RIVIAN AUTOMOTIVE, LLC

Application for Certification - Part 1 (Carryover Update)

2024 **Model Year**

EPA Manufacturer Code: RIV
Test Group: RRIVT00.0192

Durability Group: N.A. **Evaporative Family:** N.A.

Test Group Description:	Battery Electric Vehicle
Applicable Standards:	U.S. EPA: Tier 3 Bin 0 MDPV CA: ZEV MDV
Carlines Covered:	Rivian R1T Dual Large (21in) Rivian R1S Dual Large (21in) Rivian R1S Dual Large (22in) Rivian R1T Dual Large (22in) Rivian R1T All-Terrain Dual Large (20in) Rivian R1S All-Terrain Dual Large (20in) Rivian R1T Performance Dual Large (21in) Rivian R1S Performance Dual Large (21in) Rivian R1S Performance Dual Large 22in) Rivian R1T Performance Dual Large (22in) Rivian R1T All-Terrain Performance Dual Large (20in) Rivian R1S All-Terrain Performance Dual Large (20in) Rivian R1T Dual Standard (21in) Rivian R1S Dual Standard (21in) Rivian R1T Dual Standard (22in) Rivian R1S Dual Standard (22in) Rivian R1T Dual Standard Plus (21in) Rivian R1S Dual Standard Plus (21in) Rivian R1T Dual Standard Plus (22in) Rivian R1S Dual Standard Plus (22in) Rivian R1T All-Terrain Dual Standard Plus (20in) Rivian R1S All-Terrain Dual Standard Plus (20in)
Document Date:	02/06/2024

For Questions, Contact:
S. Zaker, SepZaker@rivian.com

14600 Myford Road
Irvine, CA 92606

Mr. Robert Peavyhouse
Compliance and Innovative Strategies Division
Office of Mobile Sources
Environmental Protection Agency
2000 Traverwood, Ann Arbor, MI 48105

Subject: MY 2024 Rivian Medium-Duty Vehicle Initial Application for issuance of Certificate of Conformity for Test Group RRIVT00.0192.

Rivian believes that all vehicles within this test group comply with all applicable regulations within Code of Federal Regulations Title 40 Parts 85, 86, 600, and California Code of Regulations Title 13.

Vehicle Category:	Medium Duty Passenger Vehicle (8532 lbs. GVW)
Test Group:	RRIVT00.0192
Evaporative Family:	N/A
Federal Standard:	Tier 3 Bin 0
California Standard:	ZEV

Test Group Description:

1 - Rivian R1
9 - 9 Module Battery
2 - 2 AC motors

Vehicles Covered by this certificate:

Rivian R1T Dual Large (21in)
Rivian R1S Dual Large (21in)
Rivian R1S Dual Large (22in)
Rivian R1T Dual Large (22in)
Rivian R1T All-Terrain Dual Large (20in)
Rivian R1S All-Terrain Dual Large (20in)
Rivian R1T Performance Dual Large (21in)
Rivian R1S Performance Dual Large (21in)
Rivian R1S Performance Dual Large 22in)
Rivian R1T Performance Dual Large (22in)
Rivian R1T All-Terrain Performance Dual Large (20in)
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Rivian R1T Dual Standard (21in)
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Rivian R1S Dual Standard Plus (22in)
Rivian R1T All-Terrain Dual Standard Plus (20in)
Rivian R1S All-Terrain Dual Standard Plus (20in)

Your early review and issuance of the certificate will be greatly appreciated. If you have any questions, please email me at sepzaker@rivian.com or my phone number available on CDX.

Sepehr Zakeresfahani
Sr. Manager, Range, Wireless & Material Compliance

02/06/2024

14600 Myford Road
Irvine, CA 92606

Mr. Robert Peavyhouse
Compliance and Innovative Strategies Division
Office of Mobile Sources
Environmental Protection Agency
2000 Traverwood, Ann Arbor, MI 48105

Subject: MY 2024 Rivian Medium-Duty Vehicle OBD letter for issuance of Certificate of Conformity for Test Group RRIVT00.0192.

Rivian is a manufacturer of Battery Electric Vehicle, including R1T and R1S. Battery Electric Vehicles are exempt from OBD II requirements.

Vehicle Category:	Medium Duty Passenger Vehicle (8532 lbs. GVW)
Test Group:	RRIVT00.0192
Evaporative Family:	N/A
Federal Standard:	Tier 3 Bin 0
California Standard:	ZEV

Test Group Description:

1 - Rivian R1
9 - 9 Module Battery
2 - 2 AC motors

Vehicles Covered by this certificate:

Rivian R1T Dual Large (21in)
Rivian R1S Dual Large (21in)
Rivian R1S Dual Large (22in)
Rivian R1T Dual Large (22in)
Rivian R1T All-Terrain Dual Large (20in)
Rivian R1S All-Terrain Dual Large (20in)
Rivian R1T Performance Dual Large (21in)
Rivian R1S Performance Dual Large (21in)
Rivian R1S Performance Dual Large 22in)
Rivian R1T Performance Dual Large (22in)
Rivian R1T All-Terrain Performance Dual Large (20in)
Rivian R1S All-Terrain Performance Dual Large (20in)
Rivian R1T Dual Standard (21in)
Rivian R1S Dual Standard (21in)
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Rivian R1T All-Terrain Dual Standard Plus (20in)
Rivian R1S All-Terrain Dual Standard Plus (20in)

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02/06/2024

14600 Myford Road
Irvine, CA 92606

Mr. Rober Peavyhouse
Compliance and Innovative Strategies Division
Office of Mobile Sources
Environmental Protection Agency
2000 Traverwood, Ann Arbor, MI 48105

Subject: MY 2024 Rivian Medium-Duty Vehicle Durability letter for issuance of Certificate of Conformity for Test Group RRIVT00.0192.

Rivian is a manufacturer of Battery Electric Vehicle, including R1T and R1S. Battery Electric Vehicles (no tailpipe emissions) are exempt from emissions equipment durability requirements.

Vehicle Category:	Medium Duty Passenger Vehicle (8532 lbs. GVW)
Test Group:	RRIVT00.0192
Evaporative Family:	N/A
Federal Standard:	Tier 3 Bin 0
California Standard:	ZEV

Test Group Description:

1 - Rivian R1
9 - 9 Module Battery
2 - 2 AC motors

Vehicles Covered by this certificate:

Rivian R1T Dual Large (21in)
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Sepehr Zakeresfahani
Sr. Manager, Range, Wireless & Material Compliance

02/06/2024

14600 Myford Road
Irvine, CA 92606

Mr. Steven Hada
Emissions Certification and Compliance Division (ECCD)
Air Resources Board Laboratory
9528 Telstar Avenue, El Monte, CA 91731

Subject: MY 2024 Rivian Medium-Duty Vehicles Initial Application for issuance of an Executive Order for Test Group RRIVT00.0192.

Rivian believes that all vehicles within this test group comply with all applicable regulations within Code of Federal Regulations Title 40 Parts 85, 86, 600, and California Code of Regulations Title 13.

Vehicle Category:	Medium Duty Passenger Vehicle (8532 lbs. GVW)
Test Group:	RRIVT00.0192
Evaporative Family:	N/A
Federal Standard:	Tier 3 Bin 0
California Standard:	ZEV

Test Group Description:

1 - Rivian R1
9 - 9 Module Battery
2 - 2 AC motors

Vehicles Covered by this certificate:

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Rivian R1S All-Terrain Dual Standard Plus (20in)

Your early review and issuance of the certificate will be greatly appreciated. If you have any questions, please email me at sepzaker@rivian.com or my phone number available on DMS.

Sepehr Zakeresfahani
Sr. Manager, Range, Wireless & Material Compliance

02/06/2024

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01.00.00 Communications

01.01.00 Mailing Information
Rivian Automotive, LLC
14600 Myford Road
Irvine, CA 92606
Attention: Sepehr Zakeresfahani

01.01.01 Certification Information
Rivian Automotive, LLC
14600 Myford Road
Irvine, CA 92606

01.01.02 Responsible official
Primary Contact:
Sepehr Zakeresfahani, Sr. Manager – Range, Wireless, and Material Compliance
sepzaker@rivian.com

02.00.00 Confidential Information

02.01.00 Statement of confidentiality

02.02.00 Test vehicle selection

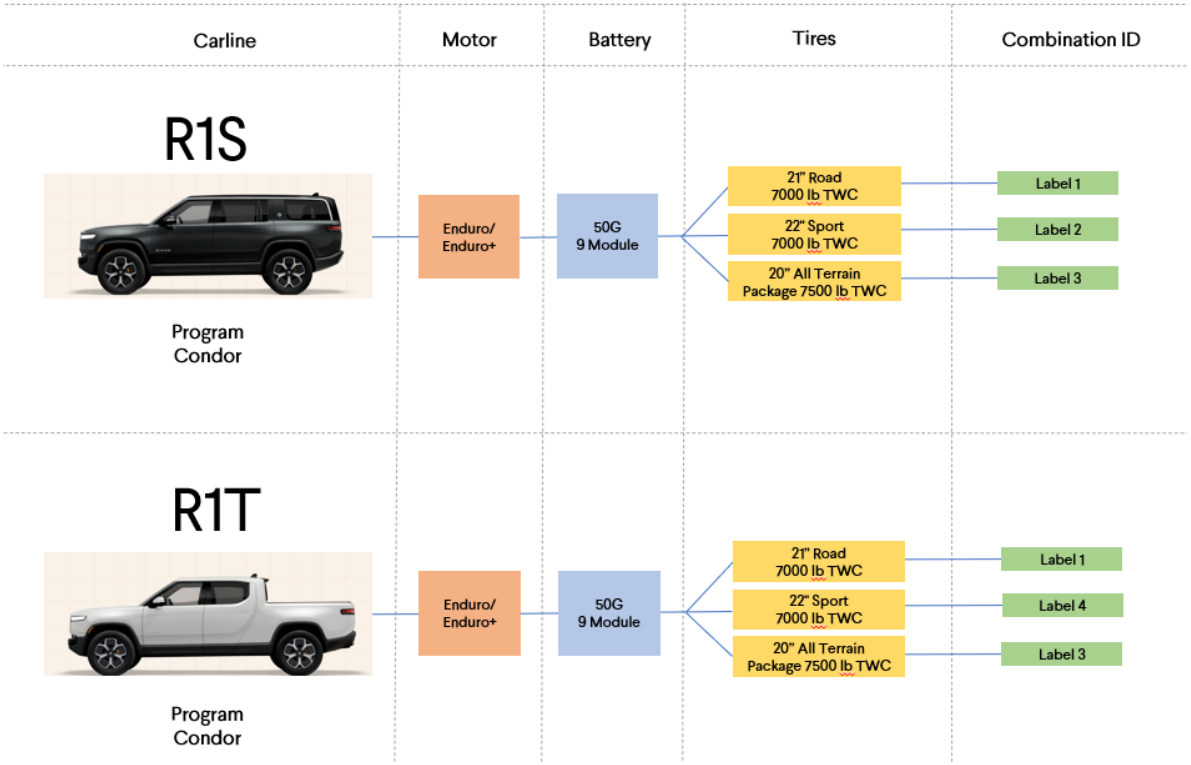
02.03.00 Projected annual model-year sales

03.00.00 Facilities, equipment, and test procedures

03.01.00 (Reserved)

03.02.00 Battery pre-conditioning procedures (if necessary)

03.03.00 Configurations and Sub configurations



Program	A [lbf]	B [lbf/mph]	C [lbf/mph^2]	Test Weight [lbs]	Tire Size
R1S All-Terrain Dual Large (20in)* R1S All-Terrain Dual Standard Plus (20in)	60.02	0.3434	0.02458	7,500	275/65R20
R1S Dual Large (21in)* R1S Dual Standard (21in) R1S Dual Standard Plus (21in)	45.22	0.6456	0.01633	7,000	275/55R21
R1S Dual Large (22in)* R1S Dual Standard (22in) R1S Dual Standard Plus (22in)	55.14	0.3691	0.02153	7,000	275/50R22
R1T All-Terrain Dual Large (20in)* R1T All-Terrain Dual Standard Plus (20in)	54.71	0.6796	0.01952	7,500	275/65R20
R1T Dual Large (21in)* R1T Dual Standard (21in) R1T Dual Standard Plus (21in)	44.76	0.5587	0.01817	7,000	275/55R21
R1T Dual Large (22in)* R1T Dual Standard (22in) R1T Dual Standard Plus (22in)	55.67	0.3376	0.02298	7,000	275/50R22

*The above programs are relevant to their corresponding Performance variant. e.g R1S All-Terrain Dual Large (20in) and R1S All-Terrain Performance Dual Large (20in) share the same coastdown values, test weight, and tire size.

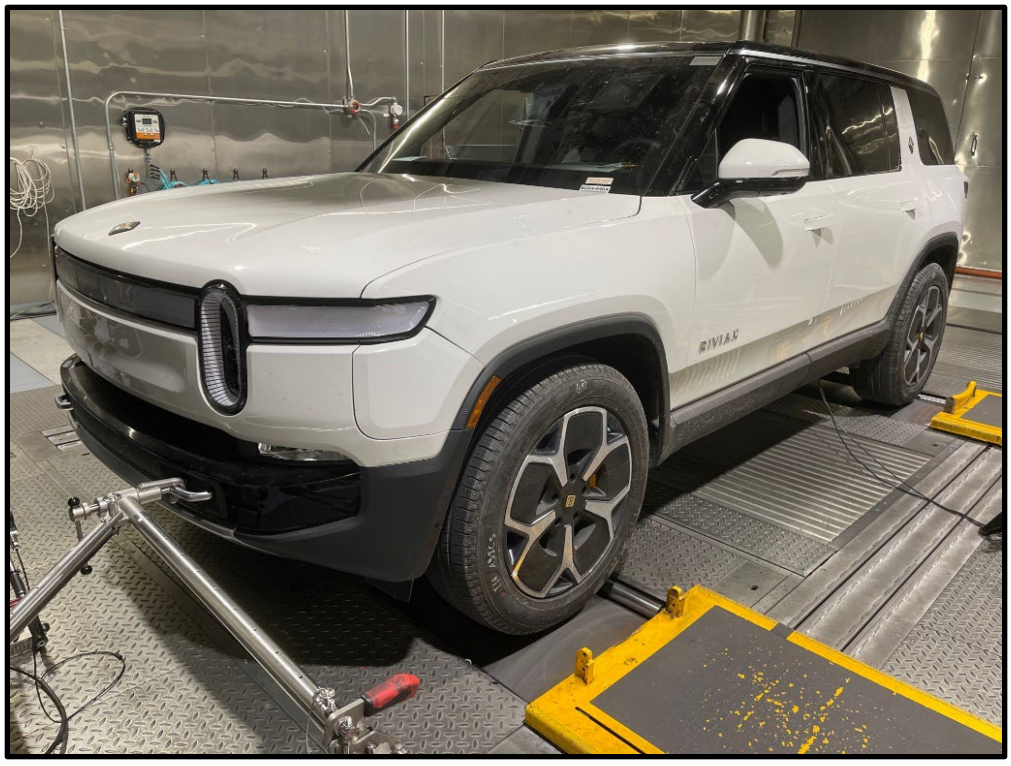
03.04.00 Test Procedures
03.04.01 Range Test Procedures

03.04.02 Description of Coastdown

03.05.00 Special Test Instructions

Vehicle Setup:

Bleyer rigid bar fixation system. Front bar fixed to the front tow hook. and rear bar fixed to the tow hitch receiver.



Instrumentation:
Battery voltage and current measurement were taken using HBM power analyzer & Hioki CT684X-05 current clamps.

- Clamps installed to minimize number of measured current channels.
- Current clamp sizes determined by maximum combined circuit current.

AC Level 2 240 V/ 48 A (11.5 kW) charger was used for charging.

03.05.00 Statement of Compliance
Every vehicle which is covered by this application conforms to US EPA Federal Tier 3 Bin 0 regulations applicable to new Medium-Duty Vehicles and state of California ZEV regulations applicable to new Medium-Duty Vehicles for the 2024 Model Year.

04.00.00 (Reserved)
05.00.00 (Reserved)
06.00.00 Maintenance
06.01.00 Test vehicle scheduled maintenance
06.02.00 Recommended customer maintenance schedule

Rivian Service is our proactive and flexible approach to vehicle care, centered around uptime for our fleet operators. Through remote diagnostics, a large fleet of mobile service vans staffed with Rivian Technicians and a network of service centers deliver rapid care with minimal inconvenience to the fleet operator. Rivian maintenance intervals are determined by onboard prognostics. Vehicle and environment sensors measure or model the remaining life of maintenance items. Operators are informed when maintenance is approaching or due, scheduling necessary maintenance items only. Our fleet of mobile service vans can perform most vehicle care needs at the operator facilities or wherever the vehicle might be. In many instances, the fleet operator won't even have to be present, so can carry on with their day. Mobile service is available anywhere in the US and Canada. As we expand into other markets, our suite of Rivian vehicle care capabilities, including mobile service, will continue to be a key component of our strategy.

Time till repair (year)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Miles to repair equivalent	12.5K	25K	37.5K	50K	62.5K	75K	87.5K	90K	102.5K	115K
R1T Maintenance Schedule										
Multi-point inspection	X	X	X	X	X	X	X	X	X	X
Drive unit & gearbox fluid lubricant									X	

This table is an example and may not represent the final customer experience.

06.03.00 Lubricants and heater fuels if any

Transmission Oil:

BOT 350 M3 transmission fluid for dry electric drive units.

Typical Characteristics:

Test	Method	Units	
SAE Grade		-	**75W**
Density @ 15C, Relative	ASTM D1298	g/ml	**0.852**
Appearance Visual		-	**clear**
Viscosity, Kinematic 100°C	ASTM D445	mm²/s	**6.3**
Viscosity, Kinematic 40°C	ASTM D445	mm²/s	**32**
Viscosity Index		-	**154**
Viscosity, Brookfield @ -40°C	ASTM D2983	mPa.s (cP)	**10000**
Pour Point	ASTM D97	°C	**-51**
Flash Point, COC	ASTM D92	°C	**226**

Coolant: L228

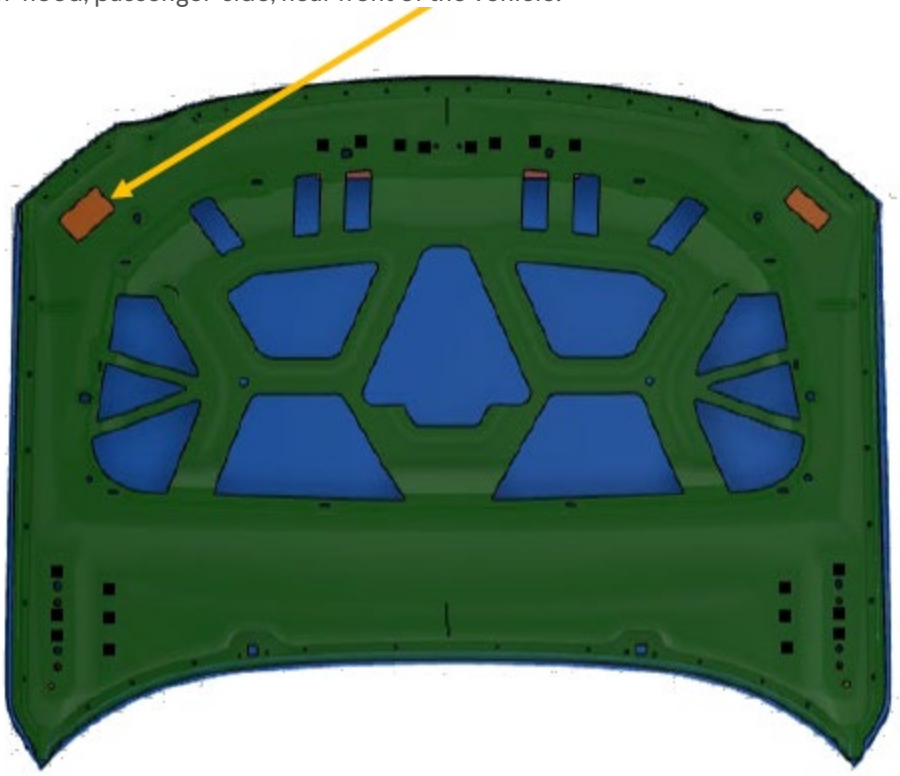
Performance of L288 According to ASTM D3306

Table 1 – ASTM D3306 Results

Item			ASTM D3306 Type I	CCI L288
Color			Distinctive	Yellow
Relative Density 15.5/15.5°C			1.110 ~ 1.145	1.128
Freezing Point °C	50 vol% in DI water		-36.4 max.	-37
Boiling Point °C	50 vol% in DI water		108 min.	109
Ash content mass%			5 max.	1.7
pH	50 vol% in DI water		7.5 ~ 11.0	7.6
Chloride μg/g			25 max.	<25
Water mass%			5 max.	3.8
Reserve Alkalinity mL			Report	8.0
Effect on Automotive Finish			No Effect	Pass
Corrosion in Glassware	Weight Loss[1] mg/Specimen	Copper	10 max.	0.2
		Solder	30 max.	4.3
		Brass	10 max.	1.9
		Steel	10 max.	0.7
		Cast Iron	10 max.	1.4
		Aluminum	30 max.	+0.2
Simulated Service Test	Weight Loss[1] mg/Specimen	Copper	20 max.	0.7
		Solder	60 max.	6.9
		Brass	20 max.	5.9
		Steel	20 max.	0.2
		Cast Iron	20 max.	3.3
		Aluminum	60 max.	0.1
Corrosion of Cast Aluminum Alloys at Heat-Rejecting Surfaces mg/cm^2/week			1.0 max.	0.1
Foaming	Volume mL		150 max.	20
	Break Time s		5 max.	3
Cavitation-Erosion Rating for pitting, cavitation, and erosion of the water pump			8 min.	9

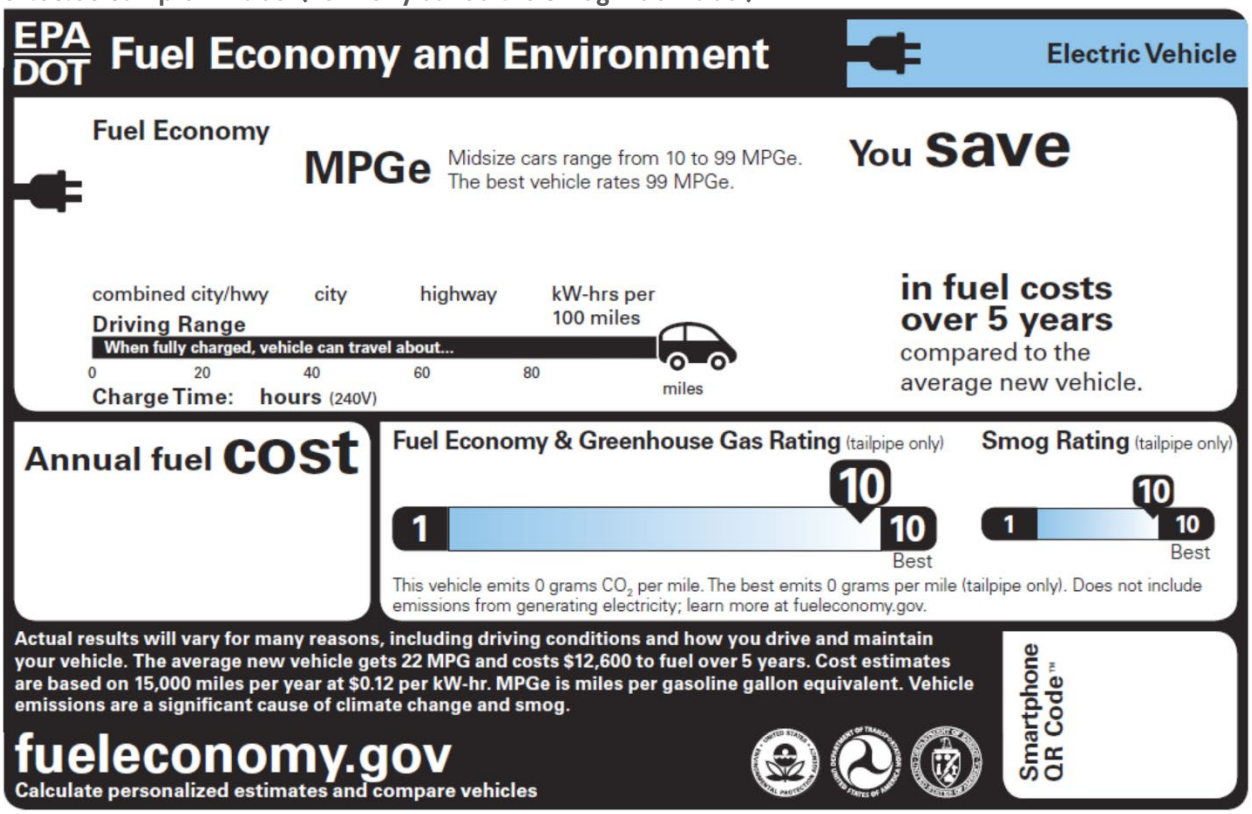
Note (1): A plus sign designates weight gain.

07.00.00 Vehicle Emission Control Information (VECI) and Environmental
07.01.00 VECI Label locations
Under-hood, passenger-side, near front of the vehicle.



07.02.00 Sample VECI labels (MY2024 Sample Label):

07.03.00 Sample EP label (Formerly called the Smog Index label)



07.04.00 Statement of compliance

Every vehicle which is covered by this application conforms to US EPA Federal Tier 3 Bin 0 regulations applicable to new Medium Duty Passenger Vehicles and state of California ZEV regulations applicable to new Medium-Duty Vehicles for the 2024 Model Year.

08.00.00 General technical description

08.01.00 Description of Propulsion System

See 08.01.01 through 08.01.06

08.01.01 Description of Vehicle Architecture

08.01.02 Description of Drive Unit Architecture

08.01.03 Description of Motor(s)

08.01.04 Description of Gearbox(s)

08.01.05 Description of Inverter(s)

08.01.06 Description of Drivetrain(s)

08.03.00 Description of Batteries

08.03.01 Battery charging capacity
Battery pack nominal capacity for Large Pack is 360 Ah based on a constant current C/5 discharge rate. Battery pack nominal capacity Ah for Standard and Standard Plus are currently being tested and will be included in an updated application. Large: 135kWh. Standard Plus: 121.3 kWh. Standard: 105.9 kWh.

08.03.02 Self-discharge information
Rivian estimates the average self-discharge rate of the battery is less than 4% per month.

08.03.03 Description of thermal management system
The thermal management system for the high voltage battery is a liquid coolant system. A pump circulates coolant thru the battery and a refrigerant-cooled chiller to extract heat and lower the temperature of the battery. In cold weather, an in-line heating element is used to heat the coolant to raise the temperature of the battery.

08.03.04 Definition of end-of-life
The battery warranty for in vehicle use is 8 years or 150k miles, whichever occurs first. See section 08.03.05 for information on reuse strategy.

08.03.05 Description of battery disposal plan
Safe battery removal and discharge by Rivian service is recommended. Rivian service will determine which battery components meet standards for reuse. Rivian prioritizes the remanufacture of battery components into equivalent vehicle parts, then consumption in 2nd life applications. For components which do not meet the necessary standards, Rivian approved partners will transport, break down and recycle all materials used within the battery.

Rivian is pursuing UL 1973 certification of vehicle battery modules to enable their reuse for 2nd life grid storage applications. Rivian also plans to develop a process to evaluate the suitability of modules from field returned packs for reuse for grid storage applications in line with UL 1974 (Standard for Evaluation for Repurposing Batteries).

If a facility other than one approved by Rivian intends to dispose of the HV Battery or components, the vehicle owner and/or facility assume the responsibility to comply with any local or federal standards that may apply. A certificate from the recycler should be obtained as proof the materials were properly and legally disposed of.

08.04.00 Description of Controller/Inverter
See Section 08.01.05

08.05.00 Description of Transmission
See Section 08.01.04

08.06.00 Description of climate control system

- Rivian's climate control is a Dual Zone system with Automatic Temperature control.
- HVAC predominantly includes Defrost mode, Panel mode, and Floor mode (or any combination of these three).
- The vehicle could be remotely conditioned to a comfortable climate setpoint using a Mobile Application.
- The system consists of four electronically controlled face vent to direct airflow around passengers.
- The recirculation door is independently controlled by the passengers.
- Auto humidity control.
- Auto/manual blower fan control.
- The system is equipped with Air Conditioning and PTC heater to provide adequate heating and cooling for individual zones.

08.06.01 Electric Heat Pump
N/A

08.06.02 (Reserved)
08.06.03 Climate control system logic
HVAC software has multiple modes which can be selected based on user preference:

- In Manual Mode, the user has complete control on blower speed, temperature, and airflow distribution to face or feet. Recirculation of air is also manually controlled by the user.
- In Auto mode, the software provides adequate heating and cooling requests to control the breathing temperature of both driver and passenger to the requested setpoint. In this mode, the airflow distribution and the blower speeds are automatically selected to maintain the desired temperature from the screen. The software estimates the breathing temperature of individual passenger based on airflow through ducts, In-Cabin sensors, external ambient temperature sensors, and solar load sensors. Recirculation of air inside the cabin is automatically selected based on humidity level inside the cabin.
- Additionally, defrost or demist mode is provided to the user for a clear view while driving. During defog mode, the software supplies conditioned air towards the windshield based on the dew point calculation. If the desired mode is Defrost, the PTC (Positive Temperature Coefficient) heater blows hot air towards the windshield to clear frost.

08.06.04 (Reserved)

08.07.00 Description of Regenerative Braking System
The regenerative braking system can use electric propulsion motor to convert the vehicles kinetic energy to electrical energy which is stored in the vehicles high voltage battery.

08.07.01 Control logic
The regenerative control logic uses two main inputs, acceleration pedal position and vehicle speed to determine a desired regenerative braking torque. Regenerative torque is limited when the vehicle experiences low wheel traction events e.g. ice or snow.

08.07.02 Percentage of braking performed on road by each axle
The percentage of braking performed on road by each axle is constantly changing and redistributing. It is based on the driver demanded torque and has been optimized for vehicle dynamics and range attributes.

08.07.03 Overlap of friction brakes and regenerative braking
One pedal driving by default, and in this mode, fully releasing the pedal yields the maximum regen allowable in the level selected. As the driver manually increases primary service brake pressure and friction braking torque, the vehicle regen level will proportionally ramp down to 0 Nm. The ramp profile is affected by many factors, such as those described in 08.07.01. When auto hold is active and the vehicle approaches standstill, the braking torque will blend from motors to friction brakes.

08.08.00 Description of charger
The Rivian R1T and R1S are capable of conductive charging using Electric Vehicle Supply Equipment (EVSE) off-board chargers for the following charge methods:

- AC Level 1 Charging at 120 V / 12 A
- AC Level 2 Charging at 240 V / 48 A
- DC Fast Charging at up to 210 kW

For Level 1 and Level 2 charging, the vehicle is equipped with an On-Board Charger that will convert the single-phase alternating current from the EVSE into DC current.

The vehicle is equipped with a SAE J1772 Combo CCS inlet, located at the front left corner of the vehicle, and covered by a charge port door.

08.08.01 Proper recharging procedures
Detailed instructions can be found in the owner's guide.

1. Put the vehicle in park (P) or unlock the vehicle.
2. Open the charge port door, located at the front left corner of the vehicle.
3. Plug the charger connector from the Electric Vehicle Supply Equipment (EVSE) into the vehicle's charge inlet so that the connector is fully seated and latched.
4. Follow any instructions provided by the EVSE to begin the charging session.
5. When the charging session is complete, It is indicated by the vehicle's center touchscreen and by an indicator light at the vehicle's charge inlet.
6. Stop the charge via the vehicle touchscreen or button at the charge port, or follow any instructions provided by the EVSE to end the charging station.
7. Remove the charger connector and close the charge port door.

Charging starts automatically. There may be a short delay if the battery requires heating or cooling.

NOTE: When the vehicle is plugged in but not actively charging, it draws energy from the charger instead of using the battery.

The charge port light color indicates the charging status:

White (solid), Ready.
White (pulsing), Starting to charge.
Green (pulsing), Charging.
Green (solid), Charge Complete.
Blue (solid), Charge Scheduled.
Red (solid), Error.
Red (pulsing), Error.

To stop the charging session:

- Select Stop Charge from Energy menu.
- Unplug the charge cable and return the plug to the charger.

Signs of discharged 12-volt batteries include the following:
- Doors and storage areas will not unlock.
- Vehicle does not respond to key fob.
- Lighting will not illuminate.
- Displays will not power up.

To jump start the 12-volt batteries:
- Remove the trailer hitch cover to access the jump start wire harness at the rear of the vehicle.
- Remove the round access panel to the right of the trailer hitch.
- Pull out the jump start wire harness.
- Connect the positive lead (red) to the red lead on the jump start wire harness and negative lead (black) to the black lead on the jump start wire harness.

Once energized, you can unlock the vehicle and power up the vehicle displays. If the vehicle battery has drained to 0%, open the charge port and charge as soon as possible.

08.08.02 Power requirements necessary to recharge vehicle
The Rivian R1T and R1S complies with industry standard SAE J1772 for AC Level 1 (120 VAC) and AC Level 2 (240 VAC) charging.

AC Level 1 charging requires a conventional 110-120 Volt AC grounded outlet capable of the rating of the EVSE to be used. A portable EVSE cord set that is capable of AC Level 1 charging is included with the vehicle.

AC Level 2 charging requires a 220-240 Volt AC outlet capable of the rating of the EVSE to be used.

08.09.00 Accessories which draw energy from the batteries
Energy from the high voltage battery is used to power the electric heater and electric air conditioning. Energy is drawn by an on-board DC-DC converter that converts the high voltage to 14 Volts DC to maintain the low voltage battery system and power 12 Volt systems. Energy is also drawn by an on-board DC-AC converter to provide AC power to NEMA 15-5 outlets located in the vehicle.

08.10.00 Other unique features (e.g. solar panels)
N/A

08.11.00 Description of warning system(s) for maintenance / malfunction
The Rivian vehicles communicate maintenance and malfunction needs to the driver through easy-to-read and timely notifications. If issues do occur, the notification system uses a combination of telltales, texts, and visuals to explain the situation. Our notifications are simple to understand, communicate when the vehicle needs service, and alerts customer if an issue arises. The customer leaves the experience feeling confident knowing the system explains the proper actions to take. Any notifications that appear in the driver's instrument cluster retire to the center display so the driver can recall still relevant notifications at a later time.
The Rivian R1S and R1T provide warning tell-tale lights on the driver's display for minor and major defects. A message and audible tone may also be provided for some major defects. Detailed descriptions of the warnings can be found in the owner's guide.

08.11.01 Cut off terminal voltages for prevention of battery damage
Battery management control system is programmed to prevent a state of under-voltage or over-voltage per the voltage limits defined by Rivian. Contactor opens and DTCs are set when voltage of the 9 module 135 kWh battery is below 216 V or above 459 V.

09.00.00 (Reserved)
10.00.00 (Reserved)
11.00.00 Starting and shifting schedules

12.00.00 (Reserved)
13.00.00 (Reserved)
14.00.00 (Reserved)
15.00.00 (Reserved)
16.00.00 (Reserved)
17.00.00 California requirements

17.01.00 Statement of compliance
Every vehicle which is covered by this application conforms to US EPA Federal Tier 3 Bin 0 regulations applicable to new Medium Duty Passenger Vehicles and state of California ZEV regulations applicable to new Medium-Duty Vehicles for the 2024 Model Year.

17.01.01 General statement
Rivian confirms that the production vehicles covered by this application will be substantially the same as the vehicles tested for the purposes of this application.

17.01.02 Drivability statement
As of 01/01/2006, This statement is no longer included in the California Exhaust Emission Standards and Test Procedures.

17.02.00 Supplemental Data and Certification Review Sheets
See end of document for ZEV Supplemental Sheets

17.03.00 (Reserved)
17.04.00 Credits

17.04.01 Description of multi-manufacturer arrangements
N/A

17.04.02 Credit calculation

17.05.00 Vehicle Safety
The Rivian architecture comprises a body attached to a skateboard frame structure. The primary structure encompasses engineered crush zones used to, in case of crash, absorb the crash energy. The "safety cage" comprises of body pillars, side impact bars, floor sills and roof rails (working with other structural elements) and with an advanced optimized restraint system to help properly restrain and protect occupants.

17.05.01 All information for safe operation of vehicle
See sections 03.04.00, 03.05.00, and 11.00.00.

17.05.02 Information on safe handling of battery system
The high voltage battery is to be serviced and handled only by technicians authorized by Rivian.

17.05.03 Description of emergency procedures
Emergency procedures are described in the owner's manual. Please refer to the owner's manual for details. Emergency procedures for first responders are described in the Emergency Response Guide provided for this vehicle.

17.06.00 (Reserved)

Test Results:

R1S Dual Large (21in)

EPA EV Multicycle Calculator (SAE J1634 Oct 2012)

Manufacturer:	RIVIAN		
Carline:	R1S		
Model Year	2023	D.Good	March 8, 2016
Vehicle	R1S 040X 21"		
Test Number			
Comments:	**ALL PURPOSE**		
Lab	FEV		
Test Date	3/10/2023		

Cycle	Energy (Wh)	Distance (mi)	ECdc_cyc	Kuwgt	Kwgt	Recharge AC WattHrs
UDDS1	1992.98	7.422	268.52	67.13	4.09	151758.000
UDDS2	1901.59	7.428	256.00	64.00	84.03	
UDDS3	1841.31	7.429	247.85	61.96	81.36	
UDDS4	1850.89	7.436	248.91	62.23	81.70	
HWY1	2892.33	10.249	282.21	141.10		
HWY2	2805.91	10.246	273.84	136.92		
SS1	94517.37	278.856	338.95			
SS2	22929.4	67.436	340.02			
TOTAL	**130731.77**	**396.502**				

K-Factors	UDDS1	UDDS2	UDDS3	UDDS4	HWY1	HWY2
Unweighted	0.250	0.250	0.250	0.250	0.500	0.500
Weighted	0.015	0.328	0.328	0.328	NA	NA

Results	Range (mi)	AC Wh/mi	**MPGe**	**kWh/100mi**	**EPA version** kWh/100mi
UDDSu	**512.03**	**296.39**			
UDDSw	**520.45**	**291.59**	**115.5902**	**29.1590**	29.15905
HWY	**470.21**	**322.74**	**104.4332**	**32.2742**	32.27420

MCT Results	whdc/mi	mi/kwhdc	mi/kwhac
UDDS	251.1903	3.9810	3.4295
HFEDS	278.0258	3.5968	3.0984

Range

	0.7 Adj	**Adj**	**MPGe**	**MPGe**
Factor	0.7000	0.7071	0.7000	0.7071
City	364.31	368.00	80.9131	81.7312
Hwy	329.15	332.48	73.1033	73.8424
Combined	348.49	352.01	77.40	78.18

R1S Dual Large (22in)

EPA EV Multicycle Calculator (SAE J1634 Oct 2012)

Manufacturer:	RIVIAN	As used by EPA laboratory	
Carline:	R1S		
Model Year	2023	D.Good	March 8, 2016
Vehicle	R1S 040X 22"		
Test Number			
Comments:	**ALL PURPOSE**		
Lab	FEV		
Test Date	3/27/2023		

Cycle	Energy (Wh)	Distance (mi)	ECdc_cyc	Kuwgt	Kwgt
UDDS1	2012.85	7.402	271.93	67.98	4.17
UDDS2	1957.20	7.442	262.99	65.75	86.32
UDDS3	1913.71	7.438	257.29	64.32	84.45
UDDS4	1913.00	7.443	257.02	64.26	84.36
HWY1	3027.09	10.274	294.63	147.31	
HWY2	2962.08	10.264	288.58	144.29	
SS1	94881.56	261.954	362.21		
SS2	22478.80	61.693	364.37		
TOTAL	**131146.29**	**373.911**			

Recharge AC WattHrs
151994

K-Factors	UDDS1	UDDS2	UDDS3	UDDS4	HWY1	HWY2
Unweighted	0.250	0.250	0.250	0.250	0.500	0.500
Weighted	0.015	0.328	0.328	0.328	NA	NA

Results	Range (mi)	AC Wh/mi	**MPGe**	**kWh/100mi**
UDDSu	**499.97**	**304.01**		
UDDSw	**505.78**	**300.52**	**112.1567**	**30.0517**
HWY	**449.75**	**337.96**	**99.7320**	**33.7956**

EPA version
kWh/100mi
30.05170
33.79557

MCT Results	whdc/mi	mi/kwhdc	mi/kwhac
UDDS	259.2977	3.8566	3.3276
HFEDS	291.6012	3.4293	2.9590

Range

	0.7 Adj	**Adj**	**MPGe**	**MPGe**
Factor	0.7000	0.7093	0.7000	0.7093
City	354.04	358.75	78.5097	79.5539
Hwy	314.82	319.01	69.8124	70.7410
Combined	336.39	340.87	74.60	75.59

R1S All-Terrain Dual Large (20in)

EPA EV Multicycle Calculator (SAE J1634 Oct 2012)

Manufacturer:	RIVIAN	As used by EPA laboratory	
Carline:	R1S		
Model Year	2023	D.Good	March 8, 2016
Vehicle	R1S 040X 20"		
Test Number			
Comments:	**All-Purpose**		
Lab	FEV		
Test Date	4/11/2023		

Cycle	Energy (Wh)	Distance (mi)	ECdc_cyc	Kuwgt	Kwgt	Recharge AC WattHrs
UDDS1	2257.62	7.447	303.16	75.79	5.24	150826
UDDS2	2184.59	7.440	293.63	73.41	96.18	
UDDS3	2081.98	7.445	279.65	69.91	91.61	
UDDS4	2089.22	7.456	280.21	70.05	91.79	
HWY1	3315.74	10.239	323.84	161.92		
HWY2	3216.93	10.259	313.58	156.79		
SS1	99200.76	251.402	394.59			
SS2	16325.41	41.292	395.37			
TOTAL	**130672.25**	**342.980**				

K-Factors	UDDS1	UDDS2	UDDS3	UDDS4	HWY1	HWY2
Unweighted	0.250	0.250	0.250	0.250	0.500	0.500
Weighted	0.017	0.328	0.328	0.328	NA	NA

Results	Range (mi)	AC Wh/mi	**MPGe**	**kWh/100mi**	**EPA version** kWh/100mi
UDDSu	**451.90**	**333.76**			
UDDSw	**458.79**	**328.74**	**102.5265**	**32.8744**	32.87443
HWY	**410.01**	**367.86**	**91.6245**	**36.7860**	36.78603

MCT Results	whdc/mi	mi/kwhdc	mi/kwhac
UDDS	284.8167	3.5110	3.0419
HFEDS	318.7059	3.1377	2.7184

Range

	0.7 Adj	**Adj**	**MPGe**	**MPGe**
Factor	0.7000	0.7036	0.7000	0.7036
City	321.16	322.79	71.7685	72.1336
Hwy	287.01	288.47	64.1371	64.4633
Combined	305.79	307.34	68.33	68.68

R1T Dual Large (22in)

EPA EV Multicycle Calculator (SAE J1634 Oct 2012)

Manufacturer:	RIVIAN	As used by EPA laboratory	
Carline:	R1T 033X		
Model Year	2023	D.Good	March 8, 2016
Vehicle	R1T-033X 22"		
Test Number			
Comments:	**All-Purpose**		
Lab	FEV		
Test Date	5/10/2023		

Cycle	Energy (Wh)	Distance (mi)	ECdc_cyc	Kuwgt	Kwgt	Recharge AC WattHrs
UDDS1	2097.34	7.455	281.33	70.33	4.48	151213
UDDS2	2029.86	7.444	272.68	68.17	89.45	
UDDS3	1933.61	7.450	259.54	64.88	85.13	
UDDS4	1925.46	7.451	258.42	64.61	84.77	
HWY1	3115.85	10.253	303.89	151.94		
HWY2	3003.17	10.257	292.79	146.40		
SS1	101716.58	271.994	373.97			
SS2	15800.31	42.338	373.20			
TOTAL	**131622.18**	**364.642**				

K-Factors	UDDS1	UDDS2	UDDS3	UDDS4	HWY1	HWY2
Unweighted	0.250	0.250	0.250	0.250	0.500	0.500
Weighted	0.016	0.328	0.328	0.328	NA	NA

Results	Range (mi)	AC Wh/mi	**MPGe**	**kWh/100mi**	**EPA version** kWh/100mi
UDDSu	**491.14**	**307.88**			
UDDSw	**498.89**	**303.10**	**111.2012**	**30.3099**	30.30992
HWY	**441.18**	**342.75**	**98.3380**	**34.2747**	34.27465

MCT Results	whdc/mi	mi/kwhdc	mi/kwhac
UDDS	263.8303	3.7903	3.2992
HFEDS	298.3411	3.3519	2.9176

Range

	Unadj	**Adj**	**MPGe**	**MPGe**
Factor	0.7000	0.7217	0.7000	0.7217
City	349.22	360.05	77.8409	80.2551
Hwy	308.83	318.40	68.8366	70.9715
Combined	331.04	341.31	73.79	76.08

R1S Dual Standard (21in)
Test results pending

R1S Dual Standard Plus (21in)
Test results pending

R1T Dual Standard (22in)
Test results pending

R1T Dual Standard Plus (22in)
Test results pending

R1S All-Terrain Dual Standard Plus (20in)
Test results pending

Certification Summary Information Report

Manufacturer	Rivian Automotive LLC	**Manufacturer Code**	RIV
Test Group	RRIVT00.0192	**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**	02/06/2024 07:45:47 PM
Model Year	2024		

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	--	--

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**	MDPV
Federal Clean Fuel Vehicle	Yes	**Federal Clean Fuel Vehicle Standard**	ZEV
Federal Clean Fuel Vehicle ILEV	No	**California Partial Zero Emissions Vehicle Indicator**	--
Durability Group Name	RRIVR0000192	**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	12/01/2023	**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**	RRIVT00.0192
Test Group OBD Compliance Level	Full - no deficiencies	**Number of Test Group OBD Deficiencies**	0
OBD Deficiencies Comments	OBD COMPLIANCE IS NOT APPLICABLE TO ZEV. PARAMETERS ARE PLACEHOLDERS TO ALLOW DATASET SUBMISSION.		
Mfr Test Group Comments	DURABILITY IS NOT APPLICABLE TO ZEV. PARAMETERS ARE PLACEHOLDERS TO ALLOW DATASET SUBMISSION.		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Rivian Automotive LLC	1 - Rivian	542 - R1S Performance Dual Large (22in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	782 - R1T Dual Standard Plus (22in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	730 - R1T All-Terrain Dual Large (20in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	780 - R1T All-Terrain Dual Standard Plus (20in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	732 - R1T Dual Large (22in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	742 - R1T Performance Dual Large (22in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	541 - R1S Performance Dual Large (21in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	741 - R1T Performance Dual Large (21in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	742 - R1T Performance Dual Large (22in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	741 - R1T Performance Dual Large (21in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	532 - R1S Dual Large (22in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	772 - R1T Dual Standard (22in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	581 - R1S Dual Standard Plus (21in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	731 - R1T Dual Large (21in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	730 - R1T All-Terrain Dual Large (20in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	530 - R1S All-Terrain Dual Large (20in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	572 - R1S Dual Standard (22in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	582 - R1S Dual Standard Plus (22in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	540 - R1S All-Terrain Performance Dual Large (20in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	571 - R1S Dual Standard (21in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	581 - R1S Dual Standard Plus (21in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Rivian Automotive LLC	1 - Rivian	771 - R1T Dual Standard (21in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	580 - R1S All-Terrain Dual Standard Plus (20in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	571 - R1S Dual Standard (21in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	531 - R1S Dual Large (21in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	780 - R1T All-Terrain Dual Standard Plus (20in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	781 - R1T Dual Standard Plus (21in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	782 - R1T Dual Standard Plus (22in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	580 - R1S All-Terrain Dual Standard Plus (20in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	740 - R1T All-Terrain Performance Dual Large (20in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	740 - R1T All-Terrain Performance Dual Large (20in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	772 - R1T Dual Standard (22in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	582 - R1S Dual Standard Plus (22in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	732 - R1T Dual Large (22in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	572 - R1S Dual Standard (22in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	781 - R1T Dual Standard Plus (21in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	531 - R1S Dual Large (21in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	530 - R1S All-Terrain Dual Large (20in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	542 - R1S Performance Dual Large (22in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	541 - R1S Performance Dual Large (21in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	731 - R1T Dual Large (21in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	532 - R1S Dual Large (22in)	Federal	Part-time 4-Wheel Drive	Automatic	1	No
Rivian Automotive LLC	1 - Rivian	771 - R1T Dual Standard (21in)	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	1	No

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

Rivian Automotive LLC	1 - Rivian	540 - R1S All-Terrain Performance Dual Large (20in)	California + CAA Section 177 states	Part-time 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	--	--	--	--	--	--	--	--	--	--

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Electricity	--	--	--

Official Charge Depleting Test Numbers

Test Group Fuel	UDDS	Highway
Electricity	PRIV10079973	PRIV10079974
Electricity	PRIV10079232	PRIV10079233
Electricity	PRIV10080841	PRIV10080842
Electricity	PRIV10080257	PRIV10080258

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Hybrid Electric Vehicle And Fuel Cell Information

Rechargable Energy Storage System	Battery(s)	**Rechargable Energy Storage System, if Other**	--
Battery Type	Lithium Ion	**Number of Battery Packs**	1
Total Voltage of Battery Packs	400	**Battery Energy Capacity**	360
Battery Specific Energy	169	**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**	Yes
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	2		
Motor/Generator Type 1	AC Permanent Magnet	**Rated Motor/Generator Power**	208
Motor/Generator Type 2	AC Permanent Magnet	**Rated Motor/Generator Power**	208
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	**Usable H2 Fill Capacity (kg)**	--
Mfr Hybrid Electric/ Electric Vehicle Comments	All-Purpose (Default) Drive Mode Rated Motor/Generator Power (kWatt) 248 and 248 is for Performance Dual Large. Rated Motor/Generator Power (kWatt) 208 and 208 is for Dual Large.		

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Emission Data Vehicle Information

Vehicle ID / Configuration	R1S040XR20 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	PRIVT00.0192	**Original Evaporative/Refueling Family**	--
Original Test Vehicle Model Year	2023		

Vehicle Model

Represented Test Vehicle Make	Rivian	**Represented Test Vehicle Model**	R1S 20in All-Terrain Performance Dual Large

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	Yes		
Odometer Correction -- Initial	1	**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	264X2RW	**Rated Horsepower**	665
Displacement (liters)	99.999		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	Electric
Number of Air Aspiration Devices	--	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	--	**Drive Mode While Testing**	Part-time 4-Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	6951	**Equivalent Test Weight (pounds)**	7500
GVWR (lbs)	--	**N/V Ratio**	999
Axle Ratio	9.99		
Transmission Type	Automatic	**# of Transmission Gears**	1
Transmission Lockup	No	**Creeper Gear**	No

Certification Summary Information Report

Test Group	RRIVT00.0192	Evaporative/Refueling Family	--

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	60.02	0.3434	0.02458	1.1	-0.058	0.0267	18.5
Cold CO	66.02	0.3777	0.02704	-9.84	-0.234	0.02946	N/A
US06	60.02	0.3434	0.02458	1.1	-0.058	0.0267	N/A

Emission Control Device Comments Battery Electric Vehicle

Manufacturer Test Vehicle Comments FDU Axle Ratio: 11.0:1 RDU Axle Ratio: 13.7:1 FDU N/V: 135.0 RDU N/V: 108.4

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080257**	**Test Procedure**	**81 - Charge Depleting UDDS**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	04/11/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4903	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	150.83
Charge Depleting Range (Calculated miles)	458.79	**Charge Depleting Range (Actual miles)**	458.79
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	458.79
Number of Charge Depleting Bags/Phases Conducted	4	**Transition Bag/Phase Number**	--

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	-0.56
3	Drive Trace Energy Economy Rating	-0.46
4	Drive Trace Inertia Work Ratio Rating	-0.69
5	Manufacturer Fuel Economy	27.96

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	-0.19
8	Drive Trace Energy Economy Rating	-0.45
9	Drive Trace Inertia Work Ratio Rating	-0.34
10	Manufacturer Fuel Economy	28.02

Charge Depleting Bag/Phase

Certification Summary Information Report

Test Group	RRIVT00.0192	Evaporative/Refueling Family	--

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
11	Carbon-Related Exhaust Emissions	0
12	Drive Trace Absolute Speed Change Rating	0.2
13	Drive Trace Energy Economy Rating	0.11
14	Drive Trace Inertia Work Ratio Rating	0.46
15	Manufacturer Fuel Economy	29.36

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
16	Carbon-Related Exhaust Emissions	0
17	Drive Trace Absolute Speed Change Rating	1
18	Drive Trace Energy Economy Rating	0.55
19	Drive Trace Inertia Work Ratio Rating	1.45
20	Manufacturer Fuel Economy	30.32

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 20" Tires. Cycle 1: 303.16 Wh/mi, Cycle 2: 293.63 Wh/mi, Cycle 3: 279.65 Wh/mi, Cycle 4: 280.21 Wh/mi. Cycle 1: 2257.63 Wh MCT DC Energy: 130672.25 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	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080258**	**Test Procedure**	**84 - Charge Depleting Highway**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	04/11/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4903	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	150.83
Charge Depleting Range (Calculated miles)	410.01	**Charge Depleting Range (Actual miles)**	410.01
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	410.01
Number of Charge Depleting Bags/Phases Conducted	2	**Transition Bag/Phase Number**	--

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	-1.15
3	Drive Trace Energy Economy Rating	0.02
4	Drive Trace Inertia Work Ratio Rating	-1.31
5	Manufacturer Fuel Economy	31.36

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	1
8	Drive Trace Energy Economy Rating	0.57
9	Drive Trace Inertia Work Ratio Rating	0.91
10	Manufacturer Fuel Economy	32.38

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 20" Tires. Cycle 1: 323.84 Wh/mi, Cycle 2: 313.58 Wh/mi MCT DC Energy: 130672.25 Wh

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

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	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Emission Data Vehicle Information

Vehicle ID / Configuration	R1S040XR21 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	PRIVT00.0192	**Original Evaporative/Refueling Family**	--
Original Test Vehicle Model Year	2023		

Vehicle Model

Represented Test Vehicle Make	Rivian	**Represented Test Vehicle Model**	R1S 21in Performance Dual Large

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	Yes		
Odometer Correction -- Initial	1	**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	264X2RW	**Rated Horsepower**	665
Displacement (liters)	99.999		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	Electric
Number of Air Aspiration Devices	--	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	--	**Drive Mode While Testing**	Part-time 4-Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	6722	**Equivalent Test Weight (pounds)**	7000
GVWR (lbs)	--	**N/V Ratio**	999
Axle Ratio	9.99		
Transmission Type	Automatic	**# of Transmission Gears**	1
Transmission Lockup	No	**Creeper Gear**	No

Certification Summary Information Report

Test Group	RRIVT00.0192	Evaporative/Refueling Family	--

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	45.22	0.6456	0.01633	-2.18	0.4431	0.0174	15.8
Cold CO	49.74	0.7102	0.01796	-7.21	0.1288	0.0211	N/A
US06	45.22	0.6456	0.01633	-2.18	0.4431	0.0174	N/A

Emission Control Device Comments Battery Electric Vehicle

Manufacturer Test Vehicle Comments FDU Axle Ratio: 11.0:1 RDU Axle Ratio: 13.7:1 FDU N/V: 140.0 RDU N/V: 112.4

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079554**	**Test Procedure**	**2 - CVS 75 and later (w/o can. load)**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/15/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4207	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.15	--
DT-EER (Drive Trace Energy Economy Rating)	-0.32	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.21	--
MFR FE (Manufacturer Fuel Economy)	25.95	129.8651252
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	0
Optional Carbon-Related Exhaust Emissions	0	0

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 21" Tires. Cycle 1: 283.16 Wh/mi, Cycle 2: 241.93 Wh/mi, Cycle 3: 276.15 Wh/mi, Cycle 4: 239.50 Wh/mi.

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

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	CO	0.0	--	--	--	0	--	0	0	Pass
CA	150,000 miles	California ZEV	CO	0.0	--	--	--	0	--	0	0	Pass

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079555**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/15/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4207	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.57	--
DT-EER (Drive Trace Energy Economy Rating)	-0.3	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.5	--
MFR FE (Manufacturer Fuel Economy)	28.01	120.3141735
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	0
Optional Carbon-Related Exhaust Emissions	0	0

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 21" Tires. Cycle 1: 280.08 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079556**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/16/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4239	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.66	--
DT-EER (Drive Trace Energy Economy Rating)	0.66	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.69	--
MFR FE (Manufacturer Fuel Economy)	36.5	92.3287671
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--
Optional Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 21" Tires. Cycle 1 (City1): 350.52 Wh/mi, Cycle 2 (HWY): 361.07 Wh/mi, Cycle 3 (City2): 452.60 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079557**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/16/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4232	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.62	--
DT-EER (Drive Trace Energy Economy Rating)	-0.79	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.44	--
MFR FE (Manufacturer Fuel Economy)	33.74	99.8814464
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--
Optional Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 21" Tires. Cycle 1: 337.36 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079232**	**Test Procedure**	**81 - Charge Depleting UDDS**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/10/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3699	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.76
Charge Depleting Range (Calculated miles)	520.45	**Charge Depleting Range (Actual miles)**	520.45
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	520.45
Number of Charge Depleting Bags/Phases Conducted	4	**Transition Bag/Phase Number**	--

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	0.4
3	Drive Trace Energy Economy Rating	-0.02
4	Drive Trace Inertia Work Ratio Rating	0.84
5	Manufacturer Fuel Economy	24.89

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	0.41
8	Drive Trace Energy Economy Rating	0.2
9	Drive Trace Inertia Work Ratio Rating	0.7
10	Manufacturer Fuel Economy	24.79

Charge Depleting Bag/Phase

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
11	Carbon-Related Exhaust Emissions	0
12	Drive Trace Absolute Speed Change Rating	0.64
13	Drive Trace Energy Economy Rating	0.27
14	Drive Trace Inertia Work Ratio Rating	0.91
15	Manufacturer Fuel Economy	25.6

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
16	Carbon-Related Exhaust Emissions	0
17	Drive Trace Absolute Speed Change Rating	0.12
18	Drive Trace Energy Economy Rating	-0.39
19	Drive Trace Inertia Work Ratio Rating	0.13
20	Manufacturer Fuel Economy	26.85

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 21" Tires. Cycle 1: 268.52 Wh/mi, Cycle 2: 256.00 Wh/mi, Cycle 3: 247.85 Wh/mi, Cycle 4: 248.91 Wh/mi. MCT Energy: 130731.77 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	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079233**	**Test Procedure**	**84 - Charge Depleting Highway**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/10/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3699	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.76
Charge Depleting Range (Calculated miles)	470.21	**Charge Depleting Range (Actual miles)**	470.21
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	470.21
Number of Charge Depleting Bags/Phases Conducted	2	**Transition Bag/Phase Number**	--

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	1.82
3	Drive Trace Energy Economy Rating	0.1
4	Drive Trace Inertia Work Ratio Rating	2.07
5	Manufacturer Fuel Economy	28.22

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	1.64
8	Drive Trace Energy Economy Rating	0.03
9	Drive Trace Inertia Work Ratio Rating	1.85
10	Manufacturer Fuel Economy	27.38

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 21" Tires. Cycle 1: 282.21 Wh/mi, Cycle 2: 273.84 Wh/mi MCT Energy: 130731.77 Wh

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

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	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079558**	**Test Procedure**	**86 - Charge Depleting 20 Degree F FTP**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/15/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4192	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.76
Charge Depleting Range (Calculated miles)	14.82	**Charge Depleting Range (Actual miles)**	14.82
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	14.82
Number of Charge Depleting Bags/Phases Conducted	4	**Transition Bag/Phase Number**	--

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	-0.55
3	Drive Trace Energy Economy Rating	-0.79
4	Drive Trace Inertia Work Ratio Rating	-0.89
5	Manufacturer Fuel Economy	52.27

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	1.71
8	Drive Trace Energy Economy Rating	1.13
9	Drive Trace Inertia Work Ratio Rating	3.22
10	Manufacturer Fuel Economy	52.89

Charge Depleting Bag/Phase

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
11	Carbon-Related Exhaust Emissions	0
12	Drive Trace Absolute Speed Change Rating	0.75
13	Drive Trace Energy Economy Rating	0.5
14	Drive Trace Inertia Work Ratio Rating	0.6
15	Manufacturer Fuel Economy	63.42

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
16	Carbon-Related Exhaust Emissions	0
17	Drive Trace Absolute Speed Change Rating	1.85
18	Drive Trace Energy Economy Rating	0.56
19	Drive Trace Inertia Work Ratio Rating	1.24
20	Manufacturer Fuel Economy	46.89

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 21" Tires. Cycle 1: 634.16 Wh/mi, Cycle 2: 522.73 Wh/mi, Cycle 3: 468.91 Wh/mi, Cycle 4: 528.87 Wh/mi,

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Emission Data Vehicle Information

Vehicle ID / Configuration	R1S040XR22 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	PRIVT00.0192	**Original Evaporative/Refueling Family**	--
Original Test Vehicle Model Year	2023		

Vehicle Model

Represented Test Vehicle Make	Rivian	**Represented Test Vehicle Model**	R1S 22in Performance Dual Large

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	Yes		
Odometer Correction -- Initial	1	**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	264X2RW	**Rated Horsepower**	665
Displacement (liters)	99.999		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	Electric
Number of Air Aspiration Devices	--	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	--	**Drive Mode While Testing**	Part-time 4-Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	6735	**Equivalent Test Weight (pounds)**	7000
GVWR (lbs)	--	**N/V Ratio**	999
Axle Ratio	9.99		
Transmission Type	Automatic	**# of Transmission Gears**	1
Transmission Lockup	No	**Creeper Gear**	No

Certification Summary Information Report

Test Group	RRIVT00.0192	Evaporative/Refueling Family	--

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	55.14	0.3691	0.02153	1.04	0.081	0.02389	17
Cold CO	60.65	0.406	0.02368	-10.31	-0.0655	0.02644	N/A
US06	55.14	0.3691	0.02153	1.04	0.081	0.02389	N/A

Emission Control Device Comments Battery Electric Vehicle

Manufacturer Test Vehicle Comments FDU Axle Ratio: 11.0:1 RDU Axle Ratio: 13.7:1 FDU N/V: 70.0 RDU N/V: 87.2

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079977**	**Test Procedure**	**2 - CVS 75 and later (w/o can. load)**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	04/04/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4790	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.57	--
DT-EER (Drive Trace Energy Economy Rating)	0.02	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.62	--
MFR FE (Manufacturer Fuel Economy)	27.11	124.3083733
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	0
Optional Carbon-Related Exhaust Emissions	0	0

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 298.43 Wh/mi, Cycle 2: 252.47 Wh/mi, Cycle 3: 288.42 Wh/mi, Cycle 4: 248.31 Wh/mi.

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 0	CO	0.0	--	--	--	0	--	0	0	Pass
CA	150,000 miles	California ZEV	CO	0.0	--	--	--	0	--	0	0	Pass

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079979**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	04/04/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4790	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.24	--
DT-EER (Drive Trace Energy Economy Rating)	0.21	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.08	--
MFR FE (Manufacturer Fuel Economy)	29.68	113.5444744
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	0
Optional Carbon-Related Exhaust Emissions	0	0

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 296.78 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079984**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	04/05/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4838	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.11	--
DT-EER (Drive Trace Energy Economy Rating)	2.73	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	4.32	--
MFR FE (Manufacturer Fuel Economy)	38.56	87.3962656
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--
Optional Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1 (City1): 362.89 Wh/mi, Cycle 2 (HWY): 384.71 Wh/mi, Cycle 3 (City2): 456.02 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079985**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	04/05/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4831	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.12	--
DT-EER (Drive Trace Energy Economy Rating)	-0.43	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.72	--
MFR FE (Manufacturer Fuel Economy)	35.04	96.1757991
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--
Optional Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 350.35 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079973**	**Test Procedure**	**81 - Charge Depleting UDDS**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/27/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4319	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.99
Charge Depleting Range (Calculated miles)	505.78	**Charge Depleting Range (Actual miles)**	505.78
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	505.78
Number of Charge Depleting Bags/Phases Conducted	4	**Transition Bag/Phase Number**	--

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	-2.65
3	Drive Trace Energy Economy Rating	-2.33
4	Drive Trace Inertia Work Ratio Rating	-3.69
5	Manufacturer Fuel Economy	26.3

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	-2.05
8	Drive Trace Energy Economy Rating	-0.86
9	Drive Trace Inertia Work Ratio Rating	-1.72
10	Manufacturer Fuel Economy	25.73

Charge Depleting Bag/Phase

Certification Summary Information Report

Test Group	RRIVT00.0192	Evaporative/Refueling Family	--

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
11	Carbon-Related Exhaust Emissions	0
12	Drive Trace Absolute Speed Change Rating	-0.89
13	Drive Trace Energy Economy Rating	-0.51
14	Drive Trace Inertia Work Ratio Rating	-0.92
15	Manufacturer Fuel Economy	25.7

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
16	Carbon-Related Exhaust Emissions	0
17	Drive Trace Absolute Speed Change Rating	-1.04
18	Drive Trace Energy Economy Rating	-0.91
19	Drive Trace Inertia Work Ratio Rating	-0.72
20	Manufacturer Fuel Economy	27.19

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 271.93 Wh/mi, Cycle 2: 262.99 Wh/mi, Cycle 3: 257.29 Wh/mi, Cycle 4: 257.02 Wh/mi. MCT Energy: 131146.29 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	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079974**	**Test Procedure**	**84 - Charge Depleting Highway**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	03/27/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4319	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.99
Charge Depleting Range (Calculated miles)	449.75	**Charge Depleting Range (Actual miles)**	449.75
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	449.75
Number of Charge Depleting Bags/Phases Conducted	2	**Transition Bag/Phase Number**	--

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	0.05
3	Drive Trace Energy Economy Rating	-1.08
4	Drive Trace Inertia Work Ratio Rating	0.51
5	Manufacturer Fuel Economy	29.46

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	-0.61
8	Drive Trace Energy Economy Rating	-0.42
9	Drive Trace Inertia Work Ratio Rating	-0.7
10	Manufacturer Fuel Economy	28.86

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 294.63 Wh/mi, Cycle 2: 288.58 Wh/mi MCT Energy: 131146.29 Wh

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

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	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10079986**	**Test Procedure**	**86 - Charge Depleting 20 Degree F FTP**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	04/03/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4775	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.99
Charge Depleting Range (Calculated miles)	14.88	**Charge Depleting Range (Actual miles)**	14.88
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	14.88
Number of Charge Depleting Bags/Phases Conducted	4	**Transition Bag/Phase Number**	--

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	1.2
3	Drive Trace Energy Economy Rating	-0.15
4	Drive Trace Inertia Work Ratio Rating	1.25
5	Manufacturer Fuel Economy	43.32

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	1.89
8	Drive Trace Energy Economy Rating	0.7
9	Drive Trace Inertia Work Ratio Rating	1.82
10	Manufacturer Fuel Economy	50.75

Charge Depleting Bag/Phase

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
11	Carbon-Related Exhaust Emissions	0
12	Drive Trace Absolute Speed Change Rating	1.12
13	Drive Trace Energy Economy Rating	1.01
14	Drive Trace Inertia Work Ratio Rating	2.76
15	Manufacturer Fuel Economy	63.26

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
16	Carbon-Related Exhaust Emissions	0
17	Drive Trace Absolute Speed Change Rating	1.53
18	Drive Trace Energy Economy Rating	0.43
19	Drive Trace Inertia Work Ratio Rating	2.36
20	Manufacturer Fuel Economy	46.42

Manufacturer Test Comments R1S - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 632.63 Wh/mi, Cycle 2: 507.51 Wh/mi, Cycle 3: 464.22 Wh/mi, Cycle 4: 433.19 Wh/mi,

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Emission Data Vehicle Information

Vehicle ID / Configuration	R1T033XR22 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	PRIVT00.0192	**Original Evaporative/Refueling Family**	--
Original Test Vehicle Model Year	2023		

Vehicle Model

Represented Test Vehicle Make	Rivian	**Represented Test Vehicle Model**	R1T 22in Performance Dual Large

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	Yes		
Odometer Correction -- Initial	1	**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	264X2RW	**Rated Horsepower**	665
Displacement (liters)	99.999		
Air Aspiration Method	Naturally Aspirated	**Air Aspiration Method, if 'Other'**	Electric
Number of Air Aspiration Devices	--	**Air Aspiration Device Configuration**	--
Charge Air Cooler Type	--	**Drive Mode While Testing**	Part-time 4-Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	6598	**Equivalent Test Weight (pounds)**	7000
GVWR (lbs)	--	**N/V Ratio**	999
Axle Ratio	9.99		
Transmission Type	Automatic	**# of Transmission Gears**	1
Transmission Lockup	No	**Creeper Gear**	No

Certification Summary Information Report

Test Group	RRIVT00.0192	Evaporative/Refueling Family	--

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	55.67	0.3376	0.02298	-8.2	0.125	0.02513	17.3
Cold CO	61.24	0.3714	0.02528	-11.05	0.0039	0.02685	N/A
US06	55.67	0.3376	0.02298	-8.2	0.125	0.02513	N/A

Emission Control Device Comments Battery Electric Vehicle

Manufacturer Test Vehicle Comments FDU Axle Ratio: 11.0:1 RDU Axle Ratio: 13.7:1 FDU N/V: 70.0 RDU N/V: 87.2

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080843**	**Test Procedure**	**2 - CVS 75 and later (w/o can. load)**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	05/16/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3631	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	3.06	--
DT-EER (Drive Trace Energy Economy Rating)	2.38	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	4.13	--
MFR FE (Manufacturer Fuel Economy)	26.93	125.1392499
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	0
Optional Carbon-Related Exhaust Emissions	0	0

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1T - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 302.26 Wh/mi, Cycle 2: 253.33 Wh/mi, Cycle 3: 283.83 Wh/mi, Cycle 4: 241.17 Wh/mi.

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

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	CO	0.0	--	--	--	0	--	0	0	Pass
CA	150,000 miles	California ZEV	CO	0.0	--	--	--	0	--	0	0	Pass

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080844**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	05/16/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3631	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	7.82	--
DT-EER (Drive Trace Energy Economy Rating)	1.61	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	10.06	--
MFR FE (Manufacturer Fuel Economy)	29.6	113.8513514
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	0
Optional Carbon-Related Exhaust Emissions	0	0

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1T - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 295.98 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080845**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	05/16/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3656	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-2.78	--
DT-EER (Drive Trace Energy Economy Rating)	-1.79	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-5.5	--
MFR FE (Manufacturer Fuel Economy)	39.2	85.9693878
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--
Optional Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1T - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1 (City1): 366.71 Wh/mi, Cycle 2 (HWY): 393.08 Wh/mi, Cycle 3 (City2): 444.21 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080846**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	05/18/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3694	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.72	--
DT-EER (Drive Trace Energy Economy Rating)	0.16	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.29	--
MFR FE (Manufacturer Fuel Economy)	31.18	108.0821039
NOX (Nitrogen Oxide)	0	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--
Optional Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments R1T - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 311.76 Wh/mi

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080841**	**Test Procedure**	**81 - Charge Depleting UDDS**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	05/10/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3184	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.21
Charge Depleting Range (Calculated miles)	498.89	**Charge Depleting Range (Actual miles)**	498.89
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	498.89
Number of Charge Depleting Bags/Phases Conducted	4	**Transition Bag/Phase Number**	--

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	0.79
3	Drive Trace Energy Economy Rating	0.42
4	Drive Trace Inertia Work Ratio Rating	1.01
5	Manufacturer Fuel Economy	27.27

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	0.76
8	Drive Trace Energy Economy Rating	0.19
9	Drive Trace Inertia Work Ratio Rating	1.08
10	Manufacturer Fuel Economy	25.84

Charge Depleting Bag/Phase

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
11	Carbon-Related Exhaust Emissions	0
12	Drive Trace Absolute Speed Change Rating	1.25
13	Drive Trace Energy Economy Rating	0.42
14	Drive Trace Inertia Work Ratio Rating	1.77
15	Manufacturer Fuel Economy	28.13

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
16	Carbon-Related Exhaust Emissions	0
17	Drive Trace Absolute Speed Change Rating	0.17
18	Drive Trace Energy Economy Rating	-0.49
19	Drive Trace Inertia Work Ratio Rating	-0.03
20	Manufacturer Fuel Economy	25.95

Manufacturer Test Comments R1T - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 281.33 Wh/mi, Cycle 2: 272.68 Wh/mi, Cycle 3: 259.54 Wh/mi, Cycle 4: 258.42 Wh/mi. UDDS1 Energy: 2097.34 Wh MCT Energy: 131622.18 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	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080842**	**Test Procedure**	**84 - Charge Depleting Highway**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	05/10/2023	**Fuel**	Electricity
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3184	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.21
Charge Depleting Range (Calculated miles)	441.18	**Charge Depleting Range (Actual miles)**	441.18
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	441.18
Number of Charge Depleting Bags/Phases Conducted	2	**Transition Bag/Phase Number**	--

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	1.95
3	Drive Trace Energy Economy Rating	0.28
4	Drive Trace Inertia Work Ratio Rating	2.42
5	Manufacturer Fuel Economy	30.39

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	-0.36
8	Drive Trace Energy Economy Rating	-0.02
9	Drive Trace Inertia Work Ratio Rating	-0.33
10	Manufacturer Fuel Economy	29.28

Manufacturer Test Comments R1T - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 303.89 Wh/mi, Cycle 2: 292.79 Wh/mi MCT Energy: 131622.18 Wh

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

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	--	--
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	RRIVT00.0192	**Evaporative/Refueling Family**	--

Test #	**PRIV10080847**	**Test Procedure**	**86 - Charge Depleting 20 Degree F FTP**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	62 - Electricity
Test Date	05/17/2023	**Fuel**	N/A
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	FEV Michigan		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3679	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	**Road Speed Fan Usage**	Yes

PHEV/EV Charge Depleting Test Information

Recharge Event Voltage	240	**Recharge Event Energy (kiloWatt-hours)**	151.21
Charge Depleting Range (Calculated miles)	14.88	**Charge Depleting Range (Actual miles)**	14.88
Charge Depleting Range Highway (Calculated miles)	--	**Derived 5-Cycle Coefficient Model Year**	--
All Electric Range Unadjusted (miles)	--	**Equivalent All Electric Range (miles)**	14.88
Number of Charge Depleting Bags/Phases Conducted	4	**Transition Bag/Phase Number**	--

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	-1.09
3	Drive Trace Energy Economy Rating	-0.19
4	Drive Trace Inertia Work Ratio Rating	-1.28
5	Manufacturer Fuel Economy	63.35

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
6	Carbon-Related Exhaust Emissions	0
7	Drive Trace Absolute Speed Change Rating	0.49
8	Drive Trace Energy Economy Rating	0.25
9	Drive Trace Inertia Work Ratio Rating	0.65
10	Manufacturer Fuel Economy	52.82

Charge Depleting Bag/Phase

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
11	Carbon-Related Exhaust Emissions	0
12	Drive Trace Absolute Speed Change Rating	0.43
13	Drive Trace Energy Economy Rating	-0.22
14	Drive Trace Inertia Work Ratio Rating	0.87
15	Manufacturer Fuel Economy	45.77

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
16	Carbon-Related Exhaust Emissions	0
17	Drive Trace Absolute Speed Change Rating	-0.07
18	Drive Trace Energy Economy Rating	-0.25
19	Drive Trace Inertia Work Ratio Rating	-0.43
20	Manufacturer Fuel Economy	47.89

Manufacturer Test Comments R1T - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 633.53 Wh/mi, Cycle 2: 528.20 Wh/mi, Cycle 3: 478.88 Wh/mi, Cycle 4: 457.66 Wh/mi.

Fuel Properties

Certification Summary Information Report

Test Group	RRIVT00.0192	**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**	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

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**Standard Level**	California ZEV
Fuel	Electricity	**Test Procedure**	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	CO	--	--	--	--	--	--	0	0
150,000 miles	CO-COMP	--	--	--	--	--	--	0	0
150,000 miles	CREE	--	--	--	--	--	--	0	0
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	MDPV (Federal Tier 2, GVWR 8501-10000)	**Standard Level**	California ZEV
Fuel	Electricity	**Test Procedure**	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	CO	--	--	--	--	--	--	0	0
150,000 miles	CO-COMP	--	--	--	--	--	--	0	0
150,000 miles	CREE	--	--	--	--	--	--	0	0
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0

Certification Summary Information Report

Test Group RRIVT00.0192 **Evaporative/Refueling Family** --

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** 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	CO	--	--	--	--	--	--	0	0
150,000 miles	CO-COMP	--	--	--	--	--	--	0	0
150,000 miles	CREE	--	--	--	--	--	--	0	0
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	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** 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	CO	--	--	--	--	--	--	0	0
150,000 miles	CO-COMP	--	--	--	--	--	--	0	0
150,000 miles	CREE	--	--	--	--	--	--	0	0
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0

Cert Region California + CAA Section 177 states **Cert/In-Use Code** Cert
Vehicle Class MDPV (Federal Tier 2, GVWR 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

Test Group	RRIVT00.0192	**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	RRIVT00.0192	**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	RRIVT00.0192	**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

Suggested ZEV Application Format for Certification

E.O.#. _____ Page 1 of 2

2024 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Rivian Automotive, LLC Test Group: RRIVT00.0192

Vehicle Class(es): PC____, LDT1 (0-3750 lbs. LVW)____, LDT2 (≥ 3,751 lbs. LVW)____,
MDV6 (8,500-10,000 lbs. GVW) X , MDV7 (10,001-14,000 lbs. GVW)____

ZEV Type: NEV___, ZEV X

No. of ZEV Credits per vehicle: 4.0

Fuel Type: Electro-chemical Battery X , Fuel Cell___, Capacitor___, Other (specify)_____

Battery Type(s): Lead Acid____ Nickel Cadmium____ SBLA____ Sodium Sulfur_____
Sodium Nickel Chloride____ Nickel Metal Hydride____ Lithium Metal Disulfide_____
Zinc Air _____ Zinc Bromine _____ Lithium Polymer ___, Lithium Ion X ,

Other (specify):_____

Total Battery Weight (kg.): 796 Total Battery Volume (liters): 562

No. of batteries or modules per vehicle: 1 Total Battery Voltage: 400

Charger(s): On-board X Off-board X Conductive X Inductive___.

Drive Motors(s): AC Induction____ DC Brush____. DC Brushless_____
Switched Reluctance____ Other (specify): AC Permanent Magnet .

No. of Drive Motors 2 Rated motor power 264 kW @ 6000 rpm Max rpm: 16000 .

Drive: FWD_____ RWD ___ 4WD-FT 4WD-PT X _

Regenerative Braking: No ____ Yes X FW __ RW____ AW X .

Driver Controlled Regen Braking: Yes X No ____ Coast Regen Braking: Yes X No ___.

Air Conditioning: Yes X No___, Fuel Fired Heater:[1] Yes____ No X .

Vehicle Make & Models (If coded, see attachments)	Trans type M5, A4 (If applicable)	GVWR	Curb Weight	ETW or Test Weight	DPA / RLHP or Dyno Coeff. a=, b=, c=
Make: Rivian Model: R1S All-Terrain Dual Large (20in) R1T All-Terrain Dual Large (20in) R1S All-Terrain Performance Dual Large (20in) R1T All-Terrain Performance Dual Large (20in)	Automatic	8532 lbs.	6951 lbs. (R1S) 6925 lbs. (R1T)	7500 lbs.	a: 60.02 lbf b: 0.3434 lbf/mph c: 0.02458 lbf/mph^2

Date Issued: 09/14/2023 Revisions:

[1] Fuel fired heaters are not allowed in pure ZEVs for model year 2009 and subsequently.

2024 MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Rivian Automotive, LLC Test Group: RRIVT00.0192

Range Test Results

Vehicle ID	Trans	(check one) ____TW X ETW	(check one) ____DPA ____RLHP Or dyno coeff.	City Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
R1S040XR20	Auto	7500 lbs.	a: 1.10 lbf b: -0.0580 lbf/mph c: 0.02458 lbf/mph^2	458.79	328.74	284.82	284.82
				Hwy. Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
				410.01	367.86	318.71	318.71

Battery Test Results: PASS Specific Energy: Wh/kg 169

Remarks: Rated motor power 264 kW @ 6,000 rpm corresponds to Performance Dual Large.

Date Issued: 09/14/2023 Revisions:

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Suggested ZEV Application Format for Certification

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2024 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Rivian Automotive, LLC Test Group: RRIVT00.0192

Vehicle Class(es): PC____, LDT1 (0-3750 lbs. LVW)____, LDT2 (≥ 3,751 lbs. LVW)____,
MDV6 (8,500-10,000 lbs. GVW) X , MDV7 (10,001-14,000 lbs. GVW)____

ZEV Type: NEV___, ZEV X

No. of ZEV Credits per vehicle: 4.0

Fuel Type: Electro-chemical Battery X , Fuel Cell___, Capacitor___, Other (specify)_____

Battery Type(s): Lead Acid____ Nickel Cadmium____ SBLA____ Sodium Sulfur_____
Sodium Nickel Chloride____ Nickel Metal Hydride____ Lithium Metal Disulfide_____
Zinc Air _____ Zinc Bromine _____ Lithium Polymer ___, Lithium Ion X ,

Other (specify):_____

Total Battery Weight (kg.): 796 Total Battery Volume (liters): 562

No. of batteries or modules per vehicle: 1 Total Battery Voltage: 400

Charger(s): On-board X Off-board X Conductive X Inductive___.

Drive Motors(s): AC Induction____ DC Brush____. DC Brushless_____
Switched Reluctance____ Other (specify): AC Permanent Magnet .

No. of Drive Motors 2 Rated motor power 264 kW @ 6000 rpm Max rpm: 16000 .

Drive: FWD_____ RWD ___ 4WD-FT 4WD-PT X _

Regenerative Braking: No ____ Yes X FW __ RW____ AW X .

Driver Controlled Regen Braking: Yes X No ____ Coast Regen Braking: Yes X No ___.

Air Conditioning: Yes X No___, Fuel Fired Heater:[1] Yes____ No X .

Vehicle Make & Models (If coded, see attachments)	Trans type M5, A4 (If applicable)	GVWR	Curb Weight	ETW or Test Weight	DPA / RLHP or Dyno Coeff. a=, b=, c=
Make: Rivian Model: R1S Dual Large (21in) R1T Dual Large (21in) R1S Performance Dual Large (21in) R1T Performance Dual Large (21in)	Automatic	8532 lbs.	6722 lbs (R1S) 6585 lbs (R1T)	7000 lbs.	a: 45.22 lbf b: 0.6456 lbf/mph c: 0.01633 lbf/mph^2

Date Issued: 09/14/2023 Revisions:

[1] Fuel fired heaters are not allowed in pure ZEVs for model year 2009 and subsequently.

2024 MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Rivian Automotive, LLC Test Group: RRIVT00.0192

Range Test Results

Vehicle ID	Trans	(check one) ____TW X ETW	(check one) ____DPA ____RLHP Or dyno coeff.	City Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
R1S040XR21	Auto	7000 lbs.	a: -2.18 lbf b: 0.4431 lbf/mph c: 0.01740 lbf/mph^2	520.45	291.59	251.19	251.19
				Hwy. Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
				470.21	322.74	278.03	278.03

Battery Test Results: PASS Specific Energy: Wh/kg 169

Remarks: Rated motor power 264 kW @ 6,000 rpm corresponds to Performance Dual Large.

Date Issued: 09/14/2023 Revisions:

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2024 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Rivian Automotive, LLC Test Group: RRIVT00.0192

Vehicle Class(es): PC____, LDT1 (0-3750 lbs. LVW)____, LDT2 (≥ 3,751 lbs. LVW)____,
MDV6 (8,500-10,000 lbs. GVW) X , MDV7 (10,001-14,000 lbs. GVW)____

ZEV Type: NEV___, ZEV X

No. of ZEV Credits per vehicle: 4.0

Fuel Type: Electro-chemical Battery X , Fuel Cell___, Capacitor___, Other (specify)_____

Battery Type(s): Lead Acid____ Nickel Cadmium____ SBLA____ Sodium Sulfur_____
Sodium Nickel Chloride____ Nickel Metal Hydride____ Lithium Metal Disulfide_____
Zinc Air _____ Zinc Bromine _____ Lithium Polymer ___, Lithium Ion X ,

Other (specify):_____

Total Battery Weight (kg.): 796 Total Battery Volume (liters): 562

No. of batteries or modules per vehicle: 1 Total Battery Voltage: 400

Charger(s): On-board X Off-board X Conductive X Inductive___.

Drive Motors(s): AC Induction____ DC Brush____. DC Brushless_____
Switched Reluctance____ Other (specify): AC Permanent Magnet .

No. of Drive Motors 2 Rated motor power 264 kW @ 6000 rpm Max rpm: 16000 .

Drive: FWD_____ RWD ___ 4WD-FT 4WD-PT X _

Regenerative Braking: No ____ Yes X FW __ RW____ AW X .

Driver Controlled Regen Braking: Yes X No ____ Coast Regen Braking: Yes X No ___.

Air Conditioning: Yes X No___, Fuel Fired Heater:[1] Yes____ No X .

Vehicle Make & Models (If coded, see attachments)	Trans type M5, A4 (If applicable)	GVWR	Curb Weight	ETW or Test Weight	DPA / RLHP or Dyno Coeff. a=, b=, c=
Make: Rivian Model: R1T Dual Large (22in) R1T Performance Dual Large (22in)	Automatic	8532 lbs.	6598 lbs.	7000 lbs.	a: 55.67 lbf b: 0.3376 lbf/mph c: 0.02298 lbf/mph^2

Date Issued: 09/14/2023 Revisions:

[1] Fuel fired heaters are not allowed in pure ZEVs for model year 2009 and subsequently.

2024 MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Rivian Automotive, LLC Test Group: RRIVT00.0192

Range Test Results

Vehicle ID	Trans	(check one) _____TW X ETW	(check one) _____DPA ____RLHP Or dyno coeff.	City Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
R1T033XR22	Auto	7000 lbs.	a: -8.2 lbf b: 0.125 lbf/mph c: 0.02513 lbf/mph^2	498.89	303.10	263.83	263.83
				Hwy. Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
				441.18	342.75	298.34	298.34

Battery Test Results: PASS Specific Energy: Wh/kg 169

Remarks:

Date Issued: 09/14/2023 Revisions:

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Suggested ZEV Application Format for Certification

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2024 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Rivian Automotive, LLC Test Group: RRIVT00.0192

Vehicle Class(es): PC____, LDT1 (0-3750 lbs. LVW)____, LDT2 (≥ 3,751 lbs. LVW)____,
MDV6 (8,500-10,000 lbs. GVW) X , MDV7 (10,001-14,000 lbs. GVW)____

ZEV Type: NEV___, ZEV X

No. of ZEV Credits per vehicle: 4.0

Fuel Type: Electro-chemical Battery X , Fuel Cell___, Capacitor___, Other (specify)_____

Battery Type(s): Lead Acid____ Nickel Cadmium____ SBLA____ Sodium Sulfur_____
Sodium Nickel Chloride____ Nickel Metal Hydride____ Lithium Metal Disulfide_____
Zinc Air _____ Zinc Bromine _____ Lithium Polymer ___, Lithium Ion X ,

Other (specify):_____

Total Battery Weight (kg.): 796 Total Battery Volume (liters): 562

No. of batteries or modules per vehicle: 1 Total Battery Voltage: 400

Charger(s): On-board X Off-board X Conductive X Inductive___.

Drive Motors(s): AC Induction____ DC Brush____. DC Brushless_____
Switched Reluctance____ Other (specify): AC Permanent Magnet .

No. of Drive Motors 2 Rated motor power 264 kW @ 6000 rpm Max rpm: 16000 .

Drive: FWD_____ RWD ___ 4WD-FT 4WD-PT X _

Regenerative Braking: No ____ Yes X FW __ RW____ AW X .

Driver Controlled Regen Braking: Yes X No ____ Coast Regen Braking: Yes X No ___.

Air Conditioning: Yes X No___, Fuel Fired Heater:[1] Yes____ No X .

Vehicle Make & Models (If coded, see attachments)	Trans type M5, A4 (If applicable)	GVWR	Curb Weight	ETW or Test Weight	DPA / RLHP or Dyno Coeff. a=, b=, c=
Make: Rivian Model: R1S Dual Large (22in) R1S Performance Dual Large (22in)	Automatic	8532 lbs.	6735 lbs.	7000 lbs.	a: 55.14 lbf b: 0.3691 lbf/mph c: 0.02153 lbf/mph^2

Date Issued: 09/14/2023 Revisions:

[1] Fuel fired heaters are not allowed in pure ZEVs for model year 2009 and subsequently.

2024 MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Rivian Automotive, LLC Test Group: RRIVT00.0192

Range Test Results

Vehicle ID	Trans	(check one) _____TW ___X__ETW	(check one) _____DPA _____RLHP Or dyno coeff.	City Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
R1S040XR22	Auto	7000 lbs.	a: 1.04 lbf b: 0.0810 lbf/mph c: 0.02389 lbf/mph^2	505.78	300.52	259.30	259.30
				Hwy. Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
				449.75	337.96	291.60	291.60

Battery Test Results: PASS Specific Energy: Wh/kg 169

Remarks: Rated motor power 264 kW @ 6,000 rpm corresponds to Performance Dual Large.

Date Issued: 09/14/2023 Revisions:

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Application:

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