



VEHICLE WILL NOT RESTART – EME FC 2223A7/2223A8

MODEL

F30 PHEV (330e)	G12 PHEV (740e xDrive)	G30 (530e)	
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SITUATION

Message "Engine restart not possible. Have this checked by nearest BMW Service Workshop."(CCM-ID: 22) is displayed, possibly along with others.

Vehicle may be inoperable or Malfunction Indicator Lamp (MIL) illuminated.

Fault codes are stored in the Electrical Machine Electronics (EME) fault memory:

- 2223A7 - EME: Internal fault (electrical machine inverter)
- 2223A8 - EME: Internal fault (electrical machine inverter)

CAUSE

Electrical Machine Electronics (EME) defect or faulty software.

CORRECTION

Depending on troubleshooting results, replace or reprogram Electrical Machine Electronics (EME)

PROCEDURE

For conditions that are similar to the situation described:

Evaluate the vehicle using the condition matrix on the following page and perform the appropriate suggested service operation.

To review this table, find the column which best describes the vehicle you're working on. At the bottom of the column there will be a **Service Operation** listed which will lead you to the appropriate repair.

Category / Condition	#1	#2	#3	#4
Check the frequency of the specified fault code(s) (2223A7 and/or 2223A8) in fault memory	Faults not stored	Frequency of 3X or more	Frequency of less than 3X	Frequency of less than 3X
Specified Fault code(s) are Currently Present?	Faults not stored	YES	NO	YES
Codes present in other Control Units indicating Under-/Over-Voltage Condition	YES	NO	NO	NO

Other EME fault codes related to below undervoltage (9V or less) or overvoltage (14V or more) on terminal 30.	YES	NO	NO	NO
Error can be reproduced by multiple (approx. 10) terminal changes.	NA	NA	NO	YES
Suggested Service Operation (below)	“A”	“B”	“C”	“B”

Suggested Service Operations

Service Operation “A”	(Category 1): Follow diagnosis in ISTA. This bulletin doesn’t apply.
Service Operation “B”	(Categories 2 and 4): Replace the Electrical Machine Electronics (EME) according to the repair instructions.
Service Operation “C”	(Category 3): Program and encode the vehicle using the most recent version of ISTA available.

Note that ISTA 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, refer to CenterNet / TIS / Technical Documentation / Diagnostics and Programming / Programming Documentation.

PARTS INFORMATION

Service Operation “B”

Part Number	Description	Quantity
Refer to ETK	EME (Electric Machine Electronics)	1

WARRANTY INFORMATION

Diagnosis

Labor Operation:	Labor Allowance:	Description:
00 00 006	Refer to KSD2	Performing “vehicle test” (with vehicle diagnosis system – checking faults) (Main work)
Or:		
00 00 556	Refer to KSD2	Performing “vehicle test” (with vehicle diagnosis system – checking faults) (Plus work)
And:		
61 21 528	Refer to KSD2	Connect an approved battery charger/power supply (indicated in KSD2 as “Charging battery”)
And:		

61 25 910	Refer to KSD2	Recharging high-voltage battery unit (to high voltage charging socket)
And, as necessary:		
61 00 006	Work time (WT)	Performing vehicle diagnosis – test module

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

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 section.

Service Operation "A" - Other Repairs

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

Or, with the above diagnosis and performing:

Service Operation "B"

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:	1236001500	
Labor Operation:	Labor Allowance:	Description:
12 36 610	Refer to KSD2	Replacing electric machine electronics (after vehicle diagnosis)
And:		
61 00 730	Refer to KSD2	Programming/encoding control unit(s)

And:

Sublet – Bulk Materials

Sublet Code 4	See the sublet reimbursement calculations below	Reimbursement for the repair-related bulk materials (Do not use part numbers for claim submission)
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Sublet reimbursement calculation for claiming repair-related bulk materials (BMW part numbers, including BMW antifreeze/coolant, 1 gallon bulk container reference P/N 82 14 1 467 704 to replace the drained quantity with a 50/50 solution) is at the dealer net price for the "quantities used" plus your center's handling.

Enter this material cost in sublet and itemize the amount on the repair order and in claim comment section.

Or, with the above diagnosis and performing:

Service Operation “C”

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:	1236000200	
Labor Operation:	Labor Allowance:	Description:
61 00 730	Refer to KSD2	Programming/encoding control unit(s)

Refer to KSD2/AIR for the corresponding flat rate unit (FRU) allowances.

Vehicle Programming and Encoding

During the same workshop visit, if a vehicle also requires another Technical Campaign or repair that also includes programming and encoding the control units, the programming procedure may only be invoiced one time.

- A. The programming procedure automatically reprograms and encodes all vehicle control modules which do not have the latest software i-level. If one or more control module failures occur “during” this programming procedure:

- Please claim this “consequential” control module-related repair work under the defect code listed in this bulletin with the applicable KSD2/AIR labor operations.

Please explain this additional work (The why and what) on the repair order in the claim comments section.

- B. For control module failures that occurred “prior” to performing this programming procedure:

- When “covered” under an applicable limited warranty, claim this control module-related repair work using the applicable defect code and labor operations (including diagnosis) in KSD2/AIR.

Overlapping Labor Procedure

If invoicing the KSD2 flat rate labor operation codes for other repair work results in overlapping labor, for those flat rate labor operations that are affected, you can now:

- Replace the stated KSD2 “FRU allowance” with a “reduced FRU value” to eliminate the overlapping labor.

For help in identifying the overlapping labor, please refer to the AIR FRU Plausibility Check (Overlapping Labor Tool) that is located in the AIR Client.

Eligible other repair work being claimed under a different defect code will require separate punch times.

On the repair order and in the claim comment section, please identify and itemize those labor operations being claimed with a “reduced FRU value.”

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