

Certification Summary Information Report

Manufacturer	Kia Corporation	Manufacturer Code	KMX
Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Certificate Number	VKMXJ02.5PR3-022	CARB Executive Order #	--
Certificate Issue Date	06/10/2026	Certificate Revision Date	--
Certificate Effective Date	06/10/2026	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	05/07/2026 04:43:56 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	Spark Ignition direct & ported 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	LDT1, LDT2
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	TKMXGPGNNPR3	Durability Group Equivalency Factor	1.0
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	08/01/2026	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VHYXV02.5UP3
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	The fuel for Litmus test is E10. Litmus result(Value/Threshold): City(22.0/21.5) HWY(26.3/24.3). Test No: TKMX10088105(FTP),TKMX10088106(HWY),TKMX10088107(US06),TKMX10088108(SC03),TKMX10088109(Cold)		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	05/03/2026 10:36:46 PM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Plastic	Fuel Tank Material Description	HDPE				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	Yes	Air Intake System Vapor Storage Device Description	HC-TRAP				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	125	Number of Primary Canisters	1				
Number of Bleed Canisters	0	Bleed Canister Total Working Capacity (grams)	--				
Mfr Evaporative/Refueling Family Comments	--						
Leak Family Details							
Leak Family Indicator	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				
VKMXR0125PRG-NQ5	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
Kia Corporation	1 - KIA	729 - Sportage FWD	Federal	2-Wheel Drive, Front	Semi-Automatic	8	Yes
Kia Corporation	1 - KIA	729 - Sportage FWD	California + CAA Section 177 states	2-Wheel Drive, Front	Semi-Automatic	8	Yes
Kia Corporation	1 - KIA	733 - Sportage X-pro	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Kia Corporation	1 - KIA	728 - Sportage AWD	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	8	Yes
Kia Corporation	1 - KIA	728 - Sportage AWD	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Kia Corporation	1 - KIA	733 - Sportage X-pro	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	8	Yes

Certification Summary Information Report

Test Group	VKMXXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG	
Engine Description				
Hybrid Type	--	Hybrid Description	--	
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--	
Engine Block Arrangement	Inline	Mfr Engine Block Arrangement Description	--	
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	SAE 0W-20	
Number of Cylinders/Rotors	4	Mechanically Variable Compression Ratio Indicator	N	
After Treatment Device(s) (ATD)				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Platinum + Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Platinum + Rhodium	Ceramic	Monolith
Mfr After Treatment Device (ATD) Comments				
--				
Direct Ozone Reduction (DOR) Device				
Not Equipped				
Mfr Emission Control Device Comments				
--				
Engine Configuration Number 1				
Engine Displacement (liters)	2.5	Engine Rated Horsepower	188	
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2	
Air Aspiration Method	Naturally Aspirated	Number of Air Aspiration Devices	--	
Air Aspiration Device Configuration	--	Charge Air Cooler Type	--	
Air Aspiration Drive Method(s)	Mechanical			
Cylinder Deactivation	No			
Cylinder Deactivation Description	--			
Variable Valve Timing	Yes			
Variable Valve Timing System Description	E-CVVT is an electric device that improve fuel efficiency and reduce toxic exhaust gas by allowing the timing of the intake valves to be changed while the engine is on opration.			
Variable Valve Lift?	No			
Variable Valve Lift System Description	--			
Number of Knock Sensors	1	Number of Air/Fuel Sensors	2	
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--	
Air/Fuel Sensor # 2 Type	Other	Air/Fuel Sensor # 2 Description	WR-HO2S	
Mfr Air/Fuel Sensor Comments	--			
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	Yes	
EGR Type	Electronic/Electric	Exhaust Gas Recirculation Description if 'Other'	--	
Closed Loop Air Injection System	No			
Air Injection Type	--	Air Injection Type if 'Other'	--	
Mfr Engine Configuration Comments	--			

Certification Summary Information Report

Test Group		VKMXJ02.5PR3				Evaporative/Refueling Family			VKMXR0125PRG		
Official Test Numbers											
Test Group Fuel		FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Gasoline		TKMX10088105	TKMX10088107	TKMX10088108	TKMX10088109	TKMX10088106	26.3	228.2	34.4	286.1	--

SFTP LEV-III Official Test Numbers							
Test Group Fuel		FTP		US06		SC03	
Gasoline		TKMX10088105		TKMX10088107		TKMX10088108	

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
-------------------	--------------	-------------------------------------	--------------

Emission Data Vehicle Information

Vehicle ID / Configuration	NQ5-KU6H5GA003A / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	TKMXT02.5PR3	Original Evaporative/Refueling Family	TKMXR0125PRG
Original Test Vehicle Model Year	2026		

Vehicle Model

Represented Test Vehicle Make	Kia	Represented Test Vehicle Model	Sportage
--------------------------------------	-----	---------------------------------------	----------

Leak Family Details

Leak Family Identifier	NQ5	Leak Family Name	TKMXR0125PRG-NQ5
-------------------------------	-----	-------------------------	------------------

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	61	Odometer Correction Factor	0.9997
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	G4KN-AC	Rated Horsepower	188
Displacement (liters)	2.5		
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--
Charge Air Cooler Type	--	Drive Mode While Testing	2-Wheel Drive, Front
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	3802	Equivalent Test Weight (pounds)	4000
GVWR (lbs)	4872	N/V Ratio	28.5
Axle Ratio	3.8		
Transmission Type	Semi-Automatic	# of Transmission Gears	8
Transmission Lockup	Yes	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	34.58	0.28248	0.025504	16.501	0.24303	0.024973	15
US06	34.58	0.28248	0.025504	16.501	0.24303	0.024973	N/A

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG						
Emission Control Device Comments	--								
Manufacturer Test Vehicle Comments	26MY NQ5 PE 2.5 8AT AWD 19in ETW 4000 (EVAP)								
Test #	TKMX10088199	Test Procedure	27 - California fuel 2-day evap						
Exhaust Test # for this Evap Test	TKMX10088188	Test Fuel Type	51 - CARB LEV4 E10 Regular Gasoline						
Test Date	09/23/2024	Fuel	Gasoline						
Fuel Batch ID	24E-01	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	772-1, Jangduck-Dong								
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)								
Test Start Odometer Reading	4086	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	--								
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No						
Test Results									
<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>0.2193</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)	0.2193	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.2193	--							
Manufacturer Test Comments									
26MY NQ5 PE 2.5 AWD 19in 2DBL									
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	0.2193	0	0.219	0.3	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2193	0	0.219	0.3	Pass	

Test Group		VKMXJ02.5PR3		Evaporative/Refueling Family		VKMXR0125PRG		
Test #		TKMX10088200		Test Procedure		38 - CA fuel 3-day evap.		
Exhaust Test # for this Evap Test		TKMX10088190		Test Fuel Type		51 - CARB LEV4 E10 Regular		
Test Date		09/10/2024		Fuel		Gasoline		
Fuel Batch ID		24E-01		Fuel Calibration Number		1		
Vehicle Class		N/A		DF Type		Mfr. Determined		
Verify Test Lab ID		772-1, Jangduck-Dong						
E10 Evaporative Test Measurement Method		Calculated (1.08 x FID Total Hydrocarbons)						
Test Start Odometer Reading		4062		Odometer Units		M		
4WD Test Dyno		No		Diesel Adjustment Factor Usage		--		
State of Charge Delta		--		Road Speed Fan Usage		No		
Drive Cycle Speed Tolerance Criteria		Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)						
Test Results								
Test Result Name			Unrounded Test Result		Verify Calculated FE Equivalent Value (miles per gallon)			
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)			0.2139		--			
Manufacturer Test Comments								
26MY NQ5 PE 2.5 AWD 19in 3DBL								
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	0.2139	0	0.214	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2139	0	0.214	0.3	Pass

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG																											
Test #	TKMX10088201	Test Procedure	24 - Federal fuel refueling test (ORVR)																											
Exhaust Test # for this Evap Test	TKMX10088191	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)																											
Test Date	10/12/2024	Fuel	Gasoline																											
Fuel Batch ID	24T-01	Fuel Calibration Number	1																											
Vehicle Class	N/A	DF Type	Mfr. Determined																											
Verify Test Lab ID	772-1, Jangduck-Dong																													
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)																													
Test Start Odometer Reading	4169	Odometer Units	M																											
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																											
State of Charge Delta	--																													
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No																											
Test Results																														
<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-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td><td>0.003</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)	0.003	--																					
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)																												
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.003	--																												
Manufacturer Test Comments 26MY NQ5 PE 2.5 AWD 19in ORVR																														
<table><tr><td>Certification Region</td><td>Useful Life</td><td>Standard Level</td><td>Emission Name</td><td>Rounded Result</td><td>Add DF</td><td>Certification Level</td><td>Standard</td><td>Pass/Fail</td></tr><tr><td>Fed</td><td>150,000 miles</td><td>Federal Tier 3 Evap</td><td>HC-TOTAL-EQUIV</td><td>0.003</td><td>0</td><td>0</td><td>0.2</td><td>Pass</td></tr><tr><td>CA</td><td>150,000 miles</td><td>California LEV-IV Zero Evap (Option 2)</td><td>HC-TOTAL-EQUIV</td><td>0.003</td><td>0</td><td>0</td><td>0.2</td><td>Pass</td></tr></table>				Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.003	0	0	0.2	Pass	CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.003	0	0	0.2	Pass
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail																						
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.003	0	0	0.2	Pass																						
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.003	0	0	0.2	Pass																						

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG						
Test #	TKMX10088202	Test Procedure	37 - California Fuel Running Loss						
Exhaust Test # for this Evap Test	TKMX10088190	Test Fuel Type	51 - CARB LEV4 E10 Regular Gasoline						
Test Date	09/10/2024	Fuel	Gasoline						
Fuel Batch ID	24E-01	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	772-1, Jangduck-Dong								
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)								
Test Start Odometer Reading	4062	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	--								
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No						
Test Results									
<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-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.0002</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)	0.0002	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0002	--							
Manufacturer Test Comments									
26MY NQ5 PE 2.5 AWD 19in RL									
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	0	0	0.01	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0	0	0	0.01	Pass	

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG																																
Test #	TKMX10088208	Test Procedure	65 - Evap Canister Bleed Test																																
Exhaust Test # for this Evap Test	--	Test Fuel Type	51 - CARB LEV4 E10 Regular Gasoline																																
Test Date	09/27/2024	Fuel	Gasoline																																
Fuel Batch ID	24E-01	Fuel Calibration Number	1																																
Vehicle Class	N/A	DF Type	Mfr. Determined																																
Verify Test Lab ID	772-1, Jangduck-Dong																																		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)																																		
Test Start Odometer Reading	4097	Odometer Units	M																																
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																																
State of Charge Delta	--																																		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No																																
Test Results																																			
<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-TOTAL (Total Hydrocarbon)</td><td>0.0009</td><td>--</td></tr></table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL (Total Hydrocarbon)	0.0009	--																										
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)																																	
HC-TOTAL (Total Hydrocarbon)	0.0009	--																																	
Manufacturer Test Comments 26MY NQ5 PE 2.5 AWD 19in Bleed																																			
<table><tr><td>Certification Region</td><td>Useful Life</td><td>Standard Level</td><td>Emission Name</td><td>Rounded Result</td><td>Add DF</td><td>Certification Level</td><td>Standard</td><td>Pass/Fail</td></tr><tr><td>Fed</td><td>150,000 miles</td><td>Federal Tier 3 Evap</td><td>HC-TOTAL</td><td>0.0009</td><td>0</td><td>0.001</td><td>0.02</td><td>Pass</td></tr><tr><td>CA</td><td>150,000 miles</td><td>California LEV-IV Zero Evap (Option 2)</td><td>HC-TOTAL</td><td>0.0009</td><td>0</td><td>0.001</td><td>0.02</td><td>Pass</td></tr></table>									Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL	0.0009	0	0.001	0.02	Pass	CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL	0.0009	0	0.001	0.02	Pass
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail																											
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL	0.0009	0	0.001	0.02	Pass																											
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL	0.0009	0	0.001	0.02	Pass																											

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
------------	--------------	------------------------------	--------------

Test #	TKMX10088209	Test Procedure	67 - Leak Test - Port Near Canister
Exhaust Test # for this Evap Test	--	Test Fuel Type	51 - CARB LEV4 E10 Regular Gasoline
Test Date	10/04/2024	Fuel	Gasoline
Fuel Batch ID	24E-01	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4097	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
LEAK-DIA (Effective Leak Diameter (inches))	0	--

Manufacturer Test Comments

26MY NQ5 PE 2.5 AWD 19in Leak Test Port Near Canister

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	LEAK-DIA	0	0	0	0.02	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	LEAK-DIA	0	0	0	0.02	Pass

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG																																
Test #	TKMX10088210	Test Procedure	68 - Leak Test - Port Near Fuel Pipe																																
Exhaust Test # for this Evap Test	--	Test Fuel Type	51 - CARB LEV4 E10 Regular Gasoline																																
Test Date	10/04/2024	Fuel	Gasoline																																
Fuel Batch ID	24E-01	Fuel Calibration Number	1																																
Vehicle Class	N/A	DF Type	Mfr. Determined																																
Verify Test Lab ID	772-1, Jangduck-Dong																																		
E10 Evaporative Test Measurement Method	--																																		
Test Start Odometer Reading	4097	Odometer Units	M																																
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																																
State of Charge Delta	--																																		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No																																
Test Results																																			
<table><tr><td>Test Result Name</td><td>Unrounded Test Result</td><td>Verify Calculated FE Equivalent Value</td></tr><tr><td>LEAK-DIA (Effective Leak Diameter (inches))</td><td>0</td><td>--</td></tr></table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value	LEAK-DIA (Effective Leak Diameter (inches))	0	--																										
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value																																	
LEAK-DIA (Effective Leak Diameter (inches))	0	--																																	
Manufacturer Test Comments 26MY NQ5 PE 2.5 AWD 19in Leak Test Port Near Fuel pipe																																			
<table><tr><td>Certification Region</td><td>Useful Life</td><td>Standard Level</td><td>Emission Name</td><td>Rounded Result</td><td>Add DF</td><td>Certification Level</td><td>Standard</td><td>Pass/Fail</td></tr><tr><td>Fed</td><td>150,000 miles</td><td>Federal Tier 3 Evap</td><td>LEAK-DIA</td><td>0</td><td>0</td><td>0</td><td>0.02</td><td>Pass</td></tr><tr><td>CA</td><td>150,000 miles</td><td>California LEV-IV Zero Evap (Option 2)</td><td>LEAK-DIA</td><td>0</td><td>0</td><td>0</td><td>0.02</td><td>Pass</td></tr></table>									Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	Fed	150,000 miles	Federal Tier 3 Evap	LEAK-DIA	0	0	0	0.02	Pass	CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	LEAK-DIA	0	0	0	0.02	Pass
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail																											
Fed	150,000 miles	Federal Tier 3 Evap	LEAK-DIA	0	0	0	0.02	Pass																											
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	LEAK-DIA	0	0	0	0.02	Pass																											

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG						
Emission Data Vehicle Information									
Vehicle ID / Configuration	NQ5HKU6H5GA004A / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	TKMXT02.5PR3	Original Evaporative/Refueling Family	TKMXR0125PRG						
Original Test Vehicle Model Year	2026								
Vehicle Model									
Represented Test Vehicle Make	Kia	Represented Test Vehicle Model	Sportage						
Leak Family Details									
Leak Family Identifier	NQ5	Leak Family Name	TKMXR0125PRG-NQ5						
Drive Sources and Fuel System Details									
	<table border="1"> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> <tr> <td>1</td><td>Combustion Engine</td><td>Gasoline</td></tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline		
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	40	Odometer Correction Factor	0.9985						
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor								
Odometer Correction Units	Miles								
Engine Code	G4KN-AC	Rated Horsepower	188						
Displacement (liters)	2.5								
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--						
Charge Air Cooler Type	--	Drive Mode While Testing	2-Wheel Drive, Front						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	3761	Equivalent Test Weight (pounds)	4000						
GVWR (lbs)	4872	N/V Ratio	29						
Axle Ratio	3.8								
Transmission Type	Semi-Automatic	# of Transmission Gears	8						
Transmission Lockup	Yes	Creep Gear	No						

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family		VKMXR0125PRG	
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	35.639	0.47969	0.02163	13.878	0.23658	0.02258	15.2	
Cold CO	39.203	0.52766	0.023793	17.13	0.03401	0.026626	N/A	
US06	35.639	0.47969	0.02163	13.878	0.23658	0.02258	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		26MY NQ5 PE 2.5 8AT AWD X-Pro 17in AT Tire ETW 4000 (EDV)						

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088105	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	09/05/2024	Fuel	Gasoline
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4398	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	341.4995	--
FE BAG 1 (Bag 1 Fuel Economy)	25.2767	25.2767
CO2 BAG 2 (Bag 2 Carbon Dioxide)	293.4625	--
FE BAG 2 (Bag 2 Fuel Economy)	29.4836	29.4836
CO2 BAG 3 (Bag 3 Carbon Dioxide)	287.5915	--
FE BAG 3 (Bag 3 Fuel Economy)	29.9937	29.9937
CO (Carbon Monoxide)	0.1468	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.26	--
DT-EER (Drive Trace Energy Economy Rating)	0.49	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.77	--
MFR FE (Manufacturer Fuel Economy)	28.5889	28.5889
NOX (Nitrogen Oxide)	0.0048	--
HC-NM (Non-methane Hydrocarbon)	0.0033	--
NMOG (Non-methane organic gases)	0.0037	--
PM (Particulate Matter)	0.0009	--
HC-TOTAL (Total Hydrocarbon)	0.00575	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	302.2538	999

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family				VKMXR0125PRG			
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		301.7996			--					
Manufacturer Test Comments		26MY NQ5 2.5 8AT AWD X-pro 17in ETW 4000 (EDV) E10-FTP										
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	--	--	--	0.091253	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.15	--	--	--	0.06	--	0.2	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.84	--	--	--	0	--	0.8	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0037	--	1.1	--	0.0044	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0085	--	1.1	--	--	--	0.016	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX-COMP	0.0159	--	--	--	0	--	0.016	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0048	--	--	--	0.0028	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0009	--	--	--	0.0001	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.15	--	--	--	0.06	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0037	--	1.1	--	0.0044	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0085	--	1.1	--	--	--	0.016	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0048	--	--	--	0.0028	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0009	--	--	--	0.0001	--	0.001	0.003	Pass
NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.												

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088109	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	08/25/2024	Fuel	Gasoline
Fuel Batch ID	22D-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4285	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	421.3951	--
FE BAG 1 (Bag 1 Fuel Economy)	20.4902	20.4902
CO2 BAG 2 (Bag 2 Carbon Dioxide)	338.3586	--
FE BAG 2 (Bag 2 Fuel Economy)	25.5961	25.5961
CO2 BAG 3 (Bag 3 Carbon Dioxide)	306.9348	--
FE BAG 3 (Bag 3 Fuel Economy)	28.186	28.186
CO (Carbon Monoxide)	0.2451	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.36	--
DT-EER (Drive Trace Energy Economy Rating)	-1.33	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.41	--
MFR FE (Manufacturer Fuel Economy)	24.9142	24.9142
NOX (Nitrogen Oxide)	0.0032	--
HC-NM (Non-methane Hydrocarbon)	0.0136	--
HC-TOTAL (Total Hydrocarbon)	0.01761	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	346.9334	--

Manufacturer Test Comments 26MY NQ5 PE 2.5 8AT AWD X-pro 17in ETW 4000 (EDV) E10-20F This vehicle followed the manual climate control procedure in cold FTP mode.

Certification Summary Information Report

Test Group		VKMXJ02.5PR3				Evaporative/Refueling Family				VKMXR0125PRG		
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	0.25	--	--	--	0.02	--	0.3	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.01	--	--	--	0.0032	--	0	0.3	Pass
CA	50,000 miles	California LEV-IV SULEV30	CO	0.25	--	--	--	0.02	--	0.3	10.0	Pass

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088110	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	08/28/2024	Fuel	Gasoline
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4331	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)
CO (Carbon Monoxide)	0.2572	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.14	--
DT-EER (Drive Trace Energy Economy Rating)	0.28	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.87	--
MFR FE (Manufacturer Fuel Economy)	27.2213	27.2213
NOX (Nitrogen Oxide)	0.0028	--
HC-NM (Non-methane Hydrocarbon)	0.007	--
NMOG (Non-methane organic gases)	0.0077	--
HC-TOTAL (Total Hydrocarbon)	0.0104	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	317.0777	--

Manufacturer Test Comments

26MY NQ5 PE 2.5 8AT AWD X-pro 17in ETW 4000 (EDV) E10-50F

Certification Summary Information Report

Test Group		VKMXJ02.5PR3				Evaporative/Refueling Family				VKMXR0125PRG		
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	CO	0.26	--	--	--	0	--	0.3	1.0	Pass
CA	4,000 miles	California LEV-IV SULEV30	NMOG	0.0077	--	1.1	--	0	--	0.008	99.999	Pass
CA	4,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0105	--	1.1	--	--	--	0.01	0.060	Pass
CA	4,000 miles	California LEV-IV SULEV30	NOX	0.0028	--	--	--	0	--	0.003	99.999	Pass

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088111	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	08/23/2024	Fuel	Gasoline
Fuel Batch ID	22M-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4198	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	351.4904	--
FE BAG 1 (Bag 1 Fuel Economy)	25.3064	25.3064
CO2 BAG 2 (Bag 2 Carbon Dioxide)	296.6794	--
FE BAG 2 (Bag 2 Fuel Economy)	30.0139	30.0139
CO2 BAG 3 (Bag 3 Carbon Dioxide)	296.4897	--
FE BAG 3 (Bag 3 Fuel Economy)	30.1181	30.1181
METHANE (CH4 - Methane)	0.0029	--
CO (Carbon Monoxide)	0.2368	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.9	--
DT-EER (Drive Trace Energy Economy Rating)	0.28	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.73	--
MFR FE (Manufacturer Fuel Economy)	28.9185	28.9185
NOX (Nitrogen Oxide)	0.0042	--
N2O (Nitrous Oxide)	0.0003	--
HC-NM (Non-methane Hydrocarbon)	0.0048	--
NMOG (Non-methane organic gases)	0.005	--
HC-TOTAL (Total Hydrocarbon)	0.00739	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	308.3993	308

Certification Summary Information Report

Test Group		VKMXJ02.5PR3				Evaporative/Refueling Family				VKMXR0125PRG		
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		307.971			--					
Manufacturer Test Comments		26MY NQ5 PE 2.5 8AT AWD X-pro 17in ETW 4000 (FEDV) E0-FTP										
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	--	--	--	0.091253	--	308	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.0029	--	--	--	0.003	--	0.006	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0003	--	--	--	0.0002	--	0	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.24	--	--	--	0.06	--	0.3	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.005	--	1.1	--	0.0044	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0092	--	1.1	--	--	--	0.016	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0042	--	--	--	0.0028	--	0.007	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.24	--	--	--	0.06	--	0.3	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.005	--	1.1	--	0.0044	--	0.009	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0092	--	1.1	--	--	--	0.016	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0042	--	--	--	0.0028	--	0.007	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	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088229	Test Procedure	49 - Quick-Driveway (QD)
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	09/11/2024	Fuel	Gasoline
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4428	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)
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.35	--
DT-EER (Drive Trace Energy Economy Rating)	0.33	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.1	--
NOX (Nitrogen Oxide)	0.0041	--
HC-NM (Non-methane Hydrocarbon)	0.0045	--
NMOG (Non-methane organic gases)	0.0049	--

Manufacturer Test Comments

26MY NQ5 2.5 8AT AWD X-pro 17in ETW 4000 (EDV) E10-QD

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0049	--	1.1	--	0.0056	--	0.01	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.009	--	1.1	--	--	--	0.021	0.042	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0041	--	--	--	0.006	--	0.01	99.999	Pass

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088106	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	09/11/2024	Fuel	Gasoline
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4436	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)
CO (Carbon Monoxide)	0.0269	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	3.52	--
DT-EER (Drive Trace Energy Economy Rating)	-0.17	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	4.04	--
MFR FE (Manufacturer Fuel Economy)	36.1481	36.1481
NOX (Nitrogen Oxide)	0.0018	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0.00035	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	239.0471	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	239.1244	--

Manufacturer Test Comments

26MY NQ5 PE 2.5 8AT AWD X-pro 17in ETW 4000 (EDV) E10-HWY

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family					VKMXR0125PRG		
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	--	--	--	0.091253	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0044	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0018	--	1.03	--	--	--	0.009	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0018	--	--	--	0.0028	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0044	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0018	--	1.03	--	--	--	0.009	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0018	--	--	--	0.0028	--	0.005	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	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088112	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	08/23/2024	Fuel	Gasoline
Fuel Batch ID	22M-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4209	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)	
CO (Carbon Monoxide)	0.0249	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	4.48	--	
DT-EER (Drive Trace Energy Economy Rating)	0.02	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	5.08	--	
MFR FE (Manufacturer Fuel Economy)	35.957	35.957	
NOX (Nitrogen Oxide)	0.0015	--	
HC-NM (Non-methane Hydrocarbon)	0.0002	--	
NMOG (Non-methane organic gases)	0.0002	--	
HC-TOTAL (Total Hydrocarbon)	0.00028	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	248.0314	248	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	248.2038	--	
Manufacturer Test Comments	26MY NQ5 PE 2.5 8AT AWD X-pro 17in ETW 4000 (FEDV) E0-HWY		

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family					VKMXR0125PRG		
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	248	--	--	--	0.091253	--	248	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0002	--	1.03	--	0.0044	--	0.005	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0017	--	1.03	--	--	--	0.009	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0015	--	--	--	0.0028	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0002	--	1.03	--	0.0044	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0017	--	1.03	--	--	--	0.009	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0015	--	--	--	0.0028	--	0.004	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	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088107	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	09/11/2024	Fuel	Gasoline
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4457	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	544.1357	--
FE BAG 1 (Bag 1 Fuel Economy)	15.7275	15.7275
CO2 BAG 2 (Bag 2 Carbon Dioxide)	300.3293	--
FE BAG 2 (Bag 2 Fuel Economy)	28.6155	28.6155
CO (Carbon Monoxide)	1.7333	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-4.57	--
DT-EER (Drive Trace Energy Economy Rating)	-1.98	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-6.06	--
MFR FE (Manufacturer Fuel Economy)	24.2231	24.2231
NOX (Nitrogen Oxide)	0.0064	--
HC-NM (Non-methane Hydrocarbon)	0.0028	--
NMOG (Non-methane organic gases)	0.0028	--
PM (Particulate Matter)	0.0025	--
HC-TOTAL (Total Hydrocarbon)	0.00414	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	354.357	--

Manufacturer Test Comments

26MY NQ5 PE 2.5 8AT AWD X-pro 17in ETW 4000 (EDV) E10-US06

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family					VKMXR0125PRG		
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	1.7333	--	--	--	0.06	--	1.793	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0028	--	1.03	--	0.0044	--	0.007	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0092	--	--	--	--	--	0.016	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0064	--	--	--	0.0028	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0025	--	--	--	0.0001	--	0.003	0.006	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	1.73	--	--	--	0.06	--	1.8	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0028	--	1.03	--	0.0044	--	0.007	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0092	--	--	--	--	--	0.016	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0064	--	--	--	0.0028	--	0.009	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0025	--	--	--	0.0001	--	0.003	0.006	Pass

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Test #	TKMX10088108	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	08/27/2024	Fuel	Gasoline
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4317	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)
CO (Carbon Monoxide)	0.6623	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.07	--
DT-EER (Drive Trace Energy Economy Rating)	-0.03	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.57	--
MFR FE (Manufacturer Fuel Economy)	21.8184	21.8184
NOX (Nitrogen Oxide)	0.0074	--
HC-NM (Non-methane Hydrocarbon)	0.0011	--
NMOG (Non-methane organic gases)	0.0012	--
HC-TOTAL (Total Hydrocarbon)	0.00335	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	395.3979	--

Manufacturer Test Comments

26MY NQ5 PE 2.5 8AT AWD X-pro 17in ETW 4000 (EDV) E10-SC03

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family					VKMXR0125PRG		
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	0.6623	--	--	--	0.06	--	0.722	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0012	--	1.03	--	0.0044	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0086	--	--	--	--	--	0.016	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0074	--	--	--	0.0028	--	0.01	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.66	--	--	--	0.06	--	0.7	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0012	--	1.03	--	0.0044	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0086	--	--	--	--	--	0.016	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0074	--	--	--	0.0028	--	0.01	99.999	Pass

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Fuel Properties			
Fuel Batch ID	24E-01	Fuel Calibration Number	1
Test Fuel Type	51 - CARB LEV4 E10 Regular Gasoline	Fuel Batch Calibration Date	08/23/2024
Fuel Batch Calibration Effective Date	08/27/2024	Fuel Batch Calibration Ineffective Date	08/27/2027
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 (%)	9.4	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17903
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	24T-01	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	09/29/2022
Fuel Batch Calibration Effective Date	06/25/2024	Fuel Batch Calibration Ineffective Date	06/25/2027
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)	17799
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.824	Weight Fraction CO2	--
Fuel Batch ID	22M-01	Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	06/03/2021
Fuel Batch Calibration Effective Date	02/14/2022	Fuel Batch Calibration Ineffective Date	02/14/2025
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.743
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18435
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.867	Weight Fraction CO2	--
Fuel Batch ID	22D-01	Fuel Calibration Number	1
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	07/29/2021
Fuel Batch Calibration Effective Date	05/10/2022	Fuel Batch Calibration Ineffective Date	05/10/2025
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--

Certification Summary Information Report

Test Group	VKMXJ02.5PR3	Evaporative/Refueling Family	VKMXR0125PRG
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17925
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	--

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family			VKMXR0125PRG	
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			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	--	--	--	--	--	--	0.06	99.999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0044	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	99.999
150,000 miles	NOX	--	--	--	--	--	--	0.0028	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.006
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			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	--	--	--	--	--	--	0.02	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0.0032	0.3
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			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	--	--	--	--	--	--	0.091253	999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0044	99.999
150,000 miles	NMOG+NOX	--	--	1.03	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0028	99.999

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family			VKMXR0125PRG	
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			Federal fuel 2-day exhaust (w/can load)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0.091253	999
120,000 miles	METHANE	--	--	--	--	--	--	0.003	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0002	0.010
150,000 miles	CO	--	--	--	--	--	--	0.06	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	0	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0044	99.999
150,000 miles	NMOG+NOX	--	--	1.1	--	--	--	0	0.030
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0028	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.003

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			Federal fuel 2-day exhaust (w/can load)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.06	1.0
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0044	99.999
150,000 miles	NMOG+NOX	--	--	1.1	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0028	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.003

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family			VKMXR0125PRG	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			Fed. fuel 50 F exh.	
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	--	--	--	--	--	--	0	1.0
4,000 miles	HCHO	--	--	--	--	--	--	--	0.008
4,000 miles	NMOG	--	--	1.1	--	--	--	0	99.999
4,000 miles	NMOG+NOX	--	--	1.1	--	--	--	0	0.060
4,000 miles	NOX	--	--	--	--	--	--	0	99.999
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			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	--	--	--	--	--	--	0.06	1.0
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0044	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0028	99.999
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			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	--	--	--	--	--	--	0.02	10.0

Certification Summary Information Report

Test Group		VKMXJ02.5PR3			Evaporative/Refueling Family			VKMXR0125PRG	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			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	--	--	--	--	--	--	0.06	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0044	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0028	99.999
150,000 miles	PM	--	--	--	--	--	--	0.0001	0.006
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			Quick-Driveway (QD)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0056	99.999
150,000 miles	NMOG+NOX	--	--	1.1	--	--	--	0	0.042
150,000 miles	NOX	--	--	--	--	--	--	0.006	99.999
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT1 (LVW-3750, GVW 0-6000)			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	--	--	--	0.0044	99.999
150,000 miles	NMOG+NOX	--	--	1.03	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0028	99.999

Certification Summary Information Report

Test Group	VKMXJ02.5PR3		Evaporative/Refueling Family		VKMXR0125PRG				
Cert Region	Federal		Cert/In-Use Code		Cert				
Vehicle Class	LDT1 (LVW-3750, GVW 0-6000)		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	--	--	--	--	--	--	0.06	99.999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0044	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	99.999
150,000 miles	NOX	--	--	--	--	--	--	0.0028	99.999

Evaporative/Refueling Standards

Evaporative/Refueling Family	VKMXR0125PRG	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	--	0.300	0

Evaporative/Refueling Family	VKMXR0125PRG	Cert Region	Federal
Cert/In-Use Code	Cert	Standard Level	Federal Tier 3 Evap
Test Procedure	Leak Test - Port Near Fuel Pipe		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	LEAK-DIA	--	0.020	0

Evaporative/Refueling Family	VKMXR0125PRG	Cert Region	California + CAA Section 177 states
Cert/In-Use Code	Cert	Standard Level	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal fuel refueling test (ORVR)		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0

Evaporative/Refueling Family	VKMXR0125PRG	Cert Region	Federal
Cert/In-Use Code	Cert	Standard Level	Federal Tier 3 Evap
Test Procedure	California fuel 2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0

Certification Summary Information Report

Test Group		VKMXJ02.5PR3		Evaporative/Refueling Family		VKMXR0125PRG	
Evaporative/Refueling Family		VKMXR0125PRG		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	--	0.020	0		
Evaporative/Refueling Family		VKMXR0125PRG		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 2-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0		
Evaporative/Refueling Family		VKMXR0125PRG		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Leak Test - Port Near Fuel Pipe					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	LEAK-DIA	--	0.02	0		
Evaporative/Refueling Family		VKMXR0125PRG		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-EQUIV	--	0.300	0		
Evaporative/Refueling Family		VKMXR0125PRG		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	--	0.01	0		

Certification Summary Information Report

Test Group		VKMXJ02.5PR3		Evaporative/Refueling Family		VKMXR0125PRG	
Evaporative/Refueling Family		VKMXR0125PRG		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		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		VKMXR0125PRG		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	150,000 miles	HC-TOTAL-EQUIV	--	0.01	0		
Evaporative/Refueling Family		VKMXR0125PRG		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Leak Test - Port Near Canister					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	LEAK-DIA	--	0.020	0		
Evaporative/Refueling Family		VKMXR0125PRG		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	--	0.20	0		
Evaporative/Refueling Family		VKMXR0125PRG		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Leak Test - Port Near Canister					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	LEAK-DIA	--	0.02	0		

Certification Summary Information Report

Test Group		VKMXJ02.5PR3	Evaporative/Refueling Family		VKMXR0125PRG
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		VKMXXJ02.5PR3	Evaporative/Refueling Family		VKMXR0125PRG
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		VKMXXJ02.5PR3	Evaporative/Refueling Family		VKMXR0125PRG
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		VKMXJ02.5PR3	Evaporative/Refueling Family		VKMXR0125PRG
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	