VOLKSWAGEN

GROUP OF AMERICA

Ms. Robin Lang, Chief
Emissions Certification and Compliance Division
California Air Resources Board
9480 Telstar Avenue, Suite 4
El Monte, CA 91731

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

April 2, 2026 Date

Subject: 2027 Model Year Partial Carryover Application Request

VOLKSWAGEN GROUP OF AMERICA, INC.
3800 HAMLIN ROAD
AUBURN HILLS, MI 48326

Dear Ms. Lang,

VWGoA is requesting the Air Resources Board approve the following Partial Carryover Application for VVGAV03.0N7M based on Partial Carryover data from TVGAV03.0N7M and Executive Order number A-413-0379. By signing this letter, *VWGoA* is certifying that this model year's application package:

1. Includes no change of the emission standards/FELs, regulation requirements, emission characteristics of the engine, or test procedures requirements.

2. The 2027 application package differs from the 2026 application package only by:

- ✔ Model year
- ✔ Test Group/Engine/Vehicle/Evaporative family name (typically the first character)
- ☐ Manufacturer contact information
- ✔ Projected sales data
- ☐ Model information (may only add models if the certification emission levels are not changed)
- ✔ Part numbers (durable to full useful life and no impact on certification emission levels)
- ☐ Equipment types (i.e. crane, dozer, generator, etc.)

3. All other information in the 2027 application package is identical to the 2026 application package (incorporates all approved running changes to date).

4. The application package is complete and named correctly using the appropriate Document Management System (DMS) file and workflow naming conventions and submitted using the correct workflow process.

If you have any questions regarding this request, please contact Anthony D'Ambrosi at (248) 754-4396.

Sincerely,

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

Enclosure(s)

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
CALIFORNIA AIR RESOURCES BOARD

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

CARB USE ONLY

Invoice Name	MSF250788
Invoice Date	Feb 06, 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	Audi_RSQ8,S8	Model Year 2027	VVGAJ04.0NAT	Light-duty vehicle test group and medium-duty vehicle test group	Base	$ 50,309.00
2	Audi_A8	Model Year 2027	VVGAV03.0N7M	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	$ 25,155.00
3	Audi_SQ8	Model Year 2027	VVGAT04.0NAV	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	$ 25,155.00
4	Audi_Q8	Model Year 2027	VVGAT03.0N7N	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	$ 25,155.00
5	Audi_Q4 eton quattro	Model Year 2027	VVGAV00.0A4A	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	$ 12,577.00
6	Audi_Q4 eton	Model Year 2027	VVGAV00.0A4R	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	$ 12,577.00
7	Audi_etron GT	Model Year 2027	VVGAV00.0NZG	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	$ 12,577.00

Total Due	$ 163,505.00

I, Tony DAmbrosi
Tony DAmbrosi (Feb 6, 2026 15:39:10 EST) , attest that any information provided is true, accurate, and complete.

(Responsible Party Signature Here)

Kim, Seong Hun

From: noreply@salesforce.com on behalf of California Air <mscertfees@arb.ca.gov>
Sent: Friday, February 27, 2026 10:38 AM
To: Kim, Seong Hun
Subject: [From: External] MS Fee Payment Confirmation for Invoice MSF250788
Attachments: MSF250788 - 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 MSF250788. 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 – 25RA0309
2. Date of Payment – 2/26/2026
3. Payment Status - Paid

Audi, a member of the Volkswagen Group

Application for Emissions Certification

2027 Model Year

Durability Group: VVGAHHGNNN7M
Evap. Family: VVGAR0176NCS

Test Group: VVGAV03.0N7M

Certificate Number: VVGAV03.0N7M - XXX

Durability Group Description: Four Stroke, Otto Cycle, Gasoline Fueled, Direct Fuel Injection, Catalyst Code: JM842 (PRE), JM842 (MAIN)

Test Group Description: 3.0l V6 TFSI, DFI/TC/CAC/TWC/WR-HO2S/HO2S – LDV

Applicable Exhaust Standards: 50 State — Federal: Tier 4 Interim Bin 70; California: LEV IV ULEV70

Applicable Evaporative Standards: 50 State — Federal: Tier 4 FEL: 300 mg; California: LEV IV FEL: 300 mg

Carlines Covered: A8 quattro

Vehicles Tested:

VID	Config.	Test Type / #	Test Type / #
SN7M-A8	0	FTP / SVGA10084973	HFET / SVGA10084974
		US06 / SVGA10084975	SC03 / SVGA10084976
		20°F FTP / SVGA10084970	50°F FTP / SVGA10084971
RA7G-A6-168	0	2-Day / RVGA10080447	ORVR / RVGA10080448
		3-Day / RVGA10080451	Running Loss / RVGA10080449
UC-412	0	BETP / KVGA10058954	

Issue Date: 03-31-2026

Questions, Contact:
EEO Office, Auburn Hills, Michigan

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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	VVGAHHGNNN7M
Source of Durability Data	LN7M-DDV
Relation Factor BAT VWADP / BAT SRC	2.22
Engine Type	Piston
Combustion Method	Otto cycle four stroke
Fuel Used	Gasoline
Basic Fuel Metering System	Direct Injection
Displacement [l]	3.0

Catalyst / After treatment device specifics		
	Durability Group Statistics	**Durability Data Vehicle**
Catalyst Construction		Monolith
Precious Metal Composition TWC		Paladium, Rhodium
PTOX TWC		n.a.
NAC:1 SCRC: 2		n.a.
Total Catalyst Volume [l]		3.46
Total Precious Metal Loading [g]		13.89
Precious Metal Load Rate PM [g] / CV [l]		4.02
Cat. Grouping Statistic	4.6	4.6
Durability Group Limit (25% or 0.2 g/l)	3.5	3.5
Test Group Covered		VVGAV03.0N7M

3. Evaporative / Refueling Family Description

			C/O - BETP
Evaporative / Refueling Family Name		VVGAR0176NCS (A8 quattro)	BETP C/O UC-412
Vapor storage device	Canister	Yes	Yes
	Other	-	-
Basic canister design	Working Capacity (g)	176	150
	Bed Volume (cm^3)	2660	
	Number, config.	1	1
	Geometry	Other	Other
	Construction	5-chamber	5-Chamber
	Bleeding trap	Yes	Yes
	Bleed trap Working Capacity (g)	6-10	6-10
	Material	Plastic	Plastic
Fuel System		DFI	DFI
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	-	-
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		VVGAV03.0N7M VVGAV03.0N7N VVGAJ04.0NAT	

4. Durability Procedure Description

Please refer to the Common Section

5.0 Test Group Description

Evap. Family:	VVGAR0176NCS
Test Group Name:	VVGAV03.0N7M
Certificate Number:	VVGAV03.0N7M - XXX
Engine displacements covered:	3.0 liters
Arrangement and number of cylinders:	V6
Vehicle class(es) covered:	LDV
Federal Emissions Standards Class:	Tier 4 Interim BIN 70
California Emissions Standards Class:	LEV IV ULEV70

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: VVGAV03.0N7M
Models: A8 quattro
Test Group: VVGAV03.0N7M
Evaporative/Refueling Family: VVGAR0176NCS

VID	Config.	Vehicle Type	Tests Performed
SN7M-A8	0	Cert. Emission E10 Fuel	2xUDDS, HFET, US06, SC03, 20°F FTP, 50°F FTP
SN7M-A8	0	GHG E0	2xUDDS, HFET, US06, SC03
SN7M-A8	1	Fuel Economy E0 Fuel	2xUDDS, HFET, US06, SC03, 20°F FTP
RA7G-A6-168	0	EVAP Emission	2-Day EVAP, 3-Day EVAP, R/L, ORVR
UC-412	0	EVAP Emission	BETP

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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	04/02/2026 09:26:23 PM
Model Year	2027		

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

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

Drive Source #2: Electric Motor

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Electricity	--	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**	--
Durability Group Name	VVGAHHGNNN7M	**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	No		
OBD Compliance Type	CARB	**OBD Demonstration Vehicle Test Group**	SVGAT04.0NAV
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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	03/30/2026 03:01:09 PM
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)	176	**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 300mg A8L 3.0 TFSI		

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
VVGAR0176NCS-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	94 - A8 quattro	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Volkswagen Group of America, Inc.	2 - Audi	94 - A8 quattro	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**	0W20 VW50800
Number of Cylinders/Rotors	6	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	VVGAV03.0N7M	Evaporative/Refueling Family	VVGAR0176NCS

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)	3.0	**Engine Rated Horsepower**	335
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	The variable valve timing is a substantial feature for: ? Reducing engine emissions ? Optimizing gas-exchange cycle ? Optimizing fuel consumption ? Reducing engine roughness ? Optimizing full load performance		
Variable Valve Lift?	Yes		
Variable Valve Lift System Description	Audi Valve Lift System		
Number of Knock Sensors	2	**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	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 CZSE var: 0		

Official Test Numbers

Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity	SVGA10084973	SVGA10084975	SVGA10084976	SVGA10084970	SVGA10084974	--	--	--	--	--
Gasoline	SVGA10084973	SVGA10084975	SVGA10084976	SVGA10084970	SVGA10084974	16.5	228.2	32.3	286.1	--

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Electricity	SVGA10084973	SVGA10084975	SVGA10084976
Gasoline	SVGA10084973	SVGA10084975	SVGA10084976

Hybrid Electric Vehicle And Fuel Cell Information

Rechargable Energy Storage System	Battery(s)	**Rechargable Energy Storage System, if Other**	--
Battery Type	Lithium Ion	**Number of Battery Packs**	1
Total Voltage of Battery Packs	48	**Battery Energy Capacity**	9.50
Battery Specific Energy	51.0	**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	--		

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Emission Data Vehicle Information

Vehicle ID / Configuration	RA7G-A6-168 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	RVGAJ02.0A7G	**Original Evaporative/Refueling Family**	RVGAR0176NCS
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	Audi	**Represented Test Vehicle Model**	A6 quattro

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	RVGAR0176NCS-001

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline
2	Electric Motor	Electricity

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1.0141
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	DPAA	**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 eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	4156	**Equivalent Test Weight (pounds)**	4500
GVWR (lbs)	5335	**N/V Ratio**	20.4
Axle Ratio	4.41		
Transmission Type	Automated Manual- Selectable (e.g. Automated Manual with paddles)	**# of Transmission Gears**	7
Transmission Lockup	No	**Creeper Gear**	No

Test Group	VVGAV03.0N7M	Evaporative/Refueling Family	VVGAR0176NCS

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	41.7	0.0611	0.02065	5.24	-0.1605	0.02034	12.9
Cold CO	45.87	0.0672	0.02271	0	0	0	N/A
US06	41.7	0.0611	0.02065	5.24	-0.1605	0.02034	N/A

Emission Control Device Comments	DFI/TC/CAC/TWC/WR-HO2S/HO2S
Manufacturer Test Vehicle Comments	A6 quattro EVAP EDV

Test #	**RVGA10080447**	**Test Procedure**	**23 - 2-day evap**
Exhaust Test # for this Evap Test	RVGA10080440	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/17/2023	**Fuel**	Gasoline
Fuel Batch ID	IG0025	**Fuel Calibration Number**	4
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	3351	**Odometer Units**	M
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**	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.254	--

Manufacturer Test Comments MY24 A6 quattro Evap Test 2Day

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	0.2540	0.0120	0.266	0.300	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2540	0.0120	0.266	0.300	Pass

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**RVGA10080451**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	RVGA10080442	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	04/21/2023	**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	3627	**Odometer Units**	M
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**	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.218	--

Manufacturer Test Comments MY24 A6 quattro Evap Test - 3Day

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	0.2180	0.0250	0.243	0.300	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2180	0.0250	0.243	0.300	Pass

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**RVGA10080448**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	RVGA10080441	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	03/15/2023	**Fuel**	Gasoline
Fuel Batch ID	IG0025	**Fuel Calibration Number**	1
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	AUDI AG Ingolstadt		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	3442	**Odometer Units**	M
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**	--

Test Results

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 MY24 A6 quattro Evap Test - 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	0.025	0.04	0.20	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC	0.020	0.025	0.04	0.20	Pass

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**RVGA10080449**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	RVGA10080442	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	04/21/2023	**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	3610	**Odometer Units**	M
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**	--

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	--

Manufacturer Test Comments MY24 A6 quattro Evap Test - 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	0.000	0.000	0.00	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.05	Pass

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Emission Data Vehicle Information

Vehicle ID / Configuration	SN7M-A8 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	SVGAV03.0N7M	**Original Evaporative/Refueling Family**	SVGAR0176NCS
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	Audi	**Represented Test Vehicle Model**	A8 L

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Electric Motor	Electricity
2	Combustion Engine	Gasoline

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1.0237
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Kilometers		
Engine Code	CZSE	**Rated Horsepower**	335
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**	All Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5027	**Equivalent Test Weight (pounds)**	5500
GVWR (lbs)	6140	**N/V Ratio**	24.4
Axle Ratio	3.08		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VVGAV03.0N7M	Evaporative/Refueling Family	VVGAR0176NCS

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	59.25	0.1654	0.02094	6.64	0.0046	0.0193	16
Cold CO	65.17	0.182	0.02303	-4.76	0.112	0.02039	N/A
US06	59.25	0.1654	0.02094	6.64	0.0046	0.0193	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments Tested in S-Mode

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**SVGA10084970**	**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	02/07/2024	**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	5439	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	572.8517904	--
FE BAG 1 (Bag 1 Fuel Economy)	15.06043	15.06043
CO2 BAG 2 (Bag 2 Carbon Dioxide)	601.4264978	--
FE BAG 2 (Bag 2 Fuel Economy)	14.4183381	14.4183381
CO2 BAG 3 (Bag 3 Carbon Dioxide)	472.5986716	--
FE BAG 3 (Bag 3 Fuel Economy)	18.3425677	18.3425677
METHANE (CH4 - Methane)	0.0081176	--
CO (Carbon Monoxide)	0.5179254	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.268951	--
DT-EER (Drive Trace Energy Economy Rating)	-1.17079	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.006317	--
MFR FE (Manufacturer Fuel Economy)	15.5	15.5
NOX (Nitrogen Oxide)	0.0159244	--
HC-NM (Non-methane Hydrocarbon)	0.067454	--
NMOG (Non-methane organic gases)	0.0741	--
HC-TOTAL (Total Hydrocarbon)	0.0751626	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	560	--

Manufacturer Test Comments test performed in S-Mode 4k Cold-CO - Tested as AUDI dr. - ETW: 5500

Certification Summary Information Report

Test Group VVGAV03.0N7M **Evaporative/Refueling Family** VVGAR0176NCS

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	0.52	--	--	--	0.1700	--	0.7	10.0	Pass
Fed	120,000 miles	Federal Tier 4 Bin 70	HC-NM	0.07	--	--	--	0.0041	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-IV ULEV70	CO	0.52	--	--	--	0.1700	--	0.7	10.0	Pass

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**SVGA10084971**	**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	02/21/2024	**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	5559	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	521.1561206	--
FE BAG 1 (Bag 1 Fuel Economy)	16.6261407	16.6261407
CO2 BAG 2 (Bag 2 Carbon Dioxide)	576.3492168	--
FE BAG 2 (Bag 2 Fuel Economy)	15.0531627	15.0531627
CO2 BAG 3 (Bag 3 Carbon Dioxide)	457.0754221	--
FE BAG 3 (Bag 3 Fuel Economy)	18.9738328	18.9738328
METHANE (CH4 - Methane)	0.0021688	--
CO (Carbon Monoxide)	0.1553604	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.9436499	--
DT-EER (Drive Trace Energy Economy Rating)	-1.27945	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.04005	--
MFR FE (Manufacturer Fuel Economy)	16.3	16.3
NOX (Nitrogen Oxide)	0.0129294	--
HC-NM (Non-methane Hydrocarbon)	0.0139082	--
NMOG (Non-methane organic gases)	0.0153	--
HC-TOTAL (Total Hydrocarbon)	0.0157288	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	532	--

Manufacturer Test Comments test performed in S-Mode 4k FED. FUEL 50'F FTP - Tested as AUDI dr. - ETW: 5500

Certification Summary Information Report

Test Group VVGAV03.0N7M **Evaporative/Refueling Family** VVGAR0176NCS

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	4,000 miles	California LEV-IV ULEV70	CO	0.16	--	--	--	--	--	0.2	1.7	Pass
CA	4,000 miles	California LEV-IV ULEV70	NMOG	0.0153	--	1.0991	--	--	--	0.015	99.999	Pass
CA	4,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.02823	--	--	--	--	--	0.028	0.140	Pass
CA	4,000 miles	California LEV-IV ULEV70	NOX	0.01293	--	--	--	--	--	0.0129	99.9990	Pass

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**SVGA10084973**	**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	01/24/2024	**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	4899	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	475.8205783	--
FE BAG 1 (Bag 1 Fuel Economy)	18.2065945	18.2065945
CO2 BAG 2 (Bag 2 Carbon Dioxide)	567.5065153	--
FE BAG 2 (Bag 2 Fuel Economy)	15.2863075	15.2863075
CO2 BAG 3 (Bag 3 Carbon Dioxide)	443.4024355	--
FE BAG 3 (Bag 3 Fuel Economy)	19.5529054	19.5529054
CO2 BAG 4 (Bag 4 Carbon Dioxide)	559.5357563	--
FE BAG 4 (Bag 4 Fuel Economy)	15.5034136	15.5034136
METHANE (CH4 - Methane)	0.0014002	--
CO (Carbon Monoxide)	0.210044	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.4705833	--
DT-EER (Drive Trace Energy Economy Rating)	-0.2121755	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.9650144	--
MFR FE (Manufacturer Fuel Economy)	16.9	16.9
NOX (Nitrogen Oxide)	0.0152414	--
N2O (Nitrous Oxide)	0.0004617	--
HC-NM (Non-methane Hydrocarbon)	0.0107576	--
NMOG (Non-methane organic gases)	0.0118	--
PM (Particulate Matter)	0.0004594	--
HC-TOTAL (Total Hydrocarbon)	0.0118919	--

Certification Summary Information Report

Test Group VVGAV03.0N7M **Evaporative/Refueling Family** VVGAR0176NCS

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	512	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	512	--

Manufacturer Test Comments test performed in S-Mode 4k FED. FUEL FTP - Tested as AUDI dr. - ETW: 5500

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	--	--	--	0.2200	--	999	--	--
Fed	120,000 miles	Federal Tier 4 Bin 70	METHANE	0.0014	--	--	--	0.0021	--	0.004	0.030	Pass
Fed	120,000 miles	Federal Tier 4 Bin 70	N2O	0.0005	--	--	--	0.0005	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	CO	0.21	--	--	--	0.1700	--	0.4	1.7	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	CO-COMP	0.49	--	--	--	--	--	0.5	4.2	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0118	--	1.0991	--	0.0058	--	0.018	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0270	--	--	--	--	--	0.040	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX-COMP	0.0308	--	--	--	--	--	0.031	0.090	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0152	--	--	--	0.0070	--	0.022	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0005	--	--	--	0.0000	--	0.000	0.003	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.21	--	--	--	0.1700	--	0.4	1.7	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0118	--	1.0991	--	0.0058	--	0.018	99.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.02704	--	--	--	--	--	0.040	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.01524	--	--	--	0.0070	--	0.0222	99.9990	Pass
CA	150,000 miles	California LEV-IV ULEV70	PM	0.0005	--	--	--	0.0000	--	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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**SVGA10084977**	**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	01/30/2024	**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	5209	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	487.756278	--
FE BAG 1 (Bag 1 Fuel Economy)	18.2529219	18.2529219
CO2 BAG 2 (Bag 2 Carbon Dioxide)	572.3628717	--
FE BAG 2 (Bag 2 Fuel Economy)	15.5997772	15.5997772
CO2 BAG 3 (Bag 3 Carbon Dioxide)	452.0793746	--
FE BAG 3 (Bag 3 Fuel Economy)	19.7353186	19.7353186
CO2 BAG 4 (Bag 4 Carbon Dioxide)	565.4510611	--
FE BAG 4 (Bag 4 Fuel Economy)	15.7927707	15.7927707
METHANE (CH4 - Methane)	0.0017095	--
CO (Carbon Monoxide)	0.3189297	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.0919508	--
DT-EER (Drive Trace Energy Economy Rating)	-0.5231347	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.018671	--
MFR FE (Manufacturer Fuel Economy)	17.2	17.2
NOX (Nitrogen Oxide)	0.012237	--
N2O (Nitrous Oxide)	0.0002193	--
HC-NM (Non-methane Hydrocarbon)	0.0148418	--
NMOG (Non-methane organic gases)	0.0153	--
PM (Particulate Matter)	0.0004487	--
HC-TOTAL (Total Hydrocarbon)	0.0163959	--

Certification Summary Information Report

Test Group	VVGAV03.0N7M	Evaporative/Refueling Family	VVGAR0176NCS

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	521	521

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	520	--

Manufacturer Test Comments GHG Test 4k FED. FUEL FTP - Tested as AUDI dr. - ETW: 5500

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	521	--	--	--	0.2200	--	521	--	--
Fed	120,000 miles	Federal Tier 4 Bin 70	METHANE	0.0017	--	--	--	0.0021	--	0.004	0.030	Pass
Fed	120,000 miles	Federal Tier 4 Bin 70	N2O	0.0002	--	--	--	0.0005	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	CO	0.32	--	--	--	0.1700	--	0.5	1.7	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0153	--	1.0991	--	0.0058	--	0.021	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0275	--	--	--	--	--	0.040	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0122	--	--	--	0.0070	--	0.019	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0004	--	--	--	0.0000	--	0.000	0.003	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.32	--	--	--	0.1700	--	0.5	1.7	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0153	--	1.0991	--	0.0058	--	0.021	99.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.02754	--	--	--	--	--	0.040	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.01224	--	--	--	0.0070	--	0.0192	99.9990	Pass
CA	150,000 miles	California LEV-IV ULEV70	PM	0.0004	--	--	--	0.0000	--	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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**SVGA10084974**	**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	01/24/2024	**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	4922	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0.124055	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.1683518	--
DT-EER (Drive Trace Energy Economy Rating)	-0.0947469	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.0116928	--
MFR FE (Manufacturer Fuel Economy)	30.6	30.6
NOX (Nitrogen Oxide)	0.0033881	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0001171	--
NMOG (Non-methane organic gases)	0.0001	--
PM (Particulate Matter)	0.0002859	--
HC-TOTAL (Total Hydrocarbon)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	283	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	283	--

Manufacturer Test Comments test performed in S-Mode 4k HWFET - Tested as AUDI dr. - ETW: 5500

Certification Summary Information Report

Test Group VVGAV03.0N7M **Evaporative/Refueling Family** VVGAR0176NCS

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	--	--	--	0.2200	--	999	--	--
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0001	--	1.0300	--	0.0058	--	0.006	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0035	--	--	--	--	--	0.016	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0034	--	--	--	0.0070	--	0.010	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0001	--	1.0300	--	0.0058	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.00349	--	--	--	--	--	0.016	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.00339	--	--	--	0.0070	--	0.0104	99.9990	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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**SVGA10084978**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	01/30/2024	**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	5233	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0.0903159	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.31873	--
DT-EER (Drive Trace Energy Economy Rating)	-0.0077593	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.781174	--
MFR FE (Manufacturer Fuel Economy)	30.6	30.6
NOX (Nitrogen Oxide)	0.0027976	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0003161	--
NMOG (Non-methane organic gases)	0.0003	--
PM (Particulate Matter)	0.0002546	--
HC-TOTAL (Total Hydrocarbon)	0.0000559	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	292	292

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	292	--

Manufacturer Test Comments GHG Test 4k HWFET - Tested as AUDI dr. - ETW: 5500

Certification Summary Information Report

Test Group VVGAV03.0N7M **Evaporative/Refueling Family** VVGAR0176NCS

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	292	--	--	--	0.2200	--	292	--	--
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0003	--	1.0300	--	0.0058	--	0.006	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0031	--	--	--	--	--	0.016	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0028	--	--	--	0.0070	--	0.010	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0003	--	1.0300	--	0.0058	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.00310	--	--	--	--	--	0.016	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.00280	--	--	--	0.0070	--	0.0098	99.9990	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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**SVGA10084975**	**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	01/24/2024	**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	4955	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	712.6226731	--
FE BAG 1 (Bag 1 Fuel Economy)	12.1576737	12.1576737
CO2 BAG 2 (Bag 2 Carbon Dioxide)	334.7340569	--
FE BAG 2 (Bag 2 Fuel Economy)	25.8769749	25.8769749
METHANE (CH4 - Methane)	0.0039259	--
CO (Carbon Monoxide)	0.4407522	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-2.365256	--
DT-EER (Drive Trace Energy Economy Rating)	-1.179342	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-4.166597	--
MFR FE (Manufacturer Fuel Economy)	20.7	20.7
NOX (Nitrogen Oxide)	0.0069049	--
N2O (Nitrous Oxide)	0.0000119	--
HC-NM (Non-methane Hydrocarbon)	0.0058938	--
NMOG (Non-methane organic gases)	0.0061	--
PM (Particulate Matter)	0.0020785	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0128	--
HC-TOTAL (Total Hydrocarbon)	0.0097648	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	418	--

Certification Summary Information Report

Test Group VVGAV03.0N7M **Evaporative/Refueling Family** VVGAR0176NCS

Manufacturer Test Comments test performed in S-Mode 4k US06 - Tested as AUDI dr. - ETW: 5500

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	0.44	--	--	--	0.1700	--	0.6	99.0	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0061	--	1.0300	--	0.0058	--	0.012	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0069	--	--	--	0.0070	--	0.014	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0021	--	--	--	0.0000	--	0.002	0.006	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.44	--	--	--	0.1700	--	0.6	9.6	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0061	--	1.0300	--	0.0058	--	0.012	99.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.01300	--	--	--	--	--	0.026	0.084	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.00690	--	--	--	0.0070	--	0.0139	99.9990	Pass

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Test #	**SVGA10084976**	**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	01/24/2024	**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	4981	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0.3181744	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.7244866	--
DT-EER (Drive Trace Energy Economy Rating)	-0.257097	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.033574	--
MFR FE (Manufacturer Fuel Economy)	15.3	15.3
NOX (Nitrogen Oxide)	0.0124562	--
N2O (Nitrous Oxide)	0.0000885	--
HC-NM (Non-methane Hydrocarbon)	0.0006568	--
NMOG (Non-methane organic gases)	0.0007	--
PM (Particulate Matter)	0.0012468	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0131	--
HC-TOTAL (Total Hydrocarbon)	0.0004247	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	567	--

Manufacturer Test Comments test performed in S-Mode 4k SC03 - Tested as AUDI dr. - ETW: 5500

Certification Summary Information Report

Test Group VVGAV03.0N7M **Evaporative/Refueling Family** VVGAR0176NCS

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 4 Bin 70	CO	0.32	--	--	--	0.1700	--	0.5	99.0	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0007	--	1.0300	--	0.0058	--	0.006	99.000	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0132	--	--	--	--	--	0.026	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0125	--	--	--	0.0070	--	0.020	99.000	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.32	--	--	--	0.1700	--	0.5	1.7	Pass

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Emission Data Vehicle Information

Vehicle ID / Configuration	UC-412 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	KVGAV02.0A7M	**Original Evaporative/Refueling Family**	KVGAR0150ACS
Original Test Vehicle Model Year	2019		

Vehicle Model

Represented Test Vehicle Make	AUDI	**Represented Test Vehicle Model**	A6 Quattro (C8)

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline
2	Electric Motor	Electricity

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1.0586
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Kilometers		
Engine Code	DLHB	**Rated Horsepower**	248
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 eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	4156	**Equivalent Test Weight (pounds)**	4500
GVWR (lbs)	--	**N/V Ratio**	21.4
Axle Ratio	4.41		
Transmission Type	Automated Manual- Selectable (e.g. Automated Manual with paddles)	**# of Transmission Gears**	7
Transmission Lockup	No	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VVGAV03.0N7M	Evaporative/Refueling Family	VVGAR0176NCS

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	39.521	0.2532	0.017868	-4.833	0.15554	0.016296	12.9
Cold CO	43.474	0.27852	0.019654	-5.317	0.17109	0.017926	N/A
US06	39.521	0.2532	0.017868	-4.833	0.15554	0.016296	N/A

Emission Control Device Comments DFI/TC/CAC/TWC/WR-HO2S/HO2S

Manufacturer Test Vehicle Comments MY 2019 AUDI A6 Quattro (C8) tested as A6 Limousine with Automated Manual Selectable 7 speed - ETW: 4500

Test #	**KVGA10058954**	**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	03/03/2019	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Volkswagen AG WOB2		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5069	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	--	**Road Speed Fan Usage**	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0164	--

Manufacturer Test Comments --

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Fuel Properties

Fuel Batch ID	**IG0025**	**Fuel Calibration Number**	**4**
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	02/06/2023	**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	**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
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**	**1**
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	02/15/2023	**Fuel Batch Calibration Ineffective Date**	02/14/2025

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS
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	**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**	--

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

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**	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	--	--	--	--	--	--	0.1700	99.0
150,000 miles	NMOG	--	--	1.0300	--	--	--	0.0058	99.000
150,000 miles	NOX	--	--	--	--	--	--	0.0070	99.000
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.006

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDV/Passenger Car	**Standard Level**	California LEV-IV 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	--	--	--	--	--	--	0.1700	1.7
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.0991	--	--	--	0.0058	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0070	99.9990
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS
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	--	--	--	--	--	--	0.2200	999
120,000 miles	METHANE	--	--	--	--	--	--	0.0021	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0005	0.010
150,000 miles	CO	--	--	--	--	--	--	0.1700	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.0991	--	--	--	0.0058	99.000
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.090
150,000 miles	NOX	--	--	--	--	--	--	0.0070	99.000
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDV/Passenger Car	**Standard Level**	California LEV-IV 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	--	--	--	--	--	--	0.1700	10.0

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDV/Passenger Car	**Standard Level**	California LEV-IV 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	--	--	--	--	--	--	0.1700	9.6
150,000 miles	NMOG	--	--	1.0300	--	--	--	0.0058	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.084
150,000 miles	NOX	--	--	--	--	--	--	0.0070	99.9990

Certification Summary Information Report

Test Group VVGAV03.0N7M **Evaporative/Refueling Family** VVGAR0176NCS

Cert Region California + CAA Section 177 states **Cert/In-Use Code** Both
Vehicle Class LDV/Passenger Car **Standard Level** California LEV-IV 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	--	--	--	--	--	--	0.1700	1.7
150,000 miles	NMOG	--	--	1.0300	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	--	--	--	--	999.999

Cert Region Federal **Cert/In-Use Code** Both
Vehicle Class LDV/Passenger Car **Standard Level** Federal Tier 4 Bin 70
Fuel Gasoline **Test Procedure** 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	--	--	--	--	--	--	0.1700	99.0
150,000 miles	NMOG	--	--	1.0300	--	--	--	0.0058	99.000
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0070	99.000

Cert Region California + CAA Section 177 states **Cert/In-Use Code** Both
Vehicle Class LDV/Passenger Car **Standard Level** California LEV-IV 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	--	--	--	0.0058	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0070	99.9990

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS
Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDV/Passenger Car	**Standard Level**	California LEV-IV 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	HCHO	--	--	--	--	--	--	--	0.016
4,000 miles	NMOG	--	--	1.0991	--	--	--	--	99.999
4,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.140
4,000 miles	NOX	--	--	--	--	--	--	--	99.9990

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	--	--	--	--	--	--	0.2200	999
150,000 miles	NMOG	--	--	1.0300	--	--	--	0.0058	99.000
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0070	99.000

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	--	--	--	--	--	--	0.1700	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0.0041	0.3

Evaporative/Refueling Standards

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Evaporative/Refueling Family VVGAR0176NCS
Cert Region California + CAA Section 177 states
Cert/In-Use Code Both
Standard Level California LEV-IV Zero Evap (Option 2)
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 VVGAR0176NCS
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	0.000

Evaporative/Refueling Family VVGAR0176NCS
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	0.025

Evaporative/Refueling Family VVGAR0176NCS
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 VVGAR0176NCS
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	0.0120

Certification Summary Information Report

Test Group	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS

Evaporative/Refueling Family	VVGAR0176NCS	**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	0.0250

Evaporative/Refueling Family	VVGAR0176NCS	**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	0.0250

Evaporative/Refueling Family	VVGAR0176NCS	**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	0.025

Evaporative/Refueling Family	VVGAR0176NCS	**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	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.000

Evaporative/Refueling Family	VVGAR0176NCS	**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	--	0.300	0.0120

Certification Summary Information Report

Test Group	VVGAV03.0N7M	Evaporative/Refueling Family	VVGAR0176NCS

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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS
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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS
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	VVGAV03.0N7M	**Evaporative/Refueling Family**	VVGAR0176NCS
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, NOx,** ***N_2O, CH_4, 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, NOx, N_2O, CH_4 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 AECD 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 CISD-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	VVGAHHGNNN7M
Test Group	VVGAV03.0N7M
Evap Family	VVGAR0176NCS
Emission Control System:	DFI/TC/CAC/TWC/WR-HO2S/HO2S

Engine Displacement:	3.0 liters
Valves per Cylinder:	4
Sales Area:	50 states
MMS:	MG1CS002
SIL:	N/A

Engine Code	Model	Vehicle Class	Engine Code Characteristics			HP @RPM	Torque @RPM [lb-ft]	Trans. / OD	ETW	Curb Weight [lbs]	Fuel Tank Capacity [Gal]	Canister working capacity [g]	Tire size	N/V Ratio	Start/ Stop [Y/N]
			Cat. Code	Com-pression ratio	Idle [rpm]										
CZSE	A8 quattro	LDV	JM842 (PRE), JM842 (MAIN)	11.2 ±0.3	630± 50	335 @5000 - 6400	369 @ 1370 - 4500	8 / 7+8	5250	4839	22.2	176	265/40 R20 265/35 R21	24.3 24.4	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	Gear 8
AL552-8Q	AWD	8	1-8	n.a.	3.076	4.714	3.143	2.106	1.667	1.285	1.000	0.839	0.667

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]					
A8 quattro	5500	59.25	0.1654	0.02094	263.55	0.4573	0.03596	16.0	21.5	8.9 / 22.2	20	S	automatic	Tier 3 / Tier 2	LN7M
A8 quattro	5250	50.34	0.1654	0.02028	223.94	0.4573	0.03483	14.6	22.6	8.9 / 22.2	20	D	automatic	Tier 2	LN7M

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. Automatic headlights can be turned off via the infotainment / MMI screen.
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 the infotainment / MMI screen.
Please contact VWGoA Engineering and Environmental Office if you need assistance with disabling the daytime running lights.

12.3 e-Motor Details

Model Name	A8 quattro
Engine Identification Number	IBSG4UA1
Nominal Voltage	48V
Direct Current (DC) / Alternating Current (AC) number of phases	Alternating Current (AC) / 3 phases
Maximum Net Power	9.4 kW @ 2700 rpm-3000rpm
Maximum Net Torque	62.0 Nm @ 0-1250rpm

12.4 Battery details

Battery Type	Lithium Ion Battery
Number of Battery Cells	13
Number of Battery Modules	1
Total Weight of Battery System	8.9 kg
Nominal voltage	48 Volt
Minimum Battery Voltage for Safe Operation	36 Volt
Total System Energy Capacity (Ah)	Gross: 9.5 Ah Net: 5.7 Ah
Energy Density (Whr/Kg)	51 Wh/kg
Battery Thermal Management	air

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

Sect No.	Date:	Comment:	R/C No.
Part 1			
All	03-31-2026	Initial application created	

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

Running Change / Field Fix Log for test group only.

Model Year: 2027
Test Group: VVGAV03.0N7M
Models: A8 quattro
Evaporative Family: VVGAR0176NCS

RC / FF Number	Description of Change / Reason	Date

15.3 ORVR Safety Application for Carry-Over ORVR Systems

Volkswagen Group Vehicles use standard technology in all 2027MY vehicles ORVR systems.
In accordance with EPA Guidance Letter CISD-06-06, ORVR applications will not be submitted.

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

April 2, 2026 Date

Subject: MY 2027 Volkswagen Group Light Duty Vehicle Initial Application for Emissions Certification for Test Group VVGAV03.0N7M with Evaporative Family VVGAR0176NCS.

Dear Mr. Kimball,

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

Test Group	Standards	Sales Area
VVGAV03.0N7M	Interim Tier 4 Bin 70	Federal
	LEV IV ULEV70	California

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

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: 2026.04.02 23:45:58 -04'00'

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

Enclosure(s)

US EPA Fee Form

Help and EPA Instructions

* Required Field

General Information

Date: 02/23/2026

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 *

248-754-4209

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 *

VVGAV03.0N7M

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 VVGAV03.0N7M
Pay.gov Tracking ID: 27VRSFE2
Agency Tracking ID: 77305110614

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.

The content of this document may contain Sensitive But Unclassified (SBU) data and/or Controlled Unclassified Information (CUI).

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

April 2, 2026 Date

Subject: MY 2027 Volkswagen Group Light Duty Vehicle Initial Application for Emissions Certification for Test Group VVGAV03.0N7M with Evaporative Family VVGAR0176NCS.

Dear Ms. Lang,

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

Test Group	Standards	Sales Area
VVGAV03.0N7M	Interim Tier 4 Bin 70	Federal
	LEV IV ULEV70	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

Digitally signed by D'Ambrosi Anthony VWPKI 5406C07D40F4331C
Date: 2026.04.02 23:46:50 -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

Partial Soak Standard(s)

In accordance with Title 13 CCR Chapter 1, Section 1961.4 (d)(2)(B), the Volkswagen Group hereby certifies that vehicles in this test group comply with the partial soak standards applicable in the aforementioned section.

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

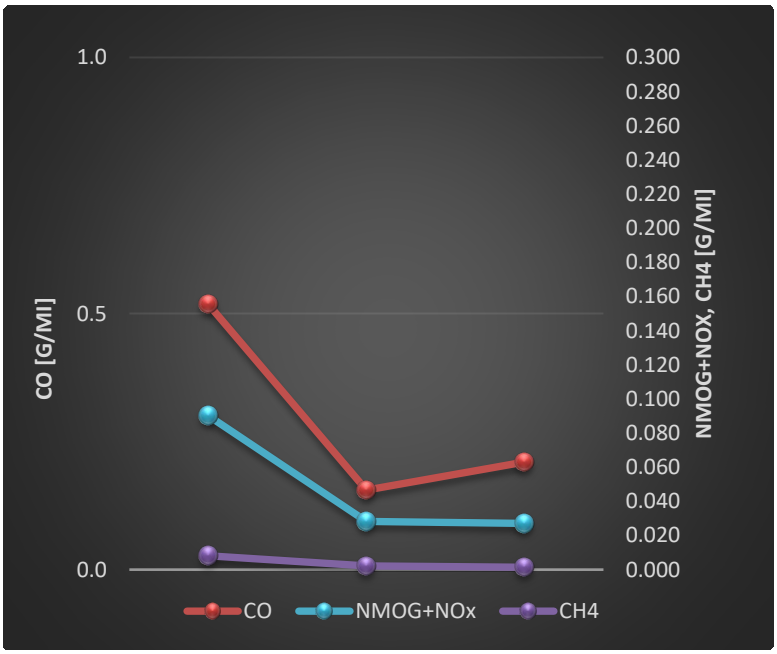
F_{HCHO} (Indolene): **1.04 (no RAF applied)**

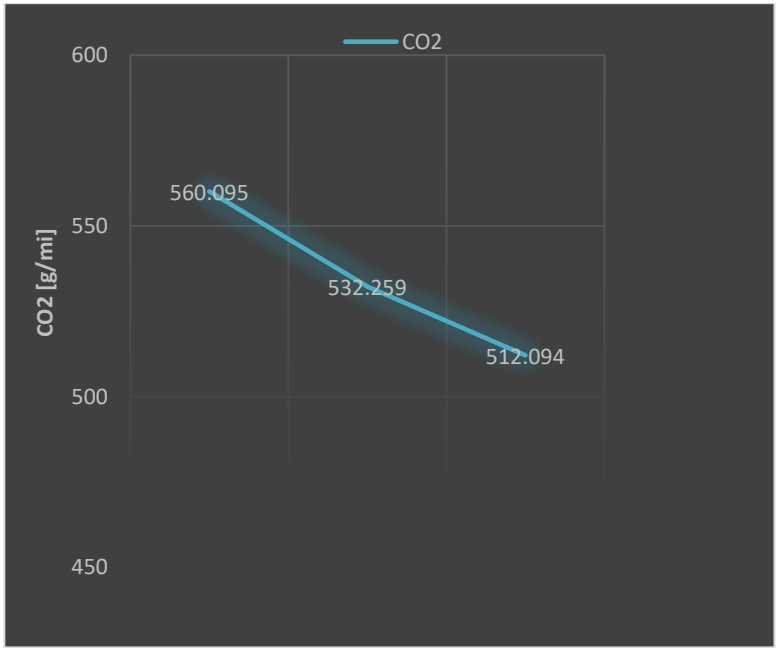
F_{HCHO} (Phase II): **1.10 (no RAF applied)**

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

17.5 Continuity of Emissions

A8 quattro



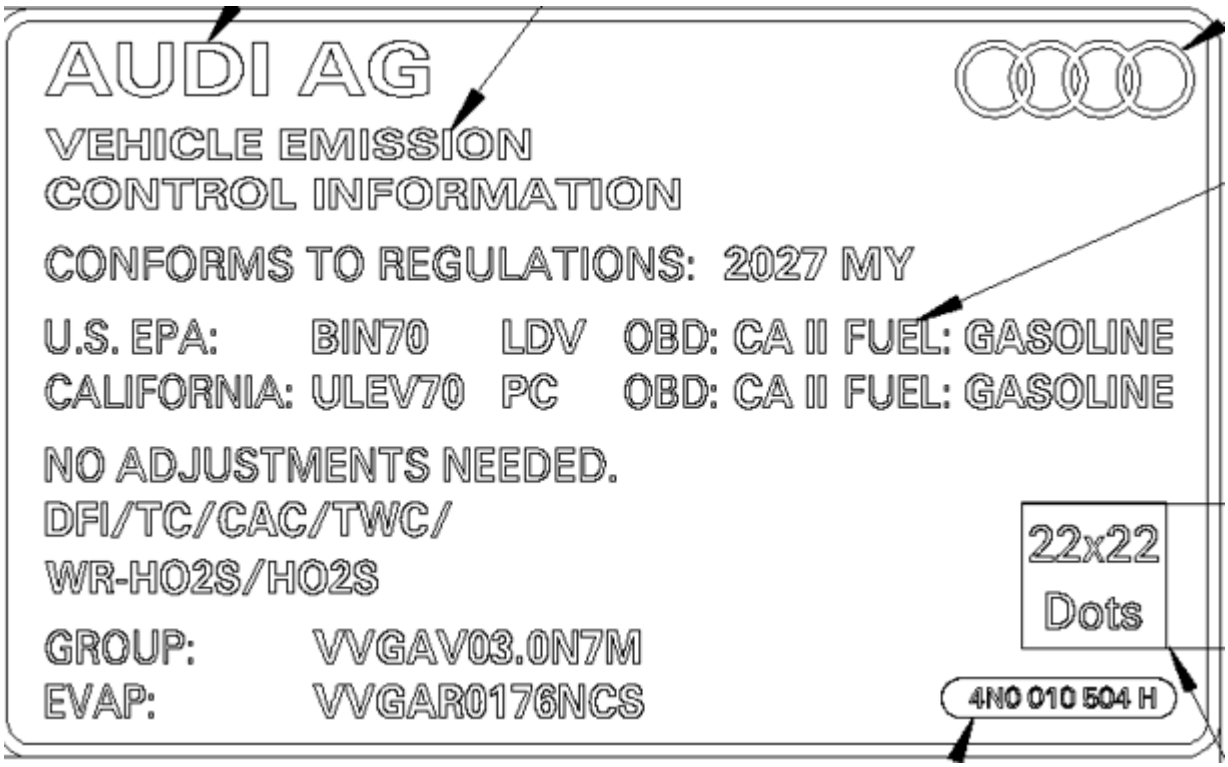


17.6 Applicable Deterioration Factors

	THC (g/mi)	NMHC (g/mi)	NMOG (g/mi)	NOx (g/mi)	CO (g/mi)	PM (g/mi)
150k	0.063*	0.052	0.0058	0.007	0.17	0.0

*120k

21. Vehicle Emission Control Information Label



21.2 Engine Control Module (ECM) Information

Model	Engine Code	SW-Part number	Cal ID	CVN	Comments
A8 L	CZSE	4N0.907.559.AM 0004	4N0559AM0004BVAB	32 F9 E2 1E	SOP

21.3 Transmission Control Module (TCM) Information

Model	Trans Code	SW-Part number	Cal ID	CVN	Comments
A8 L	AL552-8Q	4N0.927.158.BQ 0002	4N0158BQ00022000	48 F7 A8 E2	SOP

21.4 Automatic Transmission Fluid Pump

Model	Trans Code	SW-Part number	Cal ID	CVN	Comments
A8L	AL552-8Q	0D7.321.281.E 0703	0D7281E+0703IEP0	ED FF 23 4E	SOP

21.5 Brake System Control Module BSCM Information

Model	SW-Part number	Cal ID	CVN	Comments
A8 L	4N0.907.379.BF 0915	4N0379BF0915D0Hh	94 EA BC AC	SOP
	4N0.907.379.BF 0915	4N0379BF0915D0Hg	94 E5 D5 53	SOP

21.6 Gateway Control Module Information

Model	Trans Code	SW-Part number	Cal ID	CVN	Comments
A8 L	CZSE	8W0.907.468.AA	GW8W0468AA0062	9A 83 5E 5C	SOP
		80C.907.468.AA	GW80C468AA0062	FE 12 E3 7C	
		4KE.907.468.AA	GW4KE468AA0062	2B 05 0B 0D	
		4KL.907.468.AA	GW4KL468AA0062	D7 10 20 C7	
		4KR.907.468.AA	GW4KR468AA0062	EE 77 91 9C	

21.7 Voltage Converter Information

Model	SW-Part number	Cal ID	CVN	Comments
A8 L	4K0.959.663.B 0501	4K0663B+05012001	53 34 E2 4B	SOP

21.8 Start Generator Control Module Information (SGCM)

Model	SW-Part number	Cal ID	CVN	Comments
A8L	4M0.903.028 0608	4M0028++06080000	99 A9 93 09	SOP
	4M0.903.028 0609	4M0028++06090000	C2 D1 E8 83	FF_VGA_K-S_088_25

21.9 Battery Energy Control Module 2 (BECM2) Information

Model	SW-Part number	Cal ID	CVN	Comments
A8L	4N0.915.105.J 0115	4N0105J+**0**1150000	C3 57 59 18	RC_VGA_S-T_085_25

22. Calibration Information

Please refer to Section K of the OBD II A-P application

23. Vehicle Description

Please refer to Section 12.0 of this Test Group Application

24. Final U.S. Sales

Final Sales will be available with the Final Part 2 Application