#### **GENERAL MOTORS LLC**

**EXECUTIVE ORDER A-006-2058** 

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.

9.0			TEST G	ROUP INFORM	ATION						
MODEL YEAR	TEST GRO	UP VEHIC	LE CLASS(ES)	FUE	L CATEGORY	FU	FUEL TYPE				
2017	HGMXV01.8	021	PC -		TED SINGLE FUE VEHICLE	L	GASOLINE				
	USEFUL LIF	E (miles)	VEHICLE E	MISSION CATEG	ORY	INTI	ERIM / INTERME	DIATE IN-USE STD			
EXH/0	ORVR	EVAP	FTP		SFTP		FTP	SFTP			
120	,000	150,000	USEPA TIER3 BIN1 COUNTED AS AR LEV2 ULEV		EV2 SFTP STANDARD *						
SPECIAL	FEATURES &	EXHAUST EMISSION	CONTROL SYSTEMS	THE PERSON NAMED IN	OBD STATUS	the state of the s	ENGIN	E DISPLACEMENT (L)			
1		TWC(2), HO2S(2), SF	1	FULL	ALL MO	DELS	LS				
*		*		PARTIAL *			. 1.8				
*		*		PARTIAL WITH FINES	*		K.				
· / / / / / / / / / / / / / / / / / / /	PER METERS STRATE	E	VAPORATIVE & REFUEL	ING (EVAP/ORV	R) FAMILY INFORI	MATION	and the state of the state of	Transferred to the state of the			
EV	AP / ORVR FA	MILY EVA	PORATIVE STD CATEGO	DRY EVAPE	MISSION STD VE	HICLE CLAS	S SPE	ECIAL FEATURES			
	HGMXR00958	305	LEV2		PC			HCT			
	*		ŵ		*			*			
	*		*		*			*			
	Z racibientificatorio N. H.	Separate and a second party of		N CREDIT INFOR	RMATION	A STATE OF CASE AND PARTY	F 16 A 2 : A 2 - A 2 - A 2 - A	The first throat of the second			
	A	LLOWANCE FOR TEST	GROUP		G CREDIT FOR	NMOG CP	EDIT FOR DOR	OPTIONAL EXH. STD FOR			
BASEL	INE PZEV	AT PZEV	TZEV	NON-P	NON-PZEV ZERO-EVAP			WORK TRUCKS			
	*	*	*		N		N	N			
			NMOG AND FL	EET AVERAGE	INFORMATION	6)					
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO	HCHO/NMHC RATIO		G+NOX FLEET DT (0-3750 LVW) (g			EET STD LDT (3751 LVW- WR) + 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.

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 July 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.)

	FUEL TYPE	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 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											
		NMOG+N	Ox (g/mi)	CO (	g/mi)	НСНО	(mg/mi)	PM (	g/mi)	HWY NMOG+NOx (g/ml)			
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD		
FTP @ 50K		*	*	*	*	*	*	*	*				
FTP @ UL	GASOLINE-TIER2 UNLEADED	0.065	0.110	0.56	2.1	*	4	*	0.010	0.011	0.110		
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE	*	*	0.96	10.0	*	*	*	*	*	*		
50°F @ 4K	*	*	*	*	*	*	*	*	*	*	*		

# SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

FUEL TYPE				US	06				sc	03			CC	MPOSITI		
	FUEL TYPE	NMHC+NOx (g/mi)		CO (g/mi)		PM (mg/mi)		NMHC+NOx (g/mi)		CO (g/mi)		NMOG+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	0.014	0.14	0.71	8.0	*	*	0.007	0.20	0.28	2.7	*	*	*	*	
@ UL	GASOLINE-TIER2 UNLEADED	*	*	*	w	*	*	*	*	*	*	0.029	0.103	0.110	*	*

## WHOLE VEHICLE EVAPORATIVE/ORVR EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE			WHOLE V	EHICLE EV	APORATIVE	RUNNING LOSS		ON-BOARD REFUELING VAPOR RECOVERY			
FAMILY	FUEL TYPE	3-DAYS DIURNAL + HOT SOAK (g/test) @ UL			2-DAYS DIURNAL + HOT SOAK (g/test) @ UL			(g/mi) @ UL		(g/gallon) @ UL	
		CERT	. STD	FEL	CERT	STD	FEL	CERT	STD	CERT	STD
HGMXR0095805	GASOLINE-TIER2 UNLEADED	0.34	0.50	*	0.54	0.65	*	0.000	0.05	0.08	0.20
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

# FUEL ONLY & CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

		FUEL ONLY EVAP	ORATIVE TESTING				
FUEL TYPE					CANISTER BLEED (g/test)		
	CERT	STD	CERT	STD	CERT	STD	
*	*	*	*	*	*	*	
*	*	*	*	*	*	*	
*	*	*	*	*	*	*	
	FUEL TYPE	FUEL TYPE 3-DAYS DIURNA (g/test	FUEL TYPE 3-DAYS DIURNAL + HOT SOAK (g/test) @ UL	FUEL TYPE 3-DAYS DIURNAL + HOT SOAK 2-DAYS DIURNA (g/test) @ UL (g/test)	(g/test) @ UL (g/test) @ UL	FUEL TYPE  3-DAYS DIURNAL + HOT SOAK (g/test) @ UL  2-DAYS DIURNAL + HOT SOAK (g/test) @ UL  CANISTER B	

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CHEVROLET

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F

\*=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; 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; AlR/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+15% CA Phase2 gasoline; E85-EPA: 85% ethanol+15% Tier2 unleaded gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gasoline; E10-EPA: 10% ethanol+90% CA Phase2 g

#### 2017 MODEL YEAR: VEHICLE MODELS INFORMATION VEH **ENGINE TRANS EVAPORATIVE** EXH PZEV MAKE MODEL OBD CLASS TYPE **FAMILY ECS** TYPE PC HGMXR0095805 F CHEVROLET SONIC 1.8 M5.SA6 1

1.8

M5,SA6

HGMXR0095805

PC