

Certification Summary Information Report

Manufacturer	Hyundai Motor Company	Manufacturer Code	HYX
Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Certificate Number	PHYXV03.5J65-027	CARB Executive Order #	--
Certificate Issue Date	03/24/2022	Certificate Revision Date	--
Certificate Effective Date	03/24/2022	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	02/25/2022 02:26:54 AM
Model Year	2023		

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G					
Test Group Information								
CSI Type	Update for Correction	Running Change Reference Number	--					
GHG Exempt Status	Not Exempt							
Drive Sources and Fuel(s)								
Drive Source #1:	Electric Motor							
	<table border="1"> <thead> <tr> <th>Fuel</th> <th>Basic Fuel Metering System</th> <th>Lean Burn Strategy Indicator</th> </tr> </thead> <tbody> <tr> <td>Electricity</td> <td>--</td> <td>--</td> </tr> </tbody> </table>	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator	Electricity	--	--	
Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator						
Electricity	--	--						
Drive Source #2:	Combustion Engine							
	<table border="1"> <thead> <tr> <th>Fuel</th> <th>Basic Fuel Metering System</th> <th>Lean Burn Strategy Indicator</th> </tr> </thead> <tbody> <tr> <td>Gasoline</td> <td>Spark Ignition direct & ported injection</td> <td>No</td> </tr> </tbody> </table>	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator	Gasoline	Spark Ignition direct & ported injection	No	
Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator						
Gasoline	Spark Ignition direct & ported injection	No						
Hybrid Indicator	Yes							
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes					
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	No					
Fuel Cell Indicator	No	EPA Vehicle Class	LDV					
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--					
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	No					
Durability Group Name	PHYXGPGNNJ65	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	04/01/2022	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	PHYXV03.5UT5					
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0					
OBD Deficiencies Comments	--							
Mfr Test Group Comments	Litmus result city FE threshold=17.4 5cycle=17.3, hwy FE threshold=23.6 5cycle=24.5							
Mfr Exhaust / Evap Standards Comments	--							

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Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	12/21/2021 12:45:58 AM				
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)	149	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				
PHYXR0149J6G-RS4	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
Hyundai Motor Company	2 - GENESIS	94 - G90 MHEV	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	8	Yes
Hyundai Motor Company	2 - GENESIS	94 - G90 MHEV	Federal	All 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	--				
Engine Block Arrangement	V-shaped engine	Mfr Engine Block Arrangement Description	--				
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	0W30				
Number of Cylinders/Rotors	6	Mechanically Variable Compression Ratio Indicator	N				

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G	
After Treatment Device(s) (ATD)				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + 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)	3.5	Engine Rated Horsepower	420	
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2	
Air Aspiration Method	Turbocharged+Supercharged	Number of Air Aspiration Devices	3	
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Liquid	
Air Aspiration Drive Method(s)	Mechanical			
Cylinder Deactivation	No			
Cylinder Deactivation Description	--			
Variable Valve Timing	Yes			
Variable Valve Timing System Description	CVVT			
Variable Valve Lift?	No			
Variable Valve Lift System Description	--			
Number of Knock Sensors	2	Number of Air/Fuel Sensors	4	
Air/Fuel Sensor # 1 Type	Other	Air/Fuel Sensor # 1 Description	WR-HO2S	
Air/Fuel Sensor # 2 Type	Other	Air/Fuel Sensor # 2 Description	WR-HO2S	
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--	
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--	
Mfr Air/Fuel Sensor Comments	--			
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No	
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--	
Closed Loop Air Injection System	No			
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--	
Mfr Engine Configuration Comments	2 Turbo charger + 1 Super charger			

Certification Summary Information Report

Test Group		PHYXV03.5J65				Evaporative/Refueling Family		PHYXR0149J6G		
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	PHYX91004915	PHYX91004918	PHYX10072267	PHYX10072271	PHYX91004919	79.9	228.2	999.9	286.1	--
SFTP LEV-III Official Test Numbers										
Test Group Fuel	FTP	US06	SC03							
Electricity	--	--	--							
Gasoline	PHYX91004915	PHYX91004918	PHYX10072267							
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	45				Battery Energy Capacity		9.8			
Battery Specific Energy	17.5				Battery Charger Type		On-Board			
Number of Capacitors	--				Capacitor Rating (In Farads)		--			
Mfr Capacitor Comments	--									
Hydraulic System Description	--									
Regenerative Braking Type	Electrical Regen Brake				Driver Controlled Regenerative Braking		No			
Regenerative Braking Source	Front Wheels									
Mfr Regenerative Braking Description	--									
Drive Motor(s)/Generator(s)	1				Rated Motor/Generator Power		12			
Motor/Generator Type 1	claw pole									
Mfr Fuel Cell Description	--				Usable H2 Fill Capacity (kg)		--			
Fuel Cell On-Board H2 Storage Capacity (kg)	--									
Mfr Hybrid Electric/ Electric Vehicle Comments	This vehicle is mild hybrid vehicle.									

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Manufacturer Test Vehicle Comments	21MY RG3 3.5T EVAP AWD 20"		
Test #	MHYX10062524	Test Procedure	38 - CA fuel 3-day evap.
Exhaust Test # for this Evap Test	MHYX10062521	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	11/22/2019	Fuel	Gasoline
Fuel Batch ID	19E-03	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	4238	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.1919	--

Manufacturer Test Comments 21MY RG3 3.5L 20"(ETW:4750)-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	0.1919	0	0.192	0.3	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.1919	0	0.192	0.3	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	MHYX91004651	Test Procedure	27 - California fuel 2-day evap
Exhaust Test # for this Evap Test	MHYX91004650	Test Fuel Type	46 - CARB LEV3 E10 Regular
Test Date	10/22/2020	Fuel	Gasoline
Fuel Batch ID	26757	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5077.1	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
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.207219	--

Manufacturer Test Comments Hot_Soak_HC_(g) = 0.044611, Diurnal (gHC) = 0.162608

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	0.2072	0	0.207	0.3	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2072	0	0.207	0.3	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	MHYX10062526	Test Procedure	37 - California Fuel Running Loss
Exhaust Test # for this Evap Test	MHYX10062521	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	11/22/2019	Fuel	Gasoline
Fuel Batch ID	19E-03	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	4238	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.001	--

Manufacturer Test Comments

21MY RG3 3.5L 20"(ETW:4750) CA E10-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	0.001	0	0	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.001	0	0	0.05	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	MHYX10062527	Test Procedure	24 - Federal fuel refueling test (ORVR)
Exhaust Test # for this Evap Test	MHYX10062523	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	11/06/2019	Fuel	Gasoline
Fuel Batch ID	18T-03	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	4102	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.006	--

Manufacturer Test Comments

21MY RG3 3.5L 20"(ETW:4750) FED E10-ORVR

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	0.006	0.003	0.01	0.2	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.006	0.003	0.01	0.2	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	MHYX10062528	Test Procedure	65 - Evap Canister Bleed Test
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	11/28/2019	Fuel	Gasoline
Fuel Batch ID	19E-03	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	4257	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.0148	--

Manufacturer Test Comments 21MY RG3 3.5L 20"(ETW:4750) CA E10-Bleed

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	0.0148	0	0.015	0.02	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.0148	0	0.015	0.02	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	MHYX10062680	Test Procedure	67 - Leak Test - Port Near Canister
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/02/2019	Fuel	Gasoline
Fuel Batch ID	18T-03	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	4257	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

21MY RG3 3.5L 20"(ETW:4750) FED E10-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-III Zero Evap (Option 2)	LEAK-DIA	0	0	0	0.02	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	MHYX10062681	Test Procedure	68 - Leak Test - Port Near Fuel Pipe
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/02/2019	Fuel	Gasoline
Fuel Batch ID	18T-03	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	4257	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

21MY RG3 3.5L 20"(ETW:4750) FED E10-Leak Test Port Near Fuel Pipe

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-III Zero Evap (Option 2)	LEAK-DIA	0	0	0	0.02	Pass

Certification Summary Information Report

Test Group		PHYXV03.5J65			Evaporative/Refueling Family			PHYXR0149J6G
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	47.846	0.40535	0.020491	24.36	-0.02472	0.023062	15.9	
Cold CO	52.631	0.44589	0.02254	24.132	-0.2467	0.026861	N/A	
US06	47.846	0.40535	0.020491	24.36	-0.02472	0.023062	N/A	
Emission Control Device Comments	2Turbo charger + 1Super Charger							
Manufacturer Test Vehicle Comments	G90 3.5T 48V HEV AWD 21in (EDV)							

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Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX10072271	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	09/17/2021	Fuel	Gasoline
Fuel Batch ID	19D-03	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4202	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	542	--
FE BAG 1 (Bag 1 Fuel Economy)	15.8	15.8
CO2 BAG 2 (Bag 2 Carbon Dioxide)	506	--
FE BAG 2 (Bag 2 Fuel Economy)	17.1	17.1
CO2 BAG 3 (Bag 3 Carbon Dioxide)	411	--
FE BAG 3 (Bag 3 Fuel Economy)	21	21
CO (Carbon Monoxide)	0.6	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.94	--
DT-EER (Drive Trace Energy Economy Rating)	1.65	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.83	--
MFR FE (Manufacturer Fuel Economy)	17.7	17.7
HC-NM (Non-methane Hydrocarbon)	0.0982	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	488	--

Manufacturer Test Comments

RS4 3.5T 48V HEV AWD 8SA 21in (EDV) E10 FTP20

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Test Group		PHYXV03.5J65				Evaporative/Refueling Family				PHYXR0149J6G		
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 70	CO	0.6	--	--	--	0.03	--	0.6	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 70	HC-NM	0.1	--	--	--	0.0025	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-III ULEV70	CO	0.6	--	--	--	0.03	--	0.6	10.0	Pass

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Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX10072272	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	10/11/2021	Fuel	Gasoline
Fuel Batch ID	20T-02	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4320	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
CO (Carbon Monoxide)	0.46	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.66	--
DT-EER (Drive Trace Energy Economy Rating)	1.98	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.4	--
NOX (Nitrogen Oxide)	0.0206	--
NMOG (Non-methane organic gases)	0.046	--

Manufacturer Test Comments

RS4 3.5T 48V HEV AWD 8SA 21in (EDV) E10 FTP50

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-III ULEV70	CO	0.46	--	--	--	--	--	0.5	1.7	Pass
CA	4,000 miles	California LEV-III ULEV70	NMOG	0.046	--	1.1	--	--	--	0.046	99.999	Pass
CA	4,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0666	--	--	--	--	--	0.067	0.140	Pass
CA	4,000 miles	California LEV-III ULEV70	NOX	0.0206	--	--	--	--	--	0.021	99.999	Pass

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Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX10072274	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	09/07/2021	Fuel	Gasoline
Fuel Batch ID	21M-02	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4102	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.006	--
CO (Carbon Monoxide)	0.28	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.18	--
DT-EER (Drive Trace Energy Economy Rating)	0.23	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.67	--
MFR FE (Manufacturer Fuel Economy)	23.1	23.1
NOX (Nitrogen Oxide)	0.0249	--
N2O (Nitrous Oxide)	0.0016	--
NMOG (Non-methane organic gases)	0.0117	--
HC-TOTAL (Total Hydrocarbon)	0.0161	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	384	384

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	384	--

Manufacturer Test Comments

RS4 3.5T 48V HEV AWD 8SA 21in (EDV) E0 FTP

Certification Summary Information Report

Test Group		PHYXV03.5J65			Evaporative/Refueling Family					PHYXR0149J6G		
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 70	CREE	384	--	--	--	0	--	384	--	--
Fed	120,000 miles	Federal Tier 3 Bin 70	METHANE	0.006	--	--	--	0.0046	--	0.011	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 70	N2O	0.0016	--	--	--	0.0002	--	0.002	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.28	--	--	--	0.1	--	0.4	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0117	--	1.1	--	0.0034	--	0.015	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0366	--	--	--	--	--	0.044	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0249	--	--	--	0.0039	--	0.029	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.28	--	--	--	0.1	--	0.4	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0117	--	1.1	--	0.0034	--	0.015	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0366	--	--	--	--	--	0.044	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0249	--	--	--	0.0039	--	0.029	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	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX10073646	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	26 - Cold CO Regular (Tier 2)
Test Date	02/09/2022	Fuel	Gasoline
Fuel Batch ID	FK1421	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	6800 Geddes Road		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5067	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	540	--
FE BAG 1 (Bag 1 Fuel Economy)	15.2	15.2
CO2 BAG 2 (Bag 2 Carbon Dioxide)	510	--
FE BAG 2 (Bag 2 Fuel Economy)	16.2	16.2
CO2 BAG 3 (Bag 3 Carbon Dioxide)	412	--
FE BAG 3 (Bag 3 Fuel Economy)	20	20
CO (Carbon Monoxide)	0.71	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.26	--
DT-EER (Drive Trace Energy Economy Rating)	0.1	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.61	--
MFR FE (Manufacturer Fuel Economy)	16.9	16.9
HC-NM (Non-methane Hydrocarbon)	0.0974	--
HC-TOTAL (Total Hydrocarbon)	0.109	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	489	--

Manufacturer Test Comments

RS4 3.5T 48V HEV AWD 8SA 21in (EDV) E0 FTP20

Certification Summary Information Report

Test Group		PHYXV03.5J65				Evaporative/Refueling Family				PHYXR0149J6G		
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 70	CO	0.71	--	--	--	0.03	--	0.7	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 70	HC-NM	0.1	--	--	--	0.0025	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-III ULEV70	CO	0.71	--	--	--	0.03	--	0.7	10.0	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX91004915	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	01/05/2022	Fuel	Gasoline
Fuel Batch ID	28637	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4831	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	437.3814087	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	422.5527344	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	364.6651917	--
FE BAG 3 (Bag 3 Fuel Economy)	999	--
CO2 BAG 4 (Bag 4 Carbon Dioxide)	393.4327698	--
FE BAG 4 (Bag 4 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0050459	--
CO (Carbon Monoxide)	0.3812607	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.2661031	--
DT-EER (Drive Trace Energy Economy Rating)	0.7815925	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.112795	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0212395	--
N2O (Nitrous Oxide)	0.000843	--
HC-NM (Non-methane Hydrocarbon)	0.0095805	--
NMOG (Non-methane organic gases)	0.0105229	--
PM (Particulate Matter)	0.0014829	--
HC-TOTAL (Total Hydrocarbon)	0.0141597	--

Certification Summary Information Report

Test Group	PHYXV03.5J65		Evaporative/Refueling Family				PHYXR0149J6G					
	Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE									
	Carbon-Related Exhaust Emissions	9999.9999999	999									
	Test Result Name	Unrounded Test Result	Verify Calculated CO2									
	Carbon dioxide	401.1257019	--									
Manufacturer Test Comments	None Unrounded Result for the following test results were modified by Verify: FE BAG 1, FE BAG 4, FE BAG 3, FE BAG 2, MFR FE											
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 70	CREE	999	--	--	--	0	--	999	--	--
Fed	120,000 miles	Federal Tier 3 Bin 70	METHANE	0.005	--	--	--	0.0046	--	0.01	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 70	N2O	0.0008	--	--	--	0.0002	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.38	--	--	--	0.1	--	0.5	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO-COMP	0.95	--	--	--	0	--	1	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0105	--	1.1	--	0.0034	--	0.014	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0317	--	--	--	--	--	0.039	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX-COMP	0.0436	--	--	--	0	--	0.044	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0212	--	--	--	0.0039	--	0.025	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.0015	--	--	--	0	--	0.002	0.003	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.38	--	--	--	0.1	--	0.5	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	CO-COMP	0.95	--	--	--	0	--	1	4.2	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0105	--	1.1	--	0.0034	--	0.014	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0317	--	--	--	--	--	0.039	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX-COMP	0.0436	--	--	--	0	--	0.044	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0212	--	--	--	0.0039	--	0.025	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0015	--	--	--	0	--	0.002	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	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX10072273	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	09/03/2021	Fuel	Gasoline
Fuel Batch ID	21M-02	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4074	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	0.13	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	4.89	--
DT-EER (Drive Trace Energy Economy Rating)	0.11	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	5.86	--
MFR FE (Manufacturer Fuel Economy)	35.5	35.5
NOX (Nitrogen Oxide)	0.0067	--
NMOG (Non-methane organic gases)	0.0005	--
HC-TOTAL (Total Hydrocarbon)	0.001	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	250	250

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	250	--

Manufacturer Test Comments

RS4 3.5T 48V HEV AWD 8SA 21in (EDV) E0 HWY

Certification Summary Information Report

Test Group		PHYXV03.5J65			Evaporative/Refueling Family					PHYXR0149J6G		
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 70	CREE	250	--	--	--	0	--	250	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0005	--	1.03	--	0.0034	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0072	--	--	--	--	--	0.014	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0067	--	--	--	0.0039	--	0.011	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0005	--	1.03	--	0.0034	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0072	--	--	--	--	--	0.014	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0067	--	--	--	0.0039	--	0.011	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	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX91004919	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	01/05/2022	Fuel	Gasoline
Fuel Batch ID	28637	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4844	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0003266	--
CO (Carbon Monoxide)	0.0849646	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.2661712	--
DT-EER (Drive Trace Energy Economy Rating)	0.2949492	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.7364382	--
MFR FE (Manufacturer Fuel Economy)	34.507637	--
NOX (Nitrogen Oxide)	0.0080526	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0007625	--
NMOG (Non-methane organic gases)	0.0007853	--
HC-TOTAL (Total Hydrocarbon)	0.0010732	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	251.1574097	--

Manufacturer Test Comments None

Certification Summary Information Report

Test Group		PHYXV03.5J65				Evaporative/Refueling Family				PHYXR0149J6G		
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 70	CREE	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0008	--	1.03	--	0.0034	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0089	--	--	--	--	--	0.016	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0081	--	--	--	0.0039	--	0.012	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0008	--	1.03	--	0.0034	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0089	--	--	--	--	--	0.016	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0081	--	--	--	0.0039	--	0.012	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	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX10073644	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	01/21/2022	Fuel	Gasoline
Fuel Batch ID	S-0002	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	6800 Geddes Road		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4969	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	690	--
FE BAG 1 (Bag 1 Fuel Economy)	12.7	12.7
CO2 BAG 2 (Bag 2 Carbon Dioxide)	338	--
FE BAG 2 (Bag 2 Fuel Economy)	26.3	26.3
CO (Carbon Monoxide)	1.44	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-3.28	--
DT-EER (Drive Trace Energy Economy Rating)	-2.21	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-5.99	--
MFR FE (Manufacturer Fuel Economy)	21.3	21.3
NOX (Nitrogen Oxide)	0.0184	--
NMOG (Non-methane organic gases)	0.0212	--
HC-TOTAL (Total Hydrocarbon)	0.026	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	416	--

Manufacturer Test Comments

RS4 3.5T 48V HEV AWD 8SA 21in (EDV) E0 US06

Certification Summary Information Report

Test Group		PHYXV03.5J65				Evaporative/Refueling Family				PHYXR0149J6G		
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 70	CO	1.44	--	--	--	0.1	--	1.54	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0212	--	1.03	--	0.0034	--	0.025	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0396	--	--	--	--	--	0.047	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0184	--	--	--	0.0039	--	0.022	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	1.44	--	--	--	0.1	--	1.54	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0212	--	1.03	--	0.0034	--	0.025	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0396	--	--	--	--	--	0.047	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0184	--	--	--	0.0039	--	0.022	99.999	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX91004918	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	01/05/2022	Fuel	Gasoline
Fuel Batch ID	28637	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4861	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	736.4315186	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	351.3351746	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0050179	--
CO (Carbon Monoxide)	1.4690201	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.8128801	--
DT-EER (Drive Trace Energy Economy Rating)	-0.7165641	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.9265119	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0210347	--
N2O (Nitrous Oxide)	0.0001515	--
HC-NM (Non-methane Hydrocarbon)	0.018656	--
NMOG (Non-methane organic gases)	0.0192156	--
PM (Particulate Matter)	0.0018502	--
HC-TOTAL (Total Hydrocarbon)	0.02343	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	436.9320374	--

Manufacturer Test Comments

None Unrounded Result for the following test results were modified by Verify: MFR FE, FE BAG 2, FE BAG 1

Certification Summary Information Report

Test Group		PHYXV03.5J65				Evaporative/Refueling Family				PHYXR0149J6G		
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 70	CO	1.469	--	--	--	0.1	--	1.569	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0192	--	1.03	--	0.0034	--	0.023	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0402	--	--	--	--	--	0.048	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.021	--	--	--	0.0039	--	0.025	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.0019	--	--	--	0	--	0.002	0.006	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	1.469	--	--	--	0.1	--	1.569	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0192	--	1.03	--	0.0034	--	0.023	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0402	--	--	--	--	--	0.048	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.021	--	--	--	0.0039	--	0.025	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0019	--	--	--	0	--	0.002	0.006	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX10072267	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	09/15/2021	Fuel	Gasoline
Fuel Batch ID	20T-02	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4153	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	0.82	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.55	--
DT-EER (Drive Trace Energy Economy Rating)	0.18	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.83	--
MFR FE (Manufacturer Fuel Economy)	17.6	17.6
NOX (Nitrogen Oxide)	0.0318	--
NMOG (Non-methane organic gases)	0.0058	--
HC-TOTAL (Total Hydrocarbon)	0.0133	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	489	--

Manufacturer Test Comments RS4 3.5T 48V HEV AWD 8SA 21in (EDV) E10 SC03

Certification Summary Information Report

Test Group		PHYXV03.5J65				Evaporative/Refueling Family				PHYXR0149J6G		
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 70	CO	0.82	--	--	--	0.1	--	0.92	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0058	--	1.03	--	0.0034	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0376	--	--	--	--	--	0.045	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0318	--	--	--	0.0039	--	0.036	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.82	--	--	--	0.1	--	0.92	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0058	--	1.03	--	0.0034	--	0.009	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0376	--	--	--	--	--	0.045	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0318	--	--	--	0.0039	--	0.036	99.999	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Test #	PHYX10073645	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	01/20/2022	Fuel	Gasoline
Fuel Batch ID	S-0002	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	6800 Geddes Road		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4940	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	0.22	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.99	--
DT-EER (Drive Trace Energy Economy Rating)	1	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.1	--
MFR FE (Manufacturer Fuel Economy)	19.7	19.7
NOX (Nitrogen Oxide)	0.0284	--
NMOG (Non-methane organic gases)	0.0003	--
HC-TOTAL (Total Hydrocarbon)	0.006	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	452	--

Manufacturer Test Comments

RS4 3.5T 48V HEV AWD 8SA 21in (EDV) E0 SC03

Certification Summary Information Report

Test Group		PHYXV03.5J65				Evaporative/Refueling Family				PHYXR0149J6G		
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 70	CO	0.22	--	--	--	0.1	--	0.32	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0003	--	1.03	--	0.0034	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0287	--	--	--	--	--	0.036	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0284	--	--	--	0.0039	--	0.032	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.22	--	--	--	0.1	--	0.32	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0003	--	1.03	--	0.0034	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0287	--	--	--	--	--	0.036	99.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0284	--	--	--	0.0039	--	0.032	99.999	Pass

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Fuel Properties			
Fuel Batch ID	21M-02	Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	07/14/2021
Fuel Batch Calibration Effective Date	07/14/2021	Fuel Batch Calibration Ineffective Date	07/14/2024
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value (BTU / lb)	18569
Fuel Blend Carbon Weight Fraction	0.867	Weight Fraction CO2	--
Fuel Batch ID	18T-03	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/10/2018
Fuel Batch Calibration Effective Date	12/11/2018	Fuel Batch Calibration Ineffective Date	12/11/2021
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.745
Fuel Ethanol Volume Percent (%)	10.1	Fuel Net Heating Value (BTU / lb)	17781
Fuel Blend Carbon Weight Fraction	0.83	Weight Fraction CO2	--
Fuel Batch ID	FK1421	Fuel Calibration Number	1
Test Fuel Type	26 - Cold CO Regular (Tier 2)	Fuel Batch Calibration Date	01/12/2018
Fuel Batch Calibration Effective Date	01/12/2018	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.733
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value (BTU / lb)	18661
Fuel Blend Carbon Weight Fraction	0.865	Weight Fraction CO2	--
Fuel Batch ID	20T-02	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/31/2019
Fuel Batch Calibration Effective Date	04/19/2021	Fuel Batch Calibration Ineffective Date	04/19/2024
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value (BTU / lb)	17905
Fuel Blend Carbon Weight Fraction	0.824	Weight Fraction CO2	--
Fuel Batch ID	19E-03	Fuel Calibration Number	1
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	08/08/2019

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Fuel Batch Calibration Effective Date	10/29/2019	Fuel Batch Calibration Ineffective Date	10/29/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.75
Fuel Ethanol Volume Percent (%)	9.6	Fuel Net Heating Value (BTU / lb)	17917
Fuel Blend Carbon Weight Fraction	0.827	Weight Fraction CO2	--
Fuel Batch ID	28637	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	08/26/2021
Fuel Batch Calibration Effective Date	08/26/2021	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.75
Fuel Ethanol Volume Percent (%)	9.6	Fuel Net Heating Value (BTU / lb)	17894
Fuel Blend Carbon Weight Fraction	0.825	Weight Fraction CO2	--
Fuel Batch ID	S-0002	Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	07/29/2021
Fuel Batch Calibration Effective Date	07/29/2021	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value (BTU / lb)	18458
Fuel Blend Carbon Weight Fraction	0.866	Weight Fraction CO2	--
Fuel Batch ID	26757	Fuel Calibration Number	1
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	07/27/2017
Fuel Batch Calibration Effective Date	07/27/2017	Fuel Batch Calibration Ineffective Date	07/27/2032
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.749
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value (BTU / lb)	17958
Fuel Blend Carbon Weight Fraction	0.827	Weight Fraction CO2	--
Fuel Batch ID	19D-03	Fuel Calibration Number	1
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	08/14/2019
Fuel Batch Calibration Effective Date	05/20/2020	Fuel Batch Calibration Ineffective Date	05/20/2023
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value (BTU / lb)	17925

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Fuel Blend Carbon Weight Fraction	0.828	Weight Fraction CO2	--

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
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Consolidated List of Standards

Exhaust Standards

Cert Region	Federal	Cert/In-Use Code	Cert
Vehicle Class	LDV/Passenger Car	Standard Level	Federal Tier 3 Bin 70
Fuel	Gasoline	Test Procedure	Federal fuel 2-day exhaust (w/can load)

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0	999
120,000 miles	METHANE	--	--	--	--	--	--	0.0046	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0002	0.010
150,000 miles	CO	--	--	--	--	--	--	0.1	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	0	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0034	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.070
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0039	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

Cert Region	California + CAA Section 177 states	Cert/In-Use Code	Cert
Vehicle Class	LDV/Passenger Car	Standard Level	California LEV-III ULEV70
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	--	--	--	--	--	--	0.1	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	0	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0034	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.070
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0039	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

Certification Summary Information Report

Test Group		PHYXV03.5J65			Evaporative/Refueling Family			PHYXR0149J6G		
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 70		
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	--	--	--	--	--	--	0.1	99.999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	99.999	
150,000 miles	NOX	--	--	--	--	--	--	0.0039	99.999	

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70		
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	--	--	--	--	--	--	--	1.7	
4,000 miles	HCHO	--	--	--	--	--	--	--	0.016	
4,000 miles	NMOG	--	--	1.1	--	--	--	--	99.999	
4,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.140	
4,000 miles	NOX	--	--	--	--	--	--	--	99.999	

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70		
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	--	--	--	--	--	--	0.1	99.999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	99.999	
150,000 miles	NOX	--	--	--	--	--	--	0.0039	99.999	

Certification Summary Information Report

Test Group		PHYXV03.5J65			Evaporative/Refueling Family			PHYXR0149J6G		
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 70		
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	--	--	--	--	--	--	0.1	99.999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	99.999	
150,000 miles	NOX	--	--	--	--	--	--	0.0039	99.999	
150,000 miles	PM	--	--	--	--	--	--	0	0.006	

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70		
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	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.070	
150,000 miles	NOX	--	--	--	--	--	--	0.0039	99.999	

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70		
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	--	--	--	--	--	--	0.1	99.999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	99.999	
150,000 miles	NOX	--	--	--	--	--	--	0.0039	99.999	
150,000 miles	PM	--	--	--	--	--	--	0	0.006	

Certification Summary Information Report

Test Group		PHYXV03.5J65			Evaporative/Refueling Family			PHYXR0149J6G		
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 70		
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	--	--	--	--	--	--	0.03	10.0	
120,000 miles	HC-NM	--	--	--	--	--	--	0.0025	0.3	

Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 70		
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	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.070	
150,000 miles	NOX	--	--	--	--	--	--	0.0039	99.999	

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-III ULEV70		
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	--	--	--	--	--	--	0.03	10.0	

Evaporative/Refueling Standards

Evaporative/Refueling Family		PHYXR0149J6G			Cert Region			California + CAA Section 177 states		
Cert/In-Use Code		Cert			Standard Level			California LEV-III 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	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G		
Evaporative/Refueling Family	PHYXR0149J6G	Cert Region	California + CAA Section 177 states California LEV-III Zero Evap (Option 2)		
Cert/In-Use Code	Cert	Standard Level			
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
Evaporative/Refueling Family	PHYXR0149J6G	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	PHYXR0149J6G	Cert Region	California + CAA Section 177 states California LEV-III Zero Evap (Option 2)		
Cert/In-Use Code	Cert	Standard Level			
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	0.003
Evaporative/Refueling Family	PHYXR0149J6G	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	PHYXR0149J6G	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

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G		
Evaporative/Refueling Family	PHYXR0149J6G	Cert Region	California + CAA Section 177 states California LEV-III Zero Evap (Option 2)		
Cert/In-Use Code	Cert	Standard Level			
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	PHYXR0149J6G	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	--	0.05	0
Evaporative/Refueling Family	PHYXR0149J6G	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
Evaporative/Refueling Family	PHYXR0149J6G	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	PHYXR0149J6G	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	0.003

Certification Summary Information Report

Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G		
Evaporative/Refueling Family	PHYXR0149J6G	Cert Region	California + CAA Section 177 states California LEV-III Zero Evap (Option 2)		
Cert/In-Use Code	Cert	Standard Level			
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	PHYXR0149J6G	Cert Region	California + CAA Section 177 states California LEV-III Zero Evap (Option 2)		
Cert/In-Use Code	Cert	Standard Level			
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	PHYXR0149J6G	Cert Region	California + CAA Section 177 states California LEV-III Zero Evap (Option 2)		
Cert/In-Use Code	Cert	Standard Level			
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	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
Glossary			
Useful Life			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
Emission Name			
HC-TOTAL	Total Hydrocarbon	METHANOL	CH3OH - Methanol
CO	Carbon Monoxide	N2O	Nitrous Oxide
CO2	Carbon dioxide	SPITBACK	Spitback Hydrocarbon in grams
CREE	Carbon-Related Exhaust Emissions	AMP-HRS	Integrated Amp-hours
OPT-CREE	Optional Carbon-Related Exhaust Emissions	START-SOC	System Start State of Charge Watt-hours
NOX	Nitrogen Oxide	END-SOC	System End State of Charge Watt-hours
PM	Particulate Matter	ACT-DISTANCE	Actual Distance Driven (miles)
PM-COMP	SFTP Composite Particulate Matter	AS-VOLT	Average System Voltage
HC-NM	Non-methane Hydrocarbon	CO2 BAG 1	Bag 1 Carbon Dioxide
OMHCE	Organic material Hydrocarbon Equivalent	CO2 BAG 2	Bag 2 Carbon Dioxide
OMNMHCE	Organic material non-methane HC equivalent	CO2 BAG 3	Bag 3 Carbon Dioxide
NMOG	Non-methane organic gases	CO2 BAG 4	Bag 4 Carbon Dioxide
HCHO	Formaldehyde	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides
H3C2HO	Acetaldehyde	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	DT-IWRR	Drive Trace Inertia Work Ratio Rating
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	DT-ASCR	Drive Trace Absolute Speed Change Rating
CO-COMP	SFTP Composite Carbon Monoxide	DT-EER	Drive Trace Energy Economy Rating
ETHANOL	C2H5OH - Ethanol	COMB-CREE	Combined Carbon-Related Exhaust Emissions
FE BAG 1	Bag 1 Fuel Economy	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
FE BAG 2	Bag 2 Fuel Economy	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
FE BAG 3	Bag 3 Fuel Economy	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
FE BAG 4	Bag 4 Fuel Economy	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
MFR FE	Manufacturer Fuel Economy	LEAK-DIA	Effective Leak Diameter (inches)
HC	Hydrocarbon for Running Loss and ORVR	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
METHANE	CH4 - Methane	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
Certification Region			
CA	California + CAA Section 177 states	FA	Federal
Exhaust Emission Standard Level			
B1	Federal Tier 2 Bin 1	L3ULEV340	California LEV-III ULEV340
B2	Federal Tier 2 Bin 2	L3ULEV250	California LEV-III ULEV250
B3	Federal Tier 2 Bin 3	L3ULEV200	California LEV-III ULEV200
B4	Federal Tier 2 Bin 4	L3SULEV170	California LEV-III SULEV170
B5	Federal Tier 2 Bin 5	L3SULEV150	California LEV-III SULEV150

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B6	Federal Tier 2 Bin 6	L3LEV630	California LEV-III LEV630
B7	Federal Tier 2 Bin 7	L3ULEV570	California LEV-III ULEV570
B8	Federal Tier 2 Bin 8	L3ULEV400	California LEV-III ULEV400
B9	Federal Tier 2 Bin 9	L3ULEV270	California LEV-III ULEV270
B10	Federal Tier 2 Bin 10	L3SULEV230	California LEV-III SULEV230
B11	Federal Tier 2 Bin 11	L3SULEV200	California LEV-III SULEV200
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	T3B160	Federal Tier 3 Bin 160
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	T3B125	Federal Tier 3 Bin 125
L2	California LEV-II LEV	T3B110	Federal Tier 3 Transitional Bin 110
L2OP	California LEV-II LEV Optional	T3B85	Federal Tier 3 Transitional Bin 85
U2	California LEV-II ULEV	T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover
S2	California LEV-II SULEV	T3B70	Federal Tier 3 Bin 70
ZEV	California ZEV	T3B50	Federal Tier 3 Bin 50
OT	Other	T3B30	Federal Tier 3 Bin 30
T1	Federal Tier 1	T3B20	Federal Tier 3 Bin 20
PZEV	California PZEV	T3B0	Federal Tier 3 Bin 0
L2LEV160	California LEV-II LEV160	HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395
L2ULEV125	California LEV-II ULEV125	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340
L2SULEV30	California LEV-II SULEV30	HDV2B250	Federal Tier 3 HD Class 2b Bin 250
L2LEV395	California LEV-II LEV395	HDV2B200	Federal Tier 3 HD Class 2b Bin 200
L2ULEV340	California LEV-II ULEV340	HDV2B170	Federal Tier 3 HD Class 2b Bin 170
L2LEV630	California LEV-II LEV630	HDV2B150	Federal Tier 3 HD Class 2b Bin 150
L2ULEV570	California LEV-II ULEV570	HDV2B0	Federal Tier 3 HD Class 2b Bin 0
L3LEV160	California LEV-III LEV160	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630
L3ULEV125	California LEV-III ULEV125	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570
L3ULEV70	California LEV-III ULEV70	HDV3B400	Federal Tier 3 HD Class 3 Bin 400
L3ULEV50	California LEV-III ULEV50	HDV3B270	Federal Tier 3 HD Class 3 Bin 270
L3SULEV30	California LEV-III SULEV30	HDV3B230	Federal Tier 3 HD Class 3 Bin 230
L3SULEV20	California LEV-III SULEV20	HDV3B200	Federal Tier 3 HD Class 3 Bin 200
L3LEV395	California LEV-III LEV395	HDV3B0	Federal Tier 3 HD Class 3 Bin 0
Transmission Type Code			
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual
A	Automatic	OT	Other
AM	Automated Manual	SA	Semi-Automatic
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)
Drive System Code			
4	4-Wheel Drive	P	Part-time 4-Wheel Drive
F	2-Wheel Drive, Front	A	All Wheel Drive
R	2-Wheel Drive, Rear		

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Test Group	PHYXV03.5J65	Evaporative/Refueling Family	PHYXR0149J6G
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