

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-41
Relating to Exemptions under Section 27156
of the Vehicle Code

GAS MIZER INCORPORATED
"GAS MIZER"

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 "Gas Mizer" device manufactured by Gas Mizer Incorporated, 8399 Topanga Canyon Blvd., Canoga Park, California 91304 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 except the following:

1. All vehicles equipped with a breakerless or electronic ignition system.
2. All 1966-70 model-year vehicles equipped with a Dana or Carter Nox retrofit device using an electronic speed sensor.

The "Gas Mizer" is a single wire coil wound in alternating directions with a non-magnetic core. The coil is encapsulated in a plastic mold. The device also includes two snap-fit electronic suppression cables.

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 be prohibited unless prior approval is obtained from 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 "GAS MIZER" 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 3 day of October, 1974.

WILLIAM SIMMONS
Executive Officer

State of California
AIR RESOURCES BOARD

September 27, 1974

Staff Report

Evaluation of the Gas Mizer Inc.,
"Gas Mizer" Non-Magnetic
Coil for Exemption from the
Prohibitions of Section 27156 of the
Vehicle Code

I. Introduction

Gas Mizer, Incorporated, 8399 Topanga Canyon Blvd., Canoga Park, California 91304 has applied for exemption from the prohibitions of Section 27156 of the Vehicle Code for its "Gas Mizer" device. This section prohibits the installation of any device which may reduce the effectiveness of the motor vehicle emission control systems. The applicant is requesting the exemption be granted for all 1974 and older model-year vehicles except the following:

1. All vehicles equipped with a breakerless or electronic ignition system.
2. All 1966-70 model-year vehicles equipped with a Dana or Carter NOx retrofit device using an electronic speed switch.

II. System Description and Function

The device is installed between the OEM ignition coil and distributor. It consists of a non-magnetic core (3/4 in. dia. wooden dowel 8-1/2 inches long) with electrical connection provided at

each end. The dowel is wrapped at the coil end with 11 turns of 300 volt FR-1 Rome cable (300 gauge) followed by 47 turns of 23 gauge Nyleze wire. The helix angle of the wrap is then reversed and 105 more turns are made with the Nyleze wire. Another helix angle reversal is made to wrap the last 57 turns at the distributor end. A photograph of the device is shown in Figure 1.

The applicant claims that the device will improve fuel economy.

III. Device Evaluation

A. Applicant's Tests

Gas Mizer submitted data that is intended to show the effects of the device on fuel economy. A 1973 Pinto was driven 267.4 miles without the device and 288.4 miles with the device over sundry surface and freeway routes. Data showing 7-10 percent increase in fuel economy was presented. Because of the limited mileage accumulation of a test and random driving routes and driving conditions used, the data is inconclusive.

B. ARB Tests

Two "Gas Mizer" devices were tested on a 1974 Dodge, 360 CID, EGR and automatic transmission to determine their electrical characteristics. The following are the results of the tests:

Centrifugal Spark Advance - Crankshaft Degrees

<u>Engine Speed - RPM</u>	<u>Standard Ignition</u>	<u>Gas Mizer Device</u>	
		<u>No. 1</u>	<u>No. 2</u>
760 (Idle)	5.0	4.5	4.0
1000	10.0	10.0	9.5
1500	22.0	23.0	23.0
2000	24.0	25.0	24.0
2500	26.0	27.0	26.5
3000	28.0	28.5	28.5

Spark Duration - Microseconds

<u>Engine Speed - RPM</u>	<u>Standard Ignition</u>	<u>Gas Mizer Device</u>	
		<u>No. 1</u>	<u>No. 2</u>
760 (Idle)	1100	1200	1100
2000	900	950	900

Secondary Voltage - Kilovolts

<u>Engine Speed RPM</u>	<u>Gas Mizer Device</u>					
	<u>Standard Ignition</u>		<u>Firing</u>		<u>Available</u>	
	<u>Firing</u>	<u>Available</u>	<u>No. 1</u>	<u>No. 2</u>	<u>No. 1</u>	<u>No. 2</u>
760 (Idle)	12	26	10-13	8-13	20	19
2000	8-10	23	8-10	7-9	20	19

Secondary Voltage Rise Time - Microseconds

<u>Engine Speed - RPM</u>	<u>Standard Ignition</u>	<u>Gas Mizer Device</u>	
		<u>No. 1</u>	<u>No. 2</u>
760 (Idle)	10-15	10-15	10-15

Device Electrical Resistance - Ohms

Device No. 1 - 2.0

Device No. 2 - 2.0

The electrical characteristics of the device are similar to the OEM system. The device may slightly influence the required and available voltage at the spark plug by the addition of the device's resistance to the OEM system.

The following are the results of idle emission tests performed on the 1974 Dodge:

	<u>HC - PPM</u>	<u>CO - %</u>
Baseline No. 1	138	1.0
Device No. 1	117.5	0.78
Baseline No. 2	64	0.19
Device No. 2	64	0.50

No apparent effects were produced by the devices in the idle emission tests.

IV. Conclusions and Recommendations

It is the opinion of the Staff that the "Gas Mizer" device does not reduce the effectiveness of required emission control systems.

Therefore, it is recommended that Gas Mizer Corporation be granted an exemption from the prohibitions of Vehicle Code Section 27156 for the "Gas Mizer" device for 1974 and older model-year vehicles except for the following:

- 1 - All vehicles equipped with a breakerless or electronic ignition system.
- 2.- All 1966-70 model-year vehicles equipped with a Dana or Carter NOx device using an electronic speed switch.

Figure 1

"Gas Mizer" Device

