

3/4/2024

Mr. Daniel Cullen Vehicle Programs and Compliance Division Environmental Protection Agency 2000 Traverwood, Ann Arbor, MI 48105

Subject: Request for issuance of a new Certificate of Conformity - initial application

Tesla, Inc. requests that the EPA issue a Certificate of Conformity for the subject test group.

Attached to this request is a running change to the RTSLV00.0L2Y test group (Model Y with one front and one rear motor) application which adds the Model Y Performance AWD carline. Tesla believes that the test group complies with all applicable regulations contained within Title 40 of the CFR, California Amendments to Subparts B, C, and S, Part 86 and Part 88, Title 40 of the CFR and Title 13 of the California Code of Regulations

Vehicle Category:	Light Duty Vehicle (< 8000 lbs. GVW)
Durability Group:	RTSLEEVNNL2Y
Test Group:	RTSLV00.0L2Y
Summary Sheet No:	NA
Durability Group Description:	NA
Durability Vehicle:	NA
OBD Group:	NA
Test Group Description:	Tesla differentiates test groups based on: 1) battery type, 2) number of drive motors, and 3) vehicle line.
	L - Lithium Ion Battery 2 - AWD Motor Y - Model Y Line of vehicles
Applicable Standards:	FEDERAL Tier 3 BIN 0 & CALIFORNIA ZEV
Carlines Covered by this certificate:	Model Y Long Range AWD, Performance AWD
Your early review and issuance of the certificate will be greatly appre-	ciated. If you have any questions, please contact me at our office at

Į.

Sincerely,

(510) 249-3755

Suraj Nagaraj

Sr. Director - Vehicle Homologation

Contents	
01.00.00	Communications
01.01.00	Mailing information
01.01.01	Certification information
01.01.02	Responsible official
03.00.00	Facilities, Equipment and Test Procedures
03.01.00	Procedure to determine mass emissions of the fuel fired heater
03.02.00	Battery pre-conditioning procedures
03.03.00	Vehicle Configuration and sub-configurations
03.04.00	Test Procedures
04.00.00	Statement of Compliance
05.00.00	Reserved
06.00.00	Maintenance
06.01.00	Test vehicle scheduled maintenance
06.02.00	recommended customer maintenance schedule
06.03.00	Lubricants and heater fuels
07.00.00	Labels
07.01.00	Label locations
07.02.00	Sample emission control information label
07.03.00	California Environmental Performance Index label: 2015 and later
07.03.00	model years
07.04.00	Projected sales information
08.00.00	General Technical Description
08.01.00	Description of propulsion system
08.02.00	Description of motor(s)
08.03.00	Description of batteries
08.03.01	Battery charging capacity
08.03.02	Self-discharge information
08.03.03	Description of thermal management system
08.03.04 08.03.05	Definition of end-of-life
08.04.00	Description of battery disposal plan Description of controller / inverter
08.05.00	Description of transmission
08.06.00	Description of climate control system
08.06.01	Electric heat pump
08.06.02	Fuel-fired heater
08.06.03	Climate control system logic
	Tamper resistance of climate control system that includes a fuel-fired
08.06.04	heater
08.07.00	Description of regenerative braking system
08.07.01	Control logic
08.07.02	Percentage of braking performed on road by each axle
08.08.00	Description of charger
08.08.01	Proper recharging procedures
08.08.02	Power requirements necessary to recharge vehicle
08.09.00	Accessories which draw energy from the batteries
08.01.00	Other unique features (solar panels)
08.11.00	Description of warning system(s) for maintenance / malfunction
08.11.01	Cut-off terminal voltages for prevention of battery damage
08.12.00	Description of dyno mode
08.13.00	Description of coastdown mode
09.00.00	Reserved
10.00.00	Reserved
11.00.00	Starting and shifting schedules

11.01.00	Starting
11.02.00	Shifting
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
17.01.01	General statement
17.01.02	Driveability statement
17.02.00	Supplemental data and certification review sheets
	Engineering evaluation of zero evaporative emissions under any and
17.03.00	all operating conditions (for vehicles equipped with fuel- fired heater
	only)
17.04.00	Credits
17.04.01	Description of multi-manufacturer agreements
17.05.00	Vehicle safety
17.05.01	All information on safe handling of vehicle
17.05.02	Information on safe handling of battery system
17.05.03	Description of emergency procedures
17.06.00	Description of fuel-fired heater / fuel tank evaporative system

1 COMMUNICATIONS

1.01 Mailing information

01.01.01 Certification information

Tesla, Inc 3500 Deer Creek Road Palo Alto, CA 94304

01.01.02 Responsible officials

01.01.03 - Primary Contact

Mr. Suraj Nagaraj, Sr Director- Vehicle Homologation Telephone 510 249 8749

01.01.04 - Secondary Contact

Mr. Sandeep Pannu, Staff Homologation Engineer - Vehicle Homologation Telephone 341-345-5043
Mr. Derek Yam, Staff Homologation Engineer - Vehicle Homologation Telephone 650-793-0327

3 FACILITIES, EQUIPMENT AND TEST PROCEDURES

Internal range test reports are on file at Tesla

3.01 Procedure to determine mass emissions of the fuel-fired heater

Not applicable; vehicle not equipped with a fuel fired heater.

3.02 Battery pre-conditioning procedures

The lithium ion battery cells are cycled by the battery cell manufacturer before they are assembled into battery packs. There is no further pre-conditioning necessary.

3.03 Vehicle Configurations and sub configurations

Refer to Appendix 03.03

3.04 TEST PROCEDURES

SAE J1634 was followed for all Range testing and SAE J2263 (as issued 2008-12) was followed for Road load measurement.

SPECIAL TEST INSTRUCTIONS

See attachment

04.00 Statement of Compliance

This vehicle conforms to US EPA Federal Tier 3 Bin 0 and State of California regulations applicable to 2024 Model Year new ZEV Light-duty Vehicles

05.00 RESERVED

06.00 MAINTENANCE

6.01 Test vehicle scheduled maintenance

Not applicable.

6.02 Recommended customer maintenance schedule

See Owner Hand Book.

6.03 Lubricants and heater fuels

Heater fuel:

Transmission Lubricant:

Capacity Make Trade name

Type Viscosity Viscosity

Test VehicleSame as factory fill

07.00 LABELS

07.01 Label locations

VECI Emission Label

Not applicable

Factory Fill

1750 mL (Front), 2750 mL (Rear)

SK

ATF-1351-G Synthetic 9210 cP at -40°C

5.9 cSt at 100°C



See 07.02

Monroney Label



See 07.03

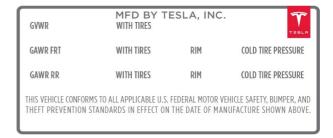
07.02 Emission Control Information label: 2024 Model Year

(Mandated in CFR Title 40, Part 86; §86.1807. Label format agreed with EPA

VEHICLE EMISSION CONTROL INFORMATION

THIS VEHICLE CONFORMS TO U.S. EPA REGULATIONS APPLICABLE TO 2024 MODEL YEAR NEW TIER 3 BIN 0 LIGHT-DUTY VEHICLES AND TO CALIFORNIA REGULATIONS APPLICABLE TO ZEV PASSENGER CARS AND IS CERTIFIED FOR SALE IN CALIFORNIA.

MODEL: 2024 TESLA MODEL Y MOTOR: 3 PHASE AC TEST GROUP: RTSLV00.0L2Y EVAPORATIVE FAMILY: RTSLR0000L2Y



07.03 California Environmental Performance Index label: 2024 Model Year

(Mandated in California Environmental Performance Label Specifications for 2009 and Subsequent Model Passenger Cars, Light-Duty Trucks and Medium-Duty Passenger Cars. Label format agreed with EPA/ CARB)

Fuel Economy and Environment Electric Vehicle Fuel Economy MPGe Small sport utility vehicle cars range from 16 to 120 MPGe. The best vehicle rates 141 MPGe highway combined city/hwy 100 miles **Driving Range** over 5 years compared to the average new vehicle. ### miles Charge Time: 10 hours (240V) Fuel Economy & Greenhouse Gas Rating (ta Smog Rating (tailpipe only 10

Model Y AWD - FE Label

07.04 Projected sales information (Confidential)

08:00 GENERAL TECHNICAL DESCRIPTION

08.01 DESCRIPTION OF PROPULSION SYSTEM

Rear Drive Unit: Traction motor \times 1,

Fixed ratio gearbox, Drive inverter

Rear Drive Unit:

Traction motor × 1, Fixed ratio gearbox, Drive inverter

8.02 DESCRIPTION OF MOTOR(s)

Front motor:

3-Phase AC induction motor utilizing a squirrel cage 4 pole, variable frequency drive to control the motor.

Rear motor:

3-phase AC internal permanent magnet motor utilizing a six-pole, high-frequency design with inverter-controlled magnetic flux.

8.03 DESCRIPTION OF BATTERIES

The battery packs used in the Tesla Model Y is one of the most technically advanced lithium-ion battery packs in the world. Using customized automotive grade lithium-ion cells, the Tesla battery achieves unmatched energy density and enables the long range capability of the vehicle. The low-profile flat packaging enables an efficient and functional occupant area. The battery has replaceable active short circuit protection that is accessible with the battery in the vehicle via an access panel. A set of switches inside the pack disconnect high voltage from the positive and negative terminals on the battery pack when not in use. To disable the switches from closing during vehicle service, the 12V power feed can be disconnected at the low voltage wiring connector into the battery pack. The battery control system consists of the Battery Monitoring System (BMS) which controls the switches, measures pack current and voltages, electrical isolation of the battery from chassis ground and monitors cell voltages and module temperatures from the Battery Monitor Boards (BMBs) installed on each of the modules.

08.03.01 Battery charging capacity

The fully charged battery contains a minimum amount of usable energy when new, based on the battery type/option fitted to the vehicle.

08.03.02 Self-discharge information

The self-discharge rate of the High Voltage battery is likely to be less than 0.5% per month.

08.03.03 Description of thermal management system

The Tesla battery pack contains an integrated cooling system to ensure that the individual cells are maintained at, or close to, their optimum operating temperature. Incorporated in the vehicle system is an inline heating element to raise and a chiller to lower the pack temperature, when required.

08.03.04 Definition of end-of-life

The battery pack end-of-life shall be determined by Tesla's local service centers with Proper inspection and test methods.

08.03.05 Description of battery disposal plan

Tesla's lithium ion battery packs do not contain heavy metals such as lead, Cadmium, or mercury. They are exempt from hazardous waste disposal standards in the USA under the Universal Waste Regulations. However, they do contain recyclable materials, and Tesla plans to recycle all battery packs removed from vehicles.

Tesla highly recommends that all battery packs be taken to local Tesla service facilities and recycled by Tesla or Tesla authorized agencies, so that the battery packs can be recycled in a safe and efficient manner.

If disposing independently, without return to Tesla, then the owner must assume responsibility for recycling in a safe and legal manner. If an owner does assume this responsibility, Tesla recommends consulting with the appropriate local, state or federal authorities to determine the appropriate methods for disposal and recycling. Keep in mind that disposal regulations may vary dependent on location.

For more information on the recycling of Tesla custom battery packs, please call Tesla Customer Service at 1-877-79TESLA (1-877-798-3752).

08.04 DESCRIPTION OF CONTROLLER / INVERTER

The drive inverter performs several critical functions in the Tesla Model Y including torque control, power and torque limit enforcement, and status monitoring. The drive inverter is an integral part of the drive unit.

08.05 DESCRIPTION OF TRANSMISSION

The transmission is a fixed ratio, mechanical, transversely mounted gearbox with integral final drive (transaxle configuration).

The shift lever is mounted to the steering column. The lever has five detents—that can select Reverse, Neutral, Drive, Cruise and Autopilot (if equipped). Selecting either forward or reverse position enables drive current to the motor to generate the appropriate torque. There is no physical reverse gear needed.

In addition, the lever has a park button which is used to operate the electrically-actuated park brake.

Transmission Shift lever - Steering column



8.06 DESCRIPTION OF CLIMATE CONTROL SYSTEM

General Specifications:

The Model Y climate control modes include Defrost, Panel and Floor (or any combination of these three). The system consists of two panel vents, two front row floor vents, defroster vent, second row floor vents, second row console vents with positive air shut off and turning vane manual control.

08.06.01 Electric cabin heater

The heater unit incorporating a variable speed electric fan is located in the front of the chassis tub with ducting directing the blown air to defrosting, face level and floor level vents in the passenger compartment.

The heater element is of the heat pump, drawing HV electrical energy from the battery pack High Voltage.

Tesla Model Y's heat pump reduces the energy required by the HVAC system in both heating and cooling scenarios. The energy required to heat the cabin varies by weather and occupant comfort needs, but on-average consumes approximately 10% of the total energy available for driving. However, even moderately cold weather (0°C), consumption can increase to 25% or more. A heat pump consumes a small amount of electrical energy to thermodynamically "upgrade" low-temperature (less useful) thermal energy to higher-temperature (more useful) thermal energy, making it suitable for occupant comfort. That is, for a given electrical power input, a heat pump will return 1 to 5x in useful heating power; an electrical cabin heater provides 1:1 in heating power, and therefore is far less efficient.

Typically, this is accomplished using conventional refrigeration system components, e.g., compressors, valves, heat exchangers and so on, configured or connected together in a specific way. Tesla's heat pump uses conventional components with unconventional flexibility or cycle configuration. A heat pump must generally have a low-temperature source from which to draw energy. Tesla's system enables the heat pump source to be either the power-train coolant loop, e.g., low-temperature waste heat produced naturally by the vehicle while driving, ambient air, the battery thermal mass, the cabin thermal mass, or combinations thereof. Another advantage of this architecture is the ability to reject heat into the battery pack via a liquid-cooled condenser for a limited amount of time during cabin cooling scenarios when the temperature of the battery is modest. Therefore, for most startups with AC on, the relatively cool, well-coupled, large thermal mass serves to lower discharge pressure and therefore reduces compressor input power relative to a conventional air-cooled condenser setup.

Modern automotive heat pump systems using an HFC/HFO refrigerant suffer from low heating capacity in extremely cold ambient conditions, e.g., minus 10°C and below. Therefore, these conventional systems retain an expensive high-voltage cabin heater to cover heating deficits whenever the heat pump capacity is insufficient. Tesla's heat pump system also provides ways to remove a cabin air high voltage PTC heater completely by using the compressor as an electrical heater in specific scenarios. In fact, the electrical power draw capability of the compressor significantly exceeds a typical HV cabin PTC heater capability. This last point is accomplished via Tesla's unique architecture – the cycle is configured in such a way to provide a controlled environment for the compressor, regardless of ambient conditions, and ultimately unlocks the full electrical input power. Therefore, Tesla's thermal system can sometimes operate like a heat pump (heat efficiently) and sometimes like an electrical heater when heat pump capacity is not sufficient for comfort – using the same compressor.

08.06.02 Fuel-fired heater

Not applicable

08.06.03 Air conditioning

The Model Y air conditioner system is an R134a refrigerant consists of a high voltage electric scroll type with integrated inverter with High Voltage Interlock Loop. The compressor Oil is Poly Olefin Ester oil that is non-conducting.

08.06.04 Climate control system logic

Vehicle Controller printed circuit boards activate actuators and responds to evaporator air outlet temperature sensor, heat pump condenser outlet temperature sensor and air duct temperature sensors, as well as user demands from center display.

08.06.05 Tamper resistance of climate control system that includes a fuel-fired heater Not applicable

08.07 DESCRIPTION OF REGENERATIVE BRAKING SYSTEM

Regenerative braking (RGB) occurs when the driver lifts his foot from the accelerator pedal while the vehicle is moving; the experience is analogous to engine braking on a gasoline-powered car with a conventional manual transmission. The friction braking system is independent of RGB.

The amount of RGB torque generated depends on the accelerator pedal position — largest when the accelerator pedal is fully released, decreasing as the pedal is depressed, reaching zero torque when the pedal reaches its neutral torque position (a position that is a function of vehicle speed). The max RGB deceleration also varies depending on vehicle speed. The maximum RGB profile is defined as a target total deceleration rate as a function of vehicle speed. The max RGB profile is tailored to everyday driving conditions, which typically exhibit higher deceleration rates at lower speeds.

When the battery pack is near maximum capacity, regenerative braking function will be limited to ensure the maximum capacity of the battery is not exceeded. Any RGB limiting will be ramped in gradually to allow the driver to adapt to the changing RGB performance. When the battery pack is below 0 degrees, RGB will not be allowed because the batteries are not rated to accept charge below this temperature. Any RGB limiting will be ramped in gradually to allow the driver to adapt to the changing RGB performance. The vehicle notifies the driver of any limits on the regenerative braking function.

08.08 DESCRIPTION OF VEHICLE ELECTRICAL SUPPLY EQUIPMENT (CHARGER)

The Tesla Model Y is capable of accepting energy either from a permanent facility installed at the owners location or from many readily available power outlets when 'on the road'.

Optional - The dedicated High Power Connector (HPC) can be purchased separately from the vehicle and a certified electrician will confirm the capabilities of the residential supply circuit at the vehicle owner's location. Confirmation of a satisfactory residential electrical Supply will lead to the installation of a hard-wired HPC unit, this will expedite vehicle charging at the most efficient rate. The HPC can supply available current up to a maximum of 80 amps and incorporates electronic systems that communicate with the vehicle control systems to indicate the maximum available current so that the vehicle can determine the amount and rate of charge required. But the current standard on-board charger is limited to 48A. So the charging duration is 8.5 hrs. at the rate of 48 Amps.

Standard - Charging at rates lower than or equal to 32A can also be achieved via a mobile connector. The universal mobile connector is included as standard in the purchase of every Model Y and is an individual cable that connects the vehicle to any available domestic power outlet and can deliver current to a maximum of 32 Amps. The Mobile Connector incorporates similar electronic circuitry as the HPC to communicate with the vehicle and manage the charging process. The charging duration is 12 hrs. at the rate of 32 Amps.

The vehicle is also capable of accepting DC current up to 525A from an off-board charger (Supercharger).

08.08.01 Proper recharging procedures

The charging system adjusts automatically to the available AC line voltage, frequency and current, within limits. The charging system in the vehicle works in conjunction with either of the three external charging stations; the permanently installed HPC, the permanently installed supercharger or the portable Mobile Connector.

Anytime the EV Inlet door is opened, the vehicle will prepare to enter CHARGE state. Once the user connects either supply cable to the vehicle, the charging system signals to the vehicle that it is ready to deliver the charge. The vehicle locks the cable onto the vehicle and then indicates that it is ready to accept energy and charging will commence. Failure of any of these steps will result in fault condition and lack of **full charging capability**. Vehicle could still charge on low power if handle lock is not engaged.

Prepare to charge state



Low Power Charging Indication



High Power Charging Indication



If the battery temperature is near or below freezing temperatures, normal charging will not occur. The vehicle will identify this condition and will begin heating the battery coolant and circulating the coolant to raise the battery temperature to enable charge. When the pack temperature rises to a temperature within the allowable charging range, heating will reduce or stop and charging will commence.

08.08.02 Power requirements necessary to recharge vehicle

Model Y comes with one on-board charger is capable of a maximum of 48A on 208V or 240V outlets and 12A on 120V outlets.

08.10 OTHER UNIQUE FEATURES (i.e. solar panels)

Not applicable; vehicle is not equipped with any such features.

08.11 DESCRIPTION OF WARNING SYSTEM(S) FOR MAINTENANCE / MALFUNCTION

The Tesla Model Y is equipped with a tell-tale lamp located in the instrument pack to indicate any malfunctions through user alerts e.g. "battery failure" with battery symbol.

The tell-tale is complemented by more detailed information exhibited on the Center Display. An additional driver aid which indicates the nature of the malfunction as well as a wide range of additional vehicle data, such as when maintenance is needed.

08.11.01 Cut-off terminal voltages for prevention of battery damage

The control electronics inside of the Drive Unit and Charger are programmed not to allow the unit to drive the voltage of the battery above or below hard voltage limits. If the battery pack is unable to achieve a desired response from these systems and the voltage reaches above or below a set limit, the two switches inside the battery pack will open, disabling the entire high voltage system in the car.

8.12 DESCTIPTION OF DYNO MODE

Tesla, Inc. implementated user interface (UI) features that enable access to our "Dyno Mode" for all users. This feature is required to be enabled to maintain representative driving controls while testing on a chassis dynamometer.

In order to preserve the proper driving functionality and behavior, Dyno Mode executes the following features:

- Disable Stability Control to ensure no false interaction with the dyno.
- Disable Traction Control to ensure no false interaction with the dyno.
- Disable Active Drive Line Damping to avoid inducing oscillations in the dyno.
- Force the torque split to be as it would be under normal straight-line driving conditions
- Disable Brake Disk Wipe
- Disable vehicle movement plausibility monitor to ensure the availability of autonomous brake actuation on Dyno.

When the Stability Control and Traction Control systems become faulted, as is the case on a dynamometer where driving is detected but movement is not, regenerative braking is disabled so that unintended braking torque does not lead to loss of traction or control on low friction surfaces. Disabling Stability Control and Traction Control prevents those systems from disrupting regenerative braking behavior, maintaining the most representative driving energy consumption.

Dyno Mode can be activated by the user, according to the steps in the driver's guide.

Dyno Mode can be deactivated by the user by pressing the "Power Off" button within the Safety & Security tab of the UI.

8.13 DESCTIPTION OF COASTDOWN MODE

Tesla does not use any special mode for coastdown testing.

09.00 RESERVED

10.00 RESERVED

11.00 STARTING AND SHIFTING SCHEDULES

11.01 Starting

The Model Y does not have a traditional starter switch and instead has a smart entry system for greater safety and customer convenience. The smart entry system comprises of an authenticated phone (using Bluetooth Low Energy or internet connectivity) or key card (using Near Field Communication), a weight sensor embedded into the driver seat, and the brake pedal.

ENTERING

An authenticated phone can be used to passively unlock the car when connected, in range and a door handle is pulled or trunk release button is pressed.

The Tesla mobile app on an authenticated phone can be used to manually unlock the vehicle.

A key card can be used to unlock the car by scanning the card on the b-pillar.

After a successful key card scan on the b-pillar or center console:

- a. Vehicle is authorized to Drive within a reasonable time period. Time period is extended based on additional user interaction which include: driver opening their door, driver sitting down, driver closing their door while seated.
- b. If time period is exceeded, upon brake press, instruct driver to rescan key card on the center console to reauthorize Drive.
- c. Accessory Mode functions will be available without the user having to rescan their key card.

LOCKING

An authenticated phone can be used to passively lock the car when the phone is disconnected or moved away from the vehicle. This passive function can be disabled in controls on the touchscreen.

The Tesla mobile app on an authenticated phone can be used to manually lock the vehicle.

A key card can be used to lock the car by scanning the card on the b-pillar. There is no passive locking with key cards (car does not auto lock).

Note: Using a key card to lock/unlock will be equivalent to an active lock/unlock—i.e., clicking on the key fob to lock and double-clicking to unlock.

STARTING

If successful interaction between authenticated phone or the key card and vehicle controller occurs, the system deactivates the immobilizer. Immobilizer deactivation only happens after 2 conditions are met below. The vehicle then enters accessory mode analogous to a "ACC" position on a conventional IC engine. In this mode, low voltage (12V) is supplied to the vehicle allowing operation of the radio and other accessories connected to the accessory rail.

High Voltage (HV) necessary to enable vehicle propulsion is enabled only by the closing of the contactors, which can only be triggered when the following conditions are both satisfied,

- 1. Authenticated phone or key card is authorized and key code is validated AND
- 2. Brake pedal is depressed.

By requiring brake pedal activation, along with the appropriate key code, this system ensures the safety of vehicle occupants by not allowing self mobility of the vehicle without the driver providing proper control inputs (i.e., service brake activation) and appropriate driver authorization (i.e., presence of the key code). If either the service brake is not activated or the key code not present, the vehicle controller will not close the contactors and self-mobility is not possible.

If the brake pedal is depressed and the proper key code present, the drive rail will activate (immobilizer deactivates) and allows the vehicle to be shifted out of Park.

11.02 SHIFTING

Not applicable – the vehicle has a single-speed transmission.

12:00 -16:00 RESERVED

17:00 CALIFORNIA REQUIREMENTS

17:01 Statement of Compliance

17.01.01 General Statement

The production vehicles which are subject to registration or sale in the State of California will be, in all material respects, substantially the same in construction as test vehicles which are certified by the California Air Research Board; and will meet all the applicable emissions standards which are promulgated by the California Air Research Board in accordance with Section 43101 of the Health and Safety Code.

Tesla attests that the vehicle emission control label complies with the label durability requirements of the "California Motor Vehicle Emission Control and Smog Index Label Specifications", Title 13, CCR, Section 1965.

17.01.02 Drivability statement

This statement is no longer included in the California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles (as of January 01 2006); as was the case in previous versions.

17.02 Supplemental data and certification review sheets

See attached

17.03 Engineering evaluation of zero evaporative emissions under any and all operating conditions (for vehicles equipped with fuel-fired heater only)

Not applicable; vehicle is not equipped with fuel-fired heater.

17.04 Credits

17.04.01 Description of multi-manufacturer arrangements

Not applicable; Tesla has no such agreements in place.

17.05 VEHICLE SAFETY

17.05.01 All Information for safe operation of vehicle

Tesla owner's manual is available at webiste https://www.tesla.com/ownersmanual

17.05.02 Information on safe handling of battery system

HANDLING

Do not short circuit, puncture, incinerate, crush, immerse, force discharge, or expose the battery pack to temperatures outside the specified maximum storage temperature range of -20°C to 60°C.

The battery pack has a nominal operating voltage of 400 VDC. The battery pack is sealed in a rigid metal case and its exterior is isolated from high voltage. Handling the battery pack is electrically safe provided the enclosure remains closed.

The battery pack contains hermetically sealed lithium ion cells that contain a number of chemicals and materials of construction. Risk of exposure to electrode materials and Liquid electrolyte will only occur in cases of mechanical or thermal abuse of the battery Pack.

STORAGE

Do not store the battery pack in a manner that allows terminals to short circuit. Do not place near heating equipment, nor expose to direct sunlight for long periods. The battery pack should only be stored in approved packaging and stacked no more than two (2) packages high. To maintain service life, the battery pack should be stored at a state of charge (SOC) of 15 to 50%.

TRANSPORT

Lithium ion batteries are regulated as Class 9 Miscellaneous dangerous goods (also known as "hazardous materials") pursuant to the International Civil Aviation Organization.

(ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air, International Air Transport Association (IATA) Dangerous Goods Regulations, the International Maritime Dangerous Goods (IMDG) Code, European Agreements concerning the International Carriage of Dangerous Goods by Rail (RID) and Road (ADR), and applicable national regulations such as the USA's hazardous materials regulations (see 49 CFR 173.185). These regulations contain very specific packaging, labelling, marking, and documentation requirements. The regulations also require that individuals involved in the preparation of dangerous goods for transport be trained on how to properly package, label, mark and prepare shipping documents.

17.05.03 Description of emergency procedures

HIGH VOLTAGE EXPOSURE

If one of the Tesla products has been visibly damaged or its enclosure compromised, then practice appropriate high voltage preventative measures until the danger has been assessed (and dissipated if necessary).

FIREFIGHTING MEASURES

If a fire or explosion occurs when the battery pack is charging, shut off power to the charger. In case of burning lithium ion fires, flood the area with water. The water may not extinguish them, but will cool the adjacent batteries and control the spread of the fire. CO2, dry chemical and foam extinguishers are preferred for small fires, but also may not extinguish burning lithium ion batteries. Burning batteries will burn themselves out. Virtually all fires involving lithium ion batteries can be controlled with water. When water is used, however, hydrogen gas may be a by-product which can form an explosive

Mixture with air. LITH-X (powdered graphite) or copper powder fire extinguishers, sand, dry ground dolomite or soda ash may also be used. These materials act as smothering agents.

Damaged or opened cells or batteries can result in rapid heating (due to exothermic reaction of constituent materials) and the release of flammable vapors. Water (and other items listed above) disperses heat when applied in sufficient quantity to a fire. Extended heat exposure can lead to ignition of adjacent cells with a potential complete envelopment of the battery pack if not cooled. An extinguished lithium ion battery fire can re-ignite due to the exothermic reaction of constituent materials from broken or damaged cells. To avoid this, remove sources of ignition and cool the burned mass by flooding with (or immersing in) water. Fire-fighters should wear self-contained breathing apparatus. Cells or batteries may flame or leak potentially hazardous organic vapors if exposed to excessive heat, fire or over voltage conditions. These vapors include HF, oxides of carbon, aluminum, lithium, copper, and cobalt. Additionally, volatile phosphorus pentafluoride may form at temperatures above 230° Fahrenheit. Never cut into the sealed battery pack enclosure due to the high voltage and electrocution risks.

If a decision is made to fight a battery fire aggressively, then large amounts of water should be applied from a safe distance with the intent of flooding the battery pack enclosure as completely as possible. Alternatively, if a decision is made to fight a battery fire defensively, then the fire crew should pull back a safe distance and allow the battery to burn itself out. Fire crews may choose to utilize a water stream or fog pattern to protect exposures or control the path of smoke.

FIRST AID MEASURES

Under normal conditions of use, the constituent battery cells are hermetically sealed. Contents of an open (broken) constituent battery cell can cause skin irritation and/or chemical burns. If materials from a ruptured or otherwise damaged cell or battery contact skin, flush immediately with water and wash affected area with soap and water. For eye contact, flush with significant amounts of water for 15 minutes and see physician at once. Avoid inhaling any vented gases. If a chemical burn occurs or if irritation persists, seek medical assistance. Seek immediate medical assistance if an electrical shock or electrocution has occurred (or is suspected).

17.06 Description of fuel-fired heater / fuel tank evaporative system

Not applicable; vehicle is not equipped with fuel-fired heater.

3.03 Vehicle Configuration and sub-configurations

Make	Tesla
Carline	Model Y
Туре	Battery Electric Vehicle
Test Group	RTSLV00.0L2Y
Final Drive ratio	1
Emission Control	NA (BEV)
Exhaust	NA (BEV)
Evap	NA (BEV)
Model Type	Model Y Long Range AWD
Basic Engine code (F/R)	L2Y
Transmission Type / Code	AV/1
Vehicle ID tested	YD224-922405
Vehicle Configuration #	0
Sub configuration #	0
Gross Vehicle Weight (lbs)	5223
33% Curb Mass (lbs)	4363
Loaded Vehicle Weight (lbs)	4663
Equivalent Test Weight (lbs)	4750
Wheel / Tire	255/45 R19
Target Road Load A lbf	38.35
B lbf/mph	0.0677
C lbf/mph^2	0.0171
Road Load HP @ 50mph	11.27
Sub configuration #	1
Gross Vehicle Weight (lbs)	5223
33% Curb Mass (lbs)	4363
Loaded Vehicle Weight (lbs)	4663
Equivalent Test Weight (lbs)	4750
Wheel / Tire	255/40 R20
Target Road Load A lbf	44.78
B lbf/mph	0.1046
C lbf/mph^2	0.0171
Road Load HP @ 50mph	12.37

Fuel Economy Data Vehicle (FEDV) Selection Justification – FEDV curb mass vehicle accounts for options that have a greater than 33% take rate and highest sold wheel/tire combination that collectively represents a vehicle configuration / sub configuration that has the largest sales volume within that Model Type. Tesla affirms that the road load power, and the target coefficients are those that are appropriate for the ETW of the vehicle.

3.03 Vehicle Configuration and sub-configurations

Make	Tesla	
Carline	Model Y	
Туре	Battery Electric Vehicle	
Test Group	RTSLV00.0L2Y	
Final Drive ratio	1	
Emission Control	NA (BEV)	
Exhaust	NA (BEV)	
Evap	NA (BEV)	
Model Type	Model Y Performance AWD	
Basic Engine code (F/R)	L2Y	
Transmission Type / Code	AV/1	
Vehicle ID tested	YD224-970022	
Vehicle Configuration #	0	
Sub configuration #	0	
Gross Vehicle Weight (lbs)	5251	
33% Curb Mass (lbs)	4398	
Loaded Vehicle Weight (lbs)	4698	
Equivalent Test Weight (lbs)	4750	
Wheel / Tire	255/35 R21 (FT)	
Wileel/ Tile	275/35 R21 (RR)	
Target Road Load A lbf	39.41	
B lbf/mph	0.2207	
C lbf/mph^2	0.0169	
Road Load HP @ 50mph	12.36	
Sub configuration #	1	
Gross Vehicle Weight (lbs)	5251	
33% Curb Mass (lbs)	4398	
Loaded Vehicle Weight (lbs)	4698	
Equivalent Test Weight (lbs)	4750	
Wheel / Tire	255/35 R21 (FT)	
vviieer/ Tire	275/35 R21 (RR)	
Target Road Load A lbf	38.26	
B lbf/mph	0.1780	
C lbf/mph^2	0.0194	
Road Load HP @ 50mph	12.76	

^{21&}quot; Hankooks (sub configuration #0) are the highest-take rate tire for range testing. 21" Michelins (sub configuration #1) are range negative compared to the Hankooks. Fuel Economy Data Vehicle (FEDV) Selection Justification – FEDV curb mass vehicle accounts for options that have a greater than 33% take rate and highest sold wheel/tire combination that collectively represents a vehicle configuration / sub configuration that has the largest sales volume within that Model Type. Tesla affirms that the road load power, and the target coefficients are those that are appropriate for the ETW of the vehicle.

Certification Summary Information Report

Manufacturer	Tesla, Inc.	Manufacturer Code	TSL
Test Group	RTSLV00.0L2Y	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	03/04/2024 01:30:39 PM
Model Year	2024		

Test Group Information

CSI Type Running Change Reference Number 0

GHG Exempt Status Not Exempt

Drive Sources and Fuel(s)

Drive Source #1: Electric Motor

Fu	el Basic Fuel	Metering System	Lean Burn Strategy	y Indicator
Electr	icity			
Hybrid Indicator	No			
Multiple Fuel Storage		Rechargeable Energy Sto	orage System Indicator	Yes
Multiple Fuel Combustion		Off-board Charge Capal	ole Indicator	Yes
Fuel Cell Indicator	No	EPA Vehicle Class		LDV
Federal Clean Fuel Vehicle	Yes	Federal Clean Fuel Vehic	cle Standard	ZEV
Federal Clean Fuel Vehicle ILEV	Yes	California Partial Zero E	Emissions Vehicle Indicator	
Durability Group Name	RTSLEEVNNL2Y	Durability Group Equiva	alency Factor	1
Reduced Fee Test Group	No	Certification Region Cod	le(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No			
Introduction into Commerce Date	01/01/2024	CAP2000 Conditional Co	ertificate?	N/A
Independent Commercial Importer?		Alternative Fuel Convert	ter Certificate?	
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite (CO Option	
SFTP LEV-III Composite Compliance Indicator	Yes			
OBD Compliance Type	CARB	OBD Demonstration Veh	nicle Test Group	RTSLV00.0L2Y
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group C	OBD Deficiencies	0
OBD Deficiencies Comments	Battery Electric Vehicle - No OBD requirement	its		
Mfr Test Group Comments				
Mfr Exhaust / Evap Standards Comments				

Certification Summary Information Report

Test Group	RTSLV00.0L2Y Evaporative/Refueling Family						
Models Covered by	Models Covered by this Certificate						
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Tesla, Inc.	1 - Tesla Motors	47 - Model Y Performance AWD	Federal	All Wheel Drive	Automatic	1	No
Tesla, Inc.	1 - Tesla Motors	47 - Model Y Performance AWD	California + CAA Section 177 states	All Wheel Drive	Automatic	1	No
Tesla, Inc.	1 - Tesla Motors	45 - Model Y Long Range AWD	Federal	All Wheel Drive	Automatic	1	No
Tesla, Inc.	1 - Tesla Motors	45 - Model Y Long Range AWD	California + CAA Section 177 states	All Wheel Drive	Automatic	1	No
Engine Description							
Hybrid Type				Hybrid Description			
Engine Type				Mfr Engine Description	l		
Engine Block Arrangem	nent			Mfr Engine Block Arra			
Camless Valvetrain Indi				Oil Viscosity/Classificat			
Number of Cylinders/Re				Mechanically Variable		cator	
After Treatment De				•	•		
Mfr After Treatment D Comments	evice (ATD)						
Direct Ozone Reduction	n (DOR) Device						
Mfr Emission Control I							
Official Test Number	ers						
Test Group Fuel	FTP US	06 SC03	Cold CO	Highway	EPA City EPA Cituus Litmus Value Thresho	s Litmus	EPA Highway CREE Litmus Weighting Threshold Factor
Electricity							
SFTP LEV-III Offic	SFTP LEV-III Official Test Numbers						
Test Group F	Suel	FTP		US06	SC03		
Electricity							
Official Charge Depleting Test Numbers							
Test Gro	oup Fuel	UD	DDS	<u> </u>	Highway		
	Electricity RTSL10084896			RTSL10084897			
Electr		RTSL10	L10083662 RTSL10083663				

Date: 03/04/2024 01:30:51 PM Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family		
Hybrid Electric Vehicle And Fuel Cel	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	355	Battery Energy Capacity	235	
Battery Specific Energy	175	Battery Charger Type	On-Board	
Number of Capacitors		Capacitor Rating (In Farads)		
Mfr Capacitor Comments				
Hydraulic System Description				
Regenerative Braking Type	Electrical Regen Brake			
Regenerative Braking Source	Both	Driver Controlled Regenerative Braking	No	
Mfr Regenerative Braking Description				
Drive Motor(s)/Generator(s)	4			
Motor/Generator Type 1	AC Induction	Rated Motor/Generator Power	91	
Motor/Generator Type 2	AC 3 PHASE PERMANENT MAGNET	Rated Motor/Generator Power	200	
Motor/Generator Type 3	AC Induction	Rated Motor/Generator Power	135	
Motor/Generator Type 4	AC 3 PHASE PERMANENT MAGNET	Rated Motor/Generator Power	202	
Mfr Fuel Cell Description				
Fuel Cell On-Board H2 Storage Capacity (kg)	·	Usable H2 Fill Capacity (kg)		
Mfr Hybrid Electric/ Electric Vehicle Comments	2024 MY Model Y AWD Carline; Base Front - 91 kW; Rear - 200 kW Perf Front - 135 kW; Rear - 202 kW			

Certification Summary Information Report

Test Group		RTSLV0	0.0L2Y		Evaporative/R	efueling Family			
Emission Data V	ehicle Informat	tion							
Vehicle ID / Configu	ration	YD224-9	22405 / 0		Manufacturer Vehicle Configuration Number		0		
Original Test Group		RTSLV0	0.0L2Y		Original Evaporative/Refueling Family				
Original Test Vehicle		2024				J	•		
Vehicle Model									
Represented Test Ve	ehicle Make	Tesla			Represented T	est Vehicle Model		Model Y Long Rang	e AWD
Leak Family Det	ails								
Leak Family Identifi	ier				Leak Family N	ame			
Drive Sources an	nd Fuel System	Details							
Г	Drive S	Source and Fuel#		Driv	ve Source		Fuel		
	= == == =	1			tric Motor		Electricity	y	
						•			
Hybrid Indicator		No							
Multiple Fuel Storag	ge				Multiple Fuel				
Fuel Cell Indicator		No			_	Energy Storage Syst		Yes	
Rechargeable Energ	y Storage System	Battery(s)		Rechargeable 1	Energy Storage Syst	tem, if 'Other'		
Off-board charge Ca	apable Indicator	Yes							
Odometer Correction	n Initial	1			Odometer Correction Factor		1		
Odometer Correction	n Sign	-= System	m Miles is equal to (al to (Test odometer reading - Initial system miles) * Correction factor					
Odometer Correction	n Units	Miles							
Engine Code		L2Y			Rated Horsepower		390		
Displacement (liters))	0.001							
Air Aspiration Meth	od	Naturally	Aspirated	Air Aspiration Method, if 'Other'					
Number of Air Aspin	ration Devices				Air Aspiration	Device Configurati	on		
Charge Air Cooler T	Гуре				Drive Mode W	hile Testing		All Wheel Drive	
Shift Indicator Light	t Usage	Not eqipp	ped		Aged Emission	Components		4,000 (mi)	
Curb Weight (lbs)		4363			Equivalent Tes	st Weight (pounds)		4750	
GVWR (lbs)		5223			N/V Ratio			108	
Axle Ratio		1							
Transmission Type		Automati	c		# of Transmiss	ion Gears		1	
Transmission Locku	p	No		Creeper Gear		No			
Dynamometer C	Coefficients:								
]	Farget Coefficien	ts		Set Coefficients				
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		l Total Road Load Hor lighway/Evap Coefficie	
City/Highway/Evap		0.0677	0.0171	-1.94	0.1342	0.0139	City/II	11.3	
			•		0.1342	0.0137		11.3	
Emission Control De	evice Comments	No Emiss	sions Control Device	- Pure Electric					

Certification Summary Information Report

Test Group	RTSLV00.0L2Y Evaporative/Refueling Family				
Manufacturer Test Vehicle Comments	This is 2024 Model Y Long Range AWD; Front Motor Power - 91 kW; Rear Motor Power - 200 kW;				
Test #	RTSL10083665	Test Procedure	2 - CVS 75 and later (w/o can. load)		
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity		
Test Date	12/09/2023	Fuel	Electricity		
Fuel Batch ID		Fuel Calibration Number			
Vehicle Class	LDV/Passenger Car	Car DF Type			
Verify Test Lab ID	Tesla Kato				
E10 Evaporative Test Measurement Method					
Test Start Odometer Reading	2853	Odometer Units	M		
4WD Test Dyno	Yes	Yes Diesel Adjustment Factor Usage			
State of Charge Delta					
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)
CO (Carbon Monoxide)	0	-
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.0358	-
DT-EER (Drive Trace Energy Economy Rating)	-0.3427	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.4407	-
MFR FE (Manufacturer Fuel Economy)	18.0473	186.7315332
NOX (Nitrogen Oxide)	0	1
NMOG (Non-methane organic gases)	0	

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

Manufacturer Test Comments

Internal Test results (CVS-75 UDDS Ambient) for MY2024 Model Y Long Range AWD. AC wh/mi @ 50 % SOC - Bag 1 - 199.0; Bag 2- 169.1; Bag 3 - 194.1; Bag 4 - 167.9; Test Start Odometer Reading 2853 Test Start Propulsion System Mileage 2853 DC energy consumption Phase 1 = 199.0 Wh/mi; Phase 2 = 169.1 Wh/mi; Phase 3 = 194.1 Wh/mi;

Certification				Rounded		NMOG/NM	Diesel Adjustment			Certification		
Region	Useful Life	Standard Level	Emission Name	Result	RAF	HC Ratio	Factor	Add DF	Mult DF	Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 0	СО	0.0	-			0	1	0	0	Pass
CA	150,000 miles	California ZEV	СО	0.0				0		0	0	Pass

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10083666	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	12/09/2023	Fuel	N/A
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method			
Test Start Odometer Reading	2853	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
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)
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.3592	
DT-EER (Drive Trace Energy Economy Rating)	0.5999	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.8966	
MFR FE (Manufacturer Fuel Economy)	19.1837	175.6699698
NOX (Nitrogen Oxide)	0	
NMOG (Non-methane organic gases)	0	

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

Manufacturer Test Comments

Internal Test results (HWY 3) for MY2024 Model Y Long Range AWD. DC energy consumption = 191.8 Wh/mi;

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10083673	Test Procedure	90 - US06
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	12/09/2023	Fuel	N/A
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method	l		
Test Start Odometer Reading	2853	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes
TP 4 TP 14			

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
CO (Carbon Monoxide)	0	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-2.9827	
DT-EER (Drive Trace Energy Economy Rating)	-2.3517	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-5.4242	
MFR FE (Manufacturer Fuel Economy)	27.1773	124.0005446
NOX (Nitrogen Oxide)	0	
NMOG (Non-methane organic gases)	0	

Manufacturer Test Comments Internal Te

 $Internal\ Test\ results\ (US\ 06)\ for\ MY2024\ Model\ Y\ Long\ Range\ AWD.\ End\ SOC-\ 2069Wh\ DC\ energy\ consumption\ Phase\ 1\ (Highway)=254.9\ Wh/mi;\ Phase\ 2\ (City)=271.8\ Wh/mi$

Date: 03/04/2024 01:30:51 PM Certific

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10083676	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	12/09/2023	Fuel	N/A
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Metho	od		
Test Start Odometer Reading	2853	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes
75 4 75 14			

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
CO (Carbon Monoxide)	0	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.4522	
DT-EER (Drive Trace Energy Economy Rating)	-0.3568	-1
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.1181	1
MFR FE (Manufacturer Fuel Economy)	26.7754	125.8617985
NOX (Nitrogen Oxide)	0	-1
NMOG (Non-methane organic gases)	0	

Manufacturer Test Comments

Internal Test results (SC 03) for MY2024 Model Y Long Range AWD. End SOC- 958Wh DC energy consumption = 267.8 Wh/mi

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10083662	Test Procedure	81 - Charge Depleting UDDS
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	12/09/2023	Fuel	Electricity
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method			
Test Start Odometer Reading	2853	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
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	208	Recharge Event Energy (kiloWatt-hours)	88.905
Charge Depleting Range (Calculated miles)	437	Charge Depleting Range (Actual miles)	437
Charge Depleting Range Highway (Calculated miles)		Derived 5-Cycle Coefficient Model Year	
All Electric Range Unadjusted (miles)		Equivalent All Electric Range (miles)	437
Number of Charge Depleting Bags/Phases Conducted	4	Transition Bag/Phase Number	

Charge Depleting Bag/Phase

Date: 03/04/2024 01:30:51 PM

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
1	Actual Distance Driven (miles)	436.99
2	Carbon Monoxide	0
3	Carbon dioxide	0
4	Carbon-Related Exhaust Emissions	0
5	Drive Trace Absolute Speed Change Rating	1.1021
6	Drive Trace Energy Economy Rating	-0.7972
7	Drive Trace Inertia Work Ratio Rating	2.0596
8	Integrated DC KW-HRS	225.46
9	Manufacturer Fuel Economy	165.67
10	Nitrogen Oxide	0
11	Non-methane organic gases	0
12	Non-methane organic gases plus Nitrogen Oxides	999.999
13	Particulate Matter	0
14	System End State of Charge Watt-hours	78.865
15	System Start State of Charge Watt-hours	0

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Manufacturer Test Comments	wh (system gave error l NMOG Test results. Cy 7.440 187.47 46.87 61 1976 10.250 192.81 96. HWY1 HWY2 Unweig	MY2024 Model Y Long Range AWD. Range determined by using SAE J1634 Multi-cycle test procedure. END-SOC 78865 imited to 4 digits)ACT-Distance & KW-HRS are dummy values. MCT dc wh/mi is attached with EPA application. Added cle Energy(Wh) Distance(mi) ECdc_cyc Kuwgt Rwgt Recharge UDDS1 1520 7.450 204.03 51.01 3.93 AC WattHrs UDDS2 139.29 88904.6 UDDS3 1323 7.450 177.53 44.38 58.04 UDDS4 1304 7.450 175.03 43.76 57.22 HWY1 2045 10.260 199.35 99.67 HW 41 SS1 61783 251.360 245.80 SS2 7518 31.060 242.05 TOTAL 78864.60 332.720 K-Factors UDDS1 UDDS2 UDDS3 UDDS4 hted 0.250 0.250 0.250 0.500 0.500 Weighted 0.019 0.327 0.327 NA NA Results Range (mi) AC Wh/mi MPGe 23.97 209.70 UDDSw 436.99 203.45 165.6677 20.3449 HWY 402.21 221.04 152.4822 22.1042	

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

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
m	DECL 10002//2	m (p)	
Test #	RTSL10083663	Test Procedure	84 - Charge Depleting Highway
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	12/09/2023	Fuel	Electricity
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method			
Test Start Odometer Reading	2853	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
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	208	Recharge Event Energy (kiloWatt-hours)	88.905
Charge Depleting Range (Calculated miles)	402	Charge Depleting Range (Actual miles)	402
Charge Depleting Range Highway (Calculated miles)		Derived 5-Cycle Coefficient Model Year	
All Electric Range Unadjusted (miles)		Equivalent All Electric Range (miles)	402
Number of Charge Depleting Bags/Phases Conducted	2	Transition Bag/Phase Number	
Charge Donleting Rog/Phoco			

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
1	Actual Distance Driven (miles)	402.21
2	Carbon Monoxide	0
3	Carbon dioxide	0
4	Carbon-Related Exhaust Emissions	0
5	Drive Trace Absolute Speed Change Rating	4.2314
6	Drive Trace Energy Economy Rating	0.7907
7	Drive Trace Inertia Work Ratio Rating	5.3597
8	Integrated DC KW-HRS	0
9	Manufacturer Fuel Economy	152.48
10	Nitrogen Oxide	0
11	Non-methane organic gases	0
12	Non-methane organic gases plus Nitrogen Oxides	999.999
13	Particulate Matter	0
14	System End State of Charge Watt-hours	78.865
15	System Start State of Charge Watt-hours	0

CA

150,000 miles | California ZEV

CREE

0

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Manufacturer Test Comments		Range AWD. Range determined by using SAE J1634 Mult T dc wh/mi is attached with application. DC energy consumni KW-HRS are dummy values.	

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

0

0

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10083670	Test Procedure	86 - Charge Depleting 20 Degree F FTP
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	12/09/2023	Fuel	N/A
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method			
Test Start Odometer Reading	2853	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Inf	formation		
Recharge Event Voltage	208	Recharge Event Energy (kiloWatt-hours)	85.803
Charge Depleting Range (Calculated miles)	267.8	Charge Depleting Range (Actual miles)	267.8
Charge Depleting Range Highway (Calculated miles)		Derived 5-Cycle Coefficient Model Year	
All Electric Range Unadjusted (miles)		Equivalent All Electric Range (miles)	267.8
Number of Charge Depleting Bags/Phases Conducted Charge Depleting Bags/Phase	36	Transition Bag/Phase Number	

Charge Depleting Bag/Phase

Date: 03/04/2024 01:30:51 PM

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
1	Actual Distance Driven (miles)	436.99
2	Carbon Monoxide	0
3	Carbon dioxide	0
4	Carbon-Related Exhaust Emissions	0
5	Drive Trace Absolute Speed Change Rating	1.952
6	Drive Trace Energy Economy Rating	1.45
7	Drive Trace Inertia Work Ratio Rating	3.258
8	Integrated DC KW-HRS	0
9	Manufacturer Fuel Economy	28.4213
10	Nitrogen Oxide	0
11	Non-methane organic gases	0
12	Non-methane organic gases plus Nitrogen Oxides	999.999
13	Particulate Matter	0
14	System End State of Charge Watt-hours	76.113
15	System Start State of Charge Watt-hours	0

Certification Summary Information Report

st Group	RTSLV00.0L2Y	Evaporative/Refueling Family
lanufacturer Test Comments	Internal Test results(Cold UDI discharge. DC energy consump KW-HRS are dummy values	DS) for MY2024 Model Y Long Range AWD. END SOC is 76113 Wh (System error limited to 4 digits) for full ption Phase 1 = 472.3 Wh/mi; Phase 3 = 434.3 Wh/mi; Total charge depleting energy consumption = 284.21 Wh/m

City/Highway/Evap

Cold CO

39.409

43.35

0.2207

0.24

0.0169

0.02

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling F	amily		
Emission Data Vehicle Informat	ion				
Vehicle ID / Configuration	YD224-970022 / 0	Manufacturer Vehicle C	onfiguration Number	0	
Original Test Group Name	RTSLV00.0L2Y	Original Evaporative/Re	=		
Original Test Vehicle Model Year	2024	9 1	•		
Vehicle Model					
Represented Test Vehicle Make	Tesla	Represented Test Vehicl	e Model	Model Y Performance AWD	
Leak Family Details					
Leak Family Identifier		Leak Family Name			
Drive Sources and Fuel System 1	Details				
Drive S	ource and Fuel#	Drive Source	Fuel		
Billes	1	Electric Motor	Electric		
	-	2144114 1.10101			
Hybrid Indicator	No				
Multiple Fuel Storage		Multiple Fuel Combustion	on		
Fuel Cell Indicator	No	Rechargeable Energy St	orage System Indicator	Yes	
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy St	orage System, if 'Other'		
Off-board charge Capable Indicator	Yes				
Odometer Correction Initial	1	Odometer Correction Fa	actor	1	
Odometer Correction Sign	- = System Miles is equal to	(Test odometer reading - Initial system miles) *	Correction factor		
Odometer Correction Units	Miles				
Engine Code	L2Y	Rated Horsepower		452	
Displacement (liters)	0.001				
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method,	if 'Other'		
Number of Air Aspiration Devices		Air Aspiration Device C	onfiguration		
Charge Air Cooler Type		Drive Mode While Testin	ng	All Wheel Drive	
Shift Indicator Light Usage	Not eqipped	Aged Emission Compone	ents	4,000 (mi)	
Curb Weight (lbs)	4398	Equivalent Test Weight	(pounds)	4750	
GVWR (lbs)	5251	N/V Ratio		108	
Axle Ratio	1				
Transmission Type	Automatic	# of Transmission Gears	1	1	
Transmission Lockup	No	Creeper Gear		No	
Dynamometer Coefficients:					
ר	Carget Coefficients	Set Coefficients			
Coefficient Category A (lbf)	B (lbf/mph) C (lbf/mph**2)	A (lbf) B (lbf/mph) C (lbf/n		ed Total Road Load Horse Power fo /Highway/Evap Coefficients	

0.1212

0.13

0.015

0.02

12.4

N/A

2.18

2.4

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Emission Control Device Comments	No Emissions Control Device - Pure Electric		
Manufacturer Test Vehicle Comments	This is MY2024 Model Y Performance AWD; F	Front Motor Power - 135 kW; Rear Motor Power - 202kW;	
Test #	RTSL10084616	Test Procedure	2 - CVS 75 and later (w/o can. load)
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	02/13/2024	Fuel	Electricity
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method			
Test Start Odometer Reading	2994	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
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)		
CO (Carbon Monoxide)	0			
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.4689			
DT-EER (Drive Trace Energy Economy Rating)	1.7427			
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.752			
MFR FE (Manufacturer Fuel Economy)	18.4945	182.2433697		
NOX (Nitrogen Oxide)	0			
NMOG (Non-methane organic gases)	0			

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

Manufacturer Test Comments

Internal Test results (CVS-75 UDDS Ambient) for MY2024 Model Y Performance AWD. Test Start Odometer Reading 2994 Test Start Propulsion System Mileage 2994 DC energy consumption Phase 1 = 214.7 Wh/mi; Phase 2 = 182.2 Wh/mi; Phase 3 = 208.9 Wh/mi;

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 0	СО	0.0	1		1	0	-1	0	0	Pass
CA	150,000 miles	California ZEV	СО	0.0				0		0	0	Pass

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10084617	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	02/13/2024	Fuel	N/A
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method			
Test Start Odometer Reading	2994	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
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)
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.0391	
DT-EER (Drive Trace Energy Economy Rating)	1.0246	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.3145	
MFR FE (Manufacturer Fuel Economy)	21.03	160.2710414
NOX (Nitrogen Oxide)	0	
NMOG (Non-methane organic gases)	0	

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

Manufacturer Test Comments

Internal Test results (HWY 3) for MY2024 Model Y Performance AWD. The HFET result from the full discharge MCT is used for the 2-part and 5-part calculations.; Test Start Odometer Reading 2994 Test Start Propulsion System Mileage 2994 DC energy consumption = 210.3 Wh/mi;

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10084621	Test Procedure	90 - US06
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	02/13/2024	Fuel	N/A
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Metho	od		
Test Start Odometer Reading	2994	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes
m (P 1			

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
CO (Carbon Monoxide)	0	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.1324	
DT-EER (Drive Trace Energy Economy Rating)	0.2942	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.4241	
MFR FE (Manufacturer Fuel Economy)	28.55	118.056042
NOX (Nitrogen Oxide)	0	
NMOG (Non-methane organic gases)	0	

Manufacturer Test Comments

Internal Test results (US 06) for MY2024 Model Y Performance AWD. Test Start Odometer Reading 2994 Test Start Propulsion System Mileage 2994 DC energy consumption Phase 1 (Highway) = 277.2 Wh/mi; Phase 2 (City) = 285.5 Wh/mi

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10084622	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	02/13/2024	Fuel	N/A
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Metho	d		
Test Start Odometer Reading	2994	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes
m . n . 1			

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (kilowatt-hour per 100 miles)
CO (Carbon Monoxide)	0	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.108	
DT-EER (Drive Trace Energy Economy Rating)	-0.6235	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.631	
MFR FE (Manufacturer Fuel Economy)	27.61	122.075335
NOX (Nitrogen Oxide)	0	
NMOG (Non-methane organic gases)	0	

Manufacturer Test Comments

 $Internal\ Test\ results\ (SC\ 03)\ for\ MY2024\ Model\ Y\ Performance\ AWD.\ Test\ Start\ Odometer\ Reading\ 2994\ Test\ Start\ Propulsion\ System\ Mileage\ 2994\ DC\ energy\ consumption\ =\ 276.1\ Wh/mi$

Certification Summary Information Report

0084619 24	Test Procedure Test Fuel Type Fuel Fuel Calibration Number DF Type	86 - Charge Depleting 20 Degree F FTP 62 - Electricity N/A EPA Assigned
	Fuel Fuel Calibration Number	N/A
	Fuel Calibration Number	
to		
to	DF Type	EPA Assigned
to		
	Odometer Units	M
	Diesel Adjustment Factor Usage	
t 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes
1		
	Recharge Event Energy (kiloWatt-hours)	83.439
	Charge Depleting Range (Actual miles)	261
	Derived 5-Cycle Coefficient Model Year	
	Equivalent All Electric Range (miles)	261
	Transition Bag/Phase Number	
	t 86 (+/- 2 mph, +/- 1 sec)	Diesel Adjustment Factor Usage Road Speed Fan Usage Recharge Event Energy (kiloWatt-hours) Charge Depleting Range (Actual miles) Derived 5-Cycle Coefficient Model Year Equivalent All Electric Range (miles)

Charge Depleting Bag/Phase

Date: 03/04/2024 01:30:51 PM

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
1	Actual Distance Driven (miles)	0
2	Carbon Monoxide	0
3	Carbon dioxide	0
4	Carbon-Related Exhaust Emissions	0
5	Drive Trace Absolute Speed Change Rating	2.903
6	Drive Trace Energy Economy Rating	2.287
7	Drive Trace Inertia Work Ratio Rating	4.703
8	Integrated DC KW-HRS	0
9	Manufacturer Fuel Economy	28.2778
10	Nitrogen Oxide	0
11	Non-methane organic gases	0
12	Non-methane organic gases plus Nitrogen Oxides	999.999
13	Particulate Matter	0
14	System End State of Charge Watt-hours	73.781
15	System Start State of Charge Watt-hours	0

Date: 03/04/2024 01:30:51 PM Certification Summary Information Report

Cest Group	RTSLV00.0L2Y	Evaporative/Refueling Family
Manufacturer Test Comments	Internal Test results(Cold UDD discharge. Tesla did not use ext consumption calculation. The s efficiency from the full dischar Phase 1 = 519.3 Wh/mi; Phase	DS) for MY2024 Model Y Performance AWD. END SOC is 76769 wh (System error limited to 4 digits) for full ternal current measurement after the full cold discharge test, since AC energy is not used in any part of the 5-cycle stated recharge energy is an estimate using the DC energy from the cold discharge test and the round trip energy rege MCT. Test Start Odometer Reading 2994 Test Start Propulsion System Mileage 2994 DC energy consumption 3 = 353.8 Wh/mi; Total charge depleting energy consumption = 282.78 Wh/mi

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10084896	Test Procedure	81 - Charge Depleting UDDS
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	02/28/2024	Fuel	Electricity
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method			
Test Start Odometer Reading	2994	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
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	208	Recharge Event Energy (kiloWatt-hours)	89.456
Charge Depleting Range (Calculated miles)	417	Charge Depleting Range (Actual miles)	417
Charge Depleting Range Highway (Calculated miles)	_	Derived 5-Cycle Coefficient Model Year	
All Electric Range Unadjusted (miles)		Equivalent All Electric Range (miles)	417
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	Actual Distance Driven (miles)	0
2	Carbon Monoxide	0
3	Carbon dioxide	0
4	Carbon-Related Exhaust Emissions	0
5	Drive Trace Absolute Speed Change Rating	1.3704
6	Drive Trace Energy Economy Rating	1.0903
7	Drive Trace Inertia Work Ratio Rating	2.1258
8	Integrated DC KW-HRS	0
9	Manufacturer Fuel Economy	157.21
10	Nitrogen Oxide	0
11	Non-methane organic gases	0
12	Non-methane organic gases plus Nitrogen Oxides	999.999
13	Particulate Matter	0
14	System End State of Charge Watt-hours	78.946
15	System Start State of Charge Watt-hours	0

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Manufacturer Test Comments	wh (system gave error limited to 4 digits). MC Reading 2994 Test Start Propulsion System M	formance AWD. Range determined by using SAE J1634 Mu T dc wh/mi is attached with EPA application. Added NMOG ileage 2994 DC energy consumption UDDS1 = 207.03 Wh/m Sweighted = 189.20 Wh/mi; UDDS1 DC discharge energy	Test results. Test Start Odometer ni; UDDS2 = 192.94 Wh/mi; UDDS3 =

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

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Test #	RTSL10084897	Test Procedure	84 - Charge Depleting Highway
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity
Test Date	02/28/2024	Fuel	Electricity
Fuel Batch ID		Fuel Calibration Number	
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	Tesla Kato		
E10 Evaporative Test Measurement Method			
Test Start Odometer Reading	2994	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	
State of Charge Delta			
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Inf	formation		
Recharge Event Voltage	208	Recharge Event Energy (kiloWatt-hours)	89.456
Charge Depleting Range (Calculated miles)	369	Charge Depleting Range (Actual miles)	369
Charge Depleting Range Highway (Calculated miles)	_	Derived 5-Cycle Coefficient Model Year	
All Electric Range Unadjusted (miles)		Equivalent All Electric Range (miles)	369
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	Actual Distance Driven (miles)	0
2	Carbon Monoxide	0
3	Carbon dioxide	0
4	Carbon-Related Exhaust Emissions	0
5	Drive Trace Absolute Speed Change Rating	2.5494
6	Drive Trace Energy Economy Rating	0.4866
7	Drive Trace Inertia Work Ratio Rating	3.3259
8	Integrated DC KW-HRS	0
9	Manufacturer Fuel Economy	139.15
10	Nitrogen Oxide	0
11	Non-methane organic gases	0
12	Non-methane organic gases plus Nitrogen Oxides	999.999
13	Particulate Matter	0
14	System End State of Charge Watt-hours	78.946
15	System Start State of Charge Watt-hours	0

Certification Summary Information Report

Date: 03/04/2024 01:3	30:51 PM
-----------------------	----------

Test Group	RTSLV00.0L2Y	Evaporative/Refueling Family	
Manufacturer Test Comments	78946 wh (System error limite	24 Model Y Performance AWD. Range determined by using SAE. 3d to 4 digits). MCT dc wh/mi is attached with application. Test Sta	rt Odometer Reading 2994 Test Start Propulsion

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
Fed	150,000 miles	Federal Tier 3 Bin 0	CREE	0				0		0		
CA	150,000 miles	California ZEV	СО	0.0				0		0	0	Pass
CA	150,000 miles	California ZEV	CREE	0				0		0		

Fuel Properties

Certification Summary Information Report

Test Group	RTSLV00.0L2Y Evaporative/Refueling Family								
			Consolida	ted List of Sta	andards				
Exhaust Standa	rds								
Cert Region	Fede	ral		Cert/In-U	Jse Code		Cert	t	
Vehicle Class	LDV	/Passenger Car		Standard	l Level		Fede	eral Tier 3 Bin 0	
Fuel	Elect	ricity		Test Prod	cedure		Cha	rge Depleting UDE	OS
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		Passenger Car ricity		Standard Test Prod NMOG /		Downward Diesel Adjustment		eral Tier 3 Bin 0 rge Depleting High	
		Rounded			Aujustinent				
Useful Life	Emission Name	Rounded Result	RAF	NMHC	Factor	<u> Factor</u>	Mult DF	Add DF	Std
150,000 miles	СО	Result	RAF 					0	0
150,000 miles 150,000 miles	CO CO-COMP	Result		NMHC	Factor	<u> Factor</u>		0	0
150,000 miles 150,000 miles 150,000 miles	CO CO-COMP CREE	Result		 	Factor	Factor		0 0 0	0 0 0
150,000 miles 150,000 miles	CO CO-COMP	Result		NMHC	Factor	Factor 		0	0
150,000 miles 150,000 miles 150,000 miles 150,000 miles	CO CO-COMP CREE NMOG+NOX-COMP	Result		 	Factor	Factor		0 0 0 0	0 0 0
150,000 miles 150,000 miles 150,000 miles 150,000 miles	CO CO-COMP CREE NMOG+NOX-COMP	Result		 	Factor Use Code	Factor	 	0 0 0 0	0 0 0
150,000 miles 150,000 miles 150,000 miles 150,000 miles Cert Region Vehicle Class	CO CO-COMP CREE NMOG+NOX-COMP Calif	Result		NMHC Cert/In-U	Factor Use Code	Factor	 Cert	0 0 0 0 0	0 0 0
150,000 miles 150,000 miles 150,000 miles	CO CO-COMP CREE NMOG+NOX-COMP Calif	Result cornia + CAA Section/Passenger Car		NMHC Cert/In-U	Factor Use Code	Factor	 Cert	0 0 0 0	0 0 0

Certification Summary Information Report

Test Group	RTSI	LV00.0L2Y		Evaporat	Evaporative/Refueling Family				
Cert Region	Feder	leral Cert/In-Use Code				Cer	t		
Vehicle Class	LDV	Passenger Car Standard Level				Federal Tier 3 Bin 0			
Fuel	Elect	ricity		Test Proc	edure		CV	S 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	СО							0	0
Cert Region Vehicle Class		ornia + CAA Sectio /Passenger Car	n 177 states	Cert/In-U			Cer Cal	t ifornia ZEV	
Fuel	Elect	ricity		Test Proc	edure		Cha	rge Depleting Hig	ghway
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
Cert Region Vehicle Class Fuel		ornia + CAA Sectio /Passenger Car ricity	n 177 states	Cert/In-U Standard Test Proc	Level			t ifornia ZEV urge Depleting UE	DDS
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

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refueling	g Family
	Glo	ossary	
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

Page 28 of 30 CSI Submission/Revision Date: 03/04/2024 01:30:39 PM

Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/Refuel	ing Family
B5	Federal Tier 2 Bin 5	L3SULEV150	California LEV-III SULEV150
B6	Federal Tier 2 Bin 6	L3LEV630	California LEV-III LEV630
В7	Federal Tier 2 Bin 7	L3ULEV570	California LEV-III ULEV570
B8	Federal Tier 2 Bin 8	L3ULEV400	California LEV-III ULEV400
В9	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			
4	4-Wheel Drive	P	Part-time 4-Wheel Drive
F	2-Wheel Drive, Front	A	All Wheel Drive

Page 29 of 30 CSI Submission/Revision Date: 03/04/2024 01:30:39 PM

Date: 03/04/2024 01:30:52 PM Certification Summary Information Report

Test Group	RTSLV00.0L2Y	Evaporative/R	efueling Family	
R	2-Wheel Drive, Rear			
Additional Ter	ms 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	