



## Condition

**ATTENTION:**

**THIS IS A TECH TIP, NOT A TECHNICAL BULLETIN.  
TECH TIPS ARE NOT ASSOCIATED WITH WARRANTY CLAIMING.**

### Applicable Vehicles

Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
Jetta, Golf, Golf R, GTI, eGolf, Sportwagen, Passat, CC, EOS, Beetle, Beetle Convertible, Tiguan, Touareg, Atlas, Tiguan LWB, Arteon	2011-2020	All	All	All	All

### Revision Table

Instance Number	Published Date	Version Number	Reason For Update
2052080/2	6/14/19	57-18-02TT	Update to diagnosis and additional model year applicability.
2052080/1	8/3/18	57-18-02TT	Original publication.

## Technical Background

There is no specification for testing the open circuit voltage of key batteries. **Open circuit voltage testing using a voltmeter will result in misdiagnosis of the actual key battery condition.** Remote keys are designed to function normally with voltage less than that of a new battery.

The following methods are recommended to make a correct diagnosis of the key battery.

## Service

### 1. Perform Key Battery Test Plan (if Available)

- This is only possible on certain MQB models beginning with model year 2018.
- Check for a Technical Bulletin, and use the GFF Test Plan if available.
- The test plan is titled "Remote Control Battery Check" in ODIS.

### 2. Check LED Indicator on the Key

- Watch the LED indicator on the key while pressing a button.
- As long as the LED illuminates, the key will operate within the normal range.
- If the LED does not illuminate when pressing a button the battery should be replaced.

**3. Check for MFI Message**

- With the ignition on, push any button on the key and watch for a message in the MFI.
- The battery condition is transmitted from the key to the BCM.
- If an MFI message indicates the key battery is low, it should be replaced.

**4. Measure Battery Voltage – Using a 320 Ω Load**

- It is necessary to measure the voltage with a load to simulate operating conditions.
- Resistor decade box VAS 6345 may be used to dial-in 320 Ω.
- Connect the resistance of 320 Ω in parallel with a digital voltmeter.
- Measure the voltage across the coin battery after 6 seconds.
- If under 2.6 Volts the battery should be replaced.

**5. Check DTCs and Measuring Values for Remote Key (MQB Vehicles Only)**

- MQB vehicles will store a DTC in the BCM if a key detects a low battery condition.
- The DTC will indicate which remote number reported the low battery condition.
- Use measuring values to determine the current remote number and battery condition.
- AW 09 > Guided Functions > Measuring Values > “Vehicle key with remote control”
- As a button is pressed, check if the current remote number matches with the DTC.
- As a button is pressed, if the battery condition is “low” or “Not OK” it should be replaced.

**6. Test Battery using a ZTS MBT-1 “Multi-Battery Tester”**

- This tester is commercially available in the United States.
- The result of the pulse-test is displayed as a remaining percentage of battery charge.
- If the indication is less than 60% on the ZTS tester, the battery should be replaced.

## Additional Information

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