RESOLUTION INDEX Cont'd

Resolution No. 63-5 The Board has designated the Scott Research Laboratories, Inc., as an authorized control testing laboratory.

Resolution No. 63-6 The Board approved the State-B.R. Higbie contract number 6137 for $2,465.

Resolution No. 63-7 United Air Cleaner Division, Novo Industrial Corporation filed an application for certificate of approval for a crankcase emission control device on February 28, 1962.

Resolution No. 63-8 Humber, Ltd. filed an application for a certificate of approval for a crankcase emission control device on October 29, 1962.

Resolution No. 63-9 WHEREAS, every possible means must be used to effect a significant reduction in air pollution because of continued growth of Los Angeles and the State and, to give immediate attention to the need for mass rapid transit in Los Angeles County.

Resolution No. 63-10 Fiat S.P.A. filed an application for a certificate of approval for a crankcase emission control system on 1/22/63.

Resolution No. 63-11 Renault filed an application for a certificate of approval for a crankcase emission control system on 1/21/63.

Resolution No. 63-12 Resolution exempting foreign cars from provisions of Section 24390, Rover Motor Cars (England) Aston Martin (England) Lagonda (England).

Resolution No. 63-13 Norris-Thermador filed an application for a certificate of approval for a crankcase emission control system on 2/19/63.

Resolution No. 63-14 Resolution to exempt from Article 3 of this Chapter motor-driven cycles, implements of husbandry and.....

Resolution No. 63-15 The Board finds that the following laboratories are qualified and equipped to conduct testing of exhaust devices, Norris-Thermador Corporation, Universal Oxidation Processes, Inc., and Chromalloy Corporation.

Resolution No. 63-16 Oildex Corporation filed an application for a certificate of approval for a crankcase emission control system on 7/26/62.

Resolution No. 63-17 Scott Research Labs. Inc. has been authorized as a motor vehicle pollution control testing laboratory.

Resolution No. 63-18 United Air Cleaner, Div. of Novo Industrial Corporation filed an application for a certificate of approval for a crankcase emission control system on 12/3/62.

RESOLUTION INDEX Cont'd

Resolution 63-19 — The installation of crankcase emission control devices becomes mandatory on new cars sold in California which are in classes b,c,d,e, and f, effective April 26, 1963.

Resolution 63-20 — K & B Mfg. Corp. filed an application for a certificate of approval for a crankcase emission control system on November 26, 1962 which consists of a sealed split flow system.

not approved

Resolution 63-21 — Norris-Thermador Corp. filed an application for a certificate of approval for a crankcase emission control system on February 19, 1963.

Resolution 63-22 — Scott Research Labs. Inc. designated as an authorized motor vehicle pollution control testing laboratory.

Resolution 63-23 — Societe Industrielle de Mechanique et Carrosserie Automobile (Simca) filed an application for a certificate of approval for a crankcase emission control device.

Resolution 63-24 — Standard Motor Company, Limited filed an application for a certificate of approval for a crankcase emission control system.

Resolution 63-25 — Oildex Corporation filed an application for a certificate of approval for a crankcase emission control system on July 26, 1962.

Resolution 63-26 — United Air Cleaner Division of Novo Industrial Corporation, filed an application for a certificate of approval for a crankcase emission control system on December 3, 1962.

Resolution 63-27 — The Scott Research Labs., Inc. has been designated as an automotive testing facility as an authorized motor vehicle pollution control testing laboratory.

Resolution 63-28 — The MVPCB has found that the Motor Industry Research Association Lindley, Nr. Nuneaton, Warwickshire, England is adequately qualified and equipped to conduct testing of exhaust devices in accordance with the standards set by the State Department.

Resolution 63-29 — The following cars are exempted from provisions of Section 24390 of the Health and Safety Code: Aston Martin (England) and Lagonda (England), and White Motor Company.

Resolution 62-30 (Amendment) — No Resolution

AC Spark Plug Div. of General Motors Corp. has made application for extension of this approval to include motor vehicle classification (a).

Resolution 63-31 — Chrysler Corp. filed an application for a certificate of approval for a crankcase emission control system on July 5, 1962, which was amended to include additional control means, by letter, June 24, '63.

Resolution 63-32 — Scott Res. Labs. Inc., Perkasie, Pa, is adequately qualified and equipped to conduct testing of crankcase control devices.

RESOLUTION INDEX Cont'd

Resolution 63-33 Engineering evaluation show that Auto Union DKW 2 cycle motor vehicles meet State standards for crankcase emissions established by the State Dept. of P.H.

Resolution 63-34 Humber, Ltd, (Subs. of Rootes Motors, Ltd.) filed an application for a certificate of approval for a closed crankcase emission control system on May 6, 1963.

Resolution 63-35 The MVPCB has designated Scott Res. Labs. Inc. automotive testing facility as an authorized motor vehicle pollution control testing laboratory.

Resolution 63-36 Nissan Motor Co., Ltd., Takara-cho, Kanagawa-ku, Yokohama, Japan, filed an application for a certificate of approval for a crankcase emission control system.

Resolution 63-37 The MVPCB has designated several laboratories as "authorized" facilities in accordance with Sec. 24397 of the Health and Safety C

Resolution 63-38 Alfa Romeo S.P.A. 45 Via Gattamelata, Milano, Italy filed an application for a certificate of approval for a crankcase emission control system.

Resolution 63-39 Daimler-Benz Aktiengesellschaft, Stuttgart, Unterturkheim, Germany, filed an application for a certificate of approval for a crankcase emission control system.

Resolution 63-40 **Not used**

Resolution 63-41 **Not used**

Resolution 63-42 **Not used**

Resolution 63-43 The MVPCB approves said Interagency Agreement with the U of C at Los Angeles to a maximum of $2,500.00

Resolution 63-44 The MVPCB as a matter of procedural policy, for registration purposes, presume that all 1961-1962 and 1963 year model motor vehicles, registered in California, are equipped with crankcase control devices.

Resolution 63-45 White Motor Company, Cleveland, Ohio, filed an application for certification of approval for a crankcase control system.

Resolution 63-46 American Motors Corporation filed an application for a certificate of approval for an open crankcase emission control system on 9/10/63.

Resolution 63-47 Section 24379 (b) of the Health and Safety Code was amended effective September 20, 1963 to define engine modifications as a "device" subject to Board approval.

RESOLUTIONS INDEX Cont'd

Resolution 63-48 **Chicago Screw Company filed an application for a certificate of approval for an open crankcase emission control system on July 30, 1963, described as the Chicago Screw Company open crankcase, etc.....**

Resolution 63-49 Chevrolet Division of the General Motors Corporation, Detroit, Michigan, filed an application for a certificate of approval for a crankcase emission control system.

Resolution 63-49 (Amended) Chevrolet-Closed-Positive Engine Ventilation System for installation on 1964 and subsequent models of cars in vehicle classifications (b), (c), (d), (e), and (f).

Resolution 63-50 Humber Ltd., Stoke, Coventry, England filed an application for a certificate of approval for a crankcase emission control system on Sept. 30, 1963.

Resolution 63-51 Studebaker Corp., So. Bend, Indiana, filed an application for a certificate of approval for a crankcase emission control system on Oct. 31, 1963.

Resolution 63-52 Section 24385 (5) of the Health and Safety Code authorizes the MVPCB to exempt...motor vehicles for which certified devices are not available;

Resolution 63-53 Honda Motor Company Ltd., No. 5, 5-Chome, Yaesu, Chuo-ku, Tokyo, Japan fi filed an application for certification of approval for a crankcase emission control system which is described as follows.

Resolution 63-54 Installation of crankcase emission control devices becomes mandatory on new cars sold in California, which are in groups (b), (c), (d), (e) and (f), effective April 26, 1963, and group (a) effective February 1, 1964, in accordance with Section 24390 of the Health and Safety Code.

Resolution 63-55 Studebaker Corporation, So. Bend, Indiana, filed an application for certificate of approval for a crankcase emission control system November 18, 1963.

Resolution 63-56 General Motors (France) filed an application for a certificate of approval for a crankcase emission control system on November 12, 1963, which is now described as the General Motors (France) Closed Crankcase Emission Control System.

Resolution 63-57 **Not used**

Resolution 63-58 Section 24386 (5) of the Health and Safety Code authorizes the Motor Vehicle Pollution Control Board "to exempt from Article 3 of this Chapter designated classifications of motor vehicles for which certified devices are not available.

REPORT ON THE SMITH CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Smith crankcase emission control system. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installations), December 1962 revision. This report does not include evidence concerning compliance with the Board's criteria. Two methods of crankcase emission control are covered in the application.

Description of Device. Group (a)

(1)

The device is a diaphram type vacuum control valve which maintains constant depression in the crankcase. Ventilation air is controlled through a restriction in the oil filler cap.

The inlet to the valve is connected to the crankcase and the outlet to the intake manifold downstream of the carburetor. The valve embodies two spring loaded plungers. One of the plungers controls the flow from the crankcase, through an oil separator to the intake manifold. The other acts as a flame arrestor. Ventilation air is drawn into the system through a restricted oil filler cap.

Description of Device. Group (b) and alternative Group (a).

(2)

Group (b) is the same as Group (a) except for the addition of a tube from the crankcase to the clean side of the air cleaner and a sealed oil filler cap. This is the same as the so-called "closed system". Group (a) alternative method also includes the tube from the crankcase to the air cleaner and a sealed oil filler cap. Ventilation air is drawn from the clean side of the air cleaner.

According to the manufacturer, no maintenance will be necessary for at least 20,000 miles.

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 S. Smith & Sons Ltd. containing the manufacturers representation that the device, which will be manufactured for original equipment installation only, will comply with the Board's criteria.

Summary and Conclusions

1. The Smith's 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 will comply with the Board's criteria.

3. The staff recommends that the Smith's crankcase emission control system be approved for factory installation on motor vehicles in Class (a) and (b), as per the attached resolution. 1/17/63 jh

RESOLUTION 63-1

WHEREAS the Studebaker Corporation filed an application for a certificate of approval for the Avanti and Jet Thrust Engine Crankcase emission control system, which device is describes as follows:

An oil resistant rubber tube connecting the crankcase breather tube to the upstream side of the air cleaner, with a branch from this line leading to the intake manifold. The crankcase breather tube is sufficiently baffled to prevent oil pull over. The branch tube contains a fixed orifice and a floating nylon ball check valve which acts as a flame arrester. The oil filler caps are restricted to control the flow of ventilation air.

WHEREAS the device has been found to meet the crankcase emissions standards established by the California State Department of Public Health as published in Title 17 of the 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 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 for the Studebaker Avanti and Jet Thrust Engines Crankcase Ventilation system (including supercharged engines) for factory installation on 1963 models only of these automobiles in motor vehicle classification (d) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

1/17/63

RESOLUTION 63-2

WHEREAS S. Smith & Sons Ltd. filed an application for a certificate of approval for the Smith's crankcase emission control system, which device is described as follows:

A diaphram actuated valve connecting the crankcase to the intake manifold to maintain a constant depression in the crankcase.

Th valve embodies two plungers, both spring loaded, one to control blowby flow and the other as a flame arrestor. Two methods of crankcase emission control are covered in the application.

(1) A simple system utilizing the valve alone for Group "A" engines in which ventilation air is drawn through a restriction in the oil filler cap.

(2) A closed system for Group "B", and a closed system as an alternative for Group "A". In (2) a tube from the crankcase to the air cleaner is added, together with a sealed oil filler cap. Ventilation air is drawn from the clean side of the air cleaner.

WHEREAS the device has been found to meet the crankcase emissions standards established by the California 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 after considering 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 for the Smith's crankcase ventilation system for factory installations on 1963 and subsequent models of automobiles in motor vehicle classifications (a) and (b) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

1/17/63

REPORT ON THE GENERAL MOTORS (FRANCE) CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the General Motors (France) Closed Crankcase Emission Control System. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installations), December 1962 revision. The report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The device consists of two circuits. The primary circuit connects the rocker arm cover to the intake manifold through a T connection and an AC valve. The AC valve meters the flow of crankcase gases by means of the intake manifold vacuum. The secondary circuit connects the intake side of the carburetor through a calibrated orifice to one of the legs of the T connection situated above the AC valve. The secondary circuit is so mounted that it will handle any blowby gases not taken care of by the intake manifold circuit.

There are two flame arrestors. The AC valve itself and metal strips placed after the oil trap in the rocker arm cover. According to the manufacturer, this system only requires checking of the valve every 6,000 miles and carburetor every 18,000 miles. The oil filler cap is sealed.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that it does, in fact, meet the State standards by showing complete control of crankcase emissions at all these standard test conditions.

Compliance with Board Criteria

The Board has on file a letter from General Motors (France) containing the manufacturer's representation, that the device which will be manufactured for original equipment installation only, will comply with the Board's criteria.

Summary and Conclusions

1. The General Motors (France) AC crankcase 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 is produced for original equipment installation and will comply with the Board's criteria.

3. The staff recommends that the General Motors (France) AC Closed Crankcase Emission Control System be granted a certificate of approval for factory installation on cars in class (a) as per attached resolution.

1/17/63
jh

RESOLUTION 63-3

WHEREAS General Motors (France) filed an application for a certificate of approval for the AC Crankcase Ventilation System (France), which device is described as follows:

> A crankcase emission control device consisting of two circuits. A primary circuit connecting the rocker arm cover to the intake manifold through a T connection and AC valve. The AC valve meters the flow of crankcase gases utilizing the intake manifold vacuum. A secondary circuit connecting one side of the T to the intake side of the carburetor.
>
> There are two flame arrestors; the AC valve itself and a chamber containing metal strips mounted under the rocker arm cover just after the oil filter.

WHEREAS the device has been found to meet the crankcase emissions standards established by the California Department of Public Health as published in Title 17 of the 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 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 for the General Motors (France) AC Crankcase Ventilation Control System for installation on 1963 and subsequent models in motor vehicle classification (a) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

1/17/63

RESOLUTION 63-4

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

WHEREAS Chapter 3, Section 24398 authorizes the Motor Vehicle Pollution Control Board to contact for the use of, or the performance of tests or other services; 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 continue device testing and evaluation and since Scott has agreed to perform such work; and

WHEREAS the Board finds that necessary testing required in contract 7030 with Scott Research Laboratories, Inc. requires more time, it is necessary to extend the term for 90 days.

THEREFORE, BE IT RESOLVED, THAT this Board,

Approves the Scott Research Laboratories, Inc. State Contract No. 7030 amendment, dated November 17th, 1962, for an extension of 90 days as presented and directs the Executive Officer to sign same on behalf of the State Motor Vehicle Pollution Control Board.

1/17/63

RESOLUTION 63 - 5

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

WHEREAS Chapter 3, Section 24398 authorizes the Motor Vehicle Pollution Control Board to contract for the use of, or the performance of tests or other services; 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 continue device testing and evaluation and since Scott has agreed to perform such work, the Board accepts the proposed agreement to increase the contract amount by $8,000.00.

THEREFORE, BE IT RESOLVED, That this Board,

Approves the Scott Research Laboratories, Inc. State Contract No. 149 amended, dated January 17th, 1963 to increase the contract to a total of $23,000.00 as presented and directs the Executive Officer to sign on behalf of the State Motor Vehicle Pollution Control Board.

1/17/63

mj

REPORT ON HUMBER SUPER SNIPE CRANKCASE VENTILATION SYSTEM

Introduction

This report presents the evaluation of the Humber Super Snipe Crankcase Ventilation System, by the staff of the Motor Vehicle Pollution Control Board. The basis, for the evaluation, is the Alternate Testing Procedure For Evaluation of Devices To Control Crankcase Emissions (Factory Installations) December 1962 Revision. The report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The Humber Super Snipe Crankcase Ventilation System utilizes a spring-loaded crankcase ventilation valve made by AC Delco, Dunstable, England. AC Delco is a subsidiary of General Motors Corporation, USA, and manufacture the English version of the AC crankcase ventilation valve. The valve meters the flow of crankcase gases from the rocker arm cover through the AC Delco Valve into the intake manifold of the engine. Ventilation air is drawn in through the oil filler cap. The Humber Super Snipe is not imported into California at the present time, but there is the possibility that the Humber policy will change and some cars will shipped into the State. The Humber Crankcase Ventilation System was developed before the recent revision of the crankcase procedure approved in December 1962. For that reason, the system is recommended to be limited to 1963 cars only. Humber has been advised that beginning with the 1964 models they will have to conform with the December 1962 procedure requirements. The AC Delco Valve is equipped with a flame arrestor and has been checked by Scott Laboratories and found to do a satisfactory job. Prototype valves were checked for flow and were found to be similar to the flow curves supplied by AC Delco. Humber recommends that the valve be cleaned every 6,000 miles.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system does, in fact, meet the State's standards.

Compliance with Board Criteria

The Board has on file a letter from Humber, Ltd., containing the manufacturer's representation that the device which will be manufactured for original equipment installation only will comply with the Board's criteria.

Summary and Conclusions

1. The Humber Super Snipe Crankcase Ventilation 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 is produced for original equipment installation and will comply with the Board's criteria.

3. The staff recommends that the Humber Super Snipe Crankcase Ventilation System be granted a certificate of approval for factory installation on new cars in Class (b) as per the attached resolution limited to 1963 models only.

1/17/63
mj

RESOLUTION 63-6

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

WHEREAS it is necessary for the State to continue device testing and evaluation at the contract laboratory at the Los Angeles County Air Pollution Control District; and

WHEREAS due to the increased work load and progress of the Board's device testing program it is necessary to install another chassis dynamometer; and

WHEREAS the Executive Committee has approved this contract expenditure as recommended by the Budget Committee.

THEREFORE, BE IT RESOLVED, That this Board

Approves the State - B. R. Higbie contract number 6137 for $2,465, dated November 19, 1962.

jh
1/17/63

RESOLUTION 63-7

WHEREAS United Air Cleaner Division, Novo Industrial Corporation, filed an application for certificate of approval for a crankcase emission control device on February 28, 1962, which was amended to include additional controls by letter dated January 8, 1962, which system is now described as the United Closed Crankcase Ventilation System having the following specifications:

> The United Closed Crankcase Ventilation System is a modified version of the crankcase ventilation system approved by the Board through Resolution 62-8 on June 27, 1962 for Groups (b), (c), (d), (e) and (f). The modifications consists of an additional rubber tube and accessory fittings connecting the crankcase to the clean side of the air filter and a sealed oil filler cap to replace the normal breather inlet filler cap. That portion of the blowby which exceeds the capacity of the ventilation valve system is returned to the engine air intake system; and

WHEREAS the system has been found to meet the crankcase emission standard 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 after considering 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 United Air Cleaner Division, Novo Industrial Corporation for a closed crankcase ventilation system for factory installation (new cars) in Classifications, (b), (c), (d), (e) and (f) as designated by Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

1/17/63
mj

RESOLUTION 63-8

WHEREAS Humber, Ltd. filed an application for a certificate of approval for a crankcase emission control device on October 29, 1962, which device is described as a crankcase ventilator valve having the following specifications:

> A spring-loaded valve assembly actuated by a manifold vacuum which meters the flow of crankcase gases to the engine intake manifold, together with accessory parts; and

WHEREAS the device has been found to meet the crankcase emission 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 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 Humber, Ltd. for a Super Snipe Crankcase Ventilator System for factory installation on 1963 cars only in motor vehicle Classification (b) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

1/17/63
mj

EDMUND G. BROWN, Governor
STATE OF CALIFORNIA

63-9

MOTOR VEHICLE POLLUTION CONTROL BOARD

217 WEST FIRST STREET
LOS ANGELES 12, CALIFORNIA
MA 0-4850

January 18, 1963

WHEREAS, the State Legislature and the State Motor Vehicle Pollution Control Board, find the motor vehicle to be a major source of air pollution; and,

WHEREAS, the motor vehicle pollution problem is greatly aggravated in Los Angeles County because of 3.5 million registered motor vehicles; and,

WHEREAS, the Los Angeles County Board of Supervisors and the Los Angeles City Council is and always has been in the forefront of the battle to reduce air pollution; and,

WHEREAS, $25 million has been spent by Los Angeles County in the last 15 years to control stationary sources of air pollution; and,

WHEREAS, the Los Angeles County Board of Supervisors and the Los Angeles City Council in the interest of returning clean air to California, has co-operated with the State on the problem of controlling moving sources of air pollution by supporting legislation for the creation of the Motor Vehicle Pollution Control Board, and the program of this Board; and,

WHEREAS, every possible means must be used to effect a significant reduction in air pollution because of the continued growth of Los Angeles and the State; and,

WHEREAS, the installation of control devices on motor vehicles will reduce air pollution in Los Angeles County, the expected increase in population and number of motor vehicles in the county requires that prompt consideration be given to the development of other transportation facilities for Los Angeles County which will not add to the air pollution problem;

NOW, THEREFORE, BE IT RESOLVED by the State of California, Motor Vehicle Pollution Control Board, that the Los Angeles County Board of Supervisors, the Mayor of the City of Los Angeles, and the Los Angeles City Council, give immediate attention to the need for mass rapid transit in Los Angeles County to meet the needs of continued population growth, and further, that the Board of Supervisors, the Mayor of the City of Los Angeles, and the Los Angeles City Council determine means for the planning and financing of a mass rapid transit system as a further and direct way to alleviate the County's air pollution problem; and,

BE IT FURTHER RESOLVED that copies of this resolution be forwarded forthwith to the Honorable Edmund G. Brown, Governor of the State of California; Warren M. Dorn, Burton W. Chace, Ernest E. Debs, Frank G. Bonelli, and Kenneth Hahn, Los Angeles Board of Supervisors; and,

BE IT FURTHER RESOLVED that copies of this resolution be forwarded forthwith to Mayor Samuel W. Yorty, and Councilmen Harold A. Henry, C. Lemoine Blanchard, Thomas D. Shepherd, Rosalind Wyman, L. E. Timberlake, Ernani Bernardi, Gordon R. Hahn, Joe E. Hollingsworth, Karl E. Rundberg, John P. Cassidy, James Harvey Brown, John C. Holland, and John S. Gibson, Jr., Los Angeles City Council.

I, D. A. JENSEN, Executive Officer of the California Motor Vehicle Pollution Control Board, do hereby certify that the foregoing is a full, true and correct copy of a resolution which was adopted by the Board on January 17, 1963, and entered in the minutes of said Board.

D. A. JENSEN
Executive Officer
Motor Vehicle Pollution Control Board
State of California

REPORT ON THE FIAT CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This report presents the evaluation of the Fiat Crankcase Emission Control System by the staff of the Motor Vehicle Pollution Control Board. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installations), December 1962 revision. The report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The Fiat Crankcase Emission Control System consists of the following:

1. A synthetic rubber tube connecting the rocker arm cover with the clean side of the air cleaner. The filter element consists of paper set in plastic.

2. A plastic branch tube from the rubber tube through a variable flow valve into the intake manifold.

3. The variable flow valve is regulated by a cam installed on the carburetor throttle shaft. The valve is closed during idle and deceleration conditions.

4. All other engine openings are sealed, including a sealed oil filler cap.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system does, in fact, meet the State standards and the odor criterion. The system is presently applicable to Fiat models 500D, 1100D and the 1200 Cabriolet.

Maintenance

According to the manufacturer the entire system should be cleaned when the carburetor assembly is cleaned.

Compliance with Board Criteria

The Board has on file a letter from Fiat containing the manufacturer's representation that the system, which will be manufactured for original equipment installation only, will comply with the Board's criteria.

Summary and Conclusions

1. The Fiat 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 system is produced for original equipment installation only and will comply with the Board's criteria.

3. The staff recommends that the Fiat Crankcase Emission Control System be granted a certificate of approval for factory installation only on new Fiat cars in class (a) as per attached resolution.

3/13/63
eb

when operating efficiently.

2. The applicant has made representation that the system is produced for original equipment installation only and will comply with the Board's criteria.

3. The staff recommends that the Fiat Crankcase Emission Control System be granted a certificate of approval for factory installation only on new Fiat cars in class (a) as per attached resolution.

3/13/63
eb

REPORT ON THE RENAULT CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This report presents the evaluation of the Renault Crankcase Emission Control System by the staff of the Motor Vehicle Pollution Control Board. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installations), December 1962 revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The Renault Crankcase Emission Control System is completely sealed and consists of a synthetic rubber tube connecting the rocker arm cover and the clean side of the air cleaner. The tube terminates in the carburetor throat. There is a baffle type oil-air separator in the rocker arm cover and the filter element consists of pleated paper. The following cars are included in the application for certification:

Renault R8 - Type 1130
Renault Caravelle S - Type 1131

Renault claims that the device will last throughout the life of the car with normal maintenance, which consists of checking and cleaning the system every 20,000 miles.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system does, in fact, meet the State standards and odor criteria.

Compliance with Board Criteria

The Board has on file a letter from Renault containing the manufacturer's representation that the device, which will be manufactured for original equipment installation only, will comply with the Board's criteria.

Summary and Conclusions

1. The Renault Crankcase Emission Control Device 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 granted a certificate of approval for factory installation on new cars only in class (a) as per the attached resolution.

3/13/63
eb

RESOLUTION 63-10

WHEREAS Fiat S.P.A. filed an application for a certificate of approval for a crankcase emission control system on January 22, 1963, which consists of a sealed split flow system as follows:

1. A rubber tube connecting the rocker arm cover to the clean side of the air cleaner

2. A plastic branch tube from the rubber tube through a variable flow valve to the intake manifold

3. A variable flow valve regulated mechanically by a cam installed on the carburetor throttle shaft

4. A sealed oil filler cap

WHEREAS the device has been found to meet the crankcase emission 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 Fiat S.P.A. for a crankcase emission control system for factory installation on Fiat cars in motor vehicle classification (a) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

3/13/63

REPORT ON THE NORRIS-THERMADOR CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This report presents the evaluation of the Norris-Thermador crankcase emission control system by the staff of the Motor Vehicle Pollution Control Board. The basis for the evaluation is the "Alternate Testing Procedure for Evaluation of Devices" to control crankcase emissions (Factory Installations) December 1962 revision. The report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The device is a diaphragm type control valve sensitive to crankcase vacuum which maintains a depression in the crankcase. The amount of throttling, and consequently, the flow capacity, is affected by both crankcase and intake manifold pressures.

Methods of Installation

The applicant requests certification for two methods of installation:

1. As a positive ventilating system, the valve is installed between the crankcase and the intake manifold. The oil filler cap has a 3/16 inch fixed orifice to limit the amount of ventilation air pulled into the crankcase.

2. As a closed system the valve is installed as in (1). In addition, there is a tube, containing a restriction, between the rocker-arm cover and the clean side of the air cleaner. The oil filler cap is sealed.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system does, in fact, meet the State standards and the odor criterion.

Maintenance

According to the manufacturer, the valve should be replaced annually and the tube cleaned periodically.

Compliance with Board Criterion

The Board has on file a letter from Norris-Thermador containing the manufacturers' representation that the system which will be manufactured for original equipment installation only, will comply with the Board's criteria.

Summary and Conclusions

1. The Norris-Thermador 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 system will be offered for original equipment installation only and will comply with the Board's criteria.

3. The staff recommends that the Norris-Thermador crankcase emission control system be granted a certificate of approval for factory installation on new cars only in classifications (b), (c), (d), (e), and (f) as per attached resolution.

RESOLUTION 63-11

WHEREAS Renault filed an application for a certificate of approval for a crankcase emission control system on January 21, 1963, which system is described as follows:

> A completely sealed system, consisting of a tube from the rocker arm cover to the clean side of the air cleaner, terminating in the carburetor throat.

WHEREAS the system has been found to meet the crankcase emission 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 after considering manufacturer's representations, the Board finds that the system 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 Regie Nationale Des Usines Renault for a crankcase emission control system for factory installation on Renault automobiles in classification (a) as designated by Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

3/13/63

RESOLUTION 63-12

WHEREAS the installation of crankcase emission control devices becomes mandatory on new cars sold in California which are in classes b, c, d, e, and f, effective April 26, 1963, in accordance with section 24390 of the Health and Safety Code; and

WHEREAS certain foreign car manufacturers have been delayed in engineering a specific device for factory installation on their cars; and

WHEREAS executives of these companies have supplied the Board with written assurance that engineering is now under way and that approved devices will be installed on their cars sold in California by August 1, 1963; and

WHEREAS the number of cars involved are negligible in number;

THEREFORE, BE IT RESOLVED, that:

1. The following cars are exempted from provisions of section 24390 of the Health and Safety Code under authority granted the Motor Vehicle Pollution Control Board under section 24386(5) of the Health and Safety Code:

   a) Rover Motor Cars (England)
   b) Aston Martin (England)
   c) Lagonda (England)

2. Such exemption shall terminate on July 31, 1963.

3/13/63

RESOLUTION 63-13

WHEREAS Norris-Thermador filed an application for a certificate of approval for a crankcase emission control system, on February 19, 1963, which consists of a diaphragm type control valve sensitive to crankcase vacuum, which maintains a depression in the crankcase. There are two methods of installation as follows:

1. Between the crankcase and intake manifold with a restricted oil filler cap.

2. Between the crankcase and intake manifold with a sealed oil filler cap, an additional tube, containing a restriction, between the rocker-arm cover and the clean side of the air cleaner.

WHEREAS the device has been found to meet the crankcase emission 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 Norris-Thermador for a crankcase emission control system for factory installation on new cars only in motor vehicle classifications (b), (c), (d), (e), and (f) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

3/13/63
mj

RESOLUTION 63-14 (Amendment)

WHEREAS motor driven cycles have previously been exempted by the Motor Vehicle Pollution Control Board on January 13, 1963, under Resolution 63-14, and,

WHEREAS there are no crankcase devices available for motor cycles greater than 15 H.P.,

NOW THEREFORE BE IT RESOLVED that the Motor Vehicle Pollution Control Board, under authority granted in Section 24386(5) of the Health and Safety Code, exempt all motor cycles from Article 3, Chapter 3, Division 20 of the Health and Safety Code.

11/19/63
vj

REPORT ON EXHAUST TESTING LABORATORIES

Introduction

This is a report on the staff evaluation of the following exhaust testing laboratories:

Norris-Thermador Corporation
Product Development Laboratory
2017 Camfield Avenue
Los Angeles 22, California

Universal Oxidation Processes, Inc.
526 E. Twelfth Street
Los Angeles 15, California

Chromalloy Corporation
12536 Chadron Avenue
Hawthorne, California

Facilities

Facilities of the subject laboratories, including equipment, personnel and procedures followed in exhaust testing conform to those of laboratories already approved by the Board. Personnel connected with each of these laboratories have had active experience in connection with motor vehicle pollution control for periods ranging between 4 and 10 years.

Cross-checking of Results Between Laboratories

Cross-checks have, from time to time, been made between various of the subject laboratories and approved laboratories. While the nature of the tests and vehicles are such that some differences occur on such cross-checks, the staff does not believe that at the present time, any one of these laboratories would show a significant systematic difference from the others. However, it is understood that cross-checks, from time to time, between two or more of the approved laboratories may be necessary.

Staff Conclusions

1. The staff is satisfied that the subject laboratories are adequately qualified and equipped to make exhaust emission tests of vehicles and devices in accordance with the Board's procedure.

2. The staff recommends that the subject laboratories be approved as vehicle and device exhaust test laboratories.

3/13/63
MPS:jh

RESOLUTION 63-14

WHEREAS Section 24386(5) of the Health and Safety Code authorizes the Motor Vehicle Pollution Control Board "to exempt from Article 3 of this Chapter....motor-driven cycles, implements of husbandry..." and,

WHEREAS Legislative intent, as expressed in that Section, requires implementation by Board action,

NOW THEREFORE BE IT RESOLVED that the Motor Vehicle Pollution Control Board, under authority granted in Section 24386(5) of the Health and Safety Code, exempts motor-driven cycles as defined in Section 405 of the Vehicle Code and implements of husbandry as defined in Section 350 of the Vehicle Code from Article 3, Chapter 3, Division 20 of the Health and Safety Code.

3/13/63
vj

BOARD RESOLUTION 63-15

WHEREAS Chapter 3, 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 the Board finds that the following laboratories:

Norris-Thermador Corporation
Product Development Laboratory
2017 Camfield Avenue
Los Angeles 22, California

Universal Oxidation Processes, Inc.
526 E. Twelfth Street
Los Angeles 15, California

Chromalloy Corporation
12536 Chadron Avenue
Hawthorne, California

are adequately qualified and equipped to conduct testing of exhaust devices in accordance with the standards set by the State Department under Section 426.5 and the criteria established by the Board;

THEREFORE, BE IT RESOLVED, That the Board hereby designates each of the above named laboratories as an authorized motor vehicle pollution control testing laboratory for exhaust control devices.

3/13/63
MPS:jh

REPORT ON OILDEX CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This report presents the evaluation of the Oildex Closed Crankcase Emission Control System by the staff of the Motor Vehicle Pollution Control Board. The bases of evaluation are the requirements set forth in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Sections 2000 to 2004. Since approval is sought for used car installations, the report deals with both the California Crankcase Emissions Standard compliance with the Board criteria, including odor criterion. The basis of the evaluation is the California Procedure for Testing Motor Vehicle Crankcase Emissions, as amended June 5, 1963.

Description of System

The Oildex Closed Crankcase Emission Control System consists of two conduits between the crankcase and the engine air induction system. Flow in the line to the intake manifold is regulated by a spring-loaded variable orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through the second line to the clean side of the air cleaner. Accessory parts include a cotton filter and condensate trap in the manifold branch, a flame arresting screen in the air cleaner branch, a sealed oil filler cap, and other fittings. Oildex has one basic unit and three metering valves to cover five engine size groups.

The system is primarily proposed for use, and historically has been used in connection with fleet operations. Kits are already catalogued for 213 separate passenger car applications, and 105 for trucks.

Compliance with Crankcase Emission Standards

The Oildex Closed Crankcase Emission Control System complies with the standards of the California Department of Public Health when properly installed and maintained. The staff has data from an authorized testing laboratory for ten cars in five engine size classes operated for more than 12,000 miles with the closed system in place. From these data it can be inferred that the closed system will provide complete control of crankcase emissions.

Compliance with Board Criteria

The Board criteria are stated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2003, as follows:

Every device controlling crankcase emissions from motor vehicles receiving a certificate of approval from the Motor Vehicle Pollution Control Board shall meet the following criteria:

A. Be so designed as to have no adverse effect on engine operation or performance.

The manifold branch of the Oildex system has been in production for many years and many thousands of installations are in current use in California without reported adverse effect. It is the staff judgment

that the valve branch of this system complies with this criterion. The tube connection to the air cleaner introduces the additional possibility of crankcase explosions via flame propogation through the tube. The applicant has provided a flame-arresting screen to protect against this possibility. This commercially available flame arrestor has been given extensive tests and years of operation by the Chrysler Corporation. Based on this evidence, the staff concludes that the tube portion of the system will operate without adverse effects on the engine due to crankcase explosion.

The applicant has submitted adequate service life test data on the tube to air cleaner portion of the system, and after 12,000 miles of driving on 10 cars no significant excess pressure built up in the crankcase system.

B. Operate in a safe manner.

It is the staff conclusion that the device operates in a safe manner.

C. Have sufficient durability so as to operate efficiently for at least 12,000 miles with normal maintenance.

The data submitted by the applicant indicates that the valve branch of the system will operate effectively for 12,000 miles with normal maintenance. The cotton filter element should be inspected every 12,000 miles and changed, if necessary. The trap should be emptied when 2/3 full, of liquid has accumulated therein. Unless most trips are of short duration, at low speeds, and in cold climates, filling of the trap with liquid, primarily water, will occur infrequently, if at all. If it does occur, this liquid, without the trap, would have drained back into the crankcase.

The metering valve should be inspected and cleaned, if necessary, at 12,000-mile intervals. Oildex recommends that the valve not be replaced but that it be cleaned. The flame arrestor should be checked annually and cleaned or replaced as necessary. The rubber tube connecting the various components is ozone and oil resistant.

The staff concludes that the system will effect a high degree of crankcase emission control for at least 12,000 miles with normal maintenance.

D. Operate in such a manner so as not to create excessive heat, noise, or odor beyond the standard characteristic of the motor vehicle without such a device.

The staff concludes that this criterion is met, particularly inasmuch as there are no openings in the device whereby odor may be caused.

E. The purchase or cost of installation of such device shall not constitute an undue cost burden.

The applicant states that closed system kits will retail for $25 to $27 net to the consumer, plus the cost of installation. Although this is substantially higher than competing systems, the staff believes it is not an undue cost burden, since customers have the option of purchasing less expensive systems. In general, this system will only be

that the valve branch of this system complies with this criterion. The tube connection to the air cleaner introduces the additional possibility of crankcase explosions via flame propogation through the tube. The applicant has provided a flame-arresting screen to protect against this possibility. This commercially available flame arrestor has been given extensive tests and years of operation by the Chrysler Corporation. Based on this evidence, the staff concludes that the tube portion of the system will operate without adverse effects on the engine due to crankcase explosion.

The applicant has submitted adequate service life test data on the tube to air cleaner portion of the system, and after 12,000 miles of driving on 10 cars no significant excess pressure built up in the crankcase system.

B. Operate in a safe manner.

It is the staff conclusion that the device operates in a safe manner.

C. Have sufficient durability so as to operate efficiently for at least 12,000 miles with normal maintenance.

The data submitted by the applicant indicates that the valve branch of the system will operate effectively for 12,000 miles with normal maintenance. The cotton filter element should be inspected every 12,000 miles and changed, if necessary. The trap should be emptied when 2/3 full, of liquid has accumulated therein. Unless most trips are of short duration, at low speeds, and in cold climates, filling of the trap with liquid, primarily water, will occur infrequently, if at all. If it does occur, this liquid, without the trap, would have drained back into the crankcase.

The metering valve should be inspected and cleaned, if necessary, at 12,000-mile intervals. Oildex recommends that the valve not be replaced but that it be cleaned. The flame arrestor should be checked annually and cleaned or replaced as necessary. The rubber tube connecting the various components is ozone and oil resistant.

The staff concludes that the system will effect a high degree of crankcase emission control for at least 12,000 miles with normal maintenance.

D. Operate in such a manner so as not to create excessive heat, noise, or odor beyond the standard characteristic of the motor vehicle without such a device.

The staff concludes that this criterion is met, particularly inasmuch as there are no openings in the device whereby odor may be caused.

E. The purchase or cost of installation of such device shall not constitute an undue cost burden.

The applicant states that closed system kits will retail for $25 to $27 net to the consumer, plus the cost of installation. Although this is substantially higher than competing systems, the staff believes it is not an undue cost burden, since customers have the option of purchasing less expensive systems. In general, this system will only be

purchased for beneficial purposes other than, and in addition to, air pollution control (See Section V).

F. Installation of such device shall not create or contribute to a noxious or toxic effect in the ambient air.

The system complies with the air/fuel ratio change limits of 1% rich to 4% lean when new and, at least, up to 12,000 miles of service. Plugging of the valve branch would lead to enrichment of the mixture beyond the 1% limit. Therefore, adequate maintenance is required to assure continued compliance with this criterion.

Advisory Group Recommendation

On October 17, 1963, six members of the staff's Technical Advisory Group considered the subject system. The group unanimously recommended that the Oildex Closed Crankcase Emission Control System be approved for used cars.

With regard to additional functions of this device, it was recognized by the Advisory Group that some competent fleet operators felt that other purposes of the device fully justified its use. A total of about 175,000 units were reported to be presently in use nation-wide.

Summary and Staff Recommendation

1. The Oildex Closed Crankcase Emission Control System meets the crankcase emissions standard of the California Department of Public Health. The odor criterion is also met.

2. The system complies with the Board's criteria with the following exception:

There are a number of potentially adverse effects on engine operation and performance, particularly those which may occur if maintenance is neglected with high blowby rate vehicles. As with previously approved systems, affirmative action implies reliance on the abilities and judgment of the manufacturer to adapt the system to a variety of vehicles. Errors in application design can result in adverse engine effects. It is the judgment of the staff that the basic system can operate with minimal risk of adverse engine effects.

3. Proper maintenance of the system is essential to prevent adverse engine effects and continued compliance with Board criteria.

The staff recommends certification of the Oildex Closed Crankcase Emission Control System for used cars for classifications (b), (c), (d), (e), and (f) as defined in Section 2004.

mj
11/19/63

RESOLUTION 63-16

WHEREAS Oildex Corporation filed an application for a certificate of approval for a crankcase emission control system on July 26, 1962 and amended by letters dated January 14, 1963 and March 6, 1963; which system is described as the Oildex Closed Crankcase Emission Control System having the following specifications:

> The system consists of two conduits between the vehicle crankcase and the engine air induction system. Flow in the line to the intake manifold is regulated by a spring-loaded variable orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a second tube connecting the crankcase to the clean side of the air cleaner. Accessory parts include a cotton filter and condensate trap in the manifold branch, a flame arresting screen in the tube to air cleaner branch, a sealed oil filler cap, and other fittings.

WHEREAS the system has been found to meet the crankcase emission 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 demonstration of compliance with established test procedures, 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, Sub-Chapter 1, Article 1, Section 2003.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the Oildex Closed Crankcase Emission Control System for used motor vehicles in classifications (b), (c), (d), (e), and (f), as designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

mj
11/19/63

RESOLUTION 63-17

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

WHEREAS Chapter 3, Section 24398 authorizes the Motor Vehicle Pollution Control Board to contract for the use of, or the performance of tests or other services; 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 maintenance as a factor in control of motor vehicle emissions and since Scott has agreed to perform such work, the Board accepts the proposed contract.

THEREFORE, BE IT RESOLVED, That this Board,

Approves the Scott Research Laboratories, Inc. - State contract dated March 13, 1963, for a maximum amount of $50,000 as presented and directs the Executive Officer to sign the contract on behalf of the State Motor Vehicle Pollution Control Board.

EPG:jg/mj
3/13/63

RESOLUTION 63-18

WHEREAS United Air Cleaner, Division of Novo Industrial Corporation, filed an application for a certificate of approval for a crankcase emission control system on December 3, 1962; which system is described as the United "Closed" crankcase ventilation system having the following specifications:

> The system consists of two conduits between the vehicle crankcase and the engine air induction system. Flow in the branch to the intake manifold is regulated by a spring-loaded variable-orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a tube connecting the crankcase to the clean side of the air cleaner. Accessory parts include a sealed oil filler cap and a flame arresting screen at the air cleaner.

WHEREAS the system has been found to meet the crankcase emission standard 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 demonstration of compliance with established test procedures, 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 United "Closed" crankcase ventilation system for motor vehicles in classifications b,c,d,e,f, as designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

3/13/63
mj

REPORT ON UNITED CLOSED CRANKCASE VENTILATION SYSTEM

I. Introduction

This report presents the evaluation of the United Closed Crankcase Ventilation System by the staff of the Motor Vehicle Pollution Control Board. The bases of evaluation are the requirements set forth in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Sections 2000 to 2004. Since approval is sought for used car installations, the report deals with both the California Crankcase Emissions Standard and compliance with the Board criteria.

II. Description of System

The United Closed Crankcase Ventilation System consists of two conduits between the vehicle crankcase and the engine air induction system. Flow in the branch to the intake manifold is regulated by a spring-loaded variable-orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a tube connecting the crankcase to the clean side of the air cleaner. Accessory parts include a sealed oil filler cap and a flame arresting screen at the air cleaner, and fittings.

III. Compliance with Crankcase Emissions Standard

The United Closed Crankcase Ventilation System complies with the standards of the California Department of Public Health when properly installed and maintained. The staff has data from an authorized laboratory on file for eight cars in four engine classes operated for 12,000 miles with only the manifold branch of the system. These data show that the valve has sufficient capacity to meet the standards; the addition of the tube can be expected to provide almost complete control of crankcase emissions.

IV. Compliance with Board criteria

The Board criteria are stated in Title 13, Chapter 3, Subchapter 1, Article 1, Section 2003, as follows:

> Every device controlling crankcase emissions from motor vehicles receiving a certificate of approval from the Motor Vehicle Pollution Control Board shall meet the following criteria:
>
> A. Be so designed as to have no adverse effect on engine operation or performance.
>
> Potential adverse effects of the valve branch of the system which have been considered include the following:
>
> 1. Effects on carburetion.
> 2. Intake valve deposits.
> 3. Oil carry over.
> 4. Possibility of crankcase explosions.
>
> The applicant has submitted test data showing that the valve provides adequate backfire protection. The other effects are common to all scheduled-flow valve systems. It is the staff judgment that the valve portion of this system complies with this criterion.

The tube connection to the air cleaner introduces the additional possibility of crankcase explosions via flame propagation through the tube. The applicant has chosen to provide a flame-arresting screen to protect against this possibility. In this respect, the system differs from the AC closed system, which was approved last December. The flame screen provides an opportunity for deposit accumulations which could, over a period of time, restrict flow to the point that crankcase pressures could build up with potential adverse effects on the engine. The size of the tubing is also an important design variable in relation to crankcase pressure. In the judgment of the staff and its Advisory Group, the proposed tube system will operate without adverse effect. Since the Board's requirements were changed only in December, the applicant has not had time to complete service life testing of the tube component. Therefore, the staff proposes to request additional service life tests of the complete system, to be reported by November 1, 1963. At that time the test data will be reviewed by the staff and if any design errors are then evident, corrective action could be taken or the approval could be revoked.

B. Operate in a safe manner.

It is the staff opinion that the device operates in a safe manner.

C. Have sufficient durability so as to operate efficiently for at least 12,000 miles with normal maintenance.

The data submitted by the applicant shows that, typically, the valve will operate effectively for at least 12,000 miles with no maintenance. The manufacturer recommends an annual check. It is the staff opinion that the system will effect a high degree of crankcase emission control for at least 12,000 miles with no maintenance.

D. Operate in such a manner so as not to create excessive heat, noise, or odor beyond the standard characteristic of the motor vehicle without such a device.

There is no reason to expect heat or noise problems to be caused by the system. With some vehicles under some conditions positive crankcase pressures will occur resulting in escape of blowby gases through crankcase leaks. No deliberate venting to the atmosphere occurs, however, and it is the staff opinion that the odor criterion is met.

E. The purchase or cost of installation of such device shall not constitute an undue cost burden.

The installed cost of the system will be competitive with previously approved systems.

F. Installation of such device shall not create or contribute to a noxious or toxic effect in the ambient air.

The system complies with the air/fuel ratio change limits of 1% rich to 4% lean. Plugging of the valve would lead to enrichment of the mixture beyond the 1% limit. Therefore, adequate maintenance is required to assure continued compliance with this criterion.

V. Advisory Group recommendation

On February 27, 1963, five members of the staff's Technical Advisory Group on Crankcase Emissions met to consider the subject system. After discussion, the Group unanimously recommended approval.

VI. Summary and Staff Recommendation

1. The United Closed Crankcase Ventilation System meets the crankcase emissions standard of the California Department of Public Health.

2. The system complies with the Board's criteria with the following exception:

   The report lists a number of potentially adverse effects on engine operation and performance. As with previously approved systems, affirmative action implies considerable reliance on the abilities and judgment of the manufacturer to adapt the system to a variety of vehicles. Errors in design can result in adverse engine effects. It is the judgment of the staff that the basic system can operate with minimal risk of adverse engine effects.

3. Proper maintenance of the system is essential to prevent adverse engine effects and continued compliance with the Board's air/fuel ratio change limits.

4. The staff has requested data from additional service life testing of the tube components of the system for review by November 1, 1963, and the applicant has agreed to supply this data.

5. With the understanding that additional test data will be submitted, the staff recommends certification of the United Closed Crankcase System for classifications b, c, d, e and f, as defined in Section 2004.

3/13/63
GCH:jh

RESOLUTION 63-19

WHEREAS the installation of crankcase emission control devices becomes mandatory on new cars sold in California which are in classes b,c,d,e, and f, effective April 26, 1963, in accordance with Section 24390 of the Health and Safety Code; and

WHEREAS certain car manufacturers have been delayed in engineering a specific device for factory installation on their cars; and

WHEREAS executives of these companies have supplied the Board with written assurance that engineering is now under way and that approved devices will be installed on their cars sold in California by August 1, 1963; and

WHEREAS the number of cars involved are negligible in number;

THEREFORE, BE IT RESOLVED, that:

1. The following cars are exempted from provisions of Section 24390 of the Health and Safety Code under authority granted the Motor Vehicle Pollution Control Board under Section 24386(5) of the Health and Safety Code:

    a) Mercedes - Benz
    b) The White Motor Company

2. Such exemption shall terminate on July 31, 1963.

4/10/63

not approved

REPORT ON THE K & B CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This report presents the evaluation of the K & B crankcase emission control system, by the staff of the Motor Vehicle Pollution Control Board. The basis of the evaluation is the Alternate Testing Procedure For The 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

The K & B crankcase control system utilizes an exterior manually adjusted variable size orifice to control the flow of crankcase gases into the intake manifold. The system is sealed but pulls in a small amount of ventilation air through the area around the distributor well shaft. To take care of the emissions beyond the capacity of the orifice, a secondary circuit from the crankcase or rocker arm cover to the inside of the air cleaner is employed. A nylon ball check valve opens to relieve crankcase pressure into the air cleaner. Vacuum in the crankcase is adjusted manually through the variable orifice to about 1/3 of the idle intake manifold vacuum. This amounts to 5 inches to 7 inches of mercury crankcase vacuum at idle. On long decelerations the crankcase vacuum rises to about 13 inches of mercury and on modest decelerations to about 10 inches of mercury. Rubber hoses are used to connect the various component parts of the system.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system does, in fact, meet the State standards and odor criteria.

Maintenance

Based on considerable experience with various fleets and private passenger cars, the applicant has stated that the system will efficiently control crankcase emissions for at least 12,000 miles. The system can be cleaned by removing the component parts from the automobile.

Compliance with Board's Criteria

The Board has on file a letter from K & B Manufacturing Corporation 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 will not be offered as replacement equipment except on the same new vehicles upon which was originally installed at the factory.

Summary and Conclusions

1. The K & B 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 system, produced for original equipment installation only, will comply with the Board's criteria.

3. The staff recommends that the K & B crankcase emission control system be granted a certificate of approval for factory installation on new automobiles in Classes (a), (b), (c), (d), (e), and (f) as per the attached resolution.

JRS:mj
4/10/63

Summary and Conclusions

1. The K & B 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 system, produced for original equipment installation only, will comply with the Board's criteria.

3. The staff recommends that the K & B crankcase emission control system be granted a certificate of approval for factory installation on new automobiles in Classes (a), (b), (c), (d), (e), and (f) as per the attached resolution.

JRS:mj
4/10/63

RESOLUTION 63-20

WHEREAS K & B Manufacturing Corporation filed an application for a certificate of approval for a crankcase emission control system on November 26, 1962, which consists of a sealed split flow system as follows:

1. A rubber tube connecting the rocker arm cover to the intake manifold with a manually adjusted orifice.

2. A rubber tube connecting the rocker arm cover and the clean side of the air cleaner.

3. A nylon check valve which controls the flow to the air cleaner.

4. A sealed oil filler cap.

WHEREAS the device has been found to meet the crankcase emission 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 K & B Manufacturing Corporation for a crankcase emission control system for factory installation on new automobiles in motor vehicle classifications, (a), (b), (c), (d), (e), and (f) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

JRS:mj
4/10/63

MOTOR VEHICLE POLLUTION CONTROL BOARD

REPORT ON NORRIS-THERMADOR CRANKCASE EMISSION CONTROL SYSTEM

April 10, 1963

I. Introduction

This report presents the evaluation of the Norris-Thermador Crankcase Emission Control System by the staff of the Motor Vehicle Pollution Control Board. The bases of evaluation are the requirements set forth in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Sections 2000 to 2004. Since approval is sought for used car installations, the report deals with both the California Crankcase Emission Standard and compliance with the Board's criteria.

II. Description of system

The Norris-Thermador system consists of a spring-loaded, diaphragm-type regulating valve assembly which, actuated by manifold and crankcase vacuum, meters the flow of crankcase gases to the intake manifold. Filtered ventilation air is admitted to the crankcase through an oil filler cap containing a flow-restricting orifice. Accessory parts include hose, clamps, fittings, adapters, and carburetor spacer plates for introduction of gases into the intake manifold.

Materials of contruction -

Mild steel stampings with corrosion-resistant protective coating, or
Die castings of zinc or aluminum alloy.
Stainless steel spring.
Buna N coated nylon twill diaphragm (SAE specification AMS 3274C).
High capacity, high efficiency filter.
Hydrocarbon resistant, ozone resistant rubber tubing
Phenolic resin spacer plates.

Application is made for engine classification b, c, d, e, and f. The same valve is proposed for all systems, but accessory parts must be designed for compatibility with each make and model within a class.

III. Principle of operation

The flow control valve modulates in response to the pressures in the intake manifold and in the crankcase to maintain a slight vacuum in the crankcase. The valve thus adjusts to large variations in blowby rates, while crankcase ventilation air flow remains relatively constant.

IV. Compliance with crankcase emissions standard

The Norris-Thermador system complies with the standards of the California Department of Public Health. The applicant has submitted test data from an authorized laboratory for two vehicles in each engine class showing complete control of blowby emissions at the test conditions. Further evidence of compliance after 12,000 miles service is given below in the section dealing with the odor criterion.

V. Compliance with Board criteria

The Board criteria are stated in Section 2003, as follows:

Every device controlling crankcase emissions from motor vehicles receiving a certificate of approval from the Motor Vehicle Pollution Control Board shall meet the following criteria:

A. Be so designed as to have no adverse effect on engine operation or performance.

Potential adverse effects which have been considered include the following:

1. Rough idling

The device introduces a maximum of slightly more than one cfm of ventilation air at idle. No difficulty in adjustment of idle mixture to compensate for this amount of air has been experienced.

2. Oil carryover

Oil consumption records were maintained during the durability testing and no significant change was observed following installation of the device. Maximum ventilation air at heavy loads and high speeds is restricted by the oil filler cap orifice to flow rates less than that experienced with conventional draft tube systems, so no undue oil carryover is anticipated.

3. Crankcase explosions

The applicant has submitted test data reporting deliberate attempts to induce crankcase explosions under abnormally severe conditions. In no case was there evidence of flame propagation through the valve. The durability testing also gave no evidence of crankcase explosion hazard during 200,000 vehicle-miles of operation.

4. Adequacy of ventilation

It is the judgment of the staff that the system provides better engine ventilation than the conventional draft tube system.

5. Increased engine wear

This possibility was given particular attention because this system normally operates with a vacuum of a few inches of water in the crankcase. This creates the possibility of unfiltered air being drawn into the crankcase through leaks, oil seals, and other small openings. The flow characteristics of the valve were such that at some engine loads the crankcase vacuum could be as high as 10 inches of water. The Advisory Group requested the staff to seek additional advice from the Automobile Manufacturers Association on this point.

The question was submitted to the Crankcase Ventilation Task Group, who in turn reported that in the Group's opinion no blanket statements can be made as to permissible crankcase vacuums for all engines. It was stated that the amount of negative pressure any engine can tolerate is dictated by its inherent design. Oral discussions with some of the Group members indicated that it was a majority judgment that ten inches of vacuum would be deleterious to some engines. This judgment was accepted by the staff and the information was referred to the applicant.

The applicant thereupon submitted an amended application, dated March 27, 1963, for a redesigned valve reducing the peak crankcase vacuums to 5 to 6 inches of water, without impairment of its flow capacity. Evidence to support this claim was also submitted.

It is the staff judgment that the redesigned valve is now acceptable for general application without undue risk of increased engine wear.

B. Operate in a safe manner,

It is the staff opinion that the device operates in a safe manner.

C. Have sufficient durability so as to operate efficiently for at least 12,000 miles with normal maintenance.

The applicant has reported durability tests on fifteen vehicles for a total of approximately 200,000 miles. Eleven of the vehicles have exceeded twelve thousand miles of service with no maintenance, the maximum mileage being 39,000. No instances of significant change in the flow characteristics of the valve were observed.

The ultimate useful life of the valve has not yet been established. At the present time the applicant recommends replacement of the valve after one year's operation without maintenance.

D. Operate in such manner so as not to create excessive heat, noise, or odor beyond the standard characteristic of the vehicle without such a device.

There is no reason to expect heat or noise problems to be caused by the system.

Since the oil filler cap has a small opening to the atmosphere, outflow of blowby gases to the engine compartment can occur when the pressure in the crankcase is positive. Therefore, the possibility of an odor problem was evaluated according to the Board's test procedure.

Four valves were tested with five engines, one in each class. Each valve had been operated at least 18,500 miles with no maintenance. Extra air was added to the engine crankcase to simulate the blowby rate of a vehicle in very poor condition, the total flow corresponding

to the 10th decile values in Table I of the test procedure. In all cases there was no outflow of blowby at the test conditions of idle, and the load conditions of 16", 10", and 2" Hg manifold vacuum. This is acceptable evidence of compliance with the odor criterion.

E. The purchase or cost of installation of such device shall not constitute an undue cost burden.

The installed cost of the system will be competitive with previously approved systems.

F. Installation of such device shall not create or contribute to a noxious or toxic effect in the ambient air.

The system complies with the air/fuel ratio change limits of 1% rich to 4% lean. The effect of the device is always in the leaning direction and is inversely proportional to the engines air requirement.

G. Advisory Group recommendation.

On February 27, 1963, seven members of the staff's Technical Advisory Group on Crankcase Emissions met to consider the system. After discussion, five members recommended approval with the qualification that the staff should seek further advice concerning crankcase vacuum tolerance. Two members recommended against the system on the basis that insufficient information had been presented to arrive at a judgment.

H. Summary and Staff recommendation.

1. The Norris-Thermador Crankcase Emission Control System meets the crankcase emissions standard of the California Department of Public Health.

2. The system complies with the Board's criteria. The Board's testing procedure does not provide complete assurance that no adverse effects will occur on all vehicles to which the system is adapted. However, on the basis of evidence submitted by the applicant, it is the judgement of the staff that the system can operate with minimal risk of adverse engine effects.

3. Test evidence indicates that the system will operate efficiently for at least one year with no maintenance.

4. The staff recommends certification of the Norris-Thermador Crankcase Emission Control System for classifications b, c, d, e, and f as defined in Section 2004.

GCH:jh
4/10/63

RESOLUTION 63-21

WHEREAS Norris-Thermador Corporation filed an application for a certificate of approval for a crankcase emission control system on February 19, 1963, amended by letter dated March 27, 1963; which system is described as the Norris-Thermador crankcase emission control system having the following specifications:

> The system consists of a spring-loaded, diaphragm-type regulating valve assembly which, actuated by manifold and crankcase vacuum, meters the flow of crankcase gases to the intake manifold. Filtered ventilation air is admitted to the crankcase through an oil filler cap containing a flow-restricting orifice. Accessory parts include hose, clamps, fittings, adapters, and carburetor spacer plates.

WHEREAS the system has been found to meet the crankcase emission standard 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 demonstration of compliance with established test procedures, 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 Norris-Thermador crankcase emission control system for motor vehicles in classifications b,c,d,e and f, as designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

4/10/63
eb

RESOLUTION 63-22

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

WHEREAS Chapter 3, Section 24398 authorizes the Motor Vehicle Pollution Control Board to contract for the use of, or the performance of tests or other services; 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 continue device testing and evaluation and the development of test procedures therefor, and since Scott has agreed to perform such work, the Board accepts the proposed agreement to increase the contract amount by $17,000.00.

THEREFORE, BE IT RESOLVED, That this Board,

Approves the Scott Research Laboratories, Inc. State Contract No. 149 amended, dated January 17th, 1963 to increase the contract to a total of $40,000.00; and to extend the contract for 60 days beyond its stated expiration date as presented and directs the Executive Officer to sign on behalf of the State Motor Vehicle Pollution Control Board.

4/10/63
mj

REPORT ON SIMCA * CRANKCASE EMISSION CONTROL DEVICE

Introduction

This is a report on the staff evaluation of the Simca crankcase emission control device. The basis of 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 Simca crankcase emission control device consists of a rubber tube connecting the venturi section of the carburetor to a special sealed oil filler cap. No ventilation air is introduced into the system and the system is effectively sealed from the atmosphere. The oil filler cap contains a spring-loaded, diaphram type control valve, which actuated by carburetor venturi vacuum, controls the pressure or vacuum in the crankcase.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the device does, in fact, meet the State standards and odor criterion by controlling crankcase emissions at all these test conditions.

Compliance with Board Criteria

The Board has on file a letter from Simca containing the manufacturers representation that the device, which will be manufactured for original equipment installation only, will comply with the Board's criteria and will not be offered for replacement equipment except on cars for which it was originally certified.

Summary & Conclusions

1. The Simca crankcase emission control device meets the crankcase emission standards of the California Department of Public Health, when operating efficiently.

2. The applicant has made representation that the device is produced for original equipment installation, and will comply with the Board's criteria and will not be offered as replacement equipment except on vehicles for which it was originally installed at the factory.

3. The staff recommends that the Simca crankcase emission control device be granted a certificate of approval for factory installation on cars in group (a) as per the attached resolution.

* Societe Industrielle de Mechanique et Carrosserie Automoble

JRS:mj
6/5/63

BOARD RESOLUTION 63-23

WHEREAS Societe Industrielle de Mechanique et Carrosserie Automoble (Simca) filed an application for a certificate of approval for a crankcase emission control device which is described as follows:

> A crankcase emission control device consisting of a rubber tube connecting the venturi section of the carburetor to a special sealed oil filler cap. No ventilation air is introduced into the system and the system is effectively sealed from the atmosphere. The oil filler cap contains a spring-loaded, diaphram type control valve, which actuated by carburetor venturi vacuum, controls the pressure or vacuum in the crankcase.

WHEREAS the device has been found to meet the crankcase emission standards established by the California Department of Public Health, as published in Title 17 of the 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 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 for the Simca crankcase emission control device for installation on 1963 and subsequent model Simca cars in vehicle classification (a) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

JRS:mj
6/5/63

REPORT ON THE STANDARD MOTOR COMPANY, LTD. CRANKCASE EMISSION CONTROL SYSTEM

Introduction

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

Description of Device

The Standard crankcase emission control system consists of a tube from the rocker arm cover to the clean side of the dual carburetor air cleaners. Hydrocarbons cannot escape from the system, as it is completely sealed, there being no provision made for the introduction of ventilation air. The tube from the rocker arm cover to the dual air cleaners includes a Y connection containing a flame arrestor, ahead of the carburetor intake from the air cleaners. The application covers the following automobiles:

	Cubic Inch Displacement	Engine Size Classification Group
Triumph Spitfire	70 cu. in.	group (a)
Triumph TR 4	130.5 cu. in.	group (a)

Maintenance

According to the manufacturer, the service requirements for the Standard crankcase emission control system is exactly the same as those automobiles which are not equipped with the system. This refers particularly to service of the air cleaner element. The flame arrestor screen is to be cleaned annually.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system does, in fact, meet the State standards and odor criterion.

Compliance with Board Criteria

The Board has on file a letter from Standard Motor Company, Limited containing the manufacturers representation that the system, which will be manufactured for original equipment installation only, will comply with the Board's criteria and will not be offered for replacement equipment except on the same new vehicle on which it was originally installed at the factory.

Summary and Conclusions

1. The Standard sealed, tube type 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 system is produced for original equipment installation only, and will comply with the Board's criteria and replacement only on same cars equipped at factory.

3. The staff recommends that the Standard sealed, tube to air cleaner type crankcase emission control system be granted a certificate of approval for factory installation only on new 1963 Standard and subsequent model cars in Class (a) as per the attached resolution.

6/5/63
mj

BOARD RESOLUTION 63-24

WHEREAS the Standard Motor Company, Limited filed an application for a certificate of approval for a crankcase emission control system on March 14, 1963, which system is described as follows:

> The Standard crankcase emission control system consists of a tube from the rocker arm cover to the clean side of the dual carburetor air cleaners. Hydrocarbons cannot escape from the system, as it is completely sealed, there being no provision made for the introduction of ventilation air. The tube from the rocker arm cover to the dual air cleaners includes a Y connection containing a flame arrestor, ahead of the carburetor intake from the air cleaners. The application covers the following automobiles:

	Cubic In. Displacement	Engine Size Classification Group
Triumph Spitfire	70 cu. in.	group (a)
Triumph TR 4	130.5 cu. in.	group (a)

WHEREAS the device has been found to meet the crankcase emission 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 Standard Motor Company, Limited for a sealed, tube to air cleaner crankcase emission control system for factory installation only on ~~new~~ 1963 and subsequent model Standard cars in motor vehicle classification (a) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

6/5/63
mj

REPORT ON THE OILDEX CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This report presents the evaluation of the Oildex closed crankcase emission control system by the staff of the Motor Vehicle Pollution Control Board. The basis for the evaluation is the "Alternate Testing Procedure for Evaluation of Devices" to control crankcase emissions (Factory Installations) December, 1962 revision. The report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The Oildex closed crankcase emission control system consists of the following:

1. A spring-loaded regulating valve assembly, actuated by engine manifold vacuum, which meters the flow of crankcase gases to the engine intake manifold. This valve is located in a unit containing a residue collecting jar and a cotton filtering element to filter the crankcase gases.

2. A rubber tube from the oil filter cap or oil filler spout to the clean side of the air cleaner with a wire mesh flame arrestor at the terminal end of this tube inside the air cleaner.

3. Sealed oil filler cap.

Maintenance

According to the manufacturer the regulating valve and the cotton filtering element should be inspected every 6000 miles, and the flame arrestor screen cleaned once a year.

Compliance with Crankcase Emission Standards

The applicant has demonstrated to the satisfaction of the staff that the system does, in fact, meet the State standards and the odor criterion.

Compliance with Board Criteria

The Board has on file a letter from Oildex containing the manufacturers representation that the system, which will be manufactured for original equipment installation only, will comply with the Board's criteria and will not be offered for replacement equipment except on the same new vehicles on which it was originally installed at the factory.

Summary and Conclusions

1. The Oildex closed 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 system is produced for original equipment installation only and will comply with the Board's criteria and replacement only on same cars equipped at factory.

3. The staff recommends that the Oildex closed crankcase emission control system be granted a certificate of approval for factory installation only on new 1963 and subsequent model cars in classes (b), (c), (d), (e), and (f) as per attached resolution.

6/5/63
mi

BOARD RESOLUTION 63-25

WHEREAS the Oildex Corporation filed an application for a certificate of approval for a crankcase emission control system on July 26, 1962, and an amendment on January 14, 1963, which changed the application to a closed crankcase emission control system as follows:

1. A spring-loaded regulating valve assembly, actuated by engine manifold vacuum and incorporating a residue collecting jar and cotton filtering element, between the crankcase and intake manifold.

2. A rubber tube from the oil filler cap or oil filler spout and terminating in a wire mesh flame arrestor within the clean side of the air cleaner.

3. Sealed oil filler cap.

WHEREAS the device has been found to meet the crankcase emission 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 Oildex Corporation for a closed crankcase emission control system for factory installation on new 1963 and subsequent model cars only in motor vehicle classifications (b), (c), (d), (e) and (f) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

6/5/63
JRS:mj

Policy Statement on Crankcase Emissions

Adopted by the Motor Vehicle Pollution Control Board

November 14, 1960

a. The motor vehicle contributes to California air pollution because of its emission of pollutants from several sources including the exhaust system, the crankcase, and from carburetor and gas tank evaporation. The exhaust emissions constitute by far the most significant source of pollutants, and consequently their control is vital.

b. The Board is presently proceeding with the steps necessary for approving and certifying devices which will control the principle emissions, those emanating from the exhaust system.

c. Although crankcase emissions or blowby represents a less significant source of hydrocarbons than does the exhaust, its control, which can be easily and inexpensively achieved, cannot be ignored.

d. The Department of Public Health is currently developing standards to define the maximum permissible emissions from the crankcase. This Board cannot proceed with the certification of blowby or crankcase emission control systems until the standards are developed and adopted by the State Board of Health.

e. The Board commends the American automobile industry for its voluntary installation of crankcase ventilating systems on new 1961 model cars being offered for sale in California. This represents one step in solving the problem that is created by today's smog-producing automobiles.

f. Although crankcase emissions constitute a minor source of air pollution, the Board recognized that crankcase ventilating systems on motor vehicles in California, while not now required by law, is of value.

g. The Board hopes that the automobile industry will proceed with the development and manufacture of exhaust control devices with the same speed as it has with the crankcase emission control systems.

10/31/62
mj

MOTOR VEHICLE POLLUTION CONTROL BOARD

REPORT ON UNITED CLOSED CRANKCASE VENTILATION SYSTEM

I. Introduction

This report presents the evaluation of the United Closed Crankcase Ventilation System by the staff of the Motor Vehicle Pollution Control Board. The bases of evaluation are the requirements set forth in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Sections 2000 to 2004. Since approval is sought for used car installations, the report deals with both the California Crankcase Emissions Standard and compliance with the Board criteria.

II. Description of System

The United Closed Crankcase Ventilation System consists of two conduits between the vehicle crankcase and the engine air induction system. Flow in the branch to the intake manifold is regulated by a spring-loaded variable-orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a tube connecting the crankcase to the clean side of the air cleaner. Accessory parts include a sealed oil filler cap and a flame arresting screen at the air cleaner, and fittings.

Materials of construction -

1/2" and 1" I.D. neoprene hose, resistant to hydrocarbons and ozone.
Screw machine parts of free cutting mild steel with protective coating.
Stainless steel spring.

III. Compliance with Crankcase Emissions Standard

The United Closed Crankcase Ventilation System complies with the standards of the California Department of Public Health when properly installed and maintained. The staff has data on file for twelve cars in five engine classes operated for 12,000 miles with the closed system. These data show complete control of crankcase emissions from the test vehicles.

IV. Compliance with Board criteria

The Board criteria are stated in Title 13, Chapter 3, Subchapter 1, Article 1, Section 2003, as follows:

> Every device controlling crankcase emissions from motor vehicles receiving a certificate of approval from the Motor Vehicle Pollution Control Board shall meet the following criteria:
>
> A. Be so designed as to have no adverse effect on engine operation or performance.
>
> Potential adverse effects of the valve branch of the system which have been considered include the following:
>
> 1. Effects on carburetion.
> 2. Intake valve deposits.
> 3. Oil carry over.
> 4. Possibility of crankcase explosions.

The applicant has submitted test data showing that the valve provides adequate backfire protection. The other effects are common to all scheduled-flow valve systems. Selection of the valve flow rate is important to the carburetion effects and oil carry over. Three valve sizes were used on the test vehicles. Additional sizes will be offered.

The tube connection to the air cleaner introduces the additional possibility of crankcase explosions via flame propagation through the tube. The applicant has chosen to provide a flame-arresting screen to protect against this possibility. In this respect, the system differs from the AC closed system, which was approved last December. The flame screen provides an opportunity for deposit accumulations which could, over a period of time, restrict flow to the point that crankcase pressures could build up with potential adverse effects on the engine. The size of the tubing is also an important design variable in relation to crankcase pressure.

The applicant has submitted a report from an authorized testing laboratory stating that the flame arrestor was effective in preventing flame propagation to the crankcase. The twelve test vehicles also showed no evidence of crankcase pressure buildup during 12,000 miles of service with no maintenance.

B. Operate in a safe manner.

It is the staff opinion that the device operates in a safe manner.

C. Have sufficient durability so as to operate efficiently for at least 12,000 miles with normal maintenance.

The data submitted by the applicant shows that, typically, the valve will operate effectively for at least 12,000 miles with no maintenance. The manufacturer recommends an annual check. It is the staff opinion that the system will effect a high degree of crankcase emission control for at least 12,000 miles with no maintenance.

D. Operate in such a manner so as not to create excessive heat, noise, or odor beyond the standard characteristic of the motor vehicle without such a device.

There is no reason to expect heat or noise problems to be caused by the system. With some vehicles, under some conditions, positive crankcase pressures will occur resulting in escape of blowby gases through crankcase leaks. No deliberate venting to the atmosphere occurs, however, and it is the staff opinion that the odor criterion is met.

E. The purchase or cost of installation of such device shall not constitute an undue cost burden.

The installed cost of the system will be competitive with previously approved systems.

F. Installation of such device shall not create or contribute to a noxious or toxic effect in the ambient air.

The applicant has submitted test data showing that the valve provides adequate backfire protection. The other effects are common to all scheduled-flow valve systems. Selection of the valve flow rate is important to the carburetion effects and oil carry over. Three valve sizes were used on the test vehicles. Additional sizes will be offered.

The tube connection to the air cleaner introduces the additional possibility of crankcase explosions via flame propagation through the tube. The applicant has chosen to provide a flame-arresting screen to protect against this possibility. In this respect, the system differs from the AC closed system, which was approved last December. The flame screen provides an opportunity for deposit accumulations which could, over a period of time, restrict flow to the point that crankcase pressures could build up with potential adverse effects on the engine. The size of the tubing is also an important design variable in relation to crankcase pressure.

The applicant has submitted a report from an authorized testing laboratory stating that the flame arrestor was effective in preventing flame propagation to the crankcase. The twelve test vehicles also showed no evidence of crankcase pressure buildup during 12,000 miles of service with no maintenance.

B. Operate in a safe manner.

It is the staff opinion that the device operates in a safe manner.

C. Have sufficient durability so as to operate efficiently for at least 12,000 miles with normal maintenance.

The data submitted by the applicant shows that, typically, the valve will operate effectively for at least 12,000 miles with no maintenance. The manufacturer recommends an annual check. It is the staff opinion that the system will effect a high degree of crankcase emission control for at least 12,000 miles with no maintenance.

D. Operate in such a manner so as not to create excessive heat, noise, or odor beyond the standard characteristic of the motor vehicle without such a device.

There is no reason to expect heat or noise problems to be caused by the system. With some vehicles, under some conditions, positive crankcase pressures will occur resulting in escape of blowby gases through crankcase leaks. No deliberate venting to the atmosphere occurs, however, and it is the staff opinion that the odor criterion is met.

E. The purchase or cost of installation of such device shall not constitute an undue cost burden.

The installed cost of the system will be competitive with previously approved systems.

F. Installation of such device shall not create or contribute to a noxious or toxic effect in the ambient air.

The system complies with the air/fuel ratio change limits of 1% rich to 4% lean. Plugging of the valve would lead to enrichment of the mixture beyond the 1% limit. Therefore, adequate mainenance is required to assure continued compliance with this criterion.

V. Advisory Group recommendation

On February 27, 1963, five members of the staff's Technical Advisory Group on Crankcase Emissions met to consider the subject system. After discussion, the Group unanimously recommended approval.

VI. Summary and Staff Recommendation

1. The United Closed Crankcase Ventilation System meets the crankcase emissions standard of the California Department of Public Health.

2. The system complies with the Board's criteria. The Board's testing procedure does not provide complete assurance that no adverse effects will occur on all vehicles to which the system is adapted. However, on the basis of evidence submitted by the applicant, it is the judgement of the staff that the system can operate with minimal risk of adverse engine effects.

3. Test evidence indicates that the system will operate efficiently for at least one year with no maintenance.

4. The staff recommends certification of the United Closed Crankcase Ventilation System for classifications (b), (c), (d), (e), and (f) as defined in Section 2004.

jh
6/5/63

RESOLUTION 63-26

WHEREAS United Air Cleaner Division of Novo Industrial Corporation, filed an application for a certificate of approval for a crankcase emission control system on December 3, 1962; which system is described as the United closed crankcase ventilation system having the following specifications:

> The system consists of two conduits between the vehicle crankcase and the engine air induction system. Flow in the branch to the intake manifold is regulated by a spring-loaded variable-orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a tube connecting the crankcase to the clean side of the air cleaner. Accessory parts include a sealed oil filler cap, a flame arresting screen at the air cleaner, and fittings.

WHEREAS the system has been found to meet the crankcase emission standard 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 demonstration of compliance with established test procedures, 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 United closed crankcase ventilation system for motor vehicles in classifications b,c,d,e,f, as designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

6/5/63
eb

RESOLUTION 63-26 (Amended*)

WHEREAS United Air Cleaner Division of Novo Industrial Corporation, filed an application for a certificate of approval for a crankcase emission control system on December 3, 1962; which system is described as the United Closed Crankcase Ventilation System having the following specifications:

> The system consists of two conduits between the vehicle crankcase and the engine air induction system. Flow in the branch to the intake manifold is regulated by a spring-loaded variable orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a tube connecting the crankcase to the clean side of the air cleaner. Accessory parts include a sealed oil filler cap, a flame arresting screen at the air cleaner, and fittings.

WHEREAS the system has been found to meet the crankcase emission standard 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 demonstration of compliance with established test procedures, the Board finds that the device meets the criteria, including odor criterion, 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 United Closed Crankcase Ventilation System for motor vehicles in classifications (a), (b), (c), (d), (e), and (f) as designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

*Amended to include Group (a)

11/19/63
mj

RESOLUTION 63-27

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

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

WHEREAS the Board, in Resolution 63-17, approved the maintenance survey project as recommended by the Committee on Test Procedures and Their Evaluation; and

WHEREAS the Board has contracted with Scott for the first half of a project to determine the effect of auto maintenance on vehicle emissions, and the second half of the project, as recommended by that Committee and approved by the Board, should proceed uninterrupted and be continued by the present contractor;

THEREFORE, BE IT RESOLVED, That this Board,

Approves the extension of Contract 558 with Scott Research Laboratories, Inc. for an additional $50,000 for the fiscal year commencing July 1, 1963 to continue the maintenance study, and authorizes the Executive Officer to sign the same in behalf of the State Motor Vehicle Pollution Control Board.

6/5/63
eb

RESOLUTION 63-28

WHEREAS Chapter 3, 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 the Board finds that the following laboratory:

The Motor Industry Research Association
Lindley, Nr. Nuneaton
Warwickshire
England

is adequately qualified and equipped to conduct testing of exhaust devices in accordance with the standards set by the State Department under Section 426.5 and the criteria established by the Board;

THEREFORE, BE IT RESOLVED, That the Board hereby designates the above named laboratory as an authorized motor vehicle pollution control testing laboratory for exhaust control devices.

6/5/63
eb

RESOLUTION 63-29

WHEREAS the installation of crankcase emission control devices becomes mandatory on new cars sold in California which are in classes b, c, d, e, and f, effective April 26, 1963, in accordance with Section 24390 of the Health and Safety Code; and

WHEREAS certain foreign car manufacturers have been delayed in engineering a specific device for factory installation on their cars; and

WHEREAS executives of these companies have supplied the Board with written assurance that engineering is now under way and that approved devices will be installed on their cars sold in California by August 1, 1963; and

WHEREAS the number of cars involved are negligible in number;

THEREFORE, BE IT RESOLVED, that:

1. The following cars are exempted from provisions of Section 24390 of the Health and Safety Code under authority granted the Motor Vehicle Pollution Control Board under Section 24386(5) of the Health and Safety Code:

   Aston Martin (England)
   Lagonda (England)

2. Such exemption shall terminate on October 31, 1963.

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6/5/63

RESOLUTION 63-29 - AMENDED*

WHEREAS the installation of crankcase emission control devices becomes mandatory on new cars sold in California which are in classes b, c, d, e, and f, effective April 26, 1963, in accordance with Section 24390 of the Health and Safety Code; and

WHEREAS certain car manufacturers have been delayed in engineering a specific device for factory installation on their cars; and

WHEREAS executives of these companies have supplied the Board with written assurance that engineering is now under way and that approved devices will be installed on their cars sold in California by October 31, 1963; and

WHEREAS the number of cars involved are negligible in number;

THEREFORE, BE IT RESOLVED, THAT:

1. The following cars are exempted from provisions of Section 24390 of the Health and Safety Code under authority granted the Motor Vehicle Pollution Control Board under Section 24386(5) of the Health and Safety Code:

   Aston Martin (England)
   Lagonda (England)
   White Motor Company

2. Such exemption shall terminate on October 31, 1963.

eb
8/14/63

*Amended to include White Motor Company

REPORT ON THE CHRYSLER CORPORATION CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Chrysler Corporation 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), December 1962 revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of System

The Chrysler closed crankcase emission control system consists of two conduits from the vehicle crankcase, one to the intake manifold and the other to the air induction system. The flow in the branch to the intake manifold is regulated by a spring loaded variable orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a sealed oil filler cap equipped with a filter to a tube connecting the crankcase to the dirty side of the air cleaner. An ozone resistant, oil resistant rubber hose together with necessary fittings is used to connect the various components of the system.

Compliance with Crankcase Emission Standards

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

Compliance with Board Criteria

The Board has on file a letter from the Chrysler Corporation signed by a legal officer containing the manufacturers 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 cars other than those for which it was originally certified. The manufacturer's maintenance recommendations are that inspection be every six months, but the system has been found to go 12,000 miles without service.

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 Chrysler Corporation closed crankcase emission control system be approved for new cars, factory installation on 1964 and subsequent models of motor vehicles in classifications (b), (c), (d), (e), and (f).

8/14/63
jh

RESOLUTION 63-31

WHEREAS Chrysler Corporation filed an application for a certificate of approval for a crankcase emission control system on July 5, 1962, which was amended to include additional control means, by letter, dated June 24, 1963. This system is now described as Chrysler Corporation closed crankcase emission control system having the following specifications:

> The Chrysler Corporation closed crankcase emission control system is a modified version of the Chrysler positive crankcase ventilation system as previously approved by the Board on July 11, 1962 under Resolution 62-16. The modification consists of an additional rubber tube and accessory fittings connecting the crankcase to the dirty side of the air cleaner and a sealed oil filler cap to replace the normal breather inlet air cleaner cap. The new cap places a filter in the tube to the air cleaner so that unfiltered air is not drawn into the engine. That portion of the blowby which exceeds the capacity of the variable orifice valve is directed to the engine air intake system; and

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 based upon demonstration of compliance with established test procedures 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 Chrysler Corporation closed crankcase emission control system for new cars, factory installation on 1964 and subsequent models of 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.

8/14/63
jh

BOARD RESOLUTION 63-32

WHEREAS Chapter 3, 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 Scott Research Laboratories, Inc., Perkasie, Pennsylvania, is adequately qualified and equipped to conduct testing of crankcase control devices in accordance with the standards set by the State Department under Section 426.5 and the criteria established by the Board;

THEREFORE, BE IT RESOLVED, That the Board hereby designates the Scott Laboratories, Inc., Perkasie, Pennsylvania, as an authorized motor vehicle pollution control testing laboratory, for crankcase devices.

8/14/63
vj

RESOLUTION 63-33

WHEREAS the Motor Vehicle Pollution Control Board, under Section 24386(5) of the Health & 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 Auto Union DKW 2 cycle motor vehicles meet State standards for crankcase emissions 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 2004.

THEREFORE, BE IT RESOLVED, THAT this Board

Finds that Auto Union DKW 2 cycle motor vehicles because of their design meet State standards and criteria after engineering evaluation 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 of Division 20 of the Health & Safety Code.

eb
8/14/63

REPORT OF THE HUMBER LIMITED (SUBSIDIARY OF ROOTES MOTORS) CLOSED CRANKCASE EMISSION CONTROL SYSTEM

INTRODUCTION

This is a report on the staff evaluation of the Humber, Limited (Subsidiary of Rootes Motors, 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 (December 1962 revision). This report does not include evidence concerning compliance with the Board's criteria.

DESCRIPTION OF SYSTEM

The Humber closed crankcase emission control system has two paths from the crankcase, one into the intake manifold through a spring-loaded variable orifice valve actuated by intake manifold vacuum, while the flow in excess of the valve capacity is conveyed through a second conduit to the clean side of the air cleaner. The flow in the tube from the crankcase to the air cleaner can be two ways. Clean filtered ventilation air is pulled from the air cleaner through the variable orifice valve into the intake manifold, together with blowby gases. When the blowby flow exceeds the capacity of the variable orifice valve, the blowby gases are directed to the clean side of the air cleaner. The system utilizes a sealed oil filler cap. The various components of the system are connected with oil and ozone resistant rubber hoses.

The following automobiles are included in the request for certification of the Humber closed crankcase emission control system:

Hillman Super Minx Mark II	97.2 cu. in.
Hillman Minx DeLuxe Series I	97.2 cu. in.
Hillman Husky Series III	84.8 cu. in.
Singer Vogue Mark II	97.2 cu. in.
Singer Gazelle Series I	97.2 cu. in.
Commer Cob Series III	84.8 cu. in.
Sunbeam Alpine	97.2 cu. in.
Sunbeam Rapier	97.2 cu. in.

All of the above automobiles are in Group (a) under 140 cu. inches.

COMPLIANCE WITH CRANKCASE EMISSION STANDARDS

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

COMPLIANCE WITH BOARD CRITERIA

The Board has on file a letter from Humber Limited (subsidiary of Rootes Motors Ltd.) signed by a legal officer containing the manufacturer's representation that the device which will be manufactured for original equipment only will comply with the Board's criteria. The letter also states that the system

will not be used for cars other than those for which it was originally certified. The manufacturer's maintenance recommendation is that the valve be checked or cleaned every 6000 miles while the air cleaner element should be serviced at 12,000 mile intervals.

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 Humber closed crankcase emission control system be approved for new cars, factory installation only, on 1964 and subsequent models of motor vehicles in classification (a).

8/14/63

RESOLUTION 63-34

WHEREAS Humber, Limited (Subsidiary of Rootes Motors, Limited) filed an application for a certificate of approval for a closed crankcase emission control system on May 6, 1963. This system is described as the Humber closed crankcase emission control system, having the following specifications:

> The Humber closed crankcase emission control system has two paths from the crankcase, one into the intake manifold through a spring-loaded variable orifice valve actuated by intake manifold vacuum, while the flow in excess of the valve capacity is conveyed through a second conduit to the clean side of the air cleaner. The flow in the tube from the crankcase to the air cleaner can be two ways. Clean filtered ventilation air is pulled from the air cleaner through the variable orifice valve into the intake manifold, together with blowby gases. When the blowby flow exceeds the capacity of the variable orifice valve, the blowby gases are directed to the clean side of the air cleaner. The system utilizes a sealed oil filler cap. The various components of the system are connected with oil and ozone resistant rubber hoses.

The following automobiles are included in the request for certification of the Humber closed crankcase emission control system:

Hillman Super Minx Mark II	97.2 cu. in.
Hillman Minx DeLuxe Series I	97.2 cu. in.
Hillman Husky Series III	84.8 cu. in.
Singer Vogue Mark II	97.2 cu. in.
Singer Gazelle Series I	97.2 cu. in.
Commer Cob Series III	84.8 cu. in.
Sunbeam Alpine	97.2 cu. in.
Sunbeam Rapier	97.2 cu. in.

All of the above automobiles are in Group (a) under 140 cu. inches; and

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 based upon representation of compliance with established test procedures, 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 Humber, Limited (Subsidiary of Rootes Motors Limited) closed crankcase emission control system for new cars, factory installation in 1964 and subsequent models of motor vehicles in classification (a) as designated in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2004.

8/14/63

RESOLUTION 63-35

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;

THEREFORE, BE IT RESOLVED, that this Board approves the Scott Research Laboratories, Inc. State Contract dated August 14, 1963, for a maximum amount of $25,000.00 as presented, and directs the Executive Officer to sign the contract on behalf of the State Motor Vehicle Pollution Control Board.

8/14/63
eb

RESOLUTION 63-36 (AMENDED*)

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:

> The Nissan crankcase emission control system consists of a rubber tube connecting the rocker arm cover to the clean side of the air cleaner. The system is completely sealed, there being no provision made for the introduction of ventilation air. A flame arrestor is installed in the tube leading to the air cleaner, and a baffle is installed immediately below the outlet from the rocker arm cover to eliminate the possibility of oil carryover into the air cleaner. A sealed oil filler cap is used and the rubber tube is ozone and oil resistant rubber.
>
> The factory recommends that the flame arrestor's screen be cleaned every 12,000 miles, while service to the air cleaner is the same as the car without the device; and

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 representation submitted by the manufacturer, the Board finds that the device meets the criteria including odor criterion, 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 Sealed Crankcase Emission Control System for installation on 1964 and subsequent model Nissan cars in vehicle classifications (a) and (c) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

*Amended to incorporate Group(a)

9/25/63
g/

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

Introduction

This is a report on the staff evaluation of the Nissan Motor Company, Limited 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

The Nissan sealed crankcase emission control system consists of a rubber tube connecting the rocker arm cover to the clean side of the air cleaner. The system is completely sealed, there being no provision made for the introduction of ventilation air. A flame arrestor is installed in the tube leading to the air cleaner, and a baffle is installed immediately below the outlet from the rocker arm cover to eliminate the possibility of oil carryover into the air cleaner. A sealed oil filler cap is used and the component parts are connected with a one inch ozone and oil resistant rubber tube. The factory recommends that the flame arrestor screen be cleaned every 12,000 miles, while service to the air cleaner is the same as the car without the device. The only car presently involved is called the Nissan Patrol, a jeep like automobile with a 242 cubic inch engine.

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 the legally authorized Chief Engineer 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, sealed crankcase emission control system be approved for new cars, factory installation only, on 1964 and subsequent models of motor vehicles in classification (c).

8/14/63
jh

RESOLUTION 63-36

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:

> The Nissan crankcase emission control system consists of a rubber tube connecting the rocker arm cover to the clean side of the air cleaner. The system is completely sealed, there being no provision made for the introduction of ventilation air. A flame arrestor is installed in the tube leading to the air cleaner, and a baffle is installed immediately below the outlet from the rocker arm cover to eliminate the possibility of oil carryover into the air cleaner. A sealed oil filler cap is used and the rubber tube is ozone and oil resistant rubber.
>
> The factory recommends that the flame arrestor's screen be cleaned every 12,000 miles, while service to the air cleaner is the same as the car without the device; and

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 Sealed Crankcase Emission Control System for installation on 1964 and subsequent model Nissan cars in vehicle classification (c) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

8/14/63
jh

RESOLUTION 63-37

WHEREAS the Motor Vehicle Pollution Control Board has designated several laboratories as "authorized" facilities in accordance with Section 24397 of the Health and Safety Code; and

WHEREAS effective July 1, 1963, the State of California is operating its own official laboratory as a testing facility in Los Angeles; and

WHEREAS the question has been raised as to the validity of conflicting test results in respect to eventual Board action in approving two or more exhaust emission control devices;

NOW THEREFORE, BE IT RESOLVED AND DECLARED TO BE THE PUBLIC POLICY OF THIS BOARD THAT:

1. For purposes of approval of exhaust emission control devices only data obtained by or cross-checked with the official State Motor Vehicle Pollution Laboratory will be considered by the Board.

2. Official fleet and service life testing of exhaust devices must be accomplished in the Southern California area in order to maintain proximity with the official State automotive testing facility.

3. This policy will be in effect at least until the first exhaust emission control devices are approved by the Motor Vehicle Pollution Control Board and the mandatory aspects of the California law in respect to installation of such devices are set in motion.

8/14/63
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ROUGH DRAFT never formalized

RESOLUTION 63-37 (Amended*)

WHEREAS the Motor Vehicle Pollution Control Board has designated several laboratories as "authorized" facilities in accordance with Section 24397 of the Health and Safety Code; and

WHEREAS effective July 1, 1963, the State of California is operating its own official laboratory as a testing facility in Los Angeles; and

WHEREAS the question has been raised as to the validity of conflicting test results in respect to eventual Board action in approving two or more exhaust emission control devices;

WHEREAS, however, to facilitate testing for foreign vehicles, certain other government-participating laboratories are also acceptable;

NOW THEREFORE, BE IT RESOLVED AND DECLARED TO BE THE PUBLIC POLICY OF THIS BOARD THAT:

1. For purposes of approval of exhaust emission control devices only data obtained by or cross-checked with the official State Motor Vehicle Pollution Laboratory will be considered by the Board.

2. Official fleet and service life testing of exhaust devices must be accomplished in the Southern California area in order to maintain proximity with the official State automotive testing facility; provided, however, that overseas government-participating laboratories designated "authorized" in accordance with Section 24397 are also acceptable for performing fleet and service life testing of exhaust devices.

3. This policy will be in effect at least until the first exhaust emission control devices are approved by the Motor Vehicle Pollution Control Board and the mandatory aspects of the California law in respect to installation of such devices are set in motion.

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*Amended 1/23/63 to include authorization for overseas fleet and life testing.

12/16/63
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REPORT ON THE ALFA ROMEO CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Alfa Romeo crankcase emission control system. The basis of 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

The Alfa Romeo sealed crankcase emission control system consists of a rubber tube connecting the rocker arm cover to the dirty side of the air cleaner. The system is completely sealed, there being no provision made for the introduction of ventilation air. The air cleaner element acts as a flame arrestor and at the point of take off from the rocker arm cover, a metal sheet oil decanter is fitted to minimize oil carryover from the crankcase. The oil filler cap is sealed and the component parts are connected with an ozone and oil resistant rubber tube. The factory recommends that service on the air cleaner be the same as an Alfa Romeo without the crankcase emission control system which is at 2500 miles. Two engine sizes are involved in the request for certification, the 1600 Spyder, a four cylinder engine having an engine displacement of 96 cubic inches, and the 2600 Spyder Six, having an engine displacement of 158.5 cubic inches.

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 Alfa Romeo, signed by the legally authorized national service manager, 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 Alfa Romeo sealed 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 Alfa Romeo sealed crankcase emission control system be approved for new cars, factory installation only, on 1964 and subsequent models of motor vehicles in classifications (a) and (b).

8/14/63
eb

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). The report does not include evidence concerning compliance with the Board's criteria.

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 but provision is made for the introduction of ventilation air through a connection at the dipstick. A check valve is installed in the dipstick ventilation air control system to prevent emissions from escaping to the atmosphere in the case of a positive crankcase pressure, which is at idle and low load conditions. 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. However, the check valve feature at the dipstick is new and will be used only on California automobiles. 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 Mercedes types 190, 220, 230, 300, 630 and Mercedes light truck types L-319 and O-319. It also includes an automobile with an engine of over 375 cu. in. displacement which Mercedes-Benz anticipates importing into California shortly after the first of 1964.

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 1964 and subsequent models of motor vehicles in classifications (a), (b) and (f).

8/14/63
eb

RESOLUTION 63-38

WHEREAS Alfa Romeo S.p.A. 45 Via Gattamelata, Milano, Italy, filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

> The Alfa Romeo sealed crankcase emission control system consists of a rubber tube connecting the rocker arm cover to the dirty side of the air cleaner. The system is completely sealed, there being no provision made for the introduction of ventilation air. The air cleaner element acts as a flame arrestor and at the point of take off from the rocker arm cover, a metal sheet oil decanter is fitted to prevent oil carry-over from the crankcase.

Two engine sizes are involved in the request for certification, the 1600 Spyder, a four cylinder engine having an engine displacement of 96 cubic inches, and the 2600 Spyder Six, having an engine displacement of 158.5 cubic inches; and

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 established 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 Alfa Romeo sealed crankcase emission control system for installation on 1964 and subsequent model Alfa Romeo cars in vehicle classifications (a) and (b) as designated in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2004.

8/14/63
eb

RESOLUTION 63-39

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 but provision is made for the introduction of ventilation air through a connection at the dipstick. A check valve is installed in the dipstick ventilation air control system to prevent emissions from escaping to the atmosphere in the case of positive crankcase pressure; and

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 1964 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.

8/14/63
eb

RESOLUTION 63-43

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

WHEREAS it is necessary for the State to develop methods of evaluating fleet device testing and their extrapolation to vehicle populations and since the University of California at Los Angeles has the computer facilities and personnel experienced in the use thereof, and has agreed, to perform such work, the Board accepts the proposed Interagency 63-43 Agreement for this work, to a maximum amount of $2,500.00.

THEREFORE, BE IT RESOLVED, That this Board, approves said Interagency Agreement with the University of California at Los Angeles to a maximum of $2,500.00, and directs the Executive Officer to execute said agreement on behalf of the State Motor Vehicle Pollution Control Board.

8/14/63
vj

RESOLUTION 63-44

WHEREAS American made passenger vehicles sold as new vehicles in California of the 1961-1962 and 1963 model years are equipped with a crankcase control device; and

WHEREAS commencing with the 1964 license registration documents the Department of Motor Vehicles will record compliance with the installation requirements of Chapter 3, Division 20, of the Health and Safety Code; and

WHEREAS the Department has requested that as a matter of policy the Motor Vehicle Pollution Control Board permit the Registrar of Motor Vehicles to precode all 1961, 1962 and 1963 model motor vehicles registration documents; and

WHEREAS this will not reduce the effectiveness of the Board's program to control crankcase control emissions, since all vehicles are subject to compliance requirements according to law; and

WHEREAS the Motor Vehicle Pollution Control Board recognizes that great savings in accounting costs will result to the people of the State of California if 1961, 1962 and 1963 registration documents are precoded:

THEREFORE, BE IT RESOLVED, that:

The Motor Vehicle Pollution Control Board as a matter of procedural policy, for registration purposes, presume that all 1961-1962 and 1963 year model American made passenger vehicles, registered in California are equipped with crankcase control devices.

9/25/63
mj

REPORT OF THE WHITE MOTOR COMPANY CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the White Motor Company 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 crankcase emission control system consists of a one inch rubber tube connecting the rocker arm cover 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 and the rubber tube used in the system is oil resistant and ozone resistant. 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 following makes and models of the various White Motor Company engines are included as shown below:

Lansing Division (Reo) Engines:

OA 110 (255 cu. in.)
OA 130, 6-130A - (292 cu. in.)
OA 145, 6-145A - (331 cu. in.)
OH 170, 6-170A - (331 cu. in.)
OH 186, 6-186A - (362 cu. in.)
OH 200, 6-200A - (400 cu. in.)
OV 207 - (390 cu. in.)
OV 235, 8-235A - (440 cu. in.)

White Division Engines:

450A, 462A (386 cu. in.)
470A, 477A (477 cu. in.)
490A, 531A (531 cu. in.)

Above engines are installed in vehicles made by White (Cleveland) Division, Lansing-Reo & Diamond T Division and Autocar Division.

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.

RESOLUTION 63-45

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 sealed crankcase emission control system consists of a rubber tube connecting the rocker arm cover 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 and the rubber tube used to connect the various components of the system is ozone and oil resistant;

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 1964 and subsequent model White, Lansing-Reo, Diamond T Division and Auto Car Division, motor cars in vehicle classifications (d), (e) and (f) as described in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2004.

9/25/63
mj

REPORT ON
THE AMERICAN MOTORS CORPORATION OPEN CRANKCASE EMISSION CONTROL SYSTEM

Introduction

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

Description of System

The American Motors Corporation open crankcase emission control system consists of a spring-loaded regulating valve assembly which meters the crankcase gases through the valve and into the intake manifold. A standard unrestricted flow, oil filler cap is used through which ventilation air is pulled into the system. Three engines are involved in the application for certification and these are:

1. 1964 Ramber "American" with 196 C.I.D. "L" head engine.

2. 196 C.I.D. cast iron OHV engine. This engine is standard in the "Classis" series, and will also be offered in the "American" equipped with the positive crankcase ventilation valve in a two-barrel carburetor option.

3. 196 C.I.D. aluminum OHV engine. This engine will be offered as as option in the "Classic" series.

The rubber used in connecting the components in the system is ozone and oil resistant. The maintenance recommendation for the valve and system calls for inspection, cleaning, or replacement of the valve at 8,000 mile intervals. The control valve proposed to be used by American Motors is manufactured by the Chicago Screw Company and is of the solid tapered plunger type (no orifice) which has been in use by American Motors since February 15, 1963 with no complaints. The simple open system with other type valves was approved by the Board for 1961, 1962, and 1963 models only.

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 American Motors Corporation, 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 American Motors Corporation open crankcase emission control system be approved for new American Motors Corporation automobiles, factory installation, on 1964 and subsequent models of motor vehicles in classification(b).

9/25/63
g

RESOLUTION 63-46

WHEREAS, American Motors Corporation filed an application for a certificate of approval for an open crankcase emission control system on September 10, 1963, described as the American Motors Corporation open crankcase emission control system having the following specifications:

> A spring-loaded regulating valve assembly actuated by intake manifold vacuum which meters the flow of crankcase gases to the engine intake manifold. An unrestricted flow, oil filler cap is used which permits the entrance of ventilation air into the system. An ozone resistant, oil resistant rubber hose together with necessary fittings is used to connect the various components of the system; and

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 device meets the criteria, including odor criterion, 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 American Motors Corporation open crankcase emission control system for new American Motors Corporation cars, factory installation, on 1964 ~~and subsequent models of~~ motor vehicles in classification (b) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

9/25/63
g

RESOLUTION 63-47

WHEREAS Section 24379 (b) of the Health and Safety Code was amended effective September 20, 1963 to define engine modifications as a "device" subject to Board approval; and

WHEREAS prior to this change in law six car manufacturers had modified their engines so as to meet crankcase emission control requirements and had therefore been "exempted";and

WHEREAS under the new law all of these modifications should now be considered an "approved device"

NOW THEREFORE, BE IT RESOLVED, that

The following resolutions be amended to provide that the control system involved is now an "approved device" rather than an exemption as defined in Section 24386(5) of the Health and Safety Code:

Resolution 62-11	American Motors Corporation
Resolution 62-12	Chrysler Corporation
Resolution 62-13	Ford Motor Company
Resolution 62-21	Rolls Royce Limited
Resolution 62-22	American Motors Corporation
Resolution 62-24	British Motor Corporation

9/25/63
jh

REPORT ON THE CHICAGO SCREW COMPANY OPEN CRANKCASE EMISSION CONTROL SYSTEM

Introduction

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

Description of System

The Chicago Screw Company open crankcase emission control system consists of a spring loaded regulating valve assembly which meters the crankcase gases through the valve and into the intake manifold. A standard, unrestricted flow, oil filler cap is used through which ventilation air is pulled into the system. Three engines are involved in the application for certification and these are:

1. 1964 Rambler "American" with 196 C.I.D. "L" head engine.

2. 196 C.I.D. cast iron OHV engine. This engine is standard in the "Classic" series, and will also be offered in the "American" equipped with the positive crankcase ventilation valve in a two-barrel carburetor option.

3. 196 C.I.D. aluminum OHV engine. This engine will be offered as an option in the "Classic" series.

The rubber used in connecting the components in the system is ozone and oil resistant. The maintenance recommendation for the valve and system calls for inspection, cleaning, or replacement of the valve at 8,000 mile intervals. The control valve proposed to be used is made by the Chicago Screw Company and is of the solid tapered plunger type (no orifice) which has been in use by American Motors since February 15, 1963 with no complaints. The simple open system with other type valves was approved by the Board for 1961, 1962, and 1963 models only.

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 Chicago Screw 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. The letter also states that the system will not be used as replacement other than for cars upon which it was originally certified.

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 Chicago Screw Company open crankcase emission control system be approved for new automobiles, factory installation, on 1964 and subsequent models of motor vehicles in classification (b).

9/25/63
jh/mj

RESOLUTION 63-48

WHEREAS Chicago Screw Company filed an application for a certificate of approval for an open crankcase emission control system on July 30, 1963, described as the Chicago Screw Company open crankcase emission control system having the following specifications:

> A spring loaded regulating valve assembly actuated by intake manifold vacuum which meters the flow of crankcase gases to the engine intake manifold. A restricted flow oil filler cap is used which permits the entrance of ventilation air into the system. An ozone resistant, oil resistant rubber hose together with necessary fittings is used to connect the various components of the system; and

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 representation submitted by the manufacturer, the Board finds that the device meets the criteria, including odor criterion, 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 Chicago Screw Company open crankcase emission control system for new cars, factory installation on 1964 and subsequent models of motor vehicles in classification (b) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

9/25/63
mj

REPORT ON THE CHEVROLET CLOSED-POSITIVE ENGINE VENTILATION SYSTEM

Introduction

This is a report on the staff evaluation of the Chevrolet Closed-Positive Engine Ventilation System for the control of crankcase emissions. The basis of the evlauation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions, (Factory Installation), December 1962 revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of System

The Chevrolet Closed-Positive Engine Ventilation System is a completely closed crankcase ventilation system. A fixed orifice is used to meter part of the volume of blowby gases into the intake manifold. The volume of blowby gases beyond the capacity of the orifice are directed to the clean side of the air cleaner through a flame arrestor. The system utilizes a sealed oil filler cap and a sealed dipstick. The system will be standard equipment for the start of the 1964 model year. Ozone and oil resistant hose together with the necessary fittings are used to connect the various components of the system. The recommendations for maintenance on the air cleaner is the same as on an engine without the system installed, while the orifice and flame arrestor is to be inspected or cleaned at 6000 miles or at oil change intervals.

The following engines and groups are involved in the present request for certification of the system:

Corvair - 164 cubic inch	-	Group "b"
V-8 - 327 cubic inch	-	Group "e"
V-8 - 409 cubic inch	-	Group "f"

Full satisfactory test information has been submitted to the staff on the above engines and groups and Chevrolet anticipates in the near future submitting similar full test information on the following engines which will use the exact same system:

4 cylinder in line	153 cubic inches	Group (b)
6 cylinder in line	194 cubic inches	Group (b)
6 cylinder in line	230 cubic inches	Group (c)
6 cylinder in line	292 cubic inches	Group (d)
V-8 cylinders	283 cubic inches	Group (d)
V-8 cylinders	348 cubic inches	Group (e)

In the near future, an amended resolution will be submitted to the Board to cover the above engines as soon as the required test information is received.

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 Chevrolet Division of General Motors Corporation, signed by a legal 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 offered as replacement equipment except on the same new vehicles for which it is originally approved.

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 Chevrolet Closed-Positive Engine Ventilation System be approved for new Chevrolet automobiles, factory installation, on 1964 and subsequent models of motor vehicles in classifications (b), (e), and (f).

9/25/63
mj

RESOLUTION 63-49

WHEREAS Chevrolet Division of the General Motors Corporation, Detroit, Michigan, filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

> The Chevrolet Closed-Positive Engine Ventilation System is a completely closed crankcase ventilation system consisting of an orifice for metering the blowby gases into the intake manifold. The volume of blowby gases beyond the capacity of the orifice is directed to the clean side of the air cleaner through a flame arrestor. Ventilation air is pulled into the system from the clean side of the air cleaner. The oil filler cap and the dipstick are sealed. The rubber tubes connecting the various components of the system is ozone and oil resistant; and

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, including odor criterion, 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 Chevrolet Closed Positive Engine Ventilation System for installation on 1964 and subsequent models of Chevrolet cars in vehicle classifications (b), (e), and (f) as designated in Title 13 of the Administrative Code, Chapter 3, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

9/25/63
jg

RESOLUTION 63-49 (Amended)*

WHEREAS Chevrolet Division of the General Motors Corporation, Detroit, Michigan, filed an application for a certificate of approval for a crankcase emmission control system on September 20, 1963; which system is described as the Chevrolet Closed-Positive Engine Ventilation System having the following specifications:

> The Chevrolet Closed-Positive Engine Ventilation System is a completely closed crankcase ventilation system consisting of an orifice for metering the blowby gases into the intake manifold. The volume of blowby gases beyond the capacity of the orifice is directed to the clean side of the air cleaner through a flame arrestor. Ventilation air is pulled into the system from the clean side of the air cleaner. The oil filler cap and the dipstick are sealed. The rubber tubes connecting the various components of the system is ozone and oil resistant; and

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, including odor criterion, 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 Chevrolet-Closed-Positive Engine Ventilation System for installation on 1964 and subsequent models of Chevrolet cars in vehicle 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.

*Amended to include Groups (c) & (d)

11/19/63
g

REPORT OF HUMBER LIMITED CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report of the staff evaluation of the Humber, Ltd., Closed Crankcase Emission Control System. The bases of the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installation), June 5, 1963 revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of System

The Humber Closed Crankcase Emission Control System consists of two conduits from the vehicle crankcase, one to the intake manifold and the other to the air induction system to the clean side of the air cleaner. The flow in the branch to the intake manifold is regulated by a spring-loaded variable orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through the second circuit to the air cleaner and this portion of the system is fitted with a flame arrestor to eliminate the possibility of crankcase explosions. An ozone resistant, oil resistant rubber hose, together with the necessary fittings, is used to connect the various components of the system.

At present, the following cars are involved in the request for certification but there may be others in groups (a) and (b) to which the system will be applied.

Name of Car	Engine Displacement	Group
Sunbeam Alpine IV	97.2 cu. in.	(a)
Sunbeam Rapier IV	97.2 " "	(a)
Humber Septre I	97.2 " "	(a)
Humber Super Snipe IV	181 " "	(b)

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 Humber, Ltd., signed by a legal officer, containing the manufacturer's representation that the device, which will be manufactured for original equipment only, will comply with the Board's criteria, including odor criterion. The letter also states that the system will not be used for cars other than those for which it was originally certified. The manufacturer's maintenance recommendations are that inspection be every six months but the system has been found to operate for a much longer period without service.

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 Humber Closed Crankcase Emission Control System be approved for new Humber cars, factory installaion, on 1964 and subsequent models of motor vehicles in classification (a) and (b).

mj
11/19/63

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 Humber Closed Crankcase Emission Control System be approved for new Humber cars, factory installaion, on 1964 and subsequent models of motor vehicles in classification (a) and (b).

mj
11/19/63

RESOLUTION 63-50

WHEREAS Humber, Ltd.,Stoke, Coventry, England filed an application for a certificate of approval for a crankcase emission control system on Sept. 30, 1963, which system is now described as the Humber Closed Crankcase Emission Control System having the following specifications:

> The Humber Closed Crankcase Emission Control System consists of two conduits from the vehicle crankcase, one to the intake manifold and the other to the air induction system through the air cleaner. The flow in the branch to the intake manifold is regulated by a spring-loaded variable orifice metering valve, actuated by the intake manifold vacuum. Flow in excess of valve capacity is conveyed through the second circuit to the air cleaner through a flame arrestor. The rubber tubing connecting the various components of the system is ozone and oil resistant; and

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, including odor criterion, 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 Humber Closed Crankcase Emission Control System for new cars, factory installation, on 1964 and subsequent models of motor vehicles in classifications (a) and (b) as designated in Title 13, of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

mj
11/19/63

RESOLUTION 63-50 (amended)*

WHEREAS Humber, Ltd.,(subsidiary of Rootes Motors, Limited), Stoke, Coventry, England, filed an application for a certificate of approval for a crankcase emission control system on Sept. 30, 1963, which system is now described as the Humber Closed Crankcase Emission Control System having the following specifications:

> The Humber Closed Crankcase Emission Control System consists of two conduits from the engine crankcase, one to the intake manifold and the other to the air induction system through the air cleaner. The flow in the branch to the intake manifold is regulated by a spring-loaded variable orifice metering valve, actuated by the intake manifold vacuum. Flow in excess of valve capacity is conveyed through the second circuit to the clean side of the air cleaner through a flame arrestor. The oil filler cap is sealed. The rubber tubing connecting the various components of the system is ozone and oil resistant; and

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, including odor criterion, 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 Humber Closed Crankcase Emission Control System for new cars, factory installation, on 1964 and subsequent models of motor vehicles in classifications (a), (b) and (d) as designated in Title 13, of the California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

* Amended 8/12/64 to include Group (d)

hlb
11-19-63
Amended 8-12-64

REPORT ON STUDEBAKER CLOSED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Studebaker Closed Crankcase Emission Control System for supercharged and non-supercharged engines. The basis of the evaluation is the Alternate Testing Procedure For Evaluation Of Devices To Control Crankcase Emissions (Factory Installation) June 5, 1963 revision. The report does not include evidence concerning compliance for the Board's criteria.

Description of Device

The Studebaker Closed Crankcase Emission Control System consists of two modifications for engines in Groups (b) and (d) as follows:

1. A closed crankcase emission control system consisting of two circuits from the vehicle crankcase, one to the intake manifold, and the other to the air induction system. The flow in the branch to the intake manifold is regulated by a spring loaded variable orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a sealed oil filler cap equipped with a filter to a tube connecting the crankcase to the dirty side of the air cleaner.

2. A closed crankcase emission control system consisting of two circuits from the vehicle crankcase, one to the intake manifold, and the other to the air induction system. The flow in the branch to the intake manifold is controlled by an orifice with a check valve so that in the supercharged engines the crankcase will not be pressurized. Flow in excess of the orifice capacity is directed to the dirty side of the air cleaner through the second conduit.

   Ozone and oil resistant rubber hose, together with necessary fittings, is used to connect the various components of the two systems.

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 Studebaker Corporation, signed by a legal 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 for cars other than those for which it was installed

at the factory. The manufacturer's maintenance recommendations are for inspection every six months, but the system has been found to go 12,000 miles without service.

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 Studebaker Corporation Closed Crankcase Emission Control System be approved for new car, factory installation, on 1964 and subsequent models of motor vehicles in classifications (b) and (d).

11/19/63
vj

Resolution 63-51

WHEREAS the Studebaker Corporation, South Bend, Indiana, filed an application for a certificate of approval for a crankcase emission control system on October 31, 1963. This system is now described as the Studebaker Corporation Closed Crankcase Emission Control System, having the two following modifications:

1. A closed crankcase emission control system consisting of two circuits from the vehicle crankcase, one to the intake manifold, and the other to the air induction system. The flow in the branch to the intake manifold is regulated by a spring loaded variable orifice valve actuated by intake manifold vacuum. Flow in excess of valve capacity is conveyed through a sealed oil filler cap equipped with a filter to a tube connecting the crankcase to the dirty side of the air cleaner.

2. A closed crankcase emission control system consisting of two circuits from the vehicle crankcase, one to the intake manifold, and the other to the air induction system. The flow in the branch to the intake manifold is controlled by an orifice with a check valve so that in the supercharged engines the crankcase will not be pressurized. Flow in excess of the orifice capacity is directed to the dirty side of the air cleaner through the second conduit sealed oil filler cap with filter

   Ozone and oil resistant rubber hose, together with necessary fittings, is used to connect the various components of the two systems.

WHEREAS the systems have 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, including odor criterion, 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 Studebaker Corporation Closed Crankcase Emission Control Systems for new cars, factory installation, on 1964 and subsequent models of motor vehicles in classifications (b) and (d) as designated in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2004.

11/19/63
vj

RESOLUTION 63-52

WHEREAS Section 24385(5) of the Health and Safety Code authorizes the Motor Vehicle Pollution Control Board to exempt "... motor vehicles for which certified devices are not available"; and

WHEREAS major manufacturers of approved crankcase control devices have found it economically infeasible to make devices for certain motor vehicles which are "rare" in California.

NOW, THEREFORE, BE IT RESOLVED, that

1. The Motor Vehicle Pollution Control Board finds that crankcase devices are now available for the American-made used cars listed on Exhibit A (four pages) which is incorporated as part of this resolution; and that

2. All other motor vehicles in classifications (b), (c), (d), (e), (f), and (g) as specified in the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004 are at this time declared exempt from the provisions of Article 3 of the Health and Safety Code.

11/19/63
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EXHIBIT A
Motor Vehicle
Pollution Control
Board Resolution 63-52
Page 1

Used Vehicle Makes and Models for Which Crankcase Devices Are Available from Two or More Sources

December 11, 1963

Passenger Cars

0 - not covered
P - partial coverage

Make	Model Years	Cylinders	Displacement	Carburetor Barrels	AC	M	NT	W
Buick	1962	V8	401	2			0	
	1962-61	V8	215	4			0	
	1962-61	V8	215	2			0	
	1962-59	V8	401	4			P	
	1961-57	V8	364	2				
	1960-57	V8	364	4			P	P
	1956	V8	322	2				
	1956-53	V8	322	4				
	1955-54	V8	264	2				
	1954-53	V8	322	2				
	1953-50	8	263	2				
	1951-50	8	320	2	0			
	1950	8	248	2				
Cadillac	1962-59	V8	390	4				
	1958-56	V8	365	4				
	1955-52	V8	331	4				
	1951-50	V8	331	2				
Chevrolet	1962	6	194	1			0	
	1962	V8	327	4			0	
	1962-61	6	145	2-1			0	
	1962-57	V8	283	2				
	1962-50	6	235	1				
	1961-58	V8	348	4				
	1961-57	V8	283	4				
	1957-55	V8	265	2				
	1956-55	V8	265	4	P			
	1952-50	6	216	1				
Chrysler	1962-59	V8	413	4			P	
	1961-59	V8	383	4	0		0	
	1958-57	V8	354	2				
	1958-57	V8	392	4				0
	1958-56	V8	354	4				0
	1956,54-51	V8	331	2				0
	1955	V8	301	2				
	1955-54	V8	331	4				
	1954-52	6	265	1				
	1951-50	6	250	1				
De Soto	1959	V8	383	4	0		0	
	1957	V8	325	2				
	1956	V8	330	2				
	1955	V8	291	2				
	1954-53	V8	276	2				0
	1950	6	236	1				
Dodge	1962-61	6	170	1				
	1962-60	V8	318	2				
	1962-60	6	225	1				

Note: For identification of engines see "Chilton's Automotive Manuals" or "Motor's Auto Repair Manual"

Used Vehicle Makes and Models

PASSENGER CARS

Make	Model Years	Cylinders	Displacement	Carburetor Barrels	AC	M	NT	W
Dodge	1962-59	V8	383	4	P		O	
	1962-59	V8	361	4	P		O	
	1959	V8	326	2				
	1959-50	6	230	1				P
	1958	V8	350	4	O		O	
	1958-57	V8	325	2				
	1958-57	V8	325	4				
	1956	V8	315	2				
	1956-55	V8	270	2				
	1954-53	V8	241	2				
Edsel	1958	V8	361	4				O
Ford & T'Bird	1962	V8	221	2			O	O
	1962-61	6	170	1				
	1962-61	V8	390	4			O	
	1962-60	6	144	1				
	1962-60	V8	352	2				P
	1962-56	V8	292	2				P
	1962-54	6	223	1				
	1960-58	V8	352	4				
	1959	V8	332	2				
	1958	V8	332	4				
	1958	V8	332	2	O			
	1957-56	V8	312	4				
	1957-55	V8	272	2				
	1956	V8	292	4				
	1955	V8	272	4	O			
	1954-50	V8	239	2				
	1953-52	6	215	1				
	1951-50	6	226	1			O	
Lincoln	1957-56	V8	368	4				
Mercury	1962-61	6	170	1				
	1962-61	6	223	1			O	
	1962-60	6	144	1				
	1961	V8	292	2			O	
	1961	V8	352	2			O	
	1961	V8	390	4			O	
	1960-59	V8	383	2				
	1960-58	V8	312	2				
	1959-58	V8	383	4				
	1958	V8	430	4				
	1957	V8	368	4				
	1957-56	V8	312	4				
	1955	V8	292	4				
	1954	V8	256	4				
	1953-50	V8	255	2				
Nash	1956-5]	6	196	1	O		O	
Oldsmobile	1962-61	V8	215	2			O	
	1962-61	V8	394	2				
	1962-59	V8	394	4				
	1960-58	V8	371	2				
	1959-57	V8	371	4			P	
	1956-54	V8	324	2				

Used Vehicle Makes and Models

PASSENGER CARS

Make	Model Years	Cylinders	Displacement	Carburetor Barrels	AC	M	NT	W
Oldsmobile	1956-54	V8	324	4				
	1953-52	V8	303	4				
	1953-50	V8	303	2				
Plymouth	1962-60	6	225	1				
	1962-60	6	170	1				0
	1962-58	V8	318	2				
	1959	V8	318	4				0
	1959-54	6	230	1				
	1957	V8	301	2				
	1957	V8	301	4	0			0
	1957-56	V8	277	2				
	1957-56	V8	277	4				
	1956	V8	270	2				
	1956	6	230	2	0			
	1955	V8	260	2				
	1955	V8	241	2				
	1954-50	6	218	1				
Pontiac	1962-61	4	194	1			0	0
	1962	V8	215	4			0	
	1962-59	V8	389	4				
	1962-59	V8	389	2				
	1961	V8	215	2			0	
	1958	V8	370	2				
	1958	V8	370	4				
	1957	V8	347	2				
	1957	V8	347	4				
	1956	V8	316	2				
	1956	V8	316	4				
	1955	V8	287	2				
	1955	V8	287	4				
	1954-53	6	239	2				0
	1954-50	8	268	2				
	1952-50	6	239	1				
Rambler	1962-57	6	196	1	P			P
	1961	V8	250	2				
	1961-58	V8	327	4	P			P
	1961-58	V8	250	4	P			P
Studebaker	1960-59	6	170	1				0
	1962-55	V8	259	2				
	1955	6	185	1				0
	1954-53	V8	233	2				
	1954-50	6	170	1				0
	1950	6	245	1				0

Used Vehicle Makes and Models

TRUCKS

Make	Model Years	Cylinders	Displacement	Carburetor Barrels	AC	M	NT	W
Chevrolet	1962-61	6	145	2-1			0	0
	1962-57	V8	283	2				
	1962-50	6	235	1				
	1960-54	6	261	1				
	1957-55	V8	265	2				
	1953-50	6	216	1				
Dodge	1962-61	6	170	1				0
	1962-61	6	225	1				
	1962-59	V8	318	2				
	1962-53	6	251	1				P
	1960-50	6	230	1				
	1954-50	6	218	1				
	1952-50	6	237	1				0
Ford	1962-57	V8	292	2				P
	1962-61	6	144	1			0	
	1962-61	6	170	1			0	
	1962-56	V8	332	2				0
	1962-54	6	223	1				
	1961-59	V8	302	2				0
	1958-55	V8	272	2				
	1955-54	V8	256	2				
	1955-53	V8	317	2				0
	1955-50	V8	239	2				
	1953-52	6	215	1				
	1953-50	6	254	1				P
	1952-50	6	226	1				
G.M.C.	1962-59	V6	305	2			0	P
	1960-52	6	302	1			0	0
	1960-50	6	270	1			0	P
	1957-56	V8	347	2			0	0
	1956-55	V8	316	2			0	
	1955	V8	288	2			0	0
	1955-50	6	248	1			0	
	1953-50	6	228	1			0	
International	1962-59	V8	266	2			0	
	1962-59	V8	304	2			0	
	1962-59	V8	345	2			0	0
	1962-54	6	264	1			0	
(a)	1962-52	6	450	1			0	
	1962-50	6	220	1			0	
	1962-50	6	240	1			0	

(a) Factory equipped with certified device

MLB:jh

RESOLUTION 63-52 (AMENDED)

WHEREAS Section 24395(5) of the Health and Safety Code authorizes the Motor Vehicle Pollution Control Board to exempt "... motor vehicles for which certified devices are not available"; and

WHEREAS major manufacturers of approved crankcase control devices have found it economically infeasible to make devices for certain motor vehicles which are "rare" in California.

NOW, THEREFORE, BE IT RESOLVED, that

1. The Motor Vehicle Pollution Control Board finds that crankcase devices are now available for the American-made used vehicles listed on Exhibit A (four pages) which is incorporated as part of this resolution; and that

2. All other used motor vehicles not equipped at the factory with a certified device in classifications (b), (c), (d), (e), (f), and (g) as specified in the California Administrative Code, Title 13, Chapter 3, Sub-chapter 1, Article 1, Section 2004, including those makes of used vehicles listed on Exhibit B (three pages) which is incorporated as part of this resolution, are at this time declared exempt from the provisions of Article 3, Chapter 3, Division 20 of the Health and Safety Code.

12/11/63
jh

MOTOR VEHICLE POLLUTION CONTROL BOARD

Amended
3-11-64

Exhibit B

RESOLUTION 63-52
EXEMPT USED VEHICLES
MAKES OF USED VEHICLES FOR WHICH
CRANKCASE DEVICES ARE NOT AVAILABLE

AMERICAN PASSENGER CARS

CROSLEY
FRAZER
HUDSON
IMPERIAL
KAISER
MUNTZ
PACKARD
WILLYS

AMERICAN TRUCKS & BUSES

AUTOCAR
CLARK
COLEMAN
CROWN
DIAMOND T
DIVCO
DUPLEX
FAGEOL
FLEXIBLE
FWD
KENWORTH
MACK
MARMON-HERRINGTON
OSHKOSH
PETERBILT
REO
STUDEBAKER
WARD-LA FRANCE
WALTER
WHITE
WILLYS

FOREIGN PASSENGER CARS

ABARTH

AC

ALFA ROMEO

ALPINE

ALVIS

AMPHICAR

ARISTA

ARMSTRONG SIDDELEY

ASA

ASTON MARTIN

AUSTIN

AUSTIN-HEALEY

AUTOBIANCHI

AUTOCARS

AUTO UNION

BENTELEY

BERTONE

BIANCHINA

BONNET

BORGWARD

BMW

BRISTOL

CHAIKA

CISITALIA

CITROEN

DAF

DAIMLER

DATSUN

DINFIA

DKW

DORETTI

FACEL-VEGA

FAIRTHORPE

FERRARI

FIAT

FORD, ENGLISH

FORD, GERMAN

FRAZER NASH

GAZ

GLAS

GOGGOMOBIL

GOLIATH

GRABER

GSM

HILLMAN

HINDUSTHAN

HINO

HOLDEN

HUMBER

INNOCENTI

ISAR

ISETTA

ISO

JAGUAR

JENSEN

LAGONDA

LANCIA

LEA FRANCIS

LOTUS

MASERATI

MAZDA

MBM

MERCEDES BENZ

MG

MITSUBISHI

MORGAN

MORETTI

MORRIS

MOSKVITCH

NISSAN

NSU

NSU FIAT

OGLE

OPEL

OSCA

PANHARD

PEUGEOT

PORSHE

PRINCE

PUBLICA

RELIANT

RENAULT

RILEY

ROLLS ROYCE

ROVER

SAAB

SACHSENRING

SEAT

SIATA

SKODA

SIMCA

SINGER

STANDARD

SUBARU

SUNBEAM

SUNBEAM - TALBOT

SUZUKI

TALBOT

TANUS

TATRA

TORNADO

TOYOPET

TOYOTA

TRABANT

TRACTA

TRIUMPH

TURNER

VANDEN PLAS

VAUXHALL

VIGNALE

REPORT OF THE HONDA MOTOR COMPANY CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report on the staff evaluation of the Honda Motor Company, Ltd., Crankcase Emission Control System. The basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installation), June 5, 1963 revision. The report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The Honda Motor Company Crankcase Emission Control System consists of a three-eights inch-inside-diameter tube connecting the rocker arm cover to the clean side of the air cleaner. The connection is immediately below the air cleaner in the tube connecting the air induction system to the carburetor. The system is completely sealed, there being no provision made for the introduction of ventilation air. There is no flame arrestor in the system but repeated efforts by an authorized testing laboratory were unsuccessful in propagating a flame through the system. The oil filler cap is sealed and the rubber tube used in the system is oil and ozone resistant. Honda recommends inspection of the tube once a year. The system is to be installed on a new model automobile which Honda expects to market in California early in 1964. The engine has a capacity of 30.5 cu. in. displacement and will be installed on a small sports car.

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 Honda 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, including odor criterion. The letter also states that the system will not be offered as replacement equipment except on the same new vehicles upon which it was originally installed at the factory.

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 Honda Motor Company Sealed Crankcase Emission Control System be approved for new cars, factory installation only, on 1964 and subsequent models in classification (a).

11/19/63
mj

RESOLUTION 63-53

WHEREAS Honda Motor Company, Ltd., No. 5, 5-Chome, Yaesu, Chuo-ku, Tokyo, Japan, filed an application for certification of approval for a crankcase emission control system which is described as follows:

> The Honda Motor Company, Ltd., Crankcase Emission Control System consists of a three-eights inch inside diameter tube connecting the rocker arm cover to the clean side of the air cleaner. The connection is immediately below the air cleaner in the tube connecting the air induction system to the carburetor. The system is completely sealed, there being no provision made for the introduction of ventilation air; and

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, including odor criterion, 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 Honda Motor Company sealed crankcase emission control system for installation on 1964 and subsequent model Honda cars in classification (a) as described in Title 13, of the California Administrative Code, Chapter 3, Subchapter 1, Article 1, Section 2004.

11/19/63
mj

RESOLUTION 63-54

WHEREAS the installation of crankcase emission control devices becomes mandatory on new cars sold in California which are in groups (b),(c), (d),(e), and (f), effective April 26, 1963, and group (a) effective February 1, 1964, in accordance with Section 24390 of the Health and Safety Code; and

WHEREAS certain car manufacturers have been delayed in engineering a specific device for factory installation on their cars; and

WHEREAS executives of this company has supplied the Board with written assurance that engineering is now under way and that approved devices will be installed on their cars sold in California by May 1, 1964; and

WHEREAS the number of cars involved are negligible in number;

THEREFORE, BE IT RESOLVED, that:

1. The following cars are exempted from provisions of Section 24390 of the Health and Safety Code under authority granted the Motor Vehicle Pollution Control Board under Section 24386 (5) of the Health and Safety Code:

   (a) Peugot, Inc.

   (b) Citroen Cars, Inc.

   (c) British Motors Corp.

2. Such exemption shall terminate on April 30, 1964.

12/11/63
g

REPORT OF THE STUDEBAKER CORPORATION SEALED CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report of the staff evaluation of the Studebaker Corporation Sealed Crankcase Emission Control System. The basis for evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions, (Factory Installation), June 5, 1963 revision. This report does not include evidence concerning compliance with the Board's criteria.

Description of Device

The Studebaker Sealed Crankcase Emission Control System has two modifications, one for conventional engines and the other for supercharged engines. The description of the conventional system is as follows:

1. A sealed crankcase emission control system consisting of a 3/4" rubber tube from the crankcase to the clean side of the air cleaner element. There is no provision for ventilation air as the system is completely sealed. To prevent crankcase explosions an in line flame arrestor is installed in the tube between the crankcase and the air cleaner. All oil filler caps and the dipstick opening are sealed. The hose used to join the components in the system is ozone and oil resistant synthetic rubber.

2. A sealed crankcase emission control system for supercharged engines consisting of a 3/4" rubber tube leading from the side of the crankcase to the dirty side of the air cleaner element. There is no provision for ventilation air as the system is completely sealed. After passing through the air cleaner element, the blowby gases are directed to the suction side of the supercharger from which the blowby gases are discharged into the carburetor. The oil filler caps and dipstick opening are sealed. The hose connecting the components in the system is ozone and oil resistant rubber tubing. The Studebaker Sealed System is to be used on special, high performance engines in group (e). The service on the air cleaner is the same as a car without 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 Studebaker Corporation, 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 offered as replacement equipment except on the same new vehicles upon which it was originally installed at the factory.

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 Studebaker Corporation Sealed Crankcase Emission Control System be approved for new Studebaker cars, factory installation only, on 1964 and subsequent models of motor vehicles in classification (e).

12/11/63
mj

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 Studebaker Corporation Sealed Crankcase Emission Control System be approved for new Studebaker cars, factory installation only, on 1964 and subsequent models of motor vehicles in classification (e).

12/11/63
mj

RESOLUTION 63-55

WHEREAS Studebaker Corporation, South Bend, Indiana, filed an application for a certificate of approval for a crankcase emission control system November 18, 1963, which is described as follows:

1. A sealed crankcase emission control system consisting of a 3/4" rubber tube from the crankcase to the clean side of the air cleaner element. To prevent crankcase explosions an in line flame arrestor is installed in the system between the crankcase and the air cleaner. All oil filler caps and the dipstick opening are sealed. The hose used to join the components in the system is ozone and oil resistant synthetic rubber.

2. A sealed crankcase emission control system for the supercharged engines consisting of a 3/4" rubber tube leading from the side of the crankcase to the dirty side of the air cleaner element. After passing through the air cleaner element, the blowby gases are directed to the suction side of the supercharger from which the blowby gases are discharged into the carburetor. The oil filler caps, and dipstick openings are sealed. The hose connecting the various components of the system is ozone and oil resistant rubber tubing; and

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 representation 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,

NOW, THEREFORE BE IT RESOLVED, That this Board

Issue a certificate of approval for the Studebaker Sealed Crankcase Emission Control System for installation on 1964 and subsequent model Studebaker cars in vehicle classification (e) as designated in Title 13 of the California Administrative Code, Chapter 3, Sub-chapter 1, Article 1, Section 2004.

12/11/63
jh

REPORT OF THE GENERAL MOTORS (FRANCE) CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report of the staff evaluation of the General Motors (France) Closed Crankcase Emission Control System. The bases of the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installation), June 5, 1963 revision. The report does not include evidence concerning compliance with the Board's criteria.

Description of System

The General Motors (France) Closed Crankcase Emission Control System consists of a connection from the rocker arm cover to the dirty side of an oil bath cleaner. A tee in the line from the rocker arm cover to the air cleaner connects to a branch line equipped with a AC (France) metering valve connected to the intake manifold. At idle and light loads, air is pulled in through the air cleaner through a filter which eliminates the possibility of dirty air being pulled into the intake manifold through the metering valve. The blowby in excess of the capacity of the metering valve is directed to the air cleaner through the filter which also acts as a flame arrestor. The molded rubber used in the system is ozone and oil resistant.

General Motors (France) recommends that the valve be inspected at 5,000 mile intervals while the oil bath air cleaner maintenance is the same as those cars equipped without a device. The Opel-Kadette is planning to use this 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 General Motors (France), signed by a legal officer, containing the manufacturer's representation that the device, which will be manufactured for original equipment only, will comply with the Board's criteria, including odor criterion. The letter also states that the system will not be offered as replacement equipment except on the same new equipment upon which it was originally installed at the factory.

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 General Motors (France) Closed Crankcase Emission Control System be approved for new cars, factory installation, on 1964 and subsequent models of motor vehicles in classification (a).

jh
12/11/63

RESOLUTION 63-56

WHEREAS General Motors (France) filed an application for a certificate of approval for a crankcase emission control system on November 12, 1963, which system is now described as the General Motors(France) Closed Crankcase Emission Control System having the following specifications:

> The General Motors (France) Closed Crankcase Emission Control System consists of a connection from the rocker arm cover to the dirty side of an oil bath air cleaner. A tee in the line from the rocker arm cover to the air cleaner contains a branch line equipped with an AC (France) metering valve connected to the intake manifold. At idle and light loads, air is pulled in through the air cleaner through a filter which eliminates the possibility of dirty air being pulled into the intake manifold through the metering valve. The blowby in excess of the capacity of the metering valve is directed to the air cleaner through the filter which also acts as a flame arrestor. The molded rubber used in the system is ozone and oil resistant; and

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, including odor criterion, 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 General Motors (France) Closed Crankcase Emission Control System for new cars, factory installation, on 1964 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.

jh
12/11/63