California Environmental Protection Agency

OB Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-1971

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 GROUP	INFORM	MATION				
MODEL	TEST GROUP VEHICLE CLASS(ES)				FUEL CATEGORY			FUEL TYPE		
2016	GGMXV	03.6166		PC			L VEHICLE FV)	85% ETHANOL, GASOLINE		
U	SEFUL LIF	E (miles)	VEHI	CLE EMISSIO	N CATEG	ORY	INTERIM / IN	TERMEDIA	TE IN-USE STD	
EXH/C	ORVR	EVAP	F	TP	SF1	Р	FTP			
120	120000 150000			DER2 BIN4 DAS ARB ULEV STANDARD		10			*	
SPEC	IAL FEATU	JRES & EXHA	AUST EMISSIO EMS	N CONTROL		OBD ST.	ATUS	ENGINE	DISPLACEMEN (L)	
1		2TWC(2), 2	2HO2S(2), DF	I		FULL	*			
2	2	TWC, TWC,	2HO2S(2), D	FI	P	ARTIAL	ALL MODELS	3.6		
*			*			TIAL WITH	*			
		EVA	PORATIVE & F	REFUELING (E	VAP/OR	R) FAMILY	INFORMATION	1		
EVAP	ORVR F	AMILY E	EVAPORATIVE	STD CATEGO	RY	EVAP EMIS VEHICLE		SPECIA	L FEATURES	
GG	MXR01338	10	LE	V 2	PC			*		
			E	MISSION CRE	DIT INFO	RMATION				
BASEL	ALLO		R TEST GROUP	TZEV		CREDIT FO	NMOG CR	EDIT FOR	OPTIONAL EXI STD FOR WOR TRUCKS	
	*			*		N	1	N	N	
			NMOG	AND FLEET A	VERAGE	INFORMAT	ION			
NMOG F	MOG RAF CH4 RAF FTP NMOG/NMHC RATIO (GASOLINE) (GASOL				DCTI DT 10-375		750 LVW) LDT (3751 L			
*	*	1	1.04	*	0.093			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 and 2017 and Subsequent Model Greenhouse Gas 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

day of February 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)				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)	0.028 (0.016)	0.070 (0.070)	0.4 (0.4)	2.1 (2.1)	0.01	0.04	0 (*)	11 (11)	* (*)	0.01
50°F @4K	*	*	*	*	*	*	*	*	*		1,15

4.30/min (0.44)	EUEL TVDE	NOx	(g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K		*	*	references	er til er et e	
HWFET @ UL	E85-EPA (GASOLINE - TIER 2 UNLEADED)	0.01 (0.01)	0.05		7	
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			2.8	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

2 30 2				US06		SC03	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	0.03	0.3		0.00	0.2	*	18.	
@ 4K	- TIER 2 UNLEADED	STD	0.14	8.0		0.20	2.7			
		CERT	+	*	*	*	*	*	*	*
@ UL	*	STD	*	*	*	*	*	*	*	* .
		BIN			He			*		1

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVADODATIVE			WHOLE	RL (g/mi) @ UL					
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @ UL				2DHS (g/test) @ UL			
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
GGMXR0133810	E10-EPA	0.25	0.50	*	0.30	0.65	*	0.00	0.05
GGMXR0133810	GASOLINE - TIER 2 UNLEADED	0.20	*	*	0.29	*	*	0.00	*

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				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 CANISTE TEST (g/test) @ 4			
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
GGMXR0133810	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; 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	LACROSSE	PC	3.6	SA6	GGMXR0133810	2	P	*
BUICK	LACROSSE AWD	PC	3.6	SA6	GGMXR0133810	2	P	*
CHEVROLET	CAPRICE PPV	PC	3.6	A6	GGMXR0133810	1	P	*
CHEVROLET	IMPALA	PC	3.6	SA6	GGMXR0133810	2	P	*
CHEVROLET	IMPALA LIMITED	PC	3.6	A6	GGMXR0133810	2	P	. *
CHEVROLET	IMPALA LIMITED POLICE	PC	3.6	A6	GGMXR0133810	1	P	*