

# GENERAL MOTORS LLC.

Executive Order: A-006-2276

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-19-095;

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	VFOR	MATION	1 - 211			
MODE YEAR		EST GROUP		VEHIC	LE CLASS(E	S)		FUEL CATEGORY			FUEL TYPE	
2021	MG	MXD04.3392			MDV4	777			SINGLE FUEL HICLE		GASOLINE	
	USEFUL	LIFE (miles)		VEH	HICLE EMISS	ION C	CATE	GORY	INTERIM / INT	ER	MEDIATE IN-USE STD	
EXH	/ORVR	EVAP			FTP		SF	TP	FTP		SFTP	
15	0000	15000	)	LEV3	ULEV200	US0	6, SC	EV (FULL CO3, FTP CYCLE)	*		*	
SPE	CIAL FE	EATURES & EX	HAUS		ON CONTRO	L		OBD S	TATUS	E	NGINE DISPLACEMEN (L)	
1	SWAR CORNEL	DFI, 2TW	С, 2Н	102S(2),	TWC			FULL	ALL MODELS			
*			*				P	ARTIAL	*	4.3		
*		2016	*				Sept. Developed	TIAL WITH FINES	*			
		Е	VAPO	RATIVE &	REFUELING	(EVA	P/OR	VR) FAMILY	INFORMATION			
EVA	P / ORV	R FAMILY	EVA	PORATIVE	E STD CATE	GORY		EVAP EMIS VEHICLE	SSION STD E CLASS	S	SPECIAL FEATURES	
M	IGMXF02	2176BB	LI	EV 3 OPTI	ION2 WITH	FEL	L MDV4			HCT		
M	IGMXR02	21260A	L	EV 3 OPTI	ION2 WITH	FEL MDV4			V4	НСТ		
				I	EMISSION CI	REDIT	INFO	ORMATION				
	EDIT FO	X FLEET AVE. OR EXTENDED RRANTY			REDIT FOR N ZERO-EVAP	ON-P	ZEV	NMOG CI	REDIT FOR DOR		OPTIONAL EXH. STD FOR WORK TRUCKS	
		N			N				N		N	
######################################				NMOG	AND FLEET	AVE	RAGE	INFORMAT	TION			
IMOG RAF	NE RAF NMOG/NMHC RATIO LDT (375		LDT (3751 L	X FLEET STD VW-8500 GVW) PV (g/mi)		TD NMOG- VW) MDV (8	NMOG+NOX FLEET STD MDV (8501-10000 GVWR) (g/mi)		NMOG+NOX FLEET ST MDV (10,001-14,000 GVWR) (g/mi)			
*	*	1.10		*	(0	*			0.203		0.298	

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 on this \_\_\_\_\_\_ day of July 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division



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### **ATTACHMENT**

### **EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS**

<b>EXHAUST EMISSION STANDARDS</b>	AND CERTIFICATION LEVELS	(FTP	. HWFET	50°F. 2	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+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- TIER3 E10	0.118	0.200	0.9	4.2	*	*	*	6	0.003	0.008
50°F @4K	GASOLINE- TIER3 E10	0.221	0.400	0.8	4.2	*	*	*	16		

	FUEL TYPE	NMOG+N	lOx (g/mi)	CO (	g/mi)
	FUEL TYPE	CERT	STD	CERT	STD
HWFET @ 50K	*	*	*		
HWFET @ UL	GASOLINE-TIER3 E10	0.002	0.200		
20°F @ 50K	*			*	*

#### SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

				US06		SC03	E.	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	*	*		*	*			
•		STD	*	*		*	*			
		CERT	*	*	*	*	*	0.065	3.6	3
@ UL	GASOLINE- TIER3 E10	STD	*	*	*	*	*	0.800	22.0	10
		BIN						*		

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

			WHOLE	VG					
EVAPORATIVE FAMILY	FUEL TYPE	3DH:	S (g/test)	@ UL	2DI	HS (g/test) (	ற UL	RL (g/m	ni) @ UL
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
MGMXF02176BB	GASOLINE- TIER3 E10	0.386	0.600	0.600	0.339	0.600	0.600	0.00	0.05
MGMXR021260A	GASOLINE- TIER3 E10	0.532	0.600	0.600	0.400	0.600	0.600	0.00	0.05



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					FUEL C	NLY EVA	P & CANIS	TER BLEI	ED			
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL TYPE	100000000000000000000000000000000000000	3DHS RIG TEST (g/test) @ UL		2DHS RIG TEST (g/test) @ UL		ANISTER est) @ 4K		
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
MGMXF02176BB	*	*	*	GASOLINE- TIER3 E10	*	*	*	*	0.018	0.030		
MGMXR021260A	GASOLINE- TIER3 E10	0.05	0.20	GASOLINE- TIER3 E10	*	*	*	*	0.011	0.030		
	EFFECTIVE	LEAK D	IAMET	ER STANDAR	D AND CE	RTIFICA	TION LEV	EL (INC	HES)			
EVAPORATIVE	FAMILY	LEA	K FAMIL	Y CERT				STD				
MGMXR021260A MGM		MGMXR0	21260A	-LK1	,	*			0.02			
MGMXF02176BB MGMXF0217		2176BB	-LK1	*			0.02					

\*: 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; HP/LP EGR: High/Low Pressure EGR; 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; a hyphen (-) between after treatment ECS indicates multiple functionalities of the after treatment device (ex. DPF-SCRC: SCR coated DPF); 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

## 2021 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
CHEVROLET	G2500 EXPRESS 2WD CARGO	MDV4	4.3	A8	MGMXR021260A	1	F
CHEVROLET	G2500 EXPRESS 2WD CARGO INCOM	MDV4	4.3	A8	MGMXR021260A	1	F
CHEVROLET	G2500 EXPRESS 2WD PASS	MDV4	4.3	A8	MGMXR021260A	1	F
CHEVROLET	G3500 EXPRESS 2WD CARGO	MDV4	4.3	A8	MGMXR021260A	1	F
CHEVROLET	G3500 EXPRESS 2WD CARGO INCOM	MDV4	4.3	A8	MGMXR021260A	1	F
CHEVROLET	G3500 EXPRESS 2WD CUTAWAY CH	MDV4	4.3	A8	MGMXF02176BB	1	F
CHEVROLET	G3500 EXPRESS 2WD PASS	MDV4	4.3	A8	MGMXR021260A	1	F
CHEVROLET	G3500 EXPRESS 2WD PASS INCOM	MDV4	4.3	A8	MGMXR021260A	1	F
GMC	G2500 SAVANA 2WD CARGO	MDV4	4.3	A8	MGMXR021260A	1	F



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## 2021 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
GMC	G2500 SAVANA 2WD CARGO INCOM	MDV4	4.3	A8	MGMXR021260A	1	F
GMC	G2500 SAVANA 2WD PASS	MDV4	4.3	A8	MGMXR021260A	1	F
GMC	G3500 SAVANA 2WD CARGO	MDV4	4.3	A8	MGMXR021260A	1	F
GMC	G3500 SAVANA 2WD CARGO INCOM	MDV4	4.3	A8	MGMXR021260A	1	F
GMC	G3500 SAVANA 2WD CUTAWAY CH	MDV4	4.3	A8	MGMXF02176BB	1	F
GMC	G3500 SAVANA 2WD PASS	MDV4	4.3	A8	MGMXR021260A	1	F
GMC	G3500 SAVANA 2WD PASS INCOM	MDV4	4.3	A8	MGMXR021260A	1	F