

## PART 13

# INCORPORATED TEST PROCEDURES

### Large Spark-Ignition Engines

(2010 and Later Model Years; Part 1048)

Note: This appendix shows the entirety of regulatory amendments to the test procedures titled below, which were approved by the Air Resources Board on December 16, 2011, and refined via subsequent conforming modifications authorized under Resolution 11-41. These amendments are formatted in a style to indicate changes from the existing test procedures. All existing language is indicated by plain type. All additions to the existing language are indicated by underlined type. All deletions to the existing language are indicated by ~~strikeout~~. Only those sections containing the modifications from the existing language are included. All other portions remain unchanged and are indicated by the notation [ \* \* \* \* \* ] for reference. If there is any conflict between the provisions of this document and the California Health and Safety Code, Division 26, or Title 13 of the California Code of Regulations (CCR), the Health and Safety Code and Title 13 apply.

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State of California  
AIR RESOURCES BOARD

CALIFORNIA EXHAUST AND EVAPORATIVE EMISSION STANDARDS  
AND TEST PROCEDURES FOR NEW 2010 AND LATER  
OFF-ROAD LARGE SPARK-IGNITION ENGINES  
(2010 and Later Test Procedure 1048)

Adopted: March 2, 2007

Amended: November 21, 2008

Amended: October 25, 2012

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PART 1048 – CONTROL OF EMISSIONS FROM NEW, LARGE NONROAD SPARK-IGNITION ENGINES

\* \* \* \* \*

Subpart B—Emission Standards and Related Requirements

**§1048.101 What exhaust emission standards must my engines meet?**

\* \* \* \* \*

(e) Fuel ~~t~~Types and Test Fuel.

(1) Fuel ~~t~~Types

\* \* \* \* \*

(2) Test Fuel.

(A) Except as outlined in (B), if the engine is a gasoline-fueled large spark-ignition engine, then the test fuel used shall be consistent with the fuel specifications as outlined 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 1, 2006 (last amended August 4, 2005) incorporated by reference in Section 1961(d), Title 13, CCR). The California fuel specifications are contained in the California Code of Regulations, Title 13, Chapter 5, Article 1, Sections 2260-2272. If the engine is tested using the U.S. EPA test fuel, consistent with the fuel specifications as outlined in Title 40 Code of Federal Register, Part 1065, subpart H, the manufacturer shall demonstrate that the emission test results complies with these Test Procedures.

(B) For 2013-2019 model-year gasoline-fueled, large spark-ignition engines, the manufacturer has the option to use the fuel specified in (e)(2)(C).

(C) For 2020 and later gasoline-fueled, large spark-ignition engines: The certification test fuel for exhaust emission testing must be consistent with the fuel specifications as outlined in title 13, section 1961.2 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," adopted March 22, 2012, and incorporated by reference herein. The test fuel specifications should remain consistent from batch to batch. Optionally, manufacturers may use other renewable fuel blends under this paragraph that have been certified by ARB as yielding test results equivalent, or more stringent than, those resulting from the fuel specified by 13 CCR 1961.2, and which are appropriate for the certification of large spark-ignition engines.

~~(B)~~(D) If the engine is not a gasoline-fueled large spark-ignition engine, then the test fuel used shall be consistent with the fuel specifications as outlined 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 1, 2006 (last amended August 4, 2005) incorporated by reference in Section 1961(d), Title 13, CCR). The California fuel specifications are contained in the California Code of Regulations, Title 13, Chapter 5, Article 3, Sections 2290- 2293.5. If the engine is tested using the U.S. EPA test fuel, consistent with the fuel specifications as outlined in Title 40 Code of Federal Register, Part 1065, subpart H, the manufacturer shall demonstrate that the emission test results complies with these Test Procedures.

~~(C)~~(E) During all engine tests, the engine shall employ a lubricating oil consistent with the engine manufacturer's specifications for that particular engine. These specifications shall be recorded and declared in the certification application.