

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-7-112  
Relating to Certification of New Motor Vehicles

VOLKSWAGEN AG

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1987 model-year Volkswagen AG exhaust emission control systems are certified as described below for gasoline-powered light-duty trucks:

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
HVW2.1T5CVA9	129 (2.1)	Three-Way Catalyst Oxygen Sensor (Electronic Fuel Injection)

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The following are the emission standards for this engine family:

<u>Equivalent Inertia Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per mile</u>
0-3999	0.41	9.0	1.0
4000-5999	0.50	9.0	1.0

The following are the certification emission values for this engine family:

<u>Equivalent Inertia Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
0-3999	0.19	3.0	0.4
4000-5999	0.32	4.6	0.7

BE IT FURTHER RESOLVED: That the listed models in the 0-3999 equivalent inertia weight class were certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Administrative Code which includes recall liability for emission control components up to 7 years or 75,000 miles if found defective by the Executive Officer.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards as stipulated in "California Exhaust Emission Standards and Test Procedures for 1981 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2035 et seq.) and, for the listed vehicles in the 0-3999 equivalent inertia weight class, with Health and Safety Code Section 43204.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 29th day of August, 1986.



K. D. Drachand, Chief  
Mobile Source Division

1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Volkswagen Executive Order No. A-7-112  
 Engine Family HVW2.1T5CVA9 Evaporative Family 1. VW-V  
2. VW-VS  
 Engine CID (Liters) 129 (2.1)

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ABBREVIATIONS

Ignition System

CA-Centrifugal Advance  
 EEC-Electronic Engine Control  
 EI-Electronic Ignition  
 ESAC-Electronic Spark Advance Control  
 VA-Vacuum Advance  
 VR-Vacuum Retard  
 EIC: Electronic Ignition Control

Fuel System

CFI, CL, DID, DIP, EFI, MFI  
 nV-nVenturi Carburetor  
 VV-Variable Venturi

Exhaust Emissions Control System

AIP-Air Injection-Pump  
 AIV-Air Injection-Valve  
 CL-Closed Loop  
 EGR-Exhaust Gas Recirculation  
 EM-Engine Modification  
 OC-Oxidation Catalyst System  
 TOC-Trap Oxidizer Continual  
 TOP-Trap Oxidizer Periodical  
 TR-Thermal Reactor  
 TWC-Three-Way Catalyst System

Special Features

CCV-Combustion Chamber Valve  
 CFI-Central Fuel Injection  
 DID-Diesel Injection-Direct  
 DIP-Diesel Injection-Prechamber  
 EFI-Electronic Fuel Injection  
 IC - Intercooler  
 MFI-Mechanical Fuel Injection  
 TC-Turbocharged

VEHICLE MODELS:

1. Vanagon Bus  
 Vanagon Kombi  
 Vanagon Campmobile
2. Vanagon syncro Bus  
 Vanagon syncro Kombi  
 Vanagon syncro Campmobile

DRIVE SYSTEM: 1. RWD Rear Engine/ Two -Wheel Drive

012584

2. Four Wheel Drive

C-2

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Passenger Cars  Light-Duty Trucks  Medium-Duty Vehicles  Gas  Diesel

Manufacturer Volkswagen Page \_\_\_\_\_

Engine Family HVW2.1T5CVA9 Engine Code MV

ECS (Special Features) FI/TWC/EGS (EFI/TWC/CL)<sup>05</sup> CID (Liter)-Type 129 (2.1) - 4 HO

Engine Code	Vehicle Models (If Coded see attachment) (Hp)	Trans.	Equiv. Test Weight	Ign. System Part No.	Fuel System Part No.	EGR Valve Part No.	Catalyst Part No.	
MV	Vanagon Bus (16.4)	M 4	3,750	EIC Distributor 025905205 M	Fuel pump 043906091	n. a.	025906457	
	Vanagon Kombi (16.4)							
	Vanagon Bus (16.4)	A 3	3,875					Fuel injection control 025906022
	Vanagon Kombi (16.4)							
	Vanagon Campmobile (17.4)	M 4/A 3	4,000					
	Vanagon Syncro Bus/Kombi (19.2)	M 4+ Creeper	4,000					
Vanagon Campmobile (20.0)	4,250							
Hp list: see page 05-01								

Comments: See page one for abbreviations and evaporative emission family identification. Please refer to manufacturer's HP list for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

\*Add 10% to dyno test HP for air conditioning usage.