# Vehicle does not start, battery discharged.

| | |
|---|---|
| Topic number | LI54.10-P-066341 |
| Version | 3 |
| Function group | 54.10 Battery, power supply, voltage converter |
| Date | 08-08-2017 |
| Validity | BR231 and BR172 |
| Reason for change | Examples added |
| Reason for block | |

## Complaint:

Vehicle does not start, battery discharged.

The on-board electrical system data indicates a high discharge in the engine-off cycle; "CAN bus awake unusually long", "Charge balance UNUSUAL"

| Attachments | |
|---|---|
| File | Description |
| Beispiel_Buswachhalter.pdf | Example_bus keepawake control unit |
| example_BUS_keep_awake.pdf | Example_BUS_keep_awake |

## Cause:

To be able to assess whether a bus keepawake event caused the battery discharge, it is necessary to examine the stationary cycles. A constantly active CAN is identified by the text "Interior CAN awake unusually long" (see attachment). If this text is not displayed, the battery discharge has a different cause.

Cause 1:

IC (instrument cluster) is keeping the CAN bus awake. Vehicle battery is being discharged.

Affects vehicles with code 807 (Model Year 2017).

Fault identification:

1. Affects vehicles as of code 807.

2. The on-board electrical system data indicates a high discharge in the engine-off cycle; "CAN bus awake unusually long", "Charge balance UNUSUAL"

3. The bus keepawake entry names the IC

NOTE: See examples in attachments below

Cause 2:

HERMES is keeping the CAN bus awake, only affects USA (code 494). Refer to LI82.85-P-066086.

With code 362 (HERMES LTE communication module), code 522 (Audio 20) and code 807

***If the vehicle does not match Cause 1 or Cause 2 please open a PTSS Case, see "Remedy" 3 below.***

## Remedy:

Remedy 1:

DO NOT REPLACE ANY PARTS. This complaint can only be resolved by a software update.

Remedy (with Clean Point) to be published per TIPS.

Please open a PTSS Case including documentation described in Remedy 3 below.

Damage code: 54201-54

Remedy 2:

Refer to LI82.85-P-066086.

Damage code: 8209Z-90

"Remedy" 3:

**If not identified in Cause 1 or 2, please create a PTSS case with all the documents listed below and include in the case attachments.**

Engineering may provide further instruction upon reviewing each case.

Documents needed in case attachments:

1. Quick test

2. Control units event log for signal acquisition and actuation module (SAM)

3. Bus keepawake event detection (from EIS --> Actual values)

 3.1. Last bus keepawake entry

 3.2. Last-but-one bus keepawake entry

4. Up-to-date quiescent current measurement.

| Symptoms |
| --- |
| Overall vehicle / Power supply / Battery/On-board electrical system / Battery function / Battery discharges |
| Overall vehicle / Power supply / Battery/On-board electrical system / Battery/on-board electrical system display message / Low voltage Charge battery |

| Operation numbers/damage codes | | | | |
| --- | --- | --- | --- | --- |
| Op. no. | Operation text | Time | Damage code | Note |
| | | | 54201 54 | Instrument cluster - no-load current too high |

| | | | 8209Z 90 | Communication module for telematics service - software release |
|---|---|---|---|---|

**Diagnose > Steuergerät**     12.0V    Zündung EIN   ?

**Standzyklus: 1238km - 03.06.2014 17:19:00**

Datensatz
<< 5 >>

Übersicht

Standzyklus

Fahrzyklus

Gespeicherte Daten

Filter:

Auffällige Datensätze
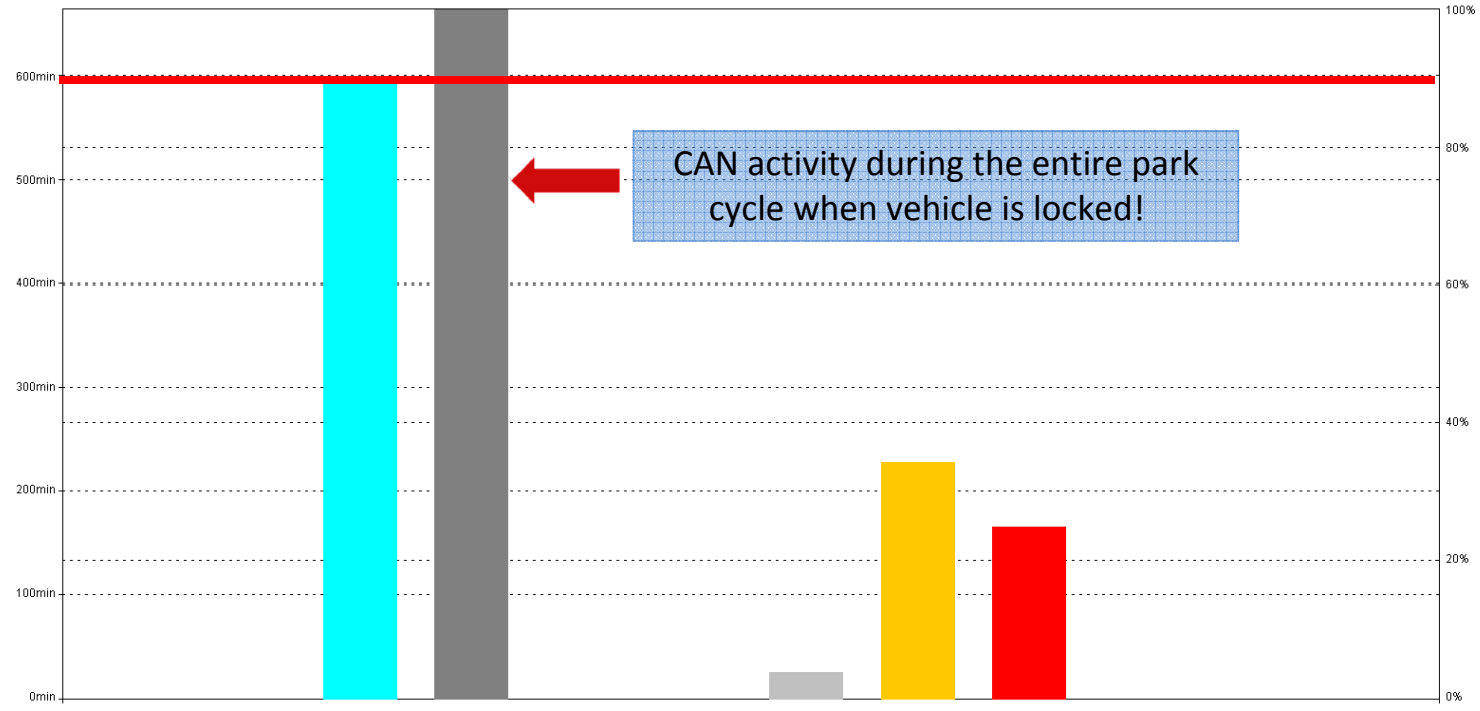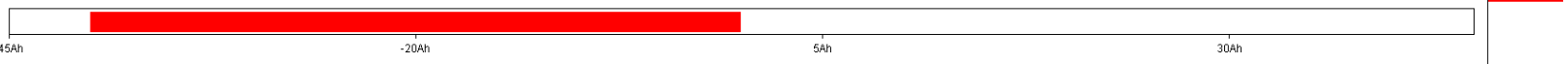
Parklicht
Standlicht
Fahrzeug VERRIEGELT
CAN-Bus AKTIV
Warnblinkanlage
Tür GEÖFFNET
Standheizung
Spannung < 12,3V
Spannung < 12V
Klemme 15C
Klemme 15R
Klemme 15

CAN activity during the entire park cycle when vehicle is locked!

| | | |
|---|---|---|
| Gesamtwegstrecke: | | 1238km |
| Standzeit vor Motorstart: | | 664min |
| Ladebilanz: | | -40Ah |
| Ruhestromwert bei Klemme 30g EIN: | | -26.0000kA |
| Ruhestromwert bei Klemme 30g AUS: | | -42.0000kA |

Auffälligkeiten

Innenraum-CAN-Bus ungewöhnlich lang WACH

Ladebilanz AUFFÄLLIG

Interior CAN bus is awake unusually long. Charging balance suspicious.

45Ah        -20Ah        5Ah        30Ah

Ladebilanz

**BODY-CAN keeps awake – technical issue**

Engine OFF cycle: 4880km  -  25.10.2014 20:34:00

Data record
<< | 9 | >>

Overview

Engine OFF cycle

Driving cycle

Stored data

Filter:

Conspicuous data records

Parking lights
Standing lights
Vehicle LOCKED
CAN bus ACTIVE
Hazard warning light system
Door OPEN
Stationary heater
Voltage < 12.3V
Voltage < 12V
Circuit 15C
Circuit 15R
Circuit 15

| Main odometer reading: | 4880km |
| Idle time before engine start: | 279min |
| Charge balance: | -26Ah |
| No-load current value with circuit 30g ON: | -26.0000kA |
| No-load current value with circuit 30g OFF: | -30.0000kA |

Noticeable problems

Interior CAN bus AWAKE for an unusually long time

Charge balance CONSPICUOUS

Charge balance

30Ah          -5Ah          20Ah

Continue ▶