California Environmental Protection Agency AIR RESOURCES BOARD

## CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2026 AND SUBSEQUENT MODEL ZERO-EMISSION VEHICLES AND PLUG-IN HYBRID ELECTRIC VEHICLES, IN THE PASSENGER CAR, LIGHT-DUTY TRUCK AND MEDIUM-DUTY VEHICLE CLASSES

Adopted: XX

- D. Test Procedures for 2026 and Subsequent Model Zero-Emission Vehicles
  - 1. Electric Dynamometer. Vehicles must be tested using an electric dynamometer meeting the requirements of 40 CFR Part 1066 Subpart C.
  - 2. Vehicle and Battery Break-In Period. Vehicles shall be stabilized as determined by the manufacturer. The manufacturer shall use good engineering judgment in determining the proper stabilized mileage to ensure the results of testing will be representative of electric range for a new vehicle.
  - 3. Operating Mode for Testing. The vehicle shall be tested for all-electric range in default mode or in normal mode if the vehicle does not have a default mode.
  - 4. SAE J1634 Test Procedures. Battery electric vehicles shall be tested utilizing SAE J1634 test procedures except as noted.
    - 4.1. A manufacturer may utilize the single-cycle range and energy consumption test, the multi-cycle range and energy consumption test, or the short multi-cycle range and energy consumption test, or the short multi-cycle range and energy consumption test plus steady state as allowed in J1634 to determine the range and energy measurements required by these test procedures. However, regardless of which option the manufacturer used for certification, the Executive Officer may use any of the four options when performing confirmatory, in-use compliance, or other enforcement testing. It is the manufacturer's obligation to ensure that its vehicles will meet all applicable requirements including minimum durability requirements regardless of the test method used to determine range.
    - 4.2. If the manufacturer uses the short multi-cycle range and energy consumption test method, the manufacturer shall disclose the constant discharge rate used for testing and the methodology used to determine that rate in the application for certification. If the manufacturer uses the multi-cycle range and energy consumption test method or the short multi-cycle range and energy consumption test plus steady state method, the manufacturer shall disclose the distance and/or time the vehicle was operated for the constant speed cycle portion of the test.
    - 4.3. Vehicles are prohibited from using thermal conditioning during the vehicle soak time subsequent to charging or prior to being operated on the dynamometer to determine range. Vehicles may utilize thermal conditioning during charging only if such action is the default operation of the vehicle.
    - 4.4. The standard convenience cord furnished with the vehicle shall be used for charging during vehicle testing within the manufacturer's recommendations for Level 2 charging, or if the convenience cord does not support Level 2 charging, for Level 1 charging.
  - 5. SAE J2572 Test Procedures. Fuel cell electric vehicles shall be tested utilizing SAE J2572 test procedures. For off-vehicle charge capable fuel cell electric vehicles, manufacturers shall determine range and energy consumption in accordance with both SAE J2572 and SAE J1634 per section D.4. and shall

use good engineering judgment to adjust the test procedures to account for measurement of range and energy consumption attributed to both off-board electricity and hydrogen fuel.

- 6. Required Cycle Testing.
  - 6.1. Vehicles are required to be tested to determine cycle-specific range and energy consumption (i.e., both alternating current and direct current energy consumption for battery electric vehicles and hydrogen consumption for fuel cell electric vehicles) for the UDDS (urban) driving schedule and the HFEDS (highway) driving schedule.
  - 6.2. Battery electric vehicles are required to be tested to determine usable battery energy.
  - 6.3. Fuel cell electric vehicles are required to determine usable hydrogen tank capacity.
- 7. Determination of Battery Specific Energy for ZEVs. Determine the specific energy of traction batteries in accordance with the U.S. Advanced Battery Consortium's Electric Vehicle Battery Procedure Manual (January 1996), Procedure No. 2, "Constant Current Discharge Test Series," using the C/3 rate. The weight calculation must reflect a completely functional battery system as defined in the Appendix of the Manual, including pack(s), required support ancillaries (e.g., thermal management), and electronic controller.
- 8. Determination of the Emissions of the Fuel-fired Heater for ZEVs. The exhaust emissions result of the fuel-fired heater shall be determined by operating at a maximum heating capacity with a cold start between 68°F and 86°F for a period of 20 minutes and dividing the grams of emissions by 20. The resulting grams per minute shall be multiplied by 3.0 minutes per mile to obtain a grams per mile value.