

RIVIAN AUTOMOTIVE, LLC

Application for Certification - Part 1

2025 Model Year

EPA Manufacturer Code: RIV **Test Group:** SRIVT00.0172

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 (22in) Rivian R1S Dual Large (22in) Rivian R1T Performance Dual Large (22in) Rivian R1S Performance Dual Large (22in) Rivian R1T Dual Large (20in) Rivian R1S Dual Large (20in) Rivian R1T Performance Dual Large (20in) Rivian R1S Performance Dual Large (20in) | | | |
| Document Date: | 10/08/2024 | | | |

For Questions, Contact:

S. Zaker, <u>SepZaker@rivian.com</u>





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

Subject: MY 2025 Rivian Medium-Duty Vehicle Initial Application for issuance of Certificate of Conformity for Test Group SRIVT00.0172.

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: SRIVT00.0172

Evaporative Family: N/A

Federal Standard: Tier 3 Bin 0

California Standard: **ZEV**

Test Group Description:

1 - Rivian R1

7 – 7 Module Battery

2 - 2 AC Motors

Vehicles Covered by this certificate:

Rivian R1T Dual Large (22in)

Rivian R1S Dual Large (22in)

Rivian R1T Performance Dual Large (22in)

Rivian R1S Performance Dual Large (22in)

Rivian R1T Dual Large (20in)

Rivian R1S Dual Large (20in)

Rivian R1T Performance Dual Large (20in)

Rivian R1S Performance Dual Large (20in)

T 310/08/2024

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.

Sep Zaker

Director, Homologation







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

Subject: MY 2025 Rivian Medium-Duty Vehicle OBD letter for issuance of Certificate of Conformity for Test Group SRIVT00.0172.

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: SRIVT00.0172

Evaporative Family: N/A

Federal Standard: Tier 3 Bin 0

California Standard: ZEV

Test Group Description:

1 - Rivian R1

7 – 7 Module Battery

2 - 2 AC Motors

Vehicles Covered by this certificate:

Rivian R1T Dual Large (22in)

Rivian R1S Dual Large (22in)

Rivian R1T Performance Dual Large (22in)

Rivian R1S Performance Dual Large (22in)

Rivian R1T Dual Large (20in)

Rivian R1S Dual Large (20in)

Rivian R1T Performance Dual Large (20in) Rivian R1S Performance Dual Large (20in)

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Sep Zaker

Director, Homologation





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

Subject: MY 2025 Rivian Medium-Duty Vehicle Durability letter for issuance of Certificate of Conformity for Test Group SRIVT00.0172.

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: SRIVT00.0172

Evaporative Family: N/A

Federal Standard: Tier 3 Bin 0

California Standard: ZEV

Test Group Description:

1 - Rivian R1

7 – 7 Module Battery

2 - 2 AC Motors

Vehicles Covered by this certificate:

Rivian R1T Dual Large (22in)

Rivian R1S Dual Large (22in)

Rivian R1T Performance Dual Large (22in)

Rivian R1S Performance Dual Large (22in)

Rivian R1T Dual Large (20in)

Rivian R1S Dual Large (20in)

Rivian R1T Performance Dual Large (20in)

Rivian R1S Performance Dual Large (20in)

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Sep Zaker

Director, Homologation





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

Subject: MY 2025 Rivian Medium-Duty Vehicles Initial Application for issuance of an Executive Order for Test Group SRIVT00.0172.

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: SRIVT00.0172

Evaporative Family: N/A

Federal Standard: Tier 3 Bin 0

California Standard: ZEV

Test Group Description:

1 - Rivian R1

7 – 7 Module Battery

2 - 2 AC Motors

Vehicles Covered by this certificate:

Rivian R1T Dual Large (22in)
Rivian R1S Dual Large (22in)
Rivian R1T Performance Dual Large (22in)
Rivian R1S Performance Dual Large (22in)
Rivian R1T Dual Large (20in)
Rivian R1S Dual Large (20in)
Rivian R1T Performance Dual Large (20in)

Rivian R1S Performance Dual Large (20in)

] / 10/08/2024

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.

Sep Zaker Director, Homologation



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01.00.00 Communications

01.01.00 Mailing Information

Rivian Automotive, LLC 14600 Myford Road Irvine, CA 92606 Attention: Sep Zaker

01.01.01 Certification Information

Rivian Automotive, LLC 14600 Myford Road Irvine, CA 92606

01.01.02 Responsible official

Primary Contact: Sep Zaker, Director, Homologation 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

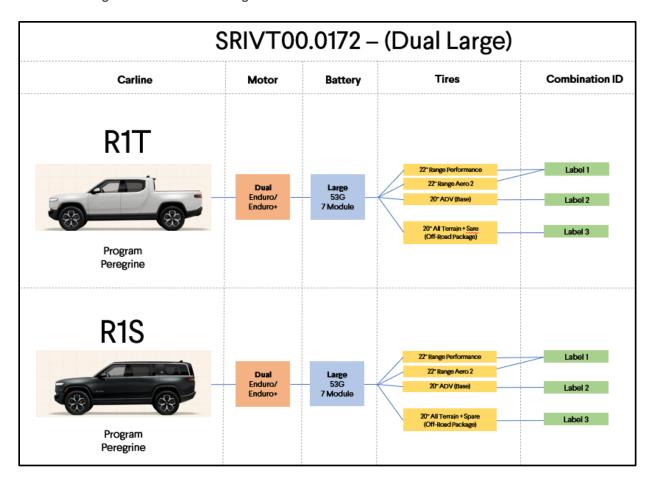
03.00.00 Facilities, equipment, and test procedures

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 | Tire Size |
|------------------------|---------|-------------|---------------------------|-------------|-----------|
| R1S Dual Large (22in)* | 43.12 | 0.2416 | 0.02096 | 6,500 | 275/50R22 |
| R1T Dual Large (22in)* | 39.52 | 0.1356 | 0.02583 | 6,500 | 275/50R22 |
| R1S Dual Large (20in)* | 43.12 | 0.2416 | 0.02088 | 6,500 | 275/65R20 |
| R1T Dual Large (20in)* | 47.47 | 0.2441 | 0.02343 | 6,500 | 275/65R20 |

^{*}The above programs are relevant to their corresponding Performance variant. e.g R1S Dual Large (22") and R1S Performance Dual Large (22") 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 a HBM Gen4TB power analyzer and Hioki CT684X-05 current clamps.

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





eAC/eCH & OBC/DCDC/DCAC-200A





Above: Hioki CT684X-05 current clamp and HBM Gen4TB power analyzer

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 2025 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 | Multi-point inspection X X X X X X X X X X X X X | | | | | | | | | |
| Drive unit & gearbox fluid lubricant | | | | | | | | | Х | |

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

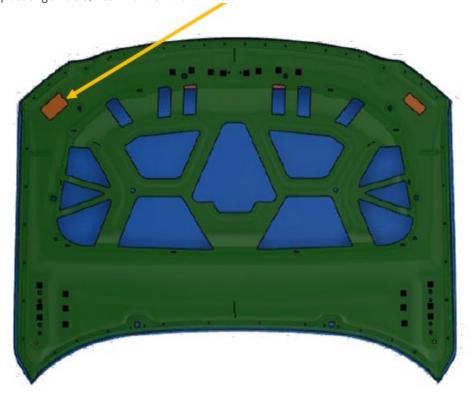
| ltem | | ASTM D3306 Type I | CCI L288 | |
|--|----------------------------|----------------------|---------------|-------|
| Color | | Distinctive | Yellow | |
| Relative Density | 15.5/15.5°C | | 1.110 ~ 1.145 | 1.128 |
| Freezing Point °C | 50 \ | ol% in DI water | -36.4 max. | -37 |
| Boiling Point °C | 50 \ | ol% in DI water | 108 min. | 109 |
| Ash content mass | s% | | 5 max. | 1.7 |
| pH | 50 \ | ol% 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 | Weight Loss ⁽¹⁾ | Copper | 10 max. | 0.2 |
| Glassware | mg/Specimen | 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 | Weight Loss ⁽¹⁾ | Copper | 20 max. | 0.7 |
| Service Test | | Solder | 60 max. | 6.9 |
| | | Brass | 20 max. | 5.9 |
| | mg/Specimen | 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/cm²/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 (MY2025 Sample Label):



RIVIAN AUTOMOTIVE, LLC



CONFORMS TO REGULATIONS: 2025 MY

TEST GROUP: SRIVT00.0172

U.S. EPA: T3B0 MDPV CALIFORNIA: ZEV MDV MOTOR: ELECTRIC MOTOR

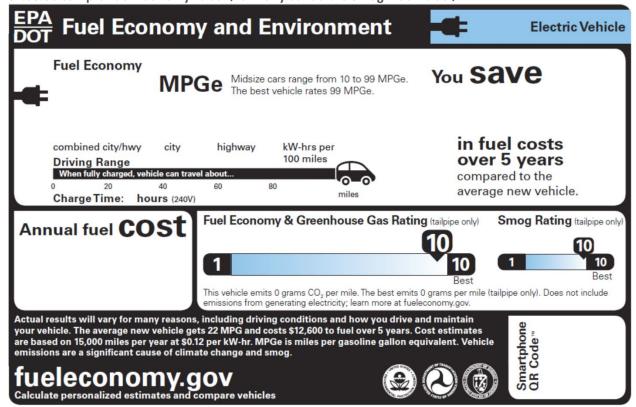
FUEL: ELECTRICITY

EVAP: N/A

THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED BY THE ON-ROAD VEHICLE AND ENGINE EMISSION REGULATIONS / CE VÉHICULE EST CONFORME À TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU RÈGLEMENT SUR LES ÉMISSIONS DES VÉHICULES ROUTIERS ET DE LEURS MOTEURS.



07.03.00 Sample Fuel Economy 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 2025 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 381.6 Ah based on a constant current C/5 discharge rate. Large: 108.5 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 through 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.

08.06.01 Electric Heat Pump

Rivian has adopted a proprietary heat pump design to enhance the user experience and improve thermal efficiency.

- A number of components, including valves, sensors, heat exchangers, and refrigerant bottle, are integrated into a single bundle for cost, mass, packaging, and assembly benefits.
- Real world range is expected to improve over R1 Launch vehicles (which is equipped with conventional AC system) when cabin reheat or heating is required (roughly below 20°C).
- Further range increase is possible via waste heat recovery from the ESS and powertrain when available

In addition, R1 heat pump has several other upgrades, including:

- Improved cabin cooling during hot ambient.
- Improved NVH due to relocated compressor.
- Improved cold ambient performance with a HV coolant heater.

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 heat pump 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 NACS (North American Charging Standard) plug, 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 NACS for AC Level 1 (120 VAC) and AC Level 2 (240 VAC) charging. Rivian R1T and R1S will be compatible with SAE J1772 through the use of an approved adapter.

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 later.

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 battery is below 315 V (264.6V if cell temperature is below 5°C) 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 2025 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:

R1T Performance Dual Large (22in)

EPA EV Multicycle Calculator (SAE J1634 Oct 2012)

Manufacturer: RIVIAN
Carline: R1T
Model Year 2025

Vehicle R1T 386X 22" Range

Test Number

Comments: ALL PURPOSE

Test Date 9/19/2024

| Cycle | Energy (Wh) | Distance (mi) | ECdc_cyc | Kuwgt | Kwgt |
|-------|-------------|---------------|----------|--------|-------|
| UDDS1 | 1985.68 | 7.433 | 267.14 | 66.79 | 4.87 |
| UDDS2 | 1642.90 | 7.456 | 220.35 | 55.09 | 72.11 |
| UDDS3 | 1552.89 | 7.413 | 209.48 | 52.37 | 68.55 |
| UDDS4 | 1565.77 | 7.438 | 210.51 | 52.63 | 68.89 |
| HWY1 | 2756.10 | 10.264 | 268.52 | 134.26 | |
| HWY2 | 2614.80 | 10.241 | 255.33 | 127.66 | |
| SS1 | 85522.33 | 255.211 | 335.10 | | |
| SS2 | 11248.35 | 33.228 | 338.52 | | |
| TOTAL | 108888.815 | 338.684 | | | |

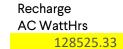
K-Factors UDDS1 UDDS2 UDDS3 UDDS4 HWY1 HWY2 Unweighted 0.250 0.250 0.250 0.250 0.500 0.500 Weighted 0.018 0.327 0.327 0.327 NA NA

| Results | Range (mi) | AC Wh/mi | MPGe | kWh/100mi |
|---------|------------|----------|----------|-----------|
| UDDSu | 479.96 | 267.78 | | |
| UDDSw | 507.82 | 253.09 | 133.1718 | 25.3094 |
| HWY | 415.73 | 309.16 | 109.0220 | 30.9158 |

| MCT Results | whdc/mi | mi/kwhdc | mi/kwhac |
|-------------|----------|----------|----------|
| UDDS | 214.4255 | 4.6636 | 3.9511 |
| HFEDS | 261.9236 | 3.8179 | 3.2346 |

Range

| | 0.7 Adj | Adj | MPGe | MPGe |
|----------|---------|-------|------------------------|-----------|
| Factor | 0.70000 | 0.705 | 0.7000 | 0.70510 |
| City | 355.47 | 358.0 | 06 93.220 | 3 93.9000 |
| Hwy | 291.01 | 293.: | 13 76.315 ₄ | 4 76.8719 |
| Combined | 326.46 | 328.8 | 84 84.7 | 7 85.39 |



March 8, 2016

D.Good

| EPA version | | | | |
|-------------|--|--|--|--|
| kWh/100mi | | | | |
| | | | | |
| 25.30941 | | | | |
| 30.91577 | | | | |



R1T Performance Dual Large (20in)

EPA EV Multicycle Calculator (SAE J1634 Oct 2012)

Manufacturer: RIVIAN
Carline: R1T
Model Year 2025

Vehicle R1T 386X 20" Base

Test Number

Comments: ALL PURPOSE

Test Date 9/29/2024

| Cycle | Energy (Wh) | Distance (mi) | ECdc_cyc | Kuwgt | Kwgt |
|-------|-------------|---------------|----------|--------|-------|
| UDDS1 | 1976.73 | 7.468 | 264.71 | 66.18 | 4.85 |
| UDDS2 | 1788.01 | 7.454 | 239.87 | 59.97 | 78.49 |
| UDDS3 | 1687.45 | 7.422 | 227.37 | 56.84 | 74.40 |
| UDDS4 | 1723.13 | 7.446 | 231.42 | 57.86 | 75.73 |
| HWY1 | 2895.66 | 10.284 | 281.56 | 140.78 | |
| HWY2 | 2760.15 | 10.251 | 269.25 | 134.62 | |
| SS1 | 84887.92 | 245.096 | 346.35 | | |
| SS2 | 10167.59 | 29.443 | 345.33 | | |
| TOTAL | 107886,6333 | 324.864 | | | |

K-Factors UDDS1 UDDS2 UDDS3 UDDS4 HWY1 HWY2 Unweighted 0.250 0.250 0.250 0.250 0.500 0.500 Weighted 0.018 0.327 0.327 0.327 NA NA

| Results | Range (mi) | AC Wh/mi | MPGe | kWh/100mi |
|---------|------------|----------|----------|-----------|
| UDDSu | 447.96 | 286.49 | | |
| UDDSw | 462.10 | 277.72 | 121.3629 | 27.7721 |
| HWY | 391.74 | 327.60 | 102.8841 | 32.7602 |

| EPA version |
|--------------------|
| kWh/100mi |
| |
| 27.77209 |
| 32.76017 |

D.Good

March 8, 2016

128334.750

Recharge AC WattHrs

| MCT Results | whdc/mi | mi/kwhdc | mi/kwhac |
|-------------|----------|----------|----------|
| UDDS | 233.4704 | 4.2832 | 3.6007 |
| HFEDS | 275.4035 | 3.6310 | 3.0525 |

Range

| | 0.7 Adj | MPGe |
|----------|---------|---------|
| Factor | 0.70000 | 0.70000 |
| City | 323.47 | 84.9540 |
| Hwy | 274.22 | 72.0189 |
| Combined | 301.31 | 78.60 |



US EPA Fee Form

Help and EPA Instructions

Engine Family / Evaporative Family / Test

Group *

SRIVT00.0172

* Required Field

| vequired i leid | |
|--|-----------------|
| General Information | |
| Date: 07/22/2024 | |
| Process Code * | |
| Submit New Fee Filing Form | |
| Manufacturer Code * | |
| RIV | |
| Manufacturer Name * | |
| Rivian Automotive LLC | |
| Contact Name * | |
| Sep Zaker | |
| Contact Email Address * | Contact Phone * |
| sepzaker@rivian.com | |
| Calendar Year complete application submitted to EPA * | |
| 2024 | |
| PLEASE NOTE: These fees apply to complete from January 1, 2024, through December 31 the calendar year in which the complete ceremodel year | |

| Certificate Request Type (Industry Sector Code) |
|--|
| Certificate Request Type * |
| On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (Federal) (A, B, D, J, T, V) On-Highway HDE Dyno Cert (Federal) (E, H) On-Highway LD ICI, MDPV ICI, HDV ICI (A, B, D, J, T, V) On-Highway Motorcycle (C) On-Highway HDV Evap (F) On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (California-Only) (A, B, D, J, T, V) On-Highway HDE Dyno Cert (California-Only) (E, H) Nonroad CI (L) Nonroad SI (B, S) Locomotive (G, K) All Nonroad Recreational, excluding Marine engines (X, Y) All Marine (Including IMO) (M, N, W) Component Certification for Evaporative Emissions (P) IMO Name (Required for dual US/IMO Marine Only) |
| ICI VIN Number (Required for ICIs Only) Do you qualify for a Reduced Fee? * No |
| |
| Payment Information |
| Amount Owed \$34,461.00 |
| Payment Type * |
| Online ACH |

Comments

EPA Form Number 3520-29

OMB Control No. 2060-0545

Approval expires 12/31/2022

The public reporting and recordkeeping burden for this collection of information is estimated to average 12 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

The content of this document may contain Sensitive But Unclassified (SBU) data and/or Controlled Unclassified Information (CUI).

Certification Summary Information Report

| Manufacturer | Rivian Automotive LLC | Manufacturer Code | RIV |
|----------------------------|-----------------------|-------------------------------------|------------------------|
| Test Group | SRIVT00.0172 | 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 | 10/03/2024 08:57:50 PM |
| Model Year | 2025 | | |
| | | | |

Test Group Information

CSI Type Update for Correction **Running Change Reference Number**

GHG Exempt Status Not Exempt

Drive Sources and Fuel(s)

Drive Source #1: Electric Motor

| <u> </u> | Fuel | Basic Fuel Metering System | Lean Burn Strategy Indicator |
|------------------|-------------|----------------------------|------------------------------|
| | Electricity | | |
| | | | |
| Hybrid Indicator | No | | |

| Try of the interest of | 110 | | |
|---|------------------------|---|--------------|
| 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 | SRIVR0000172 | Durability Group Equivalency Factor | 1 |
| Reduced Fee Test Group | No | Certification Region Code(s) | FA, CA |
| Complies with HD GHG 2b/3 regulations? | No | | |
| Introduction into Commerce Date | | CAP2000 Conditional Certificate? | N/A |
| Independent Commercial Importer? | | Alternative Fuel Converter Certificate? | |
| SFTP Federal Composite Compliance Identifier | Not Applicable | SFTP Tier 2 Composite CO Option | No |
| SFTP LEV-III Composite Compliance Indicator | No | | |
| OBD Compliance Type | CARB | OBD Demonstration Vehicle Test Group | SRIVT00.0172 |
| Test Group ORD Compliance Level | Full - no deficiencies | Number of Test Group ORD Deficiencies | 0 |

Test Group OBD Compliance Level **Number of Test Group OBD Deficiencies** Full - no deficiencies

OBD COMPLIANCE IS NOT APPLICABLE TO ZEV. PARAMETERS ARE PLACEHOLDERS TO ALLOW DATASET SUBMISSION. **OBD Deficiencies Comments**

DURABILITY IS NOT APPLICABLE TO ZEV. PARAMETERS ARE PLACEHOLDERS TO ALLOW DATASET SUBMISSION. **Mfr Test Group Comments**

Mfr Exhaust / Evap Standards Comments

Certification Summary Information Report Date: 10/03/2024 08:58:02 PM

| Test Group SRIVT00.0172 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 | 1 - Rivian | 705 - R1T Dual Large (22in) | Endamal | 4 Wheel Drive | | 1 | Nie |
| LLC Rivian Automotive | | 507 - R1S All-Terrain | Federal California + CAA | 4-Wheel Drive | Automatic | 1 | No |
| LLC Rivian Automotive | 1 - Rivian | Dual Large (20in) 706 - R1T Performance | Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| LLC | 1 - Rivian | Dual Large (22in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 508 - R1S All-Terrain Performance Dual Large (20in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 505 - R1S Dual Large (22in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 506 - R1S Performance Dual Large (22in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 705 - R1T Dual Large (22in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 706 - R1T Performance Dual Large (22in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 506 - R1S Performance Dual Large (22in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 708 - R1T All-Terrain Performance Dual Large (20in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 707 - R1T All-Terrain Dual Large (20in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 704 - R1T Performance Dual Large (20in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 504 - R1S Performance Dual Large (20in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 703 - R1T Dual Large (20in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 707 - R1T All-Terrain Dual Large (20in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 508 - R1S All-Terrain Performance Dual Large (20in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 708 - R1T All-Terrain Performance Dual Large (20in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 503 - R1S Dual Large (20in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 507 - R1S All-Terrain Dual Large (20in) | Federal | 4-Wheel Drive | Automatic | 1 | No |
| Rivian Automotive LLC | 1 - Rivian | 505 - R1S Dual Large (22in) | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 1 | No |

Page 2 of 21 CSI Submission/Revision Date: 10/03/2024 08:57:50 PM

Electricity

Certification Summary Information Report

| Date: 10/03/2024 00:30:02 TM | | | | | | | | | | |
|------------------------------------|-----------------|------------|-------------------------------|--|---|-----------------------------|---------------------------------|-----------------------------------|---------------------------------------|-----------------------------|
| Test Group | | SRIVT00 | 0.0172 | | Evaporative/Refueling | g Family | | | | |
| Rivian Automotive LLC | 1 - Rivia | | T Dual Large (20in) | California + CAA Section 177 states | 4-Wheel Drive | Autom | atic | 1 | | No |
| Rivian Automotive LLC | 1 - Rivia | 503 - R1 | S Dual Large (20in) | Federal | 4-Wheel Drive | Automa | atic | 1 | | No |
| Rivian Automotive LLC | 1 - Rivia | | Γ Performance Large (20in) | California + CAA Section 177 states | 4-Wheel Drive | Automa | atic | 1 | | No |
| Rivian Automotive LLC | 1 - Rivia | | S Performance Large (20in) | Federal | 4-Wheel Drive | Autom | atic | 1 | | No |
| Engine Description | l | | | | | | | | | |
| Hybrid Type | | | | | Hybrid Description | | | | | |
| Engine Type | | | | | Mfr Engine Description | on | | | | |
| Engine Block Arranger | nent | | | | Mfr Engine Block Arr | | cription | | | |
| Camless Valvetrain Ind | | | | | Oil Viscosity/Classific | _ | - | | | |
| Number of Cylinders/R | Rotors | | | | Mechanically Variable Compression Ratio Indicator | | | | | |
| After Treatment D | ` ` ` | D) | | | | | | | | |
| Mfr After Treatment I Comments | Device (ATD) | | | | | | | | | |
| Direct Ozone Reductio | on (DOR) Device | | | | | | | | | |
| Mfr Emission Control | Device Commer | nts | | | | | | | | |
| Official Test Numb | oers | | | | | | | | | |
| 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 l | Fuel | F 1 | ГР | | US06 | | SC03 | | | |
| | | | | | | | | | | |

Certification Summary Information Report

Date: 10/03/2024 08:58:02 PM

| | | • | |
|---|----------------------------------|---|------|
| Test Group | SRIVT00.0172 | Evaporative/Refueling Family | |
| Hybrid Electric Vehicle And Fuel Ce | ll 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 | 406 | Battery Energy Capacity | 286 |
| Battery Specific Energy | 273 | 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 | 233 |
| Motor/Generator Type 2 | AC Permanent Magnet | Rated Motor/Generator Power | 233 |
| 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 Drive Mode (DEFAULT) | | |

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling Family | |
|-----------------------------------|----------------|---|-----------------------------------|
| Emission Data Vehicle Information | on | | |
| Vehicle ID / Configuration | R1T386XR22 / 0 | Manufacturer Vehicle Configuration Number | 0 |
| Original Test Group Name | SRIVT00.0172 | Original Evaporative/Refueling Family | |
| Original Test Vehicle Model Year | 2025 | | |
| Vehicle Model | | | |
| Represented Test Vehicle Make | Rivian | Represented Test Vehicle Model | R1T Performance Dual Large (22in) |
| Leak Family Details | | | |
| Leak Family Identifier | | Leak Family Name | |
| D: G IE IG 4 D | 9 | • | |

Drive Source

Fuel

Drive Sources and Fuel System Details

Drive Source and Fuel#

| | Dire Source and Fuein | Dire Source | Tuci |
|---|-----------------------|-------------------------|-----------------------------|
| | 1 | Electric Motor | Electricity |
| Hybrid Indicator | No | | |
| Multiple Fuel Storage | | Multiple Fuel Combusti | ion |
| Fuel Cell Indicator | No | Rechargeable Energy St | torage System Indicator Yes |
| Rechargeable Energy Storage | System Battery(s) | Rechargeable Energy St | torage System, if 'Other' |
| Off-board charge Capable Ind | licator Yes | | |
| Odometer Correction Initia | l 1 | Odometer Correction F | actor 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 | 533 |
| Displacement (liters) | 99.999 | | |
| Air Aspiration Method | Naturally Aspirated | Air Aspiration Method, | if 'Other' Electric |
| Number of Air Aspiration Dev | vices | Air Aspiration Device C | Configuration |
| Charge Air Cooler Type | | Drive Mode While Testi | ing 4-Wheel Driv |
| Shift Indicator Light Usage | Not eqipped | Aged Emission Compon | tents 4,000 (mi) |
| Curb Weight (lbs) | 6314 | Equivalent Test Weight | (pounds) 6500 |
| GVWR (lbs) | | N/V Ratio | 999 |
| Axle Ratio | 9.99 | | |
| Transmission Type | Automatic | # of Transmission Gears | s 1 |
| Transmission Lockup | No | Creeper Gear | No |

Certification Summary Information Report

| Test Group | | SRIVT00.0172 Evaporative/Refueling Family | | | | | |
|---------------------------|---------|---|----------------|---------|------------------|----------------|--|
| Dynamometer Coefficients: | | | | | | | |
| | 7 | Target Coefficient | ts | | Set Coefficients | | |
| Coefficient Category | A (lbf) | B (lbf/mph) | C (lbf/mph**2) | A (lbf) | B (lbf/mph) | C (lbf/mph**2) | EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients |
| City/Highway/Evap | 39.52 | 0.1356 | 0.02583 | -6.94 | 0.1421 | 0.02367 | 14.8 |
| Cold CO | 43.47 | 0.1492 | 0.02841 | -7.85 | -0.2801 | 0.02875 | N/A |
| US06 | 39.52 | 0.1356 | 0.02583 | -6.94 | 0.1421 | 0.02367 | N/A |

Emission Control Device Comments

Battery Electric Vehicle

Manufacturer Test Vehicle Comments

FDU Axle Ratio: 11.0:1 FDU N/V: 140.4

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling Family | |
|---|--|--------------------------------|--------------------------------------|
| Test # | SRIV10087918 | Test Procedure | 2 CVC 75 and later (w/a con |
| Test # | SKI V 1008/918 | Test Procedure | 2 - CVS 75 and later (w/o can. load) |
| Exhaust Test # for this Evap Test | | Test Fuel Type | 62 - Electricity |
| Test Date | 09/21/2024 | 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 | 3838 | 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) | 1.56 | |
| DT-EER (Drive Trace Energy Economy Rating) | 0.73 | |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 2.62 | |
| MFR FE (Manufacturer Fuel Economy) | 22.51 | 149.7334518 |
| 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: 252.47 Wh/mi, Cycle 2: 202.86 Wh/mi, Cycle 3: 246.30 Wh/mi, Cycle 4: 202.09 Wh/mi.

Certification Summary Information Report

| Test Group | | | SRIVT00.0172 | | | Evaporativ | ve/Refueling Fa | amily | | | | |
|-------------------------|---------------|-------------------------|----------------------|-------------------|-----|---------------------|--------------------------------|--------|---------|------------------------|----------|-----------|
| 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 | СО | 0.0 | | | | 0 | | 0 | 0 | Pass |
| CA | 150,000 miles | California ZEV | СО | 0.0 | | | | 0 | | 0 | 0 | Pass |

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling Family | |
|---|-------------------------------------|--------------------------------|------------------|
| | | | |
| Test # | SRIV10087919 | Test Procedure | 3 - HWFE |
| Exhaust Test # for this Evap Test | | Test Fuel Type | 62 - Electricity |
| Test Date | 09/21/2024 | 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 | 3838 | 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) | 3.81 | |
| DT-EER (Drive Trace Energy Economy Rating) | 0.44 | |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 4.95 | |
| MFR FE (Manufacturer Fuel Economy) | 26.14 | 128.9403213 |
| 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: 261.40 Wh/mi

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling Family | |
|---|-------------------------------------|--------------------------------|------------------|
| | | | |
| Test # | SRIV10087920 | Test Procedure | 90 - US06 |
| Exhaust Test # for this Evap Test | | Test Fuel Type | 62 - Electricity |
| Test Date | 09/21/2024 | 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 | 3864 | 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) | -1.97 | |
| DT-EER (Drive Trace Energy Economy Rating) | -1.33 | |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating) | -3.85 | |
| MFR FE (Manufacturer Fuel Economy) | 35.35 | 95.3465347 |
| 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

 $R1T - Drive\ Mode:\ All-Purpose\ (Default\ Mode)\ Dual\ Motor,\ Large\ Battery\ Pack,\ and\ 22"\ Tires.\ Cycle\ 1\ (City1):\ 325.61\ Wh/mi,\ Cycle\ 2\ (HWY):\ 356.36\ Wh/mi,\ Cycle\ 3\ (City2):\ 390.19\ Wh/mi$

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling Family | |
|---|-------------------------------------|--------------------------------|------------------|
| | | | |
| Test # | SRIV10087921 | Test Procedure | 95 - SC03 |
| Exhaust Test # for this Evap Test | | Test Fuel Type | 62 - Electricity |
| Test Date | 09/21/2024 | 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 | 3880 | 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) | 1.36 | - |
| DT-EER (Drive Trace Energy Economy Rating) | 1.37 | - |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 1.4 | |
| MFR FE (Manufacturer Fuel Economy) | 33.36 | 101.0341727 |
| NOX (Nitrogen Oxide) | 0 | 1 |
| N2O (Nitrous Oxide) | 0 | - |
| HC-NM (Non-methane Hydrocarbon) | 0 | 1 |
| 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: 333.62 Wh/mi

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling Family | |
|---|-------------------------------------|--|-----------------------------|
| Test # | CDIV/10007005 | Test Procedure | 77 Multi Cuolo Tost (MCT) |
| Test # | SRIV10087895 | | 77 - Multi-Cycle Test (MCT) |
| Exhaust Test # for this Evap Test | | Test Fuel Type | 62 - Electricity |
| Test Date | 09/19/2024 | 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 | 3386 | 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 Inf | Cormation | | |
| Recharge Event Voltage | 240 | Recharge Event Energy (kiloWatt-hours) | 128.53 |
| Charge Depleting Range (Calculated miles) | 507.82 | Charge Depleting Range (Actual miles) | 507.82 |
| Charge Depleting Range Highway (Calculated miles) | 415.73 | Derived 5-Cycle Coefficient Model Year | |
| All Electric Range Unadjusted (miles) | | Equivalent All Electric Range (miles) | 507.82 |
| Number of Charge Depleting Bags/Phases Conducted | 8 | Transition Bag/Phase Number | |

Charge Depleting Bag/Phase #1

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| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 7.433 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | -0.35 |
| Drive Trace Energy Economy Rating | -0.29 |
| Drive Trace Inertia Work Ratio Rating | -0.81 |
| Integrated DC KW-HRS | 1.986 |
| Manufacturer Fuel Economy | 26.71 |

Charge Depleting Bag/Phase #2

Test Group

Certification Summary Information Report

| SRIVT00.0172 | Evaporative/Refueling Family |
|--|------------------------------|
| Test Result/Emission Name | Unrounded Test Result |
| Actual Distance Driven (miles) | 10.264 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | -1.88 |
| Drive Trace Energy Economy Rating | -0.78 |
| Drive Trace Inertia Work Ratio Rating | -2.18 |
| Integrated DC KW-HRS | 2.756 |
| Manufacturer Fuel Economy | 26.85 |

Charge Depleting Bag/Phase #3

| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 7.456 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | 0.76 |
| Drive Trace Energy Economy Rating | 0.03 |
| Drive Trace Inertia Work Ratio Rating | 1.54 |
| Integrated DC KW-HRS | 1.643 |
| Manufacturer Fuel Economy | 22.03 |

Charge Depleting Bag/Phase #4

| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 255.211 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | 33.71 |
| Drive Trace Energy Economy Rating | -1.41 |
| Drive Trace Inertia Work Ratio Rating | 67.58 |
| Integrated DC KW-HRS | 85.522 |
| Manufacturer Fuel Economy | 26.85 |

Charge Depleting Bag/Phase #5

| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 7.413 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | 0.31 |
| Drive Trace Energy Economy Rating | 0.69 |
| Drive Trace Inertia Work Ratio Rating | 0.64 |
| Integrated DC KW-HRS | 1.553 |
| Manufacturer Fuel Economy | 20.95 |

Charge Depleting Bag/Phase #6

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling Family |
|------------|--|------------------------------|
| | Test Result/Emission Name | Unrounded Test Result |
| | Actual Distance Driven (miles) | 10.241 |
| | Carbon-Related Exhaust Emissions | 0 |
| | Drive Trace Absolute Speed Change Rating | 0.89 |
| | Drive Trace Energy Economy Rating | 0.25 |
| | Drive Trace Inertia Work Ratio Rating | 1.32 |

Integrated DC KW-HRS

Manufacturer Fuel Economy

Charge Depleting Bag/Phase #7

| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 7.438 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | 0.59 |
| Drive Trace Energy Economy Rating | 0.58 |
| Drive Trace Inertia Work Ratio Rating | 1.51 |
| Integrated DC KW-HRS | 1.566 |
| Manufacturer Fuel Economy | 21.05 |

Charge Depleting Bag/Phase #8

| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 33.228 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | 99.9 |
| Drive Trace Energy Economy Rating | -0.34 |
| Drive Trace Inertia Work Ratio Rating | 75.74 |
| Integrated DC KW-HRS | 11.248 |
| Manufacturer Fuel Economy | 33.85 |

Manufacturer Test Comments

R1T - Drive Mode: All-Purpose (Default Mode) Performance Dual Motor, Large Battery Pack, and 22" Tires. UDDS1: 267.15 Wh/mi, UDDS2: 220.33 Wh/mi, UDDS3: 209.48 Wh/mi, UDDS4: 210.50 Wh/mi. UDDS1 Energy: 1985.68 Wh HWY1: 268.53 Wh/mi, HWY2: 255.33 Wh/mi MCT Energy: 108888.81 Wh

2.615

25.53

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| Test Group | SRIVT00.0172 | Evaporative/Refueling Family | |
|---|-------------------------------------|--|---------------------------------------|
| Test # | SRIV10087922 | Test Procedure | 86 - Charge Depleting 20 Degree F FTP |
| Exhaust Test # for this Evap Test | | Test Fuel Type | 62 - Electricity |
| Test Date | 09/26/2024 | 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 | 4029 | 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 In | formation | | |
| Recharge Event Voltage | 240 | Recharge Event Energy (kiloWatt-hours) | 128.53 |
| Charge Depleting Range (Calculated miles) | 14.9 | Charge Depleting Range (Actual miles) | 14.9 |
| Charge Depleting Range Highway (Calculated miles) | | Derived 5-Cycle Coefficient Model Year | |
| All Electric Range Unadjusted (miles) | | Equivalent All Electric Range (miles) | 14.9 |
| Number of Charge Depleting Bags/Phases Conducted | 4 | Transition Bag/Phase Number | |
| Charge Depleting Bag/Phase #1 | | | |

Charge Depleting Bag/Phase #1

| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 3.588 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | -0.89 |
| Drive Trace Energy Economy Rating | -0.73 |
| Drive Trace Inertia Work Ratio Rating | -1.72 |
| Integrated DC KW-HRS | 1.519 |
| Manufacturer Fuel Economy | 42.35 |

Charge Depleting Bag/Phase #2

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling Family |
|------------|--|------------------------------|
| | Test Result/Emission Name | Unrounded Test Result |
| | Actual Distance Driven (miles) | 3.865 |
| | Carbon-Related Exhaust Emissions | 0 |
| | Drive Trace Absolute Speed Change Rating | -0.03 |
| | Drive Trace Energy Economy Rating | -1.22 |
| | Drive Trace Inertia Work Ratio Rating | -0.19 |
| | Integrated DC KW-HRS | 1.363 |
| | Manufacturer Fuel Economy | 35.26 |

Charge Depleting Bag/Phase #3

| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 3.59 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | 0.41 |
| Drive Trace Energy Economy Rating | -0.26 |
| Drive Trace Inertia Work Ratio Rating | 0 |
| Integrated DC KW-HRS | 1.293 |
| Manufacturer Fuel Economy | 36.03 |

Charge Depleting Bag/Phase #4

| Test Result/Emission Name | Unrounded Test Result |
|--|-----------------------|
| Actual Distance Driven (miles) | 3.874 |
| Carbon-Related Exhaust Emissions | 0 |
| Drive Trace Absolute Speed Change Rating | 0.47 |
| Drive Trace Energy Economy Rating | -0.75 |
| Drive Trace Inertia Work Ratio Rating | 0.96 |
| Integrated DC KW-HRS | 1.286 |
| Manufacturer Fuel Economy | 33.2 |

Manufacturer Test Comments

R1T - Drive Mode: All-Purpose (Default Mode) Dual Motor, Large Battery Pack, and 22" Tires. Cycle 1: 423.47 Wh/mi, Cycle 2: 352.62 Wh/mi, Cycle 3: 360.28 Wh/mi, Cycle 4: 331.97 Wh/mi,

Fuel Properties

Certification Summary Information Report

| Test Group | S | RIVT00.0172 | | Evapora | tive/Refueling Fam | ily | | | |
|--------------------------------------|---------------|---|------------------|-----------------------------------|---------------------------------------|--|---------|--|------|
| | | | Consolidate | d List of St | andards | | | | |
| Exhaust Standar | ds | | | | | | | | |
| Cert Region | F | ederal | | Cert/In-l | Use Code | | Cer | t | |
| Vehicle Class | M | IDPV (Federal Tier 2, C | GVWR 8501-10000) | Standard | d Level | | Fed | eral Tier 3 Bin 0 | |
| Fuel | Е | lectricity | | Test Pro | cedure | | Cha | arge Depleting UD | DS |
| 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 | СО | | | | | | | 0 | 0 |
| 150,000 miles | CO-COMP | | | | | | | 0 | 0 |
| 150,000 miles | CREE | | | | | | | 0 | 0 |
| 150,000 miles | NMOG+NOX-COMP | | | | | | | 0 | 0 |
| Vehicle Class Fuel | | IDPV (Federal Tier 2, Clectricity | ivwr 8501-10000) | Standard Test Pro | | Downward Diesel | | ifornia ZEV arge Depleting UDI | DS |
| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Adjustment Factor | 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 Vehicle Class Fuel | M | ederal IDPV (Federal Tier 2, C lectricity | GVWR 8501-10000) | Cert/In-V Standard Test Pro | d Level | | | t eral Tier 3 Bin 0 urge Depleting Hig | hway |
| 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 | СО | | | | | | | 0 | 0 |
| 150,000 miles | CO-COMP | | | | | | | 0 | 0 |
| 150,000 miles | CREE | | | | | | | 0 | 0 |
| 150,000 miles | NMOG+NOX-COMP | | | | | | | 0 | |

Certification Summary Information Report

| Test Group | SRI | VT00.0172 | | Evaporat | tive/Refueling Fam | nily | | | |
|--|------------------------------------|--|------------------|--|--|--|---------------------------|--|--------------|
| Cert Region | Cali | fornia + CAA Section | n 177 states | Cert/In-U | Use Code | | Cer | t | |
| Vehicle Class | MD | PV (Federal Tier 2, C | GVWR 8501-10000) | Standard Level | | | Cal | ifornia ZEV | |
| Fuel | Elec | tricity | | Test Proc | cedure | | Cha | rge Depleting Hig | hway |
| 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 Vehicle Class | MDI | eral PV (Federal Tier 2, C | GVWR 8501-10000) | | l Level | | | eral Tier 3 Bin 0 | |
| = | MDI | | GVWR 8501-10000) | | l Level cedure | Downward Diesel | Fed | | o can. load) |
| Vehicle Class | MDI | PV (Federal Tier 2, C tricity Rounded | | Standard Test Proc | l Level | Diesel Adjustment | Fed | eral Tier 3 Bin 0 S 75 and later (w/o | · |
| Vehicle Class Fuel | MDi Elec | PV (Federal Tier 2, C tricity | RAF | Standard Test Prod | l Level cedure Upward Diesel Adjustment | Diesel | Fed CV: | eral Tier 3 Bin 0 | Std |
| Vehicle Class Fuel Useful Life 150,000 miles Cert Region | MDi Elec Emission Name CO | PV (Federal Tier 2, C tricity Rounded Result | RAF | Standard Test Proc NMOG / NMHC | Level cedure Upward Diesel Adjustment Factor | Diesel Adjustment Factor | Fed CV: Mult DF | eral Tier 3 Bin 0 S 75 and later (w/o Add DF 0 | Std |
| Vehicle Class Fuel Useful Life 150,000 miles Cert Region | Emission Name CO Cali | PV (Federal Tier 2, C tricity Rounded Result | RAF n 177 states | Standard Test Proc NMOG / NMHC Cert/In-U | Upward Diesel Adjustment Factor | Diesel Adjustment Factor | Fed CV: Mult DF | eral Tier 3 Bin 0 S 75 and later (w/o Add DF | Std |
| Vehicle Class Fuel Useful Life | Emission Name CO Cali | Rounded Result fornia + CAA Section | RAF n 177 states | Standard Test Proc NMOG / NMHC Cert/In-U | Upward Diesel Adjustment Factor Use Code | Diesel Adjustment Factor | Mult DF Cer Cal: | eral Tier 3 Bin 0 S 75 and later (w/o Add DF 0 | Std 0 |
| Vehicle Class Vuel Useful Life 150,000 miles Cert Region Vehicle Class | Emission Name CO Cali | Rounded Result Fornia + CAA Section PV (Federal Tier 2, C | RAF n 177 states | Standard Test Proc NMOG / NMHC Cert/In-U | Upward Diesel Adjustment Factor Use Code | Diesel Adjustment Factor | Mult DF Cer Cal: | eral Tier 3 Bin 0 S 75 and later (w/c Add DF 0 t ifornia ZEV | Std 0 |

Certification Summary Information Report

| Test Group | SRIVT00.0172 | Evaporative/Refueling | g 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 | | | |
| НСНО | Formaldehyde | NMOG+NOX-COMP | SFTP Composite Non-methane Organic Gases + Nitrogen Oxides | | | |
| Н3С2НО | 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) | | | |
| нс | 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 Star | ndard 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 | | | |

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| Test Group | SRIVT00.0172 | 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 Co | ode | | | | | |
| 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 | Drive System Code | | | | | |
| 4 | 4-Wheel Drive | P | Part-time 4-Wheel Drive | | | |
| F | 2-Wheel Drive, Front Page 20 of 21 CSI Submission/Pe | A | All Wheel Drive | | | |

Certification Summary Information Report

Date: 10/03/2024 08:58:02 PM

| Test Group | SRIVT00.0172 | 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

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|--------|--------------------|--------|
| L.U.# | . rau c | 1012 |

2025 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

| Manufacturer: Rivian Automotive, LLC Test Group: SRIVT00.0172 | | | | | | | |
|--|--|----------------------|-------------------|------------------------|--|--|--|
| 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_ <u>X</u> | | | | | | |
| No. of ZEV Cred | dits per vehicle: | 4.0 | | | | | |
| Fuel Type: Elec | ctro-chemical Ba | ttery <u>X</u> , Fue | l Cell, Capad | citor, Other (s | specify) | | |
| Battery Type(s): | Lead Acid | Nickel Cadm | nium SBL | A Sodium | Sulfur | | |
| Sodium Nic | kel Chloride | Nickel Meta | al Hydride | Lithium Metal [| Disulfide | | |
| Zinc Air | Zinc Bromin | e — Lithi | um Polymer | <u>,</u> Lithium lon _ | <u>X</u> , | | |
| Other (specify): | | | | | | | |
| Total Battery W | eight (kg.):63 | 34 Total Ba | ttery Volume (lit | ers): <u>521</u> | | | |
| No. of batteries | or modules per | vehicle: 1 | Total Batter | y Voltage: 407 | | | |
| Charger(s): On | -board <u>X</u> Off- | board <u>X</u> | Conductive X | Inductiv | <u>′e</u> . | | |
| 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 4W <u>D-FT 4WD-PTX</u> | | | | | | | |
| 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 <u>X</u> No | , Fuel Fire | ed Heater:1 Yes | s No X | | | |
| Vehicle Make | | | | | DPA / RLHP | | |
| & Models | Trans type | | | | or | | |
| (If coded, see | | | | | Dyno Coeff. | | |
| attachments) | (If applicable) | GVWR | Curb Weight | Test Weight | a=, b=, c= | | |
| Make: Rivian Model: R1T Dual Large (22in) R1T Performance Dual Large (22in) | Automatic | 8532 lbs. | 6314 lbs. (R1T) | 6500 lbs. | a: 39.52 lbf b: 0.1356 lbf/mph c: 0.02583 lbf/mph ² | | |
| | | | | | | | |
| Date Issued: 09/30/2024 Revisions: | | | | | | | |

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

| | (| Suggested ZE | √ Application F | | Certification | | |
|-------------------|----------------|-----------------------|---|---------------|-------------------------|-------------------------|--------------------------|
| | | | E.O | .# | | Pag | e 2 of 2 |
| 2025 ZEV-PASSE | | | R RESOURCES DUTY TRUCK | | | | |
| Manufacture | er: <u>Riv</u> | <u>vian Automotiv</u> | e, LLC Tes | st Group: 3 | SR <u>IVT00.0</u> | 172 | |
| Range Test | Results | | | | | | |
| | | | | | | | |
| Vehicle ID | Trans | (check one) TW X ETW | (check one)DPARLHP Or dyno coeff. | City Range | System AC (Wh/mi) | System DC (Wh/mi) | Vehicle DC (Wh/mi) |
| R1T386XR22 | Auto | 6500 lbs. | a: -6.94 lbf b: -0.1421 lbf/mph c: 0.02367 lbf/mph ² | 507.82 | 253.09 | 214.43 | 214.43 |
| | | | | Hwy. Range | System AC (Wh/mi) | System DC (Wh/mi) | Vehicle DC (Wh/mi) |
| | | | | 415.73 | 309.16 | 261.92 | 261.92 |
| | | | | | | | |
| Battery Test | t Results | : <u>PASS</u> | Specific Er | nergy: Wh | /kg <u>167</u> | | |
| Remarks: Rated | d motor pow | ver 264 kW @ 6,000 |) rpm corresponds to | o Performance | e Dual Large. | | |
| | | | | | | | |
| Date Issued | I: 09/30/2 | 2024 Re | visions: | | | | |
| Application: | | | ARB USE ON | ILY | | | |
| | | Dat | e:Revie | ewed by: | | Date: | |