California Environmental Protection Agency Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2027

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	NFORMAT	TION					
MODE		TEST GROUP VEHICLE CLASS(ES				ES)	FUEL CATEGORY			GORY	FUEL TYPE		
2017	HG	1.5020		PC	PC			G-IN HYBRID TRIC VEHICLE		GASOLINE			
USEFUL LIFE (miles) VEHICLE EMISSIO							ATEGOR	RY	TERIM / INT	ERMEDIA	TE IN-USE STD		
EXH	/ORVR		EVAP		FTP		SFTP			FTP		SFTP	
15	0000		150000	LE	V3 ULEV125	LEV	3 COMP	OSITE		*		NMOG+NOX	
SPE	CIAL FE	ATUR		AUST EMIS	SSION CONTRO	DL		OBD ST	TATL	JS	ENGINE	DISPLACEMENT (L)	
1		TWC,	HO2S (2)	, DFI, E	GR, EGRC		FU	LL	ALI	L MODELS			
*	*							TIAL		*	1.5		
*	*							PARTIAL WITH *		*			
			EV	APORATIVI	& REFUELING	G (EVA	P/ORVR)	FAMILY	INF	ORMATION			
EVA	P / ORV	R FAN	MILY	EVAPORA	TIVE STD CATE	GORY	EVAP EMISSION STD VEHICLE CLASS				SPECIAL FEATURES		
Н	GMXR00	60600	0		LEV 2	V 2 PC					HCT		
					EMISSION C	REDIT	INFORM	IATION					
	A	LLOW	ANCE FO	R TEST GR	OUP		NMOG CR			NMOG CRE		OPTIONAL EXH STD FOR WORK	
BASE	LINE P	ZEV	AT	PZEV	TZEV	NC	NON-PZEV ZERO-EVAP			DOR		TRUCKS	
* * *							N 1			N	N		
				NIV	OG AND FLEE	TAVE	RAGE IN	FORMA1	TION				
NMOG RAF	NIMICAL STRUMENT		PC+LDT	NMOG+NOX FLEE PC+LDT (0-3750 (g/mi)		750 LVW) LDT (NMOG+NOX FLEET STE 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],

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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 _____ 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

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

		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	0.0343	0.125	0.42	2.1	*	* .	*	4	*	0.01
50°F @4K	*	*	*	*	*	*	*	*	*	MANA.	

and the same of th	FUEL TYPE	NMOG+N	lOx (g/mi)	CO (g/mi)		
	FOEL TIPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*			
HWFET @ UL	GASOLINE-LEV3 E10	0.0045	0.125			
20°F @ 50K	COLD CO E10 REGULAR GASOLINE (TIER 3)			1.48	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

				US06		SC0:	3	COMPOSITE		
	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	*	*		* *	*			
		CERT	*	*	*	*	*	0.019	0.29	*
@ UL	GASOLINE- LEV3 E10	STD	*	*	*	*	*	0.103	4.2	*
		BIN	Andrew six		SAME OF	宝与 加高级		0.050	ARIAS:	

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE							
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @ UL			2DHS (g/test) @ UL			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 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 CANISTER TEST (g/test) @ 4K				
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD			
HGMXR0060600	GASOLINE - TIER 2 UNLEADED	1	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: .DT<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	CA	HGMXR0060600	1	F	*, ==