Resolution 70-1	Authorization of Executive Officer to execute contracts and documents for production of educational film strips, not to exceed 20,120.00.
Resolution 70-2	Crossman Company permit for testing experimental control device for one from 1/21/1970.
Resolution 70-3	Stanford Research Institute permit for testing experimental control device on two vehicles for one beginning on February 1, 1970.
Resolution 70-4	Procedures for determining compliance with exhaust emissions standards for 1975 and subsequent model gasoline-powered motor vehicles under 60001 pounds are "California Exhaust Emission Standards and Test Procedures for 1971 and Subsequent Model Gasoline-Powered Motor Vehicles Under 6001 Gross Vehicle Weight, November 20, 1968.
Resolution 70-5	Certificate approval for Automotive Performance, adopted March 30, 1970 by mail ballot.
Resolution 70-6	Toyo Kogyo Company Ltd. Japan for 1970 model vehicles 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cu inch) 71.39, 109.60 and 30x2
Resolution 70-7	White Motor Company with respect to 1970 model vehicles greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cu inches) 292, 331, 350, 362, 366, 400, 440 and 478.
Resolution 70-8	Executive Officer's authorization for signing administrative leases necessary to accomplish the program objects of the Board.
Resolution 70-9	Impco carburetors for use in California on vehicles of the 1966 through 1970 model years utilizing liquified petroleum gas with engine sizes as listed: CA 125, 225, 300, 425 - 200-300 2--=375- over 300, over 375
Resolution 70-10	Chrysler Corporation with respect to the 1971 model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cu. inches) 225, 318.
Resolution 70-11	Experimental permit for the Division of Highways for one year
Resolution 70-12	Amending the Administrative Code Section 2108 (a, b, c, d)
Resolution 70-13	Amending the Administrative Code Section 2109 (e)
Resolution 70-14	Rolls-Royce Limited for 1970 model vehicles
Resolution 70-15	Authorization of the Executive Officer to contract with ARCO Chemical in the amount of $32,000.
Resolution 70-16	San Diego Gas and Electric to use the Impco carburetor for vehicles of 1966 through 1970 model years utilizing liquified natural gas with engines of 200-250 and 300-375.
Resolution 70-17	Permit for P. L. Underwood for one year
Resolution 70-18	Recommendation of the Air Resources Board on lead-free gasoline

Resolution 70-19 Permit for Automotive Improvements for one year May 20, 1970.

Resolution 70-20 Permit for Stanford Research Institute on two vehicles for one year, beginning on May 20, 1970.

Resolution 70-21 Interagency Agreement with Department of Public Works for purchasing and testing of devices or systems to lower exhaust emissions and a vehicle inspection and maintenance pilot project for the period from April 1, 1970 to June 30, 1971.

Resolution 70-22 Extension permit No. 32 for Mori and Katayama for another year

Resolution 70-23 Approval of Ford Motor Company 1971 model vehicles, 6000 pounds or less gross vehicle weight, with engines of 97.56 cubic inches.

Resolution 70-24 Certificate of approval to Kaiser Jepp for their evaporative emission control systems with respect to the 1970 off-road utility vehicles 6,000 pounds or less gross vehicle weight, with engines of the following sizes 134, 225, 232, 350 cu. in.

Resolution 70-25 Certificate of approval to General Motors Corporation with resp to 1971 model vehicles, 6, 000 pounds or less gross vehicle weight with engines of the following sizes (cubic Inches, 250 and 307

Resolution 70-26 Certificate of approval to Fuji Heavy Industries Ltd. Japan with respect to the 1971 model Subaru vehicles, 6000 pounds or less gross vehicle weight, with engines of 66.4 cubic inch size.

Resolution 70-27 Certificate of approval to Nissan Motor Company. Ltd. Japan with respect to the 1971 model vehicles, 6000 pounds or less gross vehicle weight, with engines of the following sizes 71.5, 97.3, 97.4, 120.9 and 146.0.

Resolution 70-28 Amends Section 2109 paragraph (e)

Resolution 70-29 Issue a certificate of approval to Chrysler Corporation with respect to its exhaust control system for portable and mobile internal combustion engines of the following engine size classes
c 200-250 cubic inches e 300 - 375 cubic inches

Resolution 70-30 Certificate of approval for Dual Fuel Systems Inc. (Automotive Performance)

Resolution 70-31 Authorization of Executive Officer to execute the necessary Interagency Agreements with the Dept. of Public Works to accept funds for a special studies project and the Highways Dept.

Resolution 70-32 Certificate of approval for Automotive Performance (pending 6-24-70

Resolution 70-33 Permit for George B. Paxton, 6210 Cowles Mt. Blvd. La Mesa for an experimental control device for a period of one year from 7-15-70

Resolution 70-36 Approval for International Harvester for 1971 model vehicles, less than 6,001 pounds gross vehicle weight for engine sizes 196, 232, 304, 345, and 392.

Resolution 70-37 Approval for International Harvester for 1971 model vehicles greater than 6,000 gross vehicle weight for engine sizes 196, 232, 304, 308, 345, 392, 401, 406, 450, 478, 501 and 549.

Resolution 70-38 Alfa Romeo, Inc. 1971 model vehicles - 6,000 pounds or less GVW with 108.6 cu. in.

Resolution 70-39 Saab Scania Automotive, Sweden for 1971 motor vehicles 6,000 pounds or less GVW with engines of 103.7 and 104.2 cu. in.

Resolution 70-40 Toyota Motor Company for 1971 model vehicles, 6000 pounds or less GVW with engines of 71.2 cu. in.

Resolution 70-41 Chrysler Corporation for 1971 model vehicles, 6000 pounds or less GVW for engine sizes 198, 225, 318, 340, 360, 383, 426 and 440.

Resolution 70-41A Chrysler Corporation - 6,000 or less for 71 models with 73 cu. in. displacement.

Resolution 70-41B Chrysler Corporation - 6,000 lbs or less for 91 and 105 cu. in. engines.

Resolution 70-42 Chrysler Corporation approval for 1971 model vehicles, greater than 6,000 lbs GVW with engines of the following sizes 225, 318, 361, 383 413 and 440.

Resolution 70-43 ARB authorizes the Executive Officer to submit a proposal and execute a contract, if awarded, for test program and operation of HEW MVPC West Coast Laboratory.

Resolution 70-44 Public Works contract for $25,000 for a "Total Air Contaminats from Vehicle Populations" study in Los Angeles, SF and one other selected valley community.

Resolution 70-45 Inter-Agency agreement with Public Health to provide necessary lab services to assist the Board in meeting its 1970-71 program objectives.

Resolution 70-46 Inter-Agency Contract with Water Resources and Public Health for necessary Data processing Services for 71,500 for 1970-71.

Resolution 70-47 Directs the Executive Officer to request a report from the Board of Supervisors on the action it is taking to control emissions from the Ideal Cement Plant.

Resolution 70-48 Directs the Executive Officer to request a report from the Board of Supervisors on the action it is taking to control emissions from the Michigan-California Lumber Company located in Camino, El Dorado County, California.

Resolution 70-49 Approval for Ford - 1971 model vehicles greater than 6,000 pounds GVW for engines 240, 300, 302, 330, 360, 361, 390, 391, 401, 477 and 534.

Resolution 70-49A Ford approval for 1971 model vehicles greater than 6,000 punds GVW with engines sizes 240, 300, 302, 330, 360, 361, 390, 391, 401, 477 and 534.

Resolution 70-50 Approval for Volkswagen for 1971 model vehicles 6,000 pounds GVW for engine sizes 96.66 and 102.5 cu. in.

Resolution 70-51 AB Volvo approval for 1971 model vehicles 6,000 lbs GVW for 121 cu. in.

Resolution 70-51A Approval for AB Volvo - 6000 lbs GVW for 182 cu. in. - 1971 model vehicles/

Resolution 70-52 Approval for Impco to use a modification device for vehicles of the 1966 through 1970 model years utilizing natural gas for engines of E - 300 - 375 and F 375 +.

Resolution 70-52A Impco for D- 250 - 3000 cu. in.

Resolution 70-53 Approval to British Leyland Motor Corporation for 1971 - Vehicles, 6,000 lbs or less GVW with engines of the following sizes (cu.in.) 77.9, 79, 109.8, 122, 139.5, 152, 183, 215, 258, and 326.

Resolution 70-54

Resolution 70-55 Porsche for 1971 model vehicles of 6,000 pounds or less gross vehicle weight for engines of the following sizes 121.5 and 133.9.

Resolution 70-56 Mitsubishi Motors Corporation, Japan for 1971 model vehicles, 6000 lbs or less gross vehicle weight, with a 97.5 cubic inch displacement engine.

Resolution 70-57 General Motors Corporation exhaust control systems for vehicles over 6000 lbs gross vehicle weight for 1971 model year.

Resolution 70-58 General Motors Corpoation 1971 model vehicles greater than 6000 lbs gross vehicle weight with engines of the following sizes (cu. in.) 250, 292, 305, 307, 350, 351, 366, 402, 427 and 637.

Resolution 70-58A General Motors Corporation with respect to 1971 model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes 401 and 478.

Resolution 70-59 General Motors Corporation for 1971 model vehicles 6,000 pounds or les gross vehicle weight, with engines of the following sizes: Chevrolet 140, 250, 292, 307, 350, 400, 402 and 454. Buick 350, 455, Pontiac 350, 400, 455 - Oldsmobile 350, 455 - Cadillac 472, 500= Adam Opel - 65.8, 115.8

Resolution 70-60 Test Procedures for Assembly-Line Testing Section 2110

Resolution 70-61 Volkswagen of America, Inc. for 1971 Audi vehicles, 6,000 pounds or less gross vehicle weight with the 107.5 cu. in. size engine.

Resolution 70-62 American Motors - 1971 model vehicles of 6,000 pounds or less gross Vehicle Weight, with engines of the following sizes 232, 258, 304, 360 and 401.

Resolution 70-63 Daimler-Benz, Inc., Germany for their 1971 model vehicles, 6000 pounds or less gross vehicle weight, with engines of 169.4, 213.5, and 386. cu. inc having fuel injection systems only.

Resolution 70-63A Daimler -Benz needs to submit data of 50,000 miles to staff before January 1971 with respect to 1971 model vehicles of 6,000 lbs GVW or less.

Resolution 70-64 Amends Administrative Code Section 1942 for Low Emission Standards

Resolution 70-65 Checker Motors Corporation for their 1971 model vehicles, 6000 lbs or less gross vehicle weight with engine sizes of 250 and 350 cu. in.

Resolution 70-66 American Pollution Controlled, Inc. and Norris Industries for Used vehicles for 1955 to 1965 model years dependent upon unstallation pursuant to Health and Safety Code Section 39176.

Resolution 70-67 Amending Administrative Code in Title 17.

Resolution 70-68 Dual Fuel Systems to Use Natural Gas Fuel

Resolution 70-69 Toyota exhaust and evaporative emission control systems for 1971 model year

Resolution 70-70 Jeep Corporation for 1971 model year

Resolution 70-71 Peugeot, Inc. for 1971 model vehicles less than 6,001 pounds GVW.

Resolution 70-72 Bayerische Motoren Werke A.G. for 1971 model vehicles 6000 pounds or less gross vehicle weight with engines of the following sizes 96, 121.3 and 170.

Resolution 70-73 Jeep Corporation for 1971 model vehicles greater than 6,000 pounds GVW for engine sizes 232 and 350.

Resolution 70-74 Contract with the Division of Highways, Department of Public Works to conduct a vehicle emission inspection and maintenance study.

Resolution 70-75 Checker Motors Corporation for 1971 model vehicles greater than 6,000 pounds GVW for engines of 350 cu. in. size.

Resolution 70-76 Regie Nationale de Usines Renault for 1971 model vehicles, 6,000 pounds or less gross vehicle weight with 67.6, 78.7 and 95.5 cubic inch size engines

Resolution 70 77 Permit for Technoscience Systems, Inc. 537 Hofgaarden Stree,t La Puente for one year from October 21, 1970.

Resolution 70-78 Jamco, Inc. Vapco Closed Crankcase Emission Control System

Resolution 70-79 Adopts new Subchapter 1, Article 1 Section 1942 in the Adm. Code

Resolution 70-80 Adopts new Subchapter 1 Artice 1 Section 1943 in the Adm. Code.

Resolution 70-81 Ute Line Inc. exhaust system for vehicle over 6,000 pounds gross vehicle weight for 1971 model year.

Resolution 70-82 Toyo Kogy emission control systems for vehicles less than 6,001 pounds for 1971 model year.

Resolution 70-83 Fiat for 1971 model vehicles 6,000 pounds or less gross vehicle weight with 55.08, 68.1, 87.75 and 98.13 cubic inch size engines

Resolution 70-84	General Motors' modifications on 1966 through 1970 model year vehicles complying with requirements of Section 27156 of the Vehicle Code.
Resolution 70-85	Listof orchard heaters approved by tests conducted by the Universi[illegible] of California and local APCD to produce less than one gram per minute of unconsumed carbonaceous material.
Resolution 70-86	Commendation resolution for Mrs. Howard Younglove (former Board Member).
Resolution 70-87	Allied Propane Service permits (8) for experimental purposes
Resolution 70-88	Transfer of K & B's Vac=U-Tron device to Automotive Associates for used motor vehicles in classifications (b) thru (f)
Resolution 70-89	Emergency regulations for light-duty vehicles to conform with Federal regulations for 1972 models

AIR RESOURCES BOARD
STATE OF CALIFORNIA
RESOLUTION 70-1

WHEREAS Federal funds in the amount of $20,120.00 have been made available for the 1969-70 fiscal year to assist the Board in the development and production of 2,000 educational film strips to be incorporated in the Driver Education Program in High Schools throughout California; and,

WHEREAS these film strips will contribute knowledge regarding motor vehicle emissions of air pollutants and how they can be reduced by good driving practices and proper car maintenance,

NOW THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to execute contracts and documents necessary for the production of the educational film strips, not to exceed $20,120.00.

State of California

AIR RESOURCES BOARD

Resolution 70-2

WHEREAS, The Crossman Company, 210 W. "B" Street, Wilmington, California has applied for a permit for the testing of an experimental motor vehicle pollution control device for approval by this Board, and

WHEREAS, the device comprises an "Algas" carburetion system for use with L.P.G. fuel, and

WHEREAS, Section 39181 of the Health and Safety Code, authorizes the Board to issue such permits;

NOW, THEREFORE, BE IT RESOLVED, That the Crossman Company is hereby granted a permit for testing an experimental control device for a period of one year from this date.

1/21/70

State of California

AIR RESOURCES BOARD

Resolution 70-3

WHEREAS, Stanford Research Institute, Southern California Laboratories, at 820 Mission Street, South Pasadena, California has applied for a permit to test an experimental exhaust emission control device on two vehicles, and

WHEREAS, the device is intended for use on both new and used vehicles, and

WHEREAS, it is intended that the system would provide control of hydrocarbons, carbon monoxide, and nitrogen oxides, and

WHEREAS, the system operates as a control method for introduction of fuel and air;

NOW, THEREFORE, BE IT RESOLVED, that the Stanford Research Institute is hereby granted a permit for testing an experimental control device on two vehicles for a period of one year, beginning on February 1, 1970.

1-21-1970

State of California

AIR RESOURCES BOARD

Resolution 70-4

January 21, 1970

WHEREAS, the motor vehicle is the major source of pollutants released into the air of California; and

WHEREAS, the California Legislature enacted the Pure Air Act of 1968 establishing motor vehicle emission standards which all new vehicles must meet beginning in 1970 and which become increasingly more stringent through 1974; and

WHEREAS, Section 39052.5 of the Health and Safety Code authorizes the California Air Resources Board to establish more stringent motor vehicle emission standards based on a finding of necessity and technological feasibility; and

WHEREAS, the Technical Advisory Committee to the California Air Resources Board has found that such more stringent standards are both necessary and technologically feasible and has recommended that the Board adopt such standards,

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board finds compliance with the standards for exhaust emissions set forth below to be necessary and technologically feasible for 1975 and subsequent model gasoline-powered motor vehicles under 6001 pounds gross vehicle weight. In accordance with this finding, the standards for such vehicles are:

Hydrocarbons - 0.5 grams per mile

Carbon Monoxide - 12 grams per mile

Oxides of Nitrogen - 1.0 gram per mile

AND BE IT FURTHER RESOLVED, That the test procedures for determining compliance with exhaust emissions standards for 1975 and subsequent model gasoline-powered motor vehicles under 6001 pounds gross vehicle weight are "California Exhaust Emission Standards and Test Procedures for 1971 and Subsequent Model Gasoline-Powered Motor Vehicles Under 6001 Gross Vehicle Weight, dated November 20, 1968."

State of California

AIR RESOURCES BOARD

Resolution 70-5

March 30, 1970

WHEREAS, the Automotive Performance, Inc. a subsidiary of Oakes Diversified Industries Inc. of Dallas, Texas filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

(1) A tube from the crankcase through a spring-loaded papered plunger flow control valve to the intake manifold.

(2) A second tube from the oil filler cap or rocker-arm cover through the clean side of the air cleaner. Filler cap sealed to the atmosphere.

(3) A tube from a jar containing a chemical solution to a "T" in the line between the flow control valve and intake manifold. Flow of the air into jar controlled by an adjustable needle valve.

WHEREAS, the Board finds that the system complies with the standards as published in the California Administrative Code, Title 13, Section 1960; and

WHEREAS, based on test data and information submitted by the manufacturer, the Board finds that the device meets the criteria of the Air Resources Board as published in Title 13, Section 2003, of the California Administrative Code,

NOW THEREFORE, BE IT RESOLVED, That this Board issue a certificate of approval for the Automotive Performance, Inc. a subsidiary of Oakes Diversified Industries, Inc. for a closed crankcase emission control system for used motor vehicles with engine sizes over 140 cubic inches.

State of California

AIR RESOURCES BOARD

Resolution 70-6

January 21, 1970

WHEREAS, Toyo Kogyo Company, Ltd., Japan, submitted an application and all test data for approval of its emission control systems for the 1970-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system for their reciprocating engines with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) recommended maintenance.

B. Air injection and thermal reactor type of exhaust control system for their Wankel engines with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) thermal reactor,

(4) recommended maintenance.

C. Crankcase storage type evaporative emission control system for their reciprocating engines with major elements:

(1) positive sealing filler cap,
(2) vapor-liquid separator,
(3) vapor vent line to crankcase.

D. Oil Pan-Carbon storage evaporative emission control system for their Wankel engine with major elements:

(1) postive sealing filler cap,

(2) vapor-liquid separator,

(3) vapor vent line to oil pan,

(4) carbon canister.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Toyo Kogyo Company Ltd., Japan, with respect to the 1970-model vehicles, 6000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 71.39, 109.60 and 30X2.

State of California

AIR RESOURCES BOARD

Resolution 70-7

WHEREAS, White Motor Corporation submitted an application and all test data for 1970 California approval of exhaust emission control systems for vehicles greater than 6,000 pounds gross vehicle weight; and

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

1. Engine-modification type system with major elements for the 292, 331, 362, 400 and 440 cubic inch engines:

   (1) leaner carburetion plus idle rich limiter,

   (2) third main jet adjusted and sealed at factory,

   (3) distributor modification with calibration curve developed for emission control,

   (4) recommended maintenance.

2. An air-injection type system called "A.I.R." with major elements for the 350 and 366 cubic inch engines:

   (1) rotary-vane air pump,

   (2) air injection into each exhaust port,

   (3) carburetor and distributor modifications,

   (4) recommended maintenance.

3. An engine-modification type system called "C.C.S." with major elements for the 478 cubic inch engine:

   (1) leaner carburetion plus idle rich limiter,

   (2) retarded spark at idle,

   (3) recommended maintenance.

WHEREAS, the Board finds that the systems complies with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a certificate of approval to White Motor Company with respect to 1970-model vehicles greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches); 292, 331, 350, 362, 366, 400, 440 and 478.

3/18/70

State of California

AIR RESOURCES BOARD

Staff Report

Exhaust Emission Control System Approval
1970-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight

WHITE MOTOR CORPORATION

February, 1970

White Motor Corporation has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1970-Model vehicles over 6,000 pounds gross vehicle weight.

The applicant's exhaust emission control systems utilizes an engine modification system or an air injection system.

Projected Emissions of Each Test Engine

Engine Size Cubic Inches	Test Engine Number	Exhaust System*	Projected Exhaust Emissions to 1,500 Hours	
			Hydrocarbons, ppm	Carbon Monoxide, %
292	6-130#317133	EM	239	0.9
331	6-130#317136	EM	179	0.9
331	6-170#316470	EM	150	1.1
362	6-186#317206	EM	134	1.2
400	6-200#315373	EM	149	0.8
440	8-235#317215	EM	170	1.0
350**	19644-4B	AI	195	1.3
350**	19644-4C	AI	208	0.8
366**	19645-42A	AI	195	1.4
366**	19645-42B	AI	221	1.4
478**	478M007052	EM	204	1.2

*AI = Air Injection
EM = Engine Modification
** General Motors Corp. engine

Each emission data engine met the emission standards of 275 ppm hydrocarbon and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the White Motors Corporation exhaust control systems for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1970-model year. The staff, therefore, recommends adoption of Resolution 70-7.

State of California

AIR RESOURCES BOARD

Resolution 70-8

March 18, 1970

WHEREAS, the current program budget requires the leasing of office and other space in various locations throughout California; and

WHEREAS, the involvement of the Department of General Services, Facilities Planning Division, and Leasing Section will be required:

NOW THEREFORE, BE IT RESOLVED, in order to ease administrative processing, that this Board authorize the Executive Officer to execute State of California Space Requests for any and all administrative leases necessary to accomplish the program objectives of the Air Resorces Board.

State of California

AIR RESOURCES BOARD

Resolution 70-8-A

October 21, 1970

WHEREAS, the Air Resources Board program objectives require the leasing of office, air monitoring stations and other space in various locations throughout California; and

WHEREAS, the involvement of the Department of General Services Legal Section, Facilities Planning Division and Leasing Section is required:

NOW THEREFORE, BE IT RESOLVED, in order to ease administrative processing, that this Board authorizes the Executive Officer to negotiate and lease such space as necessary for air monitoring stations, office space and storage within the funds allocated for these purposes to accomplish the program objectives of the Air Resources Board.

State of California

AIR RESOURCES BOARD

Resolution 70-9

WHEREAS, in 1969 the California Legislature added Section 39052 (q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested,

WHEREAS, on November 9, 1969 the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel,"

WHEREAS, Impco Division of A. J. Industries, Inc. has submitted an application and all test data for approval of their emission control systems for vehicles modified to utilize liquified petroleum gas (LPG),

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2,

NOW, THEREFORE BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval for Impco carburetors model number listed for use in California on vehicles of the 1966 through 1970 model years utilizing liquified petroleum gas with engines sizes as listed:

Carburetor Model	Engine Size Class Cubic Inches
CA 125	200-300
CA 225	300-375
CA 300	over 300
CA 425	over 375

2/18/70

State of California

AIR RESOURCES BOARD

Resolution 70-9A

December 15, 1970

WHEREAS, in 1969, the California Legislature added Section 39052 (q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 9, 1969, the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel;" and

WHEREAS, Impco Division of A. J. Industries, Inc. has submitted an application and all test data for approval of two modification systems for gasoline-powered vehicles. One modification utilizes a liquified petroleum gas carburetion system. The other modification is a dual fuel system which utilizes either liquified petroleum gas or gasoline; and

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Impco modification systems utilizing liquified petroleum gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code; and

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a resolution of approval for Impco carburetors model numbers listed for use in California on 1971-model gasoline-powered vehicles modified to use liquified petroleum gas and for the dual fuel system which utilizes either liquified petroleum gas or gasoline.

Carburetor Model	Engine Size Class Cubic Inches	
CA 125 (LPG)	(c), (d), (e)	200-375
CA 225 (LPG)	(d), (e), (f)	Over 250
CA 300 (LPG)	(d), (e), (f)	Over 250
CA 425 (LPG)	(e), (f)	Over 300
CA 300A(Dual Fuel)	(c), (d), (e), (f)	Over 200

State of California

AIR RESOURCES BOARD

Staff Report

Impco Carburetion

Application for Motor Vehicles Modified
To Use Liquified Petroleum Gas Fuel

The Impco Carburetion Division of A. J. Industries, Inc., has submitted an application for approval of two modifications for gasoline-powered vehicles. One modification utilizes a liquified petroleum gas carburetion system. The other modification is a dual fuel system utilizing liquified petroleum gas or gasoline. The data submitted are shown below.

Carburetor Model	Engine Size Class	Test Engine Size Cu. In.	Test Vehicle License No.	Hydrocarbons gms per mi.	CO gms per mi.	NO_x gms per mi.
CA 125 LPG	(c)	225	841 BTM	0.26	1.90	1.11
CA 125 LPG	(d)	250	074 ASF	0.53	2.00	1.06
CA 125 LPG	(e)	302	565 AGF	0.76	4.30	0.51
CA 225 LPG	(d)	250	074 ASF	0.48	12.60	0.79
CA 225 LPG	(e)	350	995 BLR	0.60	10.80	0.82
CA 225 LPG	(f)	400	283 CCB	0.35	2.30	0.48
CA 425 LPG	(e)	350	(Temp)L 56350 US	1.25	1.53	0.79
CA 425 LPG	(f)	400	283 CCB	0.34	1.60	0.48
CA 300A Dual Fuel	(c)	225	841 BTM	0.33	1.60	0.98
CA 300A Dual Fuel	(d)	250	074 ASF	0.70	15.40	1.08
CA 300A Dual Fuel	(e)	350	995 BLR	0.74	11.20	0.69
CA 300A Dual Fuel	(f)	400	283 CCB	0.36	4.30	0.63

Each test vehicle in the fleet met the 1971 emission standard of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide and 4.0 grams per mile nitrogen oxides.

The emission results on liquified petroleum gas also meets the 1974-model year standards and, therefore, meets the emission requirements of Section 8657 of the Revenue and Taxation Code.

The Air Resources Board test procedure specifies that the dual fuel system modification not increase emissions when operating on gasoline. Test results show that this modification does not increase the emissions of present vehicles when operating on gasoline.

Based on the test data and other information submitted by the applicant, the staff finds that both modifications meet the California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-9A.

December 15, 1970

State of California

AIR RESOURCES BOARD

Resolution 70-9-B

January 20, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 39102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has adopted Resolutions 70-9 and 70-9-A which approved the Impco modification systems for converting gasoline engines to use liquified petroleum gas; and

WHEREAS, the Board found that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Impco modification systems utilizing liquified petroleum gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for Impco carburetors model numbers listed below for use in California on 1966-1971 model gasoline-powered vehicles, under 6,001 pounds gross vehicle weight, modified to use liquified petroleum and for the dual fuel system which utilizes either liquified petroleum gas or gasoline.

Carburetor Model	Engine Size Class	Cubic Inches
CA 125 (L.P.G.)	(c), (d), (e)	200-375
CA 225 (L.P.G.)	(d), (e), (f)	Over 250
CA 425 (L.P.G.)	(e), (f)	Over 300
CA 300A (Dual Fuel)	(c), (d), (e), (f)	Over 200

State of California

AIR RESOURCES BOARD

Resolution 70-9-C

February, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivision (a) and (b) of Section 39102 and Section 39102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has adopted Resolution 70-9 and 70-9-A which approved the Impco modification systems for converting gasoline engines to use liquified petroleum gas; and Resolution 70-9-B which found that the systems met the requirements of Section 8657 of the Revenue and Taxation Code for light-duty vehicle; and

WHEREAS, the Air Resources Board adopted a motion at its February 17, 1971, public meeting to accept demonstration on light-duty vehicles as evidence that an equal degree of control would be achieved on heavy-duty vehicles,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Impco modification systems utilizing liquified petroleum gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for Impco carburetors model numbers listed below for use in California on 1969-1971-model gasoline-powered vehicles, over 6,001 pounds gross vehicle weight, modified to use liquified petroleum gas.

Carburetor Model		Engine Size Class	Cubic Inches
CA 125	(L.P.G.)	(c), (d), (e)	200-375
CA 225	(L.P.G.)	(d), (e), (f)	Over 250
CA 425	(L.P.G.)	(e), (f)	Over 300
CA 300A	(Dual Fuel)	(c), (d), (e), (f)	Over 200

State of California

AIR RESOURCES BOARD

Resolution 70-9-C

February, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivision (a) and (b) of Section 39102 and Section 39102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has adopted Resolution 70-9 and 70-9-A which approved the Impco modification systems for converting gasoline engines to use liquified petroleum gas; and Resolution 70-9-B which found that the systems met the requirements of Section 8657 of the Revenue and Taxation Code for light-duty vehicle; and

WHEREAS, the Air Resources Board adopted a motion at its February 17, 1971, public meeting to accept demonstration on light-duty vehicles as evidence that an equal degree of control would be achieved on heavy-duty vehicles,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Impco modification systems utilizing liquified petroleum gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for Impco carburetors model numbers listed below for use in California on 1969-1971-model gasoline-powered vehicles, over 6,001 pounds gross vehicle weight, modified to use liquified petroleum gas.

Carburetor Model		Engine Size Class	Cubic Inches
CA 125	(L.P.G.)	(c), (d), (e)	200-375
CA 225	(L.P.G.)	(d), (e), (f)	Over 250
CA 425	(L.P.G.)	(e), (f)	Over 300
CA 300A	(Dual Fuel)	(c), (d), (e), (f)	Over 200

State of California

AIR RESOURCES BOARD

Resolution 70-9D

July 21, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 9102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has approved the Impco Division of A. J. Industries modification system for converting gasoline engines to use liquified petroleum gas; and

WHEREAS, the Board found that the system complied with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Impco carburetor models listed below utilizing liquified petroleum gas (LPG) will meet the emission requirements of Section 8657 of the Revenue and Taxation Code for gasoline-powered vehicles under 6,001 pounds gross vehicle weight:

Carburetor Model	Engine Size Class	Engine Size Displacement Cubic Inches
CA 125 (LPG)	(c) (d) (e)	200-375
CA 225 (LPG)	(d) (e) (f)	Over 250
CA 425 (LPG)	(e) (f)	Over 300
CA 300A(Dual Fuel)	(c) through (f)	Over 200

State of California

AIR RESOURCES BOARD

Resolution 70-9E

July 21, 1971

WHEREAS, in 1969, the California Legislature added Section 39052 (q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested;

WHEREAS, on November 9, 1969, the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquefied Petroleum Gas or Natural Gas Fuel;"

WHEREAS, Impco Division of A. J. Industries, Inc. has submitted an application and all test data for approval of modification systems for gasoline-powered vehicles; and

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a resolution of approval for Impco carburetor model numbers listed for use in California on ~~1966 through 1971 model~~ gasoline-powered vehicles modified to use liquefied petroleum gas or natural gas and for the dual fuel system which utilizes either liquefied petroleum gas and gasoline, or natural gas and gasoline.

Carburetor Model	Engine Size Class	Engine Size Cubic Inches
CA 300 AN	(e)	300-375 (Natural Gas)
CA 300 A	(a)	Under 140 (LPG plus turbo charge)
CA 125	(a)	Under 140 (LPG)

State of California

AIR RESOURCES BOARD

Resolution 70-9-F

July 21, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquefied petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 9102.5 of the Health and Safety Code;

WHEREAS, the Air Resources Board has approved the Impco Division of A. J. Industries modification system for converting gasoline engines to use liquefied petroleum gas or natural gas; and

WHEREAS, the Board found that the systems complied with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Impco carburetor models listed below utilizing liquefied petroleum gas or natural gas will meet the emission requirements of Section 8657 of the Revenue and Taxation Code for ~~1966 through 1971~~ gasoline-powered vehicles under 6,001 pounds gross vehicle weight:

Carburetor Model	Engine Size Class	Engine Size Displacement Cubic Inches	
CA 300 AN	(e)	300-375	(Natural Gas)
CA 300 A	(a)	Under 140	(L.P.G. plus turbo charge)
CA 125	(a)	Under 140	(L.P.G.)

State of California

AIR RESOURCES BOARD

Resolution 70-10

March 30, 1970

WHEREAS, Chrysler Corporation submitted an application and all test data for 1971 California approval of emission control systems for vehicles less than 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine modification-type exhaust emission control system including oxide of nitrogen control with major elements:

(1) leaner carburetion, with idle rich limiter,

(2) retarded spark at idle,

(3) restricted usage of distributor vacuum advance,

(4) higher overlap camshafts,

(5) recommended maintenance.

B. Crankcase storage-type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) vapor-liquid separator,

(3) thermal-expansion volume tank,

(4) vapor vent lines to crankcase.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6.

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Chrysler Corporation with respect to the 1971 model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 225, 318.

State of California

AIR RESOURCES BOARD

Staff Report

1970 Emission Control Systems Approval

Chrysler Corporation

March 30, 1970

Chrysler Corporation has submitted an application for 1971 model year approval of their emission control systems for their 225 and 318 cubic inch size engines. This early application is due to their intention of making a mid-year release of light-duty trucks involving these two engines.

The applicant's emission control systems are an engine-modification/oxide of nitrogen exhaust emission control and a crankcase-storage type of evaporative emission control.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
		HC-gms/mi	CO-gms/mi	NO_2-gms/mi	HC-gms/test
225	E438	1.5	23	3.4	0.02
225	566	1.7	15	3.9	0.05
225	147	1.4	20	3.8	0.07
225	615	1.1	20	3.6	0.02
318	664	1.2	15	3.0	0.02
318	562	1.3	14	3.7	0.03
318	480	1.6	18	3.8	0.04
318	655	1.6	20	3.5	0.09

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Chrysler Corporation exhaust and evaporative emission control systems meet California requirements for vehicles under 6,001 pounds gross vehicle weight for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-10.

70-11

State of California

AIR RESOURCES BOARD

March 30, 1970

WHEREAS, The Division of Highways in the Department of Public Works in the State of California has applied for twenty-five permits for the testing of an experimental motor vehicle pollution control device installed in twenty-five motor vehicles, and

WHEREAS, the vehicles will be operated on natural gas and the equipment will be installed by the San Diego Gas and Electric Company according to the Governor's Six Point Program on air pollution control, and

WHEREAS, Section 39181 of the Health and Safety Code authorizes the Board to issue such permits;

NOW, THEREFORE, BE IT RESOLVED, That the

Division of Highways be granted twenty-five permits for testing an experimental motor vehicle emission control device for a period of one year from this date.

3-18-70

State of California

AIR RESOURCES BOARD

Resolution 70-12

March 18, 1970

WHEREAS, The Air Resources Board finds it necessary to amend the Device Identification regulations in Title 13, California Administrative Code; and

WHEREAS, Section 39051 (c) of the Health and Safety Code authorizes the Air Resources Board to adopt Rules and Regulations in accordance with the provisions of the Administrative Procedure Act; and

WHEREAS, a public hearing and other proceedings have been held in accordance with the provisions of the Administrative Procedures Act, Title 2, Government Code;

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby repeals, amends and adopts its regulations, Title 13, California Administrative Code, as follows:

1. Amends Section 2108 to read:

2108 Device Identification.

(a) The manufacturer of any gasoline-powered light duty motor vehicle shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such vehicles available for sale in California and covered by an approval resolution of the Air Resources Board. This regulation does not prohibit the manufacturer from complying with Federal and California regulations with the same label.

(b) On all gasoline-powered light duty motor vehicles, a plastic or metal label shall be welded, riveted, or otherwise permanently attached in a readily visible position in the engine compartment.

(c) The label shall be affixed by the vehicle manufacturer, who has been issued the certificate of conformity for such vehicle, in such a manner that it cannot be removed without destroying or defacing the label, and shall not be affixed to any equipment which is easily detached from such vehicle.

(d) The label shall contain the following information lettered in the English language in block letters and numerals, which shall be of a color that contrasts with the background of the label:

(1) The label heading: Vehicle Emission Control Information;

(2) Full corporate name and trademark of manufacturer;

(3) Engine size (in cubic inches);

State of California

AIR RESOURCES BOARD

Staff Report

Staff Discussion of Resolution 70-12

March 18, 1970

On December 4, 1969, the Department of Health, Education, and Welfare adopted a labelling regulation similar to this proposal. The Federal regulation provided that the manufacturer could also include on the label information required by State regulations.

Much of the information proposed for this regulation is identical to Federal requirements. Additional items (4, 6, 7, 8) were developed by an inter-agency committee of the Board, Highway Patrol, and Department of Motor Vehicles. These requirements will aid licensed stations in identifying control systems for issuance of the certificate of compliance. See results of licensed garage survey attached.

The staff recommends that the regulation become effective for 1971 model vehicles manufactured after July 1, 1970.

State of California

AIR RESOURCES BOARD

Resolution 70-13

March 30, 1970

WHEREAS, the Air Resources Board finds it necessary to revise the "California Exhaust and Fuel Evaporative Emission Standards and Test Procedures for Used Vehicles Under 6,001 Pounds Gross Vehicle Weight," dated January 21, 1970; and

WHEREAS, Section 39052 (1) of the Health and Safety Code authorizes the Air Resources Board to adopt test procedures specifying the manner in which used motor vehicles shall be accredited; and

WHEREAS, a public hearing and other proceedings have been held in accordance with provisions of the Administrative Procedures Act, Title 2, Government Code;

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby repeals, amends and adopts its regulations, Title 13, California Administrative Code, as follows:

1. Amends Section 2109, paragraph (e) to read:

   (e) The test procedures for determining compliance with exhaust emission standards specified in Sections 39052.2, 39107, 39108, and 39175 of the Health and Safety Code are: "California Exhaust and Fuel Evaporative Emission Standards and Test Procedures for Used Motor Vehicles Under 6,001 Pounds Gross Vehicle Weight," adopted January 21, 1970, as amended March 18, 1970.

State of California

AIR RESOURCES BOARD

Resolution 70-14

March 30, 1970

WHEREAS, Rolls-Royce Limited, has submitted an application and all test data for approval of its emission control systems for the 1970-model Rolls-Royce and Bentley vehicles; and

WHEREAS, The applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

B. Carbon canister storage type evaporative emission control system with major elements:

(1) activated carbon canister,

(2) thermal expansion tank,

(3) purge control valve,

(4) carburetor float chamber vented to carbon canister,

(5) fuel trap functioning as a vapor-liquid separator.

WHEREAS, The Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Rolls-Royce Limited, with respect to the 1970-model vehicles, 6,001 pounds or less gross vehicle weight, with engines of 412 cubic inch size.

State of California

AIR RESOURCES BOARD

Staff Report

1970 Emission Control Systems Approval

Rolls-Royce Limited

March 30, 1970

Rolls-Royce Limited, has submitted an application for approval of the emission control systems to be used on its 1970-model Rolls-Royce and Bentley vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are an air injection type of exhaust emission control system and a carbon canister storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi.	CO-gms/mi.	Projected Evaporative Emissions at 12,000 Miles HC-gms/test
412	SBH 1016	1.7	15	0.1
412	SRX 6923	1.8	15	0.9
412	SRX 6001	1.7	11	0.7
412	SRH 1525	1.6	14	0.0

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Rolls-Royce Limited, exhaust and evaporative emission control systems for Rolls-Royce and Bentley vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1970-model year. The staff, therefore, recommends adoption of Resolution 70-14.

STATE OF CALIFORNIA
AIR RESOURCES BOARD
Resolution 70-15

WHEREAS, the Air Resources Board has received a Federal grant to demonstrate the feasibility of exhaust gas recirculation as a means of nitrogen oxides control; and,

WHEREAS, the Atlantic Richfield Company (ARCO) (Products Division) has a demonstrated capability for the design and installation of such devices;

NOW, THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to execute a contract with the ARCO Chemical Company to perform Phase II of the current project entitled "Field Evaluation of ARCO's NOR Device for Control of Nitrogen Oxides in Automotive Exhaust", dated July 3, 1968. Total cost for Phase II will not exceed $32,000.

March 30, 1970

70-16

State of California

AIR RESOURCES BOARD

March 30, 1970

WHEREAS, in 1969 the California Legislature added Section 39052 (q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 9, 1969 the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel;" and

WHEREAS, San Diego Gas and Electric Company has submitted an application and all test data for approval of their emission control systems for vehicles modified to utilize liquified natural gas (LNG); and

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval for San Diego Gas and Electric Company to use the Impco carburetor model numbers listed below for use in California on vehicles of the 1966 through 1970 model years utilizing liquified natural gas with engines sizes as listed:

Impco Carburetor Model	Engine Size Class Cubic Inches
CA 125	200-250
CA 225	300-375

3/18/70

State of California

AIR RESOURCES BOARD

Resolution 70-16A

WHEREAS, in 1969, the California Legislature added Section 39052 (q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 9, 1969, the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel"; and

WHEREAS, San Diego Gas and Electric Company has submitted an application and all test data for approval of their emission control systems for vehicles modified to utilize liquified natural gas (LNG); and

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the San Diego Gas and Electric modification system utilizing liquified natural gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code; and

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval for San Diego Gas and Electric Company to use the Impco carburetor model numbers listed below for use in California on 1971-model vehicles utilizing liquified natural gas with engine sizes as listed:

Impco Carburetor Model	Engine Size Class Cubic Inches
CA 125	(a),(b),(c) - zero to 250
CA 225	(d) (e), ~~(f)~~ - 250 ~~and over~~ to 375

December 15, 1970

State of California

AIR RESOURCES BOARD

Staff Report

San Diego Gas and Electric Company
Application for Motor Vehicles Modified
To Use Liquified Natural Gas

San Diego Gas and Electric Company has submitted an application for approval of vehicles modified to use liquified natural gas. The data submitted are shown below:

Vehicle	Engine Size Class	Test Engine Size Cubic Inches	Carburetor Model	License Number	Test Results (grams per mile) Hydrocarbons	Carbon Monoxide	NO_x
'70 Cortina	(a)	94	IMPCO CA 125	422 BHC	0.42	1.01	0.88
'70 Hornet	(b)	199	IMPCO CA 125	ZZA 192	0.50	0.38	0.94
'67 Valiant	(c)	225	IMPCO CA 125	TXP 426	0.23	0.38	0.94
'66 Chevrolet	(d)	283	IMPCO CA 225	SMR 743	0.53	1.73	1.29
'69 Chevrolet	(e)	327	IMPCO CA 225	YYU 895	0.58	1.43	1.25

Each test vehicle in the fleet met the 1971 emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, and 4 grams per mile nitrogen oxides.

The emission results on liquified natural gas also meets the 1974-model year standards and, therefore, meets the emission requirements of Section 8657 of the Revenue and Taxation Code.

Based on the test data and other information submitted by the applicant, the staff finds that the San Diego Gas and Electric Company's emission control systems to be used on vehicles modified to use liquified natural gas, meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-16A.

December 15, 1970

State of California

AIR RESOURCES BOARD

Resolution 70-16-B

January 20, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 39102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has adopted Resolution 70-16 and 70-16-A which approved the San Diego Gas and Electric modification systems for converting gasoline engines to use liquified natural gas; and

WHEREAS, the Board found that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the San Diego Gas and Electric modification systems utilizing natural gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for Impco carburetors model numbers listed below for use in California on 1966-1971 model gasoline-powered vehicles, under 6,001 pounds gross vehicle weight, modified to use liquified natural gas.

Impco Carburetor Model	Engine Size Class	Cubic Inches
CA 125	(a), (b), (c)	0 to 250
CA 225	(d), (e)	250 to 375

State of California

AIR RESOURCES BOARD

Staff Report

San Diego Gas and Electric Company
Application for Motor Vehicles Modified
To Use Liquified Natural Gas

San Diego Gas and Electric Company has submitted an application for approval of vehicles modified to use liquified natural gas. The data submitted are shown below:

Carburetor Model	Applicable Engine Size Class	Test Engine Size Cubic Inches	Test Vehicle License No.	Hydrocarbons ppm	Hydrocarbons gms/mi.	Carbon Monoxide Percent	Carbon Monoxide gms/mi.
Impco CA125	C	225	WBG-332	41	0.42	0.13	2.5
Impco CA125	C	225	TXP-426	52	0.53	0.12	2.3
Impco CA225	E	302	WBG-442	35	0.36	0.16	3.1
Impco CA225	E	327	YYU-895	81	1.00	0.14	3.3

Each test vehicle in the fleet met the 1966-1969 emission standard of 275 ppm hydrocarbons and 1.5 percent carbon monoxide and also the 1970 emission standards of 2.2 grams per mile hydrocarbon and 23 grams per mile carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the San Diego Gas and Electric Company's emission control systems to be used on vehicles modified to use liquified natural gas, meets California requirements for the 1966-1970 model years. The staff therefore recommends adoption of Resolution 70-16.

3/18/70

70-17

State of California

AIR RESOURCES BOARD

March 30, 1970

WHEREAS, Mr. P. L. Underwood, 13261 Calcutta Street, Sylmar, California 91342, has applied for a permit for the testing of an experimental motor vehicle pollution control device for approval by this Board; and

WHEREAS, the device consists of the combustion of hydrogen and oxygen in an internal combustion engine; and

WHEREAS, Section 39181 of the Health and Safety Code, authorizes the Board to issue such permits;

NOW, THEREFORE BE IT RESOLVED, That Mr. P. L. Underwood is hereby granted a permit for testing an experimental control device for a period of one year from this date.

3/18/70

State of California

AIR RESOURCES BOARD

Resolution 70-18
March 18, 1970

WHEREAS, the Air Resources Board, find it necessary to insure the most rapid possible attainment of minimum exhaust emissions from present and future motor vehicles; and

WHEREAS, almost all possible emission control systems projected for 1975 vehicles, and some cases for earlier models, suffer some restraint from the presence of lead in fuel; and

WHEREAS, much of the lead in fuel is discharged into the atmosphere from the exhaust of motor vehicles using fuels containg lead;

NOW, THEREFOR, BE IT RESOLVED, That the Air Resources Board recommends that:

1. Commencing on January 1, 1971, every marketer of motor gasoline in the State of California shall provide at least one grade of fuel having no less than a 90 octance number and containing no more than 0.5 gram of lead per gallon.

2. Commencing on January 1, 1971, no motor fuel sold in the State of California may contain more than 2.0 grams of lead per gallon.

3. Commencing on January 1, 1974, every marketer of motor gasoline in the State of California shall provide at least one grade of fuel having no less than a 90 research octane number, and which shall be free of lead additive.

4. Commencing on January 1, 1977, no motor fuel sold in the State of California may contain lead additive.

State of California

AIR RESOURCES BOARD

Resolution 70-19

WHEREAS, Automotive Improvements, 325 North Broadway, Santa Ana, California has applied for 25 permits for the testing of an experimental motor vehicle pollution control device for approval by this Board; and

WHEREAS, the device comprises a Delta Mark 10 Capacitive Discharge Ignition system for use with gasoline internal combustion engines; and

WHEREAS, Section 39181 of the Health and Safety Code, authorizes the Board to issue such permits;

NOW, THEREFORE, BE IT RESOLVED, That Automotive Improvements is hereby granted 25 permits for testing an experimental control device for a period of one year from this date.

State of California

AIR RESOURCES BOARD

Resolution 70-20

WHEREAS, Stanford Research Institute, Southern California Laboratories, at 820 Mission Street, South Pasadena, California, has applied for a permit to test an experimental exhaust emission control device on two vehicles; and

WHEREAS, the device is intended for use on both new and used vehicles; and

WHEREAS, it is intended that the system would provide control of hydrocarbons, carbon monoxide, and nitrogen oxides; and

WHEREAS, the system operates as a control method for introduction of fuel and air;

NOW, THEREFORE, BE IT RESOLVED, that the Stanford Research Institute is hereby granted a permit for testing an experimental control device on two vehicles for a period of one year, beginning on May 20, 1970.

5-20-70

State of California

AIR RESOURCES BOARD

Resolution 70-21

WHEREAS, the State Highway Commission has voted to the Air Resources Board the sum of $257,000 for purchasing and testing of devices or systems to lower exhaust emissions, and $250,000 for a vehicle inspection and maintenance pilot project for a total of $507,000 for the period from April 1, 1970 to June 30, 1971; and,

NOW, THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to execute an Interagency Agreement with the Department of Public Works to accept these funds and authorizes him to utilize such funds for the purposes stated above.

May 20, 1970

State of California

AIR RESOURCES BOARD

Resolution 70-22

WHEREAS, the law offices of Mori and Katayama, 250 East First Street, Los Angeles 90012, have applied for a years extension of a permit for the testing of an experimental pollution control device installed in a motor vehicle; and

WHEREAS, this device consists of an engine modification system; and

WHEREAS, these tests were made for engine and emission control system durability in California operating conditions; and

WHEREAS, additional durability tests are still required on one vehicle; and

WHEREAS, Section 39084 of the Health and Safety Code authorizes the Board to issue such permits; and

WHEREAS, the Board is satisfied that the proposed experimentation will contribute to the development of control technology;

NOW, THEREFORE, BE IT RESOLVED, Mori and Katayama are hereby granted an extension of Permit No. 132 for testing an experimental control device installed in a 1968 Colt vehicle, identification number A 23 50700003 for a period of one year from this date.

5/20/70

State of California

AIR RESOURCES BOARD

Resolution 70-23

April, 1970

WHEREAS, Ford Motor Company submitted an application and all test data for 1971 California approval of emission control systems for vehicles with its 97.56 cubic-inch engine.

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine modification-type exhaust emission control system called "IMCO" including oxide of nitrogen control with major elements:

(1) leaner carburetion, with idle rich limiter,

(2) retarded spark at idle and deceleration,

(3) deceleration control valve for leaner air fuel mixture during closed throttle deceleration,

(4) recommended maintenance.

B. Carbon storage-type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) vapor-liquid separator,

(3) carbon canister,

(4) regulator valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6.

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Ford Motor Company with respect to the 1971 model vehicles, 6000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 97.56.

State of California

AIR RESOURCES BOARD

Resolution 70-23-A

August 1970

WHEREAS, Ford Motor Company has submitted an application and all test data for California approval of the emission control systems for its 1971 model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows;

A. An engine-modification type exhaust emission control system called "IMPCO" (including NO_x control) with major elements:

(1) leaner carburetion plus idle rich limiter,
(2) retarded spark at idle,
(3) vacuum operated valve for additional spark advance during deceleration on some models,
(4) recommended maintenance.

B. An air-injection type exhaust emission control system called "Thermactor" (including NO_x control)with major elements:

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

C. A carbon storage evaporative emission control system with major elements:

(1) carbon canister,
(2) sealed fuel tank filler cap (with pressure-vacuum relief)
(3) vapor-liquid separator, with orifice.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2,3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Ford Motor Company with respect to 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 98, 122, 170, 200, 240, 250, 300, 302, 351, 360, 390, 400, 429, and 460.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Ford Motor Company

January 20, 1971

Ford Motor Company has submitted an application for approval of the emission control systems to be used on an additional 1971-model vehicle, the Capri.

The applicant's emission control systems are an engine-modification type of exhaust control system and a carbon-storage type of evaporative control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Test Vehicle No.	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO_2 gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
122	CEC2(KUM622)	1.5	15	2.2	0.14
122	TCC-6	1.4	19	2.9	0

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4.0 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Ford Motor Company exhaust and evaporative emission control systems meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-23B.

State of California

AIR RESOURCES BOARD

Resolution 70-23B

January 20, 1971

WHEREAS, Ford Motor Company has submitted an application and all test data for California approval of the emission control systems for an additional 1971-model vehicle, the Capri; and

WHEREAS, the applicant's emission control systems are described as follows:

A. An engine-modification type exhaust emission control system called "IMPCO" (including NO_x control) with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) vacuum-operated valve for additional spark advance during deceleration,

(4) recommended maintenance.

B. A carbon-storage evaporative emission control system with major elements:

(1) carbon canister,

(2) sealed fuel tank filler cap (with pressure-vacuum relief),

(3) vapor-liquid separator, with orifice.

WHEREAS, the Board find that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Articles 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39000, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Ford Motor Company with respect to 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 122.

State of California

AIR RESOURCES BOARD

Resolution 70-24

April 30, 1970

WHEREAS, Kaiser Jeep Corporation submitted an application and all test data for 1970 California approval of evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight; and

WHEREAS, the applicants evaporative emission control is a carbon storage type with major elements:

(1) carbon canister

(2) sealed fuel tank with non-venting cap

(3) vapor separator or expansion tank

(4) combination pressure regulator and vacuum relief valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 6:

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Kaiser Jeep Corporation for their evaporative emission control systems with respect to the 1970 model off-road utility vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 134, 225, 232, 350.

State of California

AIR RESOURCES BOARD

Resolution 70-25

May 20, 1970

WHEREAS, General Motors Corporation submitted an application and all test data for 1971 California approval of emission control systems for vehicles less than 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's emission control systems are described as follows:

A. An engine-modification type system called "C.C.S." with major elements:

   (1) Special carburetor and choke calibrations,

   (2) Special ignition timing and vacuum advance control,

   (3) Recommended maintenance.

B. Carbon storage type evaporative emission control system called "G.M.E.C.S." with major elements:

   (1) Sealed Fuel tank with provisions for routing vapors to an activated charcoal canister,

   (2) Canister containing activated charcoal for storage of fuel vapors,

   (3) Provision for removing vapors from the canister and carrying them into the engine where they are consumed.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to General Motors Corporation with respect to the 1971 model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 250,307.

State of California

AIR RESOURCES BOARD

Resolution 70-26

May 20, 1970

WHEREAS, Fuji Heavy Industries, Ltd., Japan, has submitted an application and all test data for approval of its emission control systems for the 1971-model Subaru vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4 recommended maintenance.

B. Crankcase storage type evaporative emission control system with major elements:

(1) sealed fuel tank cap,

(2) thermal expansion tanks,

(3) purge control valve,

(4) connection from the fuel tank to the air cleaner.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Fuji Heavy Industries Ltd., Japan, with respect to the 1971-model Subaru vehicles, 6000 pounds or less gross vehicle weight, with engines of 66.4 cubic inch size.

State of California

AIR RESOURCES BOARD

Resolution 70-26-A

September 16, 1970

WHEREAS, Fuji Heavy Industries, Ltd., Japan, has submitted an additional application and all required test data for approval of its emission control systems for the 1971-model Subaru vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

B. Crankcase-storage type evaporative emission control system with major elements:

(1) sealed fuel tank cap,

(2) thermal expansion tank,

(3) purge control valve,

(4) connection from the fuel tank to crankcase and air cleaner.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Fuji Heavy Industries Ltd., Japan, with respect to the 1971-model Subaru vehicles, 6000 pounds or less gross vehicle weight, with engines of 77.33 cubic inch size.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Fuji Heavy Industries, Ltd.

May 20, 1970

Fuji Heavy Industries Ltd., has submitted an application for approval of the emission control systems to be used on its 1971-model Subaru vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are an air injection type of exhaust emission control system and a crankcase storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions 50,000 Miles HC-gms/mi	CO-gms/mi	NO_2-gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
66.4	EE-1	1.9	14	1.8	1.2
66.4	EE-2	1.9	14	2.7	0.2
66.4	ED-1	1.8	14	2.0	0.9
66.4	ED-2	2.0	15	2.7	0.3
66.4	ED-3	1.9	14	2.4	0.6
66.4	ED-4	1.9	13	1.9	0.7

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, and 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Fuji Heavy Industries Ltd., exhaust and evaporative emission control systems for Subaru vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-26.

State of California

AIR RESOURCES BOARD

Resolution 70-27

May 20, 1970

WHEREAS, Nissan Motor Company, Ltd., Japan, submitted an application and all test data for 1971 California approval of exhaust emission control systems for the Datsun model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

B. Engine modification-type exhaust emission control system with major elements:

(1) leaner carburetion, with deceleration enricher and vacuum limiter,

(2) retarded spark at idle and low engine speeds,

(3) recommended maintenance.

C. Crankcase storage type evaporative emission control system with major elements:

(1) positive sealing filler cap,

(2) vapor-liquid separator,

(3) vapor vent line to crankcase,

(4) flow guide valve (exception Datsun 1800).

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Nissan Motor Company, Ltd., Japan, with respect to the 1971 model vehicles, 6000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 71.5, 97.3, 97.4, 120.9 and 146.0.

State of California

AIR RESOURCES BOARD

Resolution 70-28

May 20, 1970

WHEREAS, the Air Resources Board finds it necessary to revise the "California Exhaust and Fuel Evaporative Emission Standards and Test Produres for Used Vehicles Under 6,001 Pounds Gross Vehicle Weight," dated January 21, 1970; and

WHEREAS, Section 39052 (1) of the Health and Safety Code authorizes the Air Resources Board to adopt test procedures specifying the manner in which used motor vehicles shall be accredited; and

WHEREAS, a public hearing and other proceedings have been held in accordance with provisions of the Administrative Procedures Act, Title 2, Government Code;

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby repeals, amends and adopts its regulations, Title 13, California Administrative Code, as follows:

1. Amends Section 2109, paragraph (e) to read:

   (e) The test procedures for determining compliance with exhaust emission standards specified in Sections 39052.2, 39107, 39108, and 39175 of the Health and Safety Code are: "California Exhaust and Fuel Evaporative Emission Standards and Test Procedures for Used Motor Vehicles Under 6,001 Pounds Gross Vehicle Weight," adopted January 21, 1970, as amended May 20, 1970.

State of California

AIR RESOURCES BOARD

Resolution 70-29

May 20, 1970

WHEREAS, Chrysler Corporation submitted an application and all test data for California certification of an exhaust emission control system for portable and mobile internal combustion engines (fork lifts) used inside buildings; and

WHEREAS, the applicant's exhaust control system is described as an engine-modification type system with major elements:

(1) leaner carburetor plus an idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 5;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a certificate of approval to Chrysler Corporation with respect to its exhaust control system for portable and mobile internal combustion engines of the following engine size classes:

Engine Size Class	Engine Size Displacement
C	200-250 cubic inches
E	300-375 cubic inches

State of California

AIR RESOURCES BOARD

Resolution 70-30

May 20, 1970

WHEREAS, in 1969 the California Legislature added Section 39052 (q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 19, 1969 the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel;" and

WHEREAS, Pacific Lighting Service Company has submitted for Dual Fuel Systems Inc., an application and all test data for approval of their emission control systems for vehicles modified to utilize natural gas fuel; and

WHEREAS, the Dual Fuel Systems Inc., system is identified as "Dual Fuel Systems Inc., Model 125" with major elements;

1. Variable venturi mixer with lean adjustment.
2. Gas pressure regulator adjusted between ± 0.5 inches of water.
3. Modified vacuum spark advance.
4. Recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval for Dual Fuel Systems Inc., to use the "Dual Fuel Systems Inc., Model 125" in California on vehicles of the 1966 through 1970 model years utilizing natural gas for engines of the following size classifications:

Engine Size Class	Engine Size Displacement
A	0-140
B	140-200
C	200-250
D	250-300
E	300-375
F	375 +

State of California

AIR RESOURCES BOARD

Staff Report

Dual Fuel Systems Inc. Application for Motor Vehicles Modified To Use Natural Gas Fuel

Pacific Lighting Service Company has submitted for Dual Fuel Systems Inc. an application for approval of vehicles modified to use natural gas. The data submitted are shown below:

Applicable Engine Size Class	Test Engine Size Cubic Inches	Test Vehicle License No.	Hydrocarbons ppm	Hydrocarbons gms/mi.	Carbon Monoxide Percent	Carbon Monoxide gms/mi.
A	134	YEW 002	218	.70	.22	2.7
B	199	0661115(Temp)	84	.34	.15	2.1
C	250	80285A	123	.71	.17	3.3
D	289	92751A	118	.50	.13	2.5
E	302	67430D	185	1.18	.20	4.8
F	440	THM 662	91	.50	.35	3.1

Each test vehicle in the fleet met the 1966-1969 emission standard of 275 ppm hydrocarbons and 1.5 percent carbon monoxide and also the 1970 emission standards of 2.2 grams per mile hydrocarbon and 23 grams per mile carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the Dual Fuel Systems Inc. emission control systems to be used on vehicles modified to use natural gas fuel, meets California requirements for the 1966-1970 model years. The staff therefore recommends adoption of Resolution 70-30.

5/20/70

State of California

AIR RESOURCES BOARD

Resolution 70-31

WHEREAS, the State Highway Commission has voted to the Air Resources Board the additional sum of $40,000 for a "Special Studies Project" starting in 1970-71 to work with Highways in a program to control air pollution resulting from highway construction, and $95,000 to furnish Highways with assistance on problems of air pollution related to the planning, construction, operation, and maintenance of the State highway system; and,

NOW, THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to execute the necessary Interagency Agreements with the Department of Public Works to accept these funds, and authorizes him to utilize such funds for the purposes stated above.

May 20, 1970

State of California

AIR RESOURCES BOARD

Resolution 70-32

May 20, 1970

WHEREAS, the Automotive Performance, Inc.,a subsidiary of Oakes Diversified Industries Inc. of Dallas, Texas,filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

(1) A tube from the crankcase through a spring-loaded tapered plunger flow control valve to the intake manifold,

(2) A second tube from the oil filler cap or rocker-arm cover through the clean side of the air cleaner. Filler cap sealed to the atmosphere,

(3) A tube from a jar containing a chemical solution to a "T" in the line between the flow control valve and intake manifold or to an opening in a spacer plate between the carburetor and intake manifold. Flow of the air into jar controlled by an adjustable needle valve.

WHEREAS, the Board finds that the system complies with the standards as published in the California Administrative Code, Title 13, Section 1960; and

WHEREAS, based on test data and information submitted by the manufacturer, the Board finds that the device meets the criteria of the Air Resources Board as published in Title 13, Section 2003, of the California Administrative Code,

NOW, THEREFORE, BE IT RESOLVED, That this Board issue a certificate of approval for the Automotive Performance, Inc., a subsidiary of Oakes Diversified Industries, Inc., for a closed crankcase emission control system for used motor vehicles with engine sizes over 140 cubic inches.

State of California

AIR RESOURCES BOARD

Resolution 70-33

WHEREAS, Mr. George B. Paxton, 6210 Cowles Mt. Blvd., La Mesa, California has applied for a permit for the testing of an experimental motor vehicle pollution control device for approval by this Board; and

WHEREAS, the device comprises a crankcase emission control system incorporating a crankcase vacuum regulator and an oil separator chamber; and

WHEREAS, Section 39181 of the Health and Safety Code, authorizes the Board to issue such permits;

NOW, THEREFORE, BE IT RESOLVED, That Mr. George B. Paxton is hereby granted a permit for testing an experimental control device for a period of one year from this date.

7/15/70

State of California

AIR RESOURCES BOARD

Resolution 70-34

WHEREAS, in 1969 the California Legislature added Section 39052 (q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested,

WHEREAS, on November 9, 1969 the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel,"

WHEREAS, Marvel-Schebler Division of Borg Warner Corporation, has submitted an application and all test data for approval of their emission control systems for vehicles modified to utilize liquified petroleum gas (LPG),

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2,

NOW, THEREFORE BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval for Marvel-Schebler's Century LPG carburetor model numbers listed below for use in California on vehicles of the 1966 through 1970 model years utilizing liquified petroleum gas with engine sizes as listed:

Carburetor Model	Engine Size Class Cubic Inches
3C-706-LE	200-300
3C-705-DTLE	Over 300
3C-706-DTLE	Over 300

State of California

AIR RESOURCES BOARD

Staff Report

Marvel-Schebler Division of Borg-Warner Corporation
Application for Motor Vehicles Modified
To Use Liquified Petroleum Gas

Marvel-Schebler Division of Borg-Warner Corporation has submitted an application for approval of their Century LPG carburetors to be used on vehicles modified to use liquified petroleum gas. The data submitted are shown below:

Carburetor Model	Applicable Engine Size Class	Test Engine Size Cubic Inches	Test Vehicle	Hydrocarbons ppm	Hydrocarbons gms/mi.	Carbon Monoxide Percent	Carbon Monoxide gms/mi.
3C-706-LE	C	250	1970 Chevrolet 1/2 ton	75	1.0	0.43	10
3C-706-LE	D	300	1970 Ford 3/4 ton	64	0.7	0.08	2
3C-705-DTLE	E	350	1970 Chevrolet	110	1.4	0.29	7
3C-706-DTLE	E	350	Impala	96	1.2	0.08	2
3C-705-DTLE	F	429	1969 Ford	86	1.1	0.30	7
3C-706-DTLE	F	429	LTD	88	1.1	0.15	4

Each test vehicle in the fleet met the 1966-1969 emission standard of 275 ppm hydrocarbons and 1.5 percent carbon monoxide and also the 1970 emission standards of 2.2 grams per mile hydrocarbons and 23 grams per mile carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the Marvel-Schebler emission control systems to be used on vehicles modified to use liquified petroleum gas, meets California requirements for the 1966-1970 model years. The staff, therefore, recommends adoption of Resolution 70-34.

State of California

AIR RESOURCES BOARD

Resolution 70-34A

WHEREAS, in 1969, the California Legislature added Section 39052(q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested, and

WHEREAS, on November 9, 1969, the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel," and

WHEREAS, Marvel-Schebler Division of Borg Warner Corporation, has submitted an application and all test data for approval of their emission control systems for vehicles modified to utilize liquified pertroleum gas (LPG), and

WHEREAS, the Board find that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Marvel-Schebler modification systems utilizing liquified petroleum gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code; and

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a resolution of approval for Marvel-Schebler's Century LPG carburetor model numbers listed below for use in California on 1971-model gasoline-powered vehicles modified to use liquified petroleum gas with engine sizes as listed:

Carburetor Model	Engine Sizes Cubic Inch Displacement
3C-705-LE	140 to 200
3C-706-LE	Under 140
3C-706-LE	200-300
3C-705-DTLE	Over 300
3C-706-DTLE	Over 300

State of California

AIR RESOURCES BOARD

Staff Report

Marvel-Schebler Division of Borg-Warner Corporation Application for Motor Vehicles Modified To Use Liquified Petroleum Gas

Marvel-Schebler Division of Borg-Warner Corporation has submitted an application for approval of their Century LPG carburetors to be used on vehicles modified to use liquified petroleum gas. The data submitted are shown below:

Carburetor Model	Engine Size Class	Test Engine Size Cu. In.	Test Vehicle	HC-gms/mi	CO-gms/mi	NO_2-gms/mi
3C-706-LE	(a)	116	Opel Kadette L	.74	11.36	.96
3C-706-LE	(a)	122	Ford Pinto	.74	11.80	1.30
3C-705-LE	(b)	140	Chevrolet Vega	.56	3.48	1.16
3C-706-LE	(c)	200	Ford Mustang	1.38	1.15	.92
3C-706-LE	(d)	300	Ford 3/4 Ton	1.46	1.92	1.24
3C-705-DTLE	(e)	351	Ford Ranchero	.72	8.05	.83
3C-706-DTLE	(e)	351	Ford Ranchero	1.00	3.59	.57
3C-705-DTLE	(f)	429	Ford LTD	.92	3.70	1.11
3C-706-DTLE	(f)	429	Ford LTD	1.20	4.50	.61

Each test vehicle in the fleet met the 1971 emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, and 4 grams per mile nitrogen oxides.

The emission results on liquified petroleum gas also meet the 1974-model year standards and, therefore, meet the emission requirements of Section 8657 of the Revenue and Taxation Code.

Based on the test data and other information submitted by the applicant, the staff finds that the Marvel-Schebler emission control systems to be used on vehicles modified to use liquified petroleum gas, meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-34A.

December 15, 1970

State of California

AIR RESOURCES BOARD

Resolution 70-34-B

January 20, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 9102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has adopted Resolutions 70-34 and 70-34-A which approve the Marvel-Schebler modification systems for converting gasoline engines to use liquified petroleum gas; and

WHEREAS, the Board found that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Marvel-Schebler modification systems utilizing liquified petroleum gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for Century carburetors model numbers listed below for use in California on 1966-1971 model gasoline-powered vehicles under 6,001 pounds gross vehicle weight, modified to use liquified petroleum gas.

Carburetor Model	Engine Size Class	Engine Sizes Cubic Inch Displacement
3C-705-LE	(b)	140 to 200
3C-706-LE	(a)	Under 140
3C-706-LE	(c),(d)	200-300
3C-705-DTLE	(e),(f)	Over 300
3C-706-DTLE	(e),(f)	Over 300

State of California

AIR RESOURCES BOARD

Resolution 70-34-C

February, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 39102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has adopted Resolution 70-34 and 70-34-A which approved the Marvel-Schebler modification systems for converting gasoline engines to use liquified petroleum gas; and Resolution 70-34-B which found that the systems met the requirements of Section 8657 of the Revenue and Taxation Code for light-duty vehicles; and

WHEREAS, the Air Resources Board adopted a motion at its February 17, 1971, public meeting to accept demonstration on light-duty vehicles as evidence that an equal degree of control would be achieved on heavy-duty vehicles,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Marvel-Schebler modification systems utilizing liquified petroleum gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for Century carburetors model numbers listed below for use in California on 1969-1971-model gasoline-powered vehicles, over 6,001 pounds gross vehicle weight, modified to use liquified petroleum gas.

Carburetor Model	Engine Size Class	Engine Size Displacement Cubic Inches
3C-705-LE	(b)	140 to 200
3C-706-LE	(a)	Under 140
3C-706-LE	(c),(d)	200- 300
3C-705-DLE	(e),(f)	Over 300
3C-706-DLE	(e),(f)	Over 300

State of California

AIR RESOURCES BOARD

Resolution 70-34-D

April 21, 1971

WHEREAS, in 1969, the California Legislature added Section 39052(q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 9, 1969, the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquefied Petroleum Gas or Natural Gas Fuel;" and

WHEREAS, Marvel-Schebler, Division of Borg Warner Corporation, has submitted an additional application and all test data for approval of its emission control system for vehicles modified to utilize liquefied petroleum gas (LPG); and

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue this additional resolution of approval for Marvel-Schebler's Century LPG Carburetor Model #3C-705-LE to include vehicles with engines less than 140 cubic inch displacement.

State of California

AIR RESOURCES BOARD

Resolution 70-34-E

April 21, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meetint the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 9102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has adopted Resolutions 70-34, 70-34-A and 70-34-B which approved the Marvel-Schebler modification systems for converting gasoline engines to use liquified petroleum gas; and

WHEREAS, the Board found that the systems complied with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that Marvel-Schebler's Century LPG Carburetor Model #3C-705-LE utilizing liquified petroleum gas (LPG) will also meet the emission requirements of Section 8657 of the Revenue and Taxation Code for 1966-1971 model gasoline powered vehicles under 6,000 pounds gross vehicle weight with engines less than 140 cubic inch displacement.

State of California

AIR RESOURCES BOARD

Resolution 70-34-F

July 21, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 9102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board approved the Marvel-Schebler modification systems for converting gasoline engines to use liquified petroleum gas; and

WHEREAS, the Board found that the systems complied with the California Admisnistrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Marvel-Schebler modification systems utilizing liquified petroleum gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for Century carburetors model numbers listed below for use in California on gasoline-powered vehicles under 6,001 pounds gross vehicle weight, modified to use liquified petroleum gas.

Carburetor Model	Engine Size Class	Engine Sizes Cubic Inch Displacement
3C-705-LE	(a),(b)	Under 200
3C-706-LE	(a)	Under 140
3C-706-LE	(c),(d)	200-300
3C-705-DTLE	(e),(f)	Over 300
3C-706-DTLE	(e),(f)	Over 300

State of California

AIR RESOURCES BOARD

Resolution 70-35

July 15, 1970

WHEREAS, Energy Transmission Corporation, 2360 Cabrera Street, San Bernardino, California has applied for 4 permits for the testing of an experimental motor vehicle pollution control device for approval by this Board; and

WHEREAS, the device comprises an induction system with exhaust gas recycle and/or catalyst; and

WHEREAS, Section 39181 of the Health and Safety Code, authorizes the Board to issue such permits;

NOW, THEREFORE, BE IT RESOLVED, That Energy Transmission Corporation is hereby granted 4 permits for testing an experimental control device for a period of one year from this date.

State of California

AIR RESOURCES BOARD

Resolution 70-36

July 15, 1970

WHEREAS, International Harvester Company submitted an application and test data for California approval of an exhaust and evaporative emission control system for its 1971-model vehicles less than 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's emission control systems are described as follows:

An engine-modification type exhaust control system with major elements:

(1) leaner carburetion with idle rich limiters,

(2) retarded spark at idle and light load,

(3) speed sensor to eliminate distributor vacuum advance below vehicle speeds of 21-30 m.p.h.,

(4) recommended maintenance.

An evaporative emission control system with major elements:

(1) carbon canister,

(2) regulator valve,

(3) liquid separator,

(4) sealed gas cap,

(5) recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Articles 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, that this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a resolution of approval to International Harvester Company with respect to 1971-model vehicles, less than 6,001 pounds gross vehicle weight, with engines of the following sizes (cubic inches); 196, 232, 304, 345, and 392.

State of California

AIR RESOURCES BOARD

Resolution 70-36-A

July 21, 1971

WHEREAS, International Harvester Company submitted an application and test data for California approval of an exhaust and evaporative emission control system for its 1971-model vehicles less than 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's emission control systems are described as follows:

An engine-modification type exhaust control system with major elements:

(1) leaner carburetion with idle rich limiters,

(2) retarded spark at idle and light load,

(3) throttle positioner for deceleration,

(4) recommended maintenance.

An evaporative emission control system with major elements:

(1) carbon canister,

(2) expansion tank with check valve,

(3) non-vented fuel tank cap,

(4) recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Articles 2, 3, and 6,

NOW, THEREFORE, BE IT RESOLVED, that this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a resolution of approval to International Harvester Company with respect to 1971-model vehicles, less than 6,001 pounds gross vehicle weight, with engines of the following size (cubic inches): 258.

State of California

AIR RESOURCES BOARD

Resolution 70-37

July 15, 1970

WHEREAS, International Harvester Company submitted an application and all test data for 1971 California certification of an exhaust emission control system for vehicles over 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1, and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to International Harvester Company with respect to 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches); 196, 232, 304, 308, 345, 392, 401, 406, 450, 478, 501 and 549.

State of California

AIR RESOURCES BOARD

Resolution 70-37-A

July 21, 1971

WHEREAS, International Harvester Company submitted an application and all required test data for 1971 California approval of an exhaust emission control system for vehicles over 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Subchapter 1, and Subchapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to International Harvester Company with respect to 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with the following engine size: 258 cubic inches.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Exhaust Emission Control System Certification

International Harvester Company
Heavy-Duty Vehicles

July 15, 1970

International Harvester Company has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-model vehicles over 6,000 pounds gross vehicle weight.

Their 1971-model engines and exhaust emission control systems are the same as those approved for 1969 and 1970.

The applicant's exhaust control system is an engine-modification system.

Emission Data of Each Test Engine
Projected to 1,500 Hours

Engine Size Cubic Inches	Test Engine Number	Projected Emission Level at 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
196	9901	116	0.6
232	104L22-1	203	1.1
232	104L22-4	189	0.8
304	541080	245	1.2
304	199602	234	1.0
308	207861	204	1.0
345	EXP878	228	0.9
345	554647	216	0.8
392	EXP899	210	0.6
392	EXP930	202	0.8
401	97487	197	0.8
406	238589	152	0.8
450	234377	153	0.6
450	238420	198	0.7
478	90351	236	0.6
501	237054	157	0.9
549	92074	211	1.1
549	87772	146	0.5

Each test engine in the certification fleet met the emission standard of 275 parts per million hydrocarbons and 1.5 percent carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the International Harvester Company exhaust control system for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-37.

State of California

AIR RESOURCES BOARD

Resolution 70-38

July 15, 1970

WHEREAS, Alfa Romeo, Inc., Italy, submitted an application and all test data for approval of its emission control systems for the 1971-model vehicles; and

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

A. Fuel-injection system with major elements:

(1) fuel injection with deceleration fuel shutoff,

(2) retarded spark at idle,

(3) recommended maintenance.

B. Engine-modification system with major elements:

(1) duplex-type induction manifolding,

(2) leaner carburetion,

(3) retarded spark at idle,

(4) recommended maintenance.

WHEREAS, the applicant's evaporative emission control systems are described as follows:

A. Crankcase storage system with major elements (fuel injection vehicles):

(1) positive sealing filler cap,

(2) vapor liquid separator,

(3) vapor vent line to crankcase.

B. Charcoal storage system with major elements (engine modification vehicles):

(1) expansion tank,

(2) carbon canister,

(3) connections to fuel tank, air filter and carburetor float chamber.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Alfa Romeo, Inc., Italy, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with 108.6 cubic inch size engines.

State of California

AIR RESOURCES BOARD

1971 Emission Control Systems Approval

Alfa Romeo, Inc., Italy

Staff Report

July 15, 1970

Alfa Romeo, Inc., Italy, has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are a fuel-injection or engine-modification type of exhaust emission control system and a crankcase or charcoal storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Control System*	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO_2-gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
108.6	1530007	EM-CB	1.5	20	3.4	0.04
108.6	1530014	EM-CB	1.8	18	2.9	0.04
108.6	1375001	FI-CK	1.6	8	2.0	0.08
108.6	1530656	FI-CK	1.7	10	1.8	0.07

*FI=Fuel injection CK=Crankcase storage
EM=Engine modification CB=Carbon storage

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Alfa Romeo, Inc., Italy, exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-38.

State of California

AIR RESOURCES BOARD

Resolution 70-39

WHEREAS, SAAB Scania Automotive Group, Sweden, submitted an application and all test data for approval of its emission control systems for the 1971-model vehicles; and

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

1. Engine-modification system with major elements:

   (1) leaner carburetion,

   (2) retarded spark at idle,

   (3) injection of an air fuel mixture during deceleration.

2. Fuel-injection system with major elements:

   (1) fuel injection with deceleration fuel shutoff,

   (2) retarded spark at idle,

   (3) recommended maintenance.

WHEREAS, the applicant's evaporative emission control system is described as follows:

Carbon storage system with major elements:

(1) expansion tank,

(2) carbon canister,

(3) connections to fuel tank, air filter and carburetor float chamber on carbureted models.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to SAAB Scania Automotive Group, Sweden, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the 103.7 and 104.2 cubic inch size.

SEP 16 1970

State of California

AIR RESOURCES BOARD

1971 Emission Control Systems Approval

SAAB Scania Automotive Group

July 15, 1970

SAAB Scania Automotive Group has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are a fuel-injection or engine-modification type of exhaust emission control system and a carbon storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Control System*	Projected Exhaust Emissions 50,000 Miles HC-gms/mi	CO-gms/mi	NO_2-gms/mi	Projected Evaporative Emissions at 12,000 Miles HC-gms/test
103.7	95/179	EM	1.0	8	3.1	0
103.7	96/175	EM	0.9	13	2.3	0
104.2	99/177	FI	1.4	5	2.0	0
104.2	99/181	FI	1.5	15	2.4	0

*FI=Fuel injection
EM=Engine modification

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the SAAB Scania Automotive Group exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-39.

State of California

AIR RESOURCES BOARD

Resolution 70-40

July 15, 1970

WHEREAS, Toyota Motor Company, Ltd., Japan submitted an application and all test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

B. Container storage type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) thermal expansion tank,

(3) fuel vapor storage case,

(4) purge control valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Toyota Motor Company,Ltd., Japan, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following size (cubic inches): 71.2.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Toyota Motor Company

July 15, 1970

Toyota Motor Company, Limited has submitted an application for 1971 model year approval of the emission control systems to be used on their 71.2 cubic inch size engine. This early application is due to their intention of introducing the Corolla I series vehicles prior to their complete 1971 model line.

The applicant's emission control systems are an air-injection type of exhaust emission control system and a container storage type of evaporative emission control syster

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
		HC-gms/mi	CO-gms/mi	NO-gms/mi	HC-gms/test
71.2	KE11-030672	1.9	10	2.6	2.0
71.2	KE17-012118	1.8	8	2.0	1.6
71.2	KE20-000058	1.9	11	3.4	1.8
71.2	KE11-116766	1.9	10	2.0	1.0

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams hydrocarbons per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Toyota Motor Company exhaust and evaporative emission control systems meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-40.

State of California

AIR RESOURCES BOARD

Resolution 70-40-A

January 20, 1971

WHEREAS, Toyota Motor Company, Ltd., Japan submitted an application and all required test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

B. Container-storage type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) thermal expansion tank,

(3) fuel vapor storage case,

(4) purge control valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Toyota Motor Company, Ltd., Japan, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following size (cubic inches): 156.4.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Toyota Motor Company

January 20, 1971

Toyota Motor Company, Limited has submitted an application for 1971-model year approval of the emission control systems to be used on their 156.4 cubic inch size engine. This application is due to their intention of adding the Toyota Crown series - 2 to their 1971-model line.

The applicant's emission control systems are an air-injection type of exhaust emission control system and a container-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
		HC-gms/mi	CO-gms/mi	NO-gms/mi	HC-gms/test
156.4	MS55-150402 (3A/T)	1.4	18	3.5	2.5
156.4	MS53-110177 (4M/T)	1.1	19	2.6	3.3

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams hydrocarbons per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Toyota Motor Company exhaust and evaporative emission control systems meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-40-A.

State of California

AIR RESOURCES BOARD

Resolution 70-41

July 15, 1970

WHEREAS, Chrysler Corporation submitted an application and all test data for 1971 California approval of emission control systems for vehicles less than 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine modification-type exhaust emission control system including oxides of nitrogen control with major elements:

(1) leaner carburetion, with idle rich limiter,

(2) retarded spark at idle,

(3) restricted usage of distributor vacuum advance,

(4) higher overlap camshafts,

(5) recommended maintenance.

B. Crankcase storage-type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) vapor-liquid separator,

(3) thermal-expansion volume tank,

(4) vapor vent lines to crankcase.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6.

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Chrysler Corporation with respect to the 1971 model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 198, 225, 318, 340, 360, 383, 426, 440.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Chrysler Corporation

July 15, 1970

Chrysler Corporation has submitted an application of approval for the emission control systems to be used on their 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are an engine-modification/oxide of nitrogen exhaust emission control and a crankcase-storage type of evaporative emission control.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
		HC-gms/mi	CO-gms/mi	NO_2-gms/mi	HC-gms/test
198	154	1.9	19	3.3	0.07
198	647	1.9	14	2.4	0.10
198	131	1.8	14	4.0	0.05
198	698	1.9	11	3.9	0.08
225	E438	1.5	23	3.4	0.02
225	566	1.7	15	4.0	0.05
225	147	1.4	20	3.8	0.07
225	615	1.1	20	3.6	0.02
318	664	1.2	15	3.0	0.02
318	562	1.3	14	3.7	0.03
318	480	1.6	18	3.8	0.04
318	655	1.6	20	3.5	0.09
340	169	1.2	20	1.7	0.04
340	321	1.0	13	2.0	0.03
360	493	1.4	18	3.9	0.21
360	530	1.4	18	4.0	0.09
360	651	1.4	19	3.9	0.06
360	657	1.3	18	3.4	0.11
383	542	1.6	14	3.0	0.03
383	461	1.6	18	3.0	0.24
383	144	2.1	18	3.9	0.17
383	280	1.9	20	2.3	0.02
426	689	2.1	20	3.3	0.25
426	643	2.1	23	3.4	0.26

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO_2-gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
440	121	2.0	18	3.4	0.54
440	545	1.5	15	3.4	0.24
440	546	1.6	16	3.4	0.18
440	627	2.1	23	3.1	0.12

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Chrysler Corporation exhaust and evaporative emission control systems meet California requirements for vehicles under 6,001 pounds gross vehicle weight for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-41.

State of California

AIR RESOURCES BOARD

Resolution 70-41-A

September 1970

WHEREAS, Chrysler Corporation submitted an application and all test data for 1971 California approval of emission control systems for Simca vehicles less than 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine modification-type exhaust emission control system including oxides of nitrogen control with major elements:

(1) leaner carburetion, with idle rich limiter,

(2) retarded spark at idle,

(3) modified distributor vacuum advance,

(4) higher overlap camshafts,

(5) recommended maintenance.

B. Crankcase storage-type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) vapor-liquid separator,

(3) thermal-expansion compartment integral with fuel tank,

(4) vapor vent lines to crankcase.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6.

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Chrysler Corporation with respect to the 1971-model Simca vehicles, 6,000 pounds or less gross vehicle weight with 73 cubic inch displacement engines.

State of California

AIR RESOURCES BOARD

Resolution 70-41B

November 18, 1970

WHEREAS, Chrysler Corporation submitted an application and all test data for 1971 California approval of emission control systems for vehicles less than 6,001 pounds gross vehicle weight; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine-modification type exhaust emission control system with major elements:

(1) leaner carburetion, with idle rich limiter,

(2) retarded spark at idle,

(3) modified distributor vacuum advance,

(4) recommended maintenance.

B. Activated carbon-storage type evaporative emission control system with major elements:

(1) fuel tank with inner chamber,

(2) vapor-liquid separator,

(3) activated carbon canister.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Chrysler Corporation with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 91, 105.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Chrysler Corporation

November 18, 1970

Chrysler Corporation has submitted an application of approval for the emission control systems to be used on their 1971-model Rootes vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are an engine-modification/oxides of nitrogen exhaust emission control and a carbon-storage type of evaporative emission control.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches Disp.	Test Vehicle No.	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
		HC-gms/mi	CO-gms/mi	NO_2-gms/mi	HC-gms/test
91	H216	1.7	9	3.3	.2
91	B216	1.9	12	2.7	0
105	R41	1.5	14	3.0	0
105	R35	2.1	6	3.8	0

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Chrysler Corporation exhaust and evaporative emission control systems meet California requirements for vehicles under 6,001 pounds gross vehicle weight for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-41-B.

State of California

AIR RESOURCES BOARD

Resolution 70-42

July 15, 1970

WHEREAS, Chrysler Corporation submitted an application and all test data for 1971 California approval of an exhaust emission control system for vehicles greater than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1, and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Chrysler Corporation with respect to the 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches): 225, 318, 361, 383, 413 and 440.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Exhaust Emission Control System Certification

Chrysler Corporation has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-model vehicles over 6,000 pounds gross vehicle weight.

The applicant's exhaust control system is an engine-modification system.

Projected Emission Data of Each Test Engine

Engine Size Cubic Inches	Test Engine Number	Projected Emission Level at 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
225	915	182	1.15
225	917	188	1.31
318	91300	195	1.19
318	91600	134	1.36
361	697	183	1.02
361	698	185	0.88
383	918	147	1.24
383	92000	181	1.22
413	729	130	1.33
413	91800	144	1.13
440	588	127	0.85

Each test engine in the certification fleet met the emission standard of 275 PPM hydrocarbons and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the Chrysler Corporation exhaust control system for vehicles greater than 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-42.

State of California

AIR RESOURCES BOARD

Resolution 70-42-A

January 20, 1971

WHEREAS, Chrysler Corporation submitted an application and all test data for 1971 California approval of an exhaust emission control system for vehicles greater than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Subchapter 1, and Subchapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Chrysler Corporation with respect to the 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches): 360.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Exhaust Emission Control System Approval

January 20, 1971

Chrysler Corporation has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-model vehicles over 6,000 pounds gross vehicle weight.

The applicant's exhaust control system is an engine-modification system.

Projected Emission Data of Each Test Engine

Engine Size Cubic Inches	Test Engine Number	Projected Emission Level at 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
360	EG 360-T-108-00	174	1.4
360	EG 360-T-132-00	204	1.0

Each test engine in the certification fleet met the emission standard of 275 ppm hydrocarbons and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the Chrysler Corporation exhaust control system for vehicles greater than 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-42A.

STATE OF CALIFORNIA

AIR RESOURCES BOARD

Resolution 70-43

WHEREAS, the Federal Department of Health, Education and Welfare has invited the Air Resources Board to submit a proposal to operate its Motor Vehicle Pollution Control West Coast Laboratory at 4545 East Washington Boulevard, Los Angeles, California 90022 from approximately July 1, 1970 to October 31, 1971; and,

WHEREAS, the staff of the Air Resources Board has the ability, expertise, and capability of performing such a contract for a sixteen month program involving a variety of vehicle exhaust emission tests for the measurement of CO, CO_2, HC, and NO_x; and,

NOW, THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to submit a proposal and execute a contract, if awarded, for this test program and operation of the HEW MVPC West Coast Laboratory.

July 15, 1970

STATE OF CALIFORNIA

AIR RESOURCES BOARD

Resolution 70-44

WHEREAS, the State Highway Commission has voted to the Air Resources Board the additional sum of $25,000 for a "Total Air Contaminants from Vehicle Populations" study in Los Angeles, San Francisco, and one selected valley community; and,

NOW, THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to execute the necessary Interagency Agreement with the Department of Public Works to accept these funds, and authorizes him to utilize such funds for the purposes stated above.

July 15, 1970

STATE OF CALIFORNIA

AIR RESOURCES BOARD

Resolution 70-45

WHEREAS, the 1970-71 fiscal year budget for the Air Resources Board provides $288,016 for laboratory services to assist the Board in carrying out its program of air pollution control; and,

WHEREAS, the Air and Industrial Hygiene Laboratory of the State Department of Public Health has the personnel and technical capability to assist the Board in meeting its responsibilities under the Health and Safety Code;

NOW, THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to execute an Interagency Agreement with the California State Department of Public Health to provide necessary laboratory services to assist the Board in meeting its 1970-71 program objectives.

July 15, 1970

STATE OF CALIFORNIA

AIR RESOURCES BOARD

Resolution 70-46

WHEREAS, the 1970-71 fiscal year budget for the Air Resources Board provides $71,500 for necessary Data Processing services to assist the Board in carrying out its program of air pollution control; and,

WHEREAS, the Departments of Water Resources and Public Health have the personnel and technical ability to assist the Board in meeting its responsibilities under the Health and Safety Code;

NOW, THEREFORE, BE IT RESOLVED, that this Board authorizes the Executive Officer to execute the necessary Interagency Agreements to provide necessary data processing services to meet program objectives in 1970-71.

July 15, 1970

AIR RESOURCES BOARD

State of California

Resolution 70-47

WHEREAS the emissions from the Ideal Cement Company Plant in San Juan Bautista, San Benito County is the cause of complaints; and

WHEREAS San Benito County has not taken reasonable action to control emissions from Ideal Cement Company Plant, San Juan Bautista, San Benito County; and

WHEREAS Section 39054 of the Health and Safety Code authorizes the Board to take reasonable action to control emissions from stationary sources if the local authority fails to do so;

NOW THEREFORE BE IT RESOLVED, That this Board directs the Executive Officer to request, pursuant to Section 39054 of the Health and Safety Code, a report from the San Benito County Board of Supervisors, on the action it is taking to control emissions from the Ideal Cement Plant located in San Juan Bautista, San Benito County, California.

AIR RESOURCES BOARD

State of California

Resolution 70-48

WHEREAS the emissions from the open burn at the Michigan-California Lumber Company, Camino, El Dorado County is the cause of complaints; and

WHEREAS El Dorado County has not taken reasonable action to control emissions from Michigan-California Lumber Company, Camino, El Dorado County; and

WHEREAS Section 39054 of the Health and Safety Code authorizes the Board to take reasonable action to control emissions from stationary sources if the local authority fails to do so;

NOW THEREFORE BE IT RESOLVED, That this Board directs the Executive Officer to request, pursuant to Section 39054 of the Health and Safety Code, a report from the El Dorado County Board of Supervisors, on the action it is taking to control emissions from the Michigan-California Lumber Company located in Camino, El Dorado County, California.

State of California

AIR RESOURCES BOARD

Resolution 70-49

July 15, 1970

WHEREAS, Ford Motor Company has submitted an application and all test data for 1971 California approval of an exhaust emission control system for vehicles greater than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1, and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Ford Motor Company with respect to the 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches): 240, 300, 302, 330, 360, 361, 390, 391, 401, 477, and 534.

State of California

AIR RESOURCES BOARD

Staff Report

Exhaust Emission Control System Approval
1971-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight

Ford Motor Company

July 15, 1970

Ford Motor Company has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-model vehicles over 6,000 pounds gross vehicle weight.

Their 1971-model engines and exhaust emission control system are the same as those approved for 1970.

The applicant's exhaust emission control system is an engine-modification system.

Emission Data of Each Test Engine
Projected to 1,500 Hours

Engine Size Cubic Inches	Test Engine Number	Projected Emission Level at 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
240	X9T-LD-1-12	235	.46
	X9T-LD-1-18	240	.65
300	X9T-LD-1-10	146	.93
	X9T-HD-1-1	201	.64
302	X9T2-1-17E	234	.79
	X8T2-167	251	.60
330	X9T-HD-1-6	229	1.06
	X9T-MD-1-5	212	1.12
360	X9T2-1-10	172	1.15
	X9T2-1-7	185	1.30
361	X9T2-1-5	197	.91
	X9T2-1-6	224	1.02
390	X9T2-1-13	210	1.30
	X9T2-1-16	245	1.44
391	9TT4-4	218	0.77
	X9T4-1-11	224	1.04
401	X9T4-1-3	238	1.32
477	X9T4-1-3	225	1.40
534	X9T4-1-9	170	.41

Each emission data engine met the emission standards.

Based on the test data and other information submitted by the applicant, the staff finds that the Ford Motor Company exhaust control system for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-49.

Each emission data engine met the emission standards.

Based on the test data and other information submitted by the applicant, the staff finds that the Ford Motor Company exhaust control system for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-49.

State of California

AIR RESOURCES BOARD

Resolution 70-49-A

November 18, 1970

WHEREAS, Ford Motor Company has submitted an application and all required test data for 1971 California approval of an exhaust emission control system for vehicles greater than 6,000 pounds gross vehicle weight to be manufactured after January 1, 1971, and this system is the same as the one approved by Resolution 70-49 except for recalibrations of carburetors and distributors.

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1, and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Ford Motor Company with respect to the 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches): 240, 300, 302, 330, 360, 361, 390, 391, 401, 477, and 534.

State of California

AIR RESOURCES BOARD

Staff Report

Exhaust Emission Control System Approval
1971-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight

Ford Motor Company

November 18, 1970

Ford Motor Company has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-model vehicles over 6,000 pounds gross vehicle weight, to be manufactured after January 1, 1971.

Their 1971-model engines and exhaust emission control system are the same as those approved for 1970, and the same as the 1971-models approved by Resolution 70-49 except for recalibrations of carburetors and distributors.

The applicant's exhaust emission control system is an engine-modification system.

Emission Data of Each Test Engine
Projected to 1,500 Hours

Engine Size Cubic Inches	Test Engine Number	Projected Exhaust Emission Level at 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
240	XOTA1-240-35NLF	230	0.3
	X1T1-240-1-257	186	0.4
300	1UE1-300-7	150	0.3
	1UE1-300-8	168	0.6
302	1UE2-302-4	247	0.9
	1UE2-302-5	247	0.9
330	OTH2-330MD-5	247	0.8
	OTJ2-330HD-9	212	0.7
360	OTH2-360-8	113	0.2
	OTD2-360-45	207	0.4
361	X9T2-361-1-5	193	0.9
	X9T2-361-1-6	220	1.0
390	1TE2-390-6	207	0.5
	OTT2-390-28	168	0.7
391	X9T4-391-1-11	220	1.0
	9TT4-391-4	214	0.8
401	X9T4-401-1-3	233	1.3
477	X9T4-477-1-3	220	1.4
534	X9T4-534-1-9	167	0.4

Each emission data engine met the emission standards of 275 ppm hydrocarbons and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the Ford Motor Company exhaust control system for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-49-A.

State of California

AIR RESOURCES BOARD

Resolution 70-49-B

January 20, 1971

WHEREAS, Ford Motor Company has submitted an application and all test data for 1971 California approval of an exhaust emission control system for vehicles greater than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

Air-injection type system called "Thermactor" with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Subchapter 1, and Subchapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Ford Motor Company with respect to the 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following size (cubic inches): 330.

State of California

AIR RESOURCES BOARD

Staff Report

Exhaust Emission Control System Approval
1971-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight

Ford Motor Company

January 20, 1971

Ford Motor Company has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight.

The applicant's exhaust emission control system is an air-injection system to be used on vehicles with a 330 cubic inch size engine.

Emission Date of Each Test Engine
Projected to 1,500 Hours

Engine Size Cubic Inches	Test Engine Number	Projected Exhaust Emission Level at 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
330	XIHT2-330-11-MD	274	1.0
330	X9T2-MD-330-1-2	185	0.9

Each emission data engine met the emission standards of 275 ppm hydrocarbons and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the Ford Motor Company exhaust control system for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-49-B.

State of California

AIR RESOURCES BOARD

Resolution 70-50

July 15, 1970

WHEREAS, Volkswagen of America, Inc., submitted an application and all test data for approval of its emission control systems for the 1971-model vehicles; and

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

1. Engine-modification system with major elements:

   (1) carburetor with air by-pass,

   (2) throttle positioner for deceleration control,

   (3) dual diaphragm distributor with retarded spark at idle and partial load,

   (4) recommended maintenance.

2. Fuel-injection system with major elements:

   (1) fuel injection with deceleration fuel shutoff,

   (2) dual diaphragm distributor with retarded spark at idle and partial load,

   (3) recommended maintenance.

WHEREAS, the applicant's evaporative emission control system is described as follows:

Activated carbon trap system with major elements:

   (1) expansion tank,

   (2) activated carbon trap,

   (3) connections to fuel tank, air filter and engine fan housing.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Volkswagen of America, Inc., with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the 96.66 and 102.5 cubic inch size.

State of California

AIR RESOURCES BOARD

1971 Emission Control Systems Approval

Volkswagen of America, Inc.

July 15, 1970

Volkswagen of America, Inc., has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are a fuel-injection or engine-modification type of exhaust emission control system and a carbon-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Control System*	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO_2-gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
96.66	WOB-V 34	EM	2.0	16	3.5	0.01
96.66	WOB-V 974	EM	1.9	13	3.6	0.01
96.66	WOB-V 142	EM	2.0	20	3.5	0.01
96.66	WOB-VJ 54	FI	0.9	14	3.8	0.01
102.55	WOB-VA 27	FI	1.8	13	3.6	0.01
102.55	WOB-V 953	FI	1.7	13	2.8	0.01

*FI = Fuel injection
EM = Engine modification

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Volkswagen of America, Inc., exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-50.

State of California

AIR RESOURCES BOARD

Resolution 70-51

September 16, 1970

WHEREAS, AB Volvo, Sweden, submitted an application and all required test data for approval of its emission control systems for its 1971-model vehicles; and

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

A. Engine-modification system with major elements:

(1) dual intake manifold,

(2) lean carburetion,

(3) retarded spark at idle,

(4) delayed ignition vacuum retard,

(5) recommended maintenance.

B. Fuel-injection system with major elements:

(1) electronically-controlled fuel injection into cylinder head,

(2) deceleration fuel shutoff by a throttle valve switch,

(3) constant fuel pressure by an electric fuel pump and pressure regulator.

(4) retarded spark at idle,

(5) recommended maintenance.

WHEREAS, the applicant's evaporative emission control system is described as follows:

Carbon storage system with major elements:

(1) sealed fuel tank,

(2) thermal expansion tank,

(3) activated carbon canister,

(4) purge valve, vent and purge lines.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to AB Volvo with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engine of the following size (cubic inches): 121

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

AB Volvo

September 16, 1970

AB Volvo has submitted an application for 1971-model year approval of its emission control systems for their 121 and 182 cubic inch size engines.

The applicant's systems consist of an engine-modification or fuel-injection type of exhaust emission control system plus a carbon-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Exhaust Control System*	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
			HC-gms/mi	CO-gms/mi	NO_2-gms/mi	HC-gms/test
121	0961B 164165	EM	1.5	14	3.2	0.6
121	0A62445 114677	EM	1.4	16	3.8	0.6
121	0A85670 27651	FI	1.8	11	1.5	0.3
121	27652	FI	1.8	7	1.7	0.6
182	049216 12374	EM	1.7	11	2.0	1.9
182	0A65824 012206	EM	1.5	8	3.1	0.8

*FI - Fuel injection
EM - Engine modification

Each test vehicle met the 1971-model year emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that AB Volvo exhaust and evaporative emission control systems meet California requirements for vehicles under 6,001 pounds gross vehicle weight for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-51.

State of California

AIR RESOURCES BOARD

Resolution 70-51-A

October, 1970

WHEREAS, AB Volvo, Sweden, submitted an application and all required test data for approval of its emission control systems for its 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine-modification type exhaust emission control system with major elements:

(1) dual intake manifold,

(2) lean carburetion,

(3) retarded spark at idle,

(4) delayed ignition vacuum retard,

(5) recommended maintenance.

B. Fuel-injection system with major elements:

(1) electronically-controlled fuel injection into cylinder head,

(2) deceleration fuel shutoff by a throttle valve switch,

(3) constant fuel pressure by an electric fuel pump and pressure regulator,

(4) retarded spark at idle,

(5) recommended maintenance.

C. Carbon-storage type evaporative emission control system with major elements:

(1) sealed fuel tank,

(2) thermal expansion tank,

(3) carbon canister,

(4) purge valve, vent and purge lines.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Articles 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to AB Volvo with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engine of the following size (cubic inches): 182.

State of California

AIR RESOURCES BOARD

Resolution 70-52

July, 1970

WHEREAS, Section 39052 (q), Section 39110 and Section 39111 of the Health and Safety Code require the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 19, 1969 the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel;" and

WHEREAS, Impco Carburetion Division of A. J. Industries, Inc., has submitted an application and all test data for approval of a modification of gasoline-powered vehicles to utilize natural gas fuel; and

WHEREAS, the Impco modification is identified as the Imperial CA300AN Mixer with major elements;

1) Gas pressure regulator adjusted to 1.25 inches of water pressure,

2) A three position switch to change from gasoline to natural gas. Second position drains gasoline from carburetor bowl,

3) A mixer which adjust air-fuel ratio which is controlled by vacuum above throttle plate,

4) Idle adjustment screw in gas-air Mixer set to maximum R.P.M.,

5) Recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 7;

NOW, THEREFORE BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval for the Impco Carburetion Division of A. J. Industries, Inc., to use the Impco modification in California on vehicles of the 1966 through 1970 model years utilizing natural gas for engines of the following size classifications:

Engine Size Class	Engine Size Displacement
E	300-375
F	375+

State of California

AIR RESOURCES BOARD

Staff Report

Impco Carburetion

Application for Motor Vehicles Modified
To Use Natural Gas Fuel

Impco Carburetion Division of A.J. Industries, Inc., has submitted an application for approval of a modification of gasoline-powered vehicles to use either natural gas or gasoline. The data submitted are shown below:

Applicable Engine Size Class	Test Engine Size Cubic Inches	Test Vehicle License No.	Hydrocarbons ppm	Hydrocarbons gms/mi.	Carbon Monoxide Percent	Carbon Monoxide gms/mi.	Oxides of Nitrogen ppm	Oxides of Nitrogen gms/mi.
E	350	ZVS 854	22	.27	.16	3.6	438	1.6
F	396	VVG 902	20	.25	.11	2.5	345	1.4

Each test vehicle in the fleet met the 1966-1969 emission standard of 275 ppm hydrocarbons and 1.5 percent carbon monoxide and also the 1970 emission standards of 2.2 grams per mile hydrocarbon and 23 grams per mile carbon monoxide.

The emission results on natural gas fuel meet the vehicle emission standards through the 1973 model year. The Air Resources Board test procedure specifies that the modification not increase emissions when operating on gasoline. Test results show that this modification does not increase the emissions of present vehicles when operating on gasoline. Modified current vehicles will not meet standards beyond 1970 when operating on gasoline fuel. For this reason the approval does not extend beyond the 1970 model year.

Based on the test data and other information submitted by the applicant, the staff finds that the Impco modification to be used on vehicles utilizing both gasoline and natural gas, meets California requirements for the 1966-1970 model years. The staff, therefore, recommends adoption of Resolution 70-52.

July, 1970

State of California

AIR RESOURCES BOARD

Resolution 70-52-A

September 16, 1970

WHEREAS, Section 39052 (q), Section 39110 and Section 39111 of the Health and Safety Code require the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 19, 1969 the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel;" and

WHEREAS, Impco Carburetion Division of A. J. Industries, Inc., has submitted an application and all test data for approval of a modification of gasoline-powered vehicles to utilize natural gas fuel; and

WHEREAS, the Impco modification is identified as the Imperial CA300AN Mixer with major elements;

1) Gas pressure regulator adjusted to 1.25 inches of water pressure,

2) A three position switch to change from gasoline to natural gas. Second position drains gasoline from carburetor bowl,

3) A mixer which adjust air-fuel ratio which is controlled by vacuum above throttle plate,

4) Idle adjustment screw in gas-air Mixer set to maximum R.P.M.,

5) Recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 7;

NOW, THEREFORE BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval for the Impco Carburetion Division of A. J. Industries, Inc., to use the Impco modification in California on vehicles of the 1966 through 1970 model years utilizing natural gas for engines of the following size classification:

Engine Size Class	Engine Size Displacement
D	250-300

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

British Leyland Motor Corporation

September 16, 1970

British Leyland Motor Corporation has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are an air-injection type or engine-modification type of exhaust emission control system and a carbon-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Exhaust Control System*	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
			HC-gms/mi	CO-gms/mi	NO_2-gms/mi	HC-gms/test
Austin Morris Division						
77.9	AA2SD 23608A	AI	1.3	16	2.4	3.8
77.9	GHN4U 63629	AI	1.0	10	1.6	0.2
109.8	GHN4U 150699G	AI	1.4	10	3.2	0
109.8	GHD5UA 206538G	AI	1.1	12	3.1	0
Jaguar Cars Limited						
258	1R4421BW	EM	1.4	9	2.9	0.6
258	1E1902	EM	1.2	18	3.1	0.6
326	EX116	AI	1.8	18	2.4	0
326	EX104	AI	1.0	17	2.0	0
Standard-Triumph Motor Co., Ltd.						
79	PVC912G	EM	1.0	9	2.3	0.57
79	JHP180E	EM	1.1	15	1.8	0.57
122	PVC913G	EM	1.1	8	3.4	0.57
122	PHP73H	EM	2.2	16	2.2	0.57
152	MRW991G	EM	1.6	16	2.5	0.57
152	JVC505E	EM	1.5	18	2.6	0.77
183	PHP465G	EM	1.7	20	2.4	0.57
183	PVC237G	EM	1.9	20	2.9	0.57

Projected Emissions of Each Test Vehicle (cont.)

Engine Size Cubic Inches	Vehicle Number	Exhaust Control System*	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO_x-gms/mi	Projected Evaporativ Emissions at 50,000 Miles HC-gms/test
Rover Company, Ltd.						
215	LXC1534	EM	1.8	21	2.2	0.57
215	KXC685H	EM	1.6	15	1.7	0.57
120.8	JXC42H	EM	1.6	19	1.6	0.57
120.8	WXC815F	EM	1.4	19	1.8	0.57
139.5	UXC471F	EM	1.0	18	2.9	0.57
139.5	DXC671C	EM	1.7	17	3.3	0.57

*AI - Air Injection
EM - Engine Modification

Each test vehicle met the 1971-model year emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the British Leyland Motor Corporation exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-53.

State of California

AIR RESOURCES BOARD

Resolution 70-53

September 16, 1970

WHEREAS, British Leyland Motor Corporation has submitted an application and all required test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) modified carburetor design,

(4) temperature-controlled air intake system (326 C.I.D. engine),

(5) ignition retard capsule (326 C.I.D. engine),

(6) recommended maintenance.

B. Engine-modification type exhaust emission control system with major elements:

(1) modified carburetor design,

(2) ignition retard capsule (except Rover),

(3) duplex intake manifold (Jaguar 258 C.I.D. only)

(4) temperature-controlled air intake system,

(5) anti-run-on valve (Rover 2000 T.C. 120.8 C.I.D. only),

(6) fuel cut-off valve (Land Rover 139.5 C.I.D. only).

C. Carbon-storage type evaporative emission control system with major elements:

(1) carbon canister, sealed filler

(2) sealed filler cap,

(3) external thermal expansion tank (except Jaguar XJ6 & XJ12),

(4) connections to fuel tank, air cleaner, valve cover (except 120.8, 139.5 and 215 C.I.D.) for all engines plus carburetor float chamber connections for the 109.8, 258, 326, 79, 122, 152, 183, and 215 C.I.D. engines.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a resolution of approval to British Leyland Motor Corporation, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches) 77.9, 79, 109.8, 120.8, 122, 139.5, 152, 183, 215, 258, and 326.

These engines will be used in the following vehicles:

British Motor Corporation

Austin America and M.G., MGB Sports, MGB GT,

Jaguar Cars Limited -

XK-E and XJ6, XJ25, XJ12,

Rover Company Limited -

3500.S, 2000T.C., Land Rover

Standard-Triumph Motor Co. Ltd. -

Triumph TR.6, G.T. 6,

Spitfire, Stag.

State of California

AIR RESOURCES BOARD

Resolution 70-54

September 16, 1970

WHEREAS, Albano Enterprises, Inc., d.b.a. Air-Jet Manufacturing Company of Santa Ana, filed an application for a certificate of approval for a crankcase emission control system which is described as follows:

(1) a tube from the crankcase through a spring-loaded tapered plunger flow control valve to the intake manifold,

(2) a second tube from the oil filler cap or rocker-arm cover through the clean side of the air cleaner. The filler cap is sealed to the atmosphere,

(3) an insert called an "Air-Jet" into the line between the flow control valve and intake manifold which permits additional air to enter the line.

WHEREAS, this system is not a clearly defined crankcase emission control device, but may be considered as a modification of an existing device; and

WHEREAS, a hearing officer in a previous similar application has ruled that the system must be considered a crankcase emission control system for purposes of approval; and

WHEREAS, Section 27156 of the Vehicle Code has been amended by Assembly Bill 612 (Chapter 331, Stats. 1970), which permits modifications of existing devices if the Board finds they do not adversely affect operation of the device; and

WHEREAS, based on test data and information submitted by the manufacturer, the modificatic was shown to have no adverse effect on the operation of the existing device; and

WHEREAS, the Board finds that the system complies with the standards and criteria as published in the California Administrative Code, Title 13,

NOW, THEREFORE, BE IT RESOLVED, That this Board issue a Certificate of Approval for the Albano Enterprises, Inc., d.b.a. Air-Jet Manufacturing Company for a closed crankcase emission control system for used motor vehicles with engine sizes over 140 cubic inches. The approval shall be valid until such time as the Board may approve the system as an acceptable modification under Assembly Bill 612 (Chapter 331, Stats. 1970) which amends Section 27156 of the Vehicle Code.

State of California
AIR RESOURCES BOARD

April 21, 1971

Resolution 70-54-A

WHEREAS, Albano Enterprises, Inc., d.b.a. Air-Jet Manufacturing Company of Santa Ana, filed an application for approval of a crankcase emission control system; and

WHEREAS, on September 16, 1970 this Board issued Resolution 70-54 approving the "Air-Jet" as a crankcase emission control system with the following proviso:

> "The approval shall be valid until such time as the Board may approve the system as an acceptable modification under Assembly Bill 612 (Chapter 331, Stats. 1970) which amends Section 27156 of the Vehicle Code."

NOW, THEREFORE, BE IT RESOLVED, That this Board rescind Resolution 70-54 and find that the "Air-Jet" device does not reduce the effectiveness of any required motor vehicle pollution control device for 1971 model year and earlier vehicles with engines over 140 cubic inch displacement and is therefore exempt from the prohibitions in Section 27156 of the Vehicle Code, as to such vehicles; and

IT IS FURTHER RESOLVED, THAT THE EXECUTIVE OFFICER IS INSTRUCTED TO ADVISE ALBANO ENTERPRISES, INC. THAT THIS RESOLUTION HAS BEEN ADOPTED AND THAT THE RESOLUTION DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY OTHER ALLEGED BENEFITS OF THE "AIR-JET" DEVICE.

State of California

AIR RESOURCES BOARD

V.C. 27156 Resolution 70-54-B

October 20, 1971

WHEREAS, Albano Enterprises, Inc., d.b.a. Air-Jet Manufacturing Company, Santa Ana, California, has submitted an application for a Board finding that its "Air-Jet" crankcase device be exempt from the prohibitions of Section 27156 of the California Vehicle Code;

WHEREAS, the pronibitions of Section 27156 do not apply to an alteration, modification, or modifying device, apparatus, or mechanism found by resolution of the Air Resources Board either to not reduce the effectiveness of any required motor vehicle pollution control device or to result in increased emissions from such modified or altered vehicle; and

WHEREAS, the Board's staff has made an engineering evaluation of the "Air-Jet" crankcase device and has concluded that the device will not reduce the effectiveness of emission control devices for 1971 model year and earlier vehicles with engines over 140 cubic inch displacement;

NOW, THEREFORE, BE IT RESOLVED, That this Board find that the "Air-Jet"crankcase device does not reduce the effectiveness of any required motor vehicle pollution control device for 1971 model year and earlier vehicles with engines over 140 cubic inch displacement and is therefore exempt from the prohibitions of Section 27156 of the Vehicle Code;

IT IS FURTHER RESOLVED, That the Executive Officer is instructed to advise Albano Enterprises, Inc., d.b.a. Air-Jet Manufacturing Company that:

(1) THIS RESOLUTION HAS BEEN ADOPTED AND THAT THE RESOLUTION DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE "AIR-JET" CRANKCASE DEVICE:

(2) No claim of any kind, such as "Approved by Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication;

(3) Section 17500 of the Business and Professions Code makes unlawful untrue or misleading advertising and Section 17534 makes violation punishable as a misdemeanor;

(4) Sections 39130 and 39184 of the Health and Safety Code provide as follows:

> 39130. No person shall sell, display, advertise, or represent as a certified device any device which, in fact, is not a certified device. No person shall install or sell for installation upon any motor vehicle, any motor vehicle pollution control device which has not been certified by the Board.

April 26, 1971

Mr. Victor J. Albano
President
[redacted]
1570 East Edinger Street
Santa Ana, California 92705

Dear Mr. Albano:

Attached is a copy of a resolution which was passed by the Air Resources Board on April 21, 1971. This resolution exempts the Air Jet device from the prohibitions of Section 27156 of the Health and Safety Code.

I am instructed by the resolution to advise you that this resolution does not constitute a certification, accreditation, approval or any other type of endorsement of the Air Resources Board of any of your claims concerning anti-pollution benefits or any other alleged benefits of the Air Jet device.

John A. Maga
Executive Officer

Attachment

CWS:ct

State of California

AIR RESOURCES BOARD

Resolution 70-54-C

March 15, 1972

WHEREAS, Albuno Enterprises, Santa Ana, California, has submitted an application for a Board finding that the "Air Jet" device be exempt from the prohibitions of Section 27156 of the California Vehicle Code;

WHEREAS, the prohibitions of Section 27156 do not apply to an alteration, modification, or modifying device, apparatus, or mechanism found by resolution of the Air Resources Board either to not reduce the effectiveness of any required motor vehicle pollution control device or to result in increased emissions from such modified or altered vehicle; and

WHEREAS, the Board's staff has made an engineering evaluation of the Air Jet device and has concluded that the device will not reduce the effectiveness of required emission control devices for 1971 and older model vehicles;

NOW, THEREFORE, BE IT RESOLVED, That Resolution 70-54-B of the Air Resources Board is hereby rescinded;

IT IS FURTHER RESOLVED, That this Board find that the device does not reduce the effectiveness of any required motor vehicle pollution control device and is therefore exempt from the prohibitions of Section 27156 of the Vehicle Code for 1971 and older model vehicles.

IT IS FURTHER RESOLVED, That the Executive Officer is instructed to advise that:

(1) THIS RESOLUTION HAS BEEN ADOPTED AND THAT THE RESOLUTION DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE "AIR JET DEVICE":

(2) No claim of any kind, such as "Approved by Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication;

(3) Section 17500 of the Business and Professions Code makes unlawful untrue or misleading advertising and Section 17534 makes violation punishable as a misdemeanor;

(4) Sections 39130 and 39184 of the Health and Safety Code provide as follows:

39130. No person shall sell, display, advertise, or represent as a certified device any device which, in fact, is not a certified device. No person shall install or sell for installation upon any motor vehicle, any motor vehicles pollution control device which has not been certified by the board.

39184. No person shall sell, display, advertise, or represent as an accredited device any device which, in fact, is not an accredited device. No person shall install or sell for installation upon any used motor vehicle any motor vehicle pollution control device which has not been accredited by the board.

(5) Any apparent violation of the above policy or laws will be submitted to the Attorney General of California for such action as he deems advisable.

State of California

AIR RESOURCES BOARD

Staff Report

Evaluation of the Air Jet Device

March 15, 1972

I. Introduction

This is a summary of the staff's evaluation of the Air Jet device. The basis for this report is the "Air Resources Board Criteria for Determining Compliance with Section 27156 of the Vehicle Code", adopted February 17, 1971. This report is only concerned with the effect on exhaust emission levels due to the installation of the device; no consideration was given to its effect on performance and driveability of the vehicles. In no way does this report imply an endorsement by the staff of any beneficial effects of the "Air Jet" device. This device was previously found to be exempt from the prohibitions of Section 27156 of the Vehicle Code (Resolution 70-54-A) for engines in size classifications B through F. The applicant is now requesting that this exemption be extended to vehicles in engine size classification A (under 140 cubic inches).

II. Purpose and Claims

The applicant claims that the device will "increase combustion efficiency, make the engine run smoother, and hopefully emit less undesirable elements."

III. System Description

The device consists of an insert into the P.C.V. line between the P.C.V. Valve and the intake manifold. This insert (the "Air Jet") permits additional air into the intake manifold. The quantity of additional air is controlled by a spring and orifice arrangement.

IV. Evaluation

The staff evaluated the device and all submitted material including the data from tests performed for the applicant by the Scott Research Laboratory. Its judgment is that the device should have no adverse effects on the operation or the emissions from 1971 and prior year model vehicles.

V. Conclusion and Recommendations

The staff has found no evidence that the "Air Jet" device will reduce the effectiveness of required existing motor vehicle emission control devices for 1971 and older model vehicles. The staff, therefore, recommends that the Board find that the "Air Jet" device be exempt from the prohibitions of Section 27156 of the Vehicle Code for 1971 and prior year model vehicles.

REF: Resolution 70-54-C

State of California

AIR RESOURCES BOARD

Resolution 70-55

October 21, 1970

WHEREAS, Dr. Ing. h.c.F. Porsche KG, has submitted an application and all required test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine-modification type exhaust emission control system with major elements:

(1) electronically-controlled dashpot and mixture supply,

(2) leaner carburetion,

(3) retarded ignition timing,

(4) capacitive discharge ignition system,

(5) recommended maintenance.

B. Fuel-injection system with major elements:

(1) fuel injection with deceleration fuel shutoff,

(2) three dimensional cam,

(3) recommended maintenance.

C. Carbon storage type evaporative emission control system with major elements:

(1) two equalizing chambers,

(2) carbon canister,

(3) connections to fuel tank, air filter and engine fan housing.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, sub-Chapter 1, and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Dr. Ing. h.c.F. Porsche KG, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 121.5 and 133.9.

State of California

AIR RESOURCES BOARD

Resolution 70-56

September 16, 1970

WHEREAS, Mitsubishi Motors Corporation, Japan, submitted an application and all required test data for approval of its emission control systems for its 1971-model vehicles; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification system with major elements:

(1) throttle positioner & governor switch,

(2) modified fast idle cam,

(3) intake air temperature regulator,

(4) modified ignition timing,

(5) modified valve timing overlap,

(6) recommended maintenance.

WHEREAS, the applicant's evaporative emission control system is described as follows:

Carbon storage system with major elements:

(1) sealed fuel tank,

(2) vapor-liquid separator,

(3) activated carbon canister,

(4) purge valve, vent and purge lines.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Mitsubishi Motors Corporation with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with a 97.5 cubic inch displacement engine.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Mitsubishi Motors Corporation

September 16, 1970

Mitsubishi Motors Corporation has submitted an application for 1971-model year approval of its emission control systems for their 97.5 cubic inch size engine.

The applicant's systems consist of an engine-modification type of exhaust emission control system plus a carbon-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO_2-gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
97.5	A52 20000011	1.3	12	2.5	.17
97.5	A52 20700011	1.2	13	2.5	.04
97.5	A52 2200012	1.6	22	3.7	.04
97.5	A52 5100011	1.5	12	2.7	.12
97.5	A52 9100011	1.5	18	3.3	.04
97.5	A52 9100012	1.2	16	3.3	.04

Each test vehicle met the 1971-model year emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that Mitsubishi Motors Corporation exhaust and evaporative emission control systems meet California requirements for vehicles under 6,001 Pounds gross vehicle weight for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-56.

State of California

AIR RESOURCES BOARD

Resolution 70-57

August, 1970

WHEREAS, General Motors Corporation submitted an application and all test data for 1971 California approval of exhaust emission control systems for vehicles greater than 6,000 pounds gross vehicle weight; and

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

1. An engine-modification type system called "C.C.S." with major elements:

   (1) leaner carburetion plus idle rich limiter,

   (2) retarded spark at idle,

   (3) recommended maintenance.

2. An air-injection type system called "A.I.R." with major elements:

   (1) rotary-vane air pump,

   (2) air injection into each exhaust port,

   (3) carburetor and distributor modifications,

   (4) recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to General Motors Corporation with respect to 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches):

250, 350

State of California

AIR RESOURCES BOARD

Staff Report

Exhaust Emission Control System Approval
1971-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight

General Motors Corporation

August 1970

General Motors Corporation has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-Model vehicles over 6,000 pounds gross vehicle weight.

These 1971-model engines and exhaust emission control systems are the same as those approved for 1970.

The applicant's two exhaust emission control systems are an engine modification system and an air injection system.

Projected Emissions of Each Test Engine

Engine Size Cubic Inches	Test Engine Number	Exhaust System*	Projected Exhaust Emissions to 1,500 Hours	
			Hydrocarbons, ppm	Carbon Monoxide, %
250	27604-1A	EM	188	0.6
250	27604-1B	EM	235	1.2
350	19644-15A	EM	110	0.8
350	19644-15C	EM	159	1.0
350	19644-4B	AI	194	1.2
350	19644-15D	AI	238	1.3

*AI - Air injection
EM - Engine modification

Each emission data engine met the emission standards of 275 ppm hydrocarbons and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the General Motors Corporation exhaust control systems for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-57.

State of California

AIR RESOURCES BOARD

Resolution 70-58

September 16, 1970

WHEREAS, General Motors Corporation submitted an application and all test data for 1971 California approval of exhaust emission control systems for vehicles greater than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

1. An engine-modification type system called "C.C.S." with major elements:

   a. leaner carburetion plus idle rich limiter,

   b. retarded spark at idle,

   c. recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to General Motors Corporation with respect to 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches):

250, 292, 305, 307, 350, 351, 366, 402, 427, and 637.

State of California

AIR RESOURCES BOARD

Staff Report

Exhaust Emission Control System Approval
1971-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight

General Motors Corporation

September 16, 1970

General Motors Corporation has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-Model vehicles over 6,000 pounds gross vehicle weight.

The applicant's exhaust emission control system is an engine modification system.

Projected Emissions of Each Test Engine

Engine Size Cubic Inches	Test Engine Number	Projected Exhaust Emissions to 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
250	19884-24A	234	1.3
250	19884-24B	180	0.7
292	19887-8A	159	0.6
292	19887-8B	185	1.3
305	305C-532852	195	1.2
305	305C-532847	202	1.2
307	19622-70A	195	0.7
307	19622-70B	174	0.9
350	196240132C	244	1.1
350	196240132B	162	1.1
351	351C-060906	240	1.3
351	351C-060907	234	1.2
366	19645-51A	160	1.1
366	19645-51B	154	0.6
402	19647-14A	127	1.0
402	19647-14B	102	1.0
427	19648-37A	172	1.3
427	19648-B	153	0.5
637	637-01455	197	1.3

Each emission data engine met the emission standards of 275 ppm hydrocarbons and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the General Motors Corporation exhaust control systems for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-58.

State of California

AIR RESOURCES BOARD

Resolution 70-58-A

October 21, 1970

WHEREAS, General Motors Corporation submitted an application and all test data required for 1971 California approval of exhaust emission control systems for vehicles greater than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

An engine-modification type system called "C.C.S." with major elements:

a. leaner carburetion plus idle rich limiter,

b. retarded spark at idle,

c. recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to General Motors Corporation with respect to 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following sizes (cubic inches): 401 and 478.

State of California

AIR RESOURCES BOARD

Resolution 70-59

August, 1970

WHEREAS, General Motors Corporation has submitted an application and all test data for California approval of the emission control systems for its 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. An engine-modification type system called "C.C.S." and "O.E.C.S." for Opel vehicles with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) compression ratio established for operation with 91 Octane fuel,

(4) recommended maintenance.

B. An air-injection type system called "A.I.R." with major elements:

(1) rotary-vane air pump,

(2) air-injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) compression ratio established for operation with 91 Octane fuel,

(5) recommended maintenance.

C. Carbon storage type evaporative emission control system called "G.M.E.C.S." with major elements:

(1) sealed fuel tank with provisions for routing vapors to an activated charcoal canister,

(2) canister containing activated charcoal for storage of fuel vapors,

(3) provision for removing vapors from the canister and carrying them into the engine where they are consumed.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval
General Motors Corporation

August 1970

General Motors Corporation has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles. The application is for both 1971 domestic and Adam Opel vehicles and engines.

The applicant's emission control systems are either an air-injection or engine-modification type of exhaust emission control system and a carbon-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Exhaust Control System*	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emission at 50,000 Miles
			HC-gms/mi	CO-gms/mi	NO_x-gms/mi	HC-gms/test
65.8-OP	1425-106	EM	1.9	14	3.2	0.8
	1440-53	EM	1.9	14	2.9	0.2
115.8-OP	1440-54	EM	1.9	17	2.8	0.1
	1440-55	EM	1.5	17	2.5	0.4
	1450-6	EM	1.8	12	2.5	0.4
	1500-3	EM	1.5	15	3.3	0.5
140-C	15008	EM	1.5	17	2.9	0.1
	15010	EM	1.8	12	2.7	0.1
	15009	EM	1.3	16	2.5	0.1
	15011	EM	1.4	18	2.5	0.0
250-C	02542	EM	1.6	17	2.7	0.2
	03087	EM	1.7	14	2.3	0.0
	03086	EM	1.5	15	1.7	0.1
	C-0181	EM	1.7	16	2.3	0.3
292-C	C-0184	EM	1.2	19	2.6	0.1
	C-0183	EM	1.8	18	1.5	0.1
307-C	06393	EM	1.6	8	3.0	0.1
	07033	EM	1.9	7	2.3	0.1
	03088	EM	1.9	10	2.8	0.2
	C-0182	EM	1.8	9	2.2	0.1
350-C	06395	EM	1.1	7	2.9	0.0
	02543	EM	1.5	12	3.2	0.2
	06394	EM	1.2	15	2.9	0.0
	06396	EM	1.4	16	2.9	0.1
	07036	AI	1.4	13	1.3	0.6
350-P	0142	EM	1.7	17	2.6	0.1
	0143	EM	1.7	17	2.6	0.1
	0460	EM	1.9	19	3.2	0.1
	0737	EM	1.4	12	2.9	0.0

Engine Size Cubic Inches	Vehicle Number	Exhaust Control System*	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
			HC-gms/mi	CO-gms/mi	NO_x-gms/mi	HC-gms/test
350-O	0191	EM	1.3	9	2.5	0.1
	01110	EM	1.6	14	2.9	0.0
	0444	EM	1.7	14	2.8	0.1
	0192	EM	1.5	11	2.8	0.1
350-B	2079	EM	1.1	14	2.5	0.2
	2076	EM	1.3	17	2.3	0.0
	5097	EM	1.4	20	3.2	0.2
	5095	EM	1.4	15	3.0	0.2
400-C	02544	EM	1.1	15	3.4	0.1
	02532	EM	1.3	12	3.2	0.1
	02597	EM	1.0	11	3.0	0.2
	02547	EM	1.0	12	2.9	0.2
400-P	0461	EM	1.3	14	2.5	0.2
	0462	EM	1.4	17	2.9	0.0
	0955	EM	1.8	15	2.5	0.1
	0362	EM	1.6	15	1.7	0.0
402-C	06400	EM	1.1	14	2.2	0.1
	02449	EM	0.8	10	2.5	0.1
	06401	EM	1.1	14	2.5	0.0
	06399	EM	1.7	14	2.0	0.1
454-C	02546	EM	0.9	10	2.9	0.0
	06445	EM	1.4	12	1.9	0.1
	98020	EM	1.5	8	2.0	0.0
	06402	AI	1.5	19	1.7	1.2
455-P	0873	EM	1.4	18	2.5	0.1
	0874	EM	1.2	13	3.1	0.1
	0875	EM	1.4	16	3.0	0.0
	0363	EM	1.4	16	2.4	0.1
455-O	0445	EM	0.8	14	2.8	0.0
	0283	EM	1.1	7	2.4	0.0
	0525	EM	1.2	16	3.2	0.0
	0951	EM	1.6	18	2.8	0.3
455-B	80119	EM	1.1	14	3.0	0.3
	80120	EM	0.8	11	3.3	0.1
	50101	EM	1.2	16	2.8	0.3
	6047	EM	1.2	13	2.8	0.1
472-CD	02-32	AI	1.0	17	2.6	0.5
	02-39	AI	1.0	17	2.7	3.3
	03-56	AI	1.5	12	2.8	0.5
	03-59	AI	0.8	9	3.1	0.4

Engine Size Cubic Inches	Vehicle Number	Exhaust Control System*	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO_x-gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
500-CD	05-07	AI	0.9	18	2.7	0.4
	05-47	AI	0.8	15	2.8	0.5

AI - Air Injection
EM - Engine Modification

C - Chevrolet
B - Buick
P - Pontiac
CD- Cadillac
OP- Adam Opel
O - Oldsmobile

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4.0 grams per mile oxides of nitrogen, and 6 grams per test evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the General Motors Corporation exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-59.

State of California

AIR RESOURCES BOARD

Resolution 70-59-A

February, 1970

WHEREAS, General Motors Corporation has submitted a supplementary application and all test data for California approval of the emission control systems for its 1971-model Camaro vehicles produced by the Chevrolet Division; and

WHEREAS, the applicant's emission control systems are described as follows:

A. An air-injection type system called "A.I.R." with major elements:

(1) rotary-vane air pump,

(2) air-injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) compression ratio established for operation with 91 Octane fuel,

(5) recommended maintenance.

B. Carbon storage type evaporative emission control system called "G.M.E.C.S." with major elements:

(1) sealed fuel tank with provisions for routing vapors to an activated charcoal canister,

(2) canister containing activated charcoal for storage of fuel vapors,

(3) provision for removing vapors from the canister and carrying them into the engine where they are consumed.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to General Motors Corporation with respect to the 1971-model vehicles under 6,001 pounds gross vehicle weight with engines of following signs (cubic inches) 400.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval
General Motors Corporation

February, 1971

General Motors Corporation has submitted an application for approval of the emission control systems to be used on its 1971-model Camaro vehicles with a 400 cubic inch engine produced by the Chevrolet Division.

The applicant's emission control systems consists of an air-injection type of exhaust emission control system and a carbon-storage type of evaporative emission control system.

Engine Size Cubic Inches	Vehicle Number	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000
		HC-gms/mi	CO-gms/mi	NO_x-gms/mi	HC-gms/test
400	17059	1.2	15	2.3	0.6

The test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4.0 grams per mile oxides of nitrogen, and 6 grams per test evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the General Motors Corporation exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-59-A.

State of California

AIR RESOURCES BOARD

Resolution 70-60

September 16, 1970

WHEREAS, Sections 39052 (m) and 39068.1 of the Health and Safety Code requires the Air Resources Board to adopt regulations specifying the manner in which motor vehicles on factory assembly lines are to be emission tested; and

WHEREAS, a public hearing and other proceedings have been held in accordance with the provisions of the Administrative Procedure Act (Title 2, Government Code);

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby amends and adopts its regulations, Title 13, California Administrative Code, as follows:

Revises Section 2110 to read:

2110. Test Procedures for Assembly-Line or Pre-Delivery Testing.

(a) New motor vehicles will be tested in compliance with the Air Resources Board's "Test Procedure for Assembly-Line or Pre-Delivery Testing of Motor Vehicle Exhaust Emissions," dated March 19, 1969. (Abolished after June 30, 1971)

(b) Beginning July 1, 1971, new motor vehicles will be tested in compliance with the Air Resources Board's "California Assembly-Line Test Procedures," dated September 16, 1970.

State of California

AIR RESOURCES BOARD

Resolution 70-61

WHEREAS, Volkswagen of America Inc., submitted for Audi NSU Auto Union AG, a subsidiary company, an application and all test data for approval of its emission control systems for the 1971-model Audi vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine-modification exhaust control system with major elements:

(1) lean carburetion,

(2) retarded spark at idle,

(3) recommended maintenance.

B. Carbon-storage evaporative emission control system with major elements:

(1) fuel tank with sealed cap,

(2) expansion tank,

(3) activated carbon canister.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Audi NSU Auto Union AG, a subsidiary of Volkswagen, with respect to the 1971-model Audi vehicles, 6,000 pounds or less gross vehicle weight, with the 107.5 cubic inch size engine.

9/16/70

State of California

AIR RESOURCES BOARD

1970 Emission Control Systems Approval

Audi NSU Auto Union AG

August, 1970

Volkswagen has submitted an application for approval of the emission control systems of Audi NSU Auto Union AG, a subsidiary company, to be used on its 1971-model Audi vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are an engine-modification type of exhaust control system and a carbon storage type of evaporated emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Test Vehicle No.	Projected Exhaust Emissions at 50,000 Miles HC	CO	NO_2	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
107.5	IN-AE 65	1.6	12	3.2	0.6
107.5	IN-AH 57	1.7	22	3.7	2.7
107.5	IN-AE 9	2.2	18	3.6	1.2
107.5	IN-AL 42	1.8	22	3.2	0.6

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Audi NSU Auto Union AG exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-61.

State of California

AIR RESOURCES BOARD

Resolution 70-62

September 16, 1970

WHEREAS, American Motors Corporation has submitted an application and all test data for California approval of the emission control systems for its 1971-model vehicles;and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

B. Engine-modification type exhaust emission control system with major elements:

(1) leaner carburetion,

(2) retarded spark at idle and low engine speeds,

(3) delayed exhaust valve closure,

(4) recommended maintenance.

C. Crankcase-storage type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) liquid check valve,

(3) vapor vent line to engine valve cover.

D. Carbon-canister storage type evaporative emission control system with major elements:

(1) activated carbon canister,

(2) liquid check valve,

(3) sealed filler cap,

(4) connections to fuel tank, carburetor and P.C.V. valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

American Motors Corporation

September 16, 1970

American Motors Corporation has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are either an air-injection or engine-modification type of exhaut emission control system and either a crankcase-storage or carbon-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Emission Control System	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
			HC-gms/mi	CO-gms/mi	NO_2-gms/mi	HC-gms/test
232	D00-25L	EM-CK	.8	13	2.9	0.7
232	D00-26L	EM-CK	1.1	17	2.8	0.85
232	D00-27L	EM-CK	1.6	12	2.0	0.35
232	D00-28L	EM-CK	1.6	21	2.5	0.15
258	D00-29L	EM-CK	1.0	14	2.2	0.2
258	D01-24L	EM-CK	1.2	16	3.1	0
304	D01-25D	EM-CB	1.2	13	3.4	1.8
304	D01-26D	EM-CB	1.2	10	4.0	0.45
304	D01-27D	EM-CB	1.1	10	2.8	2.15
304	D07-18D	EM-CB	1.3	17	2.5	1.30
360	D01-29R	EM-CB	1.2	19	2.4	1.2
360	D01-28R	EM-CB	1.4	17	2.8	0
360	D07-19R	EM-CB	0.9	12	2.2	0
360	D07-20R	AI-CK	1.1	16	1.8	0.38
401	D01-30W	EM-CB	1.3	11	2.3	0
401	D07-21W	AI-CK	1.4	16	2.2	0.78

AI - Air Injection
EM - Engine Modification
CK - Crankcase storage
CB - Carbon storage

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the American Motors Corporation exhaust and evaporative emission control systems meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-62.

State of California

AIR RESOURCES BOARD

Resolution 70-63

September 16, 1970

WHEREAS, Daimler-Benz, Inc., Germany, submitted an application and all test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's exhaust control system is described as follows:

Fuel-injection system with major elements:

(1) fuel injection with deceleration fuel shutoff,

(2) retarded spark at low rpm,

(3) recommended maintenance.

WHEREAS, the applicant's evaporative emission control system is described as follows

Crankcase-storage system with major elements:

(1) expansion tank,

(2) valve system, consisting of a vent valve to crankcase, a breathing valve and a pressure relief valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6:

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Daimler-Benz, Inc., Germany, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of 169.4, 213.5, and 386.3 cubic inch sizes, having fuel injection systems only.

State of California

AIR RESOURCES BOARD

Resolution 70-63-A

November 18, 1970

WHEREAS, Daimler-Benz, Inc., Germany, submitted an application and test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the applicant's evaporative emission control system is described as follows:

Crankcase-storage system with major elements:

(1) expansion tank,

(2) valve system, consisting of a vent valve to crankcase, a breathing valve and a pressure relief valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6:

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Daimler-Benz, Inc., Germany, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 134 and 169.5.

The trend of the applicant's durability test data for 36,000 miles indicates that the California standards will be met. However, to verify this, the Board requires satisfactory completion of 50,000 miles of testing and submission of corresponding test data to the staff before the January 1971 Board meeting.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Daimler-Benz, Inc.

November, 1970, (Amended)*

Daimler-Benz, Inc., has submitted an application for approval of the emission control systems to be used on the 1971-model vehicles.

The applicant's emission control systems are either a fuel-injection or engine-modification type of exhaust emission control system and a crankcase-storage type of evaporative emission control system.

The fuel-injection type exhaust emission control system was approved by Resolution 70-63 on September 16, 1970.

For the applicants-engine modification type exhaust emission control system test data up to 36,000 miles was received for two durability vehicles numbered A-5 and A-19. The trend of the data up to 36,000 miles indicate that control system deterioration factors will meet California standards.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Exhaust Control System*	Projected Exhaust Emissions at 36,000 Miles			Projected Evaporative Emissions at 50,000 Miles
			HC-gms/mi	CO-gms/mi	NO_2-gms/mi	HC-gms/test
134.0	A5	EM	1.4	20	3.2	0.28
134.0	A6	EM	1.3	15	3.2	0.25
169.5	A4	EM	1.5	21	3.5	3.4

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Approval of the system is recommended as listed in Resolution 70-63-A, based on the conditions that the vehicles successfully complete the durability tests through 50,000 miles and that the data be submitted to the Air Resources Board before the January 1971 Board meeting.

* Amended January 1971 - Additional durability test fleet data received from Daimler-Benz, Inc., shows satisfactory completion to 50,000 miles of testing. These data show that the projected exhaust emission results to 50,000 miles would be the same as the projected exhaust emissions shown in the above table to 36,000 miles. The staff recommends the adoption of Resolution 70-63-B, which removes the conditional requirement in Resolution 70-63-A.

State of California

AIR RESOURCES BOARD

Resolution 70-63-B

January 20, 1971

WHEREAS, Daimler-Benz, Inc., Germany, submitted an application and test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the applicant's evaporative emission control system is described as follows:

Crankcase-storage system with major elements:

(1) expansion tank,

(2) valve system, consisting of a vent valve to crankcase, a breathing valve and a pressure relief valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6:

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Cahpter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Daimler-Benz, Inc., Germany, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 134 and 169.5.

State of California

AIR RESOURCES BOARD

Resolution 70-63-B

January 20, 1971

WHEREAS, Daimler-Benz, Inc., Germany, submitted an application and test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the applicant's evaporative emission control system is described as follows:

Crankcase-storage system with major elements:

(1) expansion tank,

(2) valve system, consisting of a vent valve to crankcase, a breathing valve and a pressure relief valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6:

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Cahpter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Daimler-Benz, Inc., Germany, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 134 and 169.5.

State of California

AIR RESOURCES BOARD

Resolution 70-64

WHEREAS, Section 39009.3 of the Health and Safety Code requires the Air Resources Board to establish a low emission standard; and

WHEREAS, the Board finds that not more than 50 percent of the 1971 certification vehicles would comply with a low emission standard of 1.8 grams per mile hydrocarbons, 15 grams per mile carbon monoxide, and 3.0 grams per mile oxides of nitrogen.

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby amends and adopts its regulations, Title 13, California Administrative Code, as follows:

Amend Section 1942 to read:

1942 Exhaust Emissions (Low-Emission Standards)

The Low Emission Standards pursuant to Health and Safety Code Section 39009.3 are:

(a) 1970-model year Standard

Hydrocarbons: 1.9 grams per mile

Carbon Monoxide: 18 grams per mile

(b) 1971-model year Standard

Hydrocarbons: 1.8 grams per mile

Carbon Monoxide: 15 grams per mile

Oxides of Nitrogen: 3.0 grams per mile

State of California

AIR RESOURCES BOARD

Resolution 70-65

October 21, 1970

WHEREAS, Checker Motors Corporation has submitted an application and all required test data for California approval of the emission control systems for its 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. An engine-modification type system called "C.C.S." with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) compression ratio established for operation with 91 Octane fuel,

(4) recommended maintenance.

B. Carbon-storage type evaporative emission control system called "G.M.E.C.S." with major elements:

(1) sealed fuel tank with provisions for routing vapors to an activated charcoal canister,

(2) canister containing activated charcoal for storage of fuel vapors,

(3) provision for removing vapors from the canister and carrying them into the engine where they are consumed.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Checker Motors Corporation with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 250 and 350.

Revised
7-21-71
approved

State of California

AIR RESOURCES BOARD

Resolution 70-66
September 16, 1970

WHEREAS, American Pollution Controlled, Inc. and Norris Industries have submitted an application and test data for California approval of an exhaust emission control system for 1955 to 1965 model year used vehicles of engine size classifications (d), (e), and (f); and

WHEREAS, the applicant's exhaust emission control system is described as follows:

(1) a unit, called a vaporizer, which replaces the venturi cluster in the carburetor,

(2) a vacuum spark advance disconnect with thermostatic vacuum control switch and associated rubber tubing,

(3) an exhaust gas recycling system, and

(4) carburetor mixture and speed adjustments.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 2, Articles 2 and 3; and that the system meets the specific requirements for used vehicles cited in Chapter 4 of the Health and Safety Code; and

WHEREAS, the applicants have agreed to supply 50 early production models to the State of California at least 90 days before the date of mandatory installation;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, Sections 39107 and 39176 to 39184 of the Health and Safety Code,

Issue a resolution of accreditation to American Pollution Controlled, Inc. - Norris Industries for an exhaust emission control system for 1955 to 1965 model year used vehicles for engines of the following size classifications:

Engine Size Classification	Engine Size Displacement
(d)	250-300
(e)	300-375
(f)	375+

On the terms and conditions (including proposed price) set forth in the application of American Pollution Controlled and Norris Industries, including the letters to John A. Maga, Executive Officer, from Air Pollution Controlled, Inc., dated September 8, 1970, and from Norris Industries dated September 10, 1970; and

RESOLVED FURTHER, that the use of said device shall become mandatory pursuant to law when it is found by the Board to be available for installation pursuant to Health and Safety Code section 39176.

AMERICAN POLLUTION CONTROLLED, INC.

19900 EAST COLFAX AVENUE

AURORA, COLORADO 80010

PHONE 343-2911

July 17, 1971

Mr. John Maga
Executive Officer
Air Resources Board
State of California
1108 14th Street
Sacramento, California

Dear Mr. Maga:

Reference is made to the Northrop Report for the test and evaluation of the American Pollution Controlled, Inc., Exhaust Emission Control Device.

After careful examination of the Northrop report, I feel that it is necessary to make comments regarding certain aspects of this report. Naturally, we were disappointed not to see a higher percentage of cars passing all three emission standards. Non-the-less, the results in lower emissions responsible for photo-chemical smog are very favorable.

The following comments regarding the Northrop report are made for your consideration as well as that of the Air Resources Board.

Page 2-2 Drivability: Owners tend to be overly critical. Professional driver less degrading on drivability.

Page 2-3 Mechanic Training and Assistance: No formal training given installers. Short briefing given to installers and no follow-up assistance provided. This does not reflect a true training program. Several owner complaints can be related to the quality of installation.

Page 3-3 Vehicle Selection: Last minute changes in vehicle selection, changed requirement of kit components expecially those items effecting carburetor and EGR calibration. Several vehicles also had unusually low CO readings which precluded lowering that emission. An untouched fleet of used cars will not read way below the standard for CO.

AMERICAN POLLUTION CONTROLLED, INC.

19900 EAST COLFAX AVENUE

AURORA, COLORADO 80010

[redacted]

PHONE 343-2911

Page 3-3 Dealers: Dodge dealer made only one installation, was too busy to schedule the installation work. Ford dealer mechanic selected to install kits was not a tune-up man and appeared to have minimal experience. Out of seven installations, he required parts for six installations.

Page 3-9 Cost of Installation: Installation was done on an hourly basis prearranged before the test and resulted in a slower than average rate of production, knowing any hourly charge would be approved without question. A flat rate installation fee is recommended by APC. Six cylinder engines will not cost as much for an installation as V-8 engines.

Page 3-9 Spare Parts in Kits: Kits were packaged in Aurora, Colo. for a predetermined list of automobiles. Changes in cars resulting in different carburetor and engine combinations required on-the-spot adjustment of kit components which did not in all cases provide for needed parts, expecially calibrated parts.

Page 3-9 Delay 4-6 hours at Dealers: This was primarily due to the dealers being aware the test program was a small volume, one time, situation and therefore performed the installations throughout the work day in a manner least disruptive to their regular customers.

Page 3-12 Installation Problems: Six cars (#1201, 1248, 1253, 1305 and 1342) had problems not related to the actual installation; however, should have been corrected at that time. Two cars required carburetor jet changes because a rebuilt carburetor had been installed at an earlier date. Use of an A/F or CO meter will assist the installer in making the right jet selection in such cases. This procedure will be covered in the installation manual.

Page 3-19 Drivability: Some cars had noticeable faults in drivability before installation of the APC system, but are not reflected in this report.

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PHONE 343-2911

Page 3-21 Problems during Mileage Accumulation: It is obvious that several cars needed routine service or change of parts at the time, regardless of the test taking place. This again points up the need for servicing and tune-up work at the time kit installation takes place. This procedure will cut down on complaints as well as insure low emission levels.

General Comments:

It is noteworthy that a 48.5% reduction in reactive exhaust emittants was achieved with the 50 cars equipped with the APC system. The baseline data should be noted since the HC and CO readings were comparatively low. The results of the 50 test cars after mileage accumulation compared to the 278 cars after service (Northrop Emission and Maintenance Study) shows that a larger reduction in pollutants is apparent for the average car on the street.

	APC Mileage Accumulation	278 Cars After Service	% Reductio
HC	219 ppm	475 ppm	54%
CO	1.84%	2.48%	26%
NO_x	566 ppm	1228 ppm	54%

This reduction, using the same formula shown on page 3-34 of the Northrop report, results in a 53% reduction in Reactive Emittants.

It is also interesting to note that driveability problems are similar to those voiced by owners of 1971 cars as indicated on page 3-38 of the report. We know that many complaints are correctable at the time of installation of the kit. A thorough training program coupled with more detailed and explicit instructions will preclude many of the complaints voiced in this report.

APC agrees with the Northrop recommendations for improvements in materials and production procedures. Necessary action has been taken to change design and specifications of the EGR valve.

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Action is being taken to change and improve the instruction-program for the installer-mechanic which will result in fewer owner complaints as well as making it possible to achieve a pass rate for all 3 emission levels to a figure in the 88 to 90% level. The remaining cars should pass 2 out of 3 emissions standards with the dominant reduction being in HC and NO_x.

American Pollution Controlled, Inc., believes thay with its manufacturing and marketing program ready to be implemented, it is in a position to bring a practical program to the State of California for the control of exhaust emissions from the uncontrolled vehicles in this state. A great deal has been learned from the Northrop report and we believe that this company and its affiliates, as well as the State of California will benefit from it.

Sincerely yours,

Morris L. Quick, Jr.

Morris L. Quick, Jr.
President

Attachment
MLQ;cr

DATE: July 17, 1971

TO: All Departments

FROM: Calibration Section

SUMMARY: of Page 1

Instruction program for mechanic-installer to include use of test equipment and requirement for tune-up work when necessary.

The installation procedure will be more detailed and will include analyzer use for a guide in selecting carburetor calibration items.

Road Test for a measure of drivability quality control.

More informed owners, through written as well as verbal contact.

Revise installation manual.

Morris L. Quick, Jr.
President

Carburetor History

Out of the 50 vehicles used in the Northrop/APC program 34% were operating with other than the vehicles' original carburetor.

7 had rebuilt carburetors.

10 had carburetors that did not match vehicle year and/or engine size.

One, car #1324, was equipped with a carburetor released in 1970, 5 years newer than the vehicle.

Another, car #1335, was equipped with one 4 years older than the vehicle.

EMISSIONS PASSED OF GROUP HAVING REBUILT CARBURETORS WAS:

	0	1	2	3
1237		X		
1253		X		
1292				X
1323			X	
1327			X	
1330				X
1334				X
TOTAL	0	2	2	3

EMISSIONS PASSED OF GROUP WITH REPLACED CARBURETOR WAS:

	0	1	2	3
1207			X	
1213				X
1226		X		
1250				X
1310			X	
1316			X	
1324				X
1333				X
1335				X
1340				X
TOTAL 10	0	1	3	6

State of California

AIR RESOURCES BOARD

Resolution 70-66

September 16, 1970

WHEREAS, Section 39051 (b) of the California Health and Safety Code requires the Air Resources Board to adopt ambient air quality standards for each air basin in the state, in consideration of the public health, safety and welfare including but not limited to health, illness, irritation to the senses, aesthetic value, interference with visibility and effects on economy; and

WHEREAS, the same Section of the Health and Safety Code specify that standards relating to health effects shall be based upon the recommendations of the State Department of Public Health; and

WHEREAS, a public hearing and other proceedings have been held in accordance with the provisions of the Administrative Procedure Act (Title 2, Government Code),

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board hereby amends and adopts its regulations, Title 17 California Administrative Code, as follows:

State of California

AIR RESOURCES BOARD

August 15, 1970

PROPOSED CHANGES IN THE CALIFORNIA ADMINISTRATIVE CODE

The following are the amendments to Title 17 of the California Administrative Code proposed for adoption by the California Air Resources Board at the Public Hearing on September 16, 1970:

1. Deletion of the title, Table of Standards, applicable in the San Francisco Bay Area Basin and the South Coast Basin, and the contents of the table in Article 2, Section 70201.
2. Addition of the following suspended particulate matter standards to Article 2, Section 70200, Table of Standards, applicable statewide:

Substance	Concentration and Method	Duration of Averaging Period	Conditions	Most Relevant Effects	Comment
Suspended Particulate Matter	60 ug/m^3, high volume sampling	24-hour samples, annual geometric mean.	This standard applies to suspended particulate matter in general. It is not intended to be a standard for toxic particles such as asbestos, lead, or beryllium.	Long continued exposure may be associated with increase in chronic respiratory disease. Exposure with SO_2 may produce acute illness.	Size distribution of particulate matter influences its effects on health. Commonly used methods of sampling do not segregate particles by size. The standard will be reevaluated when suitable particle sizing equipment is available.
	100 ug/m^3, high volume sampling	24-hour sample.			

State of California

AIR RESOURCES BOARD

Resolution 70-68

September 16, 1970

WHEREAS, in 1969 the California Legislature added Section 39052 (q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 19, 1969 the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel;" and

WHEREAS, Dual Fuel Systems Inc., a subsidiary of Pacific Lighting Corporation has submitted an application and all test data for approval of their emission control system for vehicles modified to utilize natural gas fuel; and

WHEREAS, the Dual Fuel Systems Inc., system is identified as "Dual Fuel Systems Inc., Model 1.25" with major elements:

1. Variable venturi mixer with lean adjustment,
2. Gas pressure regulator adjusted between $\pm$ 0.5 inches of water,
3. Disconnected vacuum spark advance,
4. Recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39000 of the Health and Safety Code,

Issue a certificate of approval for Dual Fuel Systems Inc., to use the "Dual Fuel Systems Inc., Model 1.25" in California on vehicles of the 1966 through 1971-model years utilizing natural gas for engines of the following size classifications:

Engine Size Class	Engine Size Displacement - Cubic Inches
(a)	Under 140
(b)	140-200
(c)	200-250
(d)	250-300
(e)	300-375
(f)	Over 375

State of California

AIR RESOURCES BOARD

Staff Report

Dual Fuel Systems Inc.
Application for Motor Vehicles Modified To Use Natural Gas Fuel

September 16, 1970

Dual Fuel System Inc., a subsidiary of Pacific Lighting Corporation has submitted an application for approval of a system to use natural gas. The data submitted are shown below:

Applicable Engine Size Class	Test Engine Size Cubic Inches	Test Vehicle License No.	Hydrocarbons gms/mi	Carbon Monoxide gms/mi	Oxides of Nitrogen gms/mi
(a)	98	453BBG	0.5	1.0	0.9
(b)	199	495AYB	0.4	0.6	0.9
(c)	232	AZV948	0.4	3.9	0.4
(d)	289	92751A	0.5	2.5	0.4
(e)	351	83368G	0.3	3.0	0.9
(f)	429	06SAVP	0.5	0.5	0.7

Each test vehicle in the fleet met the 1966-1969 emission standard of 275 ppm hydrocarbons and 1.5 percent carbon monoxide, and also the 1970 and 1971 emission standards of 2.2 grams per mile hydrocarbons and 23 grams per mile carbon monoxide, plus 4.0 grams per mile oxides of nitrogen for the 1971 standard.

The emission results on natural gas fuel meet the vehicle emission standards through the 1975-model year. The Air Resources Board test procedure specifies that the modification not increase emissions when operating on gasoline. Dual Fuel Systems Inc. state that this modification does not increase the emissions of present vehicles when operating on gasoline.

The types of emission control systems for gasoline-powered vehicles are not defined through the 1975-model year so this requirement cannot be evaluated. For this reason, the latest year model this approval resolution covers is 1971.

Based on the test data and other information submitted by the applicant, the staff finds that the Dual Fuel Systems Inc. emission control system to be used on vehicles modified to use natural gas fuel, meets California requirements for the 1966-1971-model years. The staff, therefore, recommends adoption of Resolution 70-68.

AIR RESOURCES BOARD

Resolution 70-68-A

January, 1971

WHEREAS, in 1969, the California Legislature added Section 39052(q), Section 39110 and Section 39111 to the Health and Safety Code requiring the Air Resources Board to adopt regulations specifying the manner in which motor vehicles modified or altered to use fuels other than gasoline or diesel be emission tested; and

WHEREAS, on November 19, 1969, the Air Resources Board adopted, "California Exhaust Emission Standards and Test Procedures for Motor Vehicles Modified to Use Liquified Petroleum Gas or Natural Gas Fuel;" and

WHEREAS, Dual Fuel Systems Inc., a subsidiary of Pacific Lighting Corporation, has submitted an application and all test data for approval of their emission control systems for vehicles modified to utilize natural gas fuel; and

WHEREAS, the Dual Fuel Systems Inc., system is identified as "Dual Fuel Systems Inc., Model 1.25" with major elements:

1. variable venturi mixer with lean adjustment,
2. gas pressure regulator adjusted between $\pm$ 0.5 inches of water,
3. disconnected vacuum spark advance,
4. recommended maintenance.

WHEREAS, the Board find that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Dual Fuel Systems Inc., modification system utilizing ~~liquified~~ natural gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code; and

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval for Dual Fuel Systems Inc., to use the "Dual Fuel Systems Inc., Model 1.25" in California on vehicles of the 1966- through 1971-model years utilizing natural gas for engines of the following size classifications:

Engine Size Class	Engine Size Displacement - Cubic Inches
(a)	Under 140
(b)	140-200
(c)	200-250
(d)	250-300
(e)	300-375
(f)	Over 375

State of California

AIR RESOURCES BOARD

Resolution 70-68-B

February, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 39102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has adopted Resolution 70-68 which approved the Dual Fuel modification systems for converting gasoline engines to use natural gas; and Resolution 70-68-A which found that the systems met the requirements of Section 8657 of the Revenue and Taxation Code for light-duty vehicles; and

WHEREAS, the Air Resources Board adopted a motion at its February 17, 1971, public meeting to accept demonstration on light-duty vehicles as evidence that an equal degree of control would be achieved on heavy-duty vehicles,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Dual Fuel modification systems utilizing natural gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for Impco carburetors model numbers listed below for use in California on 1969-1971-model gasoline-powered vehicles, over 6,001 pounds gross vehicle weight, modified to use natural gas.

Carburetor Model	Engine Size Class	Engine Size Displacement Cubic Inches
1-25"	(a)	Under 140
1-25"	(b)	140-200
1-25"	(c)	200-250
1-25"	(d)	250-300
1-25"	(e)	300-375
1-25"	(f)	Over 375

State of California

AIR RESOURCES BOARD

Resolution 70-68-C

July 21, 1971

WHEREAS, in 1970, the California Legislature added Section 8657 to the California Revenue and Taxation Code which states that no motor fuel tax shall be imposed upon motor vehicles modified to use liquified petroleum gas or natural gas and approved by the State Air Resources Board as meeting the emission standards set forth in subdivisions (a) and (b) of Section 39102 and Section 39102.5 of the Health and Safety Code; and

WHEREAS, the Air Resources Board has approved the Dual Fuel System, Inc. modification systems for converting gasoline engines to use natural gas; and

WHEREAS, the Board found that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 7,

NOW, THEREFORE, BE IT RESOLVED, That this Board

Find that the Dual Fuel System, Inc. modification systems utilizing natural gas meet the emission requirements of Section 8657 of the Revenue and Taxation Code for the carburetor model listed below for use in California on gasoline-powered vehicles, under 6,001 pounds gross vehicle weight, modified to use natural gas.

Carburetor Model	Engine Size Class	Cubic Inches
1.25	(a) through (f)	All

State of California

AIR RESOURCES BOARD

Resolution 70-69

September 16, 1970

WHEREAS, Toyota Motor Company, Ltd., Japan, submitted an application and all required test data for approval of its emission control systems for the 1971-model vehicles less than 6001 pounds gross vehicle weight;

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

B. Engine-modification type exhaust emission control system with major elements:

(1) vacuum switching valve,

(2) modified carburetor with throttle positioner,

(3) modified distributor,

(4) speed detector,

(5) speed marker,

(6) spark control computer,

(7) recommended maintenance.

C. Container-storage type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) thermal expansion tank,

(3) fuel vapor storage case,

(4) purge control valve.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39000, of the Health and Safety Code,

Issue a resolution of approval to Toyota Motor Company, Ltd., Japan, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 96.9, 113.4, 137.4, and 236.7.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Toyota Motor Company

September 16, 1970

Toyota Motor Company, Limited has submitted an application for approval of the emission control systems to be used on their 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are an air-injection type or engine-modification type of exhaust emission control system and a container-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Exhaust Control System*	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO-gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
96.9	TE21-000001 (2A/T)	EM	1.17	11.7	2.38	1.10
96.9	TE21-000002 (4M/T)	EM	1.37	8.3	2.48	1.91
113.4	RT62-128840 (4M/T)	EM	1.71	15.1	2.52	2.14
113.4	RT72-139861 (3A/T)	EM	1.14	16.5	3.09	2.09
113.4	RT62-127984 (3A/T)	EM	1.28	17.9	2.87	2.30
113.4	RT72-107059 (4M/T)	EM	1.75	13.3	2.71	4.47
137.4	MS55-139515 (3A/T)	AI	1.65	14.2	3.48	2.50
137.4	MS53-110177 (4M/T)	AI	1.93	15.2	2.65	4.89
236.7	FJ40-77383 (3M/T)	EM	1.13	9.0	3.46	0
236.7	FJ40-79241 (3M/T)	EM	1.05	10.7	3.48	0

*EM - Engine Modification AI - Air Injection

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams hydrocarbons per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Toyota Motor Company exhaust and evaporative emission control systems meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-69.

State of California

AIR RESOURCES BOARD

Resolution 70-70

September 16, 1970

WHEREAS, Jeep Corporation, a subsidiary of American Motors, submitted an application and all required test data for 1971 California approval of exhaust emission control systems for vehicles less than 6,000 pounds gross vehicle weight; and

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

I. Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) (TCS) retarded spark at low speeds (232 CID),

(3) deceleration control, dashpot type,

(4) lower compression ratio (134, 225, and 232 CID),

(5) delayed exhaust valve closure (232, 350),

(6) no vacuum advance (135 CID),

(7) recommended maintenance.

II. Air-injection system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Jeep Corporation with respect to 1971-model vehicles less than 6,001 pounds gross vehicle weight, with the following engine sizes (cubic inches): 134, 225, 232 and 350.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Jeep Corporation

September 16, 1970

Jeep Corporation, a subsidiary of American Motors, has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's exhaust emission control systems are of the air-injection or engine-modification type.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Vehicle Number	Emission Control System *	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO2-gms/mi
134	553	AI	1.8	17	3.1
134	554	AI	1.9	13	2.5
225	P-40	AI	2.2	21	2.1
225	P-41	AI	1.4	20	3.2
232	248	AI	2.1	21	2.9
232	083	AI	2.2	13	3.3
350	081	EM	2.2	20	2.3
350	082	EM	2.1	19	2.1

*AI - Air Injection
EM - Engine Modification

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Jeep Corporation exhaust emission control systems meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-70.

State of California

AIR RESOURCES BOARD

Resolution 70-70-A

December, 1970

WHEREAS, Jeep Corporation, a subsidiary of American Motors, submitted an application and all required test data for 1971 California approval of emission control systems for vehicles less than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) deceleration control, dashpot type,

(3) delayed exhaust valve closure,

(4) recommended maintenance.

B. Air-injection system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) lower compression ratio,

(5) recommended maintenance.

C. Carbon-storage type evaporative emission control system with major elements:

(1) non-vent cap,

(2) sealed fuel tank,

(3) vapor separator or expansion tank,

(4) carbon canister,

(5) connections to P.C.V. valve line, fuel tank and canister.

WHEREAS, the Board find that the systems comply with the California Adminstrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 3 and 6:

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Jeep Corporation with respect to 1971-model vehicles less than 6,001 pounds gross vehicle weight, with the following engine sizes (cubic inches): 258, 304 and 360.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control System Approval

Jeep Corporation

December 1970

The waiver granted to California by Federal authorities does not include exhaust hydrocarbon and carbon monoxide emission control for off-road utility (4-wheel drive) vehicles.

Therefore, Jeep Corporation has submitted an application for approval of their oxides of nitrogen exhaust emission control systems and carbon-storage type evaporation emission control systems to be installed on their 1971 off-road utility vehicles.

The applicant's emission control systems are the air-injection and engine-modification types of exhaust control systems plus a carbon-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inch Displacement	Test Vehicle No.	Exhaust Control System*	Projected Exhaust Emissions at 50,000 Miles NO_2 gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
258	080	EM	2.0	0
258	D01-24L	EM	3.1	0
304	070	AI	2.4	0.01
304	D07-18D	AI	2.5	1.3
360	079	AI	3.5	1.63
360	D07-20R	AI	1.8	0.38

*AI - Air Injection
EM - Engine Modification

Each test vehicle met the emission standards of 6 grams per test for evaporative emissions and 4 grams/mile oxides of nitrogen.

Based on the test data and other information submitted by the applicant, the staff finds that the Jeep Corporation exhaust and evaporative emission control systems meet California requirements for vehicles under 6,001 pounds gross vehicle weight for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-70-A.

State of California

AIR RESOURCES BOARD

Resolution 70-71

September 16, 1970

WHEREAS, Peugeot, Inc. has submitted an application and all test data for approval of its emission control systems for the 1970-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine-modification type exhaust emission control system called Coppolair with major elements:

(1) leaner carburetion,

(2) deceleration control (dashpot plus spark modification with vacuum limiter and electronic control),

(3) recommended maintenance.

B. Carbon-storage type evaporative emission control system with major elements:

(1) carbon canister,

(2) sealed filler cap,

(3) liquid separator,

(4) connections to fuel tank and carburetor intake.

WHEREAS, The Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Articles 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 of the Health and Safety Code,

Issue a certificate of approval to Peugeot Inc, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches) 304 and 504.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Peugeot, Incorporated

September 16, 1970

Peugeot, Inc. has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are a engine-modification type of exhaust emission control system and a carbon-storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Test Vehicle Number	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
		HC-gms/mi	CO-gms/mi	NO_2-gms/mi	HC-gms/test
78.59	1 (721PZ25)	1.9	17	3.2	0.37
78.59	2 (320)	1.8	16	2.2	0
120.278	3 (276)	1.8	15	2.5	0
120.278	4 (720PZ25)	0.8	10	3.4	0.38

Each test vehicle met the 1971-model year emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that Peugeot, Inc. exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-71.

State of California

AIR RESOURCES BOARD

Resolution 70-72

October 1970

WHEREAS, Bayerische Motoren Werke A.G. has submitted an application and 11 test data for California approval of the emission control systems for its 1971 model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows;

A. Air-injection type exhaust emission control system with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) exhaust gas recycle for NO_x control,

(5) recommended maintenance.

B. Engine modification-type exhaust emission control system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle and low engine speeds,

(3) recommended maintenance.

C. Vapor storage tank type evaporative emission control system with major elements:

(1) sealed filler cap,

(2) vapor-storage tank, interconnected in the fuel tank to air cleaner vent line,

(3) vapor vent line, crankcase to air cleaner,

(4) vapor vent line, fuel tank to air cleaner.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Bayerische Motoren Werke A.G. with respect to the 1971 model vehicles, 6000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 96, 121.3, and 170.

State of California

AIR RESOURCES BOARD

Resolution 70-73

WHEREAS, Jeep Corporation, a subsidiary of American Motors, submitted an application and all test data for 1971 California approval of exhaust emission control systems for vehicles greater than 6,000 pounds gross vehicle weight; and

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

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

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) deceleration control, dashpot type,

(4) recommended maintenance.

II. Air-injection system for the 232 cubic inch 6 cylinder engine, with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Jeep Corporation with respect to 1971-model vehicles greater than 6,000 pounds gross vehicle weight, with the following engine sizes (cubic inches): 232 and 350.

10/21/70

State of California

AIR RESOURCES BOARD

Resolution 70-73-A

March 17, 1971

WHEREAS, Jeep Corporation, a subsidiary of American Motors, submitted an application and all test data for 1971 California approval of exhaust emission control systems for three additional engine sizes to be used in their vehicles greater than 6,000 pounds gross vehicle weight; and

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

I. Engine modification-type system for the 258 cubic inch 6 cylinder engine with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) deceleration control, dashpot type,

(4) recommended maintenance.

II. Air-injection system for the 304 and 360 cubic inch 8 cylinder engines, with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) carburetor and distributor modifications,

(4) recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Jeep Corporation with respect to 1971-Model vehicles greater than 6,000 pounds gross vehicle weight, with the following engine sizes (cubic inches): 258, 304 and 360.

State of California

AIR RESOURCES BOARD

Staff Report

Exhaust Emission Control System Approval
1971-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight

JEEP CORPORATION

March 17, 1971

Jeep Corporation a subsidiary of American Motors, has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for three additional engine sizes to be used in their 1971-Model vehicles over 6,000 pounds gross vehicle weight.

Their 1971 exhaust emission control systems are the same as those approved for 1970.

The applicant utilizes two exhaust control systems, an engine modification type system for their 258 cubic inch size engines and an air injection type system for their 304 and 360 cubic inch size engines.

Emission Data of Each Test Engine
Projected to 1,500 Hours

Engine Size Cubic Inches	Test Engine Number	Projected Emission Level at 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
258	308A26-P001	154	1.0
304	310H28-P001	199	1.4
360	305N28-P003	259	1.0

Each emission data engine met the emission standards of 275 ppm hydrocarbon and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant, the staff finds that the Jeep Corporation exhaust control systems for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-Model year. The staff, therefore, recommends adoption of Resolution 70-73-A.

State of California

AIR RESOURCES BOARD

Resolution 70-74
September 22, 1970

WHEREAS, the Air Resources Board has contracted with the Division of Highways, Department of Public Works, to conduct a Vehicle Emission Inspection and Maintenance Study; and

WHEREAS, Assembly Bill No. 78, passed in the 1970 regular Legislative Session, requires the Air Resources Board to study the benefits and costs of a program of periodic motor vehicle emission inspections and to report its findings and recommendations to the Legislature by July 1, 1971; and

WHEREAS, the limited availability of personnel to work on this activity precludes performance of the study by the Air Resources Board's staff within the required time; and

WHEREAS, a Request for Proposals has been issued for this study and from the responses to this Request for Proposals, the Northrop Corporation has been selected as being the most qualified contractor to perform the study:

THEREFORE BE IT RESOLVED, that the Board authorizes the Executive Officer to negotiate and subsequently execute a contract, for an amount not to exceed $405,000, with the Northrop Corporation for the performance of a vehicle emission inspection and maintenance study; and

THEREFORE BE IT FURTHER RESOLVED, that the Executive Officer also be authorized to take any actions as may be necessary, incidental to the administration of such a contract.

State of California

AIR RESOURCES BOARD

November 17, 1971

Resolution 70-74A

WHEREAS, Northrop Corporation has unavoidably incurred, in the performance of contract ARB 1522, dated November 6, 1970, vehicle repair expenses of $3,172 beyond the sum specified in the original contract; and

WHEREAS, the California Division of Highways, which funded a major portion of ARB 1522, has agreed to advance an additional $3,172 to the Air Resources Board for payment to Northrop Corporation;

NOW, THEREFORE, BE IT RESOLVED, that the Air Resources Board amend contract ARB 1522 to pay Northrop an additional $3,172 for additional expenses necessarily incurred in the performance of this contract, provided the Air Resources Board receives said sum from the California Division of Highways.

BE IT FURTHER RESOLVED, that the Executive Officer take such administrative action and execute such documents with the Division of Highways and Northrop Corporation to implement and carry out this resolution.

State of California

AIR RESOURCES BOARD

Resolution 70-75

October 21, 1970

WHEREAS, Checker Motors Corporation submitted an application and all test data for 1971 California approval of exhaust emission control systems for vehicles greater than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

1. An engine-modification type system called "C.C.S." with major elements:

   a. leaner carburetion plus idle rich limiter,

   b. retarded spark at idle,

   c. recommended maintenance.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080 Division 26 of the Health and Safety Code,

Issue a resolution of approval to Checker Motors Corporation with respect to 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the 350 cubic inch size.

State of California

AIR RESOURCES BOARD

Resolution 70-76

WHEREAS, Regie Nationale des Usines Renault has submitted an application and all test data for approval of its emission control systems for its 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine-modification exhaust control system with major elements:

(1) dual carburetion,

(2) retarded spark at idle,

(3) deceleration throttle positioner,

(4) recommended maintenance.

B. Carbon storage evaporative emission control system with major elements:

(1) fuel tank with sealed cap,

(2) expansion tank,

(3) activated carbon canister,

(4) control valve which connects the carburetor float chamber to the canister when the engine is off or to the air intake when the engine is running,

(5) connections to the fuel tank, expansion tank, carbon canister, carburetor float chamber, air intake and crankcase emission control system.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Regie Nationale de Usines Renault with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with 67.6, 78.7 and 95.5 cubic inch size engines.

State of California

AIR RESOURCES BOARD

Resolution 70-77

WHEREAS, Technoscience Systems, Inc. 537 Hofgaarden Street, La Puente, California 91744 has applied for 44 permits for the testing of an experimental motor vehicle pollution control device for approval by this Board; and

WHEREAS, the device comprises a sonic generator which is incorporated into the carburetor venturi of internal combustion engines; and

WHEREAS, Section 39181 of the Health and Safety Code, authorizes the Board to issue such permits;

NOW, THEREFORE, BE IT RESOLVED, That Technoscience Systems, Inc. is hereby granted 44 permits for testing an experimental control device for a period of one year from this date.

October 21, 1970

State of California

AIR RESOURCES BOARD

Resolution 70-78

October, 1970

WHEREAS, the Vapco Division of Jamco, Inc. of Oklahoma City, Oklahoma filed an application for a resolution of accreditation for a crankcase emission control system which is described as follows:

(1) a tube from the crankcase through a spring-loaded tapered plunger flow control valve to the intake manifold,

(2) a second tube from the oil filler cap or rocker arm cover through the clean side of the air cleaner. Filler cap sealed to the atmosphere,

(3) a tube from a jar containing volatile chemical solvents to a "T" in the line between the flow control valve and intake manifold.

WHEREAS, the Board finds that the system complies with the standards as published in the California Administrative Code, Title 13, Section 1960; and

WHEREAS, based on test data and information submitted by the manufacturer, the Board finds that the device meets the criteria of the Air Resources Board as published in Title 13, Section 2003, of the California Administrative Code,

WHEREAS, Section 27156 of the Vehicle Code, as amended by Assembly Bill 612, gives the Air Resources Board the authority to approve modified or altered vehicle pollution control systems providing it does not effect the performance of the original approved device,

NOW, THEREFORE, BE IT RESOLVED, That this Board issue a resolution that the "Vapco" system is an acceptable modification to an approved motor vehicle emission control system.

State of California

AIR RESOURCES BOARD

Resolution 70-78A

July 21, 1971

WHEREAS, the Air Resources Board adopted Resolution 70-78 in October 1970 which found that the "Vapco" system produced by Jamco, Inc., of Oklahoma City, Oklahoma, is an acceptable modification to an approved motor vehicle emission control system;

WHEREAS, amendments to Section 27156 of the Vehicle Code (Assembly Bill 612, Chapter 331, Stats. 1970) became effective in November 1970;

WHEREAS, on February 21, 1971 the Board adopted criteria for determining compliance with Section 27156 of the Vehicle Code; and

WHEREAS, the intent of Resolution 70-78 has been abused by Jamco, Inc., in promoting its device by stating the device is approved by the Air Resources Board;

NOW, THEREFORE, BE IT RESOLVED, that Resolution 70-78 of the Air Resources Board is hereby rescinded;

BE IT FURTHER RESOLVED, that the Air Resources Board finds that the "Vapco" device does not reduce the effectiveness of any required motor vehicle pollution control device for engines over 140 cubic inch displacement and is therefore exempt from the prohibitions in Section 27156 of the Vehicle Code, as to such vehicles; and

BE IT FURTHER RESOLVED, that the Executive Officer is instructed to advise Jamco, Inc., that this resolution has been adopted and that THIS RESOLUTION DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING HIS ANTI-POLLUTION BENEFITS OR ANY OTHER ALLEGED BENEFITS OF THE "VAPCO" DEVICE, and he is further instructed to request Jamco, Inc., to cease any advertising to the contrary, and if Jamco, Inc. refuses to do so, to refer the matter to the Attorney General of the State of California for such action as he deems appropriate.

State of California

AIR RESOURCES BOARD

Staff Report

Jamco, Inc. "Vapco" Closed Crankcase Emission Control System

October, 1970

I. Introduction

This report presents the evaluation of the Jamco, Inc. "Vapco" closed crankcase emission control system by the staff of the Air Resources Board. The bases of evaluation are the requirements set forth in Title 13 of the California Administrative Code, Chapter 3, Subchapter 1, Sections 2000 to 2004. Since approval is sought for used car installations, the report deals with both the California Crankcase Emission Standard and compliance with the Board criteria.

II. Description of System

The Vapco system consists of the closed crankcase emission control system certified by the Novo Division of United Air Cleaner Corporation and the addition of a "Vapco" accessory.

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

The "Vapco" accessory consists of a plastic covered glass jar containing a solution of volatile solvents and a hose to a tee between the crankcase emission control valve and the intake manifold. This jar contains about a quart of solution. No air is admitted to the jar. The vacuum in the intake manifold draws the vapors from the jar into the engine.

III. Compliance with Crankcase Emission Standards

The Novo closed crankcase emission control system was certified by the former Motor Vehicle Pollution Control Board under Resolution 73-26. The staff finds that the "Vapco" accessory has no significant effect on the Novo system meeting the crankcase emission standards.

IV. Compliance with Board Criteria

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

> Every device controlling crankcase emissions from motor vehicles receiving an accreditation from the Air Resources Board shall meet the following criteria:
>
> (a) Be so designed as to have no adverse effect on engine operation or performance.

Tests conducted at the Scott Laboratory showed that leaning of the first decile vehicles and enrichment of the 10th decile vehicles were within the applicable limits.

(b) Operate in a safe manner.

The staff has raised the question as to the safety of carrying a quart jar of volatile, flammable solvents under the hood. The following letter was received from James O. Melton, Chief Engineer of the firm:

"This crankcase emission control device has as one of its components a plastic covered container containing a special vaporizing fluid. Our application form for crankcase emission control devices should have pointed up some of the special safety characteristics of this component and the reason for its use.

"This container is glass and, as such, has an inert reaction to any material that might be placed within it, either in its use in the emission control system or otherwise. Being of glass, it would be fragile were it not plastic covered. The cover serves as a resilient, supplemental container insulated by its plastic cover and of a "self extinguishing" material from a fire hazard view. A metal container would be rusted by the crankcase vapors and if light in weight or large in size would be collapsed by the vacuum of the engine acting thereon. A police car of the Moore, Oklahoma, Police Department was totaled in a front ended accident and the unit was removed undamaged and installed on the replacement car. The special vaporizing fluid, while flammable, reduces the detonation point of gasoline when mixed and improves the antiknock characteristic of gasoline.

"Over 4,000 of these units are in use including approximately 150 test units that have performed most satisfactorily during the past two years over a great many miles."

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

The staff has no reason to believe that the durability of the device will not be similar to the Novo closed crankcase emission control device.

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

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

(e) The purchase or cost of installation of such a device shall not constitute an undue cost burden.

The total cost for the device and its installation will be approximately $35.00. Even though this cost is quite high compared to other devices, the purchaser has the option to select a less expensive approved device, if he so desires.

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

Tests made at the Scott Laboratory did not show any leaning or enriching of the average car beyond the 4% lean and 1% rich limit.

(g) The adequacy of methods of distribution, the financial responsibility of the applicant, and other factors affecting the economic interests of the motoring public, shall be evaluated and determined satisfactory to protect the motorist.

The procedure for evaluation of compliance with criterion (g) is:

The applicant shall submit:

1. A current financial statement showing assets and liabilities, which shall be subject to audit, and other material as requested by the Executive Officer.

2. Letter of intent which will show method the company will employ to support their guarantee to the motorist. This should indicate what type of liability the company will assume for their product when installed on a motor vehicle and, if applicable, the insurance they have purchased to support that liability.

3. Letter of intent outlining details of the company or companies which will manufacture and/or distribute their device. This should include information as to continuing supply of replacement parts and field representation for servicing of complaints.

The firm has submitted a financial statement and a copy of their insurance policy. Both appear satisfactory.

The firm is in the business of manufacturing and distributing other automobile products such as suspension parts. One of the warehouses is located in Fullerton, California. The firm will use the present facilities for marketing and servicing complaints.

V. Summary

The Jamco, Inc. "Vapco" closed crankcase emission control system consists of a previously accredited Novo closed crankcase emission control system with the "Vapco" incorporated as a component. The staff finds that the "Vapco" component has no significant effect on the Novo system meeting the California crankcase emission standards and criterion except for "safety". The staff has reservations concerning the safety of carrying a quart jar of volatile, flammable solvents under the hood.

VI. Suggestions

The staff suggests the following three alternatives for the Board's consideration:

1. The system be accredited as a closed crankcase emission control device until November 23, 1970 when AB 612 (see attachment) becomes effective. It would then revert to the status of an acceptable modification to an approved device (Resolution 70-78 Proposal #1).

State of California

AIR RESOURCES BOARD

Resoution 70-79

November 18, 1970

WHEREAS, the "Pure Air Act of 1968" (Health and Safety Code, Division 26, Chapter 4) requires the application of certain emission standards for new diesel-powered vehicles when technologically feasible, but no later than January 1, 1973; and

WHEREAS, Sections 39052(n) and 39109 of the Health and Safety Code requires the Air Resources Board to adopt exhaust emission standards and test procedures for hydrocarbons, carbon monoxide and oxides of nitrogen for new diesel-powered vehicles and diesel engines for vehicles first sold and registered in this state, no later than January 1, 1971; and

WHEREAS, Section 39052(k) requires the Air Resources Board to adopt test procedures specifying the manner in which new motor vehicles shall be approved; and

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

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby repeals, amends and adopts its regulations, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, California Administrative Code, as follows:

1. Adopts new Subchapter 1, Article 1, Section 1942 to read:

1942. Exhaust Emissions (Over 6,001 lbs. G.V.W.). The State Air Resources Board finds compliance with the standards for exhaust emissions set forth below to be necessary and technologically feasible for 1973 and subsequent model year diesel-powered motor vehicles over 6,001 lbs. G.V.W.. In accordance with this finding, the standards for such vehicles are:

a. Exhaust Emissions from Diesel Engines in New 1973 and 1974 Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight Shall Not Exceed:

1) Hydrocarbons plus oxides of nitrogen (as NO_2) ---16 grams per brake horsepower hour.

2) Carbon monoxide---40 grams per brake horsepower hour.

b. Exhaust Emissions from Diesel Engines in New 1975 and Subsequent Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight Shall Not Exceed:

1) Hydrocarbons plus oxides of nitrogen (as NO_2) ---5 grams per brake horsepower hour.

2) Carbon monoxide---25 grams per brake horsepower hour.

2. Adopts new Subchapter 2, Article 2, Section 2109(f) to read:

2109. Test Procedures.

(f) The test procedures for determining compliance with exhaust emission standards, specified in accordance with Sections 39052(n) and 39109 of the Health and Safety Code are:

"California Exhaust Emission Standards, Test and Approval

Procedures for Diesel Engines in 1973 and Subsequent Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight" dated November 18, 1970.

3. Amends Subchapter 2, Article 3, Section 2208 to read:

2208. Test Procedures.

(a) The test procedures for determining compliance with the exhaust emission standards in Section 39101.5, 39102, and 39102.5 of the Health and Safety Code are: "California Exhaust Emission Standards and Test Procedures for 1971 and Subsequent Model Gasoline-Powered Motor Vehicles Under 6,001 Pounds Gross Vehicle Weight" dated November 20, 1968.

(b) The test procedures for determining compliance with the exhaust emission standards specified in accordance with Sections 39052(n) and 39109 of the Health and Safety Code are: "California Exhaust Emission Standards, Test and Approval Procedures for Diesel Engines in 1973 and Subsequent Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight" dated November 18, 1970.

State of California

AIR RESOURCES BOARD

Resoution 70-79

November 18, 1970

WHEREAS, the "Pure Air Act of 1968" (Health and Safety Code, Division 26, Chapter 4) requires the application of certain emission standards for new diesel-powered vehicles when technologically feasible, but no later than January 1, 1973; and

WHEREAS, Sections 39052(n) and 39109 of the Health and Safety Code requires the Air Resources Board to adopt exhaust emission standards and test procedures for hydrocarbons, carbon monoxide and oxides of nitrogen for new diesel-powered vehicles and diesel engines for vehicles first sold and registered in this state, no later than January 1, 1971; and

WHEREAS, Section 39052(k) requires the Air Resources Board to adopt test procedures specifying the manner in which new motor vehicles shall be approved; and

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

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby repeals, amends and adopts its regulations, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, California Administrative Code, as follows:

1. Adopts new Subchapter 1, Article 1, Section 1942 to read:

1942. Exhaust Emissions (Over 6,001 lbs. G.V.W.). The State Air Resources Board finds compliance with the standards for exhaust emissions set forth below to be necessary and technologically feasible for 1973 and subsequent model year diesel-powered motor vehicles over 6,001 lbs. G.V.W. In accordance with this finding, the standards for such vehicles are:

a. Exhaust Emissions from Diesel Engines in New 1973 and 1974 Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight Shall Not Exceed:

1) Hydrocarbons plus oxides of nitrogen (as NO_2) ---16 grams per brake horsepower hour.

2) Carbon monoxide---40 grams per brake horsepower hour.

b. Exhaust Emissions from Diesel Engines in New 1975 and Subsequent Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight Shall Not Exceed:

1) Hydrocarbons plus oxides of nitrogen (as NO_2) ---5 grams per brake horsepower hour.

2) Carbon monoxide---25 grams per brake horsepower hour.

2. Adopts new Subchapter 2, Article 2, Section 2109(f) to read:

2109. Test Procedures.

(f) The test procedures for determining compliance with exhaust emission standards, specified in accordance with Sections 39052(n) and 39109 of the Health and Safety Code are:

"California Exhaust Emission Standards, Test and Approval

Procedures for Diesel Engines in 1973 and Subsequent Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight" dated November 18, 1970.

3. Amends Subchapter 2, Article 3, Section 2208 to read:

2208. Test Procedures.

(a) The test procedures for determining compliance with the exhaust emission standards in Section 39101.5, 39102, and 39102.5 of the Health and Safety Code are: "California Exhaust Emission Standards and Test Procedures for 1971 and Subsequent Model Gasoline-Powered Motor Vehicles Under 6,001 Pounds Gross Vehicle Weight" dated November 20, 1968.

(b) The test procedures for determining compliance with the exhaust emission standards specified in accordance with Sections 39052(n) and 39109 of the Health and Safety Code are: "California Exhaust Emission Standards, Test and Approval Procedures for Diesel Engines in 1973 and Subsequent Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight" dated November 18, 1970.

State of California

AIR RESOURCES BOARD

Resolution 70-80

November 18, 1970

WHEREAS, the "Pure Air Act of 1968" (Health and Safety Code, Division 26, Chapter 4) permit the adoption by the Board of more stringent motor vehicle emission standards when necessary and technologically feasible; and

WHEREAS, Sections 39052.5, 39052.6 and 39151 (as amended during the 1970 Legislative Session) authorized the State Air Resources Board to revise its test procedures and to establish new standards for emissions from new motor vehicles; and

WHEREAS, Section 39052(k) requires the Air Resources Board to adopt test procedures specifying the manner in which new motor vehicles shall be approved; and

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

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby repeals, amends and adopts its regulations, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, California Administrative Code, as follows:

1. Adopts new Subchapter 1, Article 1, Section 1943 to read:

1943. Exhaust Emissions (Over 6,001 lbs. G.V.W.). The State Air Resources Board finds compliance with the standards for exhaust emissions set forth below to be necessary and technologically feasible for 1973 and subsequent model year gasoline-powered motor vehicles over 6,001 lbs. G.V.W. In accordance with this finding, the standards for such vehicles are:

a. Exhaust Emissions from ~~Diesel~~ gasoline-powered Engines in New 1973 and 1974 Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight Shall Not Exceed:

1) Hydrocarbons plus oxides of nitrogen (as NO_2)---16 grams per brake horsepower hour.

2) Carbon monoxide---40 grams per brake horsepower hour.

b. Exhaust Emissions from ~~Diesel Engines~~ gasoline-powered in New 1975 and Subsequent Model Year Vehicles Over 6,001 Pounds Gross Vehicle Weight Shall Not Exceed:

1) Hydrocarbons plus oxides of nitrogen (as NO_2)---5 grams per brake horsepower hour.

2) Carbon monoxide---25 grams per brake horsepower hour.

2. Amends new Subchapter 2, Article 2, Section 2109 to read:

2109. Test Procedures.

(d) The test procedures for determining compliance with Sections 39104 and 39105 of the Health and Safety Code are:

"California Exhaust Emission Standards and Test Procedures for 1970 and Subsequent Model Year Gasoline-Powered Motor Vehicles

Over 6,001 Pounds Gross Vehicle Weight" dated November 20, 1968 (Abolished at the end of 1972-Model Year).

(g) The test procedures for determining compliance with exhaust emission standards, specified in accordance with Sections 39052.5, 39052.6 and 39151 of the Health and Safety Code are:

"California Exhaust Emission Standards, Test and Approval Procedures for Engines in 1973 and Subsequent Model Gasoline-Powered Motor Vehicles Over 6,001 Pounds Gross Vehicle Weight" dated November 18, 1970.

3. Adopts new Subchapter 2, Article 3, Section 2208(c) to read:

2208. Test Procedures.

(c) The test procedures for determining compliance with the exhaust emission standards specified in accordance with Sections 39052.5, 39052.6 and 39151 of the Health and Safety Code are:

"California Exhaust Emission Standards, Test and Approval Procedures for Engines in 1973 and Subsequent Model Gasoline-Powered Motor Vehicles Over 6,001 Pounds Gross Vehicle Weight" dated November 18,1970.

State of California

AIR RESOURCES BOARD

Resolution 70-81

November, 1970

WHEREAS, Ute Liner, Inc. submitted an application and all test data for 1971 California approval of an exhaust emission control system for vehicles greater than 6,000 pounds gross vehicle weight; and

WHEREAS, the applicant's exhaust control system is described as follows:

Engine-modification type system with major elements:

(1) leaner carburetion plus idle rich limiter,

(2) retarded spark at idle,

(3) recommended maintenance.

WHEREAS, the Board finds that the system complies with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1, and Sub-Chapter 2, Article 2;

NOW, THEREFORE, BE IT RESOLVED, That this Board under the powers and authority granted in Chapter 4, commencing at Section 39080, Division 26 of the Health and Safety Code,

Issue a resolution of approval to Ute Liner Inc. with respect to the 1971-model vehicles, greater than 6,000 pounds gross vehicle weight, with engines of the following size (cubic inches): 413.

State of California

AIR RESOURCES BOARD

Staff Report

Exhaust Emission Control System Approval
1971-Model Vehicles Over 6,000 Pounds Gross Vehicle Weight

Ute Liner Inc.

November, 1970

Ute Liner Inc. has submitted an application containing all of the information required by the California Exhaust Emission Test Procedure for 1971-Model vehicles over 6,000 pounds gross vehicle weight.

Ute Liner buys their engines and Dodge chassis from Chrysler Corporation complete with the approved Chrysler emission control system. All emission testing has been conducted by Chrysler.

The applicant's exhaust emission control system is an engine-modification system.

Projected Emissions of Each Test Engine

Engine Size Cubic Inches	Test Engine Number	Projected Exhaust Emissions to 1,500 Hours	
		Hydrocarbons, ppm	Carbon Monoxide, %
413	729	130	1.33
413	91800	144	1.13

Each emission data engine met the emission standards of 275 ppm hydrocarbon and 1.5% carbon monoxide.

Based on the test data and other information submitted by the applicant and Chrysler Corporation, the staff finds that Ute Liner Inc. exhaust control system for vehicles over 6,000 pounds gross vehicle weight meets California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-81.

State of California

AIR RESOURCES BOARD

Resolution 70-82

November 18, 1970

WHEREAS, Toyo Kogyo Company, Ltd., Japan, submitted an application and all test data for approval of its emission control systems for the 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection type exhaust emission control system for their reciprocating engines with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) recommended maintenance.

B. Air-injection and thermal-reactor type of exhaust control system for their Wankel engines with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) thermal reactor,

(4) recommended maintenance.

C. Crankcase-storage type evaporative emission control system for their reciprocating engines with major elements:

(1) positive sealing filler cap,

(2) vapor-liquid separator,

(3) vapor vent line to crankcase.

D. Oil Pan-Carbon storage evaporative emission control system for their Wankel engine with major elements:

(1) positive sealing filler cap,

(2) vapor-liquid separator,

(3) vapor vent line to oil pan,

(4) carbon canister.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval to Toyo Kogyo Company Ltd., Japan, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 71.39, 96.82, 109.60 and 30X2.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Toyo Kogyo Company, Ltd.

November 18, 1970

Toyo Kogyo Company, Ltd. has submitted an application for approval of the emission control systems to be used on its 1971-model vehicles less than 6,001 pounds gross vehicle weight.

The applicant's emission control systems are an air injection type of exhaust emission control system and a crankcase storage type of evaporative emission control system for their reciprocating type of engine, and a combination air injection-thermal reactor type of exhaust emission control system and a combination oil pan-carbon storage type of evaporative emission control system for their Wankel engine.

Projected Emissions of Each Test Vehicle

Engine Size Cubic Inches	Test Vehicle No.	Control System*	Projected Exhaust Emissions at 50,000 Miles HC-gms/mi	CO-gms/mi	NO_2 gms/mi	Projected Evaporative Emissions at 50,000 Miles HC-gms/test
71.39	STA-124785	AI-CK	1.5	16	2.8	1.3
	STA-124788	AI-CK	1.5	17	2.9	1.4
96.82	SNA-18016	AI-CK	1.1	17	3.0	1.1
	SNA-7760	AI-CK	1.5	18	3.2	1.1
109.6	SVAV-10156	AI-CK	0.9	19	3.1	1.2
	SVAV-10059	AI-CK	1.1	21	3.8	1.1
30X2	M10A-27930	AR-OP	1.8	13	1.0	3.2
Rotary	M10A-16252	AR-OP	2.0	17	0.9	3.1

*AI - Air Injection
*AR - Air Injection and Thermal Reactor Combination

*CK - Crankcase Storage
*OP - Oil Pan and Carbon Storage Combination

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Toyo Kogyo Company, Ltd., exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-82.

State of California

AIR RESOURCES BOARD

Staff Report

1971 Emission Control Systems Approval

Toyo Kogyo Company, Ltd.

January 20, 1971

Toyo Kogyo Company, Ltd., has submitted an application for approval of the emission control systems to be used on an additional 1971-model vehicle, less than 6,001 pounds gross vehicle weight, for the Mazda RX-2 with a Wankel engine.

The applicant's emission control systems are a combination air injection-thermal reactor type of exhaust emission control system and a combination crankcase and carbon storage type of evaporative emission control system.

Projected Emissions of Each Test Vehicle

Engine Size CID	Test Vehicle No.	Projected Exhaust Emissions at 50,000 Miles			Projected Evaporative Emissions at 50,000 Miles
		HC-gms/mi	CO-gms/mi	NO_2 gms/mi	HC-gms/test
35X2	1	1.3	8	1.2	2.88
35X2	2	1.5	9	1.3	1.9

Each test vehicle met the emission standards of 2.2 grams per mile hydrocarbons, 23 grams per mile carbon monoxide, 4 grams per mile oxides of nitrogen, and 6 grams per test for evaporative emissions.

Based on the test data and other information submitted by the applicant, the staff finds that the Toyo Kogyo Company, Ltd., exhaust and evaporative emission control systems for vehicles less than 6,001 pounds gross vehicle weight meet California requirements for the 1971-model year. The staff, therefore, recommends adoption of Resolution 70-82-A.

State of California

AIR RESOURCES BOARD

Resolution 70-82-A

January 20, 1971

WHEREAS, Toyo Kogyo Company, Ltd., Japan, submitted an application and all required test data for approval of its emission control systems for an additional 1971-model vehicle the Mazda RX-2; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Air-injection and thermal-reactor type of exhaust control system for their Wankel engines with major elements:

(1) rotary-vane air pump,

(2) air injection into each exhaust port,

(3) thermal reactor,

(4) recommended maintenance.

B. Combination crankcase and carbon-storage type evaporative emission control system for their Wankel engine with major elements:

(1) positive sealing filler cap,

(2) condenser tank,

(3) carbon canister,

(4) vapor vent line to crankcase.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, Article 2, 3, and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a resolution of approval to Toyo Kogyo Company Ltd., Japan, with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with engines of the following sizes (cubic inches): 35 x 2.

State of California

AIR RESOURCES BOARD

Resolution 70-83

November 18, 1970

WHEREAS, Fiat, S.p.A. has submitted an application and all test data for approval of its emission control systems for its 1971-model vehicles; and

WHEREAS, the applicant's emission control systems are described as follows:

A. Engine-modification exhaust control system with major elements:

(1) modified carburetor,

(2) leaner carburetor calibration including idle,

(3) retarded spark at idle and low engine speeds,

(4) deceleration throttle positioner,

(5) recommended maintenance.

B. Carbon-storage evaporative emission control system with major elements:

(1) fuel tank with sealed cap,

(2) activated carbon canister,

(3) three-way control valve with connections to fuel tank, carbon canister and fuel tank air inlet.

WHEREAS, the Board finds that the systems comply with the California Administrative Code, Title 13, Chapter 3, Sub-Chapter 1 and Sub-Chapter 2, Article 2, 3 and 6;

NOW, THEREFORE, BE IT RESOLVED, That this Board

Under the powers and authority granted in Chapter 4, commencing at Section 39080, of the Health and Safety Code,

Issue a certificate of approval with respect to the 1971-model vehicles, 6,000 pounds or less gross vehicle weight, with 55.08, 68.1, 87.75 and 98.13 cubic inch size engines.

State of California

AIR RESOURCES BOARD

Resolution 70-84

November 18, 1970

WHEREAS, Section 27156 of the Vehicle Code was amended and becomes effective on November 23, 1970; and

WHEREAS, Section 27156 does not apply to an alteration, modification, or modifying device, apparatus, or mechanism found by resolution of the State Air Resources to not reduce the effectiveness of any required motor vehicle pollution control device; and

WHEREAS, General Motors Corporation proposes timing adjustments and/or modification of distributor calibration on their 1960 through 1970 model engines; and

WHEREAS, General Motors Corporation has shown by tests that these modifications permit operation of their vehicles on unleaded or low-lead fuel with no measurable change in hydrocarbon and carbon monoxide emissions and with an average reduction in oxides of nitrogen emissions of 20 to 25 percent.

NOW, THEREFORE, BE IT RESOLVED, That a resolution be issued by this Board to the effect that it finds that the proposed General Motors Corporation modifications to their 1966 through 1970 model year vehicles comply with the requirements of Section 27156 of the Vehicle Code in that they:

(1) Do not reduce the effectiveness of any required motor vehicle pollution control device; or

(2) Result in emissions which are at levels which comply with existing state or federal standards for that model year of the vehicle being modified or converted.

STATE OF CALIFORNIA
AIR RESOURCES BOARD

RESOLUTION 70-85

November 19, 1970

WHEREAS the Air Resources Board, is directed by Section 39298.7 of the Health and Safety Code to adopt and publish a list of orchard and citrus heaters which it finds produce no more than one gram per minute of unconsumed solid carbonaceous material; and

WHEREAS, ten air pollution control districts in the State of California have adopted such lists; and

WHEREAS, there are substantial differences in approved orchard heater lists from district to district; and

WHEREAS, the 13 orchard heaters listed are approved by the majority of these ten air pollution control districts; and

WHEREAS, these orchard heaters have been shown in tests conducted by the University of California and local air pollution control districts to produce less than one gram per minute of unconsumed carbonaceous material.

Air Resources Board
Approved Orchard or Citrus Heaters

Heater Type	Maximum Primary Air Orifice in Square Inches if Applicable
Coke Heater	-
Exchange Model 7" dia Stack	0.606
Hy-Lo 230	0.606
Jumbo Cone	0.196
Lazy Flame 18"	1.212
Lazy Flame 20"	0.606
Lazy Flame 24"	0.606
Lemora	0.606
National Double Stack	0.802
National Junior	1.212
Pipe System-Kittle	-
Return Stack	-
Return Stack, Internal	-

STATE OF CALIFORNIA
AIR RESOURCES BOARD

November 18-19, 1970

ORCHARD HEATER REGULATIONS

Section 39298.7 (AB 16, Ketchum) directs the Board to adopt and publish a list of orchard and citrus heaters which are found to produce no more than one gram per minute of unconsumed solid carbonaceous material. No new orchard or citrus heater produced or manufactured shall be sold for use against frost damage after January 1, 1971, unless it has been approved by the Board. No person shall use any orchard or citrus heater after January 1, 1975, unless it has been approved by the Board or unless it does not produce more than one gram per minute of unconsumed solid carbonaceous material. Local air pollution control districts may, however, prevent the use of unapproved heaters on or after January 1, 1973.

AB 16, however, provides that the chapter on burning, which includes among other provisions Section 39298.7, shall not supersede any rule or regulation of any air pollution control district which rules and regulations have been in effect for 5 or more years prior to the effective date of the chapter. There are 7 districts that adopted rules and regulations more than five years prior to the effective date of AB 16. These are: San Francisco Bay Area, Sacramento, Humboldt, Los Angeles, Orange, Riverside, and San Bernardino County Air Pollution Control Districts. San Francisco Bay Area, Humboldt and Sacramento, however, have not adopted a list of approved orchard heaters.

Background of Orchard Heater Regulations in California

During the winter of 1937, a large number of orchard heaters were used for a six week period to reduce frost damage to citrus crops in Southern California. The resulting air pollution problem prompted the passing of a Los Angeles County ordinance which limited emissions from orchard heaters to one gram per minute. In 1947, the State Legislature amended the State Health and Safety Code to provide for the formation of county air pollution control districts, and to enable these districts to regulate emissions from stationary sources, including orchard heaters.

Types of Orchard Heaters

Basically, there are five types of orchard heating equipment: (1) irrigation sprinkler systems, (2) wind machines, (3) solid fuel, coke type heaters, (4) pipeline heaters, and (5) distillation type heaters.

Irrigation sprinkler systems and wind machines do not involve the generation of heat by combustion, hence, are not considered to be a source of air pollution.

In the remaining three, gas, liquid or solid fuels are burned. These may, therefore, be a source of air pollutants. Solid fuel and pipeline heaters (see Figure 1) which generally do not emit more than one gram per minute of carbonaceous material are usually approved as a class. Distillation type, when improperly operated, can emit carbonaceous material in excess of one gram per minute in the form of heavy black smoke. Emissions from this type of heater can be minimized through regulation of fuel burning rate. The regulations on orchard heaters pertain mainly to this type, and specify operating conditions which would not lead to excess emissions.

A distillation heater has three main components; (1) the bowl or fuel reservoir, (2) the bowl cover and primary air orifice regulator, and (3) the stack. (See Figure 2). It is the physical characteristic of the stack that makes one brand of heater different from another. Each type stack has unique dimensions and arrangements of secondary air intake louvers to regulate combustion. The primary air orifice on the bowl cover controls the fuel burning rate of a distillation heater by limiting the oxygen supply necessary for combustion.

Approved Lists of Orchard Heaters

The University of California tested emissions from orchard heaters during the 1930's. During 1949-50 the Los Angeles County Air Pollution Control District tested available heaters. From the data developed, the district adopted a list of approved orchard heaters producing less than one gram of solid carbonaceous material per minute. The district prescribed the specific size of the primary air orifice. Since 1950, only three requests to approve new or modified orchard heaters have been received by Los Angeles County. In each case, the applicant was asked to furnish test data from a qualified private laboratory as to the amount of solid matter discharged.

Ten air pollution control districts in California have adopted a list of approved orchard heaters. These are Kings, Los Angeles, Monterey-Santa Cruz, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Tulare and Ventura. The lists differ from district to district, both in terms of which makes of heaters are approved and as to the size of the primary air orifice required on a given type of heater. For example, Los Angeles and Monterey-Santa Cruz County Air Pollution Control Districts both list as approved a "Hy-Lo 148 Special" orchard heater, provided the primary air orifice is 0.606 square inches or less. Orange and San Diego County Air Pollution Districts, on the other hand, require 0.5 square inches or less for the same type of heater. Riverside County specifically bans this heater.

San Bernardino County regulated fuel consumption by setting limits on the amount of fuel that may be consumed per hour. The remaining districts regulate fuel consumption by limiting the size of the primary air orifice.

The following table lists approved orchard heaters by county, the primary air orifice requirements, and the fuel consumption rate where applicable.

TABLE I

COUNTY AIR POLLUTION DISTRICT
LIST OF APPROVED ORCHARD HEATERS
(November, 1970)

Heater Type	Kings	Los Angeles (Max. Orifice Area Sq. in.)	Monterey-Santa Cruz (Max. Orifice Area Sq. in.)	Orange (Max. Orifice Area Sq. in.)	Riverside	San Bernardino (Max. Fuel Rate lbs. per hr.)	San Diego (Max. Orifice Area Sq. in.)	San Luis Obispo	Tulare	Ventura (Max. Orifice Area Sq. in.)
1. Coke Heater	x		x	x		x	x		x	x
2. Cone Stack (mfd prior to 1949 6" throat)				0.5			0.5			0.5
3. Exchange Model 6" dia stack		Ban		0.5	Ban		0.5	Ban		0.5
4. Exchange Model 7" dia stack		0.606		0.8		7	0.8	0.606		0.606
5. Hy-Lo Drum		Ban			Ban	8		Ban		Ban
6. Hy-Lo 148		0.606	0.606		Ban	8		0.606		0.606
7. Hy-Lo 148 Special		0.606	0.606	0.5	Ban	8	0.5	0.606		0.606
8. Hy-Lo 230		0.606		0.8		6	0.8	0.606		0.606
9. Hy-Lo 1929		0.606			Ban			0.606		0.606
10. Hy-Lo Double Stack		0.606			Ban			0.606		0.606
11. Jumbo Cone	x	0.196	0.196		x	7		0.196	x	0.196
12. Lazy Flame 18"	x	1.212	1.212	1.2	x	6	1.2	1.212	x	1.212
13. Lazy Flame 20"			0.606							
14. Lazy Flame 24"	x	0.606	0.606	0.8	x	6	0.8		x	0.606
15. National Double Stack		0.802						0.802		0.802
16. National Junior		1.212		1.2		6	1.2	1.212		1.212
17. Pipe System-Kittle	x		x	x	x	x	x		x	x
18. Return Stack	x		x	x	x	x	x		x	x
19. Return Stack, Internal	x				x				x	x
20. Surplus Chemical Warfare Service Smoke Generator		0.802						0.802		0.802
21. 7" Straight Stack					x	7				
22. Lemora		0.606	0.606	0.8	x	8	0.8	x		0.606

x - Approved
Blank - Neither approved nor banned

Of the 22 orchard heaters presently approved for use in the various air pollution control districts, only one is accepted by all the districts with approved lists. Even with this one, some counties specify orifice size, others don't. Table 2 lists heaters approved by the majority of the districts along with the most restrictive primary air orifice size, none of these is banned by any district.

TABLE 2

Heater Type	Maximum Primary Air Orifice in Square Inches if Applicable
Coke Heater	-
Exchange Model 7" dia Stack	0.606
Hy-Lo 230	0.606
Jumbo Cone	0.196
Lazy Flame 18"	1.212
Lazy Flame 20"	0.606
Lazy Flame 24"	0.606
Lemora	0.606
National Double Stack	0.802
National Junior	1.212
Pipe System-Kittle	-
Return Stack	-
Return Stack, Internal	-

Recommendations

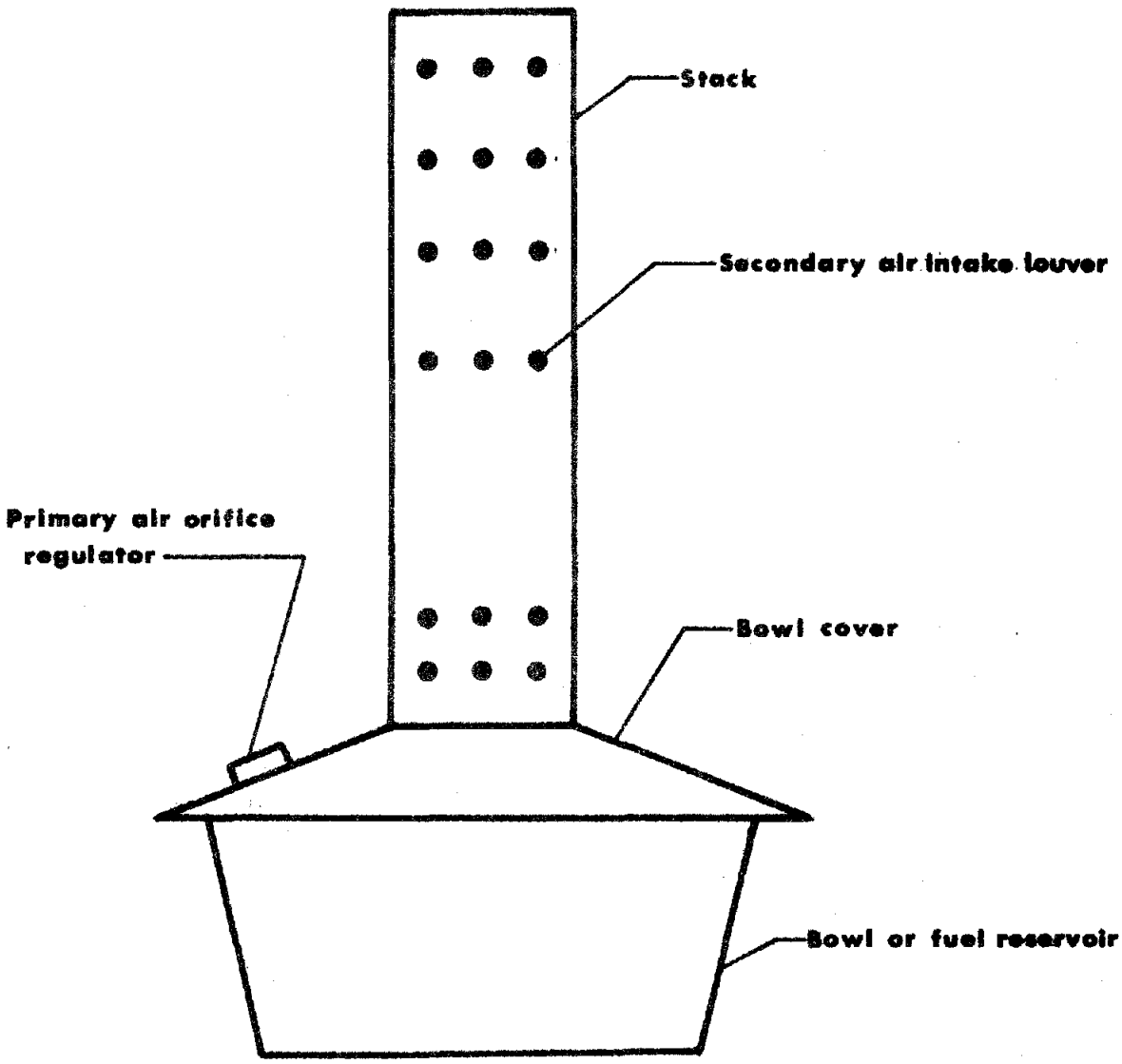
It is recommended that the 13 heaters listed in Table 2 with the indicated primary air orifice size be included in the Air Resources Board initial approved list. It is also recommended that persons desiring to add heaters to the State's approved list submit an application and test data to the Board for evaluation.

Figure 2

DISTILLATION TYPE

ORCHARD HEATER

COMPONENTS



State of California

AIR RESOURCES BOARD

Resolution 70-86
November 18, 1970

WHEREAS, Mrs. Howard Younglove has served faithfully as a member of the California Air Resources Board since the Board was established; and

WHEREAS, she has made valuable contributions to her fellow Californians and to her State government in the cause of cleaner air; and

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

NOW, THEREFORE BE IT RESOLVED, that the present members of the Air Resources Board authorize the Chairman to present her with a commendation certificate in which we gratefully acknowledge her service and publicly commend her for a job well done.

State of California

AIR RESOURCES BOARD

Resolution 70-87

December, 1970

WHEREAS, Allied Propane Service, Seaport Avenue, Richmond, California 94804, has applied for eight (8) permits for the testing of an experimental motor vehicle pollution control device for approval by this Board; and

WHEREAS, the device comprises an L.P.G. carburetion system for vehicles under 200 cu. in.; and

WHEREAS, Section 39181 of the Health and Safety Code, authorizes the Board to issue such permits;

NOW, THEREFORE, BE IT RESOLVED, That Allied Propane Service is hereby granted eight (8) permits for testing an experimental control device for a period of one year from this date.

December 15, 1970

State of California

AIR RESOURCES BOARD

Resolution 70-88

December, 1970

WHEREAS, K&B Manufacturing Company, a subsidiary of Aurora Plastics, Inc. is no longer the owner of the Vac-U-Tron Crankcase Emission Control System as stated in Resolution 65-23; and

WHEREAS, Automotive Associates International, Inc. has submitted documents verifying that they are now the legal owners of the Vac-U-Tron Crankcase Emission Control System; and

WHEREAS, Automotive Associates has submitted documents to satisfy Section (G) Criteria (g) of the California Test Procedure and Criteria for Motor Vehicle Crankcase Emission Control; and

WHEREAS, there has been no mechanical or physical change in the system which is described as follows:

> The K&B Vac-U-Tron Crankcase Emission Control System consists of an adjustable orifice connecting between the crankcase and the intake manifold. A tube from the crankcase to the inside of the air cleaner permits blowby which exceeds the capacity of the valve to pass into the carburetor. This tube contains a check-valve cap which allows flow to the air cleaner but not back into the crankcase. No provision is made for ventilating air to enter the crankcase. The cap is designed so that there will not be any substantial pressure built up in the crankcase. Upon installation of the system, the valve is to be adjusted with a special tube to obtain a crankcase vacuum of five inches of mercury (68 inches of water) on a warmed-up car at idle.

NOW, THEREFORE BE IT RESOLVED, That this Board rescind Resolution 65-23 and issue a Resolution of Accreditation to the Automotive Associates International Vac-U-Tron" Crankcase Emission Control System for used motor vehicles in Classifications b thru f as designated by Title 13, California Administrative Code, Chapter 3, Sub-Chapter 1, Article 1, Section 2004.

State of California

AIR RESOURCES BOARD

Staff Report

Report on the Change of Ownership of the K&B Vac-U-Tron Crankcase Emission Control System

December, 1970

Introduction

The K&B Crankcase Emission Control System was certified by the former Motor Vehicle Pollution Control Board on September 15, 1965 under Resolution Number 65-23.

A copy of the staff report dated September 15, 1965 and Resolution 65-23 is attached.

Section (G) Criteria (g)

Section (G), Criteria (g) paragraph (4) of the "California Test Procedure and Criteria for Vehicle Crankcase Emission Control" states as follows:

> Sale of Company or Assets
>
> The Board must be notified in writing prior to the sale or distribution of the Company or its assets. The Board may withdraw accreditation of the device if the new owners do not meet the criteria in this section.

New Owners

The new owner is the Automotive Associates International, Inc., 25930 Belle Porte Avenue, Harbor City, California 90710.

Documents Submitted

Automotive Associates has submitted a copy of the Agreement form between K&B, signed by John E. Bradbeck, Vice President of the K&B Division of Aurora Plastics Corporation (former owner), and Donald D. Binder, President of Automotive Associates International (new owner). They also submitted a copy of the "Notice of Relinquishment of License" and a copy of the "Mutual Release."

Report on the Change of ownership of the K&B Vac-U-Tron Crankcase Emission Control System

Financial Responsibility

Section (G) Criteria (g) contains the following:

(1) Owners or Stockholders Equity

In order that the applicant be capable of properly producing the device, training installers, servicing complaints, etc. the net worth exclusive of intangible assets must be in excess of $100,000.

The above balance sheet must have been examined by a certified public accountant and his statement must accompany the financial report.

The above financial balance sheet shall apply to a date no more than 90 days prior to consideration of certification of the device.

Automotive Associates has submitted a financial statement which appears satisfactory.

(2) Insurance

The applicant must carry the normal product liability insurance.

Property Damage (Minimum)

$10,000 each occurrence
$25,000 aggregate

Bodily Injury (Minimum)

$100,000 each person
$300,000 each occurrence

A 60-day notice must be given to the Board before the insurance may be reduced or cancelled.

Automotive Associates has submitted an insurance policy which appears satisfactory.

(3) Distributors

The applicant must establish within six (6) months after certification an adequate number of warehouse distributors and service representatives throughout California to assure proper coverage of the market. This is to assure ready availability of parts and service information.

Report on the Change of Ownership of the
K&B Vac-U-Tron Crankcase Emission Control
System

The new Company is presently servicing those devices originally sold by the previous owner. They also submitted a letter of intent from the T. A. Mitchell Company of San Francisco to distribute the device in Northern California.

Recommendation

Since the K&B Manufacturing Company is no longer the owner of the Vac-U-Tron Crankcase Emission Control System, the staff recommends that Resolution 65-23 be rescinded.

Since Automotive Associates International Incorporated has fulfilled the requirements of Section (G) Criteria (g) of the "California Test Procedure and Criteria for Motor Vehicle Crankcase Emission Control", and since there has been no mechanical or physical change in the crankcase emission control device itself, the staff recommends adaption of Resolution 70-88.

State of California

AIR RESOURCES BOARD

RESOLUTION 70-89

December 15, 1970

WHEREAS, the "Pure Air Act of 1968" (Health and Safety Code, Division 26, Chapter 4) permits the adoption by the Board of more stringent motor vehicle emission standards when necessary and technologically feasible; and

WHEREAS, Sections 39052(k), 39052.5, and 39052.6 authorize the State Air Resources Board to revise its test procedures and to establish new standards for emissions from new motor vehicles; and

WHEREAS, Section 39151 states that the Air Resources Board shall not approve any engine and transmission combination commencing with 1972 model year motor vehicles, which requires a gasoline having a research octane number greater than 91;

NOW, THEREFORE, BE IT RESOLVED, That the Air Resources Board hereby repeals, amends and adopts its regulations, Title 13, Chapter 3, Subchapter 1 and Subchapter 2, California Administrative Code, as follows:

1. Adopts new Subchapter 1, Article 1, Section 1944 to read:
1944. Exhaust Emissions (1972 Model Vehicles Under 6,001 lbs. G.V.W.) The State Air Resources Board finds compliance with the standards for exhaust emissions set forth below to be necessary and technologically feasible for 1972 model year gasoline-powered motor vehicles under 6,001 lbs. G.V.W. In accordance with this finding, the standards for such vehicles are: Exhaust Emissions from Gasoline-Powered Engines in 1972 Model Year Vehicles under 6,001 lbs. G.V.W. determined by optional test procedures given in Subchapter 2, Section 2109(h) and 2208(b) shall not exceed:

    a. Hydrocarbons 3.2 gms/mi

    b. Carbon Monoxide 39 gms/mi

    c. Oxides of Nitrogen (NO_2) 3.2 gms/mi (by hot 7-mode cycle)

2. Adopts Subchapter 2, Article 2, Section 2109(h) to read:
2109. Test Procedures - (h) The test procedures for determining compliance with Exhaust Emission Standards specified in Sections 39101.5, 39102 and 39102.5 of the Health and Safety Code and Section 1944, Title 13,

California Administrative Code are those: "(Those set forth in California Exhaust Emission Standards for 1972 Model Gasoline-Powered Motor Vehicles Under 6,001 lbs. G.V.W.", adopted by the Air Resources Board December 15, 1970.

3. Adopts Subchapter 2, Article 3, Section 2208(d) to read: (d) The test procedures for determining compliance with Exhaust Emission Standards specified in Sections 39101.5, 39102 and 39102.5 of the Health and Safety Code and Section 1944, Title 13, California Administrative Code are those set forth in "California Exhaust Emission Standards for 1972 Model Gasoline-Powered Motor Vehicles Under 6,001 lbs. G.V.W." adopted by the Air Resources Board on December 15, 1970.

FINDING OF EMERGENCY

The adoption of the above regulations is necessary for the immediate preservation of the public, health, safety and general welfare in that on November 10, 1970, the U. S. Department of Health, Education and Welfare adopted new test procedures applicable to 1972 and subsequent model light duty vehicles. Present California test procedures may not be comparable with these new federal procedures.

Vehicle manufacturers must soon begin testing vehicles to insure compliance of 1972 models with California emission standards. In order to eliminate uncertainty and insure the continued applicability and effectiveness of California emission standards and test procedures, these regulations must be adopted and become effective immediately. Accordingly, these regulations are adopted to become effective immediately.

AIR RESOURCES BOARD

State of California

RESOLUTION 70-89-A

WHEREAS, the State Air Resources Board, on December 15, 1970, adopted Section 1944 of Title 13, California Administrative Code, setting forth exhaust emission standards and test procedures for 1972 model-year gasoline-powered motor vehicles under 6,001 pounds G.V.W.; and

WHEREAS, Section 1944 was adopted as an emergency regulation as provided for in Section 11421(b) of the Government Code;

NOW THEREFORE BE IT RESOLVED, That after public hearings held pursuant to Section 11422.1(a) of the Government Code, the State Air Resources Board hereby reaffirms the action taken on December 15, 1970 adopting Section 1944 of Title 13, California Administrative Code.