

**REQUIREMENTS FOR ELECTRIC & HYBRID POWERED VEHICLES
STATE OF CONNECTICUT**

A. Performance.

Acceleration. The time required to accelerate from rest to 31 MPH (50 km/h) shall not exceed 13.5 seconds.

Gradeability at speed. The grade which can be traversed up at 15.5 MPH (25 km/h) shall be at least 10 percent. The vehicle shall be capable of maintaining 31 MPH (50 km/h) on a grade of 5 percent.

Gradeability limit. The grade on which the vehicle can start and climb for 20 seconds either backward or forward shall be no less than 20 percent (11.3°).

Forward speed capability. The speed which can be maintained for 5 minutes shall be 49.7 MPH (80 km/h).

Range. The distance over which the vehicle can be operated during the SAE J227a section 6 selected driving pattern test with vital accessories or equivalent operating, shall be:

1. For an electric vehicle, at least 34 miles (55 km), and
2. For a hybrid vehicle, at least 124 miles (200 km).

Battery recharge time. The vehicle shall be capable of satisfying the range requirement above, after being recharged for no more than 10 hours by use of an on-board or reasonably sized portable charger. The on-board or portable charger shall be compatible with a standard electric power outlet of 110 V. or 220 V. AC.

Recharge control. The vehicle shall have an automatic recharge control which will meet the requirements of energy, life, and safety as such requirements are stated by these performance standards. This applies when the on-board or portable chargers are used and also when off-board chargers for recharge of the vehicle are used.

B. Safety Requirements.

Safety, crashworthiness, damageability, crash avoidance and hazards.

1. The electric propulsion circuit shall be electrically isolated from other conductive portions of the vehicle sufficiently to prevent personal hazards due to contacting any portion of the electric propulsion circuit while in contact with other portions of the vehicle.

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Wiring of contrasting colors shall be used to differentiate between positive and negative leads.

2. Vehicles other than motorcycles shall be capable of complying with the performance requirements of Federal Motor Vehicle Safety Standards 208 and 301 with all battery materials remaining outside the passenger compartment.

3. Vehicles with battery vents shall have flame barrier provisions to inhibit battery explosions.

4. Ventilation shall be adequate within the battery compartment to maintain the concentration of hydrogen below 4 percent by volume during vehicle operation including charging and maintenance. Non-ventilated battery compartments shall carry a label indicating the type of battery necessary to meet this requirement. Test results may be required to confirm compliance.

5. The vehicle shall have a state-of-charge meter for the propulsion battery system or other means of providing an indication of remaining range.

6. The vehicle shall have a device which provides for the positive disconnection of the battery and which is operable from the normal operator position.

7. The vehicle shall be capable of being parked for up to 8 hours in temperatures of -13° F to 122° F (-25° C to 50° C) and subsequently operated, by moving forward under its own power, at any temperature within this temperature range without damage to the vehicle or hazard to persons.

The vehicle shall comply with all chassis manufacturers Gross Vehicle Weight Ratings (GVWR) and all applicable Federal Motor Vehicle Safety Standards as set forth in 49 CFR, part 571, unless a temporary exemption is obtained by the manufacturer from the Department of Transportation.

These minimum performance and safety requirements for electric and hybrid powered vehicles are subject to change without notice.

Although similar, these requirements do not apply to HIGH MILEAGE VEHICLES covered under DMV Reg. Sec. 14-103b and which vehicles are prohibited from limited access highways.