APPLICATION FOR CERTIFICATION

2027 MODEL YEAR

Durability Group:	VGMXGPGNNB51
Test Group:	VGMXD04.3170
Durability Group Description:	Four Stroke, Otto Cycle, Gasoline Fueled, DFI, Ceramic Monolith Pd/Rh Catalyst
Durability Vehicle:	NA - Aged Components
OBD Group:	VGMXOBDG03A
Test Group Description:	4.3L V6
Applicable Standards:	Federal BIN170 / California SULEV170
Carlines Covered by Evaporative Family:	4.3L Chevrolet G2500 EXPRESS 2WD CARGO Chevrolet G2500 EXPRESS 2WD CARGO INCOM Chevrolet G2500 EXPRESS 2WD PASS GMC G2500 SAVANA 2WD CARGO GMC G2500 SAVANA 2WD CARGO INCOM GMC G2500 SAVANA 2WD PASS Chevrolet G3500 EXPRESS 2WD CARGO Chevrolet G3500 EXPRESS 2WD CARGO INCOM Chevrolet G3500 EXPRESS 2WD PASS Chevrolet G3500 EXPRESS 2WD PASS INCOM GMC G3500 SAVANA 2WD CARGO GMC G3500 SAVANA 2WD CARGO INCOM GMC G3500 SAVANA 2WD PASS GMC G3500 SAVANA 2WD PASS INCOM VGMXR021260A

APPLICATION FOR CERTIFICATION

2027 MODEL YEAR

Carlines Covered by Evaporative Family:	4.3L Chevrolet G3500 EXPRESS 2WD CUTAWAY CH GMC G3500 SAVANA 2WD CUTAWAY CH VGMXF02176BB
Vehicles Tested:	43GGRVT785

TABLE OF CONTENTS

Part 1	(Included in Initial Application)
Section 86.1844(d)(1)	Correspondence and Communications (Refer to Common Section)
Section 86.1844(d)(2)	Durability Group Description (Refer to Common Section)
Section 86.1844(d)(3)	Evaporative/Refueling Family Description (Refer to Common Section)
Section 86.1844(d)(4)	Durability Procedure Description (Refer to Common Section)
Section 86.1844(d)(5)	Test Group Description (Refer to Common Section)
Section 86.1844(d)(6)	Test Vehicle Description
Section 86.1844(d)(7)	Emission Standards and Test Results
Section 86.1844(d)(8)	Compliance Statements (Refer to Common Section)
Section 86.1844(d)(9)	OBD System Description (Refer to Common Section)
Section 86.1844(d)(10)	Description of Flexible and Alternative-Fueled Vehicles
Section 86.1844(d)(11)	AECD Description (Also Included in Common Section)
Section 86.1844(d)(12)	Description of Vehicles Covered by Certificate and Test Parameters
Section 86.1844(d)(13)	Projected Sales
Section 86.1844(d)(14)	Request Letter(s)
Section 86.1844(b)	Additional Information
Section 18.1817-05	Complete Heavy-Duty Chassis-Certified Vehicle Average, Trading and Banking Program (Refer to Common Section)
Section 18.1037.205(c)	Air Conditioning System Leakage (Heavy-Duty Vehicles Only)
Part 2	(Included in Final Application)
Section 86.1844(e)(1)	Part Numbers
Section 86.1844(e)(2)	Basic Calibration Information
Section 86.1844(e)(3)	Description of Vehicles Covered by Certificate (Refer to Section 86.1844(d)(12))
Section 86.1844(e)(4)	Final Sales (Refer to Common Section)
Section 86.1844(e)(5)	Service Information (Refer to Request Letter, 86.1844(d)(14))
Section 86.1844(e)(6)	Gasoline to Ethanol Emissions Conversion Ratio (Flex Fuel Only)

TEST VEHICLE DESCRIPTION

Test Group	VGMXD04.3170
Evaporative Family	VGMXF02176BB
Displacement – Liters	4.3L
Engine Code	1
Emission Control System	
Exhaust	DFI/2TWC/2HO2S(2)/TWC
Evap	C/CCP/IC
Model	CG33503
Transmission Type/Code	A8/1
Shift Schedule	N/A
(LVW/ALVW) Test Weight – Lbs	9000
GVWR	9900
Dyno Horsepower/Type	NA
Roadload HP	37.4
Final Drive	3.42
N/V Ratio – rpm/mph	25.3
Tires	LT245/75R16/E BRI ALS
Vehicle/EPA Version No./GM Config No.	
FTP & HWFE	43GGRVT785/00/014
SFTP	43GGRVT785/00/014

NOTE: For complete vehicle information, see vehicle information submitted in EV-CIS database.

Data Vehicle Selection Justification - This vehicle is expected to be worst-case for exhaust emission compliance on candidate in-use vehicles, considering all exhaust emission constituents, all exhaust test procedures, and the potential impact of air conditioning on test results.

2027 EMISSION STANDARDS

BIN170 (HDV 8,501 - 10,000 GVWR)

TEST GROUP NAME: VGXMD04.3170

EVAPORATIVE FAMILY NAME(S): VGMXF02176BB, VGMXR021260A

CERTIFICATION and IN-USE STANDARDS

LOW AND HIGH ALTITUDE TESTED AT ALVW:

	FTP TEST				HWY TEST
	NMOG+NOx	CO	HCHO	PM	NMOG+NOx
150k STD	0.170	4.2	0.006	0.008	0.170

SFTP TESTED AT ALVW - LOW ALTITUDE:

	COMPOSITE NMOG+NOx	COMPOSITE CO	COMPOSITE PM
150K STD *1	0.450	12.0	0.010

*1 If HP/GVWR > 0.024; The calculation used for the composite results for NMOG+NOx, PM and CO = 35%FTP + 28%US06 + 37%SC03

2027 EMISSION STANDARDS

LEV3 SULEV170 (MDV 8,501 - 10,000 GVWR)

TEST GROUP NAME: VGMXD04.3170

EVAPORATIVE FAMILY NAME(S): VGMXF02176BB, VGMXR021260A

CERTIFICATION and IN-USE STANDARDS

LOW AND HIGH ALTITUDE TESTED AT ALVW:

	FTP TEST				HWY TEST
	NMOG+NOx	CO	HCHO	PM	NMOG+NOx
150k STD	0.170	4.2	0.006	0.008	0.170

SFTP TESTED AT ALVW - LOW ALTITUDE:

	COMPOSITE NMOG+NOx	COMPOSITE CO	COMPOSITE PM
150K STD *1	0.450	12.0	0.010

50 ºF TEST:

	NMOG+NOx	CO	HCHO
4K STD	0.340	4.2	0.016

*1 If HP/GVWR > 0.024; The calculation used for the composite results for NMOG+NOx, PM and CO = 35%FTP + 28%US06 + 37%SC03

Certification Summary Information Report

Manufacturer	General Motors LLC	**Manufacturer Code**	GMX
Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	05/27/2026 11:40:45 AM
Model Year	2027		

Test Group Information

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

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Rechargeable Energy Storage System Indicator**	--
Multiple Fuel Combustion	--	**Off-board Charge Capable Indicator**	--
Fuel Cell Indicator	--	**EPA Vehicle Class**	HDV1, M6
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	VGMXGPGNNB51	**Durability Group Equivalency Factor**	1
Reduced Fee Test Group	No	**Certification Region Code(s)**	FA, CA
Complies with HD GHG 2b/3 regulations?	Yes		
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**	VGMXD04.3170
Test Group OBD Compliance Level	Full - no deficiencies	**Number of Test Group OBD Deficiencies**	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	LV1 GMT610 FSV		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	05/15/2026 08:03:24 AM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	**Fuel Tank Material Description**	Multi-layer with HDPE and EVOH
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	Yes	**Air Intake System Vapor Storage Device Description**	HCA
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	--
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	214	**Number of Primary Canisters**	1
Number of Bleed Canisters	0	**Bleed Canister Total Working Capacity (grams)**	--
Mfr Evaporative/Refueling Family Comments	--		

Leak Family Details

Leak Family Indicator	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
VGMXF02176BB-LK1	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
General Motors LLC	3 - Chevrolet	59 - G3500 EXPRESS 2WD CUTAWAY CH	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	59 - G3500 SAVANA 2WD CUTAWAY CH	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	59 - G3500 EXPRESS 2WD CUTAWAY CH	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	59 - G3500 SAVANA 2WD CUTAWAY CH	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes

Engine Description

Hybrid Type	--	**Hybrid Description**	--
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	--
Engine Block Arrangement	V-shaped engine	**Mfr Engine Block Arrangement Description**	--
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	5W30
Number of Cylinders/Rotors	6	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXF02176BB

After Treatment Device(s) (ATD)

ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
3	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)	4.3	**Engine Rated Horsepower**	276
Number of Inlet Valves Per Cylinder	1	**Number of Exhaust Valves Per Cylinder**	1
Air Aspiration Method	Naturally Aspirated	**Number of Air Aspiration Devices**	0
Air Aspiration Device Configuration	--	**Charge Air Cooler Type**	N/A
Air Aspiration Drive Method(s)	--		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	cam phaser		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated oxygen	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated oxygen	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated oxygen	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated oxygen	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	--		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	--		

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXF02176BB

Official Test Numbers

Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Gasoline	RGMX10079965	RGMX10079967	RGMX10079968	--	RGMX10079966	--	228.2	--	286.1	--

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Emission Data Vehicle Information

Vehicle ID / Configuration	43GGME1976 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	MGMXD04.3392	**Original Evaporative/Refueling Family**	MGMXF02176BB
Original Test Vehicle Model Year	2021		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	G3500 EXPRESS 2WD CUTAWAY CH

Leak Family Details

Leak Family Identifier	LK1	**Leak Family Name**	MGMXF02176BB-LK1

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	2	**Rated Horsepower**	276
Displacement (liters)	4.3		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	7670	**Equivalent Test Weight (pounds)**	9000
GVWR (lbs)	9900	**N/V Ratio**	25.3
Axle Ratio	3.42		
Transmission Type	Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	58.27	0.7085	0.07473	31.07	0.5474	0.07289	37.4

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Emission Control Device Comments	G Van
Manufacturer Test Vehicle Comments	4K CONFIG

Test #	**MGMX10064689**	**Test Procedure**	**23 - 2-day evap**
Exhaust Test # for this Evap Test	MGMX10064688	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/04/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	3863	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.3388	--

Manufacturer Test Comments 4K EVF2 TEST

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	0.3388	0.0000	0.339	0.600	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.3388	0.0000	0.339	0.600	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**MGMX10064690**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	MGMX10064688	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	04/18/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4003	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.3862	--

Manufacturer Test Comments 4K EVF3 TEST

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	0.3862	0.0000	0.386	0.600	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.3862	0.0000	0.386	0.600	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**MGMX10064691**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	MGMX10064688	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	04/18/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4003	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.00018	--

Manufacturer Test Comments 4K EVFR TEST

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	0.00	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.000	0.0	0.00	0.05	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**MGMX10064692**	**Test Procedure**	**15 - Spitback**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	04/07/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3968	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
SPITBACK (Spitback Hydrocarbon in grams)	0.24	--

Manufacturer Test Comments 4K SPITBACK TEST

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	SPITBACK	0.24	0.0	0.2	1.0	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	SPITBACK	0.24	0.0	0.2	1.0	Pass

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Emission Data Vehicle Information

Vehicle ID / Configuration	43GGRVT785 / 0	**Manufacturer Vehicle Configuration Number**	1
Original Test Group Name	RGMXD04.3170	**Original Evaporative/Refueling Family**	RGMXF02176BB
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	G3500 EXPRESS 2WD CUTAWAY CH

Leak Family Details

Leak Family Identifier	LK1	**Leak Family Name**	RGMXF02176BB-LK1

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	1	**Rated Horsepower**	276
Displacement (liters)	4.3		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	7670	**Equivalent Test Weight (pounds)**	9000
GVWR (lbs)	9900	**N/V Ratio**	25.3
Axle Ratio	3.42		
Transmission Type	Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXF02176BB

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	58.27	0.7085	0.07473	37.66	0.4157	0.0749	37.4
US06	58.27	0.7085	0.07473	37.66	0.4157	0.0749	N/A

Emission Control Device Comments G Van

Manufacturer Test Vehicle Comments ADDED 250LBS BALLAST TO REAR AXLE. MUST BE TESTED WITH ROAD SPEED FAN. 150K CONFIG

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**RGMX10079965**	**Test Procedure**	**31 - Federal fuel 3-day exhaust**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/15/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3971	**Odometer Units**	M
4WD Test Dyno	No	**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 VGMXD04.3170 **Evaporative/Refueling Family** VGMXF02176BB

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	715.06	--
FE BAG 1 (Bag 1 Fuel Economy)	12.1	12.1
CO2 BAG 2 (Bag 2 Carbon Dioxide)	682.303	--
FE BAG 2 (Bag 2 Fuel Economy)	12.8	12.8
CO2 BAG 3 (Bag 3 Carbon Dioxide)	660.837	--
FE BAG 3 (Bag 3 Fuel Economy)	13.2	13.2
METHANE (CH4 - Methane)	0.022555	--
CO (Carbon Monoxide)	0.727858	--
METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)	0.01504	--
N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)	0.00481	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.05127	--
DT-EER (Drive Trace Energy Economy Rating)	-0.281878	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.249307	--
MFR FE (Manufacturer Fuel Economy)	12.7	12.7
NOX (Nitrogen Oxide)	0.036173	--
N2O (Nitrous Oxide)	0.0076051	--
HC-NM (Non-methane Hydrocarbon)	0.051192	--
NMOG (Non-methane organic gases)	0.056297	--
PM (Particulate Matter)	0.003383	--
HC-TOTAL (Total Hydrocarbon)	0.072313	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	684	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	683.202	--

Manufacturer Test Comments 150K EMIS TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXF02176BB

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 3 HD Class 2b Bin 170	CO	0.73	1	--	--	--	--	0.7	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO-COMP	1.36	1	--	--	--	--	1.4	12.0	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO2	999	1	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	METHANE	0.0226	1	--	--	--	--	0.023	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	N2O	0.0076	1	--	--	--	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0563	1	--	--	--	--	0.056	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0925	1	--	--	--	--	0.092	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX-COMP	0.0705	1	--	--	--	--	0.070	0.450	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0362	1	--	--	--	--	0.036	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0034	1	--	--	--	--	0.003	0.008	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM-COMP	0.0022	1	--	--	--	--	0.002	0.010	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	0.73	1	--	--	--	--	0.7	4.2	Pass
CA	150,000 miles	California LEV-III SULEV170	CO-COMP	1.36	1	--	--	--	--	1.4	12.0	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0563	1	--	--	--	--	0.056	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0925	1	--	--	--	--	0.092	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX-COMP	0.0705	1	--	--	--	--	0.070	0.450	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0362	1	--	--	--	--	0.036	99.999	Pass

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXF02176BB

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-III SULEV170	PM	0.0034	1	--	--	--	--	0.003	0.008	Pass
CA	150,000 miles	California LEV-III SULEV170	PM-COMP	0.0022	1	--	--	--	--	0.002	0.010	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**RGMX10079969**	**Test Procedure**	**31 - Federal fuel 3-day exhaust**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	04/02/2023	**Fuel**	Gasoline
Fuel Batch ID	000307	**Fuel Calibration Number**	9320
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4108	**Odometer Units**	M
4WD Test Dyno	No	**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)	724.114	--
FE BAG 1 (Bag 1 Fuel Economy)	12.2	12.2
CO2 BAG 2 (Bag 2 Carbon Dioxide)	687.601	--
FE BAG 2 (Bag 2 Fuel Economy)	13	13
CO2 BAG 3 (Bag 3 Carbon Dioxide)	671.474	--
FE BAG 3 (Bag 3 Fuel Economy)	13.3	13.3
METHANE (CH4 - Methane)	0.026236	--
CO (Carbon Monoxide)	0.708562	--
METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)	0.018325	--
N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)	0.00557	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.111886	--
DT-EER (Drive Trace Energy Economy Rating)	-0.170351	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.015802	--
MFR FE (Manufacturer Fuel Economy)	12.9	12.9
NOX (Nitrogen Oxide)	0.026834	--
N2O (Nitrous Oxide)	0.005252	--
HC-NM (Non-methane Hydrocarbon)	0.046451	--
NMOG (Non-methane organic gases)	0.047854	--
HC-TOTAL (Total Hydrocarbon)	0.071684	--

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXF02176BB

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	692	692

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	690.732	--

Manufacturer Test Comments 150K EMIS TEST

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 3 HD Class 2b Bin 170	CO	0.71	1	--	--	--	--	0.7	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO2	692	1	--	--	0	--	692	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	METHANE	0.0262	1	--	--	--	--	0.026	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	N2O	0.0053	1	--	--	--	--	0.005	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0479	1	--	--	--	--	0.048	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0747	1	--	--	--	--	0.075	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0268	1	--	--	--	--	0.027	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	0.71	1	--	--	--	--	0.7	4.2	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0479	1	--	--	--	--	0.048	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0747	1	--	--	--	--	0.075	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0268	1	--	--	--	--	0.027	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**RGMX10079966**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/15/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3982	**Odometer Units**	M
4WD Test Dyno	No	**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)	0.005775	--
CO (Carbon Monoxide)	0.08746	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.929032	--
DT-EER (Drive Trace Energy Economy Rating)	-0.141676	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.04444	--
MFR FE (Manufacturer Fuel Economy)	16.9	16.9
NOX (Nitrogen Oxide)	0.004581	--
N2O (Nitrous Oxide)	0.001387	--
HC-NM (Non-methane Hydrocarbon)	0.000497	--
NMOG (Non-methane organic gases)	0.000511	--
HC-TOTAL (Total Hydrocarbon)	0.006051	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	516	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	515.801	--

Manufacturer Test Comments 150K HWFE TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXF02176BB

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 HD Class 2b Bin 170	CO2	999	1	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	METHANE	0.0058	1	--	--	--	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	N2O	0.0014	1	--	--	--	--	0.001	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0005	1	1.03	--	--	--	0.000	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0051	1	--	--	--	--	0.005	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0046	1	--	--	--	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0005	1	1.03	--	--	--	0.000	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0051	1	--	--	--	--	0.005	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0046	1	--	--	--	--	0.005	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**RGMX10079970**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	03/28/2023	**Fuel**	Gasoline
Fuel Batch ID	000307	**Fuel Calibration Number**	9320
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4079	**Odometer Units**	M
4WD Test Dyno	No	**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)	0.008727	--
CO (Carbon Monoxide)	0.08221	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.166813	--
DT-EER (Drive Trace Energy Economy Rating)	-0.399656	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.308814	--
MFR FE (Manufacturer Fuel Economy)	16.8	16.8
NOX (Nitrogen Oxide)	0.051867	--
N2O (Nitrous Oxide)	0.005905	--
HC-NM (Non-methane Hydrocarbon)	0.001744	--
NMOG (Non-methane organic gases)	0.001796	--
HC-TOTAL (Total Hydrocarbon)	0.010054	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	530	530

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	529.849	--

Manufacturer Test Comments 150K EMIS TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXF02176BB

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 HD Class 2b Bin 170	CO2	530	1	--	--	0	--	530	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	METHANE	0.0087	1	--	--	--	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	N2O	0.0059	1	--	--	--	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0018	1	1.03	--	--	--	0.002	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0537	1	--	--	--	--	0.054	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0519	1	--	--	--	--	0.052	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0018	1	1.03	--	--	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0537	1	--	--	--	--	0.054	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0519	1	--	--	--	--	0.052	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**RGMX10079967**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/18/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4028	**Odometer Units**	M
4WD Test Dyno	No	**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)	1289.81	--
FE BAG 1 (Bag 1 Fuel Economy)	6.7	6.7
CO2 BAG 2 (Bag 2 Carbon Dioxide)	799.46	--
FE BAG 2 (Bag 2 Fuel Economy)	10.9	10.9
METHANE (CH4 - Methane)	0.010421	--
CO (Carbon Monoxide)	3.12706	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-4.34953	--
DT-EER (Drive Trace Energy Economy Rating)	-1.3878	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-8.22906	--
MFR FE (Manufacturer Fuel Economy)	9.5	9.5
NOX (Nitrogen Oxide)	0.11664	--
HC-NM (Non-methane Hydrocarbon)	0.007999	--
NMOG (Non-methane organic gases)	0.008239	--
PM (Particulate Matter)	0.00274	--
HC-TOTAL (Total Hydrocarbon)	0.017552	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	908.319	--

Manufacturer Test Comments 150K US06 TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXF02176BB

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 HD Class 2b Bin 170	CO	3.13	1	--	--	--	--	3.1	99.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0082	1	1.03	--	--	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.1248	1	--	--	--	--	0.125	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.1166	1	--	--	--	--	0.117	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0027	1	--	--	--	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	3.13	1	--	--	--	--	3.1	99.9	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0082	1	1.03	--	--	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.1248	1	--	--	--	--	0.125	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.1166	1	--	--	--	--	0.117	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	PM	0.0027	1	--	--	--	--	0.003	99.999	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**RGMX10079968**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/22/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4028	**Odometer Units**	M
4WD Test Dyno	No	**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)	0.020083	--
CO (Carbon Monoxide)	0.622938	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.23934	--
DT-EER (Drive Trace Energy Economy Rating)	-0.862183	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.41064	--
MFR FE (Manufacturer Fuel Economy)	10.8	10.8
NOX (Nitrogen Oxide)	0.004654	--
HC-NM (Non-methane Hydrocarbon)	0.003766	--
NMOG (Non-methane organic gases)	0.003879	--
PM (Particulate Matter)	0.000821	--
HC-TOTAL (Total Hydrocarbon)	0.022178	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	807.462	--

Manufacturer Test Comments 150K SC03 TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXF02176BB

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 HD Class 2b Bin 170	CO	0.62	1	--	--	--	--	0.6	99.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0039	1	1.03	--	--	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0086	1	--	--	--	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0047	1	--	--	--	--	0.005	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0008	1	--	--	--	--	0.001	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	0.62	1	--	--	--	--	0.6	99.9	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0039	1	1.03	--	--	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0086	1	--	--	--	--	0.009	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0047	1	--	--	--	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	PM	0.0008	1	--	--	--	--	0.001	99.999	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Emission Data Vehicle Information

Vehicle ID / Configuration	43GGRVT785 / 1	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	RGMXD04.3170	**Original Evaporative/Refueling Family**	RGMXF02176BB
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	G3500 EXPRESS 2WD CUTAWAY CH

Leak Family Details

Leak Family Identifier	LK1	**Leak Family Name**	RGMXF02176BB-LK1

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	1	**Rated Horsepower**	276
Displacement (liters)	4.3		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	7670	**Equivalent Test Weight (pounds)**	9000
GVWR (lbs)	9900	**N/V Ratio**	25.3
Axle Ratio	3.42		
Transmission Type	Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	58.27	0.7085	0.07473	37.66	0.4157	0.0749	37.4

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Emission Control Device Comments	G Van
Manufacturer Test Vehicle Comments	ADDED 250LBS BALLAST TO REAR AXLE. MUST BE TESTED WITH ROAD SPEED FAN. 4K CONFIG

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Test #	**RGMX10080602**	**Test Procedure**	**52 - Fed. fuel 50 F exh.**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/01/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3908	**Odometer Units**	M
4WD Test Dyno	No	**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)	0.019542	--
CO (Carbon Monoxide)	0.621843	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.44179	--
DT-EER (Drive Trace Energy Economy Rating)	-0.81764	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.550946	--
NOX (Nitrogen Oxide)	0.030965	--
HC-NM (Non-methane Hydrocarbon)	0.109221	--
NMOG (Non-methane organic gases)	0.120111	--
HC-TOTAL (Total Hydrocarbon)	0.128117	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	691.834	--

Manufacturer Test Comments 4K 50 DEG TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXF02176BB

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-III SULEV170	CO	0.62	1	--	--	--	--	0.6	4.2	Pass
CA	4,000 miles	California LEV-III SULEV170	NMOG	0.1201	1	--	--	--	--	0.120	99.999	Pass
CA	4,000 miles	California LEV-III SULEV170	NMOG+NOX	0.1511	1	--	--	--	--	0.151	0.340	Pass
CA	4,000 miles	California LEV-III SULEV170	NOX	0.0310	1	--	--	--	--	0.031	99.999	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Emission Data Vehicle Information

Vehicle ID / Configuration	66CRLN1016 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	LGMXD06.6398	**Original Evaporative/Refueling Family**	LGMXR021260A
Original Test Vehicle Model Year	2020		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	SILVERADO 2WD

Leak Family Details

Leak Family Identifier	LK1	**Leak Family Name**	LGMXR021260A-LK1

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	10	**Rated Horsepower**	397
Displacement (liters)	6.6		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	NATURALLY ASPIRATED
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	6761	**Equivalent Test Weight (pounds)**	8500
GVWR (lbs)	10350	**N/V Ratio**	25.2
Axle Ratio	3.73		
Transmission Type	Automatic	**# of Transmission Gears**	6
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	51.11	0.951	0.03706	18.41	0.3652	0.03933	25.5

Emission Control Device Comments --

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Manufacturer Test Vehicle Comments --

Test #	**LGMX10057630**	**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	12/15/2018	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	3992	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.0183	--

Manufacturer Test Comments 4K CBLD TEST

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	0.0183	0.000	0.018	0.030	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.0183	0.000	0.018	0.030	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Fuel Properties

Fuel Batch ID	**000329**	**Fuel Calibration Number**	**9322**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	10/17/2022
Fuel Batch Calibration Effective Date	10/17/2022	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.745
Fuel Ethanol Volume Percent (%)	9.8	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17787
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	**000307**	**Fuel Calibration Number**	**9320**
Test Fuel Type	61 - Tier 2 Cert Gasoline	**Fuel Batch Calibration Date**	10/10/2022
Fuel Batch Calibration Effective Date	10/10/2022	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.744
Fuel Ethanol Volume Percent (%)	--	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18427
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**	--

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Consolidated List of Standards

Exhaust Standards

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
Fuel	Gasoline	**Test Procedure**	Federal fuel 3-day exhaust

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	1	--	--	--	--	--	4.2
150,000 miles	CO-COMP	--	1	--	--	--	--	--	12.0
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.170
150,000 miles	NMOG+NOX-COMP	--	1	--	--	--	--	--	0.450
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	0.008
150,000 miles	PM-COMP	--	1	--	--	--	--	--	0.010

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	**Standard Level**	Federal Tier 3 HD Class 2b Bin 170
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	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB
Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	**Standard Level**	Federal Tier 3 HD Class 2b Bin 170
Fuel	Gasoline	**Test Procedure**	Federal fuel 3-day exhaust

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	1	--	--	--	--	--	4.2
150,000 miles	CO-COMP	--	1	--	--	--	--	--	12.0
150,000 miles	CO2	--	1	--	--	--	--	0	999.999
150,000 miles	METHANE	--	1	--	--	--	--	--	99.999
150,000 miles	N2O	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.170
150,000 miles	NMOG+NOX-COMP	--	1	--	--	--	--	--	0.450
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	0.008
150,000 miles	PM-COMP	--	1	--	--	--	--	--	0.010

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	**Standard Level**	Federal Tier 3 HD Class 2b Bin 170
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	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB
Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
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	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
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	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	**Standard Level**	Federal Tier 3 HD Class 2b Bin 170
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	CO2	--	1	--	--	--	--	0	999.999
150,000 miles	METHANE	--	1	--	--	--	--	--	99.999
150,000 miles	N2O	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.170
150,000 miles	NOX	--	1	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
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	--	--	--	--	--	4.2
4,000 miles	NMOG	--	1	--	--	--	--	--	99.999
4,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.340
4,000 miles	NOX	--	1	--	--	--	--	--	99.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
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	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.170
150,000 miles	NOX	--	1	--	--	--	--	--	99.999

Evaporative/Refueling Standards

Evaporative/Refueling Family	VGMXF02176BB	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL	--	0.030	0.000

Evaporative/Refueling Family	VGMXF02176BB	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.600	0.0000

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Evaporative/Refueling Family VGMXF02176BB
Cert Region California + CAA Section 177 states
Cert/In-Use Code Cert
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	--	0.600	0.0000

Evaporative/Refueling Family VGMXF02176BB
Cert Region California + CAA Section 177 states
Cert/In-Use Code Cert
Standard Level California LEV-III Zero Evap (Option 2)
Test Procedure Spitback

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	SPITBACK	--	1.0	0.0

Evaporative/Refueling Family VGMXF02176BB
Cert Region Federal
Cert/In-Use Code Cert
Standard Level Federal Tier 3 Evap
Test Procedure Federal Fuel Running Loss

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.0

Evaporative/Refueling Family VGMXF02176BB
Cert Region California + CAA Section 177 states
Cert/In-Use Code Cert
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	--	0.600	0.0000

Evaporative/Refueling Family VGMXF02176BB
Cert Region Federal
Cert/In-Use Code Cert
Standard Level Federal Tier 3 Evap
Test Procedure Federal fuel 3-day evap

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.600	0.0000

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB

Evaporative/Refueling Family	VGMXF02176BB	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**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	0.0

Evaporative/Refueling Family	VGMXF02176BB	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**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	--	0.030	0.000

Evaporative/Refueling Family	VGMXF02176BB	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Spitback		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	SPITBACK	--	1.0	0.0

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXF02176BB

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	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB
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	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB
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	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXF02176BB
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

Certification Summary Information Report

Manufacturer	General Motors LLC	**Manufacturer Code**	GMX
Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	05/27/2026 11:40:45 AM
Model Year	2027		

Test Group Information

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

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Rechargeable Energy Storage System Indicator**	--
Multiple Fuel Combustion	--	**Off-board Charge Capable Indicator**	--
Fuel Cell Indicator	--	**EPA Vehicle Class**	HDV1, M6
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	VGMXGPGNNB51	**Durability Group Equivalency Factor**	1
Reduced Fee Test Group	No	**Certification Region Code(s)**	FA, CA
Complies with HD GHG 2b/3 regulations?	Yes		
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**	VGMXD04.3170
Test Group OBD Compliance Level	Full - no deficiencies	**Number of Test Group OBD Deficiencies**	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	LV1 GMT610 FSV		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	05/15/2026 08:04:00 AM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	**Fuel Tank Material Description**	Multi-layer with HDPE and EVOH
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	Yes	**Air Intake System Vapor Storage Device Description**	HCA
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	--
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	214	**Number of Primary Canisters**	1
Number of Bleed Canisters	0	**Bleed Canister Total Working Capacity (grams)**	--
Mfr Evaporative/Refueling Family Comments	--		

Leak Family Details

Leak Family Indicator	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
VGMXR021260A-LK1	50 State	0.02	--

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXR021260A

Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
General Motors LLC	4 - GMC	42 - G3500 SAVANA 2WD PASS	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	41 - G2500 EXPRESS 2WD PASS	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	56 - G3500 EXPRESS 2WD CARGO	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	28 - G3500 EXPRESS 2WD PASS INCOM	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	963 - G3500 SAVANA 2WD CARGO INCOM	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	42 - G3500 SAVANA 2WD PASS	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	961 - G2500 SAVANA 2WD CARGO INCOM	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	25 - G2500 EXPRESS 2WD CARGO INCOM	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	46 - G3500 SAVANA 2WD CARGO	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	963 - G3500 SAVANA 2WD CARGO INCOM	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	31 - G2500 SAVANA 2WD PASS	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	52 - G3500 EXPRESS 2WD PASS	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	961 - G2500 SAVANA 2WD CARGO INCOM	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	27 - G3500 EXPRESS 2WD CARGO INCOM	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	43 - G2500 EXPRESS 2WD CARGO	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	25 - G2500 EXPRESS 2WD CARGO INCOM	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	31 - G2500 SAVANA 2WD PASS	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	52 - G3500 EXPRESS 2WD PASS	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	27 - G3500 EXPRESS 2WD CARGO INCOM	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	32 - G2500 SAVANA 2WD CARGO	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	56 - G3500 EXPRESS 2WD CARGO	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	28 - G3500 EXPRESS 2WD PASS INCOM	Federal	2-Wheel Drive, Rear	Automatic	8	Yes

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXR021260A

General Motors LLC	4 - GMC	964 - G3500 SAVANA 2WD PASS INCOM	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	32 - G2500 SAVANA 2WD CARGO	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	41 - G2500 EXPRESS 2WD PASS	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	964 - G3500 SAVANA 2WD PASS INCOM	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	43 - G2500 EXPRESS 2WD CARGO	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	46 - G3500 SAVANA 2WD CARGO	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes

Engine Description

Hybrid Type	--	**Hybrid Description**	--
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	--
Engine Block Arrangement	V-shaped engine	**Mfr Engine Block Arrangement Description**	--
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	5W30
Number of Cylinders/Rotors	6	**Mechanically Variable Compression Ratio Indicator**	N

After Treatment Device(s) (ATD)

ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
3	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	--

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Engine Configuration Number 1

Engine Displacement (liters)	4.3	**Engine Rated Horsepower**	276
Number of Inlet Valves Per Cylinder	1	**Number of Exhaust Valves Per Cylinder**	1
Air Aspiration Method	Naturally Aspirated	**Number of Air Aspiration Devices**	0
Air Aspiration Device Configuration	--	**Charge Air Cooler Type**	N/A
Air Aspiration Drive Method(s)	--		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	cam phaser		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated oxygen	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated oxygen	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated oxygen	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated oxygen	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	--		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	--		

Official Test Numbers

Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Gasoline	RGMX10079965	RGMX10079967	RGMX10079968	--	RGMX10079966	--	228.2	--	286.1	--

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Emission Data Vehicle Information

Vehicle ID / Configuration	43GCMET996 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	MGMXD04.3392	**Original Evaporative/Refueling Family**	MGMXR021260A
Original Test Vehicle Model Year	2021		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	G3500 EXPRESS 2WD PASS

Leak Family Details

Leak Family Identifier	LK1	**Leak Family Name**	MGMXR021260A-LK1

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	2	**Rated Horsepower**	276
Displacement (liters)	4.3		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	NATURALLY ASPIRATED
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	6400	**Equivalent Test Weight (pounds)**	8000
GVWR (lbs)	9600	**N/V Ratio**	25.3
Axle Ratio	3.42		
Transmission Type	Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	58.44	0.3077	0.03823	36.02	-0.0982	0.03987	22.6

Emission Control Device Comments LV1 Full Body Van

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Manufacturer Test Vehicle Comments --

Test #	**MGMX10064545**	**Test Procedure**	**23 - 2-day evap**
Exhaust Test # for this Evap Test	MGMX10064540	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/21/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	3926	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.3999	--

Manufacturer Test Comments 4K EVF2 TEST

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	0.3999	0.0000	0.400	0.600	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.3999	0.0000	0.400	0.600	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**MGMX10064548**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	MGMX10064540	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	04/09/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4163	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.5321	--

Manufacturer Test Comments 4K EVF3 TEST

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	0.5321	0.0000	0.532	0.600	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.5321	0.0000	0.532	0.600	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**MGMX10064546**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	MGMX10064540	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/28/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	3975	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.053	--

Manufacturer Test Comments 4K ORVR TEST

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	0.053	0.000	0.05	0.20	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.053	0.000	0.05	0.20	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**MGMX10064547**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	MGMX10064540	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	04/09/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4163	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.00021	--

Manufacturer Test Comments 4K EVFR TEST

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-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.05	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**MGMX10064746**	**Test Procedure**	**65 - Evap Canister Bleed Test**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	05/04/2020	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4180	**Odometer Units**	M
4WD Test Dyno	No	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.01081	--

Manufacturer Test Comments 4K CBLD TEST

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	0.0108	0.000	0.011	0.030	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.0108	0.000	0.011	0.030	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Emission Data Vehicle Information

Vehicle ID / Configuration	43GGRVT785 / 0	**Manufacturer Vehicle Configuration Number**	1
Original Test Group Name	RGMXD04.3170	**Original Evaporative/Refueling Family**	RGMXF02176BB
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	G3500 EXPRESS 2WD CUTAWAY CH

Leak Family Details

Leak Family Identifier	LK1	**Leak Family Name**	RGMXF02176BB-LK1

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	1	**Rated Horsepower**	276
Displacement (liters)	4.3		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	7670	**Equivalent Test Weight (pounds)**	9000
GVWR (lbs)	9900	**N/V Ratio**	25.3
Axle Ratio	3.42		
Transmission Type	Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXR021260A

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	58.27	0.7085	0.07473	37.66	0.4157	0.0749	37.4
US06	58.27	0.7085	0.07473	37.66	0.4157	0.0749	N/A

Emission Control Device Comments G Van

Manufacturer Test Vehicle Comments ADDED 250LBS BALLAST TO REAR AXLE. MUST BE TESTED WITH ROAD SPEED FAN. 150K CONFIG

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**RGMX10079965**	**Test Procedure**	**31 - Federal fuel 3-day exhaust**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/15/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3971	**Odometer Units**	M
4WD Test Dyno	No	**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	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	715.06	--
FE BAG 1 (Bag 1 Fuel Economy)	12.1	12.1
CO2 BAG 2 (Bag 2 Carbon Dioxide)	682.303	--
FE BAG 2 (Bag 2 Fuel Economy)	12.8	12.8
CO2 BAG 3 (Bag 3 Carbon Dioxide)	660.837	--
FE BAG 3 (Bag 3 Fuel Economy)	13.2	13.2
METHANE (CH4 - Methane)	0.022555	--
CO (Carbon Monoxide)	0.727858	--
METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)	0.01504	--
N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)	0.00481	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.05127	--
DT-EER (Drive Trace Energy Economy Rating)	-0.281878	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.249307	--
MFR FE (Manufacturer Fuel Economy)	12.7	12.7
NOX (Nitrogen Oxide)	0.036173	--
N2O (Nitrous Oxide)	0.0076051	--
HC-NM (Non-methane Hydrocarbon)	0.051192	--
NMOG (Non-methane organic gases)	0.056297	--
PM (Particulate Matter)	0.003383	--
HC-TOTAL (Total Hydrocarbon)	0.072313	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	684	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	683.202	--

Manufacturer Test Comments 150K EMIS TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXR021260A

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 3 HD Class 2b Bin 170	CO	0.73	1	--	--	--	--	0.7	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO-COMP	1.36	1	--	--	--	--	1.4	12.0	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO2	999	1	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	METHANE	0.0226	1	--	--	--	--	0.023	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	N2O	0.0076	1	--	--	--	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0563	1	--	--	--	--	0.056	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0925	1	--	--	--	--	0.092	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX-COMP	0.0705	1	--	--	--	--	0.070	0.450	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0362	1	--	--	--	--	0.036	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0034	1	--	--	--	--	0.003	0.008	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM-COMP	0.0022	1	--	--	--	--	0.002	0.010	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	0.73	1	--	--	--	--	0.7	4.2	Pass
CA	150,000 miles	California LEV-III SULEV170	CO-COMP	1.36	1	--	--	--	--	1.4	12.0	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0563	1	--	--	--	--	0.056	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0925	1	--	--	--	--	0.092	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX-COMP	0.0705	1	--	--	--	--	0.070	0.450	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0362	1	--	--	--	--	0.036	99.999	Pass

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXR021260A

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-III SULEV170	PM	0.0034	1	--	--	--	--	0.003	0.008	Pass
CA	150,000 miles	California LEV-III SULEV170	PM-COMP	0.0022	1	--	--	--	--	0.002	0.010	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**RGMX10079969**	**Test Procedure**	**31 - Federal fuel 3-day exhaust**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	04/02/2023	**Fuel**	Gasoline
Fuel Batch ID	000307	**Fuel Calibration Number**	9320
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4108	**Odometer Units**	M
4WD Test Dyno	No	**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)	724.114	--
FE BAG 1 (Bag 1 Fuel Economy)	12.2	12.2
CO2 BAG 2 (Bag 2 Carbon Dioxide)	687.601	--
FE BAG 2 (Bag 2 Fuel Economy)	13	13
CO2 BAG 3 (Bag 3 Carbon Dioxide)	671.474	--
FE BAG 3 (Bag 3 Fuel Economy)	13.3	13.3
METHANE (CH4 - Methane)	0.026236	--
CO (Carbon Monoxide)	0.708562	--
METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)	0.018325	--
N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)	0.00557	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.111886	--
DT-EER (Drive Trace Energy Economy Rating)	-0.170351	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.015802	--
MFR FE (Manufacturer Fuel Economy)	12.9	12.9
NOX (Nitrogen Oxide)	0.026834	--
N2O (Nitrous Oxide)	0.005252	--
HC-NM (Non-methane Hydrocarbon)	0.046451	--
NMOG (Non-methane organic gases)	0.047854	--
HC-TOTAL (Total Hydrocarbon)	0.071684	--

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXR021260A

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	692	692

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	690.732	--

Manufacturer Test Comments 150K EMIS TEST

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 3 HD Class 2b Bin 170	CO	0.71	1	--	--	--	--	0.7	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO2	692	1	--	--	0	--	692	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	METHANE	0.0262	1	--	--	--	--	0.026	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	N2O	0.0053	1	--	--	--	--	0.005	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0479	1	--	--	--	--	0.048	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0747	1	--	--	--	--	0.075	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0268	1	--	--	--	--	0.027	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	0.71	1	--	--	--	--	0.7	4.2	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0479	1	--	--	--	--	0.048	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0747	1	--	--	--	--	0.075	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0268	1	--	--	--	--	0.027	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**RGMX10079966**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/15/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3982	**Odometer Units**	M
4WD Test Dyno	No	**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)	0.005775	--
CO (Carbon Monoxide)	0.08746	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.929032	--
DT-EER (Drive Trace Energy Economy Rating)	-0.141676	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.04444	--
MFR FE (Manufacturer Fuel Economy)	16.9	16.9
NOX (Nitrogen Oxide)	0.004581	--
N2O (Nitrous Oxide)	0.001387	--
HC-NM (Non-methane Hydrocarbon)	0.000497	--
NMOG (Non-methane organic gases)	0.000511	--
HC-TOTAL (Total Hydrocarbon)	0.006051	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	516	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	515.801	--

Manufacturer Test Comments 150K HWFE TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXR021260A

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 3 HD Class 2b Bin 170	CO2	999	1	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	METHANE	0.0058	1	--	--	--	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	N2O	0.0014	1	--	--	--	--	0.001	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0005	1	1.03	--	--	--	0.000	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0051	1	--	--	--	--	0.005	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0046	1	--	--	--	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0005	1	1.03	--	--	--	0.000	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0051	1	--	--	--	--	0.005	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0046	1	--	--	--	--	0.005	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**RGMX10079970**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	03/28/2023	**Fuel**	Gasoline
Fuel Batch ID	000307	**Fuel Calibration Number**	9320
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4079	**Odometer Units**	M
4WD Test Dyno	No	**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)	0.008727	--
CO (Carbon Monoxide)	0.08221	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.166813	--
DT-EER (Drive Trace Energy Economy Rating)	-0.399656	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.308814	--
MFR FE (Manufacturer Fuel Economy)	16.8	16.8
NOX (Nitrogen Oxide)	0.051867	--
N2O (Nitrous Oxide)	0.005905	--
HC-NM (Non-methane Hydrocarbon)	0.001744	--
NMOG (Non-methane organic gases)	0.001796	--
HC-TOTAL (Total Hydrocarbon)	0.010054	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	530	530

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	529.849	--

Manufacturer Test Comments 150K EMIS TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXR021260A

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 HD Class 2b Bin 170	CO2	530	1	--	--	0	--	530	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	METHANE	0.0087	1	--	--	--	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	N2O	0.0059	1	--	--	--	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0018	1	1.03	--	--	--	0.002	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0537	1	--	--	--	--	0.054	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0519	1	--	--	--	--	0.052	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0018	1	1.03	--	--	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0537	1	--	--	--	--	0.054	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0519	1	--	--	--	--	0.052	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**RGMX10079967**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/18/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4028	**Odometer Units**	M
4WD Test Dyno	No	**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)	1289.81	--
FE BAG 1 (Bag 1 Fuel Economy)	6.7	6.7
CO2 BAG 2 (Bag 2 Carbon Dioxide)	799.46	--
FE BAG 2 (Bag 2 Fuel Economy)	10.9	10.9
METHANE (CH4 - Methane)	0.010421	--
CO (Carbon Monoxide)	3.12706	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-4.34953	--
DT-EER (Drive Trace Energy Economy Rating)	-1.3878	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-8.22906	--
MFR FE (Manufacturer Fuel Economy)	9.5	9.5
NOX (Nitrogen Oxide)	0.11664	--
HC-NM (Non-methane Hydrocarbon)	0.007999	--
NMOG (Non-methane organic gases)	0.008239	--
PM (Particulate Matter)	0.00274	--
HC-TOTAL (Total Hydrocarbon)	0.017552	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	908.319	--

Manufacturer Test Comments 150K US06 TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXR021260A

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 HD Class 2b Bin 170	CO	3.13	1	--	--	--	--	3.1	99.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0082	1	1.03	--	--	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.1248	1	--	--	--	--	0.125	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.1166	1	--	--	--	--	0.117	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0027	1	--	--	--	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	3.13	1	--	--	--	--	3.1	99.9	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0082	1	1.03	--	--	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.1248	1	--	--	--	--	0.125	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.1166	1	--	--	--	--	0.117	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	PM	0.0027	1	--	--	--	--	0.003	99.999	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**RGMX10079968**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/22/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4028	**Odometer Units**	M
4WD Test Dyno	No	**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)	0.020083	--
CO (Carbon Monoxide)	0.622938	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.23934	--
DT-EER (Drive Trace Energy Economy Rating)	-0.862183	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.41064	--
MFR FE (Manufacturer Fuel Economy)	10.8	10.8
NOX (Nitrogen Oxide)	0.004654	--
HC-NM (Non-methane Hydrocarbon)	0.003766	--
NMOG (Non-methane organic gases)	0.003879	--
PM (Particulate Matter)	0.000821	--
HC-TOTAL (Total Hydrocarbon)	0.022178	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	807.462	--

Manufacturer Test Comments 150K SC03 TEST

Certification Summary Information Report

Test Group VGMXD04.3170 **Evaporative/Refueling Family** VGMXR021260A

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 3 HD Class 2b Bin 170	CO	0.62	1	--	--	--	--	0.6	99.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0039	1	1.03	--	--	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0086	1	--	--	--	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0047	1	--	--	--	--	0.005	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0008	1	--	--	--	--	0.001	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	0.62	1	--	--	--	--	0.6	99.9	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0039	1	1.03	--	--	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0086	1	--	--	--	--	0.009	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0047	1	--	--	--	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-III SULEV170	PM	0.0008	1	--	--	--	--	0.001	99.999	Pass

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Emission Data Vehicle Information

Vehicle ID / Configuration	43GGRVT785 / 1	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	RGMXD04.3170	**Original Evaporative/Refueling Family**	RGMXF02176BB
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	G3500 EXPRESS 2WD CUTAWAY CH

Leak Family Details

Leak Family Identifier	LK1	**Leak Family Name**	RGMXF02176BB-LK1

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	1	**Rated Horsepower**	276
Displacement (liters)	4.3		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	7670	**Equivalent Test Weight (pounds)**	9000
GVWR (lbs)	9900	**N/V Ratio**	25.3
Axle Ratio	3.42		
Transmission Type	Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	58.27	0.7085	0.07473	37.66	0.4157	0.0749	37.4

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Emission Control Device Comments	G Van
Manufacturer Test Vehicle Comments	ADDED 250LBS BALLAST TO REAR AXLE. MUST BE TESTED WITH ROAD SPEED FAN. 4K CONFIG

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Test #	**RGMX10080602**	**Test Procedure**	**52 - Fed. fuel 50 F exh.**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/01/2023	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3908	**Odometer Units**	M
4WD Test Dyno	No	**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)	0.019542	--
CO (Carbon Monoxide)	0.621843	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.44179	--
DT-EER (Drive Trace Energy Economy Rating)	-0.81764	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.550946	--
NOX (Nitrogen Oxide)	0.030965	--
HC-NM (Non-methane Hydrocarbon)	0.109221	--
NMOG (Non-methane organic gases)	0.120111	--
HC-TOTAL (Total Hydrocarbon)	0.128117	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	691.834	--

Manufacturer Test Comments 4K 50 DEG TEST

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXR021260A

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-III SULEV170	CO	0.62	1	--	--	--	--	0.6	4.2	Pass
CA	4,000 miles	California LEV-III SULEV170	NMOG	0.1201	1	--	--	--	--	0.120	99.999	Pass
CA	4,000 miles	California LEV-III SULEV170	NMOG+NOX	0.1511	1	--	--	--	--	0.151	0.340	Pass
CA	4,000 miles	California LEV-III SULEV170	NOX	0.0310	1	--	--	--	--	0.031	99.999	Pass

Fuel Properties

Fuel Batch ID	**000329**	**Fuel Calibration Number**	**9322**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	10/17/2022
Fuel Batch Calibration Effective Date	10/17/2022	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.745
Fuel Ethanol Volume Percent (%)	9.8	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17787
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	**000307**	**Fuel Calibration Number**	**9320**
Test Fuel Type	61 - Tier 2 Cert Gasoline	**Fuel Batch Calibration Date**	10/10/2022
Fuel Batch Calibration Effective Date	10/10/2022	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.744
Fuel Ethanol Volume Percent (%)	--	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18427
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**	--

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Consolidated List of Standards

Exhaust Standards

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
Fuel	Gasoline	**Test Procedure**	Federal fuel 3-day exhaust

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	1	--	--	--	--	--	4.2
150,000 miles	CO-COMP	--	1	--	--	--	--	--	12.0
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.170
150,000 miles	NMOG+NOX-COMP	--	1	--	--	--	--	--	0.450
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	0.008
150,000 miles	PM-COMP	--	1	--	--	--	--	--	0.010

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	**Standard Level**	Federal Tier 3 HD Class 2b Bin 170
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	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A
Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	**Standard Level**	Federal Tier 3 HD Class 2b Bin 170
Fuel	Gasoline	**Test Procedure**	Federal fuel 3-day exhaust

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	1	--	--	--	--	--	4.2
150,000 miles	CO-COMP	--	1	--	--	--	--	--	12.0
150,000 miles	CO2	--	1	--	--	--	--	0	999.999
150,000 miles	METHANE	--	1	--	--	--	--	--	99.999
150,000 miles	N2O	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.170
150,000 miles	NMOG+NOX-COMP	--	1	--	--	--	--	--	0.450
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	0.008
150,000 miles	PM-COMP	--	1	--	--	--	--	--	0.010

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	**Standard Level**	Federal Tier 3 HD Class 2b Bin 170
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	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A
Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
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	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
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	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	**Standard Level**	Federal Tier 3 HD Class 2b Bin 170
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	CO2	--	1	--	--	--	--	0	999.999
150,000 miles	METHANE	--	1	--	--	--	--	--	99.999
150,000 miles	N2O	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.170
150,000 miles	NOX	--	1	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
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	--	--	--	--	--	4.2
4,000 miles	NMOG	--	1	--	--	--	--	--	99.999
4,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.340
4,000 miles	NOX	--	1	--	--	--	--	--	99.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	**Standard Level**	California LEV-III SULEV170
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	1.03	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.170
150,000 miles	NOX	--	1	--	--	--	--	--	99.999

Evaporative/Refueling Standards

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.600	0.0000

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel 3-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.600	0.0000

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**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	HC-TOTAL-EQUIV	--	0.20	0.000

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel refueling test (ORVR)		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.000

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**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	0.000

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal Fuel Running Loss		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.000

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**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	--	0.030	0.000

Certification Summary Information Report

Test Group	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**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	--	0.600	0.0000

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**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	--	0.600	0.0000

Evaporative/Refueling Family	VGMXR021260A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL	--	0.030	0.000

Certification Summary Information Report

Test Group	VGMXD04.3170	Evaporative/Refueling Family	VGMXR021260A

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	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A
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	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A
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	VGMXD04.3170	**Evaporative/Refueling Family**	VGMXR021260A
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

FLEXIBLE OR ALTERNATE FUELS

There are no flexible or alternate fuels certified for this test group.

Engine Code Information

Base Engine Code	1
EC Derivatives	
Test Group	VGMXD04.3170
Durability Group	VGMXGPGNNB51
Engine RPO	LV1
Disp, liters	4.3
Trans RPO	MTH
Trans Type	A8
Product Code	--
Emission RPO	NLJ
Emissions Category	SULEV170/BIN170
Vehicle Type	TRUCK
Regulatory Agencies	C
Sales Area	FA/CA
Design Altitude	Both
A/C Equipped	Yes
Driver Select Device	Normal, Tow/Haul
Police Only	No
Horsepower @ RPM	276@5200
Torque @ RPM	298@3900
Emission Ctrl Sys	DFI/2TWC/2HO2S(2)/TWC
TapUp/TapDown	No
Active Fuel Management	Non AFM
Description	LV1 G-Van

Vehicle Parameters - Certificate Coverage

Durability Group VGMXGPGNNB51
TestGroup VGMXD04.3170

EC	EC Der	Eng RPO	Disp	Evap Family	Evap Code	Model	Car Line	Trans Type/Code	Final Drive Ratio	GVWR	Tire	N/V	Loaded Weight Veh/DA	TWC Meth	TWC	TLHP	F0	F1	F2	RLHP RPO	Drv Sys	Note
1		LV1	4.3	VGMXR021260A	102	CG23405	G2500 EXPRESS 2WD CARGO	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	6982/3800	ALVW	7000	22.5	46.20	0.4433	0.04019	&AXK&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG23405+VXT	G2500 EXPRESS 2WD CARGO INCOM	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	7650/4097	ALVW	7500	22.9	48.81	0.4509	0.04019	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG23406	G2500 EXPRESS 2WD PASS	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	7339/4118	ALVW	7500	22.9	48.81	0.4509	0.04019	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG23705	G2500 EXPRESS 2WD CARGO	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	7093/3813	ALVW	7000	22.5	46.20	0.4433	0.04019	&AXK&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG23705+VXT	G2500 EXPRESS 2WD CARGO INCOM	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	7650/4085	ALVW	7500	22.9	48.81	0.4509	0.04019	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG33405	G3500 EXPRESS 2WD CARGO	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	7485/4289	ALVW	7500	22.9	48.81	0.4509	0.04019	&AXK&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG33405+VXT	G3500 EXPRESS 2WD CARGO INCOM	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8150/4597	ALVW	8000	23.3	51.40	0.4584	0.04020	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG33406	G3500 EXPRESS 2WD PASS	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	7823/4610	ALVW	8000	23.3	51.40	0.4584	0.04020	&AXW&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG33406+VXT	G3500 EXPRESS 2WD PASS INCOM	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8775/4597	ALVW	9000	24.1	56.55	0.4734	0.04021	&WNS	RD	--
1		LV1	4.3	VGMXF02176BB	101	CG33503	G3500 EXPRESS 2WD CUTAWAY CH	A8/1	3.42	8600	LT225/75R16 ALS GEN	26.3	8135/4095	ALVW	8000	38.2	63.45	0.6552	0.07624	&R04&VXT&WNS	RD	--
1		LV1	4.3	VGMXF02176BB	101	CG33503	G3500 EXPRESS 2WD CUTAWAY CH	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8635/4595	ALVW	8500	37.0	55.66	0.7009	0.07473	&R04&VXT&WNS	RD	--
1		LV1	4.3	VGMXF02176BB	101	CG33503	G3500 EXPRESS 2WD CUTAWAY CH	A8/1	3.42	9900	LT245/75R16 ALS BRI	25.3	8785/4745	ALVW	9000	37.4	58.27	0.7085	0.07473	&R04&VXT&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG33705	G3500 EXPRESS 2WD CARGO	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	7595/4285	ALVW	7500	22.9	48.81	0.4509	0.04019	&AXK&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG33705+VXT	G3500 EXPRESS 2WD CARGO INCOM	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8150/4585	ALVW	8000	23.3	51.40	0.4584	0.04020	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG33706	G3500 EXPRESS 2WD PASS	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8018/4575	ALVW	8000	23.3	51.40	0.4584	0.04020	&AXW&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	CG33706+VXT	G3500 EXPRESS 2WD PASS INCOM	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8150/4585	ALVW	8000	23.3	51.40	0.4584	0.04020	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG23405	G2500 SAVANA 2WD CARGO	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	6982/3800	ALVW	7000	22.5	46.20	0.4433	0.04019	&AXK&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG23405+VXT	G2500 SAVANA 2WD CARGO INCOM	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	7650/4097	ALVW	7500	22.9	48.81	0.4509	0.04019	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG23406	G2500 SAVANA 2WD PASS	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	7339/4118	ALVW	7500	22.9	48.81	0.4509	0.04019	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG23705	G2500 SAVANA 2WD CARGO	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	7093/3813	ALVW	7000	22.5	46.20	0.4433	0.04019	&AXK&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG23705+VXT	G2500 SAVANA 2WD CARGO INCOM	A8/1	3.42	8600	LT245/75R16 ALS BRI	25.3	7650/4085	ALVW	7500	22.9	48.81	0.4509	0.04019	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG33405	G3500 SAVANA 2WD CARGO	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	7485/4289	ALVW	7500	22.9	48.81	0.4509	0.04019	&AXK&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG33405+VXT	G3500 SAVANA 2WD CARGO INCOM	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8150/4597	ALVW	8000	23.3	51.40	0.4584	0.04020	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG33406	G3500 SAVANA 2WD PASS	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	7823/4610	ALVW	8000	23.3	51.40	0.4584	0.04020	&AXW&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG33406+VXT	G3500 SAVANA 2WD PASS INCOM	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8775/4597	ALVW	9000	24.1	56.55	0.4734	0.04021	&WNS	RD	--
1		LV1	4.3	VGMXF02176BB	101	TG33503	G3500 SAVANA 2WD CUTAWAY CH	A8/1	3.42	8600	LT225/75R16 ALS GEN	26.3	8135/4095	ALVW	8000	38.2	63.45	0.6552	0.07624	&R04&VXT&WNS	RD	--
1		LV1	4.3	VGMXF02176BB	101	TG33503	G3500 SAVANA 2WD CUTAWAY CH	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8635/4595	ALVW	8500	37.0	55.66	0.7009	0.07473	&R04&VXT&WNS	RD	--
1		LV1	4.3	VGMXF02176BB	101	TG33503	G3500 SAVANA 2WD CUTAWAY CH	A8/1	3.42	9900	LT245/75R16 ALS BRI	25.3	8785/4745	ALVW	9000	37.4	58.27	0.7085	0.07473	&R04&VXT&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG33705	G3500 SAVANA 2WD CARGO	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	7595/4285	ALVW	7500	22.9	48.81	0.4509	0.04019	&AXK&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG33705+VXT	G3500 SAVANA 2WD CARGO INCOM	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8150/4585	ALVW	8000	23.3	51.40	0.4584	0.04020	&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG33706	G3500 SAVANA 2WD PASS	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8018/4575	ALVW	8000	23.3	51.40	0.4584	0.04020	&AXW&WNS	RD	--
1		LV1	4.3	VGMXR021260A	102	TG33706+VXT	G3500 SAVANA 2WD PASS INCOM	A8/1	3.42	9600	LT245/75R16 ALS BRI	25.3	8150/4585	ALVW	8000	23.3	51.40	0.4584	0.04020	&WNS	RD	--

GM elects to test at the next higher test weight class where applicable (reference 40CFR86.1831-01(b)(3)).

TRANSMISSION INFORMATION

Test Group ID	VGMXD04.3170
Transmission Code	1
Transmission RPO	MTH
Transmission Type	A8
Drive Gear Ratios	4.56,2.97,2.08,1.69,1.27,1,0.85,0.65
Chain Drive Ratio	NA
Shift Calibrations	Computer Controlled
Torque Converter Diameter	262
Torque Converter Stall Torque Ratio	1.88
Torque Converter Lockup RPM'S	Computer Controlled
Torque Converter Stall Torque Speed	2400@372Nm
Multimode Feature - # of Modes	2
Shift Indicator Light	NA
Description	MTH
TapUp/TapDown	NO

SPECIAL TEST INSTRUCTIONS

DRIVER SELECTABLE MODES

Tow/Haul Mode:

Some vehicles are equipped with a trailer tow switch. To select the trailer tow mode, depress the trailer tow switch. The trailer tow light on the instrument panel cluster will illuminate. To go back to the normal operation, press the switch again. The indicator light on the instrument cluster will go out. Upon an engine restart, the trailer tow switch must be reactivated to enter the trailer tow mode.

Tap Shift (Manual Shift) Mode:

To select Tap Shift mode on automatic transmission vehicles (if equipped), move the gear shift lever to the manual mode position. Some vehicles require the additional step of pressing either "+" or "-" on the shifter to engage Tap Shift mode. Please refer to the Owner's Manual for vehicle specific instructions.
To go back to normal automatic mode, move the gear shift lever to "D".

Other Modes:

Some vehicles are equipped with additional driver selectable modes. These vehicles are equipped with either additional gear shifter positions or a mode selection switch to engage each mode. Please refer to the Owner's Manual for specific instructions on how to engage each mode.

OTHER

Drive Trace Tolerances:

The driver must attempt to follow the target schedule as closely as possible. Instantaneous speeds must stay within the following tolerances. The upper limit is 2.0 mph higher than the highest point on the trace within 1.0 s of the given point in time. The lower limit is 2.0 mph lower than the lowest point on the trace within 1.0 s of the given time.

Emission Test Vehicle Cooling Requirements:

All testing for this test group must use a road speed fan on all regulated test cycles, as allowed by the regulations. Center fan on grille 12 inches from center of fan

Canister Loading:

Most General Motors vehicles have a service port for the evaporative system. For vehicles that are not equipped with a service port, an evaporative service access port tool must be utilized. The evaporative service access port tool should be installed between the purge solenoid and the purge line from the evaporative canister. Purging and loading of the evaporative emissions canister must be done through this service port or service port tool. The service port and service port tool consist of a Schrader valve which is in series with the purge line. It can be identified by its green cap.

SPECIAL TEST INSTRUCTIONS (CONT.)

Fuel System Leak Test Procedure:

For evaporative emission families that are certified to Tier 3 and LEV 3 evaporative emission requirements, a fuel system leak test may need to be conducted. To conduct this testing, the outlet of the canister should be sealed. The fuel system is then pressurized by applying nitrogen through the service port. Service port details are outlined in the canister loading instructions.

Evaporative Emissions Testing:

For evaporative emissions testing conducted with test fuels that contain ethanol, General Motors utilizes a photo acoustic infrared analyzer to measure evaporative emissions.

Four-Wheel and All-Wheel Drive Vehicles:

Please contact General Motors Compliance and Certification organization for instructions on how to disable the four-wheel and all-wheel drive systems.

Traction Control and Anti-Lock Braking System (ABS):

Most General Motors vehicles come equipped with an electronic traction control system and an ABS system. During dynamometer testing, these systems will detect the difference in wheel speed between the front and rear wheels, and attempt to correct it by activating ABS and changing engine operation. Therefore, before emissions testing, the systems must be disabled. Some system can be disabled by removing the under-hood ABS fuse, other systems will require a service tool connected to the Diagnostic Link Connector. Please contact General Motors Compliance and Certification organization for instructions on which fuse(s) to remove or service tools required.

Vehicle Moving Procedures for Electronic Transmission Range Selection Equipped Vehicles:

Some General Motors vehicles are equipped with an Electronic Transmission Range Selection (ETRS) transmission. Please contact General Motors Compliance and Certification organization for instructions on how to move these vehicles in the test lab.

Automatic Headlight Systems:

Headlight must be turned off before each emissions or fuel economy test. Please refer to the owner's manual for the location of the switch that controls the headlights.

Parking Brake:

All front wheel drive vehicles must have the parking brake set prior to any dynamometer emission testing.

Tire Pressure and Ballast:
Some vehicles in this test group may require additional ballast and reduction of tire pressure to prevent wheel slip. Please add ballast and change the tire pressure prior to emissions testing, according to the list below. For engine codes not listed, testing should be conducted as specified in the vehicle parameters page.

All Engine Codes	250 pounds	32 psi

ENGINE STARTING INSTRUCTIONS

Warm or Cold Engine

For vehicles using a key, do not press down on the accelerator pedal. With your foot off the pedal, crank the engine by turning the ignition key to "Start". Release the key when the engine starts.

For vehicles using a push button start, the keyless access transmitter must be inside the vehicle for the ignition to work. To start the vehicle, do the following: With your foot on the brake pedal, press the START button located on the instrument panel. When the engine begins cranking, let go of the button and the engine cranks automatically until it starts.

Reference Owner's Manual for complete starting instructions.

SHIFT SCHEDULES - NA

	Shift Schedule				Recommended Shift Speeds (mph)								
Trans Code	FTP	Hwy	SC03	US06*1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10

*1 The speeds and acceleration rates encountered in the US06 driving schedule may require shift speeds different from the other schedules.

NA – Not Applicable

May 14, 2026 VP036

Mr. D. Cullen
U.S. Environmental Protection Agency
Office of Transportation & Air Quality
Certification & Compliance Division
2000 Traverwood
Ann Arbor, MI 48105

Dear Mr. Cullen:

Subject: Request for Certificate of Conformity - General Motors 2027 Test Group/ Evaporative Families VGMXD04.3170/VGMXF02176BB, VGMXR021260A

General Motors requests that the EPA issue certificates of conformity for the subject test group/evaporative families. GM requests the EPA review this application promptly to expedite final approval of the certificates of conformity for the subject test group. Attached to this request is the Part 1 Application.

GM requests that the EPA treat the information contained in this Part 1 Application, or information subsequently submitted for inclusion in this application, as confidential business information under 40 C.F.R. Part 2, Subpart B, and 5 U.S.C. § 552. The EPA's General Counsel made a class determination that information contained in applications for certification is entitled to confidential treatment (see Class Determination 1-13). As such, GM requests that the information described in each Table of the Class Determination be accorded confidential treatment in accordance with the time periods specified.

GM attests that the test group complies with all applicable regulations contained in 40 C.F.R. Parts 85 and 86, and the applicable California Amendments of the EPA regulations it has incorporated, and Title 13 of the California Code of Regulations.

Please review this information as soon as possible and call if you should have any questions regarding this request for certificates of conformity.

Sincerely,

S. E. Davis

S. E. Davis
Total Certification Engineer
Compliance & Certification

SED/ks

May 14, 2026 VP037

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

Dear Ms. Lang:

Subject: Request for Executive Order - General Motors 2027 Test Group/Evaporative Families VGMXD04.3170/VGMXF02176BB, VGMXR021260A

General Motors requests that CARB issue an executive order for the subject test group. GM requests that the CARB treat the information contained in this Part 1 Application, or information subsequently submitted for inclusion in this application, as confidential business information pursuant to the California Public Records Act and Sections 91000-91022 of Title 17 of the California Code of Regulations. The information is confidential and sensitive GM business information that constitutes trade secrets and commercial or financial information within the meaning of Section 6254.7 of the California Public Records Act**,** is entitled to confidential treatment, and will cause substantial competitive harm to GM if released. In the event that CARB does not agree with our position regarding confidential treatment of this information or is considering the public release of this confidential, trade secret, and commercial or financial information, or receives a request for disclosure of the information, we request that you first provide notice to me and we request the opportunity to discuss the material and the need to maintain the confidentiality of this information with you or the CARB General Counsel before any decision is made regarding its release. GM requests that the information be accorded confidential treatment indefinitely.

GM attests that the test group complies with all applicable regulations contained in 40 C.F.R. Parts 85 and 86, and the applicable California Amendments of the EPA regulations that CARB has incorporated and Title 13 of the California Code of Regulations.

GM recognizes that on June 12, 2025, a Congressional Review Act resolution came into effect disapproving the waiver that EPA had issued to CARB granting it authority to enforce the LEV IV regulation, which would have previously controlled for this executive order. In response to CARB's emergency request to temporarily reinstate the agency's LEV III regulations, EPA advised CARB that "…even if a preexisting regulation previously obtained a waiver, such waiver is no longer extant if the regulation became ineffective at any time, whether through the passage of time, repeal, or by any other means." On October 2, 2025, the California Office of Administrative Law approved CARB's emergency amendment intended to temporarily reinstate the agency's LEV III regulations. On March 26, 2026, OAL approved CARB's 90-day extension of its emergency amendment through July 1, 2026. In requesting an executive order consistent with the temporary emergency amendment, GM is not taking a position with respect to the validity or enforceability of any CARB requirements that may have been subject to Congressional Review Act resolutions or for which an EPA waiver of preemption has become ineffective.

The EPA certificates of conformity for this test group will be forwarded to you when available.

Based upon our review prior to submitting the application for certification and to the best of our current information and belief, the GM vehicles described in this request for executive order do not employ defeat devices, and do not use alternative maps or AECDs that have not been declared, nor does our emission control system include strategies that link transmission controls (input or output) to these AECDs. In addition, we do not use control strategies that would trigger different transmission behavior when driven on an official emission test compared to when driven on the road under the same conditions. We are submitting this statement to you in good faith. If, in the future, we identify any new relevant information, we will notify CARB in a timely fashion.

Please review this information as soon as possible and call if you have any questions regarding this request for an executive order.

Sincerely,

S. E. Davis

S. E. Davis
Total Certification Engineer
Compliance & Certification

SED/ks

EMISSION DATA RATIOS (GASOLINE)

	Data Ratios
NMHC (G/MI) *1	NA
NMOG (G/MI) *2	NA
HCHO (G/MI) *4	NA
NMOG:NMHC *2 (E0 TIER2)	1.04
NMOG:NMHC *3 (E10 LEV3)	1.10 (Cold Start Tests)
NMOG:NMHC *3 (E10 LEV3)	1.03 (Hot Start Tests)
NMOG:NMHC *5 (E10 TIER3)	See Below
NMOG:NMHC *6 (E10 TIER3)	1.03 (Hot Start Tests)
HCHO:NMHC *2	NA

*1 NMHC includes methane response factor.

*2 Effective with the 2004 model year, both EPA and CARB have, through regulatory change, established an industry 1.04 NMHC to NMOG factor which can be used for cert testing for all gasoline tests (does not apply to alcohol fuels).

*3 Effective with LEV3 regulations, 1.10 NMHC to NMOG factor (cold start tests) and 1.03 NMHC to NMOG factor (hot start tests) can be used for cert testing for all gasoline tests (does not apply to alcohol fuels).

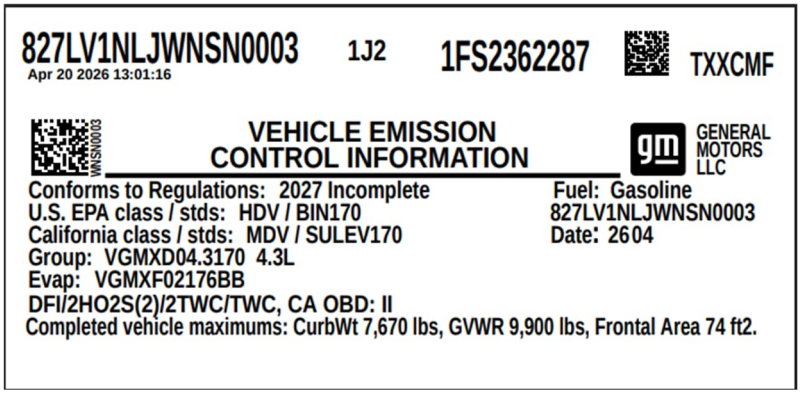
*4 HCHO requirements will now be met by a compliance statement for both EPA and CARB (does not apply to alcohol fuels).

*5 Effective with TIER3 regulations, the NMHC to NMOG conversion ratio for cold start tests is a calculation based 1066.635 which is represented by the following:

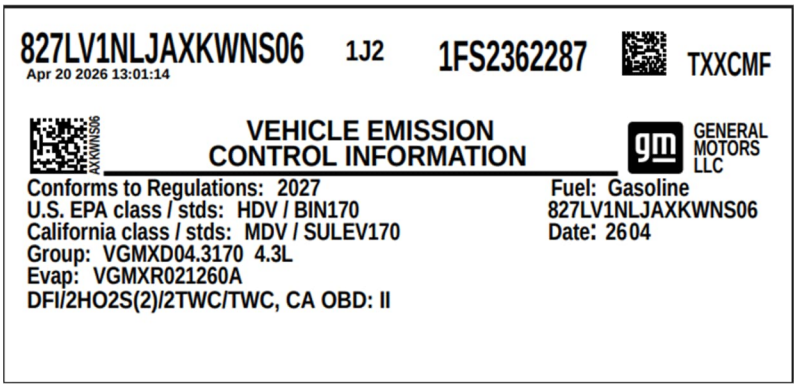
$e_{NMOGcomp} = e_{NMHCcomp} * (1.0302+(0.0071*VP_{EtOH}))$ {Eq. 1066.635-3}

*6 Effective with TIER3 regulations, 1.03 NMHC to NMOG factor (hot start tests) can be used for certification testing for all gasoline tests (does not apply to alcohol fuels).

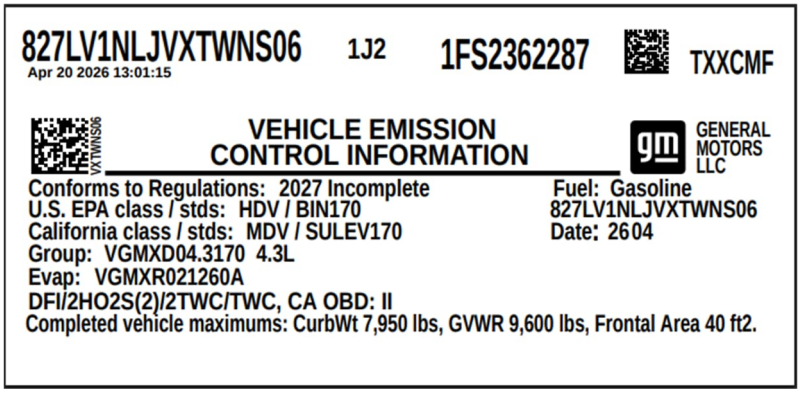
LV1&NLJ&WNS


827LV1NLJWNSN0003 1J2 1FS2362287 TXXCMF
Apr 20 2026 13:01:16
WNSN0003
VEHICLE EMISSION CONTROL INFORMATION
GENERAL MOTORS LLC
Conforms to Regulations: 2027 Incomplete
U.S. EPA class / stds: HDV / BIN170
California class / stds: MDV / SULEV170
Group: VGMXD04.3170 4.3L
Evap: VGMXF02176BB
DFI/2HO2S(2)/2TWC/TWC, CA OBD: II
Completed vehicle maximums: CurbWt 7,670 lbs, GVWR 9,900 lbs, Frontal Area 74 ft2.
Fuel: Gasoline
827LV1NLJWNSN0003
Date: 2604

LV1&NLJ&AXK&WNS


827LV1NLJAXKWNS06 1J2 1FS2362287 TXXCMF
Apr 20 2026 13:01:14
AXKWNS06
VEHICLE EMISSION CONTROL INFORMATION
GENERAL MOTORS LLC
Conforms to Regulations: 2027
U.S. EPA class / stds: HDV / BIN170
California class / stds: MDV / SULEV170
Group: VGMXD04.3170 4.3L
Evap: VGMXR021260A
DFI/2HO2S(2)/2TWC/TWC, CA OBD: II
Fuel: Gasoline
827LV1NLJAXKWNS06
Date: 2604

LV1&NLJ&WNS&VXT


827LV1NLJVXTWNS06 1J2 1FS2362287 TXXCMF
Apr 20 2026 13:01:15
VXTWNS06
VEHICLE EMISSION CONTROL INFORMATION
GENERAL MOTORS LLC
Conforms to Regulations: 2027 Incomplete
U.S. EPA class / stds: HDV / BIN170
California class / stds: MDV / SULEV170
Group: VGMXD04.3170 4.3L
Evap: VGMXR021260A
DFI/2HO2S(2)/2TWC/TWC, CA OBD: II
Completed vehicle maximums: CurbWt 7,950 lbs, GVWR 9,600 lbs, Frontal Area 40 ft2.
Fuel: Gasoline
827LV1NLJVXTWNS06
Date: 2604