

Xentry Battery Tester results disagree with workshop assessment

Topic number	LI54.10-P-071499
Version	5
Function group	54.10 - Battery, power supply, voltage converter
Date	5/1/25
Validity	118, 177, 247, 167, 205, 213, 217, 222, 238, 253, 257, 206, 223, 232, 243, 247, 295, 297, 463 except code U98 (LITHIUM-IONEN-STARTERBATTERIE (LISB))
Reason for change	Validity

Complaint

The result from the XENTRY battery test does not match the current state of the battery.

Cause

The XENTRY battery tester uses the stored on-board electrical system data in the SAM module to access the health of the 12 volt battery. The XENTRY battery test may not take into account a single discharge event because the SAM or EZS cannot record the data if the battery is discharged.

Note: A discharged battery does not necessarily need to be replaced. A discharged battery may be recovered with no permanent damage.

Remedy

1) If the battery is discharged, charge the battery. Review WS54.00-P-0037B for minimum charger specifications.

- Note the amperage difference between trickle (maintainer) chargers of at least 16A and quick chargers of at least 30A.
- Review AP54.10-P-5449U. Note when battery is sufficiently charged the charger current is less 5A.

2) While charging the battery, analyze the vehicle data to determine root cause of discharge using the following data points:

- NOTE: For guidance on use of the on-board electrical data please review the AKUBIS video titled "New on-board electrical system diagnosis shown on BR 166". The video can be accessed through WIS by following the path WSM--> content by model series --> passenger cars --> ML-Class --> Model 166 --> group 54 --> New on-board electrical system diagnosis.
- Refer to the March 2023 PCTT for the video walkthrough of analysis as well as the attachment of the slides to this Li.

For Star 2 vehicles:

-Review FSAM on-board electrical data conspicuous records

XENTRY Tips

- NOTE: This data can be found via FSAM N10/6 -> Actual Values -> On-board electrical system -> On-board electrical system data

For Star 3 vehicles:

-Review N73/3 EZS on-board electrical data conspicuous records

- NOTE: This data can be found via EZS N73/3 -> Actual Values -> On-board electrical system -> On-board electrical system data

3) Determine if root cause is due to:

- vehicle technical issue?
- customer behavior?

NOTE: Recommend using battery analysis sheet found in XiW -> Local Contents -> Diagnostic info -> Battery Discharge Worksheet

4) If battery still does not accept charge, create a TIPS case.

-Must include with the case:

- Amperage setting of charger and time battery was on charger
- XENTRY Battery Tester results
- Voltage of battery taken with multimeter: Do not connect charger while taking measurements
- N10/6 FSAM and N73/3 EZS CUL
- Workshop analysis of conspicuous data
- Root cause analysis for battery discharge based on the above documents (technical, customer, etc.)

- NOTE: For expedited results when creating a case write customer complaint as "XENTRY Battery Tester implausible".

Attachments	
File	Description
March 2023 PCTT slides.pdf	

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
Overall vehicle > Power supply > Battery/On-board electrical system > Battery function > Battery discharges

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note