

Certification Summary Information Report

Manufacturer	Lotus Cars Ltd	Manufacturer Code	LTX
Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Certificate Number	RLTXV03.5JHB-001	CARB Executive Order #	--
Certificate Issue Date	10/27/2023	Certificate Revision Date	--
Certificate Effective Date	10/27/2023	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	10/26/2023 06:18:28 AM
Model Year	2024		

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: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Multipoint/sequential fuel injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	--
Fuel Cell Indicator	--	EPA Vehicle Class	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	RLTXGPGNNEV1	Durability Group Equivalency Factor	1
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	12/01/2023	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite CO Option	--
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	RLTXV03.5JHB
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	Emira Base Approval		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	10/09/2023 08:42:46 AM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Metal	Fuel Tank Material Description	Stainless Steel				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	Yes	Air Intake System Vapor Storage Device Description	Panel filter permanently fixed to the clean air side of the air cleaner box				
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	The Lotus Emira utilises a standard liquid seal ORVR system, similar to other Lotus products, with no known in-use issues. The stainless steel filler neck is connected to a single stainless steel fuel tank. Vapour passes through proprietary venting valves to a Kayser ORVR canister. The canister is regenerated by operation of the Toyota purge valve. Lotus' engine management system controls this valve to optimise purge flow into the engine depending upon operating conditions.						
Leak Family Details							
Leak Family Indicator	Yes						
Canister Bleed Test Indicator	Yes	Applicability of Evaporative Canister Bleed Test	50 State				
Evaporative Canister Bleed Test Comments	--						
CARB Fuel Only (Rig) Test Indicator	No	Applicability of CARB Fuel Only (Rig) Test	--				
CARB Fuel Only (Rig) Test Comments	--						
Leak Family Name	Applicability of Leak Family Requirements	Leak Family Standard (inches)	Leak Family Description				
RLTXR0130JHB-131	50 State	0.02	--				
Models Covered by this Certificate							
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Lotus Cars Ltd	1 - Lotus Cars Ltd	8 - Emira	California + CAA Section 177 states	2-Wheel Drive, Rear	Manual	6	No
Lotus Cars Ltd	1 - Lotus Cars Ltd	8 - Emira	Federal	2-Wheel Drive, Rear	Manual	6	No
Engine Description							
Hybrid Type	--	Hybrid Description	--				
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--				
Engine Block Arrangement	V-shaped engine	Mfr Engine Block Arrangement Description	--				
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	0W-40				
Number of Cylinders/Rotors	6	Mechanically Variable Compression Ratio Indicator	N				

Certification Summary Information Report

Test Group		RLTXV03.5JHB		Evaporative/Refueling Family		RLTXR0130JHB					
After Treatment Device(s) (ATD)											
ATD Number		ATD Type		ATD Precious Metal		Substrate Material		Substrate Construction			
1		Three-way catalyst		Platinum + Palladium + Rhodium		Ceramic		Monolith			
2		Three-way catalyst		Palladium + Rhodium		Ceramic		Monolith			
3		Three-way catalyst		Platinum + Palladium + Rhodium		Ceramic		Monolith			
Mfr After Treatment Device (ATD) Comments		Two primary TWC (PT/PL/RH) and One secondary TWC (PL/RH)									
Direct Ozone Reduction (DOR) Device		Not Equipped									
Mfr Emission Control Device Comments		--									
Engine Configuration Number 1											
Engine Displacement (liters)		3.5		Engine Rated Horsepower		400					
Number of Inlet Valves Per Cylinder		2		Number of Exhaust Valves Per Cylinder		2					
Air Aspiration Method		Supercharged		Number of Air Aspiration Devices		1					
Air Aspiration Device Configuration		Single		Charge Air Cooler Type		Liquid					
Air Aspiration Drive Method(s)		Mechanical									
Cylinder Deactivation		No									
Cylinder Deactivation Description		--									
Variable Valve Timing		Yes									
Variable Valve Timing System Description		VVT mechanisms are on the inlet and exhaust camshafts for both engine banks. The system changes inlet and exhaust valve timing over the entire speed range in accordance to engine speed and load.									
Variable Valve Lift?		No									
Variable Valve Lift System Description		--									
Number of Knock Sensors		2		Number of Air/Fuel Sensors		1					
Air/Fuel Sensor # 1 Type		Heated oxygen		Air/Fuel Sensor # 1 Description		--					
Mfr Air/Fuel Sensor Comments		--									
Exhaust Gas Recirculation		No		Cooled Exhaust Gas Recirculation		No					
EGR Type		--		Exhaust Gas Recirculation Description if 'Other'		--					
Closed Loop Air Injection System		No		Air Injection Type if 'Other'		--					
Air Injection Type		Not Applicable									
Mfr Engine Configuration Comments		The 2GR engine is a proven Toyota engine, in use on such vehicles as the US specification Toyota Camry. Lotus has previously used Toyota powertrains and found both reliability and emissions durability to be excellent. This engine does not feature any new, unproven technology.									
Official Test Numbers											
Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Gasoline	RLTX10082871	RLTX10082868	RLTX10082869	RLTX10082874	RLTX10082867	19.2	228.2	32.2	286.1	--	

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB					
Emission Data Vehicle Information								
Vehicle ID / Configuration	EDV-17-EVM6/2 / 0	Manufacturer Vehicle Configuration Number	5					
Original Test Group Name	HLTXV03.5JHB	Original Evaporative/Refueling Family	HLTXR0130JHB					
Original Test Vehicle Model Year	2017							
Vehicle Model								
Represented Test Vehicle Make	Lotus	Represented Test Vehicle Model	Evora 400					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	
Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	1					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	2GR-3.5S	Rated Horsepower	400					
Displacement (liters)	3.5							
Air Aspiration Method	Supercharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single					
Charge Air Cooler Type	Liquid	Drive Mode While Testing	2-Wheel Drive, Rear					
Shift Indicator Light Usage	Equipped, not shifted by SIL	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	3175	Equivalent Test Weight (pounds)	3500					
GVWR (lbs)	4061	N/V Ratio	36					
Axle Ratio	3.24							
Transmission Type	Manual	# of Transmission Gears	6					
Transmission Lockup	No	Creep Gear	No					
Dynamometer Coefficients:								
	Target Coefficients		Set Coefficients					
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)					
City/Highway/Evap	37.485	0.406	0.01764					
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)					
	17.86	-0.0029	0.02059					
	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients							
	13.6							
Emission Control Device Comments	--							

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB						
Manufacturer Test Vehicle Comments	2017MY Evora 400 MT - Evap tests only								
Test #	HLTX10043888	Test Procedure	24 - Federal fuel refueling test (ORVR)						
Exhaust Test # for this Evap Test	HLTX10041983	Test Fuel Type	61 - Tier 2 Cert Gasoline						
Test Date	03/16/2016	Fuel	N/A						
Fuel Batch ID	DJ2221	Fuel Calibration Number	2221						
Vehicle Class	N/A	DF Type	EPA Assigned						
Verify Test Lab ID	Roush Emissions Laboratory								
E10 Evaporative Test Measurement Method	--								
Test Start Odometer Reading	6012	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	--								
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes						
Test Results									
<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value</th> </tr> </thead> <tbody> <tr> <td>HC (Hydrocarbon for Running Loss and ORVR)</td> <td>0.096043</td> <td>--</td> </tr> </tbody> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value	HC (Hydrocarbon for Running Loss and ORVR)	0.096043	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value							
HC (Hydrocarbon for Running Loss and ORVR)	0.096043	--							
Manufacturer Test Comments	--								

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB					
Emission Data Vehicle Information								
Vehicle ID / Configuration	EDV-24-EVSA6 / 0	Manufacturer Vehicle Configuration Number	2					
Original Test Group Name	RLTXV03.5JHB	Original Evaporative/Refueling Family	RLTXR0130JHB					
Original Test Vehicle Model Year	2024							
Vehicle Model								
Represented Test Vehicle Make	Lotus	Represented Test Vehicle Model	Emira					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	
Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	1					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	2GR-3.5S	Rated Horsepower	400					
Displacement (liters)	3.5							
Air Aspiration Method	Supercharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single					
Charge Air Cooler Type	Liquid	Drive Mode While Testing	2-Wheel Drive, Rear					
Shift Indicator Light Usage	Equipped, not shifted by SIL	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	3241	Equivalent Test Weight (pounds)	3625					
GVWR (lbs)	3902	N/V Ratio	28.5					
Axle Ratio	3.69							
Transmission Type	Semi-Automatic	# of Transmission Gears	6					
Transmission Lockup	No	Creep Gear	No					
Dynamometer Coefficients:								
	Target Coefficients		Set Coefficients					
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)					
City/Highway/Evap	37.419	0.55691	0.017409					
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)					
	13.151	0.21852	0.020146					
	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients							
	14.5							
Emission Control Device Comments	--							

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB						
Manufacturer Test Vehicle Comments	2024MY Emira EVAP testing configuration								
Test #	RLTX10082876	Test Procedure	23 - 2-day evap						
Exhaust Test # for this Evap Test	RLTX10082871	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline						
Test Date	07/12/2023	Fuel	Gasoline						
Fuel Batch ID	C50641	Fuel Calibration Number	9043						
Vehicle Class	N/A	DF Type	EPA Assigned						
Verify Test Lab ID	Applus IDIADA Group								
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)								
Test Start Odometer Reading	4254	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	--								
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes						
Test Results									
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.269</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.269	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.269	--							
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	0.269	0	0.27	0.45	Pass	
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.269	0	0.27	0.45	Pass	

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082877	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	RLTX10082871	Test Fuel Type	47 - CARB LEV3 E10 Premium
Test Date	07/04/2023	Fuel	Gasoline
Fuel Batch ID	C50641	Fuel Calibration Number	9043
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Applus IDIADA Group		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4218	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.357	--

Manufacturer Test Comments

Declared FEL 0.45

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	0.357	0	0.36	0.45	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.357	0	0.36	0.45	Pass

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB																		
Test #	RLTX10082878	Test Procedure	32 - Federal Fuel Running Loss																		
Exhaust Test # for this Evap Test	RLTX10082871	Test Fuel Type	47 - CARB LEV3 E10 Premium																		
Test Date	07/04/2023	Fuel	Gasoline																		
Fuel Batch ID	C50641	Fuel Calibration Number	9043																		
Vehicle Class	N/A	DF Type	EPA Assigned																		
Verify Test Lab ID	Applus IDIADA Group																				
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)																				
Test Start Odometer Reading	4218	Odometer Units	M																		
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																		
State of Charge Delta	--																				
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																		
Test Results																					
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.0008</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0008	--												
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)																			
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0008	--																			
Manufacturer Test Comments --																					
<table border="1"> <tr> <th>Certification Region</th> <th>Useful Life</th> <th>Standard Level</th> <th>Emission Name</th> <th>Rounded Result</th> <th>Add DF</th> <th>Certification Level</th> <th>Standard</th> <th>Pass/Fail</th> </tr> <tr> <td>Fed</td> <td>150,000 miles</td> <td>Federal Tier 3 Evap</td> <td>HC-TOTAL-EQUIV</td> <td>0.001</td> <td>0</td> <td>0</td> <td>0.05</td> <td>Pass</td> </tr> </table>				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	0.001	0	0	0.05	Pass
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	0.001	0	0	0.05	Pass													

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082875	Test Procedure	65 - Evap Canister Bleed Test
Exhaust Test # for this Evap Test	--	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline
Test Date	11/06/2022	Fuel	Gasoline
Fuel Batch ID	C44869	Fuel Calibration Number	9455
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	Applus IDIADA Group		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4254	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.0113	--

Manufacturer Test Comments

BETP conducted at Idiada using production canister, therefore vehicle values are dummy values only

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	0.011	0	0.01	0.02	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.011	0	0.01	0.02	Pass

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Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB					
Emission Data Vehicle Information								
Vehicle ID / Configuration	EDV-24-EVSM6 / 0	Manufacturer Vehicle Configuration Number	1					
Original Test Group Name	RLTXV03.5JHB	Original Evaporative/Refueling Family	RLTXR0130JHB					
Original Test Vehicle Model Year	2024							
Vehicle Model								
Represented Test Vehicle Make	Lotus	Represented Test Vehicle Model	Emira					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
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Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	1					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	2GR-3.5S	Rated Horsepower	400					
Displacement (liters)	3.5							
Air Aspiration Method	Supercharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single					
Charge Air Cooler Type	Liquid	Drive Mode While Testing	2-Wheel Drive, Rear					
Shift Indicator Light Usage	Equipped, not shifted by SIL	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	3225	Equivalent Test Weight (pounds)	3625					
GVWR (lbs)	3887	N/V Ratio	35.5					
Axle Ratio	3.24							
Transmission Type	Manual	# of Transmission Gears	6					
Transmission Lockup	No	Creep Gear	No					

Certification Summary Information Report

Test Group		RLTXV03.5JHB			Evaporative/Refueling Family		RLTXR0130JHB	
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	37.419	0.55691	0.017409	19.963	0.24494	0.018929	14.5	
Cold CO	41.161	0.6126	0.01915	23.268	0.1364	0.02205	N/A	
US06	37.419	0.55691	0.017409	15.579	0.17764	0.019657	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		MY24 Emissions Testing						

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082871	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	05/17/2023	Fuel	Gasoline
Fuel Batch ID	C55270	Fuel Calibration Number	9093
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4152	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	431.4717087	--
FE BAG 1 (Bag 1 Fuel Economy)	20.056572	20.056572
CO2 BAG 2 (Bag 2 Carbon Dioxide)	479.8468874	--
FE BAG 2 (Bag 2 Fuel Economy)	18.1212154	18.1212154
CO2 BAG 3 (Bag 3 Carbon Dioxide)	387.1607582	--
FE BAG 3 (Bag 3 Fuel Economy)	22.4499677	22.4499677
METHANE (CH4 - Methane)	0.0059399	--
CO (Carbon Monoxide)	0.272692	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.02	--
DT-EER (Drive Trace Energy Economy Rating)	1.48	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	8.34	--
MFR FE (Manufacturer Fuel Economy)	19.5174765	19.5174765
NOX (Nitrogen Oxide)	0.0128045	--
N2O (Nitrous Oxide)	0.0011626	--
HC-NM (Non-methane Hydrocarbon)	0.0134667	--
NMOG (Non-methane organic gases)	0.0148368	--
PM (Particulate Matter)	0.0002693	--
HC-TOTAL (Total Hydrocarbon)	0.0190187	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	445.5313012	999

Certification Summary Information Report

Test Group		RLTXV03.5JHB			Evaporative/Refueling Family					RLTXR0130JHB		
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		444.4032963			--					
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	120,000 miles	Federal Tier 3 Bin 125	CREE	999	--	--	--	0	--	999	--	--
Fed	120,000 miles	Federal Tier 3 Bin 125	METHANE	0.006	--	--	--	0.0069	--	0.01	0.03	Pass
Fed	120,000 miles	Federal Tier 3 Bin 125	N2O	0.001	--	--	--	0.0028	--	0	0.01	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	CO	0.27	--	--	--	0.38	--	0.6	2.1	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0148	--	1.1	--	0.0149	--	0.03	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0276	--	--	--	--	--	0.054	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0128	--	--	--	0.0115	--	0.024	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0003	--	--	--	0	--	0	0.003	Pass
CA	120,000 miles	California LEV-III ULEV125	CREE	999	--	--	--	0	--	999	--	--
CA	120,000 miles	California LEV-III ULEV125	METHANE	0.006	--	--	--	0.0069	--	0.01	0.03	Pass
CA	120,000 miles	California LEV-III ULEV125	N2O	0.001	--	--	--	0.0028	--	0	0.01	Pass
CA	150,000 miles	California LEV-III ULEV125	CO	0.27	--	--	--	0.38	--	0.6	2.1	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG	0.0148	--	1.1	--	0.0149	--	0.03	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG+NOX	0.0276	--	--	--	--	--	0.054	0.125	Pass
CA	150,000 miles	California LEV-III ULEV125	NOX	0.0128	--	--	--	0.0115	--	0.024	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	PM	0.0003	--	--	--	0	--	0	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	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082872	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	07/07/2023	Fuel	Gasoline
Fuel Batch ID	C44900	Fuel Calibration Number	9046
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4368	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	438.1080921	--
FE BAG 1 (Bag 1 Fuel Economy)	20.2224765	20.2224765
CO2 BAG 2 (Bag 2 Carbon Dioxide)	488.9448005	--
FE BAG 2 (Bag 2 Fuel Economy)	18.2608534	18.2608534
CO2 BAG 3 (Bag 3 Carbon Dioxide)	394.7839278	--
FE BAG 3 (Bag 3 Fuel Economy)	22.5968948	22.5968948
METHANE (CH4 - Methane)	0.0095822	--
CO (Carbon Monoxide)	0.4763755	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.74	--
DT-EER (Drive Trace Energy Economy Rating)	-0.14	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.19	--
MFR FE (Manufacturer Fuel Economy)	19.6678799	19.6678799
NOX (Nitrogen Oxide)	0.0127603	--
N2O (Nitrous Oxide)	0.0016661	--
HC-NM (Non-methane Hydrocarbon)	0.0215814	--
NMOG (Non-methane organic gases)	0.0224446	--
PM (Particulate Matter)	0.0004135	--
HC-TOTAL (Total Hydrocarbon)	0.0306828	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	454.0137692	454

Certification Summary Information Report

Test Group		RLTXV03.5JHB			Evaporative/Refueling Family					RLTXR0130JHB		
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		452.5703984			--					
Manufacturer Test Comments		NMOG=1.04 x NMHC										
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	120,000 miles	Federal Tier 3 Bin 125	CREE	454	--	--	--	0	--	454	--	--
Fed	120,000 miles	Federal Tier 3 Bin 125	METHANE	0.01	--	--	--	0.0069	--	0.02	0.03	Pass
Fed	120,000 miles	Federal Tier 3 Bin 125	N2O	0.002	--	--	--	0.0028	--	0	0.01	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	CO	0.48	--	--	--	0.38	--	0.9	2.1	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0224	--	1.1	--	0.0149	--	0.037	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0352	--	--	--	--	--	0.062	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0128	--	--	--	0.0115	--	0.024	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0004	--	--	--	0	--	0	0.003	Pass
CA	120,000 miles	California LEV-III ULEV125	CREE	454	--	--	--	0	--	454	--	--
CA	120,000 miles	California LEV-III ULEV125	METHANE	0.01	--	--	--	0.0069	--	0.02	0.03	Pass
CA	120,000 miles	California LEV-III ULEV125	N2O	0.002	--	--	--	0.0028	--	0	0.01	Pass
CA	150,000 miles	California LEV-III ULEV125	CO	0.48	--	--	--	0.38	--	0.9	2.1	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG	0.0224	--	1.1	--	0.0149	--	0.037	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG+NOX	0.0352	--	--	--	--	--	0.062	0.125	Pass
CA	150,000 miles	California LEV-III ULEV125	NOX	0.0128	--	--	--	0.0115	--	0.024	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	PM	0.0004	--	--	--	0	--	0	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	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082873	Test Procedure	51 - CA fuel 50 Deg(F) exhaust test
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	05/24/2023	Fuel	Gasoline
Fuel Batch ID	C55270	Fuel Calibration Number	9093
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4223	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	463.9377893	--	
FE BAG 1 (Bag 1 Fuel Economy)	18.69003	18.69003	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	501.5931543	--	
FE BAG 2 (Bag 2 Fuel Economy)	17.335858	17.335858	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	405.7932074	--	
FE BAG 3 (Bag 3 Fuel Economy)	21.4274223	21.4274223	
METHANE (CH4 - Methane)	0.0130196	--	
CO (Carbon Monoxide)	0.0006439	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	3.71	--	
DT-EER (Drive Trace Energy Economy Rating)	1.92	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	5.77	--	
MFR FE (Manufacturer Fuel Economy)	18.5804853	18.5804853	
NOX (Nitrogen Oxide)	0.0119637	--	
HC-NM (Non-methane Hydrocarbon)	0.0803337	--	
NMOG (Non-methane organic gases)	0.1005566	--	
HC-TOTAL (Total Hydrocarbon)	0.0932092	--	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	467.528024	--	
Manufacturer Test Comments	--		

Certification Summary Information Report

Test Group		RLTXV03.5JHB			Evaporative/Refueling Family					RLTXR0130JHB		
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	50,000 miles	California LEV-III ULEV125	CO	0	--	--	--	0.1197	--	0.1	2.1	Pass
CA	50,000 miles	California LEV-III ULEV125	NMOG	0.1006	--	1.1	--	0.0047	--	0.105	99.999	Pass
CA	50,000 miles	California LEV-III ULEV125	NMOG+NOX	0.1126	--	--	--	--	--	0.12	0.25	Pass
CA	50,000 miles	California LEV-III ULEV125	NOX	0.012	--	--	--	0.0036	--	0.016	99.999	Pass

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082874	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	06/07/2023	Fuel	Gasoline
Fuel Batch ID	C31346	Fuel Calibration Number	9346
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4298	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	500.6396265	--	
FE BAG 1 (Bag 1 Fuel Economy)	16.826501	16.826501	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	520.3448839	--	
FE BAG 2 (Bag 2 Fuel Economy)	16.580611	16.580611	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	420.1108055	--	
FE BAG 3 (Bag 3 Fuel Economy)	20.5246714	20.5246714	
METHANE (CH4 - Methane)	0.0168336	--	
CO (Carbon Monoxide)	1.1649144	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.3	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.77	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.33	--	
MFR FE (Manufacturer Fuel Economy)	17.5518469	17.5518469	
NOX (Nitrogen Oxide)	0.0121607	--	
HC-NM (Non-methane Hydrocarbon)	0.2811593	--	
NMOG (Non-methane organic gases)	0.3100597	--	
HC-TOTAL (Total Hydrocarbon)	0.2974806	--	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	488.7918485	--	
Manufacturer Test Comments	--		

Certification Summary Information Report

Test Group		RLTXV03.5JHB				Evaporative/Refueling Family				RLTXR0130JHB		
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 125	CO	1.2	--	--	--	0.1197	--	1	10	Pass
Fed	120,000 miles	Federal Tier 3 Bin 125	HC-NM	0.28	--	--	--	0.0118	--	0.3	0.4	Pass
CA	50,000 miles	California LEV-III ULEV125	CO	1.2	--	--	--	0.1197	--	1	10	Pass

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082867	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	05/17/2023	Fuel	Gasoline
Fuel Batch ID	C55270	Fuel Calibration Number	9093
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4152	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0006753	--
CO (Carbon Monoxide)	0.0024502	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	11.9	--
DT-EER (Drive Trace Energy Economy Rating)	0.78	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	15.42	--
MFR FE (Manufacturer Fuel Economy)	30.9906783	30.9906783
NOX (Nitrogen Oxide)	0.0037919	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0.0005048	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	280.5891181	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	279.9416795	--

Manufacturer Test Comments --

Certification Summary Information Report

Test Group		RLTXV03.5JHB			Evaporative/Refueling Family					RLTXR0130JHB		
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	120,000 miles	Federal Tier 3 Bin 125	CREE	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0	--	1.03	--	0.0149	--	0.015	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0038	--	--	--	--	--	0.03	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0038	--	--	--	0.0115	--	0.015	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	CREE	999	--	--	--	0	--	999	--	--
CA	150,000 miles	California LEV-III ULEV125	NMOG	0	--	1.03	--	0.0149	--	0.015	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG+NOX	0.0038	--	--	--	--	--	0.03	0.125	Pass
CA	150,000 miles	California LEV-III ULEV125	NOX	0.0038	--	--	--	0.0115	--	0.015	99.999	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	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082868	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	05/18/2023	Fuel	Gasoline
Fuel Batch ID	C55270	Fuel Calibration Number	9093
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4192	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	535.9601247	--	
FE BAG 1 (Bag 1 Fuel Economy)	16.0852601	16.0852601	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	330.7490276	--	
FE BAG 2 (Bag 2 Fuel Economy)	26.2345347	26.2345347	
METHANE (CH4 - Methane)	0.0031279	--	
CO (Carbon Monoxide)	1.0005683	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.36	--	
DT-EER (Drive Trace Energy Economy Rating)	-1.1	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.79	--	
MFR FE (Manufacturer Fuel Economy)	22.96763	22.96763	
NOX (Nitrogen Oxide)	0.01142	--	
HC-NM (Non-methane Hydrocarbon)	0.0022425	--	
NMOG (Non-methane organic gases)	0.0023098	--	
PM (Particulate Matter)	0.0043807	--	
HC-TOTAL (Total Hydrocarbon)	0.0034217	--	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	376.3797786	--	
Manufacturer Test Comments	--		

Certification Summary Information Report

Test Group		RLTXV03.5JHB			Evaporative/Refueling Family					RLTXR0130JHB		
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 125	CO	1	--	--	--	0.38	--	1.4	9.6	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0023	--	1.03	--	0.0149	--	0.017	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0137	--	--	--	--	--	0.04	0.12	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0114	--	--	--	0.0115	--	0.023	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0044	--	--	--	0	--	0.004	0.006	Pass
CA	150,000 miles	California LEV-III ULEV125	CO	1	--	--	--	0.38	--	1.4	9.6	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG	0.0023	--	1.03	--	0.0149	--	0.017	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG+NOX	0.0137	--	--	--	--	--	0.04	0.12	Pass
CA	150,000 miles	California LEV-III ULEV125	NOX	0.0114	--	--	--	0.0115	--	0.023	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	PM	0.0044	--	--	--	0	--	0.004	0.006	Pass

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082869	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	06/12/2023	Fuel	Gasoline
Fuel Batch ID	C55270	Fuel Calibration Number	9093
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4322	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0060136	--
CO (Carbon Monoxide)	0.0449242	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.76	--
DT-EER (Drive Trace Energy Economy Rating)	-0.06	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.51	--
MFR FE (Manufacturer Fuel Economy)	16.2721521	16.2721521
NOX (Nitrogen Oxide)	0.0225937	--
HC-NM (Non-methane Hydrocarbon)	0.0043519	--
NMOG (Non-methane organic gases)	0.0044825	--
HC-TOTAL (Total Hydrocarbon)	0.0101825	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	533.6449472	--

Manufacturer Test Comments --

Certification Summary Information Report

Test Group		RLTXV03.5JHB				Evaporative/Refueling Family				RLTXR0130JHB		
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 125	CO	0.04	--	--	--	0.38	--	0.4	2.1	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0045	--	1.03	--	0.0149	--	0.019	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0271	--	--	--	--	--	0.05	0.07	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0226	--	--	--	0.0115	--	0.034	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	CO	0.04	--	--	--	0.38	--	0.4	3.2	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG	0.0045	--	1.03	--	0.0149	--	0.019	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG+NOX	0.0271	--	--	--	--	--	0.05	0.07	Pass
CA	150,000 miles	California LEV-III ULEV125	NOX	0.0226	--	--	--	0.0115	--	0.034	99.999	Pass

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
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Emission Data Vehicle Information

Vehicle ID / Configuration	EDV-24-EVSM6/1 / 0	Manufacturer Vehicle Configuration Number	1
Original Test Group Name	RLTXV03.5JHB	Original Evaporative/Refueling Family	RLTXR0130JHB
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	Lotus	Represented Test Vehicle Model	Emira
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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

Hybrid Indicator	No		
Multiple Fuel Storage	--	Multiple Fuel Combustion	--
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	Odometer Correction Factor	1
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	2GR-3.5S	Rated Horsepower	400
Displacement (liters)	3.5		
Air Aspiration Method	Supercharged	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single
Charge Air Cooler Type	Liquid	Drive Mode While Testing	2-Wheel Drive, Rear
Shift Indicator Light Usage	Equipped, not shifted by SIL	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	3225	Equivalent Test Weight (pounds)	3625
GVWR (lbs)	3887	N/V Ratio	35.5
Axle Ratio	3.24		
Transmission Type	Manual	# of Transmission Gears	6
Transmission Lockup	No	Creep Gear	No

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	37.419	0.55691	0.017409	21.177	0.21672	0.019167	14.5

Emission Control Device Comments --

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Manufacturer Test Vehicle Comments	2024MY FE testing		

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Test #	RLTX10082870	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	07/07/2023	Fuel	Gasoline
Fuel Batch ID	C44900	Fuel Calibration Number	9046
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4368	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0013667	--
CO (Carbon Monoxide)	0.0520847	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.11	--
DT-EER (Drive Trace Energy Economy Rating)	-0.03	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.65	--
MFR FE (Manufacturer Fuel Economy)	31.8139189	31.8139189
NOX (Nitrogen Oxide)	0.003115	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0.0012924	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	281.0032996	280

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	279.9957733	--

Manufacturer Test Comments NMOG=1.04 x NMHC

Certification Summary Information Report

Test Group		RLTXV03.5JHB				Evaporative/Refueling Family				RLTXR0130JHB		
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	120,000 miles	Federal Tier 3 Bin 125	CREE	280	--	--	--	0	--	280	--	--
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0	--	1.03	--	0.0149	--	0.015	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0031	--	--	--	--	--	0.03	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0031	--	--	--	0.0115	--	0.015	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	CREE	280	--	--	--	0	--	280	--	--
CA	150,000 miles	California LEV-III ULEV125	NMOG	0	--	1.03	--	0.0149	--	0.015	99.999	Pass
CA	150,000 miles	California LEV-III ULEV125	NMOG+NOX	0.0031	--	--	--	--	--	0.03	0.125	Pass
CA	150,000 miles	California LEV-III ULEV125	NOX	0.0031	--	--	--	0.0115	--	0.015	99.999	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	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Fuel Properties			
Fuel Batch ID	C44900	Fuel Calibration Number	9046
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	07/04/2023
Fuel Batch Calibration Effective Date	07/04/2023	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.737
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value (BTU / lb)	18470
Fuel Blend Carbon Weight Fraction	0.872	Weight Fraction CO2	--
Fuel Batch ID	C55270	Fuel Calibration Number	9093
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	02/20/2023
Fuel Batch Calibration Effective Date	02/20/2023	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.75
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value (BTU / lb)	17847
Fuel Blend Carbon Weight Fraction	0.826	Weight Fraction CO2	--
Fuel Batch ID	C50641	Fuel Calibration Number	9043
Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline	Fuel Batch Calibration Date	05/17/2022
Fuel Batch Calibration Effective Date	09/22/2022	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.748
Fuel Ethanol Volume Percent (%)	9.5	Fuel Net Heating Value (BTU / lb)	17830
Fuel Blend Carbon Weight Fraction	0.829	Weight Fraction CO2	--
Fuel Batch ID	C31346	Fuel Calibration Number	9346
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	03/22/2023
Fuel Batch Calibration Effective Date	03/22/2023	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.738
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value (BTU / lb)	17803
Fuel Blend Carbon Weight Fraction	0.824	Weight Fraction CO2	--
Fuel Batch ID	C44869	Fuel Calibration Number	9455
Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline	Fuel Batch Calibration Date	08/31/2021
Fuel Batch Calibration Effective Date	08/31/2021	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.748
Fuel Ethanol Volume Percent (%)	9.6	Fuel Net Heating Value (BTU / lb)	17829
Fuel Blend Carbon Weight Fraction	0.828	Weight Fraction CO2	--
Fuel Batch ID	DJ2221	Fuel Calibration Number	2221
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	10/26/2015
Fuel Batch Calibration Effective Date	10/26/2015	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value (BTU / lb)	18476
Fuel Blend Carbon Weight Fraction	0.865	Weight Fraction CO2	--

Certification Summary Information Report

Test Group		RLTXV03.5JHB			Evaporative/Refueling Family			RLTXR0130JHB		
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-III ULEV125		
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	--	--	--	--	--	--	0.38	3.2	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0149	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0264	0.07	
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV125		
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	--	--	--	--	--	--	0.38	9.6	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0149	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0264	0.12	
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999	
150,000 miles	PM	--	--	--	--	--	--	0	0.006	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV125		
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	999.9	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0149	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0264	0.125	
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999	

Certification Summary Information Report

Test Group	RLTXV03.5JHB				Evaporative/Refueling Family			RLTXR0130JHB	
Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Cert	
Vehicle Class	LDV/Passenger Car				Standard Level			California LEV-III ULEV125	
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
120,000 miles	CREE	--	--	--	--	--	--	0	999.9
120,000 miles	METHANE	--	--	--	--	--	--	0.0069	0.03
120,000 miles	N2O	--	--	--	--	--	--	0.0028	0.01
150,000 miles	CO	--	--	--	--	--	--	0.38	2.1
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0149	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0264	0.125
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003
Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Cert	
Vehicle Class	LDV/Passenger Car				Standard Level			California LEV-III ULEV125	
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
50,000 miles	CO	--	--	--	--	--	--	0.1197	2.1
50,000 miles	NMOG	--	--	1.1	--	--	--	0.0047	99.999
50,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0083	0.25
50,000 miles	NOX	--	--	--	--	--	--	0.0036	99.999
Cert Region	Federal				Cert/In-Use Code			Cert	
Vehicle Class	LDV/Passenger Car				Standard Level			Federal Tier 3 Bin 125	
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	--	--	--	--	--	--	0.38	2.1
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0149	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0264	0.07
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999

Certification Summary Information Report

Test Group		RLTXV03.5JHB			Evaporative/Refueling Family			RLTXR0130JHB	
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 125	
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	--	--	--	--	--	--	0.38	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0149	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0264	0.12
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 125	
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
120,000 miles	CREE	--	--	--	--	--	--	0	999.9
120,000 miles	METHANE	--	--	--	--	--	--	0.0069	0.03
120,000 miles	N2O	--	--	--	--	--	--	0.0028	0.01
150,000 miles	CO	--	--	--	--	--	--	0.38	2.1
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0149	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0264	0.125
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 125	
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
120,000 miles	CREE	--	--	--	--	--	--	0	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0149	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0264	0.125
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999

Certification Summary Information Report

Test Group	RLTXV03.5JHB	Evaporative/Refueling Family					RLTXR0130JHB		
Cert Region	Federal	Cert/In-Use Code					Cert		
Vehicle Class	LDV/Passenger Car	Standard Level					Federal Tier 3 Bin 125		
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	--	--	--	--	--	--	0.1197	10
120,000 miles	HC-NM	--	--	--	--	--	--	0.0118	0.4
Cert Region	California + CAA Section 177 states	Cert/In-Use Code					Cert		
Vehicle Class	LDV/Passenger Car	Standard Level					California LEV-III ULEV125		
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	--	--	--	--	--	--	0.1197	10
Evaporative/Refueling Standards									
Evaporative/Refueling Family	RLTXR0130JHB	Cert Region					California + CAA Section 177 states		
Cert/In-Use Code	Cert	Standard Level					California LEV-III Zero Evap (Option 2)		
Test Procedure	Federal fuel 3-day evap								
Fuel	Useful Life	Emission Name	Rounded Result			Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--			0.45	0		
Evaporative/Refueling Family	RLTXR0130JHB	Cert Region					California + CAA Section 177 states		
Cert/In-Use Code	Cert	Standard Level					California LEV-III Zero Evap (Option 2)		
Test Procedure	2-day evap								
Fuel	Useful Life	Emission Name	Rounded Result			Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--			0.45	0		

Certification Summary Information Report

Test Group		RLTXV03.5JHB		Evaporative/Refueling Family		RLTXR0130JHB	
Evaporative/Refueling Family		RLTXR0130JHB		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.2	0.006		
Evaporative/Refueling Family		RLTXR0130JHB		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL	--	0.02	0		
Evaporative/Refueling Family		RLTXR0130JHB		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL	--	0.02	0		
Evaporative/Refueling Family		RLTXR0130JHB		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0		
Evaporative/Refueling Family		RLTXR0130JHB		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		California Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.005	0		

Certification Summary Information Report

Test Group		RLTXV03.5JHB		Evaporative/Refueling Family		RLTXR0130JHB	
Evaporative/Refueling Family		RLTXR0130JHB		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal fuel 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.45	0		
Evaporative/Refueling Family		RLTXR0130JHB		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.2	0.006		
Evaporative/Refueling Family		RLTXR0130JHB		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	--	0.45	0		

Certification Summary Information Report

Test Group		RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
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	METHANOL	CH3OH - Methanol	
CO	Carbon Monoxide	N2O	Nitrous Oxide	
CO2	Carbon dioxide	SPITBACK	Spitback Hydrocarbon in grams	
CREE	Carbon-Related Exhaust Emissions	AMP-HRS	Integrated Amp-hours	
OPT-CREE	Optional Carbon-Related Exhaust Emissions	START-SOC	System Start State of Charge Watt-hours	
NOX	Nitrogen Oxide	END-SOC	System End State of Charge Watt-hours	
PM	Particulate Matter	ACT-DISTANCE	Actual Distance Driven (miles)	
PM-COMP	SFTP Composite Particulate Matter	AS-VOLT	Average System Voltage	
HC-NM	Non-methane Hydrocarbon	CO2 BAG 1	Bag 1 Carbon Dioxide	
OMHCE	Organic material Hydrocarbon Equivalent	CO2 BAG 2	Bag 2 Carbon Dioxide	
OMNMHCE	Organic material non-methane HC equivalent	CO2 BAG 3	Bag 3 Carbon Dioxide	
NMOG	Non-methane organic gases	CO2 BAG 4	Bag 4 Carbon Dioxide	
HCHO	Formaldehyde	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	
H3C2HO	Acetaldehyde	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	DT-IWRR	Drive Trace Inertia Work Ratio Rating	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	DT-ASCR	Drive Trace Absolute Speed Change Rating	
CO-COMP	SFTP Composite Carbon Monoxide	DT-EER	Drive Trace Energy Economy Rating	
ETHANOL	C2H5OH - Ethanol	COMB-CREE	Combined Carbon-Related Exhaust Emissions	
FE BAG 1	Bag 1 Fuel Economy	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
FE BAG 2	Bag 2 Fuel Economy	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
FE BAG 3	Bag 3 Fuel Economy	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
FE BAG 4	Bag 4 Fuel Economy	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
MFR FE	Manufacturer Fuel Economy	LEAK-DIA	Effective Leak Diameter (inches)	
HC	Hydrocarbon for Running Loss and ORVR	LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
METHANE	CH4 - Methane	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
Certification Region				
CA	California + CAA Section 177 states	FA	Federal	
Exhaust Emission Standard Level				
B1	Federal Tier 2 Bin 1	L3ULEV340	California LEV-III ULEV340	
B2	Federal Tier 2 Bin 2	L3ULEV250	California LEV-III ULEV250	
B3	Federal Tier 2 Bin 3	L3ULEV200	California LEV-III ULEV200	
B4	Federal Tier 2 Bin 4	L3SULEV170	California LEV-III SULEV170	
B5	Federal Tier 2 Bin 5	L3SULEV150	California LEV-III SULEV150	

Certification Summary Information Report

Test Group		RLTXV03.5JHB	Evaporative/Refueling Family	RLTXR0130JHB
B6	Federal Tier 2 Bin 6		L3LEV630	California LEV-III LEV630
B7	Federal Tier 2 Bin 7		L3ULEV570	California LEV-III ULEV570
B8	Federal Tier 2 Bin 8		L3ULEV400	California LEV-III ULEV400
B9	Federal Tier 2 Bin 9		L3ULEV270	California LEV-III ULEV270
B10	Federal Tier 2 Bin 10		L3SULEV230	California LEV-III SULEV230
B11	Federal Tier 2 Bin 11		L3SULEV200	California LEV-III SULEV200
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		T3B160	Federal Tier 3 Bin 160
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		T3B125	Federal Tier 3 Bin 125
L2	California LEV-II LEV		T3B110	Federal Tier 3 Transitional Bin 110
L2OP	California LEV-II LEV Optional		T3B85	Federal Tier 3 Transitional Bin 85
U2	California LEV-II ULEV		T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover
S2	California LEV-II SULEV		T3B70	Federal Tier 3 Bin 70
ZEV	California ZEV		T3B50	Federal Tier 3 Bin 50
OT	Other		T3B30	Federal Tier 3 Bin 30
T1	Federal Tier 1		T3B20	Federal Tier 3 Bin 20
PZEV	California PZEV		T3B0	Federal Tier 3 Bin 0
L2LEV160	California LEV-II LEV160		HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395
L2ULEV125	California LEV-II ULEV125		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340
L2SULEV30	California LEV-II SULEV30		HDV2B250	Federal Tier 3 HD Class 2b Bin 250
L2LEV395	California LEV-II LEV395		HDV2B200	Federal Tier 3 HD Class 2b Bin 200
L2ULEV340	California LEV-II ULEV340		HDV2B170	Federal Tier 3 HD Class 2b Bin 170
L2LEV630	California LEV-II LEV630		HDV2B150	Federal Tier 3 HD Class 2b Bin 150
L2ULEV570	California LEV-II ULEV570		HDV2B0	Federal Tier 3 HD Class 2b Bin 0
L3LEV160	California LEV-III LEV160		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630
L3ULEV125	California LEV-III ULEV125		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570
L3ULEV70	California LEV-III ULEV70		HDV3B400	Federal Tier 3 HD Class 3 Bin 400
L3ULEV50	California LEV-III ULEV50		HDV3B270	Federal Tier 3 HD Class 3 Bin 270
L3SULEV30	California LEV-III SULEV30		HDV3B230	Federal Tier 3 HD Class 3 Bin 230
L3SULEV20	California LEV-III SULEV20		HDV3B200	Federal Tier 3 HD Class 3 Bin 200
L3LEV395	California LEV-III LEV395		HDV3B0	Federal Tier 3 HD Class 3 Bin 0
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			

Certification Summary Information Report

Test Group		RLTXV03.5JHB	Evaporative/Refueling Family		RLTXR0130JHB
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	