



# FLASH TEST REPORT

## Execution

State of charge **100 %**  
Date 29/08/2023 05:02:52  
Executed by AVILOO

## Vehicle

Brand Hyundai  
Model Ioniq - 28 kWh  
VIN KMHC  
Mileage 81,247 km

## Analysis Result

# AVILOO SCORE

**95**  
/ 100

**High voltage battery usage and history**  
Analysis of charging & driving behavior

**66** / 70

**High voltage battery performance**  
Analysis of cell voltages and module temperatures.

**29** / 30

**High voltage battery control unit**  
Check of signals and calculations of the battery management control unit.



**Vehicle communication interface**  
Check of communication via the diagnostic interface.



  
DI Wolfgang Berger MBA  
Managing director

  
DI Nikolaus Mayerhofer  
Managing director

  
Dr. Marcus Berger  
Managing director



# EXPLANATION OF THE BATTERY FLASH TEST

## ANALYSIS METHOD

The analysis performed is a combined result of: The communication quality between the diagnostic hardware AVILOO Box and the on-board diagnostic interface of the vehicle. The live battery data and data that indicates the previous use of the high voltage battery, which is made available to the AVILOO Box by the battery management system during the measurement. The plausibility check and classification of the battery condition using the collected values and a comparison with the AVILOO Battery Cloud using Big Data algorithms.

## FLASH TEST EXECUTION PROTOCOL

- 05:02:49 AVILOO Box connected.
- ✓ Flash Test started.
- ✓ Vehicle detected.
- ✓ Starting data acquisition.
- ✓ Finished data acquisition.
- ✓ Analyzing data.
- ✓ Analysis completed.

## DETAILED RESULTS OF PERFORMED CHECKS

### Vehicle Information

VIN	KMHC
Date	29/08/2023 05:02:52
Mileage	81,247 km

### Measurements High Voltage System

Battery temperature	27 °C
Maximum cell temperature deviation	1 °C
Pack voltage	394.4 V
Maximum cell voltage deviation	0 mV
Peak current during check	-0.6 A
State of Health (SoH - read from car manufacturer)*	100 %

\*The SoH shown here was not calculated by AVILOO but corresponds to the SoH read out from the battery management system and calculated by the manufacturer. AVILOO therefore does not guarantee the correctness of this SoH.





# FLASH TEST REPORT

## Execution

State of charge 100 %  
Date 08/04/2023 3:38:22 PM  
Executed by ---

## Vehicle

Brand Tesla  
Model Model 3 - 60,5 kWh  
VIN LRW3E7F  
Mileage 13,208 km

## Analysis Result

# AVILOO SCORE



**High voltage battery usage and history**  
Analysis of charging & driving behavior

61 / 70

**High voltage battery performance**

WARNING: Analysis of cell voltages and module temperatures failed.  
For details see page 2.

! / 30

**High voltage battery control unit**

Check of signals and calculations of the battery management control unit.



**Vehicle communication interface**

Check of communication via the diagnostic interface.



  
DI Wolfgang Berger MBA  
Managing director

  
DI Nikolaus Mayerhofer  
Managing director



# EXPLANATION OF THE BATTERY FLASH TEST

## ANALYSIS METHOD

The analysis performed is a combined result of: The communication quality between the diagnostic hardware AVILOO Box and the on-board diagnostic interface of the vehicle. The live battery data and data that indicates the previous use of the high voltage battery, which is made available to the AVILOO Box by the battery management system during the measurement. The plausibility check and classification of the battery condition using the collected values and a comparison with the AVILOO Battery Cloud using Big Data algorithms.

## FLASH TEST EXECUTION PROTOCOL

- 15:38:19 AVILOO Box connected.
- ✓ Flash Test started.
- ✓ Vehicle detected.
- ✓ Starting data acquisition.
- ✓ Finished data acquisition.
- ✓ Analyzing data.
- ✓ Analysis completed.

## DETAILED RESULTS OF PERFORMED CHECKS

### Vehicle Information

VIN	LRW3E7F
Date	08/04/2023 3:38:22 PM
Mileage	13,208 km

### Measurements High Voltage System

Battery temperature	26.5 °C
Maximum cell temperature deviation	1.5 °C
Pack voltage	362.2 V
<b>High cell spread detected. This indicates a defective or heavily unbalanced cell.</b>	<b>(&lt; 120.0 mV) 180 mV</b>
Peak current during check	-26.14 A
State of Health (SoH - read from car manufacturer)*	89.42 %

\*The SoH shown here was not calculated by AVILOO but corresponds to the SoH read out from the battery management system and calculated by the manufacturer. AVILOO therefore does not guarantee the correctness of this SoH.





# FLASH TEST REPORT

## Execution

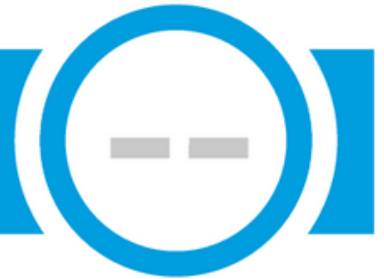
State of charge 74.5 %  
Date 08/24/2023 11:51:14 AM  
Executed by ---

## Vehicle

Brand Volkswagen  
Model ID4 - 77 kWh  
VIN WVGZZZ  
Mileage 13,421 km

## Analysis Result

# AVILOO SCORE



**High voltage battery usage and history**  
Analysis of charging & driving behavior

**69** / 70

**High voltage battery performance**  
Analysis of cell voltages and module temperatures.

**29** / 30

**High voltage battery control unit**  
Check of signals and calculations of the battery management control unit.



### Vehicle communication interface

At least one Check could not be performed, therefore the result may be inaccurate.  
For details, please refer to page 2!



  
DI Wolfgang Berger MBA  
Managing director

  
DI Nikolaus Mayerhofer  
Managing director



# EXPLANATION OF THE BATTERY FLASH TEST

## ANALYSIS METHOD

The analysis performed is a combined result of: The communication quality between the diagnostic hardware AVILOO Box and the on-board diagnostic interface of the vehicle. The live battery data and data that indicates the previous use of the high voltage battery, which is made available to the AVILOO Box by the battery management system during the measurement. The plausibility check and classification of the battery condition using the collected values and a comparison with the AVILOO Battery Cloud using Big Data algorithms.

## FLASH TEST EXECUTION PROTOCOL

- 11:51:14 Flash Test started.
- ✓ Vehicle detected.
- ✓ Starting data acquisition.
- ✓ Finished data acquisition.
- ✓ Analyzing data.
- ✓ Analysis completed.

## DETAILED RESULTS OF PERFORMED CHECKS

### Vehicle Information

VIN	WVGZZZ
Date	08/24/2023 11:51:14 AM
Mileage	13,421 km

### Measurements High Voltage System

Battery temperature	20.38 °C
Maximum cell temperature deviation	0.38 °C
Pack voltage	374.95 V
Maximum cell voltage deviation	6.1 mV
Peak current during check	-3.33 A
State of Health (SoH - read from car manufacturer)*	97.14 %

At least one check could not be performed due to missing signals. Contact the manufacturer.

\*The SoH shown here was not calculated by AVILOO but corresponds to the SoH read out from the battery management system and calculated by the manufacturer. AVILOO therefore does not guarantee the correctness of this SoH.

