

February 2015 Technical Service

This Service Information bulletin supersedes SI B61 03 14 dated January 2015.

designates changes to this revision

#### **SUBJECT**

## **Check Control Messages Related to Battery Charge During Cold Ambient Temperatures**

#### **MODEL**

F01 (7 Series)

F02 (7 Series LWB)

F04 (ActiveHybrid 7)

F06 (6 Series Gran Coupe)

F07 (Gran Turismo)

F10 (5 Series Sedan)

F10H (ActiveHybrid 5)

F12 (6 Series Convertible)

F13 (6 Series Coupe)

F15 (X5)

F25 (X3)

F30 (3 Series Sedan)

F30H (ActiveHybrid 3)

F31 (3 Series Sports Wagon)

F32 (4 Series Coupe)

F33 (4 Series Convertible)

F34 (3 Series Gran Turismo)

#### **SITUATION**

On cold days with an outside ambient temperature of less than 15°F, customers may notice a check control message related to the battery that is displayed on the instrument cluster and the control information display.

Under these conditions, the vehicle starts. Various power management faults can be stored:

- 213901 Power management: Reduction or shutdown of individual electrical consumer
- 8040BD Reset or deactivation of Terminal 30F
- 8040B9 De-activation of terminal 30B: Top start capability limit reached

- 8020E8 Reset or deactivation of terminal 30F
- 800E89 FRM: start capability limit reached with lights active during stationary mode
- 93076B Deactivation of terminal 30B: upper start capability limit reached
- 93076A Deactivation of terminal 15: upper start capability limit reached, but deactivation preventer active
- 93076C Deactivation of terminal 30B: upper start capability limit reached, but deactivation preventer or legal loads active
- 930769 Deactivation of terminal 15: upper start capability limit reached

Note: When the outside temperatures drop below 46°F, the charging system is switch to full charge.

#### **CAUSE**

- The check control message (ID 229) is caused by a heavily discharged battery.
- The check control message is triggered when the current state of charge (SoC) of the battery approaches the minimum SoC that is required to start the vehicle (start capability limit).
- In low outside ambient temperatures, the start capability limit of the vehicle is higher. Therefore it takes more energy from the battery to start a cold engine.
- Without the early warning of the check control message, the current state of charge would drop below the start capability limit and the vehicle would not start.
- The vehicle's intelligent power management system actively takes measures to increase the charge of the battery, such as increasing idle speed and reducing or shutting down certain electrical consumers.

#### **PROCEDURE**

- 1. Consult with the customer to find out which conditions the vehicle was in when the check control message was displayed (ambient temperature, parked outside or in a garage, etc.)
- 2. Perform energy diagnosis to identify why the battery is discharged, and troubleshoot according to the results of the test plan. In some cases, Energy Diagnosis does not properly identify the current state of the battery. Please use the attached diagnosis chart until this is corrected with ISTA 3.49 (expected end of April 2015).
- 3. NEW Troubleshoot all power management faults that are stored in the vehicle.
- 4. Check the condition of the battery (E Series vehicles: use the external battery tester; F Series vehicles: use the Energy Diagnosis test plan). Charge or replace the battery as needed.
- 5. New "Unfavorable Driving Profile" occurs when the vehicle is driven mostly on short trips (less than three miles), and the charging system cannot keep up with the discharging of the battery because of low ambient temperatures. For vehicles that are identified as having an "Unfavorable Driving Profile," it is recommended that the customer use a suitable battery trickle charger (a newly released 4.3-amp battery charger would be recommended in cold climate conditions in order to maintain optimum battery performance. See the attached Aftersales bulletin for more information). All vehicles that are identified with an "Unfavorable Driving Profile" are covered under warranty, per SI B61 13 05, if the battery needs to be tested, recharged or replaced and the vehicle is still covered under the warranty period.
- 6. Program the vehicle using ISTA/P 2.54 or higher. The following changes in the power management software will occur after the vehicle software is updated. The purpose of this change is to reduce the number of erroneous CC messages that occur during cold winter months.

- For all gasoline engines except the **N63**, **N63T and N52T**, the CC message (ID 229) sensitivity decreases by 10% in cold temperatures.
- For diesel engines, the CC message (ID 229) sensitivity will decrease in March 2015.
- For N63T engines, the CC message (ID 229) sensitivity will decrease in July 2015.
- The CC message (ID 229) changes from a yellow battery to a yellow triangle with an exclamation point inside (see attachment) when displayed.
- For all engines, the CC message (ID 415) sensitivity decreases by 10% in cold temperatures.
- The CC message (ID 415) changes from a yellow battery to a white battery when displayed.

Note that ISTA/P will automatically reprogram and code all programmable control modules that do not have the latest software. For information on programming and coding with ISTA/P, refer to CenterNet / Aftersales Portal / Service / Workshop Technology / Vehicle Programming.

# Always connect a BMW approved battery charger/power supply (SI B04 23 10).

7. The attached flyer contains information for the customer.

#### **WARRANTY INFORMATION**

Covered under the terms of the BMW New Vehicle/SAV Limited Warranty.

Covered under the terms of the BMW Certified Pre-Owned Program when the issue is caused by a covered item, and it is not caused by a battery that requires replacement.

<b>Defect Code:</b>	10 42 31 59 00	
Labor Operation:	Labor Allowance:	Description:
00 00 006	Refer to KSD2	Performing "vehicle test" (with vehicle diagnosis system – checking faults)
And:		
61 21 528	Refer to KSD2	Charging battery
And:		
61 20 502	Refer to KSD2	Perform battery energy diagnosis
And, as necessary:		
61 00 006	Work time (WT)	Performing vehicle diagnosis – test module
And:		
61 00 730	Refer to KSD2	Programming/encoding control unit(s) (F models only)

Labor operation code 00 00 006 is a Main labor operation. If you are using a Main labor code for another repair, use the Plus code labor operation 00 00 556 instead.

Refer to KSD2 for the corresponding flat rate unit (FRU) allowance. Enter the Chassis Number, which consists of the last 7 digits of the Vehicle Identification Number (VIN). Click on the "Search" button, and then enter the applicable flat rate labor operation in the FR code field.

Even though work time labor operation code 61 00 006 ends in "006," it is not considered a Main labor operation.

Work time (WT) labor operation 61 00 006 requires an individual punch time and an explanation in the claim comments section.

If a control module or component was working properly and/or had no related faults stored prior to vehicle programming and it fails to program correctly or requires initialization, this additional work must be claimed with separate labor operations under the defect code listed above; refer to KSD2.

Repairs to control modules and components with pre-existing conditions are not eligible to be claimed under the defect code listed in this bulletin.

## **Other Repairs**

If performing ISTA diagnostics and related test plans results in other eligible and covered work, claim this work with the applicable defect code and/or labor operations listed in KSD2.

### **ATTACHMENTS**

View PDF attachment **B610314 Diagnosis Chart**.

View PDF attachment **B610314 CCM Changes**.

View PDF attachment **B610314 Dealer Information CCM**.

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