

Pursuant to the authority vested in the 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-14-012;

IT IS ORDERED AND RESOLVED: 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.

TEST GROUP INFORMATION									
MODEL YEAR	TEST GROUP		VEHICLE CLASS(ES)		FUEL CATEGORY		FUEL TYPE		
2017	HVXJ02.0U3T		LDT2, PC		DEDICATED SINGLE FUEL VEHICLE		GASOLINE		
USEFUL LIFE (miles)			VEHICLE EMISSION CATEGORY			INTERIM / INTERMEDIATE IN-USE STD			
EXH/ORVR	EVAP		FTP	SFTP		FTP		SFTP	
150000	150000		LEV3 ULEV125	LEV 3 COMPOSITE		*		*	
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS				OBD STATUS			ENGINE DISPLACEMENT (L)		
1	TWC, WR-HO2S, HO2S, DFI, TC, CAC			FULL	*		2.0		
2	TWC, WR-HO2S, HO2S, DFI, TC, SC, CAC			PARTIAL	ALL MODELS				
*	*			PARTIAL WITH FINES	*				
EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION									
EVAP / ORVR FAMILY		EVAPORATIVE STD CATEGORY			EVAP EMISSION STD VEHICLE CLASS		SPECIAL FEATURES		
HVXR0130EB2		LEV 2			LDT2		*		
HVXR0130EV2		LEV 2			PC		*		
HVXR0130EV3		LEV 3 OPTION2			PC		*		
HVXR0142EV5		LEV 3 OPTION2			PC		*		
EMISSION CREDIT INFORMATION									
ALLOWANCE FOR TEST GROUP				NMOG CREDIT FOR NON-PZEV ZERO-EVAP		NMOG CREDIT FOR DOR		OPTIONAL EXH. STD FOR WORK TRUCKS	
BASELINE PZEV	AT PZEV		TZEV	N		N		N	
*	*		*						
NMOG AND FLEET AVERAGE INFORMATION									
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO	HCHO/NMHC RATIO	NMOG+NOX FLEET STD PC+LDT (0-3750 LVW) (g/mi)		NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)		NMOG+NOX FLEET STD MDV (10001-14000 GVWR) (g/mi)	
*	*	1.10	*	0.086		0.101		*	

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:

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 NMOG+NOx and greenhouse gas Fleet Average (PC or LDT or MDPV) or "Vehicle Equivalent Credit" (MDV) compliance plan 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.

This Executive Order hereby supersedes Executive Order A-018-0202 dated July 22, 2016.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 21st day of November 2016.


for Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS (FTP, HWFET, 50°F, 20°F)

	FUEL TYPE	CH4: methane; NMOG: non-CH4 organic gas; HC: hydrocarbon; NMHC: non-CH4 HC; CO: carbon monoxide; NOx: oxides of nitrogen; HCHO: formaldehyde; PM: particulate matter; RAF: reactivity adjustment factor; 2DHS/3DHS [g HC/test]: 2/3 days diurnal+hot-soak; RL [g HC/mi]: running loss; ORVR [g HC/gallon dispensed]: on-board refueling vapor recovery; g: gram; mg: milligram; mi: mile; K: 1000 miles; F: degrees Fahrenheit; FTP: federal test procedure; SFTP: supplemental FTP									
		NMOG+NOx (g/mi)		CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		PM (g/mi)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	*	*	*	*	*	*
FTP@UL	GASOLINE-LEV3 E10	0.0673	0.125	0.48	2.1	0.035	*	*	4	0.002	0.01
50°F @4K	GASOLINE-LEV3 E10	0.0395	0.250	0.39	2.1	*	*	*	16		

	FUEL TYPE	NMOG+NOx (g/mi)		CO (g/mi)	
		CERT	STD	CERT	STD
HWFET @ 50K	*	*	*		
HWFET @ UL	GASOLINE-LEV3 E10	0.0391	0.125		
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			0.54	10.0

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

	FUEL TYPE		US06			SC03		COMPOSITE		
			NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMOG+NOx (g/mi)	CO (g/mi)	NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)
@ 4K	*	CERT	*	*		*	*			
		STD	*	*		*	*			
@ UL	GASOLINE-LEV3 E10	CERT	*	*	*	*	*	0.058	0.43	*
		STD	*	*	*	*	*	0.103	4.2	*
		BIN						0.100		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

		WHOLE VEHICLE EVAPORATIVE TESTING							RL (g/mi) @ UL	
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @ UL			2DHS (g/test) @ UL			CERT	STD	
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	
HVVXR0130EB2	GASOLINE - CA PHASE 2	0.404	0.65	*	0.393	0.85	*	0.008	0.05	
HVVXR0130EV2	GASOLINE - CA PHASE 2	0.339	0.50	*	0.382	0.65	*	0.009	0.05	
HVVXR0130EV3	GASOLINE-LEV3 E10	0.2261	0.300	*	0.2654	0.300	*	0.012	0.05	
HVVXR0142EV5	GASOLINE-LEV3 E10	0.1968	0.300	*	0.1439	0.300	*	0.000	0.05	

ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL ONLY EVAP & CANISTER BLEED						
				FUEL TYPE	3DHS RIG TEST (g/test) @ UL		2DHS RIG TEST (g/test) @ UL		BLEED CANISTER TEST (g/test) @ 4K	
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD
HVVXR0130EB2	GASOLINE - TIER 2 UNLEADED	0.031	0.20	*	*	*	*	*	*	*
HVVXR0130EV2	GASOLINE - TIER 2 UNLEADED	0.015	0.20	*	*	*	*	*	*	*
HVVXR0130EV3	GASOLINE-LEV3 E10	0.019	0.20	GASOLINE-LEV3 E10	*	*	*	*	0.0118	0.020
HVVXR0142EV5	GASOLINE-LEV3 E10	0.004	0.20	GASOLINE-LEV3 E10	*	*	*	*	0.0086	0.020

*: 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: medium-duty 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; PZEV: partial ZEV; AT PZEV: advanced technology PZEV; 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; 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; 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; CNG/LNG: compressed/liqefied 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

2017 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
VOLVO	S60 INSCRIPTION T5	PC	2.0	SA8	HVVXR0130EV3	1	P	*
VOLVO	S60 INSCRIPTION T5 AWD	PC	2.0	SA8	HVVXR0130EV2	1	P	*
VOLVO	S60 T5	PC	2.0	SA8	HVVXR0130EV3	1	P	*
VOLVO	S60 T5 AWD	PC	2.0	SA8	HVVXR0130EV2	1	P	*
VOLVO	S60 T6 AWD	PC	2.0	SA8	HVVXR0130EV2	2	P	*
VOLVO	S60CC T5 AWD	LDT2	2.0	SA8	HVVXR0130EV2	1	P	*
VOLVO	S90 T5	PC	2.0	SA8	HVVXR0142EV5	1	P	*
VOLVO	S90 T6 AWD	PC	2.0	SA8	HVVXR0142EV5	2	P	*
VOLVO	V60 T5	PC	2.0	SA8	HVVXR0130EV3	1	P	*
VOLVO	V60 T5 AWD	PC	2.0	SA8	HVVXR0130EV2	1	P	*
VOLVO	V60 T6 AWD	PC	2.0	SA8	HVVXR0130EV2	2	P	*
VOLVO	V60CC T5 AWD	LDT2	2.0	SA8	HVVXR0130EV2	1	P	*
VOLVO	V90 CC T6 AWD	LDT2	2.0	SA8	HVVXR0142EV5	2	P	*
VOLVO	V90 T5	PC	2.0	SA8	HVVXR0142EV5	1	P	*
VOLVO	V90 T6 AWD	PC	2.0	SA8	HVVXR0142EV5	2	P	*
VOLVO	XC60 T5	LDT2	2.0	SA8	HVVXR0130EB2	1	P	*
VOLVO	XC60 T5	PC	2.0	SA8	HVVXR0130EV3	1	P	*
VOLVO	XC60 T6 AWD	LDT2	2.0	SA8	HVVXR0130EB2	2	P	*