

## Vehicle cannot be unlocked (CL), engine does not start - 12V starter battery discharged

Topic number	LI54.10-P-060034
Version	1
Design group	54.10 Battery, voltage supply, voltage converter
Date	10-21-2014
Validity	BR212 BM 212.095, 212.098, 212.195 and 212.198 with SA code ME04 BR222 BM 222.004, 222.057, 222.104 and 222.157 with SA code ME04
Reason for change	

**Complaint:**

- Vehicle cannot be unlocked (CL)
- Engine does not start
  - 12V starter inoperative
  - Silent-Start by electric machine (high voltage) inoperative

**Cause:**

Permanent no-load current (500 - 600 mA) from power electronics (LE - N129/1).

Attachments	
File	Description
Beispiel Ruhestrom Kl. 30_de.pdf	Example of no-load current at circuit 30 after no-load current switch "off"
example quiescent current terminal 30_en.pdf	Example of quiescent current at circuit 30

**Remedy:**

- Perform quick test

Note: For diagnostic work the 12V on-board electrical system must be charged or boosted using an appropriate charger!

Perform electrical system diagnosis (12V) with XENTRY Diagnostics. Access with XENTRY Diagnostics:

BR212: Rear SAM (N10/2) --> Actual values --> Electrical system data

BR222: Front SAM (N10/6) --> Actual values --> Electrical system data

The data is analyzed via the actual values in "Idle cycle - Conspicuous data sets"

In the conspicuous data set, a no-load current value with circuit 30g "off" of between 450 and 600 mA is displayed with an idle time >6h.

- Perform no-load current measurement: Perform no-load current measurement at circuit 31 line between starter battery (G1) and body:

Note: If the no-load current is present and between 450 and 600 mA, then the power consumption of the power electronics (N129/1) must be checked!

If the no-load current measurement confirms the power consumption of the power electronics, then it must be replaced.

In addition, the 12V starter battery must be fully charged and tested!

Work units				
Op. no.	Operation text	Time	Damage code	Note
54-1011	PERFORM QUICK TEST		04005 54	
54-0646	READ OUT DATA RECORDS OF BATTERY SENSOR AND BUS KEEP-AWAKE UNITS (AFTER QUICK TEST)		04005 54	
54-0645	CHECK NO-LOAD CURRENT CONSUMPTION		04005 54	
54-1135	RECHARGE BATTERY (AFTER CHECK)		04005 54	
54-1109	CHECK CONDITION OF BATTERY, TERMINAL STAMP:..... BATT. PART NO.:..... TEST CODE:.....		04005 54	
54-1126	REPLACE BATTERY (AFTER CHECK)		04005 54	Only if necessary!
08-1200	REMOVE/INSTALL POWER ELECTRONICS WITH POWER DISTRIBUTOR, REPLACE IF NECESSARY		04005 54	
08-1204	DISCONNECT POWER ELECTRONICS AND POWER DISTRIBUTOR, REPLACE PARTS IF NECESSARY (REMOVED)		04005 54	

WIS-References			
Document number	Title	Note	Allocation
AR54.10-P-1129cw	Battery - Check condition	Model series 212	Remedy
AR54.10-P-1130cw	Charge battery	Model series 212	Remedy
AR54.10-P-1129LF	Battery - Check condition	Model series 222	Remedy
AR54.10-P-1130LF	Charge battery	Model series 222	Remedy