	A		CXY*	*	*
*	2019	A		CZS*	*	*
*	2019	A		CXY*	*	*
*	2019	A		CWW*	*	*
*	2019	A		DCB*	*	*
*	2019	A		DLZ*	*	*
*	2020	A		CWW*	*	*
*	2020	A		CXY*	*	*
*	2020	A		CZS*	*	*
*	2020	A		DCB*	*	*
*	2020	A		DLZ*	*	*
*	2021	A		CWW*	*	*
*	2021	A		DLZ*	*	*
*	2021	A		DCB*	*	*
*	2021	A		CZS*	*	*
*	2021	A		CXY*	*	*
*	2022	A		CWW*	*	*
*	2022	A		CXY*	*	*
*	2022	A		CZS*	*	*
*	2022	A		DCB*	*	*
*	2022	A		DLZ*	*	*
*	2023	A		DCB*	*	*
*	2023	A		CZS*	*	*
*	2023	A		CXY*	*	*
*	2023	A		CWW*	*	*
*	2023	A		DLZ*	*	*

PR numbers

PR numbers
?:with 9G8

Documents

Document name
master.xml
7265833905e76e33befdf4f1189d400c340207e5352c38bd61.pdf
working_aid_for_necessary_functional_tests.pdf

Condition

REVISION HISTORY		
Revision	Date	Purpose
16	-	Revised <i>Additional information</i> (Updated reference TSB)
15	11/20/2024	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)

Customer states:

- The message “Electrical system: malfunction! Please contact Service” is displayed on the instrument cluster (Figure 1), in addition the battery symbol lights up in yellow or red.
- Yellow warning lamp related to the electrical system shown in the instrument cluster during driving.



Figure 1. Cluster Warning Message.

Workshop findings:

The following DTC is stored in the ECM, J623 (address word 0001):

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

NOTICE

Take note of the symptom 36564, if this is not present this TSB does not apply.

Technical Background

1. Hardware issue with belt-driven starter-alternator (diagnostic address 00CC).
2. Functional software issue with belt-driven starter-alternator (diagnostic address 00CC).

Production Solution

Not Applicable.

Service

If the complaint described above can be reproduced, then proceed as follows:

- Check if ODIS S software is the latest version, update if necessary.

NOTICE

While diagnosing the 48V system ensure the 48V and 12V battery are charged properly prior to following the procedure. Also, TSB 2067906: 27 48V Reference: *Charging 48V Battery with 12V Charger DTC P0A7D00 / P0B2900* must be observed, otherwise a specific diagnosis is not possible.

In the diagnosis (not self-diagnosis), select the function test “C29 – read_delete and attach to test plan.

NOTICE

Note: Answer the question that appears in the test plan – “Are you running this program based on an instruction in a TPI?” – with YES.

ODIS path for A4/A5/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

If the following DTC is shown in ODIS, replace the starter-alternator according to ETKA and check whether the complaint has been resolved:

- **B200096** – Faulty control module (active/static or passive/intermittent).



If the DTC is not stored in the test plan, then the generator is not faulty and replacing parts will not fix the problem.

For invoicing under warranty, the above-mentioned DTC “B200096 – control unit defective” must be present in the ODIS test plan “C29 – Read_Delete DTC” in the diagnostic log.

Important information on repair (replacement of belt-driven starter-alternator): risk of damage to radiator outlet coolant temperature sender G83 or communication problems with new belt-driven starter-alternator due to coolant entering the electrical connector.

Seal electrical connectors on coolant temperature sender, mating connector, signal connector to belt-driven starter-alternator with leak-tight connector -T40348- or suitable workshop materials. Visually inspect components for moisture before assembly and clean electrical contacts if necessary.



Note on working aid for required function checks for the event that the belt-driven starter-alternator needs replacing:

The file “Working aid for necessary functional tests” which is attached to this TSB contains the function checks in ODIS which are required for this workshop visit.

Warranty

If Starter-alternator is not replaced:

Claim Type:	<ul style="list-style-type: none"> • If the vehicle is outside of any warranty, this Technical Service Bulletin is informational only. 		
Service Number:	2726		
Damage Code:	0040		
Labor Operations:	GFF (only if starter-alternator is not replaced)	0150 0010	See SRT with associated operations
	GFF (only if starter-alternator is not replaced)	0150 0060	Time stated on the diagnostic protocol
Claim Comment:	As per TSB 2058831/16		

OR

If Starter-alternator is replaced:

Claim Type:	<ul style="list-style-type: none"> • If the vehicle is outside of any warranty, this Technical Service Bulletin is informational only.
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Service Number:	2726		
Damage Code:	0040		
Labor Operations:	Replace starter-alternator (If required according to this TSB)	2726 19xx / 2726 55xx	See SRT with associated operations
	12V battery Charge (if starter-alternator requires replacement)	2706 8950	See SRT with associated operations
	GFF (If starter-alternator requires replacement)	0150 0060	Time stated on the diagnostic protocol
Claim Comment:	As per TSB 2058831/16		

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

Exchange parts must be installed if available in the exchange program. If a new part is installed instead of an exchange part in justified cases, the reason for this must be given in the comment field in SAGA/2.

Additional Information

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

- TSB 2067906: 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.

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