

Technical Service Bulletin

Topic	27 48V MHEV Electrical System Fault with DTC U046900 / 34763; U002900/U002800
Market area	United States 444 Volkswagen of America, Inc. (6444)
Brand	Audi
Transaction No.	2073284/4
Level	EH
Status	Released for publishing
Release date	Mar 6, 2025

Diagnostic trouble codes

Diagnostic address	Diagnostic trouble code	Fault symptom	Storage state
0001 - Engine electronics	U012000: Lost Communication With Starter / Generator Control Module		Intermittent
0001 - Engine electronics	U012000: Lost Communication With Starter / Generator Control Module		static
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
0001 - Engine electronics	U002800: Vehicle Communication Bus A		Intermittent
0001 - Engine electronics	U002800: Vehicle Communication Bus A		static
0001 - Engine electronics	U002900: Vehicle Communication Bus A Performance		Intermittent
0001 - Engine electronics	U002900: Vehicle Communication Bus A Performance		static
0003 - Brake electronics	C054A00: Vacuum Sensor "A" Range/Performance		Intermittent
0003 - Brake electronics	C054A00: Vacuum Sensor "A" Range/Performance		static
0003 - Brake electronics	C11EC04: Brake booster pressure sensor faulty		Intermittent
0003 - Brake electronics	C11EC04: Brake booster pressure sensor faulty		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 -> information display symbols -> battery charge level information display	functionality -> activates	

Object of complaint	Complaint type	Position
engine -> engine operation -> engine running	functionality -> misfire	

Vehicle data

Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
4A*	2019	A		*	*	*
4A*	2020	A		*	*	*
4A*	2021	A		*	*	*
4A*	2022	A		*	*	*
4A*	2023	A		*	*	*
4K*	2019	A		*	*	*
4K*	2020	A		*	*	*
4K*	2021	A		*	*	*
4K*	2022	A		*	*	*
4K*	2023	A		*	*	*
4M*	2019	A		*	*	*
4M*	2020	A		*	*	*
4M*	2021	A		*	*	*
4M*	2022	A		*	*	*
4M*	2023	A		*	*	*
4N*	2019	A		*	*	*
4N*	2020	A		*	*	*
4N*	2021	A		*	*	*
4N*	2022	A		*	*	*
4N*	2023	A		*	*	*

PR numbers

PR numbers
? :with 9G8

Control units

Diagnostic address	Software part number	Software version	Hardware part number	Hardware version
00CC - Starter generator	*	0523	*	*
00CC - Starter generator	*	0527	*	*
00CC - Starter generator	*	0560	*	*
00CC - Starter generator	*	0562	*	*

Documents

Document name
master.xml

Condition

REVISION HISTORY		
Revision	Date	Purpose
4	-	Revised header (Updated module software) Revised <i>Service</i> (Updated information)
3	07/31/2024	Revised header (Updated DTC list) Revised <i>Service</i> (Added details for diagnosis)
2	06/05/2024	Revised header (Added module software filters) Revised <i>Service</i> (Added pictures and information for inspecting connectors)

Customer states:

- Electrical system fault appears in the instrument cluster.
- Yellow/red battery warning symbol lights up in the instrument cluster.

Workshop findings:

The complaint can be reproduced.

Address word 00CC (belt-driven starter-alternator) cannot be reached.

Numerous DTCs are stored relating to the Engine Electronics, -J623- (address word 0001) or Brake Electronics, -J104- (address word 0003):

Engine Electronics, 0001:

- **U046900:** Lost Communication with Starter/Generator Control Module – **Symptom: 34763.**
- **U002900:** Sensor/Hybrid CAN No Communication.
- **U002800:** Sensor/Hybrid CAN Faulty.

Brake Electronics, 0003:

- **C054A00:** Brake Servo Pressure Sensor.
- **C11EC04:** Brake Servo Pressure Sensor.

Technical Background

Replacing the 48V Starter/Generator will not fix this problem. The DTC “**U046900:** Lost Communication with Starter/Generator Control Module – symptom: 34763” is only stored due to some other electrical system problem in the vehicle. This is often documented in the expanded ambient conditions of the event memory using the value “Starter generator, actual mode 48V = 8”.



If the Starter Generator (diagnostic address 00CC) cannot be reached in ODIS, this does not mean that the component is faulty.

Production Solution

Not Applicable.

Service

Replacing the 48V Starter/Generator will not fix the problem. First, the pressure sensor DTCs in the brake electronics and the communication fault entries must be processed.

A potential fault on these sensors can influence the vehicle data bus system, as a result, the engine control unit sends the belt-driven starter-alternator into freewheel and electrical system faults may then occur.

DTC's U002900 and U002800 in the diagnostic address 0001 indicate the following causes:

- Communication connectors have not been plugged in or fastened correctly, pins are failing (bent, widened), or there are short circuits in the wires.
- Incorrect attempts to swap connectors (failure to connect vehicle ground cables).



Figure 1: Connector failures.

In addition, any **remaining fluids** (coolant etc.) in the connectors on the belt-driven starter-alternator (e.g. after preliminary repairs) may lead to communication issues.

Warranty

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

Additional Information

All part and service references provided in this TSB (**2073284**) 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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