

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-102  
Relating to Exemptions under Section 27156  
of the Vehicle Code

POWER HAUS PRODUCTS INC.  
"OETTINGER/OKRASA VOLKSWAGEN ENGINE MODIFICATION KIT"

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 "Oettinger/Okrasa Volkswagen Engine Modification Kit" manufactured by Power Haus Products Inc. 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 1976 through 1980 Volkswagen Rabbit, Scirocco, Dasher, Golf, and Audi Fox model 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 "OETTINGER/OKRASA VOLKSWAGEN ENGINE MODIFICATION KIT".

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 16<sup>th</sup> day of July, 1980.

*K. D. Drachand by RDR*  
K. D. Drachand, Chief  
Mobile Source Control Division

State of California  
AIR RESOURCES BOARD

July 1, 1980

Staff Report

Evaluation of the Power Haus Products Corporation "Oettinger/Okrasa Volkswagen Engine Modification Kit" in Accordance With Section 2222, Title 13 of the California Administrative Code

I. Introduction

Power Haus Products Corporation, 19102 Ervin Lane, Santa Ana, California 92705 has applied for an exemption from the prohibitions in Section 27156 of the Vehicle Code for its "Oettinger/Okrasa Volkswagen Engine Modification Kit." The applicant requests exemption for the 1976 through 1980 Volkswagen Rabbit, Scirocco, Dasher, Golf, and Audi Fox model vehicles.

II. Description of the Modification

The Power Haus Modification to the Volkswagen 97 CID engine consists of the following:

1. Increasing size of cylinders from 97 CID to 110 CID.
2. Replacing OEM pistons with larger ones.
3. Replacing intake valves (38mm to 40mm).
4. Replacing exhaust valves (32mm to 34mm).
5. Replacing OEM crankshaft with one giving a 90.5mm stroke.

All applicable vehicles are fuel injected, water cooled and have transverse mounted engines.

### III. Applicants' Test Results

The applicant tested a 1980 Volkswagen Rabbit (VIN. 17A0778608) with a 97 CID, four cylinder, gasoline powered, fuel injected, transverse mounted engine with an odometer reading of 4037 miles. The tests were performed at Olson Engineering, Inc., Huntington Beach, California.

The tests yielded the following results:

<u>Test Description</u>	<u>Exhaust Emissions</u> (grams/mile)			<u>Fuel Economy</u>
	<u>HC</u>	<u>CO</u>	<u>NOx</u>	<u>MPG</u>
Cold Start CVS-II Baseline Configuration	0.41	5.71	1.46	20.75
Cold Start CVS-II after Conversion and 100 Accumulated Miles	0.40	8.22	1.00	22.40
% Change vs. Baseline	-2.44	+43.9	-31.5	+7.95
Cold Start CVS-II after Conversion, CO Adjustment and an Additional 250 Accumulated Miles	0.29	3.11	0.72	24.35
% Change vs. Baseline	-29.26	-45.53	-50.68	+17.35

### IV. Haagen-Smit Laboratory Test Results

Since the Olson Laboratory had no control of the vehicle between the baseline test and the after-conversion tests, the staff had no way of knowing what was done to the vehicle between the tests. The staff therefore requested the Haagen-Smit Laboratory to perform a confirmatory after-conversion test. The results of this test is as follows:

	<u>Exhaust Emissions (g/mi)</u>		
	<u>HC</u>	<u>CO</u>	<u>NOx</u>
Cold Start CVS-II	<u>0.41</u>	<u>4.63</u>	<u>1.09</u>
% Change vs. Baseline	0.0	-18.91	-25.34

V. Discussion

There was no way for the Haagen-Smit Laboratory to perform a baseline test since the vehicle could not be restored to the original configuration. However, from the results of the tests on this vehicle, it does not appear that the engine modifications increase exhaust emissions.

VI. Recommendation

Based on the submitted material and test results, the staff recommends the exemption of the "Oettinger/Okrasa Volkswagen Engine Modification Kit" from the prohibitions in Section 27156 of the Vehicle Code for the 1976 through 1980 Volkswagen Rabbit, Scirocco, Dasher, Golf, and Audi Fox model vehicles. The staff, therefore, recommends adoption of Executive Order D-102.