

# TOYOTA MOTOR CORPORATION

Executive Order: A-014-1010

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.

				<b>TEST GROUP</b>	INFORM	ATION			
MODE	_	TEST GROUP	VEHIC	LE CLASS(ES)		FUEL C	ATEGORY	FUEL TYPE	
2019	K	TYXT04.6B6X		LDT4	DI		SINGLE FUEL HICLE	GASOLINE	
	USEFU	L LIFE (miles)	VEH	HICLE EMISSION	CATEGO	DRY	INTERIM / INT	ERMEDIATE IN-USE STD	
EXH	I/ORVR	EVAP		FTP	SFT	P	FTP	SFTP	
12	20000	150000	LEV	2 ULEV	LEV 2 S		*	*	
SPE	CIAL F	EATURES & EXI	HAUST EMISSIC	ON CONTROL		OBD S	TATUS	ENGINE DISPLACEMENT	
1	SFI,	AIR, EGR, EG	RC, 2WR-HO2S 2HO2S	S, 2TWC(2),	F	ULL	*		
*			*		PA	RTIAL	ALL MODELS	4.6	
*	*					PARTIAL WITH * FINES			
		EV	APORATIVE &	REFUELING (EV	AP/ORV	R) FAMILY	INFORMATION		
EVA	P / OR\	R FAMILY	EVAPORATIVE	STD CATEGOR	Y E	VAP EMIS	SSION STD CLASS	SPECIAL FEATURES	
K	TYXRO	190P32	L	EV 2		LD	T4	HCT	
				EMISSION CRED	IT INFOR	MATION			
	EDIT FO	OX FLEET AVE. OR EXTENDED RRANTY		EDIT FOR NON- ZERO-EVAP	PZEV	NMOG CF	REDIT FOR DOR	OPTIONAL EXH. STD FOR WORK TRUCKS	
		N		N			И	N	
			NMOG	AND FLEET AV	ERAGE I	NFORMAT	TION		
MOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO	HCHO/NMHC RATIO	NMOG+NOX FL PC+LDT (0-37 (g/mi)	50 LVW)	LDT (	NOX FLEET STE 3751 LVW-8500 R) + MDPV (g/mi)	NMOG+NOX FLEET STD . MDV (10,001-14,000 GVWR) (g/mi)	
*	*	1.04	0.018	0.07	2		0.083	*	

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 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 day of July 2018.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division



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## **ATTACHMENT**

FXHAUST AND	FVAPORATIVE F	MISSION STANDARDS	AND	CERTIFICATION LEVELS
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EVITATIOT ENICOION	OTANDADDO	AND OFFICIOATION LE	VELC	/ETD LUAVE	ET FASE	200EY
EXHAUS I EMISSION	STANDARDS	AND CERTIFICATION LE	VELS	(FIP, HVVF	E1. 50 F	, ZU'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** 

	NMOG (g/mi)		CO (g/mi)		1	NOx (g/mi)		HCHO (mg/mi)		M mi)	
	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	
GASOLINE - CA PHASE 2	0.0177	0.040	0.17	1.7	0.024	0.05	*	8	*	*	
GASOLINE - CA PHASE 2	0.0199	0.055	0.18	2.1	0.027	0.07	*	11	*	0.01	
*	*	*	*	*	*	· *	*	*			
	CA PHASE 2 GASOLINE -	GASOLINE - 0.0177 GASOLINE - 0.0199	(g/mi)  CERT STD  GASOLINE - 0.0177 0.040  GASOLINE - 0.0199 0.055	(g/mi) (g	(g/mi) (g/mi)   (g/mi)	(g/mi)         (g/mi)         (g/mi)         (g/mi)           CERT         STD         CERT           GASOLINE - CA PHASE 2         0.0177         0.040         0.17         1.7         0.024           GASOLINE - CA PHASE 2         0.0199         0.055         0.18         2.1         0.027	CERT   STD   CERT   STD   CERT   STD	(g/mi)     (g/mi)     (g/mi)     (mg)       CERT     STD     CERT     STD     CERT       GASOLINE - CA PHASE 2     0.0177     0.040     0.17     1.7     0.024     0.05     *       GASOLINE - CA PHASE 2     0.0199     0.055     0.18     2.1     0.027     0.07     *	(g/mi)         (g/mi)         (mg/mi)           CERT         STD         CERT         STD         CERT         STD           GASOLINE - CA PHASE 2         0.0177         0.040         0.17         1.7         0.024         0.05         *         8           GASOLINE - CA PHASE 2         0.0199         0.055         0.18         2.1         0.027         0.07         *         11	(g/mi)         (g/mi)         (mg/mi)         (g/mi)           CERT         STD         CERT         STD         CERT         STD         CERT         STD         CERT         STD         CERT         CERT         CERT         CERT         STD         CERT         CERT         STD         CERT         CERT         STD         CERT	

+	FUEL TYPE	NO'x	(g/mi)	CO (g/mi)	
	FUEL TYPE	CERT	STD	CERT	STD
HWFET @ 50K	GASOLINE - CA PHASE 2	0.009	0.07		
HWFET @ UL	GASOLINE - CA PHASE 2	0.012	0.09		
20°F @ 50K	GASOLINE-COLD CO HIGH OCTANE	1 12 12		0.94	12.5

#### SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

			US06			SC03	3	COMPOSITE		
	FUEL TYPE		NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMHC+NOx (g/mi)	CO (g/mi)	NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)
@ 4K	GASOLINE - CA PHASE 2	CERT	0.044	3.91		0.062	0.11			
		STD	0.60	11.8		0.44	4.0			
		CERT	*	*	*	*	*	0.0577	*	*
@ UL	GASOLINE - CA PHASE 2	STD	*	*	*	*	*	0.090	*	*.
		BIN						0.100		

### WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE							
EVAPORATIVE FAMILY	FUEL TYPE	3DH	S (g/test) (	@ UL	2DI	HS (g/test) @	UL	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	
KTYXR0190P32	GASOLINE TIER 2 UNLEADED	0.362	0.90	*	0.357	1.15	*	0.004	0.05	

## 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	
KTYXR0190P32	GASOLINE - TIER 2 UNLEADED	0.033	0.20	*	•	*	*		*	*	



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EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)								
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD					
*	*	*	*					

: 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; 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; ŽEV: 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

## 2019 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
LEXUS	GX 460	LDT4	4.6	SA6	KTYXR0190P32	1	P