

## Technical Service Bulletin

<b>Topic</b>	27 Q4 12V battery discharged/drive system not activated/keyless opening intermittently inop, DTC U101100, U140000
<b>Market area</b>	United States 444 Volkswagen of America, Inc. (6444)
<b>Brand</b>	Audi
<b>Transaction No.</b>	2077115/2
<b>Level</b>	EH
<b>Status</b>	Released for publishing
<b>Release date</b>	Apr 14, 2025

### New customer code

Object of complaint	Complaint type	Position
engine -> engine operation -> engine start	functionality -> no function	
information, navigation, communication, entertainment -> warning display symbols -> parking brake warning display	functionality -> activates	
information, navigation, communication, entertainment -> indicator display symbols -> parking brake indicator display	functionality -> activates	
vehicle service -> vehicle diagnosis -> Guided Fault Finding (GFF)	control modules, services -> with fault stored in the DTC memory	
information, navigation, communication, entertainment -> indicator display symbols -> parking brake indicator display	functionality -> activates without cause	
engine -> engine operation -> engine start	functionality -> misfire	
information, navigation, communication, entertainment -> malfunction display symbols -> vehicle electrical system malfunction indicator	functionality -> activates without cause	
access control, start authorization, anti-theft protection -> locking/unlocking vehicle -> door release -> door unlocking with mobile device	functionality -> no function	
access control, start authorization, anti-theft protection -> locking/unlocking vehicle -> rear lid release -> rear lid release with remote control	functionality -> cannot be released	
access control, start authorization, anti-theft protection -> locking/unlocking vehicle -> rear lid - release	functionality -> cannot be released	
assistance systems, comfort controls -> convenience opening/closing -> convenience opening -> door window convenience opening	functionality -> no function	
access control, start authorization, anti-theft protection -> locking/unlocking vehicle -> door release -> door release with remote control	functionality -> cannot be released	
engine -> engine operation -> engine running	functionality -> irregular	
information, navigation, communication, entertainment -> malfunction display symbols -> vehicle electrical system malfunction indicator	functionality -> activates	

<b>Object of complaint</b>	<b>Complaint type</b>	<b>Position</b>
vehicle service -> inspection, maintenance -> maintenance table -> other service offers	service: process -> with complaint confirmation	
body attachments and installations -> doors, lids operation -> open power rear lid	functionality -> cannot be opened	
vehicle service -> inspection, maintenance -> maintenance table -> delivery inspection	service: process -> with complaint confirmation	
vehicle service -> inspection, maintenance -> maintenance table -> battery maintenance program	service: process -> with complaint confirmation	
vehicle service -> inspection, maintenance -> maintenance table -> service for vehicles in inventory	service: process -> with complaint confirmation	
engine -> engine operation -> electro-drive mode	functionality -> no function	
engine -> engine operation -> electro-drive mode	functionality -> cannot be switched on/activated	
engine -> engine operation -> electro-drive mode	functionality -> does not switch on/connect	
information, navigation, communication, entertainment -> information display symbols -> battery charge level information display	functionality -> activates	
chassis -> brakes, brake regulation -> electronic parking brake (EPB)	functionality -> cannot be switched off/deactivated	
chassis -> brakes, brake regulation -> electronic parking brake (EPB)	functionality -> switches on by itself	
power, vehicle electrical system, data transfer -> power supply -> starter battery	electrical -> voltage too low	
information, navigation, communication, entertainment -> indicator display symbols -> parking brake indicator display	functionality -> gives incorrect reading	
engine -> engine operation -> engine running	functionality -> stopped	
body attachments and installations -> doors, lids operation -> open door	functionality -> cannot be opened	left front
information, navigation, communication, entertainment -> warning display symbols -> parking brake warning display	functionality -> activates without cause	
information, navigation, communication, entertainment -> cell phone functions, customer portal, applications -> mobile terminal application (app)	functionality -> operation sequence incorrect	
information, navigation, communication, entertainment -> cell phone functions, customer portal, applications -> mobile terminal application (app)	functionality -> no function	
information, navigation, communication, entertainment -> cell phone functions, customer portal, applications -> mobile terminal application (app)	control modules, services -> no data transfer	
information, navigation, communication, entertainment -> cell phone functions, customer portal, applications	functionality	
vehicle service -> inspection, maintenance -> maintenance table -> other service offers	control modules, services -> with fault stored in the DTC memory	
information, navigation, communication, entertainment -> warning display symbols -> generator control warning display	functionality -> activates	
information, navigation, communication, entertainment -> warning display symbols -> active warning warning display	functionality -> activates	

Object of complaint	Complaint type	Position
information, navigation, communication, entertainment -> driver information system (DIS, MFI, MMI) -> text display -> message: vehicle energy system error	functionality -> activates	
information, navigation, communication, entertainment -> driver information system (DIS, MFI, MMI) -> text display -> message: please service vehicle	functionality -> activates	
information, navigation, communication, entertainment -> Online Services	functionality	
information, navigation, communication, entertainment -> Telematics, online services	functionality	
information, navigation, communication, entertainment -> radio operation -> radio reception -> Internet radio reception	functionality -> no function	
access control, start authorization, anti-theft protection -> locking/unlocking vehicle -> door release -> keyless entry door release	functionality -> partially out of order	> no instruction <
engine -> engine operation -> engine start	functionality -> operation sequence incorrect	
engine -> engine operation -> engine start	functionality -> partially out of order	

#### New workshop code

Object of complaint	Complaint type	Position
power, vehicle electrical system, data transfer -> power supply -> starter battery	electrical -> voltage too low	

## Vehicle data

### Q4 MJ22-24

#### Sales types

Type	MY	Brand	Designation	Engine code	Gearbox code	Final drive code
F4*	2022	A		*	*	*
F4*	2023	A		*	*	*
F4*	2024	A		*	*	*
F4*	2025	A		*	*	*

#### PR numbers

PR numbers
?:with NI1
?:or ?:with NI9

## Documents

Document name
master.xml
sichtpruefung_batterie_ali_032016.pdf

**Document name**

sichtpruefung\_batterie\_ali\_032016.docx

## Condition

REVISION HISTORY		
Revision	Date	Purpose
2	-	Revised <i>Service</i> (Added SVM code for battery replacement) Revised <i>Required Parts</i> (Added part as described in updated service)
1	03/06/2025	Initial publication

### Customer states:

- The following message appears on the driver information display:
  - “12V battery is low. Charge by driving.”

**or**

- The vehicle cannot be unlocked with the vehicle key (remote control).

**and/or**

- Keyless opening often does not work.

**and/or**

- The drive system cannot be activated.

**and/or**

- No vehicle electrical systems react/work.

**and/or**

- Online services are not available and cannot be used.

**and/or**

- myAudi app air conditioning and charging function cannot be used.

### Workshop findings:

One or more of the customer statements can be reproduced:

- The 12V battery is discharged/defective.

**and/or**

- A fault was found while checking the 12V battery during a maintenance/service event and the customer commissioned a repair.

One or more of the following DTCs are logged in the Data Bus On Board Diagnostic Interface, J533 (diagnostic address: 0019):

- **DTC U101100:** Supply voltage, voltage too low

*and/or*

- **DTC B1802F1:** Low voltage energy management warning triggered

*and/or*

- **DTC U140A00:** Terminal 30 open circuit

DTCs indicating undervoltage are logged in other control units, for example:

- **DTC U140000:** Function restriction due to insufficient voltage

*and/or*

- **DTC B10CD00:** Function limitation due to energy management

## Technical Background

Issue with 12V components, e.g.:

- Battery maintenance program for stock vehicles not considered (**billing under warranty not possible**).
- Technical issue on the vehicle.
- Maintenance/service event for 12V components in the vehicle not considered.
- External influences on 12V components in the vehicle.

## Production Solution

Not applicable.

## Service

1. The driver information display shows the message *“12V battery is low. Charge by driving.”*
2. Complaints relating to *“12V battery discharged/defective”*



### NOTICE

**Important:** For Q4 vehicles (UNECE):

- The 12V battery test with the vehicle diagnostic tester may indicate that a test with -VAS 6161- is required.
- For the evaluation of the 12V battery, the condition "Charge level at least 80%" must be met.
- In the event of a complete discharge, the 12V battery can be charged using the high-voltage battery without an external charger following a test in accordance with the Workshop Manual/parts catalogue. The vehicle's drive system must be active for this.
- The 12V battery must not be charged directly at the negative terminal. The negative wire must always be connected to a suitable earth point on the vehicle when charging with an external charger.
- A faulty 12V battery must only be submitted with the diagnostic log that has completed the evaluation of the test plan "A - Battery, perform test". In the event of a visual defect, clear pictures/photos of the complaint must be attached in the Warranty DOC-IT page or TAC ticket.
- A newly installed 12V battery must always be adapted to the vehicle using the Guided Function.



## CAUTION

Risk of electrolyte leaking/subsequent damage. The following must be observed if the 12V battery is completely discharged, or the charge level is below 50%:

- The 12V battery must only be charged with a maximum charge current of 55A. Charging using a charge current greater than 55A causes electrolyte fluid to leak from the 12V battery and results in subsequent damage.
- If charging equipment from another manufacturer is used, ensure it does not exceed the maximum charging current of 55A.



## NOTICE

The following VAS battery chargers are permitted/enabled (set maximum charging current of 55A):

- VAS 5900 / VAS 5900A
- VAS 5906 / VAS 5906A
- VAS 5907
- VAS 5908
- VAS 622 001 (can only be used at level 1)
- VAS 622 001A (use 50A mode)
- VAS 622 009

### ***For 1: The driver information display displays the message “12V battery is low. Charge by driving.”:***

Proceed as follows in the event of a complaint:

1.1 Refer the customer to the information in the Owner's Manual under "*Checking and topping up fluids -> 12-volt vehicle battery -> Solutions*".

1.2 Connect the vehicle diagnostic tester to the vehicle. Then start Guided Fault Finding (GFF):

- Check DTCs of the data bus diagnostic interface (diagnostic address: 0019).
- For correct system/battery evaluation using the vehicle diagnostic tester, the DTC "*B1802F1: LV energy management warning triggered*" **must** be entered in the data bus diagnostic interface control unit (diagnostic address: 0019).
- Run the automatically generated test plan in Guided Fault Finding (GFF) to obtain the system/battery evaluation.

### ***For 2: Complaints relating to “12V battery discharged/defective”:***

Proceed as follows in the event of a complaint:

2.1. Visual inspection/assessment.

2.2. Carry out technical evaluation using vehicle diagnostic tester.

2.3. Battery adaptation using Guided Fault Finding.

### ***For 2.1: Visual inspection/assessment:***

#### **Battery: checking electrolyte level**

## Battery without magic eye

### Procedure:

- Check battery housing for the following:
  - Battery terminals are not corroded or damaged
  - Mechanical damage to battery housing and cover, indicated by electrolyte leakage or crystals at the damaged area
- Replace damaged batteries -> 12V battery according to Workshop Manual/parts catalogue with part number **000 915 089 BA** (even if this part number is greyed out in the parts catalogue).
- Check the electrolyte level of all battery cells using markings on housing.
- If the electrolyte level in at least one battery cell is under the MIN marking: Replace battery -> 12V battery according to Workshop Manual/parts catalogue with part number **000 915 089 BA** (even if this part number is greyed out in the parts catalogue).
- Install in reverse sequence.



### Note:

The MIN and MAX markings on the housing can be seen more easily by using a bright flashlight.

If the battery is difficult to see: Use a small mirror to check the electrolyte level (shine a bright flashlight at a right angle onto the battery cells).

### Battery with magic eye:



#### **WARNING**

**Risk of explosion if magic eye is colorless or light yellow!**

- Do not attempt to jump-start the vehicle.
- Do not check or charge the battery.
- Replace the battery.

### Procedure:

- Check battery housing for the following:
  - Battery terminals are not corroded or damaged
  - Mechanical damage to battery housing and cover, indicated by electrolyte leakage or crystals at the damaged area
- Replace damaged batteries -> 12V battery according to Workshop Manual/parts catalogue with part number **000 915 089 BA** (even if this part number is greyed out in the parts catalogue).
- Before checking electrolyte level: Tap magic eye -arrow- carefully with handle of a screwdriver.

### Visual inspection/assessment:

- Perform visual inspection of 12V battery on housing, connecting terminals and their threaded connections.

**!** NOTICE

Supplier applies micro-oil as corrosion protection on end terminal and at transition between end terminal socket and cover (see photo 1). These batteries are OK and do not need to be replaced.



**Figure 1.** Supplier applies micro-oil as corrosion protection on end terminal and at transition between end terminal socket and cover.

- Check the threaded connections of the earth cable on the body and the threaded connections of the positive cables on the fuse box SA.
- If the 12V battery is judged to be **defective** during the visual inspection due to a leak at the housing or near the connection terminals, the 12V battery must be replaced according to the Workshop Manual/parts catalogue. Attach clear pictures/photos to the Warranty DOC-IT page or TAC ticket.
- If deviations are found while checking the threaded connections, they must be rectified depending on the type of issue. Attach clear pictures/photos to the Warranty DOC-IT page or TAC ticket.

**Re 2.2 Technical assessment using the vehicle diagnostic tester:**

Check the 12V battery with the vehicle diagnostic tester (**exception:** Guided Fault Finding (GFF) refers to a test with the battery tester -VAS6161-):

The 12V battery must be evaluated using the vehicle diagnostic tester and the procedure described below:

- Select: “Select own test...”
- Select: “Service work”.
- Select: Program: A - Battery, test.
- Proceed according to the result of the vehicle diagnostic tester test program:
  - If the 12V battery is assessed as being **defective** after working through the test plan “**A – battery (12V), test**” in Guided Fault Finding (GFF) with the vehicle diagnostic tester, further action must be carried out according to the result of the test program. If GFF requires you to replace the 12V battery, replace it according to the Workshop Manual/parts catalogue with part number **000 915 089 BA** (even if this part number is greyed out in the parts catalogue).
  - If the 12V battery is assessed as being **defective** after the test with -VAS6161- is requested, replace it Workshop Manual/parts catalogue with part number **000 915 089 BA** (even if this part number is greyed out in the parts catalogue).
  - If the 12V battery is **not** assessed as being **defective** in Guided Fault Finding (GFF) with the vehicle diagnostic tester after working through the test plan “*Perform battery test*”, run the following programs:

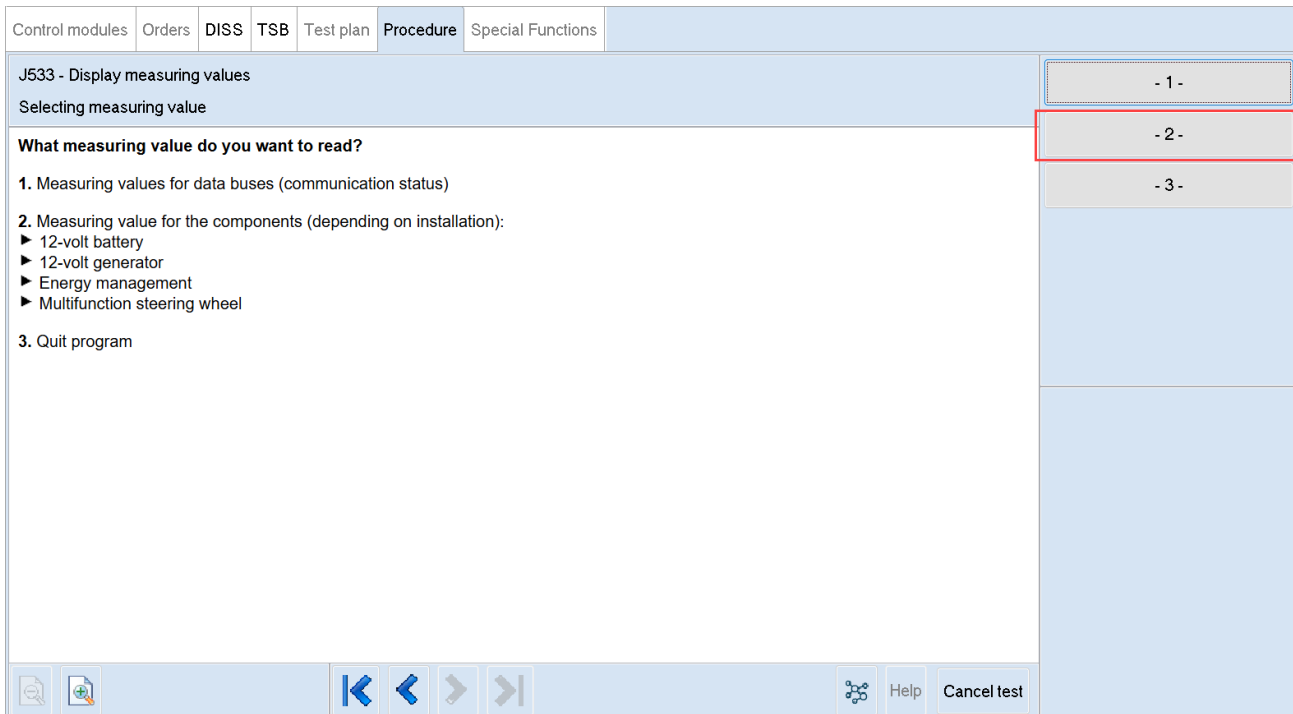
1) Read battery data with program: 0019 Read data

2) If an DTC such as: “U140600 Static current too high” is logged in diagnostic address 0019, run the relevant test program.

3) Save the diagnostic log online

4) After carrying out the battery test, go to Guided Function 0019 “Read measured values”.

Select the “12V battery” measured value.



**Figure 2.** ODIS step 1.

<input type="checkbox"/>	IDE07638	Status hybrid DC/DC converter
<input checked="" type="checkbox"/>	<b>MAS16744</b>	<b>12-volt battery</b>
<input type="checkbox"/>	IDE10674	Extended battery diagnosis
<input type="checkbox"/>	IDE08794	Battery cell analysis
<input type="checkbox"/>	IDE09058	Energy management, consumer releases

Filter:




Figure 3. ODIS step 2.

Control modules	Orders	DISS	TSB	Test plan	Procedure	Special Functions
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J533 - Display measuring values

Selecting measuring value

Measured value	ID	Value
12-volt battery	MAS16744	
- Battery voltage	MAS00362	15.183 V
- Battery current	IDE01836	0.994 A
- Usable battery charge	IDE01842	9 Ah
- Battery charge status	IDE01839	97 %
- Battery temperature	IDE01838	3 °C

Figure 4. ODIS step 3.

If the “Usable Battery Charge” value is less than or equal to **15Ah**, replace the 12V battery according to the Workshop Manual with part number **000 915 089 BA** (even if this part number is greyed out in ETKA).

If the “Usable Battery Charge” values is greater than **15Ah**, then the 12V battery is OK.

**Re 2.3: Battery adaptation using Guided Fault Finding:**

After replacing a defective 12V battery, a newly installed 12V battery must always be adapted to the vehicle using Guided Fault Finding (GFF) with the **"Program: A – Adapt battery (12V)":**

- Then the DTCs of all control units must be erased and requested again.

**Re 2.4: Documenting the current PR number using Guided Fault Finding:**

Run the test program “Enter SVM code” with **SVM code UMBBATT89A**.

**Warranty**

<b>Claim Type:</b>	<ul style="list-style-type: none"> <li>If the vehicle is outside of any warranty, this Technical Service Bulletin is informational only.</li> </ul>		
<b>Service Number:</b>	2706		
<b>Damage Code:</b>	0040		
<b>Labor Operations:</b>	GFF / Guided Function	0150 0010	See SRT with associated operations
	GFF / Guided Function	0150 0060	Time stated on the diagnostic protocol
	Check Battery	2706 0150	See SRT with associated operations
	Removing and installing battery (If necessary)	2706 1950	See SRT with associated operations
<b>Claim Comment:</b>	As per TSB 2077115/2		

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

The part numbers mentioned in this TSB are different than the ones listed in ETKA. Only use parts listed in this TSB, this includes superseding part numbers!		
Part Number	Part Description	Quantity
000 915 089 BA	12V Battery (if necessary)	1

## Additional Information

All part and service references provided in this TSB (**2077115**) 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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