

Certification Summary Information Report

Manufacturer	Volkswagen Group of America, Inc.	Manufacturer Code	VGA
Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Certificate Number	VVGAJ04.0NAT-005	CARB Executive Order #	--
Certificate Issue Date	04/15/2026	Certificate Revision Date	--
Certificate Effective Date	04/15/2026	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	04/06/2026 05:09:17 PM
Model Year	2027		

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test Group Information			
CSI Type	New	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		
Drive Sources and Fuel(s)			
Drive Source #1:	Electric Motor		
	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
	Electricity	--	No
Drive Source #2:	Combustion Engine		
	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
	Gasoline	Spark Ignition Direct fuel injection	No
Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
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	No
Durability Group Name	VVGAHHGNNAT	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	05/04/2026	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
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	VVGAJ03.0N7N
Test Group OBD Compliance Level	Partial - with deficiencies	Number of Test Group OBD Deficiencies	1
OBD Deficiencies Comments	Deficiency for non-compliance with OBDOnUDS requirements. All test groups were found to be noncompliant with the OBDOnUDS requirements, with the sole exception of the Bentley Supersports test group VVGAV04.0EAA.		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

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Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	04/06/2026 11:03:50 AM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Plastic	Fuel Tank Material Description	Plastic				
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)	182	Number of Primary Canisters	1				
Number of Bleed Canisters	1	Bleed Canister Total Working Capacity (grams)	10				
Mfr Evaporative/Refueling Family Comments	Integrated Bleed Canister FEL 450mg						
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				
VVGAR0182NCM-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.	2 - Audi	383 - RS Q8 Performance	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Volkswagen Group of America, Inc.	2 - Audi	383 - RS Q8 Performance	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	8	Yes
Engine Description							
Hybrid Type	IC Engine/Electric Motor	Hybrid Description	--				
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--				
Engine Block Arrangement	V-shaped engine	Mfr Engine Block Arrangement Description	--				
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	0W40 VW50200 / VW50500				
Number of Cylinders/Rotors	8	Mechanically Variable Compression Ratio Indicator	N				

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Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
After Treatment Device(s) (ATD)			
ATD Number	ATD Type	ATD Precious Metal	Substrate Material
1	Three-way catalyst	Palladium + Rhodium	Ceramic
Substrate Construction			
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)	4.0	Engine Rated Horsepower	631
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	2
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Air
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	Yes		
Cylinder Deactivation Description	Fuel saving by reduction of active cylinders. Mechanical deactivation of 4 inlet and outlet vales with injection cut-off on these 4 cylinders.		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	The variable valve timing is a substantial engine feature for: - Reducing engine out emissions - Optimizing full load performance - Optimizing fuel consumption - Reducing engine roughness Adjust the inlet and outlet camshaft position continuously between retard and advanced position.		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	4	Number of Air/Fuel Sensors	4
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	Applies to DWNA var: 0		

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Engine Configuration Number 2			
Engine Displacement (liters)	4.0	Engine Rated Horsepower	563
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	2
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Air
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	Yes		
Cylinder Deactivation Description	Fuel saving by reduction of active cylinders. Mechanical deactivation of 4 inlet and outlet vales with injection cut-off on these 4 cylinders.		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	The variable valve timing is a substantial engine feature for: - Reducing engine out emissions - Optimizing full load performance - Optimizing fuel consumption - Reducing engine roughness Adjust the inlet and outlet camshaft position continuously between retard and advanced position.		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	4	Number of Air/Fuel Sensors	4
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	Applies to DWKA var: 0		

Official Test Numbers

Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City	EPA City	EPA	EPA	CREE
							Litmus Value	Litmus Threshold	Highway Litmus Value	Highway Litmus Threshold	
Electricity	SVGA10086286	SVGA10085976	SVGA10085977	SVGA10085977	SVGA10085969	SVGA10085975	--	--	--	--	--
Gasoline	SVGA10086286	SVGA10085976	SVGA10085977	SVGA10085977	SVGA10085969	SVGA10085975	11.8	228.2	22.6	286.1	--

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Gasoline	SVGA10086286	SVGA10085976	SVGA10085977
Electricity	SVGA10086286	SVGA10085976	SVGA10085977

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Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	48	Battery Energy Capacity	9.5
Battery Specific Energy	50.1	Battery Charger Type	On-Board
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	Driver Controlled Regenerative Braking	No
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	1		
Motor/Generator Type 1	Belt-Driven-Starter-Generator	Rated Motor/Generator Power	8
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	--		

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Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM						
Emission Data Vehicle Information									
Vehicle ID / Configuration	EC-9YA-19 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	KPRXT03.0CV6	Original Evaporative/Refueling Family	KPRXR0150RED						
Original Test Vehicle Model Year	2019								
Vehicle Model									
Represented Test Vehicle Make	Porsche	Represented Test Vehicle Model	Cayenne						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>			Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	0	Odometer Correction Factor	0.9982						
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles								
Odometer Correction Units	Miles								
Engine Code	DCB	Rated Horsepower	332						
Displacement (liters)	3								
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, Rear						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	4696	Equivalent Test Weight (pounds)	5000						
GVWR (lbs)	6239	N/V Ratio	48.8						
Axle Ratio	3.21								
Transmission Type	Semi-Automatic	# of Transmission Gears	8						
Transmission Lockup	Yes	Creeper Gear	No						

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Dynamometer Coefficients:			
	Target Coefficients		Set Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)
City/Highway/Evap	49.458	0.71636	0.01991
Cold CO	49.458	0.71636	0.01991
US06	49.458	0.71636	0.01991
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)
	49.458	0.71636	0.01991
	49.458	0.71636	0.01991
	49.458	0.71636	0.01991
			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
			18
			N/A
			N/A
Emission Control Device Comments	--		
Manufacturer Test Vehicle Comments	Evap test vehicle for base Cayenne, Cayenne S, and Cayenne Turbo		
Test #	KPRX10054425	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	05/26/2018	Fuel	N/A
Fuel Batch ID	CAFW17	Fuel Calibration Number	745
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	VW: VGA/7		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4303	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
	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.009	--
Manufacturer Test Comments	new "E3" (all non-hybrid Cayenne models); E10 fuel; Porsche test number E48-255-18 (VW Wolfsburg)		

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM						
Emission Data Vehicle Information									
Vehicle ID / Configuration	RA77-Q7-452 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	RVGAT02.0A77	Original Evaporative/Refueling Family	RVGAR0182NCM						
Original Test Vehicle Model Year	2024								
Vehicle Model									
Represented Test Vehicle Make	Audi	Represented Test Vehicle Model	Q7						
Leak Family Details									
Leak Family Identifier	001	Leak Family Name	RVGAR0182NCM-001						
Drive Sources and Fuel System Details									
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>			Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	0	Odometer Correction Factor	1.194						
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor								
Odometer Correction Units	Kilometers								
Engine Code	DUVA	Rated Horsepower	261						
Displacement (liters)	2								
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)	5049	Equivalent Test Weight (pounds)	5250						
GVWR (lbs)	6393	N/V Ratio	25						
Axle Ratio	3.5								
Transmission Type	Semi-Automatic	# of Transmission Gears	8						
Transmission Lockup	Yes	Creeper Gear	No						

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
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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	61.37	0.1473	0.02847	3.42	-0.0376	0.02777	18.7
Cold CO	67.51	0.162	0.03132	-7.72	-0.1046	0.03054	N/A
US06	61.37	0.1473	0.02847	3.42	-0.0376	0.02777	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments MY2024 Audi Q7 2.0L tested with E10 fuel for Exhaust EDV (and Evap) and also E0 fuel for FEDV.

Test #	RVGA10080553	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	RVGA10080546	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/14/2023	Fuel	Gasoline
Fuel Batch ID	IG0025	Fuel Calibration Number	3
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Ingolstadt		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5446	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.311	--

Manufacturer Test Comments --

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	0.311	0.011	0.322	0.45	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.311	0.011	0.322	0.45	Pass

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Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
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Test #	RVGA10080554	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	RVGA10080549	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	03/31/2023	Fuel	Gasoline
Fuel Batch ID	IG0025	Fuel Calibration Number	5
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Ingolstadt		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	6048	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.207	--

Manufacturer Test Comments --

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	0.207	0.014	0.221	0.45	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.207	0.014	0.221	0.45	Pass

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
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Test #	RVGA10080552	Test Procedure	24 - Federal fuel refueling test (ORVR)
Exhaust Test # for this Evap Test	RVGA10080538	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	01/24/2023	Fuel	Gasoline
Fuel Batch ID	IG0025	Fuel Calibration Number	2
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Ingolstadt		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5131	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC (Hydrocarbon for Running Loss and ORVR)	0.009	--

Manufacturer Test Comments --

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	0.009	0.007	0.02	0.2	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC	0.009	0.007	0.02	0.2	Pass

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Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	RVGA10080555	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	RVGA10080549	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	03/31/2023	Fuel	Gasoline
Fuel Batch ID	IG0025	Fuel Calibration Number	5
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Ingolstadt		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	6020	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0	--

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0	0	0	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0	0	0	0.05	Pass

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Test Group		VVG AJ04.0NAT			Evaporative/Refueling Family			VVGAR0182NCM
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	66.89	0.1946	0.03092	7.55	-0.151	0.03059	20.5	
Cold CO	73.58	0.2141	0.03401	-6.48	-0.3587	0.03417	N/A	
US06	66.89	0.1946	0.03092	7.55	-0.151	0.03059	N/A	
Emission Control Device Comments	--							
Manufacturer Test Vehicle Comments	driven in S-Mode							

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Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	SVGA10085969	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/22/2024	Fuel	Gasoline
Fuel Batch ID	NK0018	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Neckarsulm		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5056	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	840.7066606	--
FE BAG 1 (Bag 1 Fuel Economy)	10.2279531	10.2279531
CO2 BAG 2 (Bag 2 Carbon Dioxide)	859.7276582	--
FE BAG 2 (Bag 2 Fuel Economy)	10.0896991	10.0896991
CO2 BAG 3 (Bag 3 Carbon Dioxide)	670.1055749	--
FE BAG 3 (Bag 3 Fuel Economy)	12.9355075	12.9355075
METHANE (CH4 - Methane)	0.0185479	--
CO (Carbon Monoxide)	0.9078371	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.8034361	--
DT-EER (Drive Trace Energy Economy Rating)	0.2377052	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.290831	--
MFR FE (Manufacturer Fuel Economy)	10.8	10.8
NOX (Nitrogen Oxide)	0.0347052	--
N2O (Nitrous Oxide)	0.001327	--
HC-NM (Non-methane Hydrocarbon)	0.159364	--
NMOG (Non-methane organic gases)	0.1752	--
HC-TOTAL (Total Hydrocarbon)	0.1769081	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	804	--

Manufacturer Test Comments test performed in S-Mode 4k Cold-CO - Tested as AUDI dr. - ETW: 6000

Certification Summary Information Report

Test Group		VVG AJ04.0NAT				Evaporative/Refueling Family				VVGAR0182NCM		
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 3 Bin 125	CO	0.91	--	--	--	0.11	--	1	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 125	HC-NM	0.16	--	--	--	0.0063	--	0.2	0.5	Pass
CA	50,000 miles	California LEV-IV ULEV125	CO	0.91	--	--	--	0.11	--	1	10.0	Pass

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	SVGA10085970	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	03/13/2024	Fuel	Gasoline
Fuel Batch ID	NK0020	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Neckarsulm		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5357	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	731.7774073	--
FE BAG 1 (Bag 1 Fuel Economy)	12.1556757	12.1556757
CO2 BAG 2 (Bag 2 Carbon Dioxide)	842.5929727	--
FE BAG 2 (Bag 2 Fuel Economy)	10.5984641	10.5984641
CO2 BAG 3 (Bag 3 Carbon Dioxide)	661.6949822	--
FE BAG 3 (Bag 3 Fuel Economy)	13.4815638	13.4815638
CO2 BAG 4 (Bag 4 Carbon Dioxide)	825.8963505	--
FE BAG 4 (Bag 4 Fuel Economy)	10.8121513	10.8121513
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0.5530689	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.6696104	--
DT-EER (Drive Trace Energy Economy Rating)	0.5911713	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.8926838	--
MFR FE (Manufacturer Fuel Economy)	11.7	11.7
NOX (Nitrogen Oxide)	0.0262008	--
N2O (Nitrous Oxide)	0.0004765	--
HC-NM (Non-methane Hydrocarbon)	0.0301708	--
NMOG (Non-methane organic gases)	0.0311	--
PM (Particulate Matter)	0.0009239	--
HC-TOTAL (Total Hydrocarbon)	0.0276489	--

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
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Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	766	766

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	765	--

Manufacturer Test Comments GHG Test 4k FED. FUEL FTP - Tested as AUDI dr. - ETW: 6000

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 3 Bin 125	CREE	766	--	--	--	0.43	--	766	--	--
Fed	120,000 miles	Federal Tier 3 Bin 125	METHANE	0	--	--	--	0.0018	--	0.002	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 125	N2O	0.0005	--	--	--	0.0005	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	CO	0.55	--	--	--	0.33	--	0.9	2.1	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0311	--	1.0991	--	0.0088	--	0.04	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0573	--	--	--	--	--	0.067	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0262	--	--	--	0.0012	--	0.027	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0009	--	--	--	0.0006	--	0.002	0.003	Pass
CA	150,000 miles	California LEV-IV ULEV125	CO	0.55	--	--	--	0.33	--	0.9	2.1	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0311	--	1.0991	--	0.0088	--	0.04	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0573	--	--	--	--	--	0.067	0.125	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0262	--	--	--	0.0012	--	0.027	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	PM	0.0009	--	--	--	0.0006	--	0.002	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	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	SVGA10085978	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	04/23/2024	Fuel	Gasoline
Fuel Batch ID	NK0018	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Neckarsulm		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	6210	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	769.2165423	--
FE BAG 1 (Bag 1 Fuel Economy)	11.2318425	11.2318425
CO2 BAG 2 (Bag 2 Carbon Dioxide)	829.5281571	--
FE BAG 2 (Bag 2 Fuel Economy)	10.4596901	10.4596901
CO2 BAG 3 (Bag 3 Carbon Dioxide)	651.882329	--
FE BAG 3 (Bag 3 Fuel Economy)	13.3012172	13.3012172
METHANE (CH4 - Methane)	0.0078874	--
CO (Carbon Monoxide)	0.476894	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.1578344	--
DT-EER (Drive Trace Energy Economy Rating)	-0.1517574	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.1915479	--
MFR FE (Manufacturer Fuel Economy)	11.3	11.3
NOX (Nitrogen Oxide)	0.0327882	--
HC-NM (Non-methane Hydrocarbon)	0.0386495	--
NMOG (Non-methane organic gases)	0.0425	--
HC-TOTAL (Total Hydrocarbon)	0.0452191	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	768	--

Manufacturer Test Comments 4k FED. FUEL 50'F FTP - Tested as AUDI dr. - ETW: 6000

Certification Summary Information Report

Test Group		VVG AJ04.0NAT				Evaporative/Refueling Family				VVGAR0182NCM		
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-IV ULEV125	CO	0.48	--	--	--	--	--	0.5	2.1	Pass
CA	4,000 miles	California LEV-IV ULEV125	NMOG	0.0425	--	1.0991	--	--	--	0.042	99.000	Pass
CA	4,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0753	--	--	--	--	--	0.075	0.250	Pass
CA	4,000 miles	California LEV-IV ULEV125	NOX	0.0328	--	--	--	--	--	0.033	99.000	Pass

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	SVGA10086286	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	05/08/2024	Fuel	Gasoline
Fuel Batch ID	NK0018	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Neckarsulm		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	6240	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	676.8770507	--
FE BAG 1 (Bag 1 Fuel Economy)	12.7961784	12.7961784
CO2 BAG 2 (Bag 2 Carbon Dioxide)	795.57293	--
FE BAG 2 (Bag 2 Fuel Economy)	10.9067311	10.9067311
CO2 BAG 3 (Bag 3 Carbon Dioxide)	618.0782193	--
FE BAG 3 (Bag 3 Fuel Economy)	14.0268091	14.0268091
CO2 BAG 4 (Bag 4 Carbon Dioxide)	777.5963965	--
FE BAG 4 (Bag 4 Fuel Economy)	11.1589162	11.1589162
METHANE (CH4 - Methane)	0.0035178	--
CO (Carbon Monoxide)	0.2459062	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-4.7952	--
DT-EER (Drive Trace Energy Economy Rating)	-4.019928	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-7.028098	--
MFR FE (Manufacturer Fuel Economy)	12.1	12.1
NOX (Nitrogen Oxide)	0.0331081	--
N2O (Nitrous Oxide)	0.0020892	--
HC-NM (Non-methane Hydrocarbon)	0.0140642	--
NMOG (Non-methane organic gases)	0.0155	--
PM (Particulate Matter)	0.0018053	--
HC-TOTAL (Total Hydrocarbon)	0.0172096	--

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
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Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	717	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	717	--

Manufacturer Test Comments EDV MCT MFR CONFIRMATORY RETEST - 4k FED. FUEL FTP - Tested as AUDI dr. - ETW: 6000

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 3 Bin 125	CREE	999	--	--	--	0.43	--	999	--	--
Fed	120,000 miles	Federal Tier 3 Bin 125	METHANE	0.0035	--	--	--	0.0018	--	0.005	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 125	N2O	0.0021	--	--	--	0.0005	--	0.003	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	CO	0.25	--	--	--	0.33	--	0.6	2.1	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	CO-COMP	0.65	--	--	--	--	--	0.6	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0155	--	1.0991	--	0.0088	--	0.024	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0486	--	--	--	--	--	0.059	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX-COMP	0.0424	--	--	--	--	--	0.042	0.110	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0331	--	--	--	0.0012	--	0.034	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0018	--	--	--	0.0006	--	0.002	0.003	Pass
CA	150,000 miles	California LEV-IV ULEV125	CO	0.25	--	--	--	0.33	--	0.6	2.1	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0155	--	1.0991	--	0.0088	--	0.024	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0486	--	--	--	--	--	0.059	0.125	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0331	--	--	--	0.0012	--	0.034	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	PM	0.0018	--	--	--	0.0006	--	0.002	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	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	SVGA10085971	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	03/13/2024	Fuel	Gasoline
Fuel Batch ID	NK0020	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Neckarsulm		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5381	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0008672	--
CO (Carbon Monoxide)	0.1584026	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.7110043	--
DT-EER (Drive Trace Energy Economy Rating)	0.2006295	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.139046	--
MFR FE (Manufacturer Fuel Economy)	21.3	21.3
NOX (Nitrogen Oxide)	0.0054795	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0011419	--
NMOG (Non-methane organic gases)	0.0012	--
PM (Particulate Matter)	0.0001579	--
HC-TOTAL (Total Hydrocarbon)	0.0019969	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	419	419

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	419	--

Manufacturer Test Comments

GHG Test 4k HWFET - Tested as AUDI dr. - ETW: 6000

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
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Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 125	CREE	419	--	--	--	0.43	--	419	--	--
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0012	--	1.03	--	0.0088	--	0.01	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0067	--	--	--	--	--	0.017	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0055	--	--	--	0.0012	--	0.007	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0012	--	1.03	--	0.0088	--	0.01	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0067	--	--	--	--	--	0.017	0.125	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0055	--	--	--	0.0012	--	0.007	99.000	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	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	SVGA10085975	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	04/05/2024	Fuel	Gasoline
Fuel Batch ID	NK0018	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Neckarsulm		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5901	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0069252	--
CO (Carbon Monoxide)	0.1449495	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.8528733	--
DT-EER (Drive Trace Energy Economy Rating)	0.0750254	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.136677	--
MFR FE (Manufacturer Fuel Economy)	21.2	21.2
NOX (Nitrogen Oxide)	0.0052432	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0083968	--
NMOG (Non-methane organic gases)	0.0086	--
PM (Particulate Matter)	0.0004374	--
HC-TOTAL (Total Hydrocarbon)	0.015225	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	409	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	409	--

Manufacturer Test Comments test performed in S-Mode 4k HWFET - Tested as AUDI dr. - ETW: 6000

Certification Summary Information Report

Test Group		VVGAJ04.0NAT				Evaporative/Refueling Family				VVGAR0182NCM		
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 3 Bin 125	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0086	--	1.03	--	0.0088	--	0.017	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0138	--	--	--	--	--	0.024	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0052	--	--	--	0.0012	--	0.006	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0086	--	1.03	--	0.0088	--	0.017	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0138	--	--	--	--	--	0.024	0.125	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0052	--	--	--	0.0012	--	0.006	99.000	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	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	SVGA10085976	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	04/05/2024	Fuel	Gasoline
Fuel Batch ID	NK0018	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Neckarsulm		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5933	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	880.3689434	--
FE BAG 1 (Bag 1 Fuel Economy)	9.8491361	9.8491361
CO2 BAG 2 (Bag 2 Carbon Dioxide)	475.8833427	--
FE BAG 2 (Bag 2 Fuel Economy)	18.2224908	18.2224908
METHANE (CH4 - Methane)	0.0027647	--
CO (Carbon Monoxide)	0.2353978	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.098413	--
DT-EER (Drive Trace Energy Economy Rating)	-0.4999258	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.439742	--
MFR FE (Manufacturer Fuel Economy)	15.3	15.3
NOX (Nitrogen Oxide)	0.016413	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0071525	--
NMOG (Non-methane organic gases)	0.0074	--
PM (Particulate Matter)	0.0023592	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0236	--
HC-TOTAL (Total Hydrocarbon)	0.0098786	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	566	--

Certification Summary Information Report

Test Group		VVGAJ04.0NAT		Evaporative/Refueling Family				VVGAR0182NCM				
Manufacturer Test Comments		test performed in S-Mode 4k US06 - Tested as AUDI dr. - ETW: 6000										
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 3 Bin 125	CO	0.24	--	--	--	0.33	--	0.6	99.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0074	--	1.03	--	0.0088	--	0.016	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0164	--	--	--	0.0012	--	0.018	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0024	--	--	--	0.0006	--	0.003	0.006	Pass
CA	150,000 miles	California LEV-IV ULEV125	CO	0.24	--	--	--	0.33	--	0.6	9.6	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0074	--	1.03	--	0.0088	--	0.016	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0238	--	--	--	--	--	0.034	0.150	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0164	--	--	--	0.0012	--	0.018	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	PM	0.0024	--	--	--	0.0006	--	0.003	0.006	Pass

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Test #	SVGA10085977	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	04/05/2024	Fuel	Gasoline
Fuel Batch ID	NK0018	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	AUDI AG Neckarsulm		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5959	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0.4645761	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.9371491	--
DT-EER (Drive Trace Energy Economy Rating)	-0.1446717	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.176522	--
MFR FE (Manufacturer Fuel Economy)	10.9	10.9
NOX (Nitrogen Oxide)	0.0227137	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.000853	--
NMOG (Non-methane organic gases)	0.0009	--
PM (Particulate Matter)	0.0013045	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0236	--
HC-TOTAL (Total Hydrocarbon)	0.000088	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	792	--

Manufacturer Test Comments test performed in S-Mode 4k SC03 - Tested as AUDI dr. - ETW: 6000

Certification Summary Information Report

Test Group		VVGAJ04.0NAT				Evaporative/Refueling Family				VVGAR0182NCM		
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 3 Bin 125	CO	0.46	--	--	--	0.33	--	0.8	99.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0009	--	1.03	--	0.0088	--	0.01	99.000	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0227	--	--	--	0.0012	--	0.024	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	CO	0.46	--	--	--	0.33	--	0.8	2.1	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0009	--	1.03	--	0.0088	--	0.01	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0236	--	--	--	--	--	0.034	0.125	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0227	--	--	--	0.0012	--	0.024	99.000	Pass

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Fuel Properties			
Fuel Batch ID	NK0018	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	07/27/2023
Fuel Batch Calibration Effective Date	09/01/2023	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	0.754
Fuel Ethanol Volume Percent (%)	9.7	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17936
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	IG0025	Fuel Calibration Number	3
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/24/2022
Fuel Batch Calibration Effective Date	01/19/2023	Fuel Batch Calibration Ineffective Date	01/19/2024
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 (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17949
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	IG0025	Fuel Calibration Number	5
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/24/2022
Fuel Batch Calibration Effective Date	03/10/2023	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 (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17949
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	NK0020	Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	06/08/2023
Fuel Batch Calibration Effective Date	07/24/2023	Fuel Batch Calibration Ineffective Date	07/23/2024

Certification Summary Information Report

Test Group	VVGAI04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.743
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18413
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.868	Weight Fraction CO2	--
Fuel Batch ID	IG0025	Fuel Calibration Number	2
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/24/2022
Fuel Batch Calibration Effective Date	11/28/2022	Fuel Batch Calibration Ineffective Date	11/28/2023
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 (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17949
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	CAFW17	Fuel Calibration Number	745
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/14/2017
Fuel Batch Calibration Effective Date	12/14/2017	Fuel Batch Calibration Ineffective Date	12/31/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.751
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17789
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	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM						
Consolidated List of Standards									
Exhaust Standards									
Cert Region	California + CAA Section 177 states	Cert/In-Use Code	Both						
Vehicle Class	LDV/Passenger Car	Standard Level	California LEV-IV ULEV125						
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	--	--	--	--	--	--	0.33	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0088	99.000
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.150
150,000 miles	NOX	--	--	--	--	--	--	0.0012	99.000
150,000 miles	PM	--	--	--	--	--	--	0.0006	0.006
Cert Region				Federal	Cert/In-Use Code		Both		
Vehicle Class				LDV/Passenger Car	Standard Level		Federal Tier 3 Bin 125		
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	--	--	--	--	--	--	0.43	999
120,000 miles	METHANE	--	--	--	--	--	--	0.0018	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0005	0.010
150,000 miles	CO	--	--	--	--	--	--	0.33	2.1
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	NMOG	--	--	1.0991	--	--	--	0.0088	99.000
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.125
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.110
150,000 miles	NOX	--	--	--	--	--	--	0.0012	99.000
150,000 miles	PM	--	--	--	--	--	--	0.0006	0.003

Certification Summary Information Report

Test Group		VVGAJ04.0NAT			Evaporative/Refueling Family			VVGAR0182NCM		
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV ULEV125		
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	--	--	--	--	--	--	--	2.1	
4,000 miles	NMOG	--	--	1.0991	--	--	--	--	99.000	
4,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.250	
4,000 miles	NOX	--	--	--	--	--	--	--	99.000	

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV ULEV125		
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	--	--	--	--	--	--	0.33	2.1	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0088	99.000	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.125	
150,000 miles	NOX	--	--	--	--	--	--	0.0012	99.000	

Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 125		
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	--	--	--	--	--	--	0.11	10.0	
120,000 miles	HC-NM	--	--	--	--	--	--	0.0063	0.5	

Certification Summary Information Report

Test Group		VVGAJ04.0NAT			Evaporative/Refueling Family			VVGAR0182NCM		
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV ULEV125		
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	--	--	--	--	--	--	0.33	2.1	
150,000 miles	NMOG	--	--	1.0991	--	--	--	0.0088	99.000	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.125	
150,000 miles	NOX	--	--	--	--	--	--	0.0012	99.000	
150,000 miles	PM	--	--	--	--	--	--	0.0006	0.003	

Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 125		
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	--	--	--	--	--	--	0.33	99.0	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0088	99.000	
150,000 miles	NOX	--	--	--	--	--	--	0.0012	99.000	
150,000 miles	PM	--	--	--	--	--	--	0.0006	0.006	

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV ULEV125		
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	--	--	1.03	--	--	--	0.0088	99.000	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.125	
150,000 miles	NOX	--	--	--	--	--	--	0.0012	99.000	

Certification Summary Information Report

Test Group		VVGAJ04.0NAT			Evaporative/Refueling Family			VVGAR0182NCM		
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 125		
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	CREE	--	--	--	--	--	--	0.43	999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0088	99.000	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.125	
150,000 miles	NOX	--	--	--	--	--	--	0.0012	99.000	

Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 125		
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	--	--	--	--	--	--	0.33	99.0	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0088	99.000	
150,000 miles	NOX	--	--	--	--	--	--	0.0012	99.000	

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV ULEV125		
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	--	--	--	--	--	--	0.11	10.0	

Evaporative/Refueling Standards

Evaporative/Refueling Family		VVGAR0182NCM			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	Std	Add DF					
Gasoline	150,000 miles	HC	--	0.20	0.007					

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM		
Evaporative/Refueling Family	VVGAR0182NCM	Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	Federal fuel 3-day evap				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.450	0.014
Evaporative/Refueling Family	VVGAR0182NCM	Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	Federal Fuel Running Loss				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.050	0
Evaporative/Refueling Family	VVGAR0182NCM	Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	Evap Canister Bleed Test				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	--
Evaporative/Refueling Family	VVGAR0182NCM	Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	2-day evap				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.450	0.011
Evaporative/Refueling Family	VVGAR0182NCM	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	--	0.450	0.014

Certification Summary Information Report

Test Group	VVGAJ04.0NAT		Evaporative/Refueling Family	VVGAR0182NCM	
Evaporative/Refueling Family	VVGAR0182NCM		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	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	--
Evaporative/Refueling Family	VVGAR0182NCM		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	0.007
Evaporative/Refueling Family	VVGAR0182NCM		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	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0
Evaporative/Refueling Family	VVGAR0182NCM		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	--	0.450	0.011

Certification Summary Information Report

Test Group	VVGAJ04.0NAT	Evaporative/Refueling Family	VVGAR0182NCM
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		VVGAJ04.0NAT	Evaporative/Refueling Family		VVGAR0182NCM
ACT-DISTANCE	Actual Distance Driven (miles)		WATT-HRS BAG 3	Bag 3 Watt Hours	
AS-VOLT	Average System Voltage		WATT-HRS BAG 4	Bag 4 Watt Hours	
CO2 BAG 1	Bag 1 Carbon Dioxide		WATT-HRS	Watt Hours	
CO2 BAG 2	Bag 2 Carbon Dioxide		HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon	
CO2 BAG 3	Bag 3 Carbon Dioxide		HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon	
CO2 BAG 4	Bag 4 Carbon Dioxide		HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon	
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides		HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon	
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides		N2O BAG 1	Bag 1 Nitrous Oxide	
DT-IWRR	Drive Trace Inertia Work Ratio Rating		N2O BAG 2	Bag 2 Nitrous Oxide	
DT-ASCR	Drive Trace Absolute Speed Change Rating		N2O BAG 3	Bag 3 Nitrous Oxide	
DT-EER	Drive Trace Energy Economy Rating		N2O BAG 4	Bag 4 Nitrous Oxide	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
B2	Federal Tier 2 Bin 2		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
B3	Federal Tier 2 Bin 3		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
B4	Federal Tier 2 Bin 4		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
B5	Federal Tier 2 Bin 5		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
B6	Federal Tier 2 Bin 6		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
B7	Federal Tier 2 Bin 7		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
B8	Federal Tier 2 Bin 8		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
B9	Federal Tier 2 Bin 9		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
B10	Federal Tier 2 Bin 10		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
B11	Federal Tier 2 Bin 11		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2	California LEV-II LEV		L4SULEV100	California LEV-IV SULEV100	
L2OP	California LEV-II LEV Optional		L4SULEV125	California LEV-IV SULEV125	
U2	California LEV-II ULEV		L4SULEV15	California LEV-IV SULEV15	
S2	California LEV-II SULEV		L4SULEV150	California LEV-IV SULEV150	
ZEV	California ZEV		L4SULEV170	California LEV-IV SULEV170	
OT	Other		L4SULEV175	California LEV-IV SULEV175	
T1	Federal Tier 1		L4SULEV20	California LEV-IV SULEV20	
PZEV	California PZEV		L4SULEV200	California LEV-IV SULEV200	
L2LEV160	California LEV-II LEV160		L4SULEV230	California LEV-IV SULEV230	
L2ULEV125	California LEV-II ULEV125		L4SULEV25	California LEV-IV SULEV25	
L2SULEV30	California LEV-II SULEV30		L4SULEV30	California LEV-IV SULEV30	
L2LEV395	California LEV-II LEV395		L4SULEV75	California LEV-IV SULEV75	

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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

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Test Group	VVG AJ04.0NAT	Evaporative/Refueling Family		VVGAR0182NCM
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	