

# FORD MOTOR COMPANY

Executive Order: A-010-2188

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.

	(a)			TEST GR	OUP INFOR	MATION				
MODE				VEHICLE CLASS(ES)		FUEL C	ATEGORY	FUEL TYPE		
2020	LF	MXT02.01B2		LDT1			SINGLE FUEL HICLE	GASOLINE		
	JSEFUL	LIFE (miles)		VEHICLE EMIS	SION CATE	GORY	INTERIM / INT	ERMEDIATE IN-USE STD		
EXH	/ORVR	EVAP		FTP	SF	TP	FTP	SFTP		
15	0000	150000	L	EV3 ULEV70	LEV 3 C	OMPOSITE				
SPE	SPECIAL FEATURES & EXHAUST EMISSION CONTROL OBD STATUS							ENGINE DISPLACEMENT (L)		
1		TWC, WR-	HO2S, HO2S	, DFI		FULL	ALL MODELS			
*			*			PARTIAL * 2.0				
*										
		E	VAPORATIV	E & REFUELIN	G (EVAP/O	RVR) FAMIL	INFORMATION			
EVA	P / ORV	R FAMILY	EVAPORA'	TIVE STD CAT	EGORY		SSION STD E CLASS	SPECIAL FEATURES		
I	FMXR00	90GDE	LEV 3 C	PTION2 WITH	FEL	LI	T1	HCT		
				EMISSION	CREDIT INF	ORMATION				
	EDIT FO	X FLEET AVE. OR EXTENDED RRANTY	I NIMO	CREDIT FOR ZERO-EVA		NMOG C	REDIT FOR DOF	OPTIONAL EXH. STD FOR WORK TRUCKS		
	N									
			Ni	OG AND FLEI	ET AVERAG	E INFORMA	TION			
NMOG RAF	PAE NMOG/NMHC PATIO PC+LD1 (0-3						MDV (10,001-14,000			
*	*	1.10	+		0.065		0.074	*		

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

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\_ day of June 2019

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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 AT	ND CERTIFICATION LEVELS	(FTP,	HWFET,	50°F, 20°F	)
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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**

										1,27	- A
	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	*	* * *	* *	*	*	* * * * * * * * * * * * * * * * * * * *	*	7 7 <b>.*</b> 2	*	*	* *
FTP@UL	GASOLINE- TIER3 E10	0.050	0.070	0.8	1.7	*	*	1	4	0.00	0.01
50°F @4K	*	*	*	*	*	*	*	*	*		15.75

	FUEL TYPE	NMOG+N	NOx (g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*		las Selectors	
HWFET @ UL	GASOLINE-TIER3 E10	0,.027	0.070	4.5555		
20°F @ 50K	COLD CO E10 REGULAR GASOLINE (TIER3)			1.7	10.0	

#### SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

	and the second		US06			SC03	7,57	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	*	*	*	*	*	0.037	2.8	*
@ UL	GASOLINE- TIER3 E10	STD	*	*	*	*	*	0.083	4.2	*
		BIN						0.090		

#### WHOLE VEHICLE EVAPORATIVE TESTING **EVAPORATIVE** RL (g/mi) @ UL **FUEL TYPE** 3DHS (g/test) @ UL 2DHS (g/test) @ UL **FAMILY** CERT STD FEL **CERT** STD FEL CERT STD GASOLINE-0.168 LFMXR0090GDE 0.300 0.300 0.144 0.300 0.300 0.00 0.05 TIER3 E10

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

## ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

				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				
	<b>FUEL TYPE</b>	CERT	STD		CERT	STD	CERT	STD	CERT	STD			
LFMXR0090GDE	GASOLINE- TIER3 E10	0.08	0.20	GASOLINE- TIER3 E10	*	*	*	*	0.004	0.020			



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EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)								
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD					
LFMXR0090GDE	LFMXR0090GDE-001	A CONTRACT OF THE PROPERTY OF	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; 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	OBD
FORD	ECOSPORT FWD	LDT1	2.0	SA6	LFMXR0090GDE	1	F