#### **VOLVO CAR CORPORATION**

EXECUTIVE ORDER A-018-0152
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		EXHAUST EMISSION CANDARD CATEGORY	USEFU (mil		IN- COMP (*=N/A or A/E=ex	MEDIATE USE LIANCE full in-use; h. / evap. iate in-use)	FUEL TYPE
2008	BVVXV02.5U2T	Passenger Car		"LEV II" Ultra Low mission Vehicle (LEV II	EXH / ORVR	EVAP	EXH	EVAP	Gasoline
				ULEV)	120K	150K	*	•	
No.	ECS &	EVAPORATIVE	DISPLACEMENT (L)						
1	TWC, HAFS, H	8VVXR0							
•		8VVXR0		2.5					
*				2	9				
•		e i i	5						

See the Attachment for Vehicle Models, Evaporative Family, Engine Displacement, Emission Control Systems, Phase-In Standards, OBD Compliance, Emission Standards and Certification Levels, and Abbreviations.

#### BE IT FURTHER RESOLVED:

That the exhaust and the evaporative emission standards and the certification emission levels for the listed vehicles are as listed on the Attachment. Compliance with the 50° Fahrenheit testing requirement 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 or LDT) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

#### **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], 1968.2 [on-board diagnostic, full or partial compliance], 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).

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.

Annette Hebert, Chief

Mobile Source Operations Division

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles



# **ATTACHMENT**

# EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

(For bi-, dual- or flexible-fueled vehicles, the STD and CERT in parentheses are those applicable to testing on gasoline test fuel.)

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		@ RAF=* !AF = *	NMOG OF	CH4=methane: NMOG=non-CH4 organic gas; NMHC=non-CH4 hydrocarbon; CO=carbon monoxide; NOx=oxides of nitrogen; In 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											
CERT STD		NMOG	NMHC	NMHC STD	hot-soak; l	RL [g/mi]=rur	nning loss:	ORVR (g/ga	allon dispe	nsedl=on-b	oard refuel	ling vapor recest procedure	covery: a=a	ram; mg=milli	igram
0.034 0	0.040	CERT [g/mi]	CERT [g/mi]	[g/mi]	CO	CO [g/mi]		NOx [g/mi]		HCHO [mg/mi]		PM [g/mi]		Hwy NOx [g/mi]	
					CERT	STD	CERT	STO	CE	RT :	STD	CERT	STD	CERT	STD
	@ 50K	0.012	•	0.040	0.3	1.7	0.02	0,0	5	•	8.	*	*	0.02	0.07
de producti	@ UL	0.014	•	0.055	0.3	2.1	0.02	0.07	,	*	11.	•	0.01	0.02	0.09
	₫) 50°F & 4K	0.035	*	0,080	0.4	1.7	0.02	0.0	5	•	16.	•	*	*	÷
CO [g/mi] @ 20°F & 50K							CO [g/mi] NMH0 (composite) [g/mi]		+NOx CO [g/mi] US06] [US06]		NMHC+NOx [g/ml] [SC03]		CO [g/mi] [\$C03]		
			Lowers	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
CERT	1.0	SFTP @ 4	000 miles	•	+	+	•	0.05	0.14	0.6	8.0	0.05	0,20	0,5	2.7
STD	10,0	SFTP	@ * miles	•	•		•		*		*	*	•	+ -	*
Evaporative Family			urnal + Hot is/test) @ U		ak 2-Days Diurnal + Hot Soak (grams/test) @ UL		Running Loss (grams/mile) @ UL				On-Board Refueling Vapor Recovery (grams/gallon) @ UL				
		CERT	STD		CERT :		STD	CER	CERT ST			CERT		\$TD	
8VVXR0130EV1		0.33	0.50		0.44	0.44 0.6		0.0	1	0.05		0.06		0,20	
8VVXR0132EV2		0.31	0.50		0.32		).65	0.0	1	0.05		0.04		0.20	
	•		+	<u> </u>	. +				+		<del></del>				

<sup>\* =</sup> not applicable; UL=useful life; PC=passenger car; LDT=light-duty truck; MDV=medium-duty vehicle; ECS= Emission Control System; STD= Standard; CERT= Certification; LVW=loaded vehicle weight; ALVW=adjusted LVW; LEV=low emission vehicle; TLEV=transitional LEV; ULEV=ultra LEV; SULEV=super ULEV; TWC=3-way catalyst; ADSTWC=adsorbing TWC; WU=warm-up catalyst; OC=oxidizing catalyst; O2S=oxygen sensor; HO2S=heated O2S; AFS/HAFS=air- fuel ratio sensor / heated AFS; EGR=exhaust gas recirculation; AIR=secondary alr injection; PAIR=pulsed AIR; MFI= multiport fuel injection; SFI=sequential MFI; TBI=throttle body injection; DGI=direct gasoline fuel injection; TC/SC= turbo/super charger; CAC=charge air cooler, OBD (F)/(P)=tull/partial on-board diagnostic; DOR=direct ozone reducing; prefix 2=parallel; (2) suffix=series; CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85="85%" Ethanol Fuel;

## 2008 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	EVAPORATIVE FAMILY	ECS NO.	ENGINE SIZE (L)	IN-I COMPI (*=N/A or A/E=exi	MEDIATE USE LIANCE full In-use; n. / evap. ate in-use)	PHASE-IN STD.	OBD II
					EXH	EVAP		
VOLVO	S60 2.5T	8VVXR0130EV1	1	2.5	*	•	SFTP	Partial
VOLVO	S60 2.5T AWD	8VVXR0130EV1	1	2.5	*	*	SFTP	Partial
VOLVO	S40 T5	8VVXR0132EV2	1	2.5	•	•	SFTP	Partial
VOLVO	S40 T5 AWD	8VVXR0132EV2	1	2.5	*	*	SFTP	Partial
VOLVO	V50 T5	8VVXR0132EV2	1	2.5	•	*	SFTP	Partial
VOLVO	V50 T5 AWD	8VVXR0132EV2	1	2.5	*	•	SFTP	Partial
VOLVO	C70	8VVXR0132EV2	1	2.5	*	•	SFTP	Partial
VOLVO	C30 T5	8VVXR0132EV2	1	2,5	•	•	SFTP	Partial