California Environmental Protection Agency

⊘ Air Resources Board

GENERAL MOTORS LLC. Executive Order: A-006-2090

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

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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.

					TEST GR	OUP IN	FORMAT	ION					
MODE		EST G	ROUP	VEHI	CLE CLASS(I	ES)	FUEL CATEGORY			FL	FUEL TYPE		
2018	018 JGMXD06.0399 HDV,					NOV MOVS			L VEHICLE FV)	85% ETH	ANOL, GASOLINE		
ı	JSEFUL	LIFE	(miles)	VE	HICLE EMIS	SION C	ATEGOR	Y	INTERIM / I	NTERMEDIA	TE IN-USE STD		
EXH	/ORVR		EVAP		FTP		SFTP		FTP		SFTP		
15	0000		150000	LEV	3 ULEV400	UC (L	EV3 ULE (HOT1435 A92), S TEST CY	C03,	PM		РМ		
SPE	CIAL FE	ATUR		IAUST EMISS	ION CONTRO	DL		OBD ST	ATUS	ENGINE	DISPLACEMENT (L)		
1		SF	I, 2TWC,	2HO2S(2),	TWC		FUL	L	ALL MODELS				
*	*						PART	IAL	*	6.0			
*	•						PARTIAL		*	*			
			EV	APORATIVE	& REFUELING	G (EVAI	P/ORVR)	FAMILY	INFORMATIO	N			
EVA	P / ORV	R FAN	MILY	EVAPORATIV	E STD CATE	GORY		AP EMIS	SION STD CLASS	SPECIA	L FEATURES		
J	GMXF01	76860)		LEV 2		MDV5				HCT		
J	GMXR02	1260	4	LEV 3 OP	TION2 WITH	FEL	MDV5				HCT		
					EMISSION O	CREDIT	INFORM	ATION					
	A	LLOW	ANCE FO	R TEST GRO	UP		MOG CR			REDIT FOR	OPTIONAL EXH		
BASE	LINE P	ZEV	AT	PZEV	TZEV	NO	N-PZEV Z	ZERO-E\	AP	DOR	TRUCKS		
* * *						N	ī		N	N			
				NMC	G AND FLEE	TAVE	RAGE INF	ORMAT	ION		*************		
NMOG RAF			HCHO/NMHO RATIO (GASOLINE	RATIO LDT (3751 LVV		W-8500 GVW) MD		NMOG+NOX FLEET S W) MDV (8501-10000 GVV (g/mi)		+NOX FLEET STE (10,001-14,000 VWR) (g/mi)			
*	*		1.10	*		*			0.278		0.451		

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.

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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 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).

BE IT FURTHER RESOLVED:

For evaporative family JGMXR021260A, the manufacturer has attested to compliance with the 0.02 inch effective leak diameter standard in 13 CCR Section 1976(b)(1)(G)6 ["Effective Leak Diameter Standard And Procedure"].

BE IT FURTHER RESOLVED:

Listed vehicle models over 14000 lbs GVWR are certified to the requirements in 13 CCR Section 1961.2 pursuant to 13 CCR Section 1956.8(c)(3) (heavy-duty vehicles certified to emissions requirements applicable to medium-duty vehicles).

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 2017.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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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

11 12 Water of 2											
		NMOG+NOx (g/mi)			CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		M mi)
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	*	*	*	*	*	*
FTP@UL	GASOLINE- LEV3 E10 (TIER 3 E85 (85% ETHANOL + 15% TIER 3 E10 GAS))	0.158 (0.188)	0.400	1.7 (1.4)	7.3 (7.3)	* (*)	* (*)	1 (3)	6 (6)	0.005	0.010 (0.010)
50°F @4K	*	*	*	*	*	*	*	* .	*	T. Wiles	SET OF

1967	FUEL TVDE	NMOG+N	Ox (g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*			
HWFET @ UL	GASOLINE-LEV3 E10 (TIER 3 E85 (85% ETHANOL + 15% TIER 3 E10 GAS))	0.087	0.400 (0.400)			
20°F @ 50K	*			*	*	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

FUE				US06		SC0	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	*	*		*	*			
		STD	*	*	recording to the second	*	*		F 1997 - 14	in the second
		CERT	· *	*	*	*	*	0.144	0.9	1
@ UL	E85-CARB	STD	*	*	*	*	*	0.550	6.0	7
		BIN		15			ALL THE	*	-	7
		CERT	*	*	*	*	*	0.147	1.1	3
@ UL	GASOLINE- LEV3 E10	STD	*	*	*	*	*	0.550	6.0	7
		BIN						*		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

	FUEL TYPE		WHOLE						
EVAPORATIVE FAMILY		3DHS (g/test) @ UL			2D	HS (g/test) (RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
JGMXF0176860	GASOLINE- LEV3 E10	0.408	1.00	*	0.296	1.25	*	0.00	0.05
JGMXR021260A	GASOLINE- TIER3 E10	0.456	0.600	0.575	0.467	0.600	0.575	0.00	0.05

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ORVR / FUI	EL ONLY / CA	NISTER	BLEED	EVAPORATIVE	EMISSION	STANDA	RDS AND	CERTIFICA	ATION LEV	ELS			
				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			
JGMXR021260A	E10-EPA	0.01	0.20	GASOLINE- TIER3 E10	*	*	*	*	0.007	0.030			

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; FFH: fuel fired heater; 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: semiautomatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission

2018 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
CHEVROLET	C35 SILVERADO 2WD	MDV5	6.0	A6	JGMXR021260A	1	F	*
CHEVROLET	G3500 EXPRESS 2WD CUTAWAY CH	MDV5	6.0	A6	JGMXF0176860	1	F	*
CHEVROLET	G4500 EXPRESS 2WD CUTAWAY CH	HDV	6.0	A6	JGMXF0176860	1	F	*
CHEVROLET	K35 SILVERADO 4WD	MDV5	6.0	A6	JGMXR021260A	1	F	*
GMC	C35 SIERRA 2WD	MDV5	6.0	A6	JGMXR021260A	1	F	*
GMC	G3500 SAVANA 2WD CUTAWAY CH	MDV5	6.0	A6	JGMXF0176860	1	F	*
GMC	G4500 SAVANA 2WD CUTAWAY CH	HDV	6.0	A6	JGMXF0176860	1	F	*
GMC	K35 SIERRA 4WD	MDV5	6.0	A6	JGMXR021260A	1	F	*