

VOLVO CAR CORPORATION

Executive Order: A-018-0220

New Passenger Cars, Light-Duty Trucks and

Medium-Duty Vehicles

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Pursuant to the authority vested in California Air Resources Board by Health and Safety Code (HSC), Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: The following vehicles produced by the manufacturer are certified as plug-in hybrid electric vehicles pursuant to Title 13, California Code of Regulations (13 CCR) Sections 1961 or 1961.2, 1962.2, 1976, 1978 and the incorporated test procedures. Production vehicles shall be in all material respects the same as those for which certification is granted.

				TEST GR	OUP IN	FORMAT	ION	* 5 We see				
MODE YEAR		ST GROUP	VEHIC		FUEL CATEGORY			FUEL TYPE				
2020	LV	VXJ02.0P30	LDT2, LDT4, PC				PLUG-IN HYBRID ELECTRIC VEHICLE			GASOLINE		
1	JSEFUL	LIFE (miles)	VEH	IICLE EMIS	SION C	ATEGOR	Y	INTERIM / INTERMEDIATE IN-USE STO				
EXH/ORVR EVAP			* : : > :	FTP		SFTP FTP		FTP	SFTP			
15	0000	150000	LEV3	SULEV30	LEV	3 COMPO	SITE	*		*		
SPE	CIAL FE	ATURES & EXI	HAUST EMISSIC	ON CONTR	OL		OBD S	STATUS	E	NGINE DISPLACEMENT		
1 TWC, WR-HO2S, 2HO2S, DFI, TC, SC, CAC							L	*	*			
* *						PART	TIAL .	ALL MODELS	2.0			
*	*						PARTIAL WITH * FINES					
		EV	APORATIVE &	REFUELIN	G (EVA	P/ORVR)	FAMIL	Y INFORMATION	ı	7		
EVA	P / ORV	R FAMILY	EVAPORATIVE	STD CATE	EGORY			ISSION STD LE CLASS	s	PECIAL FEATURES		
L	VVXR01	42EP2	LEV 3	OPTION2	Ty Ty	PC				*		
			·····	EMISSION (CREDIT	INFORM	ATION					
ODOUD						MOG CREDIT FOR NON-PZEV ZERO- EVAP		NMOG CREDIT FOR		OPTIONAL EXH. STD FOR WORK TRUCKS		
		EV				EVAI						
ALL MODELS N						n n				N		
			NMOG	AND FLEE	ET AVE	RAGE INI	FORMA	ATION				
NMOG RAF	RAE RAE NMOG/NMHC RATIO PC+LDI (0-3/					0 LVW) LDT (DG+NOX FLEET STD DT (3751 LVW-8500 WR) + MDPV (g/mi)		NMOG+NOX FLEET STE MDV (10,001-14,000 GVWR) (g/mi)		
*	*	1.10	*		0.065	5 0.074 *						

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. (As applicable, heavy-duty vehicles (HDV) over 14,000 pounds in GVWR listed in this Executive Order are certified to the requirements in 13 CCR Section 1961.2 applicable to MDV pursuant to 13 CCR Section 1956.8(c)(3) or 13 CCR Section 1956.8(h)(5), as applicable.)



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BE IT FURTHER RESOLVED:

The exhaust and 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 fleet average compliance requirement for NMOG+NOx or Vehicle Equivalent Credit (13 CCR Sections 1961.2(b)(1), 1961.2(b)(3), or 1961.2(c) (3), and the incorporated test procedures, as applicable), or Greenhouse Gas Emissions (13 CCR Section 1961.3, or 17 CCR Section 95663, and the incorporated test procedures, as applicable), for PC, LDT, MDPV or MDV shall be equalized as required.

BE IT FURTHER RESOLVED:

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 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for PC, LDT and MDV).

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations.

The Bureau of Automo	otive Repair will be no	otified by copy of this	Executive (Order.	A STATE OF THE STA	O COOL O
Executed at El Monte,	California on this 4	day of Septe	ember 2019.			23 174 174 11 0 ±
	Alle	in Lyons, Chief issions Certification	and Complia	ance Division	and account of the second	
VEDIAL PEATURES	E CLASS STOR		establité.	Tyttayayra	Y00435	NAJ RVI
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galagorius de la composition della composition d	gerindagsfordere i sentativa i metativa i metativa partina partina partina partina partina partina partina par	in the second	g (n. 50 Mindelfall Left Ber nan and making meneral dan panta sa	the state of the s	file of the state	garpet engli
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ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

1112618		EXHA	UST EM	ISSION	STA	NDA	RDS AN	ID CER	TIFIC	ATION L	EVELS	(FTP, HW	FET,	50°F, 20	°F)		
	FUE	FUEL TYPE		noxide; Nustment i VR [g H0	IOx: of actor C/gallo	oxide ; 2D on di	es of nitr HS/3DH spense	ogen; H IS [g HC d]: on-bo	ICHO: /test]: oard r	formald 2/3 day efueling	ehyde; P s diurnal vapor re	bon; NMH M: particu +hot-soak covery; g: ure; SFTP	late r ; RL [gram	natter; R/ g HC/mi]; ; mg: mill	AF: reactive running I igram; mi:	vity oss;	
				N		NMOG+NOx (g/mi)			CO (g/mi)		NOx (g/mi)			HCH(PM (g/mi)	
			С	ERT	STE)	CERT	ST	D	CERT	STD	CER	Т	STD	CERT	STD	
FTP@50)K	*		*	*	37	. *	*		*	*	*		*	*	*	
FTP@U		OLINE	1.0	0186	0.03	0	0.15	1.	0	0.015	*	*		4	0.0004	0.01	
50°F @4	121	OLINE	1 0	0103	0.06	0	0.25	1.	0	0.006	*	*		8			
				FUEL TYPE				NMOG+NOx (g/mi)		-) (g/mi)				
		194.5			, es					_	RT	STD		CERT	ARE SHE ARE	STD	
HWFET	@ 50K	lane o		*						* *		1					
HWFE.	T@UL			GASOLINE-LEV3 E10				0.0	092	0.030							
20°F (@ 50K		GASO	GASOLINE-COLD CO LOW OCTANE							0.58 10.0		10.0				
-84			SF1	PEXHA	UST	EMI	SSION	STAND	ARDS	AND C	ERTIFIC	ATION L	EVEL	S	e gr	Addition to	
			US06					SC03			CO	MPOSITE					
Ť	FUEL T	UEL TYPE		NMOG+NOx (g/mi)			CO (g/mi) (n		M g/mi)	NMOG+NOx (g/mi)		CO NM (g/mi)		NMOG+NOx (g/mi) (PM (mg/mi)	
@ 4K	*		CERT	*		*				*	*						
	S		STD	*		*				*	*						
		CE		*			* *		*	*		* *	0.0155		0.27	*	
@ UL	GASOLI		STD	*			*	*			*	*		0.083	4.2	*	
		В					117						(0.060			
		WHO	OLE VE	IICLE E	/APC	RA	TIVE EN	NISSION	N STA	NDARD	SAND	CERTIFIC	ATIO	N LEVEL	.s		
				× ×		WH	IOLE VI	EHICLE	EVA	PORATI	VE TEST	ring					
	ORATIVE MILY	FU	FUEL TYPE		3DH	S (g/	test) @	UL		2DHS) @ UL	D UL		RL (g/mi) @ UL			
1.7				CE	RT	S	TD	FEL	CE	RT	STD	FEI		CERT		STD	
LVVXR0142EP2			ASOLINE EV3 E1 PREM		972	0.	300	* : 12	0.1	1385 0.300		*			00 0.05		
	RVP / F	UEL O		ANISTE	R RI	FFD	FVAPO	RATIV	FFM	SSION	STANDA	RDS AND	CFI	RTIFICAT	TION I EV	FLS	
	INVINIE			ANO IL	, DL		LIAIC	2137111				P & CAN					
	ORATIVE MILY	• 0	ORVR (g	(g/gallon) @ UL			E11E1	31		DHS RIG TEST (g/test) @ UL		2DHS		G TEST BLEED		ANISTER est) @ 4K	
		FUI	EL TYPE	CERT	S	ΓD	FUEL	. TYPE		ERT	STD	CERT		STD	CERT	STD	
LVVXR	0142EP2	GAS	SOLINE- ER3 E10			20		*		*	*	*		*	*	*	



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EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)									
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD						
LVVXR0142EP2	LVVXR0142EP2-001	The state of the s	0,02						

*: not applicable; #: pounds; UL: useful life; PC: passenger car; LDT: light-duty truck; LDT1: LDT<6000#GVWR,0-3750#LVW; LDT2: LDT<6000#GVWR,3751-5750#LVW; LDT3: LDT 6001-8500#GVWR,3751-5750#ALVW; LDT4: LDT 6001-8500#GVWR,5751-8500#ALVW; MDV: medium-duty vehicle; MDV4: MDV 8501-10000#GVWR; MDV5: MDV 10001-14000#GVWR; MDPV: mediumduty passenger vehicle; HDV: heavy-duty vehicle; ECS: emission control system; CERT: certification; STD: standard; FEL: family emission limit; GVWR: gross vehicle weight rating; LVW: loaded vehicle weight; ALVW: adjusted LVW; LEV: low emission vehicle; ULEV: ultra LEV; SULEV: super ULEV; ZEV: zero-emission vehicle; TZEV: transitional ZEV; TWC/OC: 3-way/oxidizing catalyst; ADSTWC: adsorbing TWC; HAC: HC adsorbing catalyst; WU: warm-up catalyst; NAC: NOx adsorption catalyst; SCR-U or SCRC/SCR-N or SCRC-NH3: selective catalytic reduction-urea/ammonia; NH3OC: ammonia oxidation catalyst; CTOX/PTOX: continuous/periodic trap oxidizer; DPF: diesel particulate filter (active); GPF: PM filter for spark-ignited engine; HO2S/O2S: heated/oxygen sensor; WR-HO2S or AFS: wide range/linear/heated air-fuel ratio sensor; NOXS: NOx sensor; PMS: PM sensor; RDQS: reductant quality sensor; NH3S: ammonia sensor; EGR: exhaust gas recirculation; HP/LP EGR: High/Low Pressure EGR; EGRC: EGR cooler; AIR/AIRE: secondary air injection (belt driven)/(electric driven); PAIR: pulsed AIR; SFI/MFI: sequential/multiport fuel injection; DFI/IFI: direct/indirect fuel injection; TC/SC: turbo/super charger; CAC: charge air cooler; FFH: fuel fired heater; F/P/\$: full/partial/partial with fines on-board diagnostic; DOR: direct ozone reducing; HCT: hydrocarbon trap; BCAN: bleed carbon canister; prefix 2: parallel, (2) suffix: series, a hyphen (-) between after treatment ECS indicates multiple functionalities of the after treatment device (ex. DPF-SCRC: SCR coated DPF); CNG/LNG: compressed/liquefied natural gas; LPG: liquefied petroleum gas; E85: "85%" ethanol ("15%"gasoline) fuel; E10: "10%" ethanol ("90%"gasoline) fuel; A: automatic (with lockup); M: manual transmission; SA: semi automatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission; AER: all-electric range; EAER: equivalent AER; PHEV: plug-in hybrid electric vehicle; NMOG + NOx Fleet Ave. Credit for Extended Warranty: N = no credits, Y = credits, S = credits for some/select models

2020 MODEL YEAR: VEHICLE MODELS INFORMATION

MODEL NUMBER	MAKE	MODEL	VEH	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
1	VOLVO	S60 T8 AWD	PC	2.0	SA8	LVVXJ02.0P30	1	P
2. 2.	VOLVO	S60 T8 AWD POLESTAR ENGINEERED	PC	2.0	SA8	LVVXJ02.0P30	1	P
3	VOLVO	S90 T8 AWD	PC	2.0	SA8	LVVXJ02.0P30	1	P
4	AOTAO	V60 T8 AWD	PC	2.0	SA8	LVVXJ02.0P30	1 1	P
5	VOLVO	V60 T8 AWD POLESTAR ENGINEERED	PC	2.0	SA8	LVVXJ02.0P30	1	P
6	AOTAO	XC60 T8 AWD	LDT2	2.0	SA8	LVVXJ02.0P30	10 10	P
7	VOLVO	XC60 T8 AWD POLESTAR ENGINEERED	LDT2	2.0	SA8	LVVXJ02.0P30	1	P **
8	VOLVO	XC90 T8 AWD	LDT4	2.0	SA8	LVVXJ02.0P30	1	P

ELECTRIC RANGE AND ZEV ALLOWANCE INFORMATION

MODEL NUMBER	- Throng on the second	UDDS AER (MILES)	UDDS EAER (MILES)	US06 AER	HIGHW	ZEV	
	PHEV TYPE			(MILES)	AER	EAER	ALLOWANCE
	TZEV	29.6	29.5	, alternative A contract of the	29.8	30.5	0.60
4	TZEV	30.6	31.8	の情報を開発するの内でもの ではありないまという時間で	31.4	31.5	0.62
5	TZEV	30.6	31.8		31.4	31.5	0.62
6	TZEV	26.0	26.7	# *	25.9	26.1	0.57
7	TZEV	26.0	26.7	1.1.1.671.6	25.9	26,1	0.57
8	TZEV	25.6	26.7		25.1	25.1	0.57
1	TZEV	30.6	31.8		31.4	31.5	0.62
2	TZEV	30.6	31.8	10个相关的人类的人。10个目10个	31.4	31.5	0.62