# California Environmental Protection Agency Air Resources Board

FORD MOTOR COMPANY

Executive Order: A-010-1904

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 GRO	JP IN	IFOR	MATION					
MOD		TEST G	ROUP		VEHICLE	E CLASS(ES	5)		FUEL CATEGORY			FUEL TYPE		
201	6 (	SFMXT02	.02E3		LDT2				DEDICATED SINGLE FUEL VEHICLE			GASOLINE		
USEFUL LIFE (miles) VEHICLE EMISSIO						ON C	ATE	GORY	11	ITERIM / INT	ERM	EDIA	TE IN-USE STD	
EX	H/ORV	R	EVAP		F	TP		SF	TP		FTP	SFTP		
1	20000		15000	,	LEV2	ULEV	I	EV 2 STAN	SFTP DARD		*			*
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS								OBD S	TAT	US	EN	GINE	DISPLACEMENT (L)	
1		TWC, H	02S, W	R-H02S,	, CAC, TO	C, DFI			FULL		*			
*				*				Р	ARTIAL	ALL MODELS		2.0		
*				*					TIAL WITH		*			
			E	VAPOR	ATIVE & R	EFUELING	(EVA	P/OR	VR) FAMILY	/ IN	ORMATION			
EV	AP / OF	RVR FAM	MILY	EVAP	ORATIVE	STD CATEG	ORY	RY EVAP EMISSION STD VEHICLE CLASS			SPECIAL FEATURES			
	GFMXR	0125NB	7		LE	V 2	2 LDT2				*			
	-				EI	MISSION CR	EDI	r info	ORMATION					
		ALLOW	ANCE F	OR TES	T GROUP				CREDIT FO		NMOG CR		FOR	OPTIONAL EXH. STD FOR WORK
BAS	BELINE	PZEV	A.	PZEV		TZEV	NC	JN-PZ	EV ZERO-E	VAF		R		TRUCKS
	*			*		*			N		1	ī		N
					NMOG /	AND FLEET	AVE	RAG	E INFORMA	TIOI	N			
NMOG RAF CH4 RAF FTP NMC			P NMOC RAT		HCHO/NMHC RA		RATIO PC+LDT		G+NOX FLEET STD +LDT (0-3750 LVW) (g/mi)		NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)			
	*	*		1.0	4	1			0.093			0.110		

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 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.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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## **ATTACHMENT**

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

<b>EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS</b>	FTP	HWFET	50°F	20°F)	1
The state of the s		,	, ,		į.

	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	1000 miles, F. degrees Famermen, FFF. lederal test procedure, SFFF. supplemental FFF

5.54											
		NMOG (g/mi)		CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		P) (g/i	
	1	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	GASOLINE - TIER 2 UNLEADED	0.022	0.040	1.1	1.7	0.02	0.05	*	8		*
FTP@UL	GASOLINE - TIER 2 UNLEADED	0.023	0.055	1.3	2.1	0.03	0.07	*	11	*	0.01
50°F @4K	*	*	*	*	*	*	*	*	*		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

		NOx	(g/mi)	co	(g/mi)
	FUEL TYPE	CERT	STD	CERT	STD
HWFET @ 50K	GASOLINE - TIER 2 UNLEADED	0.01	0.07		
HWFET @ UL	GASOLINE - TIER 2 UNLEADED	0.02	0.09		
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE	- attu-		2.4	12.5

## SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

L +					SC03	3	COMPOSITE			
1	FUEL TYPE		NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMHC+NOx (g/mi)	CO (g/mi)	NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)
	GASOLINE	CERT	0.07	1.8	_= .	0.04	1.8		· · · · · · · · · · · · · · · · · · ·	8-14-5
@ 4K	- TIER 2 UNLEADED	STD	0.25	10.5		0.27	3.5			7 - 18
		CERT	*	*	*	*	*	*	*	*
@ UL	*	STD	*	*	*	*	*	*	*	*
		BIN	and the same				· '	*		

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

EVAPORATIVE FAMILY			WHOLE						
	FUEL TYPE	3DHS (g/test) @ UL			2DI	HS (g/test) @	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
GFMCR0125NBV	GASOLINE - TIER 2 UNLEADED	0.31	0.65	*	0.26	0.85	*	0.002	0.05

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ORVR / FUI	ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS												
				FUEL ONLY EVAP & CANISTER BLEED									
EVAPORATIVE FAMILY	ORVR (g/gailon) @ UL			FUEL TYPE	1	IG TEST ) @ UL		IG TEST ) @ UL	BLEED CANISTER TEST (g/test) @ 4K				
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD			
GFMXR0125NBV	GASOLINE - TIER 2 UNLEADED	0.01	0.20	*	*	*	*	*	*	*			

\*: 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; 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 sparkignited 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; 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%" qasoline) 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

#### 2016 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL VEH CLASS ENGINE (L) TRANS TYPE EVAPORATIVE FAMILY		EXH ECS	OBD	PZEV TYPE			
FORD	ESCAPE AWD	LDT2	2.0	SA6	GFMXR0125NBV	1	P	*
FORD	ESCAPE FWD	LDT2	2.0	SA6	GFMXR0125NBV	1	P	*
LINCOLN	MKC AWD	LDT2	2.0	SA6	GFMXR0125NBV	1	P	*
LINCOLN	MKC FWD	LDT2	2.0	SA6	GFMXR0125NBV	1	P	*