California Environmental Protection Agency AIR RESOURCES BOARD	VOLVO CAR CORPORATION	EXECUTIVE ORDER A-018-0119 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Div. 26, Part 5, Chap. 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515-39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	TEST GROUP	VEHICLE TYPE (PC=passenger car; LDT=light-duty truck; MDV=medium-duty vehicle; LVW=loaded vehicle weight; GVW=gross VW)	EXHAUST EMISSION STANDARD CATEGORY (LEV=low emission vehicle; TLEV= transitional LEV; ULEV=ultra LEV; SULEV=super ULEV)	EXHAUST (EXH) / EVAPORATIVE USEFUL LIFE (UL) (miles)	FUEL TYPE (CNG/LNG=compressed/ liquefied natural gas; LPG=liquefied petroleum gas)
2003	3VVXX2.52U2T	PC and LDT ≤ 8,500 pounds GVW (PC: LDT 3,751 – 5750 pounds LVW)	LEV II ULEV	120K: EXH/ORVR 100K: EVAF	Gasoline

No.	EVAPORATIVE FAMILY (EVAF)	No.	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS (ECS)	* = not applicable
1	3VVXR0133AAA	1	TWC, HO2S, HAFS, SFI, TC, CAC, OBD (P)	
2	*	2	*	
3	*	3	*	
4	*	4	*	

OC/TWC=oxidizing/3-way cat. ADSTWC=adsorbing TWC WU= warm-up cat. O2S/HO2S=oxygen sensor/heated O2S AFS/HAFS=air-fuel ratio sensor/heated AFS EGR=exhaust gas recirculation AIR/PAIR=secondary air injection/pulsed AIR MFI/SFI= multiport fuel injection/sequential MFI TBI= throttle body injection TC/SC=turbo /super charger CAC=charge air cooler OBD (F) / (P)=full /partial on-board diagnostic prefix 2=parallel (2) suffix=series

EVAF No.	ECS No.	ENGINE SIZE (L)	VEHICLE MAKES & MODELS	VEHICLES SUBJECT TO SFTP STANDARDS ARE UNDERLINED	ABBREVIATIONS:
1	1	2.5	Volvo: (PC) V70 AWD, S60 AWD; (LDT 3,751 – 5,750) XC 70 AWD, XC 90 AWD, XC 90 FWD		

The exhaust and evaporative emission standards (STD), as requested by the manufacturer, and certification emission levels (CERT) for the listed vehicles are as follows (compliance with the 50 °F testing requirement (for TLEV, LEV, ULEV, SULEV) may have been met based on the manufacturer's submitted compliance plan in lieu of testing). Any debit in the manufacturer's "NMOG Fleet Average" (PC and LDT) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required. (For bi-, dual- or flexible-fueled vehicles, the STD and CERT in parentheses are those applicable to testing on gasoline test fuel.)

NMOG FLEET AVERAGE STD [g/mi]		NMOG @ RAF=0.94 CH4 RAF = *		NMOG or NMHC STD [g/mi]	CH4=methane NMOG=non-CH4 organic gas NMHC=non-CH4 hydrocarbon CO=carbon monoxide NOx=oxides of nitrogen HCHO=formaldehyde PM=particulate matter RAF=reactivity adjustment factor 2/3 D [g/test]=2/3 day diurnal+hot-soak RL [g/mi]=running loss ORVR [g/gallon dispensed]=on-board refueling vapor recovery g=gram mg=milligram mi=mile K=1000 miles F=degrees Fahrenheit SFTP=supplemental federal test procedure									
PC/LDT1	LDT2	NMOG CERT [g/mi]	NMHC CERT [g/mi]		CO [g/mi]		NOx [g/mi]		HCHO [mg/mi]		PM [g/mi]		Hwy NOx [g/mi]	
0.062	0.093				CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
	@ 50K	0.020	*	0.040	0.3	1.7	0.03	0.05	0.1	8	*	*	0.004	0.07
	@ UL	0.025	*	0.055	0.3	2.1	0.04	0.07	0.2	11	*	*	0.01	0.09
	@ 50°F & 4K	0.060	*	0.080	0.7	1.7	0.02	0.05	0.2	16	*	*	*	*

CO [g/mi] @ 20°F & 50K		SFTP 1 = @ 4K (SULEV, ULEV, LEV) or 50K (Tier 1, TLEV) SFTP 2 = @ UL (Tier 1, TLEV)		NMHC+NOx [g/mi] (composite)		CO [g/mi] (composite)		NMHC+NOx [g/mi] [US06]		CO [g/mi] [US06]		NMHC+NOx [g/mi] [SC03]		CO [g/mi] [SC03]	
				CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
CERT	1.7		SFTP 1	*	*	*	*	0.04	0.14	1.6	8.0	0.10	0.20	1.2	2.7
STD	10.0		SFTP 2	*	*	*	*	*	*	*	*	*	*	*	*

@ UL	EVAPORATIVE FAMILY 1				EVAPORATIVE FAMILY 2				EVAPORATIVE FAMILY 3				EVAPORATIVE FAMILY 4			
	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR
CERT	0.9	1.8	0.00	0.001	*	*	*	*	*	*	*	*	*	*	*	*
STD	2.0	2.5	0.05	0.20	*	*	*	*	*	*	*	*	*	*	*	*

BE IT FURTHER RESOLVED: That for the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 [emission control labels], 2035 et seq. [emission control warranty], 2235 [fuel tank fill pipes and openings] (gasoline and alcohol fueled vehicles only), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model PC, LDT and MDV).

BE IT FURTHER RESOLVED: That the listed vehicle models are conditionally certified in accordance with 13 CCR Section 1968.1(m)(6.2) (malfunction and diagnostic system) because the on-board diagnostic II system of the listed vehicle models has been determined to have three deficiencies. The listed vehicle models are approved subject to the manufacturer paying a fine of twenty-five dollars ($25) per vehicle for the third deficiency in the listed test group that is produced and delivered for sale in California.

On a quarterly basis, the manufacturer shall submit to the Air Resources Board reports of the number of vehicles produced and delivered for sale in California and pay the full fine owed for that quarter pursuant to this conditional certification. Payment shall be made payable to the State Treasurer for deposit in the Air Pollution Control Fund no later than thirty (30) days after the end of each calendar quarter during the 2003 model-year production period. Failure to pay the quarterly fine, in full, in the time provided, may be cause for the Executive Officer to recind this conditional certification, effective from the start of the quarter in question, in which case all vehicles covered under this conditional certification for that quarter and all future quarters would be deemed uncertified and subject to a civil penalty of up to $5000 per vehicle pursuant to HSC Section 43154.
Vehicles certified under this Executive Order shall conform to all applicable California emission regulations.
The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 31ST day of October 2002.

Allen Lyons, Chief
Mobile Source Operations Division