7/21



State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-18-92
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 1998 model-year Volvo Car Corporation exhaust emission control systems are certified as described below for passenger cars:

Fuel Type: Gasoline

Engine Family: WVVXV2.43AWD Displacement: 2.4 Liters (149 Cubic Inches)
2.3 Liters (142 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

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

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

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

| Miles | Non-Methane Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Carbon Monoxide (20°F) |
|---|---|---|---|---|
| 50,000 | 0.25 | 3.4 | 0.4 | 10.0 |
| 100,000 | 0.31 | 4.2 | 0.6 | n/a |

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

| Miles | Non-Methane Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Carbon Monoxide (20°F) |
|---|---|---|---|---|
| 50,000 | 0.14 | 1.8 | 0.2 | 5.0 |
| 100,000 | 0.14 | 1.8 | 0.2 | n/a |

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 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 non-methane organic gas (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 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 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 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 18th day of June 1997.

R. B. Summerfield, Chief
Mobile Source Operations Division

17.03-1

E.O.# A-18-92

Page 1

1998 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: VOLVO CAR CORP. Exh Eng Fam: WVVXV2.43AWD Evap Fam: WVVXE0124BRF

All Engine Codes in Engine Familiy: CA___ 49S___ 50S X AB965___, ORVR: YES___ NO X

Exh Std: CA Tier-1 X TLEV___ LEV___ ULEV___ SULEV___, US EPA Tier-1 X

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___ Flex-Fuel___ Dual-Fuel___ Bi-Fuel___ Gasoline X Diesel___

CNG___ LNG___ LPG___ M85___ Other (specify)___

Fed Emiss Test Fuel(s): Indo X CBG___ CNG___ LPG___ M85___ Other (specify)___

Diesel: 13 CCR 2282___ 40 CFR 86.113-90___ 40 CFR 86.113-94___

Evaporative Emission Test Procedure: California___ Federal X

Service Accum: Std AMA X Mod AMA___ Mfr ADP___ Other (specify)___

MMDC Test Procedure: N/A X Std___ Equiv___ R/L Test Proc: SHED___ Pt Source X

Engine Configuration: I-5 Displacement: 2.4 / 2.3 Liters 149 / 142 Cubic Inches

Valves per Cylinder: 4 Rated HP: 190 / 236 @ 5100 / 6000 RPM

Engine: Front X Mid___ Rear___ Drive: FWD___ RWD___ 4WD-FT X 4WD-PT___

Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI, HO2S(2), TWC, AIR, TC, CAC
(use abbreviations per SAE J1930 JUN93)

| 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. |
|---|---|---|---|---|---|---|---|
| W56AWD:2(50st) | V70 AWD | L4 | 4000 | 7.6 | 9155789 | N/A | 9189237 |
| | V70XC AWD | L4 | 4000 | 9.6 | 9155789 | N/A | 9189237 |
| W53AWD:2(50st) | V70RAWD | L4 | 4000 | 7.6 | 9155771 | N/A | 9189237 |

Date Issued: Revisions:

KJ 8/12/97

8/28/97