TOYOTA

Application For Certification - Part 1
2027 Model Year

Durability Group : VTYXGPGNN62G

Evap/refueling Families : VTYXR0215P62

Test Group : VTYXT03.4B5A

Durability Group Description : Four Stroke, Otto Cycle, Gasoline Fueled, Ported FI,
Catalyst code: 3-IIr3+3-IIr3+3-IIh13+3-IIh13

Test Group Description : 3.4 Liter V6 LDT4

Applicable Standards : Federal State: Interim Tier4 - Bin 70 - LDT4
California: See Federal

Carlines Covered : TUNDRA 2WD/4WD

Engine Series : V35A-FTS

Vehicles Tested :

Vehicle I.D.	Config.	Test	Test Number
22-VK1A	00	FTP	NTYX91004874
22-VK1A	00	HWY	NTYX91004876
22-VK1A	00	SFTP	NTYX91004875, NTYX10071682
22-VK1A	00	C.CO, C.HC	NTYX10071676
22-VK3A	01	EVAP	NTYX10071169
22-VK3A	01	Running Loss	NTYX10071172
22-VK3A	01	Refueling	NTYX10071224
22-VK3A	01	Canister Bleed	NTYX10071735

EPA Response Requested By : September 11, 2026

For Questions, Contact : Lisa Florida 734-695-2697

Note :

TOYOTA

Application For Certification - Part 1
2027 Model Year

Durability Group : VTYXGPGNN62G

Evap/refueling Families : VTYXR0165P62

Test Group : VTYXT03.4B5A

Durability Group Description : Four Stroke, Otto Cycle, Gasoline Fueled, Ported FI,
Catalyst code: 3-IIr3+3-IIr3+3-IIh13+3-IIh13

Test Group Description : 3.4 Liter V6 LDT4

Applicable Standards : Federal State: Interim Tier4 - Bin 70 - LDT4
California: See Federal

Carlines Covered : LX 600

Engine Series : V35A-FTS

Vehicles Tested :

Vehicle I.D.	Config.	Test	Test Number
22-VK1A	00	FTP	NTYX91004874
22-VK1A	00	HWY	NTYX91004876
22-VK1A	00	SFTP	NTYX91004875, NTYX10071682
22-VK1A	00	C.CO, C.HC	NTYX10071676
22-VA1A	00	EVAP	NTYX10071381
22-VA1A	00	Running Loss	NTYX10071382
22-VA1A	00	Refueling	NTYX10071384
22-VA1A	00	Canister Bleed	NTYX10071732

EPA Response Requested By : September 11, 2026

For Questions, Contact : Lisa Florida 734-695-2697

Note :

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1. Correspondence and Communications

Please refer to the FOI common file.

2. Durability Group Description

Durability Group Name : VTYXGPGNN62G

Please refer to the common file for details.

3. Evaporative/Refueling Family Description

Evaporative/Refueling Family Name : VTYXR0215P62 (TUNDRA)
VTYXR0165P62 (LX 600)

Please refer to the FOI common file for details.

4. Durability Procedure Description

4.1 Exhaust Durability Test Procedure

4.2 Durability Showing

4.3 Evap/refueling Durability Test Procedure

Please refer to the CBI common file.

4.4 Exhaust Emission Deterioration Factors

4.5 Evap/refueling Emission Deterioration Factors

4.6 Equivalency Factor

Please refer to Certification Summary Information Report in Section 7 or FOI common file.

TRD Performance Package

Durability: Catalyst thermal degradation does not increase with the performance package and there is no difference in catalyst temperature model or control between the original software and performance package software. There is no negative impact to catalyst durability with the performance package.

Exhaust Emissions: Toyota conducted emission evaluations with the TRD Performance Package and confirmed that test results have negligible to slight improvement compared to EDV configuration. Considering changepoints and test results from completed tests, Toyota used Good Engineering Judgement (GEJ) to judge there is no need for certification testing.

5. Test Group Description

5.1	Test group name	:	VTYXT03.4B5A
5.2	Engine displacements covered	:	3,445 cm^3 (210.2 CID)
5.3	Arrangement and number of cylinders	:	V6
5.4	Vehicle class (es) covered	:	LDT4
5.5	Federal emission standards class	:	Interim Tier4 - Bin70 - LDT4

5.6 Applicable emission standards

Please refer to Certification Summary Information Report in Section 7.

6. Test Vehicle Description

DDV: Utilizing good engineering judgement that considered vehicle curb weight, road load coefficients, catalyst heat stress, we judged 22MY TUNDRA is the representative DDV in this Durability Group. TUNDRA was chosen as representative DDV because it has the same engine (V35A-FTS), same ECS, and the exact same catalyst specification.

EDV: Utilizing good engineering judgement that considered vehicle curb weight, road load coefficients, catalyst heat stress, we judged 22MY TUNDRA is the representative EDV in this Test Group. TUNDRA was chosen as representative EDV because it has the same engine (V35A-FTS), same ECS, and the exact same catalyst specification.

For complete vehicle description, refer to Certification Summary Information Report Sheet, enclosed in Section 7 of this application.

Certification Summary Information Report

Manufacturer	Toyota Motor Corporation	**Manufacturer Code**	TYX
Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	07/08/2026 05:03:39 AM
Model Year	2027		

Test Group Information

CSI Type	New	**Running Change Reference Number**	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Spark Ignition direct & ported injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Rechargeable Energy Storage System Indicator**	--
Multiple Fuel Combustion	--	**Off-board Charge Capable Indicator**	--
Fuel Cell Indicator	--	**EPA Vehicle Class**	LDT4
Federal Clean Fuel Vehicle	No	**Federal Clean Fuel Vehicle Standard**	--
Federal Clean Fuel Vehicle ILEV	No	**California Partial Zero Emissions Vehicle Indicator**	No
Durability Group Name	VTYXGPGNN62G	**Durability Group Equivalency Factor**	1.1
Reduced Fee Test Group	No	**Certification Region Code(s)**	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	--	**CAP2000 Conditional Certificate?**	N/A
Independent Commercial Importer?	--	**Alternative Fuel Converter Certificate?**	--
SFTP Federal Composite Compliance Identifier	Tier 3	**SFTP Tier 2 Composite CO Option**	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	**OBD Demonstration Vehicle Test Group**	VTYXT03.4B5A
Test Group OBD Compliance Level	Full - no deficiencies	**Number of Test Group OBD Deficiencies**	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	07/07/2026 02:04:38 AM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	**Fuel Tank Material Description**	EVOH
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	No	**Air Intake System Vapor Storage Device Description**	--
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	--
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	215	**Number of Primary Canisters**	1
Number of Bleed Canisters	1	**Bleed Canister Total Working Capacity (grams)**	4
Mfr Evaporative/Refueling Family Comments	--		

Leak Family Details

Leak Family Indicator	No		
Canister Bleed Test Indicator	Yes	**Applicability of Evaporative Canister Bleed Test**	50 State
Evaporative Canister Bleed Test Comments	--		
CARB Fuel Only (Rig) Test Indicator	No	**Applicability of CARB Fuel Only (Rig) Test**	--
CARB Fuel Only (Rig) Test Comments	--		

Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Toyota Motor Corporation	1 - TOYOTA	150 - TUNDRA 2WD	Federal	2-Wheel Drive, Rear	Semi-Automatic	10	Yes
Toyota Motor Corporation	1 - TOYOTA	155 - TUNDRA 4WD	Federal	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes
Toyota Motor Corporation	1 - TOYOTA	150 - TUNDRA 2WD	California + CAA Section 177 states	2-Wheel Drive, Rear	Semi-Automatic	10	Yes
Toyota Motor Corporation	1 - TOYOTA	155 - TUNDRA 4WD	California + CAA Section 177 states	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes

Engine Description

Hybrid Type	--	**Hybrid Description**	--
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	--
Engine Block Arrangement	V-shaped engine	**Mfr Engine Block Arrangement Description**	--
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	0W-20
Number of Cylinders/Rotors	6	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

After Treatment Device(s) (ATD)

ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
3	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
4	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith

Mfr After Treatment Device (ATD) Comments	--
Direct Ozone Reduction (DOR) Device	Not Equipped
Mfr Emission Control Device Comments	--

Engine Configuration Number 1

Engine Displacement (liters)	3.4	**Engine Rated Horsepower**	389
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**Charge Air Cooler Type**	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Intake and exhaust		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	APPLIED TO TUNDRA (3-drive mode)		

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Engine Configuration Number 2

Engine Displacement (liters)	3.4	**Engine Rated Horsepower**	358
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**Charge Air Cooler Type**	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Intake and exhaust		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	APPLIED TO TUNDRA (1-drive mode)		

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Engine Configuration Number 3

Engine Displacement (liters)	3.4	**Engine Rated Horsepower**	418
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**Charge Air Cooler Type**	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Intake and exhaust		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	APPLIED TO TUNDRA (3-drive mode) TRD PERFORMANCE PACKAGE		

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Engine Configuration Number 4

Engine Displacement (liters)	3.4	**Engine Rated Horsepower**	409
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**Charge Air Cooler Type**	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Intake and exhaust		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	APPLIED TO LX 600		

Official Test Numbers

Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Gasoline	NTYX91004874	NTYX91004875	NTYX10071682	NTYX10071676	NTYX91004876	70.0	228.2	999.9	286.1	--

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Gasoline	NTYX91004874	NTYX91004875	NTYX10071682

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Emission Data Vehicle Information

Vehicle ID / Configuration	22-VK1A / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	NTYXT03.4M5W	**Original Evaporative/Refueling Family**	NTYXR0180P92
Original Test Vehicle Model Year	2022		

Vehicle Model

Represented Test Vehicle Make	TOYOTA	**Represented Test Vehicle Model**	TUNDRA 4WD

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	7	**Odometer Correction Factor**	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	02	**Rated Horsepower**	389
Displacement (liters)	3.445		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Liquid	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5665	**Equivalent Test Weight (pounds)**	6000
GVWR (lbs)	7310	**N/V Ratio**	21.6
Axle Ratio	3.31		
Transmission Type	Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0215P62

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	46.278	0.52177	0.033046	29.381	0.0542	0.03455	20.7
Cold CO	50.906	0.57395	0.03635	27.687	-0.09588	0.038994	N/A
US06	46.278	0.52177	0.033046	29.381	0.0542	0.03455	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments Drive mode is SPORT. Testing with Stop and Start swith ON.

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX10071676**	**Test Procedure**	**11 - Cold CO**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	09/16/2021	**Fuel**	Gasoline
Fuel Batch ID	21T301	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000), LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Engineering & Manufacturing North America, Inc. 2		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4271	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	661.045516	--
FE BAG 1 (Bag 1 Fuel Economy)	12.6702382	12.6702382
CO2 BAG 2 (Bag 2 Carbon Dioxide)	534.2478361	--
FE BAG 2 (Bag 2 Fuel Economy)	15.8726223	15.8726223
CO2 BAG 3 (Bag 3 Carbon Dioxide)	456.8927473	--
FE BAG 3 (Bag 3 Fuel Economy)	18.5411806	18.5411806
CO (Carbon Monoxide)	0.8128887	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.51	--
DT-EER (Drive Trace Energy Economy Rating)	-0.14	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.65	--
MFR FE (Manufacturer Fuel Economy)	15.676244	15.676244
NOX (Nitrogen Oxide)	0.0129349	--
HC-NM (Non-methane Hydrocarbon)	0.1230704	--
HC-TOTAL (Total Hydrocarbon)	0.1474445	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	539.2999419	--

Manufacturer Test Comments CREE set to default value

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0215P62

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 4 Bin 70	CO	0.81	--	--	--	0.08	--	0.9	12.5	Pass
Fed	120,000 miles	Federal Tier 4 Bin 70	HC-NM	0.12	--	--	--	0.01	--	0.1	0.5	Pass
CA	50,000 miles	California LEV-IV ULEV70	CO	0.81	--	--	--	0.08	--	0.9	12.5	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX91004874**	**Test Procedure**	**21 - Federal fuel 2-day exhaust (w/can load)**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/14/2021	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000), LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4339	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	473.8370667	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	455.9607239	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	425.6127014	--
FE BAG 3 (Bag 3 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0060026	--
CO (Carbon Monoxide)	0.0925841	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.3021551	--
DT-EER (Drive Trace Energy Economy Rating)	0.1188869	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.0264587	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0151887	--
N2O (Nitrous Oxide)	0.0015389	--
HC-NM (Non-methane Hydrocarbon)	0.0085922	--
NMOG (Non-methane organic gases)	0.0094373	--
PM (Particulate Matter)	0.0015174	--
HC-TOTAL (Total Hydrocarbon)	0.0142536	--

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0215P62

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	451.329834	--

Manufacturer Test Comments None Unrounded Result for the following test results were modified by Verify: FE BAG 1, FE BAG 2, MFR FE, FE BAG 3

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 4 Bin 70	CO	0.09	--	--	--	0.25	--	0.3	1.7	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	CO-COMP	0.54	--	--	--	0.25	--	0.5	4.2	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	CREE	999	--	--	--	0.278	--	999	--	--
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0094	1	1.10	--	0.0161	--	0.026	999.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0246	1	1.10	--	--	--	0.051	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX-COMP	0.0447	1	1.03	--	0.0261	--	0.045	0.060	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0152	--	--	--	0.0100	--	0.025	999.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0015	--	--	--	0.0000	--	0.002	0.003	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.09	--	--	--	0.25	--	0.3	1.7	Pass
CA	150,000 miles	California LEV-IV ULEV70	METHANE	0.0060	--	--	--	0.0142	--	0.020	0.030	Pass
CA	150,000 miles	California LEV-IV ULEV70	N2O	0.0015	--	--	--	0.0024	--	0.004	0.010	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0094	1	1.10	--	0.0161	--	0.026	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0246	1	1.10	--	--	--	0.051	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.0152	--	--	--	0.0100	--	0.025	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	PM	0.0015	--	--	--	0.0000	--	0.002	0.003	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX91004876**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/14/2021	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000), LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4350	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0012026	--
CO (Carbon Monoxide)	0.0375776	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.313303	--
DT-EER (Drive Trace Energy Economy Rating)	-0.1761813	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.7699237	--
MFR FE (Manufacturer Fuel Economy)	26.1056709	--
NOX (Nitrogen Oxide)	0.0029815	--
N2O (Nitrous Oxide)	0.0000588	--
HC-NM (Non-methane Hydrocarbon)	0.0001689	--
NMOG (Non-methane organic gases)	0.000174	--
HC-TOTAL (Total Hydrocarbon)	0.0013131	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	332.1087952	--

Manufacturer Test Comments None

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0215P62

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 4 Bin 70	CREE	999	--	--	--	0.278	--	999	--	--
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0002	1	1.03	--	0.0161	--	0.016	999.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0032	1	1.03	--	--	--	0.029	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0030	--	--	--	0.0100	--	0.013	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0002	1	1.03	--	0.0161	--	0.016	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0032	1	1.03	--	--	--	0.029	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.0030	--	--	--	0.0100	--	0.013	999.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX91004875**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/14/2021	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000), LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4370	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	772.1322632	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	427.4880981	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0062346	--
CO (Carbon Monoxide)	0.8041477	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.5861646	--
DT-EER (Drive Trace Energy Economy Rating)	-0.595331	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-3.1386161	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0127558	--
N2O (Nitrous Oxide)	0.0005658	--
HC-NM (Non-methane Hydrocarbon)	0.0122602	--
NMOG (Non-methane organic gases)	0.012628	--
PM (Particulate Matter)	0.0043708	--
HC-TOTAL (Total Hydrocarbon)	0.0181918	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	503.6023865	--

Manufacturer Test Comments None Unrounded Result for the following test results were modified by Verify: FE BAG 1, FE BAG 2, MFR FE

Certification Summary Information Report

Test Group VTYXT03.4B5A **Evaporative/Refueling Family** VTYXR0215P62

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0044	--	--	--	0.0000	--	0.004	0.006	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.80	--	--	--	0.25	--	1.0	9.6	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0126	--	1.03	--	0.0161	--	0.029	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0254	--	1.03	--	--	--	0.052	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.0128	--	--	--	0.0100	--	0.023	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	PM	0.0044	--	--	--	0.0000	--	0.004	0.006	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX10071682**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	09/07/2021	**Fuel**	Gasoline
Fuel Batch ID	213R01	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Engineering & Manufacturing North America, Inc. 2		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4143	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	0.0907838	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.56	--
DT-EER (Drive Trace Energy Economy Rating)	0.49	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.66	--
MFR FE (Manufacturer Fuel Economy)	15.8994457	15.8994457
NOX (Nitrogen Oxide)	0.0062625	--
HC-NM (Non-methane Hydrocarbon)	0.0012633	--
HC-TOTAL (Total Hydrocarbon)	0.0062963	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	536.9419486	--

Manufacturer Test Comments CREE set to default value

Certification Summary Information Report

Test Group VTYXT03.4B5A **Evaporative/Refueling Family** VTYXR0215P62

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-IV ULEV70	CO	0.09	--	--	--	0.25	--	0.3	1.7	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0013	1	1.03	--	0.0161	--	0.017	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0076	1	1.03	--	--	--	0.034	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.0063	--	--	--	0.0100	--	0.016	999.999	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Emission Data Vehicle Information

Vehicle ID / Configuration	22-VK3A / 1	**Manufacturer Vehicle Configuration Number**	1
Original Test Group Name	NTYXT03.4M5W	**Original Evaporative/Refueling Family**	NTYXR0215P92
Original Test Vehicle Model Year	2022		

Vehicle Model

Represented Test Vehicle Make	TOYOTA	**Represented Test Vehicle Model**	TUNDRA 4WD

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	11	**Odometer Correction Factor**	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	02	**Rated Horsepower**	389
Displacement (liters)	3.445		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Liquid	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5665	**Equivalent Test Weight (pounds)**	6000
GVWR (lbs)	7310	**N/V Ratio**	21.6
Axle Ratio	3.31		
Transmission Type	Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	46.278	0.52177	0.033046	30.093	0.00195	0.035892	20.7
US06	46.278	0.52177	0.033046	30.093	0.00195	0.035892	N/A

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Emission Control Device Comments	--
Manufacturer Test Vehicle Comments	Drive mode is SPORT. Testing with Stop and Start swith ON.

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX10071169**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	NTYX10071166	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	08/05/2021	**Fuel**	Gasoline
Fuel Batch ID	2C1-02	**Fuel Calibration Number**	4
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5239	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.2551949	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments HSL=0.0654, 1ST DBL=0.1898, 2ND DBL=0.1574, 3RD DBL=0.1446, 1ST DBL IS ADDED KEY OFF MONITOR LOSS(0.0004GRAM)

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.2552	0.0000	0.255	0.500	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2552	0.0000	0.255	0.500	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX10071172**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	NTYX10071166	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	08/05/2021	**Fuel**	Gasoline
Fuel Batch ID	2C1-02	**Fuel Calibration Number**	4
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5239	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
CO BAG 1 (Bag 1 Carbon Monoxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CH4 BAG 1 (Bag 1 Methane)	0	--
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
CO BAG 2 (Bag 2 Carbon Monoxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CH4 BAG 2 (Bag 2 Methane)	0	--
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
CO BAG 3 (Bag 3 Carbon Monoxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
CH4 BAG 3 (Bag 3 Methane)	0	--
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0	--
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0001572	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.01	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX10071224**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	NTYX10071222	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/07/2021	**Fuel**	Gasoline
Fuel Batch ID	2C1-02	**Fuel Calibration Number**	2
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5041	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0296677	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.030	0.000	0.03	0.20	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.030	0.000	0.03	0.20	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Test #	**NTYX10071735**	**Test Procedure**	**65 - Evap Canister Bleed Test**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	46 - CARB LEV3 E10 Regular Gasoline
Test Date	08/05/2021	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5239	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	--	**Road Speed Fan Usage**	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.01015	--

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.0102	0.0000	0.010	0.020	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.0102	0.0000	0.010	0.020	Pass

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0215P62

Fuel Properties

Fuel Batch ID	**2C1-02**	**Fuel Calibration Number**	**4**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	03/18/2021
Fuel Batch Calibration Effective Date	08/02/2021	**Fuel Batch Calibration Ineffective Date**	08/31/2021
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.74
Fuel Ethanol Volume Percent (%)	9.9	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17815
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.826	**Weight Fraction CO2**	--
Fuel Batch ID	**28637**	**Fuel Calibration Number**	**1**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	08/26/2021
Fuel Batch Calibration Effective Date	08/26/2021	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.75
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17894
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.825	**Weight Fraction CO2**	--
Fuel Batch ID	**2C1-02**	**Fuel Calibration Number**	**2**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	03/18/2021
Fuel Batch Calibration Effective Date	07/01/2021	**Fuel Batch Calibration Ineffective Date**	07/31/2021
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.74
Fuel Ethanol Volume Percent (%)	9.9	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17815
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.826	**Weight Fraction CO2**	--
Fuel Batch ID	**213R01**	**Fuel Calibration Number**	**1**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	06/16/2021

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62
Fuel Batch Calibration Effective Date	07/20/2021	**Fuel Batch Calibration Ineffective Date**	07/20/2022
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.751
Fuel Ethanol Volume Percent (%)	9.9	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18519
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.829	**Weight Fraction CO2**	--
Fuel Batch ID	**21T301**	**Fuel Calibration Number**	**1**
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	**Fuel Batch Calibration Date**	06/08/2020
Fuel Batch Calibration Effective Date	05/13/2021	**Fuel Batch Calibration Ineffective Date**	05/13/2022
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.741
Fuel Ethanol Volume Percent (%)	9.9	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18549
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.828	**Weight Fraction CO2**	--

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Consolidated List of Standards

Exhaust Standards

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	HWFE

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	US06

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.25	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	--	1.03	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.006

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 4 Bin 70
Fuel	Gasoline	**Test Procedure**	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.08	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.01	0.5

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 4 Bin 70
Fuel	Gasoline	**Test Procedure**	Federal fuel 2-day exhaust (w/can load)

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.25	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	0.25	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.278	999.999
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	1	1.10	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.10	--	--	--	0.0261	0.070
150,000 miles	NMOG+NOX-COMP	--	1	1.03	--	--	--	0.0261	0.060
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 4 Bin 70
Fuel	Gasoline	**Test Procedure**	HWFE

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CREE	--	--	--	--	--	--	0.278	999.999
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	CA fuel 50 Deg(F) exhaust test

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	CO	--	--	--	--	--	--	--	1.7
4,000 miles	HCHO	--	--	--	--	--	--	--	0.016
4,000 miles	NMOG	--	1	1.10	--	--	--	--	999.999
4,000 miles	NMOG+NOX	--	1	1.10	--	--	1	--	0.140
4,000 miles	NOX	--	--	--	--	--	--	--	999.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	Federal fuel 2-day exhaust (w/can load)

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.25	1.7
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.0142	0.030
150,000 miles	N2O	--	--	--	--	--	--	0.0024	0.010
150,000 miles	NMOG	--	1	1.10	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.10	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 4 Bin 70
Fuel	Gasoline	**Test Procedure**	US06

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.006

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	SC03

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.25	1.7
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.08	12.5

Evaporative/Refueling Standards

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel refueling test (ORVR)		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.000

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal fuel 3-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel 3-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Spitback		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	4,000 miles	SPITBACK	--	1.0	--

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal Fuel Running Loss		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.000

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	0.0000

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal Fuel Running Loss		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.01	0.000

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal fuel refueling test (ORVR)		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.000

Evaporative/Refueling Family	VTYXR0215P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	0.0000

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0215P62

Glossary

Useful Life

4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		

Emission Name

HC-TOTAL	Total Hydrocarbon	COMB-CREE	Combined Carbon-Related Exhaust Emissions
CO	Carbon Monoxide	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
CO2	Carbon dioxide	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
CREE	Carbon-Related Exhaust Emissions	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
OPT-CREE	Optional Carbon-Related Exhaust Emissions	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
NOX	Nitrogen Oxide	LEAK-DIA	Effective Leak Diameter (inches)
PM	Particulate Matter	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
PM-COMP	SFTP Composite Particulate Matter	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
HC-NM	Non-methane Hydrocarbon	KW-HRS	Integrated DC KW-HRS
OMHCE	Organic material Hydrocarbon Equivalent	CH4 BAG 1	Bag 1 Methane
OMNMHCE	Organic material non-methane HC equivalent	CH4 BAG 2	Bag 2 Methane
NMOG	Non-methane organic gases	CH4 BAG 3	Bag 3 Methane
HCHO	Formaldehyde	CH4 BAG 4	Bag 4 Methane
H3C2HO	Acetaldehyde	CO BAG 1	Bag 1 Carbon Monoxide
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	CO BAG 2	Bag 2 Carbon Monoxide
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	CO BAG 3	Bag 3 Carbon Monoxide
CO-COMP	SFTP Composite Carbon Monoxide	CO BAG 4	Bag 4 Carbon Monoxide
ETHANOL	C2H5OH - Ethanol	NMOG BAG 1	Bag 1 Non-methane organic gases
FE BAG 1	Bag 1 Fuel Economy	NMOG BAG 2	Bag 2 Non-methane organic gases
FE BAG 2	Bag 2 Fuel Economy	NMOG BAG 3	Bag 3 Non-methane organic gases
FE BAG 3	Bag 3 Fuel Economy	NMOG BAG 4	Bag 4 Non-methane organic gases
FE BAG 4	Bag 4 Fuel Economy	ACT-DISTANCE BAG 1	Bag 1 Actual Distance
MFR FE	Manufacturer Fuel Economy	ACT-DISTANCE BAG 2	Bag 2 Actual Distance
HC	Hydrocarbon for Running Loss and ORVR	ACT-DISTANCE BAG 3	Bag 3 Actual Distance
METHANE	CH4 - Methane	ACT-DISTANCE BAG 4	Bag 4 Actual Distance
METHANOL	CH3OH - Methanol	HC-TOTAL BAG 1	Bag 1 Total Hydrocarbon
N2O	Nitrous Oxide	HC-TOTAL BAG 2	Bag 2 Total Hydrocarbon
SPITBACK	Spitback Hydrocarbon in grams	HC-TOTAL BAG 3	Bag 3 Total Hydrocarbon
AMP-HRS	Integrated Amp-hours	HC-TOTAL BAG 4	Bag 4 Total Hydrocarbon
START-SOC	System Start State of Charge Watt-hours	WATT-HRS BAG 1	Bag 1 Watt Hours
END-SOC	System End State of Charge Watt-hours	WATT-HRS BAG 2	Bag 2 Watt Hours

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62
ACT-DISTANCE	Actual Distance Driven (miles)	WATT-HRS BAG 3	Bag 3 Watt Hours
AS-VOLT	Average System Voltage	WATT-HRS BAG 4	Bag 4 Watt Hours
CO2 BAG 1	Bag 1 Carbon Dioxide	WATT-HRS	Watt Hours
CO2 BAG 2	Bag 2 Carbon Dioxide	HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon
CO2 BAG 3	Bag 3 Carbon Dioxide	HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon
CO2 BAG 4	Bag 4 Carbon Dioxide	HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	N2O BAG 1	Bag 1 Nitrous Oxide
DT-IWRR	Drive Trace Inertia Work Ratio Rating	N2O BAG 2	Bag 2 Nitrous Oxide
DT-ASCR	Drive Trace Absolute Speed Change Rating	N2O BAG 3	Bag 3 Nitrous Oxide
DT-EER	Drive Trace Energy Economy Rating	N2O BAG 4	Bag 4 Nitrous Oxide
Certification Region			
CA	California + CAA Section 177 states	FA	Federal
Exhaust Emission Standard Level			
B1	Federal Tier 2 Bin 1	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340
B2	Federal Tier 2 Bin 2	HDV2B250	Federal Tier 3 HD Class 2b Bin 250
B3	Federal Tier 2 Bin 3	HDV2B200	Federal Tier 3 HD Class 2b Bin 200
B4	Federal Tier 2 Bin 4	HDV2B170	Federal Tier 3 HD Class 2b Bin 170
B5	Federal Tier 2 Bin 5	HDV2B150	Federal Tier 3 HD Class 2b Bin 150
B6	Federal Tier 2 Bin 6	HDV2B0	Federal Tier 3 HD Class 2b Bin 0
B7	Federal Tier 2 Bin 7	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630
B8	Federal Tier 2 Bin 8	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570
B9	Federal Tier 2 Bin 9	HDV3B400	Federal Tier 3 HD Class 3 Bin 400
B10	Federal Tier 2 Bin 10	HDV3B270	Federal Tier 3 HD Class 3 Bin 270
B11	Federal Tier 2 Bin 11	HDV3B230	Federal Tier 3 HD Class 3 Bin 230
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	HDV3B200	Federal Tier 3 HD Class 3 Bin 200
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	HDV3B0	Federal Tier 3 HD Class 3 Bin 0
L2	California LEV-II LEV	L4SULEV100	California LEV-IV SULEV100
L2OP	California LEV-II LEV Optional	L4SULEV125	California LEV-IV SULEV125
U2	California LEV-II ULEV	L4SULEV15	California LEV-IV SULEV15
S2	California LEV-II SULEV	L4SULEV150	California LEV-IV SULEV150
ZEV	California ZEV	L4SULEV170	California LEV-IV SULEV170
OT	Other	L4SULEV175	California LEV-IV SULEV175
T1	Federal Tier 1	L4SULEV20	California LEV-IV SULEV20
PZEV	California PZEV	L4SULEV200	California LEV-IV SULEV200
L2LEV160	California LEV-II LEV160	L4SULEV230	California LEV-IV SULEV230
L2ULEV125	California LEV-II ULEV125	L4SULEV25	California LEV-IV SULEV25
L2SULEV30	California LEV-II SULEV30	L4SULEV30	California LEV-IV SULEV30
L2LEV395	California LEV-II LEV395	L4SULEV75	California LEV-IV SULEV75

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62
L2ULEV340	California LEV-II ULEV340	L4SULEV85	California LEV-IV SULEV85
L2LEV630	California LEV-II LEV630	L4ULEV125	California LEV-IV ULEV125
L2ULEV570	California LEV-II ULEV570	L4ULEV200	California LEV-IV ULEV200
L3LEV160	California LEV-III LEV160	L4ULEV250	California LEV-IV ULEV250
L3ULEV125	California LEV-III ULEV125	L4ULEV270	California LEV-IV ULEV270
L3ULEV70	California LEV-III ULEV70	L4ULEV40	California LEV-IV ULEV40
L3ULEV50	California LEV-III ULEV50	L4ULEV400	California LEV-IV ULEV400
L3SULEV30	California LEV-III SULEV30	L4ULEV50	California LEV-IV ULEV50
L3SULEV20	California LEV-III SULEV20	L4ULEV60	California LEV-IV ULEV60
L3LEV395	California LEV-III LEV395	L4ULEV70	California LEV-IV ULEV70
L3ULEV340	California LEV-III ULEV340	T4B170	Federal Tier 4 MDV Bin 170
L3ULEV250	California LEV-III ULEV250	T4B150	Federal Tier 4 MDV Bin 150
L3ULEV200	California LEV-III ULEV200	T4B125	Federal Tier 4 MDV Bin 125
L3SULEV170	California LEV-III SULEV170	T4B100	Federal Tier 4 MDV Bin 100
L3SULEV150	California LEV-III SULEV150	T4B85	Federal Tier 4 MDV Bin 85
L3LEV630	California LEV-III LEV630	T4B75	Federal Tier 4 MDV Bin 75
L3ULEV570	California LEV-III ULEV570	T4B70	Federal Tier 4 Bin 70
L3ULEV400	California LEV-III ULEV400	T4B65	Federal Tier 4 Bin 65
L3ULEV270	California LEV-III ULEV270	T4B60	Federal Tier 4 Bin 60
L3SULEV230	California LEV-III SULEV230	T4B55	Federal Tier 4 Bin 55
L3SULEV200	California LEV-III SULEV200	T4B50	Federal Tier 4 Bin 50
T3B160	Federal Tier 3 Bin 160	T4B45	Federal Tier 4 Bin 45
T3B125	Federal Tier 3 Bin 125	T4B40	Federal Tier 4 Bin 40
T3B110	Federal Tier 3 Transitional Bin 110	T4B35	Federal Tier 4 Bin 35
T3B85	Federal Tier 3 Transitional Bin 85	T4B30	Federal Tier 4 Bin 30
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	T4B25	Federal Tier 4 Bin 25
T3B70	Federal Tier 3 Bin 70	T4B20	Federal Tier 4 Bin 20
T3B50	Federal Tier 3 Bin 50	T4B15	Federal Tier 4 Bin 15
T3B30	Federal Tier 3 Bin 30	T4B10	Federal Tier 4 Bin 10
T3B20	Federal Tier 3 Bin 20	T4B5	Federal Tier 4 Bin 5
T3B0	Federal Tier 3 Bin 0	T4B0	Federal Tier 4 Bin 0
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395		

Transmission Type Code			
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual
A	Automatic	OT	Other
AM	Automated Manual	SA	Semi-Automatic
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)

Drive System Code			
4	4-Wheel Drive	P	Part-time 4-Wheel Drive

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0215P62
F	2-Wheel Drive, Front	A	All Wheel Drive
R	2-Wheel Drive, Rear		

Additional Terms and Acronyms

AFC	Alternative Fuel Converter	ICI	Independent Commercial Importer
CSI	Certificate Summary Information	ORVR	Onboard Refueling Vapor Recovery
DF	Deterioration Factor	SIL	Shift Indicator Light
Evap	Evaporation, Evaporative	Trans	Transmission

Certification Summary Information Report

Manufacturer	Toyota Motor Corporation	**Manufacturer Code**	TYX
Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	07/08/2026 05:03:39 AM
Model Year	2027		

Test Group Information

CSI Type	New	**Running Change Reference Number**	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Spark Ignition direct & ported injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Rechargeable Energy Storage System Indicator**	--
Multiple Fuel Combustion	--	**Off-board Charge Capable Indicator**	--
Fuel Cell Indicator	--	**EPA Vehicle Class**	LDT4
Federal Clean Fuel Vehicle	No	**Federal Clean Fuel Vehicle Standard**	--
Federal Clean Fuel Vehicle ILEV	No	**California Partial Zero Emissions Vehicle Indicator**	No
Durability Group Name	VTYXGPGNN62G	**Durability Group Equivalency Factor**	1.1
Reduced Fee Test Group	No	**Certification Region Code(s)**	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	--	**CAP2000 Conditional Certificate?**	N/A
Independent Commercial Importer?	--	**Alternative Fuel Converter Certificate?**	--
SFTP Federal Composite Compliance Identifier	Tier 3	**SFTP Tier 2 Composite CO Option**	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	**OBD Demonstration Vehicle Test Group**	VTYXT03.4B5A
Test Group OBD Compliance Level	Full - no deficiencies	**Number of Test Group OBD Deficiencies**	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	07/07/2026 02:02:47 AM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	**Fuel Tank Material Description**	EVOH
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	No	**Air Intake System Vapor Storage Device Description**	--
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	--
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	165	**Number of Primary Canisters**	1
Number of Bleed Canisters	1	**Bleed Canister Total Working Capacity (grams)**	2
Mfr Evaporative/Refueling Family Comments	--		

Leak Family Details

Leak Family Indicator	No		
Canister Bleed Test Indicator	Yes	**Applicability of Evaporative Canister Bleed Test**	50 State
Evaporative Canister Bleed Test Comments	--		
CARB Fuel Only (Rig) Test Indicator	No	**Applicability of CARB Fuel Only (Rig) Test**	--
CARB Fuel Only (Rig) Test Comments	--		

Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Toyota Motor Corporation	2 - LEXUS	107 - LX 600	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	10	Yes
Toyota Motor Corporation	2 - LEXUS	107 - LX 600	Federal	All Wheel Drive	Semi-Automatic	10	Yes

Engine Description

Hybrid Type	--	**Hybrid Description**	--
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	--
Engine Block Arrangement	V-shaped engine	**Mfr Engine Block Arrangement Description**	--
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	0W-20
Number of Cylinders/Rotors	6	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

After Treatment Device(s) (ATD)

ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
3	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
4	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith

Mfr After Treatment Device (ATD) Comments	--
Direct Ozone Reduction (DOR) Device	Not Equipped
Mfr Emission Control Device Comments	--

Engine Configuration Number 1

Engine Displacement (liters)	3.4	**Engine Rated Horsepower**	389
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**Charge Air Cooler Type**	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Intake and exhaust		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	APPLIED TO TUNDRA (3-drive mode)		

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Engine Configuration Number 2

Engine Displacement (liters)	3.4	**Engine Rated Horsepower**	358
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**Charge Air Cooler Type**	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Intake and exhaust		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	APPLIED TO TUNDRA (1-drive mode)		

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Engine Configuration Number 3

Engine Displacement (liters)	3.4	**Engine Rated Horsepower**	418
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**Charge Air Cooler Type**	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Intake and exhaust		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	APPLIED TO TUNDRA (3-drive mode) TRD PERFORMANCE PACKAGE		

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Engine Configuration Number 4

Engine Displacement (liters)	3.4	**Engine Rated Horsepower**	409
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**Charge Air Cooler Type**	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Intake and exhaust		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	APPLIED TO LX 600		

Official Test Numbers

Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Gasoline	NTYX91004874	NTYX91004875	NTYX10071682	NTYX10071676	NTYX91004876	70.0	228.2	999.9	286.1	--

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Gasoline	NTYX91004874	NTYX91004875	NTYX10071682

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Emission Data Vehicle Information

Vehicle ID / Configuration	22-VA1A / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	NTYXT03.4M5W	**Original Evaporative/Refueling Family**	NTYXR0165P92
Original Test Vehicle Model Year	2022		

Vehicle Model

Represented Test Vehicle Make	LEXUS	**Represented Test Vehicle Model**	LX 600

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	24	**Odometer Correction Factor**	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Kilometers		
Engine Code	01	**Rated Horsepower**	409
Displacement (liters)	3.445		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Liquid	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5945	**Equivalent Test Weight (pounds)**	6000
GVWR (lbs)	7230	**N/V Ratio**	22.6
Axle Ratio	3.31		
Transmission Type	Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	43.65	0.57487	0.029926	27.549	0.04536	0.033261	19.6
US06	43.65	0.57487	0.029926	27.549	0.04536	0.033261	N/A

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Emission Control Device Comments	--
Manufacturer Test Vehicle Comments	Drive mode is ECO. Testing with Stop and Start swith ON.

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX10071381**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	NTYX10071380	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	07/21/2021	**Fuel**	Gasoline
Fuel Batch ID	2C0A21	**Fuel Calibration Number**	5
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5152	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.2582	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments HSL=0.0644, 1ST DBL=0.1938, 2ND DBL=0.1496, 3RD DBL=0.1357, 1ST DBL IS ADDED KEY OFF MONITOR LOSS(0.0003GRAM)

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.2582	0.0000	0.258	0.500	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2582	0.0000	0.258	0.500	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX10071382**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	NTYX10071380	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	07/21/2021	**Fuel**	Gasoline
Fuel Batch ID	2C0A21	**Fuel Calibration Number**	5
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5152	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
CO BAG 1 (Bag 1 Carbon Monoxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CH4 BAG 1 (Bag 1 Methane)	0	--
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
CO BAG 2 (Bag 2 Carbon Monoxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CH4 BAG 2 (Bag 2 Methane)	0	--
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
CO BAG 3 (Bag 3 Carbon Monoxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
CH4 BAG 3 (Bag 3 Methane)	0	--
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0	--
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0001246	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.01	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX10071384**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	NTYX10071383	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	07/15/2021	**Fuel**	Gasoline
Fuel Batch ID	2C0A21	**Fuel Calibration Number**	5
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5115	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0061	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.006	0.000	0.01	0.20	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.006	0.000	0.01	0.20	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX10071732**	**Test Procedure**	**65 - Evap Canister Bleed Test**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	47 - CARB LEV3 E10 Premium Gasoline
Test Date	07/21/2021	**Fuel**	Gasoline
Fuel Batch ID	--	**Fuel Calibration Number**	--
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5152	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	--	**Road Speed Fan Usage**	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.00572	--

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.0057	0.0000	0.006	0.020	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.0057	0.0000	0.006	0.020	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Emission Data Vehicle Information

Vehicle ID / Configuration	22-VK1A / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	NTYXT03.4M5W	**Original Evaporative/Refueling Family**	NTYXR0180P92
Original Test Vehicle Model Year	2022		

Vehicle Model

Represented Test Vehicle Make	TOYOTA	**Represented Test Vehicle Model**	TUNDRA 4WD

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	7	**Odometer Correction Factor**	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	02	**Rated Horsepower**	389
Displacement (liters)	3.445		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Liquid	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5665	**Equivalent Test Weight (pounds)**	6000
GVWR (lbs)	7310	**N/V Ratio**	21.6
Axle Ratio	3.31		
Transmission Type	Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0165P62

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	46.278	0.52177	0.033046	29.381	0.0542	0.03455	20.7
Cold CO	50.906	0.57395	0.03635	27.687	-0.09588	0.038994	N/A
US06	46.278	0.52177	0.033046	29.381	0.0542	0.03455	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments Drive mode is SPORT. Testing with Stop and Start swith ON.

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX10071676**	**Test Procedure**	**11 - Cold CO**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	09/16/2021	**Fuel**	Gasoline
Fuel Batch ID	21T301	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000), LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Engineering & Manufacturing North America, Inc. 2		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4271	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	661.045516	--
FE BAG 1 (Bag 1 Fuel Economy)	12.6702382	12.6702382
CO2 BAG 2 (Bag 2 Carbon Dioxide)	534.2478361	--
FE BAG 2 (Bag 2 Fuel Economy)	15.8726223	15.8726223
CO2 BAG 3 (Bag 3 Carbon Dioxide)	456.8927473	--
FE BAG 3 (Bag 3 Fuel Economy)	18.5411806	18.5411806
CO (Carbon Monoxide)	0.8128887	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.51	--
DT-EER (Drive Trace Energy Economy Rating)	-0.14	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.65	--
MFR FE (Manufacturer Fuel Economy)	15.676244	15.676244
NOX (Nitrogen Oxide)	0.0129349	--
HC-NM (Non-methane Hydrocarbon)	0.1230704	--
HC-TOTAL (Total Hydrocarbon)	0.1474445	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	539.2999419	--

Manufacturer Test Comments CREE set to default value

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 4 Bin 70	CO	0.81	--	--	--	0.08	--	0.9	12.5	Pass
Fed	120,000 miles	Federal Tier 4 Bin 70	HC-NM	0.12	--	--	--	0.01	--	0.1	0.5	Pass
CA	50,000 miles	California LEV-IV ULEV70	CO	0.81	--	--	--	0.08	--	0.9	12.5	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX91004874**	**Test Procedure**	**21 - Federal fuel 2-day exhaust (w/can load)**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/14/2021	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000), LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4339	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	473.8370667	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	455.9607239	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	425.6127014	--
FE BAG 3 (Bag 3 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0060026	--
CO (Carbon Monoxide)	0.0925841	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.3021551	--
DT-EER (Drive Trace Energy Economy Rating)	0.1188869	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.0264587	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0151887	--
N2O (Nitrous Oxide)	0.0015389	--
HC-NM (Non-methane Hydrocarbon)	0.0085922	--
NMOG (Non-methane organic gases)	0.0094373	--
PM (Particulate Matter)	0.0015174	--
HC-TOTAL (Total Hydrocarbon)	0.0142536	--

Certification Summary Information Report

Test Group VTYXT03.4B5A **Evaporative/Refueling Family** VTYXR0165P62

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	451.329834	--

Manufacturer Test Comments None Unrounded Result for the following test results were modified by Verify: FE BAG 1, FE BAG 2, MFR FE, FE BAG 3

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 4 Bin 70	CO	0.09	--	--	--	0.25	--	0.3	1.7	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	CO-COMP	0.54	--	--	--	0.25	--	0.5	4.2	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	CREE	999	--	--	--	0.278	--	999	--	--
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0094	1	1.10	--	0.0161	--	0.026	999.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0246	1	1.10	--	--	--	0.051	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX-COMP	0.0447	1	1.03	--	0.0261	--	0.045	0.060	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0152	--	--	--	0.0100	--	0.025	999.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0015	--	--	--	0.0000	--	0.002	0.003	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.09	--	--	--	0.25	--	0.3	1.7	Pass
CA	150,000 miles	California LEV-IV ULEV70	METHANE	0.0060	--	--	--	0.0142	--	0.020	0.030	Pass
CA	150,000 miles	California LEV-IV ULEV70	N2O	0.0015	--	--	--	0.0024	--	0.004	0.010	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0094	1	1.10	--	0.0161	--	0.026	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0246	1	1.10	--	--	--	0.051	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.0152	--	--	--	0.0100	--	0.025	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	PM	0.0015	--	--	--	0.0000	--	0.002	0.003	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX91004876**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/14/2021	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000), LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4350	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0012026	--
CO (Carbon Monoxide)	0.0375776	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.313303	--
DT-EER (Drive Trace Energy Economy Rating)	-0.1761813	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.7699237	--
MFR FE (Manufacturer Fuel Economy)	26.1056709	--
NOX (Nitrogen Oxide)	0.0029815	--
N2O (Nitrous Oxide)	0.0000588	--
HC-NM (Non-methane Hydrocarbon)	0.0001689	--
NMOG (Non-methane organic gases)	0.000174	--
HC-TOTAL (Total Hydrocarbon)	0.0013131	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	332.1087952	--

Manufacturer Test Comments None

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0165P62

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 4 Bin 70	CREE	999	--	--	--	0.278	--	999	--	--
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG	0.0002	1	1.03	--	0.0161	--	0.016	999.999	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NMOG+NOX	0.0032	1	1.03	--	--	--	0.029	0.070	Pass
Fed	150,000 miles	Federal Tier 4 Bin 70	NOX	0.0030	--	--	--	0.0100	--	0.013	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0002	1	1.03	--	0.0161	--	0.016	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0032	1	1.03	--	--	--	0.029	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.0030	--	--	--	0.0100	--	0.013	999.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX91004875**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/14/2021	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000), LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4370	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	772.1322632	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	427.4880981	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0062346	--
CO (Carbon Monoxide)	0.8041477	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.5861646	--
DT-EER (Drive Trace Energy Economy Rating)	-0.595331	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-3.1386161	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0127558	--
N2O (Nitrous Oxide)	0.0005658	--
HC-NM (Non-methane Hydrocarbon)	0.0122602	--
NMOG (Non-methane organic gases)	0.012628	--
PM (Particulate Matter)	0.0043708	--
HC-TOTAL (Total Hydrocarbon)	0.0181918	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	503.6023865	--

Manufacturer Test Comments None Unrounded Result for the following test results were modified by Verify: FE BAG 1, FE BAG 2, MFR FE

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0165P62

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 4 Bin 70	PM	0.0044	--	--	--	0.0000	--	0.004	0.006	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.80	--	--	--	0.25	--	1.0	9.6	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0126	--	1.03	--	0.0161	--	0.029	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0254	--	1.03	--	--	--	0.052	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.0128	--	--	--	0.0100	--	0.023	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	PM	0.0044	--	--	--	0.0000	--	0.004	0.006	Pass

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Test #	**NTYX10071682**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	09/07/2021	**Fuel**	Gasoline
Fuel Batch ID	213R01	**Fuel Calibration Number**	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	Toyota Motor Engineering & Manufacturing North America, Inc. 2		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4143	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	0.0907838	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.56	--
DT-EER (Drive Trace Energy Economy Rating)	0.49	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.66	--
MFR FE (Manufacturer Fuel Economy)	15.8994457	15.8994457
NOX (Nitrogen Oxide)	0.0062625	--
HC-NM (Non-methane Hydrocarbon)	0.0012633	--
HC-TOTAL (Total Hydrocarbon)	0.0062963	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	536.9419486	--

Manufacturer Test Comments CREE set to default value

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0165P62

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-IV ULEV70	CO	0.09	--	--	--	0.25	--	0.3	1.7	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0013	1	1.03	--	0.0161	--	0.017	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0076	1	1.03	--	--	--	0.034	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.0063	--	--	--	0.0100	--	0.016	999.999	Pass

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0165P62

Fuel Properties

Fuel Batch ID	**2C0A21**	**Fuel Calibration Number**	**5**
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	03/27/2020
Fuel Batch Calibration Effective Date	07/01/2021	**Fuel Batch Calibration Ineffective Date**	07/31/2021
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.737
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17861
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.826	**Weight Fraction CO2**	--
Fuel Batch ID	**28637**	**Fuel Calibration Number**	**1**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	08/26/2021
Fuel Batch Calibration Effective Date	08/26/2021	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.75
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17894
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.825	**Weight Fraction CO2**	--
Fuel Batch ID	**213R01**	**Fuel Calibration Number**	**1**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	06/16/2021
Fuel Batch Calibration Effective Date	07/20/2021	**Fuel Batch Calibration Ineffective Date**	07/20/2022
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.751
Fuel Ethanol Volume Percent (%)	9.9	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18519
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.829	**Weight Fraction CO2**	--
Fuel Batch ID	**21T301**	**Fuel Calibration Number**	**1**
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	**Fuel Batch Calibration Date**	06/08/2020
Fuel Batch Calibration Effective Date	05/13/2021	**Fuel Batch Calibration Ineffective Date**	05/13/2022

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.741
Fuel Ethanol Volume Percent (%)	9.9	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18549
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.828	**Weight Fraction CO2**	--

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Consolidated List of Standards

Exhaust Standards

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	HWFE

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	US06

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.25	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	--	1.03	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.006

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 4 Bin 70
Fuel	Gasoline	**Test Procedure**	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.08	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.01	0.5

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 4 Bin 70
Fuel	Gasoline	**Test Procedure**	Federal fuel 2-day exhaust (w/can load)

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.25	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	0.25	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.278	999.999
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	1	1.10	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.10	--	--	--	0.0261	0.070
150,000 miles	NMOG+NOX-COMP	--	1	1.03	--	--	--	0.0261	0.060
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 4 Bin 70
Fuel	Gasoline	**Test Procedure**	HWFE

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CREE	--	--	--	--	--	--	0.278	999.999
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	CA fuel 50 Deg(F) exhaust test

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	CO	--	--	--	--	--	--	--	1.7
4,000 miles	HCHO	--	--	--	--	--	--	--	0.016
4,000 miles	NMOG	--	1	1.10	--	--	--	--	999.999
4,000 miles	NMOG+NOX	--	1	1.10	--	--	1	--	0.140
4,000 miles	NOX	--	--	--	--	--	--	--	999.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	Federal fuel 2-day exhaust (w/can load)

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.25	1.7
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.0142	0.030
150,000 miles	N2O	--	--	--	--	--	--	0.0024	0.010
150,000 miles	NMOG	--	1	1.10	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.10	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 4 Bin 70
Fuel	Gasoline	**Test Procedure**	US06

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.006

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	SC03

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.25	1.7
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0161	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0261	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0100	999.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	**Standard Level**	California LEV-IV ULEV70
Fuel	Gasoline	**Test Procedure**	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.08	12.5

Evaporative/Refueling Standards

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal fuel refueling test (ORVR)		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.000

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel refueling test (ORVR)		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.000

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	0.0000

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Spitback		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	4,000 miles	SPITBACK	--	1.0	--

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal Fuel Running Loss		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.000

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal fuel 3-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel 3-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	0.0000

Evaporative/Refueling Family	VTYXR0165P62	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal Fuel Running Loss		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.01	0.000

Certification Summary Information Report

Test Group	VTYXT03.4B5A	Evaporative/Refueling Family	VTYXR0165P62

Glossary

Useful Life

4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		

Emission Name

HC-TOTAL	Total Hydrocarbon	COMB-CREE	Combined Carbon-Related Exhaust Emissions
CO	Carbon Monoxide	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
CO2	Carbon dioxide	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
CREE	Carbon-Related Exhaust Emissions	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
OPT-CREE	Optional Carbon-Related Exhaust Emissions	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
NOX	Nitrogen Oxide	LEAK-DIA	Effective Leak Diameter (inches)
PM	Particulate Matter	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
PM-COMP	SFTP Composite Particulate Matter	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
HC-NM	Non-methane Hydrocarbon	KW-HRS	Integrated DC KW-HRS
OMHCE	Organic material Hydrocarbon Equivalent	CH4 BAG 1	Bag 1 Methane
OMNMHCE	Organic material non-methane HC equivalent	CH4 BAG 2	Bag 2 Methane
NMOG	Non-methane organic gases	CH4 BAG 3	Bag 3 Methane
HCHO	Formaldehyde	CH4 BAG 4	Bag 4 Methane
H3C2HO	Acetaldehyde	CO BAG 1	Bag 1 Carbon Monoxide
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	CO BAG 2	Bag 2 Carbon Monoxide
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	CO BAG 3	Bag 3 Carbon Monoxide
CO-COMP	SFTP Composite Carbon Monoxide	CO BAG 4	Bag 4 Carbon Monoxide
ETHANOL	C2H5OH - Ethanol	NMOG BAG 1	Bag 1 Non-methane organic gases
FE BAG 1	Bag 1 Fuel Economy	NMOG BAG 2	Bag 2 Non-methane organic gases
FE BAG 2	Bag 2 Fuel Economy	NMOG BAG 3	Bag 3 Non-methane organic gases
FE BAG 3	Bag 3 Fuel Economy	NMOG BAG 4	Bag 4 Non-methane organic gases
FE BAG 4	Bag 4 Fuel Economy	ACT-DISTANCE BAG 1	Bag 1 Actual Distance
MFR FE	Manufacturer Fuel Economy	ACT-DISTANCE BAG 2	Bag 2 Actual Distance
HC	Hydrocarbon for Running Loss and ORVR	ACT-DISTANCE BAG 3	Bag 3 Actual Distance
METHANE	CH4 - Methane	ACT-DISTANCE BAG 4	Bag 4 Actual Distance
METHANOL	CH3OH - Methanol	HC-TOTAL BAG 1	Bag 1 Total Hydrocarbon
N2O	Nitrous Oxide	HC-TOTAL BAG 2	Bag 2 Total Hydrocarbon
SPITBACK	Spitback Hydrocarbon in grams	HC-TOTAL BAG 3	Bag 3 Total Hydrocarbon
AMP-HRS	Integrated Amp-hours	HC-TOTAL BAG 4	Bag 4 Total Hydrocarbon
START-SOC	System Start State of Charge Watt-hours	WATT-HRS BAG 1	Bag 1 Watt Hours
END-SOC	System End State of Charge Watt-hours	WATT-HRS BAG 2	Bag 2 Watt Hours

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62
ACT-DISTANCE	Actual Distance Driven (miles)	WATT-HRS BAG 3	Bag 3 Watt Hours
AS-VOLT	Average System Voltage	WATT-HRS BAG 4	Bag 4 Watt Hours
CO2 BAG 1	Bag 1 Carbon Dioxide	WATT-HRS	Watt Hours
CO2 BAG 2	Bag 2 Carbon Dioxide	HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon
CO2 BAG 3	Bag 3 Carbon Dioxide	HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon
CO2 BAG 4	Bag 4 Carbon Dioxide	HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	N2O BAG 1	Bag 1 Nitrous Oxide
DT-IWRR	Drive Trace Inertia Work Ratio Rating	N2O BAG 2	Bag 2 Nitrous Oxide
DT-ASCR	Drive Trace Absolute Speed Change Rating	N2O BAG 3	Bag 3 Nitrous Oxide
DT-EER	Drive Trace Energy Economy Rating	N2O BAG 4	Bag 4 Nitrous Oxide
Certification Region			
CA	California + CAA Section 177 states	FA	Federal
Exhaust Emission Standard Level			
B1	Federal Tier 2 Bin 1	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340
B2	Federal Tier 2 Bin 2	HDV2B250	Federal Tier 3 HD Class 2b Bin 250
B3	Federal Tier 2 Bin 3	HDV2B200	Federal Tier 3 HD Class 2b Bin 200
B4	Federal Tier 2 Bin 4	HDV2B170	Federal Tier 3 HD Class 2b Bin 170
B5	Federal Tier 2 Bin 5	HDV2B150	Federal Tier 3 HD Class 2b Bin 150
B6	Federal Tier 2 Bin 6	HDV2B0	Federal Tier 3 HD Class 2b Bin 0
B7	Federal Tier 2 Bin 7	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630
B8	Federal Tier 2 Bin 8	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570
B9	Federal Tier 2 Bin 9	HDV3B400	Federal Tier 3 HD Class 3 Bin 400
B10	Federal Tier 2 Bin 10	HDV3B270	Federal Tier 3 HD Class 3 Bin 270
B11	Federal Tier 2 Bin 11	HDV3B230	Federal Tier 3 HD Class 3 Bin 230
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	HDV3B200	Federal Tier 3 HD Class 3 Bin 200
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	HDV3B0	Federal Tier 3 HD Class 3 Bin 0
L2	California LEV-II LEV	L4SULEV100	California LEV-IV SULEV100
L2OP	California LEV-II LEV Optional	L4SULEV125	California LEV-IV SULEV125
U2	California LEV-II ULEV	L4SULEV15	California LEV-IV SULEV15
S2	California LEV-II SULEV	L4SULEV150	California LEV-IV SULEV150
ZEV	California ZEV	L4SULEV170	California LEV-IV SULEV170
OT	Other	L4SULEV175	California LEV-IV SULEV175
T1	Federal Tier 1	L4SULEV20	California LEV-IV SULEV20
PZEV	California PZEV	L4SULEV200	California LEV-IV SULEV200
L2LEV160	California LEV-II LEV160	L4SULEV230	California LEV-IV SULEV230
L2ULEV125	California LEV-II ULEV125	L4SULEV25	California LEV-IV SULEV25
L2SULEV30	California LEV-II SULEV30	L4SULEV30	California LEV-IV SULEV30
L2LEV395	California LEV-II LEV395	L4SULEV75	California LEV-IV SULEV75

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62
L2ULEV340	California LEV-II ULEV340	L4SULEV85	California LEV-IV SULEV85
L2LEV630	California LEV-II LEV630	L4ULEV125	California LEV-IV ULEV125
L2ULEV570	California LEV-II ULEV570	L4ULEV200	California LEV-IV ULEV200
L3LEV160	California LEV-III LEV160	L4ULEV250	California LEV-IV ULEV250
L3ULEV125	California LEV-III ULEV125	L4ULEV270	California LEV-IV ULEV270
L3ULEV70	California LEV-III ULEV70	L4ULEV40	California LEV-IV ULEV40
L3ULEV50	California LEV-III ULEV50	L4ULEV400	California LEV-IV ULEV400
L3SULEV30	California LEV-III SULEV30	L4ULEV50	California LEV-IV ULEV50
L3SULEV20	California LEV-III SULEV20	L4ULEV60	California LEV-IV ULEV60
L3LEV395	California LEV-III LEV395	L4ULEV70	California LEV-IV ULEV70
L3ULEV340	California LEV-III ULEV340	T4B170	Federal Tier 4 MDV Bin 170
L3ULEV250	California LEV-III ULEV250	T4B150	Federal Tier 4 MDV Bin 150
L3ULEV200	California LEV-III ULEV200	T4B125	Federal Tier 4 MDV Bin 125
L3SULEV170	California LEV-III SULEV170	T4B100	Federal Tier 4 MDV Bin 100
L3SULEV150	California LEV-III SULEV150	T4B85	Federal Tier 4 MDV Bin 85
L3LEV630	California LEV-III LEV630	T4B75	Federal Tier 4 MDV Bin 75
L3ULEV570	California LEV-III ULEV570	T4B70	Federal Tier 4 Bin 70
L3ULEV400	California LEV-III ULEV400	T4B65	Federal Tier 4 Bin 65
L3ULEV270	California LEV-III ULEV270	T4B60	Federal Tier 4 Bin 60
L3SULEV230	California LEV-III SULEV230	T4B55	Federal Tier 4 Bin 55
L3SULEV200	California LEV-III SULEV200	T4B50	Federal Tier 4 Bin 50
T3B160	Federal Tier 3 Bin 160	T4B45	Federal Tier 4 Bin 45
T3B125	Federal Tier 3 Bin 125	T4B40	Federal Tier 4 Bin 40
T3B110	Federal Tier 3 Transitional Bin 110	T4B35	Federal Tier 4 Bin 35
T3B85	Federal Tier 3 Transitional Bin 85	T4B30	Federal Tier 4 Bin 30
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	T4B25	Federal Tier 4 Bin 25
T3B70	Federal Tier 3 Bin 70	T4B20	Federal Tier 4 Bin 20
T3B50	Federal Tier 3 Bin 50	T4B15	Federal Tier 4 Bin 15
T3B30	Federal Tier 3 Bin 30	T4B10	Federal Tier 4 Bin 10
T3B20	Federal Tier 3 Bin 20	T4B5	Federal Tier 4 Bin 5
T3B0	Federal Tier 3 Bin 0	T4B0	Federal Tier 4 Bin 0
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395		

Transmission Type Code			
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual
A	Automatic	OT	Other
AM	Automated Manual	SA	Semi-Automatic
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)

Drive System Code			
4	4-Wheel Drive	P	Part-time 4-Wheel Drive

Certification Summary Information Report

Test Group	VTYXT03.4B5A	**Evaporative/Refueling Family**	VTYXR0165P62
F	2-Wheel Drive, Front	A	All Wheel Drive
R	2-Wheel Drive, Rear		

Additional Terms and Acronyms

AFC	Alternative Fuel Converter	ICI	Independent Commercial Importer
CSI	Certificate Summary Information	ORVR	Onboard Refueling Vapor Recovery
DF	Deterioration Factor	SIL	Shift Indicator Light
Evap	Evaporation, Evaporative	Trans	Transmission

7. Test Results

Test group: VTYXT03.4B5A

1. Litmus test result

Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	City Litmus Value	City Litmus Threshold	Highway Litmus Value	Highway Litmus Threshold
Gasoline	NTYX91004874	NTYX91004875	NTYX10071682	NTYX10071676	NTYX91004876	15.0	14.9	18.7	18.0

2. Interim/In-Use Standard

	Federal	California
FTP	Not applicable	Not applicable
FTP (QDA)	-	-
SFTP (Composite)	Not applicable	-
SFTP (US06)	-	NMOG+NOx

8. Emission testing waiver statements

Please refer to the FOI common file for the following test waiver statements:

- High Altitude Exhaust Emissions
- High Altitude Evap/Refueling Emissions
- 91 RON fuel testing
- Formaldehyde (HCHO)
- Spitback
- 2DBL Evap Emissions
- Tier 4 Evaporative Leak Standard

9. OBD System Description

Please refer to OBD documents.

Toyota states that the OBD application meets the requirements of 40 CFR 86.1806-17 and 86.1844-01(d)(9) and is considered part of the Part 1 certification application.

10. Description of Alternate-fueled Vehicles

Please refer to the FOI common file.

11. AECD Descriptions

11.1 AECD and EI-AECD Descriptions

Confidential information

11.2 SFTP / Lean Best Torque (LBT) Air fuel Ratio Information

Please refer to the CBI common file.

12. Description of Vehicles Covered by Certificate and Test Parameters

12.1 Vehicle parameters

Durability Group : VTYXGPGNN62G
Test Group : VTYXT03.4B5A
Evap./Refueling Family : VTYXR0215P62
Emission Control System : DFI+SFI,2WR-HO2S(2),2TWC(2),2TC,1CAC

Carline	Model name	Model code	Engine Code	Valves/ cyl	Engine Disp. (L)	Sales Area	Trans-mission*2/ Overdrive	SIL	Tire*1	N/V	ETW (lb.)	Fuel tank vol. (L)	Rated HP
TUNDRA 2WD*3	Tundra 4x2 Double Cab SR5 6.5ft Bed / Tundra 4x2 Double Cab SR 6.5ft Bed	VXKA70L-CRUSZA	03	4	3.445	50	AJA0E-A (S10-1 SS) / Yes	Yes	245/75R18 AS	21.6	5500	122	358@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	5500	122	389@5200 418@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	5500	122	389@5200 418@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/70R18 AS	21.5	5500	122	389@5200 418@5200
	Tundra 4x2 CrewCab Limited 5.5ft Bed	VXKA70L-PSULZA	03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200

Note *1: AS : All-season tire
OFF : Off-road tire
*2: The number after "-" indicates the number of transmission mode.
*3: Models with 418 @5200 rated HP include TRD Performance Package.

12.1 Vehicle parameters

Carline	Model name	Model code	Engine Code	Valves/ cyl	Engine Disp. (L)	Sales Area	Trans-mission*2/ Overdrive	SIL	Tire*1	N/V	ETW (lb.)	Fuel tank vol. (L)	Rated HP
TUNDRA 2WD*3	Tundra 4x2 CrewCab SR5 5.5ft Bed / Tundra 4x2 CrewCab SR 5.5ft Bed	VXKA70L-PSUSZA	03	4	3.445	50	AJA0E-A (S10-1 SS) / Yes	Yes	245/75R18 AS	21.6	5500	122	358@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	5500	122	389@5200 418@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	5500	122	389@5200 418@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/70R18 AS	21.5	5500	122	389@5200 418@5200
	Tundra 4x2 CrewCab Platinum 5.5ft Bed / Tundra 4x2 CrewCab 1794 5.5ft Bed	VXKA70L-PSUZZA	03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200
	Tundra 4x2 CrewCab Limited 6.5ft Bed	VXKA71L-PRULZA	03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200
	Tundra 4x2 CrewCab SR5 6.5ft Bed	VXKA71L-PRUSZA	03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/70R18 AS	21.5	6000	122	389@5200 418@5200

Note *1: AS : All-season tire
OFF : Off-road tire
*2: The number after "-" indicates the number of transmission mode.
*3: Models with 418 @5200 rated HP include TRD Performance Package.

12.1 Vehicle parameters

Carline	Model name	Model code	Engine Code	Valves/ cyl	Engine Disp. (L)	Sales Area	Trans-mission*2/ Overdrive	SIL	Tire*1	N/V	ETW (lb.)	Fuel tank vol. (L)	Rated HP
TUNDRA 2WD*3	Tundra 4x2 Double Cab SR 8.1ft Bed	VXKA72L-CHUSZA	03	4	3.445	50	AJA0E-A (S10-1 SS) / Yes	Yes	245/75R18 AS	21.6	6000	122	358@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			03	4	3.445	50	AJA0E-A (S10-3 SS) / Yes	Yes	265/70R18 AS	21.5	6000	122	389@5200 418@5200
TUNDRA 4WD*3	Tundra 4x4 Double Cab SR5 6.5ft Bed / Tundra 4x4 Double Cab SR 6.5ft Bed	VXKA75L-CRUSZA	02	4	3.445	50	AJA0F-B (S10-1 SS) / Yes	Yes	245/75R18 AS	21.6	6000	122	358@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 AS	21.5	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 OFF	21.5	6000	122	389@5200 418@5200

Note *1: AS : All-season tire
OFF : Off-road tire
*2: The number after "-" indicates the number of transmission mode.
*3: Models with 418 @5200 rated HP include TRD Performance Package.

12.1 Vehicle parameters

Carline	Model name	Model code	Engine Code	Valves/ cyl	Engine Disp. (L)	Sales Area	Trans-mission*2/ Overdrive	SIL	Tire*1	N/V	ETW (lb.)	Fuel tank vol. (L)	Rated HP
TUNDRA 4WD*3	Tundra 4x4 CrewCab Limited 5.5ft Bed	VXKA75L-PSULZA	02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 OFF	21.5	6000	122	389@5200 418@5200
	Tundra 4x4 CrewCab SR5 5.5ft Bed / Tundra 4x4 CrewCab SR 5.5ft Bed / Tundra 4x4 CrewMax SR5 Trailhunter Package	VXKA75L-PSUSZA	02	4	3.445	50	AJA0F-B (S10-1 SS) / Yes	Yes	245/75R18 AS	21.6	6000	122	358@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 AS	21.5	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 OFF	21.5	6000	122	389@5200 418@5200

Note *1: AS : All-season tire
OFF : Off-road tire
*2: The number after "-" indicates the number of transmission mode.
*3: Models with 418 @5200 rated HP include TRD Performance Package.

12.1 Vehicle parameters

Carline	Model name	Model code	Engine Code	Valves/ cyl	Engine Disp. (L)	Sales Area	Trans-mission*2/ Overdrive	SIL	Tire*1	N/V	ETW (lb.)	Fuel tank vol. (L)	Rated HP
TUNDRA 4WD*3	Tundra 4x4 CrewCab Platinum 5.5ft Bed / Tundra 4x4 CrewCab 1794 5.5ft Bed	VXKA75L-PSUZZA	02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 OFF	21.5	6000	122	389@5200 418@5200
	Tundra 4x4 CrewCab Limited 6.5ft Bed	VXKA76L-PRULZA	02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 OFF	21.5	6000	122	389@5200 418@5200
	Tundra 4x4 CrewCab SR5 6.5ft Bed	VXKA76L-PRUSZA	02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 AS	21.5	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 OFF	21.5	6000	122	389@5200 418@5200

Note *1: AS : All-season tire
OFF : Off-road tire
*2: The number after "-" indicates the number of transmission mode.
*3: Models with 418 @5200 rated HP include TRD Performance Package.

12.1 Vehicle parameters

Carline	Model name	Model code	Engine Code	Valves/ cyl	Engine Disp. (L)	Sales Area	Trans-mission*2/ Overdrive	SIL	Tire*1	N/V	ETW (lb.)	Fuel tank vol. (L)	Rated HP
TUNDRA 4WD*3	Tundra 4x4 CrewCab Platinum 6.5ft Bed / Tundra 4x4 CrewCab 1794 6.5ft Bed	VXKA76L-PRUZZA	02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 AS	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 OFF	21.5	6000	122	389@5200 418@5200
	Tundra 4x4 Double Cab SR5 8.1ft Bed	VXKA77L-CHUSZA	02	4	3.445	50	AJA0F-B (S10-1 SS) / Yes	Yes	245/75R18 AS	21.6	6000	122	358@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/60R20 OFF	21.6	6000	122	389@5200 418@5200
			02	4	3.445	50	AJA0F-B (S10-3 SS) / Yes	Yes	265/70R18 AS	21.5	6000	122	389@5200 418@5200

Note *1: AS : All-season tire
OFF : Off-road tire
*2: The number after "-" indicates the number of transmission mode.
*3: Models with 418 @5200 rated HP include TRD Performance Package.

12.1 Vehicle parameters

Evap./Refueling Family : VTYXR0165P62

Carline	Model name	Model code	Engine Code	Valves/ cyl	Engine Disp. (L)	Sales Area	Trans-mission*2/ Overdrive	SIL	Tire*1	N/V	ETW (lb.)	Fuel tank vol. (L)	Rated HP
LX 600	Lexus LX 600 Premium / Lexus LX 600 F SPORT Handling / Lexus LX 600 Luxury	VJA310L-GKULZA	01	4	3.445	50	AJA0F-A (S10-3 SS) / Yes	N/A	265/50R22 AS	21.8	6000	80	409@5200
			01	4	3.445	50	AJA0F-A (S10-3 SS) / Yes	N/A	265/55R20 AS	22.6	6000	80	409@5200

Note *1: AS : All-season tire
OFF : Off-road tire
*2: The number after "-" indicates the number of transmission mode.

12.2 Test Parameters

Please refer to the FOI common file.

13. Projected Sales and Compliance Plans

Please refer to the CBI common file.

14. Request for Certificate

Test group : VTYXT03.4B5A
Evap/refueling family : VTYXR0215P62

TOYOTA MOTOR CORPORATION requests that EPA/CARB issue a 2027 model year certificate of conformity and Executive Order for the above specified test group/evaporative family combination more fully described in this application. This combination complies with the following emission standards:

		low-altitude	high altitude	Bin No
Federal:	Interim Tier4	X	X	70

California: See Federal

Kevin Webber
General Manager
Regulatory Affairs & Environmental Sustainability
Toyota Motor North America, Inc.

14. Request for Certificate

Test group : VTYXT03.4B5A
Evap/refueling family : VTYXR0165P62

TOYOTA MOTOR CORPORATION requests that EPA/CARB issue a 2027 model year certificate of conformity and Executive Order for the above specified test group/evaporative family combination more fully described in this application. This combination complies with the following emission standards:

		low-altitude	high altitude	Bin No
Federal:	Interim Tier4	X	X	70

California: See Federal

Kevin Webber
General Manager
Regulatory Affairs & Environmental Sustainability
Toyota Motor North America, Inc.

15. Other Information

15.1 Fee filing form

Invoice No.:EPA2027MY011

US EPA Fee Form

Help and EPA Instructions

* Required Field

Tracking Information

Pay.gov Tracking ID: 282SM6AP

Agency Tracking ID: 77406792202

General Information

Date: 06/02/2026

Process Code *

Submit New Fee Filing Form

Manufacturer Code *

TYX

Manufacturer Name *

Toyota Motor Corporation

Contact Name *

Keisha Anderson

Contact Email Address *

keisha.anderson@toyota.com

Contact Phone *

734-995-3552

Calendar Year complete application submitted to EPA *

2026

PLEASE NOTE: These fees apply to complete certification applications received by EPA from January 1, 2026, through December 31, 2026. The applicable fee is determined by the calendar year in which the complete certification application is received, not the model year.

Payment Information

Amount Owed

$32,317.00

Payment Type *

Offline ACH

Comments

EPA Form Number 3520-29
OMB Control No. 2060-0545
Approval expires 7/31/2027
The public reporting and recordkeeping burden for this collection of information is estimated to average 12 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

Engine Family / Evaporative Family / Test Group *

VTYXT03.4B5A

Certificate Request Type (Industry Sector Code)

Certificate Request Type *

- (●) On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (Federal) (A, B, D, J, T, V)
- ( ) On-Highway HDE Dyno Cert (Federal) (E, H)
- ( ) On-Highway LD ICI, MDPV ICI, HDV ICI (A, B, D, J, T, V)
- ( ) On-Highway Motorcycle (C)
- ( ) On-Highway HDV Evap (F)
- ( ) On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (California-Only) (A, B, D, J, T, V)
- ( ) On-Highway HDE Dyno Cert (California-Only) (E, H)
- ( ) Nonroad CI (L)
- ( ) Nonroad SI (B, S)
- ( ) Locomotive (G, K)
- ( ) All Nonroad Recreational, excluding Marine engines (X, Y)
- ( ) All Marine (Including IMO) (M, N, W)
- ( ) Component Certification for Evaporative Emissions (P)

IMO Name (Required for dual US/IMO Marine Only)

ICI VIN Number (Required for ICIs Only)

Do you qualify for a Reduced Fee? *

No

The content of this document may contain Sensitive But Unclassified (SBU) data and/or Controlled Unclassified Information (CUI).

16. Confidential Information

Please refer to the CBI common file.

17.8 Emission Control Information Labels

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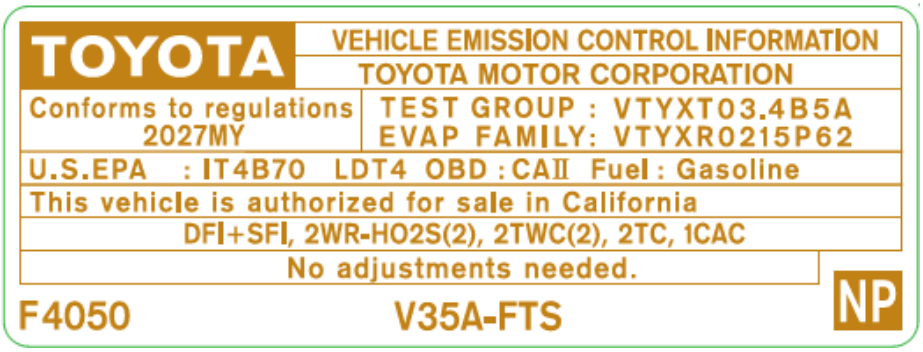
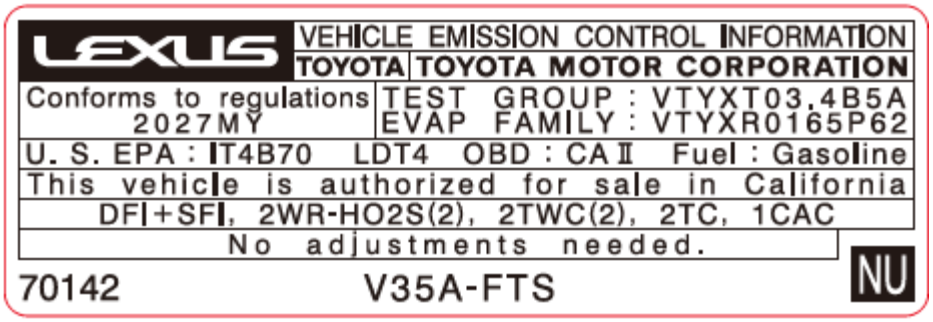
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