# California Environmental Protection Agency Air Resources Board

FORD MOTOR COMPANY

Executive Order: A-010-1900

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	UP II	NFOR	MATION						
MOD		TEST G	ROUP		VEHICLE CLASS(ES)				FUEL C	ATI	EGORY		FU	EL TYPE	
201	16	GFMXT02	2.32ED			LDT2		DEDICATED SINGLE FUEL VEHICLE				GASOLINE			
	USEF	UL LIFE	(miles)		VEHI	CLE EMISS	ION (	ATE	GORY	l'	NTERIM / IN	TEF	RMEDIA	TE IN-USE STD	
EX	(H/ORV	'R	EVAP		F	TP		SF	-TP		FTP			SFTP	
	L20000		150000	,	LEV2	ULEV	I		2 SFTP		*			*	
SF	PECIAL	FEATUR		HAUST STEMS	EMISSIO	N CONTRO	L		OBD S	TAT	US		ENGINE	DISPLACEMENT (L)	
1	7	WC(2),	HO2S,	WR-H02	S, CAC,	TC, DFI			FULL	*		$\prod$			
*				*				F	PARTIAL ALL MODELS			2.3			
*				*				PAF	RTIAL WITH FINES	ITH *					
			E	VAPORA	ATIVE & F	REFUELING	(EVA	AP/OF	RVR) FAMILY	/ IN	FORMATION	VI			
EV	/AP / O	RVR FAI	<b>VILY</b>	EVAPO	DRATIVE	STD CATE	SORY	DRY EVAP EMISSION STD VEHICLE CLASS				SPECIAL FEATURES			
	GFMXI	R0125NB	V		LE	V 2	IDT2				*				
					E	MISSION C	REDI	T INF	ORMATION						
		ALLOW	ANCE F	OR TES	T GROUP	)		NMOG CREDIT FOR NMOG CREDIT				OPTIONAL EXH.			
BA	SELINE	PZEV	Αī	PZEV		TZEV	NC	DN-P2	ZEV ZERO-E	VA		DM 1		TRUCKS	
	* * *								N			N		N	
					NMOG	AND FLEET	AVE	RAG	E INFORMA	TIO	V				
NMO	NMOG RAF CH4 RAF FTP NMOG/NMHC HCHO/NMH				HC RATIO		NMOG+NOX FI PC+LDT (0-37 (g/mi)		(0-3750 LVW)		NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)				
	*	*		1.04	4	1	ł			0.0	93	T		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.

Executed at El Monte, California on this 1374 day of May 2015.

nnette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

# **⊘** Air Resources Board

# **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**

			OG mi)	CO (g/ml)		NOx (g/mi)		HCHO (mg/ml)			M ml)
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	GASOLINE - TIER 2 UNLEADED	0.037	0.040	0.5	1.7	0.02	0.05	*	8	*	*
FTP@UL	GASOLINE - TIER 2 UNLEADED	0.050	0.055	0.6	2.1	0.04	0.07	*	11	*	0.01
50°F @4K	GASOLINE - TIER 2 UNLEADED	0.061	0.080	0.7	1.7	0.01	0.05	*	16		

		NOx	(g/mi)	CO (	y/mi)	
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	GASOLINE - TIER 2 UNLEADED	0.02	0.07	8184 10		
HWFET @ UL	GASOLINE - TIER 2 UNLEADED	0.03	0.09		and and and	
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			2.2	12.5	

## SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

				US06		SC03	3	COM	POSITE	
	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	0.01	0.8		0.03	0.2			
@ 4K	- TIER 2	STD	0.25	10.5		0.27	3.5			
		CERT	*	*	*	*	*	*	*	*
@ UL	*	STD	*	*	*	*	*	*	*	*
		BIN					-	*		

#### 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
GFMXR0125NBV	GASOLINE - TIER 2 UNLEADED	0.31	0.65	*	0.26	0.85	*	0.002	0.05

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ORVR / FUI	EL ONLY / CA	NISTER	BLEED	<b>EVAPORATIVE</b>	EMISSION	STANDA	RDS AND	CERTIFICA	ATION LEV	ELS		
				FUEL ONLY EVAP & CANISTER BLEED								
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL TYPE	3DHS R (g/test	IG TEST ) @ UL	ı	IG TEST ) @ UL	BLEED CANISTER TEST (g/test) @ 4K			
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
GFMXR0125NBV	GASOLINE - TIER 2 UNLEADED	0.008	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%"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

# 2016 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
LINCOLN	MRC AWD	LDT2	2.3	SA6	GFMXR0125NBV	1	P	*