

### GENERAL MOTORS LLC.

Executive Order: A-006-2191

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

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Pursuant to the authority vested in California 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: That 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 GRO	OUP IN	IFORM	IATION					
MODE		EST GROUP	VEHIC	VEHICLE CLASS(ES)			FUEL CATEGORY			FUEL TYPE		
2020	LG	MXD06.6394		MDV4 DEDI				SINGLE FUEL HICLE		GASOLINE		
1	USEFUL LIFE (miles) VEHICLE EMISSION CATEGORY INTERIM / INTERMEDIATE					EDIATE IN-USE STD						
EXH	/ORVR	EVAP		FTP		SFT	P	FTP		SFTP		
15	0000	150000	LEV3	ULEV200	LEV3 ULEV US06, SC03, TEST CYCI		3, FTP	NMOG+NOX AND		PM		
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS							OBD S	TATUS	ENGINE DISPLACEN			
1		DFI, 2TWC	, 2HO2S(2),	TWC		F	FULL	ALL MODELS		A.		
*			*			PA	RTIAL	*		6.6		
*			*				IAL WITH	*	*			
		EV	APORATIVE &	REFUELING	(EVA	PIORV	R) FAMILY	INFORMATION	1			
EVA	P / ORV	R FAMILY	EVAPORATIV	E STD CATE	GORY	RY EVAP EMISSION STD VEHICLE CLASS			SPECIAL FEATURES			
I	GMXF02	176BB	LEV 3 OPT	EV 3 OPTION2 WITH FEL			MDV4			HCT		
I	GMXR02	1260A	LEV 3 OPT	CION2 WITH FEL			MI	0V4		HCT		
				EMISSION C	REDIT	INFO	RMATION					
	EDIT FO	X FLEET AVE. OR EXTENDED RRANTY		REDIT FOR N ZERO-EVAP	DIT FOR NON-PZEV			REDIT FOR DO		OPTIONAL EXH. STD FOR WORK TRUCKS		
n n						и				N		
			NMO	AND FLEE	TAVE	RAGE	INFORMA	TION				
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO	HCHO/NMHC RATIO	NMOG+NC LDT (3751 L + MD	VW-8	500 GV	TD NMOG+NOX FLEET ST VW) MDV (8501-10000 GVWI (g/mi)			MOG+NOX FLEET STD MDV (10,001-14,000 GVWR) (g/mi)		
*	*	1.10	*		*			0.228		0.349		

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. (As applicable, heavy-duty vehicles (HDV) over 14,000 pounds in GVWR listed in this Executive Order are certified to the requirements in 13 CCR Section 1961.2 applicable to MDV pursuant to 13 CCR Section 1956.8(c)(3) or 13 CCR Section 1956.8(h)(5), as applicable.)



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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 fleet average compliance requirement for NMOG+NOx or Vehicle Equivalent Credit (13 CCR Sections 1961.2(b)(1), 1961.2(b)(3), or 1961.2(c) (3), and the incorporated test procedures, as applicable), or Greenhouse Gas Emissions (13 CCR Section 1961.3, or 17 CCR Section 95663, and the incorporated test procedures, as applicable), for PC, LDT, MDPV or MDV 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).

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 4

\_ day of June 2019.

Allen Lyons, 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**

		NMOG	G+NOx 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- TIER3 E10	0.063	0.200	0.3	4.2	*	*	*	6	0.005	0.008
50°F @4K	GASOLINE- TIER3 E10	0.155	0.400	0.7	4.2	* .	*	*	16		

31/2/11	FUEL TYPE  * GASOLINE-TIER3 E10	NMOG+I	CO (g/mi)		
10061	FUEL TYPE	CERT	STD	CERT	STD
HWFET @ 50K	*	*	*	es este o quest sun	renovi in
HWFET @ UL	GASOLINE-TIER3 E10	0.003	0.200	Same Stands	THE STATE OF
20°F @ 50K	*	2 (1 to 1 t		*	*

### SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

		-	US06			SC03	3	COMPOSITE			
	FUEL TYPE	Wiley.	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	*	*		*	*	5 - A. R. L.	nask (vil) Albaya A		
			STD	*	*	100 Se e 1131	*	*			
		CERT	*	*	*	*	*	0.031	0.2	2	
@ UL	GASOLINE- TIER3 E10	STD	*	*	*	*	*	0.800	22.0	10	
	177	BIN	Colons design				Mary Gran	*			

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

	FUEL TYPE		WHOLE						
EVAPORATIVE FAMILY		3DHS (g/test) @ UL			2DHS (g/test) @ UL			RL (g/mi) @ UL	
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
LGMXF02176BB	GASOLINE- TIER3 E10	0.365	0.600	0.600	0.412	0.600	0.600	0.00	0.05
LGMXR021260A	GASOLINE- TIER3 E10	0.365	0.600	0.600	0.412	0.600	0.600	0.00	0.05



TIER3 E10

LGMXR021260A

0.07

0.20

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#### ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS **FUEL ONLY EVAP & CANISTER BLEED BLEED CANISTER** ORVR (g/gallon) @ UL **3DHS RIG TEST** 2DHS RIG TEST **EVAPORATIVE** TEST (g/test) @ 4K (g/test) @ UL **FUEL TYPE** (g/test) @ UL **FAMILY** CERT STD CERT STD STD CERT FUEL TYPE CERT STD GASOLINE-0.030 0.018 \* TIER3 E10 GASOLINE-GASOLINE-0.018 0..030

EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)  EVAPORATIVE FAMILY  LEAK FAMILY  CERT  STD						
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD			
LGMXR021260A	LGMXR021260A-LK1	*	.0 . 02			
LGMXF02176BB	LGMXF02176BB-LK1	*	0.02			

TIER3 E10

: 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; 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; semi-automatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission; AER: all-electric range; EAER: equivalent AER; PHEV: plug-in hybrid electric vehicle; NMOG + NOx Fleet Ave. Credit for Extended Warranty: N = no credits, Y = credits, S = credits for some/select models

# 2020 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBC
CHEVROLET	SILVERADO 2500 HD 2WD	MDV4	6.6	A6	LGMXR021260A	1	F
CHEVROLET	SILVERADO 2500 HD 2WD CAB CHAS	MDV4	6.6	A6	LGMXF02176BB	1	F
CHEVROLET	SILVERADO 2500 HD 4WD	MDV4	6.6	A6	LGMXR021260A	1	F
CHEVROLET	SILVERADO 2500 HD 4WD CAB CHAS	MDV4	6.6	<b>A</b> 6	LGMXF02176BB	1	F:
GMC	SIERRA 2500 HD 2WD	MDV4	6.6	A6	LGMXR021260A	1	F
GMC	SIERRA 2500 HD 2WD CAB CHAS	MDV4	6.6	<b>A</b> 6	LGMXF02176BB	1	F
GMC	SIERRA 2500 HD 4WD	MDV4	6.6	A6	LGMXR021260A	1	F
GMC	SIERRA 2500 HD 4WD CAB CHAS	MDV4	6.6	A6	LCMXF02176BB	1.	F