

Kim, Seong Hun

From: noreply@salesforce.com on behalf of California Air <mscertfees@arb.ca.gov>
Sent: Wednesday, March 11, 2026 10:48 AM
To: Kim, Seong Hun
Subject: [From: External] MS Fee Payment Confirmation for Invoice MSF250739
Attachments: MSF250739 - signed.pdf

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Seong Hun Kim

Attached is documentation for your MS Fee payment for Invoice Name MSF250739. Please include a copy of this invoice and email with each application that is listed when submitting your application to the applicable MS Fee program.

1. Payment ID – 25RA0325
2. Date of Payment – 3/10/2026
3. Payment Status - Paid



MOBILE SOURCE CERTIFICATION AND COMPLIANCE FEE PAYMENT FORM FOR ON-ROAD APPLICATIONS ONLY

CARB USE ONLY

Invoice Name	MSF250739
Invoice Date	Jan 27, 2026

COMPANY INFORMATION

Company Name	Volkswagen Group of America, Inc.
Address	3800 Hamlin Road
City	Auburn Hills
State	MI
Zip	48326
Country	United States
Contact Name	Seong Hun Kim
Contact Telephone Number	2489314347
Contact Email	sunny.kim@vw.com
CARB Customer Number	CCAM000085

APPLICATION INFORMATION

Payment Row Number	Product Description or File Name	Model Year/Calendar Year	Unique Application Identifier: Test Group, Engine Family, Trailer Family, Vehicle Family, ZEP Family, if applicable (ID listed in payment row must match the unique identifier given to the certification application)	Category Type	Fee Type	Amount
1	VW_Taos	Model Year 2027	VVGAJ01.5V2L	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
2	VW_Jetta GLI	Model Year 2027	VVGAV02.0V3A	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
3	VW_Golf R,GTI	Model Year 2027	VVGAV02.0V7B	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
4	VW_Jetta	Model Year 2027	VVGAV01.5V2Q	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
Total Due						\$ 201,236.00

I, Tony D'Ambrosi
Tony dAmbrosi (Jan 27, 2026 14:25:46 EST) , attest that any information provided is true, accurate, and complete.
(Responsible Party Signature Here)



Volkswagen, a member of the Volkswagen Group

Application for Emissions Certification

2027 Model Year

Durability Group: VVGAGPGNNV7A

Evap. Family: VVGAR0139VCA

Test Group: VVGAV02.0V7B

Certificate Number: VVGAV02.0V7B -XXX

Durability Group Description: Four Stroke, Otto Cycle, Gasoline Fueled, Direct Fuel Injection, Catalyst Code: JM835

Test Group Description:

2.0 Liter Turbocharged I4 LDV
CAC/DFI/TC/WR-HO2S/HO2S/TWC

Applicable Exhaust Standards: 50 State

Federal: Tier 4 interim Bin 70
California: LEV III ULEV70

Applicable Evaporative Standards: 50 State

Federal: Tier 3 FEL: 300mg
California: LEV III FEL: 300mg

Carlines Covered: Golf GTI, Golf-R

Vehicles Tested:

VID	Config.	Test Type / #	Test Type / #
VW48302-0042	0	FTP / NVGA91004862	Cold CO / NVGA10071098
		HFET / NVGA91004860	US06 / NVGA91004861
		SC03 / NVGA10071104	50° F FTP/ NVGA10071105
VW38003-0082	0	2-Day / PVGA10074775	ORVR / PVGA10074778
		3-Day / PVGA10074776	Running Loss / PVGA10074779
		BETP / PVGA10074777	

Initial: 05/21/2026

Questions, Contact:

EEO Office, Auburn Hills, Michigan

Table of Contents

Section 01	Correspondence and Communications
Section 02	Durability Group Description
Section 03	Evaporative/Refueling Family Description
Section 04	Durability Procedure Description
Section 05	Test Group Description
Section 06	Test Vehicle Description
Section 07	Test Results
Section 08	Emission Testing Waiver Statements
Section 09	OBD System Description
Section 10	Description of Alternate-fueled Vehicles
Section 11	AECD Description
Section 12	Description of vehicles covered by certificate and test parameters
Section 13	Projected Sales
Section 14	Request for Certificate
Section 15	Other Information
Section 16	Confidential Information
Section 17	California ARB Information

1. Correspondence and Communication

Please refer to the Common Section

2. Durability Group Description

Durability Source Basics	
Durability Procedure	VW / Audi ADP
Durability Group Name	VVGAGPGNNV7A
Source of Durability Data	VW48302-0044
Relation Factor BAT VWADP / BAT SRC	2.2
Engine Type	Piston
Combustion Method	Otto cycle 4 stroke
Fuel Used	Gasoline
Basic Fuel Metering System	Direct Injection
Displacement [l]	2.0

Catalyst / After treatment device specifics		
	Durability Group Statistics	Durability Data Vehicle
Catalyst Construction		monolith
Precious Metal Composition TWC		Palladium, Rhodium
PTOX TWC		n.a.
NAC:1 SCRC: 2		n.a.
Total Catalyst Volume [l]		2.08
Total Precious Metal Loading [g]		7.34
Precious Metal Load Rate PM [g] / CV [l]		3.53
Cat. Grouping Statistic	3.7	3.7
Durability Group Limit (25% or 0.2 g/l)	2.8	2.8
Test Group Covered		VVGAV02.0V7B

3. Evaporative / Refueling Family Description

		C/O - BETP	
Evaporative / Refueling Family Name		PVGAR0139VCA	VVGAR0139VCA
Vapor storage device	Canister	Yes	Yes
	Other	-	-
Basic canister design	Working Capacity (g)	139	139
	Bed Volume (cm ³)	2230	2230
	Number, config.	1	1
	Geometry	cylinder	cylinder
	Construction	2-chamber	2-chamber
	Bleeding trap	Yes	Yes
	Bleed trap Working Capacity (g)	4	4
	Material	plastic	plastic
Fuel System			
Type of refueling system	Integrated	Yes	Yes
	Non-integrated	-	-
	Other	-	-
Fill pipe seal mechanism	Liquid seal	Yes	Yes
	Mechanical Seal	-	-
	Other	-	-
Method of controlling vapor flow to the engine	Vacuum	-	-
	Purge valve	Yes	Yes
	Other	fuel level ventilation valve	fuel level ventilation valve
Purge control system	Valve type	Duty cycle	Duty cycle
	Control	ECM	ECM
Vapor hose material	4 / multi-layer hose	Yes	Yes
	Stainless Steel	-	-
	Alloy	-	-
Fuel tank material	Metal	-	-
	Plastic	Yes	Yes
	Other	-	-
Test groups combined with this Evap. family			VVGAV02.0V7B VVGAV02.0V3A

4. Durability Procedure Description

Please refer to the Common Section

5.0 Test Group Description

Evap. Family:	VVGAR0139VCA
Test Group Name:	VVGAV02.0V7B
Certificate Number:	VVGAV02.0V7B -XXX
Engine displacements covered:	2.0 liters
Arrangement and number of cylinders:	L4 transverse
Vehicle class(es) covered:	LDV
Federal Emissions Standards Class:	Tier 4 interim Bin 70
California Emissions Standards Class:	LEV III ULEV 70

5.1 Test Group Emission Standards

Please refer to Certification Summary Information Report included in Section 7 for applicable emission standards.

6. Test Vehicle Description

Certificate Number: VVGAV02.0V7B-XXX
Models: Golf GTI, Golf R
Test Group: VVGAV02.0V7B
Evaporative/Refueling Family: VVGAR0139VCA

VID	Config.	Vehicle Type	Tests Performed
VW38003-0082	0	EVAP	3Day Evap, 2Day Evap, Running Loss, ORVR, BETP
VW483020042	0	EDV	FTP, HWY, US06, SC03, Cold FTP, 50deg FTP
VW483020042	0	EDV E0	FTP, HWY
VW38004-0041	1	FEDV	FTP, HWY
VW380070191	0	FEDV	FTP, HWY, US06, SC03, Cold FTP
VW380070175	0	FEDV	FTP, HWY, US06, SC03, Cold FTP

7. Test Results

Please refer to the Certification Summary Information Report.

Certification Summary Information Report

Manufacturer	Volkswagen Group of America, Inc.	Manufacturer Code	VGA
Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	05/27/2026 09:23:48 AM
Model Year	2027		

Test Group Information

CSI Type	Update for Correction	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Spark Ignition Direct fuel injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	No
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	No
Fuel Cell Indicator	No	EPA Vehicle Class	LDV
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	--
Durability Group Name	VVGAGPGNNV7A	Durability Group Equivalency Factor	2.2
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
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	Tier 3	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VVGAV02.0A7N
Test Group OBD Compliance Level	Partial - with deficiencies	Number of Test Group OBD Deficiencies	1
OBD Deficiencies Comments	--		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	03/10/2026 09:55:21 AM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Plastic	Fuel Tank Material Description	HDPE				
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)	139	Number of Primary Canisters	1				
Number of Bleed Canisters	1	Bleed Canister Total Working Capacity (grams)	4				
Mfr Evaporative/Refueling Family Comments	--						
Leak Family Details							
Leak Family Indicator	Yes						
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	--						
Leak Family Name	Applicability of Leak Family Requirements	Leak Family Standard (inches)	Leak Family Description				
VVGAR0139VCA-001	50 State	0.02	--				
Models Covered by this Certificate							
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Volkswagen Group of America, Inc.	1 - Volkswagen	212 - Golf R	Federal	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Volkswagen Group of America, Inc.	1 - Volkswagen	211 - Golf GTI	California + CAA Section 177 states	2-Wheel Drive, Front	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Volkswagen Group of America, Inc.	1 - Volkswagen	212 - Golf R	California + CAA Section 177 states	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Volkswagen Group of America, Inc.	1 - Volkswagen	211 - Golf GTI	Federal	2-Wheel Drive, Front	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA	
Engine Description				
Hybrid Type	--	Hybrid Description	--	
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--	
Engine Block Arrangement	Inline	Mfr Engine Block Arrangement Description	--	
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	0W30 VW50200 / VW50400	
Number of Cylinders/Rotors	4	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
Mfr After Treatment Device (ATD) Comments				
--				
Direct Ozone Reduction (DOR) Device				
Not Equipped				
Mfr Emission Control Device Comments				
--				
Engine Configuration Number 1				
Engine Displacement (liters)	2.0	Engine Rated Horsepower	241	
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2	
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1	
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Air	
Air Aspiration Drive Method(s)	Mechanical			
Cylinder Deactivation	No			
Cylinder Deactivation Description	--			
Variable Valve Timing	Yes			
Variable Valve Timing System Description	-			
Variable Valve Lift?	Yes			
Variable Valve Lift System Description	-			
Number of Knock Sensors	1	Number of Air/Fuel Sensors	2	
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--	
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--	
Mfr Air/Fuel Sensor Comments	--			
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	No	
EGR Type	Variable Valve Timing Control	Exhaust Gas Recirculation Description if 'Other'	--	
Closed Loop Air Injection System	No			
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--	
Mfr Engine Configuration Comments	Applies to DZMA var: 0			

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA								
Engine Configuration Number 2											
Engine Displacement (liters)	2.0	Engine Rated Horsepower	328								
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2								
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1								
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Air								
Air Aspiration Drive Method(s)	Mechanical										
Cylinder Deactivation	No										
Cylinder Deactivation Description	--										
Variable Valve Timing	Yes										
Variable Valve Timing System Description	-										
Variable Valve Lift?	Yes										
Variable Valve Lift System Description	-										
Number of Knock Sensors	1	Number of Air/Fuel Sensors	2								
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--								
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--								
Mfr Air/Fuel Sensor Comments	--										
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	No								
EGR Type	Variable Valve Timing Control	Exhaust Gas Recirculation Description if 'Other'	--								
Closed Loop Air Injection System	No										
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--								
Mfr Engine Configuration Comments	Applies to DSFD var: 1										
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
Gasoline	NVGA91004862	NVGA91004861	NVGA10071104	NVGA10071098	NVGA91004860	97.0	228.2	999.9	286.1	--	
SFTP LEV-III Official Test Numbers											
Test Group Fuel	FTP	US06	SC03								
Gasoline	NVGA91004862	NVGA91004861	NVGA10071104								

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA						
Emission Data Vehicle Information									
Vehicle ID / Configuration	VW38003-0082 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	PVGAV02.0V7B	Original Evaporative/Refueling Family	PVGAR0139VCA						
Original Test Vehicle Model Year	2023								
Vehicle Model									
Represented Test Vehicle Make	Volkswagen	Represented Test Vehicle Model	GTI						
Leak Family Details									
Leak Family Identifier	001	Leak Family Name	PVGAR0139VCA-001						
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>Combustion Engine</td><td>Gasoline</td></tr> </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	0	Odometer Correction Factor	0.994						
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor								
Odometer Correction Units	Miles								
Engine Code	DRNA	Rated Horsepower	241						
Displacement (liters)	1.984								
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single						
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Front						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	3316	Equivalent Test Weight (pounds)	3750						
GVWR (lbs)	4343	N/V Ratio	26.7						
Axle Ratio	3.12								
Transmission Type	Automated Manual- Selectable (e.g. Automated Manual with paddles)	# of Transmission Gears	7						
Transmission Lockup	Yes	Creep Gear	No						

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
-------------------	--------------	-------------------------------------	--------------

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	44.74	0.1809	0.02183	22.32	0.178	0.02072	14.4
Cold CO	49.21	0.199	0.02402	0	0	0	N/A
US06	44.74	0.1809	0.02183	22.32	0.178	0.02072	N/A

Emission Control Device Comments	DFI/AIR/TC/CAC/WR-HO2S/HO2S/TWC
Manufacturer Test Vehicle Comments	EVAP

Test #	PVGA10074775	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	PVGA10074752	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/02/2022	Fuel	Gasoline
Fuel Batch ID	WB0014	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Volkswagen AG WOB2		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4310	Odometer Units	M
4WD Test Dyno	No	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)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0916	--

Manufacturer Test Comments	2-Day
-----------------------------------	-------

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	0.0916	0.0000	0.092	0.300	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.092	0.000	0.09	0.30	Pass

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA						
Test #	PVGA10074776	Test Procedure	34 - Federal fuel 3-day evap						
Exhaust Test # for this Evap Test	PVGA10074753	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)						
Test Date	04/06/2022	Fuel	Gasoline						
Fuel Batch ID	WB0014	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Volkswagen AG WOB2								
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)								
Test Start Odometer Reading	4375	Odometer Units	M						
4WD Test Dyno	No	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									
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.1516</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.1516	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.1516	--							
Manufacturer Test Comments									
3-Day									
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	0.1516	0.0101	0.162	0.300	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.1516	0.0101	0.162	0.300	Pass	

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA						
Test #	PVGA10074778	Test Procedure	24 - Federal fuel refueling test (ORVR)						
Exhaust Test # for this Evap Test	PVGA10074751	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)						
Test Date	01/28/2022	Fuel	Gasoline						
Fuel Batch ID	WB0014	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Volkswagen AG WOB2								
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)								
Test Start Odometer Reading	4274	Odometer Units	M						
4WD Test Dyno	No	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									
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC (Hydrocarbon for Running Loss and ORVR)</td> <td>0.02</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC (Hydrocarbon for Running Loss and ORVR)	0.02	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC (Hydrocarbon for Running Loss and ORVR)	0.02	--							
Manufacturer Test Comments ORVR									
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	0.020	0.006	0.03	0.20	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC	0.020	0.006	0.03	0.20	Pass	

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA						
Test #	PVGA10074779	Test Procedure	32 - Federal Fuel Running Loss						
Exhaust Test # for this Evap Test	PVGA10074753	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)						
Test Date	04/06/2022	Fuel	Gasoline						
Fuel Batch ID	WB0014	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Volkswagen AG WOB2								
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)								
Test Start Odometer Reading	4386	Odometer Units	M						
4WD Test Dyno	No	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									
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.0023</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0023	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0023	--							
Manufacturer Test Comments									
Running Loss									
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	0.002	0.003	0.00	0.05	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.002	0.003	0.00	0.05	Pass	

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA						
Test #	PVGA10074777	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	02/18/2022	Fuel	Gasoline						
Fuel Batch ID	WB0014	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Volkswagen AG WOB2								
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)								
Test Start Odometer Reading	4310	Odometer Units	M						
4WD Test Dyno	No	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									
<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> </thead> <tbody> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.012</td> <td>--</td> </tr> </tbody> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.012	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.012	--							
Manufacturer Test Comments BETP									
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.0120	0.00	0.012	0.020	Pass	

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA						
Emission Data Vehicle Information									
Vehicle ID / Configuration	VW483020042 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	NVGAV02.0V7B	Original Evaporative/Refueling Family	NVGAR0157VCE						
Original Test Vehicle Model Year	2022								
Vehicle Model									
Represented Test Vehicle Make	Volkswagen	Represented Test Vehicle Model	Arteon 4Motion						
Leak Family Details									
Leak Family Identifier	001	Leak Family Name	NVGAR0157VCE-001						
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>Combustion Engine</td><td>Gasoline</td></tr> </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	No	Rechargeable Energy Storage System Indicator	No						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	0	Odometer Correction Factor	1.004						
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor								
Odometer Correction Units	Miles								
Engine Code	DSFB	Rated Horsepower	300						
Displacement (liters)	1.984								
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single						
Charge Air Cooler Type	Air	Drive Mode While Testing	All Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	3935	Equivalent Test Weight (pounds)	4500						
GVWR (lbs)	5027	N/V Ratio	29.3						
Axle Ratio	3.67								
Transmission Type	Automated Manual- Selectable (e.g. Automated Manual with paddles)	# of Transmission Gears	7						
Transmission Lockup	Yes	Creep Gear	No						

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family		VVGAR0139VCA	
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	44.96	0.4197	0.01945	0.09	0.1878	0.0191	15.3	
Cold CO	49.46	0.4617	0.02137	-31.45	0.3108	0.01945	N/A	
US06	44.96	0.4197	0.01945	0.09	0.1878	0.0191	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		--						

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA10071098	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)
Test Date	06/04/2021	Fuel	Gasoline
Fuel Batch ID	WB0009	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Volkswagen AG WOB2		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4400	Odometer Units	M
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)	435.6373507	--
FE BAG 1 (Bag 1 Fuel Economy)	19.9313125	19.9313125
CO2 BAG 2 (Bag 2 Carbon Dioxide)	416.925669	--
FE BAG 2 (Bag 2 Fuel Economy)	20.9497878	20.9497878
CO2 BAG 3 (Bag 3 Carbon Dioxide)	359.9624553	--
FE BAG 3 (Bag 3 Fuel Economy)	24.255423	24.255423
METHANE (CH4 - Methane)	0.004261	--
CO (Carbon Monoxide)	0.4090846	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.251101	--
DT-EER (Drive Trace Energy Economy Rating)	0.6248717	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.288928	--
MFR FE (Manufacturer Fuel Economy)	21.5	21.5
NOX (Nitrogen Oxide)	0.012433	--
N2O (Nitrous Oxide)	0.0005433	--
HC-NM (Non-methane Hydrocarbon)	0.0498285	--
NMOG (Non-methane organic gases)	0.0549065	--
PM (Particulate Matter)	0.0015325	--
HC-TOTAL (Total Hydrocarbon)	0.0539882	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	405	--

Certification Summary Information Report

Test Group		VVGAV02.0V7B				Evaporative/Refueling Family				VVGAR0139VCA		
Manufacturer Test Comments		4k Cold-CO - Tested as VOLKSWAGEN dr. - ETW: 4500										
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	50,000 miles	Federal Tier 4 Bin 70	CO	0.41	--	--	--	0.0400	--	0.4	10.0	Pass
Fed	120,000 miles	Federal Tier 4 Bin 70	HC-NM	0.05	--	--	--	0.0050	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-III ULEV70	CO	0.41	--	--	--	0.040	--	0.4	10.0	Pass

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA10071099	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	06/09/2021	Fuel	Gasoline
Fuel Batch ID	WB0008	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Volkswagen AG WOB2		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4418	Odometer Units	M
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)	367.9880929	--
FE BAG 1 (Bag 1 Fuel Economy)	23.9398245	23.9398245
CO2 BAG 2 (Bag 2 Carbon Dioxide)	386.7155462	--
FE BAG 2 (Bag 2 Fuel Economy)	22.8342795	22.8342795
CO2 BAG 3 (Bag 3 Carbon Dioxide)	311.6478563	--
FE BAG 3 (Bag 3 Fuel Economy)	28.3153717	28.3153717
METHANE (CH4 - Methane)	0.0016263	--
CO (Carbon Monoxide)	0.1705018	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.431203	--
DT-EER (Drive Trace Energy Economy Rating)	0.0200642	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.68797	--
MFR FE (Manufacturer Fuel Economy)	24.4	24.4
NOX (Nitrogen Oxide)	0.0081924	--
N2O (Nitrous Oxide)	0.0007566	--
HC-NM (Non-methane Hydrocarbon)	0.0171816	--
NMOG (Non-methane organic gases)	0.0189082	--
PM (Particulate Matter)	0.00002	--
HC-TOTAL (Total Hydrocarbon)	0.0187685	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	362	999

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family				VVGAR0139VCA																			
<table><tr><td colspan="2">Test Result Name</td><td colspan="3">Unrounded Test Result</td><td colspan="3">Verify Calculated CO2</td></tr><tr><td colspan="2">Carbon dioxide</td><td colspan="3">362</td><td colspan="3">--</td></tr></table>													Test Result Name		Unrounded Test Result			Verify Calculated CO2			Carbon dioxide		362			--		
Test Result Name		Unrounded Test Result			Verify Calculated CO2																							
Carbon dioxide		362			--																							
Manufacturer Test Comments		4k FED. FUEL FTP - Tested as VOLKSWAGEN dr. - ETW: 4500																										
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 70	CREE	999	--	--	--	0.176	--	999	--	--																
Fed	120,000 miles	Federal Tier 4 Bin 70	METHANE	0.0016	--	--	--	0.0005	--	0.002	0.030	Pass																
Fed	120,000 miles	Federal Tier 4 Bin 70	N2O	0.0008	--	--	--	0.0000	--	0.001	0.010	Pass																
Fed	150,000 miles	Federal Tier 4 Bin 70	CO	0.17	--	--	--	0.1300	--	0.3	1.7	Pass																
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0189	--	1.1	--	0.0069	--	0.026	99.999	Pass																
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0271	--	--	--	--	--	0.046	0.070	Pass																
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0082	--	--	--	0.0118	--	0.020	99.999	Pass																
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0000	--	--	--	0.0001	--	0.000	0.003	Pass																
CA	150,000 miles	California LEV-III ULEV70	CO	0.17	--	--	--	0.13	--	0.3	1.7	Pass																
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0189	--	--	--	0.0069	--	0.026	99.999	Pass																
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0271	--	--	--	--	--	0.046	0.070	Pass																
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0082	--	--	--	0.0118	--	0.020	99.999	Pass																
CA	150,000 miles	California LEV-III ULEV70	PM	0.0000	--	--	--	0.0001	--	0.000	0.003	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	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA10071105	Test Procedure	52 - Fed. fuel 50 F exh.
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	08/04/2021	Fuel	Gasoline
Fuel Batch ID	IG0008	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Ingolstadt		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4747	Odometer Units	M
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)	364.369161	--
FE BAG 1 (Bag 1 Fuel Economy)	23.9087403	23.9087403
CO2 BAG 2 (Bag 2 Carbon Dioxide)	341.6804684	--
FE BAG 2 (Bag 2 Fuel Economy)	25.5917581	25.5917581
CO2 BAG 3 (Bag 3 Carbon Dioxide)	309.4696092	--
FE BAG 3 (Bag 3 Fuel Economy)	28.2399765	28.2399765
METHANE (CH4 - Methane)	0.0023458	--
CO (Carbon Monoxide)	0.1947113	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.2451871	--
DT-EER (Drive Trace Energy Economy Rating)	-0.247027	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.7208188	--
MFR FE (Manufacturer Fuel Economy)	25.8	25.8
NOX (Nitrogen Oxide)	0.0122587	--
N2O (Nitrous Oxide)	0.0005019	--
HC-NM (Non-methane Hydrocarbon)	0.0222576	--
NMOG (Non-methane organic gases)	0.0245101	--
PM (Particulate Matter)	0.0009286	--
HC-TOTAL (Total Hydrocarbon)	0.0244973	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	338	--

Certification Summary Information Report

Test Group		VVGAV02.0V7B				Evaporative/Refueling Family				VVGAR0139VCA		
Manufacturer Test Comments		4k FED. FUEL 50°F FTP - Tested as VOLKSWAGEN dr. - ETW: 4500										
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
CA	4,000 miles	California LEV-III ULEV70	CO	0.19	--	--	--	--	--	0.2	1.7	Pass
CA	4,000 miles	California LEV-III ULEV70	NMOG	0.0245	--	1.1	--	--	--	0.024	99.999	Pass
CA	4,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0368	--	--	--	--	--	0.037	0.140	Pass
CA	4,000 miles	California LEV-III ULEV70	NOX	0.0123	--	--	--	--	--	0.012	99.999	Pass

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA91004862	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	09/23/2021	Fuel	Gasoline
Fuel Batch ID	27626	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4800	Odometer Units	M
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)	350.9496155	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	364.3457031	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	318.317627	--
FE BAG 3 (Bag 3 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0016657	--
CO (Carbon Monoxide)	0.1194593	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.269397	--
DT-EER (Drive Trace Energy Economy Rating)	1.0051675	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.0183816	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.009159	--
N2O (Nitrous Oxide)	0.0007585	--
HC-NM (Non-methane Hydrocarbon)	0.0125819	--
NMOG (Non-methane organic gases)	0.0138454	--
PM (Particulate Matter)	0.0003796	--
HC-TOTAL (Total Hydrocarbon)	0.014181	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	999

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family				VVGAR0139VCA																													
<table><tr><td colspan="2">Test Result Name</td><td colspan="3">Unrounded Test Result</td><td colspan="8">Verify Calculated CO2</td></tr><tr><td colspan="2">Carbon dioxide</td><td colspan="3">348.9161072</td><td colspan="8">--</td></tr></table>													Test Result Name		Unrounded Test Result			Verify Calculated CO2								Carbon dioxide		348.9161072			--							
Test Result Name		Unrounded Test Result			Verify Calculated CO2																																	
Carbon dioxide		348.9161072			--																																	
Manufacturer Test Comments		None Unrounded Result for the following test results were modified by Verify: FE BAG 2, MFR FE, FE BAG 1, FE BAG 3																																				
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 70	CREE	999	--	--	--	0.176	--	999	--	--																										
Fed	120,000 miles	Federal Tier 4 Bin 70	METHANE	0.0017	--	--	--	0.0005	--	0.002	0.030	Pass																										
Fed	120,000 miles	Federal Tier 4 Bin 70	N2O	0.0008	--	--	--	0.0000	--	0.001	0.010	Pass																										
Fed	150,000 miles	Federal Tier 4 Bin 70	CO	0.12	--	--	--	0.1300	--	0.2	1.7	Pass																										
Fed	150,000 miles	Federal Tier 4 Bin 70	CO-COMP	0.39	--	--	--	--	--	0.4	4.2	Pass																										
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0138	--	1.1	--	0.0069	--	0.021	99.999	Pass																										
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0230	--	--	--	--	--	0.042	0.070	Pass																										
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX-COMP	0.0380	--	--	--	--	--	0.038	0.090	Pass																										
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0092	--	--	--	0.0118	--	0.021	99.999	Pass																										
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0004	--	--	--	0.0001	--	0.000	0.003	Pass																										
CA	150,000 miles	California LEV-III ULEV70	CO	0.12	--	--	--	0.13	--	0.2	1.7	Pass																										
CA	150,000 miles	California LEV-III ULEV70	CO-COMP	0.39	--	--	--	--	--	0.4	4.2	Pass																										
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0138	--	--	--	0.0069	--	0.021	99.999	Pass																										
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0230	--	--	--	--	--	0.042	0.070	Pass																										
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX-COMP	0.0380	--	--	--	--	--	0.038	0.090	Pass																										
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0092	--	--	--	0.0118	--	0.021	99.999	Pass																										
CA	150,000 miles	California LEV-III ULEV70	PM	0.0004	--	--	--	0.0001	--	0.000	0.003	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	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA10071101	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	06/09/2021	Fuel	Gasoline
Fuel Batch ID	WB0008	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Volkswagen AG WOB2		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4437	Odometer Units	M
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)	0.0002936	--
CO (Carbon Monoxide)	0.2111749	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	7.93507	--
DT-EER (Drive Trace Energy Economy Rating)	-0.0177188	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	9.738946	--
MFR FE (Manufacturer Fuel Economy)	38.7	38.7
NOX (Nitrogen Oxide)	0.0035943	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0003409	--
NMOG (Non-methane organic gases)	0.0003511	--
PM (Particulate Matter)	0	--
HC-TOTAL (Total Hydrocarbon)	0.0006274	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	228	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	228	--

Manufacturer Test Comments 4k HWFET - Tested as VOLKSWAGEN dr. - ETW: 4500

Certification Summary Information Report

Test Group		VVGAV02.0V7B				Evaporative/Refueling Family				VVGAR0139VCA		
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 70	CREE	999	--	--	--	0.1800	--	999	--	--
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0004	--	1.0300	--	0.0069	--	0.007	99.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0040	--	--	--	--	--	0.023	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0036	--	--	--	0.0118	--	0.015	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0004	--	1.0300	--	0.0069	--	0.007	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0040	--	--	--	--	--	0.023	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0036	--	--	--	0.0118	--	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	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA91004860	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	09/23/2021	Fuel	Gasoline
Fuel Batch ID	27626	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4811	Odometer Units	M
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)	0.0000303	--
CO (Carbon Monoxide)	0.1183282	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.1389947	--
DT-EER (Drive Trace Energy Economy Rating)	0.1027871	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.3106155	--
MFR FE (Manufacturer Fuel Economy)	38.7631302	--
NOX (Nitrogen Oxide)	0.0029222	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0005795	--
NMOG (Non-methane organic gases)	0.0005969	--
HC-TOTAL (Total Hydrocarbon)	0.0006087	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	221.7604523	--

Manufacturer Test Comments None

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family					VVGAR0139VCA		
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 70	CREE	999	--	--	--	0.1800	--	999	--	--
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0006	--	1.0300	--	0.0069	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0035	--	--	--	--	--	0.022	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0029	--	--	--	0.0118	--	0.015	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0006	--	1.0300	--	0.0069	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0035	--	--	--	--	--	0.022	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0029	--	--	--	0.0118	--	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	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA10071100	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	06/09/2021	Fuel	Gasoline
Fuel Batch ID	WB0008	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Volkswagen AG WOB2		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4429	Odometer Units	M
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)	544.4330285	--
FE BAG 1 (Bag 1 Fuel Economy)	16.1732712	16.1732712
CO2 BAG 2 (Bag 2 Carbon Dioxide)	296.0771312	--
FE BAG 2 (Bag 2 Fuel Economy)	29.7337783	29.7337783
METHANE (CH4 - Methane)	0.0096776	--
CO (Carbon Monoxide)	0.6629136	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.075652	--
DT-EER (Drive Trace Energy Economy Rating)	-1.631063	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.688815	--
MFR FE (Manufacturer Fuel Economy)	25.1	25.1
NOX (Nitrogen Oxide)	0.0105208	--
N2O (Nitrous Oxide)	0.0001789	--
HC-NM (Non-methane Hydrocarbon)	0.0202672	--
NMOG (Non-methane organic gases)	0.0208752	--
PM (Particulate Matter)	0	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0308	--
HC-TOTAL (Total Hydrocarbon)	0.0297106	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	351	--

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family				VVGAR0139VCA			
Manufacturer Test Comments		4k US06 - Tested as VOLKSWAGEN dr. - ETW: 4500										
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	Federal Tier 4 Bin 70	CO	0.66	--	--	--	0.1300	--	0.8	99.0	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0209	--	1.0300	--	0.0069	--	0.028	99.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0105	--	--	--	0.0118	--	0.022	99.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0000	--	--	--	0.0001	--	0.000	0.006	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.66	--	--	--	0.13	--	0.8	99.9	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0209	--	1.03	--	0.0069	--	0.028	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0105	--	--	--	0.0118	--	0.022	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0000	--	--	--	0.0001	--	0.000	0.006	Pass

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA91004861	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	09/23/2021	Fuel	Gasoline
Fuel Batch ID	27626	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4831	Odometer Units	M
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)	552.8129272	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	293.9523315	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0136335	--
CO (Carbon Monoxide)	0.5251425	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.4852894	--
DT-EER (Drive Trace Energy Economy Rating)	-0.9188365	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.1030028	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0105782	--
N2O (Nitrous Oxide)	0.0002054	--
HC-NM (Non-methane Hydrocarbon)	0.0196872	--
NMOG (Non-methane organic gases)	0.0202778	--
PM (Particulate Matter)	0.0001804	--
HC-TOTAL (Total Hydrocarbon)	0.0327761	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	351.222168	--

Manufacturer Test Comments

None Unrounded Result for the following test results were modified by Verify: MFR FE, FE BAG 1, FE BAG 2

Certification Summary Information Report

Test Group		VVGAV02.0V7B				Evaporative/Refueling Family				VVGAR0139VCA		
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	Federal Tier 4 Bin 70	CO	0.53	--	--	--	0.1300	--	0.7	99.0	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0203	--	1.0300	--	0.0069	--	0.027	99.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0106	--	--	--	0.0118	--	0.022	99.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0002	--	--	--	0.0001	--	0.000	0.006	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.53	--	--	--	0.13	--	0.7	99.9	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0203	--	1.03	--	0.0069	--	0.027	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0106	--	--	--	0.0118	--	0.022	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0002	--	--	--	0.0001	--	0.000	0.006	Pass

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Test #	NVGA10071104	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	07/15/2021	Fuel	Gasoline
Fuel Batch ID	IG0008	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Ingolstadt		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4687	Odometer Units	M
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)	0.0010746	--
CO (Carbon Monoxide)	0.1963005	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.635698	--
DT-EER (Drive Trace Energy Economy Rating)	-0.6071627	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.4549563	--
MFR FE (Manufacturer Fuel Economy)	23.2	23.2
NOX (Nitrogen Oxide)	0.0061213	--
N2O (Nitrous Oxide)	0.0011326	--
HC-NM (Non-methane Hydrocarbon)	0.0008942	--
NMOG (Non-methane organic gases)	0.000921	--
PM (Particulate Matter)	0.0002835	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.007	--
HC-TOTAL (Total Hydrocarbon)	0.001935	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	376	--

Manufacturer Test Comments

4k SC03 - Tested as VOLKSWAGEN dr. - ETW: 4500

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family					VVGAR0139VCA		
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	Federal Tier 4 Bin 70	CO	0.20	--	--	--	0.1300	--	0.3	99.9	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0009	--	1.0300	--	0.0069	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0061	--	--	--	0.0118	--	0.018	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.20	--	--	--	0.1300	--	0.3	99.9	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0009	--	1.03	--	0.0069	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0061	--	--	--	0.0118	--	0.018	99.999	Pass

Certification Summary Information Report

Test Group	VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Fuel Properties			
Fuel Batch ID	WB0008	Fuel Calibration Number	2
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	01/29/2021
Fuel Batch Calibration Effective Date	01/29/2021	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.753
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17642
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.832	Weight Fraction CO2	--
Fuel Batch ID	27626	Fuel Calibration Number	2
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/11/2018
Fuel Batch Calibration Effective Date	12/11/2018	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18001
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.825	Weight Fraction CO2	--
Fuel Batch ID	IG0008	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	10/15/2020
Fuel Batch Calibration Effective Date	03/04/2021	Fuel Batch Calibration Ineffective Date	02/07/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.754
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17921
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.831	Weight Fraction CO2	--
Fuel Batch ID	WB0014	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/13/2021

Certification Summary Information Report

Test Group		VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
Fuel Batch Calibration Effective Date		01/14/2022	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC		--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction		--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)		--	Fuel Specific Gravity	0.747
Fuel Ethanol Volume Percent (%)		9.4	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18203
Fuel Net Heat of Combustion (E10) (MJ/kg)		--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)		0.828	Weight Fraction CO2	--
Fuel Batch ID		WB0009	Fuel Calibration Number	1
Test Fuel Type		29 - Cold CO E10 Premium Gasoline (Tier 3)	Fuel Batch Calibration Date	07/15/2020
Fuel Batch Calibration Effective Date		07/15/2020	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC		--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction		--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)		--	Fuel Specific Gravity	0.75
Fuel Ethanol Volume Percent (%)		10.1	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17764
Fuel Net Heat of Combustion (E10) (MJ/kg)		--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)		0.828	Weight Fraction CO2	--

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family		VVGAR0139VCA		
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code		Both		
Vehicle Class		LDV/Passenger Car			Standard Level		Federal Tier 4 Bin 70		
Fuel		Gasoline			Test Procedure		Federal fuel 2-day exhaust (w/can load)		
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	--	--	--	--	--	--	0.176	999
120,000 miles	METHANE	--	--	--	--	--	--	0.0005	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0000	0.010
150,000 miles	CO	--	--	--	--	--	--	0.1300	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0069	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.090
150,000 miles	NOX	--	--	--	--	--	--	0.0118	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.003
Cert Region		California + CAA Section 177 states			Cert/In-Use Code		Both		
Vehicle Class		LDV/Passenger Car			Standard Level		California LEV-III ULEV70		
Fuel		Gasoline			Test Procedure		Federal fuel 2-day exhaust (w/can load)		
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	--	--	--	--	--	--	0.13	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	NMOG	--	--	--	--	--	--	0.0069	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.090
150,000 miles	NOX	--	--	--	--	--	--	0.0118	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.003

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family			VVGAR0139VCA	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70	
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	--	--	--	--	--	--	0.13	99.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0069	99.999
150,000 miles	NOX	--	--	--	--	--	--	0.0118	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.006

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70	
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
150,000 miles	NMOG	--	--	1.0300	--	--	--	0.0069	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0118	99.999

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70	
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	--	--	--	--	--	--	0.1300	99.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0069	99.999
150,000 miles	NOX	--	--	--	--	--	--	0.0118	99.999

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family			VVGAR0139VCA	
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 4 Bin 70	
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	--	--	--	--	--	--	0.1300	99.0
150,000 miles	NMOG	--	--	1.0300	--	--	--	0.0069	99.999
150,000 miles	NOX	--	--	--	--	--	--	0.0118	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.006

Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 4 Bin 70	
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	--	--	--	--	--	--	0.1800	999
150,000 miles	NMOG	--	--	1.0300	--	--	--	0.0069	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0118	99.999

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70	
Fuel		Gasoline			Test Procedure			Fed. fuel 50 F exh.	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	CO	--	--	--	--	--	--	--	1.7
4,000 miles	NMOG	--	--	1.1	--	--	--	--	99.999
4,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.140
4,000 miles	NOX	--	--	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group		VVGAV02.0V7B			Evaporative/Refueling Family			VVGAR0139VCA	
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 4 Bin 70	
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	--	--	--	--	--	--	0.1300	99.9
150,000 miles	NMOG	--	--	1.0300	--	--	--	0.0069	99.999
150,000 miles	NOX	--	--	--	--	--	--	0.0118	99.999

Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 4 Bin 70	
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
50,000 miles	CO	--	--	--	--	--	--	0.0400	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0.0050	0.3

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70	
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
50,000 miles	CO	--	--	--	--	--	--	0.040	10.0

Evaporative/Refueling Standards

Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Federal fuel 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0.0101		

Certification Summary Information Report

Test Group		VVGAV02.0V7B		Evaporative/Refueling Family		VVGAR0139VCA	
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel		Useful Life		Emission Name		Rounded Result	
Gasoline		150,000 miles		HC		0.20	
						Add DF	
						0.006	
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal Fuel Running Loss					
Fuel		Useful Life		Emission Name		Rounded Result	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		0.05	
						Add DF	
						0.003	
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Federal Fuel Running Loss					
Fuel		Useful Life		Emission Name		Rounded Result	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		0.05	
						Add DF	
						0.003	
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Evap Canister Bleed Test					
Fuel		Useful Life		Emission Name		Rounded Result	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		0.020	
						Add DF	
						--	
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Evap Canister Bleed Test					
Fuel		Useful Life		Emission Name		Rounded Result	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		0.020	
						Add DF	
						0.00	

Certification Summary Information Report

Test Group		VVGAV02.0V7B		Evaporative/Refueling Family		VVGAR0139VCA					
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		Federal					
Cert/In-Use Code		Both		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		0.006	
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		California + CAA Section 177 states					
Cert/In-Use Code		Both		Standard Level		California LEV-IV Zero Evap (Option 2)					
Test Procedure		2-day evap									
Fuel		Useful Life		Emission Name		Rounded Result		Std		Add DF	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		--		0.30		0.000	
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		Federal					
Cert/In-Use Code		Both		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		--		0.300		0.0000	
Evaporative/Refueling Family		VVGAR0139VCA		Cert Region		Federal					
Cert/In-Use Code		Both		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		--		0.300		0.0101	

Certification Summary Information Report

Test Group		VVGAV02.0V7B	Evaporative/Refueling Family	VVGAR0139VCA
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		VVGAV02.0V7B	Evaporative/Refueling Family		VVGAR0139VCA
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	

Certification Summary Information Report

Test Group		VVGAV02.0V7B	Evaporative/Refueling Family		VVGAR0139VCA
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		VVGAV02.0V7B	Evaporative/Refueling Family		VVGAR0139VCA
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	

8. Emission Testing Waiver Statements

Emissions Continuity Compliance Statement NMOG, CO, CO₂, NO_x, N₂O, CH₄, and HCHO

In accordance with EPA Guidance Letter CD-14-19 and 40 CFR 86.1809-12 (e) the Volkswagen Group hereby certifies that based on engineering evaluations of emission testing there is no discontinuity in emission performance of NMOG, CO, CO₂, NO_x, N₂O, CH₄ and HCHO as measured and averaged over the Federal Test Procedure and the Highway Test Procedure in the temperature range of 20°F to 86°F for vehicles in this test group.

The normal operation of the emission control system consists of:

(i) Cycling back and forth in a narrow window between rich and lean operation as a result of feedback controls targeted to maintain overall engine operation at stoichiometry.

(ii) Small changes in the target air-fuel ratio to optimize vehicle emissions or drivability. This may be called "closed loop biasing."

(iii) Temporary enrichment in response to rapid throttle motion.

(iv) Enrichment during cold-start and warm-up conditions.

(v) Temporary air/fuel mixture modulation for running OBD checks to comply with California OBD regulations contained in 13 CCR §1968.2.

(vi) Infrequent operation modes, e.g. PM trap regeneration, are certified under special provisions of the CFR".

The modulation of the emission control system can cause step changes in emissions and CO₂ depending on the driving condition (engine speed and load). This modulation is not forming a discontinuity in emissions because it is included in the Federal Test Procedures and is working under the same conditions during on-road operation.

91 RON (Knock Sensor): Compliance Statement:

(Note: Statement only applies to regular fuel concepts)

In accordance with EPA Guidance Letter CD-14-19 and VPCD-97-01, city and highway fuel economy test result differences between 91 RON operation and 96 RON operation are within 3% and there are no emission increases (beyond normal test variability) using 91 RON fuel with a comparable fuel specification when tested on the FTP or SFTP cycles.

A/C Calibrations – Compliance Statement

In accordance with EPA Guidance Letter CD-14-19 and 40 CFR 86.1811-17 (d) (3) there are neither A/C-on specific calibrations nor A/C-on specific "open-loop" or "commanded" air fuel enrichment strategies incorporated into the vehicle design of this Test Group.

Lean Best Torque Compliance Statement

In accordance with EPA Guidance Letter CD-14-19 and 40 CFR 86.1811-17 (d) (1) the air fuel ratio is not richer at any time over the US06 cycle than the leanest air fuel ratio required to obtain maximum torque plus a tolerance of four percent. Other enrichments, if applicable e.g. for part protection, are described in the AECED description of the test group (section 16).

Lean-On Cruise Compliance Statement

In accordance with EPA Guidance Letter CD-14-19 and 40 CFR 86.1811-17 (d) (4) there are no "Lean-on-cruise" calibration strategies incorporated into the vehicle design of this test group.

OBD Compliance Statement

The OBD system meets the full intent of both the EPA Tier 3 Regulations contained in CFR Title 40 Part 86.1806-17 and the California OBD regulations contained in 13 CCR §1968.2.

Leak Free Exhaust System Compliance Statement

In accordance with 40 CFR 86.1844-01(d)(16(i), the Volkswagen Group hereby states that, for vehicles described in this application, as appropriate, it has conducted an engineering analysis of the complete exhaust system to ensure that the exhaust system has been designed:

- (A) To facilitate leak-free assembly, installation and operation for the full useful life of the vehicles, and
- (B) to facilitate that such repairs as might be necessary on a properly maintained and used vehicle can be performed in such a manner as to maintain leak-free operation, using tools commonly available in a motor vehicle dealership or independent repair shop for the full useful life of the vehicle.

A "leak-free" exhaust system is understood from the engine block to the point in the exhaust system behind the last component of exhaust aftertreatment system (e.g. catalyst).

Silencer/muffler and tailpipes are not part of the exhaust aftertreatment system when installed downstream the last component of exhaust aftertreatment.

For installation/mounting of the exhaust system clamps and/or flanges are used with a technical leakage specification ensuring compliance with exhaust emission standards in-use. Meaning: The exhaust system is designed to fulfill the lowest leakage according to state-of-the-art exhaust aftertreatment systems.

High Altitude Exhaust Emissions Compliance Statement

In accordance with 40 CFR 86.1829-15 (c), The Volkswagen Group hereby certifies that, based upon engineering evaluation and high altitude emission tests conducted on similar vehicles, all vehicles of this test group comply with the high altitude exhaust emissions requirements.

Formaldehyde Emissions Compliance Statement

In accordance with 86.1829-15 (d) (4), and based upon good engineering judgment, the Volkswagen Group hereby states that vehicles certified based upon NMHC emissions comply with the applicable formaldehyde emission standards.

High Altitude Evaporative/Refueling Emissions Compliance Statement

In accordance with 40 CFR 86.1829-01 (b) (2) (ii) (B), the Volkswagen Group hereby certifies that, based upon engineering evaluation and high altitude evaporative/refueling tests conducted on similar vehicles, all vehicles of this test group comply with the high altitude evaporative/refueling emissions requirements.

Spitback Compliance Statement

In accordance 40 CFR 86.1829-15 (e) (5) the Volkswagen Group hereby certifies that the vehicle inherently meets the Fuel Dispensing Spitback Standard as part of compliance with the refueling emission standard. This certification applies to the full useful life of the vehicle. Testing is therefore not required.

Evaporative Leak Test Compliance Statement

In accordance with 40 CFR 86.1829-15 (e) (4), the Volkswagen Group hereby certifies that, based upon engineering evaluation all vehicles in the evaporative/refueling emission family comply with the evaporative emission standard outlined in 40 CFR 86.1813-17 (a) (4).

Driver-Selectable modes Compliance Statement

In accordance with EPA Guidance Letter CISC-09-19, all driver-selectable transmission drive modes are deemed to comply with emission standards.

9.0 OBD System Description

9.1 Summary Table

Refer to Section 16 (included in OBD II A – P application)

9.2 California Air Resources Board OBD System Approval Letter.

Refer to Section 16

10. Description of Alternate Fueled Vehicles

Not applicable

11. Auxiliary Emission Control Devices (AECD) Descriptions

Refer to Section 16.2 of this Application

12.0 List of Certified Vehicles

Durability Group	VVGAGPGNNV7A
Test Group	VVGAV02.0V7B
Evap Family	VVGAR0139VCA
Emission Control System:	CAC/DFI/TC/WR-HO2S/HO2S/TWC

Engine Displacement:	2.0 liter
Valves per Cylinder:	4
Sales Area:	50 states
MMS:	Simos 19
SIL:	N/A

Engine Code	Model	Vehicle Class	Engine Code Characteristics			HP @RPM	Torque @RPM [lb-ft]	Trans. / OD	ETW	Curb Weight [lbs]	GVWR [lbs]	Fuel Tank Capacity [Gal]	Canister working capacity [g]	Tire size	N/V Ratio	Start/ Stop [Y/N]
			Cat. Code	Com - pres sion ratio	Idle [rpm]											
DZMA	GTI	LDV	JM835	9.6	700	241 @5250-6500	273 lb-ft @1600-4500	7	3625	3261	4343	13.2	139	225/40 R18 235/35/ R19	26.6 26.2	Y
DSFD	Golf R	LDV	JM835	9.3	700	328 @5850-6500	295 lb-ft @2000-5850	7	3750	3472	4542	14.5	139	235/35/ R19	28.8	Y

12.1 Transmissions

Transmission	Transmission Characteristic											
	Drivetrain	Gear Count	Lock-Up rpm		Gearbox Ratios							
			Gear	min/max	Axle	Gear 1	Gear 2	Gear 3	Gear 4	Gear 5	Gear 6	Gear 7
GTI DQ381-7F	FWD	7	1-7	n/a	1:4.167	3.400	2.750	1.767	0.925	0.705	0.755	0.635
					2:3.125	Axle 1	Axle 2		Axle 1		Axle 2	
Golf-R DQ381-7A	AWD	7	1-7	n/a	1: 4.471	3.190	2.750	1.897	1.040	0.7930	0.860	0.661
					2: 3.304	Axle 1	Axle2		Axle1		Axle2	

12.2 Test conditions

Model	ETW	Road Track Coefficients						TRL50	TCDT	Fuel Tank Cap.	Fan Pos.	Drive Mode for Testing	Shift Sched. I.D.	Test Fuel	DF Source
		F0	F1	F2	F0	F1	F2								
	[lbs]	[lb*f]	[lb*f/mpH]	[lb*f/(mpH)²]	[N]	[N/(km/h)]	[N/(km/h)²]	[hp]	[s]	40% / 100% [Gal]					
Arteon 4Motion (EDV)	4500	44.96	0.4197	0.01945	200.00	1.1600	0.03340	15.3	18.4	7.3 / 18.2	20	Drive	automatic	Tier 3 / Tier 2	VV7A
GTI EDV	3625	35.43	0.1368	0.01933	157.59	0.3780	0.03320	12.1	18.8	5.3 / 13.2	20	Drive	automatic	Tier 3	TV7A
GTI FEDV	3500	34.68	0.1319	0.01881	154.27	0.3647	0.03230	11.8	18.6	5.3 / 13.2	20	Drive	automatic	Tier 2	TV7A
GTI FEDV (Canada)	3625	35.43	0.1368	0.01933	157.59	0.3780	0.03320	12.1	18.8	5.3 / 13.2	20	Drive	automatic	Tier 2	TV7A
Golf-R	3750	35.35	0.3526	0.01892	157.23	0.9745	0.03250	13.4	17.6	5.8 / 14.5	20	Drive	automatic	Tier 2	TV7A

Engine Starting procedure:
Press the brake pedal and move the selector lever into the P or N position.
Start engine by turning key to “Start” position or by pushing the Engine “Stop/Start” button.

ESP/ABS Deactivation procedure
Dyno Mode must be activated.
Refer to Section 16 for Dyno Mode activation procedure.

Fan Position during dyno testing:
FTP / HWY = Road Speed Fan (Modulated)
US06 = Road Speed Fan (Modulated)

Automatic Headlight System:
Automatic headlight system must be disabled prior to any emissions or fuel economy / range testing.
Please contact VWGoA Engineering and Environmental Office if you need assistance with disabling the automatic headlights.

Daytime Running Lights (DRL):
Daytime running lights must be disabled prior to fuel economy / range testing. DRLs can be turned off via coding.
Please contact VWGoA Engineering and Environmental Office if you need assistance with disabling the daytime running lights.

- Climate Control Settings used for testing:**
- SC03: Climate Control Setting description
 - 1) Turn A/C on
 - 2) Select Sync.
 - 3) Select 72°F temperature
 - 4) Activate air recirculation
 - 5) Select max air flow
 - 6) Choose air flow setting towards driver

12.3 e-Motor Details

Not applicable

12.4 Battery details

Not applicable

12.4 Charging details

Not Applicable

13.0 Test Group Projected Sales

Refer to Section 16 of this Test Group Application

13.1 Compliance Plans

Refer to Section 16 of the Common Section

14. Request for Certificate

14.1 Statement of Compliance

Based on good engineering judgment, the Volkswagen Group states that all the vehicles described in this application for Certification comply with all applicable standards and regulations, incl. the provisions of 40 CFR Parts 85, 86 and 600.

14.2. Durability Statement

Based on the Volkswagen Group's good engineering judgment, all the vehicles described in this Application for Certification comply with all applicable intermediate and full useful life standards

15. Other Information

15.1 Revision Index

[illegible]

15.2 Running Change (RC) / Field Fix (FF) Log

Running Change / Field Fix Log for test group only.

Model Year:	2027
Test Group:	VVGAV02.0V7B
Models:	Golf GTI, Golf-R
Evaporative Family:	VVGAR0139VCA

[illegible]

15.3 ORVR Safety Statement

Volkswagen is using standard technology in all MY2026 ORVR systems. In accordance with EPA Guidance letter CISC-06-06, ORVR application will not be submitted.

US EPA Fee Form

[Help and EPA Instructions](#)

* Required Field

General Information

Date: 02/18/2026

Process Code *

Submit New Fee Filing Form

Manufacturer Code *

VGA

Manufacturer Name *

Volkswagen Group of America

Contact Name *

Greg Allen

Contact Email Address *

Gregory.Allen@vw.com

Contact Phone *

248-724-4209

Calendar Year complete application submitted
to EPA *

2026

PLEASE NOTE: These fees apply to complete certification applications received by EPA from January 1, 2026, through December 31, 2026. The applicable fee is determined by the

calendar year in which the complete certification application is received, not the model year.

Engine Family / Evaporative Family / Test Group *

VVGAV02.0V7B

Certificate Request Type (Industry Sector Code)

Certificate Request Type *

- ☒ On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (Federal) (A, B, D, J, T, V)
- ☐ On-Highway HDE Dyno Cert (Federal) (E, H)
- ☐ On-Highway LD ICI, MDPV ICI, HDV ICI (A, B, D, J, T, V)
- ☐ On-Highway Motorcycle (C)
- ☐ On-Highway HDV Evap (F)
- ☐ On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (California-Only) (A, B, D, J, T, V)
- ☐ On-Highway HDE Dyno Cert (California-Only) (E, H)
- ☐ Nonroad CI (L)
- ☐ Nonroad SI (B, S)
- ☐ Locomotive (G, K)
- ☐ All Nonroad Recreational, excluding Marine engines (X, Y)
- ☐ All Marine (Including IMO) (M, N, W)
- ☐ Component Certification for Evaporative Emissions (P)

IMO Name (Required for dual US/IMO Marine Only)

ICI VIN Number (Required for ICIs Only)

Do you qualify for a Reduced Fee? *

No

Payment Information

Amount Owed

\$32,317.00

Payment Type *

Offline ACH

Comments

MY2027 Certification Fee for VVGAV02.0V7B

Pay.gov Tracking ID: 27VNMDGN

Agency Tracking ID: 77300739558

EPA Form Number 3520-29

OMB Control No. 2060-0545

Approval expires 7/31/2027

The public reporting and recordkeeping burden for this collection of information is estimated to average 12 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

Mr. Joshua Kimball
Compliance and Innovative Strategies Division
Office of Mobile Sources
U. S. Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105

Anthony D'Ambrosi Name
Dir, Homologation Title
EEO - Certification Department
(248) 754-4396 Phone
Tony.DAmbrosi@vw.com E-Mail

May 20, 2026 Date

Subject: MY 2027 Volkswagen Group Light Duty Vehicle Initial Application for Emissions
Certification for Test Group VVGAV02.0V7B with Evaporative Family
VVGAR0139VCA.

Dear Mr. Kimball,

We submit, with this letter, the model year 2027 Part 1 Application for Emissions
Certification for the following Test Group:

<u>Test Group</u>	<u>Standards</u>	<u>Sales Area</u>
VVGAV02.0V7B	Tier 4 Interim Bin 70 LEVIII ULEV70	Federal California

Copies of the Certification Fee filing form and OBD approval letter are contained in
sections 15 and 16 of the electronic application included.

All vehicles within this test group comply with all applicable regulations contained in
40 CFR Part 86, Part 1066 and the compliance statements contained in sections 8
and 14.

This submission constitutes our final application and the request for issuance of a
Certificate of Conformity.

If you have any questions with regard to this information, please contact our office in
Auburn Hills at (248) 754-4396.

Sincerely,

D'Ambrosi Anthony
VWPKI
5406C07D40F4331C
Digitally signed by D'Ambrosi
Anthony VWPKI
5406C07D40F4331C
Date: 2026.05.20 09:56:29 -04'00'

Anthony D'Ambrosi
Volkswagen Group of America, Inc.
Engineering and Environmental Office

Enclosure(s)

March 6, 2026

Reference No. E-26-049

Mr. Rob Sutschek, Vice President
Engineering and Environmental Office
Volkswagen Group of America, Incorporated
3800 Hamlin Road
Auburn Hills, Michigan 48326

Confidential

Subject: Volkswagen's (VW) On-Board Diagnostics II (OBD II) System Description for the
2027 Model Year (MY) Test Groups VVGAV02.0V3A, VVGAV02.0V7B,
VVGAT02.0A3C, and VVGAV02.0A7N

Dear Mr. Sutschek,

The California Air Resources Board's (CARB) On-Board Diagnostics Branch has received the OBD II system description submitted by VW for the 2027 MY test groups listed above. Representations made in the application indicate that the system is compliant with the OBD II regulation¹ except for SAE International (SAE) J1979-2 implementation for all test groups listed above and diagnostic or emission critical electronic control unit (DEC ECU) requirements for steering column control module (SCCM) for test group VVGAT02.0A3C only. Therefore, CARB approves the 2027 MY system design with 1 deficiency for SAE J1979-2 implementation for test groups VVGAV02.0V3A, VVGAV02.0V7B, and VVGAV02.0A7N, and 2 deficiencies for SAE J1979-2 implementation and DEC ECU requirements for SCCM for test group VVGAT02.0A3C. Details of the deficiencies were provided in prior approval letters (Reference Nos. E-25-252 and E-26-032).

¹ Unless otherwise noted, all regulation references are to title 13, California Code of Regulations, section 1968.2.

Mr. Rob Sutschek, Vice President
March 6, 2026
Page 2
Confidential

Should you have questions or comments regarding this letter, please contact Mahfuz Rahman, Air Resources Engineer, at (951) 542-3355, or via email at mahfuz.rahman@arb.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Tawron Adams for". The signature is written in a cursive, flowing style.

Michael Regenfuss, Chief, On-Board Diagnostics Branch, Emissions Certification and Compliance Division

cc: Mahfuz Rahman, Air Resources Engineer, Emissions Certification and Compliance Division

Robin Lang, Chief
Emissions Certification and Compliance Division
California Air Resources Board
4001 Iowa Avenue
Riverside, California 92507

Anthony D'Ambrosi Name
Dir, Homologation Title
EEO – Certification Department
(248) 754-4396 Phone
Tony.DAmbrosi@vw.com E-Mail
May 20, 2026 Date

Subject: MY 2027 Volkswagen Group Light Duty Vehicle Initial Application for Emissions
Certification for Test Group VVGAR0139VCA with Evaporative Family
VVGAR0139VCA.

Dear Ms. Lang,

We submit, with this letter, the model year 2027 Part 1 Application for Emissions
Certification for the following Test Group:

<u>Test Group</u>	<u>Standards</u>	<u>Sales Area</u>
VVGAR0139VCA	Tier 4 Interim Bin 70 LEVIII ULEV 70	Federal California

This submission constitutes our final application and the request for issuance of the
Executive Order.

If you have any questions with regard to this information, please contact our office in
Auburn Hills at (248) 754-4396.

Sincerely,

D'Ambrosi Anthony
VWPKI
5406C07D40F4331C
5406C07D40F4331C Date: 2026.05.20 09:55:57 -04'00'

Anthony D'Ambrosi
Volkswagen Group of America, Inc.
Engineering and Environmental Office

Enclosure(s)

California ARB Information

17.1 California Compliance Statements

Production Vehicle same as Test Vehicle Statement

The production vehicles represented by the particular engine families will be in all material respects of the same design as those for which vehicle approval is granted.

Smog Check Compliance Statement

Vehicles in this test group meet California's BAR Smog Check requirement in 16 CCR § 3340.42 by having a compliant OBD system (13 CCR § 1968.2) that will satisfy the California BAR-OIS OBD focused test method and the OBD pass-fail criteria in 16 CCR § 3340.42.2(c).

CARB Fill Pipe Bench Leak Rate Compliance Statement

In accordance with Section VI (Bench Leak Rate Specification) of the Air Resources Board document, "Specifications for fill pipes and openings of 2015 and subsequent model motor vehicle fuel tanks", amended on May 31, 2019, the VW Group hereby attests that, for the leak family(s) stated, the systems meet the specifications in Section VI when tested per the test procedure in section VIII.

Environmental Performance Label Information

VW Group applies new EPA label in lieu of the CA EP label.

California Emissions Warranty Statement

Please refer to California Emissions Warranty booklets located in Section 16 of the Common Section.

Adjustable Parameters/Tamper Resistance Statement

The emission control system contains no devices that contain parameters that are designed, and/or intended, to be physically capable of being adjusted

17.2 Fill Pipe Specifications

Please refer to the Section 16

17.3 Evaporative Emission Deterioration Program

Please refer to Common Section Application

17.4 Assembly line NMOG / NMHC Factor

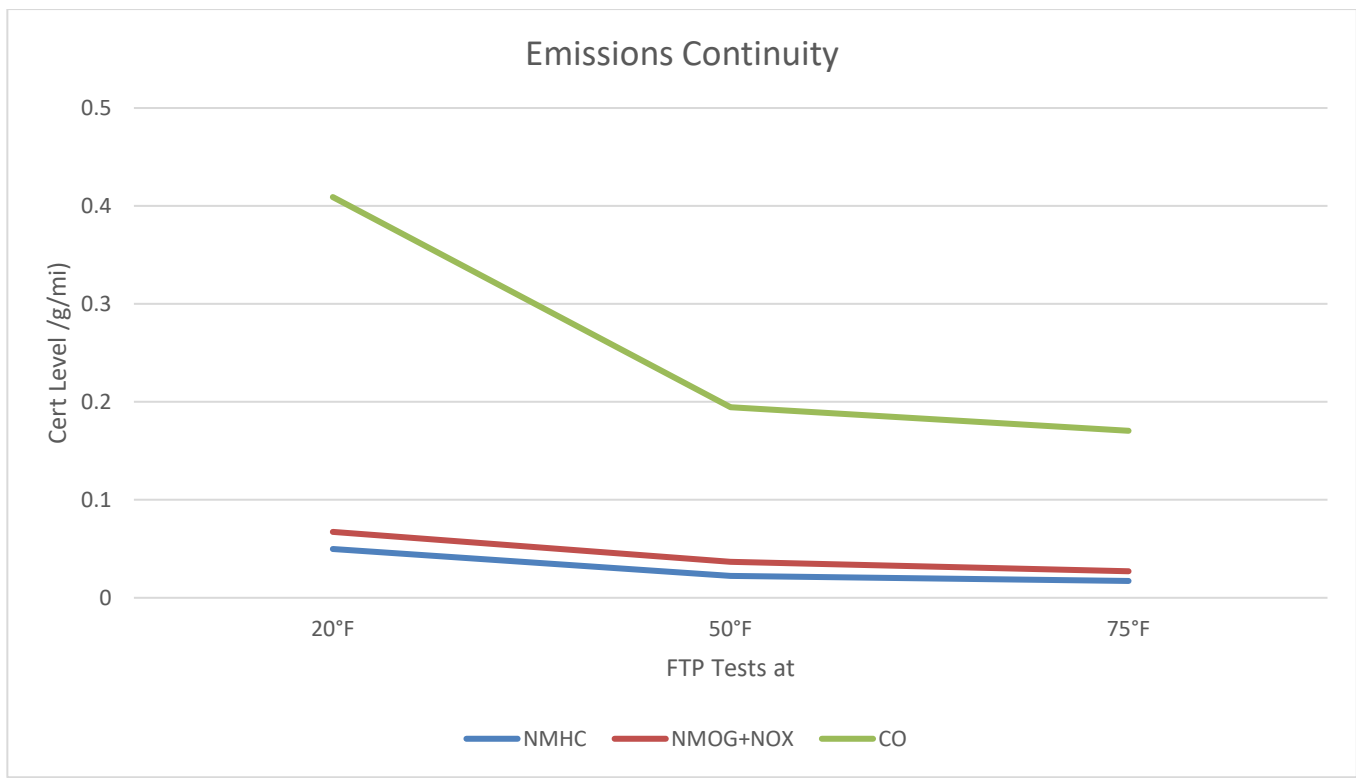
F_{NMOG}: Calculated per EPA 40CFR part 1066

F_{HCHO} (Indolene):

F_{HCHO} (Phase II):

Compliance covered by statement according to regulations (see Section 8)

17.5 Continuity of Emissions



17.6 Applicable Deterioration Factors

	THC (g/mi)	NMHC (g/mi)	NMOG (g/mi)	NOx (g/mi)	CO (g/mi)	HCHO (mg/mi)	PM (g/mi)	NMOG+NOx (g/mi)
50k	N/A	-	-	-	0.04	-	-	-
150k	N/A	0.0063*	0.0069	0.0118	0.13	-	0.0001	0.0187

*120k

21. Vehicle Emission Control Information Label

		VOLKSWAGEN	
VEHICLE EMISSION CONTROL INFORMATION			
Conforms to regulations:			2027 MY
U.S. EPA:	BIN70 LDV	OBD: CA II	Fuel: Gasoline
California:	ULEV70 PC	OBD: CA II	Fuel: Gasoline
No adjustments needed.		CAC/DFI/TC/ WR-HO2S/HO2S/TWC	
Group: VVGAV02.0V7B Evap: VVGAR0139VCA			06Q 010 005 M

21.2 Engine Control Module (ECM) Information

Model	Engine Code	SW-Part number	Cal ID	CVN	Comments
GTI	DZMA	5WA.906.264.E	5WA264E 0001BVAJ	1D 87 AC 31	
Golf R	DSFD	5WA.906.259.AA	5WA259AA0001BVAK	1E A3 99 95	

21.3 Transmission Control Module (TCM) Information

Model	Trans Code	SW-Part number	Cal ID	CVN	Comments
GTI	DQ381-7F	0GC.906.557.QL	0GC906557QL+0860	24 94 36 02	
Golf R	DW381-7A	0GC.906.557.QE	0GC906557QE+0860	99 4C A5 10	

21.4 Gateway Control Module Information

Model	Trans Code	SW-Part number	Cal ID	CVN	Comments
GTI / Golf R	DQ381-7F / -7A	5QT.907.530	5QT530 06000143	01 45 3A A6	

21.5 Brake Booster Control Module Information

Model	Trans Code	SW-Part number	Cal ID	CVN	Comments
GTI	DQ381-7F	5WA.909.059.AD	5WA059AD0572518i	1B 91 DC AF	
Golf R	DQ381-7A	5WA.909.059.AD	5WA059AD057251Ai	48 F8 DB 6E	

21.6 Brake System Control Module Information

Model	Trans Code	SW-Part number	Cal ID	CVN	Comments
GTI	DQ381-7F	5WA.614.517.EE	5WA517EE06371290	F6 75 BD E2	
Golf R	DQ381-7A	5WA.614.517.EE	5WA517EE06371270	D5 9B 06 13	

21.7 Airbag Control Module Information

Model	Trans Code	SW-Part number	Cal ID	CVN	Comments
GTI / Golf R	DQ381-7F / -7A	5QS.959.655.AC	5QS655AC03303000	0D FA CA 43	