

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 GROUP INFORMATION													
MOD YEA		TES	EST GROUP VEHICLE CLASS(E						FUEL C	FUEL CATEGORY FUEL TYPE				
202	1 1	MKM	XT02.5JR5			LDT2	DT2 DEDICATED SINGLE FUEL VEHICLE				'	GASOLINE		
	USEF	UL L	IFE (miles)		VEH	HICLE EMISSION CATEGORY INTERIM / INTERMEDIAT						RMEDIATE IN-USE STD		
EX	H/ORV	/R	EVAP			FTP		SF	SFTP FTP			SFTP		
1	50000)	15000	C	LEV3	ULEV70	LEV	3 CC	MPOSITE	*		PM		
SP	SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS								OBD S	TATUS		ENGINE DISPLACEMENT (L)		
1	DFI, SFI, WR-HO2S, HO2S, WU-TWC, TWC, EGR, EGRC								FULL	ALL MODELS				
*	*							Р	ARTIAL	*		2.5		
*	* *								TIAL WITH *					
<u> </u>	EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION													
EV	AP / OF	RVR	FAMILY	EVA	PORATIVE	E STD CATE	GORY	,	EVAP EMISSION STD VEHICLE CLASS SPI			SPECIAL FEATURES		
	MKMXR	R0144	4JRG		LEV 3	OPTION2			LDT2			HCT		
					E	EMISSION CH	REDIT	INFO	ORMATION					
	NMOG+NOX FLEET AVE. CREDIT FOR EXTENDED WARRANTY						ON-P	ZEV				OPTIONAL EXH. STD FOR WORK TRUCKS		
		N	ĩ			N			N N					
					NMOG	AND FLEET	AVE	RAG		TION				
NMO0 RAF					0-375		VW) LDT (3751 LVW-8500 MDV (10,001-			NMOG+NOX FLEET STD MDV (10,001-14,000 GVWR) (g/mi)				
*	*		1.10		*	0	.058			0.065		*		

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.)



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 <u>22nd</u> day of September 2020.

llen/Lyons, Chief

Emissions Certification and Compliance Division



FUEL TYPE

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

			NMOG+NOx (g/mi)		CO (g/mi)			NOx (g/mi)		CHO g/mi)		Pl (g/r		
			CERT	STD	CERT STD		CERT	STD	CERT	STD	CER	RT	STD	
FTP@50K	K *		*	*	*	*	*	*	*	*	*		*	
FTP@UL	L GASOLINE- TIER3 E10		0.032	0.070	0.5	1.7	*	*	*	4	0.00	01	0.003	
50°F @4K		SOLINE- R3 E10	0.017	0.140	0.2	1.7	*	*	*	16				
							NN	NMOG+NOx (g/mi) CO (g/mi)						
				FUEL TYP	E		CE	RT	STD	CER	CERT STD			
HWFET @ 50K				*			*		*					
HWFET @ UL			GASOI	INE-TIEF	R3 E10		0.0	16	0.070					
20°F @ 50K		COLD (CO E10 RE	GULAR GA	ASOLINE	(TIER3)				0.4		:	12.5	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

			SLIL	LAUA		1000	USTAND/					VLLO			
						US06				SC03		С			
	FUEL TYPE		N	NMOG+NOx		со	P	м	NMC)G+NOx	со	NMOG+NC)x C	:0	PM
				(g/mi)		(g/mi)	(mg	/mi)	(g/mi)	(g/mi)	(g/mi)	(g	/mi)	(mg/mi)
@4K *		CEF	CERT			*	*		* *						
		ST	D C	*		*				*	*				
			۲T)	*		* 2		2	*		*	0.033	1	. 9	*
@ UL	GASOLIN TIER3 E		STD		*		* 6		*		*	0.077	4	.2	*
		BI	1									0.100			
	WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS														
				WHOLE VEHICLE EVAPORATIVE TESTING											
	EVAPORATIVE FAMILY		UEL TYPE		3DHS (g/		g/test) @ UL		2DH	IS (g/test)	@ UL	· ٦	RL (g/m	(g/mi) @ UL	
				CEF	CERT		FEL	CER	т	STD	FEL	CE	RT		STD
MKMXR0144JRG		GASOI LEV3		0.2	47 0	.400	*	0.23	35	0.400	*	0.	00	0.05	
(ORVR / FUI	EL ONLY	/ CA	NISTER	BLEE) EVAP	ORATIVE	EMIS	SION	STANDA	RDS AND	CERTIFIC	ATION I	EVE	LS
								FU	EL C	NLY EVA	P & CANIS	STER BLEE	D		
	ORATIVE			g/gallon) @ UL		FUE			HS RIG TEST g/test) @ UL			RIG TEST t) @ UL		ED CANISTER T (g/test) @ 4M	
		FUEL T	YPE	CERT	STD	7		CEF	रा	STD	CERT	STD	CER	т	STD
MKMXI	R0144JRG	GASOLI TIER3		0.01	0.20		OLINE- 73 E10	*		*	*	*	0.01	.0	0.020



EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)									
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD						
MKMXR0144JRG	MKMXR0144JRG-MQ4	0.00	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
KIA	SORENTO AWD	LDT2	2.5	SA8	MKMXR0144JRG	1	F
KIA	SORENTO FWD	LDT2	2.5	SA8	MKMXR0144JRG	1	F