



Lotus Cars Ltd

Application for Certification – Part 1

2027 Model Year Emira

Durability Group: VLTXGPGNNEV1
 Evap. Family: VLTXR0130JHB
 Test Group: VLTXV03.5JHB

Durability Group Description: Four stroke, Otto Cycle, Gasoline Fuelled, Ported FI, Catalyst description: unheated monolith & precious metal

Ceramic Monolith: Pt/Pd/Rh Catalyst

Test Group Description: 3.5 Litre V6 LDV, PC

Applicable Exhaust Standards: 50 State, Tier 4, BIN 125 / LEV IV, ULEV 125

Applicable Evaporative Standards: Interim Tier 4 / LEV IV

Carline: Emira

Issue Date: 18th December 2025

Manufacturer's Requested Response Date: As soon as possible

Vehicles Tested & EPA Test Numbers:

VID	Config	Test Type / Test Number	
EDV-26-EVSM6	Config 0	FTP75 E10	TLTX10090616
		Highway E10	TLTX10090617
		Cold CO	TLTX10090615
		50 Deg F	TLTX10090619
		SC03	TLTX10090618
		US06	TLTX10090627
	Config 0	FTP75 E0	TLTX10090620
		Highway E0	TLTX10090621
EDV-26-EVSDCT	Config 0	FTP75	TLTX10090612
		3-Day EVAP	TLTX10090613
		Running Loss	TLTX10090614
EDV-24-EVSA6	Config 0	BETP	RLTX10082875
EDV-24-ORVR	Config 0	ORVR	RLTX10085056



Contents

1.	CORRESPONDENCE AND COMMUNICATIONS	4
1.1.	Organisation Chart.....	4
1.2.	USA Contact Information.....	4
1.3.	eMailing information.....	5
1.4.	EPA & CARB Liaison	5
1.5.	Certification information	5
1.6.	Contact information	5
2.	DURABILITY/REFUELLING FAMILY DESCRIPTION.....	6
3.	Evaporative & Refuelling Family Description	7
3.1.	EPA REVIEW OF LOTUS 2006MY ORVR DESCRIPTION.....	7
4.	DURABILITY PROCEDURE DESCRIPTION	13
4.1.	EPA & CARB Exhaust DFs (additive – g/mile)	13
4.2.	Evaporative DFs (additive).....	14
5.	TEST GROUP DESCRIPTION.....	14
6.	TEST VEHICLE DESCRIPTION	15
6.1.	Base Vehicle Description	15
6.2.	Vehicle Information	15
7.	TEST RESULTS	16
8.	EMISSION WAIVER/COMPLIANCE STATEMENTS.....	57
9.	OBD SYSTEM DESCRIPTION	57
9.1.	Malfunction Indicator Lamp (MIL).....	57
9.2.	OBD II Approval	57
9.3.	40 CFR Part 85 Subpart W	59
9.4.	§86.1813 Leak test procedure.....	59
10.	DESCRIPTION OF ALTERNATE FUEL VEHICLES	62
11.	EMISSIONS COMPONENTS, AUXILIARY EMISSIONS CONTROL DEVICES & EMISSIONS CONTROL STRATEGIES.....	63
12.	DESCRIPTION OF VEHICLES COVERED BY CERTIFICATION & TEST PARAMETERS..	63
12.1.	Test Parameters	64
12.1.1.	Starting procedure.....	64
12.1.2.	EPA Standard Shift Speeds (Manual Transmission)	65
12.1.3.	Shift schedule (Manual Transmission).....	65
12.1.4.	Worst case drive mode	65

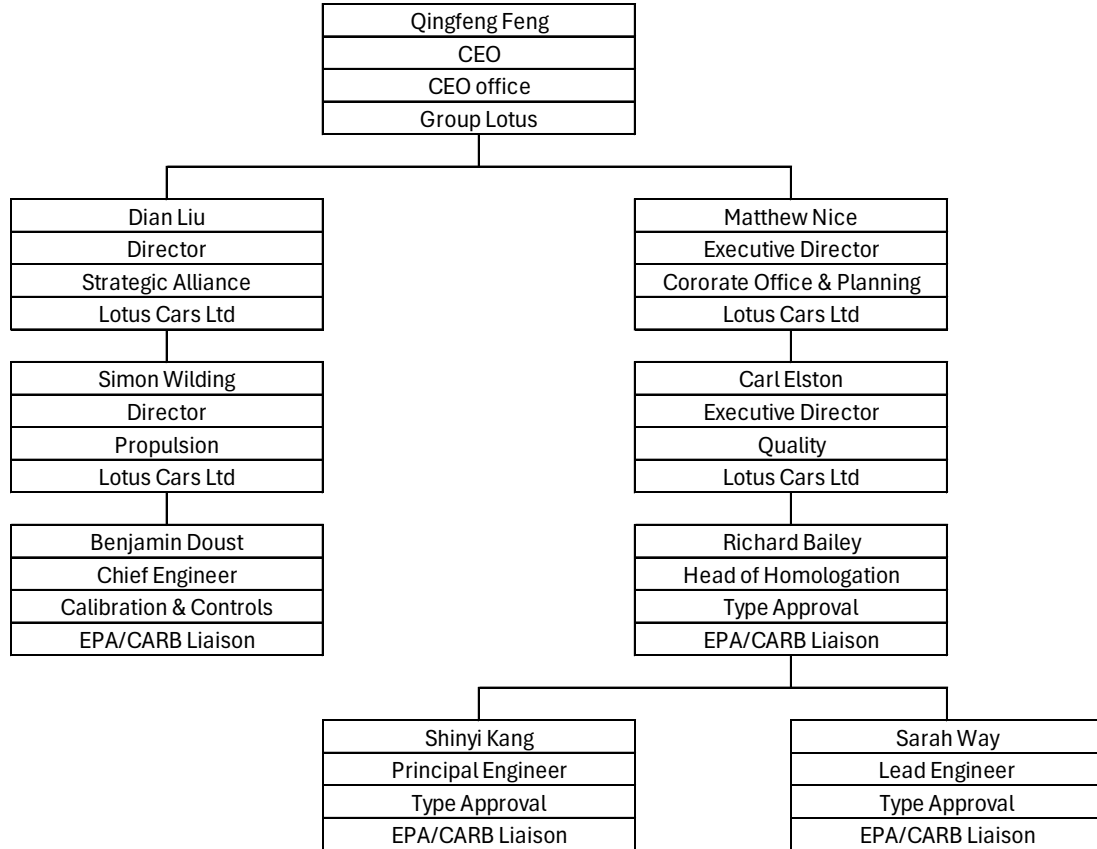


12.1.5. RLHP information.....	66
12.1.6. FFTP.....	67
12.1.7. Canister Loading.....	67
13. VEHICLES PRODUCED FOR US SALE.....	68
14. STATEMENT OF COMPLIANCE and REQUEST FOR CERTIFICATE OF CONFORMITY .	68
14.1. Statement of Compliance	68
14.2. Request for Certificate of Conformity	70
14.3. Request for Executive Order	71
15. OTHER INFORMATION.....	72
15.1. EPA Certification Fee Payment.....	72
15.2. Environmental Performance Label (included on the Monroney Label).....	73
15.3. Fuel storage system leak test procedure.....	73
16. EXHAUST SYSTEM STATEMENT	73



1. CORRESPONDENCE AND COMMUNICATIONS

1.1. Organisation Chart



1.2. USA Contact Information

Lotus Cars Ltd is situated in the United Kingdom. The name of the US-based representative is Mr Stephen Burke who can be contacted at the address of our US importer:

Agent for service :
Stephen Burke

Lotus Cars USA Inc
TEL : +1 (734) 277 9491
eMail : Stephen.Burke@lotuscars.com

35255 Glendale St
Livonia
Michigan
48150
USA

Lotus Cars USA Inc. is a wholly-owned subsidiary of Lotus Group International Limited, which in turn is a subsidiary of Zhejiang Geely Holdings Group.



1.3. eMailing information

All technical information should be sent to:

Shinyi Kang Email: skang@lotuscars.com

1.4. EPA & CARB Liaison

The following people are authorised to liaise with EPA and CARB on behalf of Lotus Cars Ltd:

Shinyi Kang	Principal Engineer – Global Emissions Type Approval
Sarah Way	Lead Engineer – Type Approval
Richard Bailey	Head of Homologation – Type Approval Department
Danielle House	Head of Government Affairs – Lotus Cars America
Benjamin Doust	Chief Engineer – Calibration & Controls

1.5. Certification information

The corporation name which should appear on the Certificate of Conformity is:

LOTUS CARS LIMITED

The certificate should be mailed to:

Shinyi Kang Email: skang@lotuscars.com

1.6. Contact information

Lotus Cars Ltd	Tel: +44 (0) 1953 608000	Fax: +44 (0)1953 608300
Shinyi Kang	Tel: +44 (0) 7740 738756	Email: skang@lotuscars.com
Sarah Way	Tel: +44 (0) 1953 608836	Email: sway@lotuscars.com
Richard Bailey	Tel: +44 (0) 7730 494124	Email: rbailey@lotuscars.com
Benjamin Doust	Tel: +44 (0) 7970 937251	Email: bdoust@lotuscars.com
Danielle House	Tel: +1 (0) 734 209 6660	Email: danielle.house@lotuscars.com



2. DURABILITY/REFUELLING FAMILY DESCRIPTION

Durability Group:	VLTXGPGNNEV1
Combustion Cycle:	4-Stroke Otto Cycle
Engine:	V6, Piston, Water-cooled
Fuel:	Gasoline
Fuel Metering System:	Electronic MPI Sequential
Catalysts:	Three, 3-Way Ceramic Monolith
'Primary' Catalyst:	1 per cylinder bank
Catalyst metals	Pt/Rh/Pd

Please refer to confidential submission for catalyst specification.

For useful life, the Emira family is in the light duty vehicles test group as per 40 CFR 86.1811-17.



3. Evaporative & Refuelling Family Description

Evaporative Name:	VLTXR0130JHB
Vapour storage method:	Single canister
Canister Capacity:	2520 cc
Canister Working Capacity:	130 g
F.E.L:	0.250 g/test
Fuel system:	The fuel system has a single stainless steel tank, filled via a single filler neck system
Control system:	Integrated
Fill-pipe design:	Liquid trap
Vapour control:	The vapours are collected by the canister from the fuel level vent valve & grade valves during refuelling, normal running and parked conditions
Purge Control:	The engine management controller defines when and how much the purge valve can be operated to clean the canister during operations
Hose material:	The hoses are constructed from multi-layer materials
Fuel tank:	The fuel tank is of stainless steel construction, 16.4 gallons.

The Lotus Emira Test Group is combined with the Evaporative & Refuelling Family in Engine Family VLTXV03.5JHB.

3.1. EPA REVIEW OF LOTUS 2006MY ORVR DESCRIPTION

Summary

Lotus Emira ORVR system does not require a full ORVR safety application as allowed for by EPA communication Cisd-06-06.

Background

Lotus Emira ORVR system uses standard ORVR technology, and follows the design of the Lotus Elise/Exige ORVR system. This is in accordance with the guidance given in Cisd-06-06.

The Lotus Emira EVAP Family VLTXR0130JHB uses the same technology as our 2005 model year submission, EVAP Family 5LTXR0115JHB (Lotus Elise/Exige). Lotus affirms there has been no significant in-use problems associated with this system.



Lotus Emira ORVR System Information

The Lotus Emira ORVR system is a fully integrated ORVR system using a liquid seal and a proven ORVR canister.

Proprietary Fill Level Vent Valves and Gradient Venting Valves have been used to control vapour flow to the 2520cc volume proprietary ORVR canister, which has an EPA minimum working capacity of 130 grams.

The Canister Close Valve is the same components used on the Lotus Elise / Exige/ Evora since its first EPA certification in 2004. The purge valve is supplied by Toyota Motor Company with the engine.

Lotus engine management software controls the purge valve to regenerate the canister, as undertaken on Elise/Exige/Evora, and its refuelling / evaporative emissions have been proved in certification testing.

ElectroStatic Discharge

The ElectroStatic Discharge strategy for the refuelling system is the same as that approved by the ORVR safety application for the Elise / Exige for MY05 (please see Attachment 1). This uses a stainless steel fuel filler neck that ensures metal contact between it and the fuel dispensing nozzle. A conductive inner layer hose joins the neck to the stainless steel fuel tank. The fuel filler neck is earthed to the vehicle ground via its mounting bracket, an earth braid, and via the conductive hose to the earthed fuel tank.

Testing has proven that the system is sufficiently conductive to both vehicle ground and, via the tyres, actual ground. This has confirmed that the system is compliant with the requirements that prevent accumulation of charge in the refuelling system (ref SAE J1645).

Comparison to Existing Approved Design

As stated, the components used in the Evora ORVR system are of the same technology as those employed in the Lotus Elise ORVR system. Differences are changes in pipe / hose lengths, and an increase in canister size, in line with fuel tank volume increase. The in-tank venting valves are of similar design and construction, but are proprietary parts from another proven component supplier (Raval).

Attachment 2 shows images of the Elise / Exige / Evora and Emira Fuel Systems to illustrate the similarity.



Attachment 1 – Elise/Exige 2005 MY ORVR Report Approval



LOTUS CARS LTD.

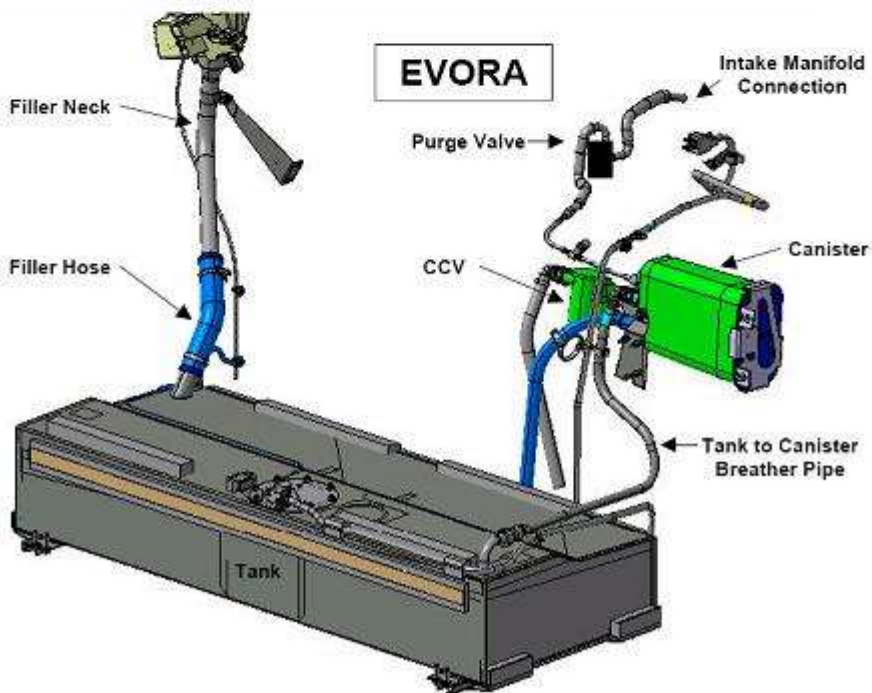
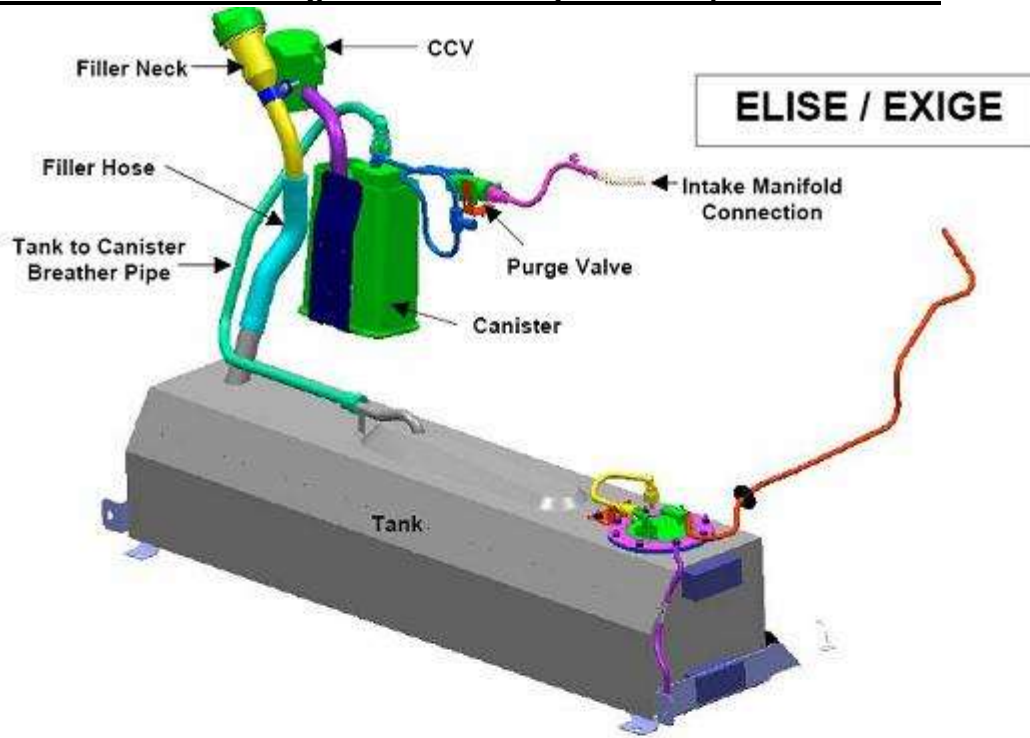
1-9-04
EPA review
complete. Review
includes e-mails dated
12/22/03.
L. Sohacki

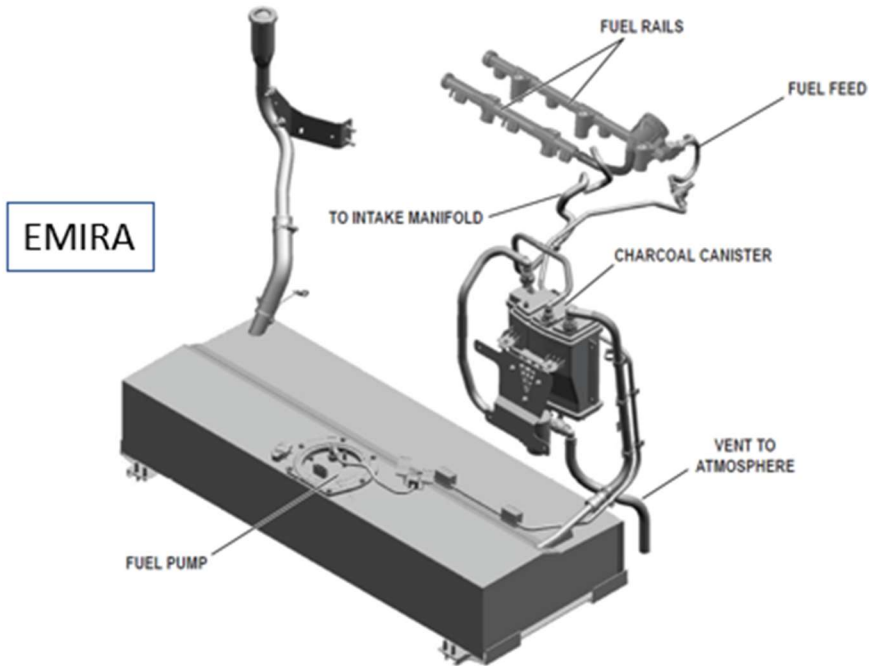
December 10th 2003 LOTUS ELISE: ORVR REPORT: 2005 MY

Lynn Sohacki
EPA, Ann Arbor



Attachment 2 – Elise / Exige/Evora ORVR System Comparison to Emira







Attachment 3 – Email EPA / Lotus dated 14 March 23

From: Cawdron, Ian <ICawdron@lotuscars.com>
Sent: Tuesday, November 22, 2022 11:42 AM
To: Snyder, Jim <Snyder.Jim@epa.gov>
Cc: Robinson, David <DRobinson@lotuscars.com>
Subject: ORVR - Lotus Emira

Hi Jim

Please see attached slides detailing the similarity between our previously approved Evora ORVR system and the new Emira system. Apart from the revised filler cap and new canister, there is very little difference and I don't believe these adversely affect ORVR.

I'd be grateful if you would review these changes and confirm whether EPA is happy to carry over approval from Evora to Emira?

Many thanks



IAN CAWDRON LCGI
LEAD ENGINEER - LEGISLATION
icawdron@lotuscars.com
T: +44 (0) 1953 608297
GROUP LOTUS Hethel, Norwich, Norfolk, NR14 8EZ, England

RE: ORVR - Lotus Emira



Snyder, Jim <Snyder.Jim@epa.gov>
To: Cawdron, Ian
Cc: Robinson, David

[Reply](#) [Reply All](#) [Forward](#) [...](#)

Tue 14/03/2023 13:44

This email is from an external sender, please ensure that you recognise the sender or that you are expecting the email before opening any files or clicking any links that it may contain.

Yes, the minimal changes appear to be improvements and Lotus can carry over the approval of the ORVR system.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov



4. DURABILITY PROCEDURE DESCRIPTION

Lotus has requested the continued use of assigned DFs in accordance with the small volume test group provision of 86.1838-01(b)(2), as detailed in 86.1826-01.

Please refer to confidential submission for small-volume test group volume.

Lotus has selected the option that is available for small-volume test groups to use assigned deterioration factors that the Administrator determined appropriate for Tier III exhaust and evaporative emissions and summarized in EPA CD-23-01 dated January 2023 (40 CFR 86.1826-01). ARB has approved the use of EPA assigned deterioration factors.

The EPA and CARB assigned DFs are additive for emissions. These DFs are used with certification test data to prove compliance and are detailed below:

4.1. EPA & CARB Exhaust DFs (additive – g/mile)

	<u>50K</u>	<u>120K</u>	<u>150K</u>
NMHC/NMOG	0.0047	0.0118	0.0149
CO	0.1197	-	0.38
NOX	0.0036	-	0.0115
HCHO	0.0002	-	0.0005
CH4	-	0.0069	-
N2O	-	0.0028	-

120k NMHC/NMOG, 50k DFs, 120k CH4 and 150k N2O DFs were derived from the Tier 3 DFs supplied in CD-2023-01:

Criteria Pollutant Assigned DFs							
Tier 3 BIN	Useful Life	CO (g/mile)	HCHO (g/mile)	NMOG (g/mile)	NOx (g/mile)	NMOG+NOx (g/mile)*	PM (g/mile)
0	150,000 miles	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
20	150,000 miles	0.06	0.0001	0.0025	0.0019	0.0043	0.0000
30	150,000 miles	0.11	0.0001	0.0034	0.0024	0.0058	0.0000
50	150,000 miles	0.16	0.0002	0.0062	0.0047	0.0109	0.0000
70	150,000 miles	0.24	0.0003	0.0098	0.0070	0.0168	0.0000
125	150,000 miles	0.38	0.0005	0.0149	0.0115	0.0264	0.0000
160	150,000 miles	0.50	0.0006	0.0198	0.0149	0.0347	0.0000

GHG Assigned DFs			
Tier 3 BIN	Useful Life	N2O (g/mile)	CH4 (g/mile)
0	120,000 miles	0.0000	0.0000
20	120,000 miles	0.0004	0.0010
30	120,000 miles	0.0007	0.0020
50	120,000 miles	0.0011	0.0026
70	120,000 miles	0.0012	0.0027
125	120,000 miles	0.0028	0.0069
160	120,000 miles	0.0034	0.0083

50k DF = (150k DF)(46k / 146k)

120k DF = (150k DF)(116k / 146k) unless provided in the table

All calculations use the same method described in CCD-12-07.



4.2. Evaporative DFs (additive)

Lotus has used the Evaporative DFs supplied in CD-2023-01 for a 'Integrated system with FEL lower than 0.325' :

Standards	Useful Life	Vehicle class	Hot Soak + 2-day Diurnal DF (g)	Hot Soak + 3-day Diurnal DF (g)	Running Loss DF (g/mi)	ORVR DF (g/USgal)
Tier 3 / LEV IV	150K	LDV	0.0000	0.0021	0.000	0.006

5. TEST GROUP DESCRIPTION

Test Group name: VLTXV03.5JHB

Arrangement and number of cylinders: V6

Vehicle class covered: LDV, PC

Federal Emissions Standards Class : Interim TIER 4 BIN 125

California Emissions Standards Class : LEV IV ULEV 125

Please refer to Certification Summary Information Report in Section 7 for applicable emission standards.



6. TEST VEHICLE DESCRIPTION

EDV-26-EVSM6	Emira MT – low altitude exhaust & fuel economy tests
EDV-26-EVSDTC	Emira Turbo – FTP, 3-day evap and running loss tests.
EDV-24-EVSA6	Emira AT – BETP test
EDV-24-ORVR	Family Fuel System – ORVR

6.1. Base Vehicle Description

Lotus Emira is a 2-door, mid-engine sports car.

Engine:	V6, 3.5 litre DOHC
Engine code:	2GR-3.5S
Engine power:	400 & 414 BHP
Engine Control System:	Please refer to the Verify CSI report
Transmission:	Please refer to the Verify CSI report
ETW:	3,625 lbs. Please refer to the Verify CSI report
Transmission ratio:	3.777 (1 st – 4 th) & 3.238 (5 th & 6 th)
Vehicle drive mode while testing:	Worst case drive mode on each cycle based on NMOG+NOx emissions. Please refer to 11.1.4.

6.2. Vehicle Information

Please refer to the CSI Report in Section 7



7. TEST RESULTS

Attachment 4 – CSI Report

Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Manufacturer	Lotus Cars Ltd	Manufacturer Code	LTX
Test Group	VLT XV03.5JHB	Evaporative/Refueling Family	VLT XR0130JHB
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	12/15/2025 11:30:47 AM
Model Year	2027		

Test Group Information			
CSI Type	New	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		
Drive Sources and Fuel(s)			
Drive Source #1:	Combustion Engine		
	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
	Gasoline	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	VLT XGPGNNEV1	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	--	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
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	VLT XV03.5JHB
Test Group OBD Compliance Level	Partial - with deficiencies	Number of Test Group OBD Deficiencies	1
OBD Deficiencies Comments	A deficiency is requested regarding the requirements of title 13, California Code of Regulations section 1968.2 (d)(9.2.2) SAE J1979-2 Implementation		
Mfr Test Group Comments	BETP and ORVR test results are carry over from MY24.		
Mfr Exhaust / Evap Standards Comments	--		



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	12/15/2025 11:13:36 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				
VLTXR0130JHB-I31	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	Federal	2-Wheel Drive, Rear	Manual	6	No
Lotus Cars Ltd	1 - Lotus Cars Ltd	8 - Emira	California + CAA Section 177 states	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				



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
After Treatment Device(s) (ATD)			
ATD Number	ATD Type	ATD Precious Metal	Substrate Material
1	Three-way catalyst	Platinum + Palladium + Rhodium	Ceramic
2	Three-way catalyst	Palladium + Rhodium	Ceramic
3	Three-way catalyst	Platinum + Palladium + Rhodium	Ceramic
Substrate Construction			
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	4
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	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.		



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB							
Engine Configuration Number 2										
Engine Displacement (liters)	3.5	Engine Rated Horsepower	414							
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	4							
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--							
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--							
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--							
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--							
Mfr Air/Fuel Sensor Comments	--									
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No							
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--							
Closed Loop Air Injection System	No									
Air Injection Type	--	Air Injection Type if 'Other'	--							
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. 414BHP version of 2GR engine has same HW and calibration as 400BHP configuration. Only difference is in the high speed and full load to provide extra power at the region. The operation residency in all legal cycles are identical each other.									
Official Test Numbers										
Test Group	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	TLTX10090616	TLTX10090627	TLTX10090618	TLTX10090615	TLTX10090617	19.2	228.2	32.4	286.1	--



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB					
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"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">Combustion Engine</td> <td style="text-align: center;">Gasoline</td> </tr> </tbody> </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			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	13.151	0.21852	0.020146	14.5	
Emission Control Device Comments	--							



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB					
Manufacturer Test Vehicle Comments	2024MY Emira EVAP testing configuration							
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	0.0000	0.01	0.02	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.011	0.0000	0.01	0.02	Pass



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Emission Data Vehicle Information			
Vehicle ID / Configuration	EDV-24-ORVR / 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			
	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



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB			Evaporative/Refueling Family	VLTXR0130JHB			
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	41.118	0.18271	0.022358	10.858	-0.00289	0.022824	14.2	
Cold CO	45.232	0.2008	0.024571	15.804	0.15738	0.024292	N/A	
US06	41.118	0.18271	0.022358	3.934	0.04414	0.022312	N/A	
Emission Control Device Comments	--							
Manufacturer Test Vehicle Comments	ORVR Tier 3							
Test #	RLTX10085056			Test Procedure	24 - Federal fuel refueling test (ORVR)			
Exhaust Test # for this Evap Test	RLTX10085035			Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)			
Test Date	12/02/2021			Fuel	Gasoline			
Fuel Batch ID	038321			Fuel Calibration Number	2255			
Vehicle Class	N/A			DF Type	EPA Assigned			
Verify Test Lab ID	Applus IDIADA Group							
E10 Evaporative Test Measurement Method	--							
Test Start Odometer Reading	0			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								
	Test Result Name	Unrounded Test Result		Verify Calculated FE Equivalent Value				
	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.158		--				
Manufacturer Test Comments	Test was completed at system level, therefore no odometer reading available. As input is required, "0000" was used as the odometer reading. Exhaust test number for vehicle level test completed.							
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	0.16	0.006	0.2	0.2	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.16	0.006	0.2	0.2	Pass



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB				
Emission Data Vehicle Information							
Vehicle ID / Configuration	EDV-26-EVSDCT / 0	Manufacturer Vehicle Configuration Number	1				
Original Test Group Name	TLTXV02.0JHB	Original Evaporative/Refueling Family	TLTXR0130JHB				
Original Test Vehicle Model Year	2026						
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							
	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	M139.981	Rated Horsepower	400				
Displacement (liters)	2						
Air Aspiration Method	Turbocharged	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)	3230	Equivalent Test Weight (pounds)	3500				
GVWR (lbs)	3825	N/V Ratio	23				
Axle Ratio	2.68						
Transmission Type	Semi-Automatic	# of Transmission Gears	8				
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	44.613	0.244	0.019043	26.303	0.02424	0.020146	13.9
Emission Control Device Comments	--						



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Manufacturer Test Vehicle Comments	2026MY Emira EVAP testing configuration		
Test #	TLTX10090613	Test Procedure	38 - CA fuel 3-day evap.
Exhaust Test # for this Evap Test	TLTX10090612	Test Fuel Type	52 - CARB LEV4 E10 Premium Gasoline
Test Date	04/04/2025	Fuel	N/A
Fuel Batch ID	72834	Fuel Calibration Number	2834
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	4009	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)	0.1731	--
Manufacturer Test Comments	Declared FEL 0.250. Assigned DF (0.0021) is used in THC result. (0.171 + 0.0021 = 0.1731)		



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB					
Test #	TLTX10090614	Test Procedure	37 - California Fuel Running Loss					
Exhaust Test # for this Evap Test	TLTX10090612	Test Fuel Type	52 - CARB LEV4 E10 Premium Gasoline					
Test Date	04/04/2025	Fuel	Gasoline					
Fuel Batch ID	72834	Fuel Calibration Number	2834					
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	4009	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)	0.00028	--					
Manufacturer Test Comments Point source: canister air vent and filler neck								
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.0003	0.0000	0.000	0.005	Pass



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Emission Data Vehicle Information			
Vehicle ID / Configuration	EDV-26-EVSM6 / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	TLTXV03.5JHB	Original Evaporative/Refueling Family	--
Original Test Vehicle Model Year	2026		
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			
	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	416
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



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB			Evaporative/Refueling Family			VLTXR0130JHB
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	16.006	0.178	0.019214	14.5
Cold CO	41.161	0.6126	0.01915	8.813	0.05716	0.021928	N/A
US06	37.419	0.55691	0.017409	16.276	0.15087	0.019395	N/A
Emission Control Device Comments	--						
Manufacturer Test Vehicle Comments	MY26 Emissions Testing Manual						



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Test #	TLTX10090615	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	03/12/2025	Fuel	Gasoline
Fuel Batch ID	1106	Fuel Calibration Number	1106
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	6797	Odometer Units	M
4WD Test Dyno	Yes	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)	479.5208767	--
	FE BAG 1 (Bag 1 Fuel Economy)	17.4358515	17.4358515
	CO2 BAG 2 (Bag 2 Carbon Dioxide)	489.5089758	--
	FE BAG 2 (Bag 2 Fuel Economy)	17.6374297	17.6374297
	CO2 BAG 3 (Bag 3 Carbon Dioxide)	403.1201386	--
	FE BAG 3 (Bag 3 Fuel Economy)	21.4246727	21.4246727
	METHANE (CH4 - Methane)	0.018496	--
	CO (Carbon Monoxide)	1.6172024	--
	DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.8494236	--
	DT-EER (Drive Trace Energy Economy Rating)	0.5655349	--
	DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.3283307	--
	MFR FE (Manufacturer Fuel Economy)	18.7326542	18.7326542
	NOX (Nitrogen Oxide)	0.0135852	--
	IIC-NM (Non-methane Hydrocarbon)	0.2567018	--
	NMOG (Non-methane organic gases)	0.2823155	--
	HC-TOTAL (Total Hydrocarbon)	0.2745348	--
	Test Result Name	Unrounded Test Result	Verify Calculated CO2
	Carbon dioxide	458.12684	--
Manufacturer Test Comments	NMHC-NMOG ratio = 1.10		



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB			Evaporative/Refueling Family				VLTXR0130JHB			
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	1.62	--	--	--	0.1197	--	1.7	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 125	HC-NM	0.26	--	--	--	0.0118	--	0.3	0.3	Pass
CA	50,000 miles	California LEV-IV ULEV125	CO	1.62	--	--	--	0.1197	--	1.7	10.0	Pass



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Test #	TLTX10090616	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	03/14/2025	Fuel	Gasoline
Fuel Batch ID	2031	Fuel Calibration Number	2031
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	6831	Odometer Units	M
4WD Test Dyno	Yes	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)	436.1285627	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	2.5467525	--	
FE BAG 1 (Bag 1 Fuel Economy)	19.6833016	19.6833016	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	495.9011712	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0.0006601	--	
FE BAG 2 (Bag 2 Fuel Economy)	17.4781246	17.4781246	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	393.4252861	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0.0709818	--	
FE BAG 3 (Bag 3 Fuel Economy)	22.0522695	22.0522695	
METHANE (CH4 - Methane)	0.0080678	--	
CO (Carbon Monoxide)	0.547617	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.85	--	
DT-EER (Drive Trace Energy Economy Rating)	1.07	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.28	--	
MFR FE (Manufacturer Fuel Economy)	19.0133282	19.0133282	
NOX (Nitrogen Oxide)	0.0121849	--	
N2O (Nitrous Oxide)	0.0121849	--	
HC-NM (Non-methane Hydrocarbon)	0.025668	--	
NMOG (Non-methane organic gases)	0.0282292	--	
PM (Particulate Matter)	0.000331	--	
HC-TOTAL (Total Hydrocarbon)	0.0330755	--	



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB		Evaporative/Refueling Family				VLTXR0130JHB											
		<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated CREE/OPT-CREE</th> </tr> </thead> <tbody> <tr> <td>Carbon-Related Exhaust Emissions</td> <td>455.9641987</td> <td>999</td> </tr> </tbody> </table>		Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	Carbon-Related Exhaust Emissions	455.9641987	999										
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE																	
Carbon-Related Exhaust Emissions	455.9641987	999																	
		<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated CO2</th> </tr> </thead> <tbody> <tr> <td>Carbon dioxide</td> <td>455.3580927</td> <td>--</td> </tr> </tbody> </table>		Test Result Name	Unrounded Test Result	Verify Calculated CO2	Carbon dioxide	455.3580927	--										
Test Result Name	Unrounded Test Result	Verify Calculated CO2																	
Carbon dioxide	455.3580927	--																	
Manufacturer Test Comments		NMHC-NMOG ratio = 1.10																	
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	0.55	--	--	--	0.38	--	0.9	2.1	Pass							
Fed	150,000 miles	Federal Tier 3 Bin 125	CREE	999	--	--	--	0	--	999	--	--							
Fed	150,000 miles	Federal Tier 3 Bin 125	METHANE	0.008	--	--	--	0.0069	--	0.01	0.03	Pass							
Fed	150,000 miles	Federal Tier 3 Bin 125	N2O	0.012	--	--	--	0.0028	--	0.01	0.01	Pass							
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0282	--	1.1	--	0.0149	--	0.043	99.999	Pass							
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0404	--	--	--	--	--	0.067	0.125	Pass							
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0122	--	--	--	0.0115	--	0.024	99.999	Pass							
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0003	--	--	--	0	--	0.000	0.003	Pass							
CA	150,000 miles	California LEV-IV SULEV125	CO	0.55	--	--	--	0.38	--	0.9	2.1	Pass							
CA	150,000 miles	California LEV-IV SULEV125	CREE	999	--	--	--	0	--	999	--	--							
CA	150,000 miles	California LEV-IV SULEV125	METHANE	0.008	--	--	--	0.0069	--	0.01	0.03	Pass							
CA	150,000 miles	California LEV-IV SULEV125	N2O	0.012	--	--	--	0.0028	--	0.01	0.01	Pass							
CA	150,000 miles	California LEV-IV SULEV125	NMOG	0.0282	--	1.1	--	0.0149	--	0.043	99.999	Pass							
CA	150,000 miles	California LEV-IV SULEV125	NMOG+NOX	0.0404	--	--	--	--	--	0.067	0.125	Pass							
CA	150,000 miles	California LEV-IV SULEV125	NOX	0.0122	--	--	--	0.0115	--	0.024	99.999	Pass							
CA	150,000 miles	California LEV-IV SULEV125	PM	0.0003	--	--	--	0	--	0.000	0.001	Pass							
NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.																			



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Test #	TLTX10090619	Test Procedure	52 - Fed. fuel 50 F exh.
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/18/2025	Fuel	N/A
Fuel Batch ID	2031	Fuel Calibration Number	2031
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	MAHLE Powertrain Ltd		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	6948	Odometer Units	M
4WD Test Dyno	Yes	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)	444.4552757	--
	CO BAG 1 (Bag 1 Carbon Monoxide)	3.4380847	--
	FE BAG 1 (Bag 1 Fuel Economy)	19.2383446	19.2383446
	CO2 BAG 2 (Bag 2 Carbon Dioxide)	480.9647862	--
	CO BAG 2 (Bag 2 Carbon Monoxide)	0.0264765	--
	FE BAG 2 (Bag 2 Fuel Economy)	18.0214698	18.0214698
	CO2 BAG 3 (Bag 3 Carbon Dioxide)	388.4367405	--
	CO BAG 3 (Bag 3 Carbon Monoxide)	0.1924685	--
	FE BAG 3 (Bag 3 Fuel Economy)	22.3242007	22.3242007
	METHANE (CH4 - Methane)	0.013973	--
	CO (Carbon Monoxide)	0.779945	--
	DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.71	--
	DT-EER (Drive Trace Energy Economy Rating)	0.42	--
	DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.97	--
	MFR FE (Manufacturer Fuel Economy)	19.6807602	19.6807602
	NOX (Nitrogen Oxide)	0.010568	--
	N2O (Nitrous Oxide)	0.0021241	--
	HC-NM (Non-methane Hydrocarbon)	0.076604	--
	NMOG (Non-methane organic gases)	0.0842475	--
	PM (Particulate Matter)	0.000531	--
	HC-TOTAL (Total Hydrocarbon)	0.0900906	--



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Test #	TLTX10090620	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	03/20/2025	Fuel	Gasoline
Fuel Batch ID	63623	Fuel Calibration Number	1134
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	6975	Odometer Units	M
4WD Test Dyno	Yes	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)	439.520846	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	3.1123703	--	
FE BAG 1 (Bag 1 Fuel Economy)	19.9297874	19.9297874	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	500.5472665	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0.0002651	--	
FE BAG 2 (Bag 2 Fuel Economy)	17.718641	17.718641	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	393.3090658	--	
CO BAG 3 (Bag 3 Carbon Monoxide)	0.1713673	--	
FE BAG 3 (Bag 3 Fuel Economy)	22.5713001	22.5713001	
METHANE (CH4 - Methane)	0.0116807	--	
CO (Carbon Monoxide)	0.692358	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.01	--	
DT-EER (Drive Trace Energy Economy Rating)	1.29	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.45	--	
MFR FE (Manufacturer Fuel Economy)	19.8502153	19.8502153	
NOX (Nitrogen Oxide)	0.011855	--	
N2O (Nitrous Oxide)	0.002884	--	
HC-NM (Non-methane Hydrocarbon)	0.0299688	--	
NMOG (Non-methane organic gases)	0.0308738	--	
PM (Particulate Matter)	0.0006973	--	
HC-TOTAL (Total Hydrocarbon)	0.041256	--	



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB		Evaporative/Refueling Family				VLTXR0130JHB				
		Test Result Name		Unrounded Test Result				Verify Calculated CREE/OPT-CREE				
		Carbon-Related Exhaust Emissions		447.2157567				454				
		Test Result Name		Unrounded Test Result				Verify Calculated CO2				
		Carbon dioxide		445.8741664				--				
Manufacturer Test Comments		NMHC-NMOG ratio = 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 125	CO	0.69	--	--	--	0.38	--	1.1	2.1	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	CREE	454	--	--	--	0	--	454	--	--
Fed	150,000 miles	Federal Tier 3 Bin 125	METHANE	0.012	--	--	--	0.0069	--	0.02	0.03	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	N2O	0.003	--	--	--	0.0028	--	0.01	0.01	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0309	--	1.1	--	0.0149	--	0.046	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0428	--	--	--	--	--	0.069	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0119	--	--	--	0.0115	--	0.023	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0007	--	--	--	0	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV125	CO	0.69	--	--	--	0.38	--	1.1	2.1	Pass
CA	150,000 miles	California LEV-IV SULEV125	CREE	454	--	--	--	0	--	454	--	--
CA	150,000 miles	California LEV-IV SULEV125	METHANE	0.012	--	--	--	0.0069	--	0.02	0.03	Pass
CA	150,000 miles	California LEV-IV SULEV125	N2O	0.003	--	--	--	0.0028	--	0.01	0.01	Pass
CA	150,000 miles	California LEV-IV SULEV125	NMOG	0.0309	--	1.1	--	0.0149	--	0.046	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV125	NMOG+NOX	0.0428	--	--	--	--	--	0.069	0.125	Pass
CA	150,000 miles	California LEV-IV SULEV125	NOX	0.0119	--	--	--	0.0115	--	0.023	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV125	PM	0.0007	--	--	--	0	--	0.001	0.001	Pass
NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.												



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Test #	TLTX10090617	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	03/14/2025	Fuel	Gasoline
Fuel Batch ID	2031	Fuel Calibration Number	2031
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	6831	Odometer Units	M
4WD Test Dyno	Yes	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)	0.0005709	--
	CO (Carbon Monoxide)	0.0024731	--
	DT-ASCR (Drive Trace Absolute Speed Change Rating)	3.19	--
	DT-EER (Drive Trace Energy Economy Rating)	-0.08	--
	DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.71	--
	MFR FE (Manufacturer Fuel Economy)	30.9612319	30.9612319
	NOX (Nitrogen Oxide)	0.0055928	--
	HC-NM (Non-methane Hydrocarbon)	0.000651	--
	NMOG (Non-methane organic gases)	0.0006705	--
	HC-TOTAL (Total Hydrocarbon)	0.0012015	--
	Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
	Carbon-Related Exhaust Emissions	280.0036308	999
	Test Result Name	Unrounded Test Result	Verify Calculated CO2
	Carbon dioxide	279.5640727	--
Manufacturer Test Comments	NMHC-NMOG ratio = 1.03		



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB			Evaporative/Refueling Family					VLTXR0130JHB		
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	0.0007	--	1.03	--	0.0149	--	0.016	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0063	--	--	--	--	--	0.033	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0056	--	--	--	0.0115	--	0.017	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV125	CREE	999	--	--	--	0	--	999	--	--
CA	150,000 miles	California LEV-IV SULEV125	NMOG	0.0007	--	1.03	--	0.0149	--	0.016	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV125	NMOG+NOX	0.0063	--	--	--	--	--	0.033	0.125	Pass
CA	150,000 miles	California LEV-IV SULEV125	NOX	0.0056	--	--	--	0.0115	--	0.017	99.999	Pass

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



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Test #	TLTX10090621	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	03/20/2025	Fuel	Gasoline
Fuel Batch ID	63623	Fuel Calibration Number	1134
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	6986	Odometer Units	M
4WD Test Dyno	Yes	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)	0.0001492	--	
CO (Carbon Monoxide)	0.003567	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	6.28	--	
DT-EER (Drive Trace Energy Economy Rating)	0.05	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	7.6	--	
MFR FE (Manufacturer Fuel Economy)	33.3720136	33.3720136	
NOX (Nitrogen Oxide)	0.0037869	--	
HC-NM (Non-methane Hydrocarbon)	0.000374	--	
NMOG (Non-methane organic gases)	0.0003852	--	
HC-TOTAL (Total Hydrocarbon)	0.0015355	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	266.0047857	270	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	265.9817472	--	
Manufacturer Test Comments	NMHC-NMOG ratio = 1.03		



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB			Evaporative/Refueling Family					VLTXR0130JHB		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 125	CREE	270	--	--	--	0	--	270	--	--
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0004	--	1.03	--	0.0149	--	0.015	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0042	--	--	--	--	--	0.031	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-IV SULEV125	CREE	270	--	--	--	0	--	270	--	--
CA	150,000 miles	California LEV-IV SULEV125	NMOG	0.0004	--	1.03	--	0.0149	--	0.015	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV125	NMOG+NOX	0.0042	--	--	--	--	--	0.031	0.125	Pass
CA	150,000 miles	California LEV-IV SULEV125	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.



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Test #	TLTX10090627	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	04/24/2025	Fuel	Gasoline
Fuel Batch ID	1316	Fuel Calibration Number	1316
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	7044	Odometer Units	M
4WD Test Dyno	Yes	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)	522.1303465	--	
CO BAG 1 (Bag 1 Carbon Monoxide)	0.4661416	--	
FE BAG 1 (Bag 1 Fuel Economy)	16.5542874	16.5542874	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	328.2512375	--	
CO BAG 2 (Bag 2 Carbon Monoxide)	0.434157	--	
FE BAG 2 (Bag 2 Fuel Economy)	26.3231551	26.3231551	
METHANE (CH4 - Methane)	0.0036274	--	
CO (Carbon Monoxide)	0.4412415	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-4.3	--	
DT-EER (Drive Trace Energy Economy Rating)	-1.32	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-7.04	--	
MFR FE (Manufacturer Fuel Economy)	23.2783615	23.2783615	
NOX (Nitrogen Oxide)	0.0152202	--	
N2O (Nitrous Oxide)	0.0001983	--	
HC-NM (Non-methane Hydrocarbon)	0.0122992	--	
NMOG (Non-methane organic gases)	0.0126682	--	
PM (Particulate Matter)	0.0037195	--	
HC-TOTAL (Total Hydrocarbon)	0.0149441	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	371.7363221	--	



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB		Evaporative/Refueling Family				VLTXR0130JHB				
		Test Result Name		Unrounded Test Result				Verify Calculated CO2				
		Carbon dioxide		371.1945918				--				
Manufacturer Test Comments		NMHC-NMOG ratio = 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 125	CO	0.44	--	--	--	0.3800	--	0.8	9.6	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0127	--	1.03	--	0.0149	--	0.028	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0279	--	--	--	--	--	0.05	0.12	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0152	--	--	--	0.0115	--	0.027	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	PM	0.0037	--	--	--	0	--	0.004	0.006	Pass
CA	150,000 miles	California LEV-IV SULEV125	CO	0.44	--	--	--	0.38	--	0.8	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV125	NMOG	0.0127	--	1.03	--	0.0149	--	0.028	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV125	NMOG+NOX	0.0279	--	--	--	--	--	0.054	0.125	Pass
CA	150,000 miles	California LEV-IV SULEV125	NOX	0.0152	--	--	--	0.0115	--	0.027	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV125	PM	0.0037	--	--	--	0	--	0.004	0.006	Pass



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Test #	TLTX10090618	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	03/17/2025	Fuel	Gasoline
Fuel Batch ID	2031	Fuel Calibration Number	2031
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	6933	Odometer Units	M
4WD Test Dyno	Yes	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)	0.0058027	--
	CO (Carbon Monoxide)	0.072189	--
	DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.12	--
	DT-EER (Drive Trace Energy Economy Rating)	0.24	--
	DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.19	--
	MFR FE (Manufacturer Fuel Economy)	17.9436083	17.9436083
	NOX (Nitrogen Oxide)	0.0127879	--
	N2O (Nitrous Oxide)	0.0043609	--
	HC-NM (Non-methane Hydrocarbon)	0.004166	--
	NMOG (Non-methane organic gases)	0.004291	--
	PM (Particulate Matter)	0.000183	--
	HC-TOTAL (Total Hydrocarbon)	0.0097823	--
	Test Result Name	Unrounded Test Result	Verify Calculated CO2
	Carbon dioxide	483.1192125	--
Manufacturer Test Comments	NMHC-NMOG ratio = 1.03		



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB			Evaporative/Refueling Family					VLTXR0130JHB		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 125	CO	0.07	--	--	--	0.38	--	0.4	3.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0043	--	1.03	--	0.0149	--	0.019	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0171	--	--	--	--	--	0.04	0.07	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0128	--	--	--	0.0115	--	0.024	99.999	Pass
CA	150,000 miles	California LEV-IV ULEV125	CO	0.07	--	--	--	0.38	--	0.4	1.7	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0043	--	1.03	--	0.0149	--	0.019	99.999	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0171	--	--	--	--	--	0.044	0.125	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0128	--	--	--	0.0115	--	0.024	99.999	Pass



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Fuel Properties			
Fuel Batch ID	2031	Fuel Calibration Number	2031
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	07/16/2024
Fuel Batch Calibration Effective Date	07/16/2024	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 (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17807
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	63623	Fuel Calibration Number	1134
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	03/27/2025
Fuel Batch Calibration Effective Date	03/27/2025	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	0.732
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18536
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.871	Weight Fraction CO2	--
Fuel Batch ID	72834	Fuel Calibration Number	2834
Test Fuel Type	52 - CARB LEV4 E10 Premium Gasoline	Fuel Batch Calibration Date	03/10/2025
Fuel Batch Calibration Effective Date	03/10/2025	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	0.753
Fuel Ethanol Volume Percent (%)	9.4	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17825
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.83	Weight Fraction CO2	--
Fuel Batch ID	038321	Fuel Calibration Number	2255
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	10/15/2020
Fuel Batch Calibration Effective Date	10/15/2020	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.754
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17921
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.831	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	--
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 / Fuel Net Heat of Combustion (E0) (BTU/lb)	17829
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.828	Weight Fraction CO2	--
Fuel Batch ID	1106	Fuel Calibration Number	1106
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	02/06/2025
Fuel Batch Calibration Effective Date	02/06/2025	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 (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17833
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.826	Weight Fraction CO2	--
Fuel Batch ID	1316	Fuel Calibration Number	1316
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	03/27/2025
Fuel Batch Calibration Effective Date	03/27/2025	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	0.74
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17829
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	--



Date: 12/15/2025 11:31:22 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
-------------------	--------------	-------------------------------------	--------------



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB		Evaporative/Refueling Family				VLTXR0130JHB			
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 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	1.7	
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	
Cert Region										
Vehicle Class										
Fuel										
Federal			Cert/In-Use Code			Cert				
LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 125				
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	



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB			Evaporative/Refueling Family		VLTXR0130JHB		
Cert Region		California + CAA Section 177 states			Cert/In-Use Code		Cert		
Vehicle Class		LDV/Passenger Car			Standard Level		California LEV-IV SULEV125		
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	--	--	--	--	--	--	0.38	2.1
150,000 miles	CREE	--	--	--	--	--	--	0	999.9
150,000 miles	HCHO	--	--	--	--	--	--	0	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.0069	0.03
150,000 miles	N2O	--	--	--	--	--	--	0.0028	0.01
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	0.001
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	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0.0118	0.3
Cert Region		California + CAA Section 177 states			Cert/In-Use Code		Cert		
Vehicle Class		LDV/Passenger Car			Standard Level		California LEV-IV SULEV125		
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	--	--	--	--	--	--	--	2.1
4,000 miles	HCHO	--	--	--	--	--	--	--	0.016
4,000 miles	NMOG	--	--	1.1	--	--	--	--	99.999
4,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.25
4,000 miles	NOX	--	--	--	--	--	--	--	99.999



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB			Evaporative/Refueling Family			VLTXR0130JHB	
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
150,000 miles	CO	--	--	--	--	--	--	0.38	2.1
150,000 miles	CREE	--	--	--	--	--	--	0	999.9
150,000 miles	HCHO	--	--	--	--	--	--	0	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.0069	0.03
150,000 miles	N2O	--	--	--	--	--	--	0.0028	0.01
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-IV SULEV125	
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	0.125
150,000 miles	NOX	--	--	--	--	--	--	0.0115	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB			Evaporative/Refueling Family			VLTXR0130JHB		
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	--	--	--	--	--	--	0.3800	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-IV SULEV125		
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	
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	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	



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group		VLTXV03.5JHB			Evaporative/Refueling Family		VLTXR0130JHB		
Cert Region		California + CAA Section 177 states			Cert/In-Use Code		Cert		
Vehicle Class		LDV/Passenger Car			Standard Level		California LEV-IV 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	10.0
Evaporative/Refueling Standards									
Evaporative/Refueling Family		VLTXR0130JHB			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	--	0.25	0.0021				
Evaporative/Refueling Family		VLTXR0130JHB			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		VLTXR0130JHB			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	--	0.25	0.0021				
Evaporative/Refueling Family		VLTXR0130JHB			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	0.0000				



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group	VLTXXV03.5JHB		Evaporative/Refueling Family	VLTXR0130JHB	
Evaporative/Refueling Family	VLTXR0130JHB		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	0.0000
Evaporative/Refueling Family	VLTXR0130JIB		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	VLTXR0130JHB		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	0.0000
Evaporative/Refueling Family	VLTXR0130JHB		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	0.0000



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
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			



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
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



Date: 12/15/2025 11:31:23 AM

Certification Summary Information Report

Test Group	VLTXV03.5JHB	Evaporative/Refueling Family	VLTXR0130JHB
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



8. EMISSION WAIVER/COMPLIANCE STATEMENTS

Please refer to confidential submission.

9. OBD SYSTEM DESCRIPTION

The ECM monitors the normal engine control sensors and via diagnostic algorithms determines the condition of the emissions control devices. The outputs of the diagnostic algorithms are compared to thresholds to enable the ECM to recognise 'faults' in the system.

Once a fault is confirmed, the OBD system lights a 'malfunction indicator lamp' (MIL) on the instrument panel. This informs the driver that a fault has been detected and furthermore, stores in its memory a Diagnostic Trouble Code (DTC) for the particular type of fault detected. This can then be accessed by a technician, using an off-board diagnostic tool, who will be guided to the problem area.

A hand-held electronic diagnostic tool capable of connecting to our diagnostic connector is able to communicate with the ECM and display trouble codes and sensor readings to facilitate speedy fault diagnosis.

9.1. Malfunction Indicator Lamp (MIL)

A MIL is provided in the instrument panel in order to indicate to the driver that an emissions control system problem has occurred and that the vehicle should be taken for check/repair as soon as is practicable. The MIL lamp shall illuminate when the vehicle is in the key-on/engine-off condition. If no faults are present that should illuminate the MIL then it will extinguish when the engine is started. If, however, the lamp remains on, or comes on whilst driving, this indicates that the OBD system has detected a problem and a DTC has been stored in the memory.

If the fault cures itself, or is no longer detected, the lamp will go out after three engine start-ups with no fault present. The trouble code will be stored in the ECM memory for the next 40 engine warm-up cycles, to indicate to a technician that an intermittent fault has been detected. If no further fault or recurrence is detected during this period, the fault will be erased from the memory.

In the case of a fault that causes a sufficiently severe engine misfire such that damage to the catalytic converter may be caused, the engine management system shall take such remedial action to ensure that catalyst damage does not occur.

9.2. OBD II Approval

OBD II approval is pending from CARB. The following Lotus OBD II compliance reports refer:

- CBI_VLTXV03.5JHB_Application.pdf



Attachment 6 – OBD Approval



Gavin Newsom, Governor
Yana Garcia, CalEPA Secretary
Lauren Sanchez, CARB Chair

December 22, 2025

Reference No. E-25-325

Mr. Justin Boak, Senior Engineer
Lotus Cars Limited
Potash Lane, Hethel
Norwich, Norfolk, NR14 8EZ
England

Confidential

Subject: Lotus Car Limited's (Lotus) On-Board Diagnostics II (OBD II) System for the 2027 Model Year Test Group VLTXV03.5JHB

Dear Mr. Boak:

The California Air Resources Board's (CARB) On-Board Diagnostics Branch has received the OBD II system description submitted by Lotus for the 2027 model year test group listed above. Representations made in the application indicate that the system is compliant with the OBD II regulation¹ with the exception of the implementation of SAE J1979-2. Therefore, CARB approves the 2027 model year system design for the test group listed above with 1 deficiency for SAE J1979-2 implementation. Details of the SAE J1979-2 implementation deficiency are discussed below.

SAE J1979-2 Implementation Deficiency

Section (d)(9.2.2) requires manufacturers to use SAE J1979-2 for the standardized functions of the OBD II system on all 2027 and subsequent model year vehicles. Because Lotus has not implemented SAE J1979-2 on the vehicles in the test group listed above, the OBD system is deficient for the 2027 model year.

Should you have any comments or questions regarding this letter, please contact Sana Dadabhoy, Air Resources Engineer, at (951) 542-3521 or sana.dadabhoy@arb.ca.gov.

Sincerely,

 For

Michael Regenfuss, Chief, On-Board Diagnostics Branch, Emissions Certification and Compliance Division



9.3. 40 CFR Part 85 Subpart W

Lotus Cars Ltd confirms that all vehicles within this test group have a diagnostic system that is adequate for the performance warranty test described in 40 CFR Part 85, Subpart W. (86.1844-01(d)(9)(iv) refers)

9.4. §86.1813 Leak test procedure

This description of the leak test procedure is taken from the CBI_TLTXV03.5JHB_A-P.pdf compliance report.



Attachment 7 – Leak test access points

D.11.1 Test Procedure

A 0.020" orifice (o'Keefe Controls Co, B-20-SS) was installed in 3 different locations.

1. Fuel tank filler neck (Figure D.11-1)
2. At the charcoal canister (Purge out) (Figure D.11-1)
3. At the purge valve (Figure D.11-2)

Test Sequence:

1. Introduce fault
2. Clear DTCs (Mode \$04)
3. Start engine and operate until the fault was detected (Pending DTC).
4. Stop engine
5. Start engine and operate until MIL illuminated (confirmed DTC)
6. Move fault to next location. Repeat steps 1 - 5.

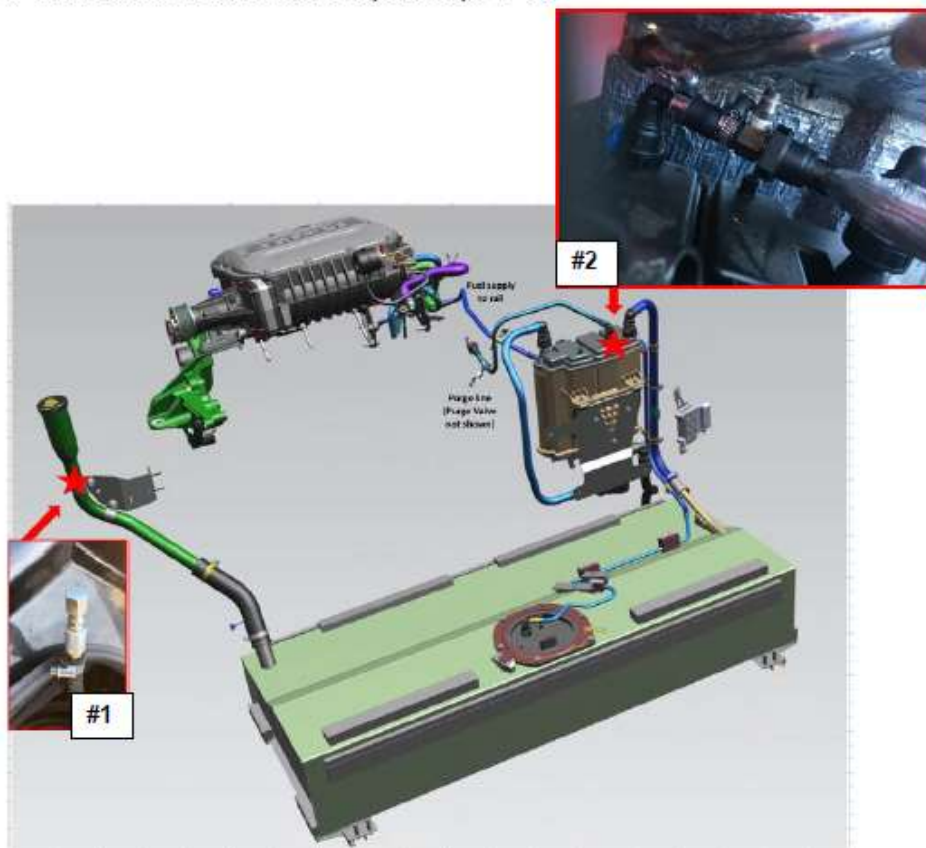


Figure D.11-1

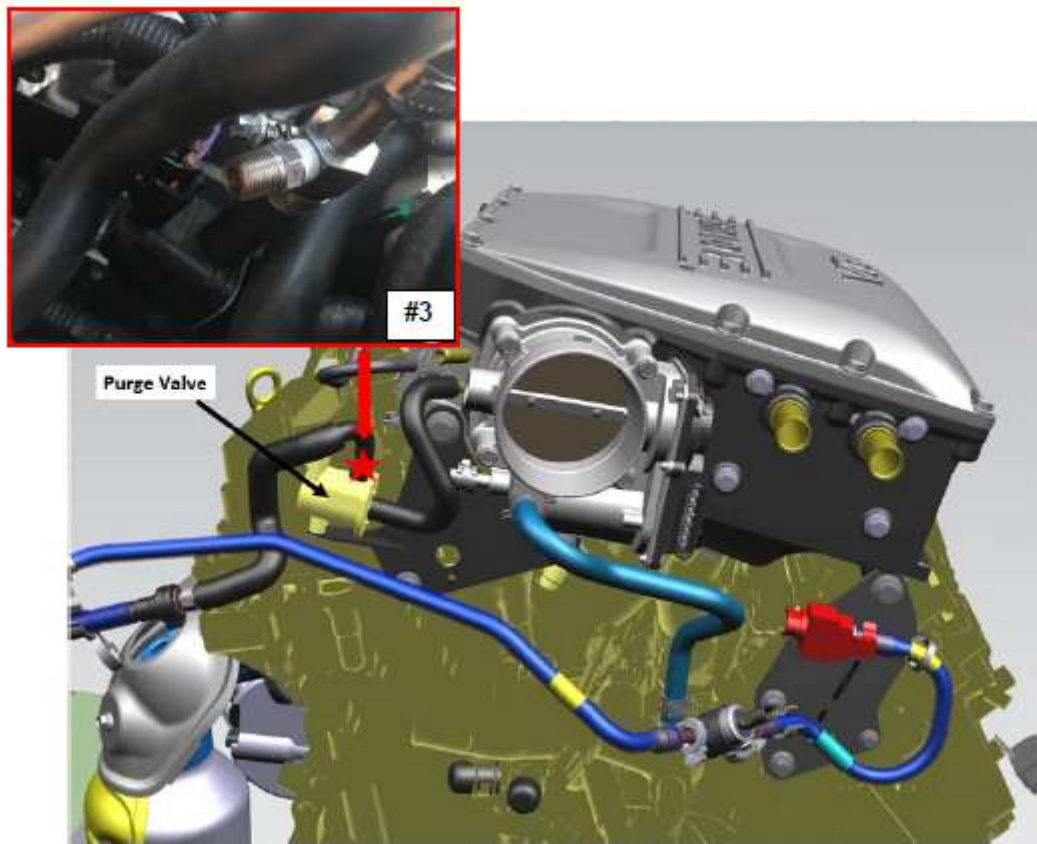


Figure D.11-2



Attachment 8 Emira LHD Diagnostic Link Connector



10. DESCRIPTION OF ALTERNATE FUEL VEHICLES

Lotus Cars Ltd offers no alternate fuel vehicles for sale.



11. EMISSIONS COMPONENTS, AUXILIARY EMISSIONS CONTROL DEVICES & EMISSIONS CONTROL STRATEGIES

Please refer to confidential submission.

12. DESCRIPTION OF VEHICLES COVERED BY CERTIFICATION & TEST PARAMETERS

Durability Group: VLT XGPGNNEV1
Test Group: VLT XV03.5JHB
Evaporative Family: VLT XR0130JHB
Emission Control System:
Eng Code 2GR-3.5S: SFI/SC/HO2S/WU-TWC/TWC/CAC

Carline	Model	Veh. Class	C-ratio	Idle RPM	Eng Config/ Displace	Eng Code	Valves/ cyl	Sale Area	Tire Size	Trans	ETW	Tank Cap
Emira	Emira	LDV	10.8	700	V6/3.5L	2GR-3.5S	4	50S	Front: 245/35 ZR20 Rear: 295/30 ZR20	M6	3625	62.0 L



12.1. Test Parameters

12.1.1. Starting procedure

Attachment 9 – Starting procedure

STARTING AND DRIVING

Starting the Engine

- Ensure the keyfob is in the front seat area.
- Manual vehicles: Check that the transmission is in neutral and depress the clutch or brake pedal, see page 188.
- Automatic vehicles: Select P - Park or N - Neutral and apply light foot pressure to the brake pedal, see pages 189 and 195.



- Lift the rear of the START/STOP ENGINE button flip cover.
- Press and release the START/STOP ENGINE button, the autostart function will operate the starter motor until the vehicle starts.

WARNING: To maintain vehicle control, ensure that the driving seat, steering wheel and door mirrors are adjusted correctly.

WARNING: If necessary, adjust the driving seat to ensure that the brake pedal can be fully depressed.

WARNING: Ensure that you and any passenger in the vehicle fastens their seatbelt before driving.

WARNING: Never remove the keyfob from the vehicle or press the START/STOP ENGINE button when the vehicle is moving. This could stop the engine and cause an accident.

CAUTION: Do not accelerate a cold engine immediately after starting. Oil may not lubricate all engine components and could cause engine damage.



Emergency Starting
A message is shown in the driver display if the keyfob battery is low and cannot be detected.



Key not in car

If this message is shown and the engine will not turn over then:

- Place the keyfob in the recess towards the rear of the storage area within centre console arm rest.
- Press the start button.
- The alarm siren will silence and the alarm is deactivated.



12.1.2. EPA Standard Shift Speeds (Manual Transmission)

15 – 25 – 40 – 45 – 50 mph

12.1.3. Shift schedule (Manual Transmission)

ID: FT6, H

12.1.4. Worst case drive mode

Below is the summary of the worst case :

Cycle	Test number	Test mode
FTP20	TLTX10090615	Tour
FTP75	TLTX10090616	Track
HFET	TLTX10090617	Sport
US06	TLTX10090627	Track
SC03	TLTX10090618	Tour
FTP50	TLTX10090619	Tour



12.1.5. RLHP information

RLHP information, including coefficients, generated by coast-down procedure in accordance with SAE J2263:

Carline	Model Code	Engine Code	Trans Type/Code	Curb Weight	LVW	ETW	Axle Ratio	N/V	Tyre Size	Tyre Mfr.	Tyre Model	Coastdown Time	RLHP @ 50mph	Target Coeff 70F (lbf)			Target Coeff 20F (lbf)		
														A	B	C	A	B	C
8	11	3	M6	3225lbs	3525lbs	3625lbs	1st - 4th: 3.777 5th - 6th: 3.238	35.5	Front: 245/35 ZR20 Rear: 295/30 ZR20	Michelin	PS CUP 2	N/A	14.5	37.419	0.55691	0.01741	41.1609	0.6126	0.01915

Test Report References:
IDIADA LME2203014_01



12.1.6. FTTP

Lotus conducted FTTP testing at Highly Marelli UK Limited. This was presented to the EPA (Lotus Emira FTTP Test Report Highly Marelli CWT_290922) and approval was granted November 3rd 2022.

Attachment 10 – FTTP Approval



Snyder, Jim <Snyder.Jim@epa.gov>

To: Cawdron, Ian
Cc: Robinson, David

Reply Reply All Forward

Thu 03/11/2022 19:40

This email is from an external sender, please ensure that you recognise the sender or that you are expecting the email before opening any files or clicking any links that it may contain.

Hi Ian,

I reviewed the FTTP Test report regarding conducting the test in a lab. I have any issues with the testing methodology, it looks acceptable.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

Lotus Emira FTTP - Evap System Vapour Pressure

Minute	Pressure Pa	Minute	Pressure Pa	Minute	Pressure Pa	Minute	Pressure Pa	Minute	Pressure Pa
0	-70	15	-710	30	20	45	-440	60	20
1	10	16	-10	31	-980	46	-460	61	20
2	20	17	-150	32	20	47	-460	62	20
3	30	18	20	33	10	48	20	63	20
4	-110	19	-1080	34	-770	49	-20	64	20
5	-40	20	-10	35	-430	50	30	65	20
6	-440	21	-10	36	10	51	-1130	66	-190
7	20	22	-140	37	10	52	10	67	-600
8	10	23	-110	38	-70	53	-1080	68	-540
9	20	24	-280	39	-20	54	20	69	-330
10	-300	25	-450	40	10	55	-1130	70	-380
11	-380	26	20	41	-380	56	20	71	-330
12	20	27	-120	42	-180	57	-460	72	-430
13	-100	28	-60	43	-460	58	20		
14	10	29	10	44	-760	59	20		

Values were observed using diagnostic equipment live data, and recorded at 1 minute intervals.

A low value of -1250 Pa was observed at approx. 12mins 30 secs.

12.1.7. Canister Loading

As per EPA process.



13. VEHICLES PRODUCED FOR US SALE

Please refer to confidential submission.

14. STATEMENT OF COMPLIANCE and REQUEST FOR CERTIFICATE OF CONFORMITY

14.1. Statement of Compliance

Lotus Cars Ltd states that any element of design, system, or emission control device installed on or incorporated in Lotus Cars Ltd's new motor vehicles or new motor vehicle engines for the purpose of complying with standards prescribed under section 202 of the Clean Air Act, will not, to the best of Lotus Cars Ltd's information and belief, cause the emission into the ambient air, pollutants in the operation of its motor vehicles or motor engines which cause or contribute to an unreasonable risk to public health welfare except as specifically permitted by the standards prescribed under section 202 of the Clean Air Act. Lotus Cars Ltd further states that any element of design, system, or emission control device installed or incorporated in Lotus Cars Ltd's new Motor vehicle engines, for the purpose of complying with standards prescribed under section 202 of the Clean Air Act, will not, to the best of Lotus Cars Ltd's information and belief, cause or contribute to an unreasonable risk to public safety.

The term pollutant means:

- a. Diesel Particles
- b. Nickel
- c. NMT combustion products
- d. Ammonia
- e. Sulphates
- f. Hydrogen sulphide
- g. Hydrogen cyanide
- h. Ruthenium combustion products
- i. Nitrosamines

or any other pollutant which Lotus Cars Ltd has identified which can reasonably be expected to be emitted from these vehicles. All vehicles have been tested in accordance with good engineering practice to ascertain that such test vehicles meet the requirement of this section for the useful life of the vehicle.

The test vehicles, with respect to which data are submitted, are in all material respects as described in the application for certification and have been tested in accordance with the applicable test procedures utilising the fuels and equipment described in the application for certification. They meet the requirement of such tests, and on the basis of such tests, they conform to the requirements of the regulations in 40 CFR, Part 86, Subpart S.

The vehicles for which certification is requested conform to the requirements in 86.1810-17 (a) and the description of the tests performed to ascertain compliance with the general standards in 86.1810-17 (a) and the data derived from such tests are available.



The testing described under 86.1824-08 has been designed and conducted in accordance with good engineering practice to assure that the vehicles covered by a certificate issued under 86.1848-10 will meet the evaporative emission standards in 86.1811-17 for the useful life of the vehicle.



14.2. Request for Certificate of Conformity

This Part 1 submission from Lotus Cars Ltd (Lotus) constitutes a final application and the request for the issue of a Certificate of Conformity for the following Test Group:

Test Group	Standards	Sales Area
VLTXV03.5JHB	Interim Tier 4 Bin 125 LEV IV ULEV 125	Federal California + S177

All vehicles within this test group comply with all applicable regulations contained in 40 CFR Part 85, 86 and 600 and request for the issue of a Certificate of Conformity.

If you have any questions regarding this submission, please contact the undersigned.

Yours sincerely

Shinyi Kang
Principal Engineer – Global Emissions Type Approval
Type Approval Department
Lotus Cars Ltd
Tel : +44 (0) 7740 738756
Email: skang@lotuscars.com



14.3. Request for Executive Order

This Part 1 submission from Lotus Cars Ltd (Lotus) constitutes a final application and the request for the issue of an executive order for the following Test Group:

Test Group	Standards	Sales Area
VLTXV03.5JHB	Interim Tier 4 Bin 125 LEV IV ULEV 125	Federal California + S177

All vehicles within this test group comply with all applicable regulations contained in the California Code of Regulations with the compliance statements detailed in Sections 8 & 14 of this submission. This submission constitutes our updated application pursuant to 13 CCR §1960.5 and 40 CFR §86.1843-01 and request for the issue of an Executive Order.

If you have any questions regarding this submission, please contact the undersigned.

Yours sincerely

Shinyi Kang
Principal Engineer – Global Emissions Type Approval
Type Approval Department
Lotus Cars Ltd
Tel : +44 (0) 7740 738756
Email: skang@lotuscars.com



15. OTHER INFORMATION

15.1. EPA Certification Fee Payment

One payment made for VLTXV03.5JHB Emira (\$32,317).

Attachment 11 – Fee Payment details



Payment details

Beneficiary name	Motor Vehicle and Engine Compliance	UETR	b125a6cd-fddd-457f-a325-d34bfe0bce56
Beneficiary account	868010099013 (US)	Debit account name	Lotus Cars Limited
Payment type	Priority Payment	Debit account number	40116031092626 (GB)
Value date	23 Dec 2025	Instruction reference number	17457C301AEG
Amount	USD 32,317.00	Customer reference	27TF762T



Processed by bank (HSBC)

23 Dec 2025 18:28 (GMT)

We've sent this payment. We'll update this status only if we receive more information from banks involved in the processing of the payment.

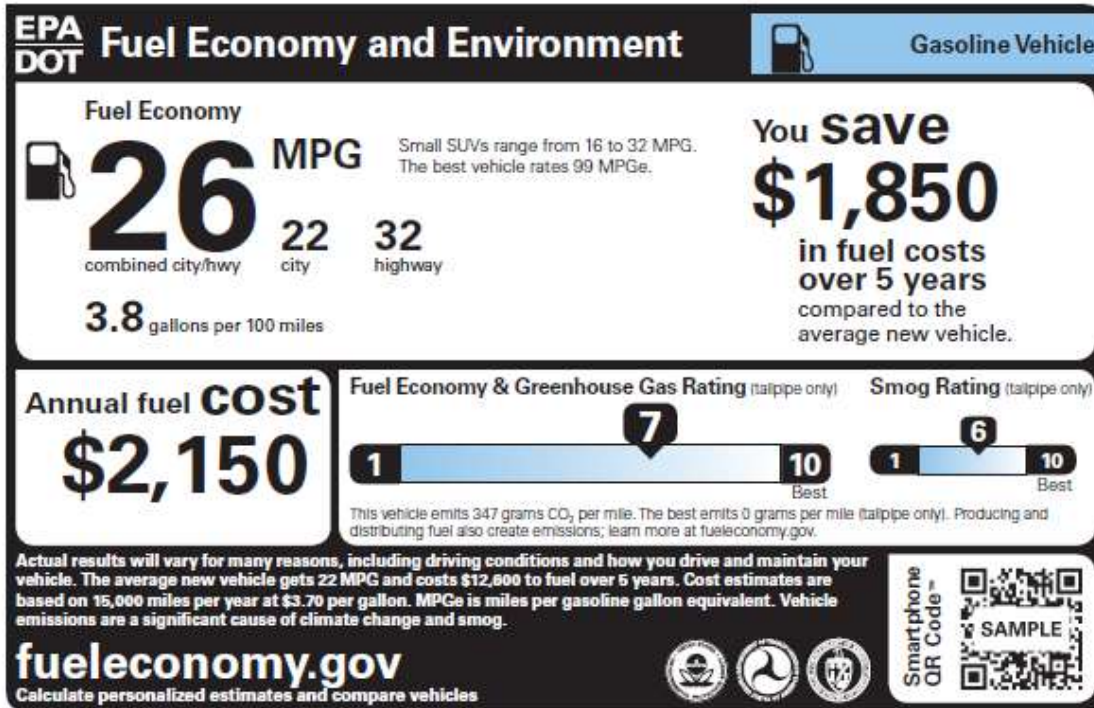
<input checked="" type="checkbox"/>	Received by bank		23 Dec 2025 16:27 (GMT)
<input checked="" type="checkbox"/>	Authorised	Gareth Howells	23 Dec 2025 16:27 (GMT)
<input checked="" type="checkbox"/>	1st authorisation completed	Shawn Leaver	23 Dec 2025 16:25 (GMT)
<input checked="" type="checkbox"/>	Created	Gareth Howells	23 Dec 2025 16:12 (GMT)



15.2. Environmental Performance Label (included on the Monroney Label)

This test group adopts the Monroney Label with EPA/DOT Fuel Economy and the Environmental Performance Label information included in lieu of a standalone Environmental Performance Label.

Sample of format in use: (not the actual label for this family)



15.3. Fuel storage system leak test procedure

As per §1066.985, testing was completed to verify that there are no significant leaks in the fuel storage system. The test results are summarized below:

Pressure applied at canister air-port [kPa]	N2 gas temperature [°C]	Leak rate after 3 min stabilization [g/h]	Leak rate after 3 min stabilization [l/min @ 25,2°C]	D eff [inches]
3,16	25,2	0.2***	0,003***	0,001

The tested vehicle fuel system can be certified with a deff = 0,002 inches.

16. EXHAUST SYSTEM STATEMENT

Lotus Cars Ltd attests that the exhaust system for the 2027MY Engine Family VLTXV03.5JHB has been analysed and designed to provide a durable and leak free exhaust system for the whole vehicle life. The exhaust system components, up to post catalyst joint, are 100% leak free tested at the component supplier. The exhaust system design is based on ease of installation and to enable repairs to be performed with commonly available tools to provide and maintain a leak free status.