

- Resolution 67-1 Dr. Ing. Porsche KG, filed an application for a certificate of approval for a closed crankcase emission control system for the 911 engine.
- Resolution 67-2 The Glas Automobile Corp. Long Beach, Calif. filed an application for a certificate of approval for a sealed crankcase emission control system.
- Resolution 67-3 Porsche K.G., Stuttgart, Germany has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices.
- Resolution 67-4 Humber Ltd. Coventry, England has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices.
- Resolution 67-5 E.R.A. Ltd., Dunstable, England, a subsidiary of the Zenith Carburette Co., Ltd. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices.
- Resolution 67-6 The Co-Recti-Fire Co. Lake Worth, Florida filed an application for a certificate of approval for a crankcase emission control system.
- Resolution 67-7 Toyota Motors Ltd., of Aichi-Ken, Japan, filed an application for a certificate of approval for a closed crankcase emission control system described as the Toyota Motors Ltd.

- Resolution 67-8 Holley Carburetor Company has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of Public Health
- Resolution 67-9 The State Legislature approved as part of the 1966-67 fiscal year budget act an expenditure of \$204,254 contractual services with the State Dept. of Public Health.
- Resolution 67-10 Scott Research Labos. Inc. has submitted a proposal dated 2/9/67 for building a mobile laboratory etc.
- Resolution 67-11 A portion of the Federal Grant funds are for a 100-car fleet test to evaluate the effect of certain maintenance on emissions.
- Resolution 67-12 Bavarian Motor Works AG has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control c c
- Resolution 67-13 Ferrari Sefac of Modena, Italy filed an application for a certificate of approval for a closed crankcase emission control system described as the Ferrari Closed Crankcase Emission Control System.
- Resolution 67-14 The Honda Motor Company, Ltd., has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of Public Health under Sec. 426.5 of the H&S Code.
- Resolution 67-15 Sec. 24386 (5) of the Health and Safety Code provides that the MVPCB shall exempt classifications of vehicles from the mandatory provisions of the law when it is found that a device is "not available.
- Resolution 67-16 The Automobile Club of So. California has been found to be adequate equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH under Section 426.5 of the H&S Code and MVPCB criteria.
- Resolution 67-17 GMC Truck and Coach Division of General Motors Corporation has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH under Code.
- Resolution 67-18 The Chevrolet Motor Division of GM Corp. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH under Sec. 426.5 of the H&S Code and MVPCB criteria
- Resolution 67-19 The Chevron Research Co., a Standard Oil Co. of California Subsidiary, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH.
- Resolution 67-20 Scott Research Lab., Inc. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH under Section 426.5 of the H&S code & MVPCB criteria

- Resolution 67-21 British Motor Corp. Ltd., has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH under Section 426.5 of the Health and Safety Code and MVPCB criteria.
- Resolution 67-22 Tungsten Contact Mfg. Co., Inc. filed an application on Nov. 7, 1966 for a certificate of approval for a crankcase emission control valve.
- Resolution 67-23 Toyota Motor Co. Ltd., on April 25, 1967 submitted a formal application for approval of a factory installed exhaust emission control system for 1968 and later models.
- Resolution 67-24 A report on the staff evaluation of the Eaton Closed Crankcase Emission Control System as submitted by the Ford Motor Co. of Dearborn, Mich.
- Resolution 67-25 A report on the staff evaluation of the 3 NSU Sealed Crankcase Emission Control Systems. The basis of the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions, (Factory Installation), June 1, 1963 revision.
- Resolution 67-26 Scott Research Labs. Inc. has submitted proposals for this work of inspection of "high emitters".
- Resolution 67-27 Isuzu Motors Ltd., has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH under Sec. 426.5 of the Health and Safety Code and MVPCB criteria.
- Resolution 67-28 SS Automobiles Inc. filed a formal application for approval of an exhaust emission control system on May 2, 1967.
- Resolution 67-29 Whereas Continental Motors Corp. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH.
- Resolution 67-30 Whereas ARCO Chemical Company, a Division of Atlantic Richfield Company, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH.
- Resolution 67-31 Whereas, Dr. Ernst Plesset has completed two terms as a member and one term as Chairman of the MVPCB.
- Resolution 67-32 Whereas, Joseph E. Havenner has completed two terms as a member of the MVPCB etc.
- Resolution 67-33 Whereas, Richard M. Mock has completed two terms as a member of the MVPCB.
- Resolution 67-34 Whereas, the State Legislature will approve as part of the 1967-68 fiscal year budget act, an expenditure of \$201,254 for contractual services with the State Dept. of Public Health.
- Resolution 67-35 Whereas the MVPCB has designated Scott Research Labs. automotive testing facility as an authorized motor vehicle pollution control test lab.
- Resolution 67-36 Whereas engineering evaluation show that the Daikatsu Hi Jet and Trimobile two stroke engines meets established State standards criteria for crankcase emissions.

- Resolution 67-37 Whereas White Motor Co., Cleveland, Ohio filed an application for certification of approval for a crankcase emission control system.
- Resolution 67-38 Whereas Hawaiian Motors Co. of Los Angeles, Calif. filed an application for a certificate of approval for a sealed crankcase emission control system described as the Hawaiian Motors Co., "Cony" sealed crankcase emission control system.
- Resolution 67-39 Whereas Nissan Motor Co., Ltd. Takara-cho, Kanagawa-ku, Yokohama, Japan filed an application for a certificate of approval for a crankcase system.
- Resolution 67-40 Whereas the International Harvester Truck Engine Lab has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH.
- Resolution 67-41 Whereas Fiat S.P.A. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices etc.
- Resolution 67-42 Whereas Peugeot Laboratory has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices etc.
- Resolution 67-43 Whereas Automotive Research Associates has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices etc.
- Resolution 67-44 Whereas Chrysler Corp. on June 23, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-45 Whereas, General Motors, on June 30, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust system.
- Resolution 67-46 Whereas Ford Motor Co., on June 30, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust control system.
- Resolution 67-47 Whereas, International Harvester, on June 30, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-48 Whereas Nissan Motor Co., Ltd. on June 20, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust control system.
- Resolution 67-49 Whereas, Volvo, on June 8, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system etc.
- Resolution 67-50 Whereas Peugeot, Inc. on June 29, 1967 submitted a Letter of Representation and all test data for 1968 California certification of an exhaust system etc.
- Resolution 67-51 Whereas Isuzu Motors Ltd. on June 20, 1967, submitted a Letter of Representation and all test data for 1968 California certification etc.

- Resolution 67-52 Whereas Volkswagen of America, Inc., on July 6, 1967 submitted a Letter of Representation and all test data for 1968 California certification of exhaust control systems etc.
- Resolution 67-53 Whereas, Ricardo & Co., Shoreham-By-Sea, Sussex, England, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Dept. of PH.
- Resolution 67-54 Whereas, Olson Labs Inc. Dearborn, Mich. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards etc.
- Resolution 67-55 Whereas, Dr. Ing. Porsche KG, on July 5, 1967, submitted a Letter of Representation for all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-56 Whereas, American Motors Corporation on June 30, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-57 Whereas, Marvel-Schebler Division of Borg-Warner Corporation has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards etc.
- Resolution 67-58 Whereas, Saab Corp., on June 22, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust system.
- Resolution 67-59 Whereas Robert Bosch GMBH has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices etc.
- Resolution 67-60 Whereas, Daimler-Benz, Inc. on July 7, 1967, submitted a Letter of Representation for all test data for 1968 California certification of an exhaust emission control system etc.
- Resolution 67-61 Whereas, Daimler-Benz Aktiengesellschaft, Stuttgart, Unterturkeheim, Germany, filed an application for a certificate of approval for a crankcase emission control system which is described as follows: etc.
- Resolution 67-62 Whereas, Regie Nationale Des Usines Renault of Billancourt, France, filed an application for a certificate of approval for a crankcase emission control system.
- Resolution 67-63 Whereas, Toyota Motors Ltd., of Aichi-Ken, Japan, filed an application for a certificate of approval for a closed crankcase emission control system described as the Toyota Motors Ltd., closed crankcase emission control system.
- Resolution 67-64 Whereas NSU Motorenwerke, Neckarsulm, Germany, filed an application for a certificate of approval for a sealed crankcase emission control system for the Wankel Engine described as the NSU Sealed Crankcase Emission Control System. *NOT CERTIFIED - SEPT 13, 1967*
- Resolution 67-65 Whereas, the All-O-Matic Manufacturing Corporation filed an application on Aug. 21, 1967 for a certificate of approval for a crankcase emission control valve. *NOT CERTIFIED - SEPT 13, 1967*
- Resolution 67-66 Whereas, Mrs. Michael Levee, Jr. has completed one term as Vice-Chairman of the MVPCB.

- Resolution 67-67 Whereas, William E. Nissen, has been a member and has completed two terms as Chairman of the Board.
- Resolution 67-68 Whereas, British Motor Corp. Ltd. August 16, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-69 Whereas, Jaguar on Sept. 5, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-70 Whereas, Kaiser Jeep Corp. on Aug. 31, 1967, submitted a Letter of Representation and all test data for 1968 California certification of and exhaust emission control system.
- Resolution 67-71 Whereas, Standard Motor Company Ltd., makers of the Triumph car, on Sept. 4, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-72 Whereas, Adam Opel A.G., a Division of General Motors Overseas Operations on Sept. 6, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-73 Whereas, The Rover Company Ltd., on Sept. 11, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-74 Whereas, Ford Motor Co. of Britain on Sept. 11, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-75 Whereas, Rolls-Royce Ltd. on Sept. 11, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system.
- Resolution 67-76 Whereas, the Motor Vehicle Pollution Control Board has for the past four years utilized the services of two Vehicle Test Coordinators.
- Resolution 67-77 Whereas, Citroen Cars Corp. on Sept. 11, 1967, submitted a Letter of Representation and all test data for 1968 California certification of and exhaust emission control system.

RESOLUTION 67-1

WHEREAS, Dr. Ing. Porsche KG, filed an application for a certificate of approval for a closed crankcase emission control system for the 911 engine, described as the Dr. Ing. Porsche K.G, Closed Crankcase Emission Control System having the following specifications;

A tube from the crankcase to a special oil sump.

A tube from the oil sump through a flame arrester to the clean side of the air cleaner.

A sealed oil filler cap.

WHEREAS, the system has been found to meet the crankcase emission control standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS, after considering representations submitted by the manufacturer, the Board finds that the system meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the Dr. Ing. Porsche Closed Crankcase Emission Control System for new Porsche cars, 911 engine, factory installation, on 1966 and subsequent models of motor vehicles in classification (a) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

1/18/67
mj

RESOLUTION 67-2

WHEREAS the Glas Automobile Corporation, Long Beach, California, filed an application for a certificate of approval for a sealed crankcase emission control system described as the Glas Automobile Corporation sealed crankcase emission control system having the following specifications;

1. A tube from the side of the oil filler spout to the atmospheric side of the air filter element.
2. A sealed oil filler cap.

WHEREAS the system has been found to meet the crankcase emission control standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer, the Board finds that the system meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the Glas Automobile Corporation sealed crankcase emission control system for new Glas Automobile Corporation cars, factory installation, on 1967 and subsequent models of motor vehicles in classification (a) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

1/18/67

g

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-3

WHEREAS, Chapter 3, Division 20, Section 24397 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS, Porsche K.G., Stuttgart, Germany, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS, cross-checks will be undertaken periodically to insure accurate and satisfactory test reports and evaluations; and

WHEREAS, Porsche K.G., Stuttgart, Germany, has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW: THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Porsche K.G., vehicle testing laboratory at Stuttgart, Germany as an Authorized Vehicle Pollution Control Testing Laboratory.

1-18-67
gvc

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-4

WHEREAS, Chapter 3, Division 20, Section 24397 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS, Humber, Ltd., Coventry, England, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS, cross-checks will be undertaken periodically to insure accurate and satisfactory test reports and evaluations; and

WHEREAS, Humber, Ltd., Coventry, England, has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW: THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Humber, Ltd., vehicle testing laboratory at Coventry, England as an Authorized Vehicle Pollution Control Testing Laboratory.

1-18-67
gvc

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-5

WHEREAS, Chapter 3, Division 20, Section 24397 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS, E.R.A., Ltd., Dunstable, England, a subsidiary of the Zenith Carburetter Co., Ltd., has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS, cross-checks will be undertaken periodically to insure accurate and satisfactory test reports and evaluations; and

WHEREAS, E.R.A., Ltd., Dunstable, England, a subsidiary of the Zenith Carburetter Co., Ltd., has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW: THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates E.R.A., Ltd., vehicle testing laboratory at Dunstable, England as an Authorized Vehicle Pollution Control Testing Laboratory.

1-18-67

gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-6

WHEREAS the Co-Recti-Fire Company, Lake Worth, Florida, filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

A tube from the rocker arm cover to a spring-loaded crankcase emission control valve to a spacer plate under the carburetor.

This control valve contains a mixing chamber with a stainless steel mesh to separate out oil and dirt.

A second tube from a modified oil filter cap or the rocker arm cover or the road draft tube to the clean side of the air filter.

Sealed oil filler cap when needed.

WHEREAS the system has been found to meet the crankcase emission standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer the Board finds that the device meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003; and

NOW, THEREFORE, BE IT RESOLVED, that this Board issue a certificate of approval for the Co-Recti-Fire Company, Lake Worth, Florida, closed crankcase emission control system for new and used motor vehicles in classifications (b), (c), (d), (e), and (f) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

1/18/67

gvc/mj

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-7

WHEREAS Toyota Motors Ltd., of Aichi-Ken, Japan, filed an application for a certificate of approval for a closed crankcase emission control system described as the Toyota Motors Ltd. "F" Engine closed crankcase emission control system having the following specifications;

A tube from crankcase through a spring-loaded regulation valve into the intake manifold.

A second tube from the rocker arm cover into the clean side of the air cleaner.

A sealed oil filler cap.

WHEREAS the system has been found to meet the crankcase emission control standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer, the Board finds that the system meets the criteria of the Motor Vehicle Pollution Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the Toyota Motors Ltd., "F" Engine closed crankcase emission control system for new Toyota Motors Ltd. cars, factory installation, on 1967 and subsequent models of motor vehicles in classification (C) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

3/8/67

mj

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-8

WHEREAS, Chapter 3, Division 20, Section 24397 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board; and

WHEREAS, Holley Carburetor Company, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS, cross-checks will be undertaken periodically to insure accurate and satisfactory test reports and evaluations; and

WHEREAS, Holley Carburetor Company, Warren, Michigan, has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Holley Carburetor Company, vehicle testing laboratory at Warren, Michigan as an Authorized Vehicle Pollution Control Testing Laboratory.

3/8/67
mj

RESOLUTION 67 -- 9

WHEREAS the State Department of Public Health performs testing services for the Motor Vehicle Pollution Control Board at its facilities at 434 South San Pedro Street, Los Angeles; and

WHEREAS that laboratory is an officially authorized testing facility; and

WHEREAS the State Legislature approved as part of the 1966-67 fiscal year budget act, an expenditure of \$204,254. contractual services with the State Department of Public Health, and

WHEREAS this Board desires to enter into an inter-agency agreement with the Department of Public Health for services of the Motor Vehicle Emission Facility for the current fiscal year,

NOW, THEREFORE BE IT RESOLVED, that this Board

Authorizes the Executive Officer to execute an inter-agency agreement with the State Department of Public Health for contractual services at the Motor Vehicle Emission Facility, for a sum not to exceed \$204,254.

3/18/67

8

RESOLUTION 67-10

WHEREAS, the Motor Vehicle Pollution Control Board has been awarded Federal Grant funds for expansion of emission surveillance of vehicles with exhaust controls in public use in California; and

WHEREAS, Section 24398, Chapter 3, Division 20 of the Health and Safety Code authorizes the Motor Vehicle Pollution Control Board to contract for the performance of services; and

WHEREAS, a portion of the Federal Grant funds are for the purpose of building a self-contained mobile laboratory facility for use at various locations in California; and

WHEREAS, Scott Research Laboratories, Inc. has submitted a proposal dated 2/9/67 for building a mobile laboratory; and

WHEREAS, a technical advisory group has aided the staff in evaluating the submitted proposals, and the Test Procedures Committee recommends the Scott proposal due to their experience in building mobile laboratories;

THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to execute a contract with Scott Research Laboratories, Inc., for \$60,785 for the building of a mobile laboratory facility per Scott's proposal of February 9, 1967.

la
3/8/67

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-11

WHEREAS the Motor Vehicle Pollution Control Board has been awarded Federal Grant funds for expansion of emission surveillance of vehicles with exhaust controls in public use in California; and

WHEREAS Section 24398, Chapter 3, Division 20 of the Health and Safety Code authorizes the Motor Vehicle Pollution Control Board to contract for the performance of tests or other services; and

WHEREAS a portion of the Federal Grant funds are for a 100-car fleet test to evaluate the effect of certain maintenance on emissions; and

WHEREAS the Automobile Club of Southern California submitted a proposal dated Feb. 8, 1967 to accomplish the fleet test; and

WHEREAS a technical advisory group has aided the staff in evaluating the submitted proposals, and the Test Procedures Committee recommends that the Automobile Club of Southern California be asked to accomplish the fleet project due to their unique capability in procuring and controlling the maintenance of the vehicles.

THEREFORE, BE IT RESOLVED, that this Board

Authorizes the Executive Officer to execute a contract with the Automobile Club of Southern California for \$120,000 to accomplish the 100-car project per the Board's project outline dated Jan. 23, 1967.

3/8/67

mj

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-12

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS Bavarian Motor Works AG has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks will be prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS Bavarian Motor Works AG has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the Bavarian Motor Works AG vehicle testing laboratory at Munich, Germany, as an Authorized Vehicle Pollution Control Testing Laboratory.

5/10/67

gvc

State of California
Motor Vehicle Pollution Control Board
417 South Hill Street
Los Angeles, California 90013

THE FERRARI SEFAC REPORT ON CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Ferrari Sefac Closed Crankcase Emission Control System. The basis of the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions, (Factory Installation), June 1, 1963, revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of System

1. A tube from the rocker-arm cover through an orifice to the base of each carburetor.
2. A tube from the rocker-arm cover (at the same point of connection as the other tube) to the air cleaner.
3. A flame arrestor in the rocker-arm cover connection.
4. A sealed oil filler cap.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system when operating efficiently meets the State standards.

Compliance with Board Criteria

The Board has on file a letter from Ferrari Sefac, signed by a legally authorized officer, containing the manufacturer's representation that the device which will be manufactured for original equipment installation only, will comply with the Board's criteria, including odor criterion. The letter also states that the system will not be used as replacement other than for cars upon which it was originally installed.

Summary and Conclusions

1. The crankcase emission control system meets the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced for original equipment installation only will comply with the Board's criteria.
3. The staff recommends that the Ferrari Sefac Closed Crankcase Emission Control System be approved for new Ferrari Automobiles, factory installation, on 1967 and subsequent models of motor vehicles in classification (c).

5/10/67
IE/g

Motor Vehicle Pollution Control Board
417 South Hill St.
Los Angeles, California 90013

RESOLUTION 67-13

WHEREAS Ferrari Sefac of Modena, Italy filed an application for a certificate of approval for a closed crankcase emission control system described as the Ferrai Closed Crankcase Emission Control System having the following specifications:

1. A tube from the rocker-arm cover through an orifice to the base of each carburetor.
2. A tube from the rocker-arm cover (at the same point of connection as the other tube) to the air cleaner.
3. A flame arrestor in the rocker-arm cover connection.
4. A sealed oil filler cap.

WHEREAS the system has been found to meet the crankcase emission control standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer, the Board finds that the system meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the Ferrari Sefac Closed Crankcase Emission Control System for new Ferrari automobiles factory installation, on 1967 and subsequent models of motor vehicles in classification (c) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

5/10/67
mj

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-14

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS the Honda Motor Company, Ltd., has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the test facility and interviewed personnel and observed test procedures; and

WHEREAS adequate cross-checks are prescribed by Board procedures to insure accurate and satisfactory test reports and evaluations; and

WHEREAS the Honda Motor Company, Ltd., has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the Honda vehicle testing laboratory at Tokyo, Japan as an Authorized Vehicle Pollution Control Testing Laboratory.

5/10/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-16

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS the Automobile Club of Southern California has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the test facility and interviewed personnel and observed test procedures; and

WHEREAS adequate cross-checks are prescribed by Board procedures to insure accurate and satisfactory test reports and evaluations; and

WHEREAS the Automobile Club of Southern California has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the Automobile Club of Southern California vehicle testing laboratory at Los Angeles, California as an Authorized Vehicle Pollution Control Testing Laboratory.

5/10/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-17

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS the GMC Truck and Coach Division of General Motors Corporation has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the test facility and interviewed personnel and observed test procedures; and

WHEREAS adequate cross-checks will be prescribed by the Board to insure accurate and satisfactory test reports and evaluations; and

WHEREAS the GMC Truck and Coach Division of General Motors Corporation has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the GMC Truck and Coach Division of General Motors Corporation vehicle testing laboratory at Pontiac, Michigan as an Authorized Vehicle Pollution Control Testing Laboratory.

5/10/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-18

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS the Chevrolet Motor Division of General Motor Corporation has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the test facility and interviewed personnel and observed test procedures; and

WHEREAS adequate cross-checks are prescribed by Board procedures to insure accurate and satisfactory test reports and evaluations; and

WHEREAS the Chevrolet Motor Division of General Motor Corporation has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the Chevrolet vehicle testing laboratory at Warren, Michigan as an Authorized Vehicle Pollution Control Testing Laboratory.

5/10/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-19

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS the Chevron Research Company, a Standard Oil Company of California Subsidiary, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the test facility and interviewed personnel and observed test procedures; and

WHEREAS adequate cross-checks are prescribed by Board procedures to insure accurate and satisfactory test reports and evaluations; and

WHEREAS the Chevron Research Company has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the Chevron Research Company vehicle testing laboratory at Richmond, California as an Authorized Vehicle Pollution Control Testing Laboratory.

5/10/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-20

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS Scott Research Laboratories, Inc. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the test facility and interviewed personnel and observed test procedures; and

WHEREAS adequate cross-checks are prescribed by Board procedures to insure accurate and satisfactory test reports and evaluations; and

WHEREAS Scott Research Laboratories, Inc. has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the Scott Research Laboratories, Inc. testing Laboratory at West Trenton, New Jersey, as an Authorized Vehicle Pollution Control Testing Laboratory.

1a

5/10/67

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-21

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS the British Motor Corporation Limited, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board Staff personnel have reviewed the test facility and interviewed personnel and observed test procedures; and

WHEREAS adequate cross-checks are prescribed by Board procedures to insure accurate and satisfactory test reports and evaluations; and

WHEREAS the British Motor Corporation Limited has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the British Motor Corporation Limited vehicle testing laboratory at Longbridge, Birmingham, England as an Authorized Vehicle Pollution Control Testing Laboratory.

5/10/67
gvc

State of California

Motor Vehicle Pollution Control Board

Resolution 67-22

WHEREAS the Tungsten Contact Manufacturing Co., Inc. filed an application on November 7, 1966 for a certificate of approval for a crankcase emission control valve which is described as follows:

A spring-loaded, tapered-plunger flow control valve identical in all respects to the "AC" valve approved by the Board as part of the "AC" closed crankcase emission control system under Resolution 62-30 on December 18, 1962; and

WHEREAS the company has represented in writing and has submitted proof that their valve is identical in material, workmanship and in all other respects to the AC valve; and

WHEREAS the company has stated its intention to market this valve only as a replacement for the AC-type valves; and

WHEREAS the Board under Title 13, Chapter 3, Sub-Chapter 1, Article 4, is empowered to approve a device if it is identical in all respects with a device which has been certified by the Motor Vehicle Pollution Control Board pursuant to the Health and Safety Code, Section 24386; and

WHEREAS this valve meets said requirements; and

NOW, THEREFORE BE IT RESOLVED, That this Board issue a certificate of approval for the Tungsten Contact Mfg.Co., Inc. tapered-plunger valve to be used as a replacement for AC type valves in certified crankcase emission control systems on new and used motor vehicles in classifications (b), (c), (d), (e) and (f) designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004; and Identical Devices Article 4, of the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1, Sections 2300 through 2304.

5/10/67
mj

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-23

WHEREAS, the Toyota Motor Co., Ltd., on April 25, 1967 submitted a formal application for approval of a factory installed exhaust emission control system for 1968 and later models; and

WHEREAS, the system is described as the Toyota Manifold Air Injection System with major components comprised as follows:

1. engine-driven air pump;
2. air-injection into each exhaust port;
3. carburetor and distributor modifications;
4. recommended maintenance.

WHEREAS, the system complies with the exhaust emission standards of the State Department of Public Health for hydrocarbons and carbon monoxide for the life of the vehicle as determined according to established procedures of the Board; and

WHEREAS, based upon demonstration of compliance with established procedures the Board finds that the system meets the criteria of the Board, as published in Title 13 of the California Administrative Code, Chapter 3, Sub-chapter 1, Article 2, Section 2103;

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer, and these adjustments have substantial effects on emissions; and

WHEREAS, the applicant has agreed to accomplish the following, or equivalent, as additional conditions of certification:

1. 100 percent inspection of spark timing at the end of the vehicle assembly line.
2. Offering and promotion of a free spark timing and idle adjustment by the dealer at 1000 miles and adequate training of dealer service personnel to perform these adjustments.
3. Notification to the owner that he is entitled to a free spark timing and idle adjustment by the dealer at approximately 1000 miles.

NOW THEREFORE, BE IT RESOLVED, That this Board, under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for factory installation of the Toyota Manifold Air Injection System for 1968 model vehicles only with engines in classifications (a-2), (a-3), (b), and (c), pursuant to Title 13, California Administrative Code, Chapter 3, Sub-chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, that the continuing effectiveness of this certification is dependent upon satisfactory surveillance data and all other pertinent information relating to the performance of the system when in public use.

5/10/67

jh

State of California

Motor Vehicle Pollution Control Board
417 South Hill Street
Los Angeles, California 90013

REPORT ON THE EATON CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Eaton Closed Crankcase Emission Control System as submitted by the Ford Motor Company of Dearborn, Michigan. The basis of the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions, (Factory Installation), June 1, 1963, revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of System

1. A tube from the rocker-arm cover through a spring-loaded self cleaning control valve to the base of each carburetor.
2. A tube from a modified oil filler cap to the air cleaner.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system when operating efficiently meets the State standards.

Compliance with Board Criteria

The Board has on file a letter from the Ford Motor Company signed by a legally authorized officer, containing the manufacturer's representation that the device which will be manufactured for original equipment installation only, will comply with the Board's criteria, including odor criterion.

Summary and Conclusions

1. The crankcase emission control system meets the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced for original equipment installation only will comply with the Board's criteria.
3. The staff recommends that the Eaton Closed Crankcase Emission Control System be approved for new automobiles, factory installation, on 1967 and subsequent models of motor vehicles in classification (d), (e) and (f) only

5/10/67
mj

STATE OF CALIFORNIA

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-24

WHEREAS Ford Motor Company of Dearborn, Michigan, filed an application for a certificate of approval for a closed crankcase emissions control system on May 1, 1967; which is described as the Eaton Closed Crankcase Emissions Control System, having the following specifications:

1. A tube from the rocker arm cover through a spring-loaded self cleaning flow control valve into the intake manifold.
2. A tube from a modified oil filler cap to the air cleaner.

WHEREAS the applicant has demonstrated to the satisfaction of the staff that the system when operating efficiently meets the State standards; and

WHEREAS the Board has on file a letter from Ford signed by a legal officer, containing the manufacturer's representation that the system, which will be manufactured for original equipment installation only, will comply with the Board's criteria and that this system will go 12,000 miles without service; and

WHEREAS the device has been found to meet the crankcase emissions standards established by the State Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS based upon representations submitted by the manufacturer, the Board finds that the device will meet the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003;

THEREFORE, BE IT RESOLVED,

That this Board issue a certificate of approval to the Ford Motor Company for a closed crankcase emissions control system for factory installation on new 1967 and subsequent model cars in motor vehicle classifications (d), (e) and (f) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

5/10/67
mj

State of California

MOTOR VEHICLE POLLUTION CONTROL

REPORT ON THE 3 NSU SEALED CRANKCASE EMISSION CONTROL SYSTEMS

Introduction

This is a report on the staff evaluation of the 3 NSU Sealed Crankcase Emission Control Systems. The basis of the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions, (Factory Installation), June 1, 1963, revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of Systems

- System 1. A tube from the rocker-arm cover through an oil separator to the air cleaner (2 cylinder engines).
- System 2. A tube from the rocker-arm cover to the air cleaner (4 cylinder engines).
- System 3. A tube from the rotor body chamber through a spring-loaded check valve to the air cleaner (Wankel Engine).

A sealed oil filler cap is used in each system.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the systems when operating efficiently meet the State standards.

Compliance with Board Criteria

The Board has on file a letter from NSU, signed by a legally authorized officer, containing the manufacturer's representation that the devices which will be manufactured for original equipment installation only, will comply with the Board's criteria, including odor criterion. The letter also states that the systems will not be used as replacement other than for cars upon which they were originally installed.

Summary and Conclusions

1. The crankcase emission control systems meet the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the devices as produced, for original equipment installation only, will comply with the Board's criteria.
3. The Staff recommends that the NSU Sealed Crankcase Emission Control Systems be approved for new NSU Automobiles, factory installation, on 1967 and subsequent models of motor vehicles in classifications (a) and (g) only.

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-25

WHEREAS NSU Motorenwerke, Neckarsulm, Germany, filed an application for a certificate of approval for 3 sealed crankcase emission control systems described as the NSU Sealed Crankcase Emission Control Systems, having the following specifications:

- System 1. A tube from the rocker-arm cover through an oil separator to the air cleaner (2 cylinder engines).
- System 2. A tube from the rocker-arm cover to the air cleaner (4 cylinder engines).
- System 3. A tube from the rotor body chamber through a spring loaded check-valve to the air cleaner (Wankel Engine)

A sealed oil filler cap is used in each system.

WHEREAS the systems have been found to meet the crankcase emission control standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer, the Board finds that the systems meet the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the three NSU Sealed Crankcase Emission Control Systems for new NSU automobiles factory installation, on 1967 and subsequent models of motor vehicles in classifications (a) and (g) only, as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

5/10/67
gvc

State of California
MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-26

WHEREAS, approximately 20% of vehicles with exhaust control systems have emissions over 350 ppm and may be described as "high emitters"; and

WHEREAS, these high emitters contribute a disproportionately large share to total air pollution; and

WHEREAS, it is necessary to inspect these high emitters in order to determine the cause, and it is desirable to evaluate methods of reducing their emissions; and

WHEREAS, Scott Research Laboratories, Inc. has submitted proposals for this work, and have performed adequately on contracts with this Board in the past;

THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to amend the existing contract with Scott Research Laboratories, Inc., for up to \$10,000 additional funds to inspect high-emitting cars, and to evaluate methods of reducing their emissions.

5/10/67

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-27

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "the Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS Isuzu Motors Ltd. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks will be prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS Isuzu Motors Ltd. has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the Isuzu Motors Ltd. vehicle testing laboratory at Tokyo, Japan, as an Authorized Vehicle Pollution Control Testing Laboratory.

MLB/a
5/10/67

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-28

WHEREAS, SS Automobiles Incorporated filed a formal application for approval of an exhaust emission control system on May 2, 1967; and

WHEREAS, the system is composed of these major components as follows:

1. engine-driven air pump
2. air injection into each exhaust port
3. carburetor and distributor modifications
4. recommended maintenance, and

WHEREAS, the system complies with the exhaust emission standards of the State Department of Public Health of 275 PPM of hydrocarbons and 1.5% of carbon monoxide for the life of the vehicle as determined according to established procedures of the Board; and

WHEREAS, based upon demonstration of compliance with established procedures, the Board finds that the system meets the criteria of the Board, as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103;

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer, and these adjustments have substantial effects on emissions; and

WHEREAS, the applicant has agreed to accomplish the following, or equivalent, as additional conditions of certification;

1. 100 percent inspection of spark timing at the end of the vehicle assembly line.
2. Offering and promotion of a free spark timing and idle adjustment by the dealer at 1000 miles and adequate training of dealer service personnel to perform these adjustments.
3. Notification to the owner that he is entitled to a free spark timing and idle adjustment by the dealer at approximately 1000 miles

NOW, THEREFORE, BE IT RESOLVED, that this Board, under the powers and authority granted in Chapter 3, (commencing at Section 24378) Division 20 of the Health and Safety Code,

Issue a certificate of approval for factory installation of the SS Automobiles Incorporated Exhaust Control System for 1967 and 1968 model vehicles only with engines in classification (e), pursuant to Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, that the continuing effectiveness of this certification is dependent upon satisfactory surveillance data and all other pertinent information relating to the performance of the system when in public use.

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-29

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "the Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS Continental Motors Corporation has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks will be prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS Continental Motors Corporation has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, that the Motor Vehicle Pollution Control Board hereby designates the Continental Motors Corporation vehicle testing laboratory at Muskegon, Michigan, as an Authorized Vehicle Pollution Control Testing Laboratory.

MLB/a
5/10/67

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-30

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "the Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS ARCO Chemical Company, a Division of Atlantic Richfield Company, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks will be prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS ARCO Chemical Company, a Division of Atlantic Richfield Company, has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates ARCO Chemical Company, a Division of Atlantic Richfield Company, laboratory at Anaheim, California, as an Authorized Vehicle Pollution Control Testing Laboratory.

MLB/a
5/10/67

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-31

WHEREAS, Dr. Ernst Plesset has completed two terms as a member and one term as Chairman of the Motor Vehicle Pollution Control Board; and

WHEREAS, he has made an extraordinary contribution to his fellow Californians and to his State government in the cause of cleaner air; and

WHEREAS, he has freely given of his time and effort in formulating and fostering the Board's program; and

WHEREAS, he has been most conscientious in attending regular Board meetings and serving on various committees of the Board; and

WHEREAS, he has now concluded his service on the Board, but not his devotion to the cause of cleaner air;

NOW, THEREFORE BE IT RESOLVED, that the present members of the Motor Vehicle Pollution Control Board do hereby gratefully acknowledge his service and publicly commend him for a job well done.

Date

Chairman

Executive Officer

7/12/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-32

WHEREAS, Joseph E. Havenner has completed two terms as a member of the Motor Vehicle Pollution Control Board; and

WHEREAS, he has made an extraordinary contribution to his fellow Californians and to his State government in the cause of cleaner air; and

WHEREAS, he has freely given of his time and effort in formulating and fostering the Board's program; and

WHEREAS, he has been most conscientious in attending regular Board meetings and serving on various committees of the Board; and

WHEREAS, he has now concluded his service on the Board, but not his devotion to the cause of cleaner air;

NOW, THEREFORE BE IT RESOLVED, that the present members of the Motor Vehicle Pollution Control Board do hereby gratefully acknowledge his service and publicly commend him for a job well done.

Date

Chairman

Executive Officer

7/12/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-33

WHEREAS, Richard M. Mock has completed two terms as a member of the Motor Vehicle Pollution Control Board; and

WHEREAS, he has made an extraordinary contribution to his fellow Californians and to his State government in the cause of cleaner air; and

WHEREAS, he has freely given of his time and effort in formulating and fostering the Board's program; and

WHEREAS, he has been most conscientious in attending regular Board meetings and serving on various committees of the Board; and

WHEREAS, he has now concluded his service on the Board, but not his devotion to the cause of cleaner air;

NOW, THEREFORE BE IT RESOLVED, that the present members of the Motor Vehicle Pollution Control Board do hereby gratefully acknowledge his service and publicly commend him for a job well done.

Date

Chairman

Executive Officer

7/12/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-34

WHEREAS the State Department of Public Health performs testing services for the Motor Vehicle Pollution Control Board at its facilities at 434 South San Pedro Street, Los Angeles; and

WHEREAS that laboratory is an officially authorized testing facility; and

WHEREAS the State Legislature will approve as part of the 1967-68 fiscal year budget act, an expenditure of \$201,254 for contractual services with the State Department of Public Health; and

WHEREAS this Board desires to enter into an inter-agency agreement with the Department of Public Health for services of the Motor Vehicle Emission Facility for the current fiscal year; and

NOW, THEREFORE BE IT RESOLVED, that this Board

Authorizes the Executive Officer to execute an inter-agency agreement with the State Department of Public Health for contractual services at the Motor Vehicle Emission Facility, for a sum not to exceed \$201,254, or such amount as may be designated by the Legislature for such services.

7/12/67

gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-35

WHEREAS the Motor Vehicle Pollution Control Board has designated Scott Research Laboratories, Inc., automotive testing facility as an authorized motor vehicle pollution control testing laboratory; and

WHEREAS Section 24398, Chapter 3, Division 20 of the Health and Safety Code authorizes the Motor Vehicle Pollution Control Board to contract for the use of, or the performance of tests or other services; and

WHEREAS the California Vehicle Test Laboratory operated by the State Department of Public Health is not equipped and is unable to perform certain necessary tests as required by the criteria established by the Motor Vehicle Pollution Control Board; and

WHEREAS the Board has contracted with Scott for prior contracts and found their performance to be satisfactory; and

WHEREAS it is necessary for the State to evaluate automobile emission control devices as to their performance in relation to established criteria and State standards as published by the Department of Public Health; and

WHEREAS Scott Research Laboratories, Inc. has agreed to perform the desired work as specified in the contract and the Motor Vehicle Pollution Control Board finds the contract to be satisfactory;

NOW, THEREFORE BE IT RESOLVED, that this Board authorizes the Executive Officer to execute a contract with Scott Research Laboratories, Inc., for a maximum amount of \$5,000 during the 1967-68 fiscal year, and directs the Executive Officer to sign the contract on behalf of the State Motor Vehicle Pollution Control Board; and

BE IT FURTHER RESOLVED, that this action is contingent upon the approval of the budget for the MVPCB, now being considered by the State Legislature in Sacramento, since availability of funds is obviously essential to effectuating this resolution.

7/12/67
gvc

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-36

WHEREAS the Motor Vehicle Pollution Control Board, under Section 24390 (J) of the Health and Safety Code is given the authority "to exempt . . . motor vehicles whose emissions are found by appropriate tests to meet State standards without additional equipment . . . " and

WHEREAS engineering evaluation show that the Daikatsu HI Jet and Trimobile two stroke engines meets established State standards criteria for crankcase emissions.

THEREFORE, BE IT RESOLVED, That this Board

Find that Daikatsu HI Jet and Trimobile, two cycle engines meet State standards and criteria in respect to compliance with crankcase emission control requirements without additional equipment and are exempted from the crankcase control provisions of Article 3, Chapter 3, Division 20 of the Health and Safety Code.

7/12/67

State of California
Motor Vehicle Pollution Control Board

REPORT OF THE WHITE MOTOR COMPANY V8-470 "GIESEL" ENGINE
CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the White Motor Company "Giesel" Engine crankcase emission control system. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installation), December 1962 revision. The report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The White Motor Company V8-470 "Giesel" Engine crankcase emission control system consists of a metal tube connecting the oil fill tower to the dirty side of the air cleaner. The system is completely sealed, there being no provision made for the introduction of ventilation air. There is no flame arrestor as the crankcase gases are directed to the dirty side of the air cleaner. The oil filler cap is sealed.

The recommended service on the system is that the air cleaner be serviced at the same intervals as the engine without the system installed.

The V8-470 "Giesel" Engine will be installed on White, Lansing-Reo, Diamond T, Autocar and other vehicles.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system when operating efficiently meets the State standards and odor criteria.

Compliance with Board Criteria

The Board has on file a letter from the White Motor Company, signed by a legally authorized officer of the company, containing the manufacturer's representation that the device which will be manufactured for original equipment installation only, will comply with the Board's criteria. The letter also states that the system will not be used for automobiles other than those for which it was originally certified.

Summary and Conclusions

1. The crankcase emission control system meets the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced for original equipment installation only, will comply with the Board's criteria.
3. The staff recommends that the White Motor Company V8-470 "Giesel" Engine sealed crankcase emission control system be approved for new cars, factory installation only, on 1967 and subsequent models of White, Lansing Reo, Diamond T, Autocar and other motor vehicles in classification (f).

State of California

Motor Vehicle Pollution Control Board

Resolution 67-37

WHEREAS White Motor Company, Cleveland, Ohio, filed an application for certification of approval for a crankcase emission control system which is described as follows:

The White Motor Company "Giesel" Engine sealed crankcase emission control system consists of a metal tube connecting the oil fill tower to the dirty side of the air cleaner. The system is completely sealed; there being no provision made for the introduction of ventilation air. There is no flame arrestor as the crankcase gases are directed to the dirty side of the air cleaner. The oil filler cap is sealed.

WHEREAS the system has been found to meet the crankcase emission standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Subchapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer, the Board finds that the device meets the criteria of the Motor Vehicle Pollution Control Board, including the odor criterion, as published in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the White Motor Company sealed crankcase emission control system for installation on 1967 and subsequent model White V8-470 "Giesel" Engine to be used in White, Lansing-Reo, Diamond T, Autocar and other motor vehicles in classification (f) as described in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2004.

7/12/67

State of California
Motor Vehicle Pollution Control Board

Resolution 67-38

WHEREAS Hawaiian Motors Company of Los Angeles, California, filed an application for a certificate of approval for a sealed crankcase emission control system described as the Hawaiian Motors Company "Cony" sealed crankcase emission control system having the following specifications:

A tube from the crankcase through a screen type flame arrester to the clean side of the air cleaner.

A sealed oil filler cap.

WHEREAS the system has been found to meet the crankcase emission control standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer, the Board finds that the system meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the Hawaiian Motors Company "Cony" sealed crankcase emission control system for new "Cony" vehicles, factory installation, on 1967 and subsequent models of motor vehicles in classification (a) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

6/67/en

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

REPORT OF THE NISSAN MOTOR COMPANY, LTD. CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Nissan Motor Company, Limited Closed crankcase emission control system. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installation). The report does not include evidence concerning compliance with the Board's criteria.

Description of Device

1. Tube from crankcase through an oil separator and a spring loaded "jiggle pin" type flow control valve to the intake manifold.
2. Tube from the rocker arm cover through a flame arrester to the clean side of the air cleaner.
3. Sealed oil filler cap and dip stick.

This device will be installed on the DATSUN Sedan and Station Wagon.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system when operating efficiently meets the State standards.

Compliance with Board Criteria

The Board has on file a letter from Nissan signed by a legally authorized officer containing the manufacturer's representation that the device which will be manufactured for original equipment installation only will comply with the Board's criteria. The letter also states that the system will not be used for automobiles other than those for which it was originally certified.

Summary and Conclusions

1. The crankcase emission control system meets the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced for original equipment installation will comply with the Board's criteria.
3. The staff recommends that the Nissan Motor Company, Limited, closed crankcase emission control system be approved for new cars, factory installation only, on 1968 and subsequent models of motor vehicles in classification (a).

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-39

WHEREAS, Nissan Motor Company, Limited, Takara-cho, Kanagawa-ku, Yokohama, Japan, filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

1. Tube from crankcase through an oil separator and a spring loaded "jiggle pin" type flow control valve to the intake manifold.
2. Tube from the rocker arm cover through a flame arrester to the clean side of the air cleaner.
3. Sealed oil filler cap and dip stick.

This device will be installed on the DATSUN Sedan and Station Wagon.

WHEREAS, the system has been found to meet the crankcase emission standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS, after considering representations submitted by the manufacturer, the Board finds that the device meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the Nissan Closed Crankcase Emission Control System for installation on 1968 and subsequent model Datsun cars in vehicle classification (a) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-40

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS the International Harvester Truck Engine Laboratory has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks are prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS the International Harvester Truck Engine Laboratory has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the International Harvester Truck Engine Laboratory at Fort Wayne, Indiana, as an Authorized Vehicle Pollution Control Testing Laboratory.

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State of California
MOTOR VEHICLE POLLUTION CONTROL BOARD
RESOLUTION 67-41

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS Fiat S.P.A. has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks are prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS Fiat S.P.A. has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Fiat S.P.A. at Torino, Italy, as an Authorized Vehicle Pollution Control Testing Laboratory.

7/12/67
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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-42

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS the Peugeot Laboratory has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks are prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS the Peugeot Laboratory has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates the Peugeot Laboratory at LaGarenne, Paris, France as an Authorized Vehicle Pollution Control Testing Laboratory.

7/12/67
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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-43

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS Automotive Research Associates has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks are prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS Automotive Research Associates has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Automotive Research Associates at San Antonio, Texas, as an Authorized Vehicle Pollution Control Testing Laboratory.

7/12/67
la

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-44

WHEREAS, Chrysler Corporation, on June 23, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Chrysler Cleaner Air Package with major elements:

- (1) deceleration valve, spark advance type, plus dashpot on manual transmission cars,
- (2) leaner carburetion, plus idle rich limiter,
- (3) retarded spark at idle,
- (4) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968-model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1000 miles, or equivalent to assure proper initial adjustment of the vehicle prior to sale; and

WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments; and

WHEREAS, the staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements.

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Chrysler Cleaner Air Package to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (b), (c), (d), (e), and (f), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-45

WHEREAS, General Motors, on June 30, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the applicant's two different exhaust control systems are described as follows:

- A. Engine Modification type system with major elements: (for all 6 cylinder engines and 8 cylinder engines with automatic transmissions)
 - (1) leaner carburetion plus idle rich limiter,
 - (2) retarded spark at idle,
 - (3) deceleration control, dashpot type,
 - (4) recommended maintenance.

- B. Air-injection system with major elements: (for 8 cylinder engines with manual transmissions)
 - (1) rotary-vane air pump,
 - (2) air injection into each exhaust port,
 - (3) carburetor and distributor modifications,
 - (4) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles, or equivalent to assure proper initial adjustment of the vehicle prior to sale; and

WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments; and

WHEREAS, the Board staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements:

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval to General Motors to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (b), (c), (d), (e), and (f), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California standards for the life of the vehicle in public use.

WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments; and

WHEREAS, the Board staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements:

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval to General Motors to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (b), (c), (d), (e), and (f), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California standards for the life of the vehicle in public use.

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-46

WHEREAS, Ford Motor Company, on June 30, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the applicant's two different exhaust control systems are described as follows:

- A. Engine-modification type system (for all engines with automatic transmissions except high performance engines) with major elements:
 - (1) leaner carburetion plus idle rich limiter
 - (2) retarded spark at idle
 - (3) deceleration control, dashpot type or spark-advance type
 - (4) recommended maintenance
- B. Air-injection system (for all engines with manual transmissions or high-performance engines) with major elements:
 - (1) rotary-vane air pump
 - (2) air-injection into each exhaust port
 - (3) carburetor and distributor modifications
 - (4) recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968-model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent to assure proper initial adjustment of the vehicle prior to sale; and

WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments; and

WHEREAS, The Board staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements:

NOW, THEREFORE, BE IT RESOLVED, That this Board, under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code, issue a certificate of approval for the Ford Motor Company exhaust control systems to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (b), (c), (d), (e), and (f), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105;

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments; and

WHEREAS, The Board staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements:

NOW, THEREFORE, BE IT RESOLVED, That this Board, under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code, issue a certificate of approval for the Ford Motor Company exhaust control systems to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (b), (c), (d), (e), and (f), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105;

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

7/12/67
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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

SUMMARY

1968 Exhaust Control Certification Documents

International Harvester Co.

Exhaust Control Systems

July 12, 1967

A. Introduction

On June 30, 1967, International Harvester Company, submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control systems. The Letter of Representation was signed by S.G. Johnson, Manager of Engineering, and the documents include complete 50,000-mile emission durability test data.

B. The Exhaust Control Systems

International Harvester Company's two exhaust control systems comprise:

A. Air-injection system with major elements:

- (1) rotary-vane air pump,
- (2) air injection into each exhaust port,
- (3) carburetor and distributor modifications,
- (4) recommended maintenance.

B. Engine modification-type system with major elements:

- (1) leaner carburetion plus idle rich limiter,
- (2) retarded spark at idle,
- (3) recommended maintenance.

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the International proving grounds laboratories, which previously had been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles

emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbons emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized.

The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Air-Injection System

Four vehicles were run 50,000 miles and seven vehicles were run 4,000 miles to establish the emission data for certification of all the vehicles with air-injection under 6,000 lb. GVW marketed by the applicant in California.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 0.93 for hydrocarbons and 1.00 for carbon monoxide and are shown in Table I.

Table I

Certification Emission Data
Air Injection System
Projected to 50,000 Miles

<u>Engine Displacement Cu.In.</u>	<u>Hydrocarbons PPM</u>	<u>Carbon Monoxide %</u>
152	172	1.28
220	226	1.09
241	171	1.26
265	198	1.23
266	224	1.17

2. Engine-Modification System

Two vehicles were run 50,000 miles and four vehicles were run 4,000 miles to establish the emission data for certification of all the vehicles with engine-modification systems under 6,000 lb. GVW marketed by the applicant in California.

Average emissions for each engine size were adjusted to vehicle life expectancy by the deterioration factors of 0.91 for hydrocarbons and 1.14 for carbon monoxide and are shown in Table II.

emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbons emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized.

The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Air-Injection System

Four vehicles were run 50,000 miles and seven vehicles were run 4,000 miles to establish the emission data for certification of all the vehicles with air-injection under 6,000 lb. GVW marketed by the applicant in California.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 0.93 for hydrocarbons and 1.00 for carbon monoxide and are shown in Table I.

Table I

Certification Emission Data
Air Injection System
Projected to 50,000 Miles

Engine Displacement Cu.In.	Hydrocarbons PPM	Carbon Monoxide %
152	172	1.28
220	226	1.09
241	171	1.26
265	198	1.23
266	224	1.17

2. Engine-Modification System

Two vehicles were run 50,000 miles and four vehicles were run 4,000 miles to establish the emission data for certification of all the vehicles with engine-modification systems under 6,000 lb. GVW marketed by the applicant in California.

Average emissions for each engine size were adjusted to vehicle life expectancy by the deterioration factors of 0.91 for hydrocarbons and 1.14 for carbon monoxide and are shown in Table II.

Table II
 Certification Emission Data
 Engine-Modification System
 Projected to 50,000 Miles

<u>Engine Displacement cu.in.</u>	<u>Hydrocarbons PPM</u>	<u>Carbon Monoxide %</u>
196	178	1.39
304	196	1.17
345	226	1.24

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons indicating that more attention is needed on delivering the car to the customer in a properly-adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Effectiveness of Exhaust Controls in Public Use", dated May 10, 1967, which gives details of the above. At present, there are approximately 1.6 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following statements in compliance with California requirements that:

1. "Ignition timing is set during run-in test at the engine factory."
2. "Ignition timing and carburetor adjustments are checked and adjusted if necessary, in the pre-delivery inspection in the dealers' shop."
3. "Ignition timing and carburetor adjustments are re-checked and adjusted if necessary, at the 1000-mile or 45-day inspection in the dealers' shop."
4. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
5. "Exhaust emission systems will be incorporated as standard equipment in International models up to 6000 lbs. GVW sold as 1968 models, in compliance with Federal laws. Basic chassis suggested retail prices of affected models will be adjusted to reflect this change in standard equipment. An element, not exceeding \$50.00 (exclusive of Federal excise tax), will be included in revised suggested retail prices to cover this change in standard equipment."
6. The applicant has made appropriate tests and statements for compliance with the following California criteria:
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability
7. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle.
8. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a permanent tag prominently fixed in the engine compartment.
9. The applicant states that all new-car salesmen, as part of their 1968-model information, shall be informed of the purpose of the emission control systems and their functioning principles.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the International Harvester Company exhaust control systems. The staff, therefore, recommends adoption of Resolution 67-47.

1. "Ignition timing is set during run-in test at the engine factory."
2. "Ignition timing and carburetor adjustments are checked and adjusted if necessary, in the pre-delivery inspection in the dealers' shop."
3. "Ignition timing and carburetor adjustments are re-checked and adjusted if necessary, at the 1000-mile or 45-day inspection in the dealers' shop."
4. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
5. "Exhaust emission systems will be incorporated as standard equipment in International models up to 6000 lbs. GVW sold as 1968 models, in compliance with Federal laws. Basic chassis suggested retail prices of affected models will be adjusted to reflect this change in standard equipment. An element, not exceeding \$50.00 (exclusive of Federal excise tax), will be included in revised suggested retail prices to cover this change in standard equipment."
6. The applicant has made appropriate tests and statements for compliance with the following California criteria:
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability
7. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle.
8. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a permanent tag prominently fixed in the engine compartment.
9. The applicant states that all new-car salesmen, as part of their 1968-model information, shall be informed of the purpose of the emission control systems and their functioning principles.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the International Harvester Company exhaust control systems. The staff, therefore, recommends adoption of Resolution 67-47.

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-47

WHEREAS, International Harvester, on June 30, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the applicant's two different exhaust control systems are described as follows;

- A. Air-injection system with major elements;
 - (1) rotary-vane air pump,
 - (2) air injection into each exhaust port,
 - (3) carburetor and distributor modifications,
 - (4) recommended maintenance.
- B. Engine Modification type system with major elements:
 - (1) leaner carburetion plus idle rich limiter,
 - (2) retarded spark at idle,
 - (3) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles, or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the International Harvester exhaust control systems as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (b), (c), (d), and (e), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-48

WHEREAS, Nissan Motor Company, Ltd., on June 20, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the applicant's three different exhaust control systems are described as follows:

- A. Air-injection system with major elements:
 - (1) rotary-vane air pump,
 - (2) air injection into each exhaust port,
 - (3) carburetor and distributor modifications,
 - (4) recommended maintenance.
- B. Fuel-shutoff system (for pickup truck) with major elements:
 - (1) fuel-shutoff for deceleration control,
 - (2) leaner carburetion plus idle rich limiter,
 - (3) retarded spark at idle,
 - (4) recommended maintenance.
- C. Engine Modification type system (for 4-wheel drive) with major elements:
 - (1) deceleration control, spark advance type, plus dashpot,
 - (2) leaner carburetion plus idle rich limiter,
 - (3) retarded spark at idle,
 - (4) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles, or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Nissan Motor Company, Ltd., exhaust control systems as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (a2), (a3), and (c), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-49

WHEREAS, Volvo, on June 8, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Volvo dual-intake-manifold system with major elements:

- (1) dual intake manifold,
- (2) leaner carburetion,
- (3) retarded spark at idle,
- (4) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at approximately 1,000 miles or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Volvo exhaust control system as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (a3), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-50

WHEREAS, Peugeot, Inc., on June 29, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Peugeot "COPPLOAIR" exhaust emission control system with major elements:

- (1) deceleration control, vacuum limiter type,
- (2) leaner carburetion plus idle rich limiter,
- (3) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles, or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board, under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code, issue a certificate of approval for the Peugeot, Inc. exhaust control systems as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class (a2), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105;

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-51

WHEREAS, Isuzu Motors Limited, on June 20, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Isuzu Air Injection System with major elements:

- (1) Rotary vane air pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Isuzu Motors Limited exhaust control system as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class (a)2, pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

7/12/67
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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

SUMMARY

1968 Exhaust Control Certification Documents
Volkswagen of America, Inc.
Exhaust Control Systems

July 12, 1967

A. Introduction

On July 6, 1967, Volkswagen of America, Inc. submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control systems. The documents include complete 50,000-mile emission durability test data.

B. The Exhaust Control Systems

Volkswagen of America, Inc., four exhaust control systems comprise:

A. Air-injection system with major elements:

- (1) Rotary-vane air pump
- (2) Air injection into each exhaust port
- (3) Engine modifications
- (4) Throttle positioner
- (5) Recommended maintenance

B. Engine-modification system with major elements:

- (1) Throttle positioner for deceleration control
- (2) Leaner carburetion plus idle rich limiter
- (3) Retarded spark at idle
- (4) Recommended maintenance

C. Engine-modification system without throttle positioner (for semi-automatic transmission).

D. Fuel-injection system with major elements:

- (1) Fuel injection with deceleration fuel shutoff
- (2) Retarded spark at idle
- (3) Recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Volkswagen proving-grounds laboratories, which previously had been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbons emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized.

The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

Five cars were run 50,000 miles and 11 cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed by the applicant in California.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 1.08 for hydrocarbons and 1.10 for carbon monoxide and are shown in Table I.

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Volkswagen proving-grounds laboratories, which previously had been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbons emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized.

The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

Five cars were run 50,000 miles and 11 cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed by the applicant in California.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 1.08 for hydrocarbons and 1.10 for carbon monoxide and are shown in Table I.

Table I.

Certification Emission Data
Projected to 50,000 Miles

Emission Standard for Under 100 Cu.In.: 410 PPM HC, 2.3% CO

System Type	Engine Displacement Cu.In.	Hydrocarbons		Carbon Monoxide	
		Deter. Factor	Results PPM	Deter. Factor	Results PPM
Air Injection	91.1	0.92	242	0.92	1.11
Air Injection	96.7	1.07	182	0.88	0.96
Fuel Injection	96.7	1.21	222	1.19	0.79
Engine Modification (w/throttle positioner)	91.1 96.7	1.01 1.01	285 227	0.97 0.97	1.70 1.35
Engine Modification (w/o throttle positioner) (semi-auto trans.)	91.1	1.01	239	0.97	1.15

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons indicating that more attention is needed on delivering the car to the customer in a properly-adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Effectiveness of Exhaust Controls in Public Use", dated May 10, 1967, which gives details of the above. At present, there are approximately 1.6 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following in compliance with California requirements:

1. The applicant states:

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- (1) "One hundred percent inspection of spark timing at the end of the engine assembly line will be standard procedure at Volkswagenwerk A. G.
 - (2) The 1968 Volkswagen Owner's Manual supplied with each vehicle will offer a free maintenance service at 600 miles and will list all items covered by this maintenance service. Both spark timing and idle adjustment will be included in this list.
 - (3) The Volkswagen Dealer's Customer Follow-up Program will provide for a card to be sent to each new owner, stating that he is entitled to a free maintenance service at 600 miles."
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
 3. The cost of the exhaust control system will not be listed as a separate item.
 4. The applicant has made appropriate tests and statements for compliance with the following California criteria:
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability
 5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle which is 24,000 miles or 24 months.
 6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a permanent tag prominently fixed in the engine compartment.
 7. The applicant states that all new-car salesmen, as part of their 1968-model information, shall be informed of the purpose of the emission control systems and their functioning principles.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Volkswagen of America, Inc. exhaust control systems. The staff, therefore, recommends adoption of Resolution 67-52.

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- (1) "One hundred percent inspection of spark timing at the end of the engine assembly line will be standard procedure at Volkswagenwerk A. G.
 - (2) The 1968 Volkswagen Owner's Manual supplied with each vehicle will offer a free maintenance service at 600 miles and will list all items covered by this maintenance service. Both spark timing and idle adjustment will be included in this list.
 - (3) The Volkswagen Dealer's Customer Follow-up Program will provide for a card to be sent to each new owner, stating that he is entitled to a free maintenance service at 600 miles."
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
 3. The cost of the exhaust control system will not be listed as a separate item.
 4. The applicant has made appropriate tests and statements for compliance with the following California criteria:

(c) driving safety	(h) horsepower and fuel economy
(d) fail safe	(i) severe mountain driving
(e) backfire	(j) oxides of nitrogen and odor
(f) CO in passenger compartment	(k) driveability
(g) tall grass fire hazard	
 5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle which is 24,000 miles or 24 months.
 6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a permanent tag prominently fixed in the engine compartment.
 7. The applicant states that all new-car salesmen, as part of their 1968-model information, shall be informed of the purpose of the emission control systems and their functioning principles.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCEB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Volkswagen of America, Inc. exhaust control systems. The staff, therefore, recommends adoption of Resolution 67-52.

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State of California
MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-52

WHEREAS, Volkswagen of America, Inc., on July 6, 1967, submitted a Letter of Representation and all test data for 1968 California certification of exhaust emission control systems; and

WHEREAS, the applicant's four different exhaust control systems are described as follows:

A. Air-injection system with major elements:

- (1) Rotary-vane air pump
- (2) Air injection into each exhaust port
- (3) Engine modifications
- (4) Throttle positioner
- (5) Recommended maintenance

B. Engine-modification system with major elements:

- (1) Throttle positioner for deceleration control
- (2) Leaner carburetion plus idle rich limiter
- (3) Retarded spark at idle
- (4) Recommended maintenance

C. Engine-modification system without throttle positioner (for semi-automatic transmission).

D. Fuel-injection system with major elements:

- (1) Fuel injection with deceleration fuel shutoff
- (2) Retarded spark at idle
- (3) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles, or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board, under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code, issue a certificate of approval for the Volkswagen of America, Inc. exhaust control systems as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class (a)2, pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles, or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board, under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code, issue a certificate of approval for the Volkswagen of America, Inc. exhaust control systems as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class (a)2, pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-53

WHEREAS, Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS, Ricardo & Co., Shoreham-By-Sea, Sussex, England, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS, Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS, adequate cross-checks are prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS, Ricardo & Co. has agreed in writing to conduct all tests and evaluation for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Ricardo & Co., Shoreham-By-Sea, Sussex, England, as an Authorized Vehicle Pollution Control Testing Laboratory.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-54

WHEREAS, Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS, Olson Laboratories Incorporated, Dearborn, Michigan, has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS, Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS, adequate cross-checks are prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS, Olson Laboratories has agreed in writing to conduct all tests and evaluation for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Olson Laboratories Incorporated, Dearborn, Michigan, as an Authorized Vehicle Pollution Control Testing Laboratory.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Summary

1968 Exhaust Control Certification Documents

PORSCHE KG

Air-Injection System

July 12, 1967

A. Introduction

On July 5, 1967, Dr. Ing. Porsche KG submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control system. The documents include complete 50,000-mile emission durability test data.

B. The Exhaust Control System

The Porsche air-injection exhaust control system comprises:

- (1) Rotary-vane air pump
- (2) Air-injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Porsche proving-ground laboratory, which had previously been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized.

The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

One car was run 50,000 miles and one car was run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 1.00 for hydrocarbons and 1.28 for carbon monoxide and are shown in Table I.

Table I

Certification Emission Data
Projected to 50,000 Miles

Engine Displacement Cu.In.	Hydrocarbons PPM		Carbon Monoxide %	
	Results	Standards	Results	Standards
96.5	245	410	1.82	2.3
121.5	231	350	1.96	2.0

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly-adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Effectiveness of Exhaust Controls in Public Use", dated May 10, 1967, which gives details of the above. At present, there are approximately 1.6 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following in compliance with California requirements:

1. The applicant will perform the following:
 - (1) 100% inspection of spark timing at the end of the vehicle assembly line.
 - (2) The offer and implementation of a free spark timing and idle adjustment by the dealer at 1,000 miles, as well as adequate training of dealer service personnel to perform these adjustments.
 - (3) Notification of the owner that he is entitled to a free spark timing and idle adjustment by the dealer at approximately 1,000 miles.
2. "The emission control device, as being part of the vehicle, is included in the basic price of the vehicle at no extra cost to the customer, and furthermore does not appear as such on the federal sticker."
3. The applicant has made appropriate tests and statements for compliance with the California criteria:

(c) driving safety	(h) horsepower and fuel economy
(d) fail safe	(i) severe mountain driving
(e) backfire	(j) oxides of nitrogen and odor
(f) CO in passenger compartment	(k) driveability
(g) tall grass fire hazard	
4. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle.
5. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a permanent tag prominently fixed in the engine compartment.
6. The applicant states that all new-car salesmen, as part of their 1968-model information, shall be informed of the purpose of the emission control systems and their functioning principles.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Dr. Ing. Porsche KG exhaust control system. The staff, therefore, recommends adoption of Resolution 67-55.

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F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCE, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Dr. Ing. Porsche KG exhaust control system. The staff, therefore, recommends adoption of Resolution 67-55.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-55

WHEREAS, Dr. Ing. Porsche KG, on July 5, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Porsche Air Injection System with major elements:

- (1) Rotary vane air pump,
- (2) Air injection into each exhaust port,
- (3) Carburetor and distributor modifications,
- (4) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Dr. Ing. Porsche KG exhaust control system as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (a2) and (a3), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

7/12/67

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-56

WHEREAS, American Motors Corporation on June 30, 1967, submitted a letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the applicant's two different exhaust control systems are described as follows:

- A. Engine Modification type system with major elements: (for all 6 cylinder engines and 8 cylinder engines with automatic transmissions)
 - (1) leaner carburetion plus idle rich limiter,
 - (2) retarded spark at idle,
 - (3) deceleration control, dashpot type,
 - (4) recommended maintenance.

- B. Air-injection system with major elements: (for 8 cylinder engines with manual transmissions)
 - (1) rotary-vane air pump,
 - (2) air injection into each exhaust port,
 - (3) carburetor and distributor modifications,
 - (4) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles, or equivalent, to assure proper initial adjustment of the vehicle prior to sale, and

American Motors
Resolution 67-56

- 2 -

WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments, and;

WHEREAS, the Board staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements.

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval to American Motors Corporation to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (b), (c), (d), (e), and (f), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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American Motors
Resolution 67-56

- 2 -

WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments, and;

WHEREAS, the Board staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements.

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval to American Motors Corporation to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (b), (c), (d), (e), and (f), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-57

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS Marvel-Schebler Division of Borg-Warner Corporation has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks are prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS Marvel-Schebler Division of Borg-Warner Corporation has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Marvel-Schebler Division of Borg-Warner Corporation at Decatur, Illinois, as an Authorized Vehicle Pollution Control Testing Laboratory.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-58

WHEREAS, SAAB Corporation, on June 22, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the SAAB "Safree" Exhaust Control System, with major elements:

- (1) Free-wheeling device for deceleration.
- (2) Leaner carburetion including idle.
- (3) Retarded spark at idle.
- (4) Recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968-model certification, a 100% inspection of spark-timing on the assembly line and a free spark-timing and idle adjustment by the dealer at 1000 miles, or equivalent;

NOW, THEREFORE, BE IT RESOLVED, That this Board, under the powers and authority granted in Chapter 3, commencing at Section 24376, Division 20 of the Health and Safety Code, issue a certificate of approval for the SAAB "Safree" Exhaust Emission Control System to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class (a)2, pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-59

WHEREAS Chapter 3, Division 20, Section 2497 of the Health and Safety Code provides that "The Motor Vehicle Pollution Control Board may designate such laboratories as it finds are qualified and equipped to analyze and determine, on the basis of the standards established by the Board, devices which are so designed and equipped to meet the standards set by the State Department under Section 426.5 and the criteria established by the Motor Vehicle Pollution Control Board;" and

WHEREAS Robert Bosch GMBH has been found to be adequately equipped and qualified to conduct testing of exhaust and crankcase control devices in accordance with the standards established by the State Department of Public Health under Section 426.5 of the Health and Safety Code and Motor Vehicle Pollution Control Board criteria; and

WHEREAS Board staff personnel have reviewed the laboratory equipment and personnel qualifications and have assured themselves that instrument recorder traces are satisfactory; and

WHEREAS adequate cross-checks are prescribed by the Board to insure accurate test reports and evaluations; and

WHEREAS Robert Bosch GMBH has agreed in writing to conduct all tests and evaluations for the purposes of certification according to procedures established by the Board;

NOW, THEREFORE, BE IT RESOLVED, That the Motor Vehicle Pollution Control Board hereby designates Robert Bosch GMBH at Stuttgart, Germany, as an Authorized Vehicle Pollution Control Testing Laboratory.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

SUMMARY

1968 Exhaust Control Certification Documents

DAIMLER-BENZ, INC.

July 12, 1967

A. Introduction

On July 7, 1967, Daimler-Benz, Inc. submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control system. The documents include complete 50,000-mile emission durability test data.

B. The Exhaust Control System

Daimler-Benz are utilizing three exhaust control systems comprising:

I. Engine-Modification System (for 121 cu. in. engine) with major elements:

- (a) leaner carburetion
- (b) retarded spark at idle
- (c) recommended maintenance

II. Air-Injection System (for 141 and 152 cu. in. engine) with major elements:

- (a) rotary-vane air pump
- (b) air injection into each exhaust port
- (c) carburetor and distributor modifications
- (d) recommended maintenance

III. Fuel-Injection System (for 152 and 386 cu. in. engine) with major elements:

- (a) fuel-injection system (with deceleration fuel shutoff)
- (b) retarded spark at idle
- (c) recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Daimler Benz proving grounds laboratories, which previously had been authorized by the Board as an approved laboratory. One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increased hydrocarbons emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized.

The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results1. Emissions

Two cars were run 50,000 miles and seven cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 0.82 for hydrocarbons and 0.88 for carbon monoxide and are shown in Table I.

Table I.
Certification Emission Data
Projected to 50,000 miles

Engine Displacement Cu. In.	Hydrocarbons		Carbon Monoxide		
	Results	PPM	Standards	Results	% Standards
121	233		350	1.55	2.0
141	95		275	1.23	1.5
152	168		275	1.18	1.5
386	195		275	0.80	1.5

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386	195		275	0.80		1.5

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons indicating that more attention is needed on delivering the car to the customer in a properly-adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Effectiveness of Exhaust Controls in Public Use", dated May 10, 1967, which gives details of the above. At present, there are approximately 1.6 million vehicles successfully operating in California with exhaust controls.

E. Letter of Representation

The applicant's Letter of Representation includes the following, in compliance with California requirements:

1. Regarding spark timing:

"It has been standard practice at Daimler-Benz at all times to inspect and if necessary reset spark timing at the end of the engine run-in period on special engine dynamometers provided for this purpose. On these dynamometers all Mercedes-Benz engines are run for various periods of time, determined according to their performance, ranging up to two hours under full operating conditions. We believe that this procedure should be recognized as giving an equivalent result to inspection at the end of the vehicle assembly line, particularly as better control and instrumentation can be furnished on the dynamometer."

2. The applicant presents the vehicle purchaser with a coupon entitling him to a free spark timing and idle adjustment at 600 and 3,000.

3. The applicant states that the cost of the Daimler-Benz exhaust emission control system will be competitive.
4. The applicant has made appropriate tests and statements for compliance with the following California criteria:
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability
5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle.
6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a permanent tag or decal prominently fixed in the engine compartment.
7. The applicant states that all new-car salesmen, as part of their 1968-model information, shall be informed of the purpose of the emission control systems and their functioning principles.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Daimler-Benz exhaust control systems. The staff, therefore, recommends adoption of Resolution 67-60.

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 - (d) fail safe
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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-60

WHEREAS, Daimler-Benz, Inc. on July 7, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the systems are comprised of the following major elements:

Daimler-Benz are utilizing three exhaust control systems comprising;

I. Engine-Modification System (for 121 cu. in. engine) with major elements:

- (a) leaner carburetion
- (b) retarded spark at idle
- (c) recommended maintenance

II. Air-Injection System (for 141 and 152 cu. in. engine) with major elements:

- (a) rotary-vane air pump
- (b) air injection into each exhaust port
- (c) carburetor and distributor modifications
- (d) recommended maintenance

III. Fuel-Injection System (for 152 and 386 cu. in. engine) with major elements:

- (a) fuel-injection system (with deceleration fuel shutoff)
- (b) retarded spark at idle
- (c) recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at approximately 1,000 miles or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Daimler-Benz exhaust control systems as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (a3), (b) and (f), pursuant to Title 17 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at approximately 1,000 miles or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Daimler-Benz exhaust control systems as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (a3), (b) and (f), pursuant to Title 1 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

REPORT ON THE MERCEDES-BENZ CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Mercedes-Benz crankcase emission control system. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installation).

Description of Device

The Mercedes-Benz crankcase emission control system consists of a rubber tube connecting the rocker arm cover to the clean side of the air cleaner. The oil filler cap is sealed. The oil dipstick is also sealed by means of an impregnated felt seal providing a completely sealed system which prevents emissions from escaping to the atmosphere even in case of a positive crankcase pressure which, however, occurs only at idle on fuel injection engines. In all other operating modes and on all carburetor engines crankcase pressure is negative as shown by the company's test reports. As a result no hydrocarbons can escape to the atmosphere.

Mercedes-Benz has used this basic crankcase ventilation system for approximately ten years with no difficulty whatsoever in its use. The system was used as an "open" system until 1963 when a check valve was introduced at the oil dipstick to prevent emissions at idle; this check valve is now being replaced by the felt seal. During the ten years of use, there has been no problem with odor in the passenger compartment, oil carryover, nor any record of crankcase explosions.

The maintenance recommendations call for the replacement of the paper type air cleaner element at 10,000 miles.

The certification request covers all Mercedes-Benz passenger cars, light trucks and buses.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system when operating efficiently meets the State standards.

Compliance with Board Criteria

The Board has on file a letter from Mercedes-Benz signed by a legally authorized officer containing the manufacturer's representation that the device, which will be manufactured for original equipment installation only, will comply with the Board's criteria. The letter also states that the system will not be used for automobiles other than those for which it was originally certified.

Summary and Conclusions

1. The crankcase emission control system meets the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced for original equipment installation will comply with the Board's criteria.
3. The staff recommends that the Mercedes-Benz crankcase emission control system be approved for new cars, factory installation only, on 1967 and subsequent models of motor vehicles in classifications (a), (b), and (f).

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Summary and Conclusions

1. The crankcase emission control system meets the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced for original equipment installation will comply with the Board's criteria.
3. The staff recommends that the Mercedes-Benz crankcase emission control system be approved for new cars, factory installation only, on 1967 and subsequent models of motor vehicles in classifications (a), (b), and (f).

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-61

WHEREAS, Daimler-Benz Aktiengesellschaft, Stuttgart, Unterturkheim, Germany, filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

The Mercedes-Benz crankcase emission control system consists of a rubber tube connecting the rocker arm cover to the clean side of the air cleaner. The oil filler cap is sealed. The oil dipstick is also sealed by means of an impregnated felt seal providing a completely sealed system which prevents emissions from escaping to the atmosphere even in case of a positive crankcase pressure which, however, occurs only at idle on fuel injection engines. In all other operating modes and on all carburetor engines crankcase pressure is negative as shown by the company's test reports.

WHEREAS, the system has been found to meet the crankcase emission standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Subchapter 5, Article 1, Section 30530; and

WHEREAS, after considering representations submitted by the manufacturer, the Board finds that the device meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the Mercedes-Benz crankcase emission control system for installation on 1967 and subsequent model cars in vehicle classifications (a), (b) and (f) as designated in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2004.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

REPORT ON THE RENAULT CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Renault Crankcase Emission Control System. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installation).

Description of Device

The device consists of a "T" from the rocker arm cover which connects to two ozone and hydrocarbon resisting synthetic rubber tubes. One of these tubes leads into an "AC" spring loaded flow control valve into the intake manifold. The other tube leads through a flame arrester into the top portion of the carburetor.

A sealed oil filler cap is used.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system when operating efficiently meets the State standards. Recommended maintenance is 12,000 miles.

Compliance with Board Criteria

The Board has on file a letter from Renault signed by a legally authorized officer containing the manufacturer's representation that the device, which will be manufactured for original equipment installation only, will comply with the Board's criteria. The letter also states that the system will not be used for automobiles other than those for which it was originally certified.

Summary and Conclusions

1. The crankcase emission control system meets the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced for original equipment installation will comply with the Board's criteria.
3. The staff recommends that the Renault Crankcase Emission Control System be approved for new cars, factory installation only, on 1968 and subsequent models of motor vehicles in classification (a).

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-62

WHEREAS, Regie Nationale Des Usines Renault of Billancourt, France filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

The device consists of a "T" from the rocker arm cover which connects to two ozone and hydrocarbon resisting synthetic rubber tubes. One of these tubes leads into an "AC" spring loaded flow control valve into the intake manifold. The other tube leads through a flame arrester into the top portion of the carburetor.

A sealed oil filler cap is used.

WHEREAS, the system has been found to meet the crankcase emission standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Subchapter 5, Article 1, Section 30530; and

WHEREAS, after considering representations submitted by the manufacturer, the Board finds that the device meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the Renault crankcase emission control system for installation on 1968 and subsequent model cars in vehicle classification (a), as designated in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2004.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

THE TOYOTA MOTORS LTD., REPORT FOR THE 3 M & K ENGINES ON CLOSED CRANKCASE EMISSION CONTROL SYSTEMS

Introduction

This is a report on the staff evaluation of the Toyoto Motors Ltd., closed crankcase emission control system. The basis of the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions, (Factory Installation), June 1, 1963, revision.

Description of Systems

System No. 1. For 3 M Engine (6 cylinder)

Tube from crankcase (large diameter) from which smaller diameter tubes split off as follows:

- a) One tube contains a spring-loaded regulating valve and leads to intake manifold.
- b) The other tube leads to the clean side of the air cleaner.

System No. 2. For K Engine (4 cylinder)

- a) Tube from rocker arm cover through a spring-loaded regulating valve to the intake manifold.
- b) Tube from rocker arm cover into the clean side of the air cleaner.

Both systems use a sealed oil filler cap.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system when operating efficiently meets the State standards.

Compliance with Board Criteria

The Board has on file a letter from the Toyota Motor Ltd., signed by a legally authorized officer, containing the manufacturer's representation that the device which will be manufactured for original equipment installation only, will comply with the Board's criteria, including odor criterion. The letter also states that the system will not be used as replacement other than for cars upon which it was originally installed.

Summary and Conclusions

1. The crankcase emission control system meets the crankcase emissions standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced for original equipment installation only will comply with the Board's criteria.
3. The staff recommends that the Toyota Motors Ltd., closed crankcase emission control system be approved for new Toyota Motors Ltd., automobiles, factory installation, on 1968 and subsequent models of motor vehicles in classification (a).

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State of California
MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-63

WHEREAS Toyota Motors Ltd., of Aichi-Ken, Japan, filed an application for a certificate of approval for a closed crankcase emission control system described as the Toyota Motors Ltd., closed crankcase emission control system having the following specifications;

System No. 1) 3 M Engine. (6 cylinder)

A tube from crankcase, splitting into two smaller tubes.

- a) One tube containing a spring-loaded regulating valve going into the intake manifold.
- b) The other tube leading into the clean side of the air cleaner.

System No. 2) K Engine (4 cylinder)

A tube from rocker arm cover through a spring-loaded regulating valve into the intake manifold.

A second tube from the rocker arm cover into the clean side of the air cleaner.

Both systems use a sealed oil filler cap.

WHEREAS the system has been found to meet the crankcase emission control standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer, the Board finds that the system meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the Toyota Motors Ltd., closed crankcase emission control system for new Toyota Motors Ltd., cars, factory installation, on 1968 and subsequent models of motor vehicles in classification (a) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-64

WHEREAS NSU Motorenwerke, Neckarsulm, Germany, filed an application for a certificate of approval for a sealed crankcase emission control system for the Wankel Engine described as the NSU Sealed Crankcase Emission Control System, having the following specifications:

A tube from the Wankel Engine rotor body chamber through a spring-loaded check valve to the air cleaner.

A sealed oil filler cap is used in the system.

WHEREAS the system has been found to meet the crankcase emission control standards established by the California Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chapter 5, Article 1, Section 30530; and

WHEREAS after considering representations submitted by the manufacturer, the Board finds that the system meets the criteria of the Motor Vehicle Pollution Control Board as published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, that this Board

Issue a certificate of approval for the NSU Sealed Crankcase Emission Control System for new NSU automobiles factory installation, on 1967 and subsequent models of motor vehicles with the Wankel Engine, in classification (g) only, as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

REPORT ON THE NSU SEALED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the NSU Sealed Crankcase Emission Control System for the Wankel Engine. The basis of the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions. (Factory Installation), June 1, 1963 revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of System

A tube from the Wankel Engine rotor body chamber through a spring-loaded check valve to the air cleaner.

A sealed oil filler cap is used in the system.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system, when operating efficiently, meets the State standards.

Compliance with Board Criteria

The Board has on file a letter from NSU, signed by a legally authorized officer, containing the manufacturer's representation that the device which will be manufactured for original equipment installation only, will comply with the Board's criteria, including odor criterion. The letter also states that the system will not be used as replacement other than for cars upon which it was originally installed.

Summary and Conclusions

1. The crankcase emission control system meets the crankcase emission standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representation that the device as produced, for original equipment installation only, will comply with the Board's criteria.
3. The Staff recommends that the NSU Sealed Crankcase Emission Control System be approved for new NSU Wankel-engined Automobiles, factory installation, on 1967 and subsequent models of motor vehicles in classification (g) only.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Report of All-O-Matic Manufacturing Corporation

Closed Crankcase Emission Control System

*not
passed*

1. Identical Devices

The All-O-Matic Manufacturing Corporation is requesting approval of their valves #004392 and 004592, to be sold as replacement valves for 1961-1967 Chrysler products, under the Identical Device Section of the California Administrative Code, Article 4, Title 13, Chapter 3, Sub-Chapter 1, which is as follows:

2300. Defined. An "identical device" is a device identical in all respects, including manufacture, installation and operation, with a device which has been certified by the Motor Vehicle Pollution Control Board pursuant to Health and Safety Code Section 24386(4) but which is manufactured by a person other than the original manufacturer of the "certified device."

2301. Proof of Identical Device. Any person intending to manufacture an identical device shall first submit proof to the Motor Vehicle Pollution Control Board that said device is an identical device as defined in Section 2300, supra. Such proof shall include the following:

- (1) Statement of principle of operation of the device.
- (2) Design drawings including materials and specifications.
- (3) Installation drawings.
- (4) Sample device.
- (5) Other material as deemed necessary for evaluation by the Executive Officer.

2302. Subject to Original Certification. An identical device is subject to and dependent upon the original application and certification of approval on which it is based.

2303. Evaluation. The Board, after review and evaluation of such proof and other data shall make a finding as to whether or not the proposed device is in fact identical to that which received prior approval.

2304. Notification. When a device has been approved as an identical device, the Board shall notify the Department of Motor Vehicles and the California Highway Patrol by submission of an appropriate Board Resolution within 30 days of the date of their action.

2. Description of the Valve

A spring-loaded tapered-plunger flow control valve, identical in all respects to the Novo Valve approved by the Board as part of the Novo Closed Crankcase Emission Control System under Resolution 63-7 dated January 17, 1963.

3. Submission of Required Material

The company has submitted the required materials as set forth under Section 2301. These included drawings, samples, specifications, etc. These materials were found to be acceptable by the staff.

4. Financial Responsibility

The company has submitted a financial statement, proof of trademark registration, and proof of product liability insurance which appear to be acceptable.

5. Letter of Representation

The company has submitted a Letter of Representation that they will take full responsibility for both materials and workmanship of the valves, which are identical in all respects to the corresponding Novo Valves. They also will only sell these valves as replacement for 1961-1967 Chrysler product valves.

Summary and Conclusions

1. The All-O-Matic Manufacturing Corporation Valves meet the requirements of an identical device to the Novo Valve, which is a part of the Closed Crankcase Emission Control System certified by Resolution 63-7.
2. The company has submitted the required materials for identical devices as set forth in Title 13, Chapter 3, Sub-Chapter 1, Article 4, of the California Administrative Code.
3. The Staff recommends that the All-O-Matic Manufacturing Corporation Valves #004392 and 004592 be granted a certificate of approval as replacement valves for 1961-1967 Chrysler products in Classes (b), (c), (d), (e) and (f), per Resolution 67-65.

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2. Description of the Valve

A spring-loaded tapered-plunger flow control valve, identical in all respects to the Novo Valve approved by the Board as part of the Novo Closed Crankcase Emission Control System under Resolution 63-7 dated January 17, 1963.

3. Submission of Required Material

The company has submitted the required materials as set forth under Section 2301. These included drawings, samples, specifications, etc. These materials were found to be acceptable by the staff.

4. Financial Responsibility

The company has submitted a financial statement, proof of trademark registration, and proof of product liability insurance which appear to be acceptable.

5. Letter of Representation

The company has submitted a Letter of Representation that they will take full responsibility for both materials and workmanship of the valves, which are identical in all respects to the corresponding Novo Valves. They also will only sell these valves as replacement for 1961-1967 Chrysler product valves.

Summary and Conclusions

1. The All-O-Matic Manufacturing Corporation Valves meet the requirements of an identical device to the Novo Valve, which is a part of the Closed Crankcase Emission Control System certified by Resolution 63-7.
2. The company has submitted the required materials for identical devices as set forth in Title 13, Chapter 3, Sub-Chapter 1, Article 4, of the California Administrative Code.
3. The Staff recommends that the All-O-Matic Manufacturing Corporation Valves #004392 and 004592 be granted a certificate of approval as replacement valves for 1961-1967 Chrysler products in Classes (b), (c), (d), (e) and (f), per Resolution 67-65.

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State of California
MOTOR VEHICLE POLLUTION CONTROL BOARD
RESOLUTION 67-65

not passed

WHEREAS, the All-O-Matic Manufacturing Corporation filed an application on August 21, 1967 for a certificate of approval for a crankcase emission control valve which is described as follows:

A spring-loaded, tapered-plunger flow control valve identical in all respects to the Novo Valve approved by the Board as part of the Novo Closed Crankcase Emission Control System under Resolution 63-7 on January 17, 1963; and

WHEREAS, the company has represented in writing and has submitted proof that their valve is identical in material, workmanship and in all other respects to the Novo Valve; and

WHEREAS, the company has stated its intention to market this valve only as a replacement for the Novo type valve for use on the 1961-1967 Chrysler Corporation vehicles; and

WHEREAS, the Board under Title 13, Chapter 3, Sub-Chapter 1, Article 4, is empowered to approve a device if it is identical in all respects with a device which has been certified by the Motor Vehicle Pollution Control Board pursuant to the Health and Safety Code, Section 24386; and

WHEREAS, this valve meets said requirements; and

NOW, THEREFORE BE IT RESOLVED, That this Board issue a certificate of approval for the All-O-Matic Manufacturing Corporation Tapered-plunger Valve to be used as a replacement for the valves in the certified crankcase emission control systems on used 1961-1967 Chrysler Corporation motor vehicles in classifications (b), (c), (d), (e) and (f) designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004; and Identical Devices Article 4, of the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1, Sections 2300 through 2304.

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State of California
MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-66

WHEREAS, MRS. MICHAEL C. LEVEE, JR. has served since the Board's inception, and also one term as Vice-Chairman of the Motor Vehicle Pollution Control Board; and

WHEREAS, she has rendered extraordinary service to her fellow Californians in the cause of cleaner air; and

WHEREAS, she has given freely of her time in formulating and fostering the Board's program; and

WHEREAS, she has consistently and conscientiously attended all regular and special Board meetings, served on various Board committees, and made valuable contributions to their deliberations; and

WHEREAS, she has now concluded her service on the Board, but not her devotion to the cause of cleaner air;

RESOLVED, That

The present members of the Motor Vehicle Pollution Control Board do hereby gratefully acknowledge her services and publicly commend her service to the People of California.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-67

WHEREAS, WILLIAM E. NISSEN, has been a distinguished member and has completed two terms as Chairman of the Board; and

WHEREAS, He has rendered extraordinary service to his fellow Californians in the cause of cleaner air; and

WHEREAS, He has given freely of his time in formulating and fostering the Board's program; and

WHEREAS, He has consistently and conscientiously attended all regular and special Board meetings, served on various Board committees, and made valuable contributions to their deliberations; and

WHEREAS, He has now concluded his service on the Board, but not his devotion to the cause of cleaner air;

RESOLVED, That

The present members of the Motor Vehicle Pollution Control Board do hereby gratefully acknowledge his service and publicly commend him for his service to the People of California.

9/13/67

State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-68

WHEREAS, British Motor Corporation Limited, August 16, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the E.P.A.I. (Exhaust Port Air Injection) System with major elements:

- (1) Rotary vane air pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the British Motor Corporation Limited Exhaust Control System as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes a(2), a(3) and b, pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Summary

1968 Exhaust Control Certification Documents
British Motor Corporation Limited
Exhaust Port Air Injection System (E.P.A.I.)

September 13, 1967

A. Introduction

On August 16, 1967, British Motor Corporation, Ltd., submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control system. The Letter of Representation was signed by C. A. Griffin, Director and Chief Engineer, and the documents include complete 50,000-mile emission durability test data.

B. The Exhaust Control System

The British Motor Corporation, Ltd., E.P.A.I. exhaust control system comprises:

- (1) Rotary vane pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Deceleration control, vacuum limiter type
- (5) Recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the British Motor Corporation, Ltd. proving-ground laboratory, which had previously been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

Three cars were run 50,000 miles and four cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 0.85 for hydrocarbons and 0.84 for carbon monoxide and are shown in Table I.

Table I

Certification Emission Data
Projected to 50,000 Miles

<u>Engine Displacement</u> Cu. In.	<u>Hydrocarbons PPM</u>		<u>Carbon Monoxide %</u>	
	<u>Results</u>	<u>Standards</u>	<u>Results</u>	<u>Standards</u>
77.9	289	410	1.23	2.30
109.8	194	350	1.05	2.00
177.8	186	275	0.93	1.50

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

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Three cars were run 50,000 miles and four cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

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Certification Emission Data
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Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Effectiveness of Exhaust Controls in Public Use", dated May 10, 1967, which gives details of the above. At present, there are approximately 1.6 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following in compliance with California requirements:

1. The applicant will perform the following:
 - (1) Inspection of spark timing and idle adjustment for every vehicle with electronic diagnostic equipment at the end of the vehicle assembly line.
 - (2) The offer and implementation, as a condition of warranty, of a free spark timing and idle adjustment by the dealer at 1,000 miles, as well as adequate training of dealer service personnel to perform these adjustments.
 - (3) Notification to the owner that he is entitled to a free spark timing and idle adjustment by the dealer at approximately 1,000 miles.
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
3. The cost of the E.P.A.I. exhaust control system will not exceed \$50.
4. The applicant has made appropriate tests and statements for compliance with the California criteria;
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability
5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle, which is 12,000 miles or 12 months.
6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a tag prominently fixed in the engine compartment.

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-69

WHEREAS, Jaguar on September 5, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Jaguar "Duplex Manifold" system with major elements:

- (1) dual intake manifold,
- (2) leaner carburetion,
- (3) retarded spark at idle,
- (4) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at approximately 1,000 miles or equivalent, and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Jaguar exhaust control system as described above to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class (d), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That the continued effectiveness of this certification is dependent upon the applicant successfully completing the durability test in approximately two months. If problems develop in the continued durability testing, the applicant has agreed to recall all assembled vehicles in public use for remedial action. The continued effectiveness of the certification also is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

9/13/67

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

SUMMARY

1968 Exhaust Control Certification Documents

Kaiser Jeep Corp.

Exhaust Control Systems

September 13, 1967

A. Introduction

On August 31, 1967, Kaiser Jeep Corp. submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control systems. The Letter of Representation was signed by Frederick A. Stewart, Vice-President, Engineering, and the documents include complete 50,000 mile emission durability test data.

B. The Exhaust Control Systems

Kaiser Jeep Corp. two exhaust control systems comprise:

I. Engine modification-type system for the 350 cubic inch 8 cylinder engine with major elements:

- (1) leaner carburetion plus idle rich limiter,
- (2) retarded spark at idle,
- (3) deceleration control, dashpot type,
- (4) recommended maintenance.

II. Air-injection system for the 134 cubic inch 4 cylinder engine, the 225 and 232 cubic inch 6 cylinder engines and the 327 cubic inch 8 cylinder engine with major elements:

- (1) rotary-vane air pump,
- (2) air injection into each exhaust port,
- (3) carburetor and distributor modifications,
- (4) recommended maintenance.

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Kaiser Jeep Corp. proving grounds laboratories, which previously had been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 70% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbons emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized.

The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

Five cars were run 50,000 miles and 9 cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed by the applicant in California.

Average emissions for each engine size were adjusted to car life expectancy by deterioration factors for hydrocarbons and for carbon monoxide and as shown in Table I.

Table I.

Certification Emission Data

Engine Displacement Cu. In.	Emission Level at 4,000 Miles		Deterioration Factor		Projected Emission Level at 50,000 Miles			
	HC-PPM	CO-%	HC	CO	HC-PPM Results	Std.	CO-% Results	Std.
134	286	1.50	1.17	1.09	334	350	1.63	2.0
225	209	1.21	.954	.903	200	275	1.10	1.5
232	232	.86	.915	.733	211	275	.63	1.5
327	156	.96	1.00	1.00	156	275	.96	1.5
350	240	1.38	.935	.945	224	275	1.30	1.5

One fleet was called the durability fleet and was composed of vehicles representing 70% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbons emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized.

The certification vehicles of each engine size are representative of transmission and carburetor options.

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Certification Emission Data

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	HC-PPM	CO-%	HC	CO	HC-PPM Results	Std.	CO-% Results	Std.
134	286	1.50	1.17	1.09	334	350	1.63	2.0
225	209	1.21	.954	.903	200	275	1.10	1.5
232	232	.86	.915	.733	211	275	.63	1.5
327	156	.96	1.00	1.00	156	275	.96	1.5
350	240	1.38	.935	.945	224	275	1.30	1.5

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons indicating that more attention is needed on delivering the car to the customer in a properly-adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Do Exhaust Controls Really Work", dated August 14, 1967, which gives details of the above. At present, there are approximately 1.7 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following in compliance with California requirements:

1. The applicant will perform the following:
 - (a) Following engine assembly, the timing is checked with a timing light with the engine running.
 - (b) Following vehicle assembly, both the engine idle speed and the ignition timing is rechecked, on each vehicle. These operations are performed as a part of the chassis rolls test and is accomplished with the vehicle operating under its own power with the engine at normal operating temperatures.
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
3. The cost of the exhaust control system is included in the basic price.
4. The applicant has made appropriate tests and statements for compliance with the California criteria;
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability

5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle, which is 12,000 miles or 12 months.
6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a decal prominently fixed in the engine compartment.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Kaiser Jeep Corporation exhaust control system. The staff, therefore, recommends adoption of Resolution 67-70.

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5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle, which is 12,000 miles or 12 months.
6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a decal prominently fixed in the engine compartment.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Kaiser Jeep Corporation exhaust control system. The staff, therefore, recommends adoption of Resolution 67-70.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-70

WHEREAS, Kaiser Jeep Corporation on August 31, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the applicant's two different exhaust control systems are described as follows:

- A. Engine Modification type system for the 350 cubic inch 8 cylinder engine with major elements:
 - (1) leaner carburetion plus idle rich limiter,
 - (2) retarded spark at idle,
 - (3) deceleration control, dashpot type,
 - (4) recommended maintenance.

- B. Air-injection system for the 134 cubic inch 4 cylinder engine, the 225 and 232 cubic inch 6 cylinder engines, and the 327 cubic inch 8 cylinder engine with major elements:
 - (1) rotary-vane air pump,
 - (2) air injection into each exhaust port,
 - (3) carburetor and distributor modifications,
 - (4) recommended maintenance.

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification, a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles, or equivalent, to assure proper initial adjustment of the vehicle prior to sale, and

WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments, and;

WHEREAS, the Board staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements.

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval to Kaiser Jeep Corporation to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (a), (c), and (e), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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WHEREAS, the applicant has agreed to submit details of substantial measures taken to insure proper adjustment of 1968-model engines as delivered to the customer, and periodic quality audit data to verify proper adjustments, and;

WHEREAS, the Board staff considers these measures to be the "equivalent" of the spark timing and idle adjustment requirements.

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval to Kaiser Jeep Corporation to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes (a), (c), and (e), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Summary

1968 Exhaust Control Certification Documents
Standard Motor Company Limited
Exhaust Emission Control System

September 13, 1967

A. Introduction

On September 4, 1967, Standard Motor Company Limited, makers of the Triumph car, submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control system. The documents include complete 50,000-mile emission durability test data.

B. The Exhaust Emission Control System

The Standard Motor Company Limited exhaust control system comprises:

- (1) Leaner carburetion
- (2) Retarded spark at idle
- (3) Deceleration control, vacuum limiter type
- (4) Recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Standard Motor Company Limited proving-ground laboratory, which had previously been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were

driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

Two cars were run 50,000 miles and five cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors for hydrocarbons and for carbon monoxide as shown in Table I.

TABLE I
Certification Emission Data

Engine Displacement Cu.In.	Emissions At 4,000 Miles		Deterioration Factors		Projected Emissions At 50,000 Miles		Standards	
	HC-PPM	CO%	HC	CO	HC-PPM	CO%	HC-PPM	CO%
79	283	1.37	1.34	1.07	379	1.47	410	2.3
122	229	1.09	1.0	.83	229	.91	350	2.0
130	259	1.52	1.34	1.07	302	1.45	350	2.0
152	243	1.36	1.0	.83	243	1.13	275	1.5

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled, "Do Exhaust Controls Really Work?", dated August 14, 1967, which gives details of the above. At present, there are approximately 1.7 million vehicles successfully operating in California with exhaust control systems.

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It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled, "Do Exhaust Controls Really Work?", dated August 14, 1967, which gives details of the above. At present, there are approximately 1.7 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following in compliance with California requirements:

1. The applicant will perform the following:
 - (1) 100% inspection of spark timing and idle carbon monoxide adjustment with a Bosch instrument for every vehicle at the end of the vehicle assembly line.
 - (2) The offer and implementation, as a condition of warranty, of a free spark timing and idle adjustment by the dealer at 1,000 miles, as well as adequate training of dealer service personnel to perform these adjustments.
 - (3) Notification to the owner that he is entitled to a free spark timing and idle adjustment by the dealer at approximately 1,000 miles.
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
3. The cost of the exhaust control system is included in the basic price.
4. The applicant has made appropriate tests and statements for compliance with the California criteria:
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability
5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle, which is 12,000 miles or 12 months.
6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a tag prominently fixed in the engine compartment.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Standard Motor Company Limited exhaust control system. The staff therefore recommends adoption of Resolution 67-71.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-71

WHEREAS, Standard Motor Company Limited, makers of the Triumph car, on September 4, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Triumph Exhaust Emission Control System with major elements:

- (1) Leaner carburetion
- (2) Retarded spark at idle
- (3) Deceleration control, vacuum limiter type
- (4) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Standard Motor Company Limited Exhaust Control System as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes a(2), a(3) and b, pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Summary

1968 Exhaust Control Certification Documents

Adam Opel A. G.

Air Injection Reactor (A.I.R.) Exhaust Control System

September 13, 1967

A. Introduction

On September 6, 1967, Adam Opel A. G., a Division of General Motors Overseas Operations, submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control system. The documents include 50,000-mile emission durability test data.

B. The Exhaust Control System

The Adam Opel A.I.R. Exhaust Control System comprises:

- (1) Rotary vane pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the proving-ground laboratories of General Motor Corporation at Milford, Michigan and Russelsheim, West Germany. The laboratory in Germany uses the same testing equipment and procedures as the authorized laboratory in the United States.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

Two cars were run 50,000 miles and 6 cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 1.03 for hydrocarbons and 1.00 for carbon monoxide and are shown in Table 1.

Table 1

Certification Emission Data
Projected to 50,000 Miles

<u>Engine Displacement</u> <u>Cu. In.</u>	<u>Hydrocarbons PPM</u>		<u>Carbon Monoxide %</u>	
	<u>Results</u>	<u>Standards</u>	<u>Results</u>	<u>Standards</u>
A	231	410	1.70	2.30
B	258	410	1.49	2.30
C	220	350	1.51	2.00

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

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3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Do Exhaust Controls Really Work?", dated August 14, 1967, which gives details of the above. At present, there are approximately 1.7 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation states that:

1. (1) "Ignition timings are being set at the Opel Plant on the engine assembly line similar to the procedure followed in our domestic production. Adequate quality control procedures are maintained to assure proper setting at this point, as well as at the end of the assembly line."
- (2) "In regard to the service tune-up at 1000 miles, we will continue the practice already in operation in regard to the Opel car which requires that the car be brought into the dealer at this point for adjustment of valve lash since this is a mechanical lash design, and at the same time ignition timing, idle speed and carburetor mixture will be adjusted to specifications."
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
3. The cost of the exhaust control system is included in the base price.
4. The warranty applicable to the exhaust control components is the same as for other similar components of the vehicle.
5. The control system shall be identified by name and spark timing and idle adjustment specifications on a decal prominently fixed in the engine compartment.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Adam Opel A. G. exhaust control system. The staff, therefore recommends adoption of Resolution 67-72.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-72

WHEREAS, Adam Opel A.G., a Division of General Motors Overseas Operations, on September 6, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Air Injection Reactor (A.I.R.) Exhaust Control System with major elements:

- (1) Rotary vane air pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Adam Opel A.G. Exhaust Control System as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement classes a(2), and a(3) pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105,

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Summary

1968 Exhaust Control Certification Documents
The Rover Company Limited
Exhaust Emission Control System

September 13, 1967

A. Introduction

On September 11, 1967, The Rover Company Limited submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control system. The documents include complete 50,000-mile emission durability test data.

B. The Exhaust Control System

The Rover Company Limited exhaust control system comprises:

- (1) Leaner carburetion, plus idle rich limiter
- (2) Retarded spark at idle
- (3) Fuel deflector between carburetor and intake manifold
- (4) Deceleration control, vacuum limiter type, plus dashpot on manual transmission cars
- (5) Recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Rover Company Limited proving-ground laboratory, which had previously been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000

miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

One car was run 50,000 miles and two cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 0.93 for hydrocarbons and 0.92 for carbon monoxide and are shown in Table I.

Table I

Certification Emission Data
Projected to 50,000 Miles

<u>Engine Displacement</u> <u>Cu.In.</u>	<u>Hydrocarbons PPM</u>		<u>Carbon Monoxide %</u>	
	<u>Results</u>	<u>Standards</u>	<u>Results</u>	<u>Standards</u>
121	271	350	1.59	2.00

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled, "Do Exhaust Controls Really Work?", dated August 14, 1967, which gives details of the above. At present, there are approximately 1.7 million vehicles successfully operating in California with exhaust control systems.

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A report is available from the Board entitled, "Do Exhaust Controls Really Work?", dated August 14, 1967, which gives details of the above. At present, there are approximately 1.7 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following in compliance with California requirements:

1. The applicant will perform the following:
 - (1) 100% inspection of spark timing at the end of the vehicle assembly line.
 - (2) The offer and promotion of a free spark timing and idle adjustment by the dealer at 1,000 miles, as well as adequate training of dealer service personnel to perform these adjustments.
 - (3) Notification to the owner that he is entitled to a free spark timing and idle adjustment by the dealer at approximately 1,000 miles.
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
3. The cost of the exhaust control system is estimated at between \$12 and \$18 per vehicle.
4. The applicant has made appropriate tests and statements for compliance with the California criteria:

(c) driving safety	(h) horsepower and fuel economy
(d) fail safe	(i) severe mountain driving
(e) backfire	(j) oxides of nitrogen and odor
(f) CO in passenger compartment	(k) driveability
(g) tall grass fire hazard	
5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle, which is 24,000 miles or 24 months.
6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a tag prominently fixed in the engine compartment.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Rover Company Limited exhaust control system. The staff, therefore, recommends adoption of Resolution 67-73.

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-73

WHEREAS, The Rover Company Limited, on September 11, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Rover Exhaust Emission Control System with major elements:

- (1) Leaner carburetion, plus idle rich limiter
- (2) Retarded spark at idle
- (3) Fuel deflector between carburetor and intake manifold
- (4) Deceleration control, vacuum limiter type, plus dashpot on manual transmission cars
- (5) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board,

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code, issue a certificate of approval for The Rover Company Limited Exhaust Control System as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class a(3) pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

9/13/67

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Summary

1968 Exhaust Control Certification Documents
Ford Motor Company of Britain
Thermactor Exhaust Emission Control System

September 13, 1967

A. Introduction

On September 11, 1967, Ford Motor Company of Britain submitted their Letter of Representation and complete documents for 1968 California certification on their exhaust control system. The documents include complete 50,000-mile emission durability test data.

B. The Exhaust Control System

The Ford Motor Company of Britain, Thermactor Exhaust Emission Control System comprises:

- (1) Rotary vane pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Deceleration control, vacuum limiter type
- (5) Recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Ford Motor Company of Britain proving-ground laboratory, which had previously been authorized by the Board as an approved laboratory.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

One car was run 50,000 miles and 3 cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 1.06 for hydrocarbons and .93 for carbon monoxide are shown in Table I.

Table I

Certification Emission Data
Projected to 50,000 Miles

<u>Engine Displacement</u> Cu. In.	<u>Hydrocarbons PPM</u>		<u>Carbon Monoxide %</u>	
	<u>Results</u>	<u>Standards</u>	<u>Results</u>	<u>Standards</u>
A	353	410	156	2.30

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

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2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Do Exhaust Controls Really Work?", dated August 14, 1967, which gives details of the above. At present, there are approximately 1.7 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following in compliance with California requirements:

1. The applicant will perform the following:
 - (1) 100% inspection of spark timing and idle adjustment at the end of the assembly line.
 - (2) The offer of a free spark timing and idle adjustment by the dealer at 1,000 miles.
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
3. The price of the Thermactor Exhaust Control System will be included in the basic price of the vehicle.
4. The applicant has made appropriate tests and statements for compliance with the California criteria;
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability
5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle, which is 12,000 miles or 12 months.
6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a tag prominently fixed in the engine compartment.

F.. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Ford Motor Company of Britain Exhaust Control System. The staff, therefore, recommends adoption of Resolution 67-74.

9/13/67

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State of California

Motor Vehicle Pollution Control Board

RESOLUTION 67-74

WHEREAS, Ford Motor Company of Britain on September 11, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Thermactor Exhaust Emission Control System with major elements:

- (1) Rotary vane air pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Ford Motor Company of Britain Exhaust Control System as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class a(2) pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

9/13/67

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Summary

1968 Exhaust Control Certification Documents
Rolls-Royce Limited
Exhaust Air Injection System

September 13, 1967

A. Introduction

On September 11, 1967, Rolls-Royce, Ltd., submitted their Letter of Representation and complete documents for 1968 California certification of their exhaust control system. The Letter of Representation was signed by S. H. Grylls, Director and Chief Engineer, and the documents include complete 50,000-mile emission durability test data.

B. The Exhaust Control System

The Rolls-Royce, Ltd., Exhaust Control System comprises:

- (1) Rotary vane pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

C. Test Procedures

Test procedures used were the "California Test Procedures and Criteria for Motor Vehicle Exhaust Emission Control" as amended by the Board September 29, 1965. These procedures provided for the emission testing of two fleets of vehicles at the Rolls-Royce, Ltd., proving-ground laboratory, with cross checks with two approved laboratories in England, the Motor Industry Research Association (MIRA) and the Associated Octel Co., Ltd.

One fleet was called the durability fleet and was composed of vehicles representing 50% of the manufacturer's sales of the particular models in California for the previous year. The purpose of the emission testing of the durability fleet was to prove the capability of the exhaust control system to control emissions for the life of the vehicle (100,000 miles). Assuming the emission deterioration of the exhaust control system is linear for 100,000 miles, emissions at 50,000 miles would represent the average emissions for the life of the vehicle. Therefore, the test procedure requires the durability fleet to be run for 50,000 miles with emission measurement at approximately each 4,000 miles. The 50,000 miles was accumulated on a driving route simulating metropolitan area driving with an average speed not exceeding 32 miles per hour. From the emission durability testing, a deterioration factor was determined.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

1. Emissions

One car was run 50,000 miles and 3 cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 0.91 for hydrocarbons and 1.11 for carbon monoxide and are shown in Table I.

Table I

Certification Emission Data
Projected to 50,000 Miles

<u>Engine Displacement</u> <u>Cu. In.</u>	<u>Hydrocarbons PPM</u>		<u>Carbon Monoxide %</u>	
	<u>Results</u>	<u>Standards</u>	<u>Results</u>	<u>Standards</u>
380	161	275	1.04	1.50

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

The second fleet of vehicles was called the certification emission data fleet. The purpose of this fleet of vehicles is to determine the emissions of each engine size at a low-mileage or "new" condition. Since deposit formation on the combustion chambers increases hydrocarbon emissions in the first 4,000 miles of use, these certification emission vehicles were driven 4,000 miles in order for the deposits to become stabilized. The certification vehicles of each engine size are representative of transmission and carburetor options.

D. Test Results

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One car was run 50,000 miles and 3 cars were run 4,000 miles to establish the emission data for certification of all the vehicles under 6,000 lb. GVW marketed in California by the applicant.

Average emissions for each engine size were adjusted to car life expectancy by the deterioration factors of 0.91 for hydrocarbons and 1.11 for carbon monoxide and are shown in Table I.

Table I

Certification Emission Data
Projected to 50,000 Miles

<u>Engine Displacement</u> <u>Cu. In.</u>	<u>Hydrocarbons PPM</u>		<u>Carbon Monoxide %</u>	
	<u>Results</u>	<u>Standards</u>	<u>Results</u>	<u>Standards</u>
380	161	275	1.04	1.50

These proving-ground data indicate that the system is capable of controlling the emissions of each engine within the standards for the life of the car.

Emission test results on approximately 1,000 vehicles equipped with exhaust controls in public use in California indicate:

1. These systems reduce emissions approximately 70% on hydrocarbons and 50% on carbon monoxide compared to the existing vehicle population.
2. Emissions on controlled cars with low mileages may range from 100 PPM to 500 PPM hydrocarbons, indicating that more attention is needed on delivering the car to the customer in a properly adjusted condition.
3. Deterioration trends indicate that average emissions of 1966 models go over the standards before 12,000 miles is reached.

It is for this reason that the Board has required additional assurance from the manufacturers that the vehicles are properly adjusted prior to delivery in California.

A report is available from the Board entitled "Do Exhaust Controls Really Work", dated August 14, 1967, which gives details of the above. At present, there are approximately 1.7 million vehicles successfully operating in California with exhaust control systems.

E. Letter of Representation

The applicant's Letter of Representation includes the following in compliance with California requirements:

1. The applicant will perform the following:
 - (1) Inspection of spark timing and idle adjustment for every vehicle with electronic diagnostic equipment at the end of the vehicle assembly line. During initial production of 1968 cars, each car will receive a complete California emission test.
 - (2) The offer and implementation, as a condition of warranty, of a free spark timing and idle adjustment by the dealer at 1,000 and 3,000 miles, as well as adequate training of dealer service personnel to perform these adjustments.
 - (3) Notification to the owner that he is entitled to a free spark timing and idle adjustment by the dealer at approximately 1,000 and 3,000 miles.
2. The applicant has submitted complete emission control specifications on each engine-transmission combination as required by the staff.
3. The cost of the exhaust control system will be included in the basic price of the vehicle.
4. The applicant has made appropriate tests and statements for compliance with the California criteria;
 - (c) driving safety
 - (d) fail safe
 - (e) backfire
 - (f) CO in passenger compartment
 - (g) tall grass fire hazard
 - (h) horsepower and fuel economy
 - (i) severe mountain driving
 - (j) oxides of nitrogen and odor
 - (k) driveability
5. The applicant states that the warranty applicable to the exhaust control components is the same as for other similar components of the vehicle, 3 years or 50,000 miles, which is conditional upon all maintenance, including tuneups, being performed at the recommended intervals.
6. The applicant states that the control system shall be identified by name and spark timing and idle adjustment specifications on a tag prominently fixed in the engine compartment.

F. Staff Recommendations

Based on the test data, information submitted by the applicant, and information gathered by the MVPCB, the staff recommends certifying, to comply with California 1968-model vehicle registration requirements, the Rolls-Royce, Ltd. Exhaust Control System. The staff, therefore, recommends adoption of Resolution 67-75.

9/13/67

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-75

WHEREAS, Rolls-Royce Limited, on September 11, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Rolls-Royce Air Injection System with major elements:

- (1) Rotary vane air pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Rolls-Royce Limited Exhaust Control System as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class f, pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

9/13/67

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

Resolution 67-76

WHEREAS, the Motor Vehicle Pollution Control Board has for the past four years utilized the services of two Vehicle Test Coordinators; and

WHEREAS, the salaries and other expenses of these Vehicle Test Coordinators are within the budget of the California Highway Patrol; and

WHEREAS, the Motor Vehicle Pollution Control Board has found the services of these two Vehicle Test Coordinators essential to its operations and functions; and

WHEREAS, the Motor Vehicle Pollution Control Board wishes to continue the present arrangement with the California Highway Patrol,

NOW, THEREFORE, BE IT RESOLVED that this Board authorizes the Executive Officer to execute an Inter-Agency Agreement with the California Highway Patrol in the amount of \$30,000 for 1967-68 fiscal year to continue with the services of the Vehicle Test Coordinators.

9-13-67

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State of California

MOTOR VEHICLE POLLUTION CONTROL BOARD

RESOLUTION 67-77

WHEREAS, Citroen Cars Corporation on September 11, 1967, submitted a Letter of Representation and all test data for 1968 California certification of an exhaust emission control system; and

WHEREAS, the system is described as the Citroen Cars Corporation Air Injection System with major elements:

- (1) Rotary vane air pump
- (2) Air injection into each exhaust port
- (3) Carburetor and distributor modifications
- (4) Recommended maintenance

WHEREAS, proving-ground test procedures established by the Board have demonstrated that the system is capable of controlling exhaust emissions within the Standards of the California Department of Public Health for the life of the vehicle; and

WHEREAS, based upon compliance with established procedures, the Board finds that the system meets the criteria published in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Section 2103; and

WHEREAS, the Board has found large percentages of vehicles with engine adjustments outside manufacturer's specifications as delivered to the customer and these adjustments have substantial effects on emissions; and

WHEREAS, Board policy requires for 1968 model certification a 100% inspection of spark timing on the assembly line and a free spark timing and idle adjustment by the dealer at 1,000 miles or equivalent; and the applicant has agreed to these requirements;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 3, commencing at Section 24378, Division 20 of the Health and Safety Code,

Issue a certificate of approval for the Citroen Cars Corporation Exhaust Control System as described above, to comply with California registration requirements for 1968-model vehicles only, with engines in displacement class (a3), pursuant to Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 2, Sections 2104 and 2105.

AND BE IT FURTHER RESOLVED, That

The continued effectiveness of this certification is dependent upon the capability of the system to maintain emissions below California Standards for the life of the vehicle in public use.

9/13/67

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