

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-7  
Relating to Exemptions under Section 27156  
of the Vehicle Code

AERO DESIGN PRODUCTS CORPORATION  
"PERMA-TUNE"

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 a "Perma-Tune" capacitive discharge ignition system as a replacement part manufactured by Aero Design Products Corporation has been found to not reduce the effectiveness of required emission control devices in vehicles and therefore is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1966-1973 model-year vehicles. The device consists of a d-c to d-c converter, storage capacitor and a thyristor electronic switch.

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.

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 "PERMA-TUNE" 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.

Section 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. 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. Any violation of this section is a misdemeanor."

Any apparent violation of the policy or laws will be submitted to the Attorney General of California for such action as he deems advisable.

Executed at Sacramento, California, this 30 day of March, 1973.

JOHN A. MAGA  
Executive Officer

State of California

AIR RESOURCES BOARD

March 16, 1973

Staff Report

Evaluation of Aero Design Products Corporation  
"Perma-Tune" Capacitive Discharge Ignition  
System for Exemption to the Prohibitions  
of Section 27156 of the Motor Vehicle Code

I. Introduction

Aero Design Products Corporation, Newport Beach, California, has applied for exemption to the prohibitions of Section 27156 of the Motor Vehicle Code for the "Perma-Tune" capacitive discharge ignition system. Section 27156 prohibits the installation of any device which reduces the effectiveness of motor vehicle emission control systems. The applicant intends to sell the device as an "after-market" part to replace the standard ignition system.

The Air Resources Board has adopted criteria for the evaluation of "after-market" devices for compliance with Section 27156. The basis for evaluation is defined in the "Air Resources Board Criteria for Determining Compliance with Section 27156 of the Motor Vehicle Code", dated February 14, 1973.

II. System Description

For a general description of capacitive discharge ignition systems, see staff report "Evaluation of Capacitive Discharge and Transistorized

Ignition Systems for Compliance with the Requirements of Section 27156 of the Motor Vehicle Code", dated February 14, 1973.

The "Perma-Tune" device consists of a multivibrator d-c to d-c converter circuit, a storage capacitor and thyristor (silicon controlled rectifier) electronic switch circuit, and a trigger conditioner circuit. The device is capable of producing a secondary coil voltage rise of 50,000 volts per microsecond. The arc discharge current is 0.8 to 1.0 ampere and a spark energy capacity of 60 millijoules.

### III. Emission Testing

Because of the number of applications received from manufacturers of capacitive discharge ignition systems, it was decided to test one c-d device with ignition design characteristics that are considered to be representative of this group. A Delta Products, Inc., "Mark Ten B" system was selected for testing. The results of these tests are shown in the staff report "Evaluation of Capacitive Discharge and Transistorized Ignition Systems for Compliance with the Requirements of Section 27156 of the Motor Vehicle Code". These tests verify that a capacitive discharge ignition system does not adversely effect the exhaust emissions of a "tuned" engine.

### IV. Conclusions and Recommendations

It is the staff's opinion that Aero Design Products Corporation "Perma-Tune" ignition system will not adversely effect motor vehicle exhaust

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emissions when evaluated with respect to the exhaust emissions obtained with a conventional ignition system of a "tuned" engine. This device may also have a beneficial effect in the control of exhaust emissions in that it maintains the "tuned" condition of the engine for a longer period of time. Therefore, the "Perma-Tune" capacitive discharge ignition system should be exempt from the prohibitions of Section 27156 of the Motor Vehicle Code.