

Certification Summary Information Report

Manufacturer	Toyota Motor Corporation	Manufacturer Code	TYX
Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Certificate Number	TTYXV02.0H3A-043	CARB Executive Order #	--
Certificate Issue Date	10/23/2025	Certificate Revision Date	--
Certificate Effective Date	10/23/2025	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	10/03/2025 02:42:26 AM
Model Year	2026		

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42						
Test Group Information									
CSI Type	Update for Correction	Running Change Reference Number	--						
GHG Exempt Status	Not Exempt								
Drive Sources and Fuel(s)									
Drive Source #1:	Electric Motor								
	<table border="1"> <tr> <th>Fuel</th><th>Basic Fuel Metering System</th><th>Lean Burn Strategy Indicator</th></tr> <tr> <td>Electricity</td><td>--</td><td>No</td></tr> </table>	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator	Electricity	--	No		
Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator							
Electricity	--	No							
Drive Source #2:	Combustion Engine								
	<table border="1"> <tr> <th>Fuel</th><th>Basic Fuel Metering System</th><th>Lean Burn Strategy Indicator</th></tr> <tr> <td>Gasoline</td><td>Spark Ignition direct & ported injection</td><td>No</td></tr> </table>	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator	Gasoline	Spark Ignition direct & ported injection	No		
Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator							
Gasoline	Spark Ignition direct & ported injection	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	TTYXHHGNNB27	Durability Group Equivalency Factor	0.9						
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA						
Complies with HD GHG 2b/3 regulations?	No								
Introduction into Commerce Date	12/01/2025	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	--								

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Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	04/03/2025 04:19:19 AM				
Integrated ORVR?	No	Fuel(s)	Electricity, Gasoline				
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)	130	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	30 - UX 300h	Federal	2-Wheel Drive, Front	Continuously Variable	1	No
Toyota Motor Corporation	2 - LEXUS	32 - UX 300h AWD	California + CAA Section 177 states	All Wheel Drive	Continuously Variable	1	No
Toyota Motor Corporation	2 - LEXUS	30 - UX 300h	California + CAA Section 177 states	2-Wheel Drive, Front	Continuously Variable	1	No
Toyota Motor Corporation	2 - LEXUS	30 - UX 300h	California + CAA Section 177 states	2-Wheel Drive, Front	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	2 - LEXUS	32 - UX 300h AWD	California + CAA Section 177 states	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	2 - LEXUS	32 - UX 300h AWD	Federal	All Wheel Drive	Continuously Variable	1	No
Toyota Motor Corporation	2 - LEXUS	30 - UX 300h	Federal	2-Wheel Drive, Front	Selectable Continuously Variable (e.g. CVT with paddles)	6	No
Toyota Motor Corporation	2 - LEXUS	32 - UX 300h AWD	Federal	All Wheel Drive	Selectable Continuously Variable (e.g. CVT with paddles)	6	No

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42	
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	
After Treatment Device(s) (ATD)				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Platinum + Rhodium	Ceramic	Monolith
Mfr After Treatment Device (ATD) Comments				
--				
Direct Ozone Reduction (DOR) Device				
Not Equipped				
Mfr Emission Control Device Comments				
--				
Engine Configuration Number 1				
Engine Displacement (liters)	2.0	Engine Rated Horsepower	154	
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	--			

Certification Summary Information Report

Test Group		TTYXV02.0H3A		Evaporative/Refueling Family		TTYXR0130J42					
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
Electricity		STYX10082354	STYX10082353	STYX10082367	STYX10082355	STYX10082366	--	--	--	--	--
Gasoline		STYX10082354	STYX10082353	STYX10082367	STYX10082355	STYX10082366	999.9	228.2	999.9	286.1	--

SFTP LEV-III Official Test Numbers				
Test Group Fuel	FTP	US06	SC03	
Gasoline	STYX10082354	STYX10082353	STYX10082367	
Electricity	STYX10082354	STYX10082353	STYX10082367	

Hybrid Electric Vehicle And Fuel Cell Information			
Rechargable Energy Storage System	Battery(s)	Rechargable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	219	Battery Energy Capacity	4.1
Battery Specific Energy	38	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	83
Motor/Generator Type 2	AC SYNCHRONOUS	Rated Motor/Generator Power	30
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	"30kWatt" of Rated Motor/Generator Power is only for AWD.		

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Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
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Emission Data Vehicle Information

Vehicle ID / Configuration	17-ZW3H / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	HTYXV01.8P35	Original Evaporative/Refueling Family	HTYXR0130J72
Original Test Vehicle Model Year	2017		

Vehicle Model

Represented Test Vehicle Make	TOYOTA	Represented Test Vehicle Model	PRIUS PRIME
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Leak Family Details

Leak Family Identifier	--	Leak Family Name	--
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Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline
2	Electric Motor	Electricity

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Multiple Fuel Combustion	--
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--
Off-board charge Capable Indicator	Yes		
Odometer Correction -- Initial	11	Odometer Correction Factor	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	01	Rated Horsepower	96
Displacement (liters)	1.798		
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--
Charge Air Cooler Type	N/A	Drive Mode While Testing	2-Wheel Drive, Front
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	3365	Equivalent Test Weight (pounds)	3625
GVWR (lbs)	--	N/V Ratio	19.9
Axle Ratio	3.22		
Transmission Type	Continuously Variable	# of Transmission Gears	1
Transmission Lockup	No	Creep Gear	No

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
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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)	
City/Highway/Evap	18.816	0.38689	0.012501	10.591	0.0846	0.014573	9.3
US06	18.816	0.38689	0.012501	10.591	0.0846	0.014573	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments POWER SHIFT PATTERN

Test #	HTYX10042567	Test Procedure	24 - Federal fuel refueling test (ORVR)
Exhaust Test # for this Evap Test	HTYX10042560	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	04/08/2016	Fuel	Gasoline
Fuel Batch ID	WL5-22	Fuel Calibration Number	3
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	3843	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC (Hydrocarbon for Running Loss and ORVR)	0.0012283	--

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	0.001	0	0	0.2	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC	0.001	0	0	0.2	Pass

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
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Emission Data Vehicle Information

Vehicle ID / Configuration	23-ZE2H / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	PTYXV01.8P33	Original Evaporative/Refueling Family	PTYXR0130J72
Original Test Vehicle Model Year	2023		

Vehicle Model

Represented Test Vehicle Make	TOYOTA	Represented Test Vehicle Model	COROLLA HYBRID AWD
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Leak Family Details

Leak Family Identifier	--	Leak Family Name	--
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Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Electric Motor	Electricity
2	Combustion Engine	Gasoline

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Multiple Fuel Combustion	--
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	9	Odometer Correction Factor	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	01	Rated Horsepower	97
Displacement (liters)	1.798		
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--
Charge Air Cooler Type	N/A	Drive Mode While Testing	2-Wheel Drive, Front
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	3265	Equivalent Test Weight (pounds)	3625
GVWR (lbs)	--	N/V Ratio	25.5
Axle Ratio	2.83		
Transmission Type	Continuously Variable	# of Transmission Gears	1
Transmission Lockup	No	Creeper Gear	No

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Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Test #	PTYX10074890	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	PTYX10074857	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/30/2022	Fuel	Gasoline
Fuel Batch ID	2B2-01	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	3901	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.1767	--

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=0.0150, 1ST DBL=0.1617, 2ND DBL=0.1190, 1ST DBL IS ADDED KEY OFF MONITOR LOSS(0.0018GRAM)

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	0.1767	0	0.177	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.1767	0	0.177	0.3	Pass

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Test #	PTYX10074891	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	PTYX10074858	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/24/2022	Fuel	Gasoline
Fuel Batch ID	2B2-01	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	3866	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.1608	--

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=0.0319, 1ST DBL=0.1289, 2ND DBL=0.1066, 3RD DBL=0.0938, 1ST DBL IS ADDED KEY OFF MONITOR LOSS(0.0018GRAM)

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	0.1608	0	0.161	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.1608	0	0.161	0.3	Pass

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Test #	PTYX10074889	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	PTYX10074858	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/24/2022	Fuel	Gasoline
Fuel Batch ID	2B2-01	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	3866	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
MFR FE (Manufacturer Fuel Economy)	999	999
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0041657	--

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

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

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.004	0	0	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.004	0	0	0.01	Pass

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Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
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Emission Data Vehicle Information

Vehicle ID / Configuration	25-MA1H / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	STYXV02.0H3A	Original Evaporative/Refueling Family	STYXR0130J72
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	LEXUS	Represented Test Vehicle Model	UX 300h AWD
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Leak Family Details

Leak Family Identifier	--	Leak Family Name	--
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Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline
2	Electric Motor	Electricity

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Multiple Fuel Combustion	--
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	7	Odometer Correction Factor	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	03	Rated Horsepower	150
Displacement (liters)	1.987		
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--
Charge Air Cooler Type	N/A	Drive Mode While Testing	2-Wheel Drive, Front
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	3625	Equivalent Test Weight (pounds)	3875
GVWR (lbs)	--	N/V Ratio	26.6
Axle Ratio	3.61		
Transmission Type	Continuously Variable	# of Transmission Gears	1
Transmission Lockup	No	Creeper Gear	No

Certification Summary Information Report

Test Group		TTYXV02.0H3A			Evaporative/Refueling Family		TTYXR0130J42	
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	30.097	0.1232	0.022162	14.677	-0.15452	0.023474	12.2	
Cold CO	33.107	0.13552	0.024379	12.455	-0.2076	0.026445	N/A	
US06	30.097	0.1232	0.022162	14.677	-0.15452	0.023474	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		Drive Mode is SPORTS.						

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Test #	STYX10082354	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	07/20/2023	Fuel	Gasoline
Fuel Batch ID	2M2A03	Fuel Calibration Number	7
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	3913	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
CO2 BAG 4 (Bag 4 Carbon Dioxide)	0	--
FE BAG 4 (Bag 4 Fuel Economy)	999	999
METHANE (CH4 - Methane)	0.0025493	--
CO (Carbon Monoxide)	0.0889718	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.66	--
DT-EER (Drive Trace Energy Economy Rating)	0.39	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.03	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0006432	--
N2O (Nitrous Oxide)	0.0000557	--
HC-NM (Non-methane Hydrocarbon)	0.00636	--
NMOG (Non-methane organic gases)	0.0070036	--
PM (Particulate Matter)	0.0009062	--
HC-TOTAL (Total Hydrocarbon)	0.008734	--

Certification Summary Information Report

Test Group		TTYXV02.0H3A				Evaporative/Refueling Family				TTYXR0130J42		
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE						
		Carbon-Related Exhaust Emissions		0		999						
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		0		--						
Manufacturer Test Comments		NMOG = HC-NM x 1.1012										
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	0.09	--	--	--	0.01	--	0.1	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.15	--	--	--	0.01	--	0.2	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	0.013	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	METHANE	0.0025	--	--	--	0.0021	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	N2O	0.0001	--	--	--	0.0002	--	0	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.007	1	1.1	--	0.002	--	0.009	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0076	1	1.1	--	--	--	0.01	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX-COMP	0.0129	1	1.03	--	0.0024	--	0.013	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0006	--	--	--	0.0004	--	0.001	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0009	--	--	--	0.0002	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.09	--	--	--	0.01	--	0.1	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.007	1	1.1	--	0.002	--	0.009	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0076	1	1.1	--	--	--	0.01	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0006	--	--	--	0.0004	--	0.001	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0009	--	--	--	0.0002	--	0.001	0.003	Pass
NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.												

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Test #	STYX10082355	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	07/27/2023	Fuel	Gasoline
Fuel Batch ID	2L2A02	Fuel Calibration Number	8
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	3994	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	--
FE BAG 3 (Bag 3 Fuel Economy)	999	999
CO2 BAG 4 (Bag 4 Carbon Dioxide)	0	--
METHANE (CH4 - Methane)	0.0056228	--
CO (Carbon Monoxide)	0.3870075	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.14	--
DT-EER (Drive Trace Energy Economy Rating)	-0.26	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.28	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0281176	--
N2O (Nitrous Oxide)	0.0095427	--
HC-NM (Non-methane Hydrocarbon)	0.0859472	--
HC-TOTAL (Total Hydrocarbon)	0.0914062	--

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

Certification Summary Information Report

Test Group		TTYXV02.0H3A				Evaporative/Refueling Family				TTYXR0130J42		
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		0			--					
Manufacturer Test Comments		--										
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	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	0.39	--	--	--	0	--	0.4	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.09	--	--	--	0	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-IV SULEV30	CO	0.39	--	--	--	0	--	0.4	10.0	Pass

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Test #	STYX10082366	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	07/20/2023	Fuel	Gasoline
Fuel Batch ID	2M2A03	Fuel Calibration Number	7
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	3928	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)	0.0004571	--
CO (Carbon Monoxide)	0.0726929	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.83	--
DT-EER (Drive Trace Energy Economy Rating)	0.19	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.25	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0001868	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.000541	--
NMOG (Non-methane organic gases)	0.0005572	--
HC-TOTAL (Total Hydrocarbon)	0.0009667	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	999

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

Manufacturer Test Comments NMOG = HC-NM x 1.03

Certification Summary Information Report

Test Group		TTYXV02.0H3A				Evaporative/Refueling Family				TTYXR0130J42		
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	999	--	--	--	0.013	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0006	1	1.03	--	0.002	--	0.003	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0008	1	1.03	--	--	--	0.003	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0002	--	--	--	0.0004	--	0.001	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0006	1	1.03	--	0.002	--	0.003	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0008	1	1.03	--	--	--	0.003	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0002	--	--	--	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	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Test #	STYX10082353	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	07/20/2023	Fuel	Gasoline
Fuel Batch ID	2M2A03	Fuel Calibration Number	7
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	3949	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	--
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	--
FE BAG 2 (Bag 2 Fuel Economy)	999	999
METHANE (CH4 - Methane)	0.0014299	--
CO (Carbon Monoxide)	0.2294976	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.07	--
DT-EER (Drive Trace Energy Economy Rating)	0.14	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.26	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0133316	--
N2O (Nitrous Oxide)	0.0001739	--
HC-NM (Non-methane Hydrocarbon)	0.0079892	--
NMOG (Non-methane organic gases)	0.0082289	--
PM (Particulate Matter)	0.0002115	--
HC-TOTAL (Total Hydrocarbon)	0.0093208	--

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	--

Certification Summary Information Report

Test Group		TTYXV02.0H3A				Evaporative/Refueling Family				TTYXR0130J42		
Manufacturer Test Comments		NMOG = HC-NM x 1.03										
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	0.0002	--	--	--	0.0002	--	0	0.006	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.23	--	--	--	0.01	--	0.2	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0082	1	1.03	--	0.002	--	0.01	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0215	1	1.03	--	--	--	0.024	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0133	--	--	--	0.0004	--	0.014	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0002	--	--	--	0.0002	--	0	0.006	Pass

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Test #	STYX10082367	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	07/13/2023	Fuel	Gasoline
Fuel Batch ID	2M2A03	Fuel Calibration Number	7
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	3839	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)	0.0025223	--
CO (Carbon Monoxide)	0.1081464	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.63	--
DT-EER (Drive Trace Energy Economy Rating)	0.56	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.15	--
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0009044	--
N2O (Nitrous Oxide)	0.0056492	--
HC-NM (Non-methane Hydrocarbon)	0.0038288	--
NMOG (Non-methane organic gases)	0.0039437	--
HC-TOTAL (Total Hydrocarbon)	0.0062776	--

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 NMOG = HC-NM x 1.03

Certification Summary Information Report

Test Group		TTYXV02.0H3A				Evaporative/Refueling Family				TTYXR0130J42		
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	0.11	--	--	--	0.01	--	0.1	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0039	1	1.03	--	0.002	--	0.006	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0048	--	1.03	--	--	--	0.007	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0009	--	--	--	0.0004	--	0.001	999.999	Pass

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Fuel Properties			
Fuel Batch ID	2B2-01	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	02/01/2022
Fuel Batch Calibration Effective Date	03/10/2022	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	0.74
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17796
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	2M2A03	Fuel Calibration Number	7
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	07/01/2023	Fuel Batch Calibration Ineffective Date	07/31/2023
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)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.825	Weight Fraction CO2	--
Fuel Batch ID	WL5-22	Fuel Calibration Number	3
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	11/12/2015
Fuel Batch Calibration Effective Date	04/01/2016	Fuel Batch Calibration Ineffective Date	04/30/2016
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.744
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17828
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	2L2A02	Fuel Calibration Number	8
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	11/04/2022
Fuel Batch Calibration Effective Date	07/01/2023	Fuel Batch Calibration Ineffective Date	07/31/2023
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--

Certification Summary Information Report

Test Group	TTYXV02.0H3A	Evaporative/Refueling Family	TTYXR0130J42
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.738
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17799
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	--

Certification Summary Information Report

Test Group		TTYXV02.0H3A			Evaporative/Refueling Family		TTYXR0130J42		
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		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	--	--	--	--	--	--	0.01	1.0
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	1	1.1	--	--	--	0.002	999.999
150,000 miles	NMOG+NOX	--	1	1.1	--	--	--	0.0024	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0002	0.003
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	--	--	--	--	--	--	0.01	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	0.01	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.013	999.999
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.0021	0.030
150,000 miles	N2O	--	--	--	--	--	--	0.0002	0.010
150,000 miles	NMOG	--	1	1.1	--	--	--	0.002	999.999
150,000 miles	NMOG+NOX	--	1	1.1	--	--	--	0.0024	0.030
150,000 miles	NMOG+NOX-COMP	--	1	1.03	--	--	--	0.0024	0.050
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0002	0.003

Certification Summary Information Report

Test Group		TTYXV02.0H3A			Evaporative/Refueling Family			TTYXR0130J42	
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			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	--	0.060
4,000 miles	NOX	--	--	--	--	--	--	--	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	--	--	--	--	--	--	0.0002	0.006
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	--	--	--	0.002	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0024	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999

Certification Summary Information Report

Test Group		TTYXV02.0H3A			Evaporative/Refueling Family			TTYXR0130J42	
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			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	--	--	--	--	--	--	0.01	1.0
150,000 miles	NMOG	--	1	1.03	--	--	--	0.002	999.999
150,000 miles	NMOG+NOX	--	--	1.03	--	--	--	0.0024	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999

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	--	--	--	--	--	--	0.01	9.6
150,000 miles	NMOG	--	1	1.03	--	--	--	0.002	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0024	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0002	0.006

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	--	--	--	--	--	--	0.013	999.999
150,000 miles	NMOG	--	1	1.03	--	--	--	0.002	999.999
150,000 miles	NMOG+NOX	--	1	1.03	--	--	--	0.0024	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0004	999.999

Certification Summary Information Report

Test Group		TTYXV02.0H3A			Evaporative/Refueling Family			TTYXR0130J42	
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	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0	0.3

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	10.0

Evaporative/Refueling Standards

Evaporative/Refueling Family		TTYXR0130J42		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		

Evaporative/Refueling Family		TTYXR0130J42		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.01	0		

Evaporative/Refueling Family		TTYXR0130J42		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		--		0.20	0

Certification Summary Information Report

Test Group		TTYXV02.0H3A		Evaporative/Refueling Family		TTYXR0130J42	
Evaporative/Refueling Family		TTYXR0130J42		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		2-day evap					
Fuel		Useful Life		Emission Name		Rounded Result	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		Std	
						Add DF	
						0	
Evaporative/Refueling Family		TTYXR0130J42		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	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		Std	
						Add DF	
						0	
Evaporative/Refueling Family		TTYXR0130J42		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	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		Std	
						Add DF	
						0	
Evaporative/Refueling Family		TTYXR0130J42		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Spitback					
Fuel		Useful Life		Emission Name		Rounded Result	
Gasoline		4,000 miles		SPITBACK		Std	
						Add DF	
						--	
Evaporative/Refueling Family		TTYXR0130J42		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Federal fuel 3-day evap					
Fuel		Useful Life		Emission Name		Rounded Result	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		Std	
						Add DF	
						0	

Certification Summary Information Report

Test Group		TTYXV02.0H3A		Evaporative/Refueling Family		TTYXR0130J42					
Evaporative/Refueling Family		TTYXR0130J42		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		--		0.20		0	

Certification Summary Information Report

Test Group		TTYXV02.0H3A	Evaporative/Refueling Family		TTYXR0130J42
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		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)				
Certification Region					

Certification Summary Information Report

Test Group		TTYXV02.0H3A		Evaporative/Refueling Family		TTYXR0130J42	
CA	California + CAA Section 177 states	FA	Federal				
Exhaust Emission Standard Level							
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		TTYXV02.0H3A	Evaporative/Refueling Family		TTYXR0130J42
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	
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		
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		