

- Resolution No. 62-1 - An amendment for existing contract for testing services at Scott Research Laboratories.
- Resolution No. 62-2 - The Board recognizes that crankcase emission control devices can change engine air/fuel ratios, thus increasing carbon monoxide or nitrogen oxides emissions.
- Resolution No. 62-3 - Properly equipped motor vehicles whose emissions are found by appropriate tests to meet State standards may be found to be exempt from compliance.
- Resolution No. 62-4 - Rochester Products Division, subsidiary of Genl. Motors Corp., filed application for a certificate of approval.
- Resolution No. 62-5 - Carter Carburetor Div. of ACF Industries, Inc., filed application for a certificate of approval for crankcase.

RESOLUTIONS INDEX Cont'd

- Resolution No. 62-6 - Walker Manufacturing Company filed application for a certificate of approval.
- Resolution No. 62-6 (a) Factory installation of the Walker "K" type crankcase ventilator system.
- Resolution No. 62-7 - Volkswagen AG of America, Inc. filed application for a certificate of approval.
- Resolution No. 62-8 - United Air Cleaner, Novo Industrial Corporation filed application for a certificate of approval for crankcase.
- Resolution No. 62-9 - The Board has designated the LA County Air Pollution Control District automotive testing facility as an authorized testing laboratory.
- Resolution No. 62-10- Diesel-powered motor vehicles are now properly equipped to meet State standards.
- Resolution No. 62-11- The Board finds that 1963 and subsequent models of motor vehicles classifications (b) and (e) manufactured by American Motors Corp. meet State standards.
- Resolution No. 62-12 - The Board finds that 1963 and subsequent models of motor vehicles manufactured by Chrysler Corporation and equipped with a Chrysler crankcase ventilation valve, meet State standards.
- Resolution No. 62-13 - The Board finds that 1963 and subsequent models of motor vehicles classifications b and c, manufactured by Ford Motor Company, and equipped with an air cleaner-crankcase ventilation system, meet State standards.
- Resolution No. 62-14 - Approves the Scott Res. Lab. Inc. -State contract No. 7030 dated June 19, 1962, for a maximum amount of \$60,000.
- Resolution No. 62-15 - American Motors Corporation has filed application for a certificate of approval for crankcase devices.
- Resolution No. 62-16 - Chrysler Corporation has filed application for a certificate of approval for a crankcase control device.
- Resolution No. 62-17 - The Board has approved several crankcase emission control devices for "factory installation".
- Resolution No. 62-18 - The Board has designated the Scott Res. Laboratories, Inc. as an authorized motor vehicle testing laboratory.
- Resolution No. 62-19 - The Board authorizes the Exec. Officer upon approval of Executive Committee and ratification of Board at the next meeting to execute contracts requiring expenditure of funds with budget allocations in amounts not to exceed \$1,000.
- Resolution No. 62-20 - The Board must secure special test fleet vehicles for the device applicant's service life fleet.

RESOLUTIONS INDEX Cont'd

- Resolution No. 62-21 - The Board finds that 1962 and subsequent models of motor vehicle classification (f) manufactured by Rolls-Royce, Ltd., Motor Car Division (including Bentley cars) meet with the State standards.
- Resolution No. 62-22 - The Board finds that 1963 and subsequent models of motor vehicles classifications (b), (c), (d), (e), and (f) manufactured by American Motors Corp., meet the State Standards.
- Resolution No. 62-23 - AC Spark Plug Division of General Motors Corp. has filed application for a certificate of approval for a crankcase emission control device.
- Resolution No. 62-24 - The Board finds that 1963 and subsequent models of classifications (b) and (c) manufactured by the British Motor Corp., meet State standards.
- Resolution No. 62-25 - International Harvester Company filed application for a certificate of approval of a crankcase control system.
- Resolution No. 62-26 - The Board, between Sept. 15, 1961 and November 14, 1962, has issued certificates of approval for numerous crankcase emission control devices .
- Resolution No. 62-27 - General Motors Corp. filed an application for a certificate of approval for the supercharged Corvair Spyder crankcase emission control system.
- Resolution No. 62-28 - Jaguar Cars, Ltd. filed an application for a certificate of approval for a crankcase emission control system on 11/14/62.
- Resolution No. 62-29 - Walker Mfg. Co. filed an application for a certificate of approval for a crankcase emission control system on 7/12/62.

BOARD RESOLUTION 62-1

WHEREAS Scott Research Laboratories, Inc. has been designated 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 it has been found necessary to amend the existing contract for testing services with Scott Research Laboratories, Inc.:

THEREFORE, BE IT RESOLVED, that this Board approves an amendment dated February 1, 1962, to Contract #234 with Scott for a total cost not to exceed \$25,100 and authorizes the Executive Officer to sign same on behalf of the Motor Vehicle Pollution Control Board.

I certify the above resolution to be a true and exact copy of the resolution passed by the Motor Vehicle Pollution Control Board at its February 14, 1962 meeting.

D. A. Jensen  
Executive Officer

DAJ:vj/jh  
2/14/62

RESOLUTION 62-2

WHEREAS the Board recognizes that crankcase emission control devices can change engine air/fuel ratios, thus increasing carbon monoxide or nitrogen oxides emissions; and

WHEREAS the Board recognizes that some degree of tolerance is required in compensating for said change in air/fuel ratio when installing crankcase emission control devices on used motor vehicles; and

WHEREAS the Board judges the benefits of hydrocarbon reduction through crankcase controls to outweigh small changes in other exhaust emissions

THEREFORE, BE IT RESOLVED, That this Board

1. Establish limits of acceptable average change in air/fuel ratio attributable to crankcase emission control devices as follows:
  - a. Air/fuel ratio decrease - not greater than 1%.
  - b. Air/fuel ratio increase - not greater than 4%.

3-29-62

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RESOLUTION 62-3

WHEREAS Section 24386(4) of the Health & Safety Code provides that the Board may issue certificates of approval for devices which operate within the State standards and meet Board criteria; and

WHEREAS Section 24386(5) provides that properly equipped motor vehicles whose emissions are found by appropriate tests to meet State standards may be found to be exempt from compliance under Article 3, Division 20, Health & Safety Code:

THEREFORE, BE IT RESOLVED, that this Board finds

1. That test procedures for factory installed original equipment to control motor vehicle emissions shall be the same whether for approval of a device (under Section 24386(4) of the Health & Safety Code) or whether for a properly equipped motor vehicle (under Section 24386(5) of the Health & Safety Code).
2. The Board upon review and evaluation of pertinent material shall make a finding at a duly called public meeting as to whether a submitted device or a properly equipped vehicle (meeting provisions of Motor Vehicle Pollution Control Board Resolution 61-6) complies with the State standards and criteria under appropriate test procedures.
3. A surveillance program shall be established to maintain constant inspection and evaluation of devices and properly equipped vehicles to insure continued compliance with State standards and Board criteria.

4/11/62  
pa/jg

## REPORT ON ROCHESTER PRODUCTS CRANKCASE VENTILATOR VALVE SYSTEM

### Introduction

This is a report on the staff evaluation of the Rochester Products Crankcase Ventilation Valve System. The basis for 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 Rochester valve is a diaphragm type vacuum-regulator valve designed to meter the flow of gases from the crankcase to the intake manifold. The valve senses crankcase vacuum and adjusts its opening to maintain a pre-determined slight vacuum in the crankcase. The amount of ventilation air admitted to the crankcase is controlled by an opening in a cap designed to fit the oil fill pipe. This cap also contains a rubber check valve which allows blowby gases to escape from the crankcase when the capacity of the regulator valve is exceeded. Hose, clamps and fittings are also required to complete the installation. Figure 1 illustrates the valve assembly. When in operation, the valve continuously modulates to maintain a flow rate sufficient to handle all blowby gases plus a constant volume of ventilation air. Near wide open throttle the flow rate may become insufficient to handle the blowby rate and some out-flow may occur. A screen in the assembly provides backfire protection. The manufacturer recommends cleaning the valve every 5,000 miles. A single valve size is applicable to all makes and models.

### Compliance with Crankcase Emissions Standards

The applicant submitted test data from 37 vehicles covering all six engine sizes. A Board staff representative has inspected the laboratory where the measurements were made. These tests showed complete control of crankcase emissions at all three standard test conditions for all 37 vehicles.

A prototype device was installed on a vehicle at the Board's laboratory and tests were made confirming compliance with the standards.

### Compliance with Board Criteria

The Board has on file a letter from Rochester Products Division of General Motors Corporation containing the company's representations that the device which will be manufactured for original equipment installation will comply with the Board's criteria.

### Summary and Conclusions

1. The Rochester Products Crankcase Ventilation Valve meets the crankcase emissions standard of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installations will comply with the Board's criteria.
3. The staff recommends that the Rochester Products Crankcase Ventilation Valve be granted a certificate of approval for factory installation on motor vehicles in classes b, c, d, e, and f as per attached resolution.

## REPORT ON CARTER CRANKCASE VENTILATOR VALVE SYSTEM

### Introduction

This is a report on the staff evaluation of the Carter Crankcase Ventilator Valve system. The basis for 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 Carter Ventilator Valve is a spring-loaded regulating valve assembly which, actuated by manifold vacuum, meters the flow of crankcase gases to the intake manifold. A typical valve is shown in Figure 1. Accessory parts such as hose, clamps, and fittings are required. Six valve sizes have been tested and additional sizes may be produced. Each size has a scheduled flow capacity designed to handle the blowby flow and also draw a limited amount of crankcase ventilation air. The manufacturer recommends cleaning the valve every 10,000 miles.

### Compliance with Crankcase Emission Standards

The applicant has submitted test data from 33 vehicles in size classes b, c, d, e, and f. A Board staff representative has inspected the laboratory where the measurements were made. The tests showed complete control of crankcase emissions at all three standard test conditions.

A prototype device was installed on a vehicle at the Board's laboratory and tests were made confirming compliance with the standards.

### Compliance with Board Criteria

The Board has on file a letter from Carter Carburetor Division of ACF Industries containing the manufacturer's representations that the device which will be manufactured for original equipment installation will comply with the Board's criteria.

### Summary and Conclusions

1. The Carter Crankcase Ventilator Valve meets the crankcase emissions standard of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installations will comply with the Board's criteria.
3. The Technical Advisory Group on Crankcase Emission Controls in a meeting on March 27th reviewed all test data and recommended to the staff that affirmative action be taken on approval of this device.
4. The staff recommends that the Carter Ventilator Valve be granted a certificate of approval for factory installation on motor vehicles in classes b, c, d, e, and f as per attached resolution.



RESOLUTION 62-4

WHEREAS Rochester Products Division, subsidiary of General Motors Corporation, filed application for a certificate of approval for a crankcase emission control device on August 9, 1961; which device is described as a crankcase ventilator valve system, having the following specifications:

A diaphragm type vacuum-regulator valve assembly which meters the flow of crankcase gases to the engine intake manifold at a rate controlled by crankcase vacuum; and a special oil filler cap which regulates flow of gases in or out of the crankcase; and accessory parts; and

WHEREAS the device 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 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the Rochester Products crankcase ventilator valve system for factory installation on 1962 and subsequent models of motor vehicle classifications b, c, d, e and f as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

4/11/62  
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# REPORT ON WALKER "K" TYPE CRANKCASE VENTILATOR

## Introduction

This is a report on the staff evaluation of the Walker "K" type crankcase ventilator system. The basis for 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 Walker "K" type Crankcase Ventilator is of the tube-to-air cleaner type. It consists of a tube connection to the upstream side of the air cleaner and a specially designed oil filler cap, which prevents outflow of blowby gases but permits the entry of ventilation air. This provides, in effect, a closed system which insures that all blowby gases are returned to the engine. It is necessary that a vehicle equipped with this device have an air filter medium that can tolerate exposure to the blowby gases. Some plastic foam filters have been found to be suitable. The system is illustrated in the accompanying figure. *required*

Maintenance consists of cleaning or changing the air filter and oil filler cap filter every 5,000 to 10,000 miles, which is the normal maintenance recommendation for these parts on conventional cars.

## Compliance with Crankcase Emissions Standards

Walker Manufacturing Company has submitted test data from three vehicles in classes b and c. Board staff representatives have inspected the laboratory where the measurements were made. These tests show compliance with the standards.

A prototype device was installed on a vehicle at the Board's laboratory and tests were made confirming compliance with the standards.

## Compliance with Board Criteria

The Board has on file a letter from Walker Manufacturing Company containing the company's representations that the device which will be manufactured for original equipment installation will comply with the Board's criteria.

## Summary and Conclusions

1. The Walker "K" Type Crankcase Ventilator meets the crankcase emissions standard of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installations will comply with the Board's criteria.
3. The Technical Advisory Group on Crankcase Emission Controls in a meeting on March 27th reviewed all test data and recommended to the staff that affirmative action be taken on approval of this device.
4. The staff recommends that the Walker "K" Type Crankcase Ventilator system be granted a certificate of approval for factory installation on motor vehicles in classes b, c, d, e, and f as per attached resolution.

RESOLUTION 62-5

WHEREAS Carter Carburetor Division of ACF Industries, Inc., filed application for a certificate of approval for a crankcase emission control device on September 13, 1961; which device is described as a crankcase ventilator valve system, having the following specifications:

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

WHEREAS the device 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 the Board accepts the manufacturer's representations that the device will meet 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the Carter Carburetor crankcase ventilator valve system for factory installation on 1962 and subsequent models of motor vehicle classifications b, c, d, e and f as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

4/11/62

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REPORT ON WALKER "K" TYPE  
CRANKCASE VENTILATOR  
FOR VEHICLE CLASSIFICATION (a)

Walker Manufacturing Company has requested extension of the approval granted by the Board in Resolution 62-6 to include vehicles in the smallest engine classification, (a).

The company has submitted additional test data for class (a) vehicles showing that the Walker "K" type crankcase ventilator meets the crankcase emissions standard of the California Department of Public Health, when operating efficiently.

The staff recommends that the Board's approval for factory installation of the Walker "K" type crankcase ventilator system be extended to include vehicles in class (b).

(a)

11/14/62

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RESOLUTION 62-6 (a)

WHEREAS Walker Manufacturing Company has been granted a certificate of approval by Board Resolution 62-6 for factory installation of the Walker "K" type crankcase ventilator system for motor vehicle classifications b, c, d, e, and f; and

WHEREAS Walker Manufacturing Company has made application for extension of this approval to motor vehicle classification (a); and

WHEREAS the device 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 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the Walker "K" type crankcase ventilator system for factory installation on 1963 and subsequent models of motor vehicles classification (a) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

11/14/62

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RESOLUTION 62-6

WHEREAS Walker Manufacturing Company filed application for a certificate of approval for a crankcase emission control device on December 10, 1961; which device is described as a "K" type crankcase ventilator system having the following specifications:

A tube-to-air cleaner device which conducts crankcase gases to the upstream side of the air cleaner; and a special oil filler cap which prevents outflow of crankcase gases; and accessory parts; and

WHEREAS the device 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 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the Walker "K" type crankcase ventilator system for factory installation on 1962 and subsequent models of motor vehicles classifications b, c, d, e, and f as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

4/11/62

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## REPORT ON VOLKSWAGEN CRANKCASE CONTROL SYSTEM

### Introduction

This is a report on the staff evaluation of the Volkswagen crankcase control system. The basis for 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 Volkswagen crankcase control system is of the tube-to-air cleaner type. It consists simply of a tube connecting the crankcase to the upstream side of the air cleaner. All other openings to the crankcase are closed and sealed.

The device has been factory installed as standard equipment on all Volkswagens produced since April 1961. No maintenance cost is anticipated.

### Compliance with Crankcase Emissions Standards

Truesdail Laboratories, Inc., an approved laboratory has submitted data on five Volkswagens equipped with the crankcase control system, showing compliance with the standards.

### Compliance with Board Criteria

The Board has on file a letter from Volkswagen of America, Inc., containing the company's representations that the device will comply with the Board's criteria.

### Summary and Conclusions

1. The Volkswagen crankcase control system meets the crankcase emissions standard of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installations will comply with the Board's criteria.
3. The Technical Advisory Group on Crankcase Emission Controls in a meeting on March 27th reviewed all test data and recommended to the staff that affirmative action be taken on approval of this device.
4. The staff recommends that the Volkswagen Crankcase Control System be granted a certificate of approval for factory installation on Volkswagen vehicles as per attached resolution.

RESOLUTION 62-7

WHEREAS Volkswagen of America, Inc., a subsidiary of Volkswagen AG in Wolfsburg, Germany, filed application for a certificate of approval for a crankcase emission control device on January 4, 1962; which device is described as a control system having the following specifications:

A tube-to-air cleaner device which conducts crankcase gases from a sealed crankcase to the upstream side of the air cleaner; and

WHEREAS the device 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 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the Volkswagen crankcase emission control system for factory installation on 1962 and subsequent models of Volkswagen motor vehicles, in classification g as designated.

4/11/62

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62-8

## REPORT ON UNITED CRANKCASE VENTILATOR

### Introduction

This is a report on the staff evaluation of the United Crankcase Ventilator System. The basis for 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 United Crankcase Ventilator is a spring-loaded valve assembly which, actuated by manifold vacuum, meters the flow of crankcase gases to the intake manifold. An illustration of the valve is shown in the attached figure. Accessory parts such as hose, clamps, and fittings are required. The manufacturer proposes two valve sizes only;

Additional sizes may be produced, if necessary. A definite maintenance interval has not been established, but the applicant reports through extensive tests at an approved laboratory that very little fouling was observed at 10,000 miles of service.

### Compliance with Crankcase Emission Standards

The applicant has submitted test data from eight vehicles in classes b, c, d, and e tested at Scott Laboratories in San Bernardino. The results of these tests showed compliance with the standards.

A prototype device was installed on a vehicle at the Board's contract laboratory and tests were made confirming compliance with the standards.

### Compliance with Board Criteria

The Board has on file a letter from United Air Cleaner Division of Novo Industrial Corporation containing the manufacturer's representations that the device which will be manufactured for original equipment installation will comply with the Board's criteria.

### Summary and Conclusions

1. The United Crankcase Ventilator meets the crankcase emissions standard of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installation will comply with the Board's criteria.
3. The Technical Advisory Group on Crankcase Emission Controls in a meeting on March 27th reviewed all test data and recommended to the staff that affirmative action be taken on approval of this device.
4. The staff recommends that the United Crankcase Ventilator System be granted a certificate of approval for factory installation on motor vehicles in classes b, c, d, e, and f as per attached resolution.

RESOLUTION 62-8

WHEREAS United Air Cleaner, Novo Industrial Corporation, filed application for a certificate of approval for a crankcase emission control device on February 28, 1962; which device is described as a crankcase ventilator valve, having the following specifications:

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

WHEREAS the device 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 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 2004

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the United crankcase ventilator valve system for factory installation on 1962 and subsequent models of motor vehicle classifications b, c, d, e and f as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004

6-19-62

RESOLUTION 62- 9

WHEREAS the Motor Vehicle Pollution Control Board has designated the Los Angeles County Air Pollution Control District 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 the District for two prior contracts and found their performance to be satisfactory; and

WHEREAS it is necessary for the State to continue device testing and criteria evaluation and since the County Air Pollution Control District has agreed to perform this work, the Board accepts the proposed contract.

THEREFORE, BE IT RESOLVED, That this Board

Approves the Air Pollution Control District - State contract No. 26 for fiscal year 1962-63 for a maximum amount of \$230,000 as presented and directs the Executive Officer to sign the contract on behalf of the State Motor Vehicle Pollution Control Board.

EFG:jg  
6-19-62

RESOLUTION 62-10

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 and appropriate tests show that diesel-powered 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 diesel-powered motor vehicles are now properly equipped to meet State standards and criteria after engineering evaluation and appropriate tests 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.

jh

6/22/62

amended 6/19/62

RESOLUTION 62-11

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 appropriate tests show that 1963 and subsequent models of motor vehicles manufactured by American Motors Corporation and equipped with an American Motors Corporation crankcase ventilation valve, meets 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 2003,

THEREFORE, BE IT RESOLVED, That this Board

Finds that 1963 and subsequent models of motor vehicles classifications b and e manufactured by American Motors Corporation, meet State Standards and criteria after appropriate tests in respect to compliance with crankcase emission control requirements.

RESOLUTION 62-12

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 appropriate tests show that 1963 and subsequent models of motor vehicles manufactured by Chrysler Corporation and equipped with a Chrysler crankcase ventilation valve, 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 2003.

THEREFORE, BE IT RESOLVED, That this Board

Finds that 1963 and subsequent models of motor vehicles classifications b, c, e, and f, manufactured by Chrysler Corporation and equipped with a Chrysler crankcase ventilation valve, meet State Standards and criteria after appropriate tests in respect to compliance with crankcase emission control requirements.

jg  
6/19/62

RESOLUTION 62-13

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 appropriate tests show that 1963 and subsequent models of motor vehicles manufactured by Ford Motor Company and equipped with an air cleaner-crankcase ventilation system 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 200<sup>4</sup>.

THEREFORE, BE IT RESOLVED, That this Board

Finds that 1963 and subsequent models of motor vehicles classifications b and c, manufactured by Ford Motor Company, and equipped with an air cleaner-crankcase ventilation system, meet State standards and criteria after appropriate tests in respect to compliance with crankcase emission control requirements without additional equipment. On this basis, these classifications of motor vehicles manufactured by Ford Motor Company are exempted from Article 3, Chapter 3 of Division 20 of the Health & Safety Code.

6/19/62

jh

RESOLUTION 62-14

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 contract.

THEREFORE, BE IT RESOLVED, That this Board,

Approves the Scott Research Laboratories, Inc. - State contract No. 7030 dated June 19, 1962, for a maximum amount of \$60,000 as presented and directs the Executive Officer to sign the contract on behalf of the State Motor Vehicle Pollution Control Board.

EPG:jg  
6-19-62



Introduction

This is a report on the staff evaluation of the American Motors Corporation Crankcase Ventilator valve system. The basis for 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 American Motors Corporation Ventilator Valve is a spring-loaded regulating valve assembly which, actuated by a manifold vacuum, meters the flow of crankcase gases to the intake manifold. It is very similar in design to the AC valve and operates on the same principle. The configuration of the plunger has been changed to modify the flow so that the characteristic flow curve is approximately the same when measured on the engine and on a flow test bench. Accessory parts such as hose, clamps and fittings are required. The flow from the crankcase to the underside of the carburetor is essentially the same as the AC device which was approved by the Board. The point of takeoff from the crankcase is at the location of the removed road draft tube. Each size has a scheduled flow capacity designed to handle the blowby flow and also draw a limited amount of crankcase ventilation air. The manufacturer recommends cleaning the valve every 6,000 miles.

Compliance with Crankcase Emission Standards

The applicant plans to use the American Motors Corporation Crankcase Ventilator valve on two groups of automobiles. One will be used on a 6-cylinder 196 cu. in. engine, while the other will be used on an 8-cylinder engine, 327" displacement, all 1963 models. As it was not possible for the applicant to supply the Board with a prototype 1963 car, a member of the staff visited the American Motors Corporation plant and witnessed the testing of the American Motors Corporation Crankcase Ventilation valve on a 1963 model automobile. The test shows complete control of crankcase emissions at all three standard test conditions. Prototype valves have been tested by the staff and characteristics were confirmed.

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

Summary and Conclusions

1. The American Motors Corporation Crankcase Ventilator valve meets the crankcase emissions standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installations will comply with the Board's criteria.
3. The staff recommends that the American Motors Corporation Crankcase Ventilator valve be granted a certificate of approval for factory installation on motor vehicles in Classes B, and E as per attached Resolution.

JRS/vj/mj/  
6/19/62

RESOLUTION 62-15

WHEREAS American Motors Corporation has filed application for a certificate of approval for a crankcase emission control device; which device is described as a crankcase ventilator valve, having the following specifications:

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

WHEREAS the device 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the American Motors crankcase ventilator valve system for factory installation on 1962 and subsequent models of motor vehicle classifications b and e as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

7-11-62

jh

*Calvin T. [unclear]*

62-16

REPORT OF CHRYSLER CORPORATION  
CRANKCASE VENTILATOR VALVE SYSTEM

Introduction.

This is a report on the staff evaluation of the Chrysler Crankcase Ventilator Valve system. The basis for 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 Chrysler Ventilator Valve is a spring-loaded regulating valve assembly which, actuated by a manifold vacuum, meters the flow of crankcase gases to the intake manifold. It is very similar in design to the AC valve and operates on the same principle. The configuration of the plunger has been changed to modify the flow so that the characteristic flow curve is approximately the same when measured on the engine and on a flow test bench. Accessory parts such as hose, clamps and fittings are required. The flow from the crankcase to the underside of the carburetor is essentially the same as the AC device which was approved by the Board. The point of takeoff from the crankcase is from a cup on the top of the rocker arm cover into which the crankcase ventilator valve is installed. Each size has a scheduled flow capacity designed to handle the blowby flow and also draw a limited amount of crankcase ventilation air. The manufacturer recommends cleaning the valve every 6,000 miles.

Compliance with Crankcase Emission Standards

The applicant has submitted test data for the various engines in the Chrysler line from 170 cu. in. to 413 cu. in. Certification is requested in Classes B, C, E and F. As it was impossible to obtain a Chrysler group of 1963 automobiles, a representative of the Motor Vehicle Pollution Control Board staff visited the Chrysler factory in Detroit, Michigan and witnessed the testing of the Chrysler device on several laboratory test cars. A total of 50 cars equipped with the Chrysler ventilating valve are currently under test in the Detroit area. Satisfactory evidence shows that the State standards are met by this system. Prototype valves have been tested by the staff and characteristics were confirmed.

Compliance with Board Criteria

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

Summary and Conclusions

1. The Chrysler Crankcase Ventilator valve meets the crankcase emissions standards of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installations will comply with the Board's criteria.
3. The staff recommends that the Chrysler Ventilator valve be granted a certificate of approval for factory installation on motor vehicles in Classes B, C, E and F.

JRS/vj/mj  
6/19/62

RESOLUTION 62-16

WHEREAS Chrysler Corporation has filed application for a certificate of approval for a crankcase emission control device; which device is described as a crankcase ventilator valve, having the following specifications:

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

WHEREAS the device 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the Chrysler crankcase ventilator valve system for factory installation on 1962 and subsequent models of motor vehicle classifications b, c, e and f as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

7-11-62  
jh

RESOLUTION 62-17

WHEREAS the Motor Vehicle Pollution Control Board has approved several crankcase emission control devices for "factory installation" so that the mandatory aspects of Article 3, Chapter 3, of Division 20 of the Health and Safety Code will apply to new cars sold in California on and after April, 1963; and

WHEREAS most such approved crankcase control devices require maintenance and/or replacement at periodic intervals; and

WHEREAS several different devices approved for factory installation are interchangeable on the motor vehicle; and

WHEREAS it would be impracticable for law enforcement officials to determine if a motor vehicle equipped with an approved device had in fact been so equipped at the factory.

THEREFORE, BE IT RESOLVED, That this Board,

As a matter of policy states that cars sold as new vehicles in California after April of 1963 equipped with an "approved device" will be in compliance with Article 3, Chapter 3, of Division 20 of the Health and Safety Code whether or not such device was installed at the factory.

DAJ:mk  
7-11-62

RESOLUTION 62-18

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 in principle.

THEREFORE, BE IT RESOLVED, That this Board,

Authorizes the Executive Officer to negotiate a contract similar in form to the attached agreement, not to exceed \$15,000.00 with Scott in Research Laboratories for necessary testing services.

That the Executive Officer is hereby directed to execute said agreement on behalf of the State Motor Vehicle Pollution Control Board.

RESOLUTION 62-19

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 that services be provided the Motor Vehicle Pollution Control Board at unforeseen times in order to continue the progress of device development and evaluation.

THEREFORE, BE IT RESOLVED, That this Board

Authorizes the Executive Officer upon approval of Executive Committee and ratification of Board at the next meeting to execute contracts requiring expenditure of funds in accordance with budget allocations in amounts not to exceed \$1,000 for any one contract.

7/11/62

jh

RESOLUTION 62-20

WHEREAS there is a need for all possible speed in evaluating exhaust emission control devices in the public interest; and

WHEREAS the Board must secure special test fleet vehicles for the device applicant's service life fleet, with requirements that specify a one year commitment of the vehicle to the test program, and

WHEREAS the applicant must furnish and install at least 25 devices within a reasonable time after acceptance for fleet and service life testing.

THEREFORE, BE IT RESOLVED, That

1. An applicant for approval of an exhaust emission control device who is accepted for Fleet and Service Life testing must proceed within 90 days to install devices on the prescribed fleet and must complete such installation of 25 devices within 150 days.
2. If an applicant does not comply with the above time requirements, his application shall be terminated.
3. Reapplication by that applicant will be thereafter considered only on the basis of demonstrated ability to produce devices for State Testing.



## REPORT ON ROLLS-ROYCE LIMITED MOTOR CAR DIVISION

### Introduction

This is a report on the staff evaluation of the Rolls-Royce, Limited, Crankcase Ventilator system. The basis for 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 Rolls-Royce Crankcase Ventilation system consists of a pipe connecting the crankcase oil filler tube to the air induction system at the choke butterfly housing. The breather system is completely enclosed, there being no provision for ventilation air to be pulled into the system. The oil filler cap is sealed. The system is to be used on all Rolls-Royce and Bentley automobiles. A flame arrestor consisting of six disks containing 40 mesh copper screen is enclosed in the system between the oil filler tube and the air cleaner. This system has been used on over 2,000 military vehicles with no difficulty whatsoever from crankcase explosion. The type of flame arrestor referred to has been used for many years by Rolls-Royce. The factory recommends that the screens be cleaned every 24,000 miles. Rolls-Royce has supplied the staff with a complete report showing crankcase depression at speeds from idle to 110 miles per hour. Rolls-Royce supplied the staff with two motor cars, one a 1960 model having 23,500 miles on it and the other, a 1962 model having 155 miles on it. Careful examination of the car reveals no point at which emissions can occur and this system is effectively sealed.

### Compliance with Crankcase Emission Standards

The applicant plans to use the sealed crankcase system on the V8 engines which are identical in the Rolls-Royce Silver Cloud and the Bentley S-2 series automobiles. Rolls-Royce has demonstrated to the satisfaction of the staff that they do in fact meet the State standards by showing complete control of crankcase emissions at the three standard test conditions.

### Compliance with Board Criteria

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

### Summary and Conclusions

1. Rolls-Royce, Limited, crankcase ventilation system meets the crankcase emissions standards of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installations will comply with the Board's criteria.
3. The staff recommends that the Rolls-Royce, Limited, crankcase ventilation system be granted a certificate of approval for factory installation on motor vehicles in Class (f) as per attached resolution.

9/19/62

mj

RESOLUTION 62-21

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 appropriate tests show that 1962 and subsequent models of motor vehicles manufactured by Rolls-Royce Ltd., Motor Car Division (including Bentley cars) and equipped with an air cleaner crankcase ventilation system 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 1962 and subsequent models of motor vehicle classification (f) manufactured by Rolls-Royce Ltd., Motor Car Division (and Bentley cars) and equipped with an air cleaner crankcase ventilation system, meet State standards and criteria after appropriate tests in respect to compliance with crankcase emission control requirements without additional equipment. On this basis, these classifications of motor vehicles manufactured by Rolls-Royce are exempted from Article 3, Chapter 3 of Division 20 of the Health & Safety Code.

## REPORT ON AMERICAN MOTORS CORPORATION

### Introduction

This is a report on the staff evaluation of the American Motors Corporation Venturi Type Positive Crankcase Ventilation system. The basis for 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 American Motors Corporation Venturi Type Positive Crankcase Ventilation system consists of a tube beveled at a 45° angle inserted into the tuning tube of the carburetor air cleaner. The probe is positioned in the tuning tube with a 45° bevel on the probe making a 45° angle with the main axis of the tuning tube. The balance of the system consists of a rubber hose of suitable size connecting the crankcase outlet and the tuning tube probe and the system contains a restricted crankcase breather cap.

In operation, air enters the crankcase through the crankcase breather cap, sweeps the crankcase where it entrains the blowby and then exits via the front engine side cover plate enroute to the air cleaner. The combined blowby and induction air enter the system on the outside of the air cleaner element. A dried paper filtering media is used in the air cleaner. Based on a study which American has made, the standard paper element should be changed at 25,000 mile intervals and the crankcase breather cap washed in solvent at 12,000 mile intervals. These intervals are the same as recommended periods for an automobile without a device.

### Compliance with Crankcase Emission Standards

American Motors Corporation has satisfied the staff that the Venturi Type Positive Crankcase Ventilation system meets the State standards at the three test points. American is asking for certification in classes b, c, d, e, and f.

The Board has on file a letter from the American Motors Corporation containing the manufacturer's representation that the device which will be manufactured for original equipment installation will comply with the Board's criteria. A member of the staff witnessed the testing of the system at the American Laboratories in Detroit.

### Summary and Conclusions

1. The American Motors Corporation Venturi Type Positive Crankcase Ventilation system meets the crankcase emissions standards of the California Department of Public Health when operating efficiently .
2. The applicant has made representations that the device, as produced for original equipment installations, will comply with the Board's criteria.
3. The staff recommends that the American Motors Corporation Venturi Type Positive Crankcase Ventilation system be granted a certificate of approval for factory installation on motor vehicles in classes b, c, d, e, and f, as per attached resolution.

RESOLUTION 62-22

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 appropriate tests show that 1963 and subsequent models of motor vehicles manufactured by American Motors Corporation and equipped with an air cleaner crankcase ventilation system 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 1963 and subsequent models of motor vehicles classifications (b), (c), (d), (e), and (f) manufactured by American Motors Corporation and equipped with an air cleaner crankcase ventilation system meet State standards and criteria after appropriate tests in respect to compliance with crankcase emission control requirements without additional equipment. On this basis, these classifications of motor vehicles manufactured by American Motors Corporation are exempted from Article 3, Chapter 3 of Division 20 of the Health & Safety Code.

9/19/62  
mj

*Wentworth*

REPORT ON AC SPARK PLUG DIVISION GENERAL MOTORS CORPORATION  
September 19, 1962

Introduction

This is a report on the staff evaluation of the AC Spark Plug Division of General Motors Corporation on the Dual Action Crankcase Ventilation system. The basis for 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 AC Spark Plug Division of General Motors Corporation Dual Action valve includes an aluminum check valve which in conjunction with an orifice controls a metered portion of the emission into the intake manifold. When the engine manifold vacuum drops off, the air cleaner flow takes over and lifts the small aluminum check valve which permits flow of the blowby to the air cleaner air induction system. The check valve is incorporated to insure ventilation flow at idle and dirty air is prevented from getting into the system. A restricted oil filler cap controls the flow of ventilation air. The point of take off from the crankcase is at the removed road draft tube location.

AC has submitted reports to the staff which show that on several engines the valve was operating satisfactorily after approximately 40,000 miles. During 1962, the Dual Action valve was used on approximately 10,000 Jet Fire F85 Oldsmobiles. In addition, approximately 100 test cars in private automobiles, fleets, company engineering cars and other laboratory vehicles were used in tests. The check valve effectively acts as a flame arrestor to eliminate any possibility of flame travel from the air induction side of the engine to the crankcase. Oil consumption figures have been carefully checked and are within reasonable limits. This system utilizing a split flow from the crankcase, part of which goes to the underside of the carburetor and part to the air cleaner, causes no problem in the air/fuel ratio limits as outlined in Resolution 62-23. AC recommends service and inspection after 12,000 miles.

Compliance with Crankcase Emission Standards

The applicant plans to supply the AC Dual Action valve for all of the 1963 Oldsmobiles and eventually on other makes of the General Motors, motor car divisions. AC has supplied the staff with suitable evidence that it meets the State standards at the three approved test points. A member of the staff visited the AC Spark Plug laboratories in Flint, Michigan and witnessed a demonstration of the Dual Action valve on a test car fully instrumented to measure the State standards and other required features of the California law.

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

Summary and Conclusions

1. The AC Spark Plug Division of General Motors Corporation Dual Action Crankcase Ventilator valve meets the crankcase emissions standards of the California Department of Public Health when operating efficiently.
2. The applicant has made representations that the device, as produced for original equipment installations, will comply with the Board's criteria.
3. The staff recommends that the AC Spark Plug Division of General Motors Corporation Dual Action Ventilator valve system be granted a certificate of approval for installation on motor vehicles in Classes b, c, d, e and f as per attached Resolution.

RESOLUTION 62-23

WHEREAS AC Spark Plug Division of General Motors Corporation has filed application for a certificate of approval for a crankcase emission control device; which device is described as a crankcase ventilator system, having the following specifications:

A dual-action control system which conducts crankcase gases to the intake manifold and to the inlet side of the air cleaner. A fixed orifice controls the flow to the intake manifold. A fixed orifice in the oil filler cap limits ventilation air flow. A check valve in the system prevents back flow from the air cleaner to the intake manifold.

WHEREAS the device 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the AC Spark Plug Division of General Motors Corporation crankcase ventilator system for factory installation on 1962 and subsequent models of motor vehicle classifications (b), (c), (d), (e), and (f) as designated in Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

REPORT ON BRITISH MOTOR CORPORATION  
CRANKCASE EMISSION CONTROL SYSTEM

Introduction

This is a report of the staff evaluation of the British Motor Corporation tube type, sealed 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 system consists of a series of tubes from the crankcase and the rocker arm cover to the air cleaner. The system is completely sealed and does not draw in any outside air from the atmosphere. This system has been fitted on the British Motor Corporation six cylinder engines since 1954 and no difficulty has been encountered in the way of crankcase explosions or oil carryover. The following cars are to be fitted with the system.

	<u>Cubic Inch Displacement</u>	<u>Engine Size Classification Group</u>
Austin Healey 3000	178	(b)
Austin A/110	161	(b)
Wolseley 6/110	178	(b)
Princess 3 Litre	178	(b)
Princess 4 Litre	244	(c)

The British Motor Corporation crankcase emission control system has been in use on a variety of automobiles, encompassing many thousands of installations, with no operating difficulty. The use of this system does not alter the manufacturer's recommendation for air cleaner service intervals.

Compliance with Crankcase Emission Standards

The British Motor Corporation has given to the staff satisfactory evidence that the system meets the State standards. All of the cars on which certification is requested are in groups (b) and (c). A member of the engineering staff has examined the necessary prototypes and confirmed the evidence submitted.

The Board has on file a letter from the British Motor Corporation containing the manufacturer's representation that the device will be manufactured for original equipment installation and will comply with the Board's criteria.

Summary and Conclusions

1. The British Motor Corporation tube type, sealed crankcase emission control system meets the crankcase emission standards of the California Department of Public Health, when operating efficiently.

RESOLUTION 62-24

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 appropriate tests show that 1963 and subsequent models of motor vehicles manufactured by the British Motor Corporation and equipped with a tube type, sealed crankcase emission control system 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 1963 and subsequent models of motor vehicles classifications (b) and (c) manufactured by the British Motor Corporation and equipped with a tube type, sealed crankcase emission control system meet State standards and criteria after appropriate tests in respect to compliance with crankcase emission control requirements without additional equipment. On this basis, these classifications of motor vehicles manufactured by the British Motor Corporation are exempted from Article 3, Chapter 3 of Division 20 of the Health and Safety Code.

11/14/62  
jh



REPORT ON INTERNATIONAL HARVESTER COMPANY  
CRANKCASE VENTILATION SYSTEM

Introduction

This is a report on the staff evaluation of the International Harvester Company crankcase ventilation system. The basis for 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 International Harvester Company crankcase ventilation system comprises a weight loaded regulating valve assembly which actuated by manifold vacuum meters the flow of crankcase gases into the intake manifold. In addition to the weight loaded valve, a tube is utilized from the rocker arm cover to the inside of the air cleaner. The oil filler cap is sealed and ventilation air for this system is pulled in from the clean side of the air cleaner. The flow from the crankcase to the intake manifold is from the point of the removed road draft tube. The flow from the rocker arm cover to the air cleaner can be in both directions. If the capacity of the weight loaded valve is exceeded, the flow is from the crankcase to the inside of the air cleaner, whereas if the flow is below the capacity of the weight loaded valve, fresh air is drawn from the inside of the air cleaner to the crankcase ventilation system. The system is completely sealed. Accessory parts such as metal tubing, clamps and fittings are required. The manufacturer recommends the cleaning of the weight loaded valve every ten thousand miles or 250 hours, whichever is greater. The air cleaner maintenance is on the same basis as though a device were not used.

Compliance with Crankcase Emissions Standards

The applicant plans to use the International Harvester Company crankcase ventilation system on his "Red Diamond" group of trucks which are known as the "RD" series. These engines include "RD 372", "RD 406", "RD 450", and "RD 501" and the numbers designate engine displacement capacity. All of the engines enumerated have the same basic design. The system described has been used by the International Harvester Company since 1946 or a total of about 16 years of actual use with these components. The air cleaner is of the oil bath type and the weight loaded valve is made by the Stewart-Warner Corporation, Chicago. Prototype valves and systems have been tested by the staff and the characteristics were confirmed. The International Harvester Company has demonstrated that the above described system meets the State standards and the Board has on file a letter from International Harvester containing the manufacturers representation that the device, which will be manufactured for original equipment installation, will comply with the Board's criteria.

Summary and Conclusions

1. The International Harvester Company crankcase ventilation system meets the crankcase emission standard of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installation will comply with the Board's criteria.
3. The staff recommends that the International Harvester Company crankcase ventilation system be granted a certificate of approval for factory installation on motor vehicles classes (e) and (f) as per attached resolution.

11/14/62

jh

Summary and Conclusions

1. The International Harvester Company crankcase ventilation system meets the crankcase emission standard of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installation will comply with the Board's criteria.
3. The staff recommends that the International Harvester Company crankcase ventilation system be granted a certificate of approval for factory installation on motor vehicles classes (e) and (f) as per attached resolution.

11/14/62

jh

RESOLUTION 62-25

WHEREAS International Harvester Company filed application for a certificate of approval for a crankcase emission control system on September 26, 1962; which system is described as the International Harvester crankcase ventilation system having the following specifications:

A weight loaded regulating valve which conducts crankcase gases to the underside of the carburetor together with a tube from the rocker arm cover to the inside of an oil bath type air cleaner with a sealed oil filler cap which prevents outflow of crankcase gases; and accessory parts; 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 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 2004.

THEREFORE, BE IT RESOLVED, That this Board

Issue a certificate of approval for the International Harvester Company crankcase ventilation system for factory installation on 1963 cars and subsequent models of motor vehicles in classification (e) and (f) as designated by Title 13, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

11/14/62

jh

RESOLUTION 62-26 *(Amended)*

WHEREAS the Motor Vehicle Pollution Control Board, between September 15, 1961 and November 14, 1962, has issued certificates of approval for numerous crankcase emission control devices for factory installation under authority contained in Chapter 3, Division 20, Section 24386(4) of the California Health and Safety Code; and

WHEREAS these devices were found at the time of granting such certificates of approval to have met the requirements of Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, which provides in part that the device shall "operate in such a manner so as not to create excessive . . . odor beyond the standard characteristics of the motor vehicle without such device"; and

WHEREAS some of these devices after further tests under the Board's surveillance program developed characteristics as the car got older with increased blowby rates which indicate non-compliance with this odor criterion contained in Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003(d)

THEREFORE, BE IT RESOLVED, that

1. The Motor Vehicle Pollution Control Board finds it necessary to limit the certificates of approval of the following crankcase emission control devices for failure to comply with the odor criteria specified above.

Motor Vehicle Pollution Control Board  
Resolution No.

		<u>Approved</u>
61-9	AC Spark Plug Division General Motors Corporation Flint 2, Michigan (valve type)	9/15/61
62-4	Rochester Products Division General Motors Corporation 1000 Lexington Avenue Rochester 3, New York	4/11/62
62-5	Carter Carburetor Division ACF Industries, Inc. 2840 No. Spring Avenue St. Louis 7, Missouri	4/11/62
62-8	United Air Cleaner Division Novo Industrial Corporation 9705 Cottage Grove Avenue Chicago, Illinois	6/19/62
62-15	American Motors Corporation 14250 Plymouth Road Detroit 32, Michigan (valve type)	7/11/62
62-16	Chrysler Corporation 341 Massachusetts Avenue P.O. Box 1919 Detroit 31, Michigan (valve type)	7/11/62

2. Certificates of approval granted to each of the above are limited in that they shall be effective only in respect to 1963 and prior models of motor vehicles manufactured prior to January 1, 1964 for factory installation.
3. Certificates of approval for factory installation are still effective for the following crankcase emission control devices.

Motor Vehicle Pollution Control Board  
Resolution No.

Approved

62-6	Walker Manufacturing Company Jackson, Michigan ("K" System)	4/11/62
62-7	Volkswagen of America, Inc. Englewood Cliffs, New Jersey	4/11/62
62-11*	American Motors Corporation 14250 Plymouth Road Detroit 32, Mich. (Venturi type)	6/19/62
62-13*	Ford Motor Company P.O. Box 2053 Dearborn, Michigan	6/19/62
62-21*	Rolls-Royce Limited 45 Rockefeller Plaza New York 20, New York	9/19/62
62-23	AC Spark Plug Division General Motors Corporation Flint 2, Michigan (Dual Action)	9/19/62
62-24*	British Motor Corporation Longbridge, Birmingham England	11/14/62
62-25	International Harvester Co. Motor Truck Division 2911 Meyer Road Fort Wayne, Indiana	11/14/62

\*Exempted under Section 24386(5) of the California Health & Safety Code

12-18-62 Amended 3/13/63  
eb

2. Certificates of approval granted to each of the above are limited in that they shall be effective only in respect to 1963 and ~~prior models~~ of motor vehicles manufactured prior to January 1, 1964 ~~for factory installation.~~
3. Certificates of approval for factory installation are still effective for the following crankcase emission control devices.

Motor Vehicle Pollution Control Board

<u>Resolution No.</u>		<u>Approved</u>
62-6	Walker Manufacturing Company Jackson, Michigan ("K" System)	4/11/62
62-7	Volkswagen of America, Inc. Englewood Cliffs, New Jersey	4/11/62
62-11*	American Motors Corporation 14250 Plymouth Road Detroit 32, Mich. (Venturi type)	6/19/62
62-13*	Ford Motor Company P.O. Box 2053 Dearborn, Michigan	6/19/62
62-21*	Rolls-Royce Limited 45 Rockefeller Plaza New York 20, New York	9/19/62
62-23	AC Spark Plug Division General Motors Corporation Flint 2, Michigan (Dual Action)	9/19/62
62-24*	British Motor Corporation Longbridge, Birmingham England	11/14/62
62-25	International Harvester Co. Motor Truck Division 2911 Meyer Road Fort Wayne, Indiana	11/14/62

\*Exempted under Section 24386(5) of the California Health & Safety Code

12-18-62 Amended 3/13/63  
eb

*See  
for Amended Copy*

RESOLUTION 62-26

WHEREAS the Motor Vehicle Pollution Control Board, between September 15, 1961 and November 14, 1962, has issued certificates of approval for numerous crankcase emission control devices for factory installation under authority contained in Chapter 3, Division 20, Section 24386(4) of the California Health and Safety Code; and

WHEREAS these devices were found at the time of granting such certificates of approval to have met the requirements of Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, which provides in part that the device shall "operate in such a manner so as not to create excessive . . . odor beyond the standard characteristics of the motor vehicle without such device"; and

WHEREAS some of these devices after further tests under the Board's surveillance program developed characteristics as the car got older with increased blowby rates which indicate non-compliance with this odor criteria contained in Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2003(d)

THEREFORE, BE IT RESOLVED, that

1. The Motor Vehicle Pollution Control Board finds it necessary to limit the certificates of approval of the following crankcase emission control devices for failure to comply with the odor criteria specified above.

Motor Vehicle Pollution Control Board  
Resolution No.

Approved

61-9	AC Spark Plug Division General Motors Corporation Flint 2, Michigan (valve type)	9-15-61
62-4	Rochester Products Division General Motors Corporation 1000 Lexington Avenue Rochester 3, New York	4-11-62
62-5	Carter Carburetor Division ACF Industries, Inc. 2840 N. Spring Avenue St. Louis 7, Missouri	4-11-62
62-8	United Air Cleaner Division Novo Industrial Corporation 9705 Cottage Grove Avenue Chicago, Illinois	6-19-62
62-15	American Motors Corporation 14250 Plymouth Road Detroit 32, Michigan (valve type)	7-11-62
62-16	Chrysler Corporation 341 Massachusetts Avenue P. O. Box 1919 Detroit 31, Michigan (valve type)	7-11-62



2. Certificates of approval granted to each of the above are limited in that they shall be effective only in respect to 1963 and prior models of motor vehicles for factory installation.
3. Certificates of approval for factory installation are still effective for the following crankcase emission control devices.

Motor Vehicle Pollution Control Board

Resolution No.

Approved

62-6	Walker Manufacturing Company Jackson, Mich. ("K" System)	4-11-62
62-7	Volkswagen of America, Inc. Englewood Cliffs, New Jersey	4-11-62
62-22*	American Motors Corporation 14250 Plymouth Road Detroit 32, Mich. (Venturi type)	6-19-62
62-13*	Ford Motor Company P. O. Box 2053 Dearborn, Michigan	6-19-62
62-21*	Rolls-Royce Limited 45 Rockefeller Plaza New York 20, New York	9-19-62
62-23	AC Spark Plug Division General Motors Corporation Flint 2, Mich. (Dual Action)	9-19-62
62-24*	British Motor Corporation Longbridge, Birmingham England	11-14-62
62-25	International Harvester Company Motor Truck Division 2911 Meyer Road Fort Wayne, Indiana	11-14-62

\* Exempted under Section 24386(5) of the California Health and Safety Code

2. Certificates of approval granted to each of the above are limited in that they shall be effective only in respect to 1963 and prior models of motor vehicles for factory installation.
3. Certificates of approval for factory installation are still effective for the following crankcase emission control devices.

Motor Vehicle Pollution Control Board  
Resolution No.

Approved

62-6	Walker Manufacturing Company Jackson, Mich. ("K" System)	4-11-62
62-7	Volkswagen of America, Inc. Englewood Cliffs, New Jersey	4-11-62
62-22*	American Motors Corporation 14250 Plymouth Road Detroit 32, Mich. (Venturi type)	6-19-62
62-13*	Ford Motor Company P. O. Box 2053 Dearborn, Michigan	6-19-62
62-21*	Rolls-Royce Limited 45 Rockefeller Plaza New York 20, New York	9-19-62
62-23	AC Spark Plug Division General Motors Corporation Flint 2, Mich. (Dual Action)	9-19-62
62-24*	BBritish Motor Corporation Longbridge, Birmingham England	11-14-62
62-25	International Harvester Company Motor Truck Division 2911 Meyer Road Fort Wayne, Indiana	11-14-62

\* Exempted under Section 24386(5) of the California Health and Safety Code

## SUPERCHARGED CORVAIR SPYDER

### Introduction

This is a report on the staff evaluation of the supercharged Corvair Spyder crankcase ventilation system. The basis for 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 Corvair Spyder supercharged crankcase ventilation system consists of a steel pipe installed at the removed road draft connection which pipe leads to the clean side of the air cleaner. A branch from this line leads to the intake side of the turbo charger compressor housing through a tube which incorporates a .076" metering orifice which has a capacity of about one cubic foot per minute. The orifice in the line regulates flow under idle and low load conditions and eliminates difficulty in starting. The oil filler cap is sealed so that no crankcase gases can escape to the atmosphere. According to the manufacturer no maintenance will be necessary for at least 12,000 miles. Prototype systems have been inspected and there is no point at which emissions can occur as the system is effectively sealed.

### Compliance with Crankcase Emission Standards

The applicant plans to use the sealed crankcase ventilation system on the Corvair Spyder supercharged engine. 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 three standard test conditions.

### Compliance with Board Criteria

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

### Summary and Conclusions

1. The Corvair Spyder supercharged crankcase ventilation 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 Corvair Spyder supercharged crankcase ventilation system be granted a certificate of approval for factory installation on motor vehicles in Class (b) as per the attached resolution.

RESOLUTION 62-27

WHEREAS General Motors Corporation filed an application for a certificate of approval for the supercharged Corvair Spyder crankcase emission control system which device is described as follows:

A steel pipe leading from the crankcase at the removed road draft tube location to the clean side of the air cleaner, with a branch from this line leading to the intake side of the turbo charger. The branch line contains an orifice having a capacity of about one cubic foot per minute, limiting flow in the system during idle and low load conditions. All of the blowby gas generated is effectively controlled by discharge back into the engine. The system is sealed eliminating any flow of blowby to the atmosphere.

WHEREAS the device has been found to meet the crankcase emissions standards established by the State Department of Public Health as published in Title 17 of the California Administrative Code, Chapter 5, Sub-Chap. 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 Corvair Spyder supercharged crankcase ventilation system for factory installation on 1963 and subsequent models of Corvair automobiles in motor vehicles classifications (b) as designated in Title 13 of the California Administrative Code, Chap. 3, Sub-Chapter 1, Article 1, Section 2004.

12/18/62

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## REPORT ON JAGUAR CARS, LIMITED

### Introduction

This is a report on the staff evaluation of the Jaguar Cars, Limited, crankcase ventilator system. The basis for 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 Jaguar crankcase ventilation system consists of a steel tube connecting at the front of the timing chain compartment to the air box ahead of the multiple carburetors. The crankcase breather system is completely sealed, there being no provision for ventilation air to be pulled into the system. The oil filler cap is sealed. The system is to be used on all Jaguar cars and has been in use on all models of these automobiles for about one year. A flame arrestor consisting of 20 mesh stainless steel gauze, 3 and 3/4 inches in diameter is located in the front of the timing chain compartment together with an oil trap in the system. The factory recommends that the screen be cleaned every 10,000 miles. The flame arrestor screen is readily accesible and merely requires the removal of four nuts for inspection.

Jaguar has supplied the staff with a complete report showing crankcase depression at all speeds from idle to 110 miles per hour. There is no oil carry over problem. Jaguar car prototypes have been inspected by the staff in Los Angeles with the ventilation system in place and it was found to be as shown by the prints, photographs and drawings submitted by the factory.

The following cars are involved in the certification application:

Mark 2	-	2.4 Litres
Mark 2	-	3.4 Litres
Mark 2	-	3.8 Litres
E-Type		
Mark 10		

The 2.4 and 3.4 automobiles are not presently imported into California. The certification of these cars is requested for the reason that some of them may be purchased new in Europe and subsequently find their way into California, also the possibility that Jaguar may sell these these cars new, later in California. A careful examination of the prototype automobiles reveals no point at which emissions can occur from this system to the atmosphere.

### Compliance with Crankcase Emission Standards

The applicant plans to use the sealed crankcase ventilation system on the above model cars. Jaguar, Ltd., has demonstrated to the satisfaction of the staff that the sealed system does, in fact,

meet the State standards by showing complete control of crankcase emissions at the three standard test conditions.

Compliance with Board Action

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

Summary and Conclusions

1. Jaguar Cars, Ltd., crankcase ventilation system meets the crankcase emissions standards of the California Department of Public Health, when operating efficiently.
2. The applicant has made representations that the device as produced for original equipment installations will comply with the Board's criteria.
3. The staff recommends that the Jaguar Cars, Ltd., crankcase ventilation system be granted a certificate of approval for factory installation on motor vehicles in Classes, (b) and (c) as per the attached resolution.

RESOLUTION 62-28

WHEREAS, Jaguar Cars, Ltd. filed an application for a certificate of approval for a crankcase emission control system on November 14, 1962, which system is described as a crankcase ventilation system, having the following specifications: A steel tube from crankcase to air cleaner assembly with flame arrestor and oil trap which conducts the crankcase gases into the air box ahead of the multiple carburetors for burning in the engine; and

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

WHEREAS, based upon representation submitted by the manufacturer, 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 for the Jaguar Cars Ltd., crankcase ventilation system for factory installation on 1963 and subsequent models of motor vehicles manufactured by Jaguar Cars Ltd., classifications (b) and (c) as designated in Title 13 of the California Administrative Code, Chap. 3, Sub-Chap. 1, Article 1, Section 2004.

RESOLUTION 62-29

WHEREAS Walker Manufacturing Company filed an application for a certificate of approval for a crankcase emission control system on July 12, 1962; which system is described as the Walker "KY" crankcase ventilation system having the following specifications:

The "KY" system consists of a main conduit with flame arrestor connecting the crankcase to the clean side of the air cleaner; a branch conduit connecting the main conduit to the intake manifold through a cleanable orifice; an oil fill cap which admits filtered ventilation air to the crankcase, but prevents backflow of crankcase gases and accessory parts; 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 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 Walker Manufacturing Company "KY" crankcase ventilation system for motor vehicles in all classifications as designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

12/18/62

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## REPORT ON STUDEBAKER AVANTI AND JET THRUST ENGINE CRANKCASE VENTILATION SYSTEMS

### Introduction

This is a report on the staff evaluation of the Studebaker Avanti and Jet Thrust Engine Crankcase Ventilation Systems, Supercharged and Nonsupercharged. basis for the evaluation is the Alternate Testing Procedure for Evaluation of Devices to Control Crankcase Emissions (Factory Installations), November, 1962 revision. The report does not include evidence concerning compliance with the Board's criteria.

### Description of Device

The Studebaker Avanti and Jet Thrust Engine Crankcase Ventilation System consists of an oil resistant rubber tube connecting the crankcase breather tube to the upstream side of the air cleaner. The crankcase breather tube is sufficiently baffled to prevent oil pull over. A branch line from this tube leads to the intake manifold. The branch line 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 ventilating air. According to the manufacturer, no maintenance will be necessary for at least 12,000 miles.

### Compliance with Crankcase Emission Standards

The applicant plans to use this system on all the Avantis and Jet Thrust engines, both supercharged and nonsupercharged, and on the V-8 Larks, Hawks and Cruisers. 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 three standard test conditions.

### Compliance with Board Criteria

The Board has on file a letter from Studebaker Corporation 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 Avanti and Jet Thrust Engine Crankcase Ventilation Systems meet 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 Studebaker Avanti and Jet Thrust Engine crankcase ventilation system be granted a certificate of approval for factory installation on motor vehicles manufactured by the Studebaker Corporation in Class (d) as per attached resolution.

RESOLUTION 62-30 (AMENDMENT)

WHEREAS the AC Spark Plug Division of General Motors Corporation has been granted a certificate of approval by Board Resolution 62-30 for new cars, factory installation of the AC closed crankcase emission control system for motor vehicle classifications (b), (c), (d), (e), and (f); and

WHEREAS AC Spark Plug Division of General Motors Corporation has made application for extension of this approval to include motor vehicle classification (a); and

WHEREAS the device 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, Subchapter 5, Article 1, Section 30530; and

WHEREAS based upon representation 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, Subchapter 1, Article 1, Section 2004;

THEREFORE, BE IT RESOLVED, that:

This Board issue a certificate of approval for the AC Spark Plug Division of General Motors Corporation for the AC closed crankcase emission control system for new cars, factory installation of 1964 and subsequent models of motor vehicles in classification (a) as designated in Title 13, Chapter 3, Subchapter 1, Article 1, Section 2004.

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8/14/63