

State of California  
AIR RESOURCES BOARD

Resolution 76-37

October 5, 1976

WHEREAS, Section 39601 of the Health and Safety Code authorizes the Air Resources Board to adopt standards, rules, and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Sections 43101 and 43104 of the Health and Safety Code authorize the Board to adopt vehicle emission standards in order to control or eliminate air pollution caused by motor vehicles;

WHEREAS, at the August 25-26, 1976 waiver hearing conducted by the United States Environmental Protection Agency (EPA), the EPA and vehicle manufacturers indicated that the March 31, 1976 California fuel evaporative emission test procedures should be expanded in certain areas.

WHEREAS, the EPA has adopted an evaporative emission standard and test procedures which are similar to the California procedure except for system durability testing;

WHEREAS, adoption of the EPA procedures, with clarification of the issues raised at the waiver hearing, would assist California in obtaining a waiver to enforce heavy-duty vehicle evaporative emission requirements; and

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of the Administrative Procedure Act (Government Code, Title 2, Division 3, Part 1, Chapter 4.5);

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby amends Chapter 3, Subchapter 1, Article 2, Section 1976, of Title 13, California Administrative Code to read as follows:

1976. Standards and Test Procedures for Evaporative Emissions from Gasoline-Powered Vehicles.

- a) Fuel evaporative emissions from 1970 through 1977 model passenger cars and light-duty trucks are set forth in 40 Code of Federal Regulation, Part 85, Subparts A and C. These standards are enforced in California pursuant to Section 43008 of the Health and Safety Code.
- b) Evaporative emissions from new 1978 and subsequent model gasoline-powered motor vehicles except motorcycles shall not exceed 6.0 grams of hydrocarbons per test.

The procedure for determining compliance with this standard is set forth in "California Evaporative Emission Standard and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles Except Motorcycles," adopted by the Air Resources Board on April 16, 1975, and amended on March 31, 1976 and October 5, 1976.

BE IT FURTHER RESOLVED, that the "California Evaporative Emission Standard and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles Except Motorcycles," as last amended on October 5, 1976, is adopted.

CALIFORNIA EVAPORATIVE EMISSION  
STANDARD AND TEST PROCEDURES  
FOR 1978 AND SUBSEQUENT MODEL  
GASOLINE-POWERED MOTOR VEHICLES  
EXCEPT MOTORCYCLES

The provisions of Title 40, Code of Federal Regulation, Part 86, Subparts A and B, as they pertain to evaporative emission standard and test procedures and as they existed on September 22, 1976, are hereby adopted as the California Evaporative Emission Standard and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles Except Motorcycles, with the following exceptions and additions:

1. This standard and these test procedures are applicable to all new 1978 and subsequent model gasoline-powered passenger cars, light-duty trucks, medium-duty vehicles and heavy-duty vehicles with engine displacements of greater than 50 cubic inches and which are subject to registration and first sold and registered in this state.
2. The definitions in Section 1900, Title 13, California Administrative Code, and in the applicable model year California exhaust emission standards and test procedures, are hereby incorporated into this test procedure by reference.
3. Approval of medium-duty vehicles shall be based on the same standard and test procedures as light-duty trucks. In selecting medium-duty test vehicles the Executive Officer shall consider the availability of test data from comparably equipped light-duty vehicles and the size of medium-duty vehicles as it relates to the practicability of evaporative emission testing.
4. Demonstration of system durability and determination of an evaporative emission deterioration factor for each evaporative emission engine family shall be based on tests of representative vehicles and/or systems. For purposes of evaporative emission testing a representative vehicle is one which, with the possible exception of the engine and drivetrain, was built at least three months prior to the commencement of evaporative emission testing, or is one which the manufacturer demonstrates has stabilized non-fuel-related evaporative emissions.
  - a. For 1978 model evaporative emission engine families which require durability testing for exhaust emissions certification, either
    - i. Evaporative emission testing shall be conducted on all durability vehicles at the 5,000, 10,000, 20,000, 30,000, 40,000, and 50,000 mile test points. Testing may be performed at more frequent intervals with advance written approval from the

Executive Officer. The results of all valid evaporative emission tests within each evaporative emission engine family shall be plotted as a function of mileage, and a least-squares fit straight line shall be drawn through the data. The evaporative emission deterioration factor is defined as the interpolated 50,000 mile value on that line minus the extrapolated 4,000 mile value on that line, but in no case shall the factor be less than zero.

OR

- ii. The manufacturer shall propose in his preliminary application for approval a method for durability testing and for determination of a deterioration factor for each evaporative emission engine family. The Executive Officer shall review such method and shall approve it if it meets the following requirements: a) The method shall cycle and test the complete evaporative emission control system for the equivalent of at least 50,000 miles of typical customer use. b) The method must reflect the flow of liquid and gaseous fuel through the evaporative emission control system, and the exposure (both peak and cyclical) to heat, vibration, and ozone expected through 50,000 miles of typical customer use. c) The method must have specifications for acceptable system performance, including maximum allowable leakage after 50,000 miles of typical customer use.

No evaporative emission control system durability testing shall be required for 1978 model year vehicles which do not require exhaust emission control system durability testing unless the Executive Officer determines that durability performance is likely to be significantly inferior to 1977 model year systems.

- b. For 1979 and later model evaporative emission engine families, both (4)(a)(i) and (4)(a)(ii) shall apply to all families selected for exhaust emission durability testing and (4)(a)(ii) shall apply to those evaporative emission engine families which are not subject to testing for exhaust emission durability. The deterioration factors determined under (4)(a)(i), if any, shall be averaged with the deterioration factors determined under (4)(a)(ii) to determine a single evaporative emission deterioration factor for each evaporative emission engine family.
5. Approval of heavy-duty vehicles, excluding medium-duty vehicles, shall be based on an engineering evaluation of the system and data submitted by the applicant. Such evaluation may include successful public usage on light-duty or medium-duty vehicles, adequate capacity of storage containers, routing of lines to prevent siphoning, and other emission-related factors deemed appropriate by the Executive Officer. In the event that the U.S. Environmental Protection Agency does not grant California a waiver to implement Section 3 of this procedure, then Section 5 shall also apply to medium-duty vehicles.