

Vehicle cannot be unlocked/ vehicle does not start - starter battery discharged

Topic number	LI54.10-P-071832
Version	3
Function group	54.10 - Battery, power supply, voltage converter
Date	7/20/22
Validity	Model series 177, model series 118, model series 247
Reason for change	updating remedy

Complaint

- Vehicle cannot be unlocked/ vehicle does not start
- Display message in instrument cluster "Battery - Start Engine - see Operator's Manual"

Attachments	
File	Description
Beispiel_Buswachhalter.pdf	Example for reading bus keepawake event from electrical system data
Beispiel Kl. 15 EIN_de.pdf	Example for terminal 15 ON
example terminal 15 active.pdf	Example for terminal 15 ON
example_BUS_keep_awake.pdf	Example for bus keepawake event

Cause

Root cause is a bus keepawake in either the Headlight control unit or in one of the following: ALC, IC, SAM, PTCU, ESP.

Additionally, the quick test will show U116000 "A bus keepawake control unit has been detected" in the electronic ignition switch (EZS) control unit for this root cause.

WIS-References		
Document number	Title	Note
AR54.10-P-1129LW	Battery - Check condition	

Remedy

Eliminate bus keep awake issue flash new software where available:

ESP N30/4

AML (Ambiance Light control unit N162)

HLM (Headlight module E1n9 and E2n9)

XENTRY TIPS

FSAM

Instrument Cluster

PTCU

Clear all faults, road test, leave vehicle for 24hrs. Review new quick test. If fault U116000 has returned, create a PTSS case with the following documentation:

Control unit event log of electronic ignition lock, EZS (N73)

- Control unit event log of SAM-F (N10/6)
- Up-to-date no-load current measurement

Document the following questions with the customer:

- Were there any messages in the instrument cluster?
- Did this behavior occur once only, or has it occurred before?
 - If so, when (approximately)?
- Was the vehicle parked in a particular location or with high traffic levels?
- Has the vehicle been modified or are there any installations in the vehicle?

WIS-References		
Document number	Title	Note
AR54.10-P-1130LW	Charge battery	
AR54.21-P-0038ME	Remove/install electronic ignition lock control unit	

Symptoms
Overall vehicle > Power supply > Battery/On-board electrical system > Battery function > Battery discharges
Overall vehicle > Power supply > Battery/On-board electrical system > Battery function > Battery cannot be charged
Overall vehicle > Power supply > Battery/On-board electrical system > Battery/on-board electrical system display message > Low voltage Charge battery
Overall vehicle > Power supply > Battery/On-board electrical system > Battery/on-board electrical system display message > Charging

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
541011	PERFORM QUICK TEST			Use the damage code for the component causing the damage!
540640	CHECK BATTERY SYSTEM (AFTER QUICK TEST)			Use the damage code for the component causing the damage!
541109	CHECK CONDITION OF BATTERY			Use the damage code for the component causing the damage!
541126	REPLACE BATTERY (AFTER CHECK)			Use the damage code for the component causing the damage!

XENTRY TIPS

540650	MAINTAIN ON-BOARD ELECTRICAL SYSTEM VOLTAGE (FOR TESTING AND DIAGNOSIS WORK)			Use the damage code for the component causing the damage!
540991	PROGRAM CONTROL UNIT (AFTER QUICK TEST)			Use the damage code for the component causing the damage!
540992	CODE CONTROL UNIT..... (AFTER QUICK TEST)			Use the damage code for the component causing the damage!
540645	CHECK NO-LOAD CURRENT CONSUMPTION			Use the damage code for the component causing the damage!
542536	REPLACE ELECTRONIC IGNITION LOCK CONTROL UNIT (AFTER QUICK TEST)			Use the damage code for the component causing the damage!