

Certification Summary Information Report

Manufacturer	Toyota Motor Corporation	Manufacturer Code	TYX
Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Certificate Number	TTYXV02.5H3A-051	CARB Executive Order #	--
Certificate Issue Date	04/13/2026	Certificate Revision Date	--
Certificate Effective Date	04/13/2026	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	03/06/2026 06:52:35 AM
Model Year	2026		

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
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
Drive Source #2:	Electric Motor		
	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
	Electricity	--	No
Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	No
Fuel Cell Indicator	No	EPA Vehicle Class	LDV
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	TTYXHHGNNB2A	Durability Group Equivalency Factor	0.7
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	05/01/2026	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
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	TTYXV02.0E4A
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	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	12/25/2024 09:42:26 PM				
Integrated ORVR?	No	Fuel(s)	Gasoline, Electricity				
Multiple Fuel Storage	Fuels Stored Together						
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	0	Bleed Canister Total Working Capacity (grams)	--				
Mfr Evaporative/Refueling Family Comments	--						
Leak Family Details							
Leak Family Indicator	No						
Canister Bleed Test Indicator	No	Applicability of Evaporative Canister Bleed Test	--				
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	37 - ES 350h	Federal	2-Wheel Drive, Front	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	2 - LEXUS	37 - ES 350h	California + CAA Section 177 states	2-Wheel Drive, Front	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	2 - LEXUS	38 - ES 350h AWD	California + CAA Section 177 states	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	2 - LEXUS	38 - ES 350h AWD	Federal	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Engine Description							
Hybrid Type	IC Engine/Electric Motor	Hybrid Description	--				
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--				
Engine Block Arrangement	Inline	Mfr Engine Block Arrangement Description	--				
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	0W-8				
Number of Cylinders/Rotors	4	Mechanically Variable Compression Ratio Indicator	N				

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42								
After Treatment Device(s) (ATD)											
ATD Number	ATD Type	ATD Precious Metal	Substrate Material								
1	Three-way catalyst	Palladium + Rhodium	Ceramic								
2	Three-way catalyst	Platinum + Rhodium	Ceramic								
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)	2.5	Engine Rated Horsepower	186								
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2								
Air Aspiration Method	Naturally Aspirated	Number of Air Aspiration Devices	--								
Air Aspiration Device Configuration	--	Charge Air Cooler Type	N/A								
Air Aspiration Drive Method(s)	--										
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	1	Number of Air/Fuel Sensors	2								
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	--								
Mfr Air/Fuel Sensor Comments	--										
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	Yes								
EGR Type	Electronic/Electric	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	--										
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	TTYX10093234	TTYX10093234	TTYX10093236	TTYX10093237	TTYX10093238	TTYX10093240	220.7	42.2	173	40	--
Electricity	TTYX10093234	TTYX10093234	TTYX10093236	TTYX10093237	TTYX10093238	TTYX10093240	--	--	--	--	--

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
SFTP LEV-III Official Test Numbers			
Test Group Fuel	FTP	US06	SC03
Gasoline	TTYX10093234	TTYX10093236	TTYX10093237
Electricity	TTYX10093234	TTYX10093236	TTYX10093237
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	248	Battery Energy Capacity	4
Battery Specific Energy	93.8	Battery Charger Type	On-Board
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	Driver Controlled Regenerative Braking	No
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	2		
Motor/Generator Type 1	AC SYNCHRONOUS	Rated Motor/Generator Power	41
Motor/Generator Type 2	AC SYNCHRONOUS	Rated Motor/Generator Power	119
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	"41kWatt" of Rated Motor/Generator Power is only for AWD.		

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
-------------------	--------------	-------------------------------------	--------------

Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	40.829	0.21956	0.025369	25.284	0.08413	0.025532	15.4
Cold CO	44.912	0.24151	0.027906	21.298	0.01124	0.028196	N/A
US06	40.829	0.21956	0.025369	25.284	0.08413	0.025532	N/A

Emission Control Device Comments --
Manufacturer Test Vehicle Comments T/M MODE IS SPORT

Test #	LTYX10061147	Test Procedure	24 - Federal fuel refueling test (ORVR)
Exhaust Test # for this Evap Test	LTYX10061109	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	08/22/2019	Fuel	Gasoline
Fuel Batch ID	1F9-04	Fuel Calibration Number	1
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	4394	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes	Road Speed Fan Usage	Yes
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0027622	--

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	0.003	0	0	0.2	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.003	0	0	0.2	Pass

Certification Summary Information Report

Test Group		TTYXV02.5H3A			Evaporative/Refueling Family			TTYXR0165J42
Dynamometer Coefficients:								
		Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	34.157	0.62236	0.02005	15.296	0.59776	0.018537	15.4	
Cold CO	37.573	0.6846	0.022055	10.22	0.58072	0.020399	N/A	
US06	34.157	0.62236	0.02005	15.296	0.59776	0.018537	N/A	
Emission Control Device Comments	--							
Manufacturer Test Vehicle Comments	Drive mode is SPORT.							

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test #	PTYX10075330	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	PTYX10075191	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	04/21/2022	Fuel	Gasoline
Fuel Batch ID	2M1-02	Fuel Calibration Number	1
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	4101	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes	Road Speed Fan Usage	Yes
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		

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)	0.134	--

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=0.0292, 1ST DBL=0.1048, 2ND DBL=0.0639, 1ST DBL IS ADDED KEY OFF MONITOR LOSS(0.0002GRAM)

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	0.134	0	0.134	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.134	0	0.134	0.3	Pass

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test #	PTYX10075331	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	PTYX10075192	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	04/14/2022	Fuel	Gasoline
Fuel Batch ID	2M1-02	Fuel Calibration Number	1
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	4058	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes	Road Speed Fan Usage	Yes
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		

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)	0.1549	--

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=0.0433, 1ST DBL=0.1116, 2ND DBL=0.0695, 3RD DBL=0.0589, 1ST DBL IS ADDED KEY OFF MONITOR LOSS(0.0002GRAM)

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	0.1549	0	0.155	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.1549	0	0.155	0.3	Pass

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
-------------------	--------------	-------------------------------------	--------------

Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	32.086	-0.0675	0.020777	15.754	-0.15401	0.020015	10.8
Cold CO	35.295	-0.07424	0.022855	15.009	-0.20923	0.022806	N/A
US06	32.086	-0.0675	0.020777	15.754	-0.15401	0.020015	N/A

Emission Control Device Comments

--

Manufacturer Test Vehicle Comments

DRIVE MODE IS SPORT

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test #	TTYX10093234	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	01/14/2026	Fuel	Gasoline
Fuel Batch ID	2D5-02	Fuel Calibration Number	3
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4200	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			

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	200.2040844	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	0.3017907	--	
FE BAG 1 (Bag 1 Fuel Economy)	999	999	
CH4 BAG 1 (Bag 1 Methane)	0.005143	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.0418624	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	93.415045	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0.0128304	--	
FE BAG 2 (Bag 2 Fuel Economy)	999	999	
CH4 BAG 2 (Bag 2 Methane)	0.0023395	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0002347	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	185.6846726	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0.0314595	--	
FE BAG 3 (Bag 3 Fuel Economy)	999	999	
CH4 BAG 3 (Bag 3 Methane)	0.0051156	--	
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0.0026415	--	
CO2 BAG 4 (Bag 4 Carbon Dioxide)	90.4787307	--	
CO BAG 4 (Bag 4 Carbon Monoxide)	0.0179442	--	
FE BAG 4 (Bag 4 Fuel Economy)	999	999	
CH4 BAG 4 (Bag 4 Methane)	0.0027181	--	
NMOG BAG 4 (Bag 4 Non-methane organic gases)	0.0000713	--	
METHANE (CH4 - Methane)	0.003795	--	
CO (Carbon Monoxide)	0.07935	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.68	--	
DT-EER (Drive Trace Energy Economy Rating)	0.21	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.16	--	
MFR FE (Manufacturer Fuel Economy)	999	999	
NOX (Nitrogen Oxide)	0.0014119	--	
N2O (Nitrous Oxide)	0.0003276	--	
HC-NM (Non-methane Hydrocarbon)	0.0086182	--	
NMOG (Non-methane organic gases)	0.0094904	--	
PM (Particulate Matter)	0.0000416	--	
HC-TOTAL (Total Hydrocarbon)	0.0122098	--	

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
-------------------	--------------	------------------------------	--------------

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	140

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	140.0305161	--

Manufacturer Test Comments Bag1:NMOG = HC-NM x 1.1036 Bag2,Bag4:NMOG = HC-NM x 1.1235 Bag3:NMOG = HC-NM x 1.0505

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	150,000 miles	Federal Tier 3 Bin 30	CO	0.08	--	--	--	0.15	--	0.2	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.22	--	--	--	0.15	--	0.2	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CREE	140	--	--	--	0.157	--	140	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	METHANE	0.0038	--	--	--	0.0027	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	N2O	0.0003	--	--	--	0.0003	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0095	1	1.1	--	0.0048	--	0.014	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0109	1	1.1	--	--	--	0.016	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX-COMP	0.014	1	1.03	--	0.0052	--	0.014	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0014	--	--	--	0.0004	--	0.002	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0	--	--	--	0	--	0	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.08	--	--	--	0.15	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0095	1	1.1	--	0.0048	--	0.014	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0109	1	1.1	--	--	--	0.016	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0014	--	--	--	0.0004	--	0.002	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0	--	--	--	0	--	0	0.001	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	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test #	TTYX10093238	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	01/22/2026	Fuel	Gasoline
Fuel Batch ID	2M3A01	Fuel Calibration Number	21
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4317	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			

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	330.3230796	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	1.1837403	--	
FE BAG 1 (Bag 1 Fuel Economy)	999	999	
CH4 BAG 1 (Bag 1 Methane)	0.0272273	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.1698543	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	126.3456035	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0.0161467	--	
FE BAG 2 (Bag 2 Fuel Economy)	999	999	
CH4 BAG 2 (Bag 2 Methane)	0.0014826	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0011657	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	196.9393046	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0.092753	--	
FE BAG 3 (Bag 3 Fuel Economy)	999	999	
CH4 BAG 3 (Bag 3 Methane)	0.0020444	--	
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0.0021237	--	
CO2 BAG 4 (Bag 4 Carbon Dioxide)	113.2587589	--	
CO BAG 4 (Bag 4 Carbon Monoxide)	0.1005081	--	
CH4 BAG 4 (Bag 4 Methane)	0.0020175	--	
NMOG BAG 4 (Bag 4 Non-methane organic gases)	0.0061102	--	
METHANE (CH4 - Methane)	0.0071301	--	
CO (Carbon Monoxide)	0.3040677	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.41	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.1	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.58	--	
MFR FE (Manufacturer Fuel Economy)	999	999	
NOX (Nitrogen Oxide)	0.0233817	--	
N2O (Nitrous Oxide)	0.001763	--	
HC-NM (Non-methane Hydrocarbon)	0.0342877	--	
NMOG (Non-methane organic gases)	0.037847	--	
HC-TOTAL (Total Hydrocarbon)	0.0406637	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	0	--	

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
-------------------	--------------	-------------------------------------	--------------

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	184.1457579	--

Manufacturer Test Comments Bag1:NMOG = HC-NM x 1.1036 Bag2,Bag4:NMOG = HC-NM x 1.1235 Bag3:NMOG = HC-NM x 1.0505

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 3 Bin 30	CO	0.3	--	--	--	0.05	--	0.4	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.03	--	--	--	0	--	0	0.2	Pass
CA	50,000 miles	California LEV-IV SULEV30	CO	0.3	--	--	--	0.05	--	0.4	10.0	Pass

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test #	TTYX10093240	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	01/09/2026	Fuel	Gasoline
Fuel Batch ID	2D5-02	Fuel Calibration Number	3
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4141	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)
METHANE (CH4 - Methane)	0.0008129	--
CO (Carbon Monoxide)	0.0231468	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.96	--
DT-EER (Drive Trace Energy Economy Rating)	0.2	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.16	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0007157	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0.0007504	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	138

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	138.18271	--

Manufacturer Test Comments NMOG = HC-NM x 1.03

Certification Summary Information Report

Test Group		TTYXV02.5H3A				Evaporative/Refueling Family				TTYXR0165J42		
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	150,000 miles	Federal Tier 3 Bin 30	CREE	138	--	--	--	0.157	--	138	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	1	1.03	--	0.0048	--	0.005	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0007	1	1.03	--	--	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0007	--	--	--	0.0004	--	0.001	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	1	1.03	--	0.0048	--	0.005	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0007	1	1.03	--	--	--	0.006	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0007	--	--	--	0.0004	--	0.001	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	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test #	TTYX10093236	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	01/09/2026	Fuel	Gasoline
Fuel Batch ID	2D5-02	Fuel Calibration Number	3
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4162	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			

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
-------------------	--------------	------------------------------	--------------

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	270.7111081	--
CO BAG 1 (Bag 1 Carbon Monoxide)	0.0722292	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CH4 BAG 1 (Bag 1 Methane)	0.0018069	--
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.0017028	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	176.5393089	--
CO BAG 2 (Bag 2 Carbon Monoxide)	0.0551916	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CH4 BAG 2 (Bag 2 Methane)	0.0013014	--
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0015326	--
METHANE (CH4 - Methane)	0.0014134	--
CO (Carbon Monoxide)	0.058967	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.04	--
DT-EER (Drive Trace Energy Economy Rating)	-0.27	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.2	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0113678	--
N2O (Nitrous Oxide)	0.0001847	--
HC-NM (Non-methane Hydrocarbon)	0.0015246	--
NMOG (Non-methane organic gases)	0.0015703	--
PM (Particulate Matter)	0.0001477	--
HC-TOTAL (Total Hydrocarbon)	0.0028622	--

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	197.4074115	--

Manufacturer Test Comments

NMOG = HC-NM x 1.0300

Certification Summary Information Report

Test Group		TTYXV02.5H3A				Evaporative/Refueling Family				TTYXR0165J42		
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	150,000 miles	Federal Tier 3 Bin 30	PM	0.0001	--	--	--	0	--	0	0.006	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.06	--	--	--	0.15	--	0.2	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0016	1	1.03	--	0.0048	--	0.006	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.013	1	1.03	--	--	--	0.018	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0114	--	--	--	0.0004	--	0.012	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0001	--	--	--	0	--	0	0.006	Pass

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Test #	TTYX10093237	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	12/18/2025	Fuel	Gasoline
Fuel Batch ID	2D5-02	Fuel Calibration Number	2
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	Toyota Motor Corporation		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4038	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)
METHANE (CH4 - Methane)	0.0042281	--
CO (Carbon Monoxide)	0.06441	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.44	--
DT-EER (Drive Trace Energy Economy Rating)	0.04	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.7	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0009793	--
N2O (Nitrous Oxide)	0.0000541	--
HC-NM (Non-methane Hydrocarbon)	0.0025907	--
NMOG (Non-methane organic gases)	0.0026684	--
HC-TOTAL (Total Hydrocarbon)	0.0065461	--

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	195.8699586	--

Manufacturer Test Comments

NMOG = HC-NM x 1.03

Certification Summary Information Report

Test Group		TTYXV02.5H3A				Evaporative/Refueling Family				TTYXR0165J42		
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
CA	150,000 miles	California LEV-IV SULEV30	CO	0.06	--	--	--	0.15	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0027	1	1.03	--	0.0048	--	0.008	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0037	1	1.03	--	--	--	0.009	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.001	--	--	--	0.0004	--	0.001	999.999	Pass

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Fuel Properties			
Fuel Batch ID	1F9-04	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/05/2019
Fuel Batch Calibration Effective Date	07/25/2019	Fuel Batch Calibration Ineffective Date	07/31/2019
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.739
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17823
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	2D5-02	Fuel Calibration Number	3
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	04/03/2025
Fuel Batch Calibration Effective Date	01/06/2026	Fuel Batch Calibration Ineffective Date	01/31/2026
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)	--
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.528	Fuel Carbon Mass Fraction (E10)	0.825
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--
Fuel Batch ID	2M1-02	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/19/2021
Fuel Batch Calibration Effective Date	04/07/2022	Fuel Batch Calibration Ineffective Date	04/30/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.737
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17833
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	2M3A01	Fuel Calibration Number	21
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	12/22/2023
Fuel Batch Calibration Effective Date	01/06/2026	Fuel Batch Calibration Ineffective Date	01/31/2026

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	0.825
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.735
Fuel Ethanol Volume Percent (%)	9.6	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	--
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.552	Fuel Carbon Mass Fraction (E10)	0.825
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--
Fuel Batch ID	2F1A11	Fuel Calibration Number	2
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/28/2020
Fuel Batch Calibration Effective Date	03/01/2022	Fuel Batch Calibration Ineffective Date	03/31/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.735
Fuel Ethanol Volume Percent (%)	0.1	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17874
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	2D5-02	Fuel Calibration Number	2
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	04/03/2025
Fuel Batch Calibration Effective Date	12/01/2025	Fuel Batch Calibration Ineffective Date	12/31/2025
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)	--
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.528	Fuel Carbon Mass Fraction (E10)	0.825
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--

Certification Summary Information Report

Test Group	TTYXV02.5H3A			Evaporative/Refueling Family			TTYXR0165J42		
Consolidated List of Standards									
Exhaust Standards									
Cert Region	California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class	LDV/Passenger Car			Standard Level			California LEV-IV SULEV30		
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	--	--	--	--	--	--	0.15	9.6
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0048	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0052	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006
Cert Region									
Vehicle Class									
Fuel									
California + CAA Section 177 states			Cert/In-Use Code			Cert			
LDV/Passenger Car			Standard Level			California LEV-IV SULEV30			
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	--	--	--	--	--	--	0.15	1.0
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0048	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0052	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999
Cert Region									
Vehicle Class									
Fuel									
California + CAA Section 177 states			Cert/In-Use Code			Cert			
LDV/Passenger Car			Standard Level			California LEV-IV SULEV30			
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	--	--	--	--	--	--	--	1.0
4,000 miles	HCHO	--	--	--	--	--	--	--	0.008
4,000 miles	NMOG	--	1	1.1	--	--	--	--	999.999
4,000 miles	NMOG+NOX	--	1	1.1	--	--	1	--	0.040
4,000 miles	NOX	--	--	--	--	--	--	--	999.999

Certification Summary Information Report

Test Group	TTYXV02.5H3A		Evaporative/Refueling Family				TTYXR0165J42		
Cert Region	California + CAA Section 177 states		Cert/In-Use Code				Cert		
Vehicle Class	LDV/Passenger Car		Standard Level				California LEV-IV SULEV30		
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	--	--	--	--	--	--	0.15	1.0
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	1	1.1	--	--	--	0.0048	999.999
150,000 miles	NMOG+NOX	--	1	1.1	--	--	--	0.0052	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.001

Cert Region	Federal		Cert/In-Use Code				Cert		
Vehicle Class	LDV/Passenger Car		Standard Level				Federal Tier 3 Bin 30		
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	--	--	--	--	--	--	0.15	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	0.15	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.157	999.999
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.0027	0.030
150,000 miles	N2O	--	--	--	--	--	--	0.0003	0.010
150,000 miles	NMOG	--	1	1.1	--	--	--	0.0048	999.999
150,000 miles	NMOG+NOX	--	1	1.1	--	--	--	0.0052	0.030
150,000 miles	NMOG+NOX-COMP	--	1	1.03	--	--	--	0.0052	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

Certification Summary Information Report

Test Group		TTYXV02.5H3A			Evaporative/Refueling Family			TTYXR0165J42	
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 30	
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	--	--	--	--	--	--	0.157	999.999
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0048	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0052	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999

Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 30	
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	--	--	--	--	--	--	0.05	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0	0.2

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV SULEV30	
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	--	--	--	0.0048	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0052	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999

Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 30	
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	0.006

Certification Summary Information Report

Test Group		TTYXV02.5H3A			Evaporative/Refueling Family			TTYXR0165J42		
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV SULEV30		
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	--	--	--	--	--	--	0.05	10.0	

Evaporative/Refueling Standards

Evaporative/Refueling Family		TTYXR0165J42			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					

Evaporative/Refueling Family		TTYXR0165J42			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					

Evaporative/Refueling Family		TTYXR0165J42			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					

Evaporative/Refueling Family		TTYXR0165J42			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	--					

Certification Summary Information Report

Test Group	TTYXV02.5H3A		Evaporative/Refueling Family	TTYXR0165J42	
Evaporative/Refueling Family	TTYXR0165J42		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	--	0.300	0
Evaporative/Refueling Family	TTYXR0165J42		Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)	
Cert/In-Use Code	Cert		Standard Level		
Test Procedure	Federal fuel 3-day evap				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0
Evaporative/Refueling Family	TTYXR0165J42		Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)	
Cert/In-Use Code	Cert		Standard Level		
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
Evaporative/Refueling Family	TTYXR0165J42		Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)	
Cert/In-Use Code	Cert		Standard Level		
Test Procedure	2-day evap				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0
Evaporative/Refueling Family	TTYXR0165J42		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	--	0.300	0

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
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		TTYXV02.5H3A	Evaporative/Refueling Family		TTYXR0165J42
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	

Certification Summary Information Report

Test Group	TTYXV02.5H3A	Evaporative/Refueling Family	TTYXR0165J42
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	TTYXV02.5H3A	Evaporative/Refueling Family		TTYXR0165J42
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	