

**Certification Summary Information Report**

<b>Manufacturer</b>	Toyota Motor Corporation	<b>Manufacturer Code</b>	TYX
<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
<b>Certificate Number</b>	TTYXJ02.5H3X-050	<b>CARB Executive Order #</b>	--
<b>Certificate Issue Date</b>	01/20/2026	<b>Certificate Revision Date</b>	--
<b>Certificate Effective Date</b>	01/20/2026	<b>Conditional Certificate</b>	No
<b>CSI Revision #</b>	--	<b>CSI Submission/Revision Date</b>	12/11/2025 10:03:16 PM
<b>Model Year</b>	2026		

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
<b>Test Group Information</b>			
<b>CSI Type</b>	New	<b>Running Change Reference Number</b>	--
<b>GHG Exempt Status</b>	Not Exempt		
<b>Drive Sources and Fuel(s)</b>			
<b>Drive Source #1:</b>	Electric Motor		
	<b>Fuel</b>	<b>Basic Fuel Metering System</b>	<b>Lean Burn Strategy Indicator</b>
	Electricity	--	No
<b>Drive Source #2:</b>	Combustion Engine		
	<b>Fuel</b>	<b>Basic Fuel Metering System</b>	<b>Lean Burn Strategy Indicator</b>
	Gasoline	Spark Ignition direct & ported injection	No
<b>Hybrid Indicator</b>	Yes		
<b>Multiple Fuel Storage</b>	--	<b>Rechargeable Energy Storage System Indicator</b>	Yes
<b>Multiple Fuel Combustion</b>	--	<b>Off-board Charge Capable Indicator</b>	Yes
<b>Fuel Cell Indicator</b>	No	<b>EPA Vehicle Class</b>	LDT2, LDV
<b>Federal Clean Fuel Vehicle</b>	No	<b>Federal Clean Fuel Vehicle Standard</b>	--
<b>Federal Clean Fuel Vehicle ILEV</b>	No	<b>California Partial Zero Emissions Vehicle Indicator</b>	No
<b>Durability Group Name</b>	TTYXHHGNNE25	<b>Durability Group Equivalency Factor</b>	1.4
<b>Reduced Fee Test Group</b>	No	<b>Certification Region Code(s)</b>	FA, CA
<b>Complies with HD GHG 2b/3 regulations?</b>	No		
<b>Introduction into Commerce Date</b>	03/01/2026	<b>CAP2000 Conditional Certificate?</b>	No
<b>Independent Commercial Importer?</b>	No	<b>Alternative Fuel Converter Certificate?</b>	No
<b>SFTP Federal Composite Compliance Identifier</b>	Tier 3	<b>SFTP Tier 2 Composite CO Option</b>	No
<b>SFTP LEV-III Composite Compliance Indicator</b>	Yes		
<b>OBD Compliance Type</b>	CARB	<b>OBD Demonstration Vehicle Test Group</b>	TTYXV02.0E4A
<b>Test Group OBD Compliance Level</b>	Partial - with deficiencies	<b>Number of Test Group OBD Deficiencies</b>	1
<b>OBD Deficiencies Comments</b>	--		
<b>Mfr Test Group Comments</b>	--		
<b>Mfr Exhaust / Evap Standards Comments</b>	--		

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42				
<b>Evaporative/Refueling Family Information</b>							
<b>Evaporative Summary Information Type</b>	New	<b>Submission/Correction Date</b>	12/25/2024 09:42:26 PM				
<b>Integrated ORVR?</b>	No	<b>Fuel(s)</b>	Electricity, Gasoline				
<b>Multiple Fuel Storage</b>	Fuels Stored Together						
<b>Bladder Fuel Tank?</b>	No						
<b>Fuel Tank Material</b>	Plastic	<b>Fuel Tank Material Description</b>	EVOH				
<b>Fill Pipe Seal Type</b>	Liquid seal						
<b>Air Intake System Vapor Storage Device?</b>	No	<b>Air Intake System Vapor Storage Device Description</b>	--				
<b>Fuel System Vapor Storage Canister?</b>	Yes	<b>Other Vapor Storage</b>	--				
<b>Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)</b>	165	<b>Number of Primary Canisters</b>	1				
<b>Number of Bleed Canisters</b>	0	<b>Bleed Canister Total Working Capacity (grams)</b>	--				
<b>Mfr Evaporative/Refueling Family Comments</b>	--						
<b>Leak Family Details</b>							
<b>Leak Family Indicator</b>	No						
<b>Canister Bleed Test Indicator</b>	No	<b>Applicability of Evaporative Canister Bleed Test</b>	--				
<b>Evaporative Canister Bleed Test Comments</b>	--						
<b>CARB Fuel Only (Rig) Test Indicator</b>	No	<b>Applicability of CARB Fuel Only (Rig) Test</b>	--				
<b>CARB Fuel Only (Rig) Test Comments</b>	--						
<b>Models Covered by this Certificate</b>							
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Toyota Motor Corporation	1 - TOYOTA	168 - RAV4 PHEV AWD GR-S	California + CAA Section 177 states	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	1 - TOYOTA	159 - RAV4 PHEV AWD	Federal	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	1 - TOYOTA	168 - RAV4 PHEV AWD GR-S	Federal	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	1 - TOYOTA	169 - RAV4 PHEV AWD WOODLAND EDITION	Federal	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	1 - TOYOTA	159 - RAV4 PHEV AWD	California + CAA Section 177 states	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	1 - TOYOTA	169 - RAV4 PHEV AWD WOODLAND EDITION	California + CAA Section 177 states	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42	
<b>Engine Description</b>				
<b>Hybrid Type</b>	IC Engine/Electric Motor	<b>Hybrid Description</b>	--	
<b>Engine Type</b>	4-Stroke Spark Ignition	<b>Mfr Engine Description</b>	--	
<b>Engine Block Arrangement</b>	Inline	<b>Mfr Engine Block Arrangement Description</b>	--	
<b>Camless Valvetrain Indicator</b>	No	<b>Oil Viscosity/Classification</b>	0W-16	
<b>Number of Cylinders/Rotors</b>	4	<b>Mechanically Variable Compression Ratio Indicator</b>	N	
<b>After Treatment Device(s) (ATD)</b>				
<b>ATD Number</b>	<b>ATD Type</b>	<b>ATD Precious Metal</b>	<b>Substrate Material</b>	<b>Substrate Construction</b>
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Platinum + Rhodium	Ceramic	Monolith
<b>Mfr After Treatment Device (ATD) Comments</b>	--			
<b>Direct Ozone Reduction (DOR) Device</b>	Not Equipped			
<b>Mfr Emission Control Device Comments</b>	--			
<b>Engine Configuration Number 1</b>				
<b>Engine Displacement (liters)</b>	2.5	<b>Engine Rated Horsepower</b>	186	
<b>Number of Inlet Valves Per Cylinder</b>	2	<b>Number of Exhaust Valves Per Cylinder</b>	2	
<b>Air Aspiration Method</b>	Naturally Aspirated	<b>Number of Air Aspiration Devices</b>	--	
<b>Air Aspiration Device Configuration</b>	--	<b>Charge Air Cooler Type</b>	N/A	
<b>Air Aspiration Drive Method(s)</b>	--			
<b>Cylinder Deactivation</b>	No			
<b>Cylinder Deactivation Description</b>	--			
<b>Variable Valve Timing</b>	Yes			
<b>Variable Valve Timing System Description</b>	Intake and exhaust			
<b>Variable Valve Lift?</b>	No			
<b>Variable Valve Lift System Description</b>	--			
<b>Number of Knock Sensors</b>	1	<b>Number of Air/Fuel Sensors</b>	2	
<b>Air/Fuel Sensor # 1 Type</b>	Heated air fuel	<b>Air/Fuel Sensor # 1 Description</b>	--	
<b>Air/Fuel Sensor # 2 Type</b>	Heated air fuel	<b>Air/Fuel Sensor # 2 Description</b>	--	
<b>Mfr Air/Fuel Sensor Comments</b>	--			
<b>Exhaust Gas Recirculation</b>	Yes	<b>Cooled Exhaust Gas Recirculation</b>	Yes	
<b>EGR Type</b>	Electronic/Electric	<b>Exhaust Gas Recirculation Description if 'Other'</b>	--	
<b>Closed Loop Air Injection System</b>	No			
<b>Air Injection Type</b>	Not Applicable	<b>Air Injection Type if 'Other'</b>	--	
<b>Mfr Engine Configuration Comments</b>	--			

## Certification Summary Information Report

Test Group		TTYXJ02.5H3X				Evaporative/Refueling Family		TTYXR0165J42			
<b>Official Test Numbers</b>											
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		TTYX10092531	TTYX10092535	TTYX10092534	TTYX10092532	TTYX10092533	205.5	38.1	146.7	33	--
Electricity		TTYX10092531	TTYX10092535	TTYX10092534	TTYX10092532	TTYX10092533	--	--	--	--	--
<b>SFTP LEV-III Official Test Numbers</b>											
Test Group Fuel	FTP		US06		SC03						
Gasoline	TTYX10092531		TTYX10092535		TTYX10092534						
Electricity	TTYX10092531		TTYX10092535		TTYX10092534						
<b>Hybrid Electric Vehicle And Fuel Cell Information</b>											
<b>Rechargeable Energy Storage System</b>	Battery(s)				<b>Rechargeable Energy Storage System, if Other</b>			--			
<b>Battery Type</b>	Lithium Ion				<b>Number of Battery Packs</b>			1			
<b>Total Voltage of Battery Packs</b>	355				<b>Battery Energy Capacity</b>			58			
<b>Battery Specific Energy</b>	116				<b>Battery Charger Type</b>			On-Board			
<b>Number of Capacitors</b>	--				<b>Capacitor Rating (In Farads)</b>			--			
<b>Mfr Capacitor Comments</b>	--										
<b>Hydraulic System Description</b>	--										
<b>Regenerative Braking Type</b>	Electrical Regen Brake				<b>Driver Controlled Regenerative Braking</b>			No			
<b>Regenerative Braking Source</b>	Both										
<b>Mfr Regenerative Braking Description</b>	--										
<b>Drive Motor(s)/Generator(s)</b>	2				<b>Rated Motor/Generator Power</b>			151			
<b>Motor/Generator Type 1</b>	AC Synchronous				<b>Rated Motor/Generator Power</b>			41			
<b>Motor/Generator Type 2</b>	AC Synchronous										
<b>Mfr Fuel Cell Description</b>	--				<b>Usable H2 Fill Capacity (kg)</b>			--			
<b>Fuel Cell On-Board H2 Storage Capacity (kg)</b>	--										
<b>Mfr Hybrid Electric/ Electric Vehicle Comments</b>	Batteries are charged from an external power supply through the charger. The Battery Specific Energy value varies depending on whether DC charging is available or not. The entered value corresponds to the value without DC charging. The value with DC charging is 118.										

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42									
<b>Emission Data Vehicle Information</b>												
<b>Vehicle ID / Configuration</b>	21-AP2H / 0	<b>Manufacturer Vehicle Configuration Number</b>	0									
<b>Original Test Group Name</b>	MTYXT02.5P33	<b>Original Evaporative/Refueling Family</b>	MTYXR0165J82									
<b>Original Test Vehicle Model Year</b>	2021											
<b>Vehicle Model</b>												
<b>Represented Test Vehicle Make</b>	TOYOTA	<b>Represented Test Vehicle Model</b>	RAV4 PRIME AWD									
<b>Leak Family Details</b>												
<b>Leak Family Identifier</b>	--	<b>Leak Family Name</b>	--									
<b>Drive Sources and Fuel System Details</b>												
<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Electric Motor</td> <td>Electricity</td> </tr> <tr> <td>2</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity	2	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel										
1	Electric Motor	Electricity										
2	Combustion Engine	Gasoline										
<b>Hybrid Indicator</b>	Yes											
<b>Multiple Fuel Storage</b>	--	<b>Multiple Fuel Combustion</b>	--									
<b>Fuel Cell Indicator</b>	No	<b>Rechargeable Energy Storage System Indicator</b>	Yes									
<b>Rechargeable Energy Storage System</b>	Battery(s)	<b>Rechargeable Energy Storage System, if 'Other'</b>	--									
<b>Off-board charge Capable Indicator</b>	Yes											
<b>Odometer Correction -- Initial</b>	14	<b>Odometer Correction Factor</b>	1									
<b>Odometer Correction Sign</b>	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor											
<b>Odometer Correction Units</b>	Miles											
<b>Engine Code</b>	01	<b>Rated Horsepower</b>	177									
<b>Displacement (liters)</b>	2.487											
<b>Air Aspiration Method</b>	Naturally Aspirated	<b>Air Aspiration Method, if 'Other'</b>										
<b>Number of Air Aspiration Devices</b>	--	<b>Air Aspiration Device Configuration</b>	--									
<b>Charge Air Cooler Type</b>	N/A	<b>Drive Mode While Testing</b>	2-Wheel Drive, Front									
<b>Shift Indicator Light Usage</b>	Not equipped	<b>Aged Emission Components</b>	4,000 (mi)									
<b>Curb Weight (lbs)</b>	4300	<b>Equivalent Test Weight (pounds)</b>	4500									
<b>GVWR (lbs)</b>	5530	<b>N/V Ratio</b>	22									
<b>Axle Ratio</b>	3.41											
<b>Transmission Type</b>	Continuously Variable	<b># of Transmission Gears</b>	1									
<b>Transmission Lockup</b>	No	<b>Creeper Gear</b>	No									

### Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
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**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)	
<b>City/Highway/Evap</b>	28.089	0.14349	0.025579	12.716	0.02442	0.025499	13.2
<b>US06</b>	28.089	0.14349	0.025579	12.716	0.02442	0.025499	N/A

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

<b>Test #</b>	<b>MTYX10063476</b>	<b>Test Procedure</b>	<b>24 - Federal fuel refueling test (ORVR)</b>
<b>Exhaust Test # for this Evap Test</b>	MTYX10063424	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	01/30/2020	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	1G9-01	<b>Fuel Calibration Number</b>	2
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	5016	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes	<b>Road Speed Fan Usage</b>	Yes
<b>Drive Cycle Speed Tolerance Criteria</b>	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)
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.0043324	--

**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	0.004	0	0	0.2	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.004	0	0	0.2	Pass



## Certification Summary Information Report

Test Group		TTYXJ02.5H3X			Evaporative/Refueling Family			TTYXR0165J42
<b>Dynamometer Coefficients:</b>								
		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	32.963	0.34363	0.024479	15.69	0.13738	0.02495	14.8	
Cold CO	36.259	0.37799	0.026927	16.107	0.02488	0.02802	N/A	
US06	32.963	0.34363	0.024479	15.69	0.13738	0.02495	N/A	
Emission Control Device Comments	--							
Manufacturer Test Vehicle Comments	DRIVE MODE IS SPORT							

### Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
<b>Test #</b>	<b>RTYX10079330</b>	<b>Test Procedure</b>	<b>23 - 2-day evap</b>
<b>Exhaust Test # for this Evap Test</b>	RTYX10079329	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/15/2023	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	2M2A03	<b>Fuel Calibration Number</b>	3
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	4163	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes	<b>Road Speed Fan Usage</b>	Yes
<b>Drive Cycle Speed Tolerance Criteria</b>	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)
<b>CO2 BAG 1 (Bag 1 Carbon Dioxide)</b>	0	--
<b>FE BAG 1 (Bag 1 Fuel Economy)</b>	999	999
<b>CO2 BAG 2 (Bag 2 Carbon Dioxide)</b>	0	--
<b>FE BAG 2 (Bag 2 Fuel Economy)</b>	999	999
<b>CO2 BAG 3 (Bag 3 Carbon Dioxide)</b>	0	--
<b>FE BAG 3 (Bag 3 Fuel Economy)</b>	999	999
<b>MFR FE (Manufacturer Fuel Economy)</b>	999	999
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.1381	--

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

Test Result Name	Unrounded Test Result	Verify Calculated CO2
<b>Carbon dioxide</b>	0	--

**Manufacturer Test Comments**                      HSL=0.0143, 1ST DBL=0.1238, 2ND DBL=0.0842, 1ST DBL IS ADDED KEY OFF MONITOR LOSS(0.0086GRAM)

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	0.1381	0	0.138	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.1381	0	0.138	0.3	Pass

### Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
<b>Test #</b>	<b>RTYX10079367</b>	<b>Test Procedure</b>	<b>38 - CA fuel 3-day evap.</b>
<b>Exhaust Test # for this Evap Test</b>	RTYX10079365	<b>Test Fuel Type</b>	46 - CARB LEV3 E10 Regular Gasoline
<b>Test Date</b>	03/20/2023	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	2L2-10	<b>Fuel Calibration Number</b>	2
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	4273	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes	<b>Road Speed Fan Usage</b>	Yes
<b>Drive Cycle Speed Tolerance Criteria</b>	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)
<b>CO2 BAG 1 (Bag 1 Carbon Dioxide)</b>	0	--
<b>FE BAG 1 (Bag 1 Fuel Economy)</b>	999	999
<b>CO2 BAG 2 (Bag 2 Carbon Dioxide)</b>	0	--
<b>FE BAG 2 (Bag 2 Fuel Economy)</b>	999	999
<b>CO2 BAG 3 (Bag 3 Carbon Dioxide)</b>	0	--
<b>FE BAG 3 (Bag 3 Fuel Economy)</b>	999	999
<b>MFR FE (Manufacturer Fuel Economy)</b>	999	999
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.1866	--

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

Test Result Name	Unrounded Test Result	Verify Calculated CO2
<b>Carbon dioxide</b>	0	--

**Manufacturer Test Comments**                      HSL=0.0338, 1ST DBL=0.1528, 2ND DBL=0.0837, 3RD DBL=0.0798, 1ST DBL IS ADDED KEY OFF MONITOR LOSS(0.0086GRAM)

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	0.1866	0	0.187	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.1866	0	0.187	0.3	Pass





## Certification Summary Information Report

Test Group	TTYXJ02.5H3X			Evaporative/Refueling Family			TTYXR0165J42
<b>Dynamometer Coefficients:</b>							
	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	35.281	0.0688	0.027616	13.659	0.05703	0.026354	14.4
Cold CO	38.809	0.07568	0.030377	13.133	-0.13802	0.030066	N/A
US06	35.281	0.0688	0.027616	13.659	0.05703	0.026354	N/A
Emission Control Device Comments	--						
Manufacturer Test Vehicle Comments	DRIVE MODE IS NORMAL						

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
<b>Test #</b>	<b>TTYX10092531</b>	<b>Test Procedure</b>	<b>21 - Federal fuel 2-day exhaust (w/can load)</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	09/05/2025	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	2A5-01	<b>Fuel Calibration Number</b>	2
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4057	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes
<b>Test Results</b>			

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	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)	249.6348786	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	0.1857234	--	
FE BAG 1 (Bag 1 Fuel Economy)	999	999	
CH4 BAG 1 (Bag 1 Methane)	0.0076434	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.0508416	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	87.8645013	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0.0238006	--	
FE BAG 2 (Bag 2 Fuel Economy)	999	999	
CH4 BAG 2 (Bag 2 Methane)	0.0027727	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0024949	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	226.471827	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0.0472583	--	
FE BAG 3 (Bag 3 Fuel Economy)	999	999	
CH4 BAG 3 (Bag 3 Methane)	0.0036838	--	
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0.0039179	--	
CO2 BAG 4 (Bag 4 Carbon Dioxide)	82.4306262	--	
CO BAG 4 (Bag 4 Carbon Monoxide)	0.0354699	--	
FE BAG 4 (Bag 4 Fuel Economy)	999	999	
CH4 BAG 4 (Bag 4 Methane)	0.0021381	--	
NMOG BAG 4 (Bag 4 Non-methane organic gases)	0.0013	--	
METHANE (CH4 - Methane)	0.0038454	--	
CO (Carbon Monoxide)	0.0672582	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.36	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.11	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.7	--	
MFR FE (Manufacturer Fuel Economy)	999	999	
NOX (Nitrogen Oxide)	0.0012153	--	
N2O (Nitrous Oxide)	0.0002916	--	
HC-NM (Non-methane Hydrocarbon)	0.0114111	--	
NMOG (Non-methane organic gases)	0.0125555	--	
PM (Particulate Matter)	0.0000995	--	
HC-TOTAL (Total Hydrocarbon)	0.014926	--	

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
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<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CREE/OPT-CREE</b>
Carbon-Related Exhaust Emissions	0	158

<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CO2</b>
Carbon dioxide	157.8821094	--

**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	0.07	--	--	--	0.04	--	0.1	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.14	--	--	--	0.04	--	0.1	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CREE	158	--	--	--	0.057	--	158	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	METHANE	0.0038	--	--	--	0.002	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	N2O	0.0003	--	--	--	0	--	0	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0126	1	1.1	--	0.0044	--	0.017	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0138	1	1.1	--	--	--	0.018	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX-COMP	0.0143	1	1.03	--	0.0047	--	0.014	0.040	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0012	--	--	--	0.0003	--	0.002	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0001	--	--	--	0	--	0	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.07	--	--	--	0.04	--	0.1	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0126	1	1.1	--	0.0044	--	0.017	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0138	1	1.1	--	--	--	0.018	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0012	--	--	--	0.0003	--	0.002	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0001	--	--	--	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	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
<b>Test #</b>	<b>TTYX10092532</b>	<b>Test Procedure</b>	<b>11 - Cold CO</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	28 - Cold CO E10 Regular Gasoline (Tier 3)
<b>Test Date</b>	09/12/2025	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	2M3A01	<b>Fuel Calibration Number</b>	17
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4146	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes
<b>Test Results</b>			

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	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)	373.3462619	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	1.285672	--	
FE BAG 1 (Bag 1 Fuel Economy)	999	999	
CH4 BAG 1 (Bag 1 Methane)	0.0396714	--	
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.4163045	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	261.3777352	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0.2189203	--	
FE BAG 2 (Bag 2 Fuel Economy)	999	999	
CH4 BAG 2 (Bag 2 Methane)	0.0009025	--	
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0006723	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	255.4932037	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0.084872	--	
FE BAG 3 (Bag 3 Fuel Economy)	999	999	
CH4 BAG 3 (Bag 3 Methane)	0.0018857	--	
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0.0005402	--	
CO2 BAG 4 (Bag 4 Carbon Dioxide)	197.1830509	--	
CO BAG 4 (Bag 4 Carbon Monoxide)	0.1452777	--	
FE BAG 4 (Bag 4 Fuel Economy)	999	999	
CH4 BAG 4 (Bag 4 Methane)	0.001673	--	
NMOG BAG 4 (Bag 4 Non-methane organic gases)	0	--	
METHANE (CH4 - Methane)	0.0094413	--	
CO (Carbon Monoxide)	0.3816085	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.69	--	
DT-EER (Drive Trace Energy Economy Rating)	0.21	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.07	--	
MFR FE (Manufacturer Fuel Economy)	999	999	
NOX (Nitrogen Oxide)	0.001828	--	
N2O (Nitrous Oxide)	0.0008601	--	
HC-NM (Non-methane Hydrocarbon)	0.0785161	--	
NMOG (Non-methane organic gases)	0.0866455	--	
HC-TOTAL (Total Hydrocarbon)	0.0873253	--	

### Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
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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	264.0297641	--

**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	0.38	--	--	--	0.01	--	0.4	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.08	--	--	--	0	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-IV SULEV30	CO	0.38	--	--	--	0.01	--	0.4	10.0	Pass

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
<b>Test #</b>	<b>TTYX10092533</b>	<b>Test Procedure</b>	<b>3 - HWFE</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	09/05/2025	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	2A5-01	<b>Fuel Calibration Number</b>	2
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4072	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO BAG 1 (Bag 1 Carbon Monoxide)	0.0480017	--
CH4 BAG 1 (Bag 1 Methane)	0.0005923	--
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.0004294	--
METHANE (CH4 - Methane)	0.0005923	--
CO (Carbon Monoxide)	0.0480017	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.73	--
DT-EER (Drive Trace Energy Economy Rating)	-0.07	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.2	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0003368	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0004169	--
NMOG (Non-methane organic gases)	0.0004294	--
HC-TOTAL (Total Hydrocarbon)	0.0009583	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	172

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	171.6657389	--

## Manufacturer Test Comments

NMOG = HC-NM x 1.03

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
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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	172	--	--	--	0.057	--	172	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0004	1	1.03	--	0.0044	--	0.005	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0007	1	1.03	--	--	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0003	--	--	--	0.0003	--	0.001	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0004	1	1.03	--	0.0044	--	0.005	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0007	1	1.03	--	--	--	0.005	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0003	--	--	--	0.0003	--	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	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
<b>Test #</b>	<b>TTYX10092535</b>	<b>Test Procedure</b>	<b>90 - US06</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	09/05/2025	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	2A5-01	<b>Fuel Calibration Number</b>	2
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4093	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes
<b>Test Results</b>			

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated FE Equivalent Value (miles per gallon)</b>
	CO2 BAG 1 (Bag 1 Carbon Dioxide)	272.1716854	--
	CO BAG 1 (Bag 1 Carbon Monoxide)	0.1930661	--
	FE BAG 1 (Bag 1 Fuel Economy)	999	999
	CH4 BAG 1 (Bag 1 Methane)	0.0036634	--
	NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.0166936	--
	CO2 BAG 2 (Bag 2 Carbon Dioxide)	234.506855	--
	CO BAG 2 (Bag 2 Carbon Monoxide)	0.1595323	--
	FE BAG 2 (Bag 2 Fuel Economy)	999	999
	CH4 BAG 2 (Bag 2 Methane)	0.0026069	--
	NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.0063493	--
	METHANE (CH4 - Methane)	0.0028409	--
	CO (Carbon Monoxide)	0.1669607	--
	DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.24	--
	DT-EER (Drive Trace Energy Economy Rating)	-0.25	--
	DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.75	--
	MFR FE (Manufacturer Fuel Economy)	999	999
	NOX (Nitrogen Oxide)	0.0025138	--
	N2O (Nitrous Oxide)	0.0003384	--
	HC-NM (Non-methane Hydrocarbon)	0.0083891	--
	NMOG (Non-methane organic gases)	0.0086408	--
	PM (Particulate Matter)	0.0003593	--
	HC-TOTAL (Total Hydrocarbon)	0.0109858	--
	<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CREE/OPT-CREE</b>
	Carbon-Related Exhaust Emissions	0	--
	<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CO2</b>
	Carbon dioxide	242.8503455	--
<b>Manufacturer Test Comments</b>	NMOG = HC-NM x 1.03		

## Certification Summary Information Report

Test Group		TTYXJ02.5H3X				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	0.0004	--	--	--	0	--	0	0.006	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.17	--	--	--	0.04	--	0.2	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0086	1	1.03	--	0.0044	--	0.013	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0111	1	1.03	--	--	--	0.016	0.036	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0025	--	--	--	0.0003	--	0.003	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0004	--	--	--	0	--	0	0.006	Pass

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
<b>Test #</b>	<b>TTYX10092534</b>	<b>Test Procedure</b>	<b>95 - SC03</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	10/10/2025	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	2A5-01	<b>Fuel Calibration Number</b>	3
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4920	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0024268	--
CO (Carbon Monoxide)	0.067682	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.21	--
DT-EER (Drive Trace Energy Economy Rating)	0.03	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.21	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.001266	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0030657	--
NMOG (Non-methane organic gases)	0.0031577	--
HC-TOTAL (Total Hydrocarbon)	0.0053303	--

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	213.5821096	--

## Manufacturer Test Comments

NMOG = HC-NM x 1.03

## Certification Summary Information Report

Test Group		TTYXJ02.5H3X				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	0.07	--	--	--	0.04	--	0.1	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0032	1	1.03	--	0.0044	--	0.008	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0045	1	1.03	--	--	--	0.009	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0013	--	--	--	0.0003	--	0.002	999.999	Pass

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42									
<b>Emission Data Vehicle Information</b>												
<b>Vehicle ID / Configuration</b>	26-AP4H / 1	<b>Manufacturer Vehicle Configuration Number</b>	1									
<b>Original Test Group Name</b>	TTYXJ02.5H3X	<b>Original Evaporative/Refueling Family</b>	TTYXR0165J42									
<b>Original Test Vehicle Model Year</b>	2026											
<b>Vehicle Model</b>												
<b>Represented Test Vehicle Make</b>	TOYOTA	<b>Represented Test Vehicle Model</b>	RAV4 PHEV AWD GR-S									
<b>Leak Family Details</b>												
<b>Leak Family Identifier</b>	--	<b>Leak Family Name</b>	--									
<b>Drive Sources and Fuel System Details</b>												
<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> <tr> <td>2</td> <td>Electric Motor</td> <td>Electricity</td> </tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	2	Electric Motor	Electricity
Drive Source and Fuel#	Drive Source	Fuel										
1	Combustion Engine	Gasoline										
2	Electric Motor	Electricity										
<b>Hybrid Indicator</b>	Yes											
<b>Multiple Fuel Storage</b>	--	<b>Multiple Fuel Combustion</b>	--									
<b>Fuel Cell Indicator</b>	No	<b>Rechargeable Energy Storage System Indicator</b>	Yes									
<b>Rechargeable Energy Storage System</b>	Battery(s)	<b>Rechargeable Energy Storage System, if 'Other'</b>	--									
<b>Off-board charge Capable Indicator</b>	Yes											
<b>Odometer Correction -- Initial</b>	0	<b>Odometer Correction Factor</b>	1									
<b>Odometer Correction Sign</b>	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor											
<b>Odometer Correction Units</b>	Miles											
<b>Engine Code</b>	01	<b>Rated Horsepower</b>	186									
<b>Displacement (liters)</b>	2.487											
<b>Air Aspiration Method</b>	Naturally Aspirated	<b>Air Aspiration Method, if 'Other'</b>										
<b>Number of Air Aspiration Devices</b>	--	<b>Air Aspiration Device Configuration</b>	--									
<b>Charge Air Cooler Type</b>	N/A	<b>Drive Mode While Testing</b>	2-Wheel Drive, Front									
<b>Shift Indicator Light Usage</b>	Not equipped	<b>Aged Emission Components</b>	4,000 (mi)									
<b>Curb Weight (lbs)</b>	4430	<b>Equivalent Test Weight (pounds)</b>	4750									
<b>GVWR (lbs)</b>	5705	<b>N/V Ratio</b>	24.5									
<b>Axle Ratio</b>	3.44											
<b>Transmission Type</b>	Continuously Variable	<b># of Transmission Gears</b>	1									
<b>Transmission Lockup</b>	No	<b>Creeper Gear</b>	No									

### Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
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**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)	
<b>City/Highway/Evap</b>	35.281	0.0688	0.027616	15.34	-0.00868	0.027273	14.4
<b>US06</b>	35.281	0.0688	0.027616	15.34	-0.00868	0.027273	N/A

**Emission Control Device Comments**

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**Manufacturer Test Vehicle Comments**

DRIVE MODE IS NORMAL

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
<b>Test #</b>	<b>TTYX10092576</b>	<b>Test Procedure</b>	<b>81 - Charge Depleting UDDS</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	09/23/2025	<b>Fuel</b>	N/A
<b>Fuel Batch ID</b>	2D5A01	<b>Fuel Calibration Number</b>	2
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4354	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes
<b>PHEV/EV Charge Depleting Test Information</b>			
<b>Recharge Event Voltage</b>	240	<b>Recharge Event Energy (kiloWatt-hours)</b>	18.3882
<b>Charge Depleting Range (Calculated miles)</b>	84.346	<b>Charge Depleting Range (Actual miles)</b>	84.346
<b>Charge Depleting Range Highway (Calculated miles)</b>	--	<b>Derived 5-Cycle Coefficient Model Year</b>	2017
<b>All Electric Range Unadjusted (miles)</b>	80.837	<b>Equivalent All Electric Range (miles)</b>	84.025
<b>Number of Charge Depleting Bags/Phases Conducted</b>	13	<b>Transition Bag/Phase Number</b>	12
<b>Charge Depleting Bag/Phase #1</b>			

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.451
	Average System Voltage		433
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.28
	Drive Trace Energy Economy Rating		-0.12
	Drive Trace Inertia Work Ratio Rating		0.5
	Integrated Amp-hours		3.584
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		1.551872
	System Start State of Charge Watt-hours		0
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #2**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.449
	Average System Voltage		427.5
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.54
	Drive Trace Energy Economy Rating		-0.11
	Drive Trace Inertia Work Ratio Rating		0.79
	Integrated Amp-hours		7.113
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		3.0605195
	System Start State of Charge Watt-hours		1.551872
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #3**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.449
	Average System Voltage		420.6
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.43
	Drive Trace Energy Economy Rating		0.02
	Drive Trace Inertia Work Ratio Rating		0.56
	Integrated Amp-hours		10.6642
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		4.5541542
	System Start State of Charge Watt-hours		3.0605195
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #4**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.46
	Average System Voltage		412.9
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.44
	Drive Trace Energy Economy Rating		0.02
	Drive Trace Inertia Work Ratio Rating		0.94
	Integrated Amp-hours		14.2285
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		6.0258537
	System Start State of Charge Watt-hours		4.5541542
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #5**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.454
	Average System Voltage		405.2
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.35
	Drive Trace Energy Economy Rating		-0.08
	Drive Trace Inertia Work Ratio Rating		0.64
	Integrated Amp-hours		17.8852
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		7.5075485
	System Start State of Charge Watt-hours		6.0258537
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #6**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.444
	Average System Voltage		396.8
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.25
	Drive Trace Energy Economy Rating		-0.35
	Drive Trace Inertia Work Ratio Rating		0.53
	Integrated Amp-hours		21.5984
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		8.9809463
	System Start State of Charge Watt-hours		7.5075485
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #7**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.463
	Average System Voltage		389.1
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		-0.2
	Drive Trace Energy Economy Rating		-0.47
	Drive Trace Inertia Work Ratio Rating		-0.29
	Integrated Amp-hours		25.4012
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		10.4606158
	System Start State of Charge Watt-hours		8.9809463
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #8**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>	<b>Unrounded Test Result</b>	
	Actual Distance Driven (miles)	7.454	
	Average System Voltage	383.4	
	CH4 - Methane	0	
	Carbon Monoxide	0	
	Carbon dioxide	0	
	Carbon-Related Exhaust Emissions	0	
	Drive Trace Absolute Speed Change Rating	-0.13	
	Drive Trace Energy Economy Rating	-0.4	
	Drive Trace Inertia Work Ratio Rating	-0.16	
	Integrated Amp-hours	29.2468	
	Manufacturer Fuel Economy	0	
	Nitrogen Oxide	0	
	Nitrous Oxide	0	
	Non-methane Hydrocarbon	0	
	Non-methane organic gases	0	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	0	
	System End State of Charge Watt-hours	11.9350188	
	System Start State of Charge Watt-hours	10.4606158	
	Total Hydrocarbon	0	

**Charge Depleting Bag/Phase #9**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.451
	Average System Voltage		379.4
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.49
	Drive Trace Energy Economy Rating		-0.08
	Drive Trace Inertia Work Ratio Rating		0.89
	Integrated Amp-hours		33.1486
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		13.4153617
	System Start State of Charge Watt-hours		11.9350188
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #10**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.448
	Average System Voltage		376.2
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.31
	Drive Trace Energy Economy Rating		-0.26
	Drive Trace Inertia Work Ratio Rating		0.58
	Integrated Amp-hours		37.0756
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		14.8926991
	System Start State of Charge Watt-hours		13.4153617
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #11**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.453
	Average System Voltage		373.4
	CH4 - Methane		0.0032
	Carbon Monoxide		0.13
	Carbon dioxide		39
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.32
	Drive Trace Energy Economy Rating		-0.05
	Drive Trace Inertia Work Ratio Rating		0.78
	Integrated Amp-hours		40.2181
	Manufacturer Fuel Economy		219.703837
	Nitrogen Oxide		0.002
	Nitrous Oxide		0.001
	Non-methane Hydrocarbon		0.028
	Non-methane organic gases		0.0308
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		16.0661086
	System Start State of Charge Watt-hours		14.8926991
	Total Hydrocarbon		0.031

**Charge Depleting Bag/Phase #12**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		7.452
	Average System Voltage		373.3
	CH4 - Methane		0.0034
	Carbon Monoxide		0.1
	Carbon dioxide		117
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		0.46
	Drive Trace Energy Economy Rating		0.05
	Drive Trace Inertia Work Ratio Rating		1.08
	Integrated Amp-hours		41.2172
	Manufacturer Fuel Economy		73.6799538
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0.0046
	Non-methane organic gases		0.0051
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		16.4390726
	System Start State of Charge Watt-hours		16.0661086
	Total Hydrocarbon		0.008

**Charge Depleting Bag/Phase #13**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>	<b>Unrounded Test Result</b>	
	Actual Distance Driven (miles)	7.446	
	Average System Voltage	373.9	
	CH4 - Methane	0.0041	
	Carbon Monoxide	0.08	
	Carbon dioxide	148	
	Carbon-Related Exhaust Emissions	0	
	Drive Trace Absolute Speed Change Rating	0.62	
	Drive Trace Energy Economy Rating	-0.02	
	Drive Trace Inertia Work Ratio Rating	1.06	
	Integrated Amp-hours	41.1931	
	Manufacturer Fuel Economy	58.2711035	
	Nitrogen Oxide	0.0004	
	Nitrous Oxide	0	
	Non-methane Hydrocarbon	0.0104	
	Non-methane organic gases	0.0115	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	0	
	System End State of Charge Watt-hours	16.4300616	
	System Start State of Charge Watt-hours	16.4390726	
	Total Hydrocarbon	0.014	
<b>Manufacturer Test Comments</b>	The state of charge unit input in kilo-watt-hours. 4000MILES. URBAN CD-RANGE TEST. NMOG=HC-NM x 1.1012. Changed TestFuelTypeID from 48 to 61 and FuelBatchID from 2A5-01 to 2D5A01. Calculate E10 fuel economy using 0.81 R factor for PHEV calculator		

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
<b>Test #</b>	<b>TTYX10092577</b>	<b>Test Procedure</b>	<b>84 - Charge Depleting Highway</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	09/30/2025	<b>Fuel</b>	N/A
<b>Fuel Batch ID</b>	2D5A01	<b>Fuel Calibration Number</b>	2
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Toyota Motor Corporation		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4512	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	No	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes
<b>PHEV/EV Charge Depleting Test Information</b>			
<b>Recharge Event Voltage</b>	239.5	<b>Recharge Event Energy (kiloWatt-hours)</b>	17.9972
<b>Charge Depleting Range (Calculated miles)</b>	71.775	<b>Charge Depleting Range (Actual miles)</b>	71.775
<b>Charge Depleting Range Highway (Calculated miles)</b>	--	<b>Derived 5-Cycle Coefficient Model Year</b>	2017
<b>All Electric Range Unadjusted (miles)</b>	64.351	<b>Equivalent All Electric Range (miles)</b>	71.148
<b>Number of Charge Depleting Bags/Phases Conducted</b>	9	<b>Transition Bag/Phase Number</b>	8
<b>Charge Depleting Bag/Phase #1</b>			

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		10.252
	Average System Voltage		427.9
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		1.36
	Drive Trace Energy Economy Rating		-0.1
	Drive Trace Inertia Work Ratio Rating		1.71
	Integrated Amp-hours		6.17456
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		2.6420942
	System Start State of Charge Watt-hours		0
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #2**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		10.252
	Average System Voltage		416.9
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		1.53
	Drive Trace Energy Economy Rating		-0.25
	Drive Trace Inertia Work Ratio Rating		1.92
	Integrated Amp-hours		12.3056
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		5.1981248
	System Start State of Charge Watt-hours		2.6420942
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #3**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		10.256
	Average System Voltage		403.1
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		3.91
	Drive Trace Energy Economy Rating		-0.12
	Drive Trace Inertia Work Ratio Rating		4.95
	Integrated Amp-hours		18.6902
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		7.7717571
	System Start State of Charge Watt-hours		5.1981248
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #4**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		10.254
	Average System Voltage		390
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		2.37
	Drive Trace Energy Economy Rating		-0.16
	Drive Trace Inertia Work Ratio Rating		2.96
	Integrated Amp-hours		25.374
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		10.3784391
	System Start State of Charge Watt-hours		7.7717571
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #5**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		10.254
	Average System Voltage		379.3
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		4.46
	Drive Trace Energy Economy Rating		-0.1
	Drive Trace Inertia Work Ratio Rating		5.76
	Integrated Amp-hours		31.8901
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		12.8499958
	System Start State of Charge Watt-hours		10.3784391
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #6**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		10.255
	Average System Voltage		372.5
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		2.41
	Drive Trace Energy Economy Rating		-0.19
	Drive Trace Inertia Work Ratio Rating		2.93
	Integrated Amp-hours		38.7271
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		15.3967783
	System Start State of Charge Watt-hours		12.8499958
	Total Hydrocarbon		0

**Charge Depleting Bag/Phase #7**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		10.252
	Average System Voltage		371.5
	CH4 - Methane		0.0026
	Carbon Monoxide		0.11
	Carbon dioxide		128
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		2.77
	Drive Trace Energy Economy Rating		-0.15
	Drive Trace Inertia Work Ratio Rating		3.44
	Integrated Amp-hours		40.7532
	Manufacturer Fuel Economy		67.3265638
	Nitrogen Oxide		0.0019
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0.0196
	Non-methane organic gases		0.0202
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		16.1494745
	System Start State of Charge Watt-hours		15.3967783
	Total Hydrocarbon		0.022

**Charge Depleting Bag/Phase #8**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
	<b>Test Result/Emission Name</b>		<b>Unrounded Test Result</b>
	Actual Distance Driven (miles)		10.253
	Average System Voltage		374.7
	CH4 - Methane		0.0012
	Carbon Monoxide		0.05
	Carbon dioxide		178
	Carbon-Related Exhaust Emissions		0
	Drive Trace Absolute Speed Change Rating		2.89
	Drive Trace Energy Economy Rating		-0.09
	Drive Trace Inertia Work Ratio Rating		3.68
	Integrated Amp-hours		40.7419
	Manufacturer Fuel Economy		48.4829116
	Nitrogen Oxide		0.0004
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0.0003
	Non-methane organic gases		0.0003
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		0
	System End State of Charge Watt-hours		16.1452404
	System Start State of Charge Watt-hours		16.1494745
	Total Hydrocarbon		0.001

**Charge Depleting Bag/Phase #9**

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42																																										
	<table border="1"> <thead> <tr> <th data-bbox="522 164 808 188">Test Result/Emission Name</th> <th data-bbox="1310 164 1549 188">Unrounded Test Result</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 196 819 220">Actual Distance Driven (miles)</td> <td data-bbox="1394 196 1465 220">10.255</td> </tr> <tr> <td data-bbox="543 228 787 253">Average System Voltage</td> <td data-bbox="1402 228 1457 253">374.7</td> </tr> <tr> <td data-bbox="590 261 741 285">CH4 - Methane</td> <td data-bbox="1394 261 1465 285">0.0006</td> </tr> <tr> <td data-bbox="575 293 756 318">Carbon Monoxide</td> <td data-bbox="1402 293 1457 318">0.05</td> </tr> <tr> <td data-bbox="590 326 741 350">Carbon dioxide</td> <td data-bbox="1409 326 1451 350">171</td> </tr> <tr> <td data-bbox="495 358 829 383">Carbon-Related Exhaust Emissions</td> <td data-bbox="1409 358 1430 383">0</td> </tr> <tr> <td data-bbox="453 391 871 415">Drive Trace Absolute Speed Change Rating</td> <td data-bbox="1402 391 1457 415">2.92</td> </tr> <tr> <td data-bbox="485 423 840 448">Drive Trace Energy Economy Rating</td> <td data-bbox="1394 423 1465 448">-0.14</td> </tr> <tr> <td data-bbox="478 456 846 480">Drive Trace Inertia Work Ratio Rating</td> <td data-bbox="1402 456 1457 480">3.71</td> </tr> <tr> <td data-bbox="558 488 766 513">Integrated Amp-hours</td> <td data-bbox="1388 488 1472 513">40.7641</td> </tr> <tr> <td data-bbox="527 521 798 545">Manufacturer Fuel Economy</td> <td data-bbox="1373 521 1486 545">50.4666456</td> </tr> <tr> <td data-bbox="590 553 735 578">Nitrogen Oxide</td> <td data-bbox="1394 553 1465 578">0.0002</td> </tr> <tr> <td data-bbox="590 586 735 610">Nitrous Oxide</td> <td data-bbox="1409 586 1430 610">0</td> </tr> <tr> <td data-bbox="533 618 791 643">Non-methane Hydrocarbon</td> <td data-bbox="1394 618 1465 643">0.0005</td> </tr> <tr> <td data-bbox="533 651 791 675">Non-methane organic gases</td> <td data-bbox="1394 651 1465 675">0.0005</td> </tr> <tr> <td data-bbox="428 683 896 708">Non-methane organic gases plus Nitrogen Oxides</td> <td data-bbox="1388 683 1472 708">999.999</td> </tr> <tr> <td data-bbox="453 716 871 740">Optional Carbon-Related Exhaust Emissions</td> <td data-bbox="1409 716 1430 740">0</td> </tr> <tr> <td data-bbox="474 748 850 773">System End State of Charge Watt-hours</td> <td data-bbox="1373 748 1486 773">16.1535587</td> </tr> <tr> <td data-bbox="474 781 850 805">System Start State of Charge Watt-hours</td> <td data-bbox="1373 781 1486 805">16.1452404</td> </tr> <tr> <td data-bbox="575 813 749 837">Total Hydrocarbon</td> <td data-bbox="1394 813 1465 837">0.001</td> </tr> </tbody> </table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.255	Average System Voltage	374.7	CH4 - Methane	0.0006	Carbon Monoxide	0.05	Carbon dioxide	171	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	2.92	Drive Trace Energy Economy Rating	-0.14	Drive Trace Inertia Work Ratio Rating	3.71	Integrated Amp-hours	40.7641	Manufacturer Fuel Economy	50.4666456	Nitrogen Oxide	0.0002	Nitrous Oxide	0	Non-methane Hydrocarbon	0.0005	Non-methane organic gases	0.0005	Non-methane organic gases plus Nitrogen Oxides	999.999	Optional Carbon-Related Exhaust Emissions	0	System End State of Charge Watt-hours	16.1535587	System Start State of Charge Watt-hours	16.1452404	Total Hydrocarbon	0.001	
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<b>Manufacturer Test Comments</b>	The state of charge unit input in kilo-watt-hours. 4000MILES. HWY CD-RANGE TEST. NMOG=HC-NM x 1.03. Changed TestFuelTypeID from 48 to 61 and FuelBatchID from 2A5-01 to 2D5A01. Calculate E10 fuel economy using 0.81 R factor for PHEV calculator																																												

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
<b>Fuel Properties</b>			
<b>Fuel Batch ID</b>	<b>2A5-01</b>	<b>Fuel Calibration Number</b>	<b>3</b>
<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	<b>Fuel Batch Calibration Date</b>	10/31/2025
<b>Fuel Batch Calibration Effective Date</b>	10/01/2025	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	--	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.739
<b>Fuel Ethanol Volume Percent (%)</b>	9.8	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	--
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	41.528	<b>Fuel Carbon Mass Fraction (E10)</b>	0.825
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	--	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>1G9-01</b>	<b>Fuel Calibration Number</b>	<b>2</b>
<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	<b>Fuel Batch Calibration Date</b>	07/13/2019
<b>Fuel Batch Calibration Effective Date</b>	01/01/2020	<b>Fuel Batch Calibration Ineffective Date</b>	01/31/2020
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	--	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.74
<b>Fuel Ethanol Volume Percent (%)</b>	9.6	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	17841
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	--	<b>Fuel Carbon Mass Fraction (E10)</b>	--
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.826	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>2L2-10</b>	<b>Fuel Calibration Number</b>	<b>2</b>
<b>Test Fuel Type</b>	46 - CARB LEV3 E10 Regular Gasoline	<b>Fuel Batch Calibration Date</b>	11/18/2022
<b>Fuel Batch Calibration Effective Date</b>	03/01/2023	<b>Fuel Batch Calibration Ineffective Date</b>	03/31/2023
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	--	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.74
<b>Fuel Ethanol Volume Percent (%)</b>	9.9	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	17848
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	--	<b>Fuel Carbon Mass Fraction (E10)</b>	--
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.825	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>2A5-01</b>	<b>Fuel Calibration Number</b>	<b>2</b>
<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	<b>Fuel Batch Calibration Date</b>	09/30/2025
<b>Fuel Batch Calibration Effective Date</b>	09/01/2025	<b>Fuel Batch Calibration Ineffective Date</b>	--

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
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 (%)	9.8	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	--
<b>Fuel Batch ID</b>	<b>2D5A01</b>	<b>Fuel Calibration Number</b>	<b>2</b>
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	04/19/2025
Fuel Batch Calibration Effective Date	09/01/2025	Fuel Batch Calibration Ineffective Date	09/30/2025
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.735
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18529
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.863	Weight Fraction CO2	--
<b>Fuel Batch ID</b>	<b>2M3A01</b>	<b>Fuel Calibration Number</b>	<b>17</b>
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	09/30/2025
Fuel Batch Calibration Effective Date	09/01/2025	Fuel Batch Calibration Ineffective Date	12/22/2023
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	--
<b>Fuel Batch ID</b>	<b>2M2A03</b>	<b>Fuel Calibration Number</b>	<b>3</b>
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/01/2022
Fuel Batch Calibration Effective Date	03/01/2023	Fuel Batch Calibration Ineffective Date	03/31/2023
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)	17847
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--

### Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.825	<b>Weight Fraction CO2</b>	--

### Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42
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#### Consolidated List of Standards

**Exhaust Standards**

<b>Cert Region</b>	Federal	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	Federal Tier 3 Bin 30
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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	--	--	--	--	--	--	0.04	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	0.04	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.057	999.9999
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.002	0.030
150,000 miles	N2O	--	--	--	--	--	--	0	0.010
150,000 miles	NMOG	--	1	1.1	--	--	--	0.0044	999.999
150,000 miles	NMOG+NOX	--	1	1.1	--	--	--	0.0047	0.030
150,000 miles	NMOG+NOX-COMP	--	1	1.03	--	--	--	0.0047	0.040
150,000 miles	NOX	--	--	--	--	--	--	0.0003	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

<b>Cert Region</b>	Federal	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	Federal Tier 3 Bin 30
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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	--	--	--	--	--	--	0.01	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0	0.3

### Certification Summary Information Report

<b>Test Group</b>		TTYXJ02.5H3X			<b>Evaporative/Refueling Family</b>			TTYXR0165J42		
<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-IV SULEV30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			US06		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	CO	--	--	--	--	--	--	0.04	9.6	
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0044	999.999	
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0047	0.036	
150,000 miles	NOX	--	--	--	--	--	--	0.0003	999.999	
150,000 miles	PM	--	--	--	--	--	--	0	0.006	

<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-IV SULEV30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			SC03		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	CO	--	--	--	--	--	--	0.04	1.0	
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0044	999.999	
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0047	0.030	
150,000 miles	NOX	--	--	--	--	--	--	0.0003	999.999	

<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-IV SULEV30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			Federal fuel 2-day exhaust (w/can load)		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	CO	--	--	--	--	--	--	0.04	1.0	
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004	
150,000 miles	NMOG	--	1	1.1	--	--	--	0.0044	999.999	
150,000 miles	NMOG+NOX	--	1	1.1	--	--	--	0.0047	0.030	
150,000 miles	NOX	--	--	--	--	--	--	0.0003	999.999	
150,000 miles	PM	--	--	--	--	--	--	0	0.001	

### Certification Summary Information Report

<b>Test Group</b>		TTYXJ02.5H3X			<b>Evaporative/Refueling Family</b>			TTYXR0165J42		
<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-IV SULEV30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			HWFE		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0044	999.999	
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0047	0.030	
150,000 miles	NOX	--	--	--	--	--	--	0.0003	999.999	

<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Federal Tier 3 Bin 30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			HWFE		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	CREE	--	--	--	--	--	--	0.057	999.9999	
150,000 miles	NMOG	--	1	1.03	--	--	--	0.0044	999.999	
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0047	0.030	
150,000 miles	NOX	--	--	--	--	--	--	0.0003	999.999	

<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-IV SULEV30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			CA fuel 50 Deg(F) exhaust test		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
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	--	0.060	
4,000 miles	NOX	--	--	--	--	--	--	--	999.999	

### Certification Summary Information Report

<b>Test Group</b>		TTYXJ02.5H3X			<b>Evaporative/Refueling Family</b>			TTYXR0165J42		
<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-IV SULEV30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			Cold CO		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
50,000 miles	CO	--	--	--	--	--	--	0.01	10.0	

<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Federal Tier 3 Bin 30		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			US06		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	PM	--	--	--	--	--	--	0	0.006	

**Evaporative/Refueling Standards**

<b>Evaporative/Refueling Family</b>		TTYXR0165J42			<b>Cert Region</b>			California + CAA Section 177 states		
<b>Cert/In-Use Code</b>		Cert			<b>Standard Level</b>			California LEV-IV Zero Evap (Option 2)		
<b>Test Procedure</b>		California Fuel Running Loss								
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>					
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.01	0					

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

<b>Evaporative/Refueling Family</b>		TTYXR0165J42			<b>Cert Region</b>			Federal		
<b>Cert/In-Use Code</b>		Cert			<b>Standard Level</b>			Federal Tier 3 Evap		
<b>Test Procedure</b>		California Fuel Running Loss								
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>					
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0					

## Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X		<b>Evaporative/Refueling Family</b>	TTYXR0165J42	
<b>Evaporative/Refueling Family</b>	TTYXR0165J42		<b>Cert Region</b>	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)	
<b>Cert/In-Use Code</b>	Cert		<b>Standard Level</b>		
<b>Test Procedure</b>	2-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0
<b>Evaporative/Refueling Family</b>	TTYXR0165J42		<b>Cert Region</b>	Federal	
<b>Cert/In-Use Code</b>	Cert		<b>Standard Level</b>	Federal Tier 3 Evap	
<b>Test Procedure</b>	Spitback				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	4,000 miles	SPITBACK	--	1.0	--
<b>Evaporative/Refueling Family</b>	TTYXR0165J42		<b>Cert Region</b>	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)	
<b>Cert/In-Use Code</b>	Cert		<b>Standard Level</b>		
<b>Test Procedure</b>	Federal fuel refueling test (ORVR)				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0
<b>Evaporative/Refueling Family</b>	TTYXR0165J42		<b>Cert Region</b>	Federal	
<b>Cert/In-Use Code</b>	Cert		<b>Standard Level</b>	Federal Tier 3 Evap	
<b>Test Procedure</b>	Federal fuel refueling test (ORVR)				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0
<b>Evaporative/Refueling Family</b>	TTYXR0165J42		<b>Cert Region</b>	Federal	
<b>Cert/In-Use Code</b>	Cert		<b>Standard Level</b>	Federal Tier 3 Evap	
<b>Test Procedure</b>	CA fuel 3-day evap.				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0

### Certification Summary Information Report

<b>Test Group</b>	TTYXJ02.5H3X	<b>Evaporative/Refueling Family</b>	TTYXR0165J42		
<b>Evaporative/Refueling Family</b>	TTYXR0165J42	<b>Cert Region</b>	Federal		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap		
<b>Test Procedure</b>	2-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family	TTYXR0165J42
<b>Glossary</b>			
<b>Useful Life</b>			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
<b>Emission Name</b>			
HC-TOTAL	Total Hydrocarbon	AS-VOLT	Average System Voltage
CO	Carbon Monoxide	CO2 BAG 1	Bag 1 Carbon Dioxide
CO2	Carbon dioxide	CO2 BAG 2	Bag 2 Carbon Dioxide
CREE	Carbon-Related Exhaust Emissions	CO2 BAG 3	Bag 3 Carbon Dioxide
OPT-CREE	Optional Carbon-Related Exhaust Emissions	CO2 BAG 4	Bag 4 Carbon Dioxide
NOX	Nitrogen Oxide	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides
PM	Particulate Matter	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides
PM-COMP	SFTP Composite Particulate Matter	DT-IWRR	Drive Trace Inertia Work Ratio Rating
HC-NM	Non-methane Hydrocarbon	DT-ASCR	Drive Trace Absolute Speed Change Rating
OMHCE	Organic material Hydrocarbon Equivalent	DT-EER	Drive Trace Energy Economy Rating
OMNMHCE	Organic material non-methane HC equivalent	COMB-CREE	Combined Carbon-Related Exhaust Emissions
NMOG	Non-methane organic gases	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
HCHO	Formaldehyde	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
H3C2HO	Acetaldehyde	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	LEAK-DIA	Effective Leak Diameter (inches)
CO-COMP	SFTP Composite Carbon Monoxide	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
ETHANOL	C2H5OH - Ethanol	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
FE BAG 1	Bag 1 Fuel Economy	KW-HRS	Integrated DC KW-HRS
FE BAG 2	Bag 2 Fuel Economy	CH4 BAG 1	Bag 1 Methane
FE BAG 3	Bag 3 Fuel Economy	CH4 BAG 2	Bag 2 Methane
FE BAG 4	Bag 4 Fuel Economy	CH4 BAG 3	Bag 3 Methane
MFR FE	Manufacturer Fuel Economy	CH4 BAG 4	Bag 4 Methane
HC	Hydrocarbon for Running Loss and ORVR	CO BAG 1	Bag 1 Carbon Monoxide
METHANE	CH4 - Methane	CO BAG 2	Bag 2 Carbon Monoxide
METHANOL	CH3OH - Methanol	CO BAG 3	Bag 3 Carbon Monoxide
N2O	Nitrous Oxide	CO BAG 4	Bag 4 Carbon Monoxide
SPITBACK	Spitback Hydrocarbon in grams	NMOG BAG 1	Bag 1 Non-methane organic gases
AMP-HRS	Integrated Amp-hours	NMOG BAG 2	Bag 2 Non-methane organic gases
START-SOC	System Start State of Charge Watt-hours	NMOG BAG 3	Bag 3 Non-methane organic gases
END-SOC	System End State of Charge Watt-hours	NMOG BAG 4	Bag 4 Non-methane organic gases
ACT-DISTANCE	Actual Distance Driven (miles)		
<b>Certification Region</b>			

## Certification Summary Information Report

Test Group	TTYXJ02.5H3X	Evaporative/Refueling Family		TTYXR0165J42
CA	California + CAA Section 177 states	FA	Federal	
<b>Exhaust Emission Standard Level</b>				
B1	Federal Tier 2 Bin 1	T3B160	Federal Tier 3 Bin 160	
B2	Federal Tier 2 Bin 2	T3B125	Federal Tier 3 Bin 125	
B3	Federal Tier 2 Bin 3	T3B110	Federal Tier 3 Transitional Bin 110	
B4	Federal Tier 2 Bin 4	T3B85	Federal Tier 3 Transitional Bin 85	
B5	Federal Tier 2 Bin 5	T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
B6	Federal Tier 2 Bin 6	T3B70	Federal Tier 3 Bin 70	
B7	Federal Tier 2 Bin 7	T3B50	Federal Tier 3 Bin 50	
B8	Federal Tier 2 Bin 8	T3B30	Federal Tier 3 Bin 30	
B9	Federal Tier 2 Bin 9	T3B20	Federal Tier 3 Bin 20	
B10	Federal Tier 2 Bin 10	T3B0	Federal Tier 3 Bin 0	
B11	Federal Tier 2 Bin 11	HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2	California LEV-II LEV	HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2OP	California LEV-II LEV Optional	HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
U2	California LEV-II ULEV	HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
S2	California LEV-II SULEV	HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
ZEV	California ZEV	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
OT	Other	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
T1	Federal Tier 1	HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
PZEV	California PZEV	HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L2LEV160	California LEV-II LEV160	HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L2ULEV125	California LEV-II ULEV125	HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L2SULEV30	California LEV-II SULEV30	HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2LEV395	California LEV-II LEV395	L4SULEV100	California LEV-IV SULEV100	
L2ULEV340	California LEV-II ULEV340	L4SULEV125	California LEV-IV SULEV125	
L2LEV630	California LEV-II LEV630	L4SULEV15	California LEV-IV SULEV15	
L2ULEV570	California LEV-II ULEV570	L4SULEV150	California LEV-IV SULEV150	
L3LEV160	California LEV-III LEV160	L4SULEV170	California LEV-IV SULEV170	
L3ULEV125	California LEV-III ULEV125	L4SULEV175	California LEV-IV SULEV175	
L3ULEV70	California LEV-III ULEV70	L4SULEV20	California LEV-IV SULEV20	
L3ULEV50	California LEV-III ULEV50	L4SULEV200	California LEV-IV SULEV200	
L3SULEV30	California LEV-III SULEV30	L4SULEV230	California LEV-IV SULEV230	
L3SULEV20	California LEV-III SULEV20	L4SULEV25	California LEV-IV SULEV25	
L3LEV395	California LEV-III LEV395	L4SULEV30	California LEV-IV SULEV30	
L3ULEV340	California LEV-III ULEV340	L4SULEV75	California LEV-IV SULEV75	
L3ULEV250	California LEV-III ULEV250	L4SULEV85	California LEV-IV SULEV85	
L3ULEV200	California LEV-III ULEV200	L4ULEV125	California LEV-IV ULEV125	

## Certification Summary Information Report

Test Group		TTYXJ02.5H3X	Evaporative/Refueling Family		TTYXR0165J42
L3SULEV170	California LEV-III SULEV170		L4ULEV200	California LEV-IV ULEV200	
L3SULEV150	California LEV-III SULEV150		L4ULEV250	California LEV-IV ULEV250	
L3LEV630	California LEV-III LEV630		L4ULEV270	California LEV-IV ULEV270	
L3ULEV570	California LEV-III ULEV570		L4ULEV40	California LEV-IV ULEV40	
L3ULEV400	California LEV-III ULEV400		L4ULEV400	California LEV-IV ULEV400	
L3ULEV270	California LEV-III ULEV270		L4ULEV50	California LEV-IV ULEV50	
L3SULEV230	California LEV-III SULEV230		L4ULEV60	California LEV-IV ULEV60	
L3SULEV200	California LEV-III SULEV200		L4ULEV70	California LEV-IV ULEV70	
<b>Transmission Type Code</b>					
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)	
<b>Drive System Code</b>					
4	4-Wheel Drive		P	Part-time 4-Wheel Drive	
F	2-Wheel Drive, Front		A	All Wheel Drive	
R	2-Wheel Drive, Rear				
<b>Additional Terms and Acronyms</b>					
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	