

Certification Summary Information Report

Manufacturer	Jaguar Land Rover Limited	Manufacturer Code	JLX
Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Certificate Number	VJLXT03.0HTT-007	CARB Executive Order #	--
Certificate Issue Date	05/15/2026	Certificate Revision Date	--
Certificate Effective Date	05/15/2026	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	05/13/2026 06:26:43 AM
Model Year	2027		

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test Group Information			
CSI Type	New	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		
Drive Sources and Fuel(s)			
Drive Source #1:	Combustion Engine		
	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
	Gasoline	Spark Ignition Direct fuel injection	No
Drive Source #2:	Electric Motor		
	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
	Electricity	--	--
Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	No
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	No
Fuel Cell Indicator	No	EPA Vehicle Class	LDT4
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	Yes
Durability Group Name	VJLXGPGNNHTT	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	09/14/2026	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VJLXT03.0HTT
Test Group OBD Compliance Level	Partial - with deficiencies	Number of Test Group OBD Deficiencies	1
OBD Deficiencies Comments	--		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Evaporative/Refueling Family Information			
Evaporative Summary Information Type	New	Submission/Correction Date	03/11/2026 06:54:22 AM
Integrated ORVR?	Yes	Fuel(s)	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	Fuel Tank Material Description	Multi-barrier HDPE
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	No	Air Intake System Vapor Storage Device Description	CVVL
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	175	Number of Primary Canisters	1
Number of Bleed Canisters	1	Bleed Canister Total Working Capacity (grams)	5
Mfr Evaporative/Refueling Family Comments	175g single canister Tier 3 HLDT / LEV3 HLDT Option 2 (500mg Whole-vehicle + Canister Bleed).		
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
VJLXR0175P1B-001	50 State	0.02	--

Certification Summary Information Report

Test Group		VJLXT03.0HTT		Evaporative/Refueling Family		VJLXR0175P1B	
Models Covered by this Certificate							
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Jaguar Land Rover Limited	2 - Land Rover	301 - Defender 90 P400 MHEV	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	312 - Defender 130 P300 MHEV	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	301 - Defender 90 P400 MHEV	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	317 - Defender 90 P300 MHEV	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	313 - Defender 130 P400 MHEV	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	319 - Defender 110 P400 MHEV	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	318 - Defender 110 P300 MHEV	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	312 - Defender 130 P300 MHEV	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	317 - Defender 90 P300 MHEV	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	313 - Defender 130 P400 MHEV	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	318 - Defender 110 P300 MHEV	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Jaguar Land Rover Limited	2 - Land Rover	319 - Defender 110 P400 MHEV	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Engine Description							
Hybrid Type		IC Engine/Electric Motor		Hybrid Description		--	
Engine Type		4-Stroke Spark Ignition		Mfr Engine Description		Jaguar Land Rover AJ20P6 3.0L I6 Gasoline direct Injection.	
Engine Block Arrangement		Inline		Mfr Engine Block Arrangement Description		--	
Camless Valvetrain Indicator		No		Oil Viscosity/Classification		0W20	
Number of Cylinders/Rotors		6		Mechanically Variable Compression Ratio Indicator		N	
After Treatment Device(s) (ATD)							
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction			
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith			
Mfr After Treatment Device (ATD) Comments		In-line configuration engine. Upstream Heated Air Fuel Ratio sensor (HAFS), mid-brick Heated Exhaust Gas Oxygen sensor (HO2S), downstream Heated Exhaust Gas Oxygen sensor (HO2S)					
Direct Ozone Reduction (DOR) Device		Not Equipped					
Mfr Emission Control Device Comments		--					

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Engine Configuration Number 1			
Engine Displacement (liters)	3.0	Engine Rated Horsepower	300
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged+Supercharged	Number of Air Aspiration Devices	2
Air Aspiration Device Configuration	Both Parallel and Series	Charge Air Cooler Type	Liquid
Air Aspiration Drive Method(s)	Electric, Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Inlet and Exhaust Camshaft Phasing controlled by Engine Management System.		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	Number of Air/Fuel Sensors	3
Air/Fuel Sensor # 1 Type	Heated air fuel	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	--
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	Mechanical turbocharger and electronic supercharger.		

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B								
Engine Configuration Number 2											
Engine Displacement (liters)	3.0	Engine Rated Horsepower	400								
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2								
Air Aspiration Method	Turbocharged+Supercharged	Number of Air Aspiration Devices	2								
Air Aspiration Device Configuration	Both Parallel and Series	Charge Air Cooler Type	Liquid								
Air Aspiration Drive Method(s)	Mechanical, Electric										
Cylinder Deactivation	No										
Cylinder Deactivation Description	--										
Variable Valve Timing	Yes										
Variable Valve Timing System Description	Inlet and Exhaust Camshaft Phasing controlled by Engine Management System.										
Variable Valve Lift?	No										
Variable Valve Lift System Description	--										
Number of Knock Sensors	2	Number of Air/Fuel Sensors	3								
Air/Fuel Sensor # 1 Type	Heated air fuel	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	--								
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	Mechanical turbocharger and electronic supercharger.										
Official Test Numbers											
Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity	--	--	--	--	--	--	--	--	--	--	--
Gasoline	TJLX10091142	TJLX10091144	TJLX10091145	TJLX10091146	TJLX10091143	19	228.2	24.2	286.1	--	
SFTP LEV-III Official Test Numbers											
Test Group	Fuel	FTP	US06	SC03							
Gasoline	TJLX10091142	TJLX10091144	TJLX10091145	TJLX10091146							
Electricity	--	--	--	--							

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Official Charge Depleting Test Numbers			
Test Group Fuel	UDDS	Highway	
Electricity	--	--	
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	48	Battery Energy Capacity	8
Battery Specific Energy	370	Battery Charger Type	On-Board
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Not applicable		
Regenerative Braking Source	--	Driver Controlled Regenerative Braking	--
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	1		
Motor/Generator Type 1	AC Induction	Rated Motor/Generator Power	15
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	--		

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
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Emission Data Vehicle Information

Vehicle ID / Configuration	3ETVOL004 / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	TJLXT03.0HTT	Original Evaporative/Refueling Family	TJLXR0175P1B
Original Test Vehicle Model Year	2026		

Vehicle Model

Represented Test Vehicle Make	Land Rover	Represented Test Vehicle Model	Defender 130 MHEV
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Leak Family Details

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

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

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Multiple Fuel Combustion	--
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--
Off-board charge Capable Indicator	Yes		
Odometer Correction -- Initial	0	Odometer Correction Factor	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	3.0AJMH-19	Rated Horsepower	400
Displacement (liters)	3		
Air Aspiration Method	Turbocharged+Supercharged	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Both Parallel and Series
Charge Air Cooler Type	Liquid	Drive Mode While Testing	4-Wheel Drive
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	5857	Equivalent Test Weight (pounds)	6000
GVWR (lbs)	7452	N/V Ratio	24.5
Axle Ratio	3.55		
Transmission Type	Semi-Automatic	# of Transmission Gears	8
Transmission Lockup	Yes	Creeper Gear	No

Certification Summary Information Report

Test Group		VJLXT03.0HTT			Evaporative/Refueling Family		VJLXR0175P1B	
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	65.9	0.409	0.03553	5.373	0.18379	0.033584	23.4	
Cold CO	72.49	0.4499	0.039083	5.373	0.18379	0.033584	N/A	
US06	65.9	0.409	0.03553	5.373	0.18379	0.033584	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		Land Rover Defender 130 3.0L MHEV EDV. 255/60R19 Goodyear Wrangler Tires.						

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test #	TJLX10091142	Test Procedure	25 - California 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	05/08/2025	Fuel	Gasoline
Fuel Batch ID	242739	Fuel Calibration Number	9764
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4167	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	441.4215	--
FE BAG 1 (Bag 1 Fuel Economy)	19.59	19.59
CO2 BAG 2 (Bag 2 Carbon Dioxide)	408.5803	--
FE BAG 2 (Bag 2 Fuel Economy)	21.224	21.224
CO2 BAG 3 (Bag 3 Carbon Dioxide)	388.1655	--
FE BAG 3 (Bag 3 Fuel Economy)	22.314	22.314
CO2 BAG 4 (Bag 4 Carbon Dioxide)	401.4094	--
FE BAG 4 (Bag 4 Fuel Economy)	21.603	21.603
METHANE (CH4 - Methane)	0.003	--
CO (Carbon Monoxide)	0.2591	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.806	--
DT-EER (Drive Trace Energy Economy Rating)	-0.924	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.901	--
MFR FE (Manufacturer Fuel Economy)	21.2515	21.2515
NOX (Nitrogen Oxide)	0.0035	--
N2O (Nitrous Oxide)	0.0002	--
HC-NM (Non-methane Hydrocarbon)	0.005	--
NMOG (Non-methane organic gases)	0.0055	--
PM (Particulate Matter)	0.0006	--
HC-TOTAL (Total Hydrocarbon)	0.0077	--

Certification Summary Information Report

Test Group		VJLXT03.0HTT			Evaporative/Refueling Family				VJLXR0175P1B			
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE						
		Carbon-Related Exhaust Emissions		408		999						
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		407.666		--						
Manufacturer Test Comments		Defender 130 3.0L I6 EDV E10 2xUDDS. MFR Test No. CDC6 2025-05-08 13. Goodyear Wrangler 255/60R19 Tires.										
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 30	CREE	999	--	--	--	0	--	999	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.003	--	--	--	0.0025	--	0.006	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0002	--	--	--	0	--	0	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.26	--	--	--	0.28	--	0.5	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0055	--	1.1	--	0.0028	--	0.008	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.009	--	--	--	--	--	0.014	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0035	--	--	--	0.002	--	0.006	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0006	--	--	--	0	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.26	--	--	--	0.28	--	0.5	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0055	--	1.1	--	0.0028	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.009	--	--	--	--	--	0.014	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0035	--	--	--	0.002	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0006	--	--	--	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.												

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test #	TJLX10091146	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	04/25/2025	Fuel	Gasoline
Fuel Batch ID	242739	Fuel Calibration Number	9764
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	--	Odometer Units	M
Test Start Odometer Reading	4074	Diesel Adjustment Factor Usage	--
4WD Test Dyno	Yes		
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	618.0164	--	
FE BAG 1 (Bag 1 Fuel Economy)	13.951	13.951	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	538.5015	--	
FE BAG 2 (Bag 2 Fuel Economy)	16.104	16.104	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	464.624	--	
FE BAG 3 (Bag 3 Fuel Economy)	18.659	18.659	
CO (Carbon Monoxide)	0.4475	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.637	--	
DT-EER (Drive Trace Energy Economy Rating)	0.571	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.962	--	
MFR FE (Manufacturer Fuel Economy)	16.195	16.195	
NOX (Nitrogen Oxide)	0.0107	--	
HC-NM (Non-methane Hydrocarbon)	0.0309	--	
NMOG (Non-methane organic gases)	0.034	--	
HC-TOTAL (Total Hydrocarbon)	0.0376	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	535	--	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	534.6824	--	

Test Group	VJLXT03.0HTT				Evaporative/Refueling Family				VJLXR0175P1B			
Manufacturer Test Comments		Defender 130 3.0L I6 EDV E10 FTP20. Goodyear Wrangler 255/60R19 Tires. MFR Test No. CDC3 2025-04-25 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	50,000 miles	Federal Tier 3 Bin 30	CO	0.45	--	--	--	0.09	--	0.5	12.5	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.03	--	--	--	0.002	--	0	0.5	Pass
CA	50,000 miles	California LEV-IV SULEV30	CO	0.45	--	--	--	0.09	--	0.5	12.5	Pass

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test #	TJLX10091147	Test Procedure	51 - CA fuel 50 Deg(F) exhaust test
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	05/15/2025	Fuel	Gasoline
Fuel Batch ID	242739	Fuel Calibration Number	9764
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4241	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	507.4958	--	
FE BAG 1 (Bag 1 Fuel Economy)	17.046	17.046	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	443.9491	--	
FE BAG 2 (Bag 2 Fuel Economy)	19.532	19.532	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	409.4836	--	
FE BAG 3 (Bag 3 Fuel Economy)	21.153	21.153	
METHANE (CH4 - Methane)	0.0039	--	
CO (Carbon Monoxide)	0.2619	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.919	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.909	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-3.183	--	
MFR FE (Manufacturer Fuel Economy)	19.3541	19.3541	
NOX (Nitrogen Oxide)	0.0041	--	
HC-NM (Non-methane Hydrocarbon)	0.0075	--	
NMOG (Non-methane organic gases)	0.0082	--	
HC-TOTAL (Total Hydrocarbon)	0.0107	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	448	--	

Certification Summary Information Report

Test Group		VJLXT03.0HTT				Evaporative/Refueling Family				VJLXR0175P1B		
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		447.6606			--					
Manufacturer Test Comments		Defender 130 3.0L I6 EDV E10 FTP50. Goodyear Wrangler 255/60R19 Tires. MFT Test No. CDC6 2025-05-15 16.										
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	4,000 miles	California LEV-IV SULEV30	NMOG	0.0082	--	1.1	--	0.0028	--	0.011	999.999	Pass
CA	4,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0123	--	--	--	--	--	0.017	0.060	Pass
CA	4,000 miles	California LEV-IV SULEV30	NOX	0.0041	--	--	--	0.002	--	0.006	999.999	Pass

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test #	TJLX10091331	Test Procedure	25 - California fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	06/16/2025	Fuel	Gasoline
Fuel Batch ID	63623	Fuel Calibration Number	4091
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4587	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	462.0906	--	
FE BAG 1 (Bag 1 Fuel Economy)	19.158	19.158	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	435.7338	--	
FE BAG 2 (Bag 2 Fuel Economy)	20.367	20.367	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	403.492	--	
FE BAG 3 (Bag 3 Fuel Economy)	21.988	21.988	
CO2 BAG 4 (Bag 4 Carbon Dioxide)	410.1914	--	
FE BAG 4 (Bag 4 Fuel Economy)	21.631	21.631	
METHANE (CH4 - Methane)	0.0029	--	
CO (Carbon Monoxide)	0.2306	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.207	--	
DT-EER (Drive Trace Energy Economy Rating)	0.81	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.157	--	
MFR FE (Manufacturer Fuel Economy)	20.877	20.877	
NOX (Nitrogen Oxide)	0.0036	--	
N2O (Nitrous Oxide)	0.0001	--	
HC-NM (Non-methane Hydrocarbon)	0.0053	--	
NMOG (Non-methane organic gases)	0.0054	--	
PM (Particulate Matter)	0.0008	--	
HC-TOTAL (Total Hydrocarbon)	0.0075	--	

Certification Summary Information Report

Test Group		VJLXT03.0HTT			Evaporative/Refueling Family				VJLXR0175P1B			
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE						
		Carbon-Related Exhaust Emissions		425		425						
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		424.7991		--						
Manufacturer Test Comments		Defender 130 3.0L I6 EDV E0 2xUDDS. MFR Test No. CDC6 2025-06-16 07. Goodyear Wrangler 255/60R19 Tires.										
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 30	CREE	425	--	--	--	0	--	425	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.0029	--	--	--	0.0025	--	0.005	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0001	--	--	--	0	--	0	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.23	--	--	--	0.28	--	0.5	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0054	--	1.1	--	0.0028	--	0.008	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.009	--	--	--	--	--	0.014	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0036	--	--	--	0.002	--	0.006	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0008	--	--	--	0	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.23	--	--	--	0.28	--	0.5	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0054	--	1.1	--	0.0028	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.009	--	--	--	--	--	0.014	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0036	--	--	--	0.002	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0008	--	--	--	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.												

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test #	TJLX10091143	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	04/15/2025	Fuel	Gasoline
Fuel Batch ID	242739	Fuel Calibration Number	9764
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3947	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0003	--
CO (Carbon Monoxide)	0.1905	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.512	--
DT-EER (Drive Trace Energy Economy Rating)	-0.09	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.53	--
MFR FE (Manufacturer Fuel Economy)	27.964	27.964
NOX (Nitrogen Oxide)	0.0003	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	310	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	309.8391	--

Manufacturer Test Comments

Defender 130 3.0L I6 EDV E10 HWY. MFR Test No. CDC6 2025-04-15 05. Goodyear Wrangler 255/60R19 Tires.

Certification Summary Information Report

Test Group		VJLXT03.0HTT			Evaporative/Refueling Family					VJLXR0175P1B		
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 30	CREE	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0028	--	0.003	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0003	--	--	--	--	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0003	--	--	--	0.002	--	0.002	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0028	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0003	--	--	--	--	--	0.005	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0003	--	--	--	0.002	--	0.002	99.999	Pass

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

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test #	TJLX10091332	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	06/10/2025	Fuel	Gasoline
Fuel Batch ID	63623	Fuel Calibration Number	4091
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4537	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
METHANE (CH4 - Methane)	0.0003	--	
CO (Carbon Monoxide)	0.1433	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	3.455	--	
DT-EER (Drive Trace Energy Economy Rating)	0.22	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	4.091	--	
MFR FE (Manufacturer Fuel Economy)	28.8247	28.8247	
NOX (Nitrogen Oxide)	0.0013	--	
N2O (Nitrous Oxide)	0	--	
HC-NM (Non-methane Hydrocarbon)	0	--	
NMOG (Non-methane organic gases)	0	--	
HC-TOTAL (Total Hydrocarbon)	0	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	308	308	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	307.7235	--	
Manufacturer Test Comments	Defender 130 3.0L I6 EDV E0 HWY. MFR Test No. CDC6 2025-06-10 09. Goodyear Wrangler 255/60R19 Tires.		

Certification Summary Information Report

Test Group		VJLXT03.0HTT				Evaporative/Refueling Family				VJLXR0175P1B		
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 30	CREE	308	--	--	--	0	--	308	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0028	--	0.003	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0013	--	--	--	--	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0013	--	--	--	0.002	--	0.003	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0028	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0013	--	--	--	--	--	0.006	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0013	--	--	--	0.002	--	0.003	99.999	Pass

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

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test #	TJLX10091144	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	04/15/2025	Fuel	Gasoline
Fuel Batch ID	242739	Fuel Calibration Number	9764
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3968	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	722.4542	--
FE BAG 1 (Bag 1 Fuel Economy)	11.925	11.925
CO2 BAG 2 (Bag 2 Carbon Dioxide)	427.4373	--
FE BAG 2 (Bag 2 Fuel Economy)	20.206	20.206
CO (Carbon Monoxide)	1.5531	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.41	--
DT-EER (Drive Trace Energy Economy Rating)	-0.791	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.536	--
MFR FE (Manufacturer Fuel Economy)	17.526	17.526
NOX (Nitrogen Oxide)	0.0035	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
PM (Particulate Matter)	0.003	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0035	--
HC-TOTAL (Total Hydrocarbon)	0.0016	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	492.3964	--

Manufacturer Test Comments

Defender 130 3.0L I6 EDV E10 US06. MFR Test No. CDC6 2025-04-15 06. Goodyear Wrangler 255/60R19 Tires.

Certification Summary Information Report

Test Group		VJLXT03.0HTT				Evaporative/Refueling Family				VJLXR0175P1B		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	1.55	--	--	--	1.06	--	2.6	9.6	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0006	--	0.001	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0035	--	--	--	--	--	0.02	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0035	--	--	--	0.0159	--	0.019	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	1.55	--	--	--	1.06	--	2.6	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0006	--	0.001	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0035	--	--	--	--	--	0.02	0.036	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0035	--	--	--	0.0159	--	0.019	99.999	Pass

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Test #	TJLX10091145	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	05/09/2025	Fuel	Gasoline
Fuel Batch ID	242739	Fuel Calibration Number	9764
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4182	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	0.3684	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.028	--
DT-EER (Drive Trace Energy Economy Rating)	0.471	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.1	--
MFR FE (Manufacturer Fuel Economy)	15.7153	15.7153
NOX (Nitrogen Oxide)	0.0064	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0.0004	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	551.2811	--

Manufacturer Test Comments

Defender 130 3.0L I6 EDV E10 SC03. MFR Test No. CDC6 2025-05-09 01. Goodyear Wrangler 255/60R19 Tires.

Certification Summary Information Report

Test Group		VJLXT03.0HTT				Evaporative/Refueling Family				VJLXR0175P1B		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.37	--	--	--	0.39	--	0.8	3.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0027	--	0.003	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0064	--	--	--	--	--	0.009	0.020	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0064	--	--	--	0	--	0.006	999.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.37	--	--	--	0.39	--	0.8	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0027	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0064	--	--	--	--	--	0.009	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0064	--	--	--	0	--	0.006	99.999	Pass

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B						
Emission Data Vehicle Information									
Vehicle ID / Configuration	3KMVP032 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	NJLXT04.4GTE	Original Evaporative/Refueling Family	NJLXR0175P1B						
Original Test Vehicle Model Year	2022								
Vehicle Model									
Represented Test Vehicle Make	LAND ROVER	Represented Test Vehicle Model	New Range Rover						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
	<table border="1"> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> <tr> <td>1</td><td>Combustion Engine</td><td>Gasoline</td></tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline		
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	No						
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 - Initial system miles) * Correction factor								
Odometer Correction Units	Miles								
Engine Code	4.4NC10-22	Rated Horsepower	530						
Displacement (liters)	4.4								
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel						
Charge Air Cooler Type	Liquid	Drive Mode While Testing	4-Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	5705	Equivalent Test Weight (pounds)	6000						
GVWR (lbs)	7385	N/V Ratio	22.9						
Axle Ratio	3.31								
Transmission Type	Semi-Automatic	# of Transmission Gears	8						
Transmission Lockup	Yes	Creep Gear	No						

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
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Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	46.948	-0.11133	0.03423	50.874	-0.11143	0.034206	16.9
Cold CO	51.643	-0.12246	0.037653	50.874	-0.11143	0.034206	N/A
US06	46.948	-0.11133	0.03423	50.874	-0.11143	0.034206	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments New Range Rover NC10 4.4 V8 Turbocharged LWB. 285/45R22 Tires. Evaps EDV.

Test #	NJLX10072639	Test Procedure	38 - CA fuel 3-day evap.
Exhaust Test # for this Evap Test	NJLX10072627	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline
Test Date	04/26/2021	Fuel	Gasoline
Fuel Batch ID	35047	Fuel Calibration Number	6681
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Jaguar Land Rover Limited		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	4812	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.297	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.297	--

Manufacturer Test Comments SET A 4K results 3D + HS (3 day using highest of the three values). New Range Rover 4.4L V8 TC.

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	0.297	0	0.297	0.5	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.297	0	0.297	0.5	Pass

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B									
Test #	NJLX10072640	Test Procedure	38 - CA fuel 3-day evap.									
Exhaust Test # for this Evap Test	NJLX10072638	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline									
Test Date	05/05/2021	Fuel	Gasoline									
Fuel Batch ID	35047	Fuel Calibration Number	6681									
Vehicle Class	N/A	DF Type	Mfr. Determined									
Verify Test Lab ID	Jaguar Land Rover Limited											
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)											
Test Start Odometer Reading	4864	Odometer Units	M									
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--									
State of Charge Delta	Yes											
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	--									
Test Results												
<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> </thead> <tbody> <tr> <td>HC-TOTAL (Total Hydrocarbon)</td> <td>0.322</td> <td>--</td> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.322</td> <td>--</td> </tr> </tbody> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL (Total Hydrocarbon)	0.322	--	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.322	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)										
HC-TOTAL (Total Hydrocarbon)	0.322	--										
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.322	--										
Manufacturer Test Comments												
SET B 4K results 3D + HS (3 day using highest of the three values). New Range Rover 4.4L V8 TC.												
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	0.322	0	0.322	0.5	Pass				
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.322	0	0.322	0.5	Pass				

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B						
Test #	NJLX10072654	Test Procedure	37 - California Fuel Running Loss						
Exhaust Test # for this Evap Test	NJLX10072627	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline						
Test Date	04/26/2021	Fuel	Gasoline						
Fuel Batch ID	35047	Fuel Calibration Number	6681						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Jaguar Land Rover Limited								
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)								
Test Start Odometer Reading	4812	Odometer Units	M						
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--						
State of Charge Delta	Yes								
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	--						
Test Results									
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.000508</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.000508	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.000508	--							
Manufacturer Test Comments									
Running loss test for 4k SET A. New Range Rover 4.4L V9 TC.									
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
Fed	120,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.001	0	0	0.05	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.001	0	0	0.05	Pass	

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B						
Test #	NJLX10072655	Test Procedure	24 - Federal fuel refueling test (ORVR)						
Exhaust Test # for this Evap Test	NJLX10072627	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline						
Test Date	05/29/2021	Fuel	Gasoline						
Fuel Batch ID	35047	Fuel Calibration Number	6681						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Jaguar Land Rover Limited								
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)								
Test Start Odometer Reading	4812	Odometer Units	M						
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--						
State of Charge Delta	Yes								
Drive Cycle Speed Tolerance Criteria	--	Road Speed Fan Usage	--						
Test Results									
<table border="1"> <tr> <td>Test Result Name</td> <td>Unrounded Test Result</td> <td>Verify Calculated FE Equivalent Value (miles per gallon)</td> </tr> <tr> <td>HC (Hydrocarbon for Running Loss and ORVR)</td> <td>0.073</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC (Hydrocarbon for Running Loss and ORVR)	0.073	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC (Hydrocarbon for Running Loss and ORVR)	0.073	--							
Manufacturer Test Comments									
ORVR TEST FOR 4K SET A. New Range Rover 4.4L V8 TC.									
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
Fed	120,000 miles	Federal Tier 3 Evap	HC	0.073	0	0.07	0.2	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC	0.073	0	0.07	0.2	Pass	

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B						
Test #	NJLX10072656	Test Procedure	37 - California Fuel Running Loss						
Exhaust Test # for this Evap Test	NJLX10072638	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline						
Test Date	05/05/2021	Fuel	Gasoline						
Fuel Batch ID	35047	Fuel Calibration Number	6681						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Jaguar Land Rover Limited								
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)								
Test Start Odometer Reading	4847	Odometer Units	M						
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--						
State of Charge Delta	Yes								
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	--						
Test Results									
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.000524</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.000524	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.000524	--							
Manufacturer Test Comments									
Running loss test for 4k SET B. New Range Rover 4.4L V9 TC.									
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
Fed	120,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.001	0	0	0.05	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.001	0	0	0.05	Pass	

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B						
Test #	NJLX10072657	Test Procedure	24 - Federal fuel refueling test (ORVR)						
Exhaust Test # for this Evap Test	NJLX10072638	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline						
Test Date	06/04/2021	Fuel	Gasoline						
Fuel Batch ID	35047	Fuel Calibration Number	6681						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Jaguar Land Rover Limited								
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)								
Test Start Odometer Reading	4864	Odometer Units	M						
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--						
State of Charge Delta	Yes								
Drive Cycle Speed Tolerance Criteria	--	Road Speed Fan Usage	--						
Test Results									
<table><tr><td>Test Result Name</td><td>Unrounded Test Result</td><td>Verify Calculated FE Equivalent Value (miles per gallon)</td></tr><tr><td>HC (Hydrocarbon for Running Loss and ORVR)</td><td>0.004</td><td>--</td></tr></table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC (Hydrocarbon for Running Loss and ORVR)	0.004	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC (Hydrocarbon for Running Loss and ORVR)	0.004	--							
Manufacturer Test Comments ORVR TEST FOR 4K SET B. New Range Rover 4.4L V8 TC.									
Certification Region Useful Life Standard Level Emission Name Rounded Result Add DF Certification Level Standard Pass/Fail									
Fed	120,000 miles	Federal Tier 3 Evap	HC	0.004	0	0	0.2	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC	0.004	0	0	0.2	Pass	

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B					
Test #	NJLX10073373	Test Procedure	65 - Evap Canister Bleed Test					
Exhaust Test # for this Evap Test	--	Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline					
Test Date	04/20/2018	Fuel	Gasoline					
Fuel Batch ID	35047	Fuel Calibration Number	6681					
Vehicle Class	N/A	DF Type	Mfr. Determined					
Verify Test Lab ID	Jaguar Land Rover Limited							
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)							
Test Start Odometer Reading	4812	Odometer Units	M					
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--					
State of Charge Delta	Yes							
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	--					
Test Results								
Test Result Name		Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)					
HC-TOTAL (Total Hydrocarbon)		0.0109	--					
Manufacturer Test Comments								
Test attached to original evap EDV to process in EV-CIS, but actual test is rig based and carried out by canister manufacturer.								
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	0.0109	0	0.011	0.02	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL	0.0109	0	0.011	0.02	Pass

Certification Summary Information Report

Test Group	VJLXT03.0HTT	Evaporative/Refueling Family	VJLXR0175P1B
Fuel Properties			
Fuel Batch ID	35047	Fuel Calibration Number	6681
Test Fuel Type	47 - CARB LEV3 E10 Premium Gasoline	Fuel Batch Calibration Date	09/25/2020
Fuel Batch Calibration Effective Date	09/25/2020	Fuel Batch Calibration Ineffective Date	09/25/2024
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 (%)	9.7	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18040
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.829	Weight Fraction CO2	--
Fuel Batch ID	242739	Fuel Calibration Number	9764
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	03/26/2024
Fuel Batch Calibration Effective Date	04/01/2025	Fuel Batch Calibration Ineffective Date	04/01/2030
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.743
Fuel Ethanol Volume Percent (%)	9.6	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17811
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	4091
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	07/22/2024
Fuel Batch Calibration Effective Date	07/22/2024	Fuel Batch Calibration Ineffective Date	04/03/2029
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	--

Certification Summary Information Report

Test Group		VJLXT03.0HTT			Evaporative/Refueling Family			VJLXR0175P1B	
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			US06	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	1.06	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0006	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0165	0.050
150,000 miles	NOX	--	--	--	--	--	--	0.0159	999.999
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			HWFE	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0028	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0048	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.002	99.999

Certification Summary Information Report

Test Group		VJLXT03.0HTT			Evaporative/Refueling Family			VJLXR0175P1B	
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			California fuel 2-day exhaust (w/can load)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0	999.999
120,000 miles	METHANE	--	--	--	--	--	--	0.0025	0.030
120,000 miles	N2O	--	--	--	--	--	--	0	0.010
150,000 miles	CO	--	--	--	--	--	--	0.28	1.0
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0028	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0048	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.002	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			California 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	--	--	--	--	--	--	0.28	1.0
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0028	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0048	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.002	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.001

Certification Summary Information Report

Test Group	VJLXT03.0HTT				Evaporative/Refueling Family			VJLXR0175P1B	
Cert Region	Federal				Cert/In-Use Code			Cert	
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)				Standard Level			Federal Tier 3 Bin 30	
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	--	--	--	--	--	--	0.39	3.2
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0027	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0027	0.020
150,000 miles	NOX	--	--	--	--	--	--	0	999.999

Cert Region	Federal				Cert/In-Use Code			Both	
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)				Standard Level			Federal Tier 3 Bin 30	
Fuel	Gasoline				Test Procedure			HWFE	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0	999.999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0028	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0048	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.002	999.999

Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Both	
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)				Standard Level			California LEV-IV SULEV30	
Fuel	Gasoline				Test Procedure			US06	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	1.06	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0006	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0165	0.036
150,000 miles	NOX	--	--	--	--	--	--	0.0159	99.999

Certification Summary Information Report

Test Group		VJLXT03.0HTT			Evaporative/Refueling Family			VJLXR0175P1B	
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			Cold CO	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.09	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.002	0.5

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			CA fuel 50 Deg(F) exhaust test	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	NMOG	--	--	1.1	--	--	--	0.0028	999.999
4,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0048	0.060
4,000 miles	NOX	--	--	--	--	--	--	0.002	999.999

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			SC03	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.39	1.0
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0027	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0027	0.030
150,000 miles	NOX	--	--	--	--	--	--	0	99.999

Certification Summary Information Report

Test Group	VJLXT03.0HTT			Evaporative/Refueling Family			VJLXR0175P1B		
Cert Region	California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)			Standard Level			California LEV-IV SULEV30		
Fuel	Gasoline			Test Procedure			Cold CO		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.09	12.5

Evaporative/Refueling Standards

Evaporative/Refueling Family		VJLXR0175P1B		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		CA fuel 3-day evap.					
Fuel		Useful Life	Emission Name	Rounded Result	Std	Add DF	
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0		

Evaporative/Refueling Family	VJLXR0175P1B		Cert Region	Federal	
Cert/In-Use Code	Cert		Standard Level	Federal Tier 3 Evap	
Test Procedure	CA fuel 3-day evap.				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL	--	0.500	0

Evaporative/Refueling Family		VJLXR0175P1B		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		California Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC-TOTAL-EQUIV	--	0.05	0		

Evaporative/Refueling Family		VJLXR0175P1B		Cert Region		Federal	
Cert/In-Use Code		Both		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	--	0.020	0		

Certification Summary Information Report

Test Group		VJLXT03.0HTT		Evaporative/Refueling Family		VJLXR0175P1B	
Evaporative/Refueling Family		VJLXR0175P1B		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-IV 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	--	0.020	0		
Evaporative/Refueling Family		VJLXR0175P1B		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC	--	0.20	0		
Evaporative/Refueling Family		VJLXR0175P1B		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC	--	0.20	0		
Evaporative/Refueling Family		VJLXR0175P1B		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV 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	--	0.05	0		

Certification Summary Information Report

Test Group		VJLXT03.0HTT	Evaporative/Refueling Family		VJLXR0175P1B
Glossary					
Useful Life					
4	4,000 miles		120	120,000 miles	
50	50,000 miles		150	150,000 miles	
100	100,000 miles				
Emission Name					
HC-TOTAL	Total Hydrocarbon		COMB-CREE	Combined Carbon-Related Exhaust Emissions	
CO	Carbon Monoxide		COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
CO2	Carbon dioxide		HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
CREE	Carbon-Related Exhaust Emissions		METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
OPT-CREE	Optional Carbon-Related Exhaust Emissions		N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
NOX	Nitrogen Oxide		LEAK-DIA	Effective Leak Diameter (inches)	
PM	Particulate Matter		LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
PM-COMP	SFTP Composite Particulate Matter		CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
HC-NM	Non-methane Hydrocarbon		KW-HRS	Integrated DC KW-HRS	
OMHCE	Organic material Hydrocarbon Equivalent		CH4 BAG 1	Bag 1 Methane	
OMNMHCE	Organic material non-methane HC equivalent		CH4 BAG 2	Bag 2 Methane	
NMOG	Non-methane organic gases		CH4 BAG 3	Bag 3 Methane	
HCHO	Formaldehyde		CH4 BAG 4	Bag 4 Methane	
H3C2HO	Acetaldehyde		CO BAG 1	Bag 1 Carbon Monoxide	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03		CO BAG 2	Bag 2 Carbon Monoxide	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides		CO BAG 3	Bag 3 Carbon Monoxide	
CO-COMP	SFTP Composite Carbon Monoxide		CO BAG 4	Bag 4 Carbon Monoxide	
ETHANOL	C2H5OH - Ethanol		NMOG BAG 1	Bag 1 Non-methane organic gases	
FE BAG 1	Bag 1 Fuel Economy		NMOG BAG 2	Bag 2 Non-methane organic gases	
FE BAG 2	Bag 2 Fuel Economy		NMOG BAG 3	Bag 3 Non-methane organic gases	
FE BAG 3	Bag 3 Fuel Economy		NMOG BAG 4	Bag 4 Non-methane organic gases	
FE BAG 4	Bag 4 Fuel Economy		ACT-DISTANCE BAG 1	Bag 1 Actual Distance	
MFR FE	Manufacturer Fuel Economy		ACT-DISTANCE BAG 2	Bag 2 Actual Distance	
HC	Hydrocarbon for Running Loss and ORVR		ACT-DISTANCE BAG 3	Bag 3 Actual Distance	
METHANE	CH4 - Methane		ACT-DISTANCE BAG 4	Bag 4 Actual Distance	
METHANOL	CH3OH - Methanol		HC-TOTAL BAG 1	Bag 1 Total Hydrocarbon	
N2O	Nitrous Oxide		HC-TOTAL BAG 2	Bag 2 Total Hydrocarbon	
SPITBACK	Spitback Hydrocarbon in grams		HC-TOTAL BAG 3	Bag 3 Total Hydrocarbon	
AMP-HRS	Integrated Amp-hours		HC-TOTAL BAG 4	Bag 4 Total Hydrocarbon	
START-SOC	System Start State of Charge Watt-hours		WATT-HRS BAG 1	Bag 1 Watt Hours	
END-SOC	System End State of Charge Watt-hours		WATT-HRS BAG 2	Bag 2 Watt Hours	

Certification Summary Information Report

Test Group		VJLXT03.0HTT	Evaporative/Refueling Family		VJLXR0175P1B
ACT-DISTANCE	Actual Distance Driven (miles)		WATT-HRS BAG 3	Bag 3 Watt Hours	
AS-VOLT	Average System Voltage		WATT-HRS BAG 4	Bag 4 Watt Hours	
CO2 BAG 1	Bag 1 Carbon Dioxide		WATT-HRS	Watt Hours	
CO2 BAG 2	Bag 2 Carbon Dioxide		HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon	
CO2 BAG 3	Bag 3 Carbon Dioxide		HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon	
CO2 BAG 4	Bag 4 Carbon Dioxide		HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon	
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides		HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon	
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides		N2O BAG 1	Bag 1 Nitrous Oxide	
DT-IWRR	Drive Trace Inertia Work Ratio Rating		N2O BAG 2	Bag 2 Nitrous Oxide	
DT-ASCR	Drive Trace Absolute Speed Change Rating		N2O BAG 3	Bag 3 Nitrous Oxide	
DT-EER	Drive Trace Energy Economy Rating		N2O BAG 4	Bag 4 Nitrous Oxide	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
B2	Federal Tier 2 Bin 2		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
B3	Federal Tier 2 Bin 3		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
B4	Federal Tier 2 Bin 4		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
B5	Federal Tier 2 Bin 5		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
B6	Federal Tier 2 Bin 6		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
B7	Federal Tier 2 Bin 7		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
B8	Federal Tier 2 Bin 8		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
B9	Federal Tier 2 Bin 9		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
B10	Federal Tier 2 Bin 10		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
B11	Federal Tier 2 Bin 11		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2	California LEV-II LEV		L4SULEV100	California LEV-IV SULEV100	
L2OP	California LEV-II LEV Optional		L4SULEV125	California LEV-IV SULEV125	
U2	California LEV-II ULEV		L4SULEV15	California LEV-IV SULEV15	
S2	California LEV-II SULEV		L4SULEV150	California LEV-IV SULEV150	
ZEV	California ZEV		L4SULEV170	California LEV-IV SULEV170	
OT	Other		L4SULEV175	California LEV-IV SULEV175	
T1	Federal Tier 1		L4SULEV20	California LEV-IV SULEV20	
PZEV	California PZEV		L4SULEV200	California LEV-IV SULEV200	
L2LEV160	California LEV-II LEV160		L4SULEV230	California LEV-IV SULEV230	
L2ULEV125	California LEV-II ULEV125		L4SULEV25	California LEV-IV SULEV25	
L2SULEV30	California LEV-II SULEV30		L4SULEV30	California LEV-IV SULEV30	
L2LEV395	California LEV-II LEV395		L4SULEV75	California LEV-IV SULEV75	

Certification Summary Information Report

Test Group		VJLXT03.0HTT	Evaporative/Refueling Family		VJLXR0175P1B
L2ULEV340	California LEV-II ULEV340		L4SULEV85	California LEV-IV SULEV85	
L2LEV630	California LEV-II LEV630		L4ULEV125	California LEV-IV ULEV125	
L2ULEV570	California LEV-II ULEV570		L4ULEV200	California LEV-IV ULEV200	
L3LEV160	California LEV-III LEV160		L4ULEV250	California LEV-IV ULEV250	
L3ULEV125	California LEV-III ULEV125		L4ULEV270	California LEV-IV ULEV270	
L3ULEV70	California LEV-III ULEV70		L4ULEV40	California LEV-IV ULEV40	
L3ULEV50	California LEV-III ULEV50		L4ULEV400	California LEV-IV ULEV400	
L3SULEV30	California LEV-III SULEV30		L4ULEV50	California LEV-IV ULEV50	
L3SULEV20	California LEV-III SULEV20		L4ULEV60	California LEV-IV ULEV60	
L3LEV395	California LEV-III LEV395		L4ULEV70	California LEV-IV ULEV70	
L3ULEV340	California LEV-III ULEV340		T4B170	Federal Tier 4 MDV Bin 170	
L3ULEV250	California LEV-III ULEV250		T4B150	Federal Tier 4 MDV Bin 150	
L3ULEV200	California LEV-III ULEV200		T4B125	Federal Tier 4 MDV Bin 125	
L3SULEV170	California LEV-III SULEV170		T4B100	Federal Tier 4 MDV Bin 100	
L3SULEV150	California LEV-III SULEV150		T4B85	Federal Tier 4 MDV Bin 85	
L3LEV630	California LEV-III LEV630		T4B75	Federal Tier 4 MDV Bin 75	
L3ULEV570	California LEV-III ULEV570		T4B70	Federal Tier 4 Bin 70	
L3ULEV400	California LEV-III ULEV400		T4B65	Federal Tier 4 Bin 65	
L3ULEV270	California LEV-III ULEV270		T4B60	Federal Tier 4 Bin 60	
L3SULEV230	California LEV-III SULEV230		T4B55	Federal Tier 4 Bin 55	
L3SULEV200	California LEV-III SULEV200		T4B50	Federal Tier 4 Bin 50	
T3B160	Federal Tier 3 Bin 160		T4B45	Federal Tier 4 Bin 45	
T3B125	Federal Tier 3 Bin 125		T4B40	Federal Tier 4 Bin 40	
T3B110	Federal Tier 3 Transitional Bin 110		T4B35	Federal Tier 4 Bin 35	
T3B85	Federal Tier 3 Transitional Bin 85		T4B30	Federal Tier 4 Bin 30	
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover		T4B25	Federal Tier 4 Bin 25	
T3B70	Federal Tier 3 Bin 70		T4B20	Federal Tier 4 Bin 20	
T3B50	Federal Tier 3 Bin 50		T4B15	Federal Tier 4 Bin 15	
T3B30	Federal Tier 3 Bin 30		T4B10	Federal Tier 4 Bin 10	
T3B20	Federal Tier 3 Bin 20		T4B5	Federal Tier 4 Bin 5	
T3B0	Federal Tier 3 Bin 0		T4B0	Federal Tier 4 Bin 0	
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395				
Transmission Type Code					
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual		
A	Automatic	OT	Other		
AM	Automated Manual	SA	Semi-Automatic		
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)		
Drive System Code					
4	4-Wheel Drive	P	Part-time 4-Wheel Drive		

Certification Summary Information Report

Test Group		VJLXT03.0HTT	Evaporative/Refueling Family		VJLXR0175P1B
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	