Vehicle does not start, battery discharged.

Topic number	LI54.10-P-066342
Version	4
Function group	54.10 Battery, power supply, voltage converter
Date	10-26-2017
Validity	MFA (BR117/ BR156/ BR176/ BR242/ BR246)
Reason for change	Remedy for Cause 1 available
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 Sales Codes 807 and 808 with production date up to September 2017

Fault code identification:

1. Affects vehicles with code 807 and code 808 with production date up to September 2017

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

Cause 2:

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

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

IMPORTANT:

If the vehicle does not match Cause 1 or 2 but the OBS data indicates a high discharge in the engine-off cycle; "CAN bus awake unusually long", "Charge balance UNUSUAL" please open a PTSS Case, see "Remedy" 3 below.

Remedy:

Remedy 1:

Flash instrument cluster

Software available as of XENTRY DVD 09

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, but the OBS data indicates a high discharge in the engine-off cycle; "CAN bus awake unusually long", "Charge balance UNUSUAL" 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

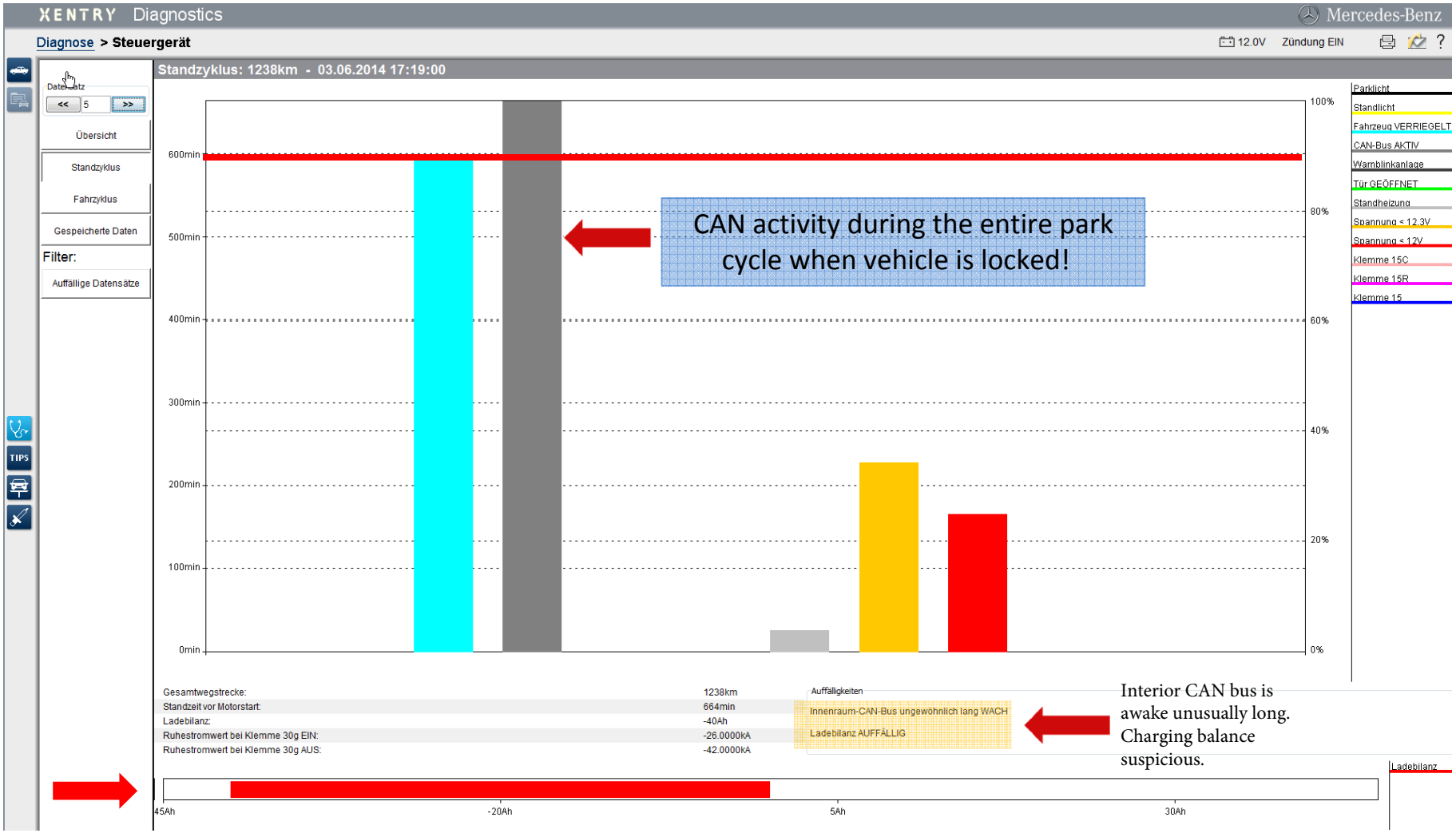
4. Up-to-date quiescent current measurement.

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

Validity		
Vehicle	Engine	Transmission
A (176)	*	*
B (242, 246)	*	*
CLA (117)	*	*
GLA (156)	*	*


XENTRY Diagnostics
Mercedes-Benz
Diagnose > Steuergerät
12.0V
Zündung EIN
Standzyklus: 1238km - 03.06.2014 17:19:00
Datensatz
<< 5 >>
Übersicht
Standzyklus
Fahrzyklus
Gespeicherte Daten
Filter:
Auffällige Datensätze
600min
500min
400min
300min
200min
100min
0min
100%
80%
60%
40%
20%
0%
CAN activity during the entire park cycle when vehicle is locked!
Parklicht
Standlicht
Fahrzeug VERRIEGELT
CAN-Bus AKTIV
Warnblinkanlage
Tür GEÖFFNET
Standheizung
Spannung < 12.3V
Spannung < 12V
Klemme 15C
Klemme 15R
Klemme 15
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