



## DC/DC Converter does not supply sufficient 12V power

### MODEL

I01 (i3 & i3 Rex)	I12 (i8)
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### SITUATION

Customer probably has a CCM stating “Battery is not charged” (CCM-ID: 213) is displayed.

Customer may report a variety of other issues:

- Erratic KOMBI behavior
- Malfunction of any device powered by 12V electrical
- Vehicle not starting, or reduced 12V power while driving

Vehicles from production date 10/1/2015 with the following software levels:

I01: 15-11-501 up to and including 16-07-500

I12: 15-11-501 up to and including 16-03-503

### CAUSE

EME Software

### 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.**

**NOTE:** Vehicles affected by this measure will have fault code “22223F – DCDC, hardware, component protection, exceedance of maximum transformer current, hardware interrupt” stored in the EME.

In response to CC message described above:

1. Check the current I-level of the vehicle’s software.
2. Compare to levels shown in the following chart:

Series	I-level	ISTA/P version update

I01	I001-15-11-501 thru I001-16-07-500	3.58.3
I12	I001-15-11-501 thru I001-16-03-503	3.58.2

**Does the I-level fall within the range specified?**

YES – program and encode the vehicle with the ISTA/P 3.59.0. Move to step 3

NO – Move to step 3.

3. Measure the output current and voltage of the DC/DC converter according to the functional check **“FUB-FPA-FPA-120014-A14 DC/DC converter output current check”**

**Does the DC/DC converter deliver the required output voltage and current?**

YES- continue with troubleshooting the vehicle’s 12V electrical system.

Check for short circuits in:

- positive battery cable
- battery ground connection
- 12V vehicle battery

and repair, if necessary, according to the standard procedure.

NO- Go to step 4.

4. Check the fault details.

**Is the fault code 22223F currently present or is there a history of problems related to charging of the 12V vehicle battery?**

YES- Replace the EME in accordance with the repair instructions.

NO- Release the vehicle. Repair is completed.

**WARRANTY INFORMATION**

Covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks or the BMW Certified Pre-Owned Program.

<b>Defect Code:</b>	<b>12 36 00 02 00</b>	
<b>Labor Operation:</b>	<b>Labor Allowance:</b>	Description:

00 00 006	Refer to KSD2	Performing “vehicle test” (with vehicle diagnosis system – checking faults)
And:		
61 25 910	Refer to KSD2	Recharging high-voltage battery unit (to high voltage charging unit)
And:		
61 00 730	Refer to KSD2	Programming / encoding control unit(s)
And:		
61 21 528	Refer to KSD2	Connect an approved battery charger/power supply(indicated in KSD2 as “Charging battery to EME”)

**I01 (i3) only:**

<b>Labor Operation:</b>	<b>Labor Allowance:</b>	<b>Description:</b>
61 21 529	Refer to KSD2	Connect an approved battery charger/power supply(indicated in KSD2 as “i3) (luggage compartment service cap removed)

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) allowances.

**Vehicle Programming and Coding**

Control module failures that occur during programming:

- Please claim these consequential repairs under the defect code listed in this bulletin and use the applicable KSD2 labor operations.

**Other Repairs**

Control module failures that occur prior to programming and/or additional work is performed as a result of performing the ISTA diagnostics and related test plans:

- When covered under an applicable limited warranty, claim these repairs using the applicable defect code and labor operations in KSD2.

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