

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-428-1  
Relating to Exemptions Under Section 27156  
of the Vehicle Code

KENNEDY ENGINEERED PRODUCTS  
VW VANAGON ENGINE CHANGE 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 Section 39515 and Section 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the installation of the VW Vanagon Engine Change Kit marketed by Kennedy Engineered Products, 38830 17th St. East, Palmdale, CA 93550 has been found not to reduce the effectiveness of the applicable vehicle pollution control system and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for all 1980-91 VW Vanagons.

The VW Vanagon Engine Change Kit is designed to provide all the necessary parts to replace the stock 1980-91 VW Vanagon engine with a 1990-95 2.2 liter Subaru engine. The kit includes the following parts: Adaptor plates and hardware to mount the Subaru engine to the VW transmission and motor mounts, necessary intake air ducting and closed element air filter box, electrical schematic on adapting the Subaru's sensors and ECU to the Vanagon body, and an exhaust system which includes a set of manifolds, one muffler, and one TRI-D Industries, Inc. TD-5000 catalytic converter. On Vanagons that are not equipped with a check engine light on the dash, a light must be installed and wired to the Subaru ECU. The following trouble codes may be logged by the Subaru ECU: #33, speed sensor, #51, neutral switch, and # 52, emergency brake. The Vanagon hardware does not support these electrical functions.

Kennedy Engineered Products' VW Vanagon Engine Change Kit is only applicable on a complete Subaru 2.2L engine. These engines must be installed according to the Air Resources Board's "Engine Change Policy" which requires the engine to be of the same model-year as the vehicle it is being installed in or newer. A complete engine includes the following: A stock 1990-95 Subaru 2.2L long block equipped with the stock air intake components, closed element air filter box (either original or aftermarket), ECU, associated wiring, and all engine sensors. The new engine must interface with the stock Vanagon's evaporative emissions control system. Diesel Vanagon conversions must upgrade their evaporative emissions control system to that of a gasoline Vanagon.

**The Executive Order number must be printed on an identification label and affixed near the vehicle's tune-up label with your company name, address, and the list of the following trouble codes that may be logged by the Subaru ECU: #33, #51, and #52.**

This Executive Order is valid provided that the installation instructions for the VW Vanagon Engine Change Kit will not recommend tuning the vehicle to specifications different from those of the original Subaru engine.

Changes made to the design or operating conditions of the VW Vanagon Engine Change Kit, as exempt by the Air Resources Board, which adversely affect the performance of the vehicle's pollution control system shall invalidate this Executive Order.

Marketing of the VW Vanagon Engine Change Kit using any identification other than that shown in this Executive Order or marketing of the system 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 the system shall not be construed as exemption to sell, offer for sale, or advertise any component of the kit as an individual device.

This Executive Order does not constitute any opinion as to the effect the use of the VW Vanagon Engine Change Kit may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on the following submitted emissions test data on a 1985 Volkswagen Vanagon equipped with a 1994 Subaru 2.2L engine and a TRI-D catalyst:

	HC	CO	NOX
Standards	0.41	9.0	1.0
device w/ dfs	0.16	0.9	0.6

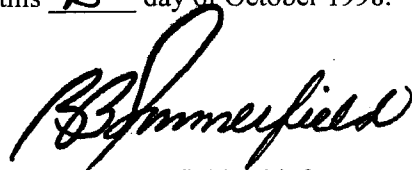
Test results showed that tailpipe emissions with the 1994 Subaru 2.2L engine and a TRI-D catalyst installed on the vehicle met the vehicle's applicable emission standard during Cold Start CVS-75 Federal Test Procedure.

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 KENNEDY ENGINEERED PRODUCTS' VW VANAGON ENGINE CHANGE KIT.

No claim of any kind, such as "Approved by the Air Resources Board", may be made with respect to the action taken herein in any advertising or other oral or written communication.

Violation of any of the above conditions shall be grounds for revocation of this order. The order may be revoked only after a ten-day written notice of intention to revoke the order, in which period the holder of the order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it shall be held within ten days of receipt of the request and the order may not be revoked until a determination after hearing that grounds for revocation exist.

Executed at El Monte, California, this 13<sup>th</sup> day of October 1998.



R. B. Summerfield, Chief  
Mobile Source Operations Division