

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

CARB USE ONLY

Invoice Name	MSF250697
Invoice Date	Jan 15, 2026

COMPANY INFORMATION

Company Name	Mercedes-Benz USA
Address	13470 International Pkwy
City	Jacksonville
State	FLORIDA
Zip	32218
Country	United States
Contact Name	Brandin Benson
Contact Telephone Number	5515797969
Contact Email	brandin.b.benson@mbusa.com
CARB Customer Number	CCAM000021

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	n/a	Model Year 2027	VMBXT00.0ED3	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
2	n/a	Model Year 2027	VMBXT00.0ED4	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
3	n/a	Model Year 2027	VMBXV00.0E10	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
4	n/a	Model Year 2027	VMBXV00.0ED1	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
5	n/a	Model Year 2027	VMBXV00.0ED2	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
6	n/a	Model Year 2027	VMBXV00.0ED3	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
7	n/a	Model Year 2027	VMBXV00.0ED4	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
8	n/a	Model Year 2027	VMBXV00.0ED5	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
9	n/a	Model Year 2027	VMBXV00.0ED8	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00

10	n/a	Model Year 2027	VMBXV00.0ED9	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 12,577.00
11	n/a	Model Year 2027	VMBXV04.0U3A	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
12	n/a	Model Year 2027	VMBXT02.0HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
13	n/a	Model Year 2027	VMBXV02.0HY2	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
14	n/a	Model Year 2027	VMBXV01.5HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
15	n/a	Model Year 2027	VMBXJ02.0HY3	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
16	n/a	Model Year 2027	VMBXV01.5HY2	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
17	n/a	Model Year 2027	VMBXV02.0HY4	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
18	n/a	Model Year 2027	VMBXT02.0HY2	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
19	n/a	Model Year 2027	VMBXV02.0HY7	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
20	n/a	Model Year 2027	VMBXT03.0HY2	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
21	n/a	Model Year 2027	VMBXV03.0HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
22	n/a	Model Year 2027	VMBXT03.0HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
23	n/a	Model Year 2027	VMBXJ03.0HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
24	n/a	Model Year 2027	VMBXV03.0HY2	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
25	n/a	Model Year 2027	VMBXV03.0HY3	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
26	n/a	Model Year 2027	VMBXT04.0HY2	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
27	n/a	Model Year 2027	VMBXV04.0HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
28	n/a	Model Year 2027	VMBXT04.0HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
29	n/a	Model Year 2027	VMBXV02.0HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
30	n/a	Model Year 2027	VMBXJ02.0HY1	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
31	n/a	Model Year 2027	VMBXV03.0HY4	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 50,309.00
32	n/a	Model Year 2027	VMBXV04.0HY5	Light-duty vehicle test group and	Base	\$ 50,309.00

				medium-duty vehicle test group		
						Total Due \$ 1,232,568.00

I, John Healey
John Healey (Jan 15, 2026 10:38:03 EST), attest that any information provided is true, accurate, and complete.
(Responsible Party Signature Here)

From: noreply@salesforce.com <noreply@salesforce.com> **On Behalf Of** California Air
Sent: Wednesday, February 11, 2026 10:47 AM
To: Healey, John (171) <john.healey@mbusa.com>
Subject: MS Fee Payment Confirmation for Invoice MSF250697

****EXTERNAL E-MAIL****

Dear Brandin Benson

Attached is documentation for your MS Fee payment for Invoice Name MSF250697. 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 – 25ATD221
2. Date of Payment – 2/6/2026
3. Payment Status - Paid



Application for Certification – Part 1

Model Year 2027 Specific Sections

Model(s) Covered:	Maybach S 580 S 580 4MATIC
Test Group:	VMBXV04.0HY1
Test Group Description:	4.0 ltr. V-8 turbocharged with starter generator (48V)
Durability Group:	VMBXHHGNNBI6
Durability Group Description:	Otto Cycle - Four Stroke - Water Cooled - Piston - Premium Gasoline - Direct Injection - Monolith - Pd / Rh TWC - Gasoline Particulate Filter (GPF)
Evaporative Family:	VMBXR0170LNS
EPA Summary Sheet No.:	CSI-VMBXV04.0HY1-VMBXR0170LNS
Applicable Standards:	Federal – Interim Tier 4 BIN 50 California - LEV III ULEV 50
OBD Group:	MRGx C
Vehicle(s) Tested Exhaust:	Z223E40DETC EVO ISG2 4x4 - Z2742 Z223E40DETC EVO ISG2 4x4 - Z27942
Vehicle(s) Tested EVAP:	V223E40DETC ISG 4x4 - Z2148 W212E35DEH 4x4 - Z2025



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Revision History

Issue Date / Revision Date	Affected Sections	Description of Changes
19-Jun-2026	All	Initial Version



1 Correspondence

1.01 EPA Responsible Official

Paul Skorupskas
VP, US Certification & Regulatory Affairs
Government Liaison, EPA
Phone: +1 (734) 929 8658
Email: paul.skorupskas@mercedes-benz.com

1.02 CARB Responsible Official

Tobias Schmelzle
Manager, US OBD Certification
Government Liaison, CARB
Phone: +1 (562) 243 7672
Email: tobias.t.schmelzle@mercedes-benz.com

1.03 Mailing Information

Mercedes-Benz AG
Attention: HPC 059-L404
Leibnizstrasse 2
71032 Boeblingen
Germany



2 Durability Group

2.01 Logic for Defining Durability Group

Please refer to the Common Application for Certification.



3 Evaporative/Refueling Family

3.01 Logic for Defining Evaporative/Refueling Family

Please refer to the Common Application for Certification. Results are available in Section 7 Test Results.



4 Durability Procedure

4.01 Exhaust Durability

Please refer to Section 16 Confidential Information for the test results used to establish deterioration factors. Applied DFs used can be found in Section 7 Test Results (CSI).

4.02 Evaporative/Refueling Durability

Please refer to Section 16 Confidential Information for the test results used to establish deterioration factors. Applied DFs used can be found in Section 7 Test Results (CSI).

4.03 Durability Equivalency Factors

Please refer to Section 16 Confidential Information.



5 Test Group

5.01 Test Group Description

Please refer to the Cover Page, Section 7 Test Results, and the Common Application for Certification.

Category	Group	Status
EDV/ZEV	VMBXV04.0HY1	New Testing
EVAP	VMBXR0170LNS	Carry-Over of Test Result
Durability	VMBXHHGNNBI6	New Testing



6 Test Vehicle

6.01 Test Vehicle Description

Please refer to Section 7 Test Results and Section 12 Vehicles Covered by Certificate for further information.



7 Test Results

7.01 Certification Summary Information

Please refer to the attachments for the Certification Summary Information Sheet.

7.02 Supplemental Test Methods

If a test vehicle is selected for EPA Confirmatory Testing, additional information will be provided under separate cover.

7.03 Pressurized Fuel Tanks

Not applicable for this test group.

7.04 Vehicle Lubricants

Please refer to the attachments for the Certification Summary Information Sheet and/or the owner's manual.



8 Statements

8.01 Conformity

Please refer to Section 14 Request for Certificates and the Common Application for Certification.

8.02 Testing Waiver Statements

Please refer to the Common Application for Certification.



9 On-Board Diagnostic System

9.01 OBD System

Please refer to Section 14 Request for Certificates and Section 16 Confidential Information.

9.02 Fuel Tank Leak Test

Please refer to the Common Application for Certification.



10 Alternate-Fueled Vehicles

10.01 Applicability

Alternate-fueled vehicles are not part of this test group.



11 Auxiliary Emissions Control Devices

11.01 AECD Document

Please refer to Section 16 Confidential Information.



12 Vehicles Covered by Certificate

12.01 Vehicle Information & Test Parameters

Additional vehicle information can be found in Section 7 Test Results.

	Vehicle 1 (EDV)	Vehicle 2 (FEDV)
Vehicle Identification Text:	Z223E40DETC-Z2742	V223E40DETC-Z2748
Actual Test Vehicle Make Text:	Mercedes-Benz	Mercedes-Benz
Actual Test Vehicle Model Text:	Maybach S 580	S 580 4MATIC
Carline Class:	Large Car	Large Car
Evaporative Refueling Family Name:	VMBXR0170LNS	VMBXR0170LNS
Drive Source Details 1		
Drive Source Identifier:	C	C
Fuel Identifier:	G	G
Drive Source Details 2		
Drive Source Identifier:	E	E
Fuel Identifier:	EL	EL
Fuel Cell Indicator:	N	N
Rechargeable Energy Storage System Indicator:	Y	Y
Rechargeable Energy Storage Device Identifier:	B	B
Off Board Charge Capability Indicator:	N	N
Test Drive Code:	A	A
Shift Indicator Light Usage Identifier:	1	1
Aged Component Usage Identifier:	4	4
Odometer Correction Details		
Correction Initial Value:	34	11
Correction Factor Value:	1	1
Correction Sign Identifier:	-	-
Correction Units Code:	M	M
Engine Code Text:	M177-40EVO	M177-40EVO
Engine Rated Horsepower Value:	530	530
Engine Displacement Value:	3982	3982
Air Aspiration Details		
Air Aspiration Method Identifier:	TC	TC
Air Aspiration Device Count:	2	2
Air Aspiration Configuration Identifier:	P	P
Charge Air Cooler Identifier:	L	L
Emissions Control Device Comments Text:		
Transmission Specifications Details		
Light Duty Transmission Type Identifier:	A	A
Transmission Lock up Indicator:	Y	Y
Transmission Creeper Gear Indicator:	N	N
Transmission Gear Count:	9	9
HYBRID Vehicle Indicator	Y	Y
⁽¹⁾ Vehicle Specifications Details		
Vehicle Class (EPA):	LDV	LDV
Vehicle Class (CARB):	PC	PC



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Curb Weight Value:	5375	5118
Equivalent Test Weight Value:	5500	5500
Gross Vehicle Weight Rating Value:	6426	6426
Adjusted Loaded Vehicle Weight Value:	5900	5772
Loaded Vehicle Weight Value:	5675	5418
Vehicle Subconfigs Details		
Vehicle Configuration Number:	0	
Manufacturer Vehicle Configuration Number:	0	
Tire Description:	Tire 1 (worst case)	Tire 1 (worst case)
Front:	265/35 R21	
Rear:	265/35 R21	
Total Road Load Horsepower Value:	14.73	
NV Ratio Value:	19.4	
Axle Ratio Value:	2.647	
Test Drive Mode:	Refer to section 16 (CBI)	Default
Test Procedure Dynamometer Coefficients		
Target Coefficient A Value:	55.08	
Target Coefficient B Value:	0.0362	
Target Coefficient C Value:	0.02142	
Vehicle Configuration Number:	0	0
Manufacturer Vehicle Configuration Number:	0	0
Tire Description:	Tire 2 (Label)	Tire 2 (Label)
Front:	265/35 R21	255/40 R20
Rear:	265/35 R21	285/35 R20
Total Road Load Horsepower Value:	14.73	14.61
NV Ratio Value:	19.4	19.8
Axle Ratio Value:	2.647	2.647
Test Drive Mode:	Default	Default
Test Procedure Dynamometer Coefficients		
Target Coefficient A Value:	55.08	55.08
Target Coefficient B Value:	0.0362	0.0362
Target Coefficient C Value:	0.02142	0.02107

⁽¹⁾ Adjusted to current model year

Please refer to the Common Application for Certification for a comprehensive list of all available tires and road loads.

12.02 Sub-Configuration Range Values

Not applicable for this test group.



13 Sales Volume

13.01 Projected Sales Volume

Please refer to the Common Application for Certification and the CARB E-Cert.

13.02 Projected Conformity with Schedules

Please refer to materials provided with the Compliance Preview Meeting.



14 Request for Certificates

14.01 Request for EPA Certificate of Conformity

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Mercedes-Benz AG | 70546 Stuttgart

Mercedes-Benz

Mr. Daniel Cullen
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
USA

Datum/Date
Model Year 2027

Request for Issuance of Certificate of Conformity

Dear Mr. Cullen,

Mercedes-Benz requests that EPA issues a Certificate of Conformity for the test group listed on the cover page of this application.

The applicable test results can be found in Section 7 of this document. Compliance statements can be found in Section 8 of the Common Application for Certification.

Production vehicles which are subject to registration or sale in all fifty states will be, in all material respects, the same as the certification test vehicles. The test group complies with all applicable regulations contained within 40 CFR Part 86 and California Health and Safety Code.

The application is current as of the date of submission.

Mit freundlichen Grüßen/Yours sincerely,

i.V. Paul Skorupskas
VP – US Certification & Regulatory Affairs



14.02 Request for CARB Executive Order

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Mercedes-Benz AG | 70546 Stuttgart

Mercedes-Benz

Mr. Seung Yeon Yang
California Air Resources Board
Emissions Certification & Compliance Division
4001 Iowa Avenue
Riverside, CA 92507
USA

Datum/Date
Model Year 2027

Request for Issuance of Executive Order

Dear Mr. Yang,

Mercedes-Benz requests that CARB issue an Executive Order for the test group listed on the cover page of this application.

The applicable test results can be found in Section 7 of this document. Compliance statements can be found in Section 8 of the Common Application for Certification.

Production vehicles which are subject to registration or sale in the State of California will be, in all material respects, the same as the certification test vehicles. The test group complies with all applicable regulations contained within 40 CFR Part 86 and California Health and Safety Code. The Vehicle Emission Control label complies with the requirements of California Code of Regulations, Title 13, Section 1965.

The application is current as of the date of submission.

Mit freundlichen Grüßen/Yours sincerely,

i.V. Paul Skorupskas
VP – US Certification & Regulatory Affairs

i.A. Tobias Schmelzle
Manager – CARB Liaison & On-Board Diagnostics



14.03 OBD Approval

Please see Section 16 Confidential Information for information regarding the OBD approval.

14.04 EPA Fee Filing Form

Please refer to the attachments for the Fee Filing Forms.

14.05 CARB Fee Filing Form

Please refer to the beginning of this document.



15 Additional Information

15.01 Hybrid System Information

Please refer to Section 7 Test Results and Section 16 Confidential Information.

15.02 Fuel-Fired Heater

There is no applicable fuel-fired heater for this test group.

15.03 Exhaust System Leaks & Repair

Please refer to the Common Application for Certification.

15.04 Battery Monitor & Durability

Not applicable for this test group.



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16 Confidential Information (FOI)

(Reserved)



Attachments (FOI)

1	Certification Summary Information (FOI)
2	EPA Fee Filing Form (FOI)



Attachment 1: Certification Summary Information (FOI)

Certification Summary Information Report

Manufacturer	Mercedes Benz	Manufacturer Code	MBX
Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	07/02/2026 09:41:58 AM
Model Year	2027		

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
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	--	--
Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	No
Fuel Cell Indicator	No	EPA Vehicle Class	LDV
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	No
Durability Group Name	VMBXHHGNNBI6	Durability Group Equivalency Factor	0.7
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	--	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VMBXV04.0HY1
Test Group OBD Compliance Level	Partial - with deficiencies and penalty	Number of Test Group OBD Deficiencies	2
OBD Deficiencies Comments	OBD Reference No. E-26-080		
Mfr Test Group Comments	TestGroup qualifies for Derived-5-Cycle Approach: City Litmus Threshold: 14.8 mpg, City FE 15.2 mpg - PASS / HWY Litmus Threshold: 23.1 mpg, HWY FE: 25.9 mpg - PASS ; Sales: Federal = Nationwide (50 states); CA = CA+ 177 States		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	03/18/2026 06:04:18 AM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Plastic	Fuel Tank Material Description	Plastic				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	No	Air Intake System Vapor Storage Device Description	--				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	163	Number of Primary Canisters	1				
Number of Bleed Canisters	1	Bleed Canister Total Working Capacity (grams)	4				
Mfr Evaporative/Refueling Family Comments	Evap family 170LNS for three 223 S-class models w/ ICE except Maybach S 680 4MATIC and S 580e 4MATIC PHEV (NIRCOS)						
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	Bleed canister integrated in primary canister; cert result: 0.008 g/test; MMBX10068170						
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				
VMBXR0170LNS-LNS	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
Mercedes Benz	1 - Mercedes-Benz	805 - S 580 4MATIC Maybach	California + CAA Section 177 states	All Wheel Drive	Automatic	9	Yes
Mercedes Benz	1 - Mercedes-Benz	806 - S 580 4MATIC	California + CAA Section 177 states	All Wheel Drive	Automatic	9	Yes
Mercedes Benz	1 - Mercedes-Benz	806 - S 580 4MATIC	Federal	All Wheel Drive	Automatic	9	Yes
Mercedes Benz	1 - Mercedes-Benz	805 - S 580 4MATIC Maybach	Federal	All Wheel Drive	Automatic	9	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		
Number of Cylinders/Rotors	8			Mechanically Variable Compression Ratio Indicator	N		

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
After Treatment Device(s) (ATD)			
ATD Number	ATD Type	ATD Precious Metal	Substrate Material
1	Three-way catalyst	Palladium + Rhodium	Ceramic
2	Three-way catalyst	Palladium + Rhodium	Ceramic
3	Other	no coating	Ceramic
4	Three-way catalyst	Platinum + Palladium + Rhodium	Ceramic
Substrate Construction			
Monolith			
Mfr After Treatment Device (ATD) Comments			
ATD #3 = GPF (Gasoline particulate filter)			
Direct Ozone Reduction (DOR) Device			
Not Equipped			
Mfr Emission Control Device Comments			
--			
Engine Configuration Number 1			
Engine Displacement (liters)	4.0	Engine Rated Horsepower	530
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	2
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Allows timing of the intake / exhaust valves to be changed while the engine is in operation		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	4	Number of Air/Fuel Sensors	4
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	No
EGR Type	Variable Valve Timing Control	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	--		

Certification Summary Information Report

Test Group		VMBXV04.0HY1				Evaporative/Refueling Family		VMBXR0170LNS		
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	VMBX91006776	VMBX91006777	VMBX10093728	VMBX10093732	VMBX91006778	--	--	--	--	--
Gasoline	VMBX91006776	VMBX91006777	VMBX10093728	VMBX10093732	VMBX91006778	42.5	15.0	89.2	23.3	--

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Gasoline	VMBX91006776	VMBX91006777	VMBX10093728
Electricity	VMBX91006776	VMBX91006777	VMBX10093728

Official Charge Depleting Test Numbers

Test Group Fuel	UDDS	Highway
Gasoline	--	--

Hybrid Electric Vehicle And Fuel Cell Information

Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	44	Battery Energy Capacity	17.5
Battery Specific Energy	57.2	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	permanent synchronous motor	Rated Motor/Generator Power	17
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	ISG (Integrated-Starter-Generator) Engine with 48V Technology (BB300)		

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
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Emission Data Vehicle Information

Vehicle ID / Configuration	V223E40DETC-Z2148 / 0	Manufacturer Vehicle Configuration Number	2
Original Test Group Name	MMBXV04.0HY1	Original Evaporative/Refueling Family	MMBXR0170LND
Original Test Vehicle Model Year	2021		

Vehicle Model

Represented Test Vehicle Make	Mercedes-Benz	Represented Test Vehicle Model	S 580 4MATIC
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Leak Family Details

Leak Family Identifier	LND	Leak Family Name	MMBXR0170LND-LND
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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	No
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	95	Odometer Correction Factor	0.9886
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	M176-40DETC	Rated Horsepower	496
Displacement (liters)	3.982		
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel
Charge Air Cooler Type	Liquid	Drive Mode While Testing	4-Wheel Drive
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	4942	Equivalent Test Weight (pounds)	5250
GVWR (lbs)	6210	N/V Ratio	19.7
Axle Ratio	2.65		
Transmission Type	Automatic	# of Transmission Gears	9
Transmission Lockup	Yes	Creeper Gear	No

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
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Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	62.72	0.0362	0.01903	3.759	0.08354	0.016303	14.9
US06	62.72	0.0362	0.01903	3.759	0.08354	0.016303	N/A

Emission Control Device Comments Engine: 496 HP combustion and 20 HP electric

Manufacturer Test Vehicle Comments 285/40 R19 ; EVAP testing configuration

Test #	MMBX10068338	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	MMBX10068336	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	01/26/2021	Fuel	Gasoline
Fuel Batch ID	U21R14	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4170	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 (Total Hydrocarbon)	0.286	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.3092	--

Manufacturer Test Comments MY2021 (V223) 3Day EVAP Test Result. Hot Soak: 0.1102 g HC-Total-EQUIV. MFR Conducted Confirmatory Testing

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	0.3092	0	0.309	0.325	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.3092	0	0.309	0.325	Pass

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	MMBX91004730	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	MMBX91004726	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	03/16/2021	Fuel	Gasoline
Fuel Batch ID	27626	Fuel Calibration Number	2
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4331	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.285436	--

Manufacturer Test Comments

Hot_Soak_HC_(g) = 0.061215, Diurnal (gHC) = 0.224221

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	0.2854	0	0.285	0.325	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2854	0	0.285	0.325	Pass

Certification Summary Information Report

Test Group	VMBXV04.0HY1		Evaporative/Refueling Family		VMBXR0170LNS			
Test #	MMBX10068172		Test Procedure		24 - Federal fuel refueling test (ORVR)			
Exhaust Test # for this Evap Test	MMBX10068171		Test Fuel Type		49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)			
Test Date	12/17/2020		Fuel		Gasoline			
Fuel Batch ID	U21R13		Fuel Calibration Number		1			
Vehicle Class	N/A		DF Type		Mfr. Determined			
Verify Test Lab ID	3953 Research Park Drive							
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)							
Test Start Odometer Reading	3998		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 (Hydrocarbon for Running Loss and ORVR)			0.0005		--			
OMHCE (Organic material Hydrocarbon Equivalent)			0.00054		--			
Manufacturer Test Comments								
MY2021 (V223) ORVR EVAP Test Result								
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	OMHCE	0.001	0.016	0.02	0.20	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.001	0.016	0.02	0.20	Pass

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	MMBX10068337	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	MMBX10068336	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	01/26/2021	Fuel	Gasoline
Fuel Batch ID	U21R14	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4153	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
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)	0.00035	--

Manufacturer Test Comments

MY2021 (V223) Running Loss Test. Tier 3 E10 fuel. 0.000322 g/mi HC. MFR Conducted Confirmatory Testing

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	0.00	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.000	0	0.00	0.05	Pass

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS						
Test #	MMBX10068170	Test Procedure	65 - Evap Canister Bleed Test						
Exhaust Test # for this Evap Test	--	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline						
Test Date	01/14/2019	Fuel	Gasoline						
Fuel Batch ID	--	Fuel Calibration Number	--						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	3953 Research Park Drive								
E10 Evaporative Test Measurement Method	--								
Test Start Odometer Reading	3900	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	--								
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No						
Test Results									
<table border="1"> <tr> <td>Test Result Name</td> <td>Unrounded Test Result</td> <td>Verify Calculated FE Equivalent Value</td> </tr> <tr> <td>HC-TOTAL (Total Hydrocarbon)</td> <td>0.008</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value	HC-TOTAL (Total Hydrocarbon)	0.008	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value							
HC-TOTAL (Total Hydrocarbon)	0.008	--							
Manufacturer Test Comments									
BETP conducted at the EVAP canister supplier Kayser in Einbeck, Germany. Therefore vehicle and test lab values are Dummy values only. Three different samples have been tested with test results ranging btw. 6 - 8 mg HC									
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	0.0080	0	0.008	0.020	Pass	
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.0080	0	0.008	0.020	Pass	

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
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Emission Data Vehicle Information

Vehicle ID / Configuration	Z223E40DETC-Z2742 / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	VMBXV04.0HY1	Original Evaporative/Refueling Family	VMBXR0170LNS
Original Test Vehicle Model Year	2027		

Vehicle Model

Represented Test Vehicle Make	Mercedes-Benz	Represented Test Vehicle Model	Maybach S 580
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Leak Family Details

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

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline
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	Yes		
Odometer Correction -- Initial	34	Odometer Correction Factor	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	M177-40EVO	Rated Horsepower	530
Displacement (liters)	3.982		
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel
Charge Air Cooler Type	Liquid	Drive Mode While Testing	All Wheel Drive
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	5375	Equivalent Test Weight (pounds)	5500
GVWR (lbs)	6426	N/V Ratio	19.4
Axle Ratio	2.65		
Transmission Type	Automatic	# of Transmission Gears	9
Transmission Lockup	Yes	Creeper Gear	No

Certification Summary Information Report

Test Group		VMBXV04.0HY1			Evaporative/Refueling Family		VMBXR0170LNS	
Dynamometer Coefficients:								
Target Coefficients				Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients	
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	55.08	0.0362	0.02142	4.57	-0.01757	0.018961	14.7	
Cold CO	60.59	0.0398	0.02356	-4.21	-0.17902	0.021678	N/A	
US06	55.08	0.0362	0.02142	4.57	-0.01757	0.018961	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		265/35 R21						

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	VMBX10093732	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)
Test Date	03/17/2026	Fuel	Gasoline
Fuel Batch ID	U25C06	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5336	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	Yes
Test Results			

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
ACT-DISTANCE (Actual Distance Driven (miles))	11.064	--	
ACT-DISTANCE BAG 1 (Bag 1 Actual Distance)	3.593	--	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	647.7094	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	0.9025	--	
FE BAG 1 (Bag 1 Fuel Economy)	13.3921	13.3921	
CH4 BAG 1 (Bag 1 Methane)	0.0256	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.098	--	
WATT-HRS BAG 1 (Bag 1 Watt Hours)	8.7557	--	
ACT-DISTANCE BAG 2 (Bag 2 Actual Distance)	3.882	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	518.7819	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0	--	
FE BAG 2 (Bag 2 Fuel Economy)	16.7656	16.7656	
CH4 BAG 2 (Bag 2 Methane)	0.001	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0004	--	
WATT-HRS BAG 2 (Bag 2 Watt Hours)	-32.6025	--	
ACT-DISTANCE BAG 3 (Bag 3 Actual Distance)	3.59	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	429.6321	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0	--	
FE BAG 3 (Bag 3 Fuel Economy)	20.2442	20.2442	
CH4 BAG 3 (Bag 3 Methane)	0.0033	--	
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0	--	
WATT-HRS BAG 3 (Bag 3 Watt Hours)	-13.84	--	
METHANE (CH4 - Methane)	0.0067	--	
CO (Carbon Monoxide)	0.1865	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.868	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.656	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.548	--	
MFR FE (Manufacturer Fuel Economy)	16.6821	16.6821	
NOX (Nitrogen Oxide)	0.0285	--	
N2O (Nitrous Oxide)	0.0019	--	
HC-NM (Non-methane Hydrocarbon)	0.0186	--	

Certification Summary Information Report

Test Group		VMBXV04.0HY1			Evaporative/Refueling Family				VMBXR0170LNS			
		NMOG (Non-methane organic gases)		0.0204		--						
		HC-TOTAL (Total Hydrocarbon)		0.0247		--						
		WATT-HRS (Watt Hours)		-37.6868		--						
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE						
		Carbon-Related Exhaust Emissions		522		--						
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		521.013		--						
Manufacturer Test Comments		265/35 R21										
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 3 Bin 50	CO	0.19	--	--	--	0.01	--	0.2	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 50	HC-NM	0.0186	--	--	--	0.002	--	0.021	0.300	Pass
CA	50,000 miles	California LEV-III ULEV50	CO	0.19	--	--	--	0.01	--	0.2	10.0	Pass

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	VMBX91006776	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/01/2026	Fuel	Gasoline
Fuel Batch ID	29858	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5625	Odometer Units	M
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			

Certification Summary Information Report

Test Group	VMBOXV04.0HY1	Evaporative/Refueling Family	VMBOXR0170LNS
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
ACT-DISTANCE (Actual Distance Driven (miles))	14.9177084	--	
ACT-DISTANCE BAG 1 (Bag 1 Actual Distance)	3.5880315	--	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	532.2493896	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	0.3309789	--	
FE BAG 1 (Bag 1 Fuel Economy)	999	--	
CH4 BAG 1 (Bag 1 Methane)	0.0154776	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.0679013	--	
HC-TOTAL BAG 1 (Bag 1 Total Hydrocarbon)	0.0767866	--	
WATT-HRS BAG 1 (Bag 1 Watt Hours)	-311.9848157	--	
ACT-DISTANCE BAG 2 (Bag 2 Actual Distance)	3.8733535	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	462.1835327	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0	--	
FE BAG 2 (Bag 2 Fuel Economy)	999	--	
CH4 BAG 2 (Bag 2 Methane)	0.0014337	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0	--	
HC-TOTAL BAG 2 (Bag 2 Total Hydrocarbon)	0.0013605	--	
WATT-HRS BAG 2 (Bag 2 Watt Hours)	-16.695197	--	
ACT-DISTANCE BAG 3 (Bag 3 Actual Distance)	3.5896795	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	389.2698669	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0	--	
FE BAG 3 (Bag 3 Fuel Economy)	999	--	
CH4 BAG 3 (Bag 3 Methane)	0.0025454	--	
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0	--	
HC-TOTAL BAG 3 (Bag 3 Total Hydrocarbon)	0.0022107	--	
WATT-HRS BAG 3 (Bag 3 Watt Hours)	-18.47988	--	
ACT-DISTANCE BAG 4 (Bag 4 Actual Distance)	3.8666446	--	
CO2 BAG 4 (Bag 4 Carbon Dioxide)	454.1669617	--	
CO BAG 4 (Bag 4 Carbon Monoxide)	0	--	
FE BAG 4 (Bag 4 Fuel Economy)	999	--	
CH4 BAG 4 (Bag 4 Methane)	0.0009697	--	
NMOG BAG 4 (Bag 4 Non-methane organic gases)	0	--	

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
	HC-TOTAL BAG 4 (Bag 4 Total Hydrocarbon)	0.0006001	--
	WATT-HRS BAG 4 (Bag 4 Watt Hours)	7.3402592	--
	METHANE (CH4 - Methane)	0.0045056	--
	CO (Carbon Monoxide)	0.0684393	--
	DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.827778	--
	DT-EER (Drive Trace Energy Economy Rating)	-0.1156058	--
	DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.0569582	--
	MFR FE (Manufacturer Fuel Economy)	999	--
	NOX (Nitrogen Oxide)	0.0185443	--
	N2O (Nitrous Oxide)	0.0020451	--
	HC-NM (Non-methane Hydrocarbon)	0.0127499	--
	NMOG (Non-methane organic gases)	0.014013	--
	PM (Particulate Matter)	0.0000318	--
	HC-TOTAL (Total Hydrocarbon)	0.0169655	--
	WATT-HRS (Watt Hours)	-339.8196335	--
Test Result Name		Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions		9999.9999999	454
Test Result Name		Unrounded Test Result	Verify Calculated CO2
Carbon dioxide		454.2935181	--
Manufacturer Test Comments			
Amended Report (test number 20260081002); test is related to lab concern CA-26-023. Added values for HC-TOTAL bags, ACT-DISTANCE, and WATT-HRS. No other changes were made. Unrounded Result for the following test results were modified by Verify: FE BAG 3, MFR FE, FE BAG 2, FE BAG 4, FE BAG 1			

Certification Summary Information Report

Test Group		VMBXV04.0HY1			Evaporative/Refueling Family					VMBXR0170LNS		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 50	CREE	454	--	--	--	0.0789	--	454	--	--
Fed	120,000 miles	Federal Tier 3 Bin 50	METHANE	0.0045	--	--	--	0.0037	--	0.008	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 50	N2O	0.0020	--	--	--	0.0015	--	0.004	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	CO	0.07	--	--	--	0.05	--	0.1	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	CO-COMP	0.08	--	--	--	--	--	0.1	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0140	--	1.10	--	0.0027	--	0.017	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0325	--	--	--	--	--	0.035	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX-COMP	0.0242	--	--	--	--	--	0.024	0.080	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0185	--	--	--	0	--	0.018	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	PM	0.0000	--	--	--	0.0001	--	0.000	0.003	Pass
CA	120,000 miles	California LEV-III ULEV50	CREE	454	--	--	--	0.0789	--	454	--	--
CA	120,000 miles	California LEV-III ULEV50	METHANE	0.0045	--	--	--	0.0037	--	0.008	0.030	Pass
CA	120,000 miles	California LEV-III ULEV50	N2O	0.0020	--	--	--	0.0015	--	0.004	0.010	Pass
CA	150,000 miles	California LEV-III ULEV50	CO	0.07	--	--	--	0.05	--	0.1	1.7	Pass
CA	150,000 miles	California LEV-III ULEV50	CO-COMP	0.08	--	--	--	--	--	0.1	4.2	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0140	--	1.10	--	0.0027	--	0.017	99.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0325	--	--	--	--	--	0.035	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX-COMP	0.0242	--	--	--	--	--	0.024	0.080	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0185	--	--	--	0	--	0.018	99.999	Pass
CA	150,000 miles	California LEV-III ULEV50	PM	0.0000	--	--	--	0.0001	--	0.000	0.001	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	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	VMBX91006797	Test Procedure	2 - CVS 75 and later (w/o can. load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	05/19/2026	Fuel	N/A
Fuel Batch ID	29351	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5705	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	Yes
Test Results			

Certification Summary Information Report

Test Group	VMBOXV04.0HY1	Evaporative/Refueling Family	VMBOXR0170LNS
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
ACT-DISTANCE (Actual Distance Driven (miles))	14.8813902	--	
ACT-DISTANCE BAG 1 (Bag 1 Actual Distance)	3.5772004	--	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	570.3438853	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	0.983816	--	
FE BAG 1 (Bag 1 Fuel Economy)	15.5742477	--	
CH4 BAG 1 (Bag 1 Methane)	0.0186406	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.1023337	--	
HC-TOTAL BAG 1 (Bag 1 Total Hydrocarbon)	0.1166163	--	
WATT-HRS BAG 1 (Bag 1 Watt Hours)	-360.1871126	--	
ACT-DISTANCE BAG 2 (Bag 2 Actual Distance)	3.8407032	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	506.7355937	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0	--	
FE BAG 2 (Bag 2 Fuel Economy)	17.5880018	--	
CH4 BAG 2 (Bag 2 Methane)	0.0010466	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0	--	
HC-TOTAL BAG 2 (Bag 2 Total Hydrocarbon)	0.0009911	--	
WATT-HRS BAG 2 (Bag 2 Watt Hours)	-22.7902093	--	
ACT-DISTANCE BAG 3 (Bag 3 Actual Distance)	3.5877274	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	399.3730368	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0	--	
FE BAG 3 (Bag 3 Fuel Economy)	22.3157739	--	
CH4 BAG 3 (Bag 3 Methane)	0.0032644	--	
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0	--	
HC-TOTAL BAG 3 (Bag 3 Total Hydrocarbon)	0.002888	--	
WATT-HRS BAG 3 (Bag 3 Watt Hours)	-4.790258	--	
ACT-DISTANCE BAG 4 (Bag 4 Actual Distance)	3.8757585	--	
CO2 BAG 4 (Bag 4 Carbon Dioxide)	507.8726274	--	
CO BAG 4 (Bag 4 Carbon Monoxide)	0	--	
FE BAG 4 (Bag 4 Fuel Economy)	17.5486659	--	
CH4 BAG 4 (Bag 4 Methane)	0.0008667	--	
NMOG BAG 4 (Bag 4 Non-methane organic gases)	0	--	

Manufacturer Test Comments None

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	VMBX91006778	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	05/01/2026	Fuel	Gasoline
Fuel Batch ID	29858	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5640	Odometer Units	M
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)
ACT-DISTANCE (Actual Distance Driven (miles))	10.2590361	--
METHANE (CH4 - Methane)	0.0006249	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.2202392	--
DT-EER (Drive Trace Energy Economy Rating)	-0.1408319	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.7397106	--
MFR FE (Manufacturer Fuel Economy)	34.0901489	--
NOX (Nitrogen Oxide)	0.0024534	--
N2O (Nitrous Oxide)	0.0001349	--
HC-NM (Non-methane Hydrocarbon)	0.0002368	--
NMOG (Non-methane organic gases)	0.0002439	--
HC-TOTAL (Total Hydrocarbon)	0.0008475	--
WATT-HRS (Watt Hours)	-8.8547763	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	255

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	255.2107849	--

Manufacturer Test Comments

Amended Report (test number 20260081003); test is related to lab concern CA-26-023. Added values for ACT-DISTANCE, and WATT-HRS. No other changes were made.

Certification Summary Information Report

Test Group		VMBXV04.0HY1			Evaporative/Refueling Family					VMBXR0170LNS		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 50	CREE	255	--	--	--	0.0789	--	255	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0002	--	1.03	--	0.0027	--	0.003	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0027	--	--	--	--	--	0.005	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0025	--	--	--	0	--	0.002	99.999	Pass
CA	120,000 miles	California LEV-III ULEV50	CREE	255	--	--	--	0.0789	--	255	--	--
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0002	--	1.03	--	0.0027	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0027	--	--	--	--	--	0.005	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0025	--	--	--	0	--	0.002	99.999	Pass

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

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	VMBX91006798	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	05/19/2026	Fuel	Gasoline
Fuel Batch ID	29351	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5720	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	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
ACT-DISTANCE (Actual Distance Driven (miles))	10.2256217	--	
METHANE (CH4 - Methane)	0.0004806	--	
CO (Carbon Monoxide)	0	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	4.243016	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.6153997	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	5.2524524	--	
MFR FE (Manufacturer Fuel Economy)	33.4284774	--	
NOX (Nitrogen Oxide)	0.0027884	--	
N2O (Nitrous Oxide)	0.0001191	--	
HC-NM (Non-methane Hydrocarbon)	0.0003731	--	
NMOG (Non-methane organic gases)	0.000388	--	
HC-TOTAL (Total Hydrocarbon)	0.0008428	--	
WATT-HRS (Watt Hours)	-11.0817	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	9999.9999999	267	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	266.6119899	--	
Manufacturer Test Comments	None		

Certification Summary Information Report

Test Group		VMBXV04.0HY1			Evaporative/Refueling Family					VMBXR0170LNS		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 50	CREE	267	--	--	--	0.0789	--	267	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0004	--	1.03	--	0.0027	--	0.003	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0032	--	--	--	--	--	0.006	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0028	--	--	--	0	--	0.003	99.999	Pass
CA	120,000 miles	California LEV-III ULEV50	CREE	267	--	--	--	0.0789	--	267	--	--
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0004	--	1.03	--	0.0027	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0032	--	--	--	--	--	0.006	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0028	--	--	--	0	--	0.003	99.999	Pass

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

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	VMBX91006777	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	05/01/2026	Fuel	Gasoline
Fuel Batch ID	29858	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5660	Odometer Units	M
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			

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
ACT-DISTANCE (Actual Distance Driven (miles))	8.0212002	--	
ACT-DISTANCE BAG 1 (Bag 1 Actual Distance)	1.7853826	--	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	612.3384399	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	0	--	
FE BAG 1 (Bag 1 Fuel Economy)	999	--	
CH4 BAG 1 (Bag 1 Methane)	0.0051583	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.0020299	--	
HC-TOTAL BAG 1 (Bag 1 Total Hydrocarbon)	0.0070122	--	
WATT-HRS BAG 1 (Bag 1 Watt Hours)	-58.5042213	--	
ACT-DISTANCE BAG 2 (Bag 2 Actual Distance)	6.235817	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	301.379364	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0	--	
FE BAG 2 (Bag 2 Fuel Economy)	999	--	
CH4 BAG 2 (Bag 2 Methane)	0.0023826	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0018808	--	
HC-TOTAL BAG 2 (Bag 2 Total Hydrocarbon)	0.0041546	--	
WATT-HRS BAG 2 (Bag 2 Watt Hours)	31.4337214	--	
METHANE (CH4 - Methane)	0.0030004	--	
CO (Carbon Monoxide)	0	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-2.4847732	--	
DT-EER (Drive Trace Energy Economy Rating)	-2.1488345	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-4.8977151	--	
MFR FE (Manufacturer Fuel Economy)	999	--	
NOX (Nitrogen Oxide)	0.0093288	--	
N2O (Nitrous Oxide)	0.0010557	--	
HC-NM (Non-methane Hydrocarbon)	0.0018582	--	
NMOG (Non-methane organic gases)	0.001914	--	
PM (Particulate Matter)	0.0000593	--	
HC-TOTAL (Total Hydrocarbon)	0.0047907	--	
WATT-HRS (Watt Hours)	-27.0704999	--	

Certification Summary Information Report

Test Group		VMBXV04.0HY1				Evaporative/Refueling Family				VMBXR0170LNS			
		Test Result Name		Unrounded Test Result		Verify Calculated CO2							
		Carbon dioxide		370.5935669		--							
Manufacturer Test Comments				Amended Report (test number 20260081004); test is related to lab concern CA-26-023. Added values for HC-TOTAL bags, ACT-DISTANCE, and WATT-HRS. No other changes were made. Unrounded Result for the following test results were modified by Verify: FE BAG 1, FE BAG 2, MFR FE									
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail	
Fed	150,000 miles	Federal Tier 3 Bin 50	PM	0.0001	--	--	--	0.0001	--	0.000	0.006	Pass	
CA	150,000 miles	California LEV-III ULEV50	PM	0.0001	--	--	--	0.0001	--	0.000	0.006	Pass	

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Test #	VMBX10093728	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	03/13/2026	Fuel	N/A
Fuel Batch ID	U26R13	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5222	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	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
ACT-DISTANCE (Actual Distance Driven (miles))	3.584	--
METHANE (CH4 - Methane)	0.0022509	--
CO (Carbon Monoxide)	0.0155336	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.4525	--
DT-EER (Drive Trace Energy Economy Rating)	-0.0495	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.5183	--
MFR FE (Manufacturer Fuel Economy)	15.8114834	15.8114834
NOX (Nitrogen Oxide)	0.0186124	--
N2O (Nitrous Oxide)	0.0009819	--
HC-NM (Non-methane Hydrocarbon)	0.0002674	--
NMOG (Non-methane organic gases)	0.0002754	--
PM (Particulate Matter)	0	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0188798	--
HC-TOTAL (Total Hydrocarbon)	0.0023262	--
WATT-HRS (Watt Hours)	-24.0462	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	551.8659604	--

Manufacturer Test Comments

265/35 R21

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Fuel Properties			
Fuel Batch ID	29858	Fuel Calibration Number	2
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	07/12/2025
Fuel Batch Calibration Effective Date	07/12/2025	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	0.748
Fuel Ethanol Volume Percent (%)	9.7	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17835
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.377	Fuel Carbon Mass Fraction (E10)	0.829
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.827	Weight Fraction CO2	--
Fuel Batch ID	29351	Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	05/03/2023
Fuel Batch Calibration Effective Date	05/03/2023	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	0.742
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18439
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.867	Weight Fraction CO2	--
Fuel Batch ID	U21R14	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	09/24/2020
Fuel Batch Calibration Effective Date	01/20/2021	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.743
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17587
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.823	Weight Fraction CO2	--
Fuel Batch ID	27626	Fuel Calibration Number	2
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/11/2018
Fuel Batch Calibration Effective Date	12/11/2018	Fuel Batch Calibration Ineffective Date	--

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18001
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.825	Weight Fraction CO2	--
Fuel Batch ID	U21R13	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	09/24/2020
Fuel Batch Calibration Effective Date	12/15/2020	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.743
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17587
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.823	Weight Fraction CO2	--
Fuel Batch ID	U26R13	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	01/07/2026
Fuel Batch Calibration Effective Date	03/10/2026	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)	--
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.72	Fuel Carbon Mass Fraction (E10)	0.83
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--
Fuel Batch ID	U25C06	Fuel Calibration Number	1
Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)	Fuel Batch Calibration Date	04/11/2024
Fuel Batch Calibration Effective Date	05/17/2024	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	0.745
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	--
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.39	Fuel Carbon Mass Fraction (E10)	0.827

Certification Summary Information Report

Test Group	VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--

Certification Summary Information Report

Test Group		VMBXV04.0HY1			Evaporative/Refueling Family			VMBXR0170LNS	
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 50	
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	--	--	--	--	--	--	0.0789	999
120,000 miles	METHANE	--	--	--	--	--	--	0.0037	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0015	0.010
150,000 miles	CO	--	--	--	--	--	--	0.05	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	NMOG	--	--	1.10	--	--	--	0.0027	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.050
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.080
150,000 miles	NOX	--	--	--	--	--	--	0	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.003
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 50	
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	--	--	--	--	--	--	0.01	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0.002	0.300

Certification Summary Information Report

Test Group		VMBXV04.0HY1			Evaporative/Refueling Family			VMBXR0170LNS	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV50	
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	--	--	--	--	--	--	0.0789	999
120,000 miles	METHANE	--	--	--	--	--	--	0.0037	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0015	0.010
150,000 miles	CO	--	--	--	--	--	--	0.05	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	NMOG	--	--	1.10	--	--	--	0.0027	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.050
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.080
150,000 miles	NOX	--	--	--	--	--	--	0	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.001
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 50	
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	PM	--	--	--	--	--	--	0.0001	0.006
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 50	
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	--	--	--	--	--	--	0.0789	999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0027	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.050
150,000 miles	NOX	--	--	--	--	--	--	0	99.999

Certification Summary Information Report

Test Group	VMBXV04.0HY1				Evaporative/Refueling Family			VMBXR0170LNS	
Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Both	
Vehicle Class	LDV/Passenger Car				Standard Level			California LEV-III ULEV50	
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	--	--	--	--	--	--	0.0789	999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0027	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.050
150,000 miles	NOX	--	--	--	--	--	--	0	99.999

Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Both	
Vehicle Class	LDV/Passenger Car				Standard Level			California LEV-III ULEV50	
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	--	--	--	--	--	--	0.01	10.0

Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Both	
Vehicle Class	LDV/Passenger Car				Standard Level			California LEV-III ULEV50	
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	PM	--	--	--	--	--	--	0.0001	0.006

Evaporative/Refueling Standards

Evaporative/Refueling Family		VMBXR0170LNS		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	

Certification Summary Information Report

Test Group		VMBXV04.0HY1		Evaporative/Refueling Family		VMBXR0170LNS	
Evaporative/Refueling Family		VMBXR0170LNS		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III 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		
Evaporative/Refueling Family		VMBXR0170LNS		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III 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	--	0.325	0		
Evaporative/Refueling Family		VMBXR0170LNS		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III 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	--	0.325	0		
Evaporative/Refueling Family		VMBXR0170LNS		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	--	0.325	0		
Evaporative/Refueling Family		VMBXR0170LNS		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III 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	OMHCE	--	0.20	0.016		

Certification Summary Information Report

Test Group		VMBXV04.0HY1		Evaporative/Refueling Family		VMBXR0170LNS	
Evaporative/Refueling Family		VMBXR0170LNS		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	--	0.325	0		
Evaporative/Refueling Family		VMBXR0170LNS		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	--	0.020	0		
Evaporative/Refueling Family		VMBXR0170LNS		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	OMHCE	--	0.20	0.016		
Evaporative/Refueling Family		VMBXR0170LNS		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL	--	0.020	0		

Certification Summary Information Report

Test Group		VMBXV04.0HY1	Evaporative/Refueling Family		VMBXR0170LNS
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		VMBXV04.0HY1	Evaporative/Refueling Family		VMBXR0170LNS
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		VMBXV04.0HY1	Evaporative/Refueling Family	VMBXR0170LNS
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		VMBXV04.0HY1	Evaporative/Refueling Family		VMBXR0170LNS
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	



Mercedes-Benz AG

U.S. Certification

Attachment 2: EPA Fee Filing Form (FOI)

US EPA Fee Form

[Help and EPA Instructions](#)

* Required Field

General Information

Date: 01/14/2026

Process Code *

Submit New Fee Filing Form

Manufacturer Code *

MBX

Manufacturer Name *

Mercedes-Benz USA

Contact Name *

Brandin Benson

Contact Email Address *

brandin.b.benson@mbusa.com

Contact Phone *

5515797969

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 *

VMBXV04.0HY1

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 Wire

Comments

EPA Form Number 3520-29

OMB Control No.2060-0545

Approval expires 7/31/2027

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