

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-7-101  
Relating to Certification of New Motor Vehicles

VOLKSWAGENWERK 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 1986 model-year Volkswagenwerk 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>
GVW2.1T5CVA8	129 (2.1)	Three-Way Catalyst with Closed Loop (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	1.5

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	0.14	2.5	0.3

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 Health and Safety Code Section 43204, provided, however, that for the listed vehicles in the 0-3999 equivalent inertia weight class jurisdiction is hereby reserved to modify these provisions to the extent made necessary by an EPA waiver decision, in order to assure that the listed vehicles comply with the minimum federal requirements applicable in California.

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 20th day of September, 1985.

*Bob Cross for*  
K. D. Drachand, Chief  
Mobile Source Division

1986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Volkswagen Executive Order No. A-7-101  
 Engine Family GVW2.1T5CVA8 Evaporative Family 1. VW-V  
2. VW-VS  
 Engine CID (Liters) 129 (2.1)  
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ABBREVIATIONS

<u>Ignition System</u>	<u>Exhaust Emissions Control System</u>	<u>Special Features</u>
CA-Centrifugal Advance	AIP-Air Injection-Pump	CCV-Combustion Chamber Valve
EEC-Electronic Engine Control	AIV-Air Injection-Valve	CFI-Central Fuel Injection
EI-Electronic Ignition	CL-Closed Loop	DID-Diesel Injection-Direct
ESAC-Electronic Spark Advance Control	EGR-Exhaust Gas Recirculation	DIP-Diesel Injection-Prechamber
VA-Vacuum Advance	EM-Engine Modification	EFI-Electronic Fuel Injection
VR-Vacuum Retard	OC-Oxidation Catalyst System	IC - Intercooler
EIC: Electronic Ignition Control	TOC-Trap Oxidizer Continual	MFI-Mechanical Fuel Injection
	TOP-Trap Oxidizer Periodical	TC-Turbocharged
	TR-Thermal Reactor	
	TWC-Three-Way Catalyst System	

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

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

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05.00.00.00 TEST PROCEDURES

ENGINE FAM.: GVW2.1VA

ENGINE CODE: all

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05.03.02.00 Road Load

.01 For the following vehicle models described in this engine family the dynamometer power absorption (DPA) values were determined in accordance with A/C 55B.

Vehicle Model	ETW (lbs)	DPA Value (hp)	Corrected Road Coast Down Time (s)	For Further Information Refer to
Vanagon Bus/Kombi M4	3,750	16.4 *	11.00	1986 VW Application Sect. 05.03 general part
Campmobile M4, A3	4,000	17.4 *	11.22	
Bus/Kombi A3	3,875	16.4 *	11.37	
Vanagon syncro M4 + Creeper				
Bus/Kombi	4,000	19.2 *	10.14	
Campmobile	4,250	20.0 *	10.03	

\* DPA value includes 10 % increment for A/C usage

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1986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E.O. #A-7-10)

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

Manufacturer Volkswagen Page 2

Engine Family GVW2.1T5CVA8 Engine Code MV

ECS (Special Features) FI/TWC/EGS (EFI/TWC/CL) 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.	Label Ident. Part No.				
MV	Vanagon Bus (16.4) Vanagon Kombi (16.4)	M 4	3,750	EIC Distributor 025905205 M	Fuel pump 043906091	n. a.	VECI 025010 001 H  VHRD 025010 001G				
	Vanagon Bus (16.4) Vanagon Kombi (16.4)							A 3	3,875	Fuel pressure governor 025133035	
	Vanagon Cammobile (17.4)	M 4/A 3	4,000		Fuel injection control 025906022						
	Vanagon Syncro Bus/Kombi (19.2) Cammobile (20.0)	M 4+ Creeper	4,000								
								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.

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