California Environmental Protection Agency

@ Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2041

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Page 1 of 4

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	FORMA	TION ·					
MODE	- T	TEST GROUP VEHICLE CLA					FUEL CATEGORY		FUEL TYPE				
2017	017 HGMXV06.2090					PC DEDICATED SINGI				LE FUEL GASOLINE			
	USEFU	LIFE	(miles)	11 1	EHICLE EMIS	SION C	ATEGOR	RY	INTERIM / INT	ERMEDIA	TE IN-USE STD		
EXH	I/ORVR		EVAP		FTP		SFTP		FTP		SFTP		
15	0000		150000	LE	EV3 LEV160	LEV	3 COMP	OSITE	*		*		
SPE	CIAL FI	EATUR		AUST EMIS	SION CONTR	OL		OBD ST	ATUS	ENGINE	DISPLACEMENT (L)		
1		2	TWC (2),	2HO2S(2),	DFI		FU	LL	ALL MODELS				
2	2TWC(2), 2H02S(2), DFI, SC, CAC						PAR	TIAL	*	6.2			
*				*			PARTIA FIN		*				
			EV	APORATIVE	& REFUELIN	G (EVAF	P/ORVR)	FAMILY	INFORMATION				
EVA	P/ORV	R FAI	AILY	EVAPORAT	IVE STD CAT	EGORY	EVAP EMISSION STD VEHICLE CLASS			SPECIAL FEATURES			
F	IGMXR0	13381			LEV 2		PC				*		
H	IGMXR0:	133880			LEV 2	EV 2 PC					HCT		
					EMISSION	CREDIT	INFORM	IATION					
	A	LLOW	ANCE FO	R TEST GR	OUP			REDIT FO			OPTIONAL EXH.		
BASE	LINE P	ZEV	AT	PZEV	TZEV	NO	N-PZEV	ZERO-EV	AP DO	R	TRUCKS		
	*			*	*		1	N	. N		N		
				NM	OG AND FLEE	ET AVER	RAGE IN	FORMAT	ION				
NMOG RAF	CH4 RAF	I NIMA (CZ/NIMALIA)		PC+LDT	NMOG+NOX FLEET PC+LDT (0-3750 L (g/mi)		1		MDV	NOX FLEET STD (10001-14000 VWR) (g/mi)			
*	*		1.10	*		0.086			0.101		*		

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.

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



GENERAL MOTORS LLC. Executive Order: A-006-2041

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Page 2 of 4

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).

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 May 2016.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

@ Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2041

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

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 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+NOx (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- LEV3 E10	0.0831	0.160	0.84	4.2	*	*	*	4	*	0.01
50°F @4K	*	*	*	*	*	*	*	*	*		

1. Table 200 11 11 11 11 11 11 11 11 11 11 11 11 1	CUEL TYPE	NMOG+N	Ox (g/mi)	CO	g/mi)
	FUEL TYPE	CERT	STD	CERT	STD
HWFET @ 50K	*	*	*		
HWFET @ UL	GASOLINE-LEV3 E10	0.0192	0.160		
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			3.11	10.0

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

75		- Table 1997		US06		SC03	3	CON	POSITE	
	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	*	*		*	*			36.6 <u>2.</u>
		STD	*	*		*	*	The same of the sa		
		CERT	*	*	*	*	*	0.087	0.84	*
@ UL	GASOLINE- LEV3 E10	STD	*	*	*	*	*	0.103	4.2	*
		BIN		144				0.120		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE						
EVAPORATIVE FAMILY	FUEL TYPE	3DH	S (g/test) (@ UL	2DI	HS (g/test) (RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
HGMXR0133810	GASOLINE - TIER 2 UNLEADED	0.205	0.50	*	0.288	0.65	*	0.000	0.05
HGMXR0133880	GASOLINE - TIER 2 UNLEADED	0.205	0.50	*	0.288	0.65	*	0.000	0.05

GENERAL MOTORS LLC. Executive Order: A-006-2041

New Passenger Cars, Light-Duty Trucks and

Medium-Duty Vehicles

Page 4 of 4

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 TES (g/test) @ UL		BLEED CANISTER TEST (g/test) @ 4K			
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
HGMXR0133810	GASOLINE - TIER 2 UNLEADED	0.011	0.20		*	*	*	*	*	*		
HGMXR0133880	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; 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; 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

2017 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
CHEVROLET	CAMARO	PC	6.2	M6,SA8	HGMXR0133880	1	F	*
CHEVROLET	CORVETTE	PC	6.2	M7,SA8	GGMXR0133810	1	F	*
CHEVROLET	CORVETTE	PC	6.2	M7,SA8	GGMXR0133810	2	F	*