State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-7-137-1
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 1990 model-year Volkswagen AG exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

Engine Family: LVW1.8V5FWE8 Displacement: 1.8 Liters (109 Inches$^3$)
Equipped with the following exhaust emission control systems:

Heated Oxygen Sensor
Three-Way Catalyst
Multipoint Electronic Fuel Injection
Supercharger
Charge Air Cooler

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

The following are the exhaust emission standards for this engine family:

| Hydrocarbons (Grams per Mile) | Carbon Monoxide (Grams per Mile) | Nitrogen Oxides (Grams per Mile) |
|---|---|---|
| 0.41 | 7.0 | 0.7 |

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

| Hydrocarbons (Grams per Mile) | Carbon Monoxide (Grams per Mile) | Nitrogen Oxides (Grams per Mile) |
|---|---|---|
| 0.17 | 2.0 | 0.5 |

BE IT FURTHER RESOLVED: That the listed models are certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Code of Regulations 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 vehicle manufacturer is certifying to the optional NOx standard based on actual sales of 1989 model-year California-certified passenger cars.

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 Code of Regulations, 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 1988 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 Emission Control Label Specifications" (Title 13, California Code of Regulations, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed have been granted an exemption from compliance with the requirements of the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s]..." (Title 13, California Code of Regulations, Section 1968) 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 provisions (California Health and Safety Code Section 43205).

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

This Executive Order cancels and supersedes Executive Order A-7-137 dated November 1, 1988.

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

Executed at El Monte, California this 7th day of August, 1989.

Bob Cross for

K. D. Drachand, Chief
Mobile Source Division

# 1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

| | | | |
|---|---|---|---|
| Manufacturer | VW AG | Engine Family | LVW1.8V5FWE8 |
| Evap. Family | KWE 1 | Engine Type | Otto |
| | | Displacement (Liters) | 1.8 |

## ABBREVIATIONS

### Ignition System

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

### Exhaust Emissions Control System

AIP - Air Injection-Pump
AIV - Air Injection-Valve
EGR - Exhaust Gas Recirculation
EIC - Electronic Injection Control (Diesel only)
EM - Engine Modification
SPL - Smoke Puff Limiter or Throttle Delay
TOC - Trap Oxidizer Continual
TOP - Trap Oxidizer Periodical
DBC - Dual Bed Catalyst
OC - Oxidation Catalyst System
TWC - Three-Way Catalyst System
WUOC - Warm-Up Oxidation Catalyst
WUTWC - Warm-Up Three-Way-Catalyst
OS - Oxygen Sensor
HOS - Heated Oxygen Sensor

### Special Features

CFI - Central Fuel Injection
EPFI - Electronic Port Fuel Injection
MPFI - Mechanical Port Fuel Injection
SFI - Sequential Fuel Injection
DID - Diesel Injection-Direct
DIP - Diesel Injection-Prechamber
TC - Turbocharger
SC - Supercharger
IC - Intercooler or Aftercooler
CCV - Combustion Chamber Valve
OBD - On-Board Diagnostics

### Fuel System

CFI, EPFI, MPFI, SFI, DID, DIP, HOS, OS
nV - nVenturi Carburetor - VV - Variable Venturi Carburetor

### VEHICLE MODELS:

Corrado

Engine: Front X Mid. ___ Rear ___

Drive System: FWD X RWD ___ 4WD Full Time ___ 4WD Part Time ___

# 1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

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

Manufacturer VW AG

Engine Family LVW 1.8 V5FWE8

Displacement (Ltr.) 1.8

Engine Type Otto

Emission Control System EPFI, TWC, HOS

| Engine Code | Vehicle Models (Dyno HP) | Trans. Type | Equiv. Test Weight | Ignition System Part No. | Fuel System Part No. | EGR Valve Part No. | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| PG | Corrado (5.6) | M6 | 3,000 | EI-ESAC 037 905 205 G | EPFI 037 906 022 B 037 906 022 CD | — | 535 131 701 A 535 131 701 B |

Comments:
See page one for abbreviations and evaporative emission family identification 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.