APPLICATION FOR CERTIFICATION

2027 MODEL YEAR

Durability Group:	VGMXGPGNNB67
Test Group:	VGMXD06.6231
Durability Group Description:	Four Stroke, Otto Cycle, Gasoline Fueled, DFI, Ceramic Monolith Pd/Rh Catalyst
Durability Vehicle:	NA - Aged Components
OBD Group:	VGMXOBDG03A
Test Group Description:	6.6L V8
Applicable Standards:	Federal BIN230 / California SULEV230
Carlines Covered by Evaporative Family:	6.6L Chevrolet G3500 EXPRESS 2WD CUTAWAY CH GMC G3500 SAVANA 2WD CUTAWAY CH VGMXF019060C
Vehicles Tested:	66CRRV1182

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TEST VEHICLE DESCRIPTION

Selection	Durability Vehicle Selection - NA	Emission-Data Vehicle
Test Group		VGMXD06.6231
Evaporative Family		VGMXF02176BB
Displacement – Liters		6.6
Engine Code		11
Emission Control System		
Exhaust		DFI/2TWC/2HO2S(2)/TWC
Evap		C/CCP/IC
Model		CK30943+VXT
Transmission Type/Code		A10/1
Shift Schedule		NA
(ALVW) Test Weight – lbs.		13,000
GVWR		14,000
Dyno Horsepower/Type		NA
Roadload HP		58.0
Final Drive		3.73
N/V Ratio – rpm/mph		24.6
Tires		LT235/80R18 AT (MIC)
Vehicle/EPA Config No./GM Config No.		
FTP & HWFE		66CRRV1182/00/006
SFTP		66CRRV1182/00/006

NOTE: Road speed fan used on all test cycles. For complete vehicle information, see vehicle information submitted in EVCIS database.

Data Vehicle Selection Justification – Highest TWC, highest RLHP, highest N/V ratio.

2027 EMISSION STANDARDS

BIN230 (HDV 10,001 - 14,000 GVWR)

TEST GROUP NAME: VGXMD06.6231

EVAPORATIVE FAMILY NAME(S): VGMXF019060C

CERTIFICATION and IN-USE STANDARDS

LOW AND HIGH ALTITUDE TESTED AT ALVW:

	FTP TEST				HWY TEST
	NMOG+NOx	CO	HCHO	PM	NMOG+NOx
150k STD	0.230	4.2	0.006	0.010	0.230

SFTP TESTED AT ALVW - LOW ALTITUDE:

	COMPOSITE NMOG+NOx	COMPOSITE CO	COMPOSITE PM
150K STD *1	0.350	4.0	0.007

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

2027 EMISSION STANDARDS

LEV3 SULEV230 (MDV 10,001 - 14,000 GVWR)

TEST GROUP NAME: VGMXD06.6231

EVAPORATIVE FAMILY NAME(S): VGMXF019060C

CERTIFICATION and IN-USE STANDARDS

LOW AND HIGH ALTITUDE TESTED AT ALVW:

	FTP TEST				HWY TEST
	NMOG+NOx	CO	HCHO	PM	NMOG+NOx
150k STD	0.230	4.2	0.006	0.010	0.230

SFTP TESTED AT ALVW - LOW ALTITUDE:

	COMPOSITE NMOG+NOx	COMPOSITE CO	COMPOSITE PM
150K STD *1	0.350	4.0	0.007

50 ºF TEST:

	NMOG+NOx	CO	HCHO
4K STD	0.460	4.2	0.020

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

Certification Summary Information Report

Manufacturer	General Motors LLC	**Manufacturer Code**	GMX
Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	05/27/2026 01:39:26 PM
Model Year	2027		

Test Group Information

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

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Rechargeable Energy Storage System Indicator**	--
Multiple Fuel Combustion	--	**Off-board Charge Capable Indicator**	--
Fuel Cell Indicator	--	**EPA Vehicle Class**	HDV2, M7
Federal Clean Fuel Vehicle	No	**Federal Clean Fuel Vehicle Standard**	--
Federal Clean Fuel Vehicle ILEV	No	**California Partial Zero Emissions Vehicle Indicator**	No
Durability Group Name	VGMXGPGNNB67	**Durability Group Equivalency Factor**	1
Reduced Fee Test Group	No	**Certification Region Code(s)**	FA, CA
Complies with HD GHG 2b/3 regulations?	Yes		
Introduction into Commerce Date	--	**CAP2000 Conditional Certificate?**	N/A
Independent Commercial Importer?	--	**Alternative Fuel Converter Certificate?**	--
SFTP Federal Composite Compliance Identifier	Tier 3	**SFTP Tier 2 Composite CO Option**	No
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	CARB	**OBD Demonstration Vehicle Test Group**	VGMXD06.6231
Test Group OBD Compliance Level	Full - no deficiencies	**Number of Test Group OBD Deficiencies**	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	L8T Gas GMT610 FSV >10K		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	05/15/2026 08:19:05 AM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Metal	**Fuel Tank Material Description**	--
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	Yes	**Air Intake System Vapor Storage Device Description**	HCA
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	--
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	190	**Number of Primary Canisters**	1
Number of Bleed Canisters	0	**Bleed Canister Total Working Capacity (grams)**	--
Mfr Evaporative/Refueling Family Comments	--		

Leak Family Details

Leak Family Indicator	Yes		
Canister Bleed Test Indicator	Yes	**Applicability of Evaporative Canister Bleed Test**	50 State
Evaporative Canister Bleed Test Comments	--		
CARB Fuel Only (Rig) Test Indicator	No	**Applicability of CARB Fuel Only (Rig) Test**	--
CARB Fuel Only (Rig) Test Comments	--		

Leak Family Name	Applicability of Leak Family Requirements	Leak Family Standard (inches)	Leak Family Description
VGMXF019060C-LK1	50 State	0.02	--
VGMXF019060C-LK2	50 State	0.03	--

Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
General Motors LLC	4 - GMC	59 - G3500 SAVANA 2WD CUTAWAY CH	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	59 - G3500 EXPRESS 2WD CUTAWAY CH	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	4 - GMC	59 - G3500 SAVANA 2WD CUTAWAY CH	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
General Motors LLC	3 - Chevrolet	59 - G3500 EXPRESS 2WD CUTAWAY CH	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Engine Description

Hybrid Type	--	**Hybrid Description**	--
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	--
Engine Block Arrangement	V-shaped engine	**Mfr Engine Block Arrangement Description**	--
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	5W30
Number of Cylinders/Rotors	8	**Mechanically Variable Compression Ratio Indicator**	N

After Treatment Device(s) (ATD)

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

Mfr After Treatment Device (ATD) Comments	--
Direct Ozone Reduction (DOR) Device	Not Equipped
Mfr Emission Control Device Comments	--

Engine Configuration Number 1

Engine Displacement (liters)	6.6	**Engine Rated Horsepower**	401
Number of Inlet Valves Per Cylinder	1	**Number of Exhaust Valves Per Cylinder**	1
Air Aspiration Method	Naturally Aspirated	**Number of Air Aspiration Devices**	0
Air Aspiration Device Configuration	--	**Charge Air Cooler Type**	N/A
Air Aspiration Drive Method(s)	--		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	cam phaser		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated oxygen	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated oxygen	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated oxygen	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated oxygen	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	--		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	--		

Certification Summary Information Report

Test Group	VGMXD06.6231	Evaporative/Refueling Family	VGMXF019060C

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	RGMX10077633	RGMX10077635	RGMX10077636	--	RGMX10077634	--	228.2	--	286.1	--

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Emission Data Vehicle Information

Vehicle ID / Configuration	66CRRV1182 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	RGMXD06.6230	**Original Evaporative/Refueling Family**	RGMXF02176BB
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	SILVERADO 3500 HD 4WD CAB CHAS

Leak Family Details

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

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	11	**Rated Horsepower**	401
Displacement (liters)	6.6		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	All Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	11900	**Equivalent Test Weight (pounds)**	13000
GVWR (lbs)	14000	**N/V Ratio**	24.6
Axle Ratio	3.73		
Transmission Type	Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	79.34	1.1206	0.12251	30.35	-0.0061	0.12613	58.9

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Emission Control Device Comments	L8T Incomplete Pickup
Manufacturer Test Vehicle Comments	150K CONFIG. EDV TESTING CONDUCTED USING AN AWD DYNO USING 2WD REAR MODE.

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**RGMX10077633**	**Test Procedure**	**31 - Federal fuel 3-day exhaust**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/19/2022	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000), MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4163	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Certification Summary Information Report

Test Group	VGMXD06.6231	Evaporative/Refueling Family	VGMXF019060C

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	1033.64	--
FE BAG 1 (Bag 1 Fuel Economy)	8.4	8.4
CO2 BAG 2 (Bag 2 Carbon Dioxide)	973.487	--
FE BAG 2 (Bag 2 Fuel Economy)	9	9
CO2 BAG 3 (Bag 3 Carbon Dioxide)	968.158	--
FE BAG 3 (Bag 3 Fuel Economy)	9	9
METHANE (CH4 - Methane)	0.024722	--
CO (Carbon Monoxide)	0.819507	--
METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)	0.01804	--
N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)	0.001545	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.101543	--
DT-EER (Drive Trace Energy Economy Rating)	-0.448613	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.235638	--
MFR FE (Manufacturer Fuel Economy)	8.8	8.8
NOX (Nitrogen Oxide)	0.041345	--
N2O (Nitrous Oxide)	0.002374	--
HC-NM (Non-methane Hydrocarbon)	0.071155	--
NMOG (Non-methane organic gases)	0.07825	--
PM (Particulate Matter)	0.004136	--
HC-TOTAL (Total Hydrocarbon)	0.094541	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	986	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	984.478	--

Manufacturer Test Comments 150K EMIS TEST

Certification Summary Information Report

Test Group VGMXD06.6231 **Evaporative/Refueling Family** VGMXF019060C

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO	0.82	1	--	--	--	--	0.8	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO-COMP	0.95	1	--	--	--	--	1.0	4.0	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO2	999	1	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	METHANE	0.0247	1	--	--	--	--	0.025	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	N2O	0.0024	1	--	--	--	--	0.002	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG	0.0782	1	--	--	--	--	0.078	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG+NOX	0.1195	1	--	--	--	--	0.120	0.230	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG+NOX-COMP	0.0626	1	--	--	--	--	0.063	0.350	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NOX	0.0413	1	--	--	--	--	0.041	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	PM	0.0041	1	--	--	--	--	0.004	0.010	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	PM-COMP	0.0022	1	--	--	--	--	0.002	0.007	Pass
CA	150,000 miles	California LEV-III SULEV230	CO	0.82	1	--	--	--	--	0.8	4.2	Pass
CA	150,000 miles	California LEV-III SULEV230	CO-COMP	0.95	1	--	--	--	--	1.0	4.0	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG	0.0782	1	--	--	--	--	0.078	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG+NOX	0.1195	1	--	--	--	--	0.120	0.230	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG+NOX-COMP	0.0626	1	--	--	--	--	0.063	0.350	Pass
CA	150,000 miles	California LEV-III SULEV230	NOX	0.0413	1	--	--	--	--	0.041	99.999	Pass

Certification Summary Information Report

Test Group VGMXD06.6231 **Evaporative/Refueling Family** VGMXF019060C

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-III SULEV230	PM	0.0041	1	--	--	--	--	0.004	0.010	Pass
CA	150,000 miles	California LEV-III SULEV230	PM-COMP	0.0022	1	--	--	--	--	0.002	0.007	Pass

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

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**RGMX10077637**	**Test Procedure**	**31 - Federal fuel 3-day exhaust**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	10/27/2022	**Fuel**	Gasoline
Fuel Batch ID	000307	**Fuel Calibration Number**	9320
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000), MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4255	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	1084.26	--
FE BAG 1 (Bag 1 Fuel Economy)	8.2	8.2
CO2 BAG 2 (Bag 2 Carbon Dioxide)	1040.83	--
FE BAG 2 (Bag 2 Fuel Economy)	8.6	8.6
CO2 BAG 3 (Bag 3 Carbon Dioxide)	1009.75	--
FE BAG 3 (Bag 3 Fuel Economy)	8.8	8.8
METHANE (CH4 - Methane)	0.032548	--
CO (Carbon Monoxide)	1.22004	--
METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)	0.02404	--
N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)	0.00273	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.017768	--
DT-EER (Drive Trace Energy Economy Rating)	-0.260115	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.06928	--
MFR FE (Manufacturer Fuel Economy)	8.6	8.6
NOX (Nitrogen Oxide)	0.043927	--
N2O (Nitrous Oxide)	0.003873	--
HC-NM (Non-methane Hydrocarbon)	0.056172	--
NMOG (Non-methane organic gases)	0.057869	--
HC-TOTAL (Total Hydrocarbon)	0.086913	--

Certification Summary Information Report

Test Group VGMXD06.6231 **Evaporative/Refueling Family** VGMXF019060C

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	1043	1043

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	1041.27	--

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	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO	1.22	1	--	--	--	--	1.2	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO2	1043	1	--	--	0	--	1043	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	METHANE	0.0325	1	--	--	--	--	0.032	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	N2O	0.0039	1	--	--	--	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG	0.0579	1	--	--	--	--	0.058	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG+NOX	0.1018	1	--	--	--	--	0.102	0.230	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NOX	0.0439	1	--	--	--	--	0.044	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	CO	1.22	1	--	--	--	--	1.2	4.2	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG	0.0579	1	--	--	--	--	0.058	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG+NOX	0.1018	1	--	--	--	--	0.102	0.230	Pass
CA	150,000 miles	California LEV-III SULEV230	NOX	0.0439	1	--	--	--	--	0.044	99.999	Pass

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

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**RGMX10077634**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/19/2022	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000), MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4174	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.00994	--
CO (Carbon Monoxide)	0.117179	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.68577	--
DT-EER (Drive Trace Energy Economy Rating)	-0.311701	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.80246	--
MFR FE (Manufacturer Fuel Economy)	11.3	11.3
NOX (Nitrogen Oxide)	0.003795	--
N2O (Nitrous Oxide)	0.000539	--
HC-NM (Non-methane Hydrocarbon)	0.00283	--
NMOG (Non-methane organic gases)	0.002915	--
HC-TOTAL (Total Hydrocarbon)	0.012503	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	774	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	774.153	--

Manufacturer Test Comments 150K HWY TEST

Certification Summary Information Report

Test Group VGMXD06.6231 **Evaporative/Refueling Family** VGMXF019060C

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO2	999	1	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	METHANE	0.0099	1	--	--	--	--	0.010	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	N2O	0.0005	1	--	--	--	--	0.000	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG	0.0029	1	--	--	--	--	0.003	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG+NOX	0.0067	1	--	--	--	--	0.007	0.230	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NOX	0.0038	1	--	--	--	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG	0.0029	1	--	--	--	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG+NOX	0.0067	1	--	--	--	--	0.007	0.230	Pass
CA	150,000 miles	California LEV-III SULEV230	NOX	0.0038	1	--	--	--	--	0.004	99.999	Pass

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

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**RGMX10077638**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	10/27/2022	**Fuel**	Gasoline
Fuel Batch ID	000307	**Fuel Calibration Number**	9320
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000), MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4266	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.013731	--
CO (Carbon Monoxide)	0.142127	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.84988	--
DT-EER (Drive Trace Energy Economy Rating)	-0.153852	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.17921	--
MFR FE (Manufacturer Fuel Economy)	11.1	11.1
NOX (Nitrogen Oxide)	0.004662	--
N2O (Nitrous Oxide)	0.001317	--
HC-NM (Non-methane Hydrocarbon)	0.00315	--
NMOG (Non-methane organic gases)	0.003245	--
HC-TOTAL (Total Hydrocarbon)	0.016119	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	804	804

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	804.33	--

Manufacturer Test Comments --

Certification Summary Information Report

Test Group VGMXD06.6231 **Evaporative/Refueling Family** VGMXF019060C

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO2	804	1	--	--	0	--	804	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	METHANE	0.0137	1	--	--	--	--	0.014	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	N2O	0.0013	1	--	--	--	--	0.001	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG	0.0032	1	--	--	--	--	0.003	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG+NOX	0.0079	1	--	--	--	--	0.008	0.230	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NOX	0.0047	1	--	--	--	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG	0.0032	1	--	--	--	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG+NOX	0.0079	1	--	--	--	--	0.008	0.230	Pass
CA	150,000 miles	California LEV-III SULEV230	NOX	0.0047	1	--	--	--	--	0.005	99.999	Pass

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

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**RGMX10077635**	**Test Procedure**	**16 - Hot 1435 LA92**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/19/2022	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000), MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4195	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.018137	--
CO (Carbon Monoxide)	2.24438	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.52866	--
DT-EER (Drive Trace Energy Economy Rating)	-1.02296	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.34124	--
NOX (Nitrogen Oxide)	0.023679	--
HC-NM (Non-methane Hydrocarbon)	0.011074	--
NMOG (Non-methane organic gases)	0.011406	--
PM (Particulate Matter)	0.001579	--
HC-TOTAL (Total Hydrocarbon)	0.028721	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	1186.66	--

Manufacturer Test Comments 150K LA92 TEST

Certification Summary Information Report

Test Group VGMXD06.6231 **Evaporative/Refueling Family** VGMXF019060C

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO	2.24	1	--	--	--	--	2.2	99.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG	0.0114	1	--	--	--	--	0.011	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG+NOX	0.0351	1	--	--	--	--	0.035	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NOX	0.0237	1	--	--	--	--	0.024	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	PM	0.0016	1	--	--	--	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	CO	2.24	1	--	--	--	--	2.2	99.9	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG	0.0114	1	--	--	--	--	0.011	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG+NOX	0.0351	1	--	--	--	--	0.035	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NOX	0.0237	1	--	--	--	--	0.024	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	PM	0.0016	1	--	--	--	--	0.002	99.999	Pass

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**RGMX10077636**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/20/2022	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000), MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4215	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.020558	--
CO (Carbon Monoxide)	0.093118	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.736125	--
DT-EER (Drive Trace Energy Economy Rating)	0.677553	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.669387	--
MFR FE (Manufacturer Fuel Economy)	7.8	7.8
NOX (Nitrogen Oxide)	0.02714	--
HC-NM (Non-methane Hydrocarbon)	0.002555	--
NMOG (Non-methane organic gases)	0.002631	--
PM (Particulate Matter)	0.000917	--
HC-TOTAL (Total Hydrocarbon)	0.022078	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	1111.54	--

Manufacturer Test Comments 150K SC03 TEST

Certification Summary Information Report

Test Group VGMXD06.6231 **Evaporative/Refueling Family** VGMXF019060C

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	CO	0.09	1	--	--	--	--	0.1	99.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG	0.0026	1	--	--	--	--	0.003	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NMOG+NOX	0.0297	1	--	--	--	--	0.030	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	NOX	0.0271	1	--	--	--	--	0.027	99.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 3 Bin 230	PM	0.0009	1	--	--	--	--	0.001	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	CO	0.09	1	--	--	--	--	0.1	99.9	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG	0.0026	1	--	--	--	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NMOG+NOX	0.0297	1	--	--	--	--	0.030	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	NOX	0.0271	1	--	--	--	--	0.027	99.999	Pass
CA	150,000 miles	California LEV-III SULEV230	PM	0.0009	1	--	--	--	--	0.001	99.999	Pass

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Emission Data Vehicle Information

Vehicle ID / Configuration	66CRRV1182 / 1	**Manufacturer Vehicle Configuration Number**	1
Original Test Group Name	RGMXD06.6230	**Original Evaporative/Refueling Family**	RGMXF02176BB
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	**Represented Test Vehicle Model**	SILVERADO 3500 HD 4WD CAB CHAS

Leak Family Details

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

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	11	**Rated Horsepower**	401
Displacement (liters)	6.6		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	All Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	11900	**Equivalent Test Weight (pounds)**	13000
GVWR (lbs)	14000	**N/V Ratio**	24.6
Axle Ratio	3.73		
Transmission Type	Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	79.34	1.1206	0.12251	30.35	-0.0061	0.12613	58.9

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Emission Control Device Comments	L8T Incomplete Pickup
Manufacturer Test Vehicle Comments	4K CONFIG. EDV TESTING CONDUCTED USING AN AWD DYNO USING 2WD REAR MODE.

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**RGMX10078352**	**Test Procedure**	**52 - Fed. fuel 50 F exh.**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/10/2022	**Fuel**	Gasoline
Fuel Batch ID	000329	**Fuel Calibration Number**	9322
Vehicle Class	MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4350	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.022607	--
CO (Carbon Monoxide)	1.03646	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.259787	--
DT-EER (Drive Trace Energy Economy Rating)	-0.638226	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.296505	--
NOX (Nitrogen Oxide)	0.028963	--
HC-NM (Non-methane Hydrocarbon)	0.120245	--
NMOG (Non-methane organic gases)	0.132235	--
HC-TOTAL (Total Hydrocarbon)	0.142049	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	1027.13	--

Manufacturer Test Comments 4K 50 DEG TEST

Certification Summary Information Report

Test Group VGMXD06.6231 **Evaporative/Refueling Family** VGMXF019060C

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	4,000 miles	California LEV-III SULEV230	CO	1.04	1	--	--	--	--	1.0	4.2	Pass
CA	4,000 miles	California LEV-III SULEV230	NMOG	0.1322	1	--	--	--	--	0.132	99.999	Pass
CA	4,000 miles	California LEV-III SULEV230	NMOG+NOX	0.1612	1	--	--	--	--	0.161	0.460	Pass
CA	4,000 miles	California LEV-III SULEV230	NOX	0.0290	1	--	--	--	--	0.029	99.999	Pass

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Emission Data Vehicle Information

Vehicle ID / Configuration	66GDMET947 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	PGMXD06.6398	**Original Evaporative/Refueling Family**	PGMXF019060C
Original Test Vehicle Model Year	2023		

Vehicle Model

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

Leak Family Details

Leak Family Identifier	LK1	**Leak Family Name**	PGMXF019060C-LK1

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	12	**Rated Horsepower**	401
Displacement (liters)	6.6		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	0	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	N/A	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	10455	**Equivalent Test Weight (pounds)**	11500
GVWR (lbs)	12300	**N/V Ratio**	32.5
Axle Ratio	4.1		
Transmission Type	Automatic	**# of Transmission Gears**	6
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	75.9	0.8179	0.08923	40.1	0.1297	0.09327	45.3

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Emission Control Device Comments L8T Cutaway Van -5G8

Manufacturer Test Vehicle Comments --

Test #	**PGMX10075103**	**Test Procedure**	**23 - 2-day evap**
Exhaust Test # for this Evap Test	PGMX10075102	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/26/2022	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	5662	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.3039	--

Manufacturer Test Comments 4K EVF2 TEST

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.3039	0.0000	0.304	0.600	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.3039	0.0000	0.304	0.600	Pass

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**PGMX10075105**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	PGMX10075102	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	04/25/2022	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	5716	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.4481	--

Manufacturer Test Comments 4K EVF3 TEST

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.4481	0.0000	0.448	0.600	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.4481	0.0000	0.448	0.600	Pass

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**PGMX10075104**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	PGMX10075102	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	05/04/2022	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	5754	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	No

Test Results

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

Manufacturer Test Comments 4K EVFR TEST

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.000	0.0	0.00	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.000	0.0	0.00	0.05	Pass

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**PGMX10075101**	**Test Procedure**	**15 - Spitback**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	04/14/2022	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5670	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
SPITBACK (Spitback Hydrocarbon in grams)	0.05	--

Manufacturer Test Comments 4K SPITBACK TEST

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	SPITBACK	0.05	0.0	0.0	1.0	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	SPITBACK	0.05	0.0	0.0	1.0	Pass

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Test #	**PGMX10075100**	**Test Procedure**	**65 - Evap Canister Bleed Test**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	08/27/2021	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Compliance and Certification		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	5662	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.00358	--

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	0.0036	0.000	0.004	0.030	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.0036	0.000	0.004	0.030	Pass

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Fuel Properties

Fuel Batch ID	**000329**	**Fuel Calibration Number**	**9322**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	10/17/2022
Fuel Batch Calibration Effective Date	10/17/2022	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.745
Fuel Ethanol Volume Percent (%)	9.8	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17787
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.828	**Weight Fraction CO2**	--

Fuel Batch ID	**000307**	**Fuel Calibration Number**	**9320**
Test Fuel Type	61 - Tier 2 Cert Gasoline	**Fuel Batch Calibration Date**	10/10/2022
Fuel Batch Calibration Effective Date	10/10/2022	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.744
Fuel Ethanol Volume Percent (%)	--	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18427
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.867	**Weight Fraction CO2**	--

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Consolidated List of Standards

Exhaust Standards

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	**Standard Level**	Federal Tier 3 HD Class 3 Bin 230
Fuel	Gasoline	**Test Procedure**	HWFE

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO2	--	1	--	--	--	--	0	999
150,000 miles	METHANE	--	1	--	--	--	--	--	99.999
150,000 miles	N2O	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.230
150,000 miles	NOX	--	1	--	--	--	--	--	99.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**Standard Level**	California LEV-III SULEV230
Fuel	Gasoline	**Test Procedure**	HWFE

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.230
150,000 miles	NOX	--	1	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C
Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	**Standard Level**	Federal Tier 3 HD Class 3 Bin 230
Fuel	Gasoline	**Test Procedure**	SC03

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**Standard Level**	California LEV-III SULEV230
Fuel	Gasoline	**Test Procedure**	Federal fuel 3-day exhaust

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	1	--	--	--	--	--	4.2
150,000 miles	CO-COMP	--	1	--	--	--	--	--	4.0
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.230
150,000 miles	NMOG+NOX-COMP	--	1	--	--	--	--	--	0.350
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	0.010
150,000 miles	PM-COMP	--	1	--	--	--	--	--	0.007

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C
Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	**Standard Level**	Federal Tier 3 HD Class 3 Bin 230
Fuel	Gasoline	**Test Procedure**	Federal fuel 3-day exhaust

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	1	--	--	--	--	--	4.2
150,000 miles	CO-COMP	--	1	--	--	--	--	--	4.0
150,000 miles	CO2	--	1	--	--	--	--	0	999
150,000 miles	METHANE	--	1	--	--	--	--	--	99.999
150,000 miles	N2O	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.230
150,000 miles	NMOG+NOX-COMP	--	1	--	--	--	--	--	0.350
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	0.010
150,000 miles	PM-COMP	--	1	--	--	--	--	--	0.007

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**Standard Level**	California LEV-III SULEV230
Fuel	Gasoline	**Test Procedure**	Hot 1435 LA92

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	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C
Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	**Standard Level**	Federal Tier 3 HD Class 3 Bin 230
Fuel	Gasoline	**Test Procedure**	Hot 1435 LA92

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	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**Standard Level**	California LEV-III SULEV230
Fuel	Gasoline	**Test Procedure**	Fed. fuel 50 F exh.

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	CO	--	1	--	--	--	--	--	4.2
4,000 miles	NMOG	--	1	--	--	--	--	--	99.999
4,000 miles	NMOG+NOX	--	1	--	--	--	1	--	0.460
4,000 miles	NOX	--	1	--	--	--	--	--	99.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDV7 (Cal. LEV 2/3/4 MDV GVW 10001-14000)	**Standard Level**	California LEV-III SULEV230
Fuel	Gasoline	**Test Procedure**	SC03

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	1	--	--	--	--	--	99.9
150,000 miles	NMOG	--	1	--	--	--	--	--	99.999
150,000 miles	NMOG+NOX	--	1	--	--	--	1	--	99.999
150,000 miles	NOX	--	1	--	--	--	--	--	99.999
150,000 miles	PM	--	1	--	--	--	--	--	99.999

Evaporative/Refueling Standards

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-III Zero Evap (Option 2)
Test Procedure	Evap Canister Bleed Test		

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

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-III Zero Evap (Option 2)
Test Procedure	Federal fuel 3-day evap		

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

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-III Zero Evap (Option 2)
Test Procedure	Spitback		

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

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal Fuel Running Loss		

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

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-III Zero Evap (Option 2)
Test Procedure	Federal Fuel Running Loss		

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

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	2-day evap		

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

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Spitback		

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

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-III Zero Evap (Option 2)
Test Procedure	2-day evap		

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

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Evap Canister Bleed Test		

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

Evaporative/Refueling Family	VGMXF019060C	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel 3-day evap		

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

Certification Summary Information Report

Test Group	VGMXD06.6231	Evaporative/Refueling Family	VGMXF019060C

Glossary

Useful Life

4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		

Emission Name

HC-TOTAL	Total Hydrocarbon	COMB-CREE	Combined Carbon-Related Exhaust Emissions
CO	Carbon Monoxide	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
CO2	Carbon dioxide	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
CREE	Carbon-Related Exhaust Emissions	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
OPT-CREE	Optional Carbon-Related Exhaust Emissions	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
NOX	Nitrogen Oxide	LEAK-DIA	Effective Leak Diameter (inches)
PM	Particulate Matter	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
PM-COMP	SFTP Composite Particulate Matter	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
HC-NM	Non-methane Hydrocarbon	KW-HRS	Integrated DC KW-HRS
OMHCE	Organic material Hydrocarbon Equivalent	CH4 BAG 1	Bag 1 Methane
OMNMHCE	Organic material non-methane HC equivalent	CH4 BAG 2	Bag 2 Methane
NMOG	Non-methane organic gases	CH4 BAG 3	Bag 3 Methane
HCHO	Formaldehyde	CH4 BAG 4	Bag 4 Methane
H3C2HO	Acetaldehyde	CO BAG 1	Bag 1 Carbon Monoxide
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	CO BAG 2	Bag 2 Carbon Monoxide
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	CO BAG 3	Bag 3 Carbon Monoxide
CO-COMP	SFTP Composite Carbon Monoxide	CO BAG 4	Bag 4 Carbon Monoxide
ETHANOL	C2H5OH - Ethanol	NMOG BAG 1	Bag 1 Non-methane organic gases
FE BAG 1	Bag 1 Fuel Economy	NMOG BAG 2	Bag 2 Non-methane organic gases
FE BAG 2	Bag 2 Fuel Economy	NMOG BAG 3	Bag 3 Non-methane organic gases
FE BAG 3	Bag 3 Fuel Economy	NMOG BAG 4	Bag 4 Non-methane organic gases
FE BAG 4	Bag 4 Fuel Economy	ACT-DISTANCE BAG 1	Bag 1 Actual Distance
MFR FE	Manufacturer Fuel Economy	ACT-DISTANCE BAG 2	Bag 2 Actual Distance
HC	Hydrocarbon for Running Loss and ORVR	ACT-DISTANCE BAG 3	Bag 3 Actual Distance
METHANE	CH4 - Methane	ACT-DISTANCE BAG 4	Bag 4 Actual Distance
METHANOL	CH3OH - Methanol	HC-TOTAL BAG 1	Bag 1 Total Hydrocarbon
N2O	Nitrous Oxide	HC-TOTAL BAG 2	Bag 2 Total Hydrocarbon
SPITBACK	Spitback Hydrocarbon in grams	HC-TOTAL BAG 3	Bag 3 Total Hydrocarbon
AMP-HRS	Integrated Amp-hours	HC-TOTAL BAG 4	Bag 4 Total Hydrocarbon
START-SOC	System Start State of Charge Watt-hours	WATT-HRS BAG 1	Bag 1 Watt Hours
END-SOC	System End State of Charge Watt-hours	WATT-HRS BAG 2	Bag 2 Watt Hours

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C
ACT-DISTANCE	Actual Distance Driven (miles)	WATT-HRS BAG 3	Bag 3 Watt Hours
AS-VOLT	Average System Voltage	WATT-HRS BAG 4	Bag 4 Watt Hours
CO2 BAG 1	Bag 1 Carbon Dioxide	WATT-HRS	Watt Hours
CO2 BAG 2	Bag 2 Carbon Dioxide	HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon
CO2 BAG 3	Bag 3 Carbon Dioxide	HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon
CO2 BAG 4	Bag 4 Carbon Dioxide	HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	N2O BAG 1	Bag 1 Nitrous Oxide
DT-IWRR	Drive Trace Inertia Work Ratio Rating	N2O BAG 2	Bag 2 Nitrous Oxide
DT-ASCR	Drive Trace Absolute Speed Change Rating	N2O BAG 3	Bag 3 Nitrous Oxide
DT-EER	Drive Trace Energy Economy Rating	N2O BAG 4	Bag 4 Nitrous Oxide

Certification Region			
CA	California + CAA Section 177 states	FA	Federal

Exhaust Emission Standard Level			
B1	Federal Tier 2 Bin 1	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340
B2	Federal Tier 2 Bin 2	HDV2B250	Federal Tier 3 HD Class 2b Bin 250
B3	Federal Tier 2 Bin 3	HDV2B200	Federal Tier 3 HD Class 2b Bin 200
B4	Federal Tier 2 Bin 4	HDV2B170	Federal Tier 3 HD Class 2b Bin 170
B5	Federal Tier 2 Bin 5	HDV2B150	Federal Tier 3 HD Class 2b Bin 150
B6	Federal Tier 2 Bin 6	HDV2B0	Federal Tier 3 HD Class 2b Bin 0
B7	Federal Tier 2 Bin 7	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630
B8	Federal Tier 2 Bin 8	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570
B9	Federal Tier 2 Bin 9	HDV3B400	Federal Tier 3 HD Class 3 Bin 400
B10	Federal Tier 2 Bin 10	HDV3B270	Federal Tier 3 HD Class 3 Bin 270
B11	Federal Tier 2 Bin 11	HDV3B230	Federal Tier 3 HD Class 3 Bin 230
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	HDV3B200	Federal Tier 3 HD Class 3 Bin 200
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	HDV3B0	Federal Tier 3 HD Class 3 Bin 0
L2	California LEV-II LEV	L4SULEV100	California LEV-IV SULEV100
L2OP	California LEV-II LEV Optional	L4SULEV125	California LEV-IV SULEV125
U2	California LEV-II ULEV	L4SULEV15	California LEV-IV SULEV15
S2	California LEV-II SULEV	L4SULEV150	California LEV-IV SULEV150
ZEV	California ZEV	L4SULEV170	California LEV-IV SULEV170
OT	Other	L4SULEV175	California LEV-IV SULEV175
T1	Federal Tier 1	L4SULEV20	California LEV-IV SULEV20
PZEV	California PZEV	L4SULEV200	California LEV-IV SULEV200
L2LEV160	California LEV-II LEV160	L4SULEV230	California LEV-IV SULEV230
L2ULEV125	California LEV-II ULEV125	L4SULEV25	California LEV-IV SULEV25
L2SULEV30	California LEV-II SULEV30	L4SULEV30	California LEV-IV SULEV30
L2LEV395	California LEV-II LEV395	L4SULEV75	California LEV-IV SULEV75

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C
L2ULEV340	California LEV-II ULEV340	L4SULEV85	California LEV-IV SULEV85
L2LEV630	California LEV-II LEV630	L4ULEV125	California LEV-IV ULEV125
L2ULEV570	California LEV-II ULEV570	L4ULEV200	California LEV-IV ULEV200
L3LEV160	California LEV-III LEV160	L4ULEV250	California LEV-IV ULEV250
L3ULEV125	California LEV-III ULEV125	L4ULEV270	California LEV-IV ULEV270
L3ULEV70	California LEV-III ULEV70	L4ULEV40	California LEV-IV ULEV40
L3ULEV50	California LEV-III ULEV50	L4ULEV400	California LEV-IV ULEV400
L3SULEV30	California LEV-III SULEV30	L4ULEV50	California LEV-IV ULEV50
L3SULEV20	California LEV-III SULEV20	L4ULEV60	California LEV-IV ULEV60
L3LEV395	California LEV-III LEV395	L4ULEV70	California LEV-IV ULEV70
L3ULEV340	California LEV-III ULEV340	T4B170	Federal Tier 4 MDV Bin 170
L3ULEV250	California LEV-III ULEV250	T4B150	Federal Tier 4 MDV Bin 150
L3ULEV200	California LEV-III ULEV200	T4B125	Federal Tier 4 MDV Bin 125
L3SULEV170	California LEV-III SULEV170	T4B100	Federal Tier 4 MDV Bin 100
L3SULEV150	California LEV-III SULEV150	T4B85	Federal Tier 4 MDV Bin 85
L3LEV630	California LEV-III LEV630	T4B75	Federal Tier 4 MDV Bin 75
L3ULEV570	California LEV-III ULEV570	T4B70	Federal Tier 4 Bin 70
L3ULEV400	California LEV-III ULEV400	T4B65	Federal Tier 4 Bin 65
L3ULEV270	California LEV-III ULEV270	T4B60	Federal Tier 4 Bin 60
L3SULEV230	California LEV-III SULEV230	T4B55	Federal Tier 4 Bin 55
L3SULEV200	California LEV-III SULEV200	T4B50	Federal Tier 4 Bin 50
T3B160	Federal Tier 3 Bin 160	T4B45	Federal Tier 4 Bin 45
T3B125	Federal Tier 3 Bin 125	T4B40	Federal Tier 4 Bin 40
T3B110	Federal Tier 3 Transitional Bin 110	T4B35	Federal Tier 4 Bin 35
T3B85	Federal Tier 3 Transitional Bin 85	T4B30	Federal Tier 4 Bin 30
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	T4B25	Federal Tier 4 Bin 25
T3B70	Federal Tier 3 Bin 70	T4B20	Federal Tier 4 Bin 20
T3B50	Federal Tier 3 Bin 50	T4B15	Federal Tier 4 Bin 15
T3B30	Federal Tier 3 Bin 30	T4B10	Federal Tier 4 Bin 10
T3B20	Federal Tier 3 Bin 20	T4B5	Federal Tier 4 Bin 5
T3B0	Federal Tier 3 Bin 0	T4B0	Federal Tier 4 Bin 0
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395		

Transmission Type Code			
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual
A	Automatic	OT	Other
AM	Automated Manual	SA	Semi-Automatic
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)

Drive System Code			
4	4-Wheel Drive	P	Part-time 4-Wheel Drive

Certification Summary Information Report

Test Group	VGMXD06.6231	**Evaporative/Refueling Family**	VGMXF019060C
F	2-Wheel Drive, Front	A	All Wheel Drive
R	2-Wheel Drive, Rear		

Additional Terms and Acronyms

AFC	Alternative Fuel Converter	ICI	Independent Commercial Importer
CSI	Certificate Summary Information	ORVR	Onboard Refueling Vapor Recovery
DF	Deterioration Factor	SIL	Shift Indicator Light
Evap	Evaporation, Evaporative	Trans	Transmission

FLEXIBLE OR ALTERNATE FUELS

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

Engine Code Information

Base Engine Code	12	13
EC Derivatives		
Test Group	VGMXD06.6231	VGMXD06.6231
Durability Group	VGMXGPGNNB67	VGMXGPGNNB67
Engine RPO	L8T	L8T
Disp, liters	6.6	6.6
Trans RPO	N8X	N8X
Trans Type	A8	A8
Product Code	--	--
Emission RPO	NLR	NLR
Emissions Category	SULEV230/BIN230	SULEV230/BIN230
Vehicle Type	TRUCK	TRUCK
Regulatory Agencies	C	C
Sales Area	FA/CA	FA/CA
Design Altitude	Both	Both
A/C Equipped	Yes	Yes
Driver Select Device	Normal, Tow/haul	Normal, Tow/haul
Police Only	No	No
Horsepower @ RPM	401@5200	401@5200
Torque @ RPM	464@4000	464@4000
Emission Ctrl Sys	DFI/2TWC/2HO2S(2)/TWC	DFI/2TWC/2HO2S(2)/TWC
TapUp/TapDown	No	No
Active Fuel Management	Non AFM	Non AFM
Description	L8T Cutaway Van -5G8	L8T Cutaway Van &5G8

Vehicle Parameters - Certificate Coverage

Durability Group VGMXGPGNNB67
TestGroup VGMXD06.6231

EC	EC Der	Eng RPO	Disp	Evap Family	Evap Code	Model	Car Line	Trans Type/Code	Final Drive Ratio	GVWR	Tire	N/V	Loaded Weight Veh/DA	TWC Meth	TWC	TLHP	F0	F1	F2	RLHP RPO	Drv Sys	Note
12		L8T	6.6	VGMXF019060C	102	CG33503	G3500 EXPRESS 2WD CUTAWAY CH	A8/2	3.42	10100	LT245/75R16 ALS BRI	25.3	9343/4845	ALVW	9500	39.1	54.96	1.1146	0.07301	&GU6&R04&WNS-5G8/NE7	RD	--
12		L8T	6.6	VGMXF019060C	102	CG33503	G3500 EXPRESS 2WD CUTAWAY CH	A8/2	3.73	12300	LT225/75R16 ALS GEN	28.7	11378/5945	ALVW	11500	41.4	78.50	1.0792	0.07136	&GT4&R05&WNS-5G8/NE7	RD	--
12		L8T	6.6	VGMXF019060C	102	CG33803	G3500 EXPRESS 2WD CUTAWAY CH	A8/2	3.42	10100	LT245/75R16 ALS BRI	25.3	9343/4833	ALVW	9500	39.1	54.96	1.1146	0.07301	&GU6&R04&WNS-5G8/NE7	RD	--
12		L8T	6.6	VGMXF019060C	101	CG33803	G3500 EXPRESS 2WD CUTAWAY CH	A8/2	3.73	12300	LT225/75R16 ALS GEN	28.7	11378/5933	ALVW	11500	41.4	78.50	1.0792	0.07136	&GT4&NE7&R05&WNS-5G8	RD	--
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12		L8T	6.6	VGMXF019060C	101	CG33803	G3500 EXPRESS 2WD CUTAWAY CH	A8/2	4.10	12300	LT225/75R16 ALS GEN	31.5	11378/5933	ALVW	11500	41.4	78.50	1.0792	0.07136	&GT5&NE7&R05&WNS-5G8	RD	--
12		L8T	6.6	VGMXF019060C	102	CG33803	G3500 EXPRESS 2WD CUTAWAY CH	A8/2	4.10	12300	LT225/75R16 ALS GEN	31.5	11378/5933	ALVW	11500	41.4	78.50	1.0792	0.07136	&GT5&R05&WNS-5G8/NE7	RD	--
12		L8T	6.6	VGMXF019060C	102	TG33503	G3500 SAVANA 2WD CUTAWAY CH	A8/2	3.42	10100	LT245/75R16 ALS BRI	25.3	9343/4845	ALVW	9500	39.1	54.96	1.1146	0.07301	&GU6&R04&WNS-5G8/NE7	RD	--
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13		L8T	6.6	VGMXF019060C	102	CG33503	G3500 EXPRESS 2WD CUTAWAY CH	A8/2	3.42	10100	LT245/75R16 ALS BRI	25.3	9343/4845	ALVW	9500	39.1	54.96	1.1146	0.07301	&5G8&GU6&R04&WNS-NE7	RD	--
13		L8T	6.6	VGMXF019060C	102	CG33803	G3500 EXPRESS 2WD CUTAWAY CH	A8/2	3.42	10100	LT245/75R16 ALS BRI	25.3	9343/4833	ALVW	9500	39.1	54.96	1.1146	0.07301	&5G8&GU6&R04&WNS-NE7	RD	--
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13		L8T	6.6	VGMXF019060C	102	TG33803	G3500 SAVANA 2WD CUTAWAY CH	A8/2	3.42	10100	LT245/75R16 ALS BRI	25.3	9343/4833	ALVW	9500	39.1	54.96	1.1146	0.07301	&5G8&GU6&R04&WNS-NE7	RD	--

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

TRANSMISSION INFORMATION

Test Group ID	VGMXD06.6231
Transmission Code	2
Transmission RPO	N8X
Transmission Type	A8
Drive Gear Ratios	4.56,2.97,2.08,1.69,1.27,1,0.85,0.65
Chain Drive Ratio	NA
Shift Calibrations	Computer Controlled
Torque Converter Diameter	260 mm
Torque Converter Stall Torque Ratio	1.84
Torque Converter Lockup RPM'S	Computer Controlled
Torque Converter Stall Torque Speed	2650 @ 320
Multimode Feature - # of Modes	2
Shift Indicator Light	NA
Description	NA
TapUp/TapDown	NO

SPECIAL TEST INSTRUCTIONS

DRIVER SELECTABLE MODES

Tow/Haul Mode:

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

Tap Shift (Manual Shift) Mode:

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

Other Modes:

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

OTHER

Drive Trace Tolerances:

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

Emission Test Vehicle Cooling Requirements:

For the federal test procedure at 75°, 50° and 20°, and a highway fuel economy test, a fixed speed fan that has a nominal capacity of 5300 cfm must be used. The fan must be placed within 12 inches of the front of the vehicle and centered on the vehicle's grill. For the US06 test, a fixed speed fan that has a nominal capacity of 15000 cfm must be used. The fan must be placed within 24 inches of the front of the vehicle and centered on the vehicle's grill. For the SC03 test, a road speed fan that has a nominal capacity of 95000 cfm at 60 mph must be used. The fan must be placed on the floor between 24 and 36 inches from the front of the vehicle.

EPA does allow additional cooling, and a road speed fan can be used on any test. The certification vehicle in this test group used a road speed fan on the SC03, as required by the regulations, and on the following tests: FTP 75°, FTP 50°, Hwy and LA92. Use "Prime One" road speed fan at maximum height or SC03 road speed fan.

SPECIAL TEST INSTRUCTIONS (CONT.)

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 evap service access port tool must be utilized. The evap service access port tool should be installed between the purge solenoid and the purge line from the evap 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 consists 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 3 evaporative emission requirements, a fuel system leak test may need to be conducted. To conduct this testing, the outlet of the canister should be sealed. The fuel system is then pressurized by applying nitrogen through the service port. Service port details are outlined in the canister loading instructions.

Evaporative Emissions Testing:

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

Four-Wheel and All-Wheel Drive Vehicles:

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

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

Most General Motors vehicles come equipped with an electronic traction control system and an ABS system. During dynamometer testing, these systems will detect the difference in wheel speed between the front and rear wheels, and attempt to correct it by activating ABS and changing engine operation. Therefore, before emissions testing, the systems must be disabled. The system on these vehicles cannot be disabled by removing the underhood ABS fuse. Vehicles in this test group must be put in “Dyno Mode” using a service tool connected to the ALDL to disable Traction Control/ABS. Please contact General Motors Compliance and Certification organization for instructions.

Automatic Headlight Systems:

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

Parking Brake:

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

Tire Pressure and Ballast:

Some vehicles in this test group may require additional ballast and reduction of tire pressure to prevent wheel slip. Please add ballast and change the tire pressure prior to emissions testing, according to the list below. For engine codes not listed, testing should be conducted as specified in the vehicle parameters page. For engine code 10 and 11, add 500 lbs ballast to rear axle.

ENGINE STARTING INSTRUCTIONS

Warm or Cold Engine

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

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

Reference Owner’s Manual for complete starting instructions.

SHIFT SCHEDULES - NA

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

NA – Not Applicable

May 14, 2026 VP040

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 VGMXD06.6231/VGMXF019060C

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,

S. E. Davis

S. E. Davis
Total Certification Engineer
Compliance & Certification

SED/ks

May 14, 2026 VP041

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 VGMXD06.6231/VGMXF019060C

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

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

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

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

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

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

Sincerely,

S. E. Davis

S. E. Davis
Total Certification Engineer
Compliance & Certification

SED/ks

EMISSION DATA RATIOS (GASOLINE)

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

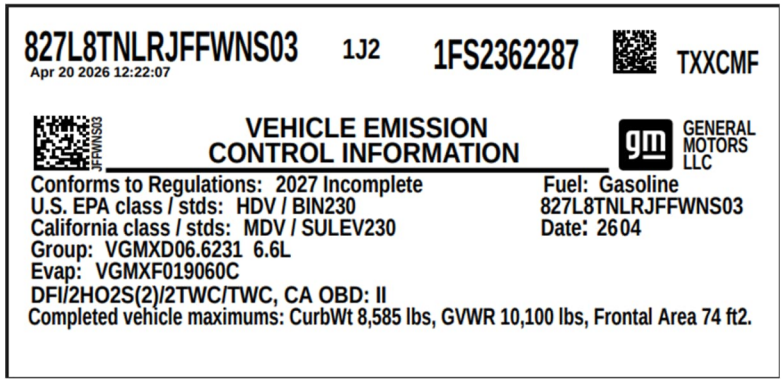
*4 HCHO requirements will now be met by a compliance statement for both EPA and CARB (does not apply to alcohol fuels).

*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:

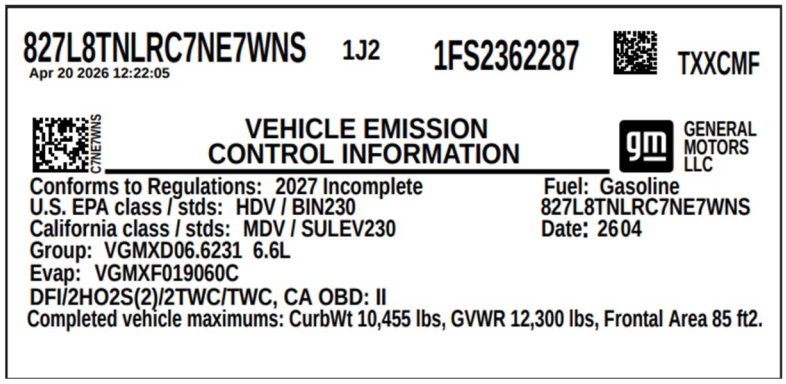
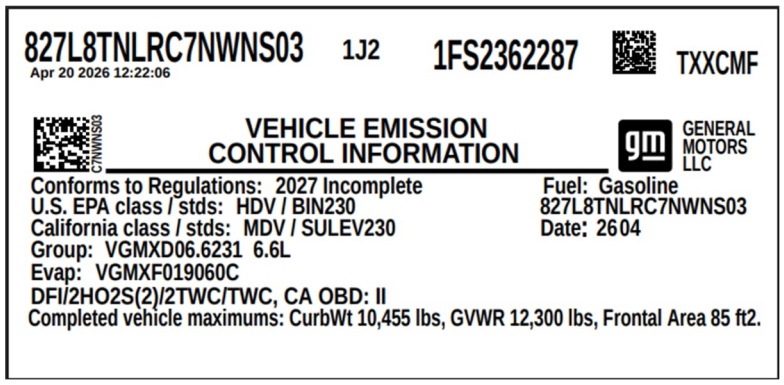
$$\theta_{NMOGcomp} = \theta_{NMHCcomp} * (1.0302+(0.0071*VP_{EtOH})) \quad \{Eq.\ 1066.635\text{-}3\}$$

*6 Effective with TIER3 regulations, 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).

L8T&NLR&JFF&WNS-NE7



L8T&NLR&NE7&C7N&WNS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