California Environmental Protection Agency	GENERAL MOTORS	Executive Order: A-006-2111 New Passenger Cars, Light-Duty Trucks and
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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	TION					
MODE				HICLE CLASS(I	LE CLASS(ES)		FUEL CATEGORY		F	FUEL TYPE			
2018	JG	MCKV01	D1.5030 PC				PLUG-IN HYBRID ELECTRIC VEHICLE			G	GASOLINE		
USEFUL LIFE (miles) VEH				VEHICLE EMIS	ICLE EMISSION CATEGORY			INTERIM / INTERMEDIATE IN-USE STD					
EXH/ORVR EVAP				FTP		SFTP		FTP		SFTP			
150000 150000			150000	LE	V3 SULEV30	LEV	LEV 3 COMPOSIT		*		*		
SPE		ATUR		AUST EMIS	SSION CONTRO	DL		OBD ST	ATUS	ENGINE	DISPLACEMENT (L)		
1 .	DFI, TWC, EGR, HO2S(2), EGRC						FU	JLL *					
*	*						PART	PARTIAL ALL MODE		5	1.5		
*				*			PARTIA		*				
			EV	APORATIVI	E & REFUELING	G (EVA	P/ORVR)	FAMILY	INFORMATIC	DN .			
EVAP / ORVR FAMILY EVAPORATIVE STD CATEGOR					GORY	EVAP EMISSION STD VEHICLE CLASS			SPECIA	SPECIAL FEATURES			
JGMXR0060600					LEV 2		PC			HCT			
					EMISSION C	REDIT		ATION					
ALLOWANCE FOR TEST GROUP								REDIT FOR	OPTIONAL EXH				
BASELINE PZEV AT PZEV			PZEV	TZEV	TZEV		ON-PZEV ZERO-EVAP		DOR	TRUCKS			
* *			*	ALL MODELS	5	N			N	N			
				NN	OG AND FLEE	TAVE	RAGE IN	FORMAT	ION				
NMOG RAF			HCHO/NMI RATIO	PC+LDT	NMOG+NOX FLE PC+LDT (0-375 (g/mi)		LDT (	NOX FLEET 3751 LVW-85 2) + MDPV (g/1	00 MDV	NMOG+NOX FLEET STD MDV (10,001-14,000 GVWR) (g/mi)			
*	*	:	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. California Environmental Protection Agency

## 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).

## BE IT FURTHER RESOLVED:

Evaporative family JGMXR0060600 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  $30^{44}$  day of June 2017.

Annette Hebert, Chief Emissions Compliance, Automotive Regulations and Science Division

Executive Order: A-006-2111 **California Environmental Protection Agency** New Passenger Cars, Light-Duty Trucks and GENERAL MOTORS Medium-Duty Vehicles LLC. OB Air Resources Board Page 3 of 4 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 \*\* 6 V monoxide; NOx: oxides of nitrogen; HCHO: formaldehyde; PM: particulate matter; RAF: reactivity W.J. XY 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: C. a 1000 miles; F: degrees Fahrenheit; FTP: federal test procedure; SFTP: supplemental FTP FUEL TYPE NMOG+NOx CO NOx HCHO PM (g/mi) (g/mi) (mg/mi) (g/mi)(g/mi) CERT STD CERT STD CERT STD CERT STD CERT STD \* FTP@50K \* ŧ \* \* \* 1 \* . ÷ \* GASOLINE-0.020 0.030 \* FTP@UL 0.11 1.0 . 4 0.01 LEV3 E10 ÷ ÷ \* \* \* \* \* \* 50°F @4K NMOG+NOx (g/mi) CO (q/mi) FUEL TYPE CERT STD CERT STD HWFET @ 50K ÷ ŧ \* HWFET @ UL 0.0206 GASOLINE-LEV3 E10 0.030 20°F @ 50K COLD CO E10 REGULAR GASOLINE (TIER3) 1.5 10.0 SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS **US06** SC03 COMPOSITE NMOG+NOx CO NMOG+NOx FUEL TYPE PM NMOG+NOx CO CO PM (g/mi) (g/mi) (mg/mi) (g/mi) (g/mi) (g/mi) (g/mi) (mg/mi) CERT ÷ ÷ ŧ + @ 4K \* STD \* \* \* \* CERT \* \* ÷ ÷ + 0.0114 ÷ 0.10 GASOLINE-\* STD ÷ + \* 0.097 4.2 \* @ UL LEV3 E10 BIN 0.050 WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS WHOLE VEHICLE EVAPORATIVE TESTING **EVAPORATIVE** RL (g/mi) @ UL FUEL TYPE 3DHS (g/test) @ UL 2DHS (g/test) @ UL FAMILY CERT STD FEL CERT STD FEL CERT STD GASOLINE JGMXR0060600 0.18 0.35 \* 0.17 0.35 \* 0.00 0.05 CA PHASE 2 ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS FUEL ONLY EVAP & CANISTER BLEED **EVAPORATIVE** ORVR (g/gallon) @ UL **3DHS RIG TEST 2DHS RIG TEST** BLEED CANISTER FAMILY FUEL TYPE (g/test) @ UL (g/test) @ UL TEST (g/test) @ 4K FUEL TYPE CERT STD CERT STD CERT STD CERT STD GASOLINE GASOLINE -TIER 2 JGMXR0060600 0.044 0.20 0.04 0.0 + 0.0 \* ÷ CA PHASE 2 UNLEADED

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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 guality 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 ECS	OBD	PZEV TYPE
CHEVROLET	VOLT	PC	1.5	CV	JGMXR0060600	1	P	TZEV