BayesianBESS — Battery Health Report

Vehicle: **VChart1081** | Pack-Level Report | Generated: 31 Mar 2026 10:29

Pack Summary

Metric	Value
Total Cells	16
Cells: OK	0
Cells: OBSERVE	13
Cells: CRITICAL	3
Pack SOH (BMS)	95.2%
Avg Cell SOH (spread-derived)	94.4%
Cycle Count	449
Calendar Age	500 days
Lowest Cell RUL	73 cycles (Cell 7)
Pack Status	**CRITICAL**

Cell-by-Cell Overview

Cell	Cell SOH	Spread (mV)	RUL (cycles)	Status
Cell 1	95.08%	194.0	1224	OBSERVE
Cell 2	92.21%	480.0	296	CRITICAL
Cell 3	95.17%	185.0	1280	OBSERVE
Cell 4	95.08%	194.0	1247	OBSERVE
Cell 5	95.06%	196.0	1244	OBSERVE
Cell 6	95.12%	190.0	1271	OBSERVE
Cell 7	90.24%	676.0	73	CRITICAL
Cell 8	95.16%	186.0	1290	OBSERVE
Cell 9	91.82%	518.0	192	CRITICAL
Cell 10	95.22%	180.0	1319	OBSERVE
Cell 11	95.24%	178.0	1329	OBSERVE
Cell 12	95.04%	198.0	1236	OBSERVE
Cell 13	94.97%	205.0	1205	OBSERVE

Cell 14	95.14%	188.0	1282	OBSERVE
Cell 15	95.17%	185.0	1296	OBSERVE
Cell 16	95.05%	197.0	1242	OBSERVE

Pack BMS SOH: 95.2% | Cell SOH derived from temporal voltage spread (p90–p10, active rows).

Voltage Profile

Cell voltage min/max/spread for all cells (active rows, p10/p90). LFP safe ceiling = 3.65 V. High spread → wider OCV arc traversed → lower cell SOH.

Cell	V Avg	V Min (p10)	V Max (p90)	Spread (mV)	Cell SOH
Cell 1	3.3174	3.2380	3.4320	194.0 ■	95.08%
Cell 2	3.3706	3.2430	3.7230 ■	480.0 ■	92.21%
Cell 3	3.3140	3.2370	3.4220	185.0 ■	95.17%
Cell 4	3.3231	3.2390	3.4330	194.0 ■	95.08%
Cell 5	3.3235	3.2410	3.4370	196.0 ■	95.06%
Cell 6	3.3160	3.2390	3.4290	190.0 ■	95.12%
Cell 7	3.3931	3.2420	3.9180 ■	676.0 ■	90.24%
Cell 8	3.3189	3.2410	3.4270	186.0 ■	95.16%
Cell 9	3.3725	3.2400	3.7580 ■	518.0 ■	91.82%
Cell 10	3.3141	3.2390	3.4190	180.0 ■	95.22%
Cell 11	3.3164	3.2440	3.4220	178.0 ■	95.24%
Cell 12	3.3243	3.2440	3.4420	198.0 ■	95.04%
Cell 13	3.3291	3.2410	3.4460	205.0 ■	94.97%
Cell 14	3.3172	3.2400	3.4280	188.0 ■	95.14%
Cell 15	3.3142	3.2390	3.4240	185.0 ■	95.17%
Cell 16	3.3221	3.2420	3.4390	197.0 ■	95.05%

Pack-Level Findings

● **OBSERVE:** Cell 1: Voltage spread 194mV — monitor cell balance
■ **CRITICAL:** Cell 2: Cell voltage max 3.7230V exceeds LFP ceiling 3.65V
■ **CRITICAL:** Cell 2: Voltage spread 480mV — cell imbalance (REJECT threshold)
● **OBSERVE:** Cell 2: RUL 296 cycles — monitor closely (threshold 600 cycles)
● **OBSERVE:** Cell 3: Voltage spread 185mV — monitor cell balance
● **OBSERVE:** Cell 4: Voltage spread 194mV — monitor cell balance
● **OBSERVE:** Cell 5: Voltage spread 196mV — monitor cell balance
● **OBSERVE:** Cell 6: Voltage spread 190mV — monitor cell balance
■ **CRITICAL:** Cell 7: Cell voltage max 3.9180V exceeds LFP ceiling 3.65V
■ **CRITICAL:** Cell 7: Voltage spread 676mV — cell imbalance (REJECT threshold)
■ **CRITICAL:** Cell 7: RUL 73 cycles — end-of-life imminent

- **OBSERVE:** Cell 8: Voltage spread 186mV — monitor cell balance
- **CRITICAL:** Cell 9: Cell voltage max 3.7580V exceeds LFP ceiling 3.65V
- **CRITICAL:** Cell 9: Voltage spread 518mV — cell imbalance (REJECT threshold)
- **CRITICAL:** Cell 9: RUL 192 cycles — end-of-life imminent
- **OBSERVE:** Cell 10: Voltage spread 180mV — monitor cell balance
- **OBSERVE:** Cell 11: Voltage spread 178mV — monitor cell balance
- **OBSERVE:** Cell 12: Voltage spread 198mV — monitor cell balance
- **OBSERVE:** Cell 13: Voltage spread 205mV — monitor cell balance
- **OBSERVE:** Cell 14: Voltage spread 188mV — monitor cell balance
- **OBSERVE:** Cell 15: Voltage spread 185mV — monitor cell balance
- **OBSERVE:** Cell 16: Voltage spread 197mV — monitor cell balance

Pack Recommendation

CRITICAL: 3 cell(s) exceed safe limits. Pack should be inspected immediately. Identify REJECT/CRITICAL cells and evaluate replacement.