

DCDC223 Sensor fault codes due to faulty wake-up behavior

Topic number	LI54.10-P-079533
Version	3
Function group	54.10 - Battery, power supply, voltage converter
Date	9/15/25
Validity	The DC/DC converter type that is installed in model series 243 and 465 can be affected.
Reason for change	New information on problem and cause

Complaint

243: Red 12V battery message, white HV warning message, warning message in the IC and if applicable for vehicles with BMS30EB02 yellow HV drive system

465: Red 12V battery message, white HV warning message, warning message in the IC

If the initial warning messages are ignored in the same ignition cycle, additional warning messages, e.g. red HV warning message and yellow HV drive system warning message may be shown.

The DC/DC converter has stored a combination of the following two fault code groups:

1. P0C3B00, P0E9700, P0E5400, P0C4000.
2. P1D0B00, P1CA000, U011500.

In some cases, not all DTCs from one of these groups are triggered.

243: As a consequence, on vehicles with BMS30EB02, the DTC for the auxiliary assembly fuse P0E2F00 can be set.

This triggers the yellow HV drive system warning message.

In the ignition cycle in which the red 12 V fault message is displayed, the DC/DC converter does not support the 12 V on-board electrical system.

This means the 12 V battery may be discharged in the event of longer use.

Attachments	
File	Description
DCDC223 243 Sensor issue gelbe Hybrid Antriebssystem WEM.jpg	243 yellow HV drive system warning message - can only be deleted via XENTRY



Cause

In individual ignition cycles, this may result in faulty wake-up behavior of the DC/DC converter.

The DCDC DTCs and warning messages may appear with a time delay.

When accessing the vehicle, the white (243/465) HV warning message is displayed.

When the HV system is switched on (charging, 12V supports, precon, ignition on), the yellow HV drive system warning message is displayed on the 243 with BMS30EB02 (see below for details).

When the vehicle is started/PT-ready (displayed in the IC), the red 12V battery warning message is displayed for 243 and 465.

Since the BMS on 243 uses the HV voltage value to check the auxiliary assembly fuse, the auxiliary assembly DTC can (with BMS30EB02) be stored as a consequence and the second (yellow) HV drive system warning message can be displayed in the IC.

Remedy

The faulty state of the DC/DC converter can always be rectified with an ignition change with BUS idle.

The fact that the red 12 V warning message does not appear again is an indication of this.

On vehicles with the yellow hybrid drive system message, it is still displayed because it is not automatically reset once the faulty state is reset.

Check the DC/DC converter for functionality via Xentry Diagnostics in the workshop:

- Actuate BUCK mode for approx. 30 s
- The output current normally jumps to a high value (e.g. 100 A) and then falls slowly to the current specified value e.g. 50 A and then only changes slowly and in small increments.

243 EB311/312 (BMS30EB01):

Perform reset of the DC/DC converter, e.g. through a BUS idle or by clearing the fault memory, to exit the faulty state.

XENTRY Tips

243 EB330 (BMS30EB02):

Clear the fault memory, since the DTC for the auxiliary assembly fuse and the yellow hybrid drive system warning message are not automatically reset.

465:

Perform reset of the DC/DC converter, e.g. through a BUS idle or by clearing the fault memory, to exit the faulty state.

!!! Important note: Problems in this area do not have to be invoiced on the damage code for the DC/DC converter 54720. !!!

Information:

Cause analysis is still ongoing in order to determine a long-term remedy.

In cases in which the fault profile occurs multiple times, replacement of the DC/DC converter can be carried out.

This may help delay the fault profile from reoccurring.

Disclaimer

NOTE: The information contained in this document is intended for use by trained, professional technicians with the knowledge to properly and safely perform diagnosis and repairs on Mercedes-Benz vehicles, using Mercedes-Benz approved tools and equipment. It informs service technicians about conditions that could occur in certain vehicles and provides information that could assist in proper vehicle diagnosis, service, or repair. It does not indicate that a defect is present in any vehicle referenced in this document nor does it imply warranty coverage. DO NOT assume that a symptom or condition, or a described cause of a symptom or condition, affects any particular vehicle or groups of vehicles, or that a described repair applies to any particular vehicle or groups of vehicles. There can be multiple causes resulting in the same or similar symptoms or conditions described in this document, and trained professional service technicians must use their diagnostic skills to make evaluations on a case-by-case basis. The information contained in this document does not guarantee warranty coverage nor does it extend the vehicle's warranty in any way.

Symptoms	
Overall vehicle > Power supply > Battery/On-board electrical system > Battery/on-board electrical system display message > Low voltage Charge battery	
Overall vehicle > Power supply > High-voltage on-board electrical system > High-voltage battery > Display message	
Power generation > Engine management > Electric drive > Electric machine > Power reduced	

Control unit/fault code	
Control unit	Fault text
N83/1 - DC/DC converter (DDW) (DCDC223)	P1D0B00 - The internal power supply has a malfunction. _
	U011500 - Communication with control unit 'Drivetrain' has a malfunction. _
	P1CA000 - Initial startup was not performed. _
	P0E5400 - Current sensor A of the DC/DC converter has a short circuit to positive. _

XENTRY Tips

	P0C3B00 - Temperature sensor A of the DC/DC converter has a short circuit to positive. _ P0E9700 - Voltage sensor C of the DC/DC converter has a malfunction. _ P0C4000 - Temperature sensor B of the DC/DC converter has a short circuit to positive. _
N82/9 - Battery management system (BMS) (BMS30E-B02)	P0E2F00 - Electrical fuse B for the high voltage has a malfunction. _

Operation numbers/damage codes

Op. no.	Operation text	Time	Damage code	Note
		H	54720	