

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

**CARB USE ONLY**

<b>Invoice Name</b>	MSF220695
<b>Invoice Date</b>	Feb 14, 2023

**COMPANY INFORMATION**

<b>Company Name</b>	General Motors
<b>Address</b>	3300 General Motors Rd
<b>City</b>	Milford
<b>State</b>	Michigan
<b>Zip</b>	48380
<b>Country</b>	United States
<b>Contact Name</b>	Kimber Sinacola
<b>Contact Telephone Number</b>	2482966200
<b>Contact Email</b>	kimber.l.sinacola@gm.com
<b>CARB Customer Number</b>	CCAM000033

**APPLICATION INFORMATION**

Payment Row Number	Product Description or File Name	Model Year/Calendar Year	Unique Application Identifier: Test Group, Engine Family, Trailer Family, Vehicle Family, ZEP Family, if applicable (ID listed in payment row must match the unique identifier given to the certification application)	Category Type	Fee Type	Amount
1	RGMXJ00.0017_APPIPT1	Model Year 2024	RGMXJ00.0017	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 11,627.00
2	RGMXT00.0012_APPIPT1	Model Year 2024	RGMXT00.0012	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 11,627.00
3	RGMXT00.0006_APPIPT1	Model Year 2024	RGMXT00.0006	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 11,627.00
4	RGMXT00.0005_APPIPT1	Model Year 2024	RGMXT00.0005	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 11,627.00
5	RGMXT00.0009_APPIPT1	Model Year 2024	RGMXT00.0009	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 11,627.00
6	RGMXV02.0041_APPIPT1	Model Year 2024	RGMXV02.0041	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 17,441.00

<b>Total Due</b>	<b>\$ 75,576.00</b>
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I, Kimber Sinacola  
Kimber Sinacola (Feb 14, 2023 13:36 EST)

\_, attest that any information provided is true, accurate, and complete.

# APPLICATION FOR CERTIFICATION

## 2024 MODEL YEAR

Durability Group:	RGMXEEENN002
Test Group:	RGMXT00.0005
Durability Group Description:	Battery Electric Vehicle
Test Group Description:	2-Motor AWD (1 Front, 1 Rear)
Applicable Standards:	MDPV BIN0 / ZEV
Carlines Covered:	Chevrolet SILVERADO EV
Vehicles Tested:	2RE1E381
For Questions, Contact:	J. King (248) 505-0678

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# TEST VEHICLE DESCRIPTION

## Data Vehicle Selection

Test Group	RGMXT00.0005
Combined Motor Output - kW	381
Battery Size (Module Count)	24
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	20.2
Drive Unit Ratio(s)	13.26 Front / 11.63 Rear
N/V Ratio – rpm/mph	123.7
Tires	LT265/70R18
Vehicle/EPA Config No./GM Config No.	2RE1E381/00/000

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

<b>Test Group</b>	RGMXT00.0005	<b>Evaporative/Refueling Family</b>	--
<b>Models Covered by this Certificate</b>			
<b>Carline Manufacturer</b>	<b>Division</b>	<b>Carline</b>	<b>Certification Region Code(s)</b>
<b>Drive System</b>	<b>Trans - Type</b>	<b>- # of Gears</b>	<b>Trans - Lockup</b>
General Motors LLC	3 - Chevrolet	18 - SILVERADO EV	Federal
General Motors LLC	3 - Chevrolet	18 - SILVERADO EV	California + CAA Section 177 states
All Wheel Drive	Automatic	1	No
All Wheel Drive	Automatic	1	No
<b>Engine Description</b>			
<b>Hybrid Type</b>	--	<b>Hybrid Description</b>	--
<b>Engine Type</b>	--	<b>Mfr Engine Description</b>	--
<b>Engine Block Arrangement</b>	--	<b>Mfr Engine Block Arrangement Description</b>	--
<b>Camless Valvetrain Indicator</b>	--	<b>Oil Viscosity/Classification</b>	--
<b>Number of Cylinders/Rotors</b>	--	<b>Mechanically Variable Compression Ratio Indicator</b>	--
<b>After Treatment Device(s) (ATD)</b>			
<b>Mfr After Treatment Device (ATD) Comments</b>	--		
<b>Direct Ozone Reduction (DOR) Device</b>	--		
<b>Mfr Emission Control Device Comments</b>	--		
<b>Official Test Numbers</b>			
<b>Test Group Fuel</b>	<b>FTP</b>	<b>US06</b>	<b>SC03</b>
<b>Cold CO</b>	<b>Highway</b>	<b>EPA City Litmus Value</b>	<b>EPA City Litmus Threshold</b>
<b>Highway</b>	<b>EPA Highway Litmus Value</b>	<b>EPA Highway Litmus Threshold</b>	<b>CREE Weighting Factor</b>
Electricity	--	--	--
--	--	--	--
--	--	--	--
--	--	--	--
--	--	--	--
--	--	--	--
--	--	--	--
<b>Official Charge Depleting Test Numbers</b>			
<b>Test Group Fuel</b>	<b>UDDS</b>	<b>Highway</b>	
Electricity	RGMX10080036	RGMX10080037	

## Certification Summary Information Report

Test Group	RGMXT00.0005	Evaporative/Refueling Family	--
<b>Hybrid Electric Vehicle And Fuel Cell Information</b>			
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	350	Battery Energy Capacity	596
Battery Specific Energy	174	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 PERMANANT MAGNET	Rated Motor/Generator Power	191
Motor/Generator Type 2	AC PERMANANT MAGNET	Rated Motor/Generator Power	191
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	--		



## Certification Summary Information Report

Test Group		RGMXT00.0005			Evaporative/Refueling Family			--
<b>Dynamometer Coefficients:</b>								
		Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	59.5	0.1886	0.03305	-9.95	0.2675	0.02711	20.2	
Cold CO	65.45	0.2075	0.03636	-17.65	-0.1107	0.03029	N/A	
US06	59.5	0.1886	0.03305	-9.95	0.2675	0.02711	N/A	
Emission Control Device Comments	Silverado EV, ETN 24-MOD							
Manufacturer Test Vehicle Comments	MY24 BT1CC EDV AND FEDV, 24 MOD LD 4WT							

### Certification Summary Information Report

<b>Test Group</b>	RGMXT00.0005	<b>Evaporative/Refueling Family</b>	--
<b>Test #</b>	<b>RGMX10080036</b>	<b>Test Procedure</b>	<b>81 - Charge Depleting UDDS</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	62 - Electricity
<b>Test Date</b>	04/12/2023	<b>Fuel</b>	Electricity
<b>Fuel Batch ID</b>	--	<b>Fuel Calibration Number</b>	--
<b>Vehicle Class</b>	MDPV (Federal Tier 2, GVWR 8501-10000)	<b>DF Type</b>	Mfr. Assigned
<b>Verify Test Lab ID</b>	Referenced Test Lab: EPA/1		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	3335	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No	<b>Road Speed Fan Usage</b>	Yes
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		

**PHEV/EV Charge Depleting Test Information**

<b>Recharge Event Voltage</b>	242	<b>Recharge Event Energy (kiloWatt-hours)</b>	243.98
<b>Charge Depleting Range (Calculated miles)</b>	695.47	<b>Charge Depleting Range (Actual miles)</b>	695.47
<b>All Electric Range Unadjusted (miles)</b>	--	<b>Derived 5-Cycle Coefficient Model Year</b>	--
<b>Equivalent All Electric Range (miles)</b>	695.47		
<b>Number of Charge Depleting Bags/Phases Conducted</b>	1	<b>Transition Bag/Phase Number</b>	--

**Charge Depleting Bag/Phase**

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
1	Carbon-Related Exhaust Emissions	0
2	Drive Trace Absolute Speed Change Rating	0.17
3	Drive Trace Energy Economy Rating	-0.71
4	Drive Trace Inertia Work Ratio Rating	-0.206
5	Manufacturer Fuel Economy	96
6	System End State of Charge Watt-hours	0
7	System Start State of Charge Watt-hours	2502.1925

**Manufacturer Test Comments**

4K CDEM TEST - EPA CONFIRMATORY DC ENERGY CONSUMPTION UDDS1 = 335.4145 WH/MI; UDDS2 = 315.2388 WH/MI; UDDS3 = 306.2827 WH/MI; UDDS4 = 306.9153 WH/MI; UDDS WEIGHTED = 350.82 WH/MI; UDDS1 DC DISCHARGE ENERGY = 2502.19 WH; MCT UBE ENERGY = 243982.4 WH

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

### Certification Summary Information Report

<b>Test Group</b>	RGMXT00.0005	<b>Evaporative/Refueling Family</b>	--
<b>Test #</b>	<b>RGMX10080037</b>	<b>Test Procedure</b>	<b>84 - Charge Depleting Highway</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	62 - Electricity
<b>Test Date</b>	04/12/2023	<b>Fuel</b>	Electricity
<b>Fuel Batch ID</b>	--	<b>Fuel Calibration Number</b>	--
<b>Vehicle Class</b>	MDPV (Federal Tier 2, GVWR 8501-10000)	<b>DF Type</b>	Mfr. Assigned
<b>Verify Test Lab ID</b>	Referenced Test Lab: EPA/1		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	3335	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No	<b>Road Speed Fan Usage</b>	Yes
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		

**PHEV/EV Charge Depleting Test Information**

<b>Recharge Event Voltage</b>	242	<b>Recharge Event Energy (kiloWatt-hours)</b>	243.98
<b>Charge Depleting Range (Calculated miles)</b>	607.07	<b>Charge Depleting Range (Actual miles)</b>	607.07
<b>All Electric Range Unadjusted (miles)</b>	--	<b>Derived 5-Cycle Coefficient Model Year</b>	--
<b>Equivalent All Electric Range (miles)</b>	607.07		
<b>Number of Charge Depleting Bags/Phases Conducted</b>	1	<b>Transition Bag/Phase Number</b>	--

**Charge Depleting Bag/Phase**

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
1	Carbon-Related Exhaust Emissions	0
2	Drive Trace Absolute Speed Change Rating	0.15
3	Drive Trace Energy Economy Rating	0.003
4	Drive Trace Inertia Work Ratio Rating	0.185
5	Manufacturer Fuel Economy	84
6	System End State of Charge Watt-hours	0
7	System Start State of Charge Watt-hours	3675.7496

**Manufacturer Test Comments**

4K CDHW - EPA CONFIRMATORY TEST DC ENERGY CONSUMPTION HWFE1 = 358.2602 WH/MI; HWFE2 = 351.5125 WH/MI; HWFE AVERAGE = 354.8864 WH/MI

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

### Certification Summary Information Report

<b>Test Group</b>	RGMXT00.0005	<b>Evaporative/Refueling Family</b>	--
<b>Fuel Properties</b>			

### Certification Summary Information Report

<b>Test Group</b>	RGMXT00.0005	<b>Evaporative/Refueling Family</b>	--
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#### Consolidated List of Standards

**Exhaust Standards**

<b>Cert Region</b>	California + CAA Section 177 states	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	MDPV (Federal Tier 2, GVWR 8501-10000)	<b>Standard Level</b>	California ZEV
<b>Fuel</b>	Electricity	<b>Test Procedure</b>	Charge Depleting UDDS

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

<b>Cert Region</b>	Federal	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	MDPV (Federal Tier 2, GVWR 8501-10000)	<b>Standard Level</b>	Federal Tier 3 Bin 0
<b>Fuel</b>	Electricity	<b>Test Procedure</b>	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

<b>Cert Region</b>	Federal	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	MDPV (Federal Tier 2, GVWR 8501-10000)	<b>Standard Level</b>	Federal Tier 3 Bin 0
<b>Fuel</b>	Electricity	<b>Test Procedure</b>	Charge Depleting UDDS

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

<b>Cert Region</b>	California + CAA Section 177 states	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	MDPV (Federal Tier 2, GVWR 8501-10000)	<b>Standard Level</b>	California ZEV
<b>Fuel</b>	Electricity	<b>Test Procedure</b>	Charge Depleting Highway

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

### Certification Summary Information Report

<b>Test Group</b>		RGMXT00.0005			<b>Evaporative/Refueling Family</b>			--	
<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert	
<b>Vehicle Class</b>		MDPV (Federal Tier 2, GVWR 8501-10000)			<b>Standard Level</b>			Federal Tier 3 Bin 0	
<b>Fuel</b>		Electricity			<b>Test Procedure</b>			Charge Depleting Highway	
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>
150,000 miles	CREE	--	--	--	--	--	--	0	0

## Certification Summary Information Report

Test Group	RGMXT00.0005	Evaporative/Refueling Family	--
<b>Glossary</b>			
<b>Useful Life</b>			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
<b>Emission Name</b>			
HC-TOTAL	Total Hydrocarbon	METHANOL	CH3OH - Methanol
CO	Carbon Monoxide	N2O	Nitrous Oxide
CO2	Carbon dioxide	SPITBACK	Spitback Hydrocarbon in grams
CREE	Carbon-Related Exhaust Emissions	AMP-HRS	Integrated Amp-hours
OPT-CREE	Optional Carbon-Related Exhaust Emissions	START-SOC	System Start State of Charge Watt-hours
NOX	Nitrogen Oxide	END-SOC	System End State of Charge Watt-hours
PM	Particulate Matter	ACT-DISTANCE	Actual Distance Driven (miles)
PM-COMP	SFTP Composite Particulate Matter	AS-VOLT	Average System Voltage
HC-NM	Non-methane Hydrocarbon	CO2 BAG 1	Bag 1 Carbon Dioxide
OMHCE	Organic material Hydrocarbon Equivalent	CO2 BAG 2	Bag 2 Carbon Dioxide
OMNMHCE	Organic material non-methane HC equivalent	CO2 BAG 3	Bag 3 Carbon Dioxide
NMOG	Non-methane organic gases	CO2 BAG 4	Bag 4 Carbon Dioxide
HCHO	Formaldehyde	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides
H3C2HO	Acetaldehyde	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	DT-IWRR	Drive Trace Inertia Work Ratio Rating
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	DT-ASCR	Drive Trace Absolute Speed Change Rating
CO-COMP	SFTP Composite Carbon Monoxide	DT-EER	Drive Trace Energy Economy Rating
ETHANOL	C2H5OH - Ethanol	COMB-CREE	Combined Carbon-Related Exhaust Emissions
FE BAG 1	Bag 1 Fuel Economy	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
FE BAG 2	Bag 2 Fuel Economy	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
FE BAG 3	Bag 3 Fuel Economy	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
FE BAG 4	Bag 4 Fuel Economy	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
MFR FE	Manufacturer Fuel Economy	LEAK-DIA	Effective Leak Diameter (inches)
HC	Hydrocarbon for Running Loss and ORVR	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
METHANE	CH4 - Methane	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
<b>Certification Region</b>			
CA	California + CAA Section 177 states	FA	Federal
<b>Exhaust Emission Standard Level</b>			
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
B5	Federal Tier 2 Bin 5	L3SULEV150	California LEV-III SULEV150

## Certification Summary Information Report

Test Group	RGMXT00.0005	Evaporative/Refueling Family		--
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	
<b>Transmission Type Code</b>				
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual	
A	Automatic	OT	Other	
AM	Automated Manual	SA	Semi-Automatic	
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)	
<b>Drive System Code</b>				
4	4-Wheel Drive	P	Part-time 4-Wheel Drive	
F	2-Wheel Drive, Front	A	All Wheel Drive	
R	2-Wheel Drive, Rear			

**Certification Summary Information Report**

<b>Test Group</b>	RGMXT00.0005	<b>Evaporative/Refueling Family</b>	--
<b>Additional Terms and Acronyms</b>			
AFC	Alternative Fuel Converter	ICI	Independent Commercial Importer
CSI	Certificate Summary Information	ORVR	Onboard Refueling Vapor Recovery
DF	Deterioration Factor	SIL	Shift Indicator Light
Evap	Evaporation, Evaporative	Trans	Transmission

# **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: 191kW / 404Nm

Rear Motor: 191kW / 404Nm

### **Battery**

Lithium Ion Battery Pack

215 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

<b>Base Engine Code</b>	1
<b>EC Derivatives</b>	
<b>Test Group</b>	RGMXT00.0005
<b>Durability Group</b>	RGMXEEENN002
<b>Engine RPO</b>	XRJ
<b>Disp, liters</b>	0.0
<b>Trans RPO</b>	P8N
<b>Trans Type</b>	A1
<b>Product Code</b>	--
<b>Emission RPO</b>	NF6
<b>Emissions Category</b>	ZEV
<b>Vehicle Type</b>	TRUCK
<b>Regulatory Agencies</b>	C
<b>Sales Area</b>	FA/CA
<b>Design Altitude</b>	Both
<b>A/C Equipped</b>	Yes
<b>Driver Select Device</b>	Tour, OPD, Tow/haul
<b>Police Only</b>	No
<b>Horsepower @ RPM</b>	NA
<b>Torque @ RPM</b>	NA
<b>Emission Ctrl Sys</b>	BEV3
<b>TapUp/TapDown</b>	No
<b>Active Fuel Management</b>	Non AFM
<b>Description</b>	Silverado EV, ETN 24-MOD

### Vehicle Parameters - Certificate Coverage

Durability Group RGMXEEEN002  
 TestGroup RGMXT00.0005

EC	Eng Der	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		RGMXNA	NA	CT35843	SILVERADO EV	A1/1	1.00	9990	LT265/70R18 ALS BRI	123.7	8894/4324	LVW	9000	20.2	59.50	0.1886	0.03305	&4WT&ETN&K2O&S80&WMY	4D	--

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

# TRANSMISSION INFORMATION

<b>Test Group ID</b>	RGMXT00.0005
<b>Transmission Code</b>	1
<b>Transmission RPO</b>	P8N
<b>Transmission Type</b>	A1
<b>Drive Gear Ratios</b>	11.63
<b>Chain Drive Ratio</b>	NA
<b>Shift Calibrations</b>	Computer Controlled
<b>Torque Converter Diameter</b>	NA
<b>Torque Converter Stall Torque Ratio</b>	NA
<b>Torque Converter Lockup RPM'S</b>	Computer Controlled
<b>Torque Converter Stall Torque Speed</b>	NA
<b>Multimode Feature - # of Modes</b>	2
<b>Shift Indicator Light</b>	NO
<b>Description</b>	Silverado EV XRJ
<b>TapUp/TapDown</b>	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.



Push Here

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.

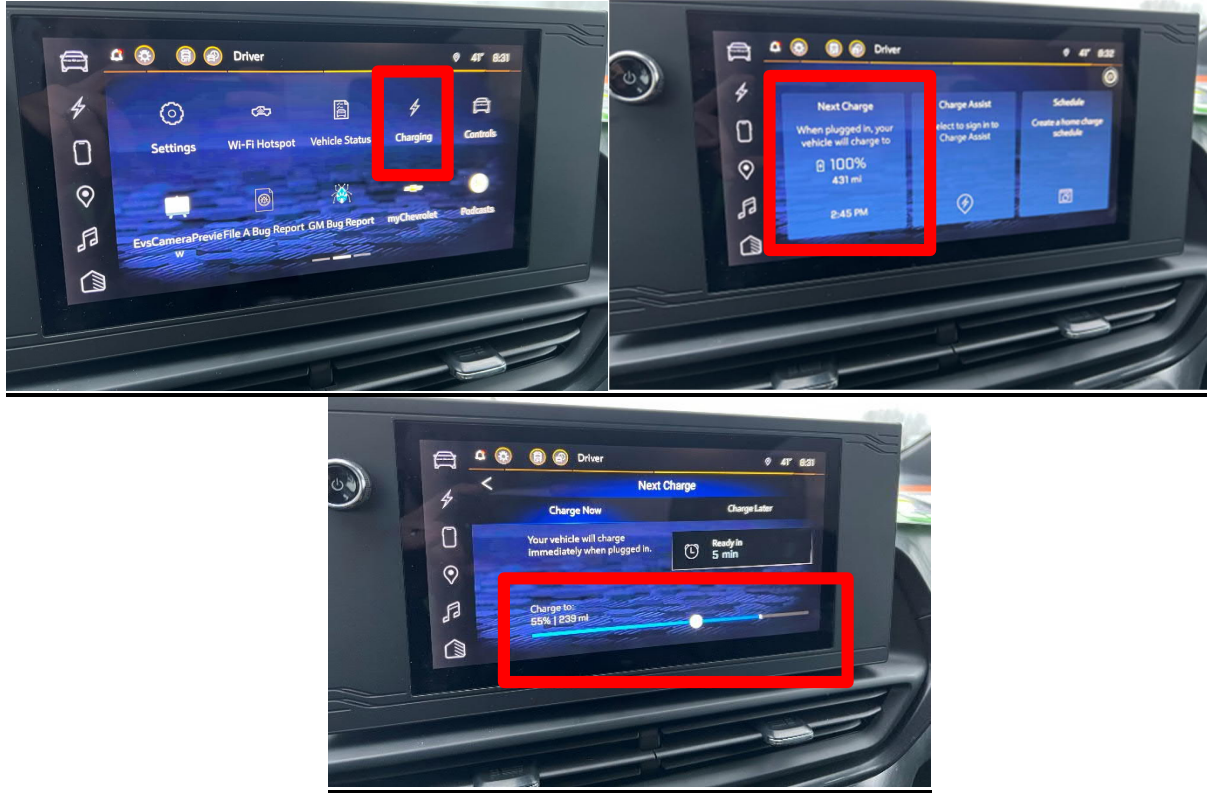
## **End Charge:**

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 RGMXT00.0005. 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:
  - Close all doors – horn will sound 3 quick beeps
  - 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

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**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/hp

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**general motors**

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

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

Model Year	2024	Certifying Agent	GM
Test Vehicle	2RE1E381	GM Config	000
		Run Date	04/05/2023 16:47:20

VEHICLE NO:	2RE1E381	CONFIGURATION NO:	000	EPA VERSION NO:	00
				ORIGINAL CERT YEAR:	2024
ENG FAM/TEST GRP:	RGMXT00.0005	ENGINE CODE:	1		
EVAP FAMILY:	RGMXNA	EVAP CODE:	NA		
TEST PURPOSE:	FE	DISPL:	0.0	SALES LOC:	BOTH
VEH TYPE: FED=	MDPV	CAL=	MDV4	EMIS CATEGORY: FED=	BIN 0 CAL= ZEV

DURA GRP:	RGMXEEVNN002	DURA VEH NO:		DURA CONFIG:	
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FUEL METER:		BOOST TYPE:		VALVES PER CYL:	0
-------------	--	-------------	--	-----------------	---

TRANS: TYPE=	A1	CODE= 1	MODE= NORMAL	SIL EQUIPPED:	No	SIL VERSION:	N/A
SHIFT SCHEDULE:	N/A	SHIFT SCHED NO:					
EVAP CANISTER SIZE(L):	0						
TANK CAPACITY (GAL): PRIM=	0,0	AUX=				PRIMARY FUEL: ELEC	
PREMIUM FUEL RECOM'D:	N	USAGE: F=	FA	C=	CA		
DYNAMOMETER DRIVE AXLE:	A						
TIRE PRESS(PSI): FRT=	61	REAR=	61	A/C EQ:	Y		
68d ROADLOAD: F0=	59.5	F1=	0.1886	F2=	0.03305	TRLHP 68d:	20.2
20d ROADLOAD: F0=	65.45	F1=	0.2075	F2=	0.03636	TRLHP 20d:	22.2

WEIGHTS (LBS):				TIRES:			
ETW: 9000	EPA CURB: 8594	GVWR:	9990	VENDOR:	BRI	SIZE:	LT265/70R18
				TREAD TYPE:	ALS		




DESIGN:	CURB WEIGHT/TEST WT CLASS TYPE	DRIVE AXLE
	8594/LVW	4324

REP VEH MODEL:	CT35843	FIN DR RATIO:	1	N/V:	123.7	ENG RPO:	XRJ
ACTUAL MODEL NO:	CT35843						
RATED HP:	510	TCC:	Y				
OVERDRIVE:	N	CREEPER:	N	PS:	YES	PB:	YES
MODE LINK CONFS:		C/O CONF:		SIL LINK CONF:			
ZERO-MILE ODO:	0	ODO CORR:	1.00				

COMMENTS MY24 BT1CC EDV and FEDV, 24  
MOD LD 4WT

VECI Labels

Chevrolet Silverado EV

<b>02MY24EN0NF635842</b> Apr 13 2023 16:56:15	262	<b>1FS2362287</b>	
 NF635842	<b>VEHICLE EMISSION CONTROL INFORMATION</b>		 <b>GENERAL MOTORS LLC</b>
<b>Conforms to Regulations: 2024</b> U.S. EPA class / stds: MDPV / TIER3 California class / stds: MDV / ZEV Group: RGMXT00.0005 Evap: N/A CA OBD: N/A		<b>Fuel: Electric</b> <b>02MY24EN0NF635842</b>	

## Supplemental ZEV Application for Certification - RGMXT00.0005

<u>Section No.</u>	<u>Title</u>
01.00.00	Communications See GM Application for Certification RGMXT00.0005
.01.00	Mailing Information See GM Application for Certification RGMXT00.0005
.01	Certification Information See GM Application for Certification RGMXT00.0005
.02	Responsible official See GM Application for Certification RGMXT00.0005
02.00.00	Confidential Information See GM Application for Certification RGMXT00.0005
.01.00	Statement of confidentiality See GM Application for Certification RGMXT00.0005
.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 RGMXT00.0005
.03.00	Projected California sales See GM Application for Certification RGMXT00.0005
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 <b>SAE J1634 procedure (as Revised 2017, Section 8) Steady State at 65 mph</b>
.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 <b>SAE J1634 procedure (as Revised 2017, Section 8)</b>
04.00.00	(Reserved)
05.00.00	(Reserved)

## Supplemental ZEV Application for Certification - RGMXT00.0005

<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 RGMXT00.0005
.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 RGMXT00.0005
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 350v nominal lithium ion battery
.02.00	Description of Motor(s) See GM Application for Certification RGMXT00.0005 – Permanent Magnet 3-phase electric machine
.03.00	Description of Batteries See GM Application for Certification RGMXT00.0005 – Lithium Ion, 350v nominal, 576 cells
.01	Battery charging capacity See GM Application for Certification RGMXT00.0005 – 596 Ahr total pack capacity

## Supplemental ZEV Application for Certification - RGMXT00.0005

<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 <a href="http://www.recyclemybattery.com">www.recyclemybattery.com</a> .
.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, 19.2kW (240V), 80 Amp wall service on 240V
.01	Proper recharging procedures: see charging section of owner's manual

## Supplemental ZEV Application for Certification - RGMXT00.0005

<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 19.2 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 240V
09.00.00	(Reserved)
10.00.00	(Reserved)
11.00.00	Starting and shifting schedules See GM Application for Certification RGMXT00.0005
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 - RGMXT00.0005

<u>Section No.</u>	<u>Title</u>
.02	<p>Credit calculation</p> <p>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</p> <p>General Motors Classifies the Silverado EV as a Medium Duty Passenger Vehicle. Per referenced regulations the ZEV Credit shall be = 4.00.</p>
.05.00	Vehicle Safety
.01	<p>All information for safe operation of vehicle</p> <p>See first responder section of Owner's Manual</p>
.02	<p>Information on safe handling of battery system</p> <p>See first responder section of Owner's Manual</p>
.03	<p>Description of emergency procedures</p> <p>See first responder section of Owner's Manual</p>
.06.00	(Reserved)