

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-127  
Relating to Exemptions under Section 27156  
of the Vehicle Code

OCTAMETER INJECTION SYSTEM

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 Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the Octameter Injection System manufactured by EPM Industries, Inc. Broken Arrow, OK 74012 has been found not to 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 1982 and older gasoline and propane powered motor vehicles.

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

Changes made to the design or operating conditions of the device, as exempted by the Air Resources Board, that adversely affect the performance of a vehicle's pollution control system 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. Exemption of a kit shall not be construed as an exemption to sell, offer for sale or advertise any component of a kit as an individual device.

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 OCTAMETER INJECTION SYSTEM.

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 untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

Section 43644 of the Health and Safety Code provides as follows:

"43644. (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the state board for certification 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 certified by the state 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 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 El Monte, California, this 23<sup>rd</sup> day of September, 1982.

  
K. D. Drachand, Chief  
Mobile Source Control Division

State of California  
AIR RESOURCES BOARD

Staff Report  
August 3, 1982

EVALUATION OF EPM INDUSTRIES, INC's "OCTAMETER INJECTION SYSTEM" IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE CALIFORNIA ADMINISTRATIVE CODE FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156

INTRODUCTION:

EPM Industries, Inc. Broken Arrow, OK 74012 has requested that the "Octameter Injection System" be exempted from the prohibitions of California Vehicle Code Section 27156 for 1982 and older model year vehicles with gasoline and propane fueled engines.

The Octameter Injection System is an aftermarket add-on device. It injects a water/alcohol vapor mixture to supplement the engine's air/fuel charge. This type of device is commonly referred to as a vapor injector.

DEVICE DESCRIPTION

The Octameter Injection System consists of an enclosed 1.25 quart capacity plastic reservoir with a metered air bleed, a water/alcohol mixture called Octamite Formula, an adjustable flow control valve and connective tubings.

The reservoir (see Figure 1) contains the following features:

1. A removable cap for refilling the reservoir;
2. The Barometric Altitude Selector (BAS) which serves as an adjustable inlet for air bleed. On top of the BAS is an adjusting knob with corresponding altitude settings varying in one thousand feet increments. A pamphlet is supplied by the manufacturer with the elevation of major cities;

3. A foam type filter covering the air inlet;
4. A connection port with a 0.022 inch orifice allowing vapor from the reservoir to be drawn into the engine;
5. An air transmission tube which serves as a stand pipe to the BAS;  
and
6. An air dispenser which purportedly breaks up the air being drawn through it to small bubbles.

The applicant submitted a report on the chemical composition of the Octamite Formula (see Attachment 2). The main components are water (50%) and methanol (40%).

In operation, vacuum from the engine is applied to the upper chamber of the reservoir allowing for ambient air to be drawn through the filter, BAS, the stand pipe and the Octamite Formula. The air bubbles burst when reaching the surface of the Octamite Formula creating a mist. The mist and air are then drawn into the engine to supplement the air/fuel mixture.

#### DEVICE EVALUATION

The applicant submitted data from comparative exhaust emissions tests however, the staff did not use the data for evaluation since the test vehicle was not California certified.

#### DEVICE CLAIMED BENEFITS

Brochures submitted by the applicant states that the Octameter Injection System is claimed to increase engine life, (engine) performance, maintenance intervals, and gas mileage up to 24%. To substantiate some of the claimed benefits the applicant submitted two analysis by United States Testing Company, Inc., of Tulsa, Oklahoma. The analysis included fuel economy

statistics from a fleet of vehicles and an analysis of engine oil from a test engine equipped with the device. However, since the conditions of these tests are unknown to the ARB and the validity of uncontrolled on-road fleet testing is questionable, the staff is of the opinion that these test results do not substantiate the alleged claimed benefits by the manufacturer. The staff contacted the applicant regarding the claimed mileage improvement benefits and the applicant agreed to delete alleged mileage benefits and submitted a letter to ARB staff stating the same (See Attachment 2)..

#### DISCUSSION

Vapor Injectors such as the Octameter Injector System with a controlling orifice of 0.022 inch have no adverse effect on vehicular emissions based on the ARB's past evaluations of more than a dozen similar devices.

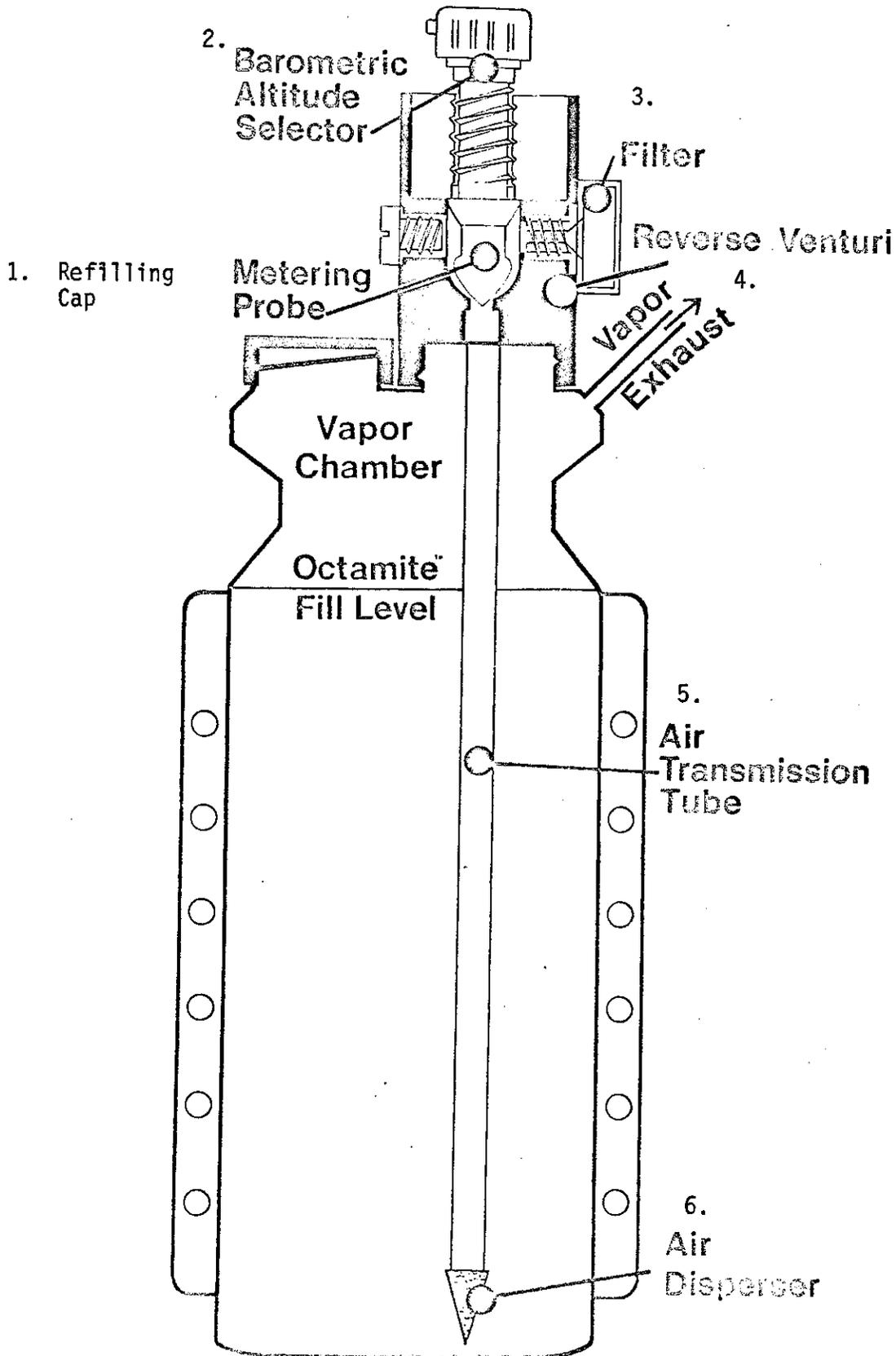
The applicant's submitted data to substantiate the claimed benefits is not admissible since the devices they evaluated were with a larger orifice size than the one submitted to the ARB.

#### CONCLUSIONS AND RECOMMENDATIONS

It is the staff's opinion that the Octameter Injection System with a 0.022 inch orifice will not have any adverse emissions impact on the vehicles as requested in the company's application. The staff therefore, recommends that the Octameter Injector System be exempted from the prohibitions of Vehicle Code Section 27156 for 1982 and older gasoline and propane fueled vehicles.

Figure 1

# OCTAMETER™ INJECTION SYSTEM CARBURETION TANK



INDUSTRIES, INC.

400A North Poplar Broken Arrow, Okla. 74012

September 8, 1982

Ron Waggnor  
Air Resources Board  
Haagen-Smit Lab  
9528 Telstar Avenue  
El Monte CA 91731

Dear Ron:

Please find enclosed a mock up of our box. We are in the design process at this point so this is very crude. EPM Industries will omit our question and answer take one from all California shipments. As soon as we receive a CARB number we will be able to go into printing.

Thanks again for your help.

Best wishes,

EPM INDUSTRIES, INC.



Gary Youngman  
Plant Manager

GY/ljr

Enclosure: 2

cc: Tim Tierney