


## HV DC/DC converter N83/1 HV voltage divider, reduction in resistance leads to BUCK mode fluctuations and ESP warning message

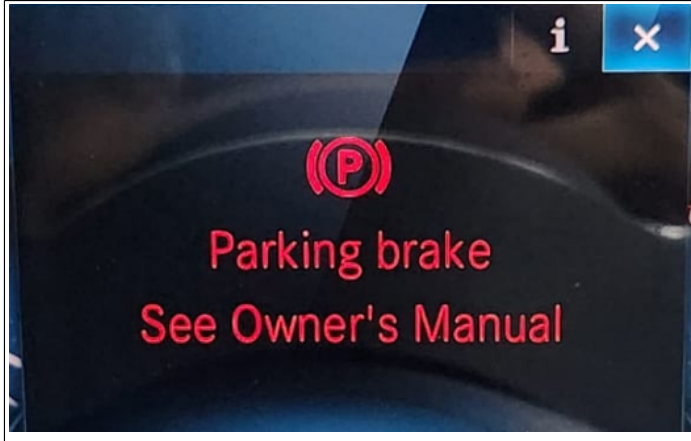
|                   |  |
|-------------------|--|
| Topic number      | LI42.45-P-079407   |
| Version           | 2  |
| Function group    | 42.45 - Electronic stability program (ESP)   |
| Date              | 9/15/25  |
| Validity          | 243 EQB  |
| Reason for change | 1). Standardization of the designation across similar LIs<br>2). Addition of the diagnosis procedure |

### Complaint

Instrument cluster warning lamp and/or warning message for brake system, EPB, ESP (yellow or red) and possibly 12 V battery (red)

Different combinations of the following DTCs present in the ESP: B23AA77, B23AB77, B23D177 and in part (C100BE0, C100BE1, B23AA1B, B23D152)

| Attachments   |                              |
|---|------------------------------|
| File  | Description                  |
| DCDC KAMAYA Parkbremse Meldung KI DE.jpg  | Warning message EPB, German  |
|  |                              |
| DCDC KAMAYA Parkbremse Warnmeldung rot englisch.png                                 | Warning message EPB, English |



## Cause

Due to a reduction in resistance at the HV voltage divider, the DC/DC converter measures an incorrect HV voltage. Regulation of the 12 V output voltage therefore becomes unstable. I.e. the output voltage starts to fluctuate and the output current starts to jump instead of slowly regulating to the currently requested value.

The EPB position is calculated by the voltage and the current. Since these fluctuate, the ESP control unit loses its position and sets the DTCs.

## Remedy

Check of the DC/DC converter via XENTRY Diagnosis

- Actuate BUCK mode for approx. 40 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.
- In the event of this fault cause, the output current is subject to strong fluctuations/jumps (multiple 1-10 A) (see videos in attachment)
- Perform in XENTRY -> DC/DC converter N83/1 -> Special procedures -> "Evaluation of the HV resistance reduction of the DC/DC converter control unit". The special procedure compares the serial number of the installed DC/DC converter with the list of potentially affected parts.
- Depending on the result:
- If the serial number can be found in the list of potentially affected component parts, then replace the DC/DC converter.
- If the serial number cannot be found in the list of potentially affected parts, XENTRY reports that the part is not malfunction. If the problem from this LI applies, please open a TIPS case and forward to HQ.

Subsequent complaint, malfunction on the EPB:

- Check of the actuators and brake caliper piston
- Manually extend and retract the piston on the brake caliper completely using the suitable socket
- If the piston sticks at a certain point, the rotation force increases significantly
- If the brake caliper piston sticks, the brake caliper has to be replaced
- If the retaining ring of the actuator is broken, the actuator has to be replaced
- In XENTRY, edit the stored test instructions of the remaining DTCs

## Attachments

| File | Description |
|------|-------------|
|------|-------------|

[EPB Aktuator Sicherungsring gebrochen.jpg](#)



Actuator, retaining ring (possible malfunction)

[DCDC 243 XENTRY BUCK mode Ausgangsschwankungen edited.mp4](#)

BUCK mode fluctuations

[DCDC Ausgangswert ok edited.mp4](#)

BUCK mode ok

## 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

Chassis/suspension > Brake system > Parking brake > Indicator lamp > Parking brake > lit

Overall vehicle > Power supply > Battery/On-board electrical system > Battery/on-board electrical system display message > Battery/Alternator - Serviced Required

## Control unit/fault code

| Control unit   | Fault text  |
|--|---|
| N30/4 - Electronic stability program (ESP®) (ESP177) | B23D152 - The brake calipers have a malfunction. The component has not been put into operation.       |
|  | B23AA1B - The left brake caliper has a malfunction. The limit value for resistance has been exceeded. |
|  | C100BE1 - The electric parking brake has a malfunction.   |
|  | -   |

# XENTRY Tips

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|  |  |
|--|--|
|  | <p>C100BE0 - The electric parking brake has a malfunction.</p> <p>–</p> <p>B23D177 - The brake calipers have a malfunction. The commanded position cannot be reached.</p> <p>B23AB77 - The right brake caliper has a malfunction. The commanded position cannot be reached.</p> <p>B23AA77 - The left brake caliper has a malfunction. The commanded position cannot be reached.</p> |
|--|--|

| Operation numbers/damage codes |                |      |             |      |
|--------------------------------|----------------|------|-------------|------|
| Op. no.                        | Operation text | Time | Damage code | Note |
|                                |                | H    | 54720       |      |