

State of California
California Environmental Protection Agency
AIR RESOURCES BOARD

FINAL

**CALIFORNIA TEST PROCEDURES FOR EVALUATING SUBSTITUTE FUELS AND
NEW CLEAN FUELS IN 2015 AND SUBSEQUENT YEARS**

Adopted: March 22, 2012
Amended: August 25, 2022

[Note: This version of the Final Test Procedures also complies with Government Code section 11346.2 subdivision (a)(3), and 11346.8, subdivision (c). The existing, original test procedure language currently incorporated by reference in the California Code of Regulations is shown in "normal type." The final amendments are shown in underline to indicate additions and ~~striketrough~~ to indicate deletions from the existing regulatory text. The final amendments are being presented in two versions. For ease of readability, and to review the final amendments in an Accessible format that can toggle between amendments in strikeout/underline and a "clean" version with amendments incorporated into the regulatory text, please refer to the Word version of these Final Test Procedures.

Subsections for which no changes are made in this rulemaking are indicated with [No change] or "* * * * *."

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CALIFORNIA TEST PROCEDURES FOR EVALUATING SUBSTITUTE FUELS AND NEW CLEAN FUELS IN 2015 AND SUBSEQUENT YEARS

I. Introduction

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C. Definitions

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7. "Light-Duty Test Procedures" means the "California 2001 through 2014 Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2009 through 2016 Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" ~~or,~~ incorporated by reference in section 1961, title 13, CCR, the "California 2015 and Subsequent through 2025 Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Year Greenhouse Gas Exhaust Emission Standards and Test Procedures Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," incorporated by reference in section 1961 and 1961.2, title 13, CCR, respectively. 2, title 13, CCR, or the "California 2026 and Subsequent Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," incorporated by reference in section 1961.4, title 13, CCR, as applicable.
8. "LDV" means light-duty vehicle, "MDV" means medium-duty vehicle. In this protocol, "low-emission vehicle" includes all vehicles certifying to the California LEV II, LEV III, and LEV ~~III~~IV standards, set forth in sections 1961, 1961.2, and ~~1961.2.4~~, title 13, CCR.

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VI. Test Vehicles

A. Vehicle Categories for Testing

1. Vehicle categories eligible for testing candidate fuels are only those categories subject to the LEV II, LEV III, and LEV ~~III~~IV emissions standards set forth in the applicable Light-Duty Test Procedures.
2. Within each eligible category, the only vehicles eligible for testing under this protocol shall be the vehicles that are reasonably capable of operating on the candidate fuel and for which the candidate fuel is not also the reference fuel.

3. The Executive Officer shall maintain estimates of the total emissions from, and total annual miles travelled by, vehicles in the state in each of the LEV II, LEV III, and LEV III, IV categories assuming that all the vehicles receive their reference fuels all the time. These estimates shall be for the same time as, consistent with, and updated on the same schedule as the estimates of miles travelled that the Executive Officer uses to determine the required numbers of new retail outlets for clean fuels under paragraph (d)(2) of section 2305 and paragraph (e)(2) of section 2307, Subchapter 8, Title 13, CCR.

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VIII. *Emission Testing Procedures*

- A. All emission tests shall be done according to the "California 2015 ~~and Subsequent Model Year~~ through 2025 Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Year Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles", "incorporated by reference in Title 13, CCR, section 1961.2 or according to the "California 2026 and Subsequent Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," incorporated by reference in title 13, CCR, section 1961.4, as applicable."

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- F. In each test run, the NMOG emissions shall be speciated for determining the ozone-forming potential of the vehicle's exhaust. Species in the NMOG emissions shall be identified and quantified by the procedures in the "California Non-Methane Organic Gas Test Procedures for 2017 and Subsequent Model Year Vehicles," incorporated by reference in section 1961.2, title 13, CCR. Exhaust emissions of benzene, 1-3 butadiene, formaldehyde, and acetaldehyde shall be identified and quantified using the procedures in the same document.

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X. *Calculations*

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B. *Test Run Results*

1. Emission rates of CO, NOx, and NMOG, expressed as "g/mile", and the emission rate of each toxic pollutant, expressed as "mg/mile", shall be determined in each test by the procedure described in the "California 2015 ~~and Subsequent~~ through 2025 Model Year Criteria Pollutant

Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Year Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles"; or the "California 2026 and Subsequent Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as applicable.

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XI. *Demonstration Regarding Durability*

- A. The applicant shall satisfy the requirements of paragraph (a)(3)(C), section 2317, Subchapter 8, Title 13, CCR ~~or~~, paragraph (a)(2), section 100.3.98, Part II of the "California 2015 ~~and Subsequent~~ through 2025 Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Year Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles"; or paragraph (a)(2), section A.3.8, Part II of the "California 2026 and Subsequent Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, as applicable, (both concerning deterioration of emission control), whichever applies, by the procedures in this section.

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