California Environmental Protection Agency

⊘ Air Resources Board

TOYOTA MOTOR CORPORATION

Executive Order: A-014-0903

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.

	. 14						TEST GRO	UP II	NFOR	RMATION						
MODE	TEST GROUP I VER				VEHICLE CLASS(ES)			FUEL CATEGORY				FUEL TYPE				
201	6	GTYXV02	2.0KEA				PC			DEDICATED VE	SIN		GASOLINE			
	USEF	UL LIFE	(miles)		\ \	/EHIC	CLE EMISS	ION	CATE	GORY	IN	ITERIM / INT	TERME	DIA	TE IN-USE STD	
EXI	H/ORV	R	EVAP			F1	ГР		SF	TP		FTP	T		SFTP	
1	50000		15000	0	LE.	v3 u	LEV125	LEV	3 C	OMPOSITE		*			NMOG+NOX	
SPE	ECIAL	FEATUR		(HAUS		OIS	N CONTRO	L		OBD S	TAT	US	ENG	INE	DISPLACEMENT (L)	
1	TWC	(2), WF	HO2S,	HO2S	TC,	CAC,	DFI, SF	ı		FULL	AL	L MODELS				
*				*						PARTIAL		2.0			2.0	
*	*								PAF	RTIAL WITH		*				
,	EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION															
EVA	AP / OF	RVR FAI	VILY	EVA	PORAT	IVE S	STD CATE	GORY	RY EVAP EMISSION STD VEHICLE CLASS			SPECIAL FEATURES				
	GTYXR	0165P1	2			LEV 2				PC			HCT			
			· · · · · · · · · · · · · · · · · · ·			ΕN	ISSION CI	REDI	TINE	ORMATION						
		ALLOV	ANCE F	OR TE	ST GR	OUP			NMOG CREDIT FOR NMOG CREDIT FOR STD FO			OPTIONAL EXH. STD FOR WORK				
BAS	ELINE	PZEV	A ⁻	r pzev	'		TZEV	N					DOR		TRUCKS	
	*			*			*		N		1	N		N		
					NM	IOG A	ND FLEET	AVE	RAG	E INFORMA	TION	ı				
NMO	G RAF	CH4 R	AF FT	P NMC		G/NMHC O HCHO/NMHC		MHC RATIO		NMOG+NOX FLEET STD PC+LDT (0-3750 LVW) (g/mi)		NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)				
,	*	*		1.	10		0.	013		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 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

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

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

		NMOG+NOx (g/mi)		CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		PM (g/mi)	
PALE 2		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	* .	*	*	*	*	*	*
FTP@UL	GASOLINE- LEV3 E10	0.0623	0.125	0.56	2.1	*	*	*	4	*	0.01
50°F @4K	GASOLINE- LEV3 E10	0.0808	0.250	0.76	2.1	*	*	*	16		

	FUEL TYPE	NMOG+N	lOx (g/mi)	CO (g CERT	(g/mi)	
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*		- a Lagra	
HWFET @ UL	GASOLINE-LEV3 E10	0.0339	0.125			
20°F @ 50K	GASOLINE-COLD CO HIGH OCTANE		**- p : 3: 4! p : 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5	1.97	10.0	

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)	
- 414		CERT	*	*		*	*		Sind State		
@ 4K	*	*	STD	*	*		*	*			ar e i mis Accordinate
		CERT	*	*	*	*	*	0.0594	0.76	*	
@ UL	GASOLINE- LEV3 E10	STD	*	*	*	*	*	0.110	4.2	*	
	TEA2 FIO	BIN						0.080			

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE						
EVAPORATIVE FAMILY	FUEL TYPE	3DHS	3DHS (g/test) @ UL			HS (g/test) @	D UL	RL (g/mi) @ UL	
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
GTYXR0165P12	GASOLINE - TIER 2 UNLEADED	0.257	0.50	*	*	0.65	*	0.005	0.05

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

				FUEL ONLY EVAP & CANISTER BLEED								
EVAPORATIVE FAMILY	ORVR (g/g	gallon) @) UL	FUEL TYPE		IG TEST	2DHS RIG TEST (g/test) @ UL		BLEED CANISTER TEST (g/test) @ 4K			
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
GTYXR0165P12	GASOLINE - TIER 2 UNLEADED	0.014	0.20	*	*	*	· *	*	*	*		

automated manual-selectable transmission: OT: other transmission

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not applicable; #: pounds; UL: useful life; PC: passenger car; LDT: light-duty truck; LDT1: LDT<6000#GVWR,0-3750#LVW; LDT2: DT<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:

2016 MODEL YEAR: VEHICLE MODELS INFORMATION **ENGINE EVAPORATIVE** EXH **VEH CLASS** TRANS TYPE MAKE MODEL OBD PZEV TYPE **FAMILY ECS** (L) GTYXR0165P12 PC 2.0 1 * LEXUS GS 200T SA8 F GS 200T F LEXUS PC 2.0 SA8 GTYXR0165P12 1 F SPORT IS 200T LEXUS PC 2.0 SA8 GTYXR0165P12 1 F * T.E.XIIS RC 200T PC 2.0 SAR GTYXR0165P12 1 ਜ *

continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: