

Attachment C-1

Final Modifications to the Otto-Cycle Engine Test Procedures

CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2004 AND SUBSEQUENT MODEL HEAVY-DUTY OTTO-CYCLE ENGINES AND VEHICLES

[Note: This version of the Proposed Test Procedures complies with Government Code section 11346.2 subdivision (a)(3). The existing, original regulatory language currently incorporated into the CCR is shown in "normal type." The proposed amendments subject to this rulemaking are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions from the existing regulatory text. The [Bracketed underline text] that was placeholder text for these amendment's approval date in the originally proposed version released on December 6, 2023, has been updated with the date of CARB's approval of these amendments. Subsections for which no changes are proposed in this rulemaking are indicated with "* * * *" or explanatory text in square brackets ("[]"). Vertical lines in the left margins are to flag where changes are proposed for ease of reference and are not part of the proposed amendments. The proposed amendments are being presented in two versions. For ease of readability, and to review the proposed 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 this Proposed Test Procedure.]

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State of California
AIR RESOURCES BOARD

**CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST
PROCEDURES FOR 2004 AND SUBSEQUENT MODEL
HEAVY-DUTY OTTO-CYCLE ENGINES AND VEHICLES**

Adopted: December 27, 2000
Amended: December 12, 2002
Amended: July 26, 2007
Amended: October 17, 2007
Amended: September 27, 2010
Amended: March 22, 2012
Amended: December 6, 2012
Amended: April 18, 2013 (Corrected by Section 100)
Amended: October 21, 2014
Amended: September 2, 2015
Amended: September 1, 2017
Amended: December 19, 2018
Amended: September 9, 2021
Amended: December 28, 2023

NOTE: This document is incorporated by reference in section 1956.8(d), title 13, California Code of Regulations (CCR) and also incorporates by reference various sections of Title 40, Part 86 of the Code of Federal Regulations, with some modifications. It contains the majority of the requirements necessary for certification of heavy-duty Otto-cycle engines for sale in California, in addition to containing the exhaust emissions standards and test procedures for these Otto-cycle engines.¹ The section numbering conventions for this document are set forth in subparagraph 4 on page 4. Reference is also made in this document to other California-specific requirements that are necessary to complete an application for certification. These other documents are designed to be used in conjunction with this document. They include:

1. “California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles,” (incorporated by reference in section 1976, title 13, CCR); (these test procedures are referred below as “evap. TPs”)
2. Warranty requirements (sections 2035, et seq., title 13, CCR);
3. Warranty requirements (sections 2036, et seq., title 13, CCR);
4. OBD II (sections 1968, et seq., title 13, CCR, as applicable);
5. HD OBD (sections 1971, et seq., title 13, CCR, as applicable);
6. “California Test Procedures for Evaluating Substitute Fuels and New Clean Fuels through 2014,” (incorporated by reference in section 2317, title 13, CCR); and
7. “California Test Procedures for Evaluating Substitute Fuels and New Clean Fuels in 2015 and Subsequent Years,” (incorporated by reference in (section 2317, title 13, CCR).

¹ The requirements for Otto-cycle engines used in complete vehicles up to 14,000 pounds GVW are contained in 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,” (incorporated by reference in §1961(d), title 13, CCR and the “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles,” (incorporated by reference in section 1961.2, title 13, CCR.

[No change to Table of Contents]

CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2004 AND SUBSEQUENT MODEL HEAVY-DUTY OTTO-CYCLE ENGINES AND VEHICLES

The following provisions of Subparts A, N, and P, Part 86, of Subparts A through I, Part 1036, of Subparts A through L, Part 1065, and of Subparts A and E, Part 1068, Title 40, Code of Federal Regulations (CFR), as adopted or amended by the U.S. Environmental Protection Agency on the date set forth next to the 40 CFR Part 86 section listed below, and only to the extent they pertain to the testing and compliance of exhaust emissions from heavy-duty Otto-cycle engines, are adopted and incorporated herein by this reference as the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles,” with the following exceptions and additions.

PART 86 – CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES AND ENGINES

Part I. GENERAL PROVISIONS FOR CERTIFICATION AND IN-USE VERIFICATION OF EMISSIONS.

§86.1 Incorporation by reference. October 25, 2016.

Subpart A - General Provisions for Heavy-Duty Engines and Heavy-Duty Vehicles.

1. General Applicability. **[§86.xxx-1]**

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2. Definitions. **[§86.xxx-2]**

A. Federal Provisions.

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B. California Provisions.

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“**California sales volume**” means the number of new California certified engines, vehicles or powertrains delivered for sale in the State of California in a given model year.

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