

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-109-1
Relating to Exemptions under Section 27156
of the Vehicle Code

FREEDOM PRODUCTS, INC.
"AUTO JET HEATER"

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 "Auto Jet Heater" device manufactured by Freedom Products, Inc., P.O. Box 700, Freedom, California 95019 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 use on any 1978 and older model year gasoline-powered motor vehicle equipped with one-, two- or four-barrel carburetor, excluding the following:

1. Motor vehicles equipped with 3-way catalyst and/or;
2. Motor vehicles equipped with carburetors having sealed idle adjustment screw(s).

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

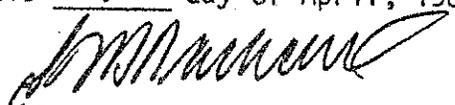
Section 43644 of the Health and Safety Code provides as follows:

"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.

Executive Order No. D-109, dated February 23, 1981 is superseded and of no further force and effect.

Executed at El Monte, California, this 17th day of April, 1981.


K. D. Drachand, Chief
Mobile Source Control Division

State of California
Air Resources Board

Staff Report

April 3, 1981

Evaluation of Freedom Products, Inc. "Auto Jet Heater" Device for Compliance with the Requirements of Section 27156 of the Vehicle Code

I. INTRODUCTION

Freedom Products, Inc., of P.O. Box 700, Freedom, California 95019, has requested by letter dated March 8, 1981 an update to the existing Air Resources Board's Executive Order (E.O.) No. D-109. The applicant requested that the exemption from the prohibitions of the Vehicle Code (V.C.) Section 27156 for the "Auto Jet Heater" device be updated to include 1978 and older model year gasoline-powered vehicles equipped with one barrel carburetor, except that the device shall not be installed on the following vehicles:

1. Motor vehicles equipped with 3-way catalyst and/or;
2. Motor vehicles equipped with carburetors having sealed idle adjustment screw(s).

II. DEVICE DESCRIPTION/OPERATION/EVALUATION

The "Auto Jet Heater" consists of an elongated replacement idle screw, a heating element inside an insulated metal housing which forms the body of the device, and an electrical wiring harness. The longitudinal sectional view of the device is shown in Figure 1.

The elongated idle screw has a threaded body (metric threads for imported carburetors and standard threads for domestic manufactured carburetors) which securely fits the carburetor and replaces the existing

idle adjustment screw. The replacement idle screw is secured to and becomes an integral part of the metal housing which encloses the heating element. At the other end of the metal housing, there is a conventional snap-on terminal for connection to the wiring harness which is linked to a 12 volt power source through the ignition system in the vehicle's fuse box.

When the ignition switch is "ON", the heating element is energized thus heating the idle screw of the device. When the ignition switch is "OFF", the heating element is not energized and the air jet heater is not functioning.

The purported objective of the device is to heat the fuel that passes through the idle discharge port. This heated fuel when accelerated into the main stream of the air/fuel mixture passing through the carburetor causes the main stream of fuel to be vaporized but without overheating.

The Air Resources Board (ARB) Staff Report titled "Evaluation of the Freedom Products, Inc. Auto Jet Heater Device for Compliance with the Requirements of Section 27156 of the Vehicle Code" dated February 1, 1981 contains a detailed description of the device, its operation, and ARB's engineering evaluation.

The device was granted an exemption from the prohibitions of V.C. Section 27156 based on ARB's engineering evaluation.

III. DISCUSSION

The original exemption, Executive Order No. D-109, was granted for the device for use on any 1978 and older model year gasoline powered vehicles equipped with 2 or 4 barrel carburetor excluding those equipped

with 3-way catalyst and/or carburetors having sealed idle adjustment screw(s).

The applicant has requested that the exemption be updated to include one barrel carburetors. The applicant has designed the device to be tamper-proof, after installation, by tying the body of the device to an add-on bracket with a wire. The wire when crimp locked will limit the adjustment to the replacement idle screw.

The add-on bracket is mounted on the engine at the base of the carburetor using one of the original carburetor tie down bolts. A wire is inserted through a hole in the bracket and through the body of the device and crimp together at the ends. A graphical interpretation is shown in Figure 2.

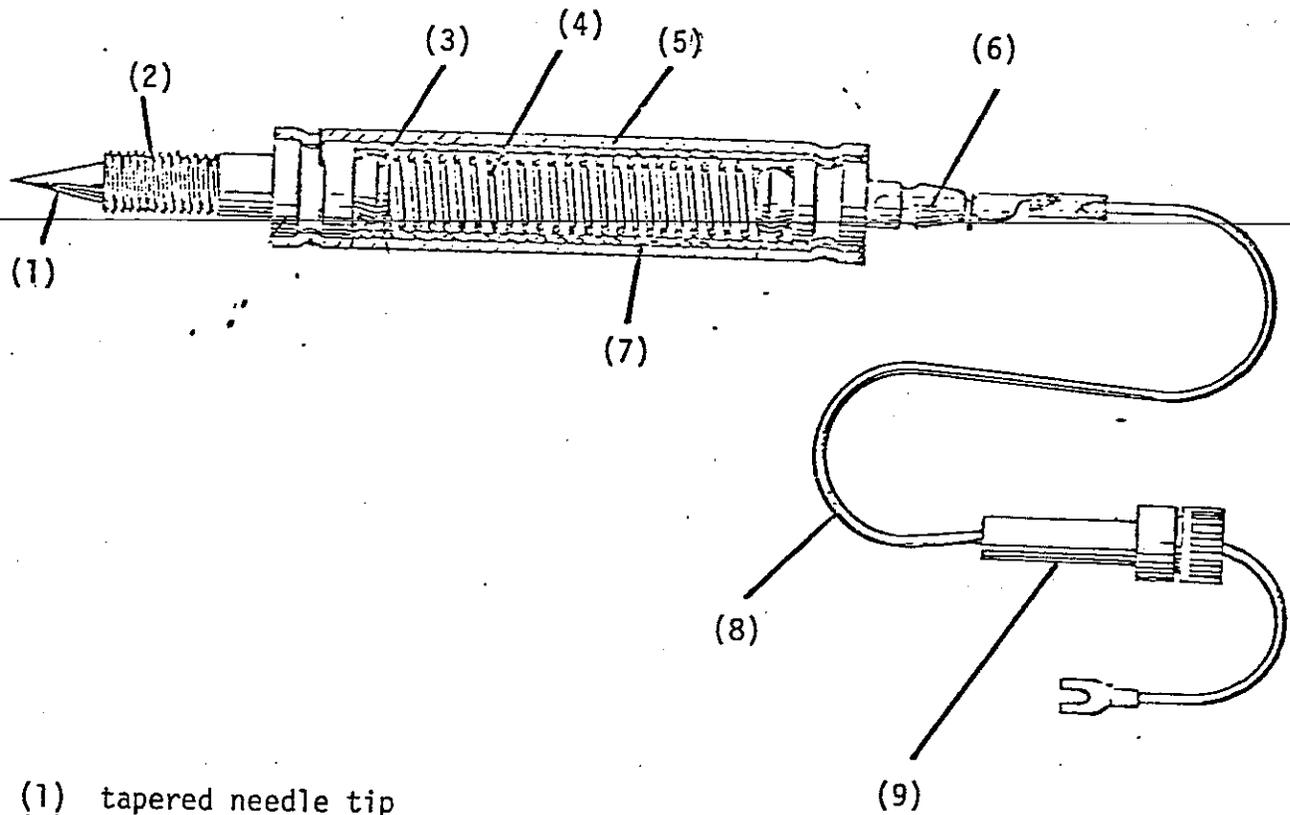
IV. CONCLUSION AND RECOMMENDATION

Previous engineering evaluation indicated that the installation of the "Auto Jet Heater" device will not have adverse effect on vehicle exhaust emissions.

The staff is of the opinion that when the add-on bracket and locking wire are installed in accordance with the installation diagram submitted by the applicant, the potential of tampering with the idle screw will be kept at a minimum.

The staff recommends that the exemption granted to Freedom Products, Inc. be updated to include one barrel carburetors, thus exempting the "Auto Jet Heater" device for use on any 1978 and older model year gasoline powered vehicles equipped with 1, 2, or 4 barrel carburetor excluding vehicles equipped with 3-way catalyst and/or carburetors having sealed idle adjustment screw(s). The staff, therefore, recommends that Executive Order No. D-109-1 be adopted.

Figure I: Longitudinal Sectional View of "Auto Jet Heater"



- (1) tapered needle tip
- (2) idle mixture needle
- (3) projecting stud
- (4) heating element
- (5) metallic housing
- (6) snap-on electrical connector
- (7) insulating material
- (8) wiring harness
- (9) 9 amp fuse and fuse holder

Figure 2: Locking Device for Single Barrel Carburetors

