

Application for Certification

Model Year: 2027
Manufacturer Name: Rolls-Royce

Test Group: VRRGV00.0R2B
Test Group Description: electric, BEV

Vehicle Class: EPA
LDV

Applicable Standards: EPA
FTP Standard: Tier 4 - Bin 0
SFTP Standard: not applicable

Carlines Covered: Black Badge Spectre (22" Wheels), Black Badge Spectre (23" Wheels), Spectre (22" Wheels), Spectre (23" Wheels)

Comprehensive List of Tests:

Multi-Cycle-Test:

Model	VID	CFG	Road Load CFG	Multi-Cycle-Test
Black Badge Spectre (23" Wheels)	U234147	00	22	VRRG10093963
Black Badge Spectre (22" Wheels)	U234147	01	21	VRRG10093964

For questions, Contact: Carlheinz Bayer, 201 / 571 - 5193

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Table of Changes

Revision / Running Change No.	Date	Section	Description of Change
Revision 1	05/06/2026	8	Emission Warranty Statement added

1. Correspondence and Communications

1.1. Authorized Persons Refer to Common Section

1.2. Certificate Information Refer to Common Section

1.3. Primary certification contact:

Name: Carlheinz Bayer
Phone Number: 201 / 571 - 5193
Fax Number: 201 / 571 - 5479
E-Mail-Address: Carlheinz.Bayer@bmwna.com

2. Durability Group Description

2.1. not applicable

3. Evaporative / Refueling Family Description

not applicable

4. Durability Procedure Description

not applicable

5. Test Group Description

5.1.	Test Group Name	VRRGV00.0R2B
5.2.	Electric Vehicle System Description	
5.2.1.	Electric Motor	Refer to Section 12
5.2.2.	Battery	Refer to Section 12
5.3.	Vehicle class	EPA LDV
5.4.	Emission standards class	Tier 4 - Bin 0

6. Test Vehicle Description

6.1. Test Vehicle Description

VID	CFG	Carline	Model	Trans Type	Road Load CFG
U234147	00	29	Black Badge Spectre (23" Wheels)	A-1	22
U234147	01	28	Black Badge Spectre (22" Wheels)	A-1	21

For a description of the selected drive modes refer to Section 12

Test parameter are described in the EV-CIS vehicle information

Road Load Configuration Description

X_ means number of tire groups used for this model
21 Road Load configuration
22 Road Load configuration

For complete vehicle description, refer to Certification Summary Information Report Sheet, enclosed in Section 7 of this application.
Selection of vehicles carried out according to 40 CFR §86.1828-01(a).

7. Test results

Certification Summary Information Report submitted to EV-CIS

see attachment:
CSI-VRRGV00.0R2B

The certified E-Range is given in the respective test information.

8. Statements**8.1 Emission Testing Waiver Statements**

not applicable

8.2 Compliance Statements

Break-In Period Vehicle, Battery, Fuel Cell

According to EPA CD-2021-12 the test vehicles are stabilized for certification testing by aging at least to 2,000 miles. Test vehicle and the battery, in addition the fuel cell if applicable, that power the vehicle during testing are aged as one unit at the same time for the same number of miles. Aging is done by using the SRC cycle.

Electric Vehicle Compliance

According to 40 CFR §86.1829-15 (f) we state as the manufacturer, consistent with good engineering judgement, that all vehicles included in this application comply with all the emission standards and related requirements of Part 86, subpart S.

Emission Warranty Statement

BMW as the manufacturer states that it will meet the emission performance and defect warranty requirements as described in 40 CFR §85.2103.

9. OBD System Description

not applicable

10. Description of Alternate-fueled Vehicles

not applicable

11. Auxiliary Emission Control Devices (AECD) descriptions

Confidential Information: Please refer to uploaded AECD document in EV-CIS

12. Description of vehicles and test parameters covered by certificate

12.1. Vehicle Parameters

12.1.1. Vehicle Information

Model Name	Carline	Trans	Vehicle Class	VCW [lbs]	ETW [lbs]	GVW [lbs]
Black Badge Spectre (22" Wheels)	28	A (A)	LDV	6521	7000	7540
Black Badge Spectre (23" Wheels)	29	A (A)	LDV	6521	7000	7540
Spectre (22" Wheels)	26	A (A)	LDV	6532	7000	7540
Spectre (23" Wheels)	27	A (A)	LDV	6532	7000	7540

12.1.2. Drive Train Information

Model Name	Carline	Trans	Gear	Engine Code	Axle ratio	
					front	rear
Black Badge Spectre (22" Wheels)	28	A (A)	1	XE2A03N1RR25X1	8.77	8.76
Black Badge Spectre (23" Wheels)	29	A (A)	1	XE2A03N1RR25X1	8.77	8.76
Spectre (22" Wheels)	26	A (A)	1	XE2A03N1RR25X	8.77	8.76
Spectre (23" Wheels)	27	A (A)	1	XE2A03N1RR25X	8.77	8.76

12.1.3. Tire Information

Modell	Carline	Trans	Road Load CFG	Tire Front	Tire Rear
Spectre (22" Wheels)	26	A	21	255/45 R22 107Y STD	285/40 R22 110Y STD
Spectre (23" Wheels)	27	A	22	255/40 R23 104Y STD	295/35 R23 108Y STD
Black Badge Spectre (22" Wheels)	28	A	21	255/45 R22 107Y STD	285/40 R22 110Y STD
Black Badge Spectre (23" Wheels)	29	A	22	255/40 R23 104Y STD	295/35 R23 108Y STD

M+S indicates an All-Season tire and not a dedicated Winter tire

(Winter) indicates a dedicated Winter tire

AT indicates an All-Terrain tire

HP indicates a High-Performance tire

RSC indicates a tire with run flat capability

STD indicates a tire without run flat capability

12.1.4. Certification Region

FA

12.2. Test Parameters

12.2.1. Engine Starting Procedures

Refer to Common Section

12.2.2. Shift Schedules

not applicable

12.2.3. Dynamometer loading information

12.2.3.1. Sort of dynamometer

all wheel roll

12.2.3.2. Electric Dynamometer Coefficients and Tires

Modell	Carline	Trans	Road Load CFG	A [lbf]	B [lbf/mph]	C [lbf/mph ²]	a [lbf]	b [lbf/mph]	c [lbf/mph ²]	TRLHP
Black Badge Spectre (22" Wheels)	28	A	21	44.5	0.208	0.01781	1.5	-0.067	0.01761	13.3
Spectre (22" Wheels)	26	A	21	44.5	0.208	0.01781	not applicable	not applicable	not applicable	13.3
Black Badge Spectre (23" Wheels)	29	A	22	47.9	0.217	0.01943	4.4	-0.079	0.01951	14.3
Spectre (23" Wheels)	27	A	22	47.9	0.217	0.01880	not	not	not	14.1

							applied	applicable	applicable	
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Modell	Carline	Trans	Road Load CFG	N/V front	N/V rear	Grill Shutter
Black Badge Spectre (22" Wheels)	28	A	21	97.6	97.5	Yes
Spectre (22" Wheels)	26	A	21	97.6	97.5	Yes
Black Badge Spectre (23" Wheels)	29	A	22	97.6	97.5	Yes
Spectre (23" Wheels)	27	A	22	97.6	97.5	Yes

Road Load Configuration Description

X_ means number of tire groups used for this model
 21 Road Load configuration
 22 Road Load configuration

12.3. Electric vehicle system description

12.3.1 Description of electric motor

Model Name	Type	Front Power (peak) [kW]	Max. torque [Nm]	Type	Rear Power (peak) [kW]	Max. torque [Nm]
Black Badge Spectre (22" Wheels)	Separately excited synchronous motor	190 @ 8000	365	Separately excited synchronous motor	360 @ 13000	650
Black Badge Spectre (23" Wheels)	Separately excited synchronous motor	190 @ 8000	365	Separately excited synchronous motor	360 @ 13000	650
Spectre (22" Wheels)	Separately excited synchronous motor	190 @ 8000	365	Separately excited synchronous motor	360 @ 13000	650
Spectre (23" Wheels)	Separately excited synchronous motor	190 @ 8000	365	Separately excited synchronous motor	360 @ 13000	650

12.3.2. Description of batteries

Model Name	System Chemistry	Capacity (C) [Ah]	Energy Capacity (E) [kWh]	Nominal Voltage [V]	Min. Voltage Pack [V]	Number of Packs	Number of Modules	Number of Battery Cells
Black Badge Spectre (22" Wheels)	Li-Ion	324.5	118.10	364.0	250.0	1	5	1000
Black Badge Spectre (23" Wheels)	Li-Ion	324.5	118.10	364.0	250.0	1	5	1000
Spectre (22" Wheels)	Li-Ion	324.5	118.10	364.0	250.0	1	5	1000
Spectre (23" Wheels)	Li-Ion	324.5	118.10	364.0	250.0	1	5	1000

Model Name	Cell format	Min. Voltage Cell [V]	Weight [kg]	Specific Energy Density [Wh/kg]	Chemistry Identifier
Black Badge Spectre (22" Wheels)	cylindrical	2.50	697.6	169	Li MM (NRM)-CSi.F
Black Badge Spectre (23" Wheels)	cylindrical	2.50	697.6	169	Li MM (NRM)-CSi.F
Spectre (22" Wheels)	cylindrical	2.50	697.6	169	Li MM (NRM)-CSi.F
Spectre (23" Wheels)	cylindrical	2.50	697.6	169	Li MM (NRM)-CSi.F

Battery specific energy data are determined in accordance with U.S. Advanced Battery Consortium's Electric Vehicle Battery Procedure No. 2 (Constant Current Discharge Test Series).

12.3.3. Description of thermal management

	Component	Medium
battery	electric heater	coolant
	chiller (heat exchanger) evaporator	refrigerant / coolant
cooling module	radiator / fan	air / coolant
	condenser	air or coolant / refrigerant
electric motor	chiller (heat exchanger) evaporator	refrigerant / coolant
passenger compartment	evaporator	refrigerant / air
	electric heater	coolant
	heat exchanger	coolant / air

12.3.4. Description of battery charger

The charger is capable of charging with different rates. For each charging power, the following approximate charge rates apply:

Model Name	Current Type Charging Source	Charging Power [kW]	Voltage [V]	Rated Current [A]	Charging Rates [hh:mm]
Black Badge Spectre (22" Wheels) Black Badge Spectre (23" Wheels) Spectre (22" Wheels) Spectre (23" Wheels)	AC	1.4	120	12	100:30
Black Badge Spectre (22" Wheels) Black Badge Spectre (23" Wheels) Spectre (22" Wheels) Spectre (23" Wheels)	AC	7.6	240	32	16:30
Black Badge Spectre (22" Wheels) Black Badge Spectre (23" Wheels) Spectre (22" Wheels) Spectre (23" Wheels)	AC	9.6	240	40	13:00
Black Badge Spectre (22" Wheels) Black Badge Spectre (23" Wheels) Spectre (22" Wheels) Spectre (23" Wheels)	AC	11.5	240	48	11:00

Model Name	Current Type Charging Source	Max. Charging Power [kW]
Black Badge Spectre (22" Wheels) Black Badge Spectre (23" Wheels) Spectre (22" Wheels) Spectre (23" Wheels)	DC	240

The conductive charging port meets SAE J3400 (NACS).

12.4. Information on driver selectable modes for Test Vehicle

VID	Drive Mode
U234147	Multi-Cycle-Test (MCT) is done in drive selector mode "D".

13. Projected Sales

Refer to Common Section for Model Year 2027

14. Request for Certification

We herewith apply for the Federal Certificate of conformity for the Test Group VRRGV00.0R2B.

The mentioned Test Group complies with all applicable regulations contained in 40 Code of Federal Regulations Part 85 and Part 86.



Dr. Bernd Ofner

15. Other Information

15.1. Vehicle Emission Control Information Label

Label according to certification requirements in 40 CFR § 86.1807-01.

The VECI label is attached to the engine hood.

Refer to Section 17, Attachment

Carline	Model Name	VECI Label
26	Spectre (22" Wheels)	see attachment: 03VE-VR2B-01
27	Spectre (23" Wheels)	
28	Black Badge Spectre (22" Wheels)	
29	Black Badge Spectre (23" Wheels)	

17. Attachment

- | | | |
|------|--|-------------------------------------|
| 17.1 | VECI Label | see attachment: 03VE-VR2B-01 |
| 17.2 | Certification Summary Information Report | see attachment:
CSI-VRRGV00.0R2B |

BMW

Designation

Attachment

VECI Label LDV, VRRGV00.0R2B

Date: 11.03.2026

03VE-VR2B-01

DRAFT - Inverted Representation

		Rolls Royce Motor Cars Ltd.	
VEHICLE EMISSION CONTROL INFORMATION			
Conforms to regulations:		MY 2027	
U.S. EPA: Tier 4 - Bin 0 LDV		Fuel: electricity Li+	
California: Conforms to U.S. EPA regulations and is certified for sale in California		Fuel: electricity Li+	
No adjustments needed.			
Group: VRRGV00.0R2B			8 900 563

Original representation

Base: Black
Characters: Silver

Certification Summary Information Report

Manufacturer	Rolls-Royce Motor Cars Limited	Manufacturer Code	RRG
Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	04/24/2026 09:35:22 AM
Model Year	2027		

Test Group Information

CSI Type	New	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Electric Motor

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Electricity	--	--

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	Yes
Fuel Cell Indicator	No	EPA Vehicle Class	LDV
Federal Clean Fuel Vehicle	Yes	Federal Clean Fuel Vehicle Standard	ZEV
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	--
Durability Group Name	VRRGEEVNNBEV	Durability Group Equivalency Factor	1
Reduced Fee Test Group	No	Certification Region Code(s)	FA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	--	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VRRGV00.0R2B
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group		VRRGV00.0R2B		Evaporative/Refueling Family		--					
Models Covered by this Certificate											
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup				
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	27 - Spectre (23" Wheels)	Federal	All Wheel Drive	Automatic	1	No				
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	28 - Black Badge Spectre (22" Wheels)	Federal	All Wheel Drive	Automatic	1	No				
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	29 - Black Badge Spectre (23" Wheels)	Federal	All Wheel Drive	Automatic	1	No				
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	26 - Spectre (22" Wheels)	Federal	All Wheel Drive	Automatic	1	No				
Engine Description											
Hybrid Type		--		Hybrid Description		--					
Engine Type		--		Mfr Engine Description		--					
Engine Block Arrangement		--		Mfr Engine Block Arrangement Description		--					
Camless Valvetrain Indicator		--		Oil Viscosity/Classification							
Number of Cylinders/Rotors		--		Mechanically Variable Compression Ratio Indicator		--					
After Treatment Device(s) (ATD)											
Mfr After Treatment Device (ATD) Comments		--									
Direct Ozone Reduction (DOR) Device		--									
Mfr Emission Control Device Comments		--									
Official Test Numbers											
Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity		--	--	--	--	--	--	--	--	--	--

Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	364	Battery Energy Capacity	324.5
Battery Specific Energy	169	Battery Charger Type	On-Board
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	Driver Controlled Regenerative Braking	No
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	2		
Motor/Generator Type 1	EESM	Rated Motor/Generator Power	190
Motor/Generator Type 2	EESM	Rated Motor/Generator Power	360
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	Motor/Generator Type: externally excited synchronuous machine (EESM)		

Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--					
Emission Data Vehicle Information								
Vehicle ID / Configuration	U234147 / 0	Manufacturer Vehicle Configuration Number	0					
Original Test Group Name	VRRGV00.0R2B	Original Evaporative/Refueling Family	--					
Original Test Vehicle Model Year	2027							
Vehicle Model								
Represented Test Vehicle Make	Rolls Royce	Represented Test Vehicle Model	Black Badge Spectre (23" Wheels)					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> <tr> <td>1</td> <td>Electric Motor</td> <td>Electricity</td> </tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity	
Drive Source and Fuel#	Drive Source	Fuel						
1	Electric Motor	Electricity						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes					
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	Yes							
Odometer Correction -- Initial	0	Odometer Correction Factor	1					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	XE2A03N1RR25X1	Rated Horsepower	1					
Displacement (liters)	0.001							
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--					
Charge Air Cooler Type	--	Drive Mode While Testing	All Wheel Drive					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	6521	Equivalent Test Weight (pounds)	7000					
GVWR (lbs)	7540	N/V Ratio	1					
Axle Ratio	1							
Transmission Type	Automatic	# of Transmission Gears	1					
Transmission Lockup	No	Creep Gear	No					
Dynamometer Coefficients:								
	Target Coefficients							
	Set Coefficients							
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)					
City/Highway/Evap	A (lbf)	B (lbf/mph)	C (lbf/mph**2)					
EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients								
City/Highway/Evap	47.9	0.217	0.01943					
US06	47.9	0.217	0.01943					
	4.4	-0.079	0.01951					
	4.4	-0.079	0.01951					
			14.3					
			N/A					

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Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--																		
Test #	VRRG10093963	Test Procedure	77 - Multi-Cycle Test (MCT)																		
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity																		
Test Date	04/07/2026	Fuel	Electricity																		
Fuel Batch ID	--	Fuel Calibration Number	--																		
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Assigned																		
Verify Test Lab ID	EETZ																				
E10 Evaporative Test Measurement Method	--																				
Test Start Odometer Reading	5516	Odometer Units	K																		
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--																		
State of Charge Delta	Yes																				
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																		
PHEV/EV Charge Depleting Test Information																					
Recharge Event Voltage	230	Recharge Event Energy (kiloWatt-hours)	133.154																		
Charge Depleting Range (Calculated miles)	432.517	Charge Depleting Range (Actual miles)	432.517																		
Charge Depleting Range Highway (Calculated miles)	450.395	Derived 5-Cycle Coefficient Model Year	--																		
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	432.517																		
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--																		
Charge Depleting Bag/Phase #1																					
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.465</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.329</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.432</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.235</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.2249</td></tr><tr><td>Manufacturer Fuel Economy</td><td>29.8038</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.465	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.329	Drive Trace Energy Economy Rating	-0.432	Drive Trace Inertia Work Ratio Rating	-0.235	Integrated DC KW-HRS	2.2249	Manufacturer Fuel Economy	29.8038
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	7.465																				
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Drive Trace Inertia Work Ratio Rating	-0.235																				
Integrated DC KW-HRS	2.2249																				
Manufacturer Fuel Economy	29.8038																				
Charge Depleting Bag/Phase #2																					

Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--																		
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.294</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.213</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.061</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0.621</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.7542</td></tr><tr><td>Manufacturer Fuel Economy</td><td>26.755</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.294	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.213	Drive Trace Energy Economy Rating	0.061	Drive Trace Inertia Work Ratio Rating	0.621	Integrated DC KW-HRS	2.7542	Manufacturer Fuel Economy	26.755		
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	10.294																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	0.213																				
Drive Trace Energy Economy Rating	0.061																				
Drive Trace Inertia Work Ratio Rating	0.621																				
Integrated DC KW-HRS	2.7542																				
Manufacturer Fuel Economy	26.755																				
Charge Depleting Bag/Phase #3																					
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Charge Depleting Bag/Phase #5																					

Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--																		
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Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--																		
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Manufacturer Fuel Economy	31.0942																				
Manufacturer Test Comments		01_MCT_U234147_00_FEDV_Black Badge Spectre (23" Wheels)_A_ETW-7000_RG22_default mode_D; MCT UBE energy = 117066 Wh																			
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail									
Fed	120,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	--	1	0	--	--									
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Fed	120,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	--	1	0	--	--									

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Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--
Emission Control Device Comments	--		
Manufacturer Test Vehicle Comments	vi_U234147_01_FEDV_Black Badge Spectre (22" Wheels)_A_ETW-7000_RG21_default mode_D_on; Axle Ratio front: 8.77; Axle Ratio rear: 8.76; N/V ratio front: 97.6; N/V ratio rear: 97.5; Power (peak) front: 190 kW; Power (peak) rear: 360 kW		

Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--
Test #	VRRG10093964	Test Procedure	77 - Multi-Cycle Test (MCT)
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	03/27/2026	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Assigned
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4842	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	230	Recharge Event Energy (kiloWatt-hours)	131.909
Charge Depleting Range (Calculated miles)	451.904	Charge Depleting Range (Actual miles)	451.904
Charge Depleting Range Highway (Calculated miles)	475.691	Derived 5-Cycle Coefficient Model Year	--
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	451.904
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--
Charge Depleting Bag/Phase #1			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.459	
Carbon dioxide		0	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-0.462	
Drive Trace Energy Economy Rating		-0.618	
Drive Trace Inertia Work Ratio Rating		-0.454	
Integrated DC KW-HRS		2.1637	
Manufacturer Fuel Economy		29.0076	
Charge Depleting Bag/Phase #2			

Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	10.293
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	0.288
		Drive Trace Energy Economy Rating	0.02
		Drive Trace Inertia Work Ratio Rating	0.698
		Integrated DC KW-HRS	2.5967
		Manufacturer Fuel Economy	25.2277
Charge Depleting Bag/Phase #3			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	7.465
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	-0.364
		Drive Trace Energy Economy Rating	-0.46
		Drive Trace Inertia Work Ratio Rating	-0.209
		Integrated DC KW-HRS	1.9887
		Manufacturer Fuel Economy	26.6405
Charge Depleting Bag/Phase #4			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	321.115
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	99.99
		Drive Trace Energy Economy Rating	99.99
		Drive Trace Inertia Work Ratio Rating	99.99
		Integrated DC KW-HRS	91.8708
		Manufacturer Fuel Economy	28.6099
Charge Depleting Bag/Phase #5			

Certification Summary Information Report

Test Group	VRRGV00.0R2B	Evaporative/Refueling Family	--
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	7.451
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	-0.55
		Drive Trace Energy Economy Rating	-0.598
		Drive Trace Inertia Work Ratio Rating	-0.591
		Integrated DC KW-HRS	1.8763
		Manufacturer Fuel Economy	25.1824
Charge Depleting Bag/Phase #6			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	10.286
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	0.167
		Drive Trace Energy Economy Rating	-0.048
		Drive Trace Inertia Work Ratio Rating	0.506
		Integrated DC KW-HRS	2.4642
		Manufacturer Fuel Economy	23.9569
Charge Depleting Bag/Phase #7			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	7.456
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	-0.432
		Drive Trace Energy Economy Rating	-0.485
		Drive Trace Inertia Work Ratio Rating	-0.373
		Integrated DC KW-HRS	1.9133
		Manufacturer Fuel Economy	25.6611
Charge Depleting Bag/Phase #8			

Certification Summary Information Report

Test Group				VRRGV00.0R2B				Evaporative/Refueling Family				--																																																																																	
<table><tr><th colspan="4">Test Result/Emission Name</th><th colspan="5">Unrounded Test Result</th></tr><tr><td colspan="4">Actual Distance Driven (miles)</td><td colspan="5">41.718</td></tr><tr><td colspan="4">Carbon dioxide</td><td colspan="5">0</td></tr><tr><td colspan="4">Carbon-Related Exhaust Emissions</td><td colspan="5">0</td></tr><tr><td colspan="4">Drive Trace Absolute Speed Change Rating</td><td colspan="5">99.99</td></tr><tr><td colspan="4">Drive Trace Energy Economy Rating</td><td colspan="5">99.99</td></tr><tr><td colspan="4">Drive Trace Inertia Work Ratio Rating</td><td colspan="5">99.99</td></tr><tr><td colspan="4">Integrated DC KW-HRS</td><td colspan="5">12.1098</td></tr><tr><td colspan="4">Manufacturer Fuel Economy</td><td colspan="5">29.0277</td></tr></table>													Test Result/Emission Name				Unrounded Test Result					Actual Distance Driven (miles)				41.718					Carbon dioxide				0					Carbon-Related Exhaust Emissions				0					Drive Trace Absolute Speed Change Rating				99.99					Drive Trace Energy Economy Rating				99.99					Drive Trace Inertia Work Ratio Rating				99.99					Integrated DC KW-HRS				12.1098					Manufacturer Fuel Economy				29.0277				
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Fuel Properties

Certification Summary Information Report

Test Group		VRRGV00.0R2B			Evaporative/Refueling Family		--		
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code		Cert		
Vehicle Class		LDV/Passenger Car			Standard Level		Federal Tier 4 Bin 0		
Fuel		Electricity			Test Procedure		Multi-Cycle Test (MCT)		

Certification Summary Information Report

Test Group		VRRGV00.0R2B	Evaporative/Refueling Family		--
Glossary					
Useful Life					
4	4,000 miles		120	120,000 miles	
50	50,000 miles		150	150,000 miles	
100	100,000 miles				
Emission Name					
HC-TOTAL	Total Hydrocarbon		COMB-CREE	Combined Carbon-Related Exhaust Emissions	
CO	Carbon Monoxide		COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
CO2	Carbon dioxide		HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
CREE	Carbon-Related Exhaust Emissions		METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
OPT-CREE	Optional Carbon-Related Exhaust Emissions		N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
NOX	Nitrogen Oxide		LEAK-DIA	Effective Leak Diameter (inches)	
PM	Particulate Matter		LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
PM-COMP	SFTP Composite Particulate Matter		CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
HC-NM	Non-methane Hydrocarbon		KW-HRS	Integrated DC KW-HRS	
OMHCE	Organic material Hydrocarbon Equivalent		CH4 BAG 1	Bag 1 Methane	
OMNMHCE	Organic material non-methane HC equivalent		CH4 BAG 2	Bag 2 Methane	
NMOG	Non-methane organic gases		CH4 BAG 3	Bag 3 Methane	
HCHO	Formaldehyde		CH4 BAG 4	Bag 4 Methane	
H3C2HO	Acetaldehyde		CO BAG 1	Bag 1 Carbon Monoxide	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03		CO BAG 2	Bag 2 Carbon Monoxide	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides		CO BAG 3	Bag 3 Carbon Monoxide	
CO-COMP	SFTP Composite Carbon Monoxide		CO BAG 4	Bag 4 Carbon Monoxide	
ETHANOL	C2H5OH - Ethanol		NMOG BAG 1	Bag 1 Non-methane organic gases	
FE BAG 1	Bag 1 Fuel Economy		NMOG BAG 2	Bag 2 Non-methane organic gases	
FE BAG 2	Bag 2 Fuel Economy		NMOG BAG 3	Bag 3 Non-methane organic gases	
FE BAG 3	Bag 3 Fuel Economy		NMOG BAG 4	Bag 4 Non-methane organic gases	
FE BAG 4	Bag 4 Fuel Economy		ACT-DISTANCE BAG 1	Bag 1 Actual Distance	
MFR FE	Manufacturer Fuel Economy		ACT-DISTANCE BAG 2	Bag 2 Actual Distance	
HC	Hydrocarbon for Running Loss and ORVR		ACT-DISTANCE BAG 3	Bag 3 Actual Distance	
METHANE	CH4 - Methane		ACT-DISTANCE BAG 4	Bag 4 Actual Distance	
METHANOL	CH3OH - Methanol		HC-TOTAL BAG 1	Bag 1 Total Hydrocarbon	
N2O	Nitrous Oxide		HC-TOTAL BAG 2	Bag 2 Total Hydrocarbon	
SPITBACK	Spitback Hydrocarbon in grams		HC-TOTAL BAG 3	Bag 3 Total Hydrocarbon	
AMP-HRS	Integrated Amp-hours		HC-TOTAL BAG 4	Bag 4 Total Hydrocarbon	
START-SOC	System Start State of Charge Watt-hours		WATT-HRS BAG 1	Bag 1 Watt Hours	
END-SOC	System End State of Charge Watt-hours		WATT-HRS BAG 2	Bag 2 Watt Hours	

Certification Summary Information Report

Test Group		VRRGV00.0R2B	Evaporative/Refueling Family		--
ACT-DISTANCE	Actual Distance Driven (miles)		WATT-HRS BAG 3	Bag 3 Watt Hours	
AS-VOLT	Average System Voltage		WATT-HRS BAG 4	Bag 4 Watt Hours	
CO2 BAG 1	Bag 1 Carbon Dioxide		WATT-HRS	Watt Hours	
CO2 BAG 2	Bag 2 Carbon Dioxide		HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon	
CO2 BAG 3	Bag 3 Carbon Dioxide		HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon	
CO2 BAG 4	Bag 4 Carbon Dioxide		HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon	
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides		HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon	
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides		N2O BAG 1	Bag 1 Nitrous Oxide	
DT-IWRR	Drive Trace Inertia Work Ratio Rating		N2O BAG 2	Bag 2 Nitrous Oxide	
DT-ASCR	Drive Trace Absolute Speed Change Rating		N2O BAG 3	Bag 3 Nitrous Oxide	
DT-EER	Drive Trace Energy Economy Rating		N2O BAG 4	Bag 4 Nitrous Oxide	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
B2	Federal Tier 2 Bin 2		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
B3	Federal Tier 2 Bin 3		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
B4	Federal Tier 2 Bin 4		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
B5	Federal Tier 2 Bin 5		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
B6	Federal Tier 2 Bin 6		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
B7	Federal Tier 2 Bin 7		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
B8	Federal Tier 2 Bin 8		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
B9	Federal Tier 2 Bin 9		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
B10	Federal Tier 2 Bin 10		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
B11	Federal Tier 2 Bin 11		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2	California LEV-II LEV		L4SULEV100	California LEV-IV SULEV100	
L2OP	California LEV-II LEV Optional		L4SULEV125	California LEV-IV SULEV125	
U2	California LEV-II ULEV		L4SULEV15	California LEV-IV SULEV15	
S2	California LEV-II SULEV		L4SULEV150	California LEV-IV SULEV150	
ZEV	California ZEV		L4SULEV170	California LEV-IV SULEV170	
OT	Other		L4SULEV175	California LEV-IV SULEV175	
T1	Federal Tier 1		L4SULEV20	California LEV-IV SULEV20	
PZEV	California PZEV		L4SULEV200	California LEV-IV SULEV200	
L2LEV160	California LEV-II LEV160		L4SULEV230	California LEV-IV SULEV230	
L2ULEV125	California LEV-II ULEV125		L4SULEV25	California LEV-IV SULEV25	
L2SULEV30	California LEV-II SULEV30		L4SULEV30	California LEV-IV SULEV30	
L2LEV395	California LEV-II LEV395		L4SULEV75	California LEV-IV SULEV75	

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Test Group		VRRGV00.0R2B	Evaporative/Refueling Family		--
L2ULEV340	California LEV-II ULEV340		L4SULEV85	California LEV-IV SULEV85	
L2LEV630	California LEV-II LEV630		L4ULEV125	California LEV-IV ULEV125	
L2ULEV570	California LEV-II ULEV570		L4ULEV200	California LEV-IV ULEV200	
L3LEV160	California LEV-III LEV160		L4ULEV250	California LEV-IV ULEV250	
L3ULEV125	California LEV-III ULEV125		L4ULEV270	California LEV-IV ULEV270	
L3ULEV70	California LEV-III ULEV70		L4ULEV40	California LEV-IV ULEV40	
L3ULEV50	California LEV-III ULEV50		L4ULEV400	California LEV-IV ULEV400	
L3SULEV30	California LEV-III SULEV30		L4ULEV50	California LEV-IV ULEV50	
L3SULEV20	California LEV-III SULEV20		L4ULEV60	California LEV-IV ULEV60	
L3LEV395	California LEV-III LEV395		L4ULEV70	California LEV-IV ULEV70	
L3ULEV340	California LEV-III ULEV340		T4B170	Federal Tier 4 MDV Bin 170	
L3ULEV250	California LEV-III ULEV250		T4B150	Federal Tier 4 MDV Bin 150	
L3ULEV200	California LEV-III ULEV200		T4B125	Federal Tier 4 MDV Bin 125	
L3SULEV170	California LEV-III SULEV170		T4B100	Federal Tier 4 MDV Bin 100	
L3SULEV150	California LEV-III SULEV150		T4B85	Federal Tier 4 MDV Bin 85	
L3LEV630	California LEV-III LEV630		T4B75	Federal Tier 4 MDV Bin 75	
L3ULEV570	California LEV-III ULEV570		T4B70	Federal Tier 4 Bin 70	
L3ULEV400	California LEV-III ULEV400		T4B65	Federal Tier 4 Bin 65	
L3ULEV270	California LEV-III ULEV270		T4B60	Federal Tier 4 Bin 60	
L3SULEV230	California LEV-III SULEV230		T4B55	Federal Tier 4 Bin 55	
L3SULEV200	California LEV-III SULEV200		T4B50	Federal Tier 4 Bin 50	
T3B160	Federal Tier 3 Bin 160		T4B45	Federal Tier 4 Bin 45	
T3B125	Federal Tier 3 Bin 125		T4B40	Federal Tier 4 Bin 40	
T3B110	Federal Tier 3 Transitional Bin 110		T4B35	Federal Tier 4 Bin 35	
T3B85	Federal Tier 3 Transitional Bin 85		T4B30	Federal Tier 4 Bin 30	
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover		T4B25	Federal Tier 4 Bin 25	
T3B70	Federal Tier 3 Bin 70		T4B20	Federal Tier 4 Bin 20	
T3B50	Federal Tier 3 Bin 50		T4B15	Federal Tier 4 Bin 15	
T3B30	Federal Tier 3 Bin 30		T4B10	Federal Tier 4 Bin 10	
T3B20	Federal Tier 3 Bin 20		T4B5	Federal Tier 4 Bin 5	
T3B0	Federal Tier 3 Bin 0		T4B0	Federal Tier 4 Bin 0	
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395				
Transmission Type Code					
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual		
A	Automatic	OT	Other		
AM	Automated Manual	SA	Semi-Automatic		
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)		
Drive System Code					
4	4-Wheel Drive	P	Part-time 4-Wheel Drive		

Certification Summary Information Report

Test Group		VRRGV00.0R2B	Evaporative/Refueling Family		--
F	2-Wheel Drive, Front		A	All Wheel Drive	
R	2-Wheel Drive, Rear				
Additional Terms and Acronyms					
AFC	Alternative Fuel Converter		ICI	Independent Commercial Importer	
CSI	Certificate Summary Information		ORVR	Onboard Refueling Vapor Recovery	
DF	Deterioration Factor		SIL	Shift Indicator Light	
Evap	Evaporation, Evaporative		Trans	Transmission	