California Environmental Protection Agency AIR RESOURCES BOARD	VOLVO CAR CORPORATION	EXECUTIVE ORDER A-018-0180 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 1 of 2

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; ALVW=adjusted loaded vehicle weight; 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 & ORVR / EVAPORATIVE USEFUL LIFE (UL) (miles)	FUEL TYPE (CNG/LNG=compressed/ liquefied natural gas; LPG=liquefied petroleum gas)
2013	DVVXJ03.2U2N	PC LDT: ≤ 6000# GVW, 3751-5750# LVW LDT: 6001-8500# GVW, 3751-5750# ALVW	LEV II ULEV	120K / 150K	Gasoline

No.	EVAPORATIVE FAMILY (EVAF)	No.	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS (ECS) * = not applicable
1	DVVXR0130EB6	1	2TWC(2), 2HO2S, 2AFS, SFI, OBD(F)
2	DVVXR0130ET3	2	*
3	*	3	*
4	*	4	*
5	*	5	*
6	*	6	*

TWC/OC=3-way/oxidizing catalyst; **ADSTWC**=adsorbing TWC; **WU**=warm-up catalyst; **NAC**=NOx adsorption catalyst; **SCR-U/SCR-N**= selective catalytic reduction-urea/ammonia; **NH3OC=SCR-U/SCR-N** ammonia slip catalyst; **CTOX/PTOX**= continuous/periodic trap oxidizer; **HO2S/O2S**=heated/oxygen sensor; **AFS/HAFS**=air- fuel ratio sensor / heated AFS; **NOXS**= NOx sensor; **RDQS**=reductant quality sensor; **EGR**=exhaust gas recirculation; **EGRC**=cooled EGR; **AIR**=secondary air injection; **PAIR**=pulsed AIR; **SFI/MFI**= sequential/ multiport fuel injection; **DFI**=direct fuel injection; **TC/SC**= turbo/super charger; **CAC**=charge air cooler; **OBD (F)/(P)/(B)**= full/partial/both on-board diagnostic; **DOR**=direct ozone reducing; 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	3.2	VOLVO: (PC) S80 3.2; XC60 3.2; XC70 3.2		
1	1	3.2	VOLVO: (LDT 3,751-5,750# LVW) XC60 3.2 AWD; XC70 3.2 AWD		
2	1	3.2	VOLVO: (LDT 3,751-5,750# LVW) XC90 3.2		
2	1	3.2	VOLVO: (LDT 3,751-5,750# ALVW) XC90 3.2 AWD		

That the exhaust, 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.

NMOG FLEET AVERAGE [g/mi]		NMOG @ RAF= * 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 STD	LDT2 STD	NMOG CERT [g/mi]	NMHC CERT [g/mi]		CO [g/mi]		NOx [g/mi]		HCHO [mg/mi]		PM [g/mi]		Hwy NOx [g/mi]	
					CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
0.035	0.043													
	@ 50K	0.016	*	0.040	0.4	1.7	0.03	0.05	*	8	*	*	0.03	0.07
	@ UL	0.023	*	0.055	0.4	2.1	0.03	0.07	*	11	*	0.01	0.03	0.09
	@ 50°F & 4K	0.028	*	0.080	0.4	1.7	0.02	0.05	*	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	1.3	SFTP @ 4K	*	*	*	*	0.08	0.14	1.2	8.0	0.03	0.20	0.7	2.7
STD	10.0	SFTP @ UL	*	*	*	*	*	*	*	*	*	*	*	*

@ 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	0.40	0.39	0.01	0.03	0.34	0.38	0.01	0.02	*	*	*	*	*	*	*	*
STD	0.50	0.65	0.05	0.20	0.65	0.85	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], 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 conditionally on the manufacturer providing data to demonstrate compliance with California's greenhouse gas fleet average emission standard (CA GHG Standard) specified in Title 13, California Code of Regulations, (13 CCR) Section 1961.1 and the incorporated California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, amended March 29, 2010 (CA Test Procedures). The manufacturer has elected, under 13 CCR Section 1961.1(a)(1)(A)(ii) and under Section E.2.5.1(ii) of the CA Test Procedures, to demonstrate compliance with the CA GHG Standard by demonstrating compliance with the National greenhouse gas program (National GHG Program). Therefore, the test group listed in this Executive Order is certified conditionally further on the manufacturer complying with the requirements specified in said provisions in 13 CCR, and Sections E.2.5.1(ii) and H.4.5(b) and H.4.5(c) of the CA Test Procedures (among other things, concerning data and information submission, timing, and format as specified by the Executive Officer). Failure to comply with the certification requirements to demonstrate compliance with CA GHG Standard by demonstrating compliance with the National GHG Program under said provisions in 13 CCR and CA Test Procedures may be cause for the Executive Officer to revoke the Executive Order. Vehicles in the revoked Executive Order shall be deemed uncertified and subject to penalties authorized under California law. Notwithstanding the requirement herein, a manufacturer that becomes, after MY2009, a large-volume manufacturer, as defined in 13 CCR Section 1900, is not required to comply with the CA GHG Standard until the beginning of the fourth model-year from becoming a large-volume manufacturer. Additionally, notwithstanding the requirement herein, a small-volume manufacturer, independent low-volume manufacturer, or intermediate volume-manufacturer, as defined in 13 CCR Section 1900, is not required to comply with CA GHG Standard during model-years (MY) 2012 through 2015.

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 23 day of January 2012.

Annette Hebert, Chief
Mobile Source Operations Division