State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-18-102
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 Order G-45-9;

IT IS ORDERED AND RESOLVED: That 2000 model-year Volvo Car Corporation exhaust emission control systems are certified as described below for passenger cars:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: YVVXV1.95MJ1 Displacement: 1.95 Liters (119 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Sequential Multiport Fuel Injection
Heated Oxygen Sensors (two)
Three Way Catalytic Converter
Turbocharger
Charge Air Cooler

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

The LEV certification exhaust emission standards for this engine family in grams per mile are:

Miles	Non-Methane Organic Gas	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20°F)
50,000	0.075	3.4	0.2	0.015	10.0
100,000	0.090	4.2	0.3	0.018	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.94

The certification exhaust emission values set forth for non-methane organic gases (NMOG) reflect application of a 0.94 RAF for 2000 model-year LEVs. The LEV certification exhaust emission values for this engine family in grams per mile are:

Miles	Non-Methane Organic Gas	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20°F)
50,000	0.052	1.3	0.04	0.001	2.3
100,000	0.058	1.4	0.05	0.002	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average NMOG exhaust mass emission requirements as set forth 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 under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the "California Refueling Emission Standards and Test Procedures for the 1998 and Subsequent Model Motor Vehicles," Title 13, California Code of Regulations, Section 1978, and the listed models comply with those standards.

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" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, 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 vehicle manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit 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 "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

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 (Title 13, California Code of Regulations, Section 2035 et seq.).

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 July 1999.

John Konaldi for

R. B. Summerfield, Chief
Mobile Source Operations Division

E.O.# A-18-102

2000 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Page____

Manufacturer: VOLVO CAR CORP Exh Eng Fam: YVVXV1.95MJ1 Evap Fam: YVVXR0133X48
All Eng Codes in Eng Fam: CA____ 49S____ 50S X AB965____
Exh Std: CA Tier-1____ TLEV____ LEV X ULEV____ ZEV____; US EPA Tier-1/NLEV
Evap Std: 50K____ Useful Life with R/L X In-Use Exh Std: Full In Use___ Alt In Use___
Veh Class(es): PC X LDT1____ LDT2____ MDV1____ MDV2____ MDV3____ MDV4____ MDV5____
Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
Fuel Type(s): Dedicated X Flex-Fuel___ Dual-Fuel___ Bi-Fuel___ Gasoline X Diesel___
CNG___ LNG___ LPG___ M85___ Other (specify)_____
Emiss Test Fuel(s): Indo___ Ph2 X CNG___ LPG___ M85____ Other (specify)_____
Diesel: 13 CCR 2282___ 40 CFR 86.113-90___ 40 CFR 86.113-94___
Service Accum: Std AMA X Mod AMA____ Mfr ADP___ Other (specify)_____
Test Procedure: N/A____ Std X Equiv___ R/L Test Proc: SHED X Pt Source___
Hybrid: Type A___ B___ C___, APU Cycle (e.g., Otto, Diesel, Turbine):_____
Engine Configuration: I4 Displacement: 1.95 / Liters 119 / Cubic Inches
Valves per Cylinder: 4 Rated HP: 160 @ 5100 RPM
Engine: Front X Mid____ Rear____ Drive: FWD X RWD____ 4WD-FT____ 4WD-PT____
Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI/HO2S(2)/TWC/TC/CAC
(use abbreviations per SAE J1930 SEP91)

Engine Code (also list CA/49ST/50ST	Vehicle Models (if coded see attachment)	Trans. (M5, A4 etc.)	ETW or Test Wt.	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
Y25:2	S40/V40	L4	3375	5.5	30614557	N/A	FRONT: 9486093 REAR: 30617299

Date Issued: 06/21/99

Revisions: