



This Service Information bulletin supersedes SI B61 02 11 **dated February 2013.**

NEW designates changes to this revision

SUBJECT

Advanced Onboard Battery Diagnostics

MODEL

F01, F02 produced from 9/2010

F02H

F10

F20H

F25

F07 produced from 9/2010

F12

F13

F30

F30H

INFORMATION

Starting with the introduction of the F10 (5 Series), an advanced intelligent battery sensor has been used. This now makes it possible for the vehicle to monitor the condition of the battery in order to determine if the battery needs to be recharged or replaced, along with the remaining capacity of the battery. The analysis and testing of the battery's SoC (State of Charge) and SoH (State of Health) is now performed using ISTA (Integrated Service Technical Application) diagnosis.

A separate test using a battery tester is no longer needed.

PROCEDURE

In order to properly test the battery, follow the procedure as outlined below.

1. Perform a vehicle test and identify any power management faults stored in the vehicle.

If the battery is faulty, one of the following fault codes will be stored in the DME:

- 213B01 - Power Management, battery condition: Battery faulty

- 213B08 - Power Management, battery condition: Battery faulty
- 29B500 - Power Management, battery condition: Battery faulty
- S0121- Power Management, battery condition: Battery faulty

If no faults are stored, continue to step 4.

2. **NEW** Complete the test plans linked to the faults and follow the test plan recommendations. This includes test plan “AT6121_FZGBATT – Battery Status” and “AT6100_END_L6 –Energy Diagnosis.” Refer to [SI B61 13 05](#) and ISTA functional description documents for additional information on energy diagnosis.
 - a. If the battery needs replacement, the test plans will prompt to “Install the following component: Battery” and supply the DIAGCODE.
 - b. If the test plan states “State of charge of the battery is too low Recharge battery!” charge the battery until the battery charger states that the battery is fully charged. Disconnect the ICOM and battery charger and let the vehicle sit for a minimum of 3 hours (this enables the IBS to update the DME and provide the correct SoC).
 - c. Restart diagnosis with ISTA in order to recheck the SoC of the battery. The test plan “AS6120_SOC_HIST-Evaluate state of battery charge” can be accessed using the following path: “*Service functions/Body/Power supply/Battery/Evaluate battery charge status.*”
 - d. If the results of the test plan state that the battery charge is still low, test the battery using the battery tester (EXP-1000 recommended) and follow the battery tester recommendations.
 - e. If the results of the test plan state the “State of charge of the battery is OK,” check all systems to ensure that no CC message are displayed, and everything is functioning properly.
3. After a battery replacement, the fault codes can only be cleared after the battery is registered. The battery registration can be completed using the test plan “AS6120_WECHSEL –Register battery replacement”. The test plan can be found under “*Service functions/Body/Power supply/Battery/Register battery change*”.
4. If the vehicle test does not identify any power management faults stored in the vehicle, the battery status can be checked by performing the test plan “AT6121_FZGBATT – Battery Status” using ISTA. The test plan can be found under “*Function structure/03 Body/Voltage supply/Battery/Battery condition*”. Follow the recommendations of the test plan, noting any DIAGCODES.

WARRANTY INFORMATION

Not applicable.

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