



POWER LOSS AT VERY LOW SOC OF HV BATTERY

MODEL

I01 (i3 & i3 REx)

SITUATION

The vehicle may exhibit any of the following at very low State of Charge (SOC) – less than 8%:

- Power loss while running range extender (REx).
- Inconsistent performance of the REx.
- High voltage system shutdown in vehicles without REx.
- Excessively high range displayed in instrument cluster.
- The following fault codes may be stored in the battery management electronics (SME):

21F13D - High-voltage battery, switch contactors: Switch-off after a fault

21F241 - High-voltage battery, cell supervision circuit 1: Undervoltage (at least one cell)

21F242 - High-voltage battery, cell supervision circuit 2: Undervoltage (at least one cell)

21F243 - High-voltage battery, cell supervision circuit 3: Undervoltage (at least one cell)

21F244 - High-voltage battery, cell supervision circuit 4: Undervoltage (at least one cell)

21F245 - High-voltage battery, cell supervision circuit 5: Undervoltage (at least one cell)

21F246 - High-voltage battery, cell supervision circuit 6: Undervoltage (at least one cell)

21F247 - High-voltage battery, cell supervision circuit 7: Undervoltage (at least one cell)

21F248 - High-voltage battery, cell supervision circuit 8: Undervoltage (at least one cell)

CAUSE

Ineffective SME software

CORRECTION

Reprogram the vehicle.

PROCEDURE

For conditions that are similar to the situation described:

1. Run diagnosis with ISTA/D and work through the corresponding test module (AT6127_HVS3ZM).
2. Check the current I-Level of the vehicle.

Is the I-Level at I001-16-03-505 or below?

YES- program the vehicle with ISTA/P 3.59.0 (Target I-Level I001-16-07-501) or higher.

NO- follow instructions from the ISTA diagnosis.

3. Once the vehicle has been programmed the test plan will perform a Service Function to re-initialize the adaption values of the high voltage battery (AS6125_HVS3KAP).

Note that ISTA/P will automatically reprogram and code all programmable control modules that do not have the latest software.

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

For information on programming and coding with ISTA/P, refer to: CenterNet / TIS / Technical Documentation / Diagnostics and Programming / Programming Documentation.

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.

Defect Code:	61 27 05 02 00	
Labor Operation:	Labor Allowance:	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, as necessary:		
61 00 006	Work time (WT)	Performing vehicle diagnosis – test module
And:		
		Programming / encoding control unit

61 00 730	Refer to KSD2	(s)
And:		
61 21 528	Refer to KSD2	Connect an approved battery charger/power supply (indicated in KSD2 as "Charging battery to EME")
Or:		
61 21 529	Refer to KSD2	Connect an approved battery charger/power supply (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) allowance.

Work time labor operation code 61 00 006 is not considered a Main labor operation; however, it does require an individual punch time and an explanation on the repair order and in the claim comments.

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:

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

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