

 CALIFORNIA AIR RESOURCES BOARD	TOYOTA MOTOR CORPORATION	Executive Order: A-014-1089-1 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 1 of 4
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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-19-095;

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.

TEST GROUP INFORMATION									
MODEL YEAR		TEST GROUP		VEHICLE CLASS(ES)		FUEL CATEGORY		FUEL TYPE	
2021		MTYXT02.5P34		LDT2, LDT3		HYBRID ELECTRIC VEHICLE		GASOLINE	
USEFUL LIFE (miles)			VEHICLE EMISSION CATEGORY				INTERIM / INTERMEDIATE IN-USE STD		
EXH/ORVR		EVAP	FTP		SFTP		FTP		SFTP
150000		150000	LEV3 SULEV30		LEV 3 COMPOSITE		PM		PM
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS					OBD STATUS			ENGINE DISPLACEMENT (L)	
1	DFI, SFI, EGR, EGRC, WR-HO2S (2), TWC (2)				FULL		ALL MODELS		2.5
*	*				PARTIAL		*		
*	*				PARTIAL WITH FINES		*		
EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION									
EVAP / ORVR FAMILY		EVAPORATIVE STD CATEGORY			EVAP EMISSION STD VEHICLE CLASS		SPECIAL FEATURES		
MTYXR0165J82		LEV 3 OPTION2 WITH FEL			LDT2		HCT		
MTYXR0195J82		LEV 3 OPTION2 WITH FEL			LDT3		HCT		
EMISSION CREDIT INFORMATION									
NMOG+NOX FLEET AVE. CREDIT FOR EXTENDED WARRANTY		NMOG CREDIT FOR NON-PZEV ZERO-EVAP			NMOG CREDIT FOR DOR		OPTIONAL EXH. STD FOR WORK TRUCKS		
N		N			N		N		
NMOG AND FLEET AVERAGE INFORMATION									
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO	HCHO/NMHC RATIO	NMOG+NOX FLEET STD PC+LDT (0-3750 LVW) (g/mi)		NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)		NMOG+NOX FLEET STD MDV (10,001-14,000 GVWR) (g/mi)	
*	*	1.10	0.004	0.058		0.065		*	

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. (As applicable, heavy-duty vehicles (HDV) over 14,000 pounds in GVWR listed in this Executive Order are certified to the requirements in 13 CCR Section 1961.2 applicable to MDV pursuant to 13 CCR Section 1956.8(c)(3) or 13 CCR Section 1956.8(h)(5), as applicable.)

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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.

This Executive Order hereby cancels and supersedes Executive Order A-014-1089 dated August 26, 2020.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed on this 22nd day of October 2020.



Allen Lyons, Chief
 Emissions Certification and Compliance Division

ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS (FTP, HWFET, 50°F, 20°F)

	FUEL TYPE	CH ₄ : methane; NMOG: non-CH ₄ organic gas; HC: hydrocarbon; NMHC: non-CH ₄ HC; CO: carbon monoxide; NO _x : 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+NO _x (g/mi)		CO (g/mi)		NO _x (g/mi)		HCHO (mg/mi)		PM (g/mi)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	*	*	*	*	*	*
FTP@UL	GASOLINE-TIER3 E10	0.0163	0.030	0.07	1.0	*	*	*	4	0.0007	0.003
50°F @4K	*	*	*	*	*	*	*	*	*		

	FUEL TYPE	NMOG+NO _x (g/mi)		CO (g/mi)	
		CERT	STD	CERT	STD
HWFET @ 50K	*	*	*		
HWFET @ UL	GASOLINE-TIER3 E10	0.0063	0.030		
20°F @ 50K	COLD CO E10 REGULAR GASOLINE (TIER3)			0.99	12.5

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

	FUEL TYPE		US06			SC03		COMPOSITE		
			NMOG+NO _x (g/mi)	CO (g/mi)	PM (mg/mi)	NMOG+NO _x (g/mi)	CO (g/mi)	NMOG+NO _x (g/mi)	CO (g/mi)	PM (mg/mi)
@ 4K	*	CERT	*	*		*	*			
		STD	*	*		*	*			
@ UL	GASOLINE-TIER3 E10	CERT	*	*	0.4	*	*	0.0178	0.13	*
		STD	*	*	6	*	*	0.077	4.2	*
		BIN						0.060		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	FUEL TYPE	WHOLE VEHICLE EVAPORATIVE TESTING						RL (g/mi) @ UL	
		3DHS (g/test) @ UL			2DHS (g/test) @ UL				
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
MTYXR0165J82	GASOLINE-TIER3 E10	0.1843	0.400	0.400	0.1589	0.400	0.400	0.004	0.05
MTYXR0195J82	GASOLINE-TIER3 E10	0.1969	0.500	0.400	0.1663	0.500	0.400	0.007	0.05

ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS										
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL ONLY EVAP & CANISTER BLEED						
				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
MTYXR0165J82	GASOLINE-TIER3 E10	0.003	0.20	*	*	*	*	*	*	*
MTYXR0195J82	GASOLINE-TIER3 E10	0.006	0.20	*	*	*	*	*	*	*

EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)			
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD
MTYXR0165J82	MTYXR0165J82-001	*	0.02
MTYXR0195J82	MTYXR0195J82-001	*	0.02

*: 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: medium-duty 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; ZEV: zero-emission vehicle; TZE: 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; HP/LP EGR: High/Low Pressure EGR; 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; a hyphen (-) between after treatment ECS indicates multiple functionalities of the after treatment device (ex. DPF-SCRC: SCR coated DPF); 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; NMOG + NOx Fleet Ave. Credit for Extended Warranty: N = no credits, Y = credits, S = credits for some/select models

2021 MODEL YEAR: VEHICLE MODELS INFORMATION							
MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
TOYOTA	HIGHLANDER HYBRID	LDT2	2.5	SCV6	MTYXR0165J82	1	*
TOYOTA	HIGHLANDER HYBRID AWD	LDT2	2.5	SCV6	MTYXR0165J82	1	*
TOYOTA	HIGHLANDER HYBRID AWD LTD/PLAT	LDT3	2.5	SCV6	MTYXR0165J82	1	*
TOYOTA	SIENNA	LDT3	2.5	SCV6	MTYXR0195J82	1	*
TOYOTA	SIENNA AWD	LDT3	2.5	SCV6	MTYXR0195J82	1	*