

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-119  
Relating to Exemptions under Section 27156  
of the Vehicle Code

ECOTROLEUM, INC.  
"AFR CONTROL VALVE"

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 "AFR Control Valve" manufactured by Ecotroleum, Inc., of Westlake Village, California, 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 1980 and older vehicles powered with carburetor equipped engines, 2500 CC or larger.

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 "AFR CONTROL VALVE".

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.

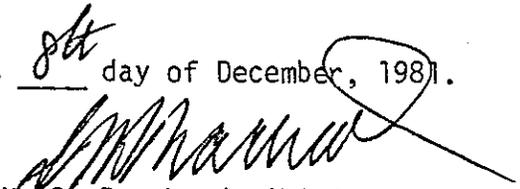
Section 17500 of the Business and Professions Code makes untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

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 8th day of December, 1981.

  
K. D. Drachand, Chief  
Mobile Source Control Division

State of California  
AIR RESOURCES BOARD

November 24, 1981

Evaluation of the Ecotroleum "AFR Control Valve" for  
Exemption from the Prohibitions in Section 27156 of the  
Vehicle Code in Accordance with Section 2222, Title 13  
of the California Administrative Code

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I. INTRODUCTION

Ecotroleum, Incorporated, of ~~Westlake Village, California~~, has applied for an exemption from the prohibitions of Section 27156 of the Vehicle Code for its "AFR Control Valve". This section prohibits the installation of any device which may reduce the effectiveness of the motor vehicle emission control system. The applicant is requesting the exemption be granted for 1980 and older model-year vehicles.

II. SYSTEM DESCRIPTION AND FUNCTION

The AFR control valve is a solenoid valve with a ball check. It has a mechanical switch and a thermal switch. The valve is installed in the line between the PCV valve and the engine air intake. The mechanical switch is attached to the throttle linkage, and the thermal switch is attached to the upper heater hose. When the temperature of the engine reaches normal operating condition and the engine speed RPM is over 1500 RPM, the solenoid is energized, thus lifting the ball check and permitting atmospheric air to enter the PCV line. There is no flow at idle, low speed, or deceleration. (Figure I)

### III. SYSTEM EVALUATION

The Air Resources Board evaluated the device on two vehicles. The evaluation consisted of CVS-II cold start comparative emission tests.

A description of the vehicles and the test results are as follows:

1 - 1980 Buick Regal, 231 CID, 6 cylinder, inertia weight--3625 pounds, odometer--21,857, License No. 1BCZ046:

<u>CVS II</u>	<u>HC</u>	<u>Emissions--grams/mile</u>		<u>NOx</u>	<u>Fuel Economy MPG</u>
		<u>CO</u>			
Baseline					
Test No. 1	0.38	7.18		0.92	*
Test No. 2	0.33	6.69		0.99	19.0
AVERAGE	0.36	6.93		0.95	19.0
With Device					
Test No. 1	0.36	6.46		0.87	19.0
Test No. 2	0.38	6.15		0.98	19.0
AVERAGE	0.37	6.31		0.93	19.0

2 - 1975 Plymouth Fury, 360 CID, 8 cylinder, inertia weight--5000 pounds, odometer--58,065, License No. E836396:

<u>CVS-II</u>	<u>HC</u>	<u>Emissions--grams/mile</u>		<u>NOx</u>	<u>Fuel Economy MPG</u>
		<u>CO</u>			
Baseline					
Test No. 1	0.45	5.69		1.57	11.1
Test No. 2	0.38	- *		1.16	11.7
AVERAGE	0.42	5.69		1.36	11.4
With Device					
Test No. 1	0.42	5.78		1.22	11.7

\* Result not Acceptable.

The emissions test data shows that the differences in emissions between the baseline and with device tests are within the test variability of the instruments and therefore the use of the device has little effect on the exhaust emissions and on the fuel mileage of the test vehicles.

IV. MANUFACTURER'S CLAIMS

The manufacturer claims a 15 percent increase in fuel economy. The manufacturer, however, did not submit any laboratory test data to support the claims. Our laboratory data does not substantiate these claims.

V. CONCLUSION AND RECOMMENDATION

Based on the test data generated at the Air Resources Board's Haagen-Smit Laboratory, the device did not increase emissions over the baseline. The staff, therefore, recommends the exemption of the device from the prohibitions in V.C. 27156 for 1980 and older model vehicles with carburetor equipped engines, 2500 CC or greater.

FIGURE I

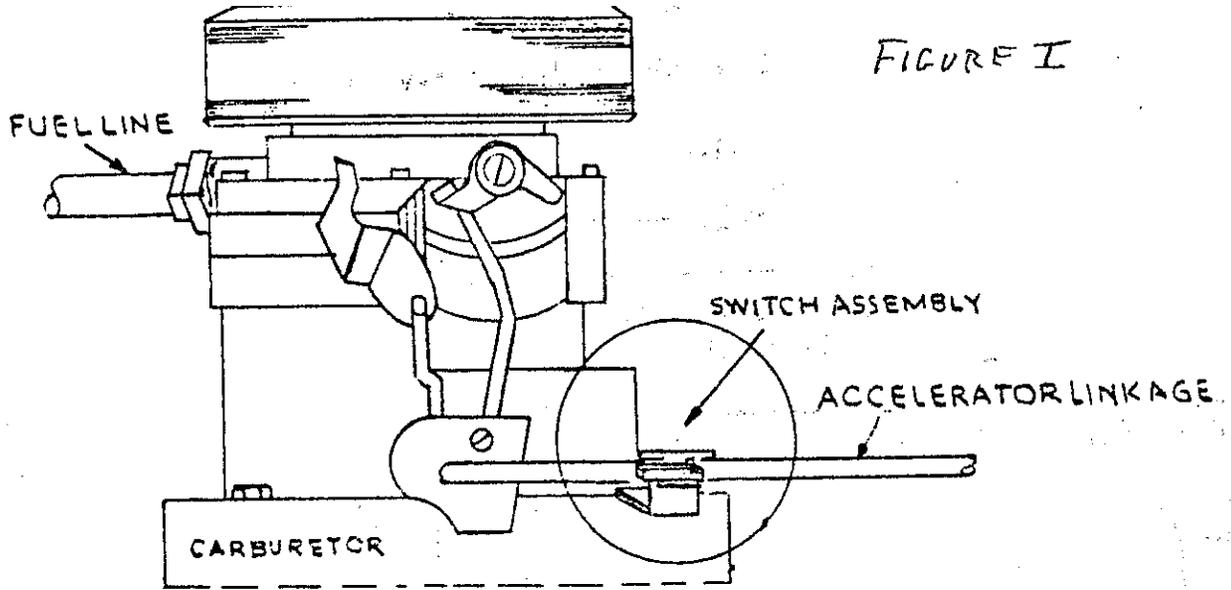


ILLUSTRATION # 2

ORIGINAL FILTER IS FACTORY INSTALLED

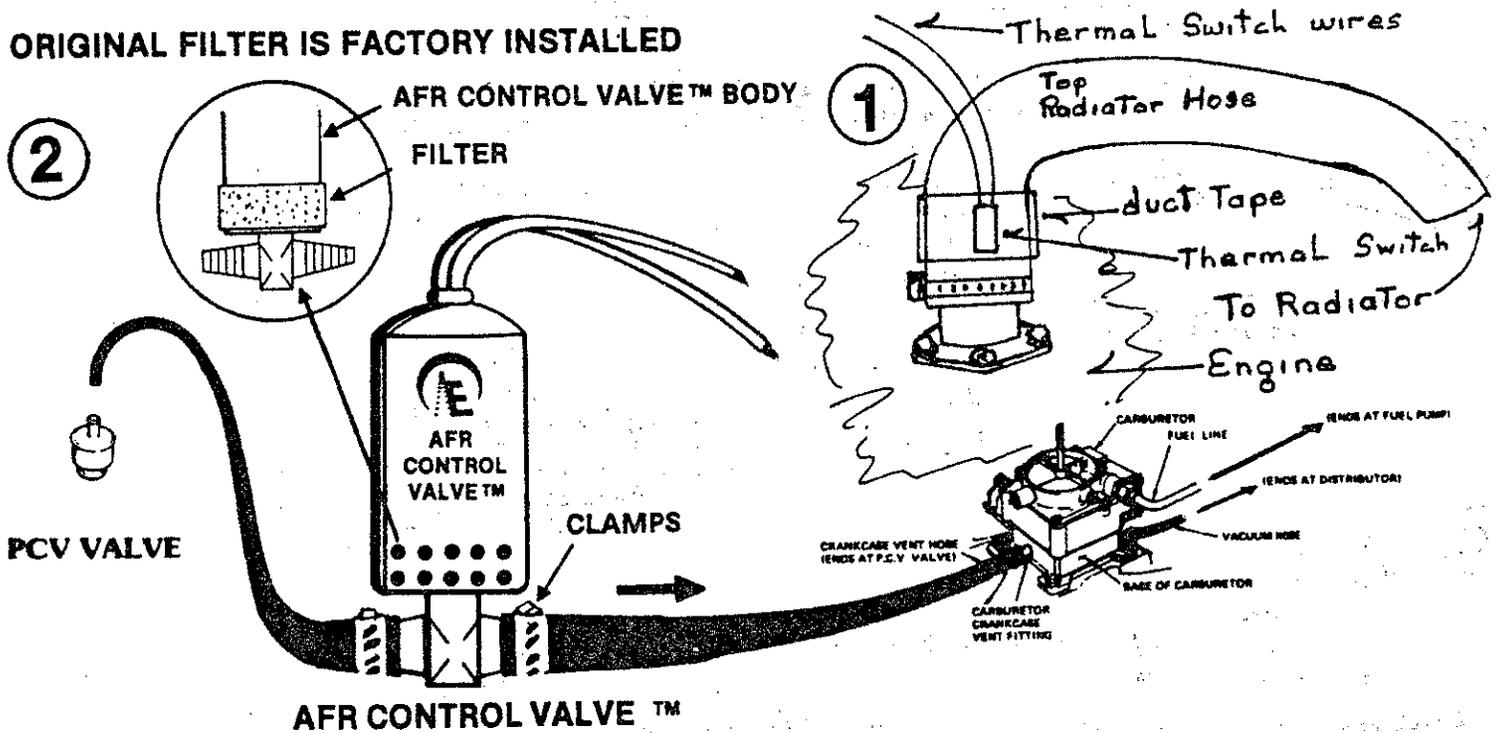


ILLUSTRATION # 3

Hook-up Diagram

