#### **VOLVO CAR CORPORATION**

EXECUTIVE ORDER A-018-0158
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 TEST GROUP		VEHICLE TYPE	EXHAUST EMISSION STANDARD CATEGORY	USEFU (mil		IN- COMP (*=N/A or A/E=exi	MEDIATE USE LIANCE full in-use; h. / evap. ate in-use)	FUEL TYPE		
2009 9VVXV02.4L2T		Passenger Car	"LEV II" Low Emission Vehicle (LEV II LEV)	ORVR	EVAP	EXH	EVAP	Gasoline		
	<u> </u>			120K 150K		•	*	Gasonne		
No.		ECIAL FEATURES	EVAPORATIVE FAMILY (EVAF) DISPLACEMENT (L)							
1	TWC, HAFS, HO	2S, SFI, TC, CAC, OBD(P)	9VVXR0130EV1							
*	, n.m.	•								
*		*	2.4							
*	, ···•	*				vi.				

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).

### BE IT FURTHER RESOLVED:

The test group listed in this Executive Order is certified based on the manufacturer's reported emissions and attestation that it meets all applicable certification requirements currently in effect and enforceable for the 2009 model year, as described above. A January 16, 2007 Order currently enjoins the Executive Officer from enforcing any provision of California Health and Safety Code section 43018.5(b)(1) concerning certification to the requirements for 2009 and subsequent model passenger cars, light-duty trucks, and medium-duty vehicles adopted pursuant to AB 1493. (Document 606, Case No. 1:04-CV-06663-AWI-GSA, U.S. Dist. Ct. E. Dist. of CA (Fresno Div.).) If said injunction ceases to be in effect, the manufacturer will have 45 days from ARB notification to demonstrate compliance with AB 1493 requirements, including the determination of the greenhouse gas values for the medium-duty passenger vehicles in the test group listed in this Executive Order. Nothing in this Executive Order is intended to constitute enforcement of any requirement under AB 1493 for 2009 model year vehicles.

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

day of June 2008

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.)

AVERAG			@ RAF=* RAF = *	NMOG or	CH4=metha HCHO=form	ane; NMOG≃ naldehvde: P	non-CH4 org M=nadiculat	anic gas; Ni e matter: PA	<b>/IHC</b> ≂non-CH	4 hydrocarb	on; CO=carbo actor; 2/3 D [g/	n monoxide;	NOx=oxides o	f nitrogen;
CERT	STD	NMOG	NMHC	NMHC	hot-soak; R	L (g/mi)=run	ning loss: OR	VR [g/gallor	dispensed)=	on-board ret	ueling vapor r	testj=2/3 day ecovery; g=g	diurnal+ ram; <b>mg=mill</b> ij	oram
0.036	0.038	CERT [g/mi]	CERT [g/mi]	STD [g/mi]		g/mi]	NOx	[g/mi]	HCHO	nental feder [ <b>mg/mi]</b>	al test procedu	ıre g/mi]		x [g/mi]
	@ 50K	0.017		0.075	+	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
	@ UL	0.021	+	0.075	0.5	3.4	0.03	0.05	*	15.	<u> </u>	*	0.00	0.07
	50°F & 4K	*	<del></del>	0.090	0.6	4.2	0.05	0.07	•	18.		0.01	0.00	0.09
	33 ( 3.41)					•	*	*	*	*	*	•	•	*

CO [g/mi @ 20°F & 56				NMHC+N (comp		CO [	g/mi] osite)		+NOx [US06]		g/mi] (06)		+NOx ISC031	CO	
				CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
CERT 2.		SFTP @ 400		*	*	*	*	0.02	0.14	2.4	8.0	0.02	0.20	0.5	2.7
315 10.	_	SFTP@	miles	*	<u> </u>	*_	•	*	*	*	*	*	*	•	*

Evaporative Family	3-Days Diurn (grams/te	al + Hot Soak est) @ UL	2-Days Diurn (grams/te	al + Hot Soak est) @ UL		ng Loss nile) @ UL	On-Board Refueling Vapo Recovery (grams/gallon) @		
	CERT	STD	CERT	STD	CERT	STD	CERT	STD	
9VVXR0130EV1	0.33	0.50	0.44	0.65	0,01	0.05	0.06	<del> </del>	
<u> </u>		*	*	•	4	•	4	0.20	
*	•	*	*	•	*	*			
*	*	•	*	•	*	•	*	<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 TC/SC= turbo/super charger; CAC=charge air cooler; OBD (F)/(P)=full/partial on-board diagnostic; DOR=direct ozone reducing; prefix 2=parallel; (2) suffix=series; CNG/LNG= compressed/ilquefled natural gas; LPG=liquefled petroleum gas; E85="85%" Ethanol Fuel;

# 2009 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	EVAPORATIVE FAMILY	ECS NO.	ENGINE SIZE (L)	INTERI IN- COMP ('=N/A or	MEDIATE USE LIANCE full in-use; h. / evap,	PHASE-IN STD.	OBD II
				(-)	EXH	EVAP		
VOLVO	S60 T5	9VVXR0130EV1	1	2.4	•	*	SFTP	Partia