California Environmental Protection Agency

O Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2066

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.

			115		TEST GROU	P IN	FORMAT	ION					
MODE	- I TI	EST GI	ROUP	VEHI				FUEL CATEGORY FLEX-FUEL VEHICLE (FFV)			FUEL TYPE		
2017	HG	MXV06	.0082								85% ETHA	85% ETHANOL, GASOLINE	
ı	JSEFUL	LIFE	(miles)	VE	HICLE EMISSIO	NC	CATEGORY INTERIM / IN				ERMEDIA	TE IN-USE STD	
EXH	ORVR		EVAP		FTP		SFTP	1		FTP	SFTP		
120000 150000			150000	TRAI BIN1	PA TIER3 NSITIONAL 10 COUNTED B LEV2 ULEV	ITIONAL LEV 2 SFTP COUNTED STANDARD							
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS							OBD STATUS			S	ENGINE DISPLACEMENT		
1		2	TWC (2),	2HO2S(2),	SFI		FUL	JLL ALL MODELS		MODELS			
*	*						PARTIAL *		*	6.0			
*				*			AL WITH *		*				
			EV	APORATIVE	& REFUELING (E	EVA	P/ORVR)	FAMILY	INFO	RMATION			
EVA	P / ORV	R FAN	MILY	EVAPORATI	VE STD CATEGO	DRY	DRY EVAP EMISSION STD VEHICLE CLASS				SPECIAL FEATURES		
H	IGMXR01	33880			LEV 2			P	PC			HCT	
					EMISSION CRE	DIT	INFORM	ATION					
	A	LLOW	ANCE FO	R TEST GRO	UP		IMOG CR				EDIT FOR	OPTIONAL EXH.	
BASE	ELINE P	ZEV	AT	PZEV	TZEV	NON-PZEV ZERO-E		-EVAP DOR		OR	TRUCKS		
* *					*	N		1	N		Ŋ	N	
				NMC	G AND FLEET	VE	RAGE IN	FORMA	TION				
NMOG RAF	CH4 RAF	RATIO		HCHO/NMH RATIO (GASOLINE	PC+LDT (0-	PC+LDT (0-375)		0 LVW) LDT		G+NOX FLEET STO T (3751 LVW-8500 VR) + MDPV (g/mi)		NOX FLEET STD (10001-14000 VWR) (g/mi)	
*	*		1.04	*	0.0	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

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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 August 2016.

BE IT FURTHER RESOLVED:

The listed vehicle models are federally certified, and are certified under the provisions of 13 CCR Section 1961.2(a)(12) and the incorporated test procedures.

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

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ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

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

			S+NOx 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	E85-EPA (GASOLINE - TIER 2 UNLEADED)	0.053	0.110	0.58	2.1 (2.1)	* (*)	* (*)	1.0	4 (4)	* (*)	0.010 (0.010)
50°F @4K	*	*	*	*	*	*	*	*	*	Samuel Stands	

	FUEL TYPE	NMOG+N	lOx (g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K		. *	*	The second of th		
HWFET @ UL	E85-EPA (GASOLINE - TIER 2 UNLEADED)	, 0.005 (0.008)	0.110 (0.110)			
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			3.4	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

	-	A CENTRE OF		US06		SC03	3	COMPOSITE		
	FUEL TYPE	- 190596	NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMHC+NOx (g/mi)	CO (g/mi)	NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)
@ 4K	GASOLINE - TIER 2 UNLEADED	CERT	0.038	0.20		0.013	0.32			
		STD	0.14	8.0		0.20	2.7	建 工作证		The April of the
		CERT	*	*	*	*	*	0.028	*	*
@ UL	GASOLINE - TIER 2 UNLEADED	STD	*	*	*	*	*	0.103	*	*
		BIN						0.110		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

	FUEL TYPE		WHOLE						
EVAPORATIVE FAMILY		3DHS	S (g/test) (@ UL	2DI	HS (g/test) @	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
HGMXR0133880	E10-EPA	0.25	0.50	*	0.30	0.65	*	0.00	0.05

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ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS												
				FUEL ONLY EVAP & CANISTER BLEED								
EVAPORATIVE FAMILY	ORVR (g/g	gallon) @) UL	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		
HGMXR0133880	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; 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 **ENGINE EVAPORATIVE** EXH TRANS TYPE **PZEV TYPE VEH CLASS** OBD MAKE MODEL **ECS FAMILY** (L) HGMXR0133880 1 CHEVROLET CAPRICE PPV 6.0 **A6**