## **GENERAL MOTORS LLC**

**EXECUTIVE ORDER A-006-2033** 

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.

granteu.				DOLLD INFORMA	TION					
			TEST G	ROUP INFORMA	TION					
MODEL YEAR	TEST GRO	UP VEHIC	LE CLASS(ES)	FUEL CATEGORY			FUEL TYPE			
2017	HGMXJ02.4	199	LDT2, PC	DEDICATED SINGLE FUEL VEHICLE			GASOLINE			
	USEFUL LIF	E (miles)	VEHICLE EN	ISSION CATEG	ORY	M / INTERME	DIATE IN-USE STD			
EXH/C	RVR	EVAP	FTP	SFTP			•	SFTP		
120,000 150,000		150,000	USEPA TIER3 BIN1 COUNTED AS ARE LEV2 ULEV			*		*		
SPECIAL I	EATURES &	EXHAUST EMISSION (	CONTROL SYSTEMS	and grant the second	OBD STATUS	ENGIN	E DISPLACEMENT (L)			
1		TWC(2), HO2S(2), DF	1	FULL	FULL *					
*		*		PARTIAL	ALL MOD		2.4			
*		*		PARTIAL WITH *						
	Section of the sectio	E	VAPORATIVE & REFUELII	NG (EVAP/ORVE	R) FAMILY INFORM	MATION				
EV	AP / ORVR FA	MILY EVA	PORATIVE STD CATEGO	RY EVAP E	MISSION STD VEH	SPE	CIAL FEATURES			
ŀ	IGMXR01208	18	LEV 2		PC		*			
H	HGMXR01337	03	LEV 2		LDT2		*			
H	IGMXR01338	10	LEV 2		PC *					
H	HGMXR01388	13	LEV 2		LDT2			*		
MARKET BARRETTE		Carlotte San Mariana, Americani Carlotte	EMISSION	CREDIT INFOR	MATION	The state of the s	But the			
		LOWANCE FOR TEST			CREDIT FOR	NMOG CRED	T FOR DOR	OPTIONAL EXH. STD FOR		
BASELI	NE PZEV	AT PZEV	TZEV *	NON-P	NON-PZEV ZERO-EVAP			WORK TRUCKS		
7 10 m	A TOTAL CONTROL OF		NMOG AND FLE	ET AVERAGE II	The state of the state of		A DEADON - ST. PRE			
NMOG RAF	CH4 RAF	FTP NMOG/NMHC	HCHO/NMHC RATIO	NMO	G+NOX FLEET T (0-3750 LVW) (g		EET STD LDT (3751 LVW- VR) + MDPV (g/mi)			
*	*	1.04	*		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 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).

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## 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.

day of May 2018

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

(For bi-, dual- or flexible-fueled vehicles, the STD and CERT in parentheses are those applicable to testing on gasoline test fuel.)

	FUEL TYPE	CH4=methane; NMOG=non-CH4 organic gas; HC=hydrocarbon; NMHC=non-CH4 HC; CO=carbon monoxide; NOx=oxides of nitrogen; HCH0=formaldehyde; PM=particulate matter; RAF=reactivity adjustment factor; 2DHS/3DHS [g HC/test]=2/3 days diumal+hot-soak; RL [g HC/mi]=running loss; ORVR [g HC/gallon dispensed]=on-board refueling vapor recovery; g=gram; mg=milligram; ml=mile; K=1000 miles; F=degrees Fahrenheit; FTP=federal test procedure; SFTP=supplemental FTP									
- 19		NMOG+NOx (g/mi)		CO (g/mi)		HCHO (mg/mi)		PM (g/mi)		HWY NMOG+NOx (g/mi)	
2 - 15/12 A		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP @ 50K	. *	*	*	*	*	. *	*	*	*	*	*
FTP @ UL	GASOLINE-TIER2 UNLEADED	0.055	0.110	0.7	2.1	*	4	*	0.010	0.018	0.110
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE	*	*	2.0	10.0	*	*	*	*	*	*
50°F @ 4K	*	*	*	*	*	*	*	*	*	*	*

### SC03 COMPOSITE **US06** NMHC+NOx NMHC+NOx CO (g/mi) PM (mg/mi) CO (g/mi) NMOG+NOx (g/mi) CO (g/mi) **FUEL TYPE** (g/mi) (g/mi) CERT CERT CERT CERT STD STD BIN STD CERT STD CERT STD CERT STD STD **GASOLINE-TIER2** \* @ 4K 0.05 0.06 0.20 2.7 0.14 2.9 8.0 1.4 UNLEADED GASOLINE-TIER2 \* \* \* 0.055 0.103 0.110 @ UL UNLEADED

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

		WHOLE VEHICLE EVAPORATIVE TESTING						RUNNING LOSS		ON-BOARD REFUELING	
EVAPORATIVE FAMILY	FUEL TYPE	3-DAYS DIURNAL + HOT SOAK (g/test) @ UL			2-DAYS DIURNAL + HOT SOAK (g/test) @ UL			(g/mi) @ UL		VAPOR RECOVERY (g/gallon) @ UL	
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	CERT	STD
HGMXR0120818	GASOLINE-TIER2 UNLEADED	0.34	0.50	*	0.58	0.65	*	0.00	0.05	0.02	0.20
HGMXR0133703	GASOLINE-CA PHASE2	0.27	0.65	*	0.25	0.85	*	0.00	0.05	*	*
HGMXR0133703	GASOLINE-TIER2 UNLEADED	*	*	*	*	*	*	*	*	0.04	0.20
HGMXR0133810	E10-EPA	0.253	*	*	0.30	*	*	0.00	*	*	*
HGMXR0133810	GASOLINE-TIER2 UNLEADED	0.20	0.50	*	0.29	0.65	*	0.00	0.05	0.01	0.20
HGMXR0138813	E10-EPA	0.26	*	*	0.35	*	*	0.00	*	*	*
HGMXR0138813	GASOLINE-TIER2 UNLEADED	0.23	0.65	*	0.36	0.85	*	0.00	0.05	0.06	0.20

	FUEL ONLY &	CANISTER BLEED	EVAPORATIVE EM	ISSION STANDARD	OS AND CERTIFICAT	ION LEVELS	
			FUEL ONLY EVAP				
EVAPORATIVE FAMILY	FUEL TYPE	3-DAYS DIURN/ (g/test		2-DAYS DIURNA (g/test)		CANISTER BLEED (g/test)	
		CERT	STD	CERT	STD	CERT	STD
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

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\*=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#LVW; LDT3=LDT 6001-8500#GVWR,3751-8500#ALVW; MDV=medium-duty vehicle; MDV4=MDV 8501-10000#GVWR; MDV5=MDV 10001-14000#GVWR; MDPV=medium-duty 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; DFF=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; FIP/S=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-CARB: 85% ethanol+15% CA Phase2 gasoline; E85-EPA: 85% ethanol+15% Tier2 unleaded gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gasoline; E10-CARB: 0.0% ethanol+90% CA Phase2 gasoline; CO-Carbon transmission; CV=contin

## 2017 MODEL YEAR: VEHICLE MODELS INFORMATION

ZOTA MODEL TEAM. VEHICLE MODELO IN CHARACTOR										
MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE		
BUICK	REGAL	PC	2.4	SA6	HGMXR0133810	1	Р	*		
BUICK	VERANO	PC	2.4	SA6	HGMXR0120818	1	Р	*		
CHEVROLET	EQUINOX AWD	LDT2	2.4	A6	HGMXR0133703	1	Р	*		
CHEVROLET	EQUINOX AWD	LDT2	2.4	A6	HGMXR0138813	1	Р	*		
CHEVROLET	EQUINOX FWD	LDT2	2.4	A6	HGMXR0133703	1	Р	. ,*		
CHEVROLET	EQUINOX FWD	LDT2	2.4	A6	HGMXR0138813	1	Р	*		
GMC	TERRAIN AWD	LDT2	2.4	A6	HGMXR0133703	1	Р	*		
GMC	TERRAIN AWD	LDT2	2.4	A6	HGMXR0138813	1	Р.	*		
GMC	TERRAIN FWD	LDT2	2.4	A6	HGMXR0133703	1	P	*		
GMC	TERRAIN FWD	LDT2	2.4	A6	HGMXR0138813	1	Р	*		