

# APPLICATION FOR CERTIFICATION

## 2027 MODEL YEAR

Durability Group:	VGMXGPGNNA01
Test Group:	VGMXJ01.5080
Durability Group Description:	Four Stroke, Otto Cycle, Gasoline Fueled, DFI, Turbocharger, Ceramic Monolith Pt/Pd/Rh Catalyst
Durability Vehicle:	Aged Components
OBD Group:	VGMXOBDG03A
Test Group Description:	1.5L L4
Applicable Standards:	Federal BIN 30/ California SULEV 30
Carlines Covered by Evaporative Family:	1.5L Chevrolet EQUINOX AWD Chevrolet EQUINOX FWD GMC TERRAIN AWD GMC TERRAIN FWD VGMXR010235A
Vehicles Tested:	151TXV5718

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# TEST VEHICLE DESCRIPTION

	<u>Durability Vehicle Selection</u>	<u>Emission-Data Vehicle Selection</u>
Test Group	NA (Aged Components)	VGMXJ01.5080
Evaporative Family		VGMXR010235A
Displacement – Liters		1.5
Engine Code		3
Emission Control System		
Exhaust		TC/CAC/DFI/WR-HO2S/TWC/HO2S
Evap		C/CCP/IC
Model		TPD26+F48
Transmission Type/Code		A8/3
Shift Schedule		NA
(LVW) Test Weight – Lbs		3875
GVWR		4850
Dyno Horsepower/Type		NA
Roadload HP		14.8
Final Drive		3.47
N/V Ratio – rpm/mph		25.5
Tires		235/65R17
Vehicle/EPA Config No./GM Config No.		
FTP & HWFE		151TXV5718/00/002
SFTP		151TXV5718/00/002
20° CO		151TXV5718/00/002

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

BIN30 (PC)

TEST GROUP NAME: VGMXJ01.5080

EVAPORATIVE FAMILY NAME(S): VGMXR010235A

## CERTIFICATION & IN-USE STANDARDS

### LOW AND HIGH ALTITUDE:

	FTP TEST						
	Low Altitude NMOG+NOx	High Altitude NMOG+NOx	CO	HCHO	PM	CH4	N2O
120K STD	NA	NA	NA	NA	NA	0.030	0.010
150k STD	0.030	0.050	1.0	0.004	0.003	NA	NA

	HWY TEST		20 °F TEST	
	Low Altitude NMOG+NOx	High Altitude NMOG+NOx	CO	NMHC
50K STD	NA	NA	10.0	NA
120K STD	NA	NA	NA	0.3
150k STD	0.030	0.050	NA	NA

### SFTP - LOW ALTITUDE:

	US06 PM	COMPOSITE* <sup>1</sup> NMOG+NOx	COMPOSITE* <sup>1</sup> CO
150K STD	0.006	0.050	4.2

\*1 The calculation used for the composite results for NMOG+NOx, CO and PM = 35%FTP + 28%US06 + 37%SC03

# 2027 EMISSION STANDARDS

LEV3 SULEV30 (PC)

TEST GROUP NAME: VGMXJ01.5080

EVAPORATIVE FAMILY NAME(S): VGMXR010235A

## CERTIFICATION STANDARDS & IN-USE STANDARDS

	FTP TEST				HWY TEST	20 °F TEST
	NMOG+NOx	CO	HCHO	PM	NMOG+NOx	CO
50K STD	NA	NA	NA	NA	NA	10.0
150K STD (Low)	0.030	1.0	0.004	0.001	0.030	NA
150K STD (High)	0.050	1.0	0.004	0.001	0.050	

### SFTP - LOW ALTITUDE:

	US06 PM	COMPOSITE <sup>*1</sup> NMOG+NOx	COMPOSITE <sup>*1</sup> CO
150K STD	0.003	0.050	4.2

### 50 °F TEST:

	NMOG+NOx	CO	HCHO
4K STD	0.060	1.0	0.008

Note: Standards apply at Low and High Altitudes unless otherwise noted.

## Certification Summary Information Report

<b>Manufacturer</b>	General Motors LLC	<b>Manufacturer Code</b>	GMX						
<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A						
<b>Certificate Number</b>	--	<b>CARB Executive Order #</b>	--						
<b>Certificate Issue Date</b>	--	<b>Certificate Revision Date</b>	--						
<b>Certificate Effective Date</b>	--	<b>Conditional Certificate</b>	--						
<b>CSI Revision #</b>	--	<b>CSI Submission/Revision Date</b>	04/09/2026 09:28:14 AM						
<b>Model Year</b>	2027								
<b>Test Group Information</b>									
<b>CSI Type</b>	New	<b>Running Change Reference Number</b>	--						
<b>GHG Exempt Status</b>	Not Exempt								
<b>Drive Sources and Fuel(s)</b>									
<b>Drive Source #1:</b>	Combustion Engine								
	<table border="1"> <thead> <tr> <th>Fuel</th><th>Basic Fuel Metering System</th><th>Lean Burn Strategy Indicator</th></tr> </thead> <tbody> <tr> <td>Gasoline</td><td>Spark Ignition Direct fuel injection</td><td>No</td></tr> </tbody> </table>			Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator	Gasoline	Spark Ignition Direct fuel injection	No
Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator							
Gasoline	Spark Ignition Direct fuel injection	No							
<b>Hybrid Indicator</b>	No								
<b>Multiple Fuel Storage</b>	--	<b>Rechargeable Energy Storage System Indicator</b>	--						
<b>Multiple Fuel Combustion</b>	--	<b>Off-board Charge Capable Indicator</b>	--						
<b>Fuel Cell Indicator</b>	--	<b>EPA Vehicle Class</b>	LDV						
<b>Federal Clean Fuel Vehicle</b>	No	<b>Federal Clean Fuel Vehicle Standard</b>	--						
<b>Federal Clean Fuel Vehicle ILEV</b>	No	<b>California Partial Zero Emissions Vehicle Indicator</b>	No						
<b>Durability Group Name</b>	VGMXGPGNNA01	<b>Durability Group Equivalency Factor</b>	1						
<b>Reduced Fee Test Group</b>	No	<b>Certification Region Code(s)</b>	FA, CA						
<b>Complies with HD GHG 2b/3 regulations?</b>	No								
<b>Introduction into Commerce Date</b>	--	<b>CAP2000 Conditional Certificate?</b>	N/A						
<b>Independent Commercial Importer?</b>	--	<b>Alternative Fuel Converter Certificate?</b>	--						
<b>SFTP Federal Composite Compliance Identifier</b>	Tier 3	<b>SFTP Tier 2 Composite CO Option</b>	No						
<b>SFTP LEV-III Composite Compliance Indicator</b>	No								
<b>OBD Compliance Type</b>	CARB	<b>OBD Demonstration Vehicle Test Group</b>	VGMXJ01.5080						
<b>Test Group OBD Compliance Level</b>	Full - no deficiencies	<b>Number of Test Group OBD Deficiencies</b>	0						
<b>OBD Deficiencies Comments</b>	--								
<b>Mfr Test Group Comments</b>	2027 LSD, GAS, 4 CYL, 1.5L, Equinox/Terrain								
<b>Mfr Exhaust / Evap Standards Comments</b>	--								

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A				
<b>Evaporative/Refueling Family Information</b>							
<b>Evaporative Summary Information Type</b>	New	<b>Submission/Correction Date</b>	04/09/2026 09:25:13 AM				
<b>Integrated ORVR?</b>	Yes	<b>Fuel(s)</b>	Gasoline				
<b>Multiple Fuel Storage</b>	--						
<b>Bladder Fuel Tank?</b>	No						
<b>Fuel Tank Material</b>	Plastic	<b>Fuel Tank Material Description</b>	Multi-layer with HDPE and EVOH				
<b>Fill Pipe Seal Type</b>	Liquid seal						
<b>Air Intake System Vapor Storage Device?</b>	Yes	<b>Air Intake System Vapor Storage Device Description</b>	HCA				
<b>Fuel System Vapor Storage Canister?</b>	Yes	<b>Other Vapor Storage</b>	--				
<b>Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)</b>	102	<b>Number of Primary Canisters</b>	1				
<b>Number of Bleed Canisters</b>	0	<b>Bleed Canister Total Working Capacity (grams)</b>	--				
<b>Mfr Evaporative/Refueling Family Comments</b>	--						
<b>Leak Family Details</b>							
<b>Leak Family Indicator</b>	Yes						
<b>Canister Bleed Test Indicator</b>	Yes	<b>Applicability of Evaporative Canister Bleed Test</b>	50 State				
<b>Evaporative Canister Bleed Test Comments</b>	--						
<b>CARB Fuel Only (Rig) Test Indicator</b>	No	<b>Applicability of CARB Fuel Only (Rig) Test</b>	--				
<b>CARB Fuel Only (Rig) Test Comments</b>	--						
<b>Leak Family Name</b>	<b>Applicability of Leak Family Requirements</b>	<b>Leak Family Standard (inches)</b>	<b>Leak Family Description</b>				
VGMXR010235A-LK1	50 State	0.02	--				
<b>Models Covered by this Certificate</b>							
<b>Carline Manufacturer</b>	<b>Division</b>	<b>Carline</b>	<b>Certification Region Code(s)</b>	<b>Drive System</b>	<b>Trans - Type</b>	<b>- # of Gears</b>	<b>Trans - Lockup</b>
General Motors LLC	4 - GMC	944 - TERRAIN AWD	California + CAA Section 177 states	All Wheel Drive	Automatic	8	Yes
General Motors LLC	4 - GMC	944 - TERRAIN AWD	Federal	All Wheel Drive	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	981 - EQUINOX FWD	Federal	2-Wheel Drive, Front	Automatic	8	Yes
General Motors LLC	4 - GMC	966 - TERRAIN FWD	California + CAA Section 177 states	2-Wheel Drive, Front	Automatic	8	Yes
General Motors LLC	4 - GMC	966 - TERRAIN FWD	Federal	2-Wheel Drive, Front	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	981 - EQUINOX FWD	California + CAA Section 177 states	2-Wheel Drive, Front	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	982 - EQUINOX AWD	Federal	All Wheel Drive	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	982 - EQUINOX AWD	California + CAA Section 177 states	All Wheel Drive	Automatic	8	Yes

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Engine Description</b>			
<b>Hybrid Type</b>	--	<b>Hybrid Description</b>	--
<b>Engine Type</b>	4-Stroke Spark Ignition	<b>Mfr Engine Description</b>	--
<b>Engine Block Arrangement</b>	Inline	<b>Mfr Engine Block Arrangement Description</b>	--
<b>Camless Valvetrain Indicator</b>	No	<b>Oil Viscosity/Classification</b>	0W20
<b>Number of Cylinders/Rotors</b>	4	<b>Mechanically Variable Compression Ratio Indicator</b>	N
<b>After Treatment Device(s) (ATD)</b>			
<b>ATD Number</b>	<b>ATD Type</b>	<b>ATD Precious Metal</b>	<b>Substrate Material</b>
1	Three-way catalyst	Platinum + Palladium + Rhodium	Ceramic
<b>Substrate Construction</b>			
Monolith			
<b>Mfr After Treatment Device (ATD) Comments</b>			
--			
<b>Direct Ozone Reduction (DOR) Device</b>	Not Equipped		
<b>Mfr Emission Control Device Comments</b>	--		
<b>Engine Configuration Number 1</b>			
<b>Engine Displacement (liters)</b>	1.5	<b>Engine Rated Horsepower</b>	175
<b>Number of Inlet Valves Per Cylinder</b>	2	<b>Number of Exhaust Valves Per Cylinder</b>	2
<b>Air Aspiration Method</b>	Turbocharged	<b>Number of Air Aspiration Devices</b>	1
<b>Air Aspiration Device Configuration</b>	Single	<b>Charge Air Cooler Type</b>	Air
<b>Air Aspiration Drive Method(s)</b>	Mechanical		
<b>Cylinder Deactivation</b>	No		
<b>Cylinder Deactivation Description</b>	--		
<b>Variable Valve Timing</b>	Yes		
<b>Variable Valve Timing System Description</b>	Multiple Positions		
<b>Variable Valve Lift?</b>	No		
<b>Variable Valve Lift System Description</b>	--		
<b>Number of Knock Sensors</b>	1	<b>Number of Air/Fuel Sensors</b>	2
<b>Air/Fuel Sensor # 1 Type</b>	Heated oxygen	<b>Air/Fuel Sensor # 1 Description</b>	--
<b>Air/Fuel Sensor # 2 Type</b>	Heated oxygen	<b>Air/Fuel Sensor # 2 Description</b>	--
<b>Mfr Air/Fuel Sensor Comments</b>	--		
<b>Exhaust Gas Recirculation</b>	No	<b>Cooled Exhaust Gas Recirculation</b>	No
<b>EGR Type</b>	--	<b>Exhaust Gas Recirculation Description if 'Other'</b>	--
<b>Closed Loop Air Injection System</b>	--		
<b>Air Injection Type</b>	Not Applicable	<b>Air Injection Type if 'Other'</b>	--
<b>Mfr Engine Configuration Comments</b>	--		

## Certification Summary Information Report

Test Group		VGMXJ01.5080				Evaporative/Refueling Family		VGMXR010235A			
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		TGMX10088555	TGMX10088551	TGMX10088554	TGMX10088553	TGMX10088550	27.9	228.2	32.2	286.1	--



### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
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**Manufacturer Test Vehicle Comments**      --

<b>Test #</b>	SGMX10084487	<b>Test Procedure</b>	23 - 2-day evap
<b>Exhaust Test # for this Evap Test</b>	SGMX10084485	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	12/13/2023	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	--	<b>Fuel Calibration Number</b>	--
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
<b>Test Start Odometer Reading</b>	3887	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	No

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.277	--

**Manufacturer Test Comments**      150K 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	0.2770	0.000	0.277	0.350	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2770	0.000	0.277	0.350	Pass

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>SGMX10084490</b>	<b>Test Procedure</b>	<b>34 - Federal fuel 3-day evap</b>
<b>Exhaust Test # for this Evap Test</b>	SGMX10084485	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	01/17/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	--	<b>Fuel Calibration Number</b>	--
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
<b>Test Start Odometer Reading</b>	4033	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	No

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.2229	--

**Manufacturer Test Comments**                      150K 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	0.2229	0.000	0.223	0.350	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2229	0.000	0.223	0.350	Pass

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
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<b>Test #</b>	SGMX10084488	<b>Test Procedure</b>	24 - Federal fuel refueling test (ORVR)
<b>Exhaust Test # for this Evap Test</b>	SGMX10084485	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	01/05/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	--	<b>Fuel Calibration Number</b>	--
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
<b>Test Start Odometer Reading</b>	3978	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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)	0.0377	--

**Manufacturer Test Comments**                      150K 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	0.038	0.000	0.04	0.20	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.038	0.000	0.04	0.20	Pass

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>SGMX10084489</b>	<b>Test Procedure</b>	<b>32 - Federal Fuel Running Loss</b>
<b>Exhaust Test # for this Evap Test</b>	SGMX10084485	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	02/07/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	--	<b>Fuel Calibration Number</b>	--
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
<b>Test Start Odometer Reading</b>	4111	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	No

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.00042	--

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

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>SGMX10084491</b>	<b>Test Procedure</b>	<b>65 - Evap Canister Bleed Test</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	12/12/2023	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	--	<b>Fuel Calibration Number</b>	--
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
<b>Test Start Odometer Reading</b>	3887	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	No

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.00312	--

**Manufacturer Test Comments**                      150K 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	0.0031	0.000	0.003	0.020	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.0031	0.000	0.003	0.020	Pass

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A						
<b>Emission Data Vehicle Information</b>									
<b>Vehicle ID / Configuration</b>	151TXV5718 / 0	<b>Manufacturer Vehicle Configuration Number</b>	0						
<b>Original Test Group Name</b>	TGMXT01.5080	<b>Original Evaporative/Refueling Family</b>	TGMXR010235A						
<b>Original Test Vehicle Model Year</b>	2026								
<b>Vehicle Model</b>									
<b>Represented Test Vehicle Make</b>	GMC	<b>Represented Test Vehicle Model</b>	TERRAIN AWD						
<b>Leak Family Details</b>									
<b>Leak Family Identifier</b>	LK1	<b>Leak Family Name</b>	TGMXR010235A-LK1						
<b>Drive Sources and Fuel System Details</b>									
<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
<b>Hybrid Indicator</b>	No								
<b>Multiple Fuel Storage</b>	--	<b>Multiple Fuel Combustion</b>	--						
<b>Fuel Cell Indicator</b>	--	<b>Rechargeable Energy Storage System Indicator</b>	--						
<b>Rechargeable Energy Storage System</b>	--	<b>Rechargeable Energy Storage System, if 'Other'</b>	--						
<b>Off-board charge Capable Indicator</b>	--								
<b>Odometer Correction -- Initial</b>	0	<b>Odometer Correction Factor</b>	1						
<b>Odometer Correction Sign</b>	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles								
<b>Odometer Correction Units</b>	Miles								
<b>Engine Code</b>	2	<b>Rated Horsepower</b>	175						
<b>Displacement (liters)</b>	1.5								
<b>Air Aspiration Method</b>	Turbocharged	<b>Air Aspiration Method, if 'Other'</b>							
<b>Number of Air Aspiration Devices</b>	1	<b>Air Aspiration Device Configuration</b>	Single						
<b>Charge Air Cooler Type</b>	Air	<b>Drive Mode While Testing</b>	4-Wheel Drive						
<b>Shift Indicator Light Usage</b>	Not equipped	<b>Aged Emission Components</b>	150,000 (mi)						
<b>Curb Weight (lbs)</b>	3600	<b>Equivalent Test Weight (pounds)</b>	3875						
<b>GVWR (lbs)</b>	4850	<b>N/V Ratio</b>	25.5						
<b>Axle Ratio</b>	3.47								
<b>Transmission Type</b>	Automatic	<b># of Transmission Gears</b>	8						
<b>Transmission Lockup</b>	Yes	<b>Creeper Gear</b>	No						

## Certification Summary Information Report

Test Group		VGMXJ01.5080			Evaporative/Refueling Family			VGMXR010235A
<b>Dynamometer Coefficients:</b>								
		Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	27.06	0.3102	0.02748	-3.72	0.088	0.0271	14.8	
Cold CO	29.77	0.3412	0.03023	-9.6	-0.1335	0.03043	N/A	
US06	27.06	0.3102	0.02748	-3.72	0.088	0.0271	N/A	
Emission Control Device Comments	D2UC-2/D2UG-2 4WD LSD							
Manufacturer Test Vehicle Comments	150K D2UX-2 AWD EDV RUNNING ON 4WD DYNO WITH FRONT WHEELS POWERING THE VEHICLE. PROP SHAFT REMOVED.							

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088553</b>	<b>Test Procedure</b>	<b>11 - Cold CO</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	28 - Cold CO E10 Regular Gasoline (Tier 3)
<b>Test Date</b>	11/05/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000334	<b>Fuel Calibration Number</b>	9312
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4091	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	410.975	--
FE BAG 1 (Bag 1 Fuel Economy)	20.4	20.4
CO2 BAG 2 (Bag 2 Carbon Dioxide)	311.732	--
FE BAG 2 (Bag 2 Fuel Economy)	27.8	27.8
CO2 BAG 3 (Bag 3 Carbon Dioxide)	293.277	--
FE BAG 3 (Bag 3 Fuel Economy)	29.6	29.6
METHANE (CH4 - Methane)	0.026415	--
CO (Carbon Monoxide)	1.62024	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.835694	--
DT-EER (Drive Trace Energy Economy Rating)	-0.581621	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.16099	--
MFR FE (Manufacturer Fuel Economy)	26.3	26.3
NOX (Nitrogen Oxide)	0.018703	--
HC-NM (Non-methane Hydrocarbon)	0.152083	--
NMOG (Non-methane organic gases)	0.167161	--
HC-TOTAL (Total Hydrocarbon)	0.17742	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	327.261	--

Manufacturer Test Comments

150K COLD TEST

## Certification Summary Information Report

Test Group		VGMXJ01.5080				Evaporative/Refueling Family				VGMXR010235A		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 3 Bin 30	CO	1.62	1	--	--	--	--	1.6	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.15	1	--	--	--	--	0.2	0.3	Pass
CA	50,000 miles	California LEV-III SULEV30	CO	1.62	1	--	--	--	--	1.6	10.0	Pass

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088555</b>	<b>Test Procedure</b>	<b>31 - Federal fuel 3-day exhaust</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	11/15/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000329	<b>Fuel Calibration Number</b>	9407
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4135	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	295.962	--
FE BAG 1 (Bag 1 Fuel Economy)	29.4	29.4
CO2 BAG 2 (Bag 2 Carbon Dioxide)	289.39	--
FE BAG 2 (Bag 2 Fuel Economy)	30.2	30.2
CO2 BAG 3 (Bag 3 Carbon Dioxide)	270.43	--
FE BAG 3 (Bag 3 Fuel Economy)	32.3	32.3
METHANE (CH4 - Methane)	0.008731	--
CO (Carbon Monoxide)	0.174566	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.651069	--
DT-EER (Drive Trace Energy Economy Rating)	0.318952	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.097	--
MFR FE (Manufacturer Fuel Economy)	30.5	30.5
NOX (Nitrogen Oxide)	0.008218	--
N2O (Nitrous Oxide)	0.000504	--
HC-NM (Non-methane Hydrocarbon)	0.008206	--
NMOG (Non-methane organic gases)	0.009025	--
PM (Particulate Matter)	0.000181	--
HC-TOTAL (Total Hydrocarbon)	0.016467	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	286	999

## Certification Summary Information Report

Test Group		VGMXJ01.5080			Evaporative/Refueling Family					VGMXR010235A		
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		285.541			--					
Manufacturer Test Comments		150K EMIS TEST										
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	999	1	--	--	0	--	999	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.0087	1	--	--	--	--	0.009	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0005	1	--	--	--	--	0.000	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.17	1	--	--	--	--	0.2	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.72	1	--	--	--	--	0.7	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0090	1	--	--	--	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0172	1	--	--	--	--	0.017	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX-COMP	0.0127	1	--	--	--	--	0.013	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0082	1	--	--	--	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0002	1	--	--	--	--	0.000	0.003	Pass
CA	150,000 miles	California LEV-III SULEV30	CO	0.17	1	--	--	--	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-III SULEV30	CO-COMP	0.72	1	--	--	--	--	0.7	4.2	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0090	1	--	--	--	--	0.009	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0172	1	--	--	--	--	0.017	0.030	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX-COMP	0.0127	1	--	--	--	--	0.013	0.050	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0082	1	--	--	--	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	PM	0.0002	1	--	--	--	--	0.000	0.001	Pass

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

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088556</b>	<b>Test Procedure</b>	<b>31 - Federal fuel 3-day exhaust</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	11/21/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000307	<b>Fuel Calibration Number</b>	9399
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4182	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	No

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	299.747	--
FE BAG 1 (Bag 1 Fuel Economy)	29.5	29.5
CO2 BAG 2 (Bag 2 Carbon Dioxide)	288.72	--
FE BAG 2 (Bag 2 Fuel Economy)	30.8	30.8
CO2 BAG 3 (Bag 3 Carbon Dioxide)	279.644	--
FE BAG 3 (Bag 3 Fuel Economy)	31.8	31.8
METHANE (CH4 - Methane)	0.013285	--
CO (Carbon Monoxide)	0.237554	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.399673	--
DT-EER (Drive Trace Energy Economy Rating)	-0.213209	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.225469	--
MFR FE (Manufacturer Fuel Economy)	30.8	30.8
NOX (Nitrogen Oxide)	0.008697	--
N2O (Nitrous Oxide)	0.000834	--
HC-NM (Non-methane Hydrocarbon)	0.012251	--
NMOG (Non-methane organic gases)	0.012621	--
PM (Particulate Matter)	0.000234	--
HC-TOTAL (Total Hydrocarbon)	0.0247	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	289	289

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
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<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CO2</b>
Carbon dioxide	288.514	--

**Manufacturer Test Comments**                      150K EMIS TEST

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	289	1	--	--	0	--	289	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.0133	1	--	--	--	--	0.013	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0008	1	--	--	--	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.24	1	--	--	--	--	0.2	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0126	1	--	--	--	--	0.013	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0213	1	--	--	--	--	0.021	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0087	1	--	--	--	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0002	1	--	--	--	--	0.000	0.003	Pass
CA	150,000 miles	California LEV-III SULEV30	CO	0.24	1	--	--	--	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0126	1	--	--	--	--	0.013	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0213	1	--	--	--	--	0.021	0.030	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0087	1	--	--	--	--	0.009	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	PM	0.0002	1	--	--	--	--	0.000	0.001	Pass

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

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088683</b>	<b>Test Procedure</b>	<b>52 - Fed. fuel 50 F exh.</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	11/27/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000329	<b>Fuel Calibration Number</b>	9407
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4253	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>METHANE (CH4 - Methane)</b>	0.008936	--
<b>CO (Carbon Monoxide)</b>	0.208946	--
<b>DT-ASCR (Drive Trace Absolute Speed Change Rating)</b>	0.670734	--
<b>DT-EER (Drive Trace Energy Economy Rating)</b>	0.352365	--
<b>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</b>	0.716204	--
<b>NOX (Nitrogen Oxide)</b>	0.01066	--
<b>HC-NM (Non-methane Hydrocarbon)</b>	0.015329	--
<b>NMOG (Non-methane organic gases)</b>	0.016858	--
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.023985	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
<b>Carbon dioxide</b>	304.948	--

## Manufacturer Test Comments

150K 50 DEG TEST

## Certification Summary Information Report

Test Group		VGMXJ01.5080				Evaporative/Refueling Family				VGMXR010235A		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	4,000 miles	California LEV-III SULEV30	CO	0.21	1	--	--	--	--	0.2	1.0	Pass
CA	4,000 miles	California LEV-III SULEV30	NMOG	0.0169	1	--	--	--	--	0.017	99.999	Pass
CA	4,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0276	1	--	--	--	--	0.028	0.060	Pass
CA	4,000 miles	California LEV-III SULEV30	NOX	0.0107	1	--	--	--	--	0.011	99.999	Pass

**Certification Summary Information Report**

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088550</b>	<b>Test Procedure</b>	<b>3 - HWFE</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	10/22/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000329	<b>Fuel Calibration Number</b>	9407
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4001	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>METHANE (CH4 - Methane)</b>	0.000819	--
<b>CO (Carbon Monoxide)</b>	0.076535	--
<b>DT-ASCR (Drive Trace Absolute Speed Change Rating)</b>	2.28072	--
<b>DT-EER (Drive Trace Energy Economy Rating)</b>	-0.206437	--
<b>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</b>	3.13453	--
<b>MFR FE (Manufacturer Fuel Economy)</b>	39.7	39.7
<b>NOX (Nitrogen Oxide)</b>	0.001417	--
<b>N2O (Nitrous Oxide)</b>	0	--
<b>HC-NM (Non-methane Hydrocarbon)</b>	0	--
<b>NMOG (Non-methane organic gases)</b>	0	--
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.000709	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
<b>Carbon-Related Exhaust Emissions</b>	220	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
<b>Carbon dioxide</b>	220.423	--

**Manufacturer Test Comments** 150K HWY TEST

## Certification Summary Information Report

Test Group		VGMXJ01.5080				Evaporative/Refueling Family				VGMXR010235A		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	999	1	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0000	1	1.03	--	--	--	0.000	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0014	1	--	--	--	--	0.001	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0014	1	--	--	--	--	0.001	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0000	1	1.03	--	--	--	0.000	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0014	1	--	--	--	--	0.001	0.030	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0014	1	--	--	--	--	0.001	99.999	Pass

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

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088557</b>	<b>Test Procedure</b>	<b>3 - HWFE</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	11/21/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000307	<b>Fuel Calibration Number</b>	9399
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4182	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>METHANE (CH4 - Methane)</b>	0.008015	--
<b>CO (Carbon Monoxide)</b>	0.071651	--
<b>DT-ASCR (Drive Trace Absolute Speed Change Rating)</b>	-1.47603	--
<b>DT-EER (Drive Trace Energy Economy Rating)</b>	-0.11848	--
<b>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</b>	-1.39563	--
<b>MFR FE (Manufacturer Fuel Economy)</b>	40.5	40.5
<b>NOX (Nitrogen Oxide)</b>	0.001875	--
<b>HC-NM (Non-methane Hydrocarbon)</b>	0.006822	--
<b>NMOG (Non-methane organic gases)</b>	0.007027	--
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.014573	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
<b>Carbon-Related Exhaust Emissions</b>	220	220

Test Result Name	Unrounded Test Result	Verify Calculated CO2
<b>Carbon dioxide</b>	220.15	--

**Manufacturer Test Comments**                      150K HWY TEST

## Certification Summary Information Report

Test Group		VGMXJ01.5080				Evaporative/Refueling Family				VGMXR010235A		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	220	1	--	--	0	--	220	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0070	1	1.03	--	--	--	0.007	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0089	1	--	--	--	--	0.009	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0019	1	--	--	--	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0070	1	1.03	--	--	--	0.007	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0089	1	--	--	--	--	0.009	0.030	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0019	1	--	--	--	--	0.002	99.999	Pass

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

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088551</b>	<b>Test Procedure</b>	<b>90 - US06</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	10/22/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000329	<b>Fuel Calibration Number</b>	9407
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4023	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	532.416	--
FE BAG 1 (Bag 1 Fuel Economy)	16.1	16.1
CO2 BAG 2 (Bag 2 Carbon Dioxide)	322.741	--
FE BAG 2 (Bag 2 Fuel Economy)	26.9	26.9
METHANE (CH4 - Methane)	0.007569	--
CO (Carbon Monoxide)	2.17565	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.79853	--
DT-EER (Drive Trace Energy Economy Rating)	-0.810517	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-3.49321	--
MFR FE (Manufacturer Fuel Economy)	23.4	23.4
NOX (Nitrogen Oxide)	0.005601	--
HC-NM (Non-methane Hydrocarbon)	0.000864	--
NMOG (Non-methane organic gases)	0.00089	--
PM (Particulate Matter)	0.000249	--
HC-TOTAL (Total Hydrocarbon)	0.008065	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	369.265	--

## Manufacturer Test Comments

150K US06 TEST

## Certification Summary Information Report

Test Group		VGMXJ01.5080				Evaporative/Refueling Family				VGMXR010235A		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	2.18	1	--	--	--	--	2.2	99.9	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0009	1	1.03	--	--	--	0.001	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0065	1	--	--	--	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0056	1	--	--	--	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0002	1	--	--	--	--	0.000	0.006	Pass
CA	150,000 miles	California LEV-III SULEV30	CO	2.18	1	--	--	--	--	2.2	99.9	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0009	1	1.03	--	--	--	0.001	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0065	1	--	--	--	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0056	1	--	--	--	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	PM	0.0002	1	--	--	--	--	0.000	0.003	Pass

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088558</b>	<b>Test Procedure</b>	<b>90 - US06</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	11/21/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000307	<b>Fuel Calibration Number</b>	9399
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4182	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	537.571	--
FE BAG 1 (Bag 1 Fuel Economy)	16.3	16.3
CO2 BAG 2 (Bag 2 Carbon Dioxide)	330.865	--
FE BAG 2 (Bag 2 Fuel Economy)	26.7	26.7
METHANE (CH4 - Methane)	0.010067	--
CO (Carbon Monoxide)	2.62701	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.577985	--
DT-EER (Drive Trace Energy Economy Rating)	-0.343542	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.3451	--
HCHO (Formaldehyde)	0.0001485	--
MFR FE (Manufacturer Fuel Economy)	23.4	23.4
NOX (Nitrogen Oxide)	0.006136	--
HC-NM (Non-methane Hydrocarbon)	0.003712	--
NMOG (Non-methane organic gases)	0.003824	--
PM (Particulate Matter)	0.000387	--
HC-TOTAL (Total Hydrocarbon)	0.013447	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	376.583	--

Manufacturer Test Comments

150K US06 TEST

## Certification Summary Information Report

Test Group		VGMXJ01.5080				Evaporative/Refueling Family				VGMXR010235A		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	2.63	1	--	--	--	--	2.6	99.9	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0038	1	1.03	--	--	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0099	1	--	--	--	--	0.010	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0061	1	--	--	--	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0004	1	--	--	--	--	0.000	0.006	Pass
CA	150,000 miles	California LEV-III SULEV30	CO	2.63	1	--	--	--	--	2.6	99.9	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0038	1	1.03	--	--	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0099	1	--	--	--	--	0.010	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0061	1	--	--	--	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	PM	0.0004	1	--	--	--	--	0.000	0.003	Pass

## Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Test #</b>	<b>TGMX10088554</b>	<b>Test Procedure</b>	<b>95 - SC03</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	11/13/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	000329	<b>Fuel Calibration Number</b>	9407
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Compliance and Certification		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4120	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.007937	--
CO (Carbon Monoxide)	0.135397	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.668522	--
DT-EER (Drive Trace Energy Economy Rating)	-0.550609	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.561465	--
MFR FE (Manufacturer Fuel Economy)	21.8	21.8
NOX (Nitrogen Oxide)	0.007971	--
HC-NM (Non-methane Hydrocarbon)	0.004992	--
NMOG (Non-methane organic gases)	0.005142	--
HC-TOTAL (Total Hydrocarbon)	0.012606	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	400.752	--

## Manufacturer Test Comments

150K SC03 TEST

## Certification Summary Information Report

Test Group		VGMXJ01.5080				Evaporative/Refueling Family				VGMXR010235A		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.14	1	--	--	--	--	0.1	99.9	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0051	1	1.03	--	--	--	0.005	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0131	1	--	--	--	--	0.013	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0080	1	--	--	--	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	CO	0.14	1	--	--	--	--	0.1	99.9	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0051	1	1.03	--	--	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0131	1	--	--	--	--	0.013	99.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0080	1	--	--	--	--	0.008	99.999	Pass

## Certification Summary Information Report

Test Group	VGMXJ01.5080	Evaporative/Refueling Family	VGMXR010235A
<b>Fuel Properties</b>			
<b>Fuel Batch ID</b>	<b>000329</b>	<b>Fuel Calibration Number</b>	<b>9407</b>
<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	<b>Fuel Batch Calibration Date</b>	09/12/2024
<b>Fuel Batch Calibration Effective Date</b>	09/12/2024	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	--	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.75
<b>Fuel Ethanol Volume Percent (%)</b>	9.8	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	17800
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	--	<b>Fuel Carbon Mass Fraction (E10)</b>	--
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.828	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>000334</b>	<b>Fuel Calibration Number</b>	<b>9312</b>
<b>Test Fuel Type</b>	28 - Cold CO E10 Regular Gasoline (Tier 3)	<b>Fuel Batch Calibration Date</b>	09/05/2023
<b>Fuel Batch Calibration Effective Date</b>	09/05/2023	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	--	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.744
<b>Fuel Ethanol Volume Percent (%)</b>	9.7	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	17826
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	--	<b>Fuel Carbon Mass Fraction (E10)</b>	--
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.827	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>000307</b>	<b>Fuel Calibration Number</b>	<b>9399</b>
<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline	<b>Fuel Batch Calibration Date</b>	05/14/2024
<b>Fuel Batch Calibration Effective Date</b>	05/14/2024	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	--	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.742
<b>Fuel Ethanol Volume Percent (%)</b>	--	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	18441
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	--	<b>Fuel Carbon Mass Fraction (E10)</b>	--
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.867	<b>Weight Fraction CO2</b>	--

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
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#### Consolidated List of Standards

**Exhaust Standards**

<b>Cert Region</b>	Federal	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	Federal Tier 3 Bin 30
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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
120,000 miles	CREE	--	1	--	--	--	--	0	999.999
120,000 miles	METHANE	--	1	--	--	--	--	--	0.030
120,000 miles	N2O	--	1	--	--	--	--	--	0.010
150,000 miles	CO	--	1	--	--	--	--	--	1.0
150,000 miles	CO-COMP	--	1	--	--	--	--	--	4.2
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.030
150,000 miles	NMOG+NOX-COMP	--	1	--	--	--	--	--	0.050
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	0.003

<b>Cert Region</b>	California + CAA Section 177 states	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	California LEV-III SULEV30
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	1	--	--	--	--	--	10.0

### Certification Summary Information Report

<b>Test Group</b>		VGMXJ01.5080			<b>Evaporative/Refueling Family</b>			VGMXR010235A		
<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Federal Tier 3 Bin 30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			US06		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
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	--	--	--	--	--	0.006	

<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-III SULEV30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			HWFE		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999	
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.030	
150,000 miles	NOX	--	1	--	--	--	--	--	99.999	

<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Federal Tier 3 Bin 30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			SC03		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
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	

### Certification Summary Information Report

<b>Test Group</b>		VGMXJ01.5080			<b>Evaporative/Refueling Family</b>			VGMXR010235A		
<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Federal Tier 3 Bin 30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			HWFE		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
120,000 miles	CREE	--	1	--	--	--	--	0	999.999	
150,000 miles	NMOG	--	1	1.03	--	--	--	--	99.999	
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.030	
150,000 miles	NOX	--	1	--	--	--	--	--	99.999	

<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-III SULEV30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			US06		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
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	--	--	--	--	--	0.003	

<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Federal Tier 3 Bin 30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			Cold CO		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
50,000 miles	CO	--	1	--	--	--	--	--	10.0	
120,000 miles	HC-NM	--	1	--	--	--	--	--	0.3	

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A
<b>Cert Region</b>	California + CAA Section 177 states	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	California LEV-III SULEV30
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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	--	--	--	--	--	1.0
4,000 miles	NMOG	--	1	--	--	--	--	--	99.999
4,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.060
4,000 miles	NOX	--	1	--	--	--	--	--	99.999

<b>Cert Region</b>	California + CAA Section 177 states	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	California LEV-III SULEV30
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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	--	--	--	--	--	1.0
150,000 miles	CO-COMP	--	1	--	--	--	--	--	4.2
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.030
150,000 miles	NMOG+NOX-COMP	--	1	--	--	--	--	--	0.050
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	0.001

<b>Cert Region</b>	California + CAA Section 177 states	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	California LEV-III SULEV30
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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

**Evaporative/Refueling Standards**

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A		
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	California + CAA Section 177 states		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	California LEV-III Zero Evap (Option 2)		
<b>Test Procedure</b>	Evap Canister Bleed Test				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL	--	0.020	0.000
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	California + CAA Section 177 states		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	California LEV-III Zero Evap (Option 2)		
<b>Test Procedure</b>	Federal fuel 3-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.350	0.000
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	California + CAA Section 177 states		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	California LEV-III Zero Evap (Option 2)		
<b>Test Procedure</b>	2-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.350	0.000
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	Federal		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap		
<b>Test Procedure</b>	Federal fuel 3-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.350	0.000
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	California + CAA Section 177 states		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	California LEV-III Zero Evap (Option 2)		
<b>Test Procedure</b>	Federal Fuel Running Loss				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0

### Certification Summary Information Report

<b>Test Group</b>	VGMXJ01.5080	<b>Evaporative/Refueling Family</b>	VGMXR010235A		
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	California + CAA Section 177 states		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	California LEV-III Zero Evap (Option 2)		
<b>Test Procedure</b>	Federal fuel refueling test (ORVR)				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.000
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	Federal		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap		
<b>Test Procedure</b>	2-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.350	0.000
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	Federal		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap		
<b>Test Procedure</b>	Evap Canister Bleed Test				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL	--	0.020	0.000
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	Federal		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap		
<b>Test Procedure</b>	Federal Fuel Running Loss				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0
<b>Evaporative/Refueling Family</b>	VGMXR010235A	<b>Cert Region</b>	Federal		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap		
<b>Test Procedure</b>	Federal fuel refueling test (ORVR)				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.000

## Certification Summary Information Report

Test Group	VGMXJ01.5080	Evaporative/Refueling Family	VGMXR010235A
<b>Glossary</b>			
<b>Useful Life</b>			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
<b>Emission Name</b>			
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		VGMXJ01.5080	Evaporative/Refueling Family		VGMXR010235A
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	
<b>Certification Region</b>					
CA	California + CAA Section 177 states		FA	Federal	
<b>Exhaust Emission Standard Level</b>					
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		VGMXJ01.5080	Evaporative/Refueling Family	VGMXR010235A
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			
<b>Transmission Type Code</b>				
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)	
<b>Drive System Code</b>				
4	4-Wheel Drive	P	Part-time 4-Wheel Drive	

### Certification Summary Information Report

Test Group	VGMXJ01.5080	Evaporative/Refueling Family	VGMXR010235A
F	2-Wheel Drive, Front	A	All Wheel Drive
R	2-Wheel Drive, Rear		
<b>Additional Terms and Acronyms</b>			
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

**Litmus Test**

Test Group	Test Vehicle #	Config #	Vehicle Run # (s)	City				Highway				Minimum Required Calculation	Status
				5-Cycle Derived	5-Cycle Calc	Threshold	Result	5-Cycle Derived	5-Cycle Calc	Threshold	Result		
VGMXJ01.5080	151TXV5718	002	1,2,4,5,6	23.7377	23.2	22.8	Pass	27.9345	25.3	26.5	Fail	3 Cycle (City, Highway, US06)	OFFICIAL

**Close**

## **FLEXIBLE OR ALTERNATE FUELS**

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

# ***Parameters Sensed vs Parameters Controlled*** **(AECD Supplementary Documentation)**

## **Purpose and Intent:**

General Motors has prepared and separately submitted general Auxiliary Emissions Control Device (AECD) descriptions and a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system in accordance to applicable Application for Certification requirements.

This document has been prepared to further describe each engine's parameters sensed and parameters controlled (SvC). This document includes both Base Emissions Control (BES) functions and Auxiliary Controls (AECD's) and is a supplement to the separate AECD Descriptions provided in the Common Section Application, in section (d)(11). This document does not include functionality for On Board Diagnostic (OBD) systems intrusive monitoring, nor does it represent any potential actions that may be triggered in a faulted state for vehicle safety, engine protection, or to constrain any potential emission increase.

The purpose and intent of this document is to define the electronic control system architecture of one particular regular production option (RPO) engine. The same engine RPO may be used in multiple vehicle models and may also appear in multiple emissions test groups. For simplicity, this document represents all available optional hardware, controls, and transmissions. As such, not all options and controls represented are necessarily equipped on every vehicle.

This engine may be available with both Gasoline and Flexible Fuel Vehicle (FFV) configurations. If a FFV configuration is available, this document includes the added ethanol sensor(s) and related ethanol based controls. Ethanol sensors and related controls described are not applicable and are not available on any particular vehicle model or emissions test group identified as gasoline only. For further information regarding ethanol controls, please refer to the AECD document.

Finally, General Motors has utilized a common SvC template, including the full range of parameters available across all of our engines for the applicable model year. Please note that for both naturally aspirated engines and supercharged engines, calculated Barometric Pressure is a function of the Throttle Air Inlet Pressure (TIAP) sensor. For turbocharged engines only, the Throttle Air Inlet Pressure (TIAP) sensor is located downstream of the turbo and upstream of the throttle. Calculated Barometric Pressure for turbocharged engines is a function of a Turbocharger Air Inlet Pressure (TCIAP) sensor, located upstream of the Turbo.

## Parameters Sensed Versus Parameters Controlled

### 2027 Model Year LSD 1.5 L Engine

Sensed Parameter	Controlled Parameter																							
	Fuel	Spark	Throttle	Boost	Cam Phaser	Sliding Camshaft	Cylinder Deactivation (AFM or DFM)	AFM Exhaust Valve	Exhaust Sound Valve	O2 Sensor Heater	Oil Pump	Purge	Electric Thermostat	Active Thermal Management	Aero Shutters	Auto Start / Stop	Engine / Idle Speed	Torque Management	Auto Trans Gear	Auto Trans Converter	Auto Trans Clutch (DCT)	Manual Trans - Shift Light (SIL)	Manual Trans - Gear (Skip shift)	
A/C Compressor Clutch Commanded/Requested																X	X							
A/C Pressure																X	X							
ABS Wheel Speed (or slip)																								
Abuse Torque Management Requested																		X	X					
Accelerator Pedal Position	X	X			X						X				X	X	X	X	X					
Accelerometer (Lat/Long)															X			X	X					
Accessory Wake Up (aka pump prime)	X																							
AFM/DFM Active																								
Alcohol Percentage in Fuel																								
Alternator Duty Cycle (APM)																		X						
Auto Stop/Start (switch or message)	X	X	X												X									
Barometric Pressure	X	X	X	X	X						X				X	X	X	X	X					
Battery State of Charge (12v)															X	X								
Battery Voltage (12V)	X	X		X	X				X	X	X			X	X	X			X	X				
Brake Booster Vacuum Sensor																								
Brake Pedal Position Sensor	X														X		X	X	X					
Brake Switch (Manual trans only)																								
Cam Barrel Position (Lobe Selection)																								
Camshaft Position Sensor	X	X		X	X						X													
Clutch Position Sensor (Manual trans only)																								
Coolant Level Sensor																								
Cooling Fans Requested / Commanded															X									
Crankshaft Position Sensor (Engine speed)	X	X	X	X	X					X	X				X		X	X	X					
Cruise Control																	X	X	X					
Door Ajar Switch/ Seat Belt Switch															X									

## Parameters Sensed Versus Parameters Controlled

2027 Model Year LSD 1.5 L Engine	Controlled Parameter																							
	Manual Trans - Gear (Skip shift)	Manual Trans - Shift Light (SIL)	Auto Trans Clutch (DCT)	Auto Trans Converter	Auto Trans Gear	Torque Management	Engine / Idle Speed	Auto Start / Stop	Aero Shutters	Active Thermal Management	Electric Thermostat	Purge	Oil Pump	O2 Sensor Heater	Exhaust Sound Valve	AFM Exhaust Valve	Cylinder Deactivation (AFM or DFM)	Sliding Camshaft	Cam Phaser	Boost	Throttle	Spark	Fuel	
Drive Mode				X	X	X																		
Driver Intended Brake Torque																								
Engine Coolant Temperature (ECT)				X	X	X	X	X	X				X	X	X								X	X
Engine Coolant Temperatures (ATM related)																								
Engine Oil Pressure													X					X						
Engine Oil Temperature																		X	X					
Engine Revolutions (Integrated)																					X	X		
Exhaust Oxygen (Post-Catalyst)																							X	
Exhaust Oxygen (Pre-Catalyst)																						X	X	
Exhaust Oxygen Heater Current														X										
Exhaust Sound Mode																								
Fuel Rail Pressure																							X	
Fuel Supply Pressure																							X	
Fuel Tank Level																							X	
Fuel Tank Pressure																								X
Fuel Temperature																							X	
Gear Absolute Position (GAP)																								
Hood switch (or engine compartment)																								X
Humidity																			X	X			X	
HVAC Controller (heater performance mode, boost idle request)																								X
Intake Air Flow (MAFS)														X	X							X	X	
Intake Air Temperature (MAFS)														X										X
Intake Manifold Air Temperature (IMT)																				X	X			
Intake Manifold Pressure (MAP)																					X	X	X	
Knock Sensor																						X	X	

## Parameters Sensed Versus Parameters Controlled

### 2027 Model Year LSD 1.5 L Engine

Sensed Parameter	Controlled Parameter																							
	Fuel	Spark	Throttle	Boost	Cam Phaser	Sliding Camshaft	Cylinder Deactivation (AFM or DFM)	AFM Exhaust Valve	Exhaust Sound Valve	O2 Sensor Heater	Oil Pump	Purge	Electric Thermostat	Active Thermal Management	Aero Shutters	Auto Start / Stop	Engine / Idle Speed	Torque Management	Auto Trans Gear	Auto Trans Converter	Auto Trans Clutch (DCT)	Manual Trans - Shift Light (SIL)	Manual Trans - Gear (Skip shift)	
Odometer																								
Outside Air Temperature (OAT)				X								X			X	X			X					
Radiator Coolant Temperature (RCT)																								
Second / Third Gear Start Enabled (Snow Mode)																								
Steering Angle Sensor																X								
Supercharger Inlet Air Pressure (SCIAP)																								
Teen/Valet Mode																		X						
Throttle Inlet Air Pressure (TIAP)	X	X	X	X	X																			
Throttle Position		X	X	X	X																			
Time	X	X	X	X	X				X	X	X					X	X	X	X	X				
Torque	X	X	X	X	X												X	X	X	X	X			
Traction Control																		X	X					
Transfer Case Mode																		X	X					
Transmission Actual Gear (TCM message)	X				X											X	X	X	X	X				
Transmission Fluid Temperature					X											X		X	X	X				
Transmission Gear Commanded (Tap up/down)																								
Transmission Input Speed (Turbine Speed)																	X	X	X	X				
Transmission Output Speed (Vehicle Speed)	X				X						X				X	X	X	X	X	X				
Transmission Range (IMRS, IRS, TRS, ETRS, PRNDL)																X	X	X	X	X				
Transmission Range Selection (Manual up/down)																X	X		X	X				
Transmission Surge Accumulator Ready																X								
Turbocharger Absolute Inlet Pressure (TCIAP)	X	X	X	X	X							X					X							

## Engine Code Information

<b>Base Engine Code</b>	1	2	3
<b>EC Derivatives</b>			
<b>Test Group</b>	VGMXJ01.5080	VGMXJ01.5080	VGMXJ01.5080
<b>Durability Group</b>	VGMXGPGNNA01	VGMXGPGNNA01	VGMXGPGNNA01
<b>Engine RPO</b>	LSD	LSD	LSD
<b>Disp, liters</b>	1.5	1.5	1.5
<b>Trans RPO</b>	MGH	MGH	MGH
<b>Trans Type</b>	A8	A8	A8
<b>Product Code</b>	P	P	P
<b>Emission RPO</b>	NLB	NLB	NLB
<b>Emissions Category</b>	SULEV30/BIN30	SULEV30/BIN30	SULEV30/BIN30
<b>Vehicle Type</b>	CAR	TRUCK	TRUCK
<b>Regulatory Agencies</b>	F/C	F/C	F/C
<b>Sales Area</b>	FA/CA	FA/CA	FA/CA
<b>Design Altitude</b>	Both	Both	Both
<b>A/C Equipped</b>	Yes	Yes	Yes
<b>Driver Select Device</b>	Tour/Start Stop/Snow	Tour/Start Stop/AWD Disconnect/Snow	Tour/Start Stop/AWD Disconnect/Snow/Tow-Haul
<b>Police Only</b>	No	No	No
<b>Horsepower @ RPM</b>	175@5600	175@5600	175@5600
<b>Torque @ RPM</b>	275@2000	275@2000	275@2000
<b>Emission Ctrl Sys</b>	TC/CAC/DFI/WR-HO2S/TWC/HO2S	TC/CAC/DFI/WR-HO2S/TWC/HO2S	TC/CAC/DFI/WR-HO2S/TWC/HO2S
<b>TapUp/TapDown</b>	No	No	No
<b>Active Fuel Management Description</b>	Non AFM	Non AFM	Non AFM
	Chevy Equinox/GMC Terrain FWD LSD	Chevy Equinox/GMC Terrain 4WD LSD	GMC Terrain 4WD LSD

## TRANSMISSION INFORMATION

<b>Test Group ID</b>	VGMXJ01.5080	VGMXJ01.5080	VGMXJ01.5080
<b>Transmission Code</b>	1	2	3
<b>Transmission RPO</b>	MGH	MGH	MGH
<b>Transmission Type</b>	A8	A8	A8
<b>Drive Gear Ratios</b>	4.69,3.31,3.01,1.92,1.45,1,0.75,0.62	4.69,3.31,3.01,1.92,1.45,1,0.75,0.62	4.69,3.31,3.01,1.92,1.45,1,0.75,0.62
<b>Chain Drive Ratio</b>	1.1	1.1	1.1
<b>Shift Calibrations</b>	Computer Controlled	Computer Controlled	Computer Controlled
<b>Torque Converter Diameter</b>	228mm	228mm	228mm
<b>Torque Converter Stall Torque Ratio</b>	1.73	1.73	1.73
<b>Torque Converter Lockup RPM'S</b>	Computer Controlled	Computer Controlled	Computer Controlled
<b>Torque Converter Stall Torque Speed</b>	3612@279Nm	3612@279Nm	3612@279Nm
<b>Multimode Feature - # of Modes</b>	3	4	5
<b>Shift Indicator Light</b>	NO	NO	NO
<b>Description</b>	Chevy Equinox/GMC Terrain MGH	Chevy Equinox/GMC Terrain MGH	GMC Terrain MGH
<b>TapUp/TapDown</b>	NO	NO	NO

# **SPECIAL TEST INSTRUCTIONS**

## **DRIVER SELECTABLE MODES**

### **Driver Selectable 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. Upon an engine restart, some driver selectable modes may need to be reactivated before continuing the drive trace.

### **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. The fan should be positioned 11.5 inches from the front of the vehicle and centered on the vehicle's grill and 12 inches from floor to center of the 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.

### **Fuel System Leak Test Procedure:**

For evaporative emission families that are certified to Tier 3 and LEV 4 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.

## **SPECIAL TEST INSTRUCTIONS (CONT.)**

### **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 use the in vehicle Mode Selector to turn off / disable the AWD system. This process may need to be repeated for every ignition cycle.

### **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. To disable these system put the vehicle in dyno mode. To disable Traction Control, put the vehicle in Dyno Mode which will also allow test the vehicle in dyno.

- Put left foot on brake pedal (Light Pressure (5%-20% pedal)).
- Put right foot on accelerator pedal (Heavy Pressure > 80% pedal).
- Repeatedly **Open and Close** the driver's door 6 times within 10 seconds; chimes when successful.
- Traction Control, and ABS dash lights should be present on key-up, indicating success.
- When moving vehicle after dyno mode is enabled, **please crab only**, otherwise dyno mode will exit.

### **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.

#### **Move Vehicle Instructions - With Vehicle in Dyno Mode**

Please CRAB Vehicle in the lab, DO NOT DRIVE, as this will exit DYNO Mode

#### **Before Moving**

- Remove key fob from vehicle and place on crab.
- Place vehicle on crab
- Wait 5-10 min for vehicle to fully go to sleep
- Pull MPR Cable to put car in neutral

#### **After Moving**

- Re-Engage MPR Cable to put vehicle in park
- Remove vehicle from crab
- Place key fob in faraday bag in the vehicle

Please leave vehicle in Neutral while performing drain/fill, dyno centering, etc.

Please do not allow vehicle to stay in accessory mode or keyed up unless COMPLETELY NECESSARY

### **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.

## ENGINE STARTING INSTRUCTIONS

### Warm or Cold Engine

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

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

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

NA – Not Applicable



April. 7, 2026

VP026

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 Family VGMXJ01.5080/VGMXR010235A

General Motors requests that the EPA issue a certificate of conformity for the subject test group/evaporative family. GM requests the EPA review this application promptly to expedite final approval of the certificate 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 a certificate of conformity.

Sincerely,

*T. Galloway*

T. Galloway  
Total Certification Engineer  
Compliance & Certification

TG/ks

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**general motors**

GM Proving Ground / Compliance & Certification / M/C 483-331-500 / 3300 GM Rd. / Milford, MI 48380-3726



April 7, 2026

VP027

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 Family  
VGMXJ01.5080/VGMXR010235A

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.

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**general motors**

GM Proving Ground / Compliance & Certification / M/C 483-331-500 / 3300 GM Rd. / Milford, MI 48380-3726

April 7, 2026  
Ms. Robin U. Lang

VP027  
Page 2

The EPA certificate of conformity for this test group will be forwarded to you when it becomes 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,

*T. Galloway*

T. Galloway  
Total Certification Engineer  
Compliance & Certification

TG/ks

## EMISSION DATA RATIOS (GASOLINE)

	<u>Data Ratios</u>
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:

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

\*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).

\*\*\* VEHICLE INFORMATION \*\*\*

<b>Model Year</b>	2027	<b>Certifying Agent</b>	GM
<b>Test Vehicle</b>	151TXV5718	<b>GM Config</b>	002
		<b>Run Date</b>	04/14/2026 11:56:23

<b>VEHICLE NO:</b>	151TXV5718	<b>CONFIGURATION NO:</b>	002	<b>EPA VERSION NO:</b>	00
				<b>ORIGINAL CERT YEAR:</b>	2026
<b>ENG FAM/TEST GRP:</b>	VGMXJ01.5080	<b>ENGINE CODE:</b>	3		
<b>EVAP FAMILY:</b>	VGMXR010235A	<b>EVAP CODE:</b>	101		
<b>TEST PURPOSE:</b>	DATA	<b>DISPL:</b>	1.5	<b>SALES LOC:</b>	BOTH
<b>VEH TYPE: FED=</b>	PC	<b>CAL=</b>	PC	<b>EMIS CATEGORY: FED=</b>	BIN30 PM CAL= SULEV30 PM1

<b>DURA GRP:</b>	VGMXGPGNNA01	<b>DURA VEH NO:</b>		<b>DURA CONFIG:</b>	
<b>FUEL METER:</b>	GDI SPARK IGN DIR INJ	<b>BOOST TYPE:</b>		<b>VALVES PER CYL:</b>	2

<b>TRANS: TYPE=</b>	A8	<b>CODE= 3</b>	<b>MODE= NORMAL</b>	<b>SIL EQUIPPED:</b>	No	<b>SIL VERSION:</b>	N/A
<b>SHIFT SCHEDULE:</b>	N/A	<b>SHIFT SCHED NO:</b>					
<b>EVAP CANISTER SIZE(L):</b>	1.70					<b>PRIMARY FUEL:</b>	GAS
<b>TANK CAPACITY (GAL): PRIM=</b>	15.6	<b>AUX=</b>		<b>C=</b>	CA		
<b>PREMIUM FUEL RECOM'D:</b>	N	<b>USAGE: F=</b>	FA				
<b>DYNAMOMETER DRIVE AXLE:</b>	F			<b>A/C EQ:</b>	Y		
<b>TIRE PRESS(PSI): FRT=</b>	35	<b>REAR=</b>	35	<b>F2=</b>	0.02748	<b>TRLHP 68d:</b>	14.8
<b>68d ROADLOAD: F0=</b>	27.06	<b>F1=</b>	0.3102	<b>F2=</b>	0.03023	<b>TRLHP 20d:</b>	16.3
<b>20d ROADLOAD: F0=</b>	29.77	<b>F1=</b>	0.3412				

<b>WEIGHTS (LBS):</b>		<b>EPA CURB:</b>	3600	<b>GVWR:</b>	4850	<b>TIRES:</b>		<b>SIZE:</b>	235/65R17
<b>ETW:</b>	3875					<b>VENDOR:</b>	CON		
		<b>CURB WEIGHT/TEST WT CLASS TYPE</b>		<b>DRIVE AXLE</b>		<b>TREAD TYPE:</b>	ALS		
<b>DESIGN:</b>		3600/LVW		2224					

<b>REP VEH MODEL:</b>	TPD26+F48	<b>FIN DR RATIO:</b>	3.47	<b>N/V:</b>	25.5	<b>ENG RPO:</b>	LSD
<b>ACTUAL MODEL NO:</b>	1PR26						
<b>RATED HP:</b>	175	<b>TCC:</b>	Y				
<b>OVERDRIVE:</b>	Y	<b>CREEPER:</b>	N	<b>PS:</b>	YES	<b>PB:</b>	YES
<b>MODE LINK CONFS:</b>		<b>C/O CONF:</b>	000	<b>SIL LINK CONF:</b>			
<b>ZERO-MILE ODO:</b>	0	<b>ODO CORR:</b>	1.00				

**COMMENTS**  
 150K D2Ux-2 AWD EDV  
 Running on 4WD dyno with front wheels powering the vehicle. Prop shaft removed.

**P2027LSDNLBFE9WNS**

**3L1**

**1GA3174680**



**FHSJ5X**

Jan 07 2026 16:21:48



**VEHICLE EMISSION  
CONTROL INFORMATION**



**GENERAL  
MOTORS  
LLC**

**Conforms to Regulations: 2027**

**U.S. EPA class / stds: LDV / BIN30**

**California class / stds: PC / SULEV30**

**Group: VGMXJ01.5080 1.5L**

**Evap: VGMXR010235A**

**TC/CAC/DFI/WR-HO2S/TWC/HO2S, CA OBD: II**

**Fuel: Gasoline**

**P2027LSDNLBFE9WNS**

**Date: 2601**