California Environmental Protection Agency

⊘ Air Resources Board

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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 GRO	UP IN	IFORMA	TION	J				
MODE	_	EST G	ROUP	VEH	IICLE CLASS(E	S)		FÜEL C	ATE	GORY	FL	JEL TYPE	
2017	но	MXV01	L.5030		PC			PLUG-1 ELECTRI			G	ASOLINE	
	USEFUL	LIFE	(miles)	V	EHICLE EMISS	ION C	ATEGO	RY	IN	ITERIM / INTE	RMEDIA	TE IN-USE STD	
EXH	/ORVR		EVAP		FTP		SFTP			FTP		SFTP	
15	0000		150000	LE	/3 SULEV30	LEV	3 COME	OSITE		*		NMOG+NOX	
SPE	CIAL F	EATUR		HAUST EMIS	SION CONTRO	L		OBD S	TAT	us	ENGINE	DISPLACEMENT (L)	
1		TWC,	HO2S (2)	, DFI, EG	R, EGRC		FU	JLL	AL	L MODELS			
*				*		1	PAR	TIAL * 1.5				1.5	
*				*		1		L WITH		*			
			EV	APORATIVE	& REFUELING	(EVA	P/ORVR) FAMILY	INF	ORMATION		·	
EVA	P / ORV	R FAN	MILY	EVAPORAT	IVE STD CATE	GORY	E	VAP EMIS VEHICLI			SPECIA	L FEATURES	
E	IGMXR00	60600	0		LEV 2			P	C			HCT	
					EMISSION CI	REDIT	INFORI	MATION					
	A	LLOW	ANCE FO	R TEST GR	DUP			REDIT FO		NMOG CRE		OPTIONAL EXH. STD FOR WORK	
BASE	LINE P	ZEV	AT	PZEV	TZEV	NO	N-PZEV	ZERO-E	VAP	DOF	₹	TRUCKS	
	*			*	ALL MODELS			N		N		N	
				NM	OG AND FLEET	AVE	RAGE IN	IFORMA"	LIÓN				
NMOG RAF	CH4 RAF	NMO	FTP G/NMHC ATIO	HCHO/NMH RATIO	PC+LDT (LDT (375	X FLEET STD 1 LVW-8500 MDPV (g/mi)	MDV	NOX FLEET STD (10001-14000 /WR) (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],

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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).

BE IT FURTHER RESOLVED:

Evaporative family HGMXR0060600 is certified pursuant to 13 CCR Section 1976(b)(1)(G)3 and deemed to comply with the requirements of 13 CCR Section 1976(b)(1)(G)1 ["LEV III evaporative requirements"].

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 <u>28</u> day of January 2016.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

THE PROPERTY OF THE PROPERTY O	AND DEDTICIOATION I EVELOVETO UNIVERT CONE C	ADORA
EXHAUST EMISSION STANDARDS	AND CERTIFICATION LEVELS (FTP. HWFET, 50°F, 2	(U*F)

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

FUEL TYPE

		NMOG (g/i		(g/i		1	Ox mi)	HC (mg		1	M mi)
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	*	*	*	*.	*	*
FTP@UL	GASOLINE- LEV3 E10	0.0164	0.030	0.29	1.0	*	*	*	4	*	0.01
50°F @4K	*	*	*	*	*	*	*	*	*		

	FUEL TYPE	* * *	Ox (g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	. *	*	*	Service State Production	Mariana Ramana (1944)	
HWFET @ UL	GASOLINE-LEV3 E10	0.0032	0.030			
20°F @ 50K	GASOLINE- TIER 3 E10 COLD CO			1.1	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

主義系				US06		SC0	3	CON	MPOSITE	
a Engran of the	FUEL TYPE		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	*	*		*	*	Waster of		
		CERT	*	0	*	*	0.1	0.007	0.15	*
@ UL	GASOLINE- LEV3 E10	STD	*	*	*	*	*	0.103	4.2	*
		BIN				14 . 14 V. An		0.050		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE \	/EHICLE	EVAPORA	TIVE TESTI	NG		
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @ UL			2D	HS (g/test) (RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
HGMXR0060600	GASOLINE - CA PHASE 2	0.18	0.35	*	0.17	0.35	*	0.000	0.05

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

					FUEL C	NLY EVA	& CANIS	TER BLEE	D	
EVAPORATIVE FAMILY	ORVR (g/g	gallon) @	UL	FUEL TYPE		IG TEST) @ UL	2DHS R (g/test	IG TEST) @ UL		ANISTER est) @ 4K
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD
HGMXR0060600	GASOLINE - TIER 2 UNLEADED	0.044	0.20	GASOLINE - CA PHASE 2	0.04	0.0	*	0.0	*	*

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: 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; 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/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

2017 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
CHEVROLET	VOLT	PC	1.5	CV	HGMXR0060600	1	F	TZEV