

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	12/15/2025 04:12:58 AM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Metal	Fuel Tank Material Description	--				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	No	Air Intake System Vapor Storage Device Description	--				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	170	Number of Primary Canisters	1				
Number of Bleed Canisters	0	Bleed Canister Total Working Capacity (grams)	--				
Mfr Evaporative/Refueling Family Comments	--						
Leak Family Details							
Leak Family Indicator	No						
Canister Bleed Test Indicator	Yes	Applicability of Evaporative Canister Bleed Test	50 State				
Evaporative Canister Bleed Test Comments	--						
CARB Fuel Only (Rig) Test Indicator	No	Applicability of CARB Fuel Only (Rig) Test	--				
CARB Fuel Only (Rig) Test Comments	--						
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	19 - Cullinan	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	9 - Phantom	Federal	2-Wheel Drive, Rear	Semi-Automatic	8	Yes
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	21 - Ghost	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	23 - Phantom Extended	Federal	2-Wheel Drive, Rear	Semi-Automatic	8	Yes
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	24 - Ghost Extended	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	30 - Black Badge Ghost	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Rolls-Royce Motor Cars Limited	1 - Rolls-Royce Motor Cars Limited	31 - Black Badge Cullinan	Federal	All Wheel Drive	Semi-Automatic	8	Yes

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1	
Engine Description				
Hybrid Type	--	Hybrid Description	--	
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--	
Engine Block Arrangement	V-shaped engine	Mfr Engine Block Arrangement Description	--	
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	0W30	
Number of Cylinders/Rotors	12	Mechanically Variable Compression Ratio Indicator	N	
After Treatment Device(s) (ATD)				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
3	Other	non coated particular filter	Ceramic	Monolith
4	Other	non coated particular filter	Ceramic	Monolith
Mfr After Treatment Device (ATD) Comments	After Treatment Device #3 and #4: Gasoline Particulate Filter (GPF)			
Direct Ozone Reduction (DOR) Device	Not Equipped			
Mfr Emission Control Device Comments	--			

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Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Engine Configuration Number 1			
Engine Displacement (liters)	6.7	Engine Rated Horsepower	536
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	2
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	variable valve timing at inlet and outlet valves		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	6	Number of Air/Fuel Sensors	4
Air/Fuel Sensor # 1 Type	Air fuel	Air/Fuel Sensor # 1 Description	--
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Air/Fuel Sensor # 3 Type	Air fuel	Air/Fuel Sensor # 3 Description	--
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	--	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	Peak-Torque 627 foot-pounds: Cullinan, Ghost, Ghost Extended; 738 foot-pounds: Phantom, Phantom Extended, Black Badge Ghost, Black Badge Cullinan		

Official Test Numbers

Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City	EPA City	EPA	EPA	CREE
							Litmus Value	Litmus Threshold	Highway Litmus Value	Highway Litmus Threshold	
Gasoline		VRRG10093091	VRRG10093093	VRRG10093094	VRRG10093095	VRRG10093092	9.2	8.7	15.6	12.4	--

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1						
Emission Data Vehicle Information									
Vehicle ID / Configuration	U220031 / 2	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	TRRGV06.7N74	Original Evaporative/Refueling Family	TRRGR0170RR1						
Original Test Vehicle Model Year	2026								
Vehicle Model									
Represented Test Vehicle Make	Rolls Royce	Represented Test Vehicle Model	Black Badge Cullinan						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Drive Source and Fuel#</th> <th style="width: 33%;">Drive Source</th> <th style="width: 33%;">Fuel</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">Combustion Engine</td> <td style="text-align: center;">Gasoline</td> </tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	1	Odometer Correction Factor	1						
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor								
Odometer Correction Units	Miles								
Engine Code	N74B68U2RR31X1	Rated Horsepower	591						
Displacement (liters)	6.7								
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel						
Charge Air Cooler Type	Liquid	Drive Mode While Testing	All Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	6151	Equivalent Test Weight (pounds)	6500						
GVWR (lbs)	7231	N/V Ratio	20.1						
Axle Ratio	2.81								
Transmission Type	Semi-Automatic	# of Transmission Gears	8						
Transmission Lockup	Yes	Creeper Gear	No						
Dynamometer Coefficients:									
Target Coefficients			Set Coefficients						
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)						
City/Highway/Evap	84.6	-0.712	0.03841						
			A (lbf)						
			13						
			B (lbf/mph)						
			-0.106						
			C (lbf/mph**2)						
			0.03128						
			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients						
			19.3						
Emission Control Device Comments									
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Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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Manufacturer Test Vehicle Comments vi_U220031_02_EVAP EDV_Black Badge Cullinan_A_ETW-6500_RG10_E10

Test #	TRRG10089846	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	TRRG10089843	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/10/2024	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	43
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	6570	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.17072	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.18438	--

Manufacturer Test Comments EVAP EDV - 2Day, Black Badge Cullinan

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.1844	0	0.184	0.5	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	TRRG10089851	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	TRRG10089844	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/27/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	58
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	6971	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.19289	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.20832	--

Manufacturer Test Comments EVAP EDV - 3Day, Black Badge Cullinan

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.2083	0.0229	0.231	0.5	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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Test #	TRRG10089848	Test Procedure	24 - Federal fuel refueling test (ORVR)
Exhaust Test # for this Evap Test	TRRG10089842	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/05/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	58
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	6857	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC (Hydrocarbon for Running Loss and ORVR)	0.0245	--

Manufacturer Test Comments EVAP EDV, ORVR, Black Badge Cullinan

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC	0.024	0	0.02	0.2	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	TRRG10089852	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	TRRG10089844	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/27/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	58
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	6943	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC (Hydrocarbon for Running Loss and ORVR)	0.0002	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0002	--

Manufacturer Test Comments EVAP EDV - RL, Black Badge Cullinan

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0	0	0	0.05	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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Test #	TRRG10089849	Test Procedure	65 - Evap Canister Bleed Test
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	01/22/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	43
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	6686	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.0097	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.01048	--

Manufacturer Test Comments EVAP EDV - BLEED, Black Badge Cullinan

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.0105	0	0.01	0.02	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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Test #	TRRG10089850	Test Procedure	67 - Leak Test - Port Near Canister
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/03/2024	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	43
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	6495	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
LEAK-DIA (Effective Leak Diameter (inches))	0.006	--

Manufacturer Test Comments EVAP EDV - Leak Test, Black Badge Cullinan

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	LEAK-DIA	0.006	0	0.01	0.02	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1						
Emission Data Vehicle Information									
Vehicle ID / Configuration	U231648 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	VRRGV06.7N74	Original Evaporative/Refueling Family	VRRGR0170RR1						
Original Test Vehicle Model Year	2027								
Vehicle Model									
Represented Test Vehicle Make	Rolls Royce	Represented Test Vehicle Model	Black Badge Cullinan						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>			Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	1	Odometer Correction Factor	1						
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor								
Odometer Correction Units	Miles								
Engine Code	N74B68M2RR31X1	Rated Horsepower	536						
Displacement (liters)	6.7								
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel						
Charge Air Cooler Type	Liquid	Drive Mode While Testing	All Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	6160	Equivalent Test Weight (pounds)	6500						
GVWR (lbs)	7231	N/V Ratio	20.1						
Axle Ratio	2.81								
Transmission Type	Semi-Automatic	# of Transmission Gears	8						
Transmission Lockup	Yes	Creeper Gear	No						

Certification Summary Information Report

Test Group		VRRGV06.7N74			Evaporative/Refueling Family			VRRGR0170RR1
Dynamometer Coefficients:								
		Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	83.7	-0.714	0.03841	1.2	-0.237	0.0331	19.2	
Cold CO	92.1	-0.785	0.04225	-4.5	-0.161	0.03377	N/A	
US06	83.7	-0.714	0.03841	1.2	-0.237	0.0331	N/A	
Emission Control Device Comments	--							
Manufacturer Test Vehicle Comments	vi_U231648_00_EDV_Black Badge Cullinan_A_ETW-6500_RG10_low Button on_D							

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093091	Test Procedure	31 - Federal fuel 3-day exhaust
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/07/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3667	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			

Certification Summary Information Report

Test Group		VRRGV06.7N74			Evaporative/Refueling Family					VRRGR0170RR1		
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	Other	CREE	797	--	--	--	0.1	--	797	--	--
Fed	120,000 miles	Other	METHANE	0.0014	--	--	--	0.0012	--	0.003	0.030	Pass
Fed	120,000 miles	Other	N2O	0.001	--	--	--	0	--	0.001	0.010	Pass
Fed	150,000 miles	Other	CO	0.03	--	--	--	0.05	--	0.1	1.7	Pass
Fed	150,000 miles	Other	NMOG	0.0086	--	1.1	--	0.0017	--	0.01	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0192	--	--	--	--	--	0.028	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0106	--	--	--	0.0075	--	0.018	99.999	Pass
Fed	150,000 miles	Other	PM	0.00013	--	--	--	0	--	0.0001	0.0005	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093095	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	11/14/2025	Fuel	Gasoline
Fuel Batch ID	COE10	Fuel Calibration Number	61
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4337	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	1039.035645	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	1.6303	--	
FE BAG 1 (Bag 1 Fuel Economy)	8.3	8.3	
CH4 BAG 1 (Bag 1 Methane)	0.0659	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.2296	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	999.857239	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0.0147	--	
FE BAG 2 (Bag 2 Fuel Economy)	8.7	8.7	
CH4 BAG 2 (Bag 2 Methane)	0	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0017	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	766.87207	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0.2445	--	
FE BAG 3 (Bag 3 Fuel Economy)	11.3	11.3	
CH4 BAG 3 (Bag 3 Methane)	0.0089	--	
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0.0032	--	
METHANE (CH4 - Methane)	0.0161	--	
CO (Carbon Monoxide)	0.412648	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.842	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.452	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.911	--	
MFR FE (Manufacturer Fuel Economy)	9.2	9.2	
NOX (Nitrogen Oxide)	0.008848	--	
N2O (Nitrous Oxide)	0.000414	--	
HC-NM (Non-methane Hydrocarbon)	0.044913	--	
NMOG (Non-methane organic gases)	0.049289	--	
PM (Particulate Matter)	0.00012	--	
HC-TOTAL (Total Hydrocarbon)	0.060361	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	945	--	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	943.987366	--	

Manufacturer Test Comments

05_FTPCOLD_U231648_00_EDV_Black Badge Cullinan_A_ETW-6500_RG10_low Button on_D

Certification Summary Information Report

Test Group		VRRGV06.7N74			Evaporative/Refueling Family					VRRGR0170RR1		
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	150,000 miles	Other	CO	0.41	--	--	--	0.05	--	0.5	10.0	Pass
Fed	150,000 miles	Other	NMOG	0.0493	--	1.1	--	0.0017	--	0.051	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0581	--	--	--	--	--	0.067	0.300	Pass
Fed	150,000 miles	Other	NOX	0.0088	--	--	--	0.0075	--	0.016	99.999	Pass
Fed	150,000 miles	Other	PM	0.00012	--	--	--	0	--	0.0001	0.0005	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093096	Test Procedure	49 - Quick-Driveway (QD)
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/15/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3822	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			

Certification Summary Information Report

Test Group		VRRGV06.7N74			Evaporative/Refueling Family					VRRGR0170RR1		
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	150,000 miles	Other	NMOG	0.0072	--	1.1	--	0.0017	--	0.009	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0176	--	--	--	--	--	0.027	0.082	Pass
Fed	150,000 miles	Other	NOX	0.0104	--	--	--	0.0075	--	0.018	99.999	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093097	Test Procedure	57 - Partial Soak (PS) - 10 minute
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/13/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3791	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			

Certification Summary Information Report

Test Group		VRRGV06.7N74				Evaporative/Refueling Family				VRRGR0170RR1		
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	150,000 miles	Other	NMOG	0.0007	--	1.1	--	0.0007	--	0.001	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0098	--	--	--	--	--	0.013	0.035	Pass
Fed	150,000 miles	Other	NOX	0.0091	--	--	--	0.0028	--	0.012	99.999	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093098	Test Procedure	58 - Partial Soak (PS) - 40 minute
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/20/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3961	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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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	150,000 miles	Other	NMOG	0.0011	--	1.1	--	0.0017	--	0.003	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0123	--	--	--	--	--	0.022	0.054	Pass
Fed	150,000 miles	Other	NOX	0.0112	--	--	--	0.0075	--	0.019	99.999	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093099	Test Procedure	59 - Partial Soak (PS) - 3 to 12 hour
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	11/04/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4247	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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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	150,000 miles	Other	NMOG	0.0082	--	1.1	--	0.0017	--	0.01	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0202	--	--	--	--	--	0.029	0.070	Pass
Fed	150,000 miles	Other	NOX	0.012	--	--	--	0.0075	--	0.02	99.999	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093092	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/07/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3685	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.008685	--
CO (Carbon Monoxide)	0.11485	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.788518	--
DT-EER (Drive Trace Energy Economy Rating)	-0.051996	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	7.767969	--
MFR FE (Manufacturer Fuel Economy)	17.6	17.6
NOX (Nitrogen Oxide)	0.002919	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.012412	--
NMOG (Non-methane organic gases)	0.012785	--
HC-TOTAL (Total Hydrocarbon)	0.020794	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	493	493

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	492.936707	--

Manufacturer Test Comments

02_HWFET_U231648_00_EDV_Black Badge Cullinan_A_ETW-6500_RG10_low Button on_D

Certification Summary Information Report

Test Group		VRRGV06.7N74				Evaporative/Refueling Family				VRRGR0170RR1		
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	Other	CREE	493	--	--	--	0.1	--	493	--	--
Fed	150,000 miles	Other	CO	0.11	--	--	--	0.05	--	0.2	1.7	Pass
Fed	150,000 miles	Other	NMOG	0.0128	--	1.03	--	0.0017	--	0.014	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0157	--	--	--	--	--	0.025	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0029	--	--	--	0.0075	--	0.01	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093093	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/07/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3718	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	919.5274658	--
CO BAG 1 (Bag 1 Carbon Monoxide)	0.0235	--
FE BAG 1 (Bag 1 Fuel Economy)	9.4	9.4
CH4 BAG 1 (Bag 1 Methane)	0.0001	--
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.0063	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	496.5996093	--
CO BAG 2 (Bag 2 Carbon Monoxide)	0.083	--
FE BAG 2 (Bag 2 Fuel Economy)	17.5	17.5
CH4 BAG 2 (Bag 2 Methane)	0.0038	--
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0113	--
METHANE (CH4 - Methane)	0.0029473	--
CO (Carbon Monoxide)	0.069736	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-2.4641742	--
DT-EER (Drive Trace Energy Economy Rating)	-1.4756746	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-4.3157486	--
MFR FE (Manufacturer Fuel Economy)	14.7	14.7
NOX (Nitrogen Oxide)	0.0102542	--
HC-NM (Non-methane Hydrocarbon)	0.0098795	--
NMOG (Non-methane organic gases)	0.0101759	--
PM (Particulate Matter)	0.0002634	--
HC-TOTAL (Total Hydrocarbon)	0.0127239	--

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	591	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	590.7568969	--

Manufacturer Test Comments 03_US06_U231648_00_EDV_Black Badge Cullinan_A_ETW-6500_RG10_low Button on_D

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	150,000 miles	Other	CO	0.07	--	--	--	0.05	--	0.1	9.6	Pass
Fed	150,000 miles	Other	NMOG	0.0102	--	1.03	--	0.0017	--	0.012	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0205	--	--	--	--	--	0.03	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0103	--	--	--	0.0075	--	0.018	99.999	Pass
Fed	150,000 miles	Other	PM	0.00026	--	--	--	0	--	0.0003	0.0005	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093094	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/10/2025	Fuel	Gasoline
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3773	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.000701	--
CO (Carbon Monoxide)	0.286246	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.335337	--
DT-EER (Drive Trace Energy Economy Rating)	-0.112692	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.021582	--
MFR FE (Manufacturer Fuel Economy)	11.1	11.1
NOX (Nitrogen Oxide)	0.012614	--
HC-NM (Non-methane Hydrocarbon)	0.000019	--
NMOG (Non-methane organic gases)	0.00002	--
HC-TOTAL (Total Hydrocarbon)	0.000686	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	783	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	783.363831	--

Manufacturer Test Comments

04_SC03_U231648_00_EDV_Black Badge Cullinan_A_ETW-6500_RG10_low Button on_D

Certification Summary Information Report

Test Group		VRRGV06.7N74				Evaporative/Refueling Family				VRRGR0170RR1		
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	150,000 miles	Other	CO	0.29	--	--	--	0.05	--	0.3	1.7	Pass
Fed	150,000 miles	Other	NMOG	0	--	1.03	--	0.0017	--	0.002	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0126	--	--	--	--	--	0.022	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0126	--	--	--	0.0075	--	0.02	99.999	Pass

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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Emission Data Vehicle Information

Vehicle ID / Configuration	U231648 / 1	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	VRRGV06.7N74	Original Evaporative/Refueling Family	VRRGR0170RR1
Original Test Vehicle Model Year	2027		
Vehicle Model			
Represented Test Vehicle Make	Rolls Royce	Represented Test Vehicle Model	Black Badge Cullinan

Leak Family Details

Leak Family Identifier	--	Leak Family Name	--
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Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No	Multiple Fuel Combustion	--
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Fuel Cell Indicator	--	Rechargeable Energy Storage System, if 'Other'	--
Rechargeable Energy Storage System	--		
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	1	Odometer Correction Factor	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	N74B68M2RR31X1	Rated Horsepower	536
Displacement (liters)	6.7		
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel
Charge Air Cooler Type	Liquid	Drive Mode While Testing	All Wheel Drive
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	6160	Equivalent Test Weight (pounds)	6500
GVWR (lbs)	7231	N/V Ratio	20.1
Axle Ratio	2.81		
Transmission Type	Semi-Automatic	# of Transmission Gears	8
Transmission Lockup	Yes	Creeper Gear	No

Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	83.7	-0.714	0.03785	-0.6	-0.181	0.03238	19
US06	83.7	-0.714	0.03785	-0.6	-0.181	0.03238	N/A

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Emission Control Device Comments	--		
Manufacturer Test Vehicle Comments	vi_U231648_01_FEDV_Black Badge Cullinan_A_ETW-6500_RG11_default mode_D		

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093102	Test Procedure	31 - Federal fuel 3-day exhaust
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	10/24/2025	Fuel	Gasoline
Fuel Batch ID	T2/E0	Fuel Calibration Number	53
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4068	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	670.242126	--
FE BAG 1 (Bag 1 Fuel Economy)	13	13
CO2 BAG 2 (Bag 2 Carbon Dioxide)	701.286926	--
FE BAG 2 (Bag 2 Fuel Economy)	12.5	12.5
CO2 BAG 3 (Bag 3 Carbon Dioxide)	548.797302	--
FE BAG 3 (Bag 3 Fuel Economy)	15.9	15.9
METHANE (CH4 - Methane)	0.003505	--
CO (Carbon Monoxide)	0.260918	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.414	--
DT-EER (Drive Trace Energy Economy Rating)	0.089	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.922	--
MFR FE (Manufacturer Fuel Economy)	13.4	13.4
NOX (Nitrogen Oxide)	0.017034	--
N2O (Nitrous Oxide)	0.000598	--
HC-NM (Non-methane Hydrocarbon)	0.013729	--
NMOG (Non-methane organic gases)	0.014144	--
PM (Particulate Matter)	0.000182	--
HC-TOTAL (Total Hydrocarbon)	0.017116	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	653	653

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	652.993469	--

Manufacturer Test Comments 01_FTP_U231648_01_FEDV_Black Badge Cullinan_A_ETW-6500_RG11_default mode_D

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	Other	CREE	653	--	--	--	0.1	--	653	--	--
Fed	120,000 miles	Other	METHANE	0.0035	--	--	--	0.0012	--	0.005	0.030	Pass
Fed	120,000 miles	Other	N2O	0.0006	--	--	--	0	--	0.001	0.010	Pass
Fed	150,000 miles	Other	CO	0.26	--	--	--	0.05	--	0.3	1.7	Pass
Fed	150,000 miles	Other	NMOG	0.0141	--	1.1	--	0.0017	--	0.016	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0311	--	--	--	--	--	0.04	0.070	Pass
Fed	150,000 miles	Other	NOX	0.017	--	--	--	0.0075	--	0.024	99.999	Pass
Fed	150,000 miles	Other	PM	0.00018	--	--	--	0	--	0.0002	0.0005	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Test #	VRRG10093103	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	11/03/2025	Fuel	Gasoline
Fuel Batch ID	T2/E0	Fuel Calibration Number	57
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	EETZ		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4202	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0.000185	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.530142	--
DT-EER (Drive Trace Energy Economy Rating)	-0.553296	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.04469	--
MFR FE (Manufacturer Fuel Economy)	24.7	24.7
NOX (Nitrogen Oxide)	0.007643	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	355	355

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	354.72879	--

Manufacturer Test Comments

02_HWFET_U231648_01_FEDV_Black Badge Cullinan_A_ETW-6500_RG11_default mode_D

Certification Summary Information Report

Test Group		VRRGV06.7N74			Evaporative/Refueling Family					VRRGR0170RR1		
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	Other	CREE	355	--	--	--	0.1	--	355	--	--
Fed	150,000 miles	Other	CO	0	--	--	--	0.05	--	0	1.7	Pass
Fed	150,000 miles	Other	NMOG	0	--	1.03	--	0.0017	--	0.002	99.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0076	--	--	--	--	--	0.017	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0076	--	--	--	0.0075	--	0.015	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Fuel Properties			
Fuel Batch ID	T10/87	Fuel Calibration Number	60
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	04/15/2025
Fuel Batch Calibration Effective Date	07/31/2025	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	0.827	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.746
Fuel Ethanol Volume Percent (%)	9.7	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	--
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.82	Fuel Carbon Mass Fraction (E10)	0.827
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--
Fuel Batch ID	T10/87	Fuel Calibration Number	58
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/25/2024
Fuel Batch Calibration Effective Date	01/22/2025	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	0.827	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.745
Fuel Ethanol Volume Percent (%)	9.7	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17975
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.827	Weight Fraction CO2	--
Fuel Batch ID	T10/87	Fuel Calibration Number	43
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	11/27/2023
Fuel Batch Calibration Effective Date	02/27/2024	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	0.827	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.746
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17962
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.827	Weight Fraction CO2	--
Fuel Batch ID	T2/E0	Fuel Calibration Number	57
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	11/26/2024
Fuel Batch Calibration Effective Date	12/11/2024	Fuel Batch Calibration Ineffective Date	--

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	0.862	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.737
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18727
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.862	Weight Fraction CO2	--
Fuel Batch ID	COE10	Fuel Calibration Number	61
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	10/25/2024
Fuel Batch Calibration Effective Date	10/24/2025	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	0.827	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.743
Fuel Ethanol Volume Percent (%)	9.5	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	--
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.92	Fuel Carbon Mass Fraction (E10)	0.827
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--
Fuel Batch ID	T2/E0	Fuel Calibration Number	53
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	02/21/2024
Fuel Batch Calibration Effective Date	02/27/2024	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	0.861	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.736
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18732
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.861	Weight Fraction CO2	--

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1						
Consolidated List of Standards									
Exhaust Standards									
Cert Region	Federal	Cert/In-Use Code	Cert						
Vehicle Class	LDV/Passenger Car	Standard Level	Other						
Fuel	Gasoline	Test Procedure	SC03						
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	0	--	--	0.05	1.7
150,000 miles	NMOG	--	--	1.03	0	--	--	0.0017	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	0	--	--	0.0075	99.999
Cert Region				Federal	Cert/In-Use Code	Cert			
Vehicle Class				LDV/Passenger Car	Standard Level	Other			
Fuel				Gasoline	Test Procedure	Federal fuel 3-day exhaust			
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	0.1	--	--	0.1	999.999
120,000 miles	METHANE	--	--	--	0	--	--	0.0012	0.030
120,000 miles	N2O	--	--	--	--	--	--	0	0.010
150,000 miles	CO	--	--	--	0	--	--	0.05	1.7
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	0	--	--	0.0017	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	0	--	--	0.0075	99.999
150,000 miles	PM	--	--	--	0	--	--	0	0.0005

Certification Summary Information Report

Test Group		VRRGV06.7N74			Evaporative/Refueling Family			VRRGR0170RR1		
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Other		
Fuel		Gasoline			Test Procedure			HWFE		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
120,000 miles	CREE	--	--	--	0.1	--	--	0.1	999.999	
150,000 miles	CO	--	--	--	0	--	--	0.05	1.7	
150,000 miles	NMOG	--	--	1.03	0	--	--	0.0017	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070	
150,000 miles	NOX	--	--	--	0	--	--	0.0075	99.999	

Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Other		
Fuel		Gasoline			Test Procedure			Quick-Driveway (QD)		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	NMOG	--	--	1.1	0	--	--	0.0017	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.082	
150,000 miles	NOX	--	--	--	0	--	--	0.0075	99.999	

Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Other		
Fuel		Gasoline			Test Procedure			Cold CO		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	CO	--	--	--	0	--	--	0.05	10.0	
150,000 miles	NMOG	--	--	1.1	0	--	--	0.0017	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.300	
150,000 miles	NOX	--	--	--	0	--	--	0.0075	99.999	
150,000 miles	PM	--	--	--	0	--	--	0	0.0005	

Certification Summary Information Report

Test Group		VRRGV06.7N74			Evaporative/Refueling Family			VRRGR0170RR1		
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Other		
Fuel		Gasoline			Test Procedure			US06		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	CO	--	--	--	0	--	--	0.05	9.6	
150,000 miles	NMOG	--	--	1.03	0	--	--	0.0017	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070	
150,000 miles	NOX	--	--	--	0	--	--	0.0075	99.999	
150,000 miles	PM	--	--	--	0	--	--	0	0.0005	

Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Other		
Fuel		Gasoline			Test Procedure			Partial Soak (PS) - 3 to 12 hour		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	NMOG	--	--	1.1	0	--	--	0.0017	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070	
150,000 miles	NOX	--	--	--	0	--	--	0.0075	99.999	

Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Other		
Fuel		Gasoline			Test Procedure			Partial Soak (PS) - 10 minute		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	NMOG	--	--	1.1	0	--	--	0.0007	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.035	
150,000 miles	NOX	--	--	--	0	--	--	0.0028	99.999	

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
Cert Region	Federal	Cert/In-Use Code	Cert
Vehicle Class	LDV/Passenger Car	Standard Level	Other
Fuel	Gasoline	Test Procedure	Partial Soak (PS) - 40 minute

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	--	1.1	0	--	--	0.0017	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.054
150,000 miles	NOX	--	--	--	0	--	--	0.0075	99.999

Evaporative/Refueling Standards

Evaporative/Refueling Family	VRRGR0170RR1	Cert Region	Federal
Cert/In-Use Code	Cert	Standard Level	Federal Tier 3 Evap
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	0

Evaporative/Refueling Family	VRRGR0170RR1	Cert Region	Federal
Cert/In-Use Code	Cert	Standard Level	Federal Tier 3 Evap
Test Procedure	2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0

Evaporative/Refueling Family	VRRGR0170RR1	Cert Region	Federal
Cert/In-Use Code	Cert	Standard Level	Federal Tier 3 Evap
Test Procedure	Federal Fuel Running Loss		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0

Evaporative/Refueling Family	VRRGR0170RR1	Cert Region	Federal
Cert/In-Use Code	Cert	Standard Level	Federal Tier 3 Evap
Test Procedure	Leak Test - Port Near Canister		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	LEAK-DIA	--	0.02	0

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1		
Evaporative/Refueling Family	VRRGR0170RR1	Cert Region	Federal		
Cert/In-Use Code	Cert	Standard Level	Federal Tier 3 Evap		
Test Procedure	Federal fuel 3-day evap				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0229
Evaporative/Refueling Family	VRRGR0170RR1	Cert Region	Federal		
Cert/In-Use Code	Cert	Standard Level	Federal Tier 3 Evap		
Test Procedure	Federal fuel refueling test (ORVR)				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC	--	0.20	0

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family	VRRGR0170RR1
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	AS-VOLT	Average System Voltage
CO	Carbon Monoxide	CO2 BAG 1	Bag 1 Carbon Dioxide
CO2	Carbon dioxide	CO2 BAG 2	Bag 2 Carbon Dioxide
CREE	Carbon-Related Exhaust Emissions	CO2 BAG 3	Bag 3 Carbon Dioxide
OPT-CREE	Optional Carbon-Related Exhaust Emissions	CO2 BAG 4	Bag 4 Carbon Dioxide
NOX	Nitrogen Oxide	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides
PM	Particulate Matter	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides
PM-COMP	SFTP Composite Particulate Matter	DT-IWRR	Drive Trace Inertia Work Ratio Rating
HC-NM	Non-methane Hydrocarbon	DT-ASCR	Drive Trace Absolute Speed Change Rating
OMHCE	Organic material Hydrocarbon Equivalent	DT-EER	Drive Trace Energy Economy Rating
OMNMHCE	Organic material non-methane HC equivalent	COMB-CREE	Combined Carbon-Related Exhaust Emissions
NMOG	Non-methane organic gases	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
HCHO	Formaldehyde	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
H3C2HO	Acetaldehyde	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	LEAK-DIA	Effective Leak Diameter (inches)
CO-COMP	SFTP Composite Carbon Monoxide	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
ETHANOL	C2H5OH - Ethanol	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
FE BAG 1	Bag 1 Fuel Economy	KW-HRS	Integrated DC KW-HRS
FE BAG 2	Bag 2 Fuel Economy	CH4 BAG 1	Bag 1 Methane
FE BAG 3	Bag 3 Fuel Economy	CH4 BAG 2	Bag 2 Methane
FE BAG 4	Bag 4 Fuel Economy	CH4 BAG 3	Bag 3 Methane
MFR FE	Manufacturer Fuel Economy	CH4 BAG 4	Bag 4 Methane
HC	Hydrocarbon for Running Loss and ORVR	CO BAG 1	Bag 1 Carbon Monoxide
METHANE	CH4 - Methane	CO BAG 2	Bag 2 Carbon Monoxide
METHANOL	CH3OH - Methanol	CO BAG 3	Bag 3 Carbon Monoxide
N2O	Nitrous Oxide	CO BAG 4	Bag 4 Carbon Monoxide
SPITBACK	Spitback Hydrocarbon in grams	NMOG BAG 1	Bag 1 Non-methane organic gases
AMP-HRS	Integrated Amp-hours	NMOG BAG 2	Bag 2 Non-methane organic gases
START-SOC	System Start State of Charge Watt-hours	NMOG BAG 3	Bag 3 Non-methane organic gases
END-SOC	System End State of Charge Watt-hours	NMOG BAG 4	Bag 4 Non-methane organic gases
ACT-DISTANCE	Actual Distance Driven (miles)		

Certification Summary Information Report

Test Group	VRRGV06.7N74	Evaporative/Refueling Family		VRRGR0170RR1
CA	California + CAA Section 177 states	FA	Federal	
Exhaust Emission Standard Level				
B1	Federal Tier 2 Bin 1	T3B160	Federal Tier 3 Bin 160	
B2	Federal Tier 2 Bin 2	T3B125	Federal Tier 3 Bin 125	
B3	Federal Tier 2 Bin 3	T3B110	Federal Tier 3 Transitional Bin 110	
B4	Federal Tier 2 Bin 4	T3B85	Federal Tier 3 Transitional Bin 85	
B5	Federal Tier 2 Bin 5	T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
B6	Federal Tier 2 Bin 6	T3B70	Federal Tier 3 Bin 70	
B7	Federal Tier 2 Bin 7	T3B50	Federal Tier 3 Bin 50	
B8	Federal Tier 2 Bin 8	T3B30	Federal Tier 3 Bin 30	
B9	Federal Tier 2 Bin 9	T3B20	Federal Tier 3 Bin 20	
B10	Federal Tier 2 Bin 10	T3B0	Federal Tier 3 Bin 0	
B11	Federal Tier 2 Bin 11	HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2	California LEV-II LEV	HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2OP	California LEV-II LEV Optional	HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
U2	California LEV-II ULEV	HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
S2	California LEV-II SULEV	HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
ZEV	California ZEV	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
OT	Other	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
T1	Federal Tier 1	HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
PZEV	California PZEV	HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L2LEV160	California LEV-II LEV160	HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L2ULEV125	California LEV-II ULEV125	HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L2SULEV30	California LEV-II SULEV30	HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2LEV395	California LEV-II LEV395	L4SULEV100	California LEV-IV SULEV100	
L2ULEV340	California LEV-II ULEV340	L4SULEV125	California LEV-IV SULEV125	
L2LEV630	California LEV-II LEV630	L4SULEV15	California LEV-IV SULEV15	
L2ULEV570	California LEV-II ULEV570	L4SULEV150	California LEV-IV SULEV150	
L3LEV160	California LEV-III LEV160	L4SULEV170	California LEV-IV SULEV170	
L3ULEV125	California LEV-III ULEV125	L4SULEV175	California LEV-IV SULEV175	
L3ULEV70	California LEV-III ULEV70	L4SULEV20	California LEV-IV SULEV20	
L3ULEV50	California LEV-III ULEV50	L4SULEV200	California LEV-IV SULEV200	
L3SULEV30	California LEV-III SULEV30	L4SULEV230	California LEV-IV SULEV230	
L3SULEV20	California LEV-III SULEV20	L4SULEV25	California LEV-IV SULEV25	
L3LEV395	California LEV-III LEV395	L4SULEV30	California LEV-IV SULEV30	
L3ULEV340	California LEV-III ULEV340	L4SULEV75	California LEV-IV SULEV75	
L3ULEV250	California LEV-III ULEV250	L4SULEV85	California LEV-IV SULEV85	
L3ULEV200	California LEV-III ULEV200	L4ULEV125	California LEV-IV ULEV125	

Certification Summary Information Report

Test Group		VRRGV06.7N74	Evaporative/Refueling Family		VRRGR0170RR1
L3SULEV170	California LEV-III SULEV170		L4ULEV200	California LEV-IV ULEV200	
L3SULEV150	California LEV-III SULEV150		L4ULEV250	California LEV-IV ULEV250	
L3LEV630	California LEV-III LEV630		L4ULEV270	California LEV-IV ULEV270	
L3ULEV570	California LEV-III ULEV570		L4ULEV40	California LEV-IV ULEV40	
L3ULEV400	California LEV-III ULEV400		L4ULEV400	California LEV-IV ULEV400	
L3ULEV270	California LEV-III ULEV270		L4ULEV50	California LEV-IV ULEV50	
L3SULEV230	California LEV-III SULEV230		L4ULEV60	California LEV-IV ULEV60	
L3SULEV200	California LEV-III SULEV200		L4ULEV70	California LEV-IV ULEV70	
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	
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	