

California Environmental Protection Agency
AIR RESOURCES BOARD

FINAL

**CALIFORNIA NON-METHANE ORGANIC GAS TEST PROCEDURES FOR
2017 AND SUBSEQUENT MODEL YEAR VEHICLES**

Adopted: September 2, 2015
Amended: August 25, 2022

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[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 "* * * * *"

NOTE: Mention of any trade name or commercial product does not constitute endorsement or recommendation of this product by the Air Resources Board.

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Part A

GENERAL APPLICABILITY AND REQUIREMENTS

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3. The analyses specified in the table below shall be performed to determine mass emission rates of NMOG in grams per mile (g/mi) or milligrams per mile (mg/mi) for vehicles operated on the listed fuel:

Fuel	NMHC by FID	Alcohols	Carbonyls
Alcohol	X	X	X
CNG	X		X
Diesel	X		
Gasoline	X		X
LPG	X		X

Note: Alternatives to direct measurement of carbonyls under certain conditions are presented 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," Section D.1.10 and 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," Section D.1.10.

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4. For natural gas-fueled vehicles, the methane concentration in the exhaust sample shall be measured with a methane analyzer. A GC combined with a FID is used for direct measurement of methane concentrations. SAE Recommended Practice J1151 [Ref. 4] is a reference on generally accepted GC principles and analytical techniques for this application. A density of 18.89 g/ft³ shall be used to determine the methane mass emissions.

The methane mass emissions shall be multiplied by the appropriate methane reactivity adjustment factor and then added to the NMOG emissions as specified 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,” incorporated by reference in Section 1961.2, title 13, California Code of Regulations (CCR)-) and 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.

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