California Environmental Protection Agency

O Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-1989

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.

			1.	TEST GROU	IP INFOR	MATION					
MODEL YEAR	TEST	GROUP	VEHIC	CLE CLASS(ES)	FUEL CATEGORY			FUEL TYPE		
2016	2016 GGMXV02.0031 PC					DEDICATED SINGLE FUEL GASOLINE					
US	EFUL LIF	E (miles)	VE	HICLE EMISSION	ON CATE	GORY IN	TERIM / INT	ERMEDIATE IN-USE STD			
EXH/O	EXH/ORVR EVAP FTP				SF	TP	FTP		SFTP		
1200	00	150000	COUNT	TIER2 BIN4 ED AS ARB V2 ULEV		SFTP	,				
SPECI	AL FEATU		HAUST EMISSI TEMS	ON CONTROL		OBD STATU	JS	ENGINE	DISPLACEMEN (L)		
1	TWC	(2), DFI,	HO2S(2), T	C, CAC		FULL AL	L MODELS		-		
*			*		F	PARTIAL * 2.0					
*			*		PAR	TIAL WITH	*				
	77.50	EV	APORATIVE 8	REFUELING (EVAP/OR	VR) FAMILY INF	ORMATION				
EVAP	ORVR F	AMILY	EVAPORATIV	E STD CATEG	ORY	EVAP EMISSIO VEHICLE CL		SPECIA	L FEATURES		
GGN	XR01208	18	1	LEV 2		PC		*			
GGN	XR01338	10	1	LEV 2		PC			*		
				EMISSION CR	EDIT INFO	ORMATION					
	ALLO	WANCE FO	OR TEST GROU	JP		CREDIT FOR	NMOG CR		OPTIONAL EXI		
BASELI	NE PZEV	AT	PZEV	TZEV	NON-PZ	EV ZERO-EVAP	DC	PK .	TRUCKS		
	*		*	*		N		N			
			NMO	G AND FLEET	AVERAGI	EINFORMATION					
NMOG R	NMOG RAF CH4 RAF FTP NMOG/NMHC RATIO HCHO/NMH		IC RATIO	PC+LDT (0-3	OG+NOX FLEET STD C+LDT (0-3750 LVW) (g/mi)		NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)				
*	*		1.04	*		0.09	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

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

F	UE	L	T	Y	P	E

(1) 10 mm (1) 1											
		NMOG (g/mi)		CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		PM (g/mi)	
1.00 p/8:		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	*	*	*	*	*	*
FTP@UL	GASOLINE - TIER 2 UNLEADED	0.0245	0.070	0.64	2.1	0.016	0.04		11	*	0.01
50°F @4K	. *	*	*	*	*	*	*	*	*		

	FUEL TYPE	NOx	(g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*			
HWFET @ UL	GASOLINE - TIER 2 UNLEADED	0.004	0.05			
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE		fat vila	2.30	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

		的建		US06 SC03		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	1.44	Comment of the second	0.011	2.55		in wind the w	
@ 4K	- TIER 2 UNLEADED	STD	0.14	8.0		0.20	2.7			(A)(#1.00 (40.00)
	GASOLINE -	CERT	*	1.44	*	*	2.55	*	. *	*
@ UL	TIER 2	STD	*	*	*	*	*	*	*	*
	UNLEADED	BIN					生在一种企业	*	企为总数	L gast

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE '							
EVAPORATIVE	FUEL TYPE	3DHS (g/test) @ UL			2DHS (g/test) @ UL			RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	
GGMXR0120818	GASOLINE - TIER 2 UNLEADED	0.343	0.50	*	0.580	0.65	*	0.000	0.05	
GGMXR0133810	GASOLINE - TIER 2 UNLEADED	0.205	0.50	*	0.288	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 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		
GGMXR0120818	GASOLINE - TIER 2 UNLEADED	0.025	0.20	*	*	*	*	*	*	*		
GGMXR0133810	GASOLINE - TIER 2 UNLEADED	0.011	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
CADILLAC	ATS	PC	2.0	M6,SA8	GGMXR0120818	1	F	*
CADILLAC	ATS AWD	PC	2.0	SA8	GGMXR0120818	1	F	*
CADILLAC	CTS SEDAN	PC	2.0	SA8	GGMXR0133810	1	F	*
CADILLAC	CTS SEDAN AWD	PC	2.0	SA8	GGMXR0133810	1	F	*
CHEVROLET	CAMARO	PC	2.0	M6,SA8	GGMXR0133810	1	F	*
CHEVROLET	MALIBU	PC	2.0	SA8	GGMXR0120818	1	F	*