California Environmental Protection Agency

⊘ Air Resources Board

GENERAL MOTORS LLC.

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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	OUP	INFO	ORMATION							
MODEL YEAR		ST G	ROUP	VEHICLE CLASS(ES)				FUE	FUEL CATEGORY			FUEL TYPE			
2016	GGI	MXV01	8031	PC					DEDICATED SINGLE FUEL VEHICLE			GASOLINE			
L	JSEFUL	LIFE	(miles)		VEHICLE EMISS	ION	CA	ΓEGORY		IN	TERIM / IN	ΓE	RMEDIAT	E IN-USE STD	
EXH/	ORVR		EVAP		FTP			SFTP			FTP			SFTP	
150	0000		150000	LI	V3 SULEV30	LE	v 3	COMPOSITE	E		*			*	
SPEC	CIAL FE	ATUR		IAUST EMI TEMS	SSION CONTRO)L		ОВЕ) ST	TAT	JS		ENGINE	DISPLACEMENT (L)	
1		SF	r, TWC(2), HO2S(2), AIR			FULL		AL	L MODELS	11			
*				*				PARTIAL	\exists		*	11	1.8		
*				*			Р	ARTIAL WIT	тн		*				
			EV	APORATIV	E & REFUELING	(EV	AP/	ORVR) FAM	IILY	INF	ORMATION	1			
EVAI	P / ORV	RFAN	MILY	EVAPORA	TIVE STD CATE	GOR	RY EVAP EMISSION STD VEHICLE CLASS				SPECIAI	FEATURES			
G	GMXR00	95700		-	LEV 2		PC					*			
G	GMXR01	17704	1		LEV 2		PC *					*			
	<u> </u>		-		EMISSION C	RED	IT IN	FORMATIC	ON	,					
	Α	LLOW	ANCE FO	R TEST GF	ROUP			OG CREDIT	–			KEDII FOR LOTE		OPTIONAL EXH. STD FOR WORK	
BASE	LINE P	ZEV	AT	PZEV	TZEV		ION-	PZEV ZERO	O-E	VAP	DO	JK	(TRUCKS	
ALL	MODEL	s		*	*			N			1	1		N	
				NI	MOG AND FLEE	TAV	ER/	GE INFOR	MAT	TION					
NMOG RAF					(0-37	50 L	50 LVW) LDT (3751 LVW-8500)	NMOG+NOX FLEET STD MDV (10,001-14,000 GVWR) (g/mi)				
*							*								

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).

BE IT FURTHER RESOLVED:

Evaporative families GGMXR0095700 and GGMXR0117704 are 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. This Executive Order hereby cancels and supersedes Executive Order A-006-1979 dated April 22, 2015.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 26 day of October 2017.

Ánnette 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

- A J		NMOG (g/I		(g/r		NO (g/i		HC (mg		(g/	M mi)
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	*	*	*	*	*	*
FTP@UL	GASOLINE- LEV3 E10	0.0183	0.030	0.17	1.0	*	*	*	4	*	0.01
50°F @4K	*	*.	*	*	*	*	*	*	*	17-16-18	

	FUEL TYPE	NMOG+N	lOx (g/mi)	CO (g/mi)		
60 Sept. 20	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	* *	*			
HWFET @ UL	GASOLINE-LEV3 E10	0.0021	0.030			
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			0.64	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

		4. 48.8 4. 48.8		US06		SC03	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	*	*		*	*		7,10	Sec. 15.	
		CERT	*	*	*	*	*	0.02	1.11	*	
@ UL	GASOLINE- LEV3 E10	STD	*	*	*	*	*	0.110	4.2	*	
		BIN						0.050		1.11	

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE							
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @ UL			2Di	HS (g/test) @	UL	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	
GGMXR0095700	GASOLINE - CA PHASE 2	0.320	0.35	*	0.314	0.35	*	0.000	0.05	
GGMXR0117704	GASOLINE - CA PHASE 2	0.320	0.35	*	0.314	0.35	*	0.000	0.05	

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ORVR / FU	ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS													
				FUEL ONLY EVAP & CANISTER BLEED										
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL TYPE	1	IG TEST) @ UL		IG TEST) @ UL	BLEED CANISTER TEST (g/test) @ 4K					
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD				
GGMXR0095700	GASOLINE - TIER 2 UNLEADED	0.007	0.20	GASOLINE - CA PHASE 2	0.04	0.0	0.04	0.0	*	*				
GGMXR0117704	GASOLINE - TIER 2 UNLEADED	0.025	0.20	GASOLINE - CA PHASE 2	0.04	0.0	0.04	0.0	*	*				

r: 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; 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

2016 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
CHEVROLET	CRUZE LIMITED	PC	1.8	M6,SA6	GGMXR0117704	1	F	PZEV
CHEVROLET	SONIC	PC	1.8	M5,SA6	GGMXR0095700	1	F	PZEV
CHEVROLET	SONIC 5	PC	1.8	M5,SA6	GGMXR0095700	1	F	PZEV