# California Environmental Protection Agency

# **⊘** Air Resources Board

FORD MOTOR COMPANY

Executive Order: A-010-2088

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

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Pursuant to the authority vested in the 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: 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 GF	ROUP IN	FORMAT	ION					
MODE		TEST GROUP VEHICLE CLASS(ES)						FUEL CATEGORY			FUEL TYPE		
2018	8 JFMXT03.54HF LDT4						LDT4 DEDICATED S					GASOLINE	
Ü	JSEFUI	LIFE	(miles)	II V	EHICLE EMIS	SION	ATEGOR	RY	IN	TERIM / INT	ERMEDIA	TE IN-USE STD	
EXH	/ORVR		EVAP		FTP		SFTP			FTP		SFTP	
15	0000		150000	LE	V3 ULEV70	LEV	3 COMPO	SITE		NMOG+NOX		*	
SPE	CIAL FI	EATUR		IAUST EMIS	SION CONTR	OL		OBD ST	TATU	IS	ENGINE	DISPLACEMENT (L)	
1	DFI,	SFI, 2	2TWC, 2W	R-HO2S, 21	HO2S, 2TC,	CAC	FU	LL		*	3.5		
*				*			PAR	TIAL	ALI	MODELS			
*	*						PARTIA FIN			*			
			EV	APORATIVE	& REFUELIN	IG (EVA	P/ORVR)	FAMILY	INF	ORMATION			
EVA	P / ORV	/R FAM	MILY	EVAPORAT	IVE STD CAT	EGORY	Y EVAP EMISSION STD VEHICLE CLASS				SPECIA	L FEATURES	
J	FMXR02	200GD	3	LEV 3 O	PTION2 WITH	FEL	LDT4					HCT	
J	FMXR02	260ND	7	LEV 3 O	PTION2 WITH	FEL	LDT4					HCT	
					EMISSION	CREDI	INFORM	ATION					
	A	LLOW	ANCE FO	R TEST GR	OUP						OPTIONAL EXH STD FOR WOR		
BASE	LINE P	ZEV	AT	PZEV	TZEV	NO	ON-PZEV	ZERO-E	VAP	DO	R	TRUCKS	
* *					*		1	N		N		N	
				NM	OG AND FLE	ET AVE	RAGE IN	FORMA	TION				
MOG RAF			PC+LDT	NMOG+NOX FLEET PC+LDT (0-3750 LV (g/ml)		0 LVW) LDT (37		MOG+NOX FLEET STI LDT (3751 LVW-8500 VWR) + MDPV (g/mi)		NOX FLEET STI (10,001-14,000 VWR) (g/mi)			
*	*		1.10	*		0.079		0.092			*		

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.



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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 NMOG+NOx and greenhouse gas Fleet Average (PC or LDT or MDPV) or "Vehicle Equivalent Credit" (MDV) compliance plan 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 for PC, LDT and MDV).

### BE IT FURTHER RESOLVED:

For evaporative families JFMXR0200GDG and JFMXR0260NDV, the manufacturer has attested to compliance with the 0.02 inch effective leak diameter standard in 13 CCR Section 1976(b)(1)(G)6 ["Effective Leak Diameter Standard And Procedure"].

day of September 2017.

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

Annette Hebert, 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** 

-T= 7		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	0.0600	0.070	1.26	1.7	*	*	1.0	4	0.0014	0.01		
50°F @4K	*	*	*	*	*	*	*	*	*	15-311-5	133		

	FUEL TYPE	NMOG+N	Ox (g/mi)	CO (g/mi)		
TAME BUS	POELTTPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*		1 - 1 2 mg	
HWFET @ UL	GASOLINE-TIER3 E10	0.0259	0.070			
20°F @ 50K	COLD CO E10 REGULAR GASOLINE (TIER3)		- 11	0.98	12.5	

## SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

				US06		SC03	3	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	* .	* .		*	*			1-22-21	
		STD	*	*	76 1	*	*	Line 1			
		CERT	*	*	*	*	*	0.0539	1.1	*	
@ UL	GASOLINE- TIER3 E10	STD	*	*	*	*	*	0.097	4.2	*	
		BIN						0.100			

### WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE						
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @ UL			2DI	HS (g/test) (	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
JFMXR0200GDG	GASOLINE- TIER3 E10	0.2989	0.500	0.500	*	0.500	0.500	0.000	0.05
JFMXR0260NDV	GASOLINE- TIER3 E10	0.2212	0.500	0.500	0.1981	0.500	0.500	0.001	0.05

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### 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-			
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
JFMXR0200GDG	GASOLINE- TIER3 E10	0.022	0.20	GASOLINE- TIER3 E10	*	*	*	*	0.0100	0.020		
JFMXR0260NDV	GASOLINE- TIER3 E10	0.011	0.20	GASOLINE- TIER3 E10	*	*	*	*	0.0107	0.020		

: 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; PZEV: partial ZEV; AT PZEV: advanced technology PZEV; 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: semiautomatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission

## 2018 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH	OBD	PZEV TYPE
FORD	EXPEDITION 2WD	LDT4	3.5	SA	JFMXR0200GDG	1	P	*
FORD	EXPEDITION 2WD	LDT4	3.5	SA	JFMXR0260NDV	1	P	*
FORD	EXPEDITION 4WD	LDT4	3.5	SA	JFMXR0200GDG	1	P	*
FORD	EXPEDITION 4WD	LDT4	3.5	SA	JFMXR0260NDV	1	P	*
FORD	EXPEDITION MAX 2WD	LDT4	3.5	SA	JFMXR0200GDG	1	P	*
FORD	EXPEDITION MAX 2WD	LDT4	3.5	SA	JFMXR0260NDV	1	P	*
FORD	EXPEDITION MAX 4WD	LDT4	3.5	SA	JFMXR0200GDG	1	P	*
FORD	EXPEDITION MAX 4WD	LDT4	3.5	SA	JFMXR0260NDV	1	P	*
LINCOLN	NAVIGATOR 2WD	LDT4	3.5	SA	JFMXR0200GDG	1	P	*
LINCOLN	NAVIGATOR 2WD	LDT4	3.5	SA	JFMXR0260NDV	1	P	*
LINCOLN	NAVIGATOR 4WD	LDT4	3.5	SA	JFMXR0200GDG	1	P	*
LINCOLN	NAVIGATOR 4WD	LDT4	3.5	SA	JFMXR0260NDV	1	P	*
LINCOLN	NAVIGATOR L 2WD	LDT4	3.5	SA	JFMXR0200GDG	1	P	*
LINCOLN	NAVIGATOR L 2WD	LDT4	3.5	SA	JFMXR0260NDV	1	P	*