California Environmental Protection Agency

O Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2086

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

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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 GR	OUP IN	FORMAT	ION					
MODE		EST G	ROUP	VEHIC	CLE CLASS(I	ES)		FUEL C	ATE	GORY		FU	EL TYPE
2018	JG	MXV0	3.6166		PC		F		EL V	EHICLE	85% E	NOL, GASOLINE	
l	JSEFUL	LIFE	(miles)	VE	HICLE EMIS	SION C	ATEGOR	Υ	IN	TERIM / IN	ERME	OIA"	TE IN-USE STD
EXH	/ORVR		EVAP		FTP		SFTP			FTP			SFTP
15	0000		150000	LEV	3 ULEV70	LEV	3 COMPC	SITE	NMC	G+NOX AN	D PM		PM
SPE	CIAL F	ATU		IAUST EMISS	ION CONTRO	DL		OBD S	TATU	IS	ENGI	NE	DISPLACEMENT (L)
1		DI	FI, 2TWC,	2HO2S(2),	TWC		FUL	L		*			1000
*				*			PART	IAL	ALI	MODELS	3.6		
*				*			PARTIAI			*			
			EV	APORATIVE 8	REFUELING	G (EVA	P/ORVR)	FAMILY	INF	ORMATION			
EVA	P / ORV	R FA	MILY	EVAPORATIV	E STD CATE	GORY		AP EMIS			SPE	CIA	L FEATURES
J	GMXR0:	13381	0		LEV 2			P	C			*	
					EMISSION (REDIT	INFORM	ATION					
	A	LLOV	VANCE FO	R TEST GRO	JP		***************************************						OPTIONAL EXH
BASE	LINE P	ZEV	АТ	PZEV	TZEV		NMOG CR N-PZEV 2				REDIT FOR		STD FOR WORK
	*	******		*	*		N . 1			4		N	
				NMO	G AND FLEE	TAVE	RAGE IN	ORMA	TION				L
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO (GASOLINE)		HCHO/NMHO RATIO (GASOLINE)	O PC+LDT (0-375					LVW-8500	MDV (10001-14000		(10001-14000
*	*		1.10	*		0.079			0	.092			*

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.

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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 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).

day of April 2017.

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

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

OB Air Resources Board

ATTACHMENT

TAKE A LIGHT A LIST	TO MADODATINE FINADIONION	ANDARDS AND CERTIFICATION	111
EAMVIIGI VVII	1 EVADADATIVE EMICCIANI CT	ARITADIS ARITALDITEIRATION	

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

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1											
Tin'		NMOG+NOx (g/mi)		CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		PM (g/mi)	
1.500		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	* .	*	*	*	*	*
FTP@UL	E85-TIER3 (GASOLINE- TIER3 E10)	0.029 (0.015)	0.070 (0.070)	0.6 (0.3)	1.7	* (*)	* (*)	1 (*)	4 (4)	0.000	0.003
50°F @4K	*	*	*	*	*	*	*	*	*	150 50 to	

	FUEL TVDC	NMOG+N	lOx (g/mi)	CO (g/mi)		
1 M	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	. *	*	*			
HWFET @ UL	E85-TIER3 (GASOLINE-TIER3 E10)	0.002 (0.001)	0.070 (0.070)			
20°F @ 50K	COLD CO E10 REGULAR GASOLINE (TIER3) (E70 (70% ETHANOL 30% EPA TIER3) - COLD E85 FUEL)			3.0 (3.3)	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

			US06			SC03	3	COM	POSITE	
22/	FUEL TYPE	12 (19) (1) 11 (1)	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	*	*		*	*			
@ 41.		STD	*	*		*	*		In the set of	
		CERT	*	*	1.0	*	*	0.023	0.4	*
@ UL	GASOLINE- TIER3 E10	STD	*	* .	10	*	*	0.097	4.2	*
		BIN		14.50				0.080		3 3/1
		CERT	*	*	1	*	*	0.022	0.4	*
@ UL	E85-TIER3	STD	*	*	10	*	*	0.097	4.2	*
		BIN	8 J. F		Same of the Western		g king i da	0.080		West.

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE	VEHICLE	EVAPORA	TIVE TESTIN	NG			
EVAPORATIVE FAMILY	FUEL TYPE	3DH	S (g/test) (@ UL	2DI	2DHS (g/test) @ UL		RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	
JGMXR0133810	E10-EPA	0.25	0.50	*	0.30	0.65	*	0.00	0.05	

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OPVE / FILEL ONLY / CANISTED BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

				FUEL ONLY EVAP & CANISTER BLEED								
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL TYPE	3DHS RIG TEST (g/test) @ UL		2DHS RIG TEST (g/test) @ UL		BLEED CANISTEI TEST (g/test) @ 4			
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
JGMXR0133810	GASOLINE - TIER 2 UNLEADED	0.01	0.20	*	*	*	*	*	*	*		

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; ŽEV: 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; 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; 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: semiautomatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS; automated manual-selectable transmission; OT; other transmission

2018 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH	OBD	PZEV TYPE
CHEVROLET	IMPALA	PC	3.6	SA6	JGMXR0133810	1	P	*