

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-30
Relating to Exemptions under Section 27156
of the Vehicle Code

ENVIRONMENTAL GASMIZER PRODUCTS, INC.
"GASMIZER"

Pursuant to the authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Section 39023 of the Health and Safety Code;

IT IS ORDERED AND RESOLVED: That the installation of the "Gasmizer" manufactured by Environmental Gasmizer Products, Inc. has been found to not reduce the effectiveness of required motor vehicle pollution control devices and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1974 and older model-year vehicles.

The device consists of a reed type air bleed valve which allows a small amount of filtered air to enter the engine. The valve is inserted in the PCV line between the PCV valve and intake manifold.

This Executive Order is valid provided that installation instructions for this device will not recommend tuning the vehicle to specifications different than those listed by the vehicle manufacturer.

Changes made to the design or operating conditions of the device as originally submitted to the Air Resources Board for evaluation that adversely affect the performance of the vehicle's pollution control devices shall invalidate this Executive Order.

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall have prior approval of the Air Resources Board.

This Executive Order does not constitute any opinion as to the effect that the use of this device may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER 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 "GASMIZER" DEVICE.

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.

Section 17500 of the Business and Professions Code makes unlawful, untrue or misleading advertising and Section 17534 makes violation punishable as a misdemeanor.

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

"39130. No person shall install, sell, offer for sale, or advertise, or, except in an application to the board for certification of a device, represent, any device as a motor vehicle pollution control device, unless that device has been certified by the board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this section is a misdemeanor."

"39184. (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the board for accreditation of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been accredited by the board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as an accredited device which, in fact, is not an accredited device. Any violation of this subdivision is a misdemeanor."

Any apparent violation of the conditions of this Executive Order will be submitted to the Attorney General of California for such action as he deems advisable.

Executed at Sacramento, California, this 19 day of April, 1974.

WILLIAM SIMMONS
Executive Officer

State of California

AIR RESOURCES BOARD

April 12, 1974

Staff Report

Evaluation of the Environmental Gasmizer Products, Inc.
"Gasmizer"
for Exemption from the Prohibitions of
Section 27156 of the Motor Vehicle Code

I. Introduction

Environmental Gasmizer Products, Inc. of San Diego, California has applied for exemption from the prohibitions of Section 27156 of the Vehicle Code for its "Gasmizer" reed type air bleed valve. This section prohibits the installation of any device which reduces the effectiveness of the motor vehicle emission control system. The applicant is requesting the exemption be granted for the two following groups:

- a. All 1970 and older model-year vehicles.
- b. All 1971 and newer model-year vehicles.

II. Device Description and Function

The device is a pressure sensitive reed type air bleed valve which is installed in the line connecting the positive crankcase ventilation valve and the intake manifold. When the vehicle operates under high load or acceleration conditions, the device will admit air into the positive crankcase ventilation line. As the valve is normally open, a slight intake manifold vacuum is required to close the valve. The manufacturer states that this condition exists, over the negative pressure range of 0.0 inches to 4.5 in. Hg. The device has a pressure sensitive reed valve which

stops the flow of the external air into the intake manifold when the vehicle is idling, cruising, or decelerating and the vacuum at the "Gasmizer" valve is greater than 4.5 in. Hg. For positive pressure such as the case of backfiring, the "Gasmizer" valve will also prevent gases from escaping through the valve to the atmosphere.

III. System Evaluation

A. Applicant's Data

The applicant has submitted the following:

- 1) Scott Research Laboratory data report No. 2189 01 10 73 entitled "Bench flow test of a Combustion Regulator and an Air Jet".
The bench flow data submitted is a comparison between the "Combustion Regulator" and the "Air Jet" air bleed valves. This data did not show the maximum flow capability of the valve at a manifold vacuum above 2.0 in. Hg. Below 2.0 in. Hg the flow range was similar to the Air Jet valve.
- 2) Scott Research Laboratory data report No. 2190 01 10 73 entitled "Exhaust emission and fuel consumption evaluation of a Gasmizer".
This report shows exhaust emissions obtained from hot CVS tests performed on the following vehicles:
 - (a) 1973 Ford Torino, 350 CID, 2 Bbl. Carb., Auto Trans. (826 GHL).
 - (b) 1965 Dodge Dart, 273 CID, 2 Bbl. Carb., Auto Trans. (PHT 166).
 - (c) 1967 Chevrolet Impala, 327 CID, 2 Bbl. Carb., Auto Trans. (TVS 672).

The data from these tests are shown in Table I.

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In general, the emissions were reduced when using the "Gasmizer" device. The hydrocarbons were reduced by an average of 5.2%, the carbon monoxides were reduced by an average of 16.6%, but the oxides of nitrogen were increased by an average of 4.9%.

The increase in HC and NOx are within normal test variability. Therefore, these data show that the installation of the "Gasmizer" device will have no adverse effects on existing exhaust emission control system of a motor vehicle.

B. Bench Flow Test Performed by ARB

The Air Resources Board performed bench flow tests at its laboratory to verify the applicant's claims. The test data is shown in Figure 1.

This ARB data did not show good correlation with that presented by the applicant due to a difference in test method.

The ARB bench flow test measured the air bleed rate by varying the vacuum downstream from the valve with the PCV inlet port closed. The ranges of vacuum used in the test are those experienced during normal engine operation. A maximum flow rate of 2.3 CFM was observed when the vacuum varied between 0 in. to 6 in. Hg. Under normal road load, vehicles operate in this vacuum range for a minimal period. The staff considers the volume of air that flows through the "Gasmizer" into the intake manifold during this period to be insignificant. No flow rate was observed when vacuum exceeded 10 inches Hg. The data obtained show that the device meets the maximum flow criteria established by the ARB for all engine sizes.

C. Fuel Evaporative Emissions

Based upon similar devices tested previously by the ARB, the staff does not expect significant fuel vapor losses escaping to the atmosphere through the "Gasmizer".

IV. Conclusion and Recommendation

The air flow permitted by the "Gasmizer" is within the established criteria for all natural aspirated gasoline engines with carburetor fuel delivery systems.

Therefore, the staff recommends that the "Gasmizer" air bleed valve manufactured by Environmental Gasmizer Products, Inc. of San Diego, California be granted an exemption from the prohibitions of Section 27156 for 1974 and older model year vehicles.

Table I
 Exhaust Emission Data of
 Gasmizer
 1972 Federal Hot Start CVS Emissions (gm/mile)

| Test Vehicle | Test Type | HC | CO | NOx |
|------------------|-----------|------|-------|------|
| Ford | Baseline | 2.28 | 33.30 | 2.04 |
| | Device | 2.10 | 26.93 | 2.14 |
| Dodge | Baseline | 4.55 | 37.33 | 5.06 |
| | Device | 4.12 | 25.69 | 5.39 |
| Chevrolet | Baseline | 3.53 | 49.80 | 3.22 |
| | Device | 3.60 | 47.84 | 3.30 |
| Average Baseline | | 3.45 | 40.14 | 3.44 |
| Average Device | | 3.27 | 33.49 | 3.61 |
| % Change | | -5.2 | -16.6 | +4.9 |

(Negative sign indicates reduction)

SCHEM AIR FLOW

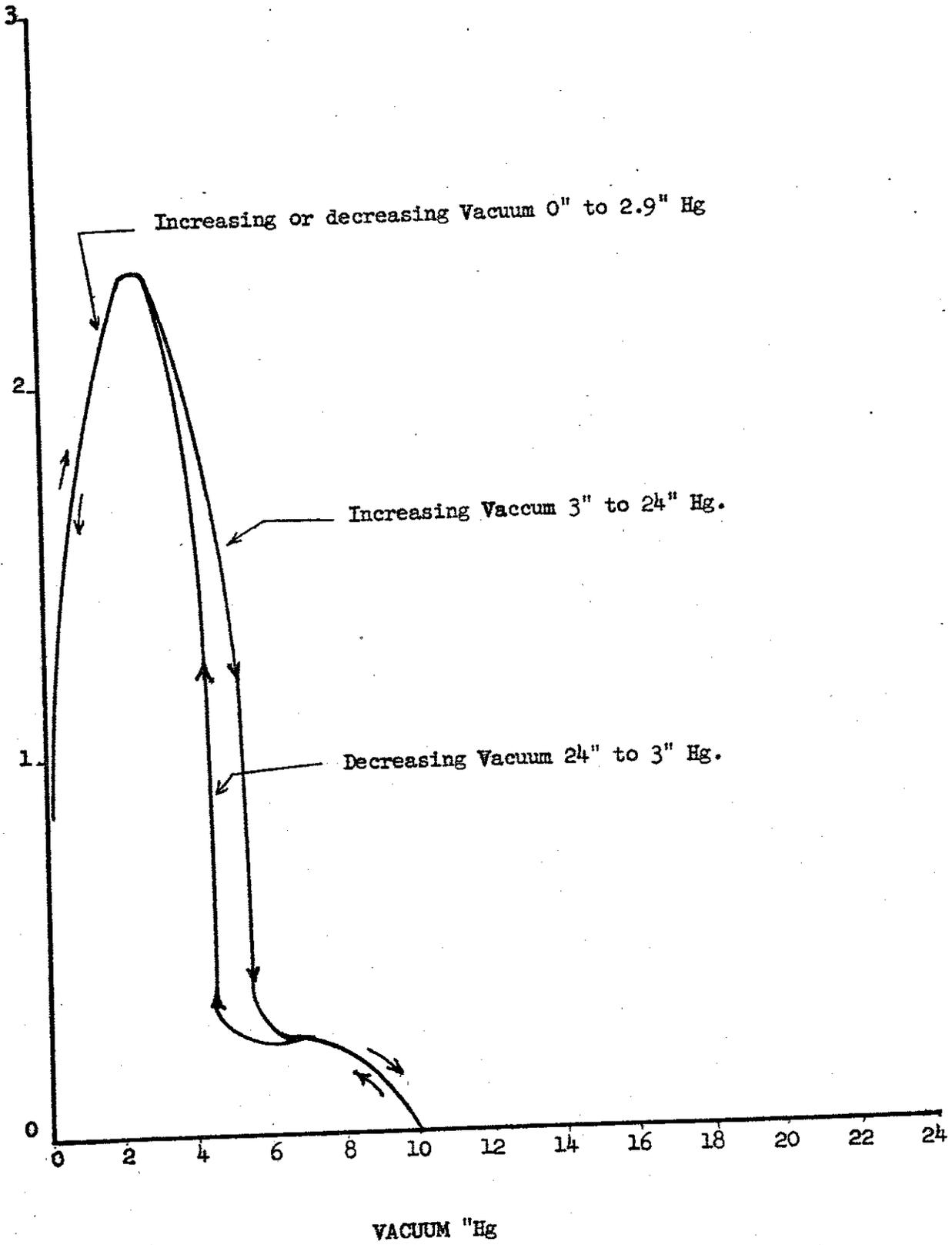


Figure 1