GENERAL MOTORS LLC

EXECUTIVE ORDER A-006-2042

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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.

granteu.				TEGT	POUR INFORM	ATION					
******			****	IEST (GROUP INFORM						
MODEL YEAR	TEST GRO	UP	VEHICLE CLASS(ES)			L CATEGORY	FUEL TYPE				
2017	17 HGMXV02.5001 PC			PC	DEDICA	TED SINGLE FUEL	GASOLINE				
	USEFUL LIF	E (miles)	ATTO POPER OF	VEHICLE E	MISSION CATE	GORY	INT	ERIM / INTERME	DIATE IN-USE STD		
EXH/ORVR EVAP			FTP	* : * *	SFTP		FTP	SFTP			
120,000 150,000			USEPA TIER3 BIN COUNTED AS AR LEV2 ULEV		LEV2 SFTP STANDARD		*	*			
SPECIAL I	FEATURES &	EXHAUST EM	ISSION	CONTROL SYSTEMS		OBD STATUS		ENGIN	IE DISPLACEMENT (L)		
1	1 TWC(2), HO2S(2), DFI					ULL ALL MODELS			2.5		
*	*					ARTIAL *					
*		*		<u> </u>	PARTIAL WITH FINES						
	A THE RESIDENCE PROPERTY OF THE PARTY OF THE	The Action of the Control of the Con	E	VAPORATIVE & REFUEL	ING (EVAP/ORV	R) FAMILY INFOR	MATION				
EV	AP / ORVR FA	MILY	EVA	APORATIVE STD CATEGO	DRY EVAP	MISSION STD VE	HICLE CLAS	SS SPE	CIAL FEATURES		
H	HGMXR010830A LEV 3 OPTI					PC		HCT			
ŀ	HGMXR01208	18		LEV 2	PC				*		
ŀ	HGMXR01237	02		LEV 2	PC			HCT			
ŀ	HGMXR01338	10		LEV 2	PC				*		
	*			*		*			*		
	*			*		*		*			
	Marither was	No. of the state o	276	EMISSIO	N CREDIT INFO	RMATION			,		
		LLOWANCE F				G CREDIT FOR PZEV ZERO-EVAP	NMOG CF	REDIT FOR DOR	OPTIONAL EXH. STD FOR		
BASEL	*	ATI	PZEV *	TZEV +	NON-F	N		N	N N		
11 15 15 15 15 15 15 15 15 15 15 15 15 1		The spanish of the first and	A PROPERTY OF	NMOG AND EL	EET AVERAGE	INFORMATION	nettiers. C. a	SERVICE STATES	THE RESERVE OF THE PROPERTY.		
NMOG RAF	CH4 RAF	FTP NMOG		HCHO/NMHC RATIO	NM	DG+NOX FLEET DT (0-3750 LVW) (c		MOG+NOX FLEET STD LDT (3751 LVW- 8500 GVWR) + 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.

BE IT FURTHER RESOLVED:

Evaporative family HGMXR0123702 is certified pursuant to 13 CCR Section 1976(b)(1)(G)3 and deemed to comply with the requirements of 13 CCR Section 1976(b)(1)(G)1 ["LEV III evaporative requirements"].

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

117/1

day of May 2016

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.)

EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS (FTP, HWFET, 50 °F, 20 °F)

	FUEL TYPE	HCHO-formaldehyde; PM-particulate matter; RAF=reactivity adjustment factor; 2DHS/3DHS [g HC/test]=2/3 days diurnal+hot-sock; 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 NMOG+NOx (g/mi) CO (g/mi) HCHO (mg/mi) PM (g/mi) HWY NMOG+NOx (g/mi)										
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	
FTP @ 50K	.*	*	*	.*	*	*	*	*	*	*	*	
FTP @ UL	GASOLINE-TIER2 UNLEADED	0.017	0.110	0.8	2.1	*	4	*	0.010	0.005	0.110	
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE	*	*	2.6	10.0	*	*	*	*		. *	
50°F @ 4K	*	*	*	*	*	. *	*	*	*	*	*	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

		US06						SC03				COMPOSITE				
	FUEL TYPE	NMHC (g/s		CO (g/mi)	PM (m	ng/mi)	NMHC (g/		co (g/mi)	NMC	G+NOx (g/mi)	CO (g/mi)
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	BIN	CERT	STD
@ 4K	GASOLINE-TIER2 UNLEADED	0.02	0.14	3.0	8.0	*	*	0.01	0.20	1.8	2.7	*	*	*	*	*
@ UL	GASOLINE-TIER2 UNLEADED	*	*	*	Ŕ	*	*	*	*	*	*	0.016	0.103	0.110	*	*

WHOLE VEHICLE EVAPORATIVE/ORVR EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE			HICLE EV	APORATIVE	RIINNIN	G LOSS	ON-BOARD REFUELING				
FAMILY	FUEL TYPE	3-DAYS DIURNAL + HOT SOAK (g/test) @ UL			2-DAYS DIURNAL + HOT SOAK (g/test) @ UL				@ UL	(g/gallon) @ UL	
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	CERT	STD
HGMXR010830A	GASOLINE- LEV3 E10	0.223.	0.300	*	0.174	0.300	*	0.00	0.05	*	*
HGMXR010830A	GASOLINE - TIER 2 UNLEADED	*	.*	*	*	*	*	*	*	0.02	0.20
HGMXR0120818	GASOLINE - TIER 2 UNLEADED	0.34	0.50	*	0.58	0.65	*	0.00	0.05	0.02	0.20
HGMXR0123702	GASOLINE - CA PHASE 2	0.26	0.35	*	0.22	0.35	*	0.00	0.05	*	*
HGMXR0123702	GASOLINE - TIER 2 UNLEADED	*	*	*	*	*	*	* .	*	0.01	0.20
HGMXR0133810	E10-EPA	0.253	*	*	0.296	*	*	0.00	*	*	*
HGMXR0133810	GASOLINE - TIER 2 UNLEADED	0.20	0.50	*	0.29	0.65	*	0.00	0.05	0.01	0.20

FUEL ONLY & CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	FUEL TYPE	3-DAYS DIURN/ (g/test	AL + HOT SOAK) @ UL	2-DAYS DIURNA (g/test)		CANISTER BLEED (g/test)		
		CERT	STD	CERT	STD	CERT	STD	
HGMXR010830A	GASOLINE- LEV3 E10	*	*	*	*	0.014	0.020	
HGMXR0123702	GASOLINE - CA PHASE 2	0.04	0.0	*	0.0	*	*	

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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#ALVW; LDT4=LDT 6001-8500#GVWR,5751-8500#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; GWR=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-CARB: 85% ethanol+90% CA Phase2 gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gasoline; E10-EPA: 10% ethanol+90% CA Phase2 gasoline; E10-EPA: 10% ethanol+90% CA Phase2 gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gas

2017 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH	OBD	TYPE
CADILLAC	ATS	PC	2.5	SA8	HGMXR010830A	1	F	*
CADILLAC	ATS	PC	2.5	SA8	HGMXR0120818	1	F	*
CHEVROLET	IMPALA	PC	2.5	SA6	HGMXR0123702	1	F	*
CHEVROLET	IMPALA	PC	2.5	SA6	HGMXR0133810	1	F	*