

**SUBJECT****CSC Communication Errors****MODEL**

I01 (i3 and i3 REx)

I12 (i8)

Vehicles produced from 12/16/13 to 10/15/14

SITUATION

The vehicle cannot be put into drive readiness or the high voltage system could automatically deactivate during driving.

CAUSE

Failure of communication on the CAN bus due to one or more faulty cell supervision circuits (CSC). As a result, the switch contactor in the high-voltage battery opens.

CORRECTION

Replace all CSCs if affected device has specified production codes and diagnostics indicate replacement.

PROCEDURE

Only properly trained personnel, who have passed all applicable technical training courses, should perform any maintenance or repairs on any Hybrid or Electric Vehicle. Work performed by unqualified persons may result in severe injury or damage to the vehicle. Additional information may be found in REP 61 00... Observe safety instructions when handling electric vehicles.

1. Perform a vehicle test with ISTA/D and check to see if the battery management electronics (SME) contains any of the following fault codes:

21F0EE - High-voltage battery, cell supervision circuit: One or more voltages invalid

21F0BC - High-voltage battery, cell supervision circuit: Communication to SME failed

21F13C - High-voltage battery: at least one battery cell is completely discharged

21F0F3 - High-voltage battery, cell supervision circuit 1: Voltage measurement of the cell block, measured value implausible

21F0F4 - High-voltage battery, cell supervision circuit 2: Voltage measurement of the cell block, measured value implausible

21F0F5 - High-voltage battery, cell supervision circuit 3: Voltage measurement of the cell block, measured value implausible

21F0F6 - High-voltage battery, cell supervision circuit 4: Voltage measurement of the cell block, measured value implausible

21F0F7 - High-voltage battery, cell supervision circuit 5: Voltage measurement of the cell block, measured value implausible

21F0F8 - High-voltage battery, cell supervision circuit 6: Voltage measurement of the cell block, measured value implausible

21F0F9 - High-voltage battery, cell supervision circuit 7: Voltage measurement of the cell block, measured value implausible

21F0FA - High-voltage battery, cell supervision circuit 8: Voltage measurement of the cell block, measured value implausible

21F0FB - High-voltage battery, cell supervision circuit 9: Voltage measurement of the cell block, measured value implausible

21F0FC - High-voltage battery, cell supervision circuit 10: Voltage measurement of the cell block, measured value implausible

21F0FD - High-voltage battery, cell supervision circuit 11: Voltage measurement of the cell block, measured value implausible


21F0FE - High-voltage battery, cell supervision circuit 12: Voltage measurement of the cell block, measured value implausible

Does the associated test plan in ISTA/D instruct that any CSC's must be replaced?

YES– go to step 2.

NO - go to step 3.

| | |
|--|---|
| | <p>2. Check the production date on the diagnosed CSC (1) to see if it falls within the following production period:</p> <p>I01 - 12.13.13 to 09.22.14</p> <p>I12 - 01.20.14 to 04.30.14</p> <p>Does the production date on the affected CSC(s) fall within</p> |
|--|---|



the range specified above?

YES- ignore the instructions of the test plan and **replace all CSC's** per repair instructions:

I01 - 61 27 540 - Removing and installing/ replacing cell supervision circuit.

I12 - 61 27 540 - Removing and installing/ replacing cell supervision circuit (top) & 61 27 542 - Removing and installing/replacing cell supervision circuit (bottom)

NO- continue on to Step 3.

3. Continue diagnosis per the associated test plan.

Note: Prior to replacing any parts, refer to SI B00 03 06 to determine if a TC PuMA case is required.

PARTS INFORMATION

I01

| Part number | Description | Quantity |
|-----------------|---------------------------------------|----------|
| 61 27 7 648 785 | Cell monitoring circuit | 8 |
| 61 27 7 625 062 | Cover for high-voltage battery | 1 |
| 61 27 7 622 121 | Seal screw | 4 |
| 61 27 7 625 086 | Warning sticker for HV storage medium | 1 |

I12

| Part number | Description | Quantity |
|-----------------|---------------------------------|----------|
| 61 27 7 648 787 | Cell monitoring circuit | 12 |
| 61 27 8 610 481 | Seal for HV battery | 1 |
| 61 27 8 610 482 | Seal, service cover, HV battery | 1 |
| 07 12 9 908 570 | ISA screw | 6 |
| 61 27 7 643 663 | Hexagon bolt with inside Torx | 37 |

Bulk Materials

| | | |
|-----------------|------------------------|-----------|
| 83 19 2 221 349 | R134a (Gas 1 oz units) | As needed |
|-----------------|------------------------|-----------|

WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks.

| | |
|---------------------|-----------------------|
| Defect Code: | 61 27 90 02 00 |
|---------------------|-----------------------|

I01 (i3 and i3 REx)

| Labor Operation: | Labor Allowance: | Description: |
|-------------------------|-------------------------|--|
| 00 63 336 | 48 FRU | Check the production date of the cell supervision circuits and replace all of them (Main work) |
| Or: | | |
| 00 63 984 | 47 FRU | Check the production date of the cell supervision circuits and replace all of them (Plus work) |

Or, for the:

I12 (i8)

| Labor Operation: | Labor Allowance: | Description: |
|-------------------------|-------------------------|--|
| 00 63 336 | 86 FRU | Check the production date of the cell supervision circuits and replace all of them (Main work) |
| Or: | | |
| 00 63 984 | 85 FRU | Check the production date of the cell supervision circuits and replace all of them (Plus work) |

And, as needed:

Sublet – Bulk Materials (excluding R134a)

| | | |
|---------------|--|---|
| Sublet Code 4 | See sublet reimbursement calculation below | Reimbursement for the repair-related bulk materials (Please do not use the part numbers for claim submission) |
|---------------|--|---|

Sublet reimbursement calculation for claiming the “used quantities” of repair-related bulk materials (BMW part numbers) is at dealer net plus your center’s handling.

Enter this material cost in sublet and itemize the amount in the claim comment section

Other Repairs

If other eligible and covered work is performed as a result of performing the ISTA diagnostics and related test plans results, claim this work with the applicable defect code and labor operations listed in KSD2.

[Copyright ©2016 BMW of North America, Inc.]