California Environmental Protection Agency

OP Air Resources Board

TOYOTA MOTOR CORPORATION

Executive Order: A-014-0889

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 GR	OUP	INF	ORMATION						
MODEL	_ ı	TEST G	ROUP		VEHICLE CLASS(ES)				FUEL	FUEL CATEGORY				FU	EL TYPE
2016	(STYXV02	2.5BED			PC		DEDICATED SINGLE FUEL VEHICLE			GASOLINE				
l	JSEFI	JL LIFE	(miles)		VE	EHICLE EMIS	SION	ICA	TEGORY	T	IN	ITERIM / INT	ERME	DIA	E IN-USE STD
EXH	ORVI	₹	EVAP			FTP			SFTP			FTP			SFTP
120	0000		150000		LE	EV2 ULEV			7 2 SFTP FANDARD			*			*
SPE	CIAL	FEATUR		HAUS		SION CONTRO	DL		OBD	s s	TAT	JS	ENG	INE	DISPLACEMENT (L)
1		TWC	(2), WI	R-H025	, но25	S, SFI	r	1 [.	FULL		AL	L MODELS			
*				*				11	PARTIAL			*	2.5		2.5
*				*			F	PARTIAL WIT	гн		*				
			E	VAPOF	RATIVE	& REFUELING	G (E\	/AP	ORVR) FAM	IILY	/ INF	ORMATION	-		
EVAI	P / OF	RVR FA	/ILY	EVA	PORATI	VE STD CATE	GOF	RY EVAP EMISSION STD VEHICLE CLASS			SPE	CIAI	L FEATURES		
G	TYXR	0115A1	2			LEV 2		. PC					HCT		
G	TYXR	0120A4	2			LEV 2		PC					HCT		
						EMISSION (RED	II TIC	NFORMATIO	N					
		ALLOW	ANCE F	OR TE	ST GRO	UP			IOG CREDIT			NMOG CR			OPTIONAL EXH
BASE	LINE	PZEV	A	PZEV		TZEV	ľ	NON-PZEV ZERO-EVAP D		DC	OR TRUCKS				
	* * *							N			N	N N			
					NMC	OG AND FLEE	TΑ	/ER/	AGE INFORM	MA.	TION	l			
NMOG	OG RAF CH4 RAF FTP NMOG/NMHC RATIO HCHO/NMHC			RA	RATIO NMOG+NOX FLEET STD PC+LDT (0-3750 LVW) (g/mi)		750 LVW)	NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)							
*		*		1.	04	0	.018	3			0.0	93			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 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)				NOx (g/mi)		HCHO (mg/mi)		PM (g/mi)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	GASOLINE - CA PHASE 2	0.0170	0.040	0.17	1.7	0.018	0.05	*	8	*	*
FTP@UL	GASOLINE - CA PHASE 2	0.0212	0.055	0.23	2.1	0.020	0.07	*	11	*	0.01
50°F @4K	*	*	*	*	*	*	*	*	*		

	FUEL TYPE	NOx	(g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	GASOLINE - CA PHASE 2	0.005	0.07		The state of the s	
HWFET @ UL	GASOLINE - CA PHASE 2	0.007	0.09			
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			1.03	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

4.4		e die		US06		SC03	3	COMPOSITE			
	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)	
0.414	GASOLINE -	CERT	0.022	0.28		0.025	0.06		A \$ 4.5		
@ 4K	CA PHASE 2	STD	0.14	8.0	Address of the same	0.20	2.7				
		CERT	*	*	*	*	*	*	*	*	
@ UL	*	STD	*	*	*	*	*	*	*	*	
	5	BIN	44444					*	4.14.50. JH		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE						
EVAPORATIVE FAMILY	FUEL TYPE	3DHS	S (g/test) (@ UL	2DI	HS (g/test) @	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
GTYXR0115A12	GASOLINE - TIER 2 UNLEADED	0.158	0.50	*	*	0.65	*	0.005	0.05
GTYXR0120A42	GASOLINE-CA PHASE 2	0.109	0.35	*	*	0.35	*	0.004	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/gallon) @ UL			FUEL TYPE		IG TEST) @ UL		IG TEST) @ UL	BLEED CANISTER TEST (g/test) @ 4K					
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD				
GTYXR0115A12	GASOLINE - TIER 2 UNLEADED	0.040	0.20	*	*	*	*	*	*	*				
GTYXR0120A42	GASOLINE - TIER 2 UNLEADED	0.004	0.20	GASOLINE - CA PHASE 2	0.01	0.0	*	0.0	*	*				

t: 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
TOYOTA	CAMRY	PC	2.5	SA6	GTYXR0115A12	1	F	*
TOYOTA	CAMRY	PC	2.5	SA6	GTYXR0120A42	1	F	*