

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 GRC	OUP IN	FOR	MATION						
MOD YEA		TEST GROUP		VEHIC	CLE CLASS(ES) FUEL CA			ATEGORY		FUEL TYPE				
202	3 1	PFMXT03.57AT			LDT4		DEDICATED SINGLE FUEL VEHICLE				GASOLINE			
	USEF	UL LIFE (miles)		VEF	IICLE EMISS	ION C	ATEC	GORY	INTERIM / IN	ITERIM / INTERMEDIATE IN-USE STD				
EX	H/ORVI	R EVAP		FTP		SF	ТР	FTP		SFTP				
1	50000	15000	D	LEV3	ULEV50	LEV	3 CC	MPOSITE	PM					
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS								OBD S	TATUS	E	ENGINE DISPLACEMENT (L)			
1 2TWC, DFI, SFI, 2WR-HO2S, 2HO2S, 2TC, CAC, EGR, EGRC								FULL	*					
*						Р	ARTIAL	ALL MODELS	3.5					
*			*					TIAL WITH FINES	*					
	EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION													
EV	AP / OF	RVR FAMILY	EVA	PORATIVE	E STD CATE	GORY	,	EVAP EMISSION STD VEHICLE CLASS			SPECIAL FEATURES			
	PFMXR	0260NDG	L	EV 3 OPTI	ON2 WITH	FEL		LD	т4		HCT			
					EMISSION CI	REDIT		ORMATION						
	REDIT	NOX FLEET AVE FOR EXTENDED ARRANTY			EDIT FOR N ZERO-EVAP	ON-P	ZEV	NMOG CREDIT FOR DOR			OPTIONAL EXH. STD FOR WORK TRUCKS			
		N			N			N N						
				NMOG	AND FLEET		RAGE		TION					
NMOG CH4 FTP RAF RAF NMOG/NMHC RATIO					NMOG+NO PC+LDT ( (g			) LDT	+NOX FLEET S (3751 LVW-8500 R) + MDPV (g/m		IMOG+NOX FLEET STD MDV (10,001-14,000 GVWR) (g/mi)			
*	*	1.10		*	0	.044			0.047 *					

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  $\underline{30th}$  day of August 2022.

Jolin U. Lang

Robin U. Lang, Chief *U* 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

				G+NOx mi)	-	O mi)	N( (g/	Ox mi)		HO /mi)		PM (g/mi)	
			CERT	STD	CERT	STD	CERT	STD	CERT	STD	CER	T STD	
FTP@50K	*		*	*	*	*	*	*	*	*	*	*	
FTP@UL	GASOLINE- TIER3 E10		0.033	0.050	1.0	1.7	*	*	2	4	0.00	0.003	
50°F @4K		*	*	*	*	*	*	*	*	*			
								NMOG+NOx (g/mi)				CO (g/mi)	
				FUEL TYP	E		CE	RT	STD	CER	RT	STD	
HWFET @ 50K				*			*		*				
HWFET @ UL		GASOLINE-TIER3 E10						14	0.050				
20°F @ 50K		COLD (	CO E10 RE	EGULAR GA	ASOLINE	(TIER3)				0.9	9	12.5	

#### SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

			SF	ΓP E	XHAU	JST EM	ISSION	I STAND	ARDS	AND	CERTIFIC	ATION LE	VELS			
						l	JS06				SC03			CO	MPOSITE	
	FUEL TY	TYPE		NMOG+NOx		СО	P	М	NMC	OG+NOx	СО	NMOG+NO		x CO	PM	
				(	(g/mi)		(g/mi)	(mg	/mi)	(	g/mi)	(g/mi)	(g/n	ni)	(g/mi)	(mg/mi)
@ 4K	⊉ 4K *		CERT		*		*			*		*				
			STD	*			*				*	*				
			CERT	*			* 3		3	*		*	0.028		1.3	*
@ UL	GASOLIN TIER3 E		STD		*		*	* 6		*		*	0.063		4.2	*
			BIN										0.060			
		WH	OLE VEI	IICL	E EV/	APORA	TIVE E	MISSION	STAN	IDAR	DS AND C	ERTIFICA	TION L	EVEL	.S	
WHOLE VEHICLE EVAPORATIVE TESTING																
	ORATIVE	FUEL TY		FUEL TYPE		3DHS (g/		g/test) @ UL		2Dł	IS (g/test)	S (g/test) @ UL		RL (		) UL
						CERT S		FEL CE		RT	STD	FEL		CERT		STD
PFMXR0260NDG			ASOLINE IER3 E1	-	0.25	54 0	. 500	0.500	0.2	08	0.500	0.50	0	0.00	00 0.05	
(	orvr / Fui	EL O	ONLY / C	ANIS	STER	BLEED	<b>EVAP</b>	ORATIVE	EMIS	SION	I STANDA	RDS AND	CERTIF	FICAT	ION LEV	ELS
									FU	JEL C	ONLY EVA	P & CANIS	STER B	LEED	)	
EVAPORATIVE FAMILY		C	ORVR (g/gal			) UL	FUE	FUEL TYPE		3DHS RIG 1 (g/test) @			rig tes t) @ UL			ANISTER est) @ 4K
		FUI	EL TYPE	C	ERT	STD			CE	RT	STD	CERT	STE	)	CERT	STD
PFMXI	R0260NDG		SOLINE- ER3 E1(	0	.02	0.20		GASOLINE- TIER3 E10		•	*	*	*		0.005	0.020



EFFECTIN	EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)										
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD								
PFMXR0260NDG	PFMXR0260NDG-001	*	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

## 2023 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
FORD	F150 RAPTOR 4WD	LDT4	3.5	SA10	PFMXR0260NDG	1	P