# California Environmental Protection Agency

**⊘** Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2046

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	IFORMAT	ION -						
MODE	- 1	EST GI	ROUP	VEH	IICLE CLASS(	ES)		FUEL C	ATEC	GORY	FUEL TYPE			
2017	HG	MXV01	.4050		PC		DEDICATED SINGLE FUEL VEHICLE			· ·	GASOLINE			
l	JSEFUL	LIFE	(miles)	V	EHICLE EMIS	SION C	ATEGOR	RY	IN	TERIM / INT	ERMEDIA	TE IN-USE STD		
EXH	ORVR		EVAP		FTP		SFTP			FTP		SFTP		
15	0000		150000	LE	V3 ULEV70	LEV	3 COMPO	SITE		NMOG+NOX		NMOG+NOX		
SPE	CIAL FE	ATUR		AUST EMIS	SION CONTRO	OL		OBD ST	ratu	s	ENGINE	DISPLACEMENT (L)		
1	TWC(2), HO2S(2), SFI						FU	LL	ALI	MODELS				
*				*			PAR	TIAL		*	1.4			
*	*						PARTIA FIN			*				
			· EV	APORATIVE	& REFUELIN	G (EVA	P/ORVR)	FAMILY	INF	ORMATION				
EVA	P / ORV	RFAN	IILY	EVAPORAT	IVE STD CATI	EGORY			AP EMISSION STD SPECIAL FEATUR					
Н	GMXR00	95805	5		LEV 2		PC				HCT			
					EMISSION	CREDIT	INFORM	IATION						
	A	LLOW	ANCE FO	R TEST GR	OUP	_						OPTIONAL EXH STD FOR WORK		
BASE	LINE P	ZEV	AT	PZEV	TZEV	NC	N-PZEV	ZERO-E	VAP	DO	K	TRUCKS		
	*			*	*			N .		N		N		
				NM	OG AND FLEE	TAVE	RAGE IN	FORMA	TION					
NMOG RAF	PAE NMOG/NMHC RATIO PC+LDT				LDT	3751	(FLEET STI LVW-8500 IDPV (g/mi)	MDV	-NOX FLEET STO ( (10001-14000 VWR) (g/mi)					
*	*	:	1,10	0.040		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

California Environmental Protection Agency

OB Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2046

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 June 2016

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

GENERAL MOTORS LLC. Executive Order: A-006-2046

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

Page 3 of 4

# **ATTACHMENT**

MAN AT 1 A 1 1 A 1 1				MILEI COLORS				A			
EXHAUST	ARILA		3 A TIV/E	CMICCIAN	CTARITY		ARITA	CEDTIEI	VATION		
CARALISI		FVAEL	TAIIVE	EIVII 3-311 IIV	- AINI	4613	AIVII	LICKLICH	- 44   11 /1	<b>u</b>	

EX	HAUST 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

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**

12:		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	0.0328	0.070	0.52	1.7	*	*	*	4	*	0.01
50°F @4K	GASOLINE- LEV3 E10	0.133	0.140	0.9	1.7	*	*	*	16		

		NMOG+N	Ox (g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*	18 18	- 11 1	
HWFET @ UL	GASOLINE-LEV3 E10	0.0047	0.070			
20°F @ 50K	TIER 3 COLD REG	(- · · · · · ·		1.1	10.0	

#### SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

1977		1 - 1	US06			SC03	3	COMPOSITE			
-	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	*	*		*	*				
@ 41.		STD	*	*	100	*	*		12 = -1		
		CERT	0.0377	*	*	0.0229	*	0.030	1.86	*	
@ UL	GASOLINE- LEV3 E10	STD	*	*	*	*	*	0.103	4.2	*	
		BIN		1			121	0.080			

### WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE						
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @ UL			2Dł	HS (g/test) (	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
HGMXR0095805	GASOLINE - TIER 2 UNLEADED	0.3420	0.50	*	0.5454	0.65	*	0.000	0.05

## 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		
HGMXR0095805	GASOLINE - TIER 2 UNLEADED	0.080	0.20	*	*	*	*	*	*	*		

California Environmental Protection Agency

Air Resources Board

automated manual-selectable transmission; OT: other transmission

GENERAL MOTORS LLC. Executive Order: A-006-2046

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

Page 4 of 4

: 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; GWWR: 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:

	2017 MODEL YEAR: VEHICLE MODELS INFORMATION												
MAKE MODEL VEH CLASS ENGINE TRANS TYPE EVAPORATIVE EXH OBD PZEV TYPE								PZEV TYPE					
CHEVROLET	SPARK	PC	1.4	CV,M5	HGMXR0095805	1	F	*					
CHEVROLET	SPARK ACTIV	PC	1.4	CV,M5	HGMXR0095805	1	F	*					