California Environmental Protection Agency

⊘ Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-1974

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 GF	ROUP	IN	FOR	MATION						
MOD	1	TEST G	ROUP		VEH	IICLE CLASS	(ES)			FUEL C	ATE	GORY		FU	EL TYPE	
201	2016 GGMXV01.4099 PC							DEDICATED SINGLE FUEL VEHICLE			GASOLINE					
USEFUL LIFE (miles) VEHICLE EMISSION							I C	ATE	GORY	11	NTERIM / INT	ERM	EDIA1	TE IN-USE STD		
EX	(H/ORVI	2	EVAP			FTP			SF	TP		FTP			SFTP	
1	L20000		150000)	cou	A TIER2 BIN NTED AS ARB EV2 ULEV	S ARB LEV 2 S			*		*		*		
SF	PECIAL	FEATUR		HAUS		SION CONTR	ROL			OBD S	TAT	US	EN	GINE	DISPLACEMENT (L)	
1		TWC (2), HO2	S(2),	TC,	CAC, SFI		1		FULL	AI	L MODELS				
*				*					· P	PARTIAL	AL *			1.4		
*				*		-	-			ARTIAL WITH * FINES						
	-		E,	VAPOI	RATIVE	& REFUELIN	1G (E)	VΑI	P/OR	VR) FAMILY	/ INF	ORMATION				
EV	AP / OF	RVR FAI	MILY	EVAI	PORAT	IVE STD CAT	EGO	RY EVAP EMISSION STD VEHICLE CLASS				SP	ECIA	L FEATURES		
	GGMXR	009580	5			LEV 2				PC				*		
	GGMXR	012081	8			LEV 2				PC			*			
						EMISSION	CRE	DIT	INF	ORMATION						
			VANCE F							G CREDIT FO -PZEV ZERO EVAP		NMOG CREDIT		FOR	OPTIONAL EXH. STD FOR WORK TRUCKS	
ВА	SELINE	PZEV	AT	PZEV	/	TZEV				EVAF					INDONS	
* * *								N		1	1		И			
	NMOG AND FLEET AVERAGE INFORMATION															
NMC	NMOG RAF CH4 RAF FTP NMOG RAT			нсно/ммнс в				O NMOG+NOX FLEET STD PC+LDT (0-3750 LVW) (g/mi)								
	*	*		1.	04		*				0.0	93			0.110	

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 for PC, LDT and MDV).

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 10

_ day of April 2015.

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

		NMOG (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 - TIER 2 UNLEADED	0.0669	0.070	0.71	2.1	0.018	0.04	*	11	*	0.01
50°F @4K	*	*	*	*	*	*	*	*	*	TANK TE	in the factor

	FUEL TYPE	NOx	(g/mi)	CO (g/mi)		
Million - Artiful Co	FOELTYPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*			
HWFET @ UL	GASOLINE - TIER 2 UNLEADED	0.008	0.05			
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE	a grander p		2.42	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

		51:55		US06		SC0	3	COMPOSITE			
	FUEL TYPE		NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMHC+NOx (g/mi)	CO (g/mi)	NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	
	GASOLINE	CERT	0.024	5.15		0.011	0.27		14.00		
@ 4K	- TIER 2 UNLEADED	STD	0.14	8.0		0.20	2.7				
		CERT	*	*	*	*	*	*	*	*	
@ UL	*	STD	*	*	*	*	*	*	*	*	
		BIN			income and the second s	in the second	MC + TO	*			

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVADODATIVE			WHOLE	D1 (-/:\ @ 111					
FAMILY	FUEL TYPE	3DHS (g/test) @ UL			2DI	HS (g/test) @	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
GGMXR0095805	GASOLINE - TIER 2 UNLEADED	0.314	0.50	*	0.366	0.65	*	0.000	0.05
GGMXR0120818	GASOLINE - TIER 2 UNLEADED	0.343	0.50	*	0.580	0.65	*	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	3DHS R (g/test	IG TEST) @ UL	2DHS R (g/test	IG TEST) @ UL	BLEED CANISTER TEST (g/test) @ 4K					
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD				
GGMXR0095805	GASOLINE - TIER 2 UNLEADED	0.007	0.20	*	*	*	*	*	*	*				
GGMXR0120818	GASOLINE - TIER 2 UNLEADED	0.025	0.20	*	*	*	*	*	*	*				

: 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; 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 sparkignited 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

2016 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
BUICK	ENCORE	PC	1.4	SA6	GGMXR0095805	1	F	*
BUICK	ENCORE AWD	PC	1.4	SA6	GGMXR0095805	1	F	*
CHEVROLET	CRUZE LIMITED	PC	1.4	M6,SA6	GGMXR0120818	1	F	*
CHEVROLET	CRUZE LIMITED ECO	PC	1.4	M6, SA6	GGMXR0120818	1	F	*
CHEVROLET	SONIC	PC	1.4	M6, SA6	GGMXR0095805	1	F	*
CHEVROLET	SONIC 5	PC	1.4	M6,SA6	GGMXR0095805	1	F	*
CHEVROLET	SONIC 5 RS	PC	1.4	M6, SA6	GGMXR0095805	1	F	*
CHEVROLET	SONIC RS	PC	1.4	M6,SA6	GGMXROO95805	1	F	*
CHEVROLET	TRAX	PC	1.4	M6,SA6	GGMXR0095805	1	F	*
CHEVROLET	TRAX AWD	PC	1.4	SA6	GGMXR0095805	1	F	*