Message in instrument cluster in yellow "Battery Symbol – Start Engine. See Owner's Manual"

Topic number	LI54.10-P-065969
Version	4
Function group	54.10 Battery, power supply, voltage converter
Date	10-27-2017
Validity	BR205/253 up to production date 12/2016 Only affects vehicles with Hyundai Mobis battery sensor.
Reason for change	Details of the situation added to avoid the unjustified replacement of Bosch battery sensors that are not affected by this fault profile.
Reason for block	

Complaint:

Message in Instrument Cluster (IC) that says "Start Engine…" and/or message via telediagnosis "Me Connect…."

PLEASE NOTE: Only affects vehicles with the Hyundai Mobis battery sensor, object number A 000 905 0454.

Attachments	
File	Description
Error in the calculation of the loading balance.pdf	Error in the calculation of the charge balance
Bild1.jpg	Drive and park cycle

Cause:

Error in the calculation of the charge balance and the state of charge of the battery that causes an unjustified message in the Instrument Cluster display as described in the Complaint section above.

Remedy:

Conditions to be met and steps to be taken to qualify the replacement of IBS B95 Battery Sensor:

1) The 12 V on-board electrical system battery is not discharged and tests "Good" with Midtronics.

2) Access the extended on-board electrical system diagnosis for the front SAM control unit (N10/6) via XENTRY Diagnostics .

3) The on-board electrical system data indicates a stationary phase with high discharge (30-50Ah) although the current before/after the opening of the no-load current switch is "OK".

4) No CAN buses are active while the vehicle is parked and locked.

5) In the subsequent driving phase, the vehicle is started with a very low state of charge (SOC) of the battery, and it takes no appreciable charge (shown in IC display in maintenance mode or Xentry Actual Values).

6) Reference the attachment ("Error in the calculation of the charge balance") which is an example of the On-Board electrical System data when the IBS Battery Sensor needs replacement.

NOTE: See # 4 measure step below and complete with original B95 battery sensor as well as with the new B95 battery sensor once replaced. If issues found with B95 positive ring terminal (Red Wire) please open a PTSS case regardless of whether the B95 Battery Sensor will be replaced by conditions above or not. Be sure to document the part number of the IBS found with this issue.

If the vehicle meets the conditions described above proceed with the replacement of the B95 battery sensor [see Parts].

Important: If the installation of the new B95 battery sensor does not remedy the complaint, open a PTSS case with the following information:

1) Control unit log of N10/6

2) Initial Quick test with Freeze Frame Data (PDF format only)

3) Midtronics Test Results of 12V Starter Battery

4) Print out of B95 Battery Sensor Guided Test Results

Additionally, after gathering the documentation listed above complete the following measures below and document re-sults in the PTSS case:

1) Ensure starter battery has received a full charge.

2) Clear all faults following a full charge cycle of the 12V battery. Do any faults return? Document any returning faults in case.

3) Inspect LIN connections for looseness, corrosion, pin tightness and measure LIN wire resistance between B95 (Battery Sensor) and N10/9 (SAM-F). Document results in case.

4) Inspect physical connection (Positive Ring Terminal, Red Wire) of B95 at the positive battery terminal (Landed on R62 Positive Terminal). Inspect for excess adhesive residue coating the ring terminal surface area. Take pictures as found before removing the nut off of the terminal and also with the ring terminal removed. If excess adhesive is found on the ring terminal contact surface area please resolve by scraping off adhesive while being carefull not to dama-ge the surgace of the ring terminal (after taking photos). Take photos after the repair is complete. Re-Terminate the connection, clear faults, and document the results after new quick test.

5) Inspect R62 Voltage Dip Limiter wiring and connections. Verify R62 wiring is landed according the associated wi-ring schematic. Document any relevant findings.

6) Document the date/time the vehicle entered the workshop.

7) Document previous visits to workshop, dates/times, and any associated work completed. Include any relevant Re-pair Order(s) in the case attachments.

Symptoms
Overall vehicle / Power supply / Battery/On-board electrical system / Battery/on-board electrical system indicator lamp / Battery charge indicator/consumer shutoff / Illuminates white
Overall vehicle / Power supply / Battery/On-board electrical system / Battery/on-board electrical system display mes-sage / Low voltage Charge battery

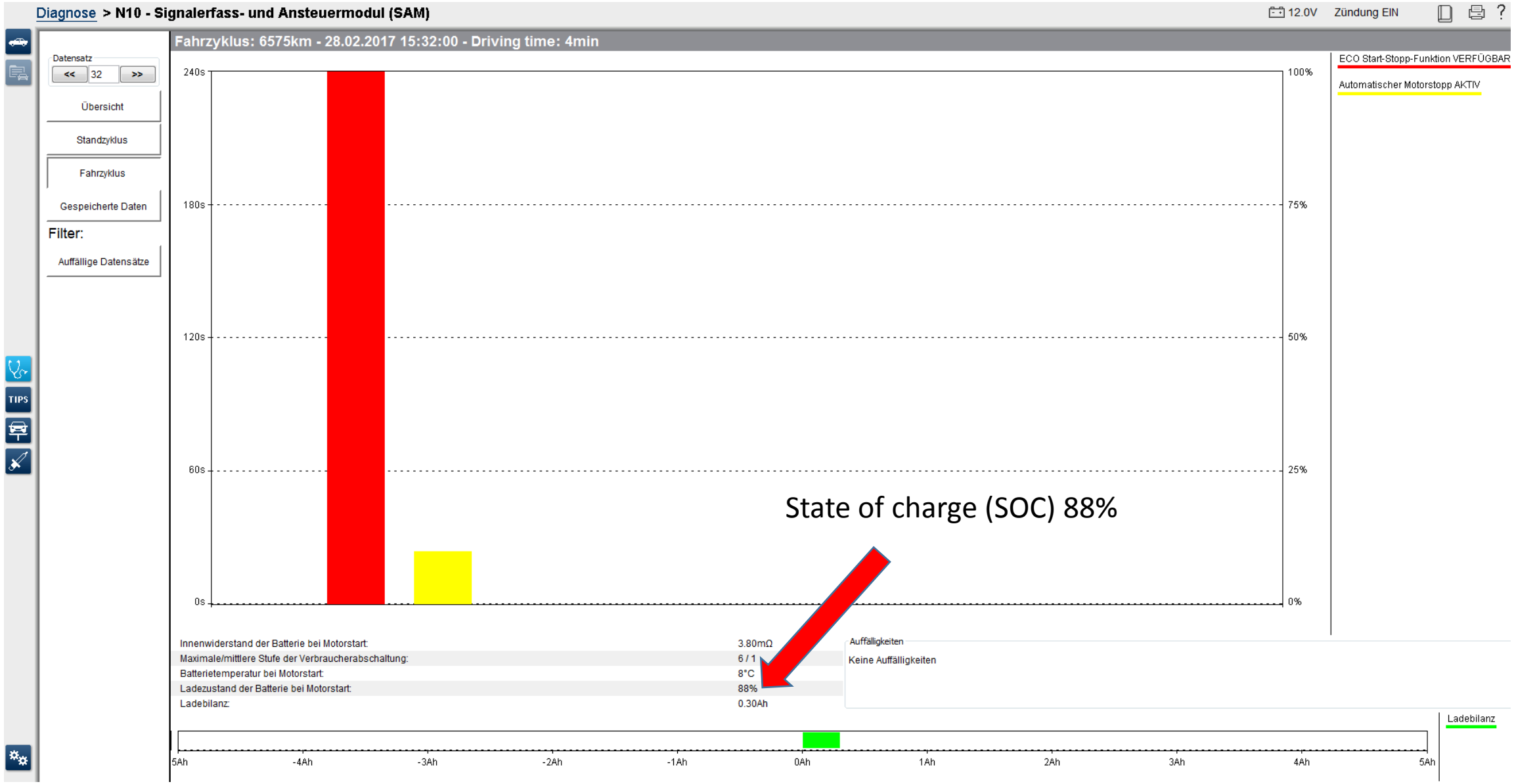
Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
A 000 905 64 07			Battery sensor	1	Battery sensor, LHD vehicles	X

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
54-1111	REPLACE BATTERY SENSOR (AFTER CHECK)		53020 73	

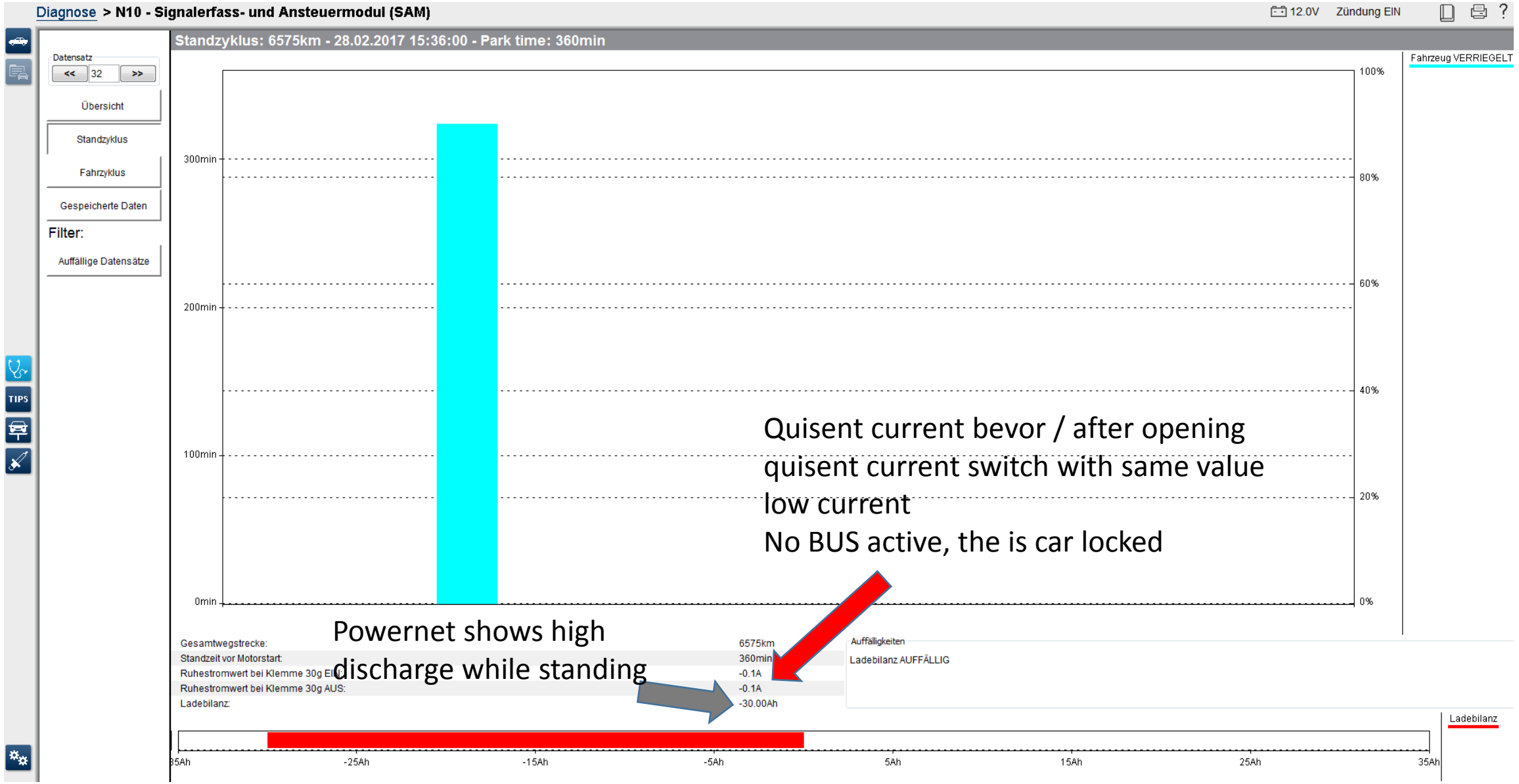
Attachments

Bild1.jpg:

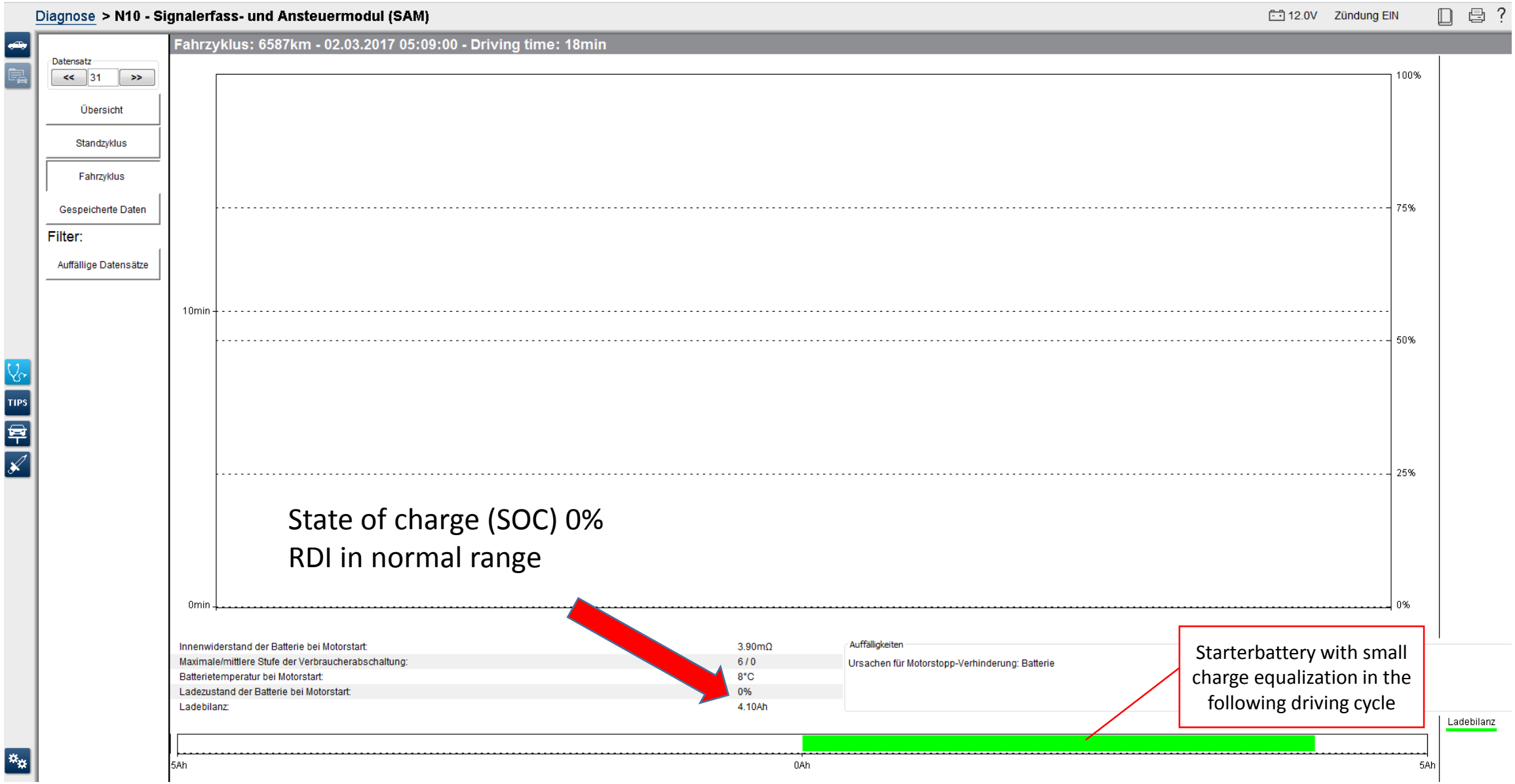
Measurement Driving cycle



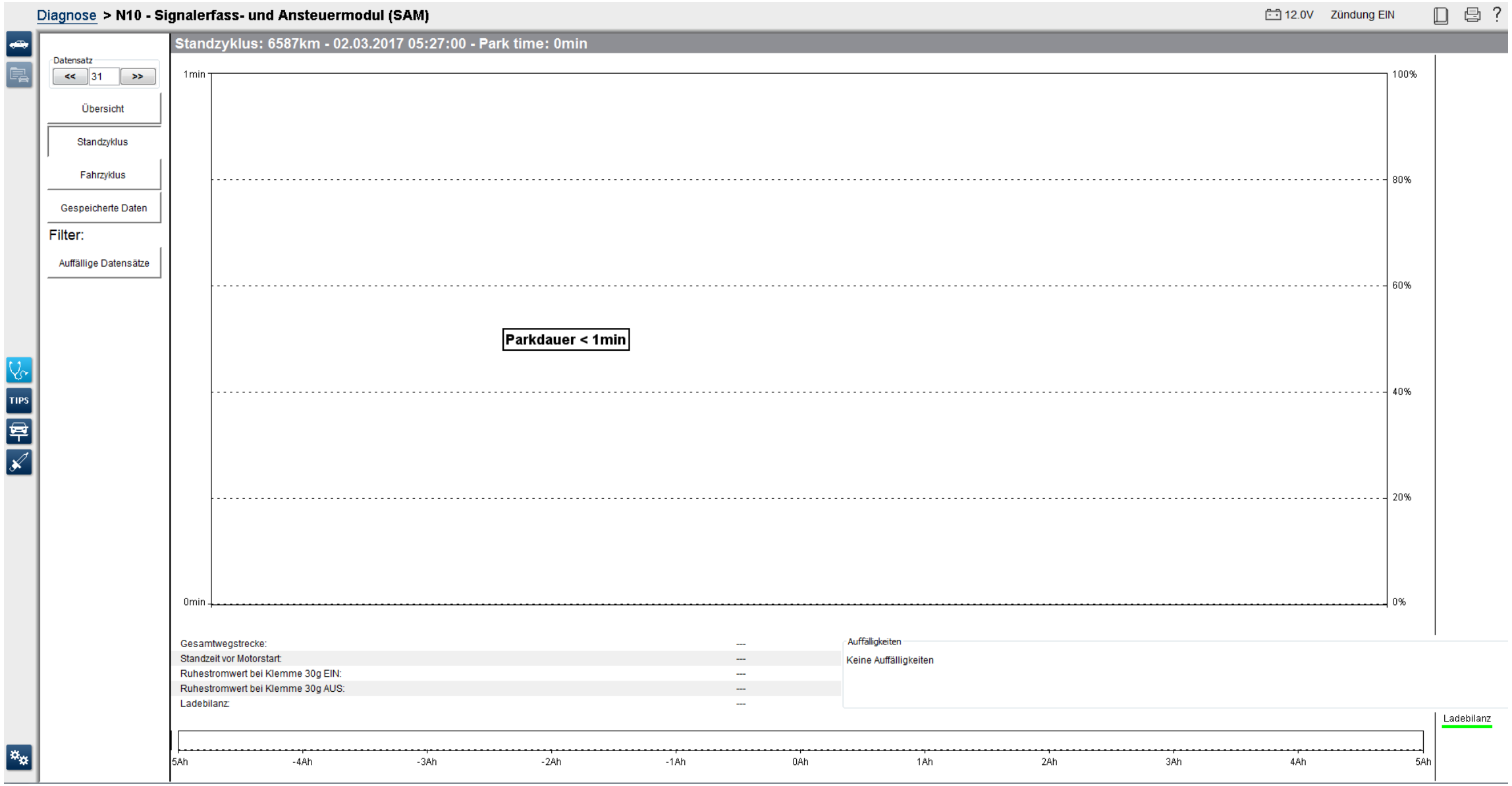
Measurement Engine OFF cycle



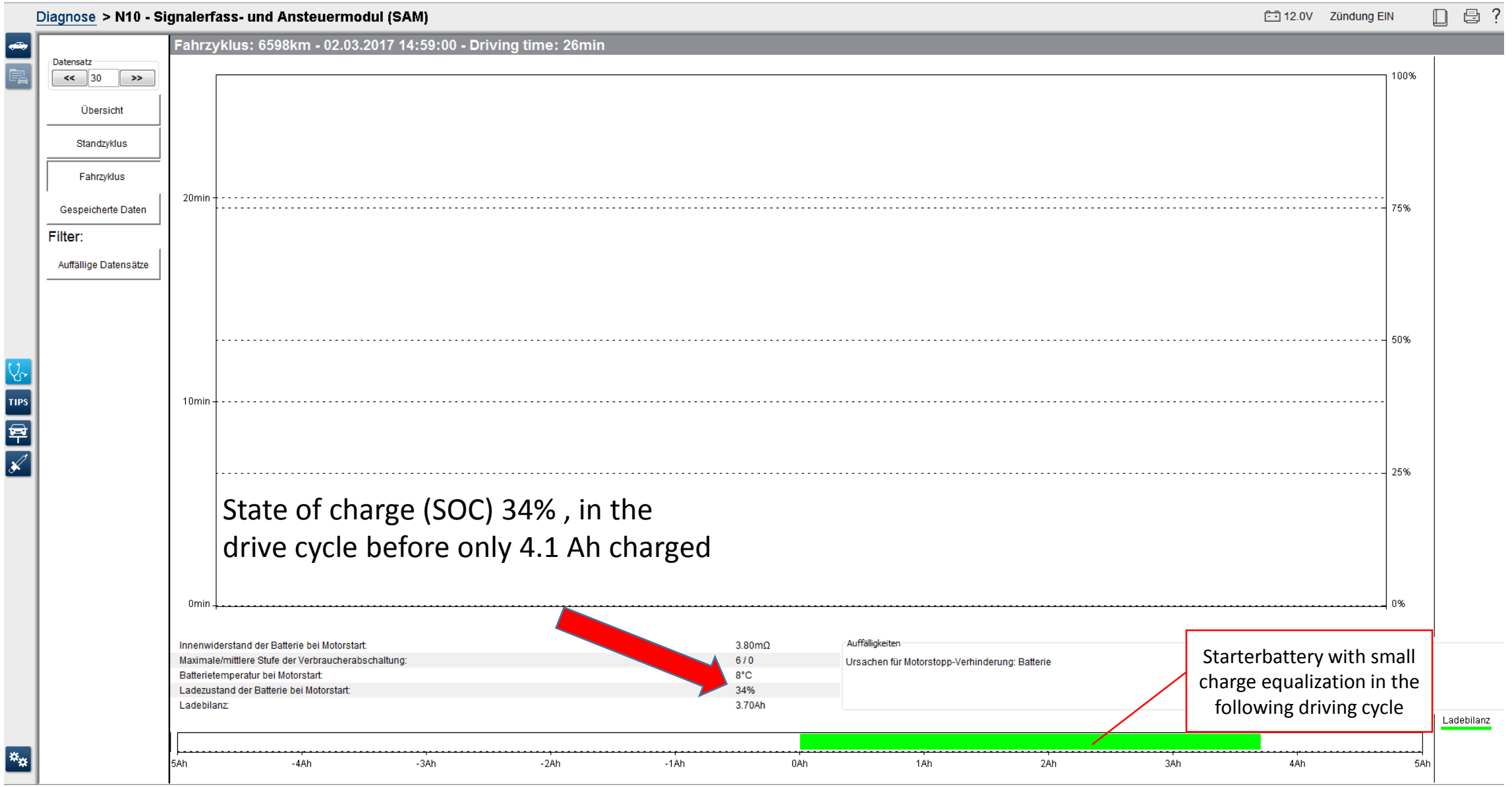
Measurement Driving cycle



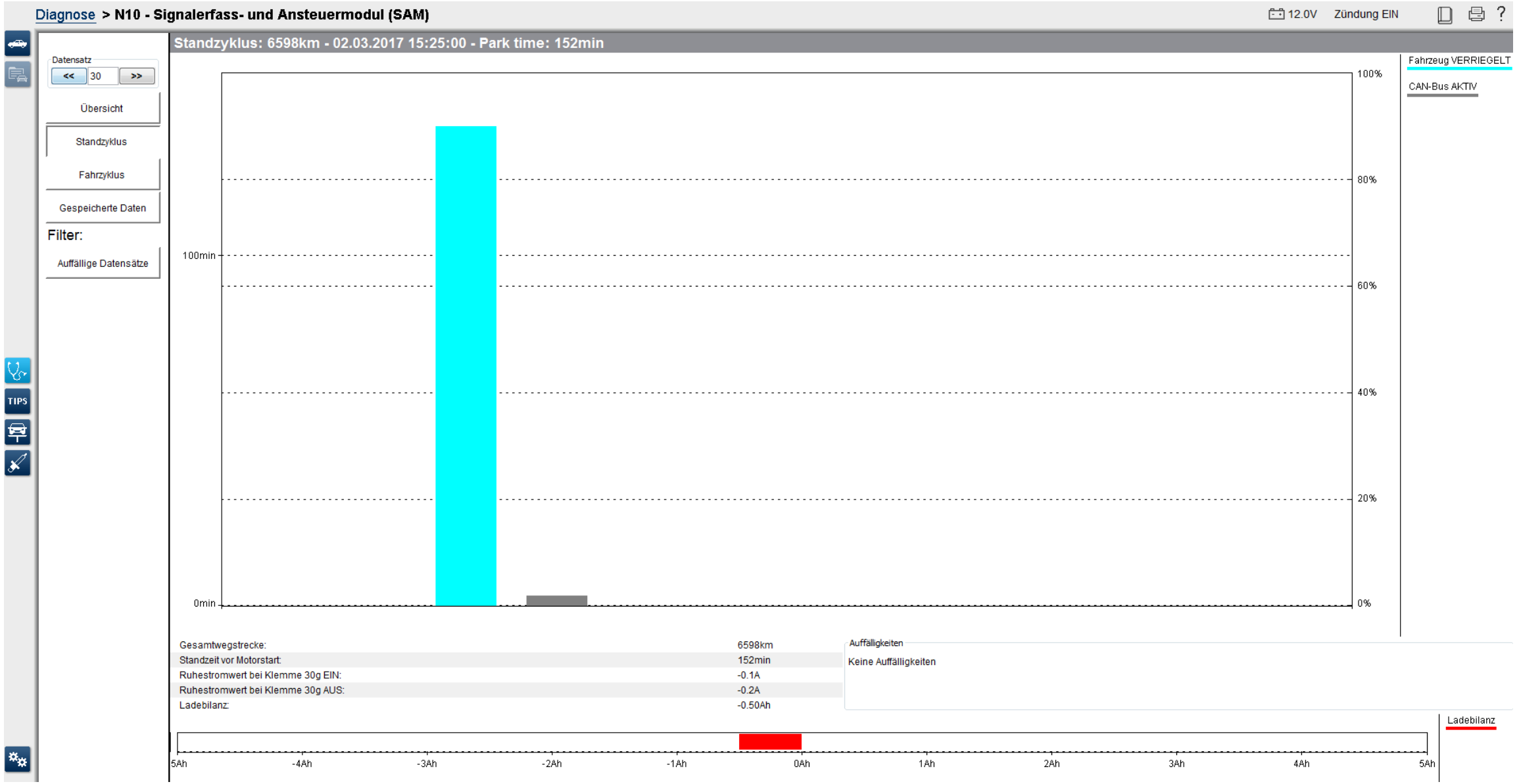
Measurement Engine OFF cycle



Measurement Driving cycle



Measurement Engine OFF cycle



Measurement Driving cycle