evc
ELECTRIC VEHICLES CLINIC

EVC Health Report

Mercedes EQS (V297) · HV battery · slave BMS diagnosis

HV BATTERY — PACK OVERVIEW



Lowest recorded



Max cell R



Latched faults

Pack	Mercedes EQS · V297 · 108S2P (2× 400V parallel, 4 contactors)
Report date	2026-11-10

Summary	TOP BMS · right string	BOTTOM BMS · left string
Status	**FAULT — 13 latched**	**clean**
Suspect cell	#12 · module I · 3.03×	none
Max cell resistance	1.80 mOhm (cell 12)	0.83 mOhm (cell 77)
Lowest recorded voltage	1.534 V	—
Voltage violations	11	0

TOP BMS — right string · 108S

13 latched faults — HV component lockout active (P1C80). Module I under/overvoltage latched.

Slave BMS	M95M02 · TC277T · TOP / right string
Status	**13 latched faults**
Root cause	Module I, cell 12 — 3.03× resistance
Latch	code 0x000E · mask 0x003F [I J K L M N]
Voltage violations	11 (min 1534 mV)
OV limit	4135 mV

SUSPECT	LOWEST	MAX CELL R	FAULTS	OV LIMIT
#12 (I)	1.534 V	1.80 mΩ	13	4135 mV

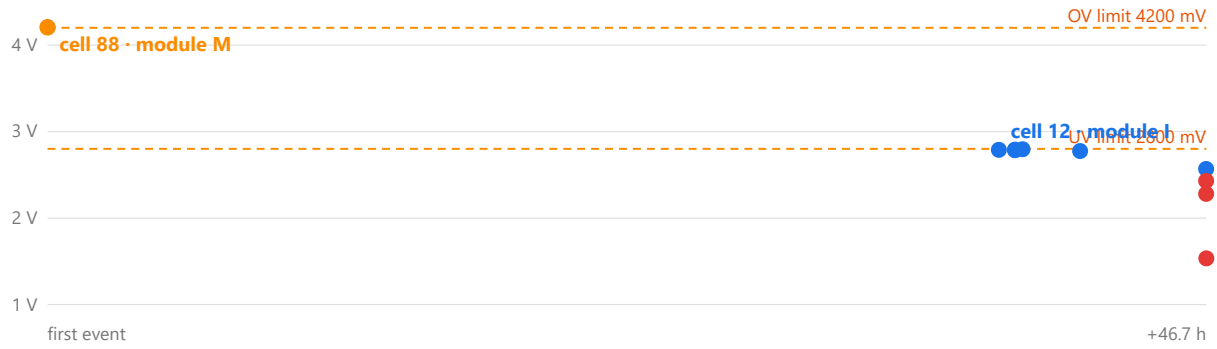
Fault Correlation — DTC ↔ stored data

Module	Cells	Predicted DTCs	Evidence
I	1–18	P0F18 P0F64 P0B63 P0B64 P0B67 U357D	suspect cell 12
J	19–36	P0F19 P0F65 P0B6C	mask set
K	37–54	P0F1A P0F66 P0B71	mask set
L	55–72	P0F1B P0F67 P0B76	mask set
M	73–90	P0F1C P0F68 P0B7B	cell 88 @2.42×
N	91–108	P0F1D P0F69 P0B80	mask set
System	—	P1540 P1C80	lockout + low-SOC

coloured = predicted · grey = not predicted

Voltage-violation history (11 events): down to **1534 mV**.

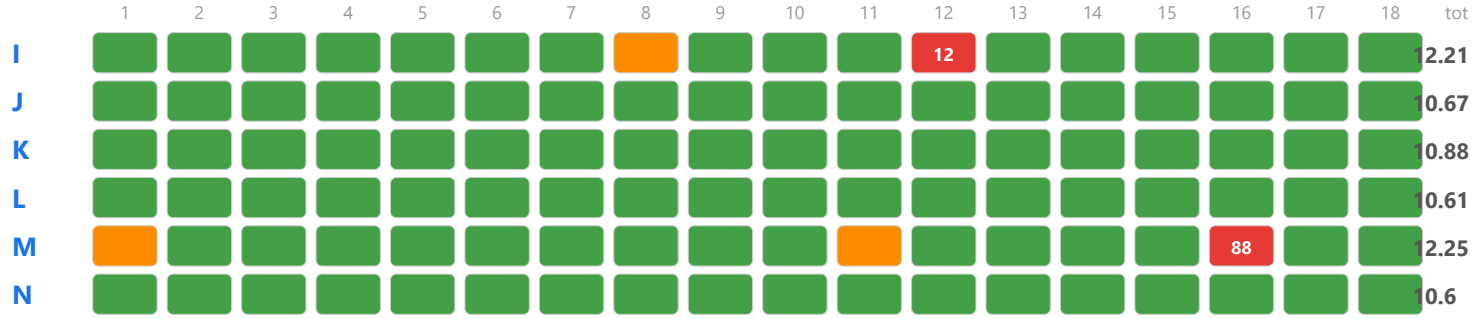
Voltage violations — freeze frames — TOP



#	time	cell	type	limit	cell voltage	SOC*	current*	T1/T2 °C
1	+0 s	**#88** · module M	OV	4200 mV	**4202 mV**	84%	118.5 A	35 / 34
2	+2 s	**#88** · module M	OV	4200 mV	**4211 mV**	84%	123.2 A	35 / 34
3	+38.4 h	**#12** · module I	UV	2800 mV	**2788 mV**	51%	-335.9 A	31 / 29
4	+39.0 h	**#12** · module I	UV	2800 mV	**2784 mV**	49%	-338.6 A	31 / 30
5	+39.0 h	**#12** · module I	UV	2800 mV	**2791 mV**	49%	-331.4 A	31 / 30
6	+39.3 h	**#12** · module I	UV	2800 mV	**2796 mV**	47%	-282.1 A	32 / 30
7	+41.6 h	**#12** · module I	UV	2800 mV	**2775 mV**	39%	-297.7 A	32 / 31
8	+46.7 h	**#12** · module I	UV	2800 mV	**2567 mV**	61%	—	34 / 31
9	+46.7 h	**#12** · module I	UV	2800 mV	**2280 mV**	61%	—	34 / 32
10	+46.7 h	**#12** · module I	UV	2800 mV	**2429 mV**	61%	—	34 / 31
11	+46.7 h	**#12** · module I	UV	2800 mV	**1534 mV**	60%	—	31 / 29

time = from the first event (BMS counter, assumed seconds). cell voltage = that cell at the moment of the event. * SOC and current are read from the freeze frame but not yet confirmed: SOC = pack state of charge, current per string, + charging / − discharging. — = not recorded.

Internal Resistance Map (mOhm) — TOP



■ healthy · ■ watch ≥0.75 · ■ high ≥1.2 mOhm · module totals on right

Module I — cells (suspect module)

cell	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
V (freeze)	3.822	3.814	3.821	3.819	3.819	3.823	3.824	3.822	3.822	3.816	3.822	3.823	3.824	3.820	3.821	3.820	3.819	3.819
R mOhm	0.58	0.59	0.59	0.59	0.59	0.59	0.59	0.86	0.64	0.62	0.60	1.80	0.59	0.60	0.59	0.59	0.59	0.61

Freeze = BMS snapshot of the last stored reading before lockout; a dead cell can read far lower by hand.

BOTTOM BMS — left string · 108S

No latched faults — slave fault memory clean.

Slave BMS	M95M02 · TC277T · BOTTOM / left string
Status	clean
Root cause	—
Latch	code 0x0000 · mask 0x0000 []
Voltage violations	0
OV limit	4135 mV

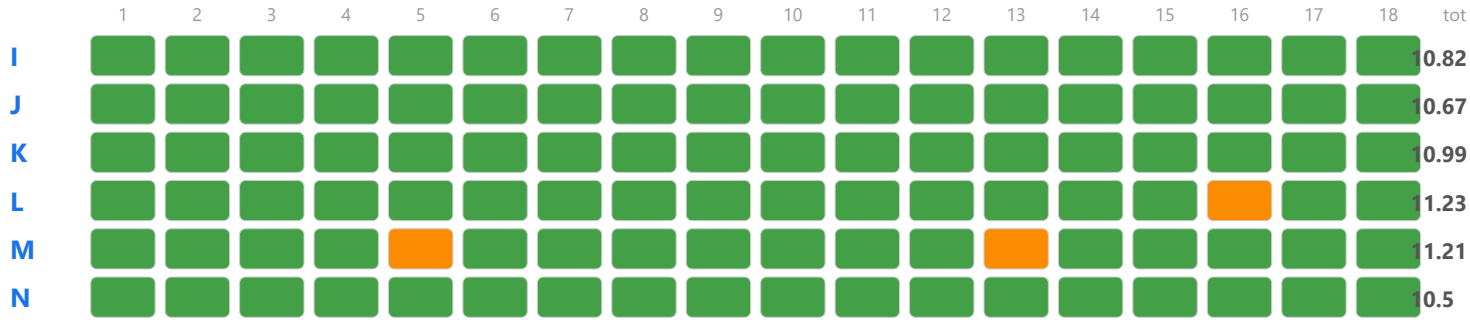
SUSPECT	LOWEST	MAX CELL R	FAULTS	OV LIMIT
none	—	0.83 mΩ	0	4135 mV

Fault Correlation — DTC ↔ stored data

Module	Cells	Predicted DTCs	Evidence
I	1–18	P0F18 P0F64 P0B63 P0B64 P0B67 U357D	—
J	19–36	P0F19 P0F65 P0B6C	—
K	37–54	P0F1A P0F66 P0B71	cell 43 @1.26×
L	55–72	P0F1B P0F67 P0B76	cell 70 @1.37×
M	73–90	P0F1C P0F68 P0B7B	cell 77 @1.4×
N	91–108	P0F1D P0F69 P0B80	—
System	—	P1540 P1C80	lockout + low-SOC

coloured = predicted · grey = not predicted

Internal Resistance Map (mOhm) — BOTTOM



■ healthy · ■ watch ≥0.75 · ■ high ≥1.2 mOhm · module totals on right

Module M — cells (highest-resistance module)

cell	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
V (freeze)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
R mOhm	0.58	0.59	0.60	0.59	0.83	0.60	0.67	0.59	0.61	0.59	0.59	0.58	0.78	0.60	0.61	0.60	0.60	0.62

Freeze = BMS snapshot of the last stored reading.