

APPLICATION FOR CERTIFICATION

2025 MODEL YEAR

Durability Group:	SGMXEEVNN002
Test Group:	SGMXT00.0005
Durability Group Description:	Battery Electric Vehicle
Test Group Description:	2-Motor (1 Front, 1 Rear)
Applicable Standards:	MDPV BIN0/ZEV
Carlines Covered by Evaporative Family:	GMC SIERRA EV Chevrolet SILVERADO EV
Vehicles Tested:	2SE1E277
For Questions, Contact:	C. Lounds (313) 550-0024

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(Included in Initial Application)

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Part 2

(Included in Final Application)

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TEST VEHICLE DESCRIPTION

Data Vehicle Selection

Test Group	SGMXT00.0005
Combined Motor Output - kW	377
Battery Size (Module Count)	20
Engine Code	1
Model	CT35843
Transmission Type/Code	A1 /1 (Electric Motor)
Test Weight Class Basis (ALVW or LVW)	LVW
Test Weight Class – lbs	9000
GVWR – lbs	9990
Roadload HP	21.3
Drive Unit Ratio(s)	13.26 Front / 11.63 Rear
N/V Ratio – rpm/mph	122.9
Tires	LT275/50R22
Vehicle/EPA Config No./GM Config No.	2SE1E277/00/000

NOTE: For complete vehicle information, see vehicle information submitted in VERIFY database.

Data Vehicle Selection Justification – This vehicle represents the worst-case range pick for this test group.

Certification Summary Information Report

Manufacturer	General Motors LLC	Manufacturer Code	GMX
Test Group	SGMXT00.0005	Evaporative/Refueling Family	--
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	08/12/2024 07:56:45 AM
Model Year	2025		

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: Electric Motor

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Electricity	--	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	Yes
Fuel Cell Indicator	No	EPA Vehicle Class	M6, MDPV
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--
Federal Clean Fuel Vehicle ILEV	--	California Partial Zero Emissions Vehicle Indicator	--
Durability Group Name	SGMXEEVNN002	Durability Group Equivalency Factor	1
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	--	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	SGMXT00.0005
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group		SGMXT00.0005		Evaporative/Refueling Family		--					
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	983 - SIERRA EV	Federal	4-Wheel Drive	Automatic	1	No				
General Motors LLC	4 - GMC	983 - SIERRA EV	California + CAA Section 177 states	4-Wheel Drive	Automatic	1	No				
General Motors LLC	3 - Chevrolet	50 - SILVERADO EV	Federal	4-Wheel Drive	Automatic	1	No				
General Motors LLC	3 - Chevrolet	50 - SILVERADO EV	California + CAA Section 177 states	4-Wheel Drive	Automatic	1	No				
Engine Description											
Hybrid Type		--		Hybrid Description		--					
Engine Type		--		Mfr Engine Description		--					
Engine Block Arrangement		--		Mfr Engine Block Arrangement Description		--					
Camless Valvetrain Indicator		--		Oil Viscosity/Classification							
Number of Cylinders/Rotors		--		Mechanically Variable Compression Ratio Indicator		--					
After Treatment Device(s) (ATD)											
Mfr After Treatment Device (ATD)											
Comments		--									
Direct Ozone Reduction (DOR) Device		--									
Mfr Emission Control Device Comments		--									
Official Test Numbers											
Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity		--	--	--	--	--	--	--	--	--	--
Official Charge Depleting Test Numbers											
Test Group Fuel		UDDS		Highway							
Electricity		--		--							

Certification Summary Information Report

Test Group	SGMXT00.0005	Evaporative/Refueling Family	--
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	336	Battery Energy Capacity	580.0
Battery Specific Energy	158.0	Battery Charger Type	Both
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	Driver Controlled Regenerative Braking	No
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	2		
Motor/Generator Type 1	AC Permanent Magnet	Rated Motor/Generator Power	189
Motor/Generator Type 2	AC Permanent Magnet	Rated Motor/Generator Power	189
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	--		

Test Group	SGMXT00.0005	Evaporative/Refueling Family	--
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Emission Data Vehicle Information

Vehicle ID / Configuration	2SE1E277 / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	SGMXT00.0005	Original Evaporative/Refueling Family	--
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	CHEVROLET	Represented Test Vehicle Model	SILVERADO EV
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Leak Family Details

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

Drive Source and Fuel#	Drive Source	Fuel
1	Electric Motor	Electricity

Hybrid Indicator	No	Multiple Fuel Combustion	--
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Fuel Cell Indicator	No	Rechargeable Energy Storage System, if 'Other'	--
Rechargeable Energy Storage System	Battery(s)		
Off-board charge Capable Indicator	Yes		
Odometer Correction -- Initial	0	Odometer Correction Factor	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	1	Rated Horsepower	645
Displacement (liters)	0.001		
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--
Charge Air Cooler Type	--	Drive Mode While Testing	All Wheel Drive
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	8535	Equivalent Test Weight (pounds)	9000
GVWR (lbs)	9990	N/V Ratio	122.9
Axle Ratio	1		
Transmission Type	Automatic	# of Transmission Gears	1
Transmission Lockup	No	Creeper Gear	No

Dynamometer Coefficients:

Target Coefficients				Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	57.69	0.3383	0.03415	-15.95	0.3814	0.02754	21.3

Emission Control Device Comments

BEV

Certification Summary Information Report

Test Group	SGMXT00.0005	Evaporative/Refueling Family	--
Manufacturer Test Vehicle Comments	CARB Data Configuration		

Certification Summary Information Report

Test Group	SGMXT00.0005	Evaporative/Refueling Family	--																		
Test #	SGMX10087354	Test Procedure	77 - Multi-Cycle Test (MCT)																		
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity																		
Test Date	08/03/2024	Fuel	N/A																		
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	2566	Odometer Units	M																		
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--																		
State of Charge Delta	--																				
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																		
PHEV/EV Charge Depleting Test Information																					
Recharge Event Voltage	241	Recharge Event Energy (kiloWatt-hours)	202.2221																		
Charge Depleting Range (Calculated miles)	586.056	Charge Depleting Range (Actual miles)	586.056																		
Charge Depleting Range Highway (Calculated miles)	489.635	Derived 5-Cycle Coefficient Model Year	--																		
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	586.056																		
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--																		
Charge Depleting Bag/Phase #1																					
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.445</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>1.27477</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.36632</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>1.77966</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.7199</td></tr><tr><td>Manufacturer Fuel Economy</td><td>36.53324</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.445	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	1.27477	Drive Trace Energy Economy Rating	0.36632	Drive Trace Inertia Work Ratio Rating	1.77966	Integrated DC KW-HRS	2.7199	Manufacturer Fuel Economy	36.53324
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Charge Depleting Bag/Phase #2																					

Certification Summary Information Report

Test Group	SGMXT00.0005	Evaporative/Refueling Family	--																		
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.256</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>1.07102</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.158739</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>1.58397</td></tr><tr><td>Integrated DC KW-HRS</td><td>3.8265</td></tr><tr><td>Manufacturer Fuel Economy</td><td>37.30987</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.256	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	1.07102	Drive Trace Energy Economy Rating	0.158739	Drive Trace Inertia Work Ratio Rating	1.58397	Integrated DC KW-HRS	3.8265	Manufacturer Fuel Economy	37.30987		
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Charge Depleting Bag/Phase #3																					
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.442</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.938912</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.226306</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>1.07417</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.3262</td></tr><tr><td>Manufacturer Fuel Economy</td><td>31.25773</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.442	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.938912	Drive Trace Energy Economy Rating	0.226306	Drive Trace Inertia Work Ratio Rating	1.07417	Integrated DC KW-HRS	2.3262	Manufacturer Fuel Economy	31.25773		
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Charge Depleting Bag/Phase #4																					
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>317.659</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0</td></tr><tr><td>Integrated DC KW-HRS</td><td>149.6561</td></tr><tr><td>Manufacturer Fuel Economy</td><td>47.11219</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	317.659	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0	Drive Trace Energy Economy Rating	0	Drive Trace Inertia Work Ratio Rating	0	Integrated DC KW-HRS	149.6561	Manufacturer Fuel Economy	47.11219		
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Integrated DC KW-HRS	149.6561																				
Manufacturer Fuel Economy	47.11219																				
Charge Depleting Bag/Phase #5																					

Certification Summary Information Report

Test Group	SGMXT00.0005	Evaporative/Refueling Family	--																		
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Manufacturer Fuel Economy	30.41236																				
Charge Depleting Bag/Phase #6																					
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.258</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-2.57087</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.982237</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-3.07494</td></tr><tr><td>Integrated DC KW-HRS</td><td>3.7229</td></tr><tr><td>Manufacturer Fuel Economy</td><td>36.29265</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.258	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-2.57087	Drive Trace Energy Economy Rating	-0.982237	Drive Trace Inertia Work Ratio Rating	-3.07494	Integrated DC KW-HRS	3.7229	Manufacturer Fuel Economy	36.29265		
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Charge Depleting Bag/Phase #7																					
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.448</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.466833</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.69408</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.780993</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.257</td></tr><tr><td>Manufacturer Fuel Economy</td><td>30.30344</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.448	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.466833	Drive Trace Energy Economy Rating	-0.69408	Drive Trace Inertia Work Ratio Rating	-0.780993	Integrated DC KW-HRS	2.257	Manufacturer Fuel Economy	30.30344		
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Manufacturer Fuel Economy	30.30344																				
Charge Depleting Bag/Phase #8																					

Certification Summary Information Report

Test Group	SGMXT00.0005	Evaporative/Refueling Family	--																		
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>27.337</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0</td></tr><tr><td>Integrated DC KW-HRS</td><td>13.4191</td></tr><tr><td>Manufacturer Fuel Economy</td><td>49.08768</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	27.337	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0	Drive Trace Energy Economy Rating	0	Drive Trace Inertia Work Ratio Rating	0	Integrated DC KW-HRS	13.4191	Manufacturer Fuel Economy	49.08768
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Manufacturer Test Comments	--																				
Fuel Properties																					

Certification Summary Information Report

Test Group		SGMXT00.0005			Evaporative/Refueling Family			--	
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		MDPV (Federal Tier 2, GVWR 8501-10000)			Standard Level			Federal Tier 3 Bin 0	
Fuel		Electricity			Test Procedure			Multi-Cycle Test (MCT)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.0	0.0
150,000 miles	CREE	--	--	--	--	--	--	0.0	0.0
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)			Standard Level			California ZEV	
Fuel		Electricity			Test Procedure			Multi-Cycle Test (MCT)	
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	CREE	--	--	--	--	--	--	0.0	0.0
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)			Standard Level			California ZEV	
Fuel		Electricity			Test Procedure			CVS 75 and later (w/o can. load)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.0	0.0
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		MDPV (Federal Tier 2, GVWR 8501-10000)			Standard Level			Federal Tier 3 Bin 0	
Fuel		Electricity			Test Procedure			CVS 75 and later (w/o can. load)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.0	0.0

Certification Summary Information Report

Test Group		SGMXT00.0005	Evaporative/Refueling Family		--
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		N2O	Nitrous Oxide	
CO	Carbon Monoxide		SPITBACK	Spitback Hydrocarbon in grams	
CO2	Carbon dioxide		AMP-HRS	Integrated Amp-hours	
CREE	Carbon-Related Exhaust Emissions		START-SOC	System Start State of Charge Watt-hours	
OPT-CREE	Optional Carbon-Related Exhaust Emissions		END-SOC	System End State of Charge Watt-hours	
NOX	Nitrogen Oxide		ACT-DISTANCE	Actual Distance Driven (miles)	
PM	Particulate Matter		AS-VOLT	Average System Voltage	
PM-COMP	SFTP Composite Particulate Matter		CO2 BAG 1	Bag 1 Carbon Dioxide	
HC-NM	Non-methane Hydrocarbon		CO2 BAG 2	Bag 2 Carbon Dioxide	
OMHCE	Organic material Hydrocarbon Equivalent		CO2 BAG 3	Bag 3 Carbon Dioxide	
OMNMHCE	Organic material non-methane HC equivalent		CO2 BAG 4	Bag 4 Carbon Dioxide	
NMOG	Non-methane organic gases		NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	
HCHO	Formaldehyde		NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	
H3C2HO	Acetaldehyde		DT-IWRR	Drive Trace Inertia Work Ratio Rating	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03		DT-ASCR	Drive Trace Absolute Speed Change Rating	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides		DT-EER	Drive Trace Energy Economy Rating	
CO-COMP	SFTP Composite Carbon Monoxide		COMB-CREE	Combined Carbon-Related Exhaust Emissions	
ETHANOL	C2H5OH - Ethanol		COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
FE BAG 1	Bag 1 Fuel Economy		HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
FE BAG 2	Bag 2 Fuel Economy		METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
FE BAG 3	Bag 3 Fuel Economy		N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
FE BAG 4	Bag 4 Fuel Economy		LEAK-DIA	Effective Leak Diameter (inches)	
MFR FE	Manufacturer Fuel Economy		LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
HC	Hydrocarbon for Running Loss and ORVR		CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
METHANE	CH4 - Methane		KW-HRS	Integrated DC KW-HRS	
METHANOL	CH3OH - Methanol				
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		L3ULEV340	California LEV-III ULEV340	
B2	Federal Tier 2 Bin 2		L3ULEV250	California LEV-III ULEV250	
B3	Federal Tier 2 Bin 3		L3ULEV200	California LEV-III ULEV200	
B4	Federal Tier 2 Bin 4		L3SULEV170	California LEV-III SULEV170	

Certification Summary Information Report

Test Group		SGMXT00.0005	Evaporative/Refueling Family		--
B5	Federal Tier 2 Bin 5		L3SULEV150	California LEV-III SULEV150	
B6	Federal Tier 2 Bin 6		L3LEV630	California LEV-III LEV630	
B7	Federal Tier 2 Bin 7		L3ULEV570	California LEV-III ULEV570	
B8	Federal Tier 2 Bin 8		L3ULEV400	California LEV-III ULEV400	
B9	Federal Tier 2 Bin 9		L3ULEV270	California LEV-III ULEV270	
B10	Federal Tier 2 Bin 10		L3SULEV230	California LEV-III SULEV230	
B11	Federal Tier 2 Bin 11		L3SULEV200	California LEV-III SULEV200	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		T3B160	Federal Tier 3 Bin 160	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		T3B125	Federal Tier 3 Bin 125	
L2	California LEV-II LEV		T3B110	Federal Tier 3 Transitional Bin 110	
L2OP	California LEV-II LEV Optional		T3B85	Federal Tier 3 Transitional Bin 85	
U2	California LEV-II ULEV		T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
S2	California LEV-II SULEV		T3B70	Federal Tier 3 Bin 70	
ZEV	California ZEV		T3B50	Federal Tier 3 Bin 50	
OT	Other		T3B30	Federal Tier 3 Bin 30	
T1	Federal Tier 1		T3B20	Federal Tier 3 Bin 20	
PZEV	California PZEV		T3B0	Federal Tier 3 Bin 0	
L2LEV160	California LEV-II LEV160		HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
L2ULEV125	California LEV-II ULEV125		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
L2SULEV30	California LEV-II SULEV30		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2LEV395	California LEV-II LEV395		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2ULEV340	California LEV-II ULEV340		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
L2LEV630	California LEV-II LEV630		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
L2ULEV570	California LEV-II ULEV570		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
L3LEV160	California LEV-III LEV160		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
L3ULEV125	California LEV-III ULEV125		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
L3ULEV70	California LEV-III ULEV70		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
L3ULEV50	California LEV-III ULEV50		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L3SULEV30	California LEV-III SULEV30		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L3SULEV20	California LEV-III SULEV20		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L3LEV395	California LEV-III LEV395		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
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		
F	2-Wheel Drive, Front	A	All Wheel Drive		

Certification Summary Information Report

Test Group	SGMXT00.0005	Evaporative/Refueling Family	--
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

Battery Electric Vehicle (BEV) System Description

Electric Drive Unit

Three 3-Phase AC Permanent Magnet Electric Motors (1 Front, 1 Rear)

Outputs at 100% Inverter limit:

Front Motor: 189kW / 404Nm

Rear Motor: 189kW / 404Nm

Battery

Lithium Ion Battery Pack

170 kWh Pack Energy Capacity (Rated C/3)

Lithium Ion Battery Pack

205 kWh Pack Energy Capacity (Rated C/3)

Transmission

Two automatic single speed drive units (One front unit / One rear unit)

Regenerative Braking System

During coasting and during brake applies, the electric motor will be used to decelerate the vehicle and provide electricity to the high voltage battery. The amount of charge the high voltage battery will accept will vary during normal operation depending on the battery state of charge and temperature.

Additional Information Provided in Owner's Manual Documents

Proper recharging procedure

Description of warning system(s) for malfunctions

Starting and shifting procedures

Vehicle safety with the following subtopics:

Information supplied to the customer for safe operation of the vehicle

Information on safe handling of the battery system

Description of emergency procedures

Engine Code Information

Base Engine Code	1	2	3
EC Derivatives			
Test Group	SGMXT00.0005	SGMXT00.0005	SGMXT00.0005
Durability Group	SGMXEEVNN002	SGMXEEVNN002	SGMXEEVNN002
Engine RPO	XRJ	XRJ	XRJ
Disp, liters	0.0	0.0	0.0
Trans RPO	P8N	P8N	P8N
Trans Type	A1	A1	A1
Product Code	--	--	--
Emission RPO	NF6	NF6	NF6
Emissions Category	ZEV	ZEV	ZEV
Vehicle Type	TRUCK	TRUCK	TRUCK
Regulatory Agencies	C	C	C
Sales Area	FA/CA	FA/CA	FA/CA
Design Altitude	Both	Both	Both
A/C Equipped	Yes	Yes	Yes
Driver Select Device	OPD-Off, OPD-On, OPD-High, Sport, Relaxed, WOW/MPM, Tow/Haul	OPD-Off, OPD-On, OPD-High, Tow/Haul	OPD-Off, OPD-On, OPD-High, Tow/Haul
Police Only	No	No	No
Horsepower @ RPM	645	510	510
Torque @ RPM	1037	786	786
Emission Ctrl Sys	NA	SFI/TWC/2HO2S(2)/2TWC	SFI/TWC/2HO2S(2)/2TWC
TapUp/TapDown	No	No	No
Active Fuel Management	Non AFM	Non AFM	Non AFM
Description	20MOD MY MODE	20MOD WT	24MOD WT

Vehicle Parameters - Certificate Coverage

Durability Group SGMXEEVNN002
TestGroup SGMXT00.0005

EC	Der	Eng RPO	Disp	Evap Family	Evap Code	Model	Car Line	Trans Type/Code	Final Drive Ratio	GVWR	Tire	N/V	Loaded Weight Veh/DA	TWC Meth	TWC	TLHP	F0	F1	F2	RLHP RPO	Drv Sys	Note
1		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/1	1.00	9900	LT265/70R18 ALS BRI	123.7	8520/403	LVW	8500	20.2	53.51	0.2776	0.03351	&ETI&FE2&K28&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/1	1.00	9900	LT275/50R22 ALS BRI	122.9	8520/403	LVW	8500	21.0	55.46	0.3289	0.03415	&ETI&FE2&K28&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/1	1.00	9900	LT275/50R22 ALS BRI	122.9	8835/420	LVW	9000	21.3	57.69	0.3383	0.03415	&ETI&FE2&K2O&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/1	1.00	9900	LT275/50R24 ALS	115.7	8835/420	LVW	9000	21.0	55.04	0.3149	0.03476	&ETI&F47&K2O&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/1	1.00	9990	LT265/70R18 ALS BRI	123.7	8520/403	LVW	8500	20.2	53.51	0.2776	0.03351	&ETI&FE2&K28&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/1	1.00	9990	LT275/50R22 ALS BRI	122.9	8520/403	LVW	8500	21.0	55.46	0.3289	0.03415	&ETI&FE2&K28&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/1	1.00	9990	LT275/50R22 ALS BRI	122.9	8835/420	LVW	9000	21.3	57.69	0.3383	0.03415	&ETI&FE2&K2O&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/1	1.00	9990	LT275/50R24 ALS	115.7	8835/420	LVW	9000	21.0	55.04	0.3149	0.03476	&ETI&F47&K2O&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	TT35843	SIERRA EV	A1/1	1.00	9900	LT275/50R24 ALS	115.7	8895/421	LVW	9000	21.0	55.04	0.3149	0.03463	&ETI&F47&K2O&S80&URC	4D	--
1		XRJ	0.0	SGMXNA	NA	TT35843	SIERRA EV	A1/1	1.00	9990	LT275/50R24 ALS	115.7	8895/421	LVW	9000	21.0	55.04	0.3149	0.03463	&ETI&F47&K2O&S80&URC	4D	--
2		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9900	LT265/70R18 ALS BRI	123.7	8455/401	LVW	8500	20.0	53.51	0.2776	0.03299	&5GD&ETI&FE2&K28&S80	4D	--
2		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9900	LT265/70R18 ALS BRI	123.7	8486/404	LVW	8500	20.0	53.51	0.2776	0.03299	&5GD&ETI&FE2&K2O&S80	4D	--
2		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9900	LT275/50R22 ALS BRI	122.9	8455/401	LVW	8500	20.8	55.46	0.3289	0.03363	&5GD&ETI&FE2&K28&S80	4D	--
2		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9900	LT275/50R22 ALS BRI	122.9	8486/404	LVW	8500	20.8	55.46	0.3289	0.03363	&5GD&ETI&FE2&K2O&S80	4D	--
2		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9990	LT265/70R18 ALS BRI	123.7	8455/401	LVW	8500	20.0	53.51	0.2776	0.03299	&5GD&ETI&FE2&K28&S80	4D	--
2		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9990	LT265/70R18 ALS BRI	123.7	8486/404	LVW	8500	20.0	53.51	0.2776	0.03299	&5GD&ETI&FE2&K2O&S80	4D	--
2		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9990	LT275/50R22 ALS BRI	122.9	8455/401	LVW	8500	20.8	55.46	0.3289	0.03363	&5GD&ETI&FE2&K28&S80	4D	--
2		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9990	LT275/50R22 ALS BRI	122.9	8486/404	LVW	8500	20.8	55.46	0.3289	0.03363	&5GD&ETI&FE2&K2O&S80	4D	--
3		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9900	LT265/70R18 ALS BRI	123.7	8843/428	LVW	9000	20.3	55.56	0.2839	0.03300	&5GD&ETN&FE2&K2O&S80	4D	--
3		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9900	LT275/50R22 ALS BRI	122.9	8843/428	LVW	9000	21.2	57.69	0.3383	0.03363	&5GD&ETN&FE2&K2O&S80	4D	--
3		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9990	LT265/70R18 ALS BRI	123.7	8843/428	LVW	9000	20.3	55.56	0.2839	0.03300	&5GD&ETN&FE2&K2O&S80	4D	--
3		XRJ	0.0	SGMXNA	NA	CT3584	SILVERADO EV	A1/2	1.00	9990	LT275/50R22 ALS BRI	122.9	8843/428	LVW	9000	21.2	57.69	0.3383	0.03363	&5GD&ETN&FE2&K2O&S80	4D	--

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

TRANSMISSION INFORMATION

Test Group ID	SGMXT00.0005	SGMXT00.0005
Transmission Code	1	2
Transmission RPO	P8N	P8N
Transmission Type	A1	A1
Drive Gear Ratios	11.63	11.63
Chain Drive Ratio	NA	NA
Shift Calibrations	Computer Controlled	Computer Controlled
Torque Converter Diameter	NA	NA
Torque Converter Stall Torque Ratio	NA	NA
Torque Converter Lockup RPM'S	Computer Controlled	Computer Controlled
Torque Converter Stall Torque Speed	NA	NA
Multimode Feature - # of Modes	15	6
Shift Indicator Light	NA	NA
Description	My Mode	WT
TapUp/TapDown	NO	NO

SPECIAL TEST INSTRUCTIONS

OTHER

Anti-Lock Braking System (ABS):

This vehicle is equipped with ABS systems. AWD dynamometer and dyno mode is required to allow the vehicle to perform on the dynamometer in a representative manner. Please contact General Motors Compliance and Certification organization for support on enabling dyno mode.

Traction Control System (TCS):

This vehicle is equipped with TCS. AWD dynamometer and dyno mode is required to allow the vehicle to perform on the dynamometer in a representative manner. Please contact General Motors Compliance and Certification organization for support on enabling dyno mode.

Emission Test Special Vehicle Cooling:

When conducting an emission test, the front cooling fan is placed 12 inches from the floor to the bottom of the fan to match the vehicle air inlet area.

Automatic Light Control:

This vehicle is equipped with automatic light control. Testing should be completed with headlights off. To enable or disable automatic headlight control, on the center screen, navigate to Controls > Lights > Headlights, and select the Off radial button or the Auto radial button.



SPECIAL TEST INSTRUCTIONS

OTHER, CONTINUED

Daytime Running Lights (DRL):

Daytime running lights must remain enabled during any emission or fuel economy testing.

SPECIAL TEST INSTRUCTIONS

Dyno Mode (Manual Entry):

1. Follow instructions to enter PSA Mode. *Do not have foot on the brake
2. Press Brake pedal lightly (between 5% and 20% or equivalent braking to put vehicle in gear).
3. Press Accelerator pedal more than 80% (WOT is fine).
4. Select one of the options below:
 - a. Open and shut the driver door SIX TIMES within 10 seconds of the first cycle of open/shut.
 - b. Alternatively, the driver seat belt can be used. Buckle and unbuckle it 6 times within 10 seconds of the first buckle/unbuckle

If successful, the vehicle instrument cluster will illuminate the indicator lights for ABS, Brake, Service Park Brake, and Traction Control.

Entry Methods:



5% < Brake < 20%
+
Accel Pedal > 80%
+
6x Driver door (or Driver Seatbelt)
Or
Diagnostic Message to \$4C1D

VEHICLE STARTING INSTRUCTIONS

Starting Procedure:

The vehicles within this Test Group do not contain a traditional on/off function facilitated by an electronic push button start or key-based ignition. These vehicles utilize a Passive Power Mode that eliminates the need for a traditional button to turn the vehicle on or off. Entering the vehicle with the Remote Keyless Entry (RKE) Transmitter and following the below instructions will allow entering either Propulsion System Active (PSA) or Run Mode.

Propulsion System Active (PSA) Mode:

This position is for starting and driving. Enter the vehicle with the RKE Transmitter and press the brake. A green vehicle ready light will display near the bottom-center in the instrument cluster when the vehicle is ready to be driven. The instrument cluster also displays an active battery gauge when the vehicle is ready to be driven. Note: the CHECK ENGINE light will not be illuminated unless there is an issue with the vehicle.



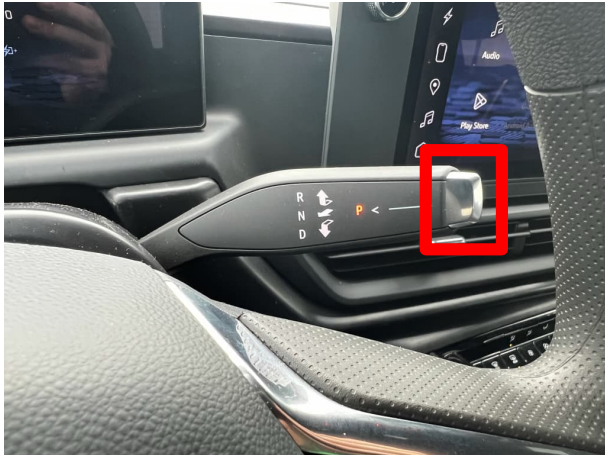
Run Mode:

Enter the vehicle while it is OFF with the RKE Transmitter and leave the driver's door open. Press the accelerator pedal three times in quick succession. On the third press, hold the pedal down until the Driver Information Center illuminates. The vehicle ready light will not illuminate if run mode has been entered.



Stopping the Vehicle/Off:

If intending to turn off the vehicle after it has been in Drive or Reverse gears and the door is closed: shift the vehicle to Park by pressing the button on the end of the stalk and open the Driver's door. This mode is intended to cover most normal driving scenarios encountered and functions as part of the Passive Power Mode.



If the vehicle is in Run Mode, or if the vehicle has not completed a drive cycle after entering PSA Mode, an additional button will appear on the center screen that is to be used to turn the vehicle off. Press the virtual Power Off Button and open the Driver's door.



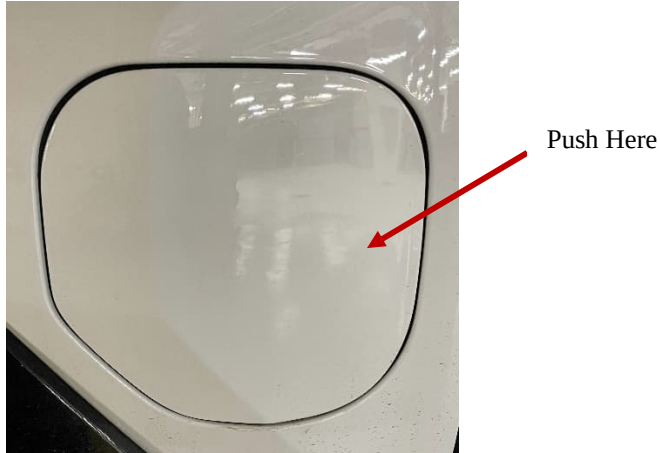
BATTERY CHARGING AND TESTING PROCEDURE INFORMATION

General Battery Charging Procedures:

Reference Owner's Manual for additional information.

Charging Plug-In Charging AC/DC Charge Cord Handle:

Open charge port door by pushing on the plug icon at the rear of the door.



Charge Port



DC Charge Port (Accessed by removing cap over lower portion of plug - See Owner's Manual for more information)

Charge times will vary with extreme hot or cold conditions. There are options to program how the vehicle is charged. See Charging section in Owner's Manual. While the charge cord is plugged into the vehicle, the vehicle cannot be driven.

BATTERY CHARGING AND TESTING PROCEDURE INFORMATION

AC Charging Start Charge:

1. Make sure the vehicle is in park and turned off.
2. Push the rearward edge of the charge port door in and release to open the door.
3. Connect the provided 240v charger.
4. Plug the charge cord into the metered 240V electrical outlet. See Electrical Requirements for Battery Charging in Owner's Manual. Verify the charge cord "power" status light is illuminated. Plug in the vehicle plug of the charge cord into the charge port on the vehicle. Verify that the Charging Status Indicator (CSI) illuminates. The CSI is the headlights of the vehicle.

When the vehicle is plugged in and the vehicle power is off, the CSI indicates the following:

All lights are blue – Battery is fully charged.

The system may be thermally conditioning the battery during any of the states above, requiring electrical energy to be transferred to the vehicle. If the vehicle is plugged in and vehicle power is on, the CSI will be blinking green. The same is true during a remote start if the vehicle is plugged in.

End Charge:

1. Unlock the vehicle with the key fob to disarm the charge cord theft alert.
2. Unplug the vehicle plug of the charge cord from the vehicle.
3. Close the charge port door by pressing firmly on the plug icon at the rear of the door.
4. Unplug the charge cord from the electrical outlet.

BATTERY CHARGING AND TESTING PROCEDURE INFORMATION

Limiting Recharge Level:

For tests required to start at a lower State of Charge (SOC) than 100%, it may be necessary to utilize the vehicle's charge limiting feature. To use the charge limiting feature via the center screen: Select Charging > Next Charge > Adjust the slider to the desired maximum state of charge. This is a latching feature that will persist until changed, therefore, additional adjustments may be necessary depending on the order of tests conducted.



BATTERY CHARGING AND TESTING PROCEDURE INFORMATION

GENERAL TESTING PROCEDURES

EV Electric Range Test Sequence for GM Vehicles:

SAE J1634 (As Revised 2017, Section 8) shall be followed for all EV testing for GM Test Group SGMXT00.0005. Steady State at 65mph.

Vehicle Verification

Verify that vehicle has at least 80% SOC worth of charge for the dyno determination sequence.
Verify that the Hioki current sensors (contact GM for support) are installed and secured on the vehicle. Device to read high voltage battery voltage is connected (contact GM for support).

High Voltage Connections – Extreme Caution required

For safety reason GM does not provide any vehicle connections nor directions as to where to connect a Hioki to collect current/voltage data. Experienced personnel familiar with HV should reference the service manual for additional information.

** Note: GM may supply Hioki attachment points on Certification test vehicles supplied to the EPA for Confirmatory Testing.

Crabbing Vehicle

Vehicle shall be crabbed or pushed to charging station, test site, etc. while in any test sequence.

BATTERY CHARGING AND TESTING PROCEDURE INFORMATION

MULTI-CYCLE RANGE TEST

Soak/Charging:

Charge time not to exceed soak time. Minimum charge time of 12 hours 240 VAC CONTINUOUS charging. Disconnect the charger just prior to crabbing vehicle to site.

Prior to Test:

- Verify that all vehicle accessories are turned off
- Road speed fan on during test
- Hood closed
- Emission bags off
- Make sure no battery chargers are connected to 12VDC system
- Disable Dyno Augmented Braking from Dyno controller.
- Disable traction control (contact GM for support)
- Start vehicle by placing foot on brake and pressing the power button. Confirm "Ready" light on cluster is green (icon is on lower right side of cluster by PRNDL).
- Turn off the HVAC system completely by turning off auto and setting the fan to off.
- Turn off radio console stack completely by holding the radio power button until the display asks if you want to fully shut down the console stack. Select yes and the display should turn off.

During 10min Soak Periods:

- Vehicle keyed off and put in Park
- Shifter button completely released
- Driver door open and closed
- Vehicle hood closed
- Road speed fan off

End of Test Criteria:

- The official end of test criteria is when a drive trace error occurs due to the vehicle being unable to keep up with the trace (two second driver violation), per SAE J1634.
- Bring the vehicle to a controlled stop with the brake within 10 seconds

After UDDS and Highway Test Sequence(s):

To place vehicle in neutral for moving and dyno alignment:

- Follow neutral instructions from Dyno Determination instructions.
- Disconnect all CAN equipment on driver OBD-II ports.
- Verify that car systems power down. With keys left in car:
 - o Close all doors – horn will sound 3 quick beeps
 - o If no beeps, cycle accessory power again

BATTERY CHARGING AND TESTING PROCEDURE INFORMATION

5 CYCLE FACTOR TESTS

Soak/Charging:

For the US06 Combination Test and SC03 Test, the test should be started with an SOC of 55% to target a midpoint SOC of 50% as closely as possible. The Cold FTP20 Test should be started with an SOC of 70%. To limit the recharge level, please see the Limiting Recharge Level of this Application.

Prior to Test:

Please refer to the directions listed in the Prior to Test section for the Multi Cycle Range Test.

During Soak Periods:

Please refer to the directions listed in the During 10min Soak Periods section for the Multi Cycle Range Test.

End of Test Criteria:

The official end of test criteria is when the drive trace has been completed for the battery of 5 Cycle Factor tests. When the test ends, bring the vehicle to a controlled stop with the brake within 10 seconds.

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>

N/A – Not Applicable



April 20, 2023

RP072

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 2024 Test Group
RGMXT00.0005

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

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

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

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

Sincerely,

J. G. King

J. G. King
Total Certification Engineer
Compliance & Certification

JGK/np

general motors

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



April 20, 2023

RP073

Mr. A. Lyons, Chief
Emissions Certification and Compliance Division
Air Resources Board
9480 Telstar Avenue, Suite 4
El Monte, CA 91731

Dear Mr. Lyons:

Subject: Request for Executive Order - General Motors 2024 Test Group RGMXT00.0005

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 believes 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.

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

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

Sincerely,

J. G. King

J. G. King
Total Certification Engineer
Certification & Compliance

JGK/np

general motors

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

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**VEHICLE EMISSION
CONTROL INFORMATION**



**GENERAL
MOTORS
LLC**

Conforms to Regulations: 2025
U.S. EPA class / stds: MDPV / TIER3
California class / stds: MDV / ZEV
Group: SGMXT00.0005
Evap: N/A
CA OBD: N/A

Fuel: Electric
02MY25EN0XRJCGO58

Supplemental ZEV Application for Certification - SGMXT00.0005

<u>Section No.</u>	<u>Title</u>
01.00.00	Communications See GM Application for Certification SGMXT00.0005
.01.00	Mailing Information See GM Application for Certification SGMXT00.0005
.01	Certification Information See GM Application for Certification SGMXT00.0005
.02	Responsible official See GM Application for Certification SGMXT00.0005
02.00.00	Confidential Information See GM Application for Certification SGMXT00.0005
.01.00	Statement of confidentiality See GM Application for Certification SGMXT00.0005
.02.00	Test vehicle selection "Worst case" test vehicle selection and manufacturer defined criteria if more than one model offered (e.g. 2-door vs 4-door). See GM Application for Certification SGMXT00.0005
.03.00	Projected California sales See GM Application for Certification SGMXT00.0005
03.00.00	Facilities, equipment, and test procedures (Manufacturers to keep information regarding facilities and equipment on file.) Testing was conducted at GM facilities as well as EPA facilities – per SAE J1634 procedure (as Revised 2017, Section 8) Steady State at 65 mph
.01.00	Procedure to determine mass emissions of the fuel-fired heater Not applicable
.02.00	Battery pre-conditioning procedures (if necessary) None –Fully Charged per SAE J1634 procedure (as Revised 2017, Section 8)
04.00.00	(Reserved)
05.00.00	(Reserved)

Supplemental ZEV Application for Certification - SGMXT00.0005

<u>Section No.</u>	<u>Title</u>
06.00.00	Maintenance See Owner's Manual
.01.00	Test vehicle scheduled maintenance None
.02.00	Recommended customer maintenance schedule See Owner's Manual
.03.00	Lubricants and heater fuels, if any See Owner's Manual
07.00.00	Vehicle Emission Control Information (VECI) and Environmental Performance (EP) Labels
.01.00	VECI Label locations Under hood
.02.00	Sample emission control information labels See GM Application for Certification SGMXT00.0005
.03.00	Sample EP Label (Formerly called the Smog Index label) Per agreement with GM and CARB EPL is now incorporated in the vehicles Window sticker. Smog score value is 10. Actual window sticker not available until EPA Certificate and Fuel Economy Labels are available
.04.00	Statement of compliance See GM Application for Certification SGMXT00.0005
08.00.00	General technical description Manufacturer's sales brochures or owner's manual may be submitted to satisfy the requirements in this section See Owner's Manual
.01.00	Description of Propulsion System Single speed fixed ratio direct drive with 13.26 front axle ratio and 11.63 rear axle ratio. Energy stored and provided by 336V or 403V nominal lithium ion battery
.02.00	Description of Motor(s) See GM Application for Certification SGMXT00.0005 – Permanent Magnet 3-phase electric machine
.03.00	Description of Batteries See GM Application for Certification SGMXT00.0005 – Lithium Ion, 336V nominal, 480 cells / 403V nominal, 576 cells
.01	Battery charging capacity See GM Application for Certification SGMXT00.0005 – 580 Ahr total pack capacity

Supplemental ZEV Application for Certification - SGMXT00.0005

<u>Section No.</u>	<u>Title</u>
08.03.02	Self-discharge information Not applicable
.03	Description of thermal management system Liquid heating and cooling system
.04	Definition of end-of-life The rechargeable energy storage system (RESS) is a collection of battery cells used for propulsion which are integrated into modules. For purposes of replacement, a module is no longer considered acceptable whenever any given cell has deviated by an unacceptable magnitude such that it would affect the safety of the vehicle.
.05	Description of battery disposal plan See Owner's Manual Battery is recycled using GM contractor for service and warranty replacements. GM also provides recycling resources at www.recyclemybattery.com .
.04.00	Description of Controller/Inverter High-voltage DC to high-voltage 3-phase AC
.05.00	Description of Transmission Single speed, fixed ratio
.06.00	Description of climate control system
.01	Electrical Heat Pump Not applicable
.02	Climate control system logic See HVAC section in Owner's Manual
.03	(Reserved) Not applicable
.07.00	Description of Regenerative Braking System
.01	Control Logic Brake system will recover energy until the driver requests more braking power than the traction system can deliver.
.02	Percentage of braking performed on road by each axle Energy is recovered from both axles.
.08.00	Description of charger On-board, liquid cooled, 11.2kW (240V), 40 Amp wall service on 240V On-board, liquid cooled, 19.6kW (240V), 80 Amp wall service on 240V
.01	Proper recharging procedures: see charging section of owner's manual

Supplemental ZEV Application for Certification - SGMXT00.0005

<u>Section No.</u>	<u>Title</u>
.02	Power requirements necessary to recharge vehicle Minimum 1.8kW (15 Amp wall service on 120V), up to 19.6 kW (80 Amp wall service on 240V)
.09.00	Accessories which draw energy from the batteries Cabin Heater, Air Conditioner, Battery Heater, Accessory Power Module (12V)
.10.00	Other unique features (e.g. solar panels) SAE Type 3 Fast Charging
.11.00	Description of warning system(s) for maintenance / malfunction Service Vehicle Soon indicator on instrument panel cluster.
.01	Cut off terminal voltages for prevention of battery damage 200V
09.00.00	(Reserved)
10.00.00	(Reserved)
11.00.00	Starting and shifting schedules See GM Application for Certification SGMXT00.0005
12.00.00 through 16.00.00	(Reserved)
17.00.00	California requirements
.01.00	Statement of compliance
.01	General statement
.02	Drivability statement
.02.00	Supplemental Data and Certification Review Sheets
.03.00	(Reserved)
.04.00	Credits
.01	Description of multi-manufacturer arrangements Not applicable

Supplemental ZEV Application for Certification - SGMXT00.0005

<u>Section No.</u>	<u>Title</u>
.02	Credit calculation Per calculation for ZEV credits found within California Exhaust Emission Standards and Test Procedures for the 2018 and Subsequent Model Zero-Emission Vehicles, and Hybrid Electric Vehicles in the Passenger Car, Light-Duty Truck, and Medium Duty Vehicle Classes,” adopted March 22, 2012 General Motors Classifies the Silverado EV as a Medium Duty Passenger Vehicle. Per referenced regulations the ZEV Credit shall be = 4.00.
.05.00	Vehicle Safety
.01	All information for safe operation of vehicle See first responder section of Owner’s Manual
.02	Information on safe handling of battery system See first responder section of Owner’s Manual
.03	Description of emergency procedures See first responder section of Owner’s Manual
.06.00	(Reserved)