State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-18-44
Relating to Certification of New Motor Vehicles

VOLVO CAR CORPORATION

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 Volvo Car Corporation exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

Engine Family	Displacement Cubic Inches	(Liters)	Exhaust Emission Control Systems (Special Features)
HVV2.3V5FELO	141	(2.3)	Three-Way Catalyst Oxygen Sensor (Heated) (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:

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 emission values for this engine family:

Hydrocarbons Grams per Mile	Carbon Monoxide Grams per Mile	Nitrogen Oxides Grams per Mile
0.23	1.4	0.5

BE IT FURTHER RESOLVED: That the listed models 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.

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 28th day of July, 1986.

K. D. Drachand, Chief
Mobile Source Division

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1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Volvo Car Corporation

Engine Family HVV2.3V5FELO

Evaporative Family E2 and E3

Engine Type L-4

Liters (CID) 2.3 (141)

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
CL-Closed Loop
EGR-Exhaust Gas Recirculation
EM-Engine Modification
OC-Oxidation Catalyst System
SPL-Smoke Puff Limiter or Throttle Delay
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 or aftercooler
MFI-Mechanical Fuel Injection
TC-Turbocharger

Fuel System

CFI, CL, DID, DIP, EFI, MFI
nV-nVenturi Carburetor

VEHICLE MODELS:

ENGINE CODE	VEHICLE MODEL	TRANSMISSION
FELO: 1	240 DL/GL 4-Dr Sedan 240 DL/GL Wagon	M5
FELO: 2	240 DL/GL 4-Dr Sedan 240 DL/GL Wagon	A4
FELO: 3	740 GL/GLE 4-Dr Sedan 740 GL/GLE Wagon	M5
FELO: 4	740 GL/GLE 4-Dr Sedan	L4
FELO: 6	740 GL/GLE Wagon	L4

Engine: Front X Mid. ____ Rear ____

Drive: FWD ____ RWD X 4WD Full Time ____ 4WD Part Time ____

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

Manufacturer VOLVO CAR CORPORATION Engine Family HVV2.3V5FELO

Liter (CID) 2.3 (141) Eng. Type In-Line 4-cylinder

Emission Control Sys. (Special Features) TWC/OxS/(EFI)

Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) ESAC Part No.	Fuel System EEI Part No.	EGR Valve Part No.	Catalyst Part No.
FELO: 1	240 DL/GL 4-DR Sedan (9.3)	M5	3250	Control Unit CHRYSLER 423 0013	Control Unit Bosch 0280000544	N/A	DEGUSSA 1357 093 or ENGELHARD 1357 091
FELO: 2		A4		Distributor BOSCH 0237520004	Injector BOSCH 0280150374		
FELO: 1	240DL/GL Wagon (9.7)	M5	3375	Knock Sensor TELEX 63653-005	Air Mass Meter: BOSCH 0280212007		
FELO: 2		A4			Oxygen Sensor: BOSCH 0258003009		
FELO: 3	740 GL/GLE 4-DR Sedan (9.6)	M5	3250	Control Unit BOSCH 0261201011			DEGUSSA 1357100, or ENGELHARD 1332383
FELO: 4		L4		Distributor BOSCH 0237502001			
FELO: 3	740 GL/GLE Wagon (9.5)	M5	3375	Knock Sensor BOSCH 0261231006			
FELO: 6		L4					

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.

Date of Issue _____ Revisions:

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